

**Lucent Technologies**  
Bell Labs Innovations



**DEFINITY<sup>®</sup>**

**Enterprise Communications Server**

Application Notes for Type Approval

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#### Notice

Every effort was made to ensure that the information in this book was complete and accurate at the time of printing. However, information is subject to change.

#### Your Responsibility for Your System's Security

Toll fraud is the unauthorized use of your telecommunications system by an unauthorized party, for example, persons other than your company's employees, agents, subcontractors, or persons working on your company's behalf. Note that there may be a risk of toll fraud associated with your telecommunications system and, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

You and your system manager are responsible for the security of your system, such as programming and configuring your equipment to prevent unauthorized use. The system manager is also responsible for reading all installation, instruction, and system administration documents provided with this product in order to fully understand the features that can introduce risk of toll fraud and the steps that can be taken to reduce that risk. Lucent Technologies does not warrant that this product is immune from or will prevent unauthorized use of common-carrier telecommunication services or facilities accessed through or connected to it. Lucent Technologies will not be responsible for any charges that result from such unauthorized use.

#### Lucent Technologies Fraud Intervention

If you *suspect that you are being victimized* by toll fraud and you need technical support or assistance, call Technical Service Center Toll Fraud Intervention Hotline at 1 800 643-2353.

#### Federal Communications Commission Statement

**Part 15: Class A Statement.** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

#### Canadian Department of Communications (DOC)

##### Interference Information

This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of the Canadian Department of Communications.

Le Présent Appareil Numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le reglement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

#### Trademarks

See the preface of this document.

#### European Union Declaration of Conformity

The "CE" mark affixed to the DEFINITY® equipment described in this book indicates that the equipment conforms to the following European Union (EU) Directives:

- Electromagnetic Compatibility (89/336/EEC)
- Low Voltage (73/23/EEC)
- Telecommunications Terminal Equipment (TTE) i-CTR3 BRI and i-CTR4 PRI

For more information on standards compliance, contact your local distributor.

#### Comments

To comment on this document, return the comment card at the front of the document.

#### Acknowledgment

This document was prepared by the Product Documentation Development, Lucent Technologies, Denver, CO.

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# Application Notes for Type Approval

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## Introduction

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The Application Note for Type Approval contains information concerning the DEFINITY Enterprise Communications Server (ECS) and how it should be configured and administered to meet in-country type approval requirements. By following these guidelines, you can set up a system that allows basic analog and digital calls on Central Office (CO), Direct Inward Dialing (DID), and Tie trunks and provides basic interworking with the Public Telephone Network. Also noted are unique features available when certain country codes are administered.

This book reflects the administration of DEFINITY ECS Release 7 features and all incremental releases up to and including Release 7.1. It is organized as follows:

- A general overview presents certain system-wide options (such as tone plans and country codes)
- Specific sections outline the administration and configuration items pertinent to each country

Each country-specific section provides a brief background on key aspects of that country's Public Network (PN) such as major analog and digital standards, availability of PPM, dial-pulse ratios, and so on. Next, it provides information to help you configure the switch for connection to in-country analog and digital Public Network Trunks (PNT) and selection of proper call-progress tones provided by DEFINITY ECS.

To fully implement DEFINITY ECS, refer to the *DEFINITY ECS Administrator's Guide* for more in-depth information.

## General Overview

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This section presents certain system-wide options (such as tone plans and country codes). Throughout the tables in this document, circuit pack apparatus codes marked with ">" are those preferred and expected to ship with new systems. They are also the new circuit packs shipped to provide upgrades or additions to existing systems. Those marked with "#" are planned to be preferred, but pending Type Approval. The other codes shown have been used in the recent past and are also acceptable.

## Speech Synthesis Circuit Packs

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**Table 1. Speech Synthesis CP Capabilities**

Feature	TN725B	TN457	TN433
Automatic Wakeup Call (in Hotel/Motel Application)	Yes	No	No
Auto Circuit Assurance	Yes	Yes	Yes
Leave Word Calling	Yes	Yes	Yes
Visually-Impaired Attendant Service (VIAS)	No	Yes	Yes
A-law	No	Yes	Yes
Mu-law	Yes	Yes	Yes

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**Processing and Environmental CPs**

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**Table 2. Cabinet, Power, and Ring Generator Summary**

<b>Country</b>	<b>Cabinet Type and Power</b>	<b>AC Power Voltage and Frequency</b>	<b>Ring Generator</b>
U.S. & Canada	GAC-MCC	120V/60Hz	20Hz
	AC-MCC	208V/60Hz	
	DC-MCC	240V/60Hz	
	AC-SCC		
	DC-SCC		
	AC-CSCC		
	AC-CMC		
Argentina	GAC-MCC	220V/50Hz	20Hz
	DC-MCC		
	AC-SCC		
	AC-CSCC		
	AC-CMC		
Australia	GAC-MCC	240V/50Hz	20Hz 25Hz
	DC-MCC		
	AC-SCC		
	DC-SCC		
	AC-CSCC		
	AC-CMC		
Belgium Luxembourg	GAC-MCC	220V/50Hz	25Hz
	DC-MCC		
	AC-SCC		
	AC-CSCC		
	AC-CMC		
Bolivia	GAC-MCC	220V/50Hz	20Hz
	DC-MCC		
	AC-SCC		
	AC-CSCC		
	AC-CMC		
Brazil	GAC-MCC	127V/60Hz	25Hz
	AC-MCC	220V/60Hz	
	DC-MCC		
	AC-SCC		
	DC-SCC		
	AC-CSCC		
	AC-CMC		

*Continued on next page*

**Table 2. Cabinet, Power, and Ring Generator Summary — Continued**

<b>Country</b>	<b>Cabinet Type and Power</b>	<b>AC Power Voltage and Frequency</b>	<b>Ring Generator</b>
Chile	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	220V/50Hz	20Hz
China	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	220V/50Hz	20Hz
Columbia	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	120V/50Hz 240V/50Hz	20Hz
Costa Rica	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	120V/60Hz 240V/60Hz	20Hz
Czech Republic	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	220V/50Hz	25Hz
Ecuador	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	120V/60Hz 240V/60Hz	20Hz

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**Table 2. Cabinet, Power, and Ring Generator Summary — Continued**

<b>Country</b>	<b>Cabinet Type and Power</b>	<b>AC Power Voltage and Frequency</b>	<b>Ring Generator</b>
France	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	220V/50Hz	50Hz
Germany	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	220V/50Hz	25Hz
Greece	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	220V/50Hz	20Hz
Hong Kong	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	200V/50Hz	20Hz
Hungary	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	220V/50Hz	20Hz
India	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	220V/50Hz	25Hz
Indonesia	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CMC	220V/50Hz	25Hz

*Continued on next page*

**Table 2. Cabinet, Power, and Ring Generator Summary — Continued**

<b>Country</b>	<b>Cabinet Type and Power</b>	<b>AC Power Voltage and Frequency</b>	<b>Ring Generator</b>
Israel	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	230V/50Hz	
Italy(Italtel)	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	220V/50Hz	20Hz
Italy(Lucent)	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	220V/50Hz	25Hz
Japan	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	100V/50Hz 100V/60Hz 200V/50Hz 200V/60Hz	20Hz
Macedonia	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC	220V/50Hz	20Hz
Malaysia	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	240V/50Hz	20Hz

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**Table 2. Cabinet, Power, and Ring Generator Summary — Continued**

<b>Country</b>	<b>Cabinet Type and Power</b>	<b>AC Power Voltage and Frequency</b>	<b>Ring Generator</b>
Mexico	GAC-MCC	127V/60Hz	20Hz
	AC-MCC	220V/60Hz	
	DC-MCC		
	AC-SCC		
	DC-SCC		
	AC-CSCC		
	AC-CMC		
Netherlands	GAC-MCC	220V/50Hz	25Hz
	DC-MCC		
	AC-SCC		
	AC-CSCC		
	AC-CMC		
New Zealand	GAC-MCC	240V/50Hz	20Hz
	DC-MCC		
	AC-SCC		
	DC-SCC		
	AC-CSCC		
	AC-CMC		
Panama	GAC-MCC	120V/60Hz	20Hz
	AC-MCC	208V/60Hz	
	DC-MCC	240V/60Hz	
	AC-SCC		
	DC-SCC		
	AC-CSCC		
	AC-CMC		
Philippines	GAC-MCC	220V/50Hz	25Hz
	DC-MCC		
	AC-SCC		
	DC-SCC		
	AC-CMC		
Poland	GAC-MCC	220V/60Hz	20Hz / 25Hz
	DC-MCC		
	AC-SCC		
	DC-SCC		
	AC-CMC		

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**Table 2. Cabinet, Power, and Ring Generator Summary — Continued**

<b>Country</b>	<b>Cabinet Type and Power</b>	<b>AC Power Voltage and Frequency</b>	<b>Ring Generator</b>
Republic of Korea	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CMC	110V/60Hz 220V/60Hz	20Hz
Russia	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	220V/50Hz	20Hz
Saudi Arabia	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	110V/60Hz 220V/50Hz	20Hz
Singapore	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	230V/50Hz	20Hz
Slovak Republic	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	220V/50Hz	25Hz
South Africa	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	220-230V/50Hz	25Hz

*Continued on next page*



**Table 2. Cabinet, Power, and Ring Generator Summary — Continued**

<b>Country</b>	<b>Cabinet Type and Power</b>	<b>AC Power Voltage and Frequency</b>	<b>Ring Generator</b>
Spain	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	220V/50Hz	25Hz
Sri Lanka	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	220V/50Hz	25Hz
Switzerland	DC-MCC AC-SCC AC-CSCC AC-CMC	220V/50Hz	25Hz
Taiwan	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	110V/60Hz 220V/60Hz	20Hz
Thailand	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	220V/50Hz	20Hz
Trinidad & Tobago	AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	120V/60Hz	20Hz

*Continued on next page*

**Table 2. Cabinet, Power, and Ring Generator Summary — Continued**

<b>Country</b>	<b>Cabinet Type and Power</b>	<b>AC Power Voltage and Frequency</b>	<b>Ring Generator</b>
United Kingdom	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC	240V/50Hz	25Hz
Venezuela	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	120V/60Hz 240V/60Hz	20Hz
Vietnam	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC	230V/50Hz	20Hz

**Table 3. Equipment and Software Summary for DC Powered Multi-Carrier Cabinet (DC-MCC)**

<b>Equipment Codes</b>	
J58890A	Multi-Carrier Cabinet
<b>Equipped With:</b>	
J58890CF	-48 Volt DC Power Distribution Unit
ED67077	Fan & Filter Assembly
<b>Optionally Equipped With:</b>	
J58890AF	Expansion Control Carrier
J58890AH	Control Carrier

*Continued on next page*

**Table 3. Equipment and Software Summary for DC Powered  
Multi-Carrier Cabinet (DC-MCC) — *Continued***

<b>Equipment Codes</b>	
J58890AJ	Duplicated Control Carrier
J58890AP	Control Carrier (Processor) Carrier (G3r)
J58890BB	Port Carrier
J58890SA	Switch Node Carrier (G3r)
J58890R	Enhanced DC Power System Cabinet

Carriers equipped with one 649A Power Supply, except J58890SA which is equipped with two.

**Table 4. Equipment and Software Summary for AC Powered Multi-Carrier Cabinet (AC-MCC)**

Equipment Codes	
J58890A	Multi-Carrier Cabinet
<b>Equipped With:</b>	
J58890CE	60Hz 120/208-240 Volt AC Power Distribution Unit
ED67077	Fan & Filter Assembly
<b>Optionally Equipped With:</b>	
J58890AF	Expansion Control Carrier
J58890AH	Control Carrier
J58890AJ	Duplicated Control Carrier
J58890AP	Control Carrier (Processor) Carrier (G3r)
J58890BB	Port Carrier
J58890SA	Switch Node Carrier (G3r)

Carriers equipped with 631DA and 631DB power supplies except J58890SA which is equipped with two 631DA.

**Table 5. Equipment and Software Summary for DC Powered Single Carrier Cabinet (DC-SCC) Stack**

Equipment Codes	
J58890H	Single Carrier Port Cabinet
J58890L	Single Carrier Control Cabinet
J58890M	Duplicated Single Carrier Control Cabinet
J58890N	Expansion Single Carrier Control Cabinet
<b>Equipped With:</b>	
676B	Power Supply
<b>Optionally Equipped With:</b>	
J58890R	Enhanced DC Power System Cabinet
J58890CG	DC Power Distribution Unit

**Table 6. Equipment and Software Summary for AC Powered Single Carrier Cabinet (AC-SCC) Stack**

<b>Equipment Codes</b>	
J58890H	Single Carrier Port Cabinet
J58890L	Single Carrier Control Cabinet
J58890M	Duplicated Single Carrier Control Cabinet
J58890N	Expansion Single Carrier Control Cabinet
<b>Equipped With:</b>	
WP-91153	Power Supply
1217A	Power Supply

**Table 7. Equipment and Software Summary for AC Powered Compact Carrier Cabinet (AC-CSCC)**

<b>Equipment Codes</b>	
J58890S	Compact Single Carrier Cabinet (not supported in Release 7 and later)
<b>Equipped With:</b>	
WP-90510	Power Supply

**Table 8. Global AC Powered Multi-Carrier Cabinet (GAC-MCC)**

Equipment Codes	
J58890A	Multi-Carrier Cabinet
<b>Equipped With:</b>	
J58890CH	50-60Hz 200-240 Volt AC/DC Power Distribution Unit (AC input with rectifiers to convert to DC distribution within cabinet)
ED67077	Fan & Filter Assembly
<b>Optionally Equipped With:</b>	
J58890AF	Expansion Control Carrier
J58890AH	Control Carrier
J58890AJ	Duplicated Control Carrier
J58890AP	Control Carrier (Processor) Carrier (G3r)
J58890BB	Port Carrier
J58890SA	Switch Node Carrier (G3r)

Carriers equipped with one 649A Power Supply, except J58890SA which is equipped with two.

**Table 9. AC Powered Compact Modular Cabinet (AC-CMC)**

Equipment Codes	
J58890T	Compact Modular Cabinet

Each equipped with 650A power supply.

**Table 10. Software Codes**

Equipment Codes	
J58890TF	Programmed Tapes DEFINITY G3r, R5r, R6r, R7r
J58890TG	Memory Cards DEFINITY G3i, G3si, G3s, G3csi, G3vs, R6si, R6vs/si, R5vs/si, R6vs/si/csi, R7csi/si, or MCU
J58890TH	Floppy Diskettes DEFINITY G3i, G3si, G3s, G3csi, G3vs, R5vs/si, R6vs/si/csi, R77csi/si, or MCU
J58890TN	CD-ROM for DEFINITY One

**Table 11. Control, Network, and Miscellaneous Hardware**

Type	Code	Name
<b>G3r Control Circuit Packs (G3V1, G3V1.1, G3V2, G3V3, G3V4, R5, R6)</b>		
Processor	TN1648	System Access - Maintenance
	UN330B	Duplication Interface
	UN331B	Processor
	TN1650B	Memory (32MB)
	TN1655	Packet Interface
	UN332	Mass Storage System/Network Control
	TN1656	Tape Drive
	TN1657	Disk Drive
	AHF111	Processor Expansion Bus Terminator
	CFY1B	Current Limiter
Switch Node	TN572	Switch Node Clock
	TN573	Switch Node Interface
	AHF105	Switch Node Bus Terminator
<b>G3vs, G3s, G3si &amp; G3i Control Circuit Packs (G3V1.1, G3V2, G3V3, G3V4)</b>		
Processor	TN786B	Processor
	CPP1	Memory (Expansion)
	TN772	Duplication Interface
	TN777B	Network Control
	TN778	Packet Control
	TN765	Processor Interface
	TN756	Tone Detector/Generator
	982LS	Current Limiter
<b>R5vs, R5si-8MB &amp; R5si-12MB, R6vs/si-16MB Control Circuit Packs</b>		
Processor	TN790	Processor
	TN772	Duplication Interface
	TN777B	Network Control
	TN778	Packet Control

*Continued on next page*

Table 11. Control, Network, and Miscellaneous Hardware — *Continued*

Type	Code	Name
	TN765	Processor Interface
	982LS	Current Limiter
<b>R6csi Control Circuit Pack</b>		
Processor	TN798	Processor
<b>R7si Control Circuit Pack</b>		
Processor	TN798	Processor
	TN792	Duplication Interface
	TN794	Network Control/Packet Interface
	TN765	Processor Interface (only required if system has BX.25 interfaces)
	982LS	Current Limiter
<b>R7csi Control Circuit Pack</b>		
Processor	TN798	Processor
<b>Other Circuit Packs and Circuit Modules</b>		
Power	631DA	MCC AC Power Unit (+5V)
	631DB	MCC AC Power Unit (-48/-5V)
	644A	MCC DC Power Unit (+5V)
	645B	MCC DC Power Unit (-48/-5V)
	649A	MCC DC Power Unit (-48/-5/+5V)
	650A	CMC AC Power Unit (-48/-5/+5/+12V) 20, 25, 50Hz Ringer/Neon
	WP-90510 L4	CSCC AC Power Unit (+5/-5/-48V) 20Hz Ringer
	WP-90510 L5-25	CSCC AC Power Unit (+5/-5/-48V) 25Hz Ringer
	WP-90510 L6-20	CSCC AC Power Unit (+5/-5/-48V) 20Hz Ringer
	WP-91153 L3	SCC AC Power Unit (+5/-5/-48V) 20Hz Ringer
	WP-91153 L4-25	SCC AC Power Unit (+5/-5/-48V) 25Hz Ringer

*Continued on next page*



**Table 11. Control, Network, and Miscellaneous Hardware — Continued**

Type	Code	Name
	1217A	Global SCC AC Power Unit
	676B	SCC DC Power Unit (+5/-5/-48V)
	TN755B	Neon Power
System/Network	TN766	Expansion Interface
	TN570B	Expansion Interface
	TN574	DS1 Converter
	TN1654	DS1 Converter (T1/E1)
	TN755B	Maintenance (EPN)
	TN771D	Maintenance/Test
	TN2202	50Hz Ring Generator (France)
	TN2305	ATM Interface, Multi Mode
	TN2306	ATM Interface, Single Mode
	TN799	Control LAN
Other	105B	Isolation Data Interface (IDI)
	116A	Isolation Data Interface (IDI)
	120A	Integrated Channel Service Unit (ICSU) (T1 only)
	122A	Music-On-Hold Interface
	124D1	MCC 20Hz Ring Generator
	130A1	MCC 25Hz Ring Generator
	700A	DS1 Loopback Jack (T1 only)
	808A	Emergency Transfer Panel
	888B	DS1 75 Ohm Coax Adapter
	9823A	Lightwave Transceiver (multi-mode shortwave)
	9823B	Lightwave Transceiver (multi-mode longwave)
	300A	Fiber Transceiver (single mode)
	AHF110	SCC TDM/LAN Bus Terminator

*Continued on next page*

**Table 11. Control, Network, and Miscellaneous Hardware — Continued**

Type	Code	Name
	CFY1B	Current Limiter
	ZAHF4	MCC TDM/LAN Bus Terminator
	TN556B	ED1E-546 DEFINITY AUDIX (386 MFB)
	TN567	ED1E-546 DEFINITY AUDIX (486 MFB)
	TN801	J58890MA LAN Gateway R2
	TN2169	ED1E-546 DEFINITY AUDIX Alarm Interface
	TN2170	ED1E-546 Ethernet/Alarm Interface
	TN2208	ED1E-546 LAN Gateway R1 (486 MFB)
	TN802	J58890MA-1, List 10, Internet Protocol Trunk

## Hardware Administration Country Codes

---

DEFINITY ECS supports administration of circuit pack operating parameters through the selection of country codes listed in [Table 12](#). Each code corresponds to a pre-defined set of (one or more) programmable hardware or firmware attributes.

**Table 12. Country Code Assignments**

---

Administered Code	Country
1	U.S. & Canada
2	Australia
3	Japan
4	Italy
5	Netherlands
6	Singapore
7	Mexico
8	Belgium & Luxembourg
9	Saudi Arabia
10	United Kingdom
11	Spain
12	France
13	Germany & South Africa
14	Czech Republic & Slovak Republic
15	Russia
16	Argentina
17	Greece
18	China
19	Hong Kong
20	Thailand
21	Macedonia
22	Poland
23	Brazil (Or, continue to use country code 16)
24	Nordic (Norway, Sweden, Iceland, Denmark)

---

## Recommended Country Codes

[Table 13](#) provides a summary of recommended Country Codes. If a Country Code value is not assigned to a particular country, (for example, no Country Code has been assigned to Venezuela), review [Table 13](#) to determine the appropriate code. Also, set the Tone Detector Precision and Tone Detector Mode according to [Table 13](#).

**Table 13. Recommended Country Codes**

Country	Tone Gen	ISDN	Digital XMIT	Trunk Group Country**	Analog Ring Cadence	Tone Det. Precision	Tone Det. Mode
U.S. & Canada	1	1	1	1	1	Precise	1
Argentina & Brazil	16	16	16	16***	16	Broadband	1
Australia	2	2	2	2	2	Precise	2
Belgium & Luxembourg	8*	8	5	8	8	Medium	5
China	18	18	18	18	18	Medium	4
Chile	1	12a	1	1	1	Precise	6
Costa Rica	1	12a	1	1	1	Precise	6
Czech Republic & Slovak Republic	14*	14	14	14	14	Medium	4
France	12	12	12	12	12	Precise	4
Germany & South Africa	13*	13^	13	13	13	Medium	4
Greece	17	17	17	17	17	Broadband	1
Hong Kong	19	19	19	19	19	Precise	1
Hungary	-		1		1	Medium	1
Italy	4	4	4	4	4	Precise	1
Japan	3	3	3	3	3	Precise	1
Macedonia	21	21	21	21	21	Medium	4
Mexico	7*	7	7	7	7	Precise	1
Netherlands	5*	5	5	5	5	Medium	5

*Continued on next page*

**Table 13. Recommended Country Codes — Continued**

Country	Tone Gen	ISDN	Digital XMIT	Trunk Group Country**	Analog Ring Cadence	Tone Det. Precision	Tone Det. Mode
Nordic							
New Zealand	2	ETSI	2	2	2	Precise	2
Poland	22	22	22	22	22	Medium	1
Russia	15	15	15	15	15	Medium	4
Saudi Arabia	9	9	9	9	9	Precise	1
Singapore	6*	6	6	6	6	Precise	1
Spain	11*	11	11	11	11	Precise	4
Taiwan	1	3	1	1	1	Precise	1
Thailand	20	20	20	20	20	Medium	4
UK OTR001	10	10	10B	10	-	Precise	3
UK Non-OTR001	10	10	10A	10	-	Precise	3
Venezuela	1	-	-	-	5	Precise	1

\* Needs additional customized tone administration to meet country requirements. (This administrative detail is covered in country-specific sections.)

\*\* These country codes select the appropriate FW protocols on the various analog CO/DID trunks. These values also need to be duplicated on the DS1 Administration. "Country Protocol" field for the appropriate FW protocol to be selected on the TN464x.

\*\*\* To enable Block Collect Call in Brazil, use Country Code 23.

- Feature is not provided in this country or hardware does not support administrable selection. Accept the default in these cases.

^ Protocol version selection of "a" corresponds to 1TR6 (Germany Specific) and "b" corresponds to E-DSS1 (Euro ISDN). Protocol version selection depends on the type of public network service purchased.

[Table 14](#) provides expanded information for the Tone Det. Mode field in [Table 13](#).

**Table 14. Available Tone Detection Modes**

Code	Mode
1	Italy
2	Australia
3	United Kingdom
4	Standard Wideband (345 - 625Hz, - 55dB)
5	Broad Wideband (300 - 1190Hz, - 35dB)
6	USA

## **Country-Specific Configuration and Administration**

The following sections present information on how to administer DEFINITY ECS for each of the supported countries. Values shown should actually be entered into fields on the specified screens.

### **⇒ NOTE:**

In the tables that follow for each country, circuit pack (CP) apparatus codes marked with ">" are those preferred and expected to ship with new systems. They are also the new CPs shipped to provide upgrades or additions to existing systems. Those marked with "#" are planned to be preferred, but pending Type Approval. The other codes shown have been used in the recent past and are also acceptable.

## Argentina

[Table 15](#) shows the recommended circuit packs.

**Table 15. Recommended and Available CPs in Argentina**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN748C
Tone Clock	> TN2182B TN780
R2MFC Circuit	> TN744D TN744B
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	n/a
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	n/a
4 Wire Tie Trunk	> TN760Dv15
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E TN464D
Digital Tie Trunk	> TN464F TN464E TN464D
Digital PRI CO Trunk	> TN464F TN464E TN464D
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B
4 Wire Digital Line	> TN754B

*Continued on next page*

Table 15. Recommended and Available CPs in Argentina — *Continued*

Equipment	Equipment Type
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

**NOTE:**

A-law companding is the national standard in Argentina. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

**NOTE:**

TN760Dv15 currently is not available from Manufacturing. If needed, contact the ITAC.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the ARS field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc:	North American numbers of the screen "x11".



Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

### Feature-Related System Parameters

Page 1 of 6

#### FEATURE-RELATED SYSTEM PARAMETERS

```

Trunk-to-Trunk Transfer: all
Coverage - Subsequent Redirection No Answer Interval: 2
Coverage - Caller Response Interval (seconds): 4
Keep Held SBA at Coverage Point? y
Automatic Callback - No Answer Timeout Interval (rings): 3
Call Park Timeout Interval (minutes): 10
Off-Premises Tone Detect Timeout Interval (seconds): 20
AAR/ARS Dial Tone Required? y
Music/Tone on Hold: none
Music (or Silence) on Transferred Trunk Calls? no
DID/Tie/ISDN Intercept Treatment: attd
Internal Automatic Answer for Attendant Extended Calls? n
Automatic Circuit Assurance (ACA) Enabled? n
    
```

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#### FEATURE-RELATED SYSTEM PARAMETERS

##### LEAVE WORD CALLING PARAMETERS

```

Maximum Number of Messages Per Station (when MSA not in service):10
Stations with System-wide Retrieval Permission (enter extension)
1:      2:      3:      4:      5:
6:      7:      8:      9:      10:
    
```

```

WARNING! SEE USER DOCUMENTATION BEFORE CHANGING TTI STATE
Terminal Translation Initialization (TTI) Enabled? n
    
```

```

External Coverage Treatment for Transferred Incoming Calls? n
    
```

SECURITY VIOLATION NOTIFICATION (SVN) PARAMETERS HAVE MOVED TO  
THE SYSTEM-PARAMETERS SECURITY SCREEN

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FEATURE-RELATED SYSTEM PARAMETERS

Reserved Slots for Attendant Priority Queue: 5  
Time before Off-hook Alert: 10  
Emergency Access Redirection Extension:  
Service Observing Warning Tone? y  
Number of Emergency Calls Allowed in Attendant Queue: 5  
Call Pickup Alerting? n  
Deluxe Paging and Call Park Timeout to Originator? n  
Controlled Outward Restriction Intercept Treatment: tone  
Controlled Termination Restriction (Do Not Disturb): tone  
Controlled Station to Station Restriction: tone

AUTHORIZATION CODE PARAMETERS

Authorization Codes Enabled?  
Authorization Code Length:  
Authorization Code Cancellation Symbol: #  
Attendant Time Out Flag? n  
Display Authorization Code? y

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FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS

System Printer Extension: Lines Per Page: 60

SYSTEM-WIDE PARAMETERS

Switch Name:

CALL CENTER SYSTEM PARAMETERS

Direct Agent Announcement Extension:  
Direct Agent Announcement Delay:  
Converse Delay Data1: 0 Data2: 2  
Direct Agent Announcement Extension: Converse Pulse ON: 100 OFF: 70  
Prompting Timeout (secs): 10

CALL MANAGEMENT SYSTEM PARAMETERS

BCMS/VuStats Measurement Interval: hour  
BCMS/VuStats Abandon Call Timer (seconds): Validate Login IDs? n  
ACD Login Identification Length: Adjunct CMS Release:

MALICIOUS CALL TRACE PARAMETERS

Apply MCT Warning Tone? n MCT Voice Recorder Trunk Group:

FEATURE-RELATED SYSTEM PARAMETERS

Public Network Trunks on Conference Call: 5                      Auto Start? n  
Conference Parties with Public Network Trunks: 6                      Auto Hold? n  
Conference Parties without Public Network Trunks: 6                      Attendant Tone? y  
Night Service Disconnect Timer (seconds): 180                      Bridging Tone? n  
Short Interdigit Timer (seconds): 3                      Conference Tone? n  
Unanswered DID Call Timer (seconds):                      Intrusion Tone? n  
Line Intercept Tone Timer (seconds): 30  
DID Busy Treatment: tone  
Allow AAR/ARS Access from DID/DIOD? n

DISTINCTIVE AUDIBLE ALERTING

Internal: 1    External: 2    Priority: 3  
Attendant Originated Calls: external

FEATURE-RELATED SYSTEM PARAMETERS

Pull Transfer: n                      Update Transferred Ring Pattern? n  
Outpulse Without Tone? y                      Wait Answer Supervision Timer? n  
Repetitive Call Waiting Tone? n  
Allow Conference via Flash? y  
Vector Disconnect Timer (min):                      Network Feedback During Tone Detection? y  
Hear Zip Tone Following VOA? n  
Intercept Treatment On Failed Trunk Transfers? n  
Station Tone Forward Disconnect: silence  
Level Of Tone Detection: precise

RECALL TIMING

Flashhook Interval? y                      Upper Bound (msec): 1000  
Lower Bound (msec): 200

ENHANCED DCS

Enhanced DCS Enabled? n  
Apply Intercept Locally? y                      Enforce PNT-to-PNT Restrictions? n

## System Parameter Country-Options Administration

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### SYSTEM PARAMETERS COUNTRY-OPTIONS

```
Companding Mode: Mu-Law           Base Tone Generator Set: 1
440Hz PBX-dial Tone? n           440Hz Secondary-dial Tone? y
Digital Loss Plan: 1
Analog Ringing Cadence: 1
```

### tone DETECTION PARAMETERS

```
Tone Detection Mode: 6
Interdigit Pause: short
```

### ⇒ NOTE:

Companding Mode: A-law is the national standard. Mu-law is used internal to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

- Customized Individual Tones — In this section, customized tone definitions follow the data-entry syntax as specified for entry on the Individual Tone Administration Screen:

[(Frequency/Level)|silence|goto)][(Duration ms)][(Step)]

— Reorder (Congestion):

1. (425/-11)(250)
2. (silence)(250)
3. (goto)(1)

— CO Dial Tone:

1. (350+440/-13.75)(1000)
2. (goto)(1)

— PBX Dial Tone:

1. (425/-11)(1000)
2. (goto)(1)

## Multifrequency-Signaling-Related System Parameters

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### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

```

Incoming Call Type: group-ii-mfc
Outgoing Call Type: group-ii-mfc
Maintenance Call Type: none
Test Call Extension:
Interdigit Timer (sec): 10
Outgoing Forward Signal Present Timer (sec): 15
Outgoing Forward Signal Absent Timer (sec): 30
Multifrequency Signaling Incoming Intercept Treatment? y
Received Signal Gain(-Loss) (dB): 0
Transmitted Signal Gain(-Loss) (dB): -3

ANI Prefix:
ANI for PBX:
Next ANI Digit: send-ani
ANI Prefix:          Collect All Digits Before Seizure? n
                    Request Incoming ANI (non-AAR/ARS)? n
                    Called Party Category: user-type
                    Use COR for Calling Party Category? n
```

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### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

INCOMING FORWARD SIGNAL TYPES  
(Tones from CO)

INCOMING BACKWARD SIGNAL TYPES  
(Tones to CO)

Group-I	Group-II	Group-A	Group-B
11: ignored	1: normal	1: next-digit	2: intercept
12: ignored	2: normal	3: end-of-dial	3: busy
13: ignored	3: normal	4: congestion	4: congestion
14: ignored	4: normal		6: free
15: ignored	5: normal		
	6: normal		
	7: normal		
	8: normal		
	9: normal		
	10: normal		
	11: normal		
	12: normal		
	13: normal		
	14: normal		
	15: normal		

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

OUTGOING FORWARD SIGNAL TYPES  
(Tones to CO)

Group-I	Group-II
12: ani-not-avail	2: normal
15: end-of-ani	1: attendant
	6: data-call

OUTGOING BACKWARD SIGNAL TYPES  
(Tones from CO)

Group-A	Group-B
1: next-digit	1: congestion
2: last-2-digits	2: intercept
3: end-of-dial	3: busy
4: congestion	4: congestion
5: send-ani	5: intercept
6: setup-sppath	6: free
7: last-3-digits	7: free
8: congestion	8: busy
9: last-digit	9: congestion
10: restart	10: congestion
11: congestion	11: congestion
12: congestion	12: congestion
13: congestion	13: congestion
14: congestion	14: congestion
15: congestion	15: congestion

## Trunk Group Administration

### CO Trunk Group Administration

TRUNK GROUP

Group Number:	Group Type: co	CDR Reports: y
Group Name: OUTSIDE CALL	COR: 1	TN: 1 TAC:
Direction: two-way	Outgoing Display? n	Night Service:
Dial Access? n	Busy Threshold: 99	Incoming Destination:
Queue Length: 0	Country: 1	Digit Absorption List:
Comm Type: voice	Auth Code? n	Toll Restricted? n
Prefix-1? n	Trunk Flash? n	

TRUNK PARAMETERS

Trunk Type: loop-start	Cut-Through? n
Outgoing Dial Type: tone	Disconnect Timing(msec): 500
Trunk Termination: rc	
Auto Guard? n	Call Still Held? n
Terminal Balanced? n	Sig Bit Inversion: none
	RA Trunk Loss: 0db
	Trunk Gain: high
Disconnect Supervision - In? n	Out? n
Answer Supervision Timeout: 10	Cyclical Hunt? n
	Receive Answer Supervision? n

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TRUNK FEATURES

ACA Assignment? n Measured: none Maintenance Tests? y  
Data Restriction? n  
Abandoned Call Search? n  
Suppress # Outpulsing? n

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TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500 Outgoing Disconnect(msec): 500  
Outgoing Dial Guard(msec): 1600  
Incoming Glare Guard(msec): 1500 Outgoing Glare Guard(msec): 1500  
Ringing Monitor(msec): 5200 Incoming Seizure(msec): 500  
Outgoing End of Dial(sec): 10 Outgoing Seizure Response(sec): 5  
Programmed Dial Pause(msec): 1500  
Flash Length(msec): 540

END TO END SIGNALING

Tone(msec): 350 Pause(msec): 150

OUTPULSING INFORMATION

PPS: 10 Make(msec): 40 Break(msec): 60 PPM? n

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TRUNK GROUP

Administered Members (min/max): 0/0  
Total Administered Members: 0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							





## DID Trunk Group Administration

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### TRUNK GROUP

Administered Members (min/max): 0/0

Total Administered Members: 0

#### GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							

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### TRUNK GROUP

Group Number:

Group Type: did

CDR Reports: y

Group Name: OUTSIDE CALL

COR: 1

TN: 1

TAC:

Country: 7

Auth Code? n

#### TRUNK PARAMETERS

Trunk Type: immed-start

Incoming Rotary Timeout(sec): 5

Incoming Dial Type: tone

Trunk Termination: rc

Disconnect Timing(msec): 500

Digit Treatment:

Digits:

Expected Digits:

Sig Bit Inversion: none

Terminal Balanced? n

RA Trunk Loss: 0db

Extended Loop Range? n

Trunk Gain: high

Drop Treatment: silence

Disconnect Supervision - In? y

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#### TRUNK FEATURES

ACA Assignment? n

Measured: none

Maintenance Tests? y

Data Restriction? n

Suppress # Outpulsing? n

Page 3 of 10

TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500

Incoming Dial Guard(msec): 70

Flash Length(msec): 540

Incoming Incomplete Dial Alarm(sec): 255

END TO END SIGNALING

Tone(msec): 350

Pause(msec): 150

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TRUNK GROUP

GROUP MEMBER ASSIGNMENTS

Administered Members (min/max): 0/0

Total Administered Members: 0

Port	Code	Sfx	Name
1:			
2:			
3:			

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented.

## DS1 Programming for CO, DID and DIOD trunks to the PTT using digital trunks

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### DS1 CIRCUIT PACK

Location: Name: E-1CO, DID, DIOD  
Bit Rate: 2.048 Line Coding: hdb3

Signaling Mode: CAS  
Interconnect: CO Country Protocol: 7

Interface Companding: alaw CRC? n  
Idle Code: 11111111

MAINTENANCE PARAMETERS  
Slip Detection? n Near-end CSU Type: none

### Tie Trunks

- Non-ISDN Signaling Example (DS1 Administration Screen)
  - Circuit Pack: TN464D (Not entered as administrable item)
  - Bit Rate: 2.048
  - Interface Companding: mu-law
  - Line Coding: HDB3
  - Signaling Mode: CAS
  - Country Protocol: 16
  - Interconnect: pbx
  - CRC?: no
  - Idle Code: 01010100
  - ISDN-PRI (Private Network) Signaling This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.
  - DS1 Administration screen
    - Circuit Pack: TN464D (or TN464C from upgrades)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: isdn-pri
    - Country Protocol: 1

- Connect: pbx
- Interface: user
- CRC: No
- Idle Code: 01010100
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: tie
    - ISDN-PRI (Public Network)  
Not available for this country.

## Australia

[Table 16](#) shows the recommended circuit packs.

**Table 16. Recommended and Available CPs in Australia**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	240V/50Hz
Ring Generator	20Hz 25Hz
Tone Detector	> TN2182B > TN744D TN420C TN420B
Tone Clock	> TN2182B TN780 TN419B
R2MFC Circuit	n/a
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	> TN750C TN750B
Analog DID Trunk	> TN436B TN436
Analog CO Trunk (No PPM)	> TN2147C TN22147
Analog CO Trunk (w/PPM)	#TN465C > TN438B
4 Wire Tie Trunk	TN437B TN437
2 Wire Tie Trunk	> TN439
Auxiliary Trunk	#TN763D > TN417
Digital CO/DID Trunk	n/a
Digital Tie Trunk	> TN464F TN464E TN464D TN464C
Digital PRI CO Trunk	> TN464F TN464E TN464D TN464C
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	TN-CCSC-2
Digital Converter PRI-BRI	
8 Port Analog Line	TN467
16 Port Analog Line	#TN2183 > TN468B TN468
24 Port Analog Line	TN2793

*Continued on next page*

Table 16. Recommended and Available CPs in Australia — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B TN413
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	TN556B

**NOTE:**

Australia P2 signaling requires TN464Fv5 or later.

## Country-Specific Features

When the Country Code is 2, Malicious Call Trace notification is passed over the following ISDN-PRI trunk groups: tandem, tie, access, and DMI-BOS. See “Malicious Call Trace” in *DEFINITY ECS Administrator’s Guide*.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the ARS field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc:	North American numbers of the screen “x11”.

Lucent recommends only the following call types be used in Australia:

int:	For all international numbers.
pubu:	For all other types of digit strings.

## System Parameter Administration

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Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: Yes <sup>1</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: Yes
  - Repetitive Call Waiting Tone: No
  - DID Busy Treatment: Attendant
  - Pull Transfer: No
  - Level of Tone Detection: Precise
  - Outpulse Without Tone: Yes
  - (Station-to-switch) Recall Timing:
    - Flashhook Interval: Yes
    - Upper Bound: 1000 ms
    - Lower Bound: 200 ms

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1. Although not a Type Approval issue, this represents the convention for this country.

- System Parameter Country Options Administration
  - Companding Mode: A-law
  - Base Tone Generation Set: 2
  - Tone Detection Mode: 2
  - Interdigit Pause: short
  - Digital Loss Plan: 2
  - Analog Ringing Cadence: 2

## **Analog Trunk Administration**

- CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Country: 2
    - Trunk Gain: high
    - Direction: two-way
    - Digit Absorption List: blank
    - Prefix-1: No
    - Trunk Type: loop-start
    - Outgoing Dial Type: tone
    - Trunk Termination: rc (complex impedance)
    - Auto Guard: yes
    - Dial Access: yes
    - Call Still Held: yes
    - Terminal Balanced: yes
    - Receive Answer Supervision: no
    - Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
    - Disconnect Supervision - In: yes
    - Disconnect Supervision - Out: Selection is customer's choice.
    - Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)



## — Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 500 ms
  - Outgoing Disconnect: 500 ms
  - Outgoing Dial Guard: 1600 ms
  - Incoming Glare Guard: 1500 ms
  - Outgoing Glare Guard: 1500 ms
  - Outgoing Dial Pulse Rate (PPS): 10 pps
  - Outgoing Rotary Digit Dial Make: 35 ms
  - Outgoing Rotary Digit Dial Break: 65 ms
  - Outgoing Rotary Dial Interdigit: 800 ms
  - Ring Monitor Timer: 5200 ms
  - Incoming Seizure: 500 ms
  - Outgoing End-of-Dial: 10 sec
  - Outgoing Seizure Response: 240 sec
  - Programmed Dial Pause: 1500 ms
  - Disconnect Signal Error: 240 sec
  - Flash Length: 100 ms
  - PPM: Yes
  - PPM Frequency: 50/12kHz
- DID Trunks
    - Trunk Group Screen
      - Group Type: DID
      - Country: 2
      - Trunk Gain: high
      - Digit Absorption List: blank
      - Incoming Dial Type: tone
      - Trunk Type: immed-start
      - Trunk Termination: rc (complex impedance)
      - Disconnect Supervision - In: yes

- Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Digit Treatment: blank
- Digits: blank
- Expected Digits: depends on system size and numbering plan
- Terminal Balanced: yes
- Extended Loop Range: (Used Only with TN459) no
- Drop Treatment: silence
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms
- Incoming Dial Guard: 50 ms
- Incoming Partial Dial: 18 sec
- Incoming Incomplete Dial: 255 sec
- Flash Length: 100 ms

■ Tie Trunks

No special Type Approval regulations apply. Tie trunks are administered on a case-by-case basis.

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

■ CO and DID Trunks

Not available in this country.

■ Tie Trunks

— Non-ISDN Signaling Example (DS1 Administration Screen)

- Circuit Pack: TN464D (Not entered as administrable item; TN464C from upgrades)
- Bit Rate: 2.048

- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: CAS
- Country Protocol: 2
- Interconnect: pbx
- CRC?: no
- Idle Code: 11111111

— ISDN-PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.

- DS1 Administration screen
  - Circuit Pack: TN464D (TN464C,B from upgrades)
  - Bit Rate: 2.048
  - Interface Companding: A-law
  - Line Coding: HDB3
  - Signaling Mode: isdn-pri
  - Country Protocol: 2
  - Connect: pbx
  - Interface: user
  - CRC: No
  - Idle Code: 11111111
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: tie

— ISDN-PRI (Public Network)

- DS1 Administration screen
  - Circuit Pack: TN464D (Not entered as administrable item; TN464C from upgrades)
  - Bit Rate: 2.048
  - Interface Companding: A-law

- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Country Protocol: 2
- Connect: Network
- CRC: No
- Idle Code: 11111111
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: public\_ntwrk

## Belgium & Luxembourg

[Table 17](#) shows the recommended circuit packs.

**Table 17. Recommended and Available CPs in Belgium & Luxembourg**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D TN420C
Tone Clock	> TN2182B TN780
R2MFC Circuit	> TN744D TN744B
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN2146
Analog CO Trunk (No PPM)	> TN2147C TN2147
Analog CO Trunk (w/PPM)	#TN465C > TN465B
4 Wire Tie Trunk	> TN760Dv11
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E TN464D
Digital Tie Trunk	> TN464F TN464E TN464D
Digital PRI CO Trunk	> TN464F TN464E TN464D
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	#TN2183> TN2149
24 Port Analog Line	n/a

*Continued on next page*

**Table 17. Recommended and Available CPs in Belgium & Luxembourg —**  
*Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181 TN2136
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen “x11”.

Lucent recommends only the following call types be used outside North America:

<code>int:</code>	For all international numbers.
<code>natl:</code>	For all national PN numbers.
<code>pubu:</code>	For all other external (that is, not extensions) numbers.

- Route Pattern administration
  - First Dial Tone Detection (always needed)
    - Number Delete Digits: 0
    - Inserted Digits: +
  - Second Dial Tone Detection (needed on some analog CO trunks)
    - Number Delete Digits: 2 (Dialed String 00)
    - Inserted Digits: +00+

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Off Premise Tone Detection Timeout: 10 sec
  - Trunk-to-Trunk Transfer: Not permitted in Belgium
  - Distinctive Audible Alerting:
    - Int: 1
    - Ext: 2
    - Priority: 2
  - DID/TIE/ISDN Intercept Treatment: Attendant
  - Public Network Trunks on Conference Call: 1
  - Conference Parties With PNTs: 3
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 25 sec
  - Auto-Hold: Yes<sup>2</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: Yes
  - Repetitive Call Waiting Tone: Yes

- DID Busy Treatment: Attendant
- Pull Transfer: No
- Level of Tone Detection: Medium
- Outpulse Without Tone: Yes
- (Station-to-switch) Recall Timing:
  - Flashhook Interval: No
  - Disconnect Timing: 350 ms
- Network Feedback During Tone Detection: No
- System Parameter Multifrequency Signaling Administration
  - Incoming Call Type: non-group-ii-mfc (use default translations)
  - Test Call Extension: 160 or as negotiated.
- System Parameter Country Options Administration
  - Companding Mode: A-law
  - Base Tone Generation Set: 8
  - Tone Detection Mode: 5
  - Digital Loss Plan: 8
  - Interdigit Pause: long
  - Dial Tone Validation Timer: 600 ms
  - Analog Ringing Cadence: 8
  - Customized Individual Tones
    - Customized tone definitions follow the syntax as specified:  
[(Frequency/Level)|silence/goto][(Duration ms)|(Step)]
- Intercept Tone:
  1. (425/-4)(250)
  2. (silence)(250)
  3. (goto)(1)
- Conference Tone:
  1. (425/-11)(200)
  2. (silence)(9800)
  3. (goto)(1)
- 1 Call Wait Tone:
  1. (425/-11)(200)



- 2 Call Wait Tone:
  1. (425/-11)(200)

## Analog Trunk Administration

- CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Direction: two-way



**NOTE:**

All trunks in Belgium are one-way but outgoing trunks must be marked two-way in order to be able to select cyclical hunt = y.

- Digit Absorption List: blank
- Country Code: 8

Trunk Gain	Loop Length
high	long
low	short

- Dial Access: No
- Prefix-1: No
- Trunk Type: loop-start
- Outgoing Dial Type:
  - Digital Trunks: tone
  - Analog Trunks: tone or rotary
- Trunk Termination: rc (complex impedance)
- Auto Guard: no
- Sig Bit Inversion: none
- Call Still Held: no
- Terminal Balanced: no

RA Trunk Loss	Loop Length
2dB	long
0dB	short

- Receive Answer Supervision: no

- Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
  - Disconnect Supervision - In:
    - Analog Trunks: no
    - Digital Trunks: yes
  - Disconnect Supervision - Out: Selection is customer's choice.
  - Disconnect Timing: 500 msec (This field will not be used for CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
  - Cyclical Hunt: Yes
  - Suppress # Outpulsing: yes
- Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 600 ms
- Outgoing Disconnect: 500 ms
- Outgoing Dial Guard: 1600 ms
- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: 1500 ms
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 35 ms
- Outgoing Rotary Digit Dial Break: 65 ms
- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response:
  - Analog trunks: 10 sec
  - Digital trunks: 2 sec
- Programmed Dial Pause: 1500 ms
- End-To-End Signaling Pause: 150 ms (accept default)
- End-To-End Signaling Tone: 350 ms (accept default)

- PPM: yes
- Frequency: 16 khz
- Flash Length: 100 ms
- DID Trunks
  - Trunk Group Screen
    - Group Type: DID
    - Direction: incoming
    - Country Code: 8
    - Trunk Gain: high or low as required by loop length
    - Digit Absorption List: blank
    - Incoming Dial Type: MF
    - Trunk Type: immed-start
    - Trunk Termination: rc (complex impedance)
    - Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
    - Digit Treatment: blank
    - Digits: blank
    - Expected Digits: 3 or 4
    - Terminal Balanced: no
    - RA Trunk Loss: 0dB
    - Extended Loop Range: (Used Only with TN459) no
    - Drop Treatment: silence
    - Disconnect Supervision:
      - Analog Trunks: no
      - Digital Trunks: yes
    - Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)
    - Suppress # Outpulsing: yes
  - Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

    - Incoming Disconnect: 600 ms

- Incoming Dial Guard: 50 ms
- Incoming Partial Dial: 18 sec
- Incoming Incomplete Dial: 60 sec
- Flash Length: 100 ms
- Tie Trunks

No special Type Approval regulations apply. Tie trunks are administered on a case-by-case basis.

## Digital Trunk Administration

This section does not list all possible valid administrable combinations: Only the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN464D
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 8
    - Interconnect: CO
    - CRC?: No
    - Idle Code: 01010100

- Trunk Group Administration Screen (Timing)

Digital trunk timing values should be set as for analog CO trunks with the following exception.

- Outgoing Seizure Response: 2 sec.
- DID Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN464D
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 8

- Interconnect: CO
- CRC?: No
- Idle Code: 01010100

— Trunk Group Administration Screen (Timing)

Digital trunk timing values should be set as for analog DID trunks.

■ Tie Trunks

— Non-ISDN Signaling Example (DS1 Administration screen)

- Circuit Pack: TN464D
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: CAS
- Country Protocol: 8
- Interconnect: pbx
- CRC?: no
- Idle Code: 01010100

— ISDN-PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.

— DS1 Administration screen

- Circuit Pack: TN464D
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Country Protocol: 8
- Connect: pbx
- Interface: user
- CRC: No
- Idle Code: 01010100

— Signaling Group screen

- Associated Signaling: Yes

- Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: tie
- ISDN-PRI (Public Network)  
Not available for this country.

## **Station Administration**

Rotary stations are not supported in Belgium.

- Type: 2500
- Switch Hook Flash: yes
- Call Vector screen

Use this with Auto Transfer and Auto Answer through vectoring/prompting, and only for Digital outgoing trunks.

- ASAI Routing: no
- Basic: yes
- Prompting: yes
- Wait time 6 seconds hearing ringback
- Announcement extension is installation dependent
- Route to number is installation dependent if unconditionally

## Bolivia

[Table 18](#) shows the recommended circuit packs.

**Table 18. Recommended and Available CPs in Bolivia**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B TN780 TN768
R2MFC Circuit	> TN744D TN744B
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	> TN750C TN750B
Analog DID Trunk	
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E TN464D
Digital Tie Trunk	> TN464F TN464E TN464D
Digital PRI CO Trunk	
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

Table 18. Recommended and Available CPs in Bolivia — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	> TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen “x11”.

Lucent recommends only the following call types be used outside North America:

<code>int:</code>	For all international numbers.
<code>natl:</code>	For all national PN numbers.
<code>pubu:</code>	For all other external (that is, not extensions) numbers.



## System Administration

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### Feature-Related System Parameters

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#### FEATURE-RELATED SYSTEM PARAMETERS

Trunk-to-Trunk Transfer: all  
Coverage - Subsequent Redirection No Answer Interval: 2  
Coverage - Caller Response Interval (seconds): 4  
Keep Held SBA at Coverage Point? y  
Automatic Callback - No Answer Timeout Interval (rings): 3  
Call Park Timeout Interval (minutes): 10  
Off-Premises Tone Detect Timeout Interval (seconds): 20  
AAR/ARS Dial Tone Required? y  
Music/Tone on Hold: none  
Music (or Silence) on Transferred Trunk Calls? no  
DID/Tie/ISDN Intercept Treatment: attd  
Internal Automatic Answer for Attendant Extended Calls? n  
Automatic Circuit Assurance (ACA) Enabled? n

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#### FEATURE-RELATED SYSTEM PARAMETERS

##### LEAVE WORD CALLING PARAMETERS

Maximum Number of Messages Per Station (when MSA not in service):10  
Stations with System-wide Retrieval Permission (enter extension)  
1: 2: 3: 4: 5:  
6: 7: 8: 9: 10:

WARNING! SEE USER DOCUMENTATION BEFORE CHANGING TTI STATE  
Terminal Translation Initialization (TTI) Enabled? n

External Coverage Treatment for Transferred Incoming Calls? n

SECURITY VIOLATION NOTIFICATION (SVN) PARAMETERS HAVE MOVED TO  
THE SYSTEM-PARAMETERS SECURITY SCREEN

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FEATURE-RELATED SYSTEM PARAMETERS

Reserved Slots for Attendant Priority Queue: 5  
Time before Off-hook Alert: 10  
Emergency Access Redirection Extension:  
Service Observing Warning Tone? y  
Number of Emergency Calls Allowed in Attendant Queue: 5  
Call Pickup Alerting? n  
Deluxe Paging and Call Park Timeout to Originator? n  
Controlled Outward Restriction Intercept Treatment: tone  
Controlled Termination Restriction (Do Not Disturb): tone  
Controlled Station to Station Restriction: tone

AUTHORIZATION CODE PARAMETERS

Authorization Codes Enabled?  
Authorization Code Length:  
Authorization Code Cancellation Symbol: #  
Attendant Time Out Flag? n  
Display Authorization Code? y

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FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS

System Printer Extension: Lines Per Page: 60

SYSTEM-WIDE PARAMETERS

Switch Name:

CALL CENTER SYSTEM PARAMETERS

Direct Agent Announcement Extension:  
Direct Agent Announcement Delay:  
Converse Delay Data1: 0 Data2: 2  
Direct Agent Announcement Extension: Converse Pulse ON: 100 OFF: 70  
Prompting Timeout (secs): 10

CALL MANAGEMENT SYSTEM PARAMETERS

BCMS/VuStats Measurement Interval: hour  
BCMS/VuStats Abandon Call Timer (seconds): Validate Login IDs? n  
ACD Login Identification Length: Adjunct CMS Release:

MALICIOUS CALL TRACE PARAMETERS

Apply MCT Warning Tone? n MCT Voice Recorder Trunk Group:

FEATURE-RELATED SYSTEM PARAMETERS

Public Network Trunks on Conference Call: 5                      Auto Start? n  
Conference Parties with Public Network Trunks: 6                      Auto Hold? n  
Conference Parties without Public Network Trunks: 6                      Attendant Tone? y  
Night Service Disconnect Timer (seconds): 180                      Bridging Tone? n  
Short Interdigit Timer (seconds): 3                      Conference Tone? n  
Unanswered DID Call Timer (seconds):                      Intrusion Tone? n  
Line Intercept Tone Timer (seconds): 30  
DID Busy Treatment: tone  
Allow AAR/ARS Access from DID/DIOD? n

DISTINCTIVE AUDIBLE ALERTING

Internal: 1    External: 2    Priority: 3  
Attendant Originated Calls: external

FEATURE-RELATED SYSTEM PARAMETERS

Pull Transfer: n                      Update Transferred Ring Pattern? n  
Outpulse Without Tone? y                      Wait Answer Supervision Timer? y  
Repetitive Call Waiting Tone? n  
Allow Conference via Flash? y  
Vector Disconnect Timer (min):                      Network Feedback During Tone Detection? y  
Hear Zip Tone Following VOA? n  
Intercept Treatment On Failed Trunk Transfers? n  
Station Tone Forward Disconnect: silence  
Level Of Tone Detection: precise

RECALL TIMING

Flashhook Interval? y                      Upper Bound (msec): 1000  
Lower Bound (msec): 200

ENHANCED DCS

Enhanced DCS Enabled? n  
Apply Intercept Locally? y                      Enforce PNT-to-PNT Restrictions? n

## Multifrequency-Signaling-Related System Parameters

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### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

```

Incoming Call Type: group-ii-mfc
Outgoing Call Type: group-ii-mfc
Maintenance Call Type: none
Test Call Extension:
Interdigit Timer (sec): 10
Outgoing Forward Signal Present Timer (sec): 15
Outgoing Forward Signal Absent Timer (sec): 30
Multifrequency Signaling Incoming Intercept Treatment? n
Received Signal Gain(-Loss) (dB): 0
Transmitted Signal Gain(-Loss) (dB): -3

ANI Prefix:
ANI for PBX:
Next ANI Digit: send-ani
ANI Prefix:          Collect All Digits Before Seizure? n
                    Request Incoming ANI (non-AAR/ARS)? n
                    Called Party Category: user-type
                    Use COR for Calling Party Category? n
```

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### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

INCOMING FORWARD SIGNAL TYPES  
(Tones from CO)

INCOMING BACKWARD SIGNAL TYPES  
(Tones to CO)

Group-I	Group-II	Group-A	Group-B
11: ignored	1: normal	1: next-digit	1: free
12: ignored	2: normal	3: end-of-dial	2: busy
13: ignored	3: normal		4: congestion
14: ignored	4: normal		7: intercept
15: ignored	5: normal		
	6: normal		
	7: normal		
	8: normal		
	9: normal		
	10: normal		
	11: normal		
	12: normal		
	13: normal		
	14: normal		
	15: normal		

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

OUTGOING FORWARD SIGNAL TYPES  
(Tones to CO)

Group-I	Group-II
12: ani-not-avail	2: normal
15: end-of-ani	1: attendant
	6: data-call

OUTGOING BACKWARD SIGNAL TYPES  
(Tones from CO)

Group-A	Group-B
1: next-digit	1: free
2: congestion	2: busy
3: end-of-dial	3: congestion
4: congestion	4: congestion
5: send-ani	5: congestion
6: congestion	6: free
7: last-2-digits	7: intercept
8: last-3-digits	8: congestion
9: congestion	9: congestion
10: congestion	10: congestion
11: congestion	11: congestion
12: congestion	12: congestion
13: congestion	13: congestion
14: congestion	14: congestion
15: congestion	15: congestion

## System Parameters Country-Options

SYSTEM PARAMETERS COUNTRY-OPTIONS

Companding Mode: A-Law  
440Hz PBX-dial Tone? y  
Digital Loss Plan: 1  
Analog Ringing Cadence: 1

Base Tone Generator Set: 1  
440Hz Secondary-dial Tone? y

TONE DETECTION PARAMETERS

Tone Detection Mode: 6  
Interdigit Pause: short

SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone
	Step	(Frequency/Level)
Busy-Tone	1:	400/-11.0Hz      Duration (msec) 500
	2:	Silence              Duration (msec) 500
	3:	Goto                      Step 1
	4:	
	5:	
	6:	
	7:	
	8:	
	9:	
	10:	

## Trunk Group Administration

---

### CO Trunk Group Administration

TRUNK GROUP

Group Number:	Group Type: co	CDR Reports: y
Group Name: OUTSIDE CALL	COR: 1	TN: 1      TAC:
Direction: two-way	Outgoing Display? n	
Dial Access? n	Busy Threshold: 99	Night Service:
Queue Length: 0	Country: 1	Incoming Destination:
Comm Type: voice	Auth Code? n	Digit Absorption List:
Prefix-1? n	Trunk Flash? n	Toll Restricted? n

TRUNK PARAMETERS

Trunk Type: loop-start		
Outgoing Dial Type: tone		Cut-Through? n
Trunk Termination: rc		Disconnect Timing(msec): 500
Auto Guard? n	Call Still Held? n	Sig Bit Inversion: none
Terminal Balanced? n		RA Trunk Loss: 0db
	Trunk Gain: high	
Disconnect Supervision - In? n	Out? n	Cyclical Hunt? n
Answer Supervision Timeout: 10		Receive Answer Supervision? n

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TRUNK FEATURES

ACA Assignment? n Measured: none Maintenance Tests? y  
Data Restriction? n  
Abandoned Call Search? n  
Suppress # Outpulsing? n

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TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500 Outgoing Disconnect(msec): 500  
Outgoing Dial Guard(msec): 1600  
Incoming Glare Guard(msec): 1500 Outgoing Glare Guard(msec): 1500  
Ringing Monitor(msec): 5200 Incoming Seizure(msec): 500  
Outgoing End of Dial(sec): 10 Outgoing Seizure Response(sec): 5  
Programmed Dial Pause(msec): 1500  
Flash Length(msec): 540

END TO END SIGNALING

Tone(msec): 350 Pause(msec): 150

OUTPULSING INFORMATION

PPS: 10 Make(msec): 40 Break(msec): 60 PPM? n

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TRUNK GROUP

Administered Members (min/max): 0/0  
Total Administered Members: 0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							

## DIOD Trunk Group Administration

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### TRUNK GROUP

Group Number:                                    Group Type: diod                                    CDR Reports: y  
Group Name: OUTSIDE CALL                                    COR: 1                                    TN: 1                                    TAC:GG  
Direction: two-way                                    Outgoing Display? n  
Dial Access? n                                    Busy Threshold: 99  
Queue Length: 0                                    Country: 1  
Prefix-1? n                                    Auth Code? n                                    Digit Absorption List:  
Trunk Flash? n                                    Toll Restricted? n

### TRUNK PARAMETERS

Trunk Type: immed-start  
Outgoing Dial Type: mf                                    Incoming Dial Type: mf  
Trunk Termination: rc  
Digit Treatment:                                    Digits:  
Expected Digits:                                    Sig Bit Inversion: none  
Terminal Balanced? n                                    RA Trunk Loss: 0db  
Trunk Gain: high                                    Drop Treatment: silence  
Disconnect Supervision - In? y Out? n  
Answer Supervision Timeout: 10                                    Receive Answer Supervision? n

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### TRUNK FEATURES

ACA Assignment? n                                    Measured: none                                    Maintenance Tests? y  
Data Restriction? n  
Suppress # Outpulsing? n



TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	Outgoing Disconnect(msec): 500
Incoming Dial Guard(msec): 70	Outgoing Dial Guard(msec): 1600
Incoming Glare Guard(msec): 1500	Outgoing Glare Guard(msec): 1500
Ringing Monitor(msec): 5200	Incoming Seizure(msec): 500
Outgoing End of Dial(sec): 10	Outgoing Seizure Response(sec): 5
Programmed Dial Pause(msec): 1500	
Flash Length(msec):	Incoming Incomplete Dial Alarm(sec): 255

END TO END SIGNALING

Tone(msec): 350                      Pause(msec): 150

OUTPULSING INFORMATION

PPS: 10      Make(msec): 40      Break(msec): 60      PPM? n

TRUNK GROUP

Administered Members (min/max): 0/0  
Total Administered Members: 0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							

**DID Trunk Group Administration**

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## TRUNK GROUP

Group Number:	Group Type: did	CDR Reports: y
Group Name: OUTSIDE CALL	COR: 1	TN: 1
	Country: 1	TAC:
	Auth Code? n	

## TRUNK PARAMETERS

Trunk Type: immed-start	Incoming Rotary Timeout(sec): 5
Incoming Dial Type: tone	
Trunk Termination: rc	Disconnect Timing(msec): 500
Digit Treatment:	Digits:
Expected Digits:	Sig Bit Inversion: none
Terminal Balanced? n	RA Trunk Loss: 0db
Extended Loop Range? n	Trunk Gain: high
	Drop Treatment: silence
Disconnect Supervision - In? y	

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## TRUNK FEATURES

ACA Assignment? n	Measured: none	Maintenance Tests? y
Data Restriction? n		
Suppress # Outpulsing? n		

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## TRUNK GROUP

## ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	
Incoming Dial Guard(msec): 70	
Flash Length(msec): 540	Incoming Incomplete Dial Alarm(sec): 255

## END TO END SIGNALING

Tone(msec): 350	Pause(msec): 150
-----------------	------------------

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TRUNK GROUP

Administered Members (min/max): 0/0

Total Administered Members: 0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name
1:			
2:			
3:			

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DS1 CIRCUIT PACK

Location:

Name: E-1CO, DID, DIOD

Bit Rate: 2.048

Line Coding: hdb3

Signaling Mode: CAS

Interconnect: CO

Country Protocol: 7

Interface Companding: alaw

CRC? n

Idle Code: 11111111

MAINTENANCE PARAMETERS

Slip Detection? n

Near-end CSU Type: other

## Brazil

[Table 19](#) shows the recommended circuit packs.

**Table 19. Recommended and Available CPs in Brazil**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	127V/60Hz 220V/60Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D TN748D
Tone Clock	> TN2182B TN780
R2MFC Circuit	> TN744D TN744B
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	> TN750C TN750B
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	
Analog CO Trunk (w/PPM)	> TN465C TN465B
4 Wire Tie Trunk	> TN2140B
2 Wire Tie Trunk	> TN439
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E TN464D TN464C
Digital Tie Trunk	> TN464F TN464E TN464D TN464C
Digital PRI CO Trunk	> TN464F TN464E TN464D TN464C
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

Table 19. Recommended and Available CPs in Brazil — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	TN2198
BRI-ST Line	TN556B

## Country-Specific Feature

When not using the Block Collect Call feature, the Country field should be **16**.

**NOTE:**

Block Collect Call requires TN753 v22 or later for DID trunks, TN464F v9 or later for DS1 trunks, and TN465C (all vintages) for analog CO trunks.

**NOTE:**

The 900 ohms feature requires TN465CV2 or later for analog CO circuit packs, and either TN2155V3 or later or TN2183BV4 or later for analog line circuit packs.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the ARS field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc:	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

### Feature-Related System Parameters

Page 1 of 6

#### FEATURE-RELATED SYSTEM PARAMETERS

```
Trunk-to-Trunk Transfer: all
Coverage - Subsequent Redirection No Answer Interval: 2
Coverage - Caller Response Interval (seconds): 4
Keep Held SBA at Coverage Point? y
Automatic Callback - No Answer Timeout Interval (rings): 3
Call Park Timeout Interval (minutes): 10
Off-Premises Tone Detect Timeout Interval (seconds): 20
AAR/ARS Dial Tone Required? y
Music/Tone on Hold: none
Music (or Silence) on Transferred Trunk Calls? no
DID/Tie/ISDN Intercept Treatment: attd
Internal Automatic Answer for Attendant Extended Calls? n
Automatic Circuit Assurance (ACA) Enabled? n
```

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FEATURE-RELATED SYSTEM PARAMETERS

LEAVE WORD CALLING PARAMETERS

Maximum Number of Messages Per Station (when MSA not in service):10

Stations with System-wide Retrieval Permission (enter extension)

1:           2:           3:           4:           5:  
6:           7:           8:           9:           10:

WARNING!     SEE USER DOCUMENTATION BEFORE CHANGING TTI STATE

Terminal Translation Initialization (TTI) Enabled? n

External Coverage Treatment for Transferred Incoming Calls? n

SECURITY VIOLATION NOTIFICATION (SVN) PARAMETERS HAVE MOVED TO  
THE SYSTEM-PARAMETERS SECURITY SCREEN

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FEATURE-RELATED SYSTEM PARAMETERS

Reserved Slots for Attendant Priority Queue: 5

Time before Off-hook Alert: 10

Emergency Access Redirection Extension:

Service Observing Warning Tone? y

Number of Emergency Calls Allowed in Attendant Queue: 5

Call Pickup Alerting? n

Deluxe Paging and Call Park Timeout to Originator? n

Controlled Outward Restriction Intercept Treatment: tone

Controlled Termination Restriction (Do Not Disturb): tone

Controlled Station to Station Restriction: tone

AUTHORIZATION CODE PARAMETERS

Authorization Codes Enabled?

Authorization Code Length:

Authorization Code Cancellation Symbol: #

Attendant Time Out Flag? n

Display Authorization Code? y

FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS

System Printer Extension: Lines Per Page: 60

SYSTEM-WIDE PARAMETERS

Switch Name:

CALL CENTER SYSTEM PARAMETERS

Direct Agent Announcement Extension: Direct Agent Announcement Delay:  
Converse Delay Data1: 0 Data2: 2  
Direct Agent Announcement Extension: Converse Pulse ON: 100 OFF: 70  
Prompting Timeout (secs): 10

CALL MANAGEMENT SYSTEM PARAMETERS

BCMS/VuStats Measurement Interval: hour  
BCMS/VuStats Abandon Call Timer (seconds): Validate Login IDs? n  
ACD Login Identification Length: Adjunct CMS Release:

MALICIOUS CALL TRACE PARAMETERS

Apply MCT Warning Tone? n MCT Voice Recorder Trunk Group:

FEATURE-RELATED SYSTEM PARAMETERS

Public Network Trunks on Conference Call: 5 Auto Start? n  
Conference Parties with Public Network Trunks: 6 Auto Hold? n  
Conference Parties without Public Network Trunks: 6 Attendant Tone? y  
Night Service Disconnect Timer (seconds): 180 Bridging Tone? n  
Short Interdigit Timer (seconds): 3 Conference Tone? n  
Unanswered DID Call Timer (seconds): Intrusion Tone? n  
Line Intercept Tone Timer (seconds): 30  
DID Busy Treatment: tone  
Allow AAR/ARS Access from DID/DIOD? n

DISTINCTIVE AUDIBLE ALERTING

Internal: 1 External: 2 Priority: 3  
Attendant Originated Calls: external



FEATURE-RELATED SYSTEM PARAMETERS

Pull Transfer: n	Update Transferred Ring Pattern? n
Outpulse Without Tone? n	Wait Answer Supervision Timer? n
	Repetitive Call Waiting Tone? n
Allow Conference via Flash? y	
Vector Disconnect Timer (min):	Network Feedback During Tone Detection? y
Hear Zip Tone Following VOA? n	
Intercept Treatment On Failed Trunk Transfers? n	
Station Tone Forward Disconnect: busy	
Level Of Tone Detection: precise	
RECALL TIMING	
Flashhook Interval? y	Upper Bound (msec): 1000
	Lower Bound (msec): 200
ENHANCED DCS	
Enhanced DCS Enabled? n	
Apply Intercept Locally? y	Enforce PNT-to-PNT Restrictions? n

## Multifrequency-Signaling-Related System Parameters

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

	Incoming Call Type: group-ii-mfc
	Outgoing Call Type: group-ii-mfc
	Maintenance Call Type: none
	Test Call Extension:
	Interdigit Timer (sec): 7
	Outgoing Forward Signal Present Timer (sec): 20
	Outgoing Forward Signal Absent Timer (sec): 30
Multifrequency Signaling Incoming Intercept Treatment? n	
	Received Signal Gain(-Loss) (dB): 0
	Transmitted Signal Gain(-Loss) (dB): -3
ANI Prefix:	
ANI for PBX:	
Next ANI Digit: send-ani	
ANI Prefix:	Collect All Digits Before Seizure? n
	Request Incoming ANI (non-AAR/ARS)? n
	Called Party Category: user-type
	Use COR for Calling Party Category? n

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

INCOMING FORWARD SIGNAL TYPES  
(Tones from CO)

Group-I	Group-II
11: ignored	1: normal
12: ani-not-avail	2: normal
13: ignored	3: normal
14: ignored	4: normal
15: and-of-ani	5: attendant
	6: data-call
	7: normal
	8: send-intercept
	9: normal
	10: normal
	11: normal
	12: normal
	13: normal
	14: normal
	15: normal

INCOMING BACKWARD SIGNAL TYPES  
(Tones to CO)

Group-A	Group-B
1: next-digit	1: free
3: end-of-dial	2: busy
4: congestion	4: congestion
5: send-ani	7: intercept

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

OUTGOING FORWARD SIGNAL TYPES  
(Tones to CO)

Group-I	Group-II
12: ani-not-avail	2: normal
15: end-of-ani	1: attendant
	6: data-call

OUTGOING BACKWARD SIGNAL TYPES  
(Tones from CO)

Group-A	Group-B
1: next-digit	1: free
2: restart	2: busy
3: end-of-dial	3: congestion
4: congestion	4: congestion
5: send-ani	5: free
6: congestion	6: free
7: last-2-digits	7: intercept
8: last-3-digits	8: congestion
9: last digit	9: congestion
10: congestion	10: congestion
11: congestion	11: congestion
12: congestion	12: congestion
13: congestion	13: congestion
14: congestion	14: congestion
15: congestion	15: congestion

## System Parameters Country-Options

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### SYSTEM PARAMETERS COUNTRY-OPTIONS

```
Companding Mode: Mu-Law                Base Tone Generator Set: 1
440Hz PBX-dial Tone? n                  440Hz Secondary-dial Tone? n
Digital Loss Plan: 1                    Version of Digital Loss Plan: _
Analog Ringing Cadence: 3               Set Layer 1 timer T1 to 30 seconds? n
Analog Line Transmission: _
64/84xx Display Character Set: Roman
```

### STONE DETECTION PARAMETERS

```
Tone Detection Mode: 1
Interdigit Pause: short
```

In Analog Line Transmission field, set to **23** for 900 ohms or set to **16** for 600 ohms.

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### SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone
	Step	(Frequency/Level)
PBX-Dial	1:	(425/-11)(950)
	2:	(silence)(50)
	3:	(goto)(1)
	4:	
	5:	
	6:	
	7:	
	8:	
	9:	
	10:	

SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone
	Step	(Frequency/Level)
Secondary Dial	1:	(425/-11)(5000)
	2:	(goto)(1)
	3:	
	4:	
	5:	
	6:	
	7:	
	8:	
	9:	
	10:	

SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone
	Step	(Frequency/Level)
Ringback	1:	(425/-11)(1000)
	2:	(silence)(4000)
	3:	(goto)(1)
	4:	
	5:	
	6:	
	7:	
	8:	
	9:	
	10:	

SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone
	Step	(Frequency/Level)
Busy	1:	(425/-11)(250)
	2:	(silence)(250)
	3:	(goto)(1)
	4:	
	5:	
	6:	
	7:	
	8:	
	9:	
	10:	

SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone
	Step	(Frequency/Level)
Intercept	1:	(425/-11)(100)
	2:	(silence)(100)
	3:	(goto)(1)
	4:	
	5:	
	6:	
	7:	
	8:	
	9:	
	10:	

SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone
	Step	(Frequency/Level)
Intrusion	1:	(425/-17.25)(50)
	2:	(silence)(2000)
	3:	(goto)(1)
	4:	
	5:	
	6:	
	7:	
	8:	
	9:	
	10:	

SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone
	Step	(Frequency/Level)
Hold	1:	(425/-11)(50)
	2:	(silence)(150)
	3:	(425/-11)(50)
	4:	(silence)(12750)
	5:	(goto)(1)
	6:	
	7:	
	8:	
	9:	
	10:	

SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone
	Step	(Frequency/Level)
Conference	1:	(425/-17.25)(50)
	2:	(silence)(12750)
	3:	(goto)(1)
	4:	
	5:	
	6:	
	7:	
	8:	
	9:	
	10:	

## Trunk Group Administration

### CO Trunk Group Administration

TRUNK GROUP

Group Number:	Group Type: co	CDR Reports: y
Group Name:	COR: 1	TN: 1 TAC:
Direction: two-way	Outgoing Display? n	Night Service:
Dial Access? n	Busy Threshold: 99	Incoming Destination:
Queue Length: 0	Country: 1	Digit Absorption List:
Comm Type: voice	Auth Code? n	Toll Restricted? n
Prefix-1? n	Trunk Flash? n	

TRUNK PARAMETERS

Trunk Type: loop-start	Cut-Through? n
Outgoing Dial Type: tone	Disconnect Timing(msec): 500
Trunk Termination: 600	
Auto Guard? y	Call Still Held? y Sig Bit Inversion: none
Terminal Balanced? y	RA Trunk Loss: 0db
	Trunk Gain: high
Disconnect Supervision - In? n Out? n	Cyclical Hunt? n
Answer Supervision Timeout: 10	Receive Answer Supervision? n

For 900 ohm operation, if the Country field is **16** or **23**, set the Version field to **a** (if Country 5 signaling is to be used) or **b** (if Country 1 signaling is to be used).



**NOTE:**

The following is valid only on TN465CV2 or later circuit packs.

To enable 600-ohm operation, set the:

- Country field set to **16** or **23**
- Version field to **a**

To enable 900-ohm operation, set the:

- Country field set to **16** or **23**
- Version field to **b**

Page 2 of 10

TRUNK FEATURES

ACA Assignment? n Measured: none  
Maintenance Tests? y  
Data Restriction? n  
Abandoned Call Search? n  
Suppress # Outpulsing? y

Page 3 of 10

TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500 Outgoing Disconnect(msec): 500  
Outgoing Dial Guard(msec): 1600  
Incoming Glare Guard(msec): 1500 Outgoing Glare Guard(msec): 1500  
Ringing Monitor(msec): 5200 Incoming Seizure(msec): 500  
Outgoing End of Dial(sec): 10 Outgoing Seizure Response(sec): 5  
Programmed Dial Pause(msec): 1500  
Flash Length(msec): 540

END TO END SIGNALING

Tone(msec): 350 Pause(msec): 150

OUTPULSING INFORMATION

PPS: 10 Make(msec): 40 Break(msec): 60 PPM? n



**NOTE:**

If the Country field is **23**, Block Collect Call is enabled. Set the Flash Length field to **2000**.



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## TRUNK GROUP

Administered Members (min/max): 0/0  
Total Administered Members: 0

## GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							

## DIOD Trunk Group Administration

Page 1 of 10

## TRUNK GROUP

Group Number:	Group Type: diod	CDR Reports: y
Group Name:	COR: 1	TN: 1 TAC:
Direction: two-way	Outgoing Display? n	
Dial Access? n	Busy Threshold: 99	
Queue Length: 0	Country: 16	
Prefix-1? n	Auth Code? n	Digit Absorption List:
	Trunk Flash? n	Toll Restricted? n

## TRUNK PARAMETERS

Trunk Type: immed-start	
Outgoing Dial Type: mf	Incoming Dial Type: mf
Trunk Termination: 600	
Digit Treatment:	Digits:
Expected Digits:	Sig Bit Inversion: none
Terminal Balanced? y	RA Trunk Loss: 0db
	Drop Treatment: busy
Trunk Gain: high	
Disconnect Supervision - In? y Out? n	
Answer Supervision Timeout: 10	Receive Answer Supervision? n

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## TRUNK FEATURES

ACA Assignment? n	Measured: none	
		Maintenance Tests? y
	Data Restriction? n	
Suppress # Outpulsing? y		

TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	Outgoing Disconnect(msec): 500
Incoming Dial Guard(msec): 70	Outgoing Dial Guard(msec): 1600
Incoming Glare Guard(msec): 1500	Outgoing Glare Guard(msec): 1500
Ringing Monitor(msec): 5200	Incoming Seizure(msec): 500
Outgoing End of Dial(sec): 10	Outgoing Seizure Response(sec): 5
Programmed Dial Pause(msec): 1500	
Flash Length(msec):	Incoming Incomplete Dial Alarm(sec): 255

END TO END SIGNALING

Tone(msec): 350                      Pause(msec): 150

OUTPULSING INFORMATION

PPS: 10      Make(msec): 40      Break(msec): 60      PPM? n

TRUNK GROUP

Administered Members (min/max): 0/0  
Total Administered Members: 0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							



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```
TRUNK GROUP
Administered Members (min/max): 0/0
Total Administered Members: 0
GROUP MEMBER ASSIGNMENTS
Port      Code      Sfx      Name
1:
2:
3:
```

## Digital Trunk Administration

This section does not list all possible valid administrable combinations: Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

### DS1 for CO, DID and DIOD trunks to the PTT using digital trunks

Page 1 of 1

```
DS1 CIRCUIT PACK
Location:                               Name: E-1CO, DID, DIOD
Bit Rate: 2.048                         Line Coding: hdb3
Signaling Mode: CAS
Interconnect: CO                         Country Protocol: 16
Interface Companding: alaw                CRC? n
Idle Code: 01010100
MAINTENANCE PARAMETERS
Slip Detection? n                        Near-end CSU Type: other
```

ISDN-PRI (Private Network) Signaling This example assumes use of US Option 1 with facility associated signaling. Other feature options require changes in one or more administered items.

#### DS1 Administration screen

- Circuit Pack: TN464D (or TN464C from upgrades)
- Bit Rate: 2.048
- Interface Companding: A-law

- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Country Protocol: 1
- Connect: pbx
- Interface: user
- CRC: No
- Idle Code: 01010100

Signaling Group screen

- Associated Signaling: Yes
- Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)

Trunk Group Administration screen

- Group Type: isdn-pri
- Service Type: tie

ISDN-PRI (Public Network)

Not available for this country.

## **Canada & U.S.**

[Table 20](#) shows the recommended circuit packs.

**Table 20. Recommended and Available CPs in Canada & U.S.**

<b>Equipment</b>	<b>Equipment Type</b>
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	120V/60Hz 208V/60Hz 240V/60Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN748C
Tone Clock	> TN2182B TN780 TN768
R2MFC Circuit	n/a
Speech Synthesizer	> TN725B
Call Classifier	> TN2182B, > TN744D TN744B
Announcement	TN750C TN750B TN750
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	n/a
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D TN763C TN763B
Digital CO/DID Trunk	> TN464F TN464E TN464D TN767
Digital Tie Trunk	> TN464F TN464E TN464D TN767 TN722B
Digital PRI CO Trunk	> TN464F TN464E TN464D TN767
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B TN746
4 Wire Digital Line	> TN754B

*Continued on next page*

**Table 20. Recommended and Available CPs in Canada & U.S. — Continued**

Equipment	Equipment Type
2 Wire Digital Line	> TN2224 TN2181
Data Line	> TN726B
BRI-U Line	TN2198
BRI-ST Line	TN556B

### Administration

All timers and option selections default to the values appropriate for operation in the US. Whenever a Country Code is requested, use Code 1.<sup>3</sup>

3. The default Country Code value is always "1" (US).

## Chile

[Table 21](#) shows the recommended circuit packs.

**Table 21. Recommended and Available CPs in Chile**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN748C
Tone Clock	> TN2182B TN780 TN768
R2MFC Circuit	
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	> TN750C TN750B
Analog DID Trunk	
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E TN464D TN464C
Digital Tie Trunk	> TN464F TN464E TN464D TN464C
Digital PRI CO Trunk	
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*



Table 21. Recommended and Available CPs in Chile — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	> TN2224 TN2181
Data Line	
BRI-U Line	
BRI-ST Line	

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

### ☰ NOTE:

Block Collect Call requires TN753 v22 or later for DID trunks, and TN464F v9 or later for DS1 trunks, and TN465C (all vintages) for analog CO trunks.

#### ■ ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. These defaults were intended for U.S. operation and certain values are likely to be inappropriate internally. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.

Lucent recommends the following call types be used:

<code>int:</code>	For all international numbers.
<code>natl:</code>	For all national PN numbers.
<code>pubu:</code>	For all other external (that is, not extensions) numbers.

## System Parameters Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

### Feature-related System Parameters

Page 1 of 6

#### FEATURE-RELATED SYSTEM PARAMETERS

Trunk-to-Trunk Transfer: all  
Coverage - Subsequent Redirection No Answer Interval: 2  
Coverage - Caller Response Interval (seconds): 4  
Keep Held SBA at Coverage Point? y  
Automatic Callback - No Answer Timeout Interval (rings): 3  
Call Park Timeout Interval (minutes): 10  
Off-Premises Tone Detect Timeout Interval (seconds): 20  
AAR/ARS Dial Tone Required? y  
Music/Tone on Hold: none  
Music (or Silence) on Transferred Trunk Calls? no  
DID/Tie/ISDN Intercept Treatment: attd  
Internal Automatic Answer for Attendant Extended Calls? n  
Automatic Circuit Assurance (ACA) Enabled? n

Page 2 of 6

#### FEATURE-RELATED SYSTEM PARAMETERS

##### LEAVE WORD CALLING PARAMETERS

Maximum Number of Messages Per Station (when MSA not in service):10  
Stations with System-wide Retrieval Permission (enter extension)  
1:            2:            3:            4:            5:  
6:            7:            8:            9:            10:

WARNING!    SEE USER DOCUMENTATION BEFORE CHANGING TTI STATE  
Terminal Translation Initialization (TTI) Enabled? n

External Coverage Treatment for Transferred Incoming Calls? n

SECURITY VIOLATION NOTIFICATION (SVN) PARAMETERS HAVE MOVED TO  
THE SYSTEM-PARAMETERS SECURITY SCREEN

Page 3 of 6

FEATURE-RELATED SYSTEM PARAMETERS

Reserved Slots for Attendant Priority Queue: 5  
Time before Off-hook Alert: 10  
Emergency Access Redirection Extension:  
Service Observing Warning Tone? y  
Number of Emergency Calls Allowed in Attendant Queue: 5  
Call Pickup Alerting? n  
Deluxe Paging and Call Park Timeout to Originator? n  
Controlled Outward Restriction Intercept Treatment: tone  
Controlled Termination Restriction (Do Not Disturb): tone  
Controlled Station to Station Restriction: tone

AUTHORIZATION CODE PARAMETERS

Authorization Codes Enabled?  
Authorization Code Length:  
Authorization Code Cancellation Symbol: #  
Attendant Time Out Flag? n  
Display Authorization Code? y

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FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS

System Printer Extension: Lines Per Page: 60

SYSTEM-WIDE PARAMETERS

Switch Name:

CALL CENTER SYSTEM PARAMETERS

Direct Agent Announcement Extension:  
Direct Agent Announcement Delay:  
Converse Delay Data1: 0 Data2: 2  
Direct Agent Announcement Extension: Converse Pulse ON: 100 OFF: 70  
Prompting Timeout (secs): 10

CALL MANAGEMENT SYSTEM PARAMETERS

BCMS/VuStats Measurement Interval: hour  
BCMS/VuStats Abandon Call Timer (seconds): Validate Login IDs? n  
ACD Login Identification Length: Adjunct CMS Release:

MALICIOUS CALL TRACE PARAMETERS

Apply MCT Warning Tone? n MCT Voice Recorder Trunk Group:

Page 5 of 6

FEATURE-RELATED SYSTEM PARAMETERS

```

Public Network Trunks on Conference Call: 5      Auto Start? n
Conference Parties with Public Network Trunks: 6   Auto Hold? n
Conference Parties without Public Network Trunks: 6  Attendant Tone? y
Night Service Disconnect Timer (seconds): 180     Bridging Tone? n
    Short Interdigit Timer (seconds): 3           Conference Tone? n
Unanswered DID Call Timer (seconds):             Intrusion Tone? n
Line Intercept Tone Timer (seconds): 30
    DID Busy Treatment: tone
Allow AAR/ARS Access from DID/DIOD? n
    
```

DISTINCTIVE AUDIBLE ALERTING

```

Internal: 1 External: 2 Priority: 3
Attendant Originated Calls: external
    
```

Page 6 of 6

FEATURE-RELATED SYSTEM PARAMETERS

```

Pull Transfer: n Update Transferred Ring Pattern? n
Outpulse Without Tone? y Wait Answer Supervision Timer? n
Allow Conference via Flash? y Repetitive Call Waiting Tone? n
Vector Disconnect Timer (min): Network Feedback During Tone Detection? y
Hear Zip Tone Following VOA? n

Intercept Treatment On Failed Trunk Transfers? n
    Station Tone Forward Disconnect: silence
    Level Of Tone Detection: precise
    
```

RECALL TIMING

```

Flashhook Interval? y Upper Bound (msec): 1000
Lower Bound (msec): 200
    
```

ENHANCED DCS

```

Enhanced DCS Enabled? n Enforce PNT-to-PNT Restrictions? n
Apply Intercept Locally? y
    
```

## Multifrequency-Signaling-Related System Parameters

Page 1 of 3

### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

```

Incoming Call Type: group-ii-mfc
Outgoing Call Type: group-ii-mfc
Maintenance Call Type: none
Test Call Extension:
Interdigit Timer (sec): 10
Outgoing Forward Signal Present Timer (sec): 15
Outgoing Forward Signal Absent Timer (sec): 30
Multifrequency Signaling Incoming Intercept Treatment? n
Received Signal Gain(-Loss) (dB): 0
Transmitted Signal Gain(-Loss) (dB): -3

ANI Prefix:
ANI for PBX:
Next ANI Digit: send-ani
ANI Prefix:          Collect All Digits Before Seizure? y
                    Request Incoming ANI (non-AAR/ARS)? y
                    Called Party Category: call-type
                    Use COR for Calling Party Category? n
    
```

Page 2 of 3

### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

INCOMING FORWARD SIGNAL TYPES  
 (Tones from CO)

INCOMING BACKWARD SIGNAL TYPES  
 (Tones to CO)

Group-I	Group-II	Group-A	Group-B
11: ignored	1: normal	1: next-digit	1: free
12: ani-not-avail	2: normal	3: end-of-dial	2: intercept
13: ignored	3: normal	5: send-ani	3: busy
14: ignored	4: normal		4: congestion
15: end-of-ani	5: normal		
	6: data-call		
	7: normal		
	8: normal		
	9: normal		
	10: normal		
	11: normal		
	12: normal		
	13: normal		
	14: normal		
	15: normal		

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

OUTGOING FORWARD SIGNAL TYPES  
(Tones to CO)

Group-I	Group-II
12: ani-not-avail	2: normal
15: end-of-ani	1: attendant
	6: data-call

OUTGOING BACKWARD SIGNAL TYPES  
(Tones from CO)

Group-A	Group-B
1: next-digit	1: free
2: last-digit	2: intercept
3: end-of-dial	3: busy
4: congestion	4: congestion
5: send-ani	5: free
6: setup-sppath	6: free
7: last-2-digits	7: intercept
8: last-3-digits	8: congestion
9: congestion	9: congestion
10: congestion	10: congestion
11: congestion	11: congestion
12: congestion	12: congestion
13: congestion	13: congestion
14: congestion	14: congestion
15: congestion	15: congestion

## System Parameters Country-Options

SYSTEM PARAMETERS COUNTRY-OPTIONS

Companding Mode: Mu-Law  
440Hz PBX-dial Tone? n  
Digital Loss Plan: 1  
Analog Ringing Cadence: 1

Base Tone Generator Set: 1  
440Hz Secondary-dial Tone? y

TONE DETECTION PARAMETERS

Tone Detection Mode: 6  
Interdigit Pause: short

## Trunk Group Administration

---

### CO Trunk Group Administration

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#### TRUNK GROUP

Group Number:	Group Type: co	CDR Reports: y
Group Name: OUTSIDE CALL	COR: 1	TN: 1 TAC:
Direction: two-way	Outgoing Display? n	Night Service:
Dial Access? n	Busy Threshold: 99	Incoming Destination:
Queue Length: 0	Country: 1	Digit Absorption List:
Comm Type: voice	Auth Code? n	Toll Restricted? n
Prefix-1? n	Trunk Flash? n	

#### TRUNK PARAMETERS

Trunk Type: loop-start	Cut-Through? n
Outgoing Dial Type: tone	Disconnect Timing(msec): 500
Trunk Termination: rc	Auto Guard? n
	Call Still Held? n
	Sig Bit Inversion: none
	RA Trunk Loss: 0db
	Terminal Balanced? n
	Trunk Gain: high
Disconnect Supervision - In? n	Out? n
Answer Supervision Timeout: 10	Cyclical Hunt? n
	Receive Answer Supervision? n

Page 2 of 10

#### TRUNK FEATURES

ACA Assignment? n	Measured: none	Maintenance Tests? y
	Data Restriction? n	
Abandoned Call Search? n		
Suppress # Outpulsing? n		

Page 3 of 10

TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	Outgoing Disconnect(msec): 500
Incoming Glare Guard(msec): 1500	Outgoing Dial Guard(msec): 1600
	Outgoing Glare Guard(msec): 1500
Ringing Monitor(msec): 5200	Incoming Seizure(msec): 500
Outgoing End of Dial(sec): 10	Outgoing Seizure Response(sec): 5
Programmed Dial Pause(msec): 1500	
Flash Length(msec): 540	

END TO END SIGNALING

Tone(msec): 350	Pause(msec): 150
-----------------	------------------

OUTPULSING INFORMATION

PPS: 10	Make(msec): 40	Break(msec): 60	PPM? n
---------	----------------	-----------------	--------

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TRUNK GROUP

Administered Members (min/max):	0/0
Total Administered Members:	0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							



## DIOD Trunk Group Administration

Page 1 of 10

### TRUNK GROUP

Group Number:                      Group Type: diod                      CDR Reports: y  
Group Name: OUTSIDE CALL              COR: 95                      TN: 1                      TAC:  
Direction: two-way              Outgoing Display? n  
Dial Access? n                      Busy Threshold: 99  
Queue Length: 0                      Country: 8  
Prefix-1? n                      Auth Code? n              Digit Absorption List:  
Trunk Flash? n                      Toll Restricted? n

### TRUNK PARAMETERS

Trunk Type: immed-start  
Outgoing Dial Type: mf                      Incoming Dial Type: mf  
Trunk Termination: rc  
Digit Treatment:                      Digits:  
Expected Digits:                      Sig Bit Inversion: none  
Terminal Balanced? n                      RA Trunk Loss: 0db  
Trunk Gain: high                      Drop Treatment: silence  
Disconnect Supervision - In? y Out? n  
Answer Supervision Timeout: 10              Receive Answer Supervision? n

Page 2 of 20

### TRUNK FEATURES

ACA Assignment? n              Measured: none  
Data Restriction? n                      Maintenance Tests? y  
Suppress # Outpulsing? n

Page 3 of 10

TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	Outgoing Disconnect(msec): 500
Incoming Dial Guard(msec): 70	Outgoing Dial Guard(msec): 1600
Incoming Glare Guard(msec): 1500	Outgoing Glare Guard(msec): 1500

Ringing Monitor(msec): 5200	Incoming Seizure(msec): 500
Outgoing End of Dial(sec): 10	Outgoing Seizure Response(sec): 5
Programmed Dial Pause(msec): 1500	
Flash Length(msec):	Incoming Incomplete Dial Alarm(sec): 255

END TO END SIGNALING

Tone(msec): 350	Pause(msec): 150
-----------------	------------------

OUTPULSING INFORMATION

PPS: 10	Make(msec): 40	Break(msec): 60	PPM? n
---------	----------------	-----------------	--------

Page 4 of 10

TRUNK GROUP

GROUP MEMBER ASSIGNMENTS

				Administered Members (min/max):	0/0		
				Total Administered Members:	0		
Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							

## DID Trunk Group Administration

Page 1 of 10

### TRUNK GROUP

Group Number: Group Type: did CDR Reports: y  
Group Name: OUTSIDE CALL COR: 1 TN: 1 TAC:  
Country: 8  
Auth Code? n

### TRUNK PARAMETERS

Trunk Type: wink-start Incoming Rotary Timeout(sec): 5  
Incoming Dial Type: mf  
Trunk Termination: rc Disconnect Timing(msec): 500  
Digit Treatment: Digits:  
Expected Digits: Sig Bit Inversion: none  
Terminal Balanced? n RA Trunk Loss: 0db  
Extended Loop Range? n Trunk Gain: high Drop Treatment: silence  
Disconnect Supervision - In? y

Page 2 of 10

### TRUNK FEATURES

ACA Assignment? n Measured: none  
Data Restriction? n Maintenance Tests? y  
Suppress # Outpulsing? n

Page 3 of 10

### TRUNK GROUP

#### ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500  
Incoming Dial Guard(msec): 70  
Flash Length(msec): 540 Incoming Incomplete Dial Alarm(sec): 255

#### END TO END SIGNALING

Tone(msec): 350 Pause(msec): 150

Page 4 of 10

TRUNK GROUP

Administered Members (min/max): 0/0

Total Administered Members: 0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name
1:			
2:			
3:			

Page 1 of 1

DS1 CIRCUIT PACK

Location:

Name: E-1 DID, DIOD

Bit Rate: 2.048

Line Coding: hdb3

Signaling Mode: CAS

Interconnect: CO

Country Protocol: 8

Interface Companding: alaw

CRC? n

Idle Code: 11111111

MAINTENANCE PARAMETERS

Slip Detection? y

Near-end CSU Type: other

Page 1 of 1

DS1 CIRCUIT PACK

Location:

Name: E-1 ISDN

Bit Rate: 2.048

Line Coding: hdb3

Signaling Mode: isdn-pri

Connect: network

Country Protocol: 12

Protocol Version: a

Interface Companding: alaw

CRC? n

Idle Code: 01010100

MAINTENANCE PARAMETERS

Slip Detection? y

Near-end CSU Type: other

## China

[Table 22](#) shows the recommended circuit packs.

**Table 22. Recommended and Available CPs in China**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B
R2MFC Circuit	> TN744D
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	> TN750C
Analog DID Trunk	
Analog CO Trunk (No PPM)	
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	
2 Wire Tie Trunk	
Auxiliary Trunk	
Digital CO/DID Trunk	> TN464Fv5
Digital Tie Trunk	> TN464Fv5
Digital PRI CO Trunk	
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN2183
24 Port Analog Line	

*Continued on next page*

Table 22. Recommended and Available CPs in China — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

### Country-Specific Feature

When the Country field is **18**, the Public Network Call Priority feature (China #1 Signaling) can be administered. Specifically, Forced Disconnect, Re-ring, and Mode-of-Release Control can be administered.

### Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to **y**. You also should check all ARS/AAR defaults. These defaults were intended for U.S. operation and certain values are likely to be inappropriate internally. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.

Lucent recommends the following call types be used:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameters Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - System-Parameters Customer-Options

```

change system-parameters customer-options                Page 1 of 2
                OPTIONAL FEATURES
                ARS? y
                Page 2 of 2
                Multifrequency Signaling? y

display system-parameters country-options                Page 1 of 21   SPE A
                SYSTEM PARAMETERS COUNTRY-OPTIONS
                Companding Mode: A-Law                    Base Tone Generator Set: 18
                440Hz PBX-dial Tone? n                    440Hz Secondary-dial Tone? n
                Digital Loss Plan: 18
                Analog Ringing Cadence: 18                Set Layer 1 timer T1 to 30 seconds? n
                Analog Line Transmission: 18
TONE DETECTION PARAMETERS
                Tone Detection Mode: 4                    Dial Tone Validation Timer(msec): 600
                Interdigit Pause: long
    
```

## System-Parameters Country-Options

```
display system-parameters country-options                               Page  2 of  21  SPE A
      SYSTEM PARAMETERS COUNTRY-OPTIONS
      Tone Name      Cadence      Tone
                    Step      (Frequency/Level)
PBX-dial           1:      440/-11.0      Duration(msec): 100
                    2:      goto              Step: 1
                    3:
```

```
display system-parameters country-options                               Page  3 of  21  SPE A
      SYSTEM PARAMETERS COUNTRY-OPTIONS
      Tone Name      Cadence      Tone
                    Step      (Frequency/Level)
confirmation       1:      440/-11.0      Duration(msec): 400
                    2:      silence           Duration(msec):  50
                    3:      440/-11.0      Duration(msec): 400
                    4:      silence           Duration(msec):  50
                    5:      440/-11.0      Duration(msec): 400
                    6:      silence           Duration(msec):  50
                    7:
```

```
display system-parameters country-options                               Page  4 of  21  SPE A
      SYSTEM PARAMETERS COUNTRY-OPTIONS
      Tone Name      Cadence      Tone
                    Step      (Frequency/Level)
busy               1:      440/-11.0      Duration(msec): 350
                    2:      silence           Duration(msec): 350
                    3:      goto              Step: 1
                    4:
```

```
display system-parameters country-options                               Page  5 of  21  SPE A
      SYSTEM PARAMETERS COUNTRY-OPTIONS
      Tone Name      Cadence      Tone
                    Step      (Frequency/Level)
reorder           1:      440/-11.0      Duration(msec): 700
                    2:      silence           Duration(msec): 700
                    3:      goto              Step: 1
                    4:
```



```
display system-parameters country-options           Page 6 of 21  SPE A
SYSTEM PARAMETERS COUNTRY-OPTIONS
Tone Name      Cadence      Tone
                Step        (Frequency/Level)
ringback       1:          440/-11.0      Duration(msec): 1000
                2:          silence         Duration(msec): 4000
                3:          goto           Step: 1
                4:
                5:
```

```
display system-parameters country-options           Page 7 of 21  SPE A
SYSTEM PARAMETERS COUNTRY-OPTIONS
Tone Name      Cadence      Tone
                Step        (Frequency/Level)
intercept      1:          440/-11.0      Duration(msec): 100
                2:          silence         Duration(msec): 100
                3:          440/-11.0      Duration(msec): 100
                4:          silence         Duration(msec): 100
                5:          440/-11.0      Duration(msec): 100
                6:          silence         Duration(msec): 100
                7:          440/-11.0      Duration(msec): 400
                8:          silence         Duration(msec): 400
                9:          goto           Step: 1
                10:
```

```
display system-parameters country-options           Page 8 of 21  SPE A
SYSTEM PARAMETERS COUNTRY-OPTIONS
Tone Name      Cadence      Tone
                Step        (Frequency/Level)
intrusion      1:          440/-17.25     Duration(msec): 200
                2:          silence         Duration(msec): 200
                3:          440/-17.25     Duration(msec): 200
                4:          silence         Duration(msec): 600
                5:          goto           Step: 1
                6:
```

```
display system-parameters country-options           Page 9 of 21  SPE A
SYSTEM PARAMETERS COUNTRY-OPTIONS
Tone Name      Cadence      Tone
                Step        (Frequency/Level)
1-call-wait    1:          440/-11.0      Duration(msec): 400
                2:
```

```
display system-parameters country-options           Page 10 of 21  SPE A
SYSTEM PARAMETERS COUNTRY-OPTIONS
Tone Name      Cadence      Tone
                Step        (Frequency/Level)
2-call-wait    1:          440/-11.0      Duration(msec): 200
                2:          silence        Duration(msec): 100
                3:          440/-11.0      Duration(msec): 200
                4:
```

```
display system-parameters country-options           Page 11 of 21  SPE A
SYSTEM PARAMETERS COUNTRY-OPTIONS
Tone Name      Cadence      Tone
                Step        (Frequency/Level)
conference     1:          950/-10.0      Duration(msec): 400
                2:          silence        Duration(msec): 10000
                3:          goto          Step: 1
                4:
```

## System-Parameters Features

```
display system-parameters features                               Page 1 of 6  SPE A
      FEATURE-RELATED SYSTEM PARAMETERS
          Trunk-to-Trunk Transfer: all
Coverage - Subsequent Redirection No Answer Interval: 2
      Coverage - Caller Response Interval (seconds): 4
          Keep Held SBA at Coverage Point? y
Automatic Callback - No Answer Timeout Interval (rings): 3
      Call Park Timeout Interval (minutes): 10
      Off-Premises Tone Detect Timeout Interval (seconds): 10
          AAR/ARS Dial Tone Required? y
              Music/Tone on Hold: tone
      Music (or Silence) on Transferred Trunk Calls? no
          DID/Tie/ISDN Intercept Treatment: attd
      Messaging Service Adjunct (MSA) Connected? n
Internal Automatic Answer for Attendant Extended Calls? n
      Automatic Circuit Assurance (ACA) Enabled? n
      Abbreviated Dial Programming by Assigned Lists? n
      Auto Abbreviated/Delayed Transition Interval (rings): 2
```

```
display system-parameters features                               Page 5 of 6  SPE A
      FEATURE-RELATED SYSTEM PARAMETERS
          Public Network Trunks on Conference Call: 5
          Conference Parties with Public Network Trunks: 6
          Conference Parties without Public Network Trunks: 6
          Night Service Disconnect Timer (seconds): 180
              Short Interdigit Timer (seconds): 3
              Unanswered DID Call Timer (seconds):
          Line Intercept Tone Timer (seconds): 30
              Auto Start? n
              Auto Hold? y
              Attendant Tone? y
              Bridging Tone? n
              Conference Tone? y
              Intrusion Tone? y
          DID Busy Treatment: tone
          Allow AAR/ARS Access from DID/DIOD? n
DISTINCTIVE AUDIBLE ALERTING
      Internal: 1  External: 2  Priority: 3
```

```

display system-parameters features                               Page 6 of 6   SPE A
                    FEATURE-RELATED SYSTEM PARAMETERS
                                Pull Transfer: n
                                Level Of Tone Detection: broadband
                                Wait Answer Supervision Timer? n
                                Repetitive Call Waiting Tone? n
                                Outpulse Without Tone? n
                                Network Feedback During Tone Detection? n
                                Intercept Treatment On Failed Trunk Transfers? y
                                Vector Disconnect Timer (min):
                                Station Busy Tone Forward Disconnect? n
                                Misoperation Alerting? y

RECALL TIMING
    Flashhook Interval? y                                Upper Bound (msec): 1000
                                                    Lower Bound (msec): 200
                                                    Forward Disconnect Timer (msec): 600

ENHANCED DCS
    Enhanced DCS Enabled? n
    
```

## Analog Trunk Administration

### Analog CO Trunks

- Trunk Group screen

- Outgoing Dial Type: tone or rotary (depending on what is accepted by the serving switch)

```

display trunk-group 1                                         Page 1 of 10

Group Number:                TRUNK GROUP
                              Group Type: co
    Direction: two-way
    Dial Access? n

                              Country: 18
    Prefix-1? n                Trunk Flash? y                Toll Restricted? n

TRUNK PARAMETERS
    Trunk Type: loop-start
    Outgoing Dial Type: tone or rotary                Cut-Through? n
    Trunk Termination: rc                Disconnect Timing(msec): 500
    Auto Guard? n                Call Still Held? n                Sig Bit Inversion: none
    
```

The following table gives admin values that are based on the length of the trunk loop. Choose "short" for type approval:

Loop Length	Trunk Gain	Terminal Balance	RA Trunk Loss
short	low	n	0dB
long	high	n	2dB

```
Disconnect Supervision - In? y Out? n           Cyclical Hunt? y
Answer Supervision Timeout: 10                 Receive Answer Supervision? n
```

- PPM? y (if provided by the serving switch)

```
display trunk-group 1                               Page 3 of 10
TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 600                    Outgoing Disconnect(msec): 600
  Incoming Glare Guard(msec): 1000                  Outgoing Dial Guard(msec): 100
  Ringing Monitor(msec): 5200                       Outgoing Glare Guard(msec): 1000
  Programmed Dial Pause(msec): 1500                  Outgoing Rotary Dial Interdigit(msec): 800
  Flash Length(msec): 100                           Incoming Seizure(msec): 800
  Outgoing Seizure Response(sec): 5
OUTPULSING INFORMATION
  PPS: 10      Make(msec): 35      Break(msec): 65      PPM? y      Frequency: 16k
```

### Route Pattern Administration

- First Dial Tone Detection (needed on analog CO trunks)
  - Number Delete Digits: 0
  - Inserted Digits: +

### Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented.

■ Multifrequency Signaling

— System-Parameters Multifrequency Signaling screen

- Request Incoming ANI (non-AAR/ARS)? n (to simulate CO, enter yes)

```
display system-parameters multifrequency-signaling      Page 1 of 3  SPE A
MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS
Incoming Call Type: group-ii-mfc
Outgoing Call Type: group-ii-mfc
Maintenance Call Type: none
Test Call Extension:
Interdigit Timer (sec): 10
Outgoing Forward Signal Present Timer (sec): 255
Outgoing Forward Signal Absent Timer (sec): 255
Multifrequency Signaling Incoming Intercept Treatment? y
Received Signal Gain(-Loss) (dB): 0
Transmitted Signal Gain(-Loss) (dB): -3
ANI Prefix: 20          Collect All Digits Before Seizure? n
ANI for PBX: 399
Next ANI Digit: next-digit
Request Incoming ANI (non-AAR/ARS)? n
Called Party Category: call-type
Use COR for Calling Party Category? y
```

```
display system-parameters multifrequency-signaling      Page 2 of 3  SPE A
MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS
INCOMING FORWARD SIGNAL TYPES          INCOMING BACKWARD SIGNAL TYPES
(Tones from CO)                        (Tones to CO)
-----
China req terminology:
PQABCD          KD          A1,A3          KB
-----
Group-I          Group-II          Group-A          Group-B
11: ignored      1: toll-operator  1 : next-digit   1 : free
12: ignored      2: toll-auto     3 : end-of-dial  2 : busy
13: ignored      3: normal        4 : congestion   3 : toll-busy
14: ignored      4: data-call     6 : send-ani     4 : congestion
15: end-of-ani   5:               :                5 : intercept
6:               :                :
7: normal        :                :
8: normal        :                :
9: normal        :                :
10: normal       :                :
11: normal       :                :
12: normal       :                :
13: normal       :                :
14: normal       :                :
15: normal       :                :
```

**⇒ NOTE:**

In China, the terminology is as follows:

- Group -I = PQABCD
- Group -II = KD
- Group-A = A1, A3
- Group-B = KB

change system-parameters multifrequency-signaling Page 3 of 3 SPE A  
MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

OUTGOING FORWARD SIGNAL TYPES  
(Tones to CO)

OUTGOING BACKWARD SIGNAL TYPES  
(Tones from CO)

-----  
China req terminology:

X0...X2,P  
KA,P'...D'  
QABCD

KD

A1,A6,A3'

KB

Group-I	Group-II	Group-A	Group-B
15: end-of-ani	1 : attendant	1: next-digit	1: free
:	2 : toll-auto	2: restart	2: busy
:	3 : normal	3: end-of-dial	3: toll-busy
:	4 : data-call	4: congestion	4: congestion
:	:	5: intercept	5: intercept
:	:	6: send-ani	6: free
:	:	7:	7: intercept
:	:	8:	8: congestion
:	:	9:	9: congestion
:	:	10:	10: congestion
:	:	11:	11: congestion
:	:	12:	12: congestion
:	:	13:	13: congestion
:	:	14:	14: congestion
:	:	15:	15: congestion

**⇒ NOTE:**

In China, the terminology is as follows:

- Group -I =  
X0...X2, P  
KA, P'...D'  
QABCD
- Group -II = KD
- Group-A = A1, A6, A3'
- Group-B = KB

■ Digital MFC Trunks

- DS1 Administration screen

```
display ds1 a14SPE A
                                DS1 CIRCUIT PACK
Location: 01A14                Name:
Bit Rate: 2.048                Line Coding: hdb3
Signaling Mode: CAS
Interconnect: CO                Country Protocol: 18
Interface Companding: alaw      CRC? n
Idle Code: 01010100
MAINTENANCE PARAMETERS
Slip Detection? n              Near-end CSU Type: other
```

■ Digital DIOD Trunks  
— Trunk Group screen

```
display trunk-group 1Page 1 of 11 SPE A
                                TRUNK GROUP
Group Number: 1                 Group Type: diod          CDR Reports? y
Group Name: OUTSIDE CALL        COR: 1                   TN: 1             TAC: 801
Direction: two-way             Outgoing Display? n
Dial Access? y                 Busy Threshold: 99
Queue Length: 0                Country: 18
                                Auth Code? n             Digit Absorption List:
                                Trunk Flash? n          Toll Restricted? n
TRUNK PARAMETERS
Trunk Type: loop-start
Outgoing Dial Type: mf          Incoming Dial Type: mf
Trunk Termination: rc
Digit Treatment:
Expected Digits:                Digits:
Terminal Balanced? n           Sig Bit Inversion: none
                                RA Trunk Loss: 0db
Disconnect Supervision - In? y Trunk Gain: high         Drop Treatment: silence
Answer Supervision Timeout: 10 Out? n                    Cyclical Hunt? n
                                Receive Answer Supervision? n
```

```
display trunk-group 1Page 2 of 11 SPE A
TRUNK FEATURES
ACA Assignment? n              Measured: none
                                Maintenance Tests? y
Data Restriction? n
Suppress # Outpulsing? n
```



```

display trunk-group 1                                     Page 3 of 11   SPE A
                                                    TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 500           Outgoing Disconnect(msec): 500
  Incoming Dial Guard(msec): 70           Outgoing Dial Guard(msec): 1600
  Incoming Glare Guard(msec): 1500        Outgoing Glare Guard(msec): 1500
  Ringing Monitor(msec): 5200            Incoming Seizure(msec): 500
  Outgoing End of Dial(sec): 10          Outgoing Seizure Response(sec): 5
  Programmed Dial Pause(msec): 1500
  Flash Length(msec): 540   Incoming Incomplete Dial Alarm(sec): 255
END TO END SIGNALING
  Tone(msec): 350           Pause(msec): 150
OUTPULSING INFORMATION
  PPS: 10   Make(msec): 40   Break(msec): 60   PPM? n
    
```

- Digital DID Trunks

- Trunk Group screen

- Expected Digits: 4 (as negotiated with the serving switch)

```

                                                    TRUNK GROUP
                                                    Group Type: did
                                                    Country: 11
                                                    Auth Code? n
TRUNK PARAMETERS
  Trunk Type: immed-start           Incoming Rotary Timeout(sec): 5
                                     Incoming Dial Type: mf
  Trunk Termination: rc           Disconnect Timing(msec): 500
  Digit Treatment:                 Digits:
  Expected Digits: 4               Sig Bit Inversion: none
  Terminal Balanced? n            RA Trunk Loss: 0db
  Extended Loop Range? n          Trunk Gain: high   Drop Treatment: silence
  Disconnect Supervision - In? y
    
```

```

                                                    TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 500
  Incoming Dial Guard(msec): 50
  Flash Length(msec): 100   Incoming Incomplete Dial Alarm(sec): 255
    
```

## Detailed Description for China

### Forced Disconnect

Forced Disconnect allows a network operator to disconnect a called party from a local call and connect the called party to an incoming toll call. Parties on the local call hear a warning tone before disconnect. Forced Disconnect is allowed only for callers on local single-station calls. It is ignored by DEFINITY ECS on conference, transferred, and forwarded calls. It is also ignored for calls to group users and tandem calls.

### Mode-of-Release Control

Mode-of-Release Control inhibits release of a trunk circuit when a caller goes on-hook, based on call type and direction. Instead of releasing the trunk circuit, DEFINITY ECS keeps the circuit active and reconnects the call if the caller goes back off-hook. Call types for which this applies are toll, local, or service. Direction is incoming or outgoing. There are three types of control.

#### Calling-Party Control

When Calling-Party Control is active, the trunk is not released until the caller goes on-hook. Several situations may occur.

- If the caller goes on-hook, the trunk is released immediately. The called party receives busy tone.
- If the called party goes on-hook, the trunk is not released until the caller goes on-hook or the re-answer timer for outgoing calls expires. The called party can re-answer the call and talk to the calling party. See ["Re-ring" on page 115](#).
- If the re-answer timer is activated and expired, the trunk is released on outgoing calls with Calling-Party Control.

#### Called-Party Control

When Called-Party Control is active, the trunk is not released until the called party goes on-hook. Several situations may occur.

- If the called party goes on-hook, the trunk is released immediately. The caller receives busy tone.
- If the caller goes on-hook, the trunk is not released until the called party goes on-hook. The caller can go off-hook again to reconnect. There is no timer involved with Called-Party Control.

#### First-Party Control

When First-Party Control is active, the trunk is released immediately regardless of whether the caller or called party goes on-hook first. The party that is still connected receives busy tone. The default or normal Mode-of-Release Control for DEFINITY ECS is First-Party Control.

## Re-ring

Re-ring occurs for incoming calls to DEFINITY ECS with Calling-Party Control. Basically, when the called party goes on-hook, the trunk is not released and Re-ring allows the CO operator to re-ring the called party and reconnect the call.

## Interactions

---

### Forced Disconnect

- Conference  
If the network toll call terminates at a phone involved in a conference, the Forced Disconnect signal is not sent by the network.
- Call Forwarding  
For calls forwarded on-premises, on-net, or off-net, the Forced Disconnect signal is not forwarded.
- Group Users  
If a network toll call terminates to a group user, the Forced Disconnect signal is not sent by the network.
- Non-Station Users  
If a network toll call terminates to a non-station user, the Forced Disconnect signal is not sent by the network.
- Tandem Trunks  
DEFINITY ECS does not tandem a Forced Disconnect signal.
- Transfer  
If a network toll call is transferred, the Forced Disconnect signal is not sent by the network.

### Mode-of-Release Control

- Conference  
A call involved in a conference is changed to First-Party Control as the mode-of-release control.
- Forward  
A forwarded call on-premises, on-net, or off-net is changed to First-Party Control as the mode-of-release control.
- Group Users ( Hunt, Trunk, TEG, AUDIX, VDN)  
Calls terminating to group users are changed to First-Party Control as the mode-of-release control.

- Non-Station Users (Personal Attendant, Data-module, Announcement, Voice Synthesis)

Calls terminating to non-station users are changed to First-Party Control as the mode-of-release control.

- Tandem Trunks

DEFINITY ECS terminates tandem calls, but the mode-of-release control is changed to First-Party Control.

- Transfer

A transferred call is changed to First-Party Control as the mode-of-release control.

## **Re-ring**

- Conference

A call involved in a conference is changed to First-Party Control as its mode-of-release control. First-Party Control calls do not re-ring.

- Call Forwarding

For calls forwarded on-premises, on-net, or off-net, Re-ring signals are not forwarded.

- Group Users ( Hunt, Trunk, TEG, AUDIX, and VDN, etc.)

Re-ring signals sent to group users are ignored by DEFINITY ECS.

- Non-Station Users (Personal Attendant, Data-module, Announcement, Voice Synthesis)

Re-ring signals sent to non-station users are ignored by DEFINITY ECS.

- Tandem Trunks

DEFINITY ECS does not tandem re-ring signals.

- Transfer

A transferred call is changed to First-Party Control as its mode-of-release control. First-Party Control calls do not re-ring.

## Colombia

[Table 23](#) shows the recommended circuit packs.

**Table 23. Recommended and Available CPs in Colombia**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	120V/50Hz 240V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B
R2MFC Circuit	
Speech Synthesizer	
Call Classifier	> TN744D
Announcement	> TN750C
Analog DID Trunk	
Analog CO Trunk (No PPM)	
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	
2 Wire Tie Trunk	
Auxiliary Trunk	
Digital CO/DID Trunk	> TN464F
Digital Tie Trunk	> TN464F
Digital PRI CO Trunk	> TN464F
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	
16 Port Analog Line	
24 Port Analog Line	n/a

*Continued on next page*

Table 23. Recommended and Available CPs in Colombia — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	
BRI-U Line	
BRI-ST Line	

## Costa Rica

[Table 24](#) shows the recommended circuit packs.

**Table 24. Recommended and Available CPs in Costa Rica**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	120V/60Hz 240V/60Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN748C
Tone Clock	> TN2182B TN780 TN768
R2MFC Circuit	
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	> TN750C TN750B
Analog DID Trunk	
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E TN464D TN464C
Digital Tie Trunk	> TN464F TN464E TN464D TN464C
Digital ISDN CO Trunk	
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

Table 24. Recommended and Available CPs in Costa Rica — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	> TN2224 TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	TN556B

## Feature Administration

The screens displayed in this section were effective the date the type approval was awarded. The screens may have changed since that date.

### ■ ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

<code>int:</code>	For all international numbers.
<code>natl:</code>	For all national PN numbers.
<code>pubu:</code>	For all other external (that is, not extensions) numbers.



## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

### Feature-Related System Parameters

Page 1 of 6

#### FEATURE-RELATED SYSTEM PARAMETERS

Trunk-to-Trunk Transfer: all  
Coverage - Subsequent Redirection No Answer Interval: 2  
Coverage - Caller Response Interval (seconds): 4  
Keep Held SBA at Coverage Point? y  
Automatic Callback - No Answer Timeout Interval (rings): 7  
Call Park Timeout Interval (minutes): 10  
Off-Premises Tone Detect Timeout Interval (seconds): 20  
AAR/ARS Dial Tone Required? y  
Music/Tone on Hold: none  
Music (or Silence) on Transferred Trunk Calls? no  
DID/Tie/ISDN Intercept Treatment: attd  
Internal Automatic Answer for Attendant Extended Calls? n  
Automatic Circuit Assurance (ACA) Enabled? n

Page 2 of 6

#### FEATURE-RELATED SYSTEM PARAMETERS

##### LEAVE WORD CALLING PARAMETERS

Maximum Number of Messages Per Station (when MSA not in service):20  
Stations with System-wide Retrieval Permission (enter extension)  
1: 2: 3: 4: 5:  
6: 7: 8: 9: 10:

WARNING! SEE USER DOCUMENTATION BEFORE CHANGING TTI STATE  
Terminal Translation Initialization (TTI) Enabled? n

External Coverage Treatment for Transferred Incoming Calls? n

SECURITY VIOLATION NOTIFICATION (SVN) PARAMETERS HAVE MOVED TO  
THE SYSTEM-PARAMETERS SECURITY SCREEN

Page 3 of 6

FEATURE-RELATED SYSTEM PARAMETERS

Reserved Slots for Attendant Priority Queue: 5  
Time before Off-hook Alert: 10  
Emergency Access Redirection Extension:  
Service Observing Warning Tone? y  
Number of Emergency Calls Allowed in Attendant Queue: 5  
Call Pickup Alerting? n  
Deluxe Paging and Call Park Timeout to Originator? n  
Controlled Outward Restriction Intercept Treatment: tone  
Controlled Termination Restriction (Do Not Disturb): tone  
Controlled Station to Station Restriction: tone

AUTHORIZATION CODE PARAMETERS

Authorization Codes Enabled?  
Authorization Code Length:  
Authorization Code Cancellation Symbol: #  
Attendant Time Out Flag? n  
Display Authorization Code? n

Page 4 of 6

FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS

System Printer Extension: Lines Per Page: 60

SYSTEM-WIDE PARAMETERS

Switch Name:

CALL CENTER SYSTEM PARAMETERS

Direct Agent Announcement Extension:  
Direct Agent Announcement Delay:  
Converse Delay Datal: 0 Data2: 2  
Direct Agent Announcement Extension: Converse Pulse ON: 100 OFF: 70  
Prompting Timeout (secs): 10

CALL MANAGEMENT SYSTEM PARAMETERS

BCMS/VuStats Measurement Interval: hour  
BCMS/VuStats Abandon Call Timer (seconds):  
ACD Login Identification Length: Validate Login IDs? n  
Adjunct CMS Release:

MALICIOUS CALL TRACE PARAMETERS

Apply MCT Warning Tone? n MCT Voice Recorder Trunk Group:



## Multifrequency-Signaling-Related System Parameters

Page 1 of 3

### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

```

Incoming Call Type: group-ii-mfc
Outgoing Call Type: group-ii-mfc
Maintenance Call Type: none
Test Call Extension:
Interdigit Timer (sec): 10
Outgoing Forward Signal Present Timer (sec): 15
Outgoing Forward Signal Absent Timer (sec): 30
Multifrequency Signaling Incoming Intercept Treatment? n
Received Signal Gain(-Loss) (dB): 0
Transmitted Signal Gain(-Loss) (dB): -3

ANI Prefix:
ANI for PBX:
Next ANI Digit: send-ani
ANI Prefix:          Collect All Digits Before Seizure? n
                    Request Incoming ANI (non-AAR/ARS)? y
                    Called Party Category: user-type
                    Use COR for Calling Party Category? n
```

Page 2 of 3

### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

INCOMING FORWARD SIGNAL TYPES  
(Tones from CO)

INCOMING BACKWARD SIGNAL TYPES  
(Tones to CO)

Group-I	Group-II	Group-A	Group-B
11: ignored	1: normal	1: next-digit	2: intercept
12: ignored	2: normal	3: end-of-dial	3: busy
13: ignored	3: normal	4: congestion	4: congestion
14: ignored	4: normal	5: send-ani	6: free
15: end-of-ani	5: normal		
	6: data-call		
	7: normal		
	8: normal		
	9: normal		
	10: normal		
	11: normal		
	12: normal		
	13: normal		
	14: normal		
	15: normal		

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

OUTGOING FORWARD SIGNAL TYPES  
(Tones to CO)

Group-I	Group-II
15: end-of-ani	1: normal
	5: attendant
	6: data-call

OUTGOING BACKWARD SIGNAL TYPES  
(Tones from CO)

Group-A	Group-B
1: next-digit	1: free
2: last-digit	2: intercept
3: end-of-dial	3: busy
4: congestion	4: congestion
5: send-ani	5: intercept
6: setup-sppath	6: free
7: last-2-digits	7: free
8: last-3-digits	8: congestion
9: resend-digit	9: congestion
10: restart	10: congestion
11: congestion	11: congestion
12: congestion	12: congestion
13: congestion	13: congestion
14: congestion	14: congestion
15: congestion	15: congestion

## System Parameters Country-Options

SYSTEM PARAMETERS COUNTRY-OPTIONS

Companding Mode: Mu-Law  
440Hz PBX-dial Tone? n  
Digital Loss Plan: 1  
Analog Ringing Cadence: 1

Base Tone Generator Set: 1  
440Hz Secondary-dial Tone? n

TONE DETECTION PARAMETERS

Tone Detection Mode: 1  
Interdigit Pause: short

SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone
	Step	(Frequency/Level)
Secondary-Dial	1: 425/-17.25	Duration(msec): 10000
	2: Goto	Step: 1
	3:	
	4:	
	5:	
	6:	
	7:	
	8:	
	9:	
	10:	

## Trunk Group Administration

---

### CO Trunk Group Administration

TRUNK GROUP

Group Number:	Group Type: co	CDR Reports: y
Group Name: OUTSIDE CALL	COR: 1	TN: 1 TAC:
Direction: two-way	Outgoing Display? n	
Dial Access? n	Busy Threshold: 99	Night Service:
Queue Length: 0	Country: 1	Incoming Destination:
Comm Type: voice	Auth Code? n	Digit Absorption List:
Prefix-1? n	Trunk Flash? n	Toll Restricted? n

TRUNK PARAMETERS

Trunk Type: loop-start		
Outgoing Dial Type: tone		Cut-Through? n
Trunk Termination: rc		Disconnect Timing(msec): 500
Auto Guard? n	Call Still Held? n	Sig Bit Inversion: none
Terminal Balanced? n		RA Trunk Loss: 0db
	Trunk Gain: high	
Disconnect Supervision - In? n	Out? n	Cyclical Hunt? n
Answer Supervision Timeout: 20		Receive Answer Supervision? n

Page 2 of 10

TRUNK FEATURES

ACA Assignment? n Measured: none Maintenance Tests? y  
Data Restriction? n  
Abandoned Call Search? n  
Suppress # Outpulsing? y

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TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500 Outgoing Disconnect(msec): 500  
Outgoing Dial Guard(msec): 1600  
Incoming Glare Guard(msec): 1500 Outgoing Glare Guard(msec): 1500  
Ringing Monitor(msec): 5200 Incoming Seizure(msec): 500  
Outgoing End of Dial(sec): 10 Outgoing Seizure Response(sec): 5  
Programmed Dial Pause(msec): 1500  
Flash Length(msec): 540

END TO END SIGNALING

Tone(msec): 350 Pause(msec): 150

OUTPULSING INFORMATION

PPS: 10 Make(msec): 40 Break(msec): 60 PPM? n

Page 4 of 10

TRUNK GROUP

Administered Members (min/max): 0/0  
Total Administered Members: 0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							

## DIOD Trunk Group Administration

Page 1 of 10

### TRUNK GROUP

Group Number:	Group Type: diod	CDR Reports: y
Group Name: OUTSIDE CALL	COR: 1	TN: 1
Direction: two-way	Outgoing Display? n	TAC:
Dial Access? n	Busy Threshold: 99	
Queue Length: 0	Country: 1	
	Auth Code? n	Digit Absorption List:
Prefix-1? n	Trunk Flash? n	Toll Restricted? n

### TRUNK PARAMETERS

Trunk Type: immed-start	
Outgoing Dial Type: mf	Incoming Dial Type: mf
Trunk Termination: rc	
Digit Treatment:	Digits:
Expected Digits:	Sig Bit Inversion: none
Terminal Balanced? n	RA Trunk Loss: 0db
	Drop Treatment: silence
Disconnect Supervision - In? y	Trunk Gain: high
Out? n	
Answer Supervision Timeout: 10	Receive Answer Supervision? n

Page 2 of 20

### TRUNK FEATURES

ACA Assignment? n	Measured: none	
		Maintenance Tests? y
	Data Restriction? n	
Suppress # Outpulsing? y		



Page 3 of 10

TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	Outgoing Disconnect(msec): 500
Incoming Dial Guard(msec): 70	Outgoing Dial Guard(msec): 1600
Incoming Glare Guard(msec): 1500	Outgoing Glare Guard(msec): 1500
Ringing Monitor(msec): 5200	Incoming Seizure(msec): 500
Outgoing End of Dial(sec): 10	Outgoing Seizure Response(sec): 5
Programmed Dial Pause(msec): 1500	
Flash Length(msec):	Incoming Incomplete Dial Alarm(sec): 255

END TO END SIGNALING

Tone(msec): 350                      Pause(msec): 150

OUTPUTSING INFORMATION

PPS: 10      Make(msec): 40      Break(msec): 60      PPM? n

Page 4 of 10

TRUNK GROUP

GROUP MEMBER ASSIGNMENTS

				Administered Members (min/max):	0/0		
				Total Administered Members:	0		
Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							





Page 3 of 10

TRUNK GROUP

Administered Members (min/max): 0/0

Total Administered Members: 0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Sig Grp
1:					
2:					
3:					

Page 1 of 1

DS1 CIRCUIT PACK

Location:

Name: E-1CO, DID, DIOD

Bit Rate: 2.048

Line Coding: hdb3

Signaling Mode: CAS

Interconnect: CO

Country Protocol: 8

Interface Companding: alaw

CRC? n

Idle Code: 11111111

MAINTENANCE PARAMETERS

Slip Detection? n

Near-end CSU Type: other

## DS1 for ISDN Trunks to the PPT

Page 1 of 1

### DS1 CIRCUIT PACK

Location: Name: E-1 ISDN  
Bit Rate: 2.048 Line Coding: hdb3

Signaling Mode: isdn-pri  
Connect: network Country Protocol: 12  
Protocol Version: a

Interface Companding: alaw CRC? n  
Idle Code: 11111111

#### MAINTENANCE PARAMETERS

Slip Detection? n Near-end CSU Type: other

## Czech Republic

[Table 25](#) shows the recommended circuit packs.

**Table 25. Recommended and Available CPs in Czech Republic**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D TN420C
Tone Clock	> TN2182B TN780
R2MFC Circuit	
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN753v17
Analog CO Trunk (No PPM)	> TN747Bv12
Analog CO Trunk (w/PPM)	#TN465C > TN465B
4 Wire Tie Trunk	TN760Dv11
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E
Digital Tie Trunk	> TN464F TN464E
Digital PRI CO Trunk	n/a
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

Table 25. Recommended and Available CPs in Czech Republic — Continued

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181 TN2136
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

<code>int:</code>	For all international numbers.
<code>natl:</code>	For all national PN numbers.
<code>pubu:</code>	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration

- Off-Premises Tone Detect Timeout Interval (seconds): 5

```
display system-parameters features                               Page 1 of 6
      FEATURE-RELATED SYSTEM PARAMETERS
      Trunk-to-Trunk Transfer: all
Coverage Subsequent Redirection/CFWD No Answer Interval: 2
      Coverage - Caller Response Interval (seconds): 4
      Keep Held SBA at Coverage Point? y
Automatic Callback - No Answer Timeout Interval (rings): 3
      Call Park Timeout Interval (minutes): 10
      Off-Premises Tone Detect Timeout Interval (seconds): 5
      AAR/ARS Dial Tone Required? y
      Music/Tone on Hold: none
      Music (or Silence) on Transferred Trunk Calls? no
      DID/Tie/ISDN Intercept Treatment: attd
      Messaging Service Adjunct (MSA) Connected? n
Internal Automatic Answer for Attendant Extended Calls? n
      Automatic Circuit Assurance (ACA) Enabled? n
      Abbreviated Dial Programming by Assigned Lists? n
Auto Abbreviated/Delayed Transition Interval (rings): 2
```

- Night Service Disconnect Timer (seconds): 10 (10 or blank for testing optional responses to errors)
- Unanswered DID Call Timer (seconds): 180
- DID Busy Treatment (set to attendant for testing optional response to errors)



```
display system-parameters features                               Page 5 of 6
      FEATURE-RELATED SYSTEM PARAMETERS
        Public Network Trunks on Conference Call: 5
        Conference Parties with Public Network Trunks: 6
        Conference Parties without Public Network Trunks: 6
        Night Service Disconnect Timer (seconds): 10
        Short Interdigit Timer (seconds): 3
        Unanswered DID Call Timer (seconds): 180
        Line Intercept Tone Timer (seconds): 20
            Auto Start? n
            Auto Hold? y
            Attendant Tone? y
            Bridging Tone? n
            Conference Tone? n
            Intrusion Tone? y
            DID Busy Treatment: tone
        Allow AAR/ARS Access from DID/DIOD? n
DISTINCTIVE AUDIBLE ALERTING
        Internal: 1   External: 2   Priority: 3
```

- Outpulse Without Tone? n (for dial tone detection)
- Network Feedback During Tone Detection? n (for dial tone detection)

```
display system-parameters features
      FEATURE-RELATED SYSTEM PARAMETERS
            Pull Transfer: n
            Level Of Tone Detection: precise
        Wait Answer Supervision Timer? n
        Repetitive Call Waiting Tone? n
            Outpulse Without Tone? n
        Network Feedback During Tone Detection? n
        Intercept Treatment On Failed Trunk Transfers? n
            Vector Disconnect Timer (min):
        Station Tone Forward Disconnect: intercept
            Misoperation Alerting? n
            Allow Conference via Flash? y
RECALL TIMING
        Flashhook Interval? y
            Upper Bound (msec): 1000
            Lower Bound (msec): 200
        Forward Disconnect Timer (msec): 600
ENHANCED DCS
        Enhanced DCS Enabled? n
```

- System Parameters Customer Options
  - ARS? y (for dial tone detection)

```
display system-parameters customer-options                               Page 1 of 2
                                OPTIONAL FEATURES
                                G3 Version: V4
                                Logged-In ACD Agents: 150
                                Abbreviated Dialing Enhanced List? n      Call Work Codes? n
                                A/D Grp/Sys List Dialing Start at 01? n      CAS Branch? n
                                ACD? n                                     CAS Main? n
                                AT&T Adjunct Links? n                       DCS (Basic)? n
                                Answer Supervision by Call Classifier? n    DCS Call Coverage? n
                                ARS? y                                     DTMF Feedback Signals For VRU? n
                                ARS/AAR Partitioning? y                   Emergency Access to Attendant? y
                                ASAI Interface? n                         Expert Agent Selection (EAS)? n
                                ATMS? n                                   External Device Alarm Admin? n
                                Audible Message Waiting? n                Flexible Billing? n
                                Authorization Codes? n                    Forced Entry of Account Codes? n
                                BCMS (Basic)? n                           Hospitality (Basic)? y
                                BCMS/VuStats LoginIDs? n                 G3V3 Hospitality Enhancements? n
                                BCMS/VuStats Service Level? n            Hospitality Parameter Reduction? n
```

- Malicious Call Trace? y (for Malicious Call feature)
- Multifrequency Signaling? y

```
display system-parameters customer-options
                                OPTIONAL FEATURES
                                ISDN-PRI? n                             Service Observing (VDNs)? n
                                ISDN-PRI over PACCON? n                  Station and Trunk MSP? n
                                Lookahead Interflow (LAI)? n            Tenant Partitioning? n
                                Malicious Call Trace? y                 Terminal Trans. Init. (TTI)? n
                                Multifrequency Signaling? y             Time of Day Routing? n
                                Multiple Call Handling (On Request)? n    Uniform Dialing Plan? n
                                Multiple Call Handling (Forced)? n        Vectoring (Basic)? n
                                PASTE (Display PBX Data on Phone)? n     Vectoring (Prompting)? n
                                Premier Business Package? y              Vectoring (G3V4 Enhanced)? n
                                Processor and System MSP? n              Vectoring (ANI/II-Digits Routing)? n
                                Private Networking? n                    VDN of Origin Announcement? n
                                Restrict Call Forward Off Net? y         VDN Return Destination? n
                                Secondary Data Module? n                 Voice Mail Application Support? n
                                Service Observing (Basic)? y              VuStats? n
                                Service Observing (Remote/By FAC)? n      VuStats (G3V4 Enhanced)? n
                                Wideband Switching? n
```

■ System Parameter Country Options Administration

- Companding Mode: A-Law
- Digital Loss Plan: 14
- Analog Ringing Cadence: 14

- Analog Line Transmission: 14
- Tone Detection Mode: 5

```
display system-parameters country-options                               Page 1 of 21
      SYSTEM PARAMETERS COUNTRY-OPTIONS
      Companding Mode: A-Law                                           Base Tone Generator Set: 14
      440Hz PBX-dial Tone? n                                           440Hz Secondary-dial Tone? n
      Digital Loss Plan: 14
      Analog Ringing Cadence: 14   Set Layer 1 timer T1 to 30 seconds? n
      Analog Line Transmission: 14
      TONE DETECTION PARAMETERS
      Tone Detection Mode: 5                                           Dial Tone Validation Timer(msec): 500
      Interdigit Pause: long
```

#### — Customized Individual Tones

In this section, customized tone definitions follow the data-entry syntax as specified for entry on the Individual Tone Administration Screen:

[(Frequency/Level)|silence|goto][(Duration ms)|(Step)]

#### — Intrusion:

- (425/-11.0)(350)
- (silence)(350)
- (425/-5.0)(350)
- (silence)(1500)
- (goto)(1)

#### — Reorder (Congestion):

- (425/-5)(150)
- (silence)(150)
- (goto)(1)

#### — Secondary Dial Tone:

- (425/-5)(150)
- (silence)(150)
- (425/-5)(150)
- (silence)(150)
- (425/-5)(150)
- (silence)(150)

- (425/-5)(650)
- (silence)(650)
- (goto)(1)
- PBX Dial Tone:
  - (425/-5)(500)
  - (goto)(1)
- Busy:
  - (425/-5)(350)
  - (silence)(350)
  - (goto)(1)
- Ringback:
  - (425/-5)(1000)
  - (silence)(4000)
  - (goto)(1)
- Call Wait 1:
  - (425/-11)(350)
- Recall Dial:
  - (425/-4)(150)
  - (silence)(150)
  - (425/-4)(150)
  - (silence)(150)
  - (425/-4)(1000)
  - (goto)(5)
- CDR System Parameters
  - Primary Output format: int-direct (for showing PPM)

```
display system-parameters cdr
                                CDR SYSTEM PARAMETERS
Node Number (Local PBX ID): 1          CDR Date Format: month/day
Primary Output Format: int-direct      Primary Output Ext: eia
Secondary Output Format:
Use ISDN Layouts? n                   EIA Device Bit Rate: 9600
Use Enhanced Formats? n
Record Outgoing Calls Only? n         Intra-switch CDR? n
Suppress CDR for Ineffective Call Attempts? y   CDR Call Splitting? y
Disconnect Information in Place of FRL? n       Attendant Call Recording? y
                                                Interworking Feat-flag? n
Force Entry of Acct Code for Calls Marked on Toll Analysis Form? n
                                                Calls to Hunt Group - Record: member-ext
Record Called Vector Directory Number Instead of Group or Member? n
Record Non-Call-Assoc TSC? n
Record Call-Assoc TSC? n             Digits to Record for Outgoing Calls: dialed
Privacy - Digits to Hide: 0          CDR Account Code Length: 2
```

- System Parameter Multifrequency Signaling Administration (Pay close attention to the values on the following three screens. They are critical.)
  - Request Incoming ANI (non-AAR/ARS)? n (To check Incoming ANI, enter yes. It is part of the malicious call trace option.)

```
display system-parameters multifrequency-signaling          Page 1 of 3
MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

Incoming Call Type: group-ii-mfc
Outgoing Call Type: group-ii-mfc
Maintenance Call Type: none
Test Call Extension:
Interdigit Timer (sec): 20
Outgoing Forward Signal Present Timer (sec): 20
Outgoing Forward Signal Absent Timer (sec): 12
Multifrequency Signaling Incoming Intercept Treatment? y
Received Signal Gain(-Loss) (dB): 0
Transmitted Signal Gain(-Loss) (dB): -3
Collect All Digits Before Seizure? n

ANI Prefix: 42
ANI for PBX: 400
Next ANI Digit: send-ani

Request Incoming ANI (non-AAR/ARS)? n
Called Party Category: user-type
Use COR for Calling Party Category? n
```

**NOTE:**

On Page 2 of the Multifrequency-Signaling-Related System Parameters screen, Group-I, numbers 12, 13, and 14, should all be *ani-not-avail*.

```
display system-parameters multifrequency-signaling           Page 2 of 3
MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS
```

INCOMING FORWARD SIGNAL TYPES (Tones from CO)		INCOMING BACKWARD SIGNAL TYPES (Tones to CO)	
Group-I	Group-II	Group-A	Group-B
11: send-congest	1: normal	1 : next-digit	3 : busy
12: send-congest	2: busy-rt-attd	3 : end-of-dial	4 : congestion
13: ani-not-avail	3: busy-rt-attd	4 : congestion	5 : intercept
14: send-congest	4: normal	5 : send-ani	6 : free
15: end-of-dial	5: busy-rt-attd	:	:
	6: normal	:	:
	7: normal	:	:
	8: normal	:	:
	9: busy-rt-attd	:	:
	10: normal	:	:
	11: send-intercept	:	:
	12: send-intercept	:	:
	13: normal	:	:
	14: normal	:	:
	15: send-intercept	:	:

```
display system-parameters multifrequency-signaling
MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS
```

OUTGOING FORWARD SIGNAL TYPES (Tones to CO)		OUTGOING BACKWARD SIGNAL TYPES (Tones from CO)	
Group-I	Group-II	Group-A	Group-B
12: ani-not-avail	1 : normal	1: next-digit	1: free
15: end-of-digits	1 : attendant	2: last-digit	2: congestion
:	6 : data-call	3: end-of-dial	3: busy
:	:	4: congestion	4: congestion
:	:	5: send-ani	5: intercept
:	:	6: setup-sppath	6: free
:	:	7: last-2-digits	7: free
:	:	8: last-3-digits	8: intercept
:	:	9: congestion	9: congestion
:	:	10: congestion	10: congestion
:	:	11: congestion	11: congestion
:	:	12: congestion	12: congestion
:	:	13: congestion	13: congestion
:	:	14: congestion	14: congestion
:	:	15: congestion	15: congestion

■ ARS Digit Analysis

— Rte Pat: 2 (for dial tone detect)

```
display ars analysis 0
```

ARS DIGIT ANALYSIS TABLE													
Partitioned Group Number: 1											Percent Full: 2		
Dialed String	Total Mn	Rte Mx	Call Pat	Call Type	Nd Num	ANI Rq	Dialed String	Total Mn	Rte Mx	Call Pat	Call Type	Nd Num	ANI Rq
2	2	7	2	pubu		n							n
3	2	7	2	pubu		n							n
4	2	7	2	pubu		n							n
5	2	7	2	pubu		n							n
6	7	7	2	hnpa		n							n
7	2	7	2	pubu		n							n
8	2	7	2	pubu		n							n
9	2	7	2	pubu		n							n
						n							n
						n							n
						n							n
						n							n
						n							n
						n							n
						n							n
						n							n
						n							n
						n							n

■ **Route Pattern**

— Inserted Digits: + (for dial tone detect)

```
display route-pattern 2
```

Pattern Number: 2							
Grp. No.	FRL	NPA	Pfx	Hop	Toll	No. Del	Inserted Digits
			Mrk	Lmt	List	Digits	Digits
1: 29		0					+
2:							
3:							
4:							
5:							
6:							

■ **Console Parameters**





## Trunk Groups

```
list trunk-group
```

### TRUNK GROUPS

Grp	No.	TAC	Group	Type	Group Name	Mem	TN	COR	CDR	Meas	Out	Queue
											Disp?	Length
23	923	co	Slov.LS_out_MFC	1	1	1	1	y	none	y	0	
24	924	co	slov.co.dec	1	1	1	1	y	none	n	0	
29	929	co	slov ana co	1	1	1	1	y	none	n	0	
31	931	did	slovak mf did	1	1	1	1	y	none	n	0	
32	932	did	slovak did dec	1	1	1	1	y	none	n	0	

### ■ CO Trunk Groups

— Example: Loop Start Outgoing MFC

- Country: 14
- Trunk Type: loop-start
- Outgoing Dial Type: mf
- Disconnect Supervision - Out? n
- Answer Supervision Timeout: 0

```
display trunk-group 23
```

Page 1 of 10

### TRUNK GROUP

```

Group Number: 23          Group Type: co          CDR Reports: y
Group Name: Slov.LS_out_MFC  COR: 1          TN: 1          TAC: 923
Direction: outgoing      Outgoing Display? y
Dial Access? y          Busy Threshold: 99
Queue Length: 0          Country: 14

Comm Type: voice          Digit Absorption List:
Prefix-1? n          Trunk Flash? n          Toll Restricted? n
TRUNK PARAMETERS
Trunk Type: loop-start
Outgoing Dial Type: mf
Trunk Termination: rc          Disconnect Timing(msec): 500
Auto Guard? n          Call Still Held? n          Sig Bit Inversion: none
Terminal Balanced? n          RA Trunk Loss: 0db
Trunk Gain: high
Disconnect Supervision - Out? n
Answer Supervision Timeout: 0          Receive Answer Supervision? y
    
```

```
display trunk-group 23                                     Page 2 of 10
TRUNK FEATURES
  ACA Assignment? n                                     Measured: none
                                                    Maintenance Tests? y
  Data Restriction? n
  Suppress # Outpulsing? n
```

```
display trunk-group 23
TRUNK GROUP
ADMINISTRABLE TIMERS
  Ringing Monitor(msec): 5200
  Outgoing Disconnect(msec): 500
  Outgoing Dial Guard(msec): 1600
  Outgoing Glare Guard(msec): 1500
  Incoming Seizure(msec): 500
  Outgoing Seizure Response(sec): 5
  Programmed Dial Pause(msec): 1500
  Flash Length(msec): 540
END TO END SIGNALING
  Tone(msec): 350      Pause(msec): 150
OUTPULSING INFORMATION
  PPS: 10      Make(msec): 40      Break(msec): 60      PPM? y      Frequency: 50/12k
```

- Outgoing Disconnect (msec): 500
- Example: Digital CO Trunk
  - Country: 14
  - Trunk Type: loop-start
  - Outgoing Dial Type: rotary
  - Disconnect Supervision - Out? n
  - Answer Supervision Timeout: 0

```
display trunk-group 24                                     Page 1 of 10
                                     TRUNK GROUP
Group Number: 24          Group Type: co          CDR Reports: y
Group Name: slov.co.dec   COR: 1          TN: 1          TAC: 924
Direction: outgoing      Outgoing Display? n
Dial Access? y           Busy Threshold: 99
Queue Length: 0          Country: 14

Comm Type: voice          Digit Absorption List:
Prefix-1? n              Trunk Flash? n       Toll Restricted? y
TRUNK PARAMETERS
  Trunk Type: loop-start
Outgoing Dial Type: rotary          Cut-Through? n
Trunk Termination: rc              Disconnect Timing(msec): 500
  Auto Guard? n      Call Still Held? n      Sig Bit Inversion: none
Terminal Balanced? n              RA Trunk Loss: 0db
Trunk Gain: high
Disconnect Supervision -          Out? n
Answer Supervision Timeout: 0     Receive Answer Supervision? y
```

```
display trunk-group 24                                     Page 2 of 10
TRUNK FEATURES
  ACA Assignment? n          Measured: none
                              Maintenance Tests? y
Data Restriction? n
Suppress # Outpulsing? n
```

- Outgoing Disconnect (msec): 500
- Outgoing Rotary Dial Interdigit (msec): 800

```
display trunk-group 24                                     TRUNK GROUP
ADMINISTRABLE TIMERS
Outgoing Disconnect(msec): 500
Outgoing Dial Guard(msec): 1600
Outgoing Glare Guard(msec): 1500
Outgoing Rotary Dial Interdigit(msec): 800
Ringling Monitor(msec): 5200      Incoming Seizure(msec): 500
Outgoing Seizure Response(sec): 5
Programmed Dial Pause(msec): 1500
Flash Length(msec): 540
END TO END SIGNALING
Tone(msec): 350      Pause(msec): 150
OUTPULSING INFORMATION
PPS: 10      Make(msec): 40      Break(msec): 60      PPM? y      Frequency: 50/12k
```

— Example: Analog CO Trunk

- Country: 14
- Trunk Type: loop-start
- Answer Supervision Timeout: 0

```

display trunk-group 29                                     Page 1 of 10
                                                    TRUNK GROUP
Group Number: 29                Group Type: co                CDR Reports: y
Group Name: slov ana co        COR: 1                TN: 1                TAC: 929
Direction: two-way            Outgoing Display? n
Dial Access? y                Busy Threshold: 99                Night Service:
Queue Length: 0                Country: 14                Incoming Destination: attd

Comm Type: voice                Auth Code? n                Digit Absorption List:
Prefix-1? y                Trunk Flash? n                Toll Restricted? y
TRUNK PARAMETERS
    Trunk Type: loop-start
Outgoing Dial Type: tone                Cut-Through? n
Trunk Termination: rc                Disconnect Timing(msec): 500
    Auto Guard? n                Call Still Held? n                Sig Bit Inversion: none
Terminal Balanced? n                RA Trunk Loss: 0db
Trunk Gain: high
Disconnect Supervision - In? y Out? n                Cyclical Hunt? n
Answer Supervision Timeout: 0                Receive Answer Supervision? y
    
```

```

display trunk-group 29                                     Page 2 of 10
TRUNK FEATURES
    ACA Assignment? n                Measured: none
                                                Maintenance Tests? y
Data Restriction? n
Abandoned Call Search? n
Suppress # Outpulsing? n
    
```

```
display trunk-group 29
                                TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 500      Outgoing Disconnect(msec): 500
                                       Outgoing Dial Guard(msec): 1600
  Incoming Glare Guard(msec): 1500    Outgoing Glare Guard(msec): 1500
                                       Incoming Seizure(msec): 500
  Ringing Monitor(msec): 5200         Outgoing Seizure Response(sec): 5
  Outgoing End of Dial(sec): 10
  Programmed Dial Pause(msec): 1500
  Flash Length(msec): 540
```

```
display trunk-group 29
                                TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 500      Outgoing Disconnect(msec): 500
                                       Outgoing Dial Guard(msec): 1600
  Incoming Glare Guard(msec): 1500    Outgoing Glare Guard(msec): 1500
                                       Incoming Seizure(msec): 500
  Ringing Monitor(msec): 5200         Outgoing Seizure Response(sec): 5
  Outgoing End of Dial(sec): 10
  Programmed Dial Pause(msec): 1500
  Flash Length(msec): 540
END TO END SIGNALING
  Tone(msec): 350      Pause(msec): 150
OUTPUTSING INFORMATION
  PPS: 10      Make(msec): 40      Break(msec): 60      PPM? n
```

■ DID Trunk Groups

— Example: MFC Signaling DID

■ Country: 14

```
display trunk-group 31
                                TRUNK GROUP
Group Number: 31                Group Type: did                CDR Reports: y
Group Name: slovak mf did      COR: 1                        TN: 1                TAC: 931
Country: 14                    Auth Code? n                  CO Type: digital

TRUNK PARAMETERS
  Trunk Type: immed-start      Incoming Rotary Timeout(sec): 5
                                       Incoming Dial Type: mf
  Trunk Termination: rc        Disconnect Timing(msec): 500
  Digit Treatment:             Digits:
  Expected Digits:             Sig Bit Inversion: none
  Terminal Balanced? n        RA Trunk Loss: 0db
  Extended Loop Range? n      Trunk Gain: high            Drop Treatment: silence
Disconnect Supervision - In? n
```

```
display trunk-group 31                               Page 2 of 10
TRUNK FEATURES
  ACA Assignment? n                               Measured: none
                                                Maintenance Tests? y
  Data Restriction? n
  Suppress # Outpulsing? n
```

- Incoming Disconnect (msec): 90
- Incoming Dial Guard (msec): 1500 (to mask problem detection glitches as digits)

```
display trunk-group 31                               Page 3 of 10
TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 90
  Incoming Dial Guard(msec): 1500
  Flash Length(msec): 540   Incoming Incomplete Dial Alarm(sec): 255
END TO END SIGNALING
  Tone(msec): 350           Pause(msec): 150
```

— Example: Rotary Signaling Digital DID

- Country: 14
- Trunk Type: immed-start
- Incoming Dial Type: rotary

```
display trunk-group 32                               Page 1 of 10
TRUNK GROUP
Group Number: 32                                   Group Type: did       CDR Reports: y
Group Name: slovak did dec                       COR: 1               TN: 1           TAC: 932
Country: 14                                       CO Type: digital
Auth Code? n
TRUNK PARAMETERS
  Trunk Type: immed-start   Incoming Rotary Timeout(sec): 5
                                                Incoming Dial Type: rotary
  Trunk Termination: rc    Disconnect Timing(msec): 500
  Digit Treatment:        Digits:
  Expected Digits:        Sig Bit Inversion: none
  Terminal Balanced? n    RA Trunk Loss: 0db
  Extended Loop Range? n  Trunk Gain: high    Drop Treatment: silence
  Disconnect Supervision - In? n
```

```

display trunk-group 32                                     Page 2 of 10
TRUNK FEATURES
  ACA Assignment? n                                     Measured: none
                                                    Maintenance Tests? y
  Data Restriction? n
  Suppress # Outpulsing? n
    
```

- Incoming Disconnect (msec): 90
- Incoming Dial Guard (msec): 70

```

display trunk-group 32                                     Page 3 of 10
                                                    TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 90
  Incoming Dial Guard(msec): 70
  Incoming Partial Dial(sec): 5
    Flash Length(msec): 100   Incoming Incomplete Dial Alarm(sec): 1
END TO END SIGNALING
  Tone(msec): 350   Pause(msec): 150
    
```

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented.

- CO Trunks
  - DS1 Administration Screen <sup>4</sup>
    - Circuit Pack: TN464D (not entered as an administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 14
    - Interconnect: CO

---

4. DS1 is also analogous to the term E1 that has been coined for the European T1 or 2 mbit interface.

- CRC?: No
- Idle Code: 01010100
- Trunk Group Administration Screen (Timing)  
Set digital trunk timing values the same as for analog CO trunks.
- DID Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN464D (not entered as an administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 14
    - Interconnect: CO
    - CRC?: No
    - Idle Code: 01010100
  - Trunk Group Administration Screen (Timing)  
Set digital trunk timing values the same as for analog DID trunks.
- Tie Trunks
  - Non-ISDN Signaling Example (DS1 Administration Screen)
    - Circuit Pack: TN464D (Not entered as administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 14
    - Interconnect: pbx
    - CRC?: no
    - Idle Code: 01010100



## Ecuador

The information provided here is preliminary and subject to change. [Table 26](#) shows the recommended circuit packs.

**Table 26. Recommended and Available CPs in Ecuador**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	120V/60Hz 240V/60Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B
R2MFC Circuit	
Speech Synthesizer	
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E TN464D
Digital Tie Trunk	> TN464F TN464E TN464D
Digital PRI CO Trunk	n/a
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN746B

*Continued on next page*

Table 26. Recommended and Available CPs in Ecuador — *Continued*

Equipment	Equipment Type
24 Port Analog Line	n/a
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181 TN2136
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

**NOTE:**

A-law companding is the national standard in Ecuador. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc:	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: Yes<sup>5</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: Yes
  - Repetitive Call Waiting Tone: No
  - DID Busy Treatment: Attendant
  - Pull Transfer: No
  - Level of Tone Detection: Medium
  - Outpulse Without Tone: Yes
  - (Station-to-switch) Recall Timing:
    - Flashhook Interval: No
    - Disconnect Timing: 350 ms

5. Although not a Type Approval issue, this represents the convention for this country.

- System Parameter Country Options Administration
  - Companding Mode: A-law
  - Base Tone Generation Set:
  - Tone Detection Mode: 2
  - Interdigit Pause: short
  - Digital Loss Plan:
  - Analog Ringing Cadence:

## **Analog Trunk Administration**

- CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Country:
    - Trunk Gain: high
    - Direction: two-way
    - Digit Absorption List: blank
    - Prefix-1: No
    - Trunk Type: loop-start
    - Outgoing Dial Type: tone
    - Trunk Termination: 600 ohm
    - Auto Guard: no
    - Dial Access: Yes
    - Call Still Held: no
    - Terminal Balanced: yes
    - Receive Answer Supervision: no
    - Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk receiving answer supervision.)
    - Disconnect Supervision - In: yes
    - Disconnect Supervision - Out: Selection is customer's choice.
    - Disconnect Timing: 100 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

## — Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 100 ms
  - Outgoing Disconnect: 100 ms
  - Outgoing Dial Guard: 3000 ms
  - Incoming Glare Guard: 1500 ms
  - Outgoing Glare Guard: 1500 ms
  - Outgoing Dial Pulse Rate (PPS): 10 pps
  - Outgoing Rotary Digit Dial Make: 40 ms
  - Outgoing Rotary Digit Dial Break: 60 ms
  - Outgoing Rotary Dial Interdigit: 800 ms
  - Ring Monitor Timer: 5200 ms
  - Incoming Seizure: 500 ms
  - Outgoing End-of-Dial: 255 sec
  - Outgoing Seizure Response: 0
  - Programmed Dial Pause: 3 sec
  - Disconnect Signal Error: 240 sec
  - End-To-End Signaling Pause: 150 ms (accept default)
  - End-To-End Signaling Tone: 350 ms (accept default)
  - Flash Length: 100 ms
  - PPM: No
- DID Trunks
    - Trunk Group Screen
    - Group Type: DID
      - Country:
      - Trunk Gain: high
      - Digit Absorption List: blank
      - Incoming Dial Type: tone
      - Trunk Type: immed-start
      - Trunk Termination: rc (complex impedance)
      - Disconnect Supervision: no

- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Digit Treatment: blank
- Digits: blank
- Expected Digits: depends on system size and numbering plan
- Terminal Balanced: yes
- RA Trunk Loss: 0dB
- Extended Loop Range: (Used Only with TN459) no
- Drop Treatment: silence
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 100 ms
  - Incoming Dial Guard: 10 ms
  - Incoming Partial Dial: 18 sec
  - Incoming Incomplete Dial: 255 sec
- Tie Trunks  
No information regarding Type Approval-related settings is currently available.

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather only the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks
  - DS1 Administration Screen <sup>6</sup>
  - Circuit Pack: TN464D (not entered as an administrable item)
    - Bit Rate: 2.048

---

6. DS1 is also analogous to the term E1 that has been coined for the European T1 or 2 mbit interface.

- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: CAS
- Country Protocol:
- Interconnect: CO
- CRC?: No
- Idle Code: 01010100
- Trunk Group Administration Screen (Timing)  
Digital trunk timing values should be set as for analog CO trunks.
- DID Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN464D (not entered as an administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol:
    - Interconnect: CO
    - CRC?: No
    - Idle Code: 01010100
  - Trunk Group Administration Screen (Timing)  
Set digital trunk timing values the same as for analog DID trunks.
- Tie Trunks
  - Non-ISDN Signaling Example (DS1 Administration Screen)
    - Circuit Pack: TN464D (Not entered as administrable item; TN464C from upgrades)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol:
    - Interconnect: pbx
    - CRC?: no
    - Idle Code: 01010100

— ISDN-PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.

— DS1 Administration screen

- Circuit Pack: TN464D (or TN464C from upgrades)
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Country Protocol: 1
- Connect: pbx
- Interface: user
- CRC: No
- Idle Code: 01010100

— Signaling Group screen

- Associated Signaling: Yes
- Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)

— Trunk Group Administration screen

- Group Type: isdn-pri
- Service Type: tie

— ISDN-PRI (Public Network)

Not available for this country.



**France**

[Table 27](#) shows the recommended circuit packs.

**Table 27. Recommended and Available CPs in France**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	50Hz (See the note that follows this table.)
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B
R2MFC Circuit	n/a
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	n/a
Analog CO Trunk (No PPM)	n/a
Analog CO Trunk (w/PPM)	n/a
4 Wire Tie Trunk	>FTN760D
2 Wire Tie Trunk	n/a
Auxiliary Trunk	n/a
Digital CO/DID Trunk	> TN464F
Digital Tie Trunk	> TN464F
Digital PRI CO Trunk	> TN464F
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	#TN-PRI-BRI
8 Port Analog Line	n/a
16 Port Analog Line	> TN2183
24 Port Analog Line	n/a

*Continued on next page*

Table 27. Recommended and Available CPs in France — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	TN556B

**NOTE:**

50Hz ring generation requires modification to all backplanes with port slots and installation of a TN2202 Ring Generator (50Hz) circuit pack.

Also, you can use the 122A Music-on-Hold Interface in France.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

**NOTE:**

All systems for France require modifications to provide 50Hz ring generation. This requires modifications to all backplanes with port slots and installation of a TN2202 Ring Generator (50Hz) circuit pack in all carriers with these modified backplanes.

**NOTE:**

The 122A Music-on-Hold Interface is used for France.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc:	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- System-Parameters Customer-Options
  - G3 Version: V4
  - ARS: y
  - Hospitality Parameter Reduction: n
  - ISDN-PRI?: y
  - ISDN-PRI over PACCON?: y
  - Tenant Partitioning?: n
- Feature-Related System Parameters
  - Trunk-to-Trunk Transfer: None (No trunk to trunk transfer allowed)
  - Coverage Subsequent Redirection/CFWD No Answer Interval: 12
  - Coverage - Caller Response Interval (seconds): 1
  - Music/Tone on Hold: music
  - DID/TIE/ISDN Intercept Treatment: attd (attendant)
  - Public Network Trunks on Conference Call: 2
  - Night Service Disconnect Timer (seconds): 240
  - Unanswered DID Call Timer (seconds): blank
  - Auto Hold: y
  - DID Busy Treatment: tone
  - Wait Answer Supervision Timer: n

- Repetitive Call Waiting Tone?: y
- Repetitive Call Waiting Interval (sec): 20
- Intercept Treatment on Failed Trunk Transfers?: y
- Station Tone Forward Disconnect: busy
- Misoperation Alerting?: y
- Upper Bound (msec): 360
- Lower Bound (msec): 180
- System Parameters Country Options
  - Companding Mode: A-Law
  - Base Tone Generator Set: 12
  - Digital Loss Plan: 12
  - Analog Line Transmission: 12
  - Tone Name: (Program the Intercept tone like the Busy tone and customize the following:  
[(Frequency/Level)|silence|goto)][(Duration ms)][(Step)]
    - Confirmation tone
      - (440/-17.25)(100)
      - (silence)(100)
      - (440/-17.25)(100)
      - (silence)(100)
      - (440/-17.25)(100)
      - (silence)(100)
    - Rep-Confirmation tone
      - (440/-17.25)(100)
      - (silence)(100)
      - (440/-17.25)(100)
      - (silence)(100)
      - (440/-17.25)(100)
      - (silence)(100)
      - (go to)(1)
    - Redirect tone
      - (silence)(50)
- Console-Parameters
  - Ext Alert Prt (TAAS): 01A0405 (administered with an analog port)

- Time in Queue Warning (sec): 20 (between 20 and 40)
- Incoming Call Reminders (set the following values to a total value of 90)
  - No Answer Timeout (sec): 60
  - Alerting (sec): 30
- Call-Type Ordering Within Priority Levels?: y

## **Station Administration**

- Attendant
  - Type: 302B1
  - Extension: blank
  - COS: 0
  - COR: 0
  - Atd-qtime feature button is mandatory
  - type-disp feature button is mandatory
- 603/302B1 Terminal Parameters
  - Default Parameter Set: 12
  - Customize Parameters: n
- 310 Touch Tone Dialing Display Station
  - Type: 2500
  - COR: 1
  - Coverage Path: 1 (mandatory)
  - Call Waiting Indication?: y
  - Att. Call Waiting Indication?: y
  - Distinctive Audible Alert?: n
  - Message Waiting Indicator: led
  - Adjunct Supervision?: n
- 311 Rotary Dialing Display Station
  - Type: 500
  - COR: 1
  - Coverage Path: 1 (mandatory/cannot be blank)
  - Call Waiting Indication?: n
  - Att. Call Waiting Indication?: n
  - Distinctive Audible Alert?: n

- Adjunct Supervision?: n
- 314 Phantom Station
  - Type: 2500
  - COR: 95
  - Port: x
- 8400 and 9400 Type Station
  - Extension: 300
  - Type: 8403B
  - Coverage Path: 1 (mandatory/cannot be blank)
  - Active Station Ringing: continuous
  - Restrict Last Appearance? n
  - Button Assign 3: brdg-appr
    - Btn: 1
    - Ext: X (where X is extension of a phantom station)
- 8400 and 9400 Terminal Parameters
  - Default Parameter Set: 12
  - Customize Parameters: n
- Call Master Station
  - Type: 603E1
  - Coverage Path: 1 (mandatory/cannot be blank)
  - Restrict Last Appearance? n
- WCBRI Interface Station
  - Extension: 306
  - Type: WCBRI
  - Coverage Path: 1 (mandatory/cannot be blank)
  - Country Protocol: etsi
  - Endpt Init?: n

## **Group Administration**

- ACD Group
  - Hunt-Group screen
    - ACD?: y
    - Queue? y
    - COR: 95

- Coverage Path> 1 (mandatory/cannot be blank)
  - First announcement extension: 5555 (mandatory/cannot be blank)
- Hunt Group
  - Hunt-Group screen
    - Group Number: 4
    - Queue? n
    - Coverage Path> 1 (mandatory/cannot be blank)
    - First announcement extension: 5555 (mandatory/cannot be blank)

### Coverage Path Administration

- Coverage Path screen
  - Coverage Criteria for Outside Call field:
    - Active? n
    - Busy?: y
    - Don't Answer?: y
  - Number of Rings: 8 (equivalent to 40 seconds)
  - Point1: 303 (extension number of the first point of coverage)
  - Point2: attd (the attendant console)
  - Point3: 550 (extension number of an announcement)

COR Number: 1  
COR Description: COR of stations

FRL: 0	APLT? y
Can Be Service Observed? n	Calling Party Restriction: none
Can Be A Service Observer? n	Called Party Restriction: none
	Forced Entry of Account Codes? n
Priority Queuing? n	Direct Agent Calling? n
Restriction Override: all	Facility Access Trunk Test? n
Restricted Call List? n	
Access to MCT? y	Fully Restricted Service? n
Category For MFC ANI: 7	Hear VDN of Origin Annc.? n
Send ANI for MFE? n	
Hear System Music on Hold? y	PASTE (Display PBX Data on Phone)? n

```
display cor 95
      COR Number: 95
      COR Description: COR of phantom stations and ACD group

      FRL: 0
      APLT? y
      Can Be Service Observed? n      Calling Party Restriction: none
      Can Be A Service Observer? n    Called Party Restriction: termination

      Forced Entry of Account Codes? n
      Priority Queuing? n              Direct Agent Calling? n
      Restriction Override: all        Facility Access Trunk Test? n
      Restricted Call List? n

      Access to MCT? y                Fully Restricted Service? n
      Category For MFC ANI: 7          Hear VDN of Origin Annc.? n
      Send ANI for MFE? n
      Hear System Music on Hold? y    PASTE (Display PBX Data on Phone)? n
```

```
display cos

      0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15
Auto Callback      y  y  y  n  y  n  y  n  y  n  y  n  y  n  y  n
Call Fwd-All Calls y  y  n  y  y  n  n  y  y  n  n  y  y  n  n  y
Data Privacy       y  y  n  n  n  n  y  y  y  n  n  n  n  y  y  y
Priority Calling   n  n  n  n  n  n  n  n  n  n  n  n  n  n  n  n
Console Permissions y  n  n  n  n  n  n  n  n  n  n  n  n  n  n  n
Off-hook Alert    n  n  n  n  n  n  n  n  n  n  n  n  n  n  n  n
Client Room       y  n  n  n  n  n  n  n  n  n  n  n  n  n  n  n
Restrict Call Fwd-Off Net y  n  n  n  n  n  n  n  n  n  n  n  n  n  n  n
Call Forwarding Busy/DA n  n  n  n  n  n  n  n  n  n  n  n  n  n  n  n
```

## ISDN PRI Administration

- DS1 Administration screen
  - Country Protocol: 12
  - Bit Rate: 2.048
  - Line Coding: hdb3
  - Version Protocol: b (ETSI and French Delta) a (France VN4 mode)
  - Interface Companding: alaw
  - Idle Code: 01010100CRC? n
  - Slip Detection? y



```
display ds1 xxyzz                               Page 1 of 1

Location: xxyzz                                Name:
Bit Rate: 2.048                                Line Coding: hdb3

Signaling Mode: isdn-pri
Connect: pbx      Interface: Peer-master
Peer_protocole: ecma
Side: a

Interface Companding: alaw                      CRC? n
Idle Code: 01010100

MAINTENANCE PARAMETERS

Slip Detection? y
```

- Trunk Group Administration screen
  - Dial Access? n
  - Busy Threshold: 20 (set at a value less than 30)
  - Night Service: 555 (extension number of an answering group)
  - Supplementary Service Protocol: b (for QSIG network) a (France VN4 mode)
  - Disconnect Supervision - In? n Out? n set (both fields to n)
  - Send Name: n
  - Send Connected Number: n
  - Numbering format: unknown (for transgroupe or connection to VN2/VN3 public network)
- Synchronization Source screen (DS1 circuit pack location)
  - Primary: 01A07 (port identifier of the ISDN PRI board connected to the public network)
  - Secondary 01A08 (if there is more than one DS1 board, port identifier of the second ISDN PRI board connected to the public network)
- Route Pattern screen
  - Numbering Format: unkn-unkn (for connection to VN2/VN3 network or connection to transgroupe network) and pubu (for VN4 network)
  - ARS Analysis: all entries must be distinct in Dialed String and have Max=Min

Numbering Format			
	ARS Call Type	RoutePattern	TG
VN4	pubu	blank	blank
Transgroupe	pubu	unknown-unknown	unkn

## Tie Trunk Administration

- Trunk-Group screen
  - Group Type: tie
  - Trunk Type (in/out): immed/auto
  - Outgoing Dial Type: tone
  - Incoming Dial Type: tone
  - Mode field: e&m
  - Type field: type-5

## Feature Access Codes

- ARS: use is mandatory
- Priority Calling: blank
- TAAS: required

## System Parameters Maintenance

### OPERATIONS SUPPORT PARAMETERS

Product Identification: 1111111111  
OSS Telephone Number:  
Alarm Origination Activated? n  
Cleared Alarm Notification? n  
Restart Notification? n  
Test Remote Access Port? n  
CPE Alarm Activation Level: major  
Packet Bus Activated? y  
Customer Access to INADS Port? n

### SCHEDULED MAINTENANCE

Start Time: 21 : 00 Stop Time: 22 : 01  
Daily Maintenance: daily  
Save Translation: daily  
Control Channel Interchange: no  
System Clocks Interchange: no  
SPE Interchange: no  
EXP-LINK Interchange: no

display system-parameters maintenance

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### MAINTENANCE THRESHOLDS ( Before Notification )

Minimum Threshold for TTRs : 2 Minimum Threshold for CPTRs: 2  
Minimum Threshold for Call Classifier Ports: 2

### TERMINATING TRUNK TRANSMISSION TEST ( Extension )

Test Type 100: Test Type 102: Test Type 105:

### ISDN MAINTENANCE

ISDN-PRI Test Call Extension: ISDN-BRI Service SPID:

### DS1 MAINTENANCE

DS0 Loop-Around Test Call Extension:

### LOSS PLAN ( Leave Blank if no Extra Loss is Required )

Minimum Number of Parties in a Conference Before Adding Extra Loss:

## Set Options

Set options

Page 1 of 2

	Major	Minor
On-board Station Alarms:	w	w
Off-board Station Alarms:	w	w
On-board Trunk Alarms (Alarm Group 1):	y	y
Off-board Trunk Alarms (Alarm Group 1):	w	w
On-board Trunk Alarms (Alarm Group 2):	w	w
Off-board Trunk Alarms (Alarm Group 2):	w	w
On-board Trunk Alarms (Alarm Group 3):	w	w
Off-board Trunk Alarms (Alarm Group 3):	w	w
On-board Trunk Alarms (Alarm Group 4):	w	w
Off-board Trunk Alarms (Alarm Group 4):	w	w
On-board Adjunct Link Alarms:	w	w
Off-board Adjunct Link Alarms:	w	w
Off-board DS1 Alarms:	w	w
Off-board PI-LINK Alarms:	w	w
Off-board Alarms (Other):	w	w
Memory Card Capacity Alarms:		w

Set options

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(Alarm Group)

01: 1	11: 1	21: 1	31: 1
02: 1	12: 1	22: 1	32: 1
03: 1	13: 1	23: 1	
04: 1	14: 1	24: 1	
05: 1	15: 1	25: 1	
06: 1	16: 1	26: 1	
07: 1	17: 1	27: 1	
08: 1	18: 1	28: 1	
09: 1	19: 1	29: 1	
10: 1	20: 1	30: 1	

## Language

The following are the call-progress display messages and button labels that are translated into French. The translation is a generic form of the language so that it provides the widest customer base coverage. The entity providing a Lucent Technologies presence in a country is expected to provide each system with the following translations as a base "user-defined" set for systems sold within the corresponding market.

The following set of "user-defined" translations apply to France. The "user-defined" selection is an option for the end-user display that is administered on the Station and Attendant Administration screens. For all phone types that support the "Display Module," except for 85XX phones, set the Display Language field to **user-defined** once the following administration is done. On the 85XX phone users screen, set the Display Language field to **English** to provide a consistent language interface for users of those phones (85XX phones support only English program prompts and faceplates). On the Console-Parameters screen, set the Attendant Group Name field from the English default of **OPERATOR**. On the trunk group screen, set the Group Name field for each trunk to something other than the English default of **OUTSIDE CALL**.

### Automatic Wakeup Do Not Disturb

- OBJECT: auto-wakeup-dn-dst
  - English: AUTO WAKEUP - Ext:  
Translation: RDV/REVEIL - Poste:
  - English: WAKEUP ENTRY DENIED  
Translation: RDV/REVEIL REFUSE
  - English: WAKEUP REQUEST CANCELED  
Translation: DEMANDE RDV/REVEIL ANNULEE
  - English: WAKEUP REQUEST CONFIRMED  
Translation: DEMANDE RDV/REVEIL CONFIRMEE
  - English: Wakeup Call  
Translation: Rappel de RDV/REVEIL
  - English: Time:  
Translation: Heure:
  - English: DO NOT DIST - Ext:  
Translation: NPD - Poste:
  - English: DO NOT DIST - Group:  
Translation: NPD - Groupe:
  - English: DO NOT DIST ENTRY DENIED  
Translation: NPD REFUSE
  - English: THANK YOU - DO NOT DIST ENTRY CONFIRMED  
Translation: NPD CONFIRME
  - English: THANK YOU - DO NOT DIST REQUEST CANCELED  
Translation: NPD ANNULE

- OBJECT: auto-wakeup-dn-dst
  - English: INTERVAL FULL  
Translation: 1/4 H SATURE
  - English: NO PERMISSION  
Translation: NON AUTORISE.
  - English: SYSTEM FULL  
Translation: SATURATION
  - English: TOO SOON  
Translation: TROP PROCHE
  - English: INVALID EXTENSION - TRY AGAIN  
Translation: NUMERO DE POSTE ERRONE - RECOMMENCER
  - English: INVALID GROUP - TRY AGAIN  
Translation: NUMERO DE GROUPE ERRONE - RECOMMENCER
  - English: WAKEUP MESSAGE:  
Translation: ANNOUNCE RAPPEL RDV/REVEIL:
  - English: INVALID NUMBER - TRY AGAIN  
Translation: NUMERO ERRONE - RECOMMENCER

**Call Identifiers**

- OBJECT: call-identifiers

**Table 28. Call Identifiers**

English Term	Meaning of English Term	Translated Term
sa	ACD Supervisor Assistance	as
ac	Attendant Assistance Call	ao
tc	Attendant Control Of A Trunk Group	ao
an	Attendant No Answer	on
pc	Attendant Personal Call	pc
rc	Attendant Recall Call	ro
rt	Attendant Return Call	ra
sc	Attendant Serial Call	ch

Table 28. Call Identifiers — *Continued*

English Term	Meaning of English Term	Translated Term
co	Controlled Outward Restriction	cd
cs	Controlled Station To Station Restriction	ci
ct	Controlled Termination Restriction	ca
db	DID Find Busy Station With CO Tones	so
da	DID Recall Go To Attendant	sr
qf	Emergency Queue Full Redirection	ur
hc	Held Call Timed Reminder	aa
ic	Intercept	fm
ip	Interposition Call	ai
ld	LDN Calls On DID Trunks LDN: Listed Directory Number	si
so	Service Observing	ob
na	Unanswered Or Incomplete DID Call	sn
ACB	Automatic Callback	Rap
callback	Callback Call	Rappel
park	Call Park	Parcage
control	Control	Controle
ICOM	Intercom Call	Intercom
OTQ	Outgoing Trunk Queuing	At.Ligne
priority	Priority Call Prioritaets-Ruf	Priorite
recall	Recall Call	Rappl Op
return	Return Call	Retour
ARS	Automatic Route Selection	Depart

*Continued on next page*

Table 28. Call Identifiers — *Continued*

English Term	Meaning of English Term	Translated Term
forward	Call Forwarding	R.Temp
cover	Cover	Debord.
DND	Do Not Disturb	NPD
p	Call Pickup	i
c	Cover All Calls	c
n	Night Station Service, Including No Answer	N
B	All Calls Busy	O
f	Call Forwarding	t
b	Cover Busy	o
d	Cover On Don't Answer	n
s	Send All Calls	f
OPERATOR	Operator	OPERATEUR
EXT	Extension	POSTE/GROUPE
OUTSIDE CALL	Outside Call	APPEL EXT.
UNKNOWN NAME	Unknown Name	INCONNU
CONFERENCE	Conference	CONFERENCE
ringing	Ringling	Sonne
busy	Busy	Occupe
busy (I)	Busy With Intrusion Allowed	Occupe I
wait	Wait	att.
(I)	Intrusion	(I)
to187	<calling party> to <calling party>	a
Sta	Station	Poste
Trk	Trunk	Ligne
VDN	Vector Directory Number	VDN



— The following table presents a translation of days of the week and months of the year.

English—Days	French—Days	English—Months	French—Months
Sunday	Dimanche	January	Janvier
Monday	Lundi	February	Fevrier
Tuesday	Mardi	March	Mars
Wednesday	Mercredi	April	Avril
Thursday	Jeudi	May	Mai
Friday	Vendredi	June	Juin
Saturday	Samedi	July	Juillet
		August	Aout
		September	Septembre
		October	Octobre
		November	Novembre
		December	Decembre

### Leave Word Calling

- OBJECT: leave-word-calling
  - English: MESSAGES FOR  
Translation: MESSAGES POUR
  - English: WHOSE MESSAGES? (DIAL EXTENSION NUMBER)  
Translation: MESSAGES DESTINES A? (SAISIR NO POSTE)
  - English: END OF MESSAGES (NEXT TO REPEAT)  
Translation: FIN DES MESSAGES (SUIVANT POUR RELIRE)
  - English: MESSAGES UNAVAILABLE - TRY LATER  
Translation: MESSAGES NON DISPO - ESSAYER PLUS TARD
  - English: MESSAGE RETRIEVAL DENIED  
Translation: CONSULTATION MESSAGES REFUSEE
  - English: MESSAGE RETRIEVAL LOCKED  
Translation: CONSULTATION MESSAGES VERROUILLEE
  - English: NO MESSAGES  
Translation: PAS DE MESSAGES
  - English: IN PROGRESS  
Translation: EN COURS

- English: DELETED  
Translation: EFFACE
- English: GET DIAL TONE, PUSH Cover Msg Retrieval  
Translation: TONALITE, APPUYEZ SUR Lire Msg des Tiers
- English: Message Center (AUDIX) CALL  
Translation: Appel de la messagerie vocale (AUDIX)
- English: CANNOT BE DELETED - CALL MESSAGE CENTER  
Translation: IMPOSSIBLE D'EFFACER - APPELER MESSAGERIE

### Malicious Call Trace

- OBJECT: malicious-call-trace
  - English: MALICIOUS CALL TRACE REQUEST  
Translation: DEMANDE D'IDENTIF.D'APPELS MALVEILLANTS
  - English: END OF TRACE INFORMATION  
Translation: FIN DE RECHERCHE DES APPELS MALVEILLANTS
  - English: original call redirected from:  
Translation: appel redirige de:
  - English: voice recorder port:  
Translation: acces enregistrement:
  - English: MCT activated by: for:  
Translation: IAM Active par: pour:
  - English: party: (EXTENSION)  
Translation: corresp.: NUMERO POSTE/GROUPE
  - English: party: (ISDN SID/CNI)  
Translation: corresp.: (IDENTIF. RNIS)
  - English: party: (PORT ID)  
Translation: Corresp.: (NUMERO DE PORT)
  - English: party: (ISDN PORT ID)  
Translation: Corresp.: (NUMERO DE PORT RNIS)

### Miscellaneous Features

- OBJECT: miscellaneous-features
  - English: ALL MADE BUSY  
Translation: TOUS OCCUPES

- English: BRIDGED  
Translation: ASSOCIE(S)
- English: DENIED  
Translation: REFUSE
- English: INVALID  
Translation: ERRONE
- English: NO MEMBER  
Translation: VIDE
- English: OUT OF SERVICE  
Translation: HORS SERVICE
- English: RESTRICTED  
Translation: RESTREINT
- English: TERMINATED  
Translation: TERMINE
- English: TRUNK SEIZED  
Translation: LIGNE UTILISEE
- English: VERIFIED  
Translation: VERIFIE
- English: CDR OVERLOAD  
Translation: SURCHARGE TAXA.
- English: ANSWERED BY  
Translation: REPONDU PAR
- English: CALL FROM  
Translation: APPEL DE
- English: Skills  
Translation: SPECIALITES
- English: TOLL  
Translation: CAED
- English: FULL  
Translation: AEDA
- English: NONE  
Translation: AR

- English: ORIG (Origination)  
Translation: AEID
- English: OTWD (Outward)  
Translation: AED
- English: CALL (<call> This Number)  
Translation: APPEL
- English: INTL (International)  
Translation: INTL
- English: Info (Information)  
Translation: INFO
- English: p (Primary)  
Translation: p
- English: s (Secondary)  
Translation: s
- English: m (Mark)  
Translation: m
- English: p (Pause)  
Translation: p
- English: s (Suppress)  
Translation: s
- English: w (Wait For A Specified Time)  
Translation: a
- English: W (Wait For Off-Premise Dial Tone)  
Translation: A
- English: You have adjunct messages  
Translation: Vous avez des messages
- English: Login Violation  
Translation: Connexion illicite
- English: Barrier Code Violation  
Translation: Code de connexion a distance illicite
- English: Authorization Code Violation  
Translation: Code autorisation illicite

- English: DIRECTORY - PLEASE ENTER NAME  
Translation: REPERTOIRE - SAISIR LE NOM
- English: DIRECTORY UNAVAILABLE - TRY LATER  
Translation: REPERTOIRE NON DISPO. - ESSAYER PLUS TARD
- English: NO MATCH - TRY AGAIN  
Translation: AUCUNE SOLUTION - RECOMMENCER
- English: NO NUMBER STORED  
Translation: AUCUN NUMERO ENRESISTRE
- English: TRY AGAIN  
Translation: RECOMMENCER
- English: Ext (in EMRG Q)  
Translation: NO (FILE URG.)
- English: HUNT GROUP NOT ADMINISTERED  
Translation: GROUPE DE POSTES NON ADMINISTRE
- English: Q-time calls  
Translation: TpsAtt Appel
- English: Add Skill: Enter number, then # sign  
Translation: Ajout specialite: saisir No puis #
- English: Remove Skill: Enter number, then # sign  
Translation: Sortie specialite: Saisir No puis #
- English: Press 1 for primary or 2 for secondary  
Translation: 1 pour principale ou 2 pour secondaire
- English: Enter Agent LoginID  
Translation: Saisir No Identification Agent
- English: Call Type  
Translation: Type d'appel

### **Property Management**

- OBJECT: property-management
  - English: CHECK IN - Ext:  
Translation: ENTREE - Poste:
  - English: CHECK IN: ROOM ALREADY OCCUPIED  
Translation: ENTREE: CHAMBRE INOCCUPEE

- English: CHECK IN COMPLETE  
Translation: ENTREE EFFECTUEE
- English: CHECK IN FAILED  
Translation: ENTREE NON VALIDEE
- English: CHECK OUT - Ext:  
Translation: SORTIE: Poste:
- English: CHECK OUT: ROOM ALREADY VACANT  
Translation: SORTIE: CHAMBRE INOCCUPEE
- English: CHECK OUT FAILED  
Translation: SORTIE NON VALIDEE
- English: MESSAGE NOTIFICATION FAILED  
Translation: ECHEC D'AVIS DE MESSAGE
- English: MESSAGE NOTIFICATION ON - Ext:  
Translation: AVIS DE MSG ACTIVE - Poste
- English: MESSAGE NOTIFICATION OFF - Ext:  
Translation: AVIS DE MSG DESACTIVE - Poste:
- English: CHECK OUT COMPLETE: MESSAGE LAMP OFF  
Translation: SORTIE EFFECTUEE: PAS DE MESSAGE
- English: CHECK OUT COMPLETE: MESSAGE LAMP ON  
Translation: SORTIE EFFECTUEE: MESSAGES
- English: MESSAGE LAMP ON  
Translation: MESSAGES
- English: MESSAGE LAMP OFF  
Translation: PAS DE MESSAGE
- English: Occupied Rooms  
Translation: Chambres occupees
- English: Enter Desired Room State (1-6)  
Translation: Saisir etat de la chambre (1-6)
- English: Undefined State, Enter number from 1 - 6  
Translation: Etat indefini, Saisir no de 1 a 6

## **Time of Day Routing**

- OBJECT: time-of-day-routing
  - English: ENTER ACTIVATION ROUTE PLAN, DAY & TIME  
Translation: SAISIR H/DATE ACTIVATION AGENDA ROUTAGE
  - English: ENTER DEACTIVATION DAY AND TIME  
Translation: SAISIR H/DATE DESACTIVATION AGENDA
  - English: OLD ROUTE PLAN: ENTER NEW PLAN:  
Translation: ANCIEN AGENDA: SAISIR NOUVEAU:
  - English: OLD ROUTE PLAN: NEW PLAN:  
Translation: ACIEN AGENDA: NOUVEAU:
  - English: ROUTE PLAN: FOR ACT-TIME:  
Translation: AGENDA: HeureDebut:
  - English: ROUTE PLAN: FOR DEACT-TIME:  
Translation: AGENDA: POUR Heure Fin:

## **Softkey Labels**

The following translations are consistent with the 8400 and 9400 DCP Terminals - Foreign Language Translation Requirements).

- OBJECT: softkey-labels
  - English: AD  
Translation: NoAbr
  - English: AutCB  
Translation: RappI
  - English: CFrwd  
Translation: RTemp
  - English: CnLWC  
Translation: AnMsg
  - English: CnsIt  
Translation: Notif
  - English: Count  
Translation: Compt
  - English: CPark  
Translation: Parc

- English: CPkUp  
Translation: Intcp
- English: Dir  
Translation: Rpert
- English: Excl  
Translation: Protc
- English: HFAns  
Translation: inter
- English: IAuto  
Translation: IAuto
- English: IDial  
Translation: IAbr
- English: Inspt  
Translation: Info
- English: Last  
Translation: Bis
- English: LWC  
Translation: Msg
- English: Mark  
Translation: ModMF
- English: Pause  
Translation: Pause
- English: PCall  
Translation: Prior
- English: Prog  
Translation: Prog
- English: RngOf  
Translation: SOff
- English: SAC  
Translation: RFixe
- English: SFunc  
Translation: FSpec



- English: Spres  
Translation: Suppr
- English: Stats  
Translation: Stats
- English: Stop  
Translation: Stop
- English: Timer  
Translation: Chron
- English: TmDay  
Translation: H/Dat
- English: View  
Translation: AffNo
- English: Wait  
Translation: AttTo

## VuStats

- OBJECT: vustats
  - English: FORMAT  
Translation: FORMAT
  - English: NOT DEFINED  
Translation: NON DEFINI
  - English: DOES NOT ALLOW OR REQUIRE ID  
Translation: NO IDENTIFICATION REQUIS
  - English: AGENT  
Translation: AGENT
  - English: SPLIT/SKILL  
Translation: GROUPE ACD
  - English: TRUNK GROUP  
Translation: GR. LIGNES
  - English: VDN  
Translation: VDN
  - English: NOT ADMINISTERED  
Translation: NON ADMINISTRE

- English: NOT MEASURED  
Translation: NON MESURE
- English: AGENT NOT LOGGED IN  
Translation: AGENT N'AYANT PAS ETABLI LA

## Germany

[Table 29](#) shows the recommended circuit packs.

**Table 29. Recommended and Available CPs in Germany**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D TN420C
Tone Clock	> TN2182B TN780
R2MFC Circuit	n/a
Speech Synthesizer	n/a
Call Classifier	> TN744D
Announcement	#TN750C > TN750B
Analog DID Trunk	> TN2184 (See the note that follows this table.)
Analog CO Trunk (No PPM)	> TN2147C
Analog CO Trunk (w/PPM)	> TN2184
4 Wire Tie Trunk	n/a
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	n/a
Digital Tie Trunk	> TN464F TN464E
Digital PRI CO Trunk	> TN464F
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	#TN-PRI-BRI
8 Port Analog Line	n/a
16 Port Analog Line	#TN2183 > TN2180

*Continued on next page*

Table 29. Recommended and Available CPs in Germany — *Continued*

Equipment	Equipment Type
24 Port Analog Line	n/a
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	TN556B

**NOTE:**

TN2184 provides DIOD operation and PPM at 12Hz or 16Hz, but not at 50Hz.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen “x11”.

Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Restricted (of Public trunks not permitted in Germany)
  - Coverage - Subsequent Redirection No Answer Interval: 1
  - Coverage - Caller Response Interval (seconds): 1
  - Keep Held SBA at Coverage Point? y
  - Automatic Callback - No Answer Timeout Interval (rings): 2
  - Call Park Timeout Interval (minutes): 3
  - Off-Premises Tone Detect Timeout Interval (seconds): 15
  - AAR/ARS Dial Tone Required: y
  - DID/TIE/ISDN Intercept Treatment: Attendant
  - Time before Off-hook Alert: 10
  - Service Observing Warning Tone: Yes
  - Public Network Trunks on Conference Call: 1
  - Conference Parties With PNTs: 3
  - Conference Parties Without PNTs: 6
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 25 sec
  - Line Intercept Tone Timer (seconds): 30
  - Auto-Hold: Yes1
  - Attendant Tone: Yes
  - Bridging Tone: No

- Conference Tone: Yes
- Intrusion Tone: Yes
- DID Busy Treatment: Attendant
- Pull Transfer: No
- Level of Tone Detection: Medium
- Wait Answer Supervision Timer: No
- Repetitive Call Waiting Tone: Yes
- Outpulse Without Tone: No
- Network Feedback During Tone Detection: No
- Intercept Treatment On Failed Trunk Transfers: No
- (Station-to-switch) Recall Timing:
  - Flashhook Interval: No
  - Disconnect Timing: 250 ms
- System Parameter Country Options Administration
  - Companding Mode: A-law
  - Base Tone Generation Set: 13
  - Tone Detection Mode: 4
  - Interdigit Pause: long
  - Dial Tone Validation Timer: 600ms
  - Analog Ringing Cadence: 13
  - Customized Individual Tones
  - Customized tone definitions follow the syntax as specified:  
[(Frequency/Level)|silence|goto)][(Duration ms)][(Step)]
    - Busy
      - (425/-4)(500)
      - (silence)(500) (475 is desired, but not possible)
      - (go to)(1)
    - Reorder
      - (425/-4)(250)
      - (silence)(250)
      - (go to)(1)
    - Ringback
      - (425/-4)(1000)

- (silence)(4000)
- (go to)(1)

## Analog Trunk Administration

- CO Trunks

- Trunk Group Screen

- Group Type: CO
- COR: COR for CO trunks must have a higher FRL than all incoming Tie trunk groups. (This is required since German regulations prohibit connecting two trunks even through a private network.)
- Direction: two-way
- Dial Access: Customer Option, No is recommended to avoid toll fraud
- Country Code: 13
- Digit Absorption List: blank
- Prefix-1: No
- Trunk Type: loop-start
- Outgoing Dial Type: tone
- Trunk Termination: rc (complex impedance)
- Parameters based on loop length (which itself is not administrable)

Loop Length	Trunk Gain	Terminal Balance	RA Trunk Loss
short	low	n	0dB
long	high	n	2dB

- Auto Guard: no
- Sig Bit Inversion: none
- Call Still Held: no
- Receive Answer Supervision: no
- Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to **0** for any trunk receiving answer supervision.)
- Disconnect Supervision - In:
  - Analog Trunks: yes
  - Digital Trunks: yes

- Disconnect Supervision - Out: no
- Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Suppress # Outpulsing: yes

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 1100 ms
- Outgoing Disconnect: 1100 ms
- Outgoing Dial Guard: 4000 ms
- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: 1500 ms
- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response:
  - Analog trunks: 5 sec
  - Digital trunks: 2 sec
- Programmed Dial Pause: 1500 ms
- Flash Length: 540 ms
- End-To-End Signaling Pause: 150 ms
- End-To-End Signaling Tone: 350 ms
- PPS: 10
- Make: 40 ms
- Break: 60 ms
- PPM: n

■ DIOD Trunks

— Trunk Group Screen

- Group Type: DIOD
- Direction: two-way
- Country Code: 13



- Digit Absorption List: blank
- Trunk Type: loop-start
- Incoming Dial Type: rotary
- Outgoing Dial Type: rotary
- Trunk Termination: rc (complex impedance)
- Digit Treatment: blank
- Digits: blank
- Expected Digits: (depends on system size and numbering plan)
- Trunk Gain: low
- Parameters based on loop length (which itself is not administrable).

Loop Length	Terminal Balance	RA Trunk Loss
short	n	0dB
long	n	2dB

- Drop Treatment: silence
- Disconnect Supervision - In:
- Analog Trunks: no
- Digital Trunks: yes
- Disconnect Supervision - Out: no
- Suppress # Outpulsing: yes

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 600 ms
- Outgoing Disconnect: 500 ms
- Incoming Dial Guard: 70 ms
- Outgoing Dial Guard: 1600 ms
- Outgoing Glare Guard: 100 ms Note: This blocks outgoing call attempts for 100 ms after previous release of trunk
- Incoming Glare Guard: 100 ms Note: This blocks incoming call attempts for 100 ms after previous release of trunk
- Incoming Partial Dial: 18 sec

- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End of Dial: 10 sec
- Outgoing Seizure Response: 5 sec
- Programmed Dial Pause: 1500 ms
- Flash Length: 100 ms
- Tone: 350 ms
- Pause: 150 ms
- Incoming Incomplete Dial Alarm: 160 sec
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 40 ms
- Outgoing Rotary Digit Dial Break: 60 ms
- PPM: yes
- Frequency: 16khz

## Digital Trunk Administration

In Germany, the public network does not cut through the voice path to an incoming B-channel until a CONNECT message is received from the called party. This is true for the VN4, 1TR6, and E- DSS1 protocols. Thus, it is not advisable to route incoming ISDN-PRI calls from the German public network over non-ISDN trunks, because the calling party will not hear any tones (ringback, busy, etc.) The best that can be done is to have an attendant or a vector handle incoming calls that might need to be routed over a non-ISDN trunk. This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- Tie Trunks
  - Non-ISDN Signaling Example (DS1 Administration screen)
    - Circuit Pack: TN464E or later
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 13
    - Interconnect: pbx

- CRC?: no
- Idle Code: (accept the default)
- ISDN-PRI Signaling (Private Network - for a connection to another DEFINITY only)

This example assumes use of AT&T Country Protocol with facility associated signaling. Other feature options will require changes in one or more administered items.

- DS1 Administration screen
- Circuit Pack: TN464E or later
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Connect: pbx
- Interface: user (on one side and "network" on the other side)
- Country Protocol: 1
- Protocol Version: a
- CRC: No
- Idle Code: (accept the default)
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - COR: COR for Tie trunks must have a lower FRL than the FRL of all CO/DID Trunk Groups and lower FRL than assigned to each Route Pattern Preferences for all CO and DIOD trunk groups. This is required since German regulations prohibit connecting two CO trunks even through a private network.
  - Service Type: tie
  - Supplementary Service Protocol: a
- ISDN-PRI (Private Network - for a connection to a non-DEFINITY via QSIG) Signaling

This example assumes use of AT&T Country Protocol with facility associated signaling. Other feature options will require changes in one or more administered items.

- DS1 Administration screen
  - Circuit Pack: TN464E or later
  - Bit Rate: 2.048
  - Interface Companding: A-law
  - Line Coding: HDB3 or AMI-BASIC depending on the administration of the other PBX
  - Signaling Mode: isdn-pri
  - Connect: pbx
  - Interface: peer-master or peer-slave (this affects layer 2; it should be set based on the administration of the other PBX)
  - Peer Protocol: ecma Side: a or b (this affects glare handling; it should be set based on the administration of the other PBX)
  - Country Protocol: 1
  - Protocol Version: a
  - CRC: No (yes is also possible, depending on the administration of the other PBX)
  - Idle Code: (must match the idle code of the other PBX)
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - COR: COR for Tie trunks must have a lower FRL than the FRL of all CO/DID Trunk Groups and lower FRL than assigned to each Route Pattern Preferences for all CO and DIOD trunk groups. This is required since German regulations prohibit connecting two CO trunks even through a private network.
  - Service Type: tie
  - Supplementary Service Protocol: a
- ISDN-PRI (Public Network)

Temporary Signaling Connections and D-Channel Backup features must not be administered for E1 interfaces that use country protocol 13 (Germany).

- DS1 Administration screen
  - Circuit Pack: TN464E or later
  - Bit Rate: 2.048
  - Interface Companding: A-law
  - Line Coding: HDB3
  - Signaling Mode: isdn-pri
  - Connect: Network
  - Country Protocol: 13
  - Protocol Version: a, for 1TR6 and b, for E-DSS1. Protocol version selection depends on the type of public network service purchased by the customer
  - CRC: yes
  - Idle Code: 01010100
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - COR: COR for Tie trunks must have a lower FRL than the FRL of all CO/DID Trunk Groups and lower FRL than assigned to each Route Pattern Preferences for all CO and DIOD trunk groups. This is required since German regulations prohibit connecting two CO trunks even through a private network.
  - Service Type: public\_ntwrk
  - Overlap Receiving: yes, a must for DID trunk operation

## **Station Administration**

In general, once the user defined language is administered to contain the translations for German language, the administrator selects "user-defined" on station administration and attendant administration to pick German as the display language for the corresponding display set user.

- 85XX Phones

In G3V3, the 8510 phone must be administered as a 7507 when you use it for both voice and data operation. If you use it for voice only operation, a phone type of 8510D is sufficient. Aliasing a phone type of 8510+ to a 7507 is a preferable way of handling the situation. In G3V4, there is native support for the 8510/8520 voice/data operation and aliasing is not required.

## — Phone Settings:

- Country Code = 9
- Companding Mode = a-law
- Transmit Value = +3
- Receive Value = -5
- Side Tone Value = 0

## ■ 84XX(94XX) Phones

Aliasing the phone types of 9403B to 8403B, 9410B to 8410B, 9410D to 8410D, and 9434D to 8434D would be a preferable way of handling the administration for the 94XX family of phones.

## — Phone Parameters


- Default Parameter Set: 13
- Customize Parameters? n

**NOTE:**

The default parameters for selecting Germany country code 13 are as follows and **SHOULD NOT BE ADMINISTERED INDIVIDUALLY** with software load G3V3i.02.0.044.0 or later loads. These values are included as reference information only.

- Display Mode: 2
- DLI Voltage Level: auto
- Handset Expander Enabled? n
- Primary Levels:
  - Voice Transmit (dB): +5.0
  - Voice Sidetone (dB): -12.0
  - Voice Receive (dB): -11.5
  - Touch Tone Sidetone (dB): -25.0
  - Touch Tone Transmit (dB): -4.0
- Adjunct Levels
  - Voice Transmit (dB): -5.0
  - Voice Receive (dB): -2.0
  - Voice Sidetone (dB): -21.5
  - Touch Tone Sidetone (dB): -25.0

## — Station Administration (nothing except for alias of 94XX to 84XX equivalent)

- VISTA Headset adaptor settings:
  - Switch: Position 5
  - Tx-pot: 1 o'clock
  - Volume-control on the Phone: Nominal
- Valid Nordcom combinations:
  - Profile Monaural Headset <or>
  - Profile Binaural Headset <or>
  - Stetomike HMT Headset
- 603/302B Phones
  - Phone Parameters
    - Default Parameter Set: 13
    - Customize Parameters? n
  -  **NOTE:**  
The default parameters for selecting Germany country code 13 are as follows and **SHOULD NOT BE ADMINISTERED INDIVIDUALLY** with software load G3V3i.02.0.044.0 or later loads. These values are included as reference information only.
  - Display Mode: 2
  - DLI Voltage Level: auto
  - Primary Levels:
    - Voice Transmit (dB): +1.5
    - Voice Sidetone (dB): -10.5
    - Voice Receive (dB): -7.5
    - Touch Tone Sidetone (dB): -25.0
    - Touch Tone Transmit (dB): -4.0
  - VISTA Headset adaptor settings:
    - Switch: Position 1
    - Tx-pot: 3 o'clock
    - Volume-control on the 603: Nominal
  - Valid Nordcom combinations:
    - Profile Monaural Headset and Headset Amplifier 54 <or>

- Profile Binaural Headset and Headset Amplifier 54  
<or>
- Stetomike HMT Headset

## Language

The following are the call progress display messages and button labels that are translated into German. The translation is a generic form of the language so that it provides the widest customer base coverage. The entity providing AT&T presence in a country is expected to provide each system with the following translations as a base "user-defined" set for systems sold within the corresponding market.

The following set of "user-defined" translations apply to Germany, Switzerland, and Austria. The "user-defined" selection is an option for the end-user display that is administered on the Station and Attendant Administration screens. For all phone types that support the "Display Module," except for 85XX phones, set the Display Language field to **user-defined** once the following administration is done. On the 85XX phone users screen, set the Display Language field to **English** to provide a consistent language interface for users of those phones (85XX phones support only English program prompts and faceplates). On the Console-Parameters screen, set the Attendant Group Name field to **Telefonist** from the English default of **OPERATOR**. On the trunk group screen, set the Group Name field for each trunk to something other than the English default of **OUTSIDE CALL**.

### Automatic Wakeup Do Not Disturb

- OBJECT: auto-wakeup-dn-dst
  - English: AUTO WAKEUP - Ext:  
Translation: Autom. Weckruf - NSt:
  - English: WAKEUP ENTRY DENIED  
Translation: Weckruf nicht angenommen
  - English: WAKEUP REQUEST CANCELED  
Translation: Weckruf Eingabe abgebrochen
  - English: WAKEUP REQUEST CONFIRMED  
Translation: Weckruf Eingabe bestaetigt
  - English: Wakeup Call  
Translation: Weckruf
  - English: Time:  
Translation: Zeit:
  - English: DO NOT DIST - Ext:  
Translation: Nicht stoeren - NSt:



- English: DO NOT DIST - Group:  
Translation: Nicht stoeren - Gruppe:
- English: DO NOT DIST ENTRY DENIED  
Translation: Eingabe zurueckgewiesen
- English: THANK YOU - DO NOT DIST ENTRY CONFIRMED  
Translation: Eingabe 'nicht stoeren' bestaetigt
- English: THANK YOU - DO NOT DIST REQUEST CANCELED  
Translation: Eingabe 'nicht stoeren' abgebrochen
- OBJECT: auto-wakeup-dn-dst
  - English: INTERVAL FULL  
Translation: W-Zeit belegt  
(Explanation: nur maximale Weckrufe zur gleichen Zeit)
  - English: NO PERMISSION  
Translation: K. Berechtig.
  - English: SYSTEM FULL  
Translation: System voll
  - English: TOO SOON  
Translation: Zu frueh
  - English: INVALID EXTENSION - TRY AGAIN  
Translation: Falsche NSt - Bitte wiederholen
  - English: INVALID GROUP - TRY AGAIN  
Translation: Falsche Gruppe - Bitte wiederholen
  - English: WAKEUP MESSAGE:  
Translation: Weckruf Nachricht:
  - English: INVALID NUMBER - TRY AGAIN  
Translation: Falsche Nummer - Bitte wiederholen

## **Call Identifiers**

- OBJECT: call-identifiers

Table 30. English-German Call Identifiers

English Term	Meaning of English Term with German Expansion	Translated Term
sa	ACD Supervisor Assistance ACD Hilfe vom Gruppenleiter	GH
ac	Attendant Assistance Call Gespraechsaufbau durch Telefonisten	GT
tc	Attendant Control Of A Trunk Group Amtsleitungs Kontrolle durch Telefonisten	AK
an	Attendant No Answer Keine Antwort	kA
pc	Attendant Personal Call Telefonisten-Gespraech	TG
rc	Attendant Recall Call	RR
rt	Attendant Return Call Rueckruf vom Telefonisten	RT
sc	Attendant Serial Call Serien-Gespraech (Gespraech wird nach Beendigung jeweils zum Telefonisten zurueckgegeben)	SG
co	Controlled Outward Restriction Kontrollierte Amtswahlsperr	AS
cs	Controlled Station To Station Restriction Kontrollierte Internsperr	IS
ct	Controlled Termination Restriction Kontrollierte Empfangssperr	ES

*Continued on next page*

Table 30. English-German Call Identifiers — *Continued*

English Term	Meaning of English Term with German Expansion	Translated Term
db	DID Find Busy Station With CO Tones  Durchwahlgespräch: Zwangsabwurf zum Telefonisten	DZ
da	DID Recall Go To Attendant  Durchwahl Rückruf umgelenkt zum Telefonisten	DT
qf	Emergency Queue Full Redirection  Umleitung bei voller Warteschlange	UW
hc	Held Call Timed Reminder  Halte-Timer	HT
ic	Intercept  Abwurf bei Durchwahl-Fehler (Aufschaltung)	DF
ip	Interposition Call  Gruppeninternes Gespräch	GG
ld	LDN Calls On DID Trunks  LDN: Listed Directory Number (Durchwahlgespräch)  (Call to an extension which has the allowance to get DID-calls)	DG
so	Service Observing  Überprüfung des Gesprächs	Ue

*Continued on next page*

Table 30. English-German Call Identifiers — *Continued*

English Term	Meaning of English Term with German Expansion	Translated Term
na	Unanswered Or Incomplete DID Call  Unbeantworteter oder unvollstaendiger Durchwahl Anruf	UD
ACB	Automatic Callback	ARueckr
callback	Callback Call	Rueckruf
park	Call Park  Gespraech parken	Parken
control	Control	Kontr.
ICOM	Intercom Call  Intern Ruf	Int.Ruf
OTQ	Outgoing Trunk Queuing  Warten auf abgehende Amtsleitung	W auf AI
priority	Priority Call  Prioritaets-Ruf	Prio-Ruf
recall	Recall Call	Rueckruf
return	Return Call  Rufe zurueck	Rufe zur
ARS	Automatic Route Selection  (ALL = Automatische Leitweglenkung is not as nice)	ARS
forward	Call Forwarding  Rufumleitung	Ruf-Uml
cover	Cover  Kontrollierte Rufumleitung (mehrere Ziele) (Rufweiterleitung)	Ruf-WL

*Continued on next page*

Table 30. English-German Call Identifiers — *Continued*

English Term	Meaning of English Term with German Expansion	Translated Term
DND	Do Not Disturb Nicht Stoeren	N.stoer
p	Call Pickup Heranholen (Pick-up)	p
c	Cover All Calls Generelle Rufumleitung an vordefinierte Ziele	R
n	Night Station Service, Including No Answer Nachtabfragestelle, incl. Keine Antwort	n
B	All Calls Busy	A
f	Call Forwarding Rufumleitung	r
b	Cover Busy Rufumleitung bei Besetzt	B
d	Cover On Don't Answer Rufumleitung bei keiner Antwort	K
s	Send All Calls Spezielle Rufumleitung an vom Benutzer programmierte Ziel(e)	P
OPERATOR	Operator	Telefonist
EXT	Extension	Nebenstelle
OUTSIDE CALL	Outside Call	Amtsgespraech
UNKNOWN NAME	Unknown Name	unbekannte Mst
CONFERENCE	Conference	Konferenz
ringing	Ringing	ruft

*Continued on next page*

Table 30. English-German Call Identifiers — *Continued*

English Term	Meaning of English Term with German Expansion	Translated Term
busy	Busy	besetzt
busy (I)	Busy With Intrusion Allowed Besetzt - Aufschalten erlaubt	bes.(A)
wait	Anklopfen	Ankl.
(I)	Intrusion Aufschalten	auf
to	<calling party> to <calling party> <Anrufender Tln.> zu <angerufenem Tln.>	zu
Sta	Station	NST
Trk	Trunk Amtsleitung	Amts-Ltg
VDN	Vector Directory Number Vektorisiertes Durchwahl-Nummer	VDN

**Date/Time**

- OBJECT: date-time
  - English: SORRY, TIME UNAVAILABLE NOW  
Translation: Zeitanzeige leider jetzt nicht verfuegbar
  - The following table presents a translation of days of the week and months of the year. .

English — Days	German — Days	English — Months	German — Months
Sunday	Sonntag	January	Januar
Monday	Montag	February	Februar
Tuesday	Dienstag	March	Maerz
Wednesday	Mittwoch	April	April
Thursday	Donnerstag	May	Mai

Friday	Freitag	June	Juni
Saturday	Samstag	July	Juli
		August	August
		September	September
		October	Oktober
		November	November
		December	Dezember

## Leave Word Calling

- OBJECT: leave-word-calling
  - English: MESSAGES FOR  
Translation: Nachrichten fuer
  - English: WHOSE MESSAGES? (DIAL EXTENSION NUMBER)  
Translation: Wessen Nachrichten? (Waehle NSt-Nummer)
  - English: END OF MESSAGES (NEXT TO REPEAT)  
Translation: Ende der Nachrichten (Weiter-Nochmal)
  - English: MESSAGES UNAVAILABLE - TRY LATER  
Translation: Nachrichten jetzt nicht verfuegbar
  - English: MESSAGE RETRIEVAL DENIED  
Translation: Zugang zu Nachrichten zurueckgewiesen
  - English: MESSAGE RETRIEVAL LOCKED  
Translation: Zugang zu Nachrichten gesperrt
  - English: NO MESSAGES  
Translation: Keine Nachrichten
  - English: IN PROGRESS  
Translation: In Bearbeitung
  - English: DELETED  
Translation: Geloesch
  - English: GET DIAL TONE, PUSH Cover Msg Retrieval  
Translation: Leitung belegen, dann "Nachr.-Zugriff"
  - English: Message Center (AUDIX) CALL  
Translation: Nachrichten-Hinweis auf (AUDIX)
  - English: CANNOT BE DELETED - CALL MESSAGE CENTER  
Translation: Loeschen nicht moeglich - Rufe Nachr-Verw

## Malicious Call Trace

- OBJECT: malicious-call-trace
  - English: MALICIOUS CALL TRACE REQUEST  
Translation: Fangschaltung aktivieren
  - English: END OF TRACE INFORMATION  
Translation: Ende der Fangschalt-Info
  - English: original call redirected from:  
Translation: Anruf umgeleitet von:
  - English: voice recorder port:  
Translation: Sprachaufzeichnung-Port:
  - English: MCT activated by: for:  
Translation: FS aktiviert von: fuer:  
(Explanation: FangSchaltung aktiviert von: fuer:)
  - English: party : (EXTENSION)  
Translation: Teiln. : (Nebenstelle)
  - English: party : (ISDN SID/CNI)  
Translation: Teiln. : (ISDN Tln 1-Tln 2)
  - English: party : (PORT ID)  
Translation: Teiln. : (Port Ref-Nr)
  - English: party : (ISDN PORT ID)  
Translation: Teiln. : (ISDN Port Ref-Nr)

## Miscellaneous Features

- OBJECT: miscellaneous-features
  - English: ALL MADE BUSY  
Translation: Alle Besetzt
  - English: BRIDGED  
Translation: Gemeinsame Ltg.
  - English: DENIED  
Translation: Abgewiesen
  - English: INVALID  
Translation: Ungueltig



- English: NO MEMBER  
Translation: N. im Amts-Buend  
(Explanation: Nicht im Amtsbuendel)
- English: OUT OF SERVICE  
Translation: Ausser Betrieb
- English: RESTRICTED  
Translation: Gesperrt
- English: TERMINATED  
Translation: Beendet
- English: TRUNK SEIZED  
Translation: Amtsltg. belegt
- English: VERIFIED  
Translation: Uberprueft
- English: CDR OVERLOAD  
Translation: GDE Ueberlastet  
(Explanation: Call detailed recording  
Gespraechs-Daten-Erfassung) Ueberlastet
- English: ANSWERED BY  
Translation: Beantwortet von
- English: CALL FROM  
Translation: Anruf von
- English: Skills  
Translation: Fertigkeit  
(REMARK: ACD Agent Belastbarkeit)
- English: TOLL  
Translation: AAnf  
(Explanation: Amtsleitungs-Anforderung)
- English: FULL  
Translation: K-Be  
(Explanation: Keine Berechtigung fuer Amtsleitung)
- English: NONE  
Translation: Kein
- English: ORIG (Origination)  
Translation: Orig

- English: OTWD (Outward)  
Translation: Abg.
- English: CALL (<call> This Number)  
Translation: Rufe
- English: INTL (International)  
Translation: Intl
- English: Info (Information)  
Translation: Info
- English: p (Primary)  
Translation: p
- English: s (Secondary)  
Translation: s
- English: m (Mark)  
Translation: m
- English: p (Pause)  
Translation: p
- English: s (Suppress)  
Translation: u (unterdruecke)
- English: w (Wait For A Specified Time)  
Translation: w
- English: W (Wait For Off-Premise Dial Tone)  
Translation: W
- English: You have adjunct messages  
Translation: Sie haben Nachrichten auf Zusatzsystem
- English: Login Violation  
Translation: Login Verletzung
- English: Barrier Code Violation  
Translation: Passwort Verletzung
- English: Authorization Code Violation  
Translation: Berechtigungs-Code Verletzung
- English: DIRECTORY - PLEASE ENTER NAME  
Translation: Telefonverzeichnis: Bitte Namen eingeben

- English: DIRECTORY UNAVAILABLE - TRY LATER  
Translation: Tel-Verz: Kein Zugang - Spaeter probieren
- English: NO MATCH - TRY AGAIN  
Translation: Nicht gefunden - Bitte wiederholen
- English: NO NUMBER STORED  
Translation: Keine Nummer gespeichert
- English: TRY AGAIN  
Translation: Bitte wiederholen
- English: Ext (in EMRG Q)  
Translation: NSt (in Not-WS)  
(Explanation: in Notruf-Warteschlange)
- English: HUNT GROUP NOT ADMINISTERED  
Translation: Sammelgruppe Nicht eingetragen
- English: Q-time calls  
Translation: W-Zeit Anr.
- English: Add Skill: Enter number, then # sign  
Translation: Fertigkeit eing.: Nummer eing., dann #
- English: Remove Skill: Enter number, then # sign  
Translation: Fertigkeit entf.: Nummer eing., dann #
- English: Press 1 for primary or 2 for secondary  
Translation: 1 fuer Primaer oder 2 fuer Sekundaer
- English: Enter Agent LoginID  
Translation: Login-ID des Agenten eingeben

### **Property Management**

- OBJECT: property-management
  - English: CHECK IN - Ext:  
Translation: Check in - NSt:
  - English: CHECK IN: ROOM ALREADY OCCUPIED  
Translation: Check in: Zimmer bereits besetzt
  - English: CHECK IN COMPLETE  
Translation: Check in fertig
  - English: CHECK IN FAILED  
Translation: Check in nicht erfolgt

- English: CHECK OUT - Ext:  
Translation: Check out - NSt:
- English: CHECK OUT: ROOM ALREADY VACANT  
Translation: Check out: Zimmer bereits frei
- English: CHECK OUT FAILED  
Translation: Check out nicht erfolgreich
- English: MESSAGE NOTIFICATION FAILED  
Translation: Nachrichten-Hinweis nicht erfolgreich
- English: MESSAGE NOTIFICATION ON - Ext:  
Translation: Nachrichten-Hinweis ein - NSt:
- English: MESSAGE NOTIFICATION OFF - Ext:  
Translation: Nachrichten-Hinweis aus - NSt:
- English: CHECK OUT COMPLETE: MESSAGE LAMP OFF  
Translation: Check out fertig: Nachrichten-Licht aus
- English: CHECK OUT COMPLETE: MESSAGE LAMP ON  
Translation: Check out fertig: Nachrichten-Licht ein
- English: MESSAGE LAMP ON  
Translation: Nachrichten-Licht ein
- English: MESSAGE LAMP OFF  
Translation: Nachrichten-Licht aus
- English: Occupied Rooms  
Translation: Besetzte Zimmer
- English: Enter Room Status  
Translation: Zimmer-Status eingeben
- English: Invalid Maid State  
Translation: Zimmermaedchen Status ungueltig

### Time of Day Routing

- OBJECT: time-of-day-routing
  - English: ENTER ACTIVATION ROUTE PLAN, DAY & TIME  
Translation: Eingabe: Routenplan ein, Tag & Uhrzeit
  - English: ENTER DEACTIVATION DAY AND TIME  
Translation: Eingabe: Routenplan aus, Tag & Uhrzeit

- English: OLD ROUTE PLAN: ENTER NEW PLAN:  
Translation: Alter Routenplan: Eingabe neuer Plan:
- English: OLD ROUTE PLAN: NEW PLAN:  
Translation: Alter Routenplan: Neuer Routenplan:
- English: ROUTE PLAN: FOR ACT-TIME:  
Translation: Routenplan: fuer Ein-Zeit:
- English: ROUTE PLAN: FOR DEACT-TIME:  
Translation: Routenplan: fuer Aus-Zeit:

### Softkey Labels

The following translations are consistent with the 8400 and 9400 DCP phones - Foreign Language Translation Requirements).

- OBJECT: softkey-labels
  - English: AD  
Translation: K-Wa
  - English: AutCB  
Translation: RRuf
  - English: CFrwd  
Translation: RufUm
  - English: CnLWC  
Translation: NaAnn  
(Explanation: Nachricht annullieren)
  - English: Cnslt  
Translation: Direk
  - English: Count  
Translation: Zaehl
  - English: CPark  
Translation: Park
  - English: CPkUp  
Translation: Pick
  - English: Dir  
Translation: Verz
  - English: Excl  
Translation: ASper

- English: HFAns  
Translation: AutoA
- English: IAuto  
Translation: I-Ver  
(Explanation: Automatische Intern-VerbindungStoppuhr)
- English: IDial  
Translation: I-KW
- English: Inspt  
Translation: Info
- English: Last  
Translation: WahlW
- English: LWC  
Translation: Nachr  
(Explanation: Zielwahl-TasteNachricht)
- English: Mark  
Translation: TmpTW  
(Explanation: RueckrufTemporaere(zeitweise)Tonwahl)
- English: Pause  
Translation: Pause  
(Explanation: Rufumleitung)
- English: PCall  
Translation: Prio  
(Explanation: Prioritaets-Ruf)
- English: Prog  
Translation: Progr  
(Explanation: DirektrufProgrammieren)
- English: RngOf  
Translation: R.aus  
(Explanation: EreigniszaehlerRufsignal aus)
- English: SAC  
Translation: Abwrf  
(Explanation: Gespraech parkenAbwurf aller Gespraech)

- English: SFunc  
Translation: Z-Fkt  
(Explanation: Heranholen (Pick-up)Zusatzfunktion)
- English: Spres  
Translation: K.Anz  
(Explanation: VerzeichnisAnzeige unterdruecken (Keine Anzeige))
- English: Stats  
Translation: Stat  
(Explanation: Aufschaltsperr ACD Statistik)
- English: Stop  
Translation: U.WaW  
(Explanation: Automatisches Antworten Unbestimmtes Warten auf Waehlton)
- English: Timer  
Translation: Timer
- English: TmDay  
Translation: Uhr  
(Explanation: Interne KurzwahlUhrzeit/Datum)
- English: View  
Translation: NrAnz  
(Explanation: GespraechsinformationRufnummer Anzeige)
- English: Wait  
Translation: Warte  
(Explanation: WahlwiederholungWarten auf Waehlton)

## VuStats

- OBJECT: vustats
  - English: FORMAT  
Translation: Format
  - English: NOT DEFINED  
Translation: undefiniert
  - English: DOES NOT ALLOW OR REQUIRE ID  
Translation: ID nicht noetig/erforderlich

- English: AGENT  
Translation: Agent
- English: SPLIT/SKILL  
Translation: (Tlg./Fert.)  
(Explanation: Teilung nach Fertigkeit)  
(Split according to skill)
- English: TRUNK GROUP  
Translation: Amtsbuendel
- English: VDN  
Translation: Vekt-DuWa-Nr  
(Explanation: Vektorisierte Durchwahl Nummer)
- English: NOT ADMINISTERED  
Translation: Nicht eingetragen
- English: NOT MEASURED  
Translation: Nicht gemessen  
<OR>  
Translation: Nicht erfasst
- English: AGENT NOT LOGGED IN  
Translation: Agent nicht eingeloggt  
<OR>  
Translation: Agent nicht angemeldet



## Greece

[Table 31](#) shows the recommended circuit packs.

**Table 31. Recommended and Available CPs in Greece**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN756
Tone Clock	> TN2182B TN780 TN756
R2MFC Circuit	n/a
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B TN750
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	#TN465C> TN465B TN465
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D TN763C
Digital CO/DID Trunk	> TN464F TN464E TN464D
Digital Tie Trunk	> TN464F TN464E TN464D TN464C
Digital PRI CO Trunk	n/a
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

Table 31. Recommended and Available CPs in Greece — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	TN556B

**NOTE:**

A-law companding is the national standard in Greece. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc:	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: Yes<sup>7</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: Yes
  - Repetitive Call Waiting Tone: No
  - DID Busy Treatment: Attendant
  - Pull Transfer: No
  - Level of Tone Detection: Broadband
  - Outpulse Without Tone: Yes
  - (Station-to-switch) Recall Timing:
    - Flashhook Interval: Yes
    - Upper Bound: 1000 ms

- Lower Bound: 200 ms
- System Parameter Country Options Administration
  - Companding Mode: mu-law
  - Base Tone Generation Set: 17
  - Tone Detection Mode: 1
  - Interdigit Pause: short
  - Digital Loss Plan: 17
  - Analog Ringing Cadence: 17
  - 440 Hz PBX-dial Tone: no
  - 440 Hz Secondary-dial Tone: yes

## **Analog Trunk Administration**

- CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Country: 17
    - Trunk Gain: high
    - Direction: two-way
    - Digit Absorption List: blank
    - Prefix-1: No
    - Trunk Type: loop-start
    - Outgoing Dial Type: tone
    - Trunk Termination: rc (complex impedance)
    - Auto Guard: no
    - Dial Access: yes
    - Call Still Held: no
    - Terminal Balanced: yes
    - Receive Answer Supervision: no
    - Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk receiving answer supervision.)
    - Disconnect Supervision - In: no
    - Disconnect Supervision - Out: Selection is customer's choice.

- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 500 ms
- Outgoing Disconnect: 500 ms
- Outgoing Dial Guard: 1600 ms
- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: 1500 ms
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 35 ms
- Outgoing Rotary Digit Dial Break: 65 ms
- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 240 sec
- Programmed Dial Pause: 1500 ms
- Disconnect Signal Error: 240 sec
- Flash Length: 100 ms
- PPM: Yes
- Frequency: 16kHz

- DID Trunks

— Trunk Group Screen

- Group Type: DID
- Country: 17
- Trunk Gain: high
- Digit Absorption List: blank
- Incoming Dial Type: tone
- Trunk Type: immed-start
- Trunk Termination: rc (complex impedance)

- Disconnect Supervision: no
- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Digit Treatment: blank
- Digits: blank
- Expected Digits: depends on system size and numbering plan
- Terminal Balanced: yes
- Extended Loop Range: (Used Only with TN459) no
- Drop Treatment: silence
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms
  - Incoming Dial Guard: 50 ms
  - Incoming Partial Dial: 18 sec
  - Incoming Incomplete Dial: 255 sec
  - Flash Length: 100 ms
- Tie Trunks

No special Type Approval regulations apply. Tie trunks are administered on a case-by-case basis.

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks
  - Circuit Pack: TN464Dv.3
  - Bit Rate: 2.048
  - Interface Companding: mu-law
  - Line Coding: HDB3

- Signaling Mode: CAS
- Country Protocol: 17
- Interconnect: CO
- CRC?: no
- Idle Code: 11111111
- DID Trunks
  - Circuit Pack: TN464Dv.3
  - Bit Rate: 2.048
  - Interface Companding: mu-law
  - Line Coding: HDB3
  - Signaling Mode: CAS
  - Country Protocol: 17
  - Interconnect: CO
  - CRC?: no
  - Idle Code: 11111111
- Tie Trunks
  - Non-ISDN Signaling Example (DS1 Administration screen)
    - Circuit Pack: TN464D
    - Bit Rate: 2.048
    - Interface Companding: mu-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 17
    - Interconnect: pbx
    - CRC?: no
    - Idle Code: 11111111
  - ISDN-PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.
  - DS1 Administration screen
    - Circuit Pack: TN464D
    - Bit Rate: 2.048
    - Interface Companding: A-law

- Line Coding: HDB3
  - Signaling Mode: isdn-pri
  - Country Protocol: 1
  - Connect: pbx
  - Interface: user
  - CRC: No
  - Idle Code: 11111111
- Signaling Group screen
- Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
- Group Type: isdn-pri
  - Service Type: tie
- ISDN-PRI (Public Network)
- Not available in this country.



## Hong Kong

[Table 32](#) shows the recommended circuit packs.

**Table 32. Recommended and Available CPs in Hong Kong**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	200V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN756
Tone Clock	> TN2182B TN780 TN756
R2MFC Circuit	n/a
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B TN750
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	> TN747B TN465
Analog CO Trunk (w/PPM)	n/a
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D TN763C
Digital CO/DID Trunk	n/a
Digital Tie Trunk	> TN464F TN464E TN464D TN464C
Digital PRI CO Trunk	n/a
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B
24 Port Analog Line	TN2793

*Continued on next page*

**Table 32. Recommended and Available CPs in Hong Kong — Continued**

Equipment	Equipment Type
4 Wire Digital Line	>TN754B
2 Wire Digital Line	#TN2224 >TN2181
Data Line	>TN726B
BRI-U Line	
BRI-ST Line	

**NOTE:**

A-law companding is the national standard in Hong Kong. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen “x11”.

Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: yes<sup>8</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: Yes
  - Repetitive Call Waiting Tone: No
  - DID Busy Treatment: Attendant
  - Pull Transfer: No
  - Level of Tone Detection: Precise
  - Outpulse Without Tone: Yes
  - (Station-to-Switch) Recall Timing:
    - Flashhook Interval: Yes

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8. Although not a Type Approval issue, this represents the convention for this country.

- Upper Bound: 1000
- Lower Bound: 200
- System Parameter Country Options Administration
  - Companding Mode: mu-law
  - Base Tone Generation Set: 1
  - Tone Detection Mode: 1
  - Interdigit Pause: default
  - Digital Loss Plan: 1
  - Analog Ringing Cadence: 1

## **Analog Trunk Administration**

- CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Country: 1
    - Trunk Gain: high
    - Direction: two-way
    - Digit Absorption List: blank
    - Prefix-1: No
    - Trunk Type: loop-start
    - Outgoing Dial Type: tone
    - Trunk Termination: rc (complex impedance)
    - Dial Access: yes
    - Auto Guard: no
    - Call Still Held: no
    - Terminal Balanced: yes
    - Receive Answer Supervision: no
    - Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
    - Disconnect Supervision - In: no
    - Disconnect Supervision - Out: Selection is customer's choice.

- Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 500 ms
- Outgoing Disconnect: 500 ms
- Outgoing Dial Guard: 1600 ms
- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: 1500 ms
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 35 ms
- Outgoing Rotary Digit Dial Break: 65 ms
- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 240 sec
- Programmed Dial Pause: 1500 ms
- Disconnect Signal Error: 240 sec
- End-To-End Signaling Pause: 150 ms (accept default)
- End-To-End Signaling Tone: 350 ms (accept default)
- Flash Length: 100 ms
- PPM: no

■ DID Trunks

— Trunk Group Screen

- Group Type: DID
- Country Code: 1
- Trunk Gain: high
- Digit Absorption List: blank
- Incoming Dial Type: tone
- Trunk Type: immed-start

- Trunk Termination: rc (complex impedance)
- Disconnect Supervision: no
- Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Digit Treatment: blank
- Digits: blank
- Expected Digits: depends on system size and numbering plan
- Terminal Balanced: yes
- Extended Loop Range: (Used Only with TN459) no
- Drop Treatment: silence
- Incoming Rotary Timeout: 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer.

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms
- Incoming Dial Guard: 50 ms
- Incoming Partial Dial: 18 sec
- Incoming Incomplete Dial: 255 sec
- Flash Length: 100 ms

■ Tie Trunks

No special Type Approval regulations apply. Tie trunks are administered on a case-by-case basis.

## **Digital Trunk Administration**

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

■ CO Trunks

Digital CO trunks are not available in this country.

■ DID Trunks

Digital DID trunks are not available in this country.

- Tie Trunks

- Non-ISDN Signaling Example (DS1 Administration screen)

- Circuit Pack: TN464D
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 1
    - Interconnect: pbx
    - CRC?: No
    - Idle Code: 11111111

- ISDN-PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered screens.

- DS1 Administration screen

- Circuit Pack: TN464D
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: isdn-pri
    - Country Protocol: 1
    - Connect: pbx
    - Interface: user
    - CRC: No
    - Idle Code: 11111111

- Signaling Group screen

- Associated Signaling: Yes
    - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)

- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: tie
- ISDN-PRI (Public Network)  
Not available for this country.



## Hungary

[Table 33](#) shows the recommended circuit packs.

**Table 33. Recommended and Available CPs in Hungary**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN748C
Tone Clock	> TN2182B TN780 TN756
R2MFC Circuit	> TN744D TN744B
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	#TN465C > TN465B
4 Wire Tie Trunk	> TN760D > TN2140B
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E TN464D
Digital Tie Trunk	> TN464F TN464E TN464D
Digital PRI CO Trunk	n/a
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B

*Continued on next page*

**Table 33. Recommended and Available CPs in Hungary — Continued**

Equipment	Equipment Type
24 Port Analog Line	n/a
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181 TN2136
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

**NOTE:**

A-law companding is the national standard in Hungary. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

## Country-Specific Feature

You can use DEFINITY ECS in the Hungarian Private Network. With the administration specified in this section, the following are available:

- Overlap sending
- Group II permissions checking
- Public and Private Network interworking
- Limit on resed requests
- I.15 transit signaling

Refer to ["Hungarian Private Network Administration" on page 244](#) for more information.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

<code>int:</code>	For all international numbers.
<code>natl:</code>	For all national PN numbers.
<code>pubu:</code>	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: Yes<sup>9</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No

- Conference Tone: No
- Intrusion Tone: Yes
- Repetitive Call Waiting Tone: No
- DID Busy Treatment: Attendant
- Pull Transfer: No
- Level of Tone Detection: Medium
- Outpulse Without Tone: Yes
- (Station-to-switch) Recall Timing:
  - Flashhook Interval: No
  - Disconnect Timing: 350 ms
- System Parameter Country Options Administration
  - Companding Mode: A-law



**NOTE:**

Companding Mode: A-law is the national standard. Mu-law is used internal to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

- Base Tone Generation Set:
- Tone Detection Mode: 2
- Interdigit Pause: short
- Digital Loss Plan:
- Analog Ringing Cadence:

## **Analog Trunk Administration**

- CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Country:
    - Trunk Gain: high
    - Direction: two-way
    - Digit Absorption List: blank
    - Prefix-1: No
    - Trunk Type: loop-start
    - Outgoing Dial Type: tone
    - Trunk Termination: 600 ohm

- Auto Guard: no
- Dial Access: Yes
- Call Still Held: no
- Terminal Balanced: yes
- Receive Answer Supervision: no
- Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: Selection is customer's choice.
- Disconnect Timing: 100 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: 1500 ms
- Outgoing Rotary Digit Dial Make: 40 ms
- Outgoing Rotary Digit Dial Break: 60 ms
- Outgoing Rotary Dial Interdigit: 800 ms

■ DID Trunks

— Trunk Group Screen

- Group Type: DID
- Country:
- Trunk Gain: high
- Digit Absorption List: blank
- Incoming Dial Type: tone
- Trunk Type: immed-start
- Trunk Termination: rc (complex impedance)
- Disconnect Supervision: no

- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Digit Treatment: blank
- Digits: blank
- Expected Digits: depends on system size and numbering Plan
- Terminal Balanced: yes
- Extended Loop Range: (Used Only with TN459) no
- Drop Treatment: silence
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 100 ms
- Incoming Dial Guard: 10 ms
- Incoming Partial Dial: 18 sec
- Incoming Incomplete Dial: 255 sec

■ Tie Trunks (Discontinuous MOL)

- Group Type: tie, tandem, access, aplt, or rlt
- Trunk Signaling Type: dis
- Direction: Two-way
- Dial Access: Yes
- Trunk Type: Immed/Immed
- Disconnect supervision - In:Y Out: Y
- Send Release Ack: Yes
- Receive Release Ack: Yes
- Send Answer Supervision: Yes
- Receive Answer Supervision: Yes

Set the following are the administrable timer values:

- Outgoing Dial Guard: 1600 ms
- Incoming Glare Guard: 5000 ms

- Outgoing Glare Guard: 5000 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 5 sec:
- Disconnect Signal Error: 90 sec
- Incoming Partial Dial: 15 sec (FW default, cannot be administered)
- Release Ack Send: 600 ms
- Answer Send: 150 ms (if SW still limits to 120ms, FW will change to 150ms if Hungarian MOL)
- Outgoing Disconnect Send: 600 ms
- Incoming disconnect Send: 600 ms
- Normal Outgoing Seize Send: 150 ms

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks
  - DS1 Administration Screen <sup>10</sup>
    - Circuit Pack: TN464D (not entered as an administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 8
    - Interconnect: CO
    - CRC?: No
    - Idle Code: 01010100
  - Trunk Group Administration Screen (Timing)

Digital trunk timing values should be set as for analog CO trunks.
- DID Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN464D (not entered as an administrable item)

---

10.

DS1 is also analogous to the term E1 that has been coined for the European T1 or 2 mbit interface.

- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: CAS
- Country Protocol: 8
- Interconnect: CO
- CRC?: No
- Idle Code: 01010100
- Trunk Group Administration Screen (Timing)
  - Digital trunk timing values should be set as for analog DID trunks.
- Tie Trunks
  - Non-ISDN Signaling Example (DS1 Administration Screen)
    - Circuit Pack: TN464D (Not entered as administrable item; TN464C from upgrades)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol:
    - Interconnect: pbx
    - CRC?: no
    - Idle Code: 01010100
  - ISDN-PRI (Private Network) Signaling
    - This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.
  - DS1 Administration screen
    - Circuit Pack: TN464D (or TN464C from upgrades)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: isdn-pri
    - Country Protocol: 8
    - Connect: pbx



- Interface: user
- CRC: No
- Idle Code: 01010100
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: public\_ntwrk
- ISDN-PRI (Public Network) Not available for this country.

## MFC Signaling

Additional MFC signals can be used in Hungary.

- The MFC signal "end-of-digits" and the symbol "\*" in the route pattern.

When the symbol "\*" is translated in the route pattern and the signal "end-of-dial" is translated on the multi-frequency screen, the MFC tone for the "end-of-digits" is sent out to the CO in the place of the symbol "\*".

- The MFC signal "ANI-avail".

When the MFC signal "ANI-avail" is translated on the multi-frequency screen, the MFC tone for the "ANI-avail" signal is sent after the group II category signal in the ANI digit response on an outgoing call. On an incoming call, the MFC signal "ANI-avail" is translated, then the ANI digits are requested on the response of the MFC tone for the "ANI-avail" signal.

## Incoming Only

```
change system-parameters multifrequency-signaling          Page 1 of 2
MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS
  Incoming Call Type: group-ii-mfc
  Outgoing Call Type: none
  Maintenance Call Type: none
  Test Call Extension:
  Interdigit Timer (sec): 10
Multifrequency Signaling Incoming Intercept Treatment? y
  Received Signal Gain(-Loss) (dB): 0
  Transmitted Signal Gain(-Loss) (dB): -3
```

change system-parameters multifrequency-signaling Page 2 of 2

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

INCOMING FORWARD SIGNAL TYPES (Tones from CO)		INCOMING BACKWARD SIGNAL TYPES (Tones to CO)	
Group-I	Group-II	Group-A	Group-B
11: ignored	1: normal	1 : next-digit	1 : busy
12: ignored	2: normal	3 : end-of-dial	2 : congestion
13: ignored	3: maint-call	:	4 : free
14: ignored	4: normal	:	7 : intercept
15: ignored	5: normal	:	:
	6: data-call	:	:
	7: normal	:	:
	8: normal	:	:
	9: normal	:	:
	10: normal	:	:
	11: normal	:	:
	12: normal	:	:
	13: normal	:	:
	14: normal	:	:
	15: normal	:	:

## Two Way

change system-parameters multifrequency-signaling Page 1 of 3

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

Incoming Call Type: group-ii-mfc  
 Outgoing Call Type: group-ii-mfc  
 Maintenance Call Type: none  
 Test Call Extension:  
 Interdigit Timer (sec): 10  
 Outgoing Forward Signal Present Timer (sec): 15  
 Outgoing Forward Signal Absent Timer (sec): 30  
 Multifrequency Signaling Incoming Intercept Treatment? y  
 Received Signal Gain(-Loss) (dB): 0  
 Transmitted Signal Gain(-Loss) (dB): -3  
 ANI Prefix:  
 ANI for PBX:  
 Next ANI Digit: send-ani  
 Collect All Digits Before Seizure? n

change system-parameters multifrequency-signaling Page 2 of 3

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

INCOMING FORWARD SIGNAL TYPES INCOMING BACKWARD SIGNAL TYPES  
(Tones from CO) (Tones to CO)

Group-I	Group-II	Group-A	Group-B
11: ignored	1: normal	1 : next-digit	1 : busy
12: ignored	2: normal	2 : end-of-dial	2 : congestion
13: ignored	3: normal	3 : congestion	4 : free
14: ignored	4: normal	7 : intercept	
15: ignored	5: normal	:	:
	6: data-call	:	:
	7: normal	:	:
	8: normal	:	:
	9: normal	:	:
	10: normal	:	:
	11: normal	:	:
	12: normal	:	:
	13: normal	:	:
	14: normal	:	:
	15: normal	:	:

change system-parameters multifrequency-signaling Page 3 of 3

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

OUTGOING FORWARD SIGNAL TYPES OUTGOING BACKWARD SIGNAL TYPES  
(Tones from CO) (Tones to CO):

GROUP-I	GROUP-II	GROUP-A	GROUP-B
15: end-of-digits	1: normal	1: next-digit	1: congestion
	1: attendant	2: last-digit	2: congestion
	6: data-call	3: end-of-dial	3: busy
		4: congestion	4: congestion
		5: call-info-ani	5: intercept
		6: setup-sppath	6: free
		7: last-2-digits	7: free
		8: last-3-digits	8: congestion
		9: restart	9: congestion
		10: congestion	10: congestion
		11: congestion	11: congestion
		12: congestion	12: congestion
		13: congestion	13: congestion
		14: congestion	14: congestion
		15: congestion	15: congestion

## Hungarian Private Network Administration

For this feature to work in Hungary, fill out the following:

- Dial Plan Record screen
  - First Digit 0 : misc
  - Second Digit 03: FAC
- Feature Access Code screen
  - AAR access code: 03
- Multifrequency-Signaling-Related System Parameters screen (first page)
  - Request Incoming ANI (non-AAR/ARS): n
  - Private Group II Permissions and Public Interworking: y
  - Overlap Sending on Link-to-Link Tandem Calls: y
  - Collect all digits before seizure: n
- Multifrequency-Signaling-Related System Parameters screen (subsequent page)
  - Tones from CO on Incoming Forward Calls-Group I:  
I15 = end-of-ani
  - Convert initial end-of-ani signal to digits: 0
  - Tones to CO on Outgoing Forward Calls -Group I:  
I15 = end-of-digit
  - Tones from CO on Incoming Forward Call-Group II  
n: normal  
(for each n that is administered as Class of Restriction  
Category for MFC ANI:n)
  - Tones to CO on Incoming Backward Calls-Group A:  
A5: send-ani
- Tie trunk group screen
  - Trunk Type: imed/imed
  - Incoming Dial Type: mf
  - Outgoing Dial Type: mf
  - Incoming digit treatment: inserted digits
  - Inserted digits fields: 03
- DID trunk group screen
  - Incoming Dial Type: mf
  - Trunk Type: imed-start

- Incoming digit treatment: inserted digits
- Inserted digits fields: 03
- AAR Digit Conversion Table (for long-distance private-network call)
  - Match. Pat.: 0
  - min: 3
  - max: 7
  - del: 0
  - Repl String:
  - Net: AAR
  - Conv: n
  - ANI req: n
- AAR Digit Conversion Table (for tandem local-area private-network call)
  - Match. Pat.: 12
  - min: 4
  - max: 4
  - del: 0
  - Repl String:
  - Net: AAR
  - Conv: n
  - ANI req: n
- AAR Digit Conversion Table (for terminating private-network call)
  - Match. Pat.: 22
  - min: 4
  - max: 4
  - del: 0
  - Repl String:
  - Net: ext
  - Conv: n
  - ANI req: n
- AAR Digit Conversion Table (for terminating DID call from public network)
  - Match. Pat.: 12
  - min: 4

- max: 4
- del: 0
- Repl String:
- Net: ext
- Conv: n
- ANI req: n
- AAR Digit Conversion Table (for terminating DID call to special emergency service providing extension)
  - Match. Pat.: 07
  - min: 2
  - max: 2
  - del: 2
  - Repl String: 1000 (for example)
  - Net: ext
  - Conv: n
  - ANI req: y
- Class of Restriction screens (COR #1 – COR #8)
  - Category for MFC ANI: 1 – 8 (respectively)
- AAR Route Pattern screen
  - No. Del. digits: 1 or 3
  - Inserted digits: \* (If No. Del. digits = 1. Leave blank if No. Del. digits = 3)

## India

[Table 34](#) shows the recommended circuit packs.

**Table 34. Recommended and Available CPs in India**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	#TN2182B #TN744D
Tone Clock	#TN2182B
R2MFC Circuit	n/a
Speech Synthesizer	#TN433
Call Classifier	> TN744D
Announcement	#TN750C
Analog DID Trunk	#TN753
Analog CO Trunk (No PPM)	#TN747B
Analog CO Trunk (w/PPM)	#TN465C
4 Wire Tie Trunk	#TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	#TN763D
Digital CO/DID Trunk	> TN464Fv5
Digital Tie Trunk	> TN464Fv5
Digital PRI CO Trunk	
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	#TN2183
24 Port Analog Line	TN2793

*Continued on next page*

Table 34. Recommended and Available CPs in India — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	#TN754C
2 Wire Digital Line	#TN2224
Data Line	#TN726B
BRI-U Line	#TN2198
BRI-ST Line	

**NOTE:**

A-law companding is the national standard in India. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

In the AAR Digit Conversion table, delete all default entries. In the IXC table, delete all default values on page 2.

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc:	North American numbers of the screen "x11".



Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

### System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

### Feature-Related System Parameters

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FEATURE-RELATED SYSTEM PARAMETERS

```

Trunk-to-Trunk Transfer: all
Coverage Subsequent Redirection/CFWD No Answer Interval: 2
Coverage - Caller Response Interval (seconds): 4
Keep Held SBA at Coverage Point? y
Automatic Callback - No Answer Timeout Interval (rings): 3
Call Park Timeout Interval (minutes): 10
Off-Premises Tone Detect Timeout Interval (seconds): 20
AAR/ARS Dial Tone Required? y
Music/Tone on Hold: tone
Music (or Silence) on Transferred Trunk Calls? no
DID/Tie/ISDN Intercept Treatment: attd
Messaging Service Adjunct (MSA) Connected? n
Internal Automatic Answer for Attendant Extended Calls? n
Automatic Circuit Assurance (ACA) Enabled? n
    
```

FEATURE-RELATED SYSTEM PARAMETERS

LEAVE WORD CALLING PARAMETERS

Maximum Number of Messages Per Station (when MSA not in service):10

Stations with System-wide Retrieval Permission (enter extension)

1:           2:           3:           4:           5:

6:           7:           8:           9:           10:

WARNING!    SEE USER DOCUMENTATION BEFORE CHANGING TTI STATE

Terminal Translation Initialization (TTI) Enabled? n

Prohibit Bridging Onto Calls With Data Privacy? n

Enhanced Abbreviated Dial Length (3 or 4): 3

Call Forward Override? n

External Coverage Treatment for Transferred Incoming Calls? n

SECURITY VIOLATION NOTIFICATION (SVN) PARAMETERS HAVE MOVED TO  
THE SYSTEM-PARAMETERS SECURITY SCREEN

FEATURE-RELATED SYSTEM PARAMETERS

Reserved Slots for Attendant Priority Queue: 5

Time before Off-hook Alert: 10

Emergency Access Redirection Extension:

Service Observing Warning Tone? y

Number of Emergency Calls Allowed in Attendant Queue: 5

Call Pickup Alerting? n

Deluxe Paging and Call Park Timeout to Originator? n

Controlled Outward Restriction Intercept Treatment: tone

Controlled Termination Restriction (Do Not Disturb): tone

Controlled Station to Station Restriction: tone

AUTHORIZATION CODE PARAMETERS

Authorization Codes Enabled? n

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FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS

System Printer Extension: Lines Per Page: 30  
EIA Device Bit Rate: 9600

SYSTEM-WIDE PARAMETERS

Switch Name: H.V.NET THANE

CALL CENTER SYSTEM PARAMETERS

CALL MANAGEMENT SYSTEM PARAMETERS

BCMS/VuStats Measurement Interval: hour

BCMS/VuStats Abandon Call Timer (seconds): Validate Login IDs? n  
ACD Login Identification Length: 0 Adjunct CMS Release:

MALICIOUS CALL TRACE PARAMETERS

Apply MCT Warning Tone? n MCT Voice Recorder Trunk Group:

Page 5 of 6

FEATURE-RELATED SYSTEM PARAMETERS

Public Network Trunks on Conference Call: 5  
Conference Parties with Public Network Trunks: 6  
Conference Parties without Public Network Trunks: 6  
Night Service Disconnect Timer (seconds): 180  
Short Interdigit Timer (seconds): 5  
Unanswered DID Call Timer (seconds):  
Line Intercept Tone Timer (seconds): 30  
Auto Start? n  
Auto Hold? n  
Attendant Tone? y  
Bridging Tone? y  
Bridging Tone? n  
Conference Tone? n  
Intrusion Tone? n  
DID Busy Treatment: tone  
Allow AAR/ARS Access from DID/DIOD? n

DISTINCTIVE AUDIBLE ALERTING

Internal: 1 External: 2 Priority: 3  
Attendant Originated Calls: external



## SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence Step	Tone (Frequency/Level)	
hold	1:	330/-5+440/-9	Duration (msec): 50
	2:	silence	Duration (msec): 100
	3:	330/-8.0	Duration (msec): 100
	4:	silence	Duration (msec): 100
	5:	goto	Step: 2
	6:		
	7:		
	8:		
	9:		
	10:		
	11:		
	12:		
	13:		
	14:		
	15:		

**NOTE:**

A-law companding is the national standard in India. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

**Multifrequency-Signaling-Related System Parameters****NOTE:**

The screen displays below for Multifrequency-Signaling-Related System Parameters are effective from Release 6.1. For documentation up to Release 5, use the older administration screens.

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MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

Incoming Call Type: group-ii-mfc ANI Prefix: 538  
Outgoing Call Type: group-ii-mfc ANI for PBX:  
Maintenance Call Type: none NEXT ANI DIGIT  
Test Call Extension: Incoming: next-ani-digit  
Interdigit Timer (sec): 10 Outgoing: next-ani-digit  
Maximum Resend Requests:  
Received Signal Gain (dB): 0  
Transmitted Signal Gain (dB): -3  
Request Incoming ANI (non-AAR/ARS)? y  
Outgoing Forward Signal Present Timer (sec): 15  
Outgoing Forward Signal Absent Timer (sec): 30  
Multifrequency Signaling Incoming Intercept Treatment? y  
Collect All Digits Before Seizure? n  
Overlap Sending on Link-to-Link Tandem Calls? n  
Private Group II Permissions and Public Interworking? n  
Group II Called Party Category: user-type  
Use COR for Calling Party Category? n

Page 2 of 4

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

Request Call Category at Start of Call: y  
Restart ANI from Caller Category: n  
Number of Incoming ANI Digits: 10  
Number of Outgoing ANI Digits: 10

	Incoming	Outgoing
ANI Available:	1__	1__
ANI Not Available:	10_	10_

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

INCOMING FORWARD SIGNAL TYPES  
(Tones from CO)

INCOMING BACKWARD SIGNAL TYPES  
(Tones to CO)

Group-I	Group-II	Group-A	Group-B
11: ignored	1: normal	1: next-digit	3: busy
12: ignored	2: normal	3: end-of-dial	4: congestion
13: ignored	3: normal	4: next-ani-digit	5: intercept
14: ignored	4: normal	5: send-ani	6: free
15: ignored	5: attendant	:	:
	6: data-call	:	:
	7: normal	:	:
	8: normal	:	:
	9: normal	:	:
	10: normal	:	:
	11: normal	:	:
	12: normal	:	:
	13: normal	:	:

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

OUTGOING FORWARD SIGNAL TYPES  
(Tones to CO)

OUTGOING BACKWARD SIGNAL TYPES  
(Tones from CO)

Group-I	Group-II	Group-A	Group-B
:	2: normal	1: next-digit	1: free
:	5: attendant	2: restart	2: intercept
:	6: data-call	3: end-of-dial	3: busy
:	:	4: next-ani	4: congestion
:	:	5: send-ani	5: intercept
:	:	6: setup-sppath	6: free
:	:	7: last-2-digits	7: congestion
:	:	8: last-3-digits	8: congestion
:	:	9: last-digit	9: congestion
:	:	10: congestion	10: congestion
:	:	11: congestion	11: congestion
:	:	12: congestion	12: congestion
:	:	13: congestion	13: congestion
:	:	14: congestion	14: congestion
:	:	15: congestion	15: congestion

## Trunk Group Administration

---

### CO Trunk Group Administration

Page 1 of 10

#### TRUNK GROUP

Group Number: 4	Group Type: co	CDR Reports: y
Group Name: M.T.N.L. LINE	COR: 50	TN: 1 TAC: 888
Direction: two-way	Outgoing Display? n	Night Service:
Dial Access? y	Busy Threshold: 99	Incoming Destination: 200
Queue Length: 0	Country: 1	Digit Absorption List:
Comm Type: voice	Auth Code? n	Toll Restricted? y
Prefix-1? y	Trunk Flash? n	

#### TRUNK PARAMETERS

Trunk Type: loop-start	Cut-Through? n
Outgoing Dial Type: rotary	Disconnect Timing(msec): 500
Trunk Termination: rc	
Auto Guard? n	Call Still Held? n Sig Bit Inversion: none
Terminal Balanced? n	RA Trunk Loss: 0db
Trunk Gain: high	
Disconnect Supervision - In? y Out? n	Cyclical Hunt? n
Answer Supervision Timeout: 10	Receive Answer Supervision? n

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#### TRUNK FEATURES

ACA Assignment? n	Measured: none	Maintenance Tests? y
Data Restriction? n		
Abandoned Call Search? n		
Suppress # Outpulsing? n		



TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	Outgoing Disconnect (msec): 500
	Outgoing Dial Guard (msec): 1600
Incoming Glare Guard (msec): 1500	Outgoing Glare Guard (msec): 1500
	Outgoing Rotary Dial Interdigit (msec): 800
Ringing Monitor (msec): 5200	Incoming Seizure (msec): 500
Outgoing End of Dial (sec): 10	Outgoing Seizure Response (sec): 5
Programmed Dial Pause (msec): 1500	
Flash Length(msec): 540	

END TO END SIGNALING

Tone (msec): 350      Pause (msec): 150

OUTPULSING INFORMATION

PPS: 10      Make (msec): 40      Break (msec): 60      PPM? n

TRUNK GROUP

Administered Members (min/max): 1/3

Total Administered Members: 3

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:	01A0808	TN747	B				
2:	01A0807	TN747	B				
3:	01A0808	TN747	B				
4:							
5:							
6:							
7:							
8:							
9:							
10:							
11:							
12:							
13:							
14:							
15:							

## Tie Trunk Group Administration

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### TRUNK GROUP

Group Number: 1                      Group Type: tie                      CDR Reports: y  
Group Name: Outgoing-2MB                      COR: 1                      TN: 1                      TAC: 51  
Direction: outgoing                      Outgoing Display? n                      Trunk Signaling Type:  
Dial Access? y                      Busy Threshold: 99  
Queue Length: 0  
Comm Type: voice

### TRUNK PARAMETERS

Trunk Type (in/out): immed/immed                      Incoming Rotary Timeout (sec): 5  
Outgoing Dial Type: mf                      Incoming Dial Type: mf  
Digit Treatment: insertion                      Disconnect Timing(msec): 500  
Digits: 0  
Connected to Toll? n                      STT Loss: normal                      Sig Bit Inversion: none  
Incoming Dial Tone? n                      DTT to DCO Loss: normal

Disconnect Supervision -                      Out? y  
Answer Supervision Timeout: 0                      Receive Answer Supervision? y

Page 2 of 11

### TRUNK FEATURES

ACA Assignment? n                      Measured: none  
Internal Alert? n                      Maintenance Tests? y  
Data Restriction? n

Used for DCS? n  
Suppress # Outpulsing? n  
Seize When Maintenance Busy: neither-end

Page 3 of 11

TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Dial Guard (msec): 70

Outgoing Disconnect (msec): 500

Outgoing Dial Guard (msec): 1600

Outgoing Glare Guard (msec): 1500

Programmed Dial Pause (msec): 1500

Outgoing Seizure Response (sec): 5

Disconnect Signal Error (sec): 240

Incoming Incomplete Dial Alarm (sec): 255

END TO END SIGNALING

Tone (msec): 350

Pause (msec): 150

OUTPULSING INFORMATION

PPS: 10      Make (msec): 40      Break (msec): 60

## Indonesia

[Table 35](#) shows the recommended circuit packs.

**Table 35. Recommended and Available CPs in Indonesia**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN784D
Tone Clock	> TN2182B
R2MFC Circuit	TN744D
Speech Synthesizer	> TN725B
Call Classifier	> TN744D TN744C
Announcement	TN750C TN750B
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	TN747B
Analog CO Trunk (w/PPM)	#TN465C
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN2464
Digital Tie Trunk	> TN2464
Digital PRI CO Trunk	TN2464
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	TNCCSC-1
Digital Converter PRI-DPNSS	TN-CCSC-2
Digital Converter PRI-BRI	TNPRI/BRI
8 Port Analog Line	n/a
16 Port Analog Line	#TN791 TN746B
24 Port Analog Line	TN2793

*Continued on next page*

**Table 35. Recommended and Available CPs in Indonesia**

---

<b>Equipment</b>	<b>Equipment Type</b>
4 Wire Digital Line	>TN754B
2 Wire Digital Line	#TN2214 >TN2181
Data Line	>TN726B
BRI-U Line	TN2198
BRI-ST Line	TN556B

---

## Israel

[Table 36](#) shows the recommended circuit packs.

**Table 36. Recommended and Available CPs in Israel**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	#TN2182B #TN744D
Tone Clock	#TN2182B
R2MFC Circuit	n/a
Speech Synthesizer	#TN433
Call Classifier	> TN744D
Announcement	TN750C
Analog DID Trunk	
Analog CO Trunk (No PPM)	
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	
2 Wire Tie Trunk	
Auxiliary Trunk	
Digital CO/DID Trunk	
Digital Tie Trunk	
Digital PRI CO Trunk	
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	
16 Port Analog Line	
24 Port Analog Line	n/a

*Continued on next page*

**Table 36. Recommended and Available CPs in Israel**

---

<b>Equipment</b>	<b>Equipment Type</b>
4 Wire Digital Line	
2 Wire Digital Line	
Data Line	
BRI-U Line	
BRI-ST Line	

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## Italy (Lucent Technologies)

[Table 37](#) shows the recommended circuit packs.

**Table 37. Recommended and Available CPs in Italy (Lucent Technologies)**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D TN420C
Tone Clock	> TN2182B TN780
R2MFC Circuit	n/a
Speech Synthesizer	> TN433
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN2179
Analog CO Trunk (No PPM)	n/a
Analog CO Trunk (w/PPM)	#TN465C > TN2138
4 Wire Tie Trunk	> TN2140B TN2140
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464Fv5
Digital Tie Trunk	> TN464Fv5
Digital PRI CO Trunk	
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	TN-CCSC-2
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	#TN2183 > TN2135
24 Port Analog Line	n/a

*Continued on next page*



**Table 37. Recommended and Available CPs in Italy (Lucent Technologies)**

Equipment	Equipment Type
4 Wire Digital Line	>TN754B
2 Wire Digital Line	#TN2224 >TN2181
Data Line	>TN726B
BRI-U Line	
BRI-ST Line	

## Country-Specific Feature

You can use DEFINITY ECS the European CEPT Advice of Charge feature in Italy. Refer to the DEFINITY ECS Administration and Feature Description for more information about Advice of Charge.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to **y**. You also should check all ARS/AAR defaults. These defaults were intended for U.S. operation and certain values are likely to be inappropriate internally. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - System-Parameters Customer-Options
    - Off Premise Tone Detection Timeout: 10 sec
    - Trunk-to-Trunk Transfer: Restricted
    - Coverage - Subsequent Redirection No Answer Interval: 3
    - Music/Tone on Hold: tone
    - DID/TIE/ISDN Intercept Treatment: Attendant
    - Time before Off-hook Alert: 10
    - Service Observing Warning Tone: Yes
    - Public Network Trunks on Conference Call: 1
    - Conference Parties With PNTs: 3
    - Conference Parties Without PNTs: 6
    - Line Intercept Tone Timer: 30
    - Night Service Disconnect Timer: 180 sec
    - Short Interdigit Timer: 3 sec
    - Unanswered DID Call Timer: 25 sec
    - Auto-Hold: Yes1
    - Attendant Tone: Yes
    - Bridging Tone: No
    - Conference Tone: No
    - Intrusion Tone: Yes
    - Repetitive Call Waiting Tone: Yes
    - DID Busy Treatment: Attendant
    - Pull Transfer: Yes

- Update Transferred Ring Pattern: Yes
- Level of Tone Detection: Precise
- Wait Answer Supervision Timer: Yes
- Misoperation Alerting: Yes
- Allow conference via Flash: Yes
- Outpulse Without Tone: No
- Network Feedback During Tone Detection: No
- Intercept Treatment On Failed Trunk Transfers: Yes
- Station Tone Forward Disconnect: Intercept
- (Station-to-switch) Recall Timing:
- Flashhook Interval: Yes
- Upper Bound: 1000 ms
- Lower Bound: 200 ms
- System Parameter Country Options Administration
  - Companding Mode: A-law
  - Base Tone Generation Set: 4
  - Tone Detection Mode: 1
  - Digital Loss Plan: 4
  - Interdigit Pause: short
  - Analog Ringing Cadence: 4
  - Analog Line Transmission: 4
  - Customized Individual Tones

## **Analog Trunk Administration**

- CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Direction: two-way
    - Dial Access: Customer Option (No is recommended to avoid toll fraud) (Yes, for approval testing)
    - Country: 4
    - Trunk Gain: high
    - Digit Absorption List: blank
    - Prefix-1: No

- Trunk Type: loop-start or ground-start
- Outgoing Dial Type: tone
- Trunk Termination: rc (complex impedance)
- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Parameters based on loop length (which itself is not administrable)

Loop Length	Trunk Gain	Terminal Balance
short	low	y
long	high	y

- Auto Guard: no
- Call Still Held: no
- Receive Answer Supervision: no
- Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: (Selection is customer's choice.)

— Trunk Group Administration screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 50 ms
- Outgoing Disconnect: 50 ms
- Outgoing Dial Guard: 1000 ms
- Incoming Glare Guard: 200 ms
- Outgoing Glare Guard: 200 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 20 sec
- Programmed Dial Pause: 1500 ms

- Disconnect Signal Error: 255 sec (only Ground Start)
- Flash Length: 100 ms
- Outpulsing Information:
  - PPS: 10 pps
  - Make: 50 ms
  - Break: 50 ms
  - PPM: Yes
  - Frequency: 12kHz
- End to End Signaling
  - Tone: 350 ms (accept default)
- DID Trunks
  - Trunk Group screen
    - Group Type: DID
    - Country: 4
    - Trunk Type: immed-start
    - Incoming Dial Type: tone
    - Trunk Termination: rc (complex impedance)
    - Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
    - Digit Treatment: blank
    - Digits: blank
    - Expected Digits: depends on system size and numbering plan
    - Terminal Balanced: yes
    - Extended Loop Range: (Used Only with TN459) no
    - Drop Treatment: silence
    - Trunk Gain: high
    - Disconnect Supervision: no
    - Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers screen.)

## — Trunk Group Administration screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms
- Incoming Dial Guard: 50 ms
- Flash Length: 100 ms
- Incoming Incomplete Dial Alarm: 255 sec

## ■ Tie Trunks

The TN2140B is used for E&M trunks that may be administered as either Continuous or Discontinuous. This section lists the only valid administration combinations possible for these trunks.

Use the following administration for these types:

## — Continuous T1

- Group Type: tie, tandem, access, aplt, or rlt
- Dial Access: Customer Option (No is recommended to avoid toll fraud) (Yes, for approval testing)
- Trunk Signaling Type: cont
- Trunk Type (in/out): cont/cont
- Send Release Ack: y
- Receive Release Ack: y
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: (Selection is customer's choice.)
- Send Answer Supervision: n
- Receive Answer Supervision: n

## — Continuous T2

- Group Type: tie, tandem, access, aplt, or rlt
- Trunk Signaling Type: cont
- Dial Access: Customer Option (No is recommended to avoid toll fraud) (Yes, for approval testing)
- Trunk Type (in/out): immed/immed
- Send Release Ack: y
- Receive Release Ack: y
- Disconnect Supervision - In: no

- Disconnect Supervision - Out: (Selection is customer's choice.)
- Send Answer Supervision: y
- Receive Answer Supervision: y

— Discontinuous T1

- Group Type: tie, tandem, access, aplt, or rlt
- Trunk Signaling Type: dis
- Dial Access: Customer Option (No is recommended to avoid toll fraud) (Yes, for approval testing)
- Trunk Type (in/out): immed/immed
- Send Release Ack: y
- Receive Release Ack: y
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: (Selection is customer's choice.)
- Send Answer Supervision: n
- Receive Answer Supervision: n

— Discontinuous T2

- Group Type: tie, tandem, access, aplt, or rlt
- Trunk Signaling Type: dis
- Dial Access: Customer Option (No is recommended to avoid toll fraud) (Yes, for approval testing)
- Trunk Type (in/out): disc/disc
- Send Release Ack: n
- Receive Release Ack: n
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: (Selection is customer's choice.)
- Send Answer Supervision: y
- Receive Answer Supervision: y

— Discontinuous T3

- Group Type: tie, tandem, access, aplt, or rlt
- Trunk Signaling Type: dis
- Dial Access: Customer Option (No is recommended to avoid toll fraud) (Yes, for approval testing)

- Trunk Type (in/out): disc/disc
- Send Release Ack: n
- Receive Release Ack: n
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: (Selection is customer's choice.)
- Send Answer Supervision: n
- Receive Answer Supervision: n

— Discontinuous T5

- Group Type: tie, tandem, access, aplt, or rlt
- Trunk Signaling Type: dis
- Dial Access: Customer Option (No is recommended to avoid toll fraud) (Yes, for approval testing)
- Trunk Type (in/out): immed/immed
- Send Release Ack: n
- Receive Release Ack: n
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: (Selection is customer's choice.)
- Send Answer Supervision: n
- Receive Answer Supervision: n

— Trunk Group Administration screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following Tie trunk timer values for this country:

- Incoming Disconnect: 300 ms (E&M cont)
- Outgoing Disconnect: 300 ms (E&M cont)
- Outgoing Dial Guard: 400 ms (E&M cont, dis)
- Incoming Glare Guard: 800 ms (E&M cont, dis)
- Outgoing Glare Guard: 1000 ms (E&M cont)
- Outgoing Glare Guard: 1200 ms (E&M dis)
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 40 ms



**NOTE:**

If connected to a 20-pps system, then set the Outgoing Rotary Digit Dial Make and Outgoing Rotary Digit Dial Break times to 20 and 30 ms respectively.

- Outgoing Rotary Digit Dial Break: 60 ms
- Outgoing Rotary Dial Interdigit: 700 ms
- Incoming Seizure: 100 ms (E&M cont)
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 1 sec (E&M cont, dis)
- Disconnect Signal Error: 2 sec (E&M cont)
- Disconnect Signal Error: 1 sec (E&M dis)
- Incoming Partial Dial: 15 sec

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN464F (Not entered as administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 4
    - Interconnect: CO
    - CRC?: Yes
    - Idle Code: 01010100
    - Trunk Group Administration screen (Timing)
    - Digital trunk timing values should be set as for analog CO trunks.
- DID Trunks
  - DS1 Administration screen
    - Circuit Pack: TN464F
    - Bit Rate: 2.048

- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: CAS
- Country Protocol: 4
- Interconnect: CO
- CRC?: No
- Idle Code: 01010100

— Trunk Group Administration screen (Timing)

Digital trunk timing values should be set as for analog DID trunks.

■ Tie Trunks

— Non-ISDN Signaling Example (DS1 Administration screen)

- Group Type: tie
- Circuit Pack: TN464F
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: CAS
- Country Protocol: 4
- Interconnect: pbx
- CRC?: no
- Idle Code: 01010101

— Trunk Group Administration screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following Tie trunk timer values for this country:

- Incoming Disconnect: 50 ms
- Outgoing Disconnect: 50 ms
- Incoming Dial Guard: 70 ms
- Outgoing Dial Guard: 1000 ms
- Incoming Glare Guard: 200 ms
- Outgoing Glare Guard: 200 ms
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 50 ms
- Outgoing Rotary Digit Dial Break: 50 ms

- Outgoing Rotary Dial Interdigit: 700 ms
- Incoming Seizure: 100 ms
- Outgoing Seizure Response: 60 sec
- Disconnect Signal Error: 255 sec
- Incoming Partial Dial: 6 sec

— ISDN-PRI (Private Network) Signaling (DS1 Administration screen)

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.

- Circuit Pack: TN464F
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Country Protocol: 4
- Connect: pbx
- Interface: user
- CRC: No
- Idle Code: 01010101
- Signaling Group screen
- Associated Signaling: Yes
- Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)

— Trunk Group Administration screen

- Group Type: isdn-pri
- Service Type: tie
- ISDN-PRI (Public Network) (DS1 Administration screen)  
Temporary Signaling Connections and D-Channel Backup features must not be administered for E1 interfaces that use country protocol 13 (Italy).
- Circuit Pack: TN464F
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: isdn-pri

- Connect: Network
  - Country Protocol: 13
  - Protocol Version: a, for 1TR6 and b, for E-DSS1.  
Protocol version selection depends on the type of public network service purchased by the customer
  - CRC: yes
  - Idle Code: 01010100
  - Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
- Group Type: isdn-pri
  - COR: COR for isdn-pri public\_ntwrk trunks must have a higher FRL than all Tie Trunks
  - Service Type: public\_ntwrk
  - Overlap Receiving: yes, a must for DID trunk operation

## Station Administration

The administrator can select "italian" on station administration and attendant administration to pick Italian as the display language for the corresponding display set user.

- 85XX Terminals

The 8510 terminal must be administered as a 7507 terminal to be able to use the 8510 terminal for both voice and data operation. If used for voice only operation, a terminal type of 8510D is sufficient. Aliasing a terminal type of 8510+ to a 7507 is preferable.

— Terminal Settings:

Each 8510 must be programmed with the following parameters:

- Country Code = 6
- Companding Mode = a-law
- Transmit Value = +3
- Receive Value = -5
- Side Tone Value = 0
- Use the following programming sequence.
- 8510 Program Instructions: (items in brackets [] mean use that button) for setting the proper country code of 6.

---

Enter:

Value	Meaning
_____	_____
[MENU]	
[MUTE]	
2	program for
4	setting country option
6	country code 6
#	save value

For setting the proper transmission values for Italy (G3V3):

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Enter:

Value	Meaning
_____	_____
[MENU]	
[MUTE]	
2	program for
5	setting transmission values
2	a-law
#	save value and proceed to next step
3	transmit value of "+3" desired
*	toggle to select "+"
#	save value and proceed to next step
5	receive value of "-5" desired
*	toggle to select "-"
#	save value and proceed to next step
0	side tone value of "0" desired
#	save value and complete setup steps for both voice and data operation

---

The following values have been determined as a result of type approval.

- 84XX (94XX) Terminals

Aliasing the terminal types of 9403B to 8403B, 9410B to 8410B, 9410D to 8410D, and 9434D to 8434D is a preferable way of handling the administration for the 94XX family of terminals.

- Terminal Parameters

- Default Parameter Set: 4
- Customize Parameters? n

The default parameters for selecting Italy country code 4 are as follows and ARE PROGRAMMED AUTOMATICALLY. These values are included as reference information only.

- Display Mode: 1
- DLI Voltage Level: auto
- Handset Expander Enabled? n

— Primary Levels:

- Voice Transmit (dB): +14.0
- Voice Sidetone (dB): -25.0
- Voice Receive (dB): -5.0
- Touch Tone Sidetone (dB): -25.0
- Touch Tone Transmit (dB): -4.0

— Adjunct Levels

- Voice Transmit (dB): 0.0
- Voice Receive (dB): -2.0
- Voice Sidetone (dB): -14.5
- Touch Tone Sidetone (dB): -25.0

- 603/302B Terminals (nothing except for alias of 94XX to 84XX equivalent)

— Terminal Parameters

- Default Parameter Set: 4
- Customize Parameters? n

The default parameters for selecting Italy country code 4 are as follows and ARE PROGRAMMED AUTOMATICALLY with software load G3V3i.02.0.044.0 or later loads. These values are included as reference information only.

— Display Mode: 1

— DLI Voltage Level: auto

— Primary Levels:

- Voice Transmit (dB): +7.0
- Voice Sidetone (dB): -35.5
- Voice Receive (dB): -6.5
- Touch Tone Sidetone (dB): -25.0
- Touch Tone Transmit (dB): -4.0

## Italy-Italtel

[Table 38](#) shows the recommended circuit packs.

**Table 38. Recommended and Available CPs in Italy-Italtel**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	20Hz
Tone Detector	> TN420C
Tone Clock	> TN780 TN419B
R2MFC Circuit	n/a
Speech Synthesizer	> TN433
Call Classifier	> TN2182B > TN744D
Announcement	#TN750C > TN750B
Analog DID Trunk	> TN2139
Analog CO Trunk (No PPM)	> n/a
Analog CO Trunk (w/PPM)	> TN2138
4 Wire Tie Trunk	#TN2140B TN2140
2 Wire Tie Trunk	> TN497
Auxiliary Trunk	> TN763D TN417
Digital CO/DID Trunk	> TN464F TN464E TN464D TN464C TN464B
Digital Tie Trunk	> TN464F TN464E TN464D TN464C TN464B
Digital PRI CO Trunk	n/a
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN2183 > TN2135
24 Port Analog Line	n/a

*Continued on next page*



Table 38. Recommended and Available CPs in Italy-Italtel — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B TN413
2 Wire Digital Line	> TN2181 TN2136
Data Line	> TN726B
BRI-U	
BRI-ST	

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

<code>int:</code>	For all international numbers.
<code>natl:</code>	For all national PN numbers.
<code>pubu:</code>	For all other external (that is, not extensions) numbers.

## **System Parameter Administration**

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Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Console Parameters Administration
  - Return Call Timeout (sec): 10 sec
- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: Yes <sup>11</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: Yes
  - Repetitive Call Waiting Tone: No
  - DID Busy Treatment: Attendant
  - Pull Transfer: No
  - Level of Tone Detection: Precise
  - Outpulse Without Tone: Yes
  - (Station-to-Switch) Recall Timing:
    - Flashhook Interval: Yes
    - Upper Bound: 1000 ms
    - Lower Bound: 200 ms
- Country Options Parameters
  - Companding Mode: A-law
  - Base Tone Generation Set: 4

- Tone Detection Mode: 1
- Interdigit Pause: short
- Digital Loss Plan: 4
- Analog Ringing Cadence: 4

## **Analog Trunk Administration**

### ■ CO Trunks

#### — Trunk Group Screen

- Group Type: CO
- Country: 4
- Trunk Gain: high
- Direction: two-way
- Digit Absorption List: blank
- Prefix-1: No
- Trunk Type: loop-start or ground-start
- Outgoing Dial Type: tone
- Trunk Termination: rc (complex impedance)
- Auto Guard: no
- Dial Access: yes
- Call Still Held: no
- Terminal Balanced: yes
- Receive Answer Supervision: no
- Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. This should be set to 0 for any trunk that will receive answer supervision.)
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: Selection is customer's choice.
- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

#### — Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 50 ms
- Outgoing Disconnect: 50 ms
- Incoming Dial Guard: 70 ms
- Outgoing Dial Guard: 1000 ms
- Incoming Glare Guard: 200 ms
- Outgoing Glare Guard: 200 ms
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 50 ms
- Outgoing Rotary Digit Dial Break: 50 ms
- Outgoing Rotary Dial Interdigit: 700 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 60 sec
- Programmed Dial Pause: 1500 ms
- Disconnect Signal Error: 255 sec
- End-To-End Signaling Tone: 350 ms (accept default)
- Flash Length: 100 ms
- PPM: Yes
- Frequency: 12kHz
- DID Trunks
  - Trunk Group Screen
    - Group Type: DID
    - Country: 4
    - Trunk Gain: high
    - Digit Absorption List: blank
    - Incoming Dial Type: tone
    - Trunk Type: immed-start
    - Trunk Termination: rc (complex impedance)
    - Disconnect Supervision: no
    - Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

- Digit Treatment: blank
- Digits: blank
- Expected Digits: depends on system size and numbering plan
- Terminal Balanced: yes
- Extended Loop Range: (Used Only with TN459) no
- Drop Treatment: silence
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms
- Incoming Dial Guard: 50 ms
- Incoming Partial Dial: 6 sec
- Incoming Incomplete Dial: 255 sec
- Flash Length: 100 ms

■ Tie Trunks

The TN2140 is used for E&M trunks that may be administered as either Continuous or Discontinuous. This section lists the only valid administration combinations possible for these trunks.

Use the following administration for these types:

— Continuous T1

- Group Type: tie, tandem, access, aplt, or rlt
- Trunk Signaling Type: cont
- Trunk Type (in/out): cont/cont
- Send Release Ack: y
- Receive Release Ack: y
- Send Answer Supervision: n
- Receive Answer Supervision: n

— Continuous T2

- Group Type: tie, tandem, access, aplt, or rlt
- Trunk Signaling Type: cont
- Trunk Type (in/out): immed/immed

- Send Release Ack: y
- Receive Release Ack: y
- Send Answer Supervision: y
- Receive Answer Supervision: y
- Discontinuous T1
  - Group Type: tie, tandem, access, aplt, or rlt
  - Trunk Signaling Type: dis
  - Trunk Type (in/out): immed/immed
  - Send Release Ack: y
  - Receive Release Ack: y
  - Send Answer Supervision: n
  - Receive Answer Supervision: n
- Discontinuous T2
  - Group Type: tie, tandem, access, aplt, or rlt
  - Trunk Signaling Type: dis
  - Trunk Type (in/out): disc/disc
  - Send Release Ack: n
  - Receive Release Ack: n
  - Send Answer Supervision: y
  - Receive Answer Supervision: y
- Discontinuous T3
  - Group Type: tie, tandem, access, aplt, or rlt
  - Trunk Signaling Type: dis
  - Trunk Type (in/out): immed/immed
  - Send Release Ack: n
  - Receive Release Ack: n
  - Send Answer Supervision: y
  - Receive Answer Supervision: y
- Discontinuous T4
  - Group Type: tie, tandem, access, aplt, or rlt
  - Trunk Signaling Type: dis
  - Trunk Type (in/out): disc/disc
  - Send Release Ack: n

- Receive Release Ack: n
- Send Answer Supervision: n
- Receive Answer Supervision: n

— Discontinuous T5

- Group Type: tie, tandem, access, aplt, or rlt
- Trunk Signaling Type: dis
- Trunk Type (in/out): immed/immed
- Send Release Ack: n
- Receive Release Ack: n
- Send Answer Supervision: n
- Receive Answer Supervision: n

If the TN497 is used as tie trunk interface CP, set Group Type and Signaling Type fields as follows:

- Group Type: tie
- Signaling Type: tge, tgu or tgi

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following tie trunk timer values for this country:

- Incoming Disconnect: 300 ms (E&M cont)
- Outgoing Disconnect: 300 ms (E&M cont)
- Outgoing Dial Guard: 400 ms (E&M cont, dis)
- Incoming Glare Guard: 800 ms (E&M cont, dis)
- Outgoing Glare Guard: 1000 ms (E&M cont) Outgoing Glare Guard: 1200 ms (E&M dis)
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 40 ms <sup>12</sup>
- Outgoing Rotary Digit Dial Break: 60 ms
- Outgoing Rotary Dial Interdigit: 700 ms
- Incoming Seizure: 100 ms (E&M cont)
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 1 sec (E&M cont, dis)

- Disconnect Signal Error: 2 sec (E&M cont) Disconnect Signal Error: 1 sec (E&M dis)
- Incoming Partial Dial: 15 sec

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN464D (Not entered as administrable item; TN464C from upgrades)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 4
    - Interconnect: CO
    - CRC?: No
    - Idle Code: 01010100
  - Trunk Group Administration Screen (Timing) Digital trunk timing values should be set as for analog CO trunks.
- DID Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN464D (or TN464C,B)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 4
    - Interconnect: CO
    - CRC?: No
    - Idle Code: 01010100
  - Trunk Group Administration Screen (Timing) Digital trunk timing values should be set as for analog DID trunks.



- Tie Trunks

- Non-ISDN Signaling Example (DS1 Administration screen)

- Group Type: tie
    - Circuit Pack: TN464D (or TN464C,B)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 4
    - Interconnect: pbx
    - CRC?: no
    - Idle Code: 01010101

- Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following tie trunk timer values for this country:

- Incoming Disconnect: 50 ms
    - Outgoing Disconnect: 50 ms
    - Incoming Dial Guard: 70 ms
    - Outgoing Dial Guard: 1000 ms
    - Incoming Glare Guard: 200 ms
    - Outgoing Glare Guard: 200 ms
    - Outgoing Dial Pulse Rate (PPS): 10 pps
    - Outgoing Rotary Digit Dial Make: 50 ms
    - Outgoing Rotary Digit Dial Break: 50 ms
    - Outgoing Rotary Dial Interdigit: 700 ms
    - Incoming Seizure: 100 ms
    - Outgoing Seizure Response: 60 sec
    - Disconnect Signal Error: 255 sec
    - Incoming Partial Dial: 6 sec

- ISDN-PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.

- DS1 Administration screen
  - Circuit Pack: TN464D (or TN464C,B from upgrades)
  - Bit Rate: 2.048
  - Interface Companding: A-law
  - Line Coding: HDB3
  - Signaling Mode: isdn-pri
  - Country Protocol: 4
  - Connect: pbx
  - Interface: user
  - CRC: No
  - Idle Code: 01010101
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: tie
- ISDN-PRI (Public Network) Not available in this country.

## Japan

[Table 39](#) shows the recommended circuit packs.

**Table 39. Recommended and Available CPs in Japan**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	100V/50Hz 100V/60Hz 200V/50Hz 200V/60Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN756
Tone Clock	> TN2182B TN780 TN756
R2MFC Circuit	n/a
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B TN750
Analog DID Trunk	> TN429B
Analog CO Trunk (No PPM)	> TN429B TN465
Analog CO Trunk (w/PPM)	n/a
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	> TN439
Auxiliary Trunk	> TN763D TN763C
Digital CO/DID Trunk	> TN464F TN464E TN464D TN464C TN767
Digital Tie Trunk	> TN464F TN464E TN464D TN464C TN767 TN2242
Digital PRI CO Trunk	> TN464F TN464E TN464D TN464C TN2242
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742

*Continued on next page*

Table 39. Recommended and Available CPs in Japan — *Continued*

Equipment	Equipment Type
16 Port Analog Line	> TN746B TN479
24 Port Analog Line	TN2793
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc:	North American numbers of the screen "x11".

Luccent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: Yes <sup>13</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: Yes
  - Repetitive Call Waiting Tone: No
  - DID Busy Treatment: Attendant
  - Pull Transfer: No
  - Level of Tone Detection: Broadband
  - Outpulse Without Tone: Yes
  - (Station-to-switch) Recall Timing:
    - Flashhook Interval: Yes

- Upper Bound: 1000 ms
- Lower Bound: 200 ms
- Country Options Parameters
  - Companding Mode: mu-law
  - Base Tone Generation Set: 3
  - Tone Detection Mode: default
  - Interdigit Pause: default
  - Digital Loss Plan: 3
  - Analog Ringing Cadence: 3

## **Analog Trunk Administration**

- CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Country Code: 3
    - Trunk Gain: high
    - Direction: two-way
    - Digit Absorption List: blank
    - Prefix-1: No
    - Trunk Type: loop-start
    - Outgoing Dial Type: tone
    - Trunk Termination: rc (complex impedance)
    - Auto Guard: no
    - Dial Access: Yes
    - Call Still Held: no
    - Terminal Balanced: yes
    - Receive Answer Supervision: no
    - Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
    - Disconnect Supervision - In: no

- Disconnect Supervision - Out: Selection is customer's choice.
- Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 500 ms
  - Outgoing Disconnect: 500 ms
  - Outgoing Dial Guard: 1600 ms
  - Incoming Glare Guard: 1500 ms
  - Outgoing Glare Guard: 1500 ms
  - Outgoing Dial Pulse Rate (PPS): 10 pps
  - Outgoing Rotary Digit Dial Make: 35 ms
  - Outgoing Rotary Digit Dial Break: 65 ms
  - Outgoing Rotary Dial Interdigit: 800 ms
  - Ring Monitor Timer: 5200 ms
  - Incoming Seizure: 500 ms
  - Outgoing End-of-Dial: 10 sec
  - Outgoing Seizure Response: 240 sec
  - Programmed Dial Pause: 1500 ms
  - Disconnect Signal Error: 240 sec
  - End-To-End Signaling Pause: 150 ms (accept default)
  - End-To-End Signaling Tone: 350 ms (accept default)
  - Flash Length: 100 ms
  - PPM: no
- DID Trunks
    - Trunk Group Screen
      - Group Type: DID
      - Country: 3
      - Trunk Gain: high
      - Digit Absorption List: blank

- Incoming Dial Type: tone
- Trunk Type: loop-start
- Trunk Termination: rc (complex impedance)
- Disconnect Supervision: no
- Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Digit Treatment: blank
- Digits: blank
- Expected Digits: depends on system size and numbering plan
- Terminal Balanced: yes
- Extended Loop Range: (Used Only with TN459) no
- Drop Treatment: silence
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms
  - Incoming Dial Guard: 50 ms
  - Incoming Partial Dial: 18 sec
  - Incoming Incomplete Dial: 255 sec
  - Flash Length: 100 ms
- Tie Trunks  
No special Type Approval regulations apply. Tie trunks are administered on a case-by-case basis.

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks  
Not available in this country.



- DID Trunks
  - Not available in this country.
- Tie Trunks
  - Non-ISDN Signaling Example (DS1 Administration Screen)
    - Circuit Pack: TN464D (or TN464C, TN767)
    - Bit Rate: 1.544
    - Interface Companding: mu-law
    - Line Coding: B8ZS
    - Line Compensation: 1
    - Framing Mode: esf
    - Signaling Mode: common-chan
    - Country Protocol: 1
    - CRC?: no
    - Idle Code: 11111111 (Idle code must contain at least 3 ones. Accept default.)
    - DMI-BOS? Yes
  - CAS Example (DS1 Administration Screen)
    - Circuit Pack: TN2242
    - Bit Rate: 2.048
    - Interface Companding: mu-law
    - Line Coding: cmi
    - Signaling Mode: cas
    - Country Protocol: 3
    - Idle Code: 11111111 (Idle code must contain at least 3 ones. Accept default.)
  - ISDN-PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.
  - DS1 Administration screen
    - Circuit Pack: TN464D (or TN464C from upgrades)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: isdn-pri

- Country Protocol: 1
- Connect: pbx
- Interface: user
- CRC: No
- Idle Code: 11111111
- DS1 Administration screen
  - Circuit Pack: TN2242
  - Interface Companding: mu-law
  - Line Coding: cmi
  - Signaling Mode: isdn-pri
  - Country Protocol: 3
  - Connect: pbx
  - Interface: user
  - Idle Code: 11111111
  - D-Channel: 1-3D (must match Signaling Group screen)
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxxyy (xxxx=>depends on CP physical location; yy=>depends on D-channel administered on DS1 screen)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: tie
- ISDN-PRI (Public Network)
- DS1 Administration screen
  - Circuit Pack: TN464C
  - Bit Rate: 1.544
  - Interface Companding: mu-law
  - Line Coding: B8ZS
  - Line Compensation: 1

- Framing Mode: esf
- Signaling Mode: isdn-pri
- Country Protocol: 3
- Connect: Network
- DMI-BOS? Yes
- Idle Code: 11111111
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: public\_ntwrk

## 2Mbit Trunk (TN2242)

The following outlines the required administration parameters for this interface to operate in Japan.

- Trunk Group screen
  - Trunk Type (in/out): wink, delay, immed (all permutations)
  - Trunk Signaling Type: blank
  - Answer Supervision Timeout: 0
  - Receive Answer Supervision: y
  - Disconnect Supervision-In: y
  - Disconnect Supervision-Out: y
  - Incoming Dial Type: tone, rotary, mf (to other DEFINITYs only)
  - Wink Timer (msec): 300 (when the Trunk Type (in/out) field is wink), 4500 (when the Trunk Type (in/out) field is delay)
- Trunk Group Administration screen (Timing)
  - Incoming Disconnect (msec): 100
  - Incoming Glare Guard (msec): 800 or higher
  - Incoming Dial Guard (msec): 10
  - Incoming Partial Dial (sec): 18
  - Incoming Incomplete Dial Alarm (sec): 25 or higher
  - PPS: 10, 20

- Make (msec): 35 (when the PPS field is 10), 15 (when the PPS field is 20)
- Break (msec): 65 (when the PPS field is 10), 35 (when the PPS field is 20)
- Outgoing Disconnect (msec): 100
- Outgoing Glare Guard (msec): 800 or higher
- Outgoing Rotary Dial Interdigit (msec): 800
- Outgoing Seizure Response (sec): 5

## Incoming Call Line Identification on Analog Trunks

---

Incoming Call Line Identification (ICLID) provides you with the calling party name and number received from the central office (CO). This occurs on a CO loop-start, DID, or DIOD trunk in Japan.

### How to Administer ICLID

To start ICLID, perform the following:

1. On System-Parameters Customer-Options form, set the Analog Trunk Incoming Call ID field to **y**.
2. On Trunk Group form, set the:
  - Group Type field to **co, did, or diod**.
  - Receive Analog Incoming Call ID field to **NTT**.
  - Direction field is **incoming** or **two-way**.
3. On Administrable Timers section, set the Incoming Seizure (msec) to **120**.

To stop ICLID, perform the following:

1. On System-Parameters Customer-Options form, set the Analog Trunk Incoming Call ID field to **n**.
2. On Trunk Group form, set the Receive Analog Incoming Call ID field to **disable**.

### Hardware Requirement

TN429D CO Trunk circuit pack or later configuration

## Detailed Description

In the US, the CO sends both calling party name and number, if they are available; in Japan, the CO sends only the calling party number.

Display of calling party information works with all DEFINITY ECS digital voice terminals (DCP and BRI) equipped with a 40-character or 32-character alphanumeric display. The analog voice terminals supported are the 7315H and 7317H series (System 25/MERLIN sets supported by DEFINITY).

For the ICLID on analog trunks, DEFINITY ECS stores and displays 15 characters of name and number information. If a name/number is longer than 15 characters, the name/number truncates to 15 characters.

In the absence of caller ID information, or in the case of a CO transmission error, the trunk group name and trunk access code display.

## Interactions

### ■ Attendant Display Features

A redirected call to either the attendant or attendant queue causes the display on the attendant's station to read similar to that of the connected party station display.

### ■ Automatic Display of Incoming Call Identification

If a new call comes in while the station user is off-hook and connected to a call, the display automatically shows the new incoming call identity for 30 seconds. After 30 seconds, the display returns to the selected call. If the call redirects after a few rings, the display returns to the selected call. If an incoming call drops and that call currently displays, the display returns to the selected call.

### ■ Bridged Call

Incoming call identity displays on both the primary station and the bridged station.

### ■ Call Forwarding

Forwarded-From Station Display — no information displays on the called principal's station.

Forwarded-To Station Display — shows the identity of the calling and called party and the reason (R) code. If the forwarded-to station is on a different switch, the called party information does not forward.

### ■ Call Pickup

Called Party Station Display — shows the calling party's identity.

Answering Party Station Display — If Call Pick-Up answers an ICLID call, the display shows both the calling party and the called principal's identities.

- Call Coverage

Called Principal's Display — The called principal's display shows the calling party's identity until the coverage party answers the call. If the coverage party answers the call, the principal's station display becomes blank. If the called principal temporarily bridges in after the coverage party answers the call, then the coverage party and the called principal's displays change to indicate a conference call.

Coverage User Station Display — The coverage user's station display shows the same display as the connected party station display.

- Call Vector Routing

When an ICLID call coming from analog trunks transfers to a Vector Directory Number (VDN), the incoming calling number is directed to VDN so call vector routing can be based on the ICLID information.

The ANI received for the incoming call (via inband or ISDN) forwards with a route-to step over a trunk that supports ANI delivery (inband or ISDN).

- DCS Feature Interaction

If the DEFINITY ECS has both DCS and ISDN display features, the ICLID information displays in DCS formats.

- Hold

When activated, the display becomes blank. The party activating the Hold reads the newly connected party's identity. The held station's display remains unchanged. When the party unholds, the display refreshes to indicate the call's current state.

- Malicious Call Trace

When activated for a particular call, MCT displays incoming calling numbers to controller stations.

- Tandem Operations

The calling party name/number passes to the terminating switch over ISDN trunks with DCS+.

- Transfer

When an ICLID call transfers, the display of the transferred-from station becomes blank. The transferred-to station displays the identity of the transferred-from party if the transfer is not yet completed. Once the transfer completes, the transferred-to station displays the identity of the calling party.

## Macedonia

[Table 40](#) shows the recommended circuit packs.

**Table 40. Recommended and Available CPs in Macedonia**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B
R2MFC Circuit	
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	
Analog CO Trunk (No PPM)	
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	
2 Wire Tie Trunk	
Auxiliary Trunk	
Digital CO/DID Trunk	> TN464Fv5
Digital Tie Trunk	> TN464Fv5
Digital PRI CO Trunk	
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

**Table 40. Recommended and Available CPs in Macedonia — *Continued***

<b>Equipment</b>	<b>Equipment Type</b>
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	



## Malaysia

[Table 41](#) shows the recommended circuit packs.

**Table 41. Recommended and Available CPs in Malaysia**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	240V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B TN780
R2MFC Circuit	> TN744D TN744B
Speech Synthesizer	> TN725B TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	TN753
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	#TN465C
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN2464
Digital Tie Trunk	> TN2464
Digital PRI CO Trunk	TN2464
Digital BRI Trunk	TN2185
Digital Converter PRI-DASS	n/a
Digital Converter PRI-DPNSS	n/a
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

**Table 41. Recommended and Available CPs in Malaysia**

Equipment	Equipment Type
4 Wire Digital Line	> TN754C
2 Wire Digital Line	#TN2214 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

*Continued on next page*

## Trunk Group Administration

### CO Trunk Group Administration

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#### TRUNK GROUP

```

Group Number: 1                Group Type: co                CDR Reports: y
Group Name: OUTSIDE CALL      COR: 50                TN: 1                TAC: 801
Direction: two-way          Outgoing Display? n
Dial Access? y              Busy Threshold: 99          Night Service: 200
Queue Length: 0             Country: 6                Incoming Destination: 200
Comm Type: voice            Digit Absorption List:
Prefix-1? y                Trunk Flash? n            Toll Restricted? n
    
```

#### TRUNK PARAMETERS

```

Trunk Type: loop-start
Outgoing Dial Type: tone          Cut-Through? n
Trunk Termination: 600ohm        Disconnect Timing(msec): 500

Auto Guard? n                    Call Still Held? n        Sig Bit Inversion: none
Terminal Balanced? y
Trunk Gain: high
    
```

```

Disconnect Supervision - In? n    Out? n                    Cyclical Hunt? n
Answer Supervision Timeout: 10    Receive Answer Supervision? n
    
```

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TRUNK FEATURES

ACA Assignment? n Measured: none

Maintenance Tests? y

Data Restriction? n

Abandoned Call Search? n

Suppress # Outpulsing? n

Charge Conversion: 1

Decimal Point: none

Currency Symbol:

Charge Type: units

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TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500

Outgoing Disconnect (msec): 500

Outgoing Dial Guard (msec): 1600

Incoming Glare Guard (msec): 1500

Outgoing Glare Guard (msec): 1500

Outgoing Rotary Dial Interdigit (msec): 800

Ringing Monitor (msec): 5200

Incoming Seizure (msec): 50

Outgoing End of Dial (sec): 10

Outgoing Seizure Response (sec): 5

Programmed Dial Pause (msec): 1500

Flash Length(msec): 540

END TO END SIGNALING

Tone (msec): 350

Pause (msec): 150

OUTPULSING INFORMATION

PPS: 10

Make (msec): 35

Break (msec): 65

PPM? n

## System Parameters Country-Options

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### SYSTEM PARAMETERS COUNTRY-OPTIONS

```
Companding Mode: Mu-Law           Base Tone Generator Set: 1
440Hz PBX-dial Tone? n           440Hz Secondary-dial Tone? n
Digital Loss Plan: 6
Analog Ringing Cadence: 6         Set Layer 1 timer T1 to 30 seconds? n
Analog Line Transmission: 2       Enhanced 84xx Display Character Set? n
```

### STONE DETECTION PARAMETERS

```
Tone Detection Mode: 6
Interdigit Pause: short
```

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### SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone	
	Step	(Frequency/Level)	
secondary-dial	1:	425/-11.0	Duration(msec): 200
	2:		
	3:		
	4:		
	5:		
	6:		
	7:		
	8:		
	9:		
	10:		
	11:		
	12:		
	13:		
	14:		
	15:		

SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence	Tone	
	Step	(Frequency/Level)	
ringback	1:	42/-11.0	Duration(msec): 400
	2:	silence	Duration(msec): 200
	3:	425/-11.0	Duration(mc): 400
	4:	silence	Duration(msec): 2000
	5:	goto	Step: 1
	6:		
	7:		
	8:		
	9:		
	10:		
	11:		
	12:		
	13:		
	14:		
	15:		

## Mexico

[Table 42](#) shows the recommended circuit packs.

**Table 42. Recommended and Available CPs in Mexico**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	127V/60Hz 220V/60Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN756
Tone Clock	> TN2182B TN780 TN756
R2MFC Circuit	> TN744D TN744B
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B TN750
Analog DID Trunk	n/a
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	#TN465C > TN465B
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D TN763C
Digital CO/DID Trunk	> TN464F
Digital Tie Trunk	> TN464F TN464E TN464D TN464C
Digital PRI CO Trunk	n/a
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

**Table 42. Recommended and Available CPs in Mexico — *Continued***

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

**NOTE:**

A-law companding is the national standard in Mexico. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- **ARS/AAR Administration**

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa: North American numbers with an area code.

hnpa: North American numbers without an area code.

svc: North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: Yes <sup>14</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: Yes
  - Repetitive Call Waiting Tone: No
  - DID Busy Treatment: Attendant
  - Pull Transfer: No
  - Level of Tone Detection: Precise
  - Outpulse Without Tone: No
  - (Station-to-switch) Recall Timing:
    - Flashhook Interval: Yes



- Upper Bound: 1000 ms
  - Lower Bound: 200 ms
- System Parameter Multifrequency Signaling Administration
  - Incoming Call Type: group-ii-mfc
  - Outgoing Call Type: group-ii-mfc
  - Test Call Extension: As negotiated
  - Incoming Interdigit Timer: 15 sec
  - Incoming Signal Types:

<b>GROUP-I</b>	<b>GROUP-II</b>	<b>GROUP-A</b>	<b>GROUP-B</b>
Use defaults	Use defaults	Use defaults	1: free 2: busy 4: congestion 5: intercept

- Outgoing Signal Types:

<b>GROUP-I</b>	<b>GROUP-II</b>	<b>GROUP-A</b>	<b>GROUP-B</b>
Use defaults	2: normal 2: attendant 2: data-call	1: next-digit 2: restart 3: end-of-dial 4: congestion 5: congestion 6: congestion 7: congestion 8: congestion 9: congestion 10: congestion 11: congestion 12: congestion 13: congestion 14: congestion 15: congestion	1: free 2: busy 3: congestion 4: congestion 5: intercept 6: congestion 7: congestion 8: congestion 9: congestion 10: congestion 11: congestion 12: congestion 13: congestion 14: congestion 15: congestion

- Country Options Parameters

- Companding Mode: mu-law



**NOTE:**

Companding Mode: A-law is the national standard. Mu-law is used internal to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

- Base Tone Generation Set: 1
- Tone Detection Mode: 6
- Interdigit Pause: short
- Digital Loss Plan: 1
- Analog Ringing Cadence: 1
- Customized Individual Tones Customized tone definitions follow the syntax as specified: [(Frequency/Level)silence/goto][(Duration ms)|(Step)]
- Busy:
  - (350+425/-4)(250)
  - (silence)(250)
  - (goto)(1)
- Secondary Dial Tone:
  - (425/-4)(1000)
  - (goto)(1)
- Intrusion Tone:
  - (425/-4)(500)
  - (silence)(150)
  - (425/-4)(150)
  - (silence)(150)
  - (goto)(1)
- 1-Call Wait:
  - (425/-4)(200)
  - (silence)(600)
  - (425/-4)(200)

— 2-Call Wait:

- (425/-4)(200)
- (silence)(600)
- (425/-4)(200)

## **Analog Trunk Administration**

- CO Trunks

- Trunk Group Screen

- Group Type: CO
- Country: 7
- Trunk Gain: high
- Direction: two-way
- Digit Absorption List: blank
- Prefix-1: No
- Trunk Type: loop-start
- Outgoing Dial Type: Pulse
- Trunk Termination: rc (complex impedance)
- Auto Guard: no
- Dial Access: Yes
- Call Still Held: no
- Terminal Balanced: yes
- Receive Answer Supervision: no
- Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: Selection is customer's choice.
- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

- Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 500 ms
- Outgoing Disconnect: 500 ms
- Outgoing Dial Guard: 1600 ms
- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: 1500 ms
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 40 ms
- Outgoing Rotary Digit Dial Break: 60 ms
- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 240 sec
- Programmed Dial Pause: 1500 ms
- Disconnect Signal Error: 240 sec
- Flash Length: 100 ms
- PPM: Yes
- Frequency: 16kHz
- DID Trunks
  - Analog DID trunks are not provided at present for Mexico.
- Analog Tie Trunks
  - No specific Type Approval requirements apply to tie trunk administration.

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN464D (Not entered as administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS

- Country Protocol: 7
- Interconnect: co
- CRC?: No
- Idle Code: 11111111
- Trunk Group Administration Screen (Timing) Digital trunk timing values should be set as for analog CO trunks.
- DID Trunks
  - DS1 Administration screen
    - Circuit Pack: TN464D (Not entered as administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Interconnect: co
    - Signaling Mode: CAS
    - Country Protocol: 7
    - CRC?: No
    - Idle Code: 11111111
- Tie Trunks
  - Mexico Two-Way Operation
    - DS1 Administration screen
      - Circuit Pack: TN464Dv.2 or greater
      - Bit Rate: 2.048
      - Interface Companding: A-law
      - Line Coding: HDB3
      - Signaling Mode: CAS
      - Country Protocol: 7
      - Interconnect: pbx or CO
      - CRC?: no
      - Idle Code: 11111111
    - Trunk Group Administration screen
      - Group Type: tie
  - U.S.A. Tie Operation (DS1 Administration screen)
    - Circuit Pack: TN464D (or TN464C)
    - Bit Rate: 2.048

- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: CAS
- Country Protocol: 1
- Interconnect: pbx
- CRC?: no
- Idle Code: 11111111
- ISDN-PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.

— DS1 Administration screen

- Circuit Pack: TN464D (or TN464C,B from upgrades)
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Country Protocol: 1
- Connect: pbx
- Interface: user
- CRC: No
- Idle Code: 11111111

— Signaling Group screen

- Associated Signaling: Yes
- Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)

— Trunk Group Administration screen

- Group Type: isdn-pri
- Service Type: tie

- ISDN-PRI (Public Network)

Not available for this country.

## Netherlands

[Table 43](#) shows the recommended circuit packs.

**Table 43. Recommended and Available CPs in the Netherlands**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D TN420C
Tone Clock	> TN2182B TN780
R2MFC Circuit	n/a
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN2146
Analog CO Trunk (No PPM)	> TN2147C
Analog CO Trunk (w/PPM)	n/a (See note 1 that follows this table.)
4 Wire Tie Trunk	> TN760Dv11 (See note 2.)
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E TN464D
Digital Tie Trunk	> TN464F TN464E TN464D
Digital PRI CO Trunk	> TN464F TN464E TN464D
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	#TN2183 > TN2144
24 Port Analog Line	n/a

*Continued on next page*

**Table 43. Recommended and Available CPs in the Netherlands — Continued**

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181 TN2136
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

⇒ **NOTE:**  
Analog trunk (w/PPM) is not available. DEFINITY ECS does not support the required 50Hz.

⇒ **NOTE:**  
TN760Dv11 or greater tie trunk requires an additional converter for CEPT-LI:Prescom TS-X1276.

## Feature Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

## ARS/AAR Administration

The DEFINITY ECS Administration and Feature Description contains a general discussion of ARS for international applications and an example of ARS administration for dial tone detection and for multi-level call restrictions.

In Netherlands, first dial tone detection is always required. Second dial tone detection for international access is not needed on DTMF trunks.

International access is 00+ and 09+.

## System Parameter Administration

### **Feature-Related System Parameters Administration**

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.



Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
- Off-Premises Tone Detect Timeout Interval: 10 sec
- Feature Parameters
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: Yes Although not a Type Approval issue, this represents the convention for this country.
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: Yes
  - Repetitive Call Waiting Tone: No
  - DID Busy Treatment: Attendant
  - Pull Transfer: No
  - Level of Tone Detection: Medium
  - Outpulse Without Tone: No
  - (Station-to-switch) Recall Timing:
    - Flashhook Interval: Yes
    - Upper Bound: 1000 ms
    - Lower Bound: 200 ms

### **Country Options Parameters**

Customized tone definitions are not required for entry on the Individual Tone Administration Screen.

- Companding Mode: A-law
- Base Tone Generation Set: 5 (Netherlands)
- Digital Loss Plan: 5 (Netherlands)

- Tone Detection Mode: 5
- Dial Tone Validation Timer: 1050 ms.
- Interdigit Pause: long
- Analog Ringing Cadence: 5 (Netherlands)

### **System Parameter Multi-frequency Administration**

- R2-MFC Test Call Extension: Not applicable to this country - (accept default)
- MFC Interdigit Timer: Not applicable to this country - (accept default).

### **Analog Trunk Administration**

#### **CO Trunks**

- Trunk Group Screen
  - Group Type: CO
  - Dial Access: Yes
  - Country: 5
  - Direction: two-way (One-way incoming and outgoing are also available.)
  - Digit Absorption List: blank
  - Prefix-1: No
  - Flash Length: 100 ms (not applicable Netherlands digital trunk)



#### **NOTE:**

A toll fraud possibility exists if Register Recall (PCORR) feature is activated since no dialed digits restrictions are checked after PCORR flash.

- Trunk Type: loop-start
- Outgoing Dial Type: tone
- Trunk Termination: rc (complex Z).
- Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Auto Guard: no
- Call Still Held: no
- Terminal Balanced: no

- RA Trunk Loss: 0dB
- Trunk Gain: high
- Receive Answer Supervision: no
- Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
- Disconnect Supervision:
  - no for signaling type A
  - yes for signaling type B1
- Suppress # outpulsing: Yes
- Timing

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 500 ms. (not applicable - accept default)
- Outgoing Disconnect: 500 ms. (not applicable - accept default)
- Outgoing Dial Guard: 1600 ms
- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: 1500 ms
- Outgoing Rotary Dial Interdigit: 800 ms.
- Outgoing Dial Pulse Rate (PPS): 10 pps.
- Outgoing Rotary Digit Dial Make: 40 ms.
- Outgoing Rotary Digit Dial Break: 60 ms.
- Ring Monitor Timer: 5200 ms.
- Incoming Seizure: 200 ms.
- Outgoing End-of-Dial: 10 sec.
- Outgoing Seizure Response: 5 (not needed in Netherlands - but works and is useful - drops trunk, gives reorder if no response from far end)
- Programmed Dial Pause: 1500 msec.
- Disconnect Signal Error: 240 sec. This field does not appear for all trunk types.
- End-To-End Signaling Tone: 350 ms (accept default).
- End-To-End Signaling Pause: 150 ms (accept default).
- PPM: No

## DID Trunks

### ■ Trunk Group Screen

- Group Type: DID
- Country: 5
- Trunk Gain: high
- Incoming Dial Type: rotary or tone as negotiated with serving central office.
- Trunk Type: immed-start
- Trunk Termination: rc (complex Z).
- Disconnect Supervision: Yes
- Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Digit Treatment: blank
- Digits: blank
- Expected Digits: depends on system size and numbering plan
- Terminal Balanced: no (should be no for all countries)
- RA Trunk Loss: 0dB
- Extended Loop Range: (Used Only with TN459) no
- Intercept Tone: no
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the *Incoming Partial Dial* WCC timer. This timer will be set from the Administrable Timers Screen.)

### ■ Timing

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms.
- Incoming Dial Guard: 70 ms. (set to minimum to get minimum start dial delay)
- Incoming Partial Dial: 18 sec. Does not appear for Tone signaling type.
- Flash Length: 100 ms.
- Incoming Incomplete Dial: 255 sec.

## Tie Trunks

Information regarding Type Approval-related settings currently is not available.

## Digital Trunks

The following are the most common valid administrable combinations. They are compatible with public-network and Type Approval standards for each country.

### CO Trunks

- DS1 Administration Screen<sup>15</sup>
  - Circuit Pack: TN464D (not entered as an administrable item)
  - Bit Rate: 2.048 (must match plug on circuit pack)
  - Cable impedance (plug on circuit pack): 75 \*W
  - Interface Companding: A-law
  - Line Coding: HDB3
  - Signaling Mode: CAS
  - Country Protocol: 5 (Netherlands)
  - Interconnect: CO
  - CRC?: No
  - Idle Code: 01010100
  - Slip Detection: Y

### Trunk Group Parameters

Digital trunk parameter values should be set as for analog CO trunks, with the following exception:

- PPM? yes
- Frequency: 50Hz/12kHz

## DID Trunks

- DS1 Administration Screen
  - Circuit Pack: TN464D (not entered as an administrable item)
  - Bit Rate: 2.048
  - Cable impedance (plug on circuit pack): 75 \*(W
  - Interface Companding: A-law
  - Line Coding: HDB3

---

15. DS 1 is also analogous to the term *E1* which has been coined for the European T1 or 2 mbit interface.

- Signaling Mode: CAS
- Country Protocol: 5 (Netherlands)
- Interconnect: CO
- CRC?: No
- Idle Code: 01010100

### Trunk Group Parameters

Digital trunk parameter values should be set as for analog DID trunks.

## Tie Trunks

### Non-ISDN Signaling Example

- DS1-Administration Screen
  - Circuit Pack: TN464D (not entered as an administrable item)
  - Bit Rate: 2.048
  - Cable impedance (plug on circuit pack): 75 \*(W
  - Interface Companding: A-law
  - Line Coding: HDB3
  - Signaling Mode: CAS
  - Country Protocol: 5 (Netherlands)
  - Interconnect: pbx
  - CRC?: no
  - Idle Code: 01010100

### ISDN PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.

- DS1 Administration screen
  - Circuit Pack: TN464D (not entered as an administrable item)
  - Bit Rate: 2.048
  - Cable impedance (plug on circuit pack): 75
  - Interface Companding: A-law
  - Line Coding: HDB3
  - Signaling Mode: isdn-pri
  - Country Protocol: 1 (US)
  - Connect: pbx

- Interface: user
- CRC: No
- Idle Code: 01010100
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: public\_ntwrk

### **ISDN PRI (Public Network)**

- Circuit Pack: TN464D (not entered as an administrable item)
- Bit Rate: 2.048
- Cable impedance (plug on circuit pack): 75
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Country Protocol: 5 (Netherlands)
- Connect: Network
- CRC: No
- Idle Code: 01010100
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: public\_ntwrk

## New Zealand

[Table 44](#) shows the recommended circuit packs.

**Table 44. Recommended and Available CPs in New Zealand**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	240V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B TN780
R2MFC Circuit	n/a
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN436B TN436
Analog CO Trunk (No PPM)	TN2147C TN2147
Analog CO Trunk (w/PPM)	#TN465C > TN438B
4 Wire Tie Trunk	> TN437B TN437
2 Wire Tie Trunk	TN439
Auxiliary Trunk	> TN763D TN417
Digital CO/DID Trunk	> TN2464
Digital Tie Trunk	> TN2464
Digital PRI CO Trunk	TN2464
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	n/a
Digital Converter PRI-DPNSS	TN-CCSC-2
Digital Converter PRI-BRI	n/a
8 Port Analog Line	TN2183
16 Port Analog Line	TN2215 #TN2183
24 Port Analog Line	TN2793

*Continued on next page*



**Table 44. Recommended and Available CPs in New Zealand**

<b>Equipment</b>	<b>Equipment Type</b>
4 Wire Digital Line	>TN754B TN413
2 Wire Digital Line	#TN2214 >TN2181
Data Line	>TN726B
BRI-U Line	
BRI-ST Line	TN556B

## Panama

[Table 45](#) shows the recommended circuit packs.

**Table 45. Recommended and Available CPs in Panama**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	120V/60Hz 208V/60Hz 240V/60Hz
Ring Generator	20Hz
Tone Detector	> TN2182 > TN744C TN748D TN748C
Tone Clock	> TN2182 TN780 TN768
R2MFC Circuit	n/a
Speech Synthesizer	> TN725B
Call Classifier	> TN2182B, > TN2182 > TN744D > TN744C TN744B
Announcement	#TN750C > TN750B TN750
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	n/a
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D TN763C TN763B
Digital CO/DID Trunk	> TN464F TN464E TN464D TN767
Digital Tie Trunk	> TN464F TN464E TN464D TN767 TN722B
Digital PRI CO Trunk	> TN464F TN464E TN464D TN767
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B TN746

*Continued on next page*

Table 45. Recommended and Available CPs in Panama — *Continued*

Equipment	Equipment Type
24 Port Analog Line	n/a
4 Wire Digital Line	> TN754B
2 Wire Digital Line	> TN2224 TN2181
Data Line	> TN726B
BRI-U Line	TN2198
BRI-ST Line	TN556B

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

<code>int:</code>	For all international numbers.
<code>natl:</code>	For all national PN numbers.
<code>pubu:</code>	For all other external (that is, not extensions) numbers.

## Feature-Related System Parameters

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### FEATURE-RELATED SYSTEM PARAMETERS

Trunk-to-Trunk Transfer: all  
Coverage - Subsequent Redirection No Answer Interval: 2  
Coverage - Caller Response Interval (seconds): 4  
Keep Held SBA at Coverage Point? y  
Automatic Callback - No Answer Timeout Interval (rings): 3  
Call Park Timeout Interval (minutes): 10  
Off-Premises Tone Detect Timeout Interval (seconds): 20  
AAR/ARS Dial Tone Required? y  
Music/Tone on Hold: none  
Music (or Silence) on Transferred Trunk Calls? no  
DID/Tie/ISDN Intercept Treatment: attd  
Internal Automatic Answer for Attendant Extended Calls? n  
Automatic Circuit Assurance (ACA) Enabled? n

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### FEATURE-RELATED SYSTEM PARAMETERS

#### LEAVE WORD CALLING PARAMETERS

Maximum Number of Messages Per Station (when MSA not in service):10  
Stations with System-wide Retrieval Permission (enter extension)  
1:            2:            3:            4:            5:  
6:            7:            8:            9:            10:

WARNING!    SEE USER DOCUMENTATION BEFORE CHANGING TTI STATE  
Terminal Translation Initialization (TTI) Enabled? n

External Coverage Treatment for Transferred Incoming Calls? n

SECURITY VIOLATION NOTIFICATION (SVN) PARAMETERS HAVE MOVED TO  
THE SYSTEM-PARAMETERS SECURITY SCREEN

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FEATURE-RELATED SYSTEM PARAMETERS

Reserved Slots for Attendant Priority Queue: 5  
     Time before Off-hook Alert: 10  
     Emergency Access Redirection Extension:  
         Service Observing Warning Tone? y  
 Number of Emergency Calls Allowed in Attendant Queue: 5  
     Call Pickup Alerting? n  
     Deluxe Paging and Call Park Timeout to Originator? n  
 Controlled Outward Restriction Intercept Treatment: tone  
 Controlled Termination Restriction (Do Not Disturb): tone  
     Controlled Station to Station Restriction: tone

AUTHORIZATION CODE PARAMETERS

Authorization Codes Enabled?  
 Authorization Code Length:  
 Authorization Code Cancellation Symbol: #  
     Attendant Time Out Flag? n  
     Display Authorization Code? y

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FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS

System Printer Extension: Lines Per Page: 60

SYSTEM-WIDE PARAMETERS

Switch Name:

CALL CENTER SYSTEM PARAMETERS

Direct Agent Announcement Extension:  
     Direct Agent Announcement Delay:  
         Converse Delay Data1: 0 Data2: 2  
 Direct Agent Announcement Extension: Converse Pulse ON: 100 OFF: 70  
     Prompting Timeout (secs): 10

CALL MANAGEMENT SYSTEM PARAMETERS

BCMS/VuStats Measurement Interval: hour  
 BCMS/VuStats Abandon Call Timer (seconds): Validate Login IDs? n  
     ACD Login Identification Length: Adjunct CMS Release:

MALICIOUS CALL TRACE PARAMETERS

Apply MCT Warning Tone? n MCT Voice Recorder Trunk Group:

FEATURE-RELATED SYSTEM PARAMETERS

Public Network Trunks on Conference Call: 5                      Auto Start? n  
Conference Parties with Public Network Trunks: 6                      Auto Hold? n  
Conference Parties without Public Network Trunks: 6                      Attendant Tone? y  
Night Service Disconnect Timer (seconds): 180                      Bridging Tone? n  
Short Interdigit Timer (seconds): 3                      Conference Tone? n  
Unanswered DID Call Timer (seconds):                      Intrusion Tone? n  
Line Intercept Tone Timer (seconds): 30  
DID Busy Treatment: tone  
Allow AAR/ARS Access from DID/DIOD? n

DISTINCTIVE AUDIBLE ALERTING

Internal: 1    External: 2    Priority: 3  
Attendant Originated Calls: external

FEATURE-RELATED SYSTEM PARAMETERS

Pull Transfer: n                      Update Transferred Ring Pattern? n  
Outpulse Without Tone? y                      Wait Answer Supervision Timer? n  
Allow Conference via Flash? y                      Repetitive Call Waiting Tone? n  
Vector Disconnect Timer (min):                      Network Feedback During Tone Detection? y  
Hear Zip Tone Following VOA? n  
Intercept Treatment On Failed Trunk Transfers? n  
Station Tone Forward Disconnect: silence  
Level Of Tone Detection: precise

RECALL TIMING

Flashhook Interval? y                      Upper Bound (msec): 1000  
Lower Bound (msec): 200

ENHANCED DCS

Enhanced DCS Enabled? n  
Apply Intercept Locally? y                      Enforce PNT-to-PNT Restrictions? n

## Multifrequency-Signaling-Related System Parameters

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### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

```

Incoming Call Type: group-ii-mfc
Outgoing Call Type: group-ii-mfc
Maintenance Call Type: none
Test Call Extension:
Interdigit Timer (sec): 10
Outgoing Forward Signal Present Timer (sec): 15
Outgoing Forward Signal Absent Timer (sec): 30
Multifrequency Signaling Incoming Intercept Treatment? n
    Received Signal Gain(-Loss) (dB): 0
    Transmitted Signal Gain(-Loss) (dB): -3

ANI Prefix:
ANI for PBX:
Next ANI Digit: send-ani
ANI Prefix:          Collect All Digits Before Seizure? n
                    Request Incoming ANI (non-AAR/ARS)? n
                    Called Party Category: user-type
                    Use COR for Calling Party Category? n
    
```

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### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

#### INCOMING FORWARD SIGNAL TYPES (Tones from CO)

#### INCOMING BACKWARD SIGNAL TYPES (Tones to CO)

Group-I	Group-II	Group-A	Group-B
11: ignored	1: normal	1: next-digit	1: free
12: ignored	2: normal	3: end-of-dial	2: busy
13: ignored	3: normal	4: congestion	4: congestion
14: ignored	4: normal	5: send-ani	7: intercept
15: end-of-ani	5: normal		
	6: normal		
	7: normal		
	8: normal		
	9: normal		
	10: normal		
	11: normal		
	12: normal		
	13: normal		
	14: normal		
	15: normal		

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

OUTGOING FORWARD SIGNAL TYPES  
(Tones to CO)

Group-I	Group-II
15: end-of-ani	1: normal 2: attendant 6: data-call

OUTGOING BACKWARD SIGNAL TYPES  
(Tones from CO)

Group-A	Group-B
1: next-digit 2: last-digit 3: end-of-dial 4: congestion 5: send-ani 6: setup-sppath 7: last-2-digits 8: last-3-digits 9: congestion 10: congestion 11: congestion 12: congestion 13: congestion 14: congestion 15: congestion	1: free 2: busy 3: congestion 4: congestion 5: congestion 6: free 7: intercept 8: congestion 9: congestion 10: congestion 11: congestion 12: congestion 13: congestion 14: congestion 15: congestion

## System Parameters Country-Options

SYSTEM PARAMETERS COUNTRY-OPTIONS

Companding Mode: Mu-Law  
440Hz PBX-dial Tone? n  
Digital Loss Plan: 1  
Analog Ringing Cadence: 1

Base Tone Generator Set: 1  
440Hz Secondary-dial Tone? n

TONE DETECTION PARAMETERS

Tone Detection Mode: 6  
Interdigit Pause: short



## CO Trunk Group Administration

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### TRUNK GROUP

Group Number:	Group Type: co	CDR Reports: y
Group Name: OUTSIDE CALL	COR: 1	TN: 1 TAC:
Direction: two-way	Outgoing Display? n	
Dial Access? n	Busy Threshold: 99	Night Service:
Queue Length: 0	Country: 1	Incoming Destination:
Comm Type: voice	Auth Code? n	Digit Absorption List:
Prefix-1? n	Trunk Flash? n	Toll Restricted? n

### TRUNK PARAMETERS

Trunk Type: loop-start		
Outgoing Dial Type: tone		Cut-Through? n
Trunk Termination: rc		Disconnect Timing(msec): 500
Auto Guard? n	Call Still Held? n	Sig Bit Inversion: none
Terminal Balanced? n		RA Trunk Loss: 0db
	Trunk Gain: high	
Disconnect Supervision - In? n Out? n		Cyclical Hunt? n
Answer Supervision Timeout: 10		Receive Answer Supervision? n

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### TRUNK FEATURES

ACA Assignment? n	Measured: none	Maintenance Tests? y
	Data Restriction? n	
Abandoned Call Search? n		
Suppress # Outpulsing? n		

TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	Outgoing Disconnect(msec): 500
Incoming Glare Guard(msec): 1500	Outgoing Dial Guard(msec): 1600
Outgoing Glare Guard(msec): 1500	Outgoing Seizure(msec): 500
Ringing Monitor(msec): 5200	Outgoing Seizure Response(sec): 5
Outgoing End of Dial(sec): 10	
Programmed Dial Pause(msec): 1500	
Flash Length(msec): 540	

END TO END SIGNALING

Tone(msec): 350	Pause(msec): 150
-----------------	------------------

OUTPUTSING INFORMATION

PPS: 10	Make(msec): 40	Break(msec): 60	PPM? n
---------	----------------	-----------------	--------

TRUNK GROUP

Administered Members (min/max):	0/0
Total Administered Members:	0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							



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TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	Outgoing Disconnect(msec): 500
Incoming Dial Guard(msec): 70	Outgoing Dial Guard(msec): 1600
Incoming Glare Guard(msec): 1500	Outgoing Glare Guard(msec): 1500
Ringing Monitor(msec): 5200	Incoming Seizure(msec): 500
Outgoing End of Dial(sec): 10	Outgoing Seizure Response(sec): 5
Programmed Dial Pause(msec): 1500	
Flash Length(msec):	Incoming Incomplete Dial Alarm(sec): 255

END TO END SIGNALING

Tone(msec): 350                      Pause(msec): 150

OUTPULSING INFORMATION

PPS: 10      Make(msec): 40      Break(msec): 60      PPM? n

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TRUNK GROUP

Administered Members (min/max): 0/0

Total Administered Members: 0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
------	------	-----	------	-------	------	------	-----------

1:

2:

3:



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TRUNK GROUP

Administered Members (min/max): 0/0

Total Administered Members: 0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name
1:			
2:			
3:			

## Philippines

[Table 46](#) shows the recommended circuit packs.

**Table 46. Recommended and Available CPs in Philippines**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CMC
AC Power Voltage & Freq	220V/60Hz
Ring Generator	20Hz/25Hz
Tone Detector	> TN2182B > TN748D
Tone Clock	> TN2182B
R2MFC Circuit	TN744D
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750B
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	TN747B
Analog CO Trunk (w/PPM)	n/a
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D TN763C
Digital CO/DID Trunk	> TN2464
Digital Tie Trunk	> TN2464
Digital PRI CO Trunk	TN2464
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	n/a
Digital Converter PRI-DPNSS	TN-CCSC-2
Digital Converter PRI-BRI	n/a
8 Port Analog Line	n/a
16 Port Analog Line	#TN746B
24 Port Analog Line	TN2793

*Continued on next page*

**Table 46. Recommended and Available CPs in Philippines**

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<b>Equipment</b>	<b>Equipment Type</b>
4 Wire Digital Line	>TN754B
2 Wire Digital Line	>TN2181
Data Line	>TN726B
BRI-U Line	TN2198
BRI-ST Line	TN556

---



## Poland

The information provided here is preliminary and subject to change. [Table 47](#) shows the recommended circuit packs.

**Table 47. Recommended and Available CPs in Poland**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN748C
Tone Clock	> TN2182B TN780 TN756
R2MFC Circuit	> TN744D TN744B
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	
Digital Tie Trunk	> TN464F TN464E TN464D
Digital PRI CO Trunk	n/a
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

**Table 47. Recommended and Available CPs in Poland — Continued**

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181 TN2136
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

**NOTE:**

A-law companding is the national standard in Poland. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- **ARS/AAR Administration**

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: Yes <sup>16</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: Yes
  - Repetitive Call Waiting Tone: No
  - DID Busy Treatment: Attendant
  - Pull Transfer: No
  - Level of Tone Detection: Medium
  - Outpulse Without Tone: Yes
  - (Station-to-switch) Recall Timing:
    - Flashhook Interval: Yes

- Upper Bound: 1100 msec
  - Lower Bound: 600 msec
- System Parameter Multifrequency Signaling Administration
  - Incoming Call Type: group-ii-mfc
  - Outgoing Call Type: group-ii-mfc
  - Test Call Extension: Accept default
  - Incoming Interdigit Timer: Accept default
  - Incoming Signal Types:

<b>GROUP-I</b>	<b>GROUP-II</b>	<b>GROUP-A</b>	<b>GROUP-B</b>
11: ignored	1: normal	1: next-digit	3: busy
12: ignored	2: normal	3: end-of-dial	4: congestion
13: ignored	3: normal	4: congestion	5: intercept
14: ignored	4: normal		6: free
15: end-of-dial	5: normal		
	6: data-call		
	7: normal		
	8: data-call		
	9: normal		
	10: normal		
	11: normal		
	12: normal		
	13: normal		
	14: normal		
	15: normal		

— Outgoing Signal Types:

<b>GROUP-I</b>	<b>GROUP-II</b>	<b>GROUP-A</b>	<b>GROUP-B</b>
15: end-of-dial	1: normal	1: next-digit	1: free
	1: attendant	2: last-digit	2: busy
	6: data-call	3: end-of-dial	3: busy
		4: congestion	4: congestion
		5: call-info-ani	5: congestion
		6: setup-sppath	6: free
		7: last-2-digits	7: intercept
		8: last-3-digits	8: congestion
		9: congestion	9: congestion
		10: congestion	10: congestion
		11: congestion	11: congestion
		12: congestion	12: congestion
		13: congestion	13: congestion
		14: congestion	14: congestion
		15: congestion	15: congestion

■ System Parameters Country Options

— Companding Mode: A-law



**NOTE:**

Companding Mode: A-law is the national standard. Mu-law is used internal to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

— Base Tone Generation Set:

— Tone Detection Mode: 5

— Interdigit Pause: short

— Digital Loss Plan:

— Analog Ringing Cadence:

## Analog Trunk Administration

- CO Trunks


- Trunk Group Screen

- Group Type: CO
    - Country:
    - Trunk Gain: high
    - Direction: two-way
    - Digit Absorption List: blank
    - Prefix-1: No
    - Trunk Type: loop-start
    - Outgoing Dial Type: tone/rotary
    - Trunk Termination: 600 ohm
    - Auto Guard: No
    - Dial Access: No
    - Call Still Held: No
    - Terminal Balanced: Yes
    - Receive Answer Supervision: yes
    - Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
    - Disconnect Supervision - In: no
    - Disconnect Supervision - Out: Selection is customer's choice.
    - Disconnect Timing: 500 msec or 1000 msec - 1000 msec for public trunk with flash. (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

- Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 500 msec or 1000 msec
    - Outgoing Disconnect: 500 msec or 1000 msec
    - Outgoing Dial Guard: 1600 ms
    - Incoming Glare Guard: 1500 ms

- Outgoing Glare Guard: 1500 ms
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 35 ms
- Outgoing Rotary Digit Dial Break: 65 ms
- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 255 sec
- Outgoing Seizure Response: 0
- Programmed Dial Pause: 1500 ms
- Disconnect Signal Error: 240 sec
- End-To-End Signaling Pause: 150 ms (accept default)
- End-To-End Signaling Tone: 350 ms (accept default)
- Flash Length: 100 ms
- PPM: No
- DID Trunks
  - Trunk Group Screen
    - Group Type: DID
    - Country:
    - Trunk Gain: high
    - Digit Absorption List: blank
    - Incoming Dial Type: rotary or mf
    -  **NOTE:**  
It is very important to have DID trunk over DS1 with rotary!
    - Trunk Type: immed-start
    - Trunk Termination: rc (complex impedance)
    - Disconnect Supervision: no
    - Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
    - Digit Treatment: blank
    - Digits: blank

- Expected Digits: depends on system size and numbering plan
- Terminal Balanced: yes
- Extended Loop Range: (Used Only with TN459) no
- Drop Treatment: silence
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 100 ms
  - Incoming Dial Guard: 10 ms
  - Incoming Partial Dial: 18 sec
  - Incoming Incomplete Dial: 255 sec
- Tie Trunks

No information regarding Type Approval-related settings is currently available.

## Digital Trunk Administration

Not all possible valid administrable combinations are listed in this section: Only the most common or standard combination, compatible with public-network and Type Approval standards for each country is presented:

- CO Trunks

— DS1 Administration Screen <sup>17</sup>

- Circuit Pack: TN464D (not entered as an administrable item)
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: CAS
- Country Protocol:
- Interconnect: CO
- CRC?: No



- Idle Code: 01010100
- Trunk Group Administration Screen (Timing) Digital trunk timing values should be set as for analog CO trunks.
- DID Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN464D (not entered as an administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol:
    - Interconnect: CO
    - CRC?: No
    - Idle Code: 01010100
  - Trunk Group Administration Screen (Timing)  
Digital trunk timing values should be set as for analog DID trunks.
- Tie Trunks
  - Non-ISDN Signaling Example (DS1 Administration Screen)
    - Circuit Pack: TN464D (Not entered as administrable item; TN464C from upgrades)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol:
    - Interconnect: pbx
    - CRC?: no
    - Idle Code: 01010100
  - ISDN-PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.

    - DS1 Administration screen
      - Circuit Pack: TN464D (or TN464C from upgrades)
      - Bit Rate: 2.048

- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Country Protocol: 1
- Connect: pbx
- Interface: user
- CRC: No
- Idle Code: 01010100
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: tie
- ISDN-PRI (Public Network) Not available for this country.

## Republic of Korea

[Table 48](#) shows the recommended circuit packs.

**Table 48. Recommended and Available CPs in Republic of Korea**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CMC
AC Power Voltage & Freq	110V/60Hz 220V/60Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B TN780
R2MFC Circuit	TN744D
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B TN750
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	TN747B TN2147C TN2147
Analog CO Trunk (w/PPM)	n/a
4 Wire Tie Trunk	> TN760
2 Wire Tie Trunk	TN439
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN2464
Digital Tie Trunk	> TN2464
Digital PRI CO Trunk	TN2464
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	n/a
Digital Converter PRI-DPNSS	n/a
Digital Converter PRI-BRI	n/a
8 Port Analog Line	TN746B
16 Port Analog Line	#TN791 TN479
24 Port Analog Line	n/a

*Continued on next page*

**Table 48. Recommended and Available CPs in Republic of Korea**

<b>Equipment</b>	<b>Equipment Type</b>
4 Wire Digital Line	>TN754C
2 Wire Digital Line	#TN2214 >TN2181
Data Line	>TN726B
BRI-U Line	TN2198
BRI-ST Line	TN556B

## Russia

[Table 49](#) shows the recommended circuit packs.

**Table 49. Recommended and Available CPs in Russia**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	20Hz
Tone Detector	#TN2182B > TN744D TN420C
Tone Clock	#TN2182B > TN780
R2MFC Circuit	> TN744D TN744Bv2
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN753v17 > TN2199
Analog CO Trunk (No PPM)	> TN747Bv12 > TN2199
Analog CO Trunk (w/PPM)	#TN465C > TN465B TN465
4 Wire Tie Trunk	> TN760Dv11
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F
Digital Tie Trunk	> TN464F
Digital PRI CO Trunk	n/a
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

Table 49. Recommended and Available CPs in Russia — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181 TN2136
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

## Country-Specific Features

When the Country Code field is 15, Russia Multifrequency Shuttle signaling can be enabled on CO, DID and DIOD trunk groups. ANI transmission, which uses gapless R1 multifrequency signaling and is completed within 800ms, can be administered on outgoing CO trunk groups. See “Trunk Group Administration” in the DEFINITY ECS Administration and Feature Description.

When the Country Code field is 15 and the Protocol Type field is **intol**, the new features Intrusion and Re-ring are enabled.

On DID and DIOD trunks, when the Country field is 15, the ANI Request feature can be enabled when, on the Trunk Group screen, the Protocol Type field is **inloc**. The ANI is requested on rotary and shuttle trunks if the incoming call is processed through the ARS/AAR digit analysis (or digit conversion). The ANI Request feature can be invoked either automatically (via ARS/AAR) or by the user during the voice state of a call by pressing the `ani-requ` button administered on their phone.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of

North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc:	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

#### ■ ANI Transmission

In order to use ANI transmission, ARS must be used. If the ANI requested signal is expected at a certain point in the digit string during dialing, the symbol "&" should be translated in the routing pattern at that point.

#### ■ ANI Request via ARS/AAR

In order to activate the ANI Request feature, on the AAR/ARS Digit Analysis Table (Digit Conversion Table) screen, set the Ani Req'd field to **y** or **r**.

#### ⇒ NOTE:

If the option **r** is selected, the ANI is requested on the incoming trunk (rotary, shuttle, or R2\_MFC) and if for any reason is not received, the incoming call drops.

#### ⇒ NOTE:

The capability of dropping the incoming call applies also for ISDN calls if the CPN is not received and:

- on the System Parameter Country-Options screen, the value of the Base Tone Generator field is 15.
- the call is processed through the AAR/ARS Digit Analysis Table (or Digit Conversion Table) screen and the ANI Req'd field is **r**.

The value **r** for the ANI Req'd field is available only if, on the Feature-Related System-Parameters screen, the Allow ANI Restriction on AAR/ARS field is **y**.

- ANI Request via Feature Button

In order to activate the ANI Request feature via button, the user must have the `ani-requ` button administered on their phone. The ANI displays on their phone only if the user has the `mct-contr` button administered.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration

- Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
- Public Network Trunks on Conference Call: 5
- Conference Parties With PNTs: 6
- Conference Parties Without PNTs: 6
- Line Intercept Tone Timer: 30
- Night Service Disconnect Timer: 180 sec
- Short Interdigit Timer: 3 sec
- Unanswered DID Call Timer: 60
- Auto-Hold: Yes <sup>18</sup>
- Attendant Tone: Yes
- Bridging Tone: No
- Conference Tone: No
- Intrusion Tone: Yes
- Allow ANI Restriction on AAR/ARS: Yes
- Repetitive Call Waiting Tone: No
- DID Busy Treatment: Attendant
- Pull Transfer: No
- Level of Tone Detection: Medium
- Outpulse Without Tone: Yes
- (Station-to-switch) Recall Timing:
  - Flashhook Interval: No
  - Disconnect Timing: 350 ms
- Station Tone Forward Disconnect: Busy



- Network Feedback: No
- Class of Restriction Administration
  - Category For C.I.S. ANI: 7
- System Parameter Country Options Administration
  - Companding Mode: A-law
  - Base Tone Generation Set: 15
  - Tone Detection Mode: 4
  - Interdigit Pause: short
  - Digital Loss Plan: 15
  - Analog Ringing Cadence: 15

## **Analog Trunk Administration**

- CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Country: 15
    - Trunk Gain: high
    - Direction: outgoing
    - Digit Absorption List: blank
    - Prefix-1: No
    - Trunk Type: loop-start
    - Outgoing Dial Type: rotary
    - Trunk Termination: 600 ohm
    - Auto Guard: no
    - Dial Access: Yes
    - Call Still Held: no
    - Terminal Balanced: yes
    - Receive Answer Supervision: yes
    - Answer Supervision Timeout: 0 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
    - Disconnect Supervision - In: yes
    - Disconnect Supervision - Out: Selection is customer's choice.

- Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 200 ms
- Outgoing Disconnect: 200 ms
- Outgoing Dial Guard: 100 ms
- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: No effect
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 50 ms
- Outgoing Rotary Digit Dial Break: 50 ms
- Outgoing Rotary Dial Interdigit: 700 ms
- Ring Monitor Timer: No effect
- Incoming Seizure: No effect
- Outgoing End-of-Dial: 254 sec
- Outgoing Seizure: 200 ms
- Programmed Dial Pause: 5000 ms
- Disconnect Signal Error: 60 sec
- End-To-End Signaling Pause: 150 ms (accept default)
- End-To-End Signaling Tone: 350 ms (accept default)
- Flash Length: No effect
- Outgoing Seizure Response: No effect
- PPM: No
- Outpulsing Make: 50 ms
- Outpulsing Break: 50 ms

— Trunk Group Administration Features Screen

To administer Multifrequency Shuttle, select the following values:

- Shuttle: yes
- Start Position: 1

- DID Trunks

— Trunk Group Screen

- Group Type: DID
- Country: 15
- Trunk Gain: high
- Direction: incoming
- Protocol Type: inloc or intol
- Digit Absorption List: blank
- Incoming Dial Type: rotary
- Trunk Type: loop-start
- Trunk Termination: rc (complex impedance)
- Disconnect Supervision: yes
- Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Digit Treatment: blank
- Digits: blank
- Expected Digits: depends on system size and numbering plan
- Terminal Balanced: yes
- Drop Treatment: silence
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Features Screen

- Shuttle: yes
- Start B Signal: 1
- Request Category: no

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Rotary Timeout: No effect
- Disconnect Timing: No effect
- Incoming Disconnect: 100 ms
- Incoming Dial Guard: 40 ms

- Incoming Partial Dial: 10 sec
- Incoming Seizure: No effect
- Incoming Incomplete Dial: 255 sec
- Disconnect Signal Error: 60 sec
- Flash Length: No effect
- Incoming Incomplete Dial Alarm: No effect
- Answer Send: 200 ms
- End-To-End Signaling Pause: 160 ms (accept defaults)
- End-To-End Signaling Tone: 360 ms (accept defaults)
- Tie Trunks

No information regarding Type Approval-related settings is currently available.

## Digital Trunk Administration

Not all possible valid administrable combinations are listed in this section: Only the most common or standard combination, compatible with public-network and Type Approval standards for each country is presented:

- CO Trunks
  - DS1 Administration Screen <sup>19</sup>
    - Circuit Pack: TN464D (not entered as an administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 15
    - Interconnect: CO
    - CRC?: No
    - Idle Code: 01010100
  - Trunk Group Administration Screen (Timing)

Digital trunk timing values should be set as for analog CO trunks.
- DID Trunks
  - DS1 Administration Screen

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19. DS1 is also analogous to the term E1 that has been coined for the European T1 or 2 mbit interface.

- Circuit Pack: TN464D (not entered as an administrable item)
  - Bit Rate: 2.048
  - Interface Companding: A-law
  - Line Coding: HDB3
  - Signaling Mode: CAS
  - Country Protocol: 15
  - Interconnect: CO
  - CRC?: No
  - Idle Code: 01010100
- Trunk Group Administration Screen (Timing)
- Digital trunk timing values should be set as for analog DID trunks.
- Tie Trunks
    - Non-ISDN Signaling Example (DS1 Administration Screen)
      - Circuit Pack: TN464D (Not entered as administrable item; TN464C from upgrades)
      - Bit Rate: 2.048
      - Interface Companding: A-law
      - Line Coding: HDB3
      - Signaling Mode: CAS
      - Country Protocol: 1
      - Interconnect: pbx
      - CRC?: no
      - Idle Code: 01010100
    - ISDN-PRI (Private Network) Signaling

This example assumes use of US Option1 with facility associated signaling. Other feature options will require changes in one or more administered items.

      - DS1 Administration screen
        - Circuit Pack: TN464D (or TN464C from upgrades)
        - Bit Rate: 2.048
        - Interface Companding: A-law
        - Line Coding: HDB3
        - Signaling Mode: isdn-pri
        - Country Protocol: 1

- Connect: pbx
- Interface: user
- CRC: No
- Idle Code: 11111111
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: tie
- ISDN-PRI (Public Network) (Not available for this country).

## Saudi Arabia

### Overview

- R2-MFC DID signaling is used.
- The PBX supplies DID Battery.
- 600 resistive impedance is used on CO trunks.
- Ringback tone to network: 425 Hz 1.2/4.65 Cadence.

[Table 50](#) shows the recommended circuit packs.

**Table 50. Recommended and Available CPs in Saudia Arabia**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	110V/60Hz 220V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN756
Tone Clock	> TN2182B TN780 TN756
R2MFC Circuit	> TN7444D TN744B
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D TN763C
Digital CO/DID Trunk	> TN464F
Digital Tie Trunk	> TN464F TN464E TN464D TN464C TN464B
Digital PRI CO Trunk	n/a
Digital BRI Trunk	

*Continued on next page*

**Table 50. Recommended and Available CPs in Saudia Arabia — Continued**

Equipment	Equipment Type
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a
4 Wire Digital Line	> TN754B
2 Wire Digital Line	TN#2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	



**NOTE:**

A-law companding is the national standard in Saudi Arabia. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

**Feature Administration**

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- **ARS/AAR Administration**

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc:	North American numbers of the screen “x11”.



Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

### ■ Feature-Related System Parameters Administration

- Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
- Public Network Trunks on Conference Call: 5
- Conference Parties With PNTs: 6
- Conference Parties Without PNTs: 6
- Line Intercept Tone Timer: 30
- Night Service Disconnect Timer: 180 sec
- Short Interdigit Timer: 3 sec
- Unanswered DID Call Timer: 60
- Auto-Hold: Yes<sup>20</sup>
- Attendant Tone: Yes
- Bridging Tone: No
- Conference Tone: No
- Intrusion Tone: Yes
- Repetitive Call Waiting Tone: No
- DID Busy Treatment: Attendant
- Pull Transfer: No
- Level of Tone Detection: Broadband
- Outpulse Without Tone: Yes

- (Station-to-switch) Recall Timing:
  - Flashhook Interval: Yes
  - Upper Bound: 1000 ms
  - Lower Bound: 200 ms
- System Parameter Multifrequency Signaling Administration
  - Incoming Call Type: group-ii-mfc
  - Test Call Extension: As negotiated
  - Incoming Interdigit Timer: 10 sec
  - Incoming Signal Types:

GROUP-I	GROUP-II	GROUP-A	GROUP-B
11: drop	1: normal	Use defaults	3: busy
12: ignored	2: busy-rt-attd		4: congestion
13: maint-call	3: normal		5: intercept
14: ignore	4: normal		6: free
15: ignore	5: busy-rt-attd		
	6: data-call		
	7: normal		
	8: data-call		
	9: busy-rt-attd		
	10: busy-rt-attd		
	11: normal		
	12: busy-rt-attd		
	13: normal		
	14: busy-rt-attd		
	15: normal		

- Country Options Parameters
  - Companding Mode: mu-law



**NOTE:**

Companding Mode: A-law is the national standard. Mu-law is used internal to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

- Base Tone Generation Set: 9
- Tone Detection Mode: default

- Interdigit Pause: default
- Digital Loss Plan: 9
- Analog Ringing Cadence: 9

## **Analog Trunk Administration**

### ■ CO Trunks

#### — Trunk Group Screen

- Group Type: CO
- Country: 9
- Trunk Gain: high
- Direction: two-way
- Digit Absorption List: blank
- Prefix-1: No
- Trunk Type: loop-start
- Outgoing Dial Type: tone
- Trunk Termination: rc (complex impedance)
- Auto Guard: no
- Dial Access: Yes
- Call Still Held: no
- Terminal Balanced: yes
- Receive Answer Supervision: no
- Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: Selection is customer's choice.
- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

#### — Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 500 ms

- Outgoing Disconnect: 500 ms
- Outgoing Dial Guard: 1600 ms
- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: 1500 ms
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 35 ms
- Outgoing Rotary Digit Dial Break: 65 ms
- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 240 sec
- Programmed Dial Pause: 1500 ms
- Disconnect Signal Error: 240 sec
- Flash Length: 100 ms
- PPM: no
- DID Trunks
  - Trunk Group Screen
    - Group Type: DID
    - Country: 9
    - Trunk Gain: high
    - Digit Absorption List: blank
    - Incoming Dial Type: MF
    - Trunk Type: immed-start
    - Trunk Termination: rc (complex impedance)
    - Disconnect Supervision: no
    - Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
    - Digit Treatment: blank
    - Digits: blank
    - Terminal Balanced: yes
    - Extended Loop Range: (Used Only with TN459) no

- Drop Treatment: silence
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms
  - Incoming Dial Guard: 50 ms
  - Incoming Partial Dial: 18 sec
  - Incoming Incomplete Dial: 255 sec
  - Flash Length: 100 ms
- Tie Trunks

No special Type Approval regulations apply. Tie trunks are administered on a case-by-case basis.

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks

Not available in this country.

- DID Trunks

Not available in this country.

- Tie Trunks

— Non-ISDN Signaling Example (DS1 Administration screen)

- Circuit Pack: TN464C
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: CAS
- Country Protocol: 9
- Interconnect: pbx
- CRC?: no
- Idle Code: 11111111

## — ISDN-PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.

## ■ DS1 Administration screen

- Circuit Pack: TN464C
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Country Protocol: 9
- Connect: pbx
- Interface: user
- CRC: No
- Idle Code: 11111111

## ■ Signaling Group screen

- Associated Signaling: Yes
- Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)

## ■ Trunk Group Administration screen

- Group Type: isdn-pri
- Service Type: tie

## — ISDN-PRI (Public Network)

Not available in this country.

## Singapore

[Table 51](#) shows the recommended circuit packs.

**Table 51. Recommended and Available CPs in Singapore**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	230V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN756
Tone Clock	> TN2182B TN780 TN756
R2MFC Circuit	> TN7444D TN744B
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B TN750
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D TN763C
Digital CO/DID Trunk	
Digital Tie Trunk	> TN464F TN464E TN464D TN464C
Digital PRI CO Trunk	> TN464F TN464E TN464D TN464C
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B
24 Port Analog Line	TN2793

*Continued on next page*

Table 51. Recommended and Available CPs in Singapore — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

**NOTE:**

A-law companding is the national standard in Singapore. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

## Feature Administration

The screens displayed in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	North American numbers with an area code.
hnpa:	North American numbers without an area code.
svc:	North American numbers of the screen "x11".



Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: Yes<sup>21</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: No
  - Repetitive Call Waiting Tone: No
  - DID Busy Treatment: Attendant
  - Pull Transfer: No
  - Level of Tone Detection: Broadband
  - Outpulse Without Tone: Yes
  - (Station-to-switch) Recall Timing:
    - Flashhook Interval: Yes

- Upper Bound: 1000 ms
  - Lower Bound: 200 ms
- System Parameter Multifrequency Signaling Administration
  - Incoming Call Type: group-ii-mfc
  - Test Call Extension: As Negotiated
  - Incoming Interdigit Timer: 10 sec
  - Incoming Signal Types:

GROUP-I	GROUP-II	GROUP-A	GROUP-B
Use defaults	Use defaults	Use defaults	1: free 2: busy 5: congestion 7: intercept

- Country Options Parameters
  - Companding Mode: mu-law



**NOTE:**

Companding Mode: A-law is the national standard. Mu-law is used internal to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

- Base Tone Generation Set: 6
- Tone Detection Mode: default
- Interdigit Pause: default
- Digital Loss Plan: 6
- Analog Ringing Cadence: 6

## **Analog Trunk Administration**

- CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Country: 6
    - Trunk Gain: high
    - Direction: two-way
    - Digit Absorption List: blank
    - Prefix-1: No

- Trunk Type: loop-start
- Outgoing Dial Type: tone
- Trunk Termination: rc (complex impedance)
- Auto Guard: no
- Dial Access: yes
- Call Still Held: no
- Terminal Balanced: yes
- Receive Answer Supervision: no
- Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: Selection is customer's choice.
- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 500 ms
- Outgoing Disconnect: 500 ms
- Outgoing Dial Guard: 1600 ms
- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: 1500 ms
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 35 ms
- Outgoing Rotary Digit Dial Break: 65 ms
- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 240 sec
- Programmed Dial Pause: 1500 ms

- Disconnect Signal Error: 240 sec
- Flash Length: 100 ms
- PPM: no
- DID Trunks
  - Trunk Group Screen
    - Group Type: DID
    - Country: 6
    - Trunk Gain: high
    - Digit Absorption List: blank
    - Incoming Dial Type: MF
    - Trunk Type: immed-start
    - Trunk Termination: rc (complex impedance)
    - Disconnect Supervision: no
    - Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
    - Digit Treatment: blank
    - Digits: blank
    - Expected Digits: depends on system size and numbering plan
    - Terminal Balanced: yes
    - Extended Loop Range: (Used Only with TN459) no
    - Drop Treatment: silence
    - Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms
- Incoming Dial Guard: 50 ms
- Incoming Partial Dial: 18 sec
- Incoming Incomplete Dial: 255 sec
- Flash Length: 100 ms

- Tie Trunks

No special Type Approval regulations apply. Tie trunks are administered on a case-by-case basis.

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks

Not available in this country.

- DID Trunks

Not available in this country.

- Tie Trunks

- Non-ISDN Signaling Example (DS1 Administration Screen)

- Circuit Pack: TN464D (or TN464C from upgrades)
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: CAS
- Country Protocol: 6
- Interconnect: pbx
- CRC?: no
- Idle Code: 11111111

- ISDN-PRI (Private Network) Signaling

This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.

- DS1 Administration screen

- Circuit Pack: TN464D (or TN464C,B from upgrades)
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Country Protocol: 1
- Connect: pbx

- Interface: user
- CRC: No
- Idle Code: 11111111
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: tie
- ISDN-PRI (Public Network)  
Not available for this country.

## Slovak Republic

[Table 52](#) shows the recommended circuit packs.

**Table 52. Recommended and Available CPs in Slovak Republic**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D TN420C
Tone Clock	> TN2182B TN780
R2MFC Circuit	
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN753v17
Analog CO Trunk (No PPM)	> TN747Bv12
Analog CO Trunk (w/PPM)	#TN465C> TN465B
4 Wire Tie Trunk	> TN760Dv11
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E
Digital Tie Trunk	> TN464F TN464E
Digital PRI CO Trunk	n/a
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

**Table 52. Recommended and Available CPs in Slovak Republic —**  
*Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181 TN2136
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

<code>int:</code>	For all international numbers.
<code>natl:</code>	For all national PN numbers.
<code>pubu:</code>	For all other external (that is, not extensions) numbers.



## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration

- Off-Premises Tone Detect Timeout Interval (seconds): 5

```
display system-parameters features                               Page 1 of 6
      FEATURE-RELATED SYSTEM PARAMETERS
      Trunk-to-Trunk Transfer: all
Coverage Subsequent Redirection/CFWD No Answer Interval: 2
      Coverage - Caller Response Interval (seconds): 4
      Keep Held SBA at Coverage Point? y
Automatic Callback - No Answer Timeout Interval (rings): 3
      Call Park Timeout Interval (minutes): 10
      Off-Premises Tone Detect Timeout Interval (seconds): 5
      AAR/ARS Dial Tone Required? y
      Music/Tone on Hold: none
      Music (or Silence) on Transferred Trunk Calls? no
      DID/Tie/ISDN Intercept Treatment: attd
      Messaging Service Adjunct (MSA) Connected? n
Internal Automatic Answer for Attendant Extended Calls? n
      Automatic Circuit Assurance (ACA) Enabled? n
      Abbreviated Dial Programming by Assigned Lists? n
Auto Abbreviated/Delayed Transition Interval (rings): 2
```

- Night Service Disconnect Timer (seconds): 10 (10 or blank for testing optional responses to errors)
- Unanswered DID Call Timer (seconds): 180
- DID Busy Treatment (set to attendant for testing optional response to errors)

```
display system-parameters features                               Page 5 of 6
      FEATURE-RELATED SYSTEM PARAMETERS
        Public Network Trunks on Conference Call: 5
        Conference Parties with Public Network Trunks: 6
        Conference Parties without Public Network Trunks: 6
        Night Service Disconnect Timer (seconds): 10
        Short Interdigit Timer (seconds): 3
        Unanswered DID Call Timer (seconds): 180
        Line Intercept Tone Timer (seconds): 20
          Auto Start? n
          Auto Hold? y
          Attendant Tone? y
          Bridging Tone? n
          Conference Tone? n
          Intrusion Tone? y
          DID Busy Treatment: tone
        Allow AAR/ARS Access from DID/DIOD? n
DISTINCTIVE AUDIBLE ALERTING
  Internal: 1  External: 2  Priority: 3
```

- Outpulse Without Tone? n (for dial tone detection)
- Network Feedback During Tone Detection? n (for dial tone detection)

```
display system-parameters features
      FEATURE-RELATED SYSTEM PARAMETERS
        Pull Transfer: n
        Level Of Tone Detection: precise
        Wait Answer Supervision Timer? n
        Repetitive Call Waiting Tone? n
        Outpulse Without Tone? n
        Network Feedback During Tone Detection? n
        Intercept Treatment On Failed Trunk Transfers? n
        Vector Disconnect Timer (min):
        Station Tone Forward Disconnect: intercept
        Misoperation Alerting? n
        Allow Conference via Flash? y
RECALL TIMING
  Flashhook Interval? y
        Upper Bound (msec): 1000
        Lower Bound (msec): 200
        Forward Disconnect Timer (msec): 600
ENHANCED DCS
  Enhanced DCS Enabled? n
```

- System Parameters Customer Options
  - ARS? y (for dial tone detection)

```
display system-parameters customer-options                               Page 1 of 2
                                OPTIONAL FEATURES
                                G3 Version: V4
                                Logged-In ACD Agents: 150
                                Abbreviated Dialing Enhanced List? n      Call Work Codes? n
                                A/D Grp/Sys List Dialing Start at 01? n      CAS Branch? n
                                ACD? n                                     CAS Main? n
                                AT&T Adjunct Links? n                       DCS (Basic)? n
                                Answer Supervision by Call Classifier? n    DCS Call Coverage? n
                                ARS? y                                     DTMF Feedback Signals For VRU? n
                                ARS/AAR Partitioning? y                   Emergency Access to Attendant? y
                                ASAI Interface? n                          Expert Agent Selection (EAS)? n
                                ATMS? n                                    External Device Alarm Admin? n
                                Audible Message Waiting? n                 Flexible Billing? n
                                Authorization Codes? n                     Forced Entry of Account Codes? n
                                BCMS (Basic)? n                             Hospitality (Basic)? y
                                BCMS/VuStats LoginIDs? n                   G3V3 Hospitality Enhancements? n
                                BCMS/VuStats Service Level? n              Hospitality Parameter Reduction? n
```

- Malicious Call Trace? y (for Malicious Call feature)
- Multifrequency Signaling? y

```
display system-parameters customer-options
                                OPTIONAL FEATURES
                                ISDN-PRI? n                               Service Observing (VDNs)? n
                                ISDN-PRI over PACCON? n                   Station and Trunk MSP? n
                                Lookahead Interflow (LAI)? n              Tenant Partitioning? n
                                Malicious Call Trace? y                   Terminal Trans. Init. (TTI)? n
                                Multifrequency Signaling? y               Time of Day Routing? n
                                Multiple Call Handling (On Request)? n     Uniform Dialing Plan? n
                                Multiple Call Handling (Forced)? n         Vectoring (Basic)? n
                                PASTE (Display PBX Data on Phone)? n      Vectoring (Prompting)? n
                                Premier Business Package? y               Vectoring (G3V4 Enhanced)? n
                                Processor and System MSP? n               Vectoring (ANI/II-Digits Routing)? n
                                Private Networking? n                     VDN of Origin Announcement? n
                                Restrict Call Forward Off Net? y          VDN Return Destination? n
                                Secondary Data Module? n                   Voice Mail Application Support? n
                                Service Observing (Basic)? y               VuStats? n
                                Service Observing (Remote/By FAC)? n       VuStats (G3V4 Enhanced)? n
                                Wideband Switching? n
```

■ System Parameter Country Options Administration

- Companding Mode: A-Law
- Digital Loss Plan: 14
- Analog Ringing Cadence: 14
- Analog Line Transmission: 14

— Tone Detection Mode: 5

```
display system-parameters country-options                               Page 1 of 21
      SYSTEM PARAMETERS COUNTRY-OPTIONS
      Companding Mode: A-Law                                           Base Tone Generator Set: 14
      440Hz PBX-dial Tone? n                                           440Hz Secondary-dial Tone? n
      Digital Loss Plan: 14
      Analog Ringing Cadence: 14   Set Layer 1 timer T1 to 30 seconds? n
      Analog Line Transmission: 14
      TONE DETECTION PARAMETERS
      Tone Detection Mode: 5                                           Dial Tone Validation Timer(msec): 500
      Interdigit Pause: long
```

— Customized Individual Tones

In this section, customized tone definitions follow the data-entry syntax as specified for entry on the Individual Tone Administration Screen:

[(Frequency/Level)|silence|goto][(Duration ms)|(Step)]

— Intrusion:

- (425/-11.0)(350)
- (silence)(350)
- (425/-5.0)(350)
- (silence)(1500)
- (goto)(1)

— Reorder (Congestion):

- (425/-5)(150)
- (silence)(150)
- (goto)(1)

— Secondary Dial Tone:

- (425/-5)(150)
- (silence)(150)
- (425/-5)(150)
- (silence)(150)
- (425/-5)(150)
- (silence)(150)
- (425/-5)(650)

- (silence)(650)
- (goto)(1)
- PBX Dial Tone:
  - (425/-5)(500)
  - (goto)(1)
- Busy:
  - (425/-5)(350)
  - (silence)(350)
  - (goto)(1)
- Ringback:
  - (425/-5)(1000)
  - (silence)(4000)
  - (goto)(1)
- Call Wait 1:
  - (425/-11)(350)
- Recall Dial:
  - (425/-4)(150)
  - (silence)(150)
  - (425/-4)(150)
  - (silence)(150)
  - (425/-4)(1000)
  - (goto)(5)
- CDR System Parameters
  - Primary Output Format: int-direct (for showing PPM)

```
display system-parameters cdr
                                CDR SYSTEM PARAMETERS
Node Number (Local PBX ID): 1          CDR Date Format: month/day
Primary Output Format: int-direct      Primary Output Ext: eia
Secondary Output Format:
Use ISDN Layouts? n                   EIA Device Bit Rate: 9600
Use Enhanced Formats? n
Record Outgoing Calls Only? n         Intra-switch CDR? n
Suppress CDR for Ineffective Call Attempts? y   CDR Call Splitting? y
Disconnect Information in Place of FRL? n       Attendant Call Recording? y
                                                Interworking Feat-flag? n
Force Entry of Acct Code for Calls Marked on Toll Analysis Form? n
                                                Calls to Hunt Group - Record: member-ext
Record Called Vector Directory Number Instead of Group or Member? n
Record Non-Call-Assoc TSC? n
Record Call-Assoc TSC? n             Digits to Record for Outgoing Calls: dialed
Privacy - Digits to Hide: 0          CDR Account Code Length: 2
```

- System Parameter Multifrequency Signaling Administration (Pay close attention to the values on the following three screens. They are critical.)
  - Request Incoming ANI (non-AAR/ARS)? n (To check Incoming ANI, enter yes. It is part of the malicious call trace option.)

```
display system-parameters multifrequency-signaling          Page 1 of 3
MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

Incoming Call Type: group-ii-mfc
Outgoing Call Type: group-ii-mfc
Maintenance Call Type: none
Test Call Extension:
Interdigit Timer (sec): 20
Outgoing Forward Signal Present Timer (sec): 20
Outgoing Forward Signal Absent Timer (sec): 12
Multifrequency Signaling Incoming Intercept Treatment? y
Received Signal Gain(-Loss) (dB): 0
Transmitted Signal Gain(-Loss) (dB): -3
Collect All Digits Before Seizure? n

ANI Prefix: 42
ANI for PBX: 400
Next ANI Digit: send-ani

Request Incoming ANI (non-AAR/ARS)? n
Called Party Category: user-type
Use COR for Calling Party Category? n
```

**NOTE:**

On Page 2 of the Multifrequency-Signaling-Related System Parameters screen, Group-I, numbers 12, 13, and 14, should all be *ani-not-avail*.

```
display system-parameters multifrequency-signaling           Page 2 of 3
MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS
```

INCOMING FORWARD SIGNAL TYPES (Tones from CO)		INCOMING BACKWARD SIGNAL TYPES (Tones to CO)	
Group-I	Group-II	Group-A	Group-B
11: send-congest	1: normal	1 : next-digit	3 : busy
12: send-congest	2: busy-rt-attd	3 : end-of-dial	4 : congestion
13: ani-not-avail	3: busy-rt-attd	4 : congestion	5 : intercept
14: send-congest	4: normal	5 : send-ani	6 : free
15: end-of-dial	5: busy-rt-attd	:	:
	6: normal	:	:
	7: normal	:	:
	8: normal	:	:
	9: busy-rt-attd	:	:
	10: normal	:	:
	11: send-intercept	:	:
	12: send-intercept	:	:
	13: normal	:	:
	14: normal	:	:
	15: send-intercept	:	:

```
display system-parameters multifrequency-signaling
MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS
```

OUTGOING FORWARD SIGNAL TYPES (Tones to CO)		OUTGOING BACKWARD SIGNAL TYPES (Tones from CO)	
Group-I	Group-II	Group-A	Group-B
12: ani-not-avail	1 : normal	1: next-digit	1: free
15: end-of-digits	1 : attendant	2: last-digit	2: congestion
:	6 : data-call	3: end-of-dial	3: busy
:	:	4: congestion	4: congestion
:	:	5: send-ani	5: intercept
:	:	6: setup-sppath	6: free
:	:	7: last-2-digits	7: free
:	:	8: last-3-digits	8: intercept
:	:	9: congestion	9: congestion
:	:	10: congestion	10: congestion
:	:	11: congestion	11: congestion
:	:	12: congestion	12: congestion
:	:	13: congestion	13: congestion
:	:	14: congestion	14: congestion
:	:	15: congestion	15: congestion

■ ARS Digit Analysis

— Rte Pat: 2 (for dial tone detect)

```
display ars analysis 0
```

ARS DIGIT ANALYSIS TABLE														
Partitioned Group Number: 1											Percent Full:			2
Dialed String	Total Mn	Rte Mx	Call Pat	Call Type	Nd Num	ANI Rq	Dialed String	Total Mn	Rte Mx	Call Pat	Call Type	Nd Num	ANI Rq	
2	2	7	2	pubu		n							n	
3	2	7	2	pubu		n							n	
4	2	7	2	pubu		n							n	
5	2	7	2	pubu		n							n	
6	7	7	2	hnpa		n							n	
7	2	7	2	pubu		n							n	
8	2	7	2	pubu		n							n	
9	2	7	2	pubu		n							n	
						n							n	
						n							n	
						n							n	
						n							n	
						n							n	
						n							n	
						n							n	
						n							n	
						n							n	

■ Route Pattern

— Inserted Digits: + (for dial tone detect)

```
display route-pattern 2
```

Pattern Number: 2							
Grp. No.	FRL	NPA	Pfx	Hop	Toll No.	Del	Inserted Digits
1: 29		0					+
2:							
3:							
4:							
5:							
6:							

■ Console Parameters





## Trunk Groups

```
list trunk-group
```

### TRUNK GROUPS

Grp	No.	TAC	Group Type	Group Name	Mem	TN	COR	CDR	Meas	Out Disp?	Queue Length
23	923	co	Slov.LS_out_MFC	1	1	1	y	none	y	0	
24	924	co	slov.co.dec	1	1	1	y	none	n	0	
29	929	co	slov ana co	1	1	1	y	none	n	0	
31	931	did	slovak mf did	1	1	1	y	none	n	0	
32	932	did	slovak did dec	1	1	1	y	none	n	0	

### ■ CO Trunk Groups

— Example: Loop Start Outgoing MFC

- Country: 14
- Trunk Type: loop-start
- Outgoing Dial Type: mf
- Disconnect Supervision - Out? n
- Answer Supervision Timeout: 0

```
display trunk-group 23
```

Page 1 of 10

### TRUNK GROUP

```

Group Number: 23          Group Type: co          CDR Reports: y
Group Name: Slov.LS_out_MFC  COR: 1          TN: 1          TAC: 923
Direction: outgoing      Outgoing Display? y
Dial Access? y           Busy Threshold: 99
Queue Length: 0          Country: 14

Comm Type: voice          Digit Absorption List:
Prefix-1? n              Trunk Flash? n      Toll Restricted? n
TRUNK PARAMETERS
Trunk Type: loop-start
Outgoing Dial Type: mf
Trunk Termination: rc          Disconnect Timing(msec): 500
Auto Guard? n          Call Still Held? n      Sig Bit Inversion: none
Terminal Balanced? n          RA Trunk Loss: 0db

Trunk Gain: high
Disconnect Supervision -      Out? n

Answer Supervision Timeout: 0          Receive Answer Supervision? y
    
```

```

display trunk-group 23                                     Page 2 of 10
TRUNK FEATURES
  ACA Assignment? n                                     Measured: none
                                                    Maintenance Tests? y
  Data Restriction? n
  Suppress # Outpulsing? n
    
```

```

display trunk-group 23
                                                    TRUNK GROUP
ADMINISTRABLE TIMERS
  Outgoing Disconnect(msec): 500
  Outgoing Dial Guard(msec): 1600
  Outgoing Glare Guard(msec): 1500
  Incoming Seizure(msec): 500
  Outgoing Seizure Response(sec): 5
  Ringing Monitor(msec): 5200
  Programmed Dial Pause(msec): 1500
  Flash Length(msec): 540
END TO END SIGNALING
  Tone(msec): 350      Pause(msec): 150
OUTPUTSING INFORMATION
  PPS: 10      Make(msec): 40      Break(msec): 60      PPM? y      Frequency: 50/12k
    
```

- Outgoing Disconnect (msec): 500

— Example: Digital CO Trunk

- Country: 14
- Trunk Type: loop-start
- Outgoing Dial Type: rotary
- Disconnect Supervision - Out? n
- Answer Supervision Timeout: 0

```

display trunk-group 24                                     Page 1 of 10
                                     TRUNK GROUP
Group Number: 24           Group Type: co           CDR Reports: y
Group Name: slov.co.dec   COR: 1                 TN: 1         TAC: 924
Direction: outgoing       Outgoing Display? n
Dial Access? y           Busy Threshold: 99
Queue Length: 0          Country: 14

Comm Type: voice           Digit Absorption List:
Prefix-1? n               Trunk Flash? n       Toll Restricted? y
TRUNK PARAMETERS
    Trunk Type: loop-start
Outgoing Dial Type: rotary           Cut-Through? n
Trunk Termination: rc               Disconnect Timing(msec): 500
    Auto Guard? n   Call Still Held? n   Sig Bit Inversion: none
Terminal Balanced? n               RA Trunk Loss: 0db
Trunk Gain: high
Disconnect Supervision -           Out? n
Answer Supervision Timeout: 0       Receive Answer Supervision? y
    
```

```

display trunk-group 24                                     Page 2 of 10
TRUNK FEATURES
    ACA Assignment? n           Measured: none
                                Maintenance Tests? y
                                Data Restriction? n
Suppress # Outpulsing? n
    
```

- Outgoing Disconnect (msec): 500
- Outgoing Rotary Dial Interdigit (msec): 800

```

display trunk-group 24                                     TRUNK GROUP
ADMINISTRABLE TIMERS
                                Outgoing Disconnect(msec): 500
                                Outgoing Dial Guard(msec): 1600
                                Outgoing Glare Guard(msec): 1500
                                Outgoing Rotary Dial Interdigit(msec): 800
                                Incoming Seizure(msec): 500
                                Outgoing Seizure Response(sec): 5
Ringling Monitor(msec): 5200
Programmed Dial Pause(msec): 1500
Flash Length(msec): 540
END TO END SIGNALING
Tone(msec): 350           Pause(msec): 150
OUTPULSING INFORMATION
PPS: 10   Make(msec): 40   Break(msec): 60   PPM? y   Frequency: 50/12k
    
```

## — Example: Analog CO Trunk

- Country: 14
- Trunk Type: loop-start
- Answer Supervision Timeout: 0

```
display trunk-group 29                                     Page 1 of 10

                                TRUNK GROUP
Group Number: 29                Group Type: co            CDR Reports: y
Group Name: slov ana co        COR: 1              TN: 1          TAC: 929
Direction: two-way            Outgoing Display? n
Dial Access? y                Busy Threshold: 99      Night Service:
Queue Length: 0                Country: 14             Incoming Destination: attd

Comm Type: voice                Auth Code? n          Digit Absorption List:
Prefix-1? y                    Trunk Flash? n        Toll Restricted? y
TRUNK PARAMETERS
    Trunk Type: loop-start
Outgoing Dial Type: tone
Trunk Termination: rc          Disconnect Timing(msec): 500
    Auto Guard? n              Call Still Held? n    Sig Bit Inversion: none
Terminal Balanced? n          RA Trunk Loss: 0db

                                Trunk Gain: high
Disconnect Supervision - In? y Out? n                Cyclical Hunt? n
Answer Supervision Timeout: 0      Receive Answer Supervision? y
```

```
display trunk-group 29                                     Page 2 of 10

                                TRUNK FEATURES
    ACA Assignment? n          Measured: none
                                Maintenance Tests? y
    Data Restriction? n
Abandoned Call Search? n
Suppress # Outpulsing? n
```

```
display trunk-group 29
                                TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 500      Outgoing Disconnect(msec): 500
                                       Outgoing Dial Guard(msec): 1600
  Incoming Glare Guard(msec): 1500   Outgoing Glare Guard(msec): 1500
                                       Incoming Seizure(msec): 500
  Ringing Monitor(msec): 5200        Outgoing Seizure Response(sec): 5
  Outgoing End of Dial(sec): 10
  Programmed Dial Pause(msec): 1500
  Flash Length(msec): 540
```

```
display trunk-group 29
                                TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 500      Outgoing Disconnect(msec): 500
                                       Outgoing Dial Guard(msec): 1600
  Incoming Glare Guard(msec): 1500   Outgoing Glare Guard(msec): 1500
                                       Incoming Seizure(msec): 500
  Ringing Monitor(msec): 5200        Outgoing Seizure Response(sec): 5
  Outgoing End of Dial(sec): 10
  Programmed Dial Pause(msec): 1500
  Flash Length(msec): 540
END TO END SIGNALING
  Tone(msec): 350      Pause(msec): 150
OUTPUTSING INFORMATION
  PPS: 10      Make(msec): 40      Break(msec): 60      PPM? n
```

■ DID Trunk Groups

— Example: MFC Signaling DID

■ Country: 14

```
display trunk-group 31
                                TRUNK GROUP
Group Number: 31                Group Type: did                CDR Reports: y
Group Name: slovak mf did      COR: 1                        TN: 1                TAC: 931
Country: 14                    Auth Code? n                  CO Type: digital

TRUNK PARAMETERS
  Trunk Type: immed-start      Incoming Rotary Timeout(sec): 5
                                       Incoming Dial Type: mf
  Trunk Termination: rc        Disconnect Timing(msec): 500
  Digit Treatment:             Digits:
  Expected Digits:             Sig Bit Inversion: none
  Terminal Balanced? n        RA Trunk Loss: 0db
  Extended Loop Range? n      Trunk Gain: high            Drop Treatment: silence
Disconnect Supervision - In? n
```

```
display trunk-group 31                               Page 2 of 10
TRUNK FEATURES
  ACA Assignment? n                               Measured: none
                                                Maintenance Tests? y
  Data Restriction? n
  Suppress # Outpulsing? n
```

- Incoming Disconnect (msec): 90
- Incoming Dial Guard (msec): 1500 (to mask problem detection glitches as digits)

```
display trunk-group 31                               Page 3 of 10
TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 90
  Incoming Dial Guard(msec): 1500
  Flash Length(msec): 540   Incoming Incomplete Dial Alarm(sec): 255
END TO END SIGNALING
  Tone(msec): 350           Pause(msec): 150
```

— Example: Rotary Signaling Digital DID

- Country: 14
- Trunk Type: immed-start
- Incoming Dial Type: rotary

```
display trunk-group 32                               Page 1 of 10
TRUNK GROUP
Group Number: 32                                   Group Type: did       CDR Reports: y
Group Name: slovak did dec                       COR: 1               TN: 1           TAC: 932
Country: 14                                       CO Type: digital
Auth Code? n
TRUNK PARAMETERS
  Trunk Type: immed-start   Incoming Rotary Timeout(sec): 5
                                                Incoming Dial Type: rotary
  Trunk Termination: rc    Disconnect Timing(msec): 500
  Digit Treatment:        Digits:
  Expected Digits:        Sig Bit Inversion: none
  Terminal Balanced? n    RA Trunk Loss: 0db
  Extended Loop Range? n  Trunk Gain: high    Drop Treatment: silence
  Disconnect Supervision - In? n
```

```
display trunk-group 32                               Page 2 of 10
TRUNK FEATURES
  ACA Assignment? n                                Measured: none
                                                Maintenance Tests? y
  Data Restriction? n
  Suppress # Outpulsing? n
```

- Incoming Disconnect (msec): 90
- Incoming Dial Guard (msec): 70

```
display trunk-group 32                               Page 3 of 10
                                                TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 90
  Incoming Dial Guard(msec): 70
  Incoming Partial Dial(sec): 5
    Flash Length(msec): 100    Incoming Incomplete Dial Alarm(sec): 1
END TO END SIGNALING
  Tone(msec): 350    Pause(msec): 150
```

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented.

- CO Trunks
  - DS1 Administration Screen<sup>22</sup>
    - Circuit Pack: TN464D (not entered as an administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 14
    - Interconnect: CO

---

22. DS1 is also analogous to the term E1 that has been coined for the European T1 or 2 mbit interface.



- CRC?: No
- Idle Code: 01010100
- Trunk Group Administration Screen (Timing)  
Digital trunk timing values should be set as for analog CO trunks.
- DID Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN464D (not entered as an administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 14
    - Interconnect: CO
    - CRC?: No
    - Idle Code: 01010100
  - Trunk Group Administration Screen (Timing)  
Digital trunk timing values should be set as for analog DID trunks.
- Tie Trunks
  - Non-ISDN Signaling Example (DS1 Administration Screen)
    - Circuit Pack: TN464D (Not entered as administrable item)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 14
    - Interconnect: pbx
    - CRC?: no
    - Idle Code: 01010100

## South Africa

[Table 53](#) shows the recommended circuit packs.

**Table 53. Recommended and Available CPs in South Africa**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz 230V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B
R2MFC Circuit	> TN744D
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	> TN750C TN750B
Analog DID Trunk	
Analog CO Trunk (No PPM)	
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	
2 Wire Tie Trunk	
Auxiliary Trunk	
Digital CO/DID Trunk	> TN464F
Digital Tie Trunk	> TN464F
Digital PRI CO Trunk	
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN2183
24 Port Analog Line	n/a

*Continued on next page*

Table 53. Recommended and Available CPs in South Africa — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

<code>int:</code>	For all international numbers.
<code>natl:</code>	For all national PN numbers.
<code>pubu:</code>	For all other external (that is, not extensions) numbers.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

### ■ Feature-Related System Parameters Administration

```
change system-parameters features                               Page 1 of 6
      FEATURE-RELATED SYSTEM PARAMETERS
      Trunk-to-Trunk Transfer: none
Coverage Subsequent Redirection      No Answer Interval: 2
      Coverage - Caller Response Interval (seconds): 4
      Keep Held SBA at Coverage Point? y
Automatic Callback - No Answer Timeout Interval (rings): 3
      Call Park Timeout Interval (minutes): 10
      Off-Premises Tone Detect Timeout Interval (seconds): 20
      AAR/ARS Dial Tone Required? y
      Music/Tone on Hold: none
      Music (or Silence) on Transferred Trunk Calls? no
      DID/Tie/ISDN Intercept Treatment: 2500
      Messaging Service Adjunct (MSA) Connected? n
Internal Automatic Answer for Attendant Extended Calls? n
      Automatic Circuit Assurance (ACA) Enabled? n
```

```
change system-parameters features                               Page 2 of 6
      FEATURE-RELATED SYSTEM PARAMETERS
LEAVE WORD CALLING PARAMETERS
Maximum Number of Messages Per Station (when MSA not in service): 10
Stations with System-wide Retrieval Permission (enter extension)
  1:      3:      5:      7:      9:
  2:      4:      6:      8:     10:

WARNING:  SEE USER DOCUMENTATION BEFORE CHANGING TTI STATE
          Terminal Translation Initialization (TTI) Enables? n

SECURITY VIOLATION NOTIFICATION (SVN) PARAMETERS HAVE MOVED TO
THE SYSTEM-PARAMETERS SECURITY SCREEN
```

change system-parameters features Page 3 of 6

FEATURE-RELATED SYSTEM PARAMETERS

Reserved Slots for Attendant Priority Queue: 5  
Time before Off-hook Alert: 10  
Emergency Access Redirection Extension:  
Service Observing Warning Tone? y

Call Pickup Alerting? y  
Deluxe Paging and Call Park Timeout to Originator? n

Controlled Outward Restriction Intercept Treatment: tone  
Controlled Termination Restriction (Do Not Disturb): tone  
Controlled Station to Station Restriction : tone

AUTHORIZATION CODE PARAMETERS Authorization Codes Enabled: n

change system-parameters features Page 4 of 6

FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS

System Printer Extension Lines Per Page: 60  
EIA Device Bit Rate: 9600

SYSTEM-WIDE PARAMETERS

Switch Name:

CALL CENTER SYSTEM PARAMETERS

Direct Agent Announcement Delay:  
Converse First Data Delay: 0  
Direct Agent Announcement Extension: Converse Second Data Delay: 2

CALL MANAGEMENT SYSTEM PARAMETERS

BCMS Measurement Interval: hour  
BCMS/VuStats Abandon Call Timer (seconds):  
ACD Login Identification Length: 0 Adjunct CMS Release:

MALICIOUS CALL TRACE PARAMETERS

Apply MCT Warning Tone? n MCT Voice Recorder Trunk Group:

```
system-parameters features                               Page 5 of 6
      FEATURE-RELATED SYSTEM PARAMETERS
      Public Network Trunks on Conference Call: 1
      Conference Parties with Public Network Trunks: 3
      Conference Parties without Public Network Trunks: 6
      Night Service Disconnect Timer (seconds): 180
      Short Interdigit Timer (seconds): 3
      Unanswered DID Call Timer (seconds):
      Line Intercept Tone Timer (seconds): 30
      Auto Start? y
      Auto Hold? y
      Attendant Tone? y
      Bridging Tone? y
      Conference Tone? n
      Intrusion Tone? y
      DID Busy Treatment: tone

DISTINCTIVE AUDIBLE ALERTING
      Internal: 2      External: 2      Priority: 3
```

```
display system-parameters features                     Page 6 of 6
      FEATURE-RELATED SYSTEM PARAMETERS
      Pull Transfer: n
      Level Of Tone Detection: medium
      Wait Answer Supervision Timer? y
      Repetitive Call Waiting Tone? y
      Repetitive Call Waiting interval (sec): 4
      Outpulse Without Tone? y
      Network Feedback During Tone Detection? y
      Intercept Treatment On Failed Trunk Transfers? n
      Vector Disconnect Timer (min):
      Station Busy Tone Forward Disconnect: intercept

RECALL TIMING
      Flashhook Interval? y
      Upper Bound (msec): 600
      Lower Bound (msec): 200

ENHANCED DCS
      Enhanced DCS Enabled? n
```

- System Parameter Multifrequency Signaling Administration
  - Incoming Call Type: group-ii-mfc
  - Outgoing Call Type: group-ii-mfc
  - Maintenance Call Type: none
  - Test Call Extension: Accept default
  - Interdigit Timer (sec): 15
  - Outgoing Forward Signal Present Timer (sec): 20

- Outgoing Forward Signal Absent Timer (sec): 30
- Multifrequency Signaling Incoming Intercept Treatment?: n
- Received Signal Gain (-Loss) (dB): 0
- Transmitted Signal Gain (-Loss) (dB): -3
- ANI Prefix:
- ANI for PBX:
- Next ANI Digit: send-ani
- Collect All Digits Before Seizure? n
- Incoming Forward Signal Types:

<b>GROUP-I</b>	<b>GROUP-II</b>	<b>GROUP-A</b>	<b>GROUP-B</b>
11: ignored	1: normal	1: next-digit	3: busy
12: ignored	2: normal	3: end-of-dial	5: congestion
13: ignored	3: normal		6: free
14: ignored	4: normal		
15: end-of-dial	5: normal		
	6: normal		
	7: normal		
	8: normal		
	9: normal		
	10: normal		
	11: normal		
	12: normal		
	13: normal		
	14: normal		
	15: normal		

— Outgoing Forward Signal Types:

<b>GROUP-I</b>	<b>GROUP-II</b>	<b>GROUP-A</b>	<b>GROUP-B</b>
15: end-of-digits	2: normal	1: next-digit	1: free
:	5: attendant	2: congestion	2: congestion
:	6: data-call	3: end-of-dial	3: busy
:	:	4: congestion	4: congestion
:	:	5: call-info-ani	5: congestion
	:	6: setup-sppath	6: free
	:	7: last-2-digits	7: intercept
	:	8: last-3-digits	8: congestion
	:	9: congestion	9: congestion
	:	10: congestion	10: congestion
	:	11: congestion	11: congestion
	:	12: congestion	12: congestion
	:	13: congestion	13: congestion
	:	14: congestion	14: congestion
	:	15: congestion	15: congestion

■ System Parameter Country Options Administration

- Companding Mode: A-law
- Base Tone Generation Set: 13
- 440Hz PBX-dial Tone? n
- 440Hz Secondary-dial Tone? n
- Digital Loss Plan: 13
- Analogue Ringing Cadence: 10
- Tone Detection Mode: 5
- Interdigit Pause: long
- Dial Tone Validation Timer: 600ms
- Analog Ringing Cadence: 10
- Customized tone definitions follow the syntax as specified:

[(Frequency/Level)|silence|goto)][(Duration ms)](Step)]

■ Ringback:

— (375+425/-15.0)(400)



- (silence)(200)
- (375+425/-15.0)(400)
- (silence)(2000)
- (go to)(1)
- Secondary-Dial:
  - (375+425/-15.0)(50)
  - (go to)(1)
- Busy:
  - (404/-11.0)(500)
  - (silence)(500)
  - (goto)(1)
- Intercept:
  - (404/-11.0)(2500)
  - (silence)(500)
  - (goto)(1)
- Reorder:
  - (404/-11.0)(250)
  - (silence)(250)
  - (goto)(1)

## **Trunk Administration**

- BothWay CO Trunk
  - Trunk Gain: low
  - RA Trunk Loss: 0dB
  - Make/Break Ratio: 35/65

```
change trunk-group 1                                     Page 1 of 10
                                                    TRUNK GROUP
Group Number: 1                                         Group Type: co           CDR Reports: y
Group Name: OUTSIDE CALL                               COR: 1                  TAC: 30
Direction: two-way                                    Outgoing Display? n
Dial Access? y                                         Busy Threshold: 99      Night Service:
Queue Length: 0                                         Country: 13             Incoming Destination: 2100
Comm Type: voice                                        Auth Code? n           Digit Absorption List:
Prefix-1? n                                             Trunk Flash? n         Toll Restricted? n

TRUNK PARAMETERS
    Trunk Type: loop-start
    Outgoing Dial Type: tone                            Cut-Through? n
    Trunk Termination: rc                              Disconnect Timing(msec): 500

    Auto Guard? n   Call Still Held? n   Sig Bit Inversion: none
    Terminal Balanced? n   RA Trunk Loss: 0db

    Trunk Gain: low

Disconnect Supervision - In? y Out? n
Answer Supervision Timeout: 10      Receive Answer Supervision? n
```

```
change trunk-group 1                                     Page 2 of 10
TRUNK FEATURES
    ACA Assignment? n                                   Measured: none
                                                    Maintenance Tests? y

    Data Restriction? n

    Abandoned Call Search? n
    Suppress # Outpulsing? n
```

```
change trunk-group 1                                     Page 3 of 10

                                     TRUNK GROUP

ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 500           Outgoing Disconnect(msec): 500
                                           Outgoing Dial Guard(msec): 1600
  Incoming Glare Guard(msec): 1500        Outgoing Glare Guard(msec): 1500

                                           Ringing Monitor(msec): 5200
                                           Incoming Seizure(msec): 500
  Outgoing End of Dial(sec): 10           Outgoing Seizure Response(sec): 5
  Programmed Dial Pause(msec): 1500
                                           Flash Length(msec): 540
END TO END SIGNALING
  Tone(msec): 350           Pause(msec): 150

OUTPULSING INFORMATION
  PPS: 10   Make(msec): 35   Break(msec): 65   PPM? n
```

■ Analogue E&M Trunk (setup as wink/wink for Transtel)

— Make/Break Ratio: 35/65

```
change trunk-group 2                                     Page 1 of 10

                                     TRUNK GROUP

Group Number: 2           Group Type: tie           CDR Reports: y
Group Name: e&m           COR: 1                   TAC: 31
Direction: two-way       Outgoing Display? n     Trunk Signaling Type:
Dial Access? y           Busy Threshold: 99      Night Service:
Queue Length: 0           Incoming Destination:
Comm Type: voice         Auth Code? n

TRUNK PARAMETERS (tone or rotary)
Trunk Type (in/out): immed/immed   Incoming Rotary Timeout (sec): 10
Outgoing Dial Type: rotary         Incoming Dial Type: rotary
                                     Disconnect Timing(msec): 500
Digit Treatment:
                                     Digits:
                                     Sig Bit Inversion: none
Connected to Toll? n           STT Loss: normal       DTT to DCO Loss: normal
Incoming Dial Tone? y

Disconnect Supervision - In? y   Out? n

Answer Supervision Timeout: 10    Receive Answer Supervision? n
```

```
change trunk-group 2                                     Page 2 of 10
TRUNK FEATURES
  ACA Assignment? n                                     Measured: none
  Internal Alert? n                                     Maintenance Tests? n
  Data Restriction? n
  Abandoned Call Search? n
  Suppress # Outpulsing? n
  Used for DCS? n
  Suppress # Outpulsing? n
  Seize When Maintenance Busy: neither-end
```

```
change trunk-group 2                                     Page 3 of 10
TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 500                       Outgoing Disconnect(msec): 500
  Incoming Dial Guard (msec): 70                       Outgoing Dial Guard(msec): 1600
  Incoming Glare Guard (msec): 1500                   Outgoing Glare Guard(msec): 1500
  Incoming Partial Dial (sec): 18
  Outgoing Rotary Dial Interdigit (msec): 800
  Outgoing End of Dial(sec): 10                       Outgoing Seizure Response(sec): 5
  Programmed Dial Pause(msec): 1500                   Disconnect Signal Error (sec): 240
  Incoming Incomplete Dial Alarm (sec): 255
END TO END SIGNALING
  Tone(msec): 350                                     Pause(msec): 150
OUTPULSING INFORMATION
  PPS: 10      Make(msec): 35      Break(msec): 65
```

■ MFC-R2 DID

- Country: 8
- Trunk Gain: low

change trunk-group 3 Page 1 of 10

```
TRUNK GROUP
Group Number: 3          Group Type: did          CDR Reports: n
Group Name: MFC-R2      COR: 1                  TAC: 72

Country: 8
Auth Code? n
Prefix-1? n            Trunk Flash? n          Toll Restricted? n
```

TRUNK PARAMETERS

```
Trunk Type: immed-start    Incoming Rotary Timeout (sec): 5
                          Incoming Dial Type: mf
Trunk Termination: rc      Disconnect Timing(msec): 500
Digit Treatment:           Digits:
Expected Digits: 4         Sig Bit Inversion: none
Terminal Balanced? n       RA Trunk Loss: 2db
Extended Loop Range? n     Trunk Gain: low         Drop Treatment: silence
Disconnect Supervision - In? y
```

change trunk-group 3 Page 2 of 10

```
TRUNK FEATURES
ACA Assignment? n          Measured: none
Data Restriction? n       Maintenance Tests? y

Suppress # Outpulsing? n
```

change trunk-group 3

Page 3 of 10

TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500  
Incoming Dial Guard (msec): 70

Flash Length (msec): 540 Incoming Incomplete Dial Alarm (sec): 255

END TO END SIGNALING

Tone(msec): 350 Pause(msec): 150

■ MFC-R2 Outgoing

change trunk-group 5

Page 1 of 10

TRUNK GROUP

Group Number: 5 Group Type: diod CDR Reports: y  
Group Name: outgoing mfc COR: 1 TAC: 35  
Direction: two-way Outgoing Display? n Trunk Signaling Type:  
Dial Access? y Busy Threshold: 99 Night Service:  
Queue Length: 0 Country: 8  
Prefix-1? y Auth Code? n Digit Absorption List:  
Trunk Flash? n Toll Restricted? y

TRUNK PARAMETERS

Trunk Type : immed-start  
Outgoing Dial Type: mf Incoming Dial Type: mf  
Trunk Termination: rc  
Digit Treatment: Digits:  
Expected Digits: 4 Sig Bit Inversion: none  
Terminal Balanced? n RA Trunk Loss: 0db  
Trunk Gain: low Drop Treatment: silence

Disconnect Supervision - In? y Out? n  
Answer Supervision Timeout: 10 Receive Answer Supervision? n

```
change trunk-group 5                               Page 2 of 10
TRUNK FEATURES
  ACA Assignment? n                               Measured: none
                                                Maintenance Tests? y
  Data Restriction? n
  Suppress # Outpulsing? n
```

```
change trunk-group 5                               Page 3 of 10
                                                TRUNK GROUP
ADMINISTRABLE TIMERS
  Incoming Disconnect(msec): 500                Outgoing Disconnect(msec): 500
  Incoming Dial Guard (msec): 70                 Outgoing Dial Guard(msec): 1600
  Incoming Glare Guard (msec): 1500             Outgoing Glare Guard(msec): 1500

  Ringing Monitor (msec): 5200                  Incoming Seizure (msec): 500
  Outgoing End of Dial(sec): 10                 Outgoing Seizure Response (msec): 5
  Programmed Dial Pause(msec): 1500
  Flash Length (msec): 5                       Incoming Incomplete Dial Alarm (sec): 255

END TO END SIGNALING
  Tone(msec): 350                               Pause(msec): 150

OUTPULSING INFORMATION
  PPS: 10   Make(msec): 35   Break(msec): 65   PPM? n
```

■ A-Bit E1 Trunk for Transtel

change trunk-group 6

Page 1 of 10

TRUNK GROUP

Group Number: 6	Group Type: tie	CDR Reports: y
Group Name: a bit	COR: 1	TAC: 36
Direction: two-way	Outgoing Display? n	Trunk Signaling Type:
Dial Access? y	Busy Threshold: 99	Night Service:
Queue Length: 0		Incoming Destination:
Comm Type: voice	Auth Code? n	

TRUNK PARAMETERS

Trunk Type (in/out): immed/immed	Incoming Rotary Timeout (sec): 5	
Outgoing Dial Type: tone	Incoming Dial Type: tone	
	Disconnect Timing(msec): 500	
Digit Treatment:	Digits:	
	Sig Bit Inversion: none	
Connected to Toll? n	STT Loss: normal	DTT to DCO Loss: normal
Incoming Dial Tone? n		

Disconnect Supervision - In? y	Out? n	
Answer Supervision Timeout: 10		Receive Answer Supervision? n

change trunk-group 6

Page 2 of 10

TRUNK FEATURES

ACA Assignment? n	Measured: none	
	Internal Alert? n	Maintenance Tests? y
	Data Restriction? n	

Used for DCS? n	
Suppress # Outpulsing? n	
Seize When Maintenance Busy: neither-end	



change trunk-group 6

Page 3 of 10

TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	Outgoing Disconnect(msec): 500
Incoming Dial Guard (msec): 70	Outgoing Dial Guard(msec): 1600
Incoming Glare Guard (msec): 1500	Outgoing Glare Guard(msec): 1500

Outgoing End of Dial(sec): 10	Outgoing Seizure Response(sec): 5
Programmed Dial Pause(msec): 1500	Disconnect Signal Error (sec): 240
	Incoming Incomplete Dial Alarm (sec): 255

END TO END SIGNALING

Tone(msec): 350      Pause(msec): 150

OUTPULSING INFORMATION

PPS: 10      Make(msec): 40      Break(msec): 60

## Station Administration

---

The administrator can select "user-defined" on station administration and attendant administration to pick a display language for the corresponding display set user.

- 603/302B1 Terminal Parameters
  - Default Parameter Set: 13
  - Customize Parameters: Y
  - Primary Levels:
    - Voice Transmit (dB): +13.0
    - Voice Sidetone (dB): -21.5
    - Voice Receive (dB): -8.5
- 8434 Terminal Parameters
  - Default Parameter Set: 13
  - Customize Parameters: Y
  - Primary Levels:
    - Voice Transmit (dB): +12.0
    - Voice Sidetone (dB): -5.0
    - Voice Receive (dB): -11.5

- 8403/8410 Terminal Parameters
  - Default Parameter Set: 13
  - Customize Parameters: Y
  - Primary Levels:
    - Voice Transmit (dB): +9.0
    - Voice Sidetone (dB): -5.0
    - Voice Receive (dB): -11.5

## Spain

[Table 54](#) shows the recommended circuit packs.

**Table 54. Recommended and Available CPs in Spain**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D TN420C
Tone Clock	> TN2182B TN780
R2MFC Circuit	> TN744D TN744Bv2
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	n/a
Analog CO Trunk (No PPM)	> TN2147C
Analog CO Trunk (w/PPM)	> TN465C TN465B
4 Wire Tie Trunk	n/a
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E
Digital Tie Trunk	n/a
Digital PRI CO Trunk	> TN464F TN464E
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	#TN2183 > TN2180
24 Port Analog Line	n/a

*Continued on next page*

**Table 54. Recommended and Available CPs in Spain — *Continued***

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

## Country-Specific Features

When the Country Code is 11, the Public Network Call Priority feature (Multifrequency Espana (MFE) Signaling) can be administered on CO and DID trunk groups. See “Public Network Call Priority” feature for information about Call Retention and Re-ring in the DEFINITY ECS Administration and Feature Description.

You can also use the European CEPT Advice of Charge feature in Spain. See DEFINITY ECS Administration and Feature Description for more information on Advice of Charge.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

## System Parameter Administration

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- System Parameters Customer Options
  - ARS: y
  - Multifrequency Signaling: y
- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: y

- Off-Premises Tone Detect Timeout Interval (sec): 10
- DID/Tie/ISDN Intercept Treatment: attd
- Public Network Trunks on Conference Call: 5
- Conference Parties With PNTs: 6
- Conference Parties Without PNTs: 6
- Night Service Disconnect Timer (sec): 180
- Short Interdigit Timer (sec): 3
- Line Intercept Tone Timer (sec): 30
- Auto-Start: n
- Auto-Hold: y
- Attendant Tone: y
- Bridging Tone: y
- Conference Tone: y
- Intrusion Tone: y
- DID Busy Treatment: attendant
- Pull Transfer: No
- Distinctive Audible Alerting:
  - Internal: 1 External: 2 Priority: 3
- Level of Tone Detection: precise
- Wait Answer Supervision Timer: y
- Repetitive Call Waiting Tone: y
- Outpulse Without Tone: n
- Network Feedback During Tone Detection: y
- Intercept Treatment On Failed Trunk Transfers: n
- Recall Timing (Switchhook Flash and Recall Button):
  - Flashhook Interval: y
  - Upper Bound (msec): 1020
  - Lower Bound (msec): 150
- Recall Timing (Button Only):
  - Flashhook Interval: y
  - Upper Bound (msec): 160
  - Lower Bound (msec): 150

- System Parameter Country Options
  - Companding Mode: A-law
  - Base Tone Generation Set: 11
  - 440Hz PBX-dial Tone: n
  - 440Hz Secondary-dial Tone: n
  - Digital Loss Plan: 11
  - Analog Line Transmission: 11
  - Analog Ringing Cadence: 11
  - Tone Detection Mode: 4
  - Dial Tone Validation Timer (msec): 1000
  - Interdigit Pause: long
    - [(Frequency/Level)|silence/goto][(Duration ms)|(Step)]
  - Ringback Tone:
    - (425/-4.0)(1500msec)
    - (silence)(3000msec)
    - (goto)(1)
  - Busy Tone:
    - (425/-4.0)(200msec)
    - (silence)(5000msec)
    - (goto)(1)
  - Reorder Tone:
    - (425/-4.0)(200msec)
    - (silence)(200msec)
    - (425/-4).0(200msec)
    - (silence)(200msec)
    - (425/-4.0)(200msec)
    - (silence)(600msec)
    - (goto)(1)
  - Intercept Tone:
    - (425/-4.0)(200msec)
    - (silence)(200msec)
    - (425/-4.0)(200msec)
    - (silence)(600msec)

- (goto)(1)
- 1 Call Wait Tone:
  - (425/-11.0)(150msec)
  - (silence)(150msec)
  - (425/-11.0)(150msec)
- Intrusion:
  - (1400/-11.0)(400msec)
  - (silence)(5000msec)
  - (goto)(1)

## **Analog Trunk Administration**

- Analog CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Direction: two-way
    - Dial Access: n
    - Country: 11
    - Prefix-1: n
    - Trunk Flash: y
    - Toll Restricted: n
    - Trunk Type: loop-start
    - Outgoing Dial Type: tone or rotary (as accepted by serving switch).
    - Cut-Through: n
    - Trunk Termination: rc
    - Disconnect Timing (msec): 500
    - Auto Guard: n
    - Call Still Held: n
    - Sig Bit Inversion: none
    - The following table gives administrative values that are based on the length of the trunk loop:

<b>Loop Length</b>	<b>Trunk Gain</b>	<b>Terminal Balance</b>	<b>RA Trunk Loss</b>
short	low	n	0dB
long	high	n	2dB

- Disconnect Supervision In: y
- Disconnect Supervision Out: n
- Cyclical Hunt: y
- Type Approval Lab Testing without Battery Reverse:
  - Answer Supervision Timeout: 5
  - Receive Answer Supervision: n
- For Actual Service with Battery Reverse:
  - Answer supervision Timeout: 0
  - Receive Answer Supervision: y
- Trunk Group Administration Screen (Timing)
  - Incoming Disconnect (msec): 600
  - Outgoing Disconnect (msec): 600
  - Outgoing Dial Guard (msec): 100
  - Incoming Glare Guard (msec): 1000
  - Outgoing Glare Guard (msec): 1000
  - Outgoing Rotary Dial Interdigit (msec): 800
  - Ring Monitor Timer (msec): 5200
  - Incoming Seizure (msec): 800
  - Outgoing Seizure Response (sec): 5
  - Programmed Dial Pause (msec): 1500
  - Flash Length (msec): 100
  - Outgoing Dial Pulse Rate (PPS): 10 pps
  - Outgoing Rotary Digit Dial Make (msec): 35
  - Outgoing Rotary Digit Dial Break (msec): 65
  - PPM: y or n as negotiated with PTT
  - Frequency: 12kHz
- Analog DID Trunk

Spain does not permit the use of analog DID circuits.
- Tie Trunks

Private networks are not permitted in Spain; therefore, tie circuits will not be used.



- ARS/AAR Administration

To place calls, set ARS to ON for CO phone calls. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa:	American numbers with an area code.
hnpa:	North American numbers without an area code.

See "Digital Trunk Administration" for more on use of AARS routing patterns.

- Route Pattern administration

- First Dial Tone Detection (needed on analog CO trunks)
  - Number Delete Digits: 0
  - Inserted Digits: +
- Second Dial Tone Detection (needed on analog CO trunks for International calls)
  - Number Delete Digits: 2 (Dialed String 07)
  - Inserted Digits: +07+

## Digital Trunk Administration

All possible valid administrable combinations are not listed in this section. Only the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- Multifrequency Signaling

- Multifrequency-Signaling-Related System Parameters
  - Incoming Call Type: MFE
  - Outgoing Call Type: MFE
  - MFE Type: 2/6
  - Interdigit Timer (sec): 20
  - Multifrequency Signaling Incoming Intercept Treatment: y
  - Received Signal Gain (-Loss)(dB): 0
  - Transmitted Signal Gain (-Loss)(dB): 0
  - ANI Prefix: 538 (as negotiated with serving office)
  - Request Incoming ANI (non-AAR/ARS): y

- ANI for PBX: 538333 (as negotiated with serving office)
- Senderization: y
- Forward Cycle Timer (sec): 5
- Backward Cycle Timer (sec): 5
- Incomplete Dial Timer (sec): 90
- Outgoing Start Timer (sec): 10
- Class Of Restriction
  - Send ANI for MFE: n or y  
(y indicates line charging, No indicates block charging.)  
Customer choice of Public or IBERCOM serving office using 2/6 signaling.
  - DS1 Administration Screen
    - Bit Rate: 2.048
    - Line Coding: hdb3
    - Signaling Mode: CAS
    - Interconnect: CO
    - Country Protocol: 11
    - Interface Companding: alaw
    - CRC: n
    - Idle Code: 01010100
- Digital DID Trunks
  - Trunk Group
    - Group Type: did
    - Country: 11
    - Auth Code: n
  - Trunk Parameters
    - Trunk Type: immed-start
    - Incoming Rotary Timeout (sec): 5
    - Incoming Dial Type: mf
    - Trunk Termination: rc
    - Disconnect Timing (msec): 500
    - Digit Treatment:
      - Expected Digits: 4 (as negotiated with serving switch)

- Digits:
  - Sig Bit Inversion: none
- Terminal Balanced: n
- RA Trunk Loss: 0db
- Extended Loop Range: n
- Trunk Gain: high
- Drop Treatment: silence
- Disconnect Supervision - In: y
- Administrable Timers
  - Incoming Disconnect (msec): 500
  - Incoming Dial Guard (msec): 50
  - Flash Length (msec): 100
  - Incoming Incomplete Dial Alarm (sec): 255
- Digital CO Trunks
  - Trunk Group
    - Group Number: 2
    - Group Type: co
    - CDR Reports: y
    - Direction: two-way
    - Country: 11
    - Prefix-1: n
    - Trunk Flash: n
    - Toll Restricted: n
  - Trunk Parameters
    - Trunk Type: loop-start
    - Outgoing Dial Type: mf
    - Trunk Termination: rc
    - Disconnect Timing (msec): 500
    - Auto Guard: n
    - Call Still Held: n
    - Sig Bit Inversion: none
    - Terminal Balanced: n
    - RA Trunk Loss: 0db

- Trunk Gain: high
- Disconnect Supervision - In: y
- Disconnect Supervision - Out: n
- Cyclical Hunt: n
- Answer Supervision Timeout: 60
- Receive Answer Supervision: n

— Administrable Timers

- Incoming Disconnect (msec): 50
- Outgoing Disconnect (msec): 600
- Outgoing Dial Guard (msec): 1000
- Incoming Glare Guard (msec): 200
- Outgoing Glare Guard (msec): 200
- Ringing Monitor (msec): 5200
- Incoming Seizure (msec): 800
- Outgoing Seizure Response (sec): 5
- Programmed Dial Pause (msec): 1500
- Flash Length (msec): 100

- ARS Administration for MFE Signaling

— ARS Digit Analysis Table

- Partitioned Group Number: 1
- Percent Full: 6

Dialed String	Total		Rte	Call type
	Min	Max	Pat	
1xxxxx	6	7	1	locl
2xxxxx	6	7	1	locl
3xxxxx	6	7	1	locl
4xxxxx	6	7	1	locl
5xxxxx	6	7	1	locl
6xxxxx	6	7	1	locl
7xxxxx	6	7	1	locl
8xxxxx	6	7	1	locl
9x0x	4	4	2	nsvc
9100x	5	5	2	emer

Dialed String	Total		Rte Pat	Call type
	Min	Max		
9108x	5	5	2	emer
9200x	5	5	2	emer
9xx0x	5	5	2	nsvc
9xxxxxxxx	9	9	2	natl
01x	3	3	1	svc
02x	3	3	1	svc
03x	3	3	1	svc
04x	3	3	1	svc
05x	3	3	1	scv
06x	3	3	1	scv
07xxx	5	15	3	int
08x	3	3	1	svc
09x	3	3	1	svc

''' For Public signaling, locl means local

''' For Public signaling, svc means local special service

''' For Public signaling, natl means national

''' For Public signaling, nsvc means national special service

''' For Public signaling, int means international

■ ARS Digit Analysis Table

— Partitioned Group Number: 1

— Percent Full: 6

Dialed String	Total		Rte Pat	Call type
	Min	Max		
3xxxxx	6	7	1	1pvt
4xxxxx	6	7	1	1pvt
5xxxxx	6	7	1	1pvt
6xxxxx	6	7	1	1pvt
92345xxxx	9	9	2	npvt
93456xxxx	9	9	2	npvt

For IBERCOM 2/6 signaling, 1pvt means local IBERCOM

For IBERCOM 2/6 signaling, npvt means national IBERCOM

- Pattern Number: 1
  - Grp. No: 2
  - FRL: 0
- Pattern Number: 2
  - Grp. No: 2
  - FRL: 0
  - No. Del Digits: 1
- Pattern Number: 3
  - Grp. No: 2
  - FRL: 0
  - No. Del Digits: 2

For the patterns where digits are deleted, the call type field from the ARS ANALYSIS screen is transmitted as a special MFE code instead of the deleted digits.

- Digital Tie Trunks

Private networks are not permitted in Spain; therefore, tie circuits will not be used.

## **ISDN-PRI**

- ISDN-PRI (Private Network) Signaling Private networks are not permitted in Spain; therefore, ISDN private internetworking is not permitted.
- ISDN-PRI (Public Network)
  - DS1 Administration screen
    - Circuit Pack: TN464D
    - Bit Rate: 2.048
    - Interface Companding: alaw
    - Line Coding: hdb3
    - Signaling Mode: isdn-pri
    - Country Protocol: 1
    - Idle Code: 01010100
  - Signaling Group screen
    - Associated Signaling: y
    - Primary D\_Channel: xxxx16 (xxxx => depends on CP physical location)

- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: public\_ntwrk

## Sri Lanka

[Table 55](#) shows the recommended circuit packs.

**Table 55. Recommended and Available CPs in Sri Lanka**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B TN780
R2MFC Circuit	TN744C TN744B
Speech Synthesizer	> TN433
Call Classifier	> TN744D
Announcement	TN750C TN750B TN750
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	TN747B
Analog CO Trunk (w/PPM)	#TN465C
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN2464
Digital Tie Trunk	> TN2464
Digital PRI CO Trunk	TN2464
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	n/a
Digital Converter PRI-DPNSS	n/a
Digital Converter PRI-BRI	
8 Port Analog Line	TN746B
16 Port Analog Line	#TN746B TN791
24 Port Analog Line	TN2793

*Continued on next page*



**Table 55. Recommended and Available CPs in Sri Lanka**

<b>Equipment</b>	<b>Equipment Type</b>
4 Wire Digital Line	>TN754C
2 Wire Digital Line	#TN2214 >TN2181
Data Line	>TN726B
BRI-U Line	
BRI-ST Line	TN556B

## Switzerland

[Table 56](#) shows the recommended circuit packs.

**Table 56. Recommended and Available CPs in Switzerland**

Equipment	Equipment Type
Cabinet Type & Power	DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D TN420C
Tone Clock	> TN2182B TN780
R2MFC Circuit	> TN744D
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	
Analog CO Trunk (No PPM)	
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	
2 Wire Tie Trunk	
Auxiliary Trunk	
Digital CO/DID Trunk	TN464F
Digital Tie Trunk	> TN464F
Digital PRI CO Trunk	
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN2183
24 Port Analog Line	n/a

*Continued on next page*

Table 56. Recommended and Available CPs in Switzerland — *Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

## Taiwan

[Table 57](#) shows the recommended circuit packs.

**Table 57. Recommended and Available CPs in Taiwan**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	110V/60Hz 220V/60Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN756
Tone Clock	> TN2182B TN780 TN756
R2MFC Circuit	n/a
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D TN763C
Digital CO/DID Trunk	
Digital Tie Trunk	> TN464F TN464E TN464D TN464C TN767
Digital PRI CO Trunk	n/a
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B
24 Port Analog Line	TN2793

*Continued on next page*

Table 57. Recommended and Available CPs in Taiwan — Continued

Equipment	Equipment Type
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

<code>fnpa:</code>	North American numbers with an area code.
<code>hnpa:</code>	North American numbers without an area code.
<code>svc:</code>	North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

<code>int:</code>	For all international numbers.
<code>natl:</code>	For all national PN numbers.
<code>pubu:</code>	For all other external (that is, not extensions) numbers.

## **System Parameter Administration**

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Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- **Feature-Related System Parameters Administration**

- Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
- Public Network Trunks on Conference Call: 5
- Conference Parties With PNTs: 6
- Conference Parties Without PNTs: 6
- Line Intercept Tone Timer: 30
- Night Service Disconnect Timer: 180 sec
- Short Interdigit Timer: 3 sec
- Unanswered DID Call Timer: 60
- Auto-Hold: Yes<sup>23</sup>
- Attendant Tone: Yes
- Bridging Tone: No
- Conference Tone: No
- Intrusion Tone: Yes
- Repetitive Call Waiting Tone: No
- DID Busy Treatment: Attendant
- Pull Transfer: No
- Level of Tone Detection: Broadband
- Outpulse Without Tone: Yes
- (Station-to-switch) Recall Timing:
  - Flashhook Interval: Yes
  - Upper Bound: 1000 ms
  - Lower Bound: 200 ms

- **Country Options Parameters**

- Companding Mode: mu-law
- Base Tone Generation Set: 1
- Tone Detection Mode: default
- Interdigit Pause: default

- Digital Loss Plan: 1
- Analog Ringing Cadence: 1
- 440 Hz PBX-dial Tone: yes
- 440 Hz Secondary-dial Tone: no

## **Analog Trunk Administration**

### ■ CO Trunks

#### — Trunk Group Screen

- Group Type: CO
- Country: 1
- Trunk Gain: high
- Direction: two-way
- Digit Absorption List: blank
- Prefix-1: No
- Trunk Type: loop-start
- Outgoing Dial Type: tone
- Trunk Termination: rc (complex impedance)
- Auto Guard: no
- Dial Access: yes
- Call Still Held: no
- Terminal Balanced: yes
- Receive Answer Supervision: no
- Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: Selection is customer's choice.
- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

#### — Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 500 ms
- Outgoing Disconnect: 500 ms
- Outgoing Dial Guard: 1600 ms
- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: 1500 ms
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 35 ms
- Outgoing Rotary Digit Dial Break: 65 ms
- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 240 sec
- Programmed Dial Pause: 1500 ms
- Disconnect Signal Error: 240 sec
- Flash Length: 100 ms
- PPM: no
- DID Trunks
  - Trunk Group Screen
    - Group Type: DID
    - Country: 1
    - Trunk Gain: high
    - Digit Absorption List: blank
    - Incoming Dial Type: tone
    - Trunk Type: immed-start
    - Trunk Termination: rc (complex impedance)
    - Disconnect Supervision: no
    - Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
    - Digit Treatment: blank
    - Digits: blank
    - Expected Digits: depends on system size and numbering plan



- Terminal Balanced: yes
- Extended Loop Range: (Used Only with TN459) no
- Drop Treatment: silence
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms
  - Incoming Dial Guard: 50 ms
  - Incoming Partial Dial: 18 sec
  - Incoming Incomplete Dial: 255 sec
  - Flash Length: 100 ms
- Tie Trunks
- No special Type Approval regulations apply. Tie trunks are administered on a case-by-case basis.

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks
- Not available in this country.
- DID Trunks
- Not available in this country.
- Tie Trunks
- Non-ISDN Signaling Example (DS1 Administration screen)
- Circuit Pack: TN464D (or TN464C, TN767)
  - Bit Rate: 1.544
  - Interface Companding: mu-law
  - Line Coding: B8ZS
  - Line Compensation: 1
  - Framing Mode: esf
  - Signaling Mode: common-chan

- Country Protocol: 5
  - CRC?: no
  - Idle Code: 11111111
  - DMI-BOS? Yes
- ISDN-PRI (Private Network) Signaling
- This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.
- DS1 Administration screen
- Circuit Pack: TN464D (or TN464C,B from upgrades)
  - Bit Rate: 2.048
  - Interface Companding: A-law
  - Line Coding: HDB3
  - Signaling Mode: isdn-pri
  - Country Protocol: 1
  - Connect: pbx
  - Interface: user
  - CRC: No
  - Idle Code: 11111111
- Signaling Group screen
- Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
- Group Type: isdn-pri
  - Service Type: tie
- ISDN-PRI (Public Network) Not available in this country.

## Thailand

[Table 58](#) shows the recommended circuit packs.

**Table 58. Recommended and Available CPs in Thailand**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	220V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B
R2MFC Circuit	> TN744D
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	
Analog CO Trunk (No PPM)	
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	
2 Wire Tie Trunk	
Auxiliary Trunk	
Digital CO/DID Trunk	> TN464Fv5
Digital Tie Trunk	> TN464Fv5
Digital PRI CO Trunk	
Digital BRI Trunk	
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	n/a
16 Port Analog Line	> TN746B

*Continued on next page*

**Table 58. Recommended and Available CPs in Thailand — *Continued***

<b>Equipment</b>	<b>Equipment Type</b>
24 Port Analog Line	TN2793
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

## Trinidad & Tobago

[Table 59](#) shows the recommended circuit packs.

**Table 59. Recommended and Available CPs in Trinidad & Tobago**

<b>Equipment</b>	<b>Equipment Type</b>
Cabinet Type & Power	AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	120V/60Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN748C
Tone Clock	> TN2182B TN780 TN768
R2MFC Circuit	
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	> TN750C TN750B
Analog DID Trunk	
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D
Digital CO/DID Trunk	> TN464F TN464E TN464D TN464C
Digital Tie Trunk	> TN464F TN464E TN464D TN464C
Digital PRI CO Trunk	
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

**Table 59. Recommended and Available CPs in Trinidad & Tobago —**  
*Continued*

Equipment	Equipment Type
4 Wire Digital Line	>TN754B
2 Wire Digital Line	>TN2224 TN2181
Data Line	>TN726B
BRI-U Line	
BRI-ST Line	

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- **ARS/AAR Administration**

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to **y**. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

`fnpa:` North American numbers with an area code.

`hnpa:` North American numbers without an area code.

`svc:` North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

`int:` For all international numbers.

`natl:` For all national PN numbers.

`pubu:` For all other external (that is, not extensions) numbers.

## Feature-Related System Parameters

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### FEATURE-RELATED SYSTEM PARAMETERS

Trunk-to-Trunk Transfer: restricted  
Coverage - Subsequent Redirection No Answer Interval: 2  
Coverage - Caller Response Interval (seconds): 4  
Keep Held SBA at Coverage Point? n  
Automatic Callback - No Answer Timeout Interval (rings): 3  
Call Park Timeout Interval (minutes): 5  
Off-Premises Tone Detect Timeout Interval (seconds): 20  
AAR/ARS Dial Tone Required? y  
Music/Tone on Hold: music  
Music (or Silence) on Transferred Trunk Calls? no  
DID/Tie/ISDN Intercept Treatment: attd  
Internal Automatic Answer for Attendant Extended Calls? n  
Automatic Circuit Assurance (ACA) Enabled? y

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### FEATURE-RELATED SYSTEM PARAMETERS

#### LEAVE WORD CALLING PARAMETERS

Maximum Number of Messages Per Station (when MSA not in service):10  
Stations with System-wide Retrieval Permission (enter extension)  
1: 2: 3: 4: 5:  
6: 7: 8: 9: 10:

WARNING! SEE USER DOCUMENTATION BEFORE CHANGING TTI STATE  
Terminal Translation Initialization (TTI) Enabled? n

External Coverage Treatment for Transferred Incoming Calls? n

SECURITY VIOLATION NOTIFICATION (SVN)PARAMETERS HAVE MOVED TO  
THE SYSTEM-PARAMETERS SECURITY SCREEN

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FEATURE-RELATED SYSTEM PARAMETERS

Reserved Slots for Attendant Priority Queue: 5  
Time before Off-hook Alert: 10  
Emergency Access Redirection Extension:  
Service Observing Warning Tone? y  
Number of Emergency Calls Allowed in Attendant Queue: 5  
Call Pickup Alerting? n  
Deluxe Paging and Call Park Timeout to Originator? n  
Controlled Outward Restriction Intercept Treatment: tone  
Controlled Termination Restriction (Do Not Disturb): tone  
Controlled Station to Station Restriction: tone

AUTHORIZATION CODE PARAMETERS

Authorization Codes Enabled?  
Authorization Code Length:  
Authorization Code Cancellation Symbol: #  
Attendant Time Out Flag? y  
Display Authorization Code? n

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FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS

System Printer Extension: Lines Per Page: 60

SYSTEM-WIDE PARAMETERS

Switch Name:

CALL CENTER SYSTEM PARAMETERS

Direct Agent Announcement Extension:  
Direct Agent Announcement Delay:  
Converse Delay Data1: 0 Data2: 2  
Direct Agent Announcement Extension: Converse Pulse ON: 100 OFF: 70  
Prompting Timeout (secs): 10

CALL MANAGEMENT SYSTEM PARAMETERS

BCMS/VuStats Measurement Interval: hour  
BCMS/VuStats Abandon Call Timer (seconds): Validate Login IDs? y  
ACD Login Identification Length: Adjunct CMS Release:

MALICIOUS CALL TRACE PARAMETERS

Apply MCT Warning Tone? n MCT Voice Recorder Trunk Group:



FEATURE-RELATED SYSTEM PARAMETERS

Public Network Trunks on Conference Call: 5                      Auto Start? n  
Conference Parties with Public Network Trunks: 6                      Auto Hold? n  
Conference Parties without Public Network Trunks: 6                      Attendant Tone? y  
Night Service Disconnect Timer (seconds): 180                      Bridging Tone? n  
Short Interdigit Timer (seconds): 3                      Conference Tone? n  
Unanswered DID Call Timer (seconds):                      Intrusion Tone? y  
Line Intercept Tone Timer (seconds): 30  
DID Busy Treatment: tone  
Allow AAR/ARS Access from DID/DIOD? n

DISTINCTIVE AUDIBLE ALERTING

Internal: 1    External: 2    Priority: 3  
Attendant Originated Calls: external

FEATURE-RELATED SYSTEM PARAMETERS

Pull Transfer: n                      Update Transferred Ring Pattern? n  
Outpulse Without Tone? n                      Wait Answer Supervision Timer? y  
Repetitive Call Waiting Tone? y  
Allow Conference via Flash? y  
Vector Disconnect Timer (min):                      Network Feedback During Tone Detection? y  
Hear Zip Tone Following VOA? n  
Intercept Treatment On Failed Trunk Transfers? n  
Station Tone Forward Disconnect: silence  
Level Of Tone Detection: precise

RECALL TIMING

Flashhook Interval? y                      Upper Bound (msec): 800  
Lower Bound (msec): 200

ENHANCED DCS

Enhanced DCS Enabled? n  
Apply Intercept Locally? y                      Enforce PNT-to-PNT Restrictions? n

## Multifrequency-Signaling-Related System Parameters

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### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

```

Incoming Call Type: group-ii-mfc
Outgoing Call Type: group-ii-mfc
Maintenance Call Type: none
Test Call Extension:
Interdigit Timer (sec): 10
Outgoing Forward Signal Present Timer (sec): 15
Outgoing Forward Signal Absent Timer (sec): 30
Multifrequency Signaling Incoming Intercept Treatment? n
Received Signal Gain(-Loss) (dB): 0
Transmitted Signal Gain(-Loss) (dB): -3

ANI Prefix:
ANI for PBX:
Next ANI Digit: send-ani
ANI Prefix:          Collect All Digits Before Seizure? n
                    Request Incoming ANI (non-AAR/ARS)? n
                    Called Party Category: user-type
                    Use COR for Calling Party Category? n
    
```

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### MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

#### INCOMING FORWARD SIGNAL TYPES (Tones from CO)

#### INCOMING BACKWARD SIGNAL TYPES (Tones to CO)

Group-I	Group-II	Group-A	Group-B
11: ignored	1: normal	1: next-digit	1: free
12: ignored	2: normal	3: end-of-dial	2: busy
13: ignored	3: normal		4: congestion
14: ignored	4: normal		7: intercept
15: ignored	5: normal		
	6: normal		
	7: normal		
	8: normal		
	9: normal		
	10: normal		
	11: normal		
	12: normal		
	13: normal		
	14: normal		
	15: normal		

MULTIFREQUENCY-SIGNALING-RELATED SYSTEM PARAMETERS

OUTGOING FORWARD SIGNAL TYPES  
(Tones to CO)

Group-I	Group-II
12: ani-not-avail	2: normal
15: end-of-ani	1: attendant
	6: data-call

OUTGOING BACKWARD SIGNAL TYPES  
(Tones from CO)

Group-A	Group-B
1: next-digit	1: free
2: congestion	2: busy
3: end-of-dial	3: congestion
4: congestion	4: congestion
5: send-ani	5: congestion
6: congestion	6: free
7: last-2-digits	7: intercept
8: last-3-digits	8: congestion
9: congestion	9: congestion
10: congestion	10: congestion
11: congestion	11: congestion
12: congestion	12: congestion
13: congestion	13: congestion
14: congestion	14: congestion
15: congestion	15: congestion

## System Parameters Country-Options

SYSTEM PARAMETERS COUNTRY-OPTIONS

Companding Mode: Mu-Law  
440Hz PBX-dial Tone? n  
Digital Loss Plan: 1  
Analog Ringing Cadence: 1

Base Tone Generator Set: 1  
440Hz Secondary-dial Tone? n

TONE DETECTION PARAMETERS

Tone Detection Mode: 6  
Interdigit Pause: short



TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	Outgoing Disconnect(msec): 500
Incoming Glare Guard(msec): 1500	Outgoing Dial Guard(msec): 1600
Outgoing Glare Guard(msec): 1500	Outgoing Seizure(msec): 500
Ringing Monitor(msec): 5200	Outgoing Seizure Response(sec): 5
Outgoing End of Dial(sec): 10	
Programmed Dial Pause(msec): 1500	
Flash Length(msec): 540	

END TO END SIGNALING

Tone(msec): 350	Pause(msec): 150
-----------------	------------------

OUTPUTSING INFORMATION

PPS: 10	Make(msec): 40	Break(msec): 60	PPM? n
---------	----------------	-----------------	--------

TRUNK GROUP

Administered Members (min/max):	0/0
Total Administered Members:	0

GROUP MEMBER ASSIGNMENTS

Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							



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TRUNK GROUP

ADMINISTRABLE TIMERS

Incoming Disconnect(msec): 500	Outgoing Disconnect(msec): 500
Incoming Dial Guard(msec): 70	Outgoing Dial Guard(msec): 1600
Incoming Glare Guard(msec): 1500	Outgoing Glare Guard(msec): 1500
Ringing Monitor(msec): 5200	Incoming Seizure(msec): 500
Outgoing End of Dial(sec): 10	Outgoing Seizure Response(sec): 5
Programmed Dial Pause(msec): 1500	
Flash Length(msec):	Incoming Incomplete Dial Alarm(sec): 255

END TO END SIGNALING

Tone(msec): 350                      Pause(msec): 150

OUTPULSING INFORMATION

PPS: 10      Make(msec): 40      Break(msec): 60      PPM? n

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TRUNK GROUP

GROUP MEMBER ASSIGNMENTS

				Administered Members (min/max):	0/0		
				Total Administered Members:	0		
Port	Code	Sfx	Name	Night	Mode	Type	Ans Delay
1:							
2:							
3:							





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TRUNK GROUP

GROUP MEMBER ASSIGNMENTS  
Administered Members (min/max): 0/0  
Total Administered Members: 0

Port	Code	Sfx	Name
1:			
2:			
3:			

### DS1 for CO, DID and DIOD trunks to the PTT using Digital

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DS1 CIRCUIT PACK

Location: Name: T-1CO, DID, DIOD  
Bit Rate: 1.544 Line Coding: b8zs

Signaling Mode: Common Channel Signalling  
Interconnect: CO Country Protocol: 1

Interface Companding: mulaw CRC? n  
Idle Code: 11111111

MAINTENANCE PARAMETERS  
Slip Detection? n Near-end CSU Type: other

## United Kingdom

[Table 60](#) shows the recommended circuit packs.

**Table 60. Recommended and Available CPs in the United Kingdom**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	240V/50Hz
Ring Generator	25Hz
Tone Detector	> TN2182B > TN744D TN420C TN420B
Tone Clock	> TN2182B TN780 TN419B
R2MFC Circuit	n/a
Speech Synthesizer	> TN457
Call Classifier	> TN744D
Announcement	TN750C TN750B
Analog DID Trunk	> TN459B TN459
Analog CO Trunk (No PPM)	> TN2147C TN2147
Analog CO Trunk (w/PPM)	> TN447
4 Wire Tie Trunk	> TN760Dv12 TN458
2 Wire Tie Trunk	
Auxiliary Trunk	> TN763D TN417
Digital CO/DID Trunk	TN2464 TN464E TN464D
Digital Tie Trunk	TN2464 TN464E TN464D TN464C
Digital PRI CO Trunk	TN2464 TN464E TN464D
Digital BRI Trunk	> TN2185b
Digital Converter PRI-DASS	TN-CCSC-1
Digital Converter PRI-DPNSS	TN-CCSC-2
Digital Converter PRI-BRI	#TN-PRI-BRI
8 Port Analog Line	TN467
16 Port Analog Line	#TN2183 > TN468B TN468
24 Port Analog Line	n/a

*Continued on next page*

**Table 60. Recommended and Available CPs in the United Kingdom —**  
*Continued*

Equipment	Equipment Type
4 Wire Digital Line	> TN754B TN413
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	TN2198
BRI-ST Line	TN556d

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication are listed here.

- ARS/AAR Administration

To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa: North American numbers with an area code.

hnpa: North American numbers without an area code.

svc: North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

int: For all international numbers.

natl: For all national PN numbers.

pubu: For all other external (that is, not extensions) numbers.

## **System Parameter Administration**

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Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- System Parameter Features Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Intrusion Tone: Yes
  - DID Busy Treatment: Attendant
  - Level of Tone Detection: Precise
  - Pull Transfer: No
  - (Station-to-switch) Recall Timing:
    - Flashhook Interval: No
    - Disconnect Timing: 150 ms
- Country Options Parameters
  - Companding Mode: A-law
  - Base Tone Generation Set: 10
  - Tone Detection Mode: 3
  - Interdigit Pause: short
  - Digital Loss Plan: 10
  - Version of Digital Loss Plan:
    - With Only V2 CPs in System: A
    - With Only New (G3) CPs in System: B
    - With New & V2 CPs Mixed in System: B
  - Analog Ringing Cadence: 10

## **Analog Trunk Administration**

- CO Trunks
  - Trunk Group Screen
    - Country: 10
    - Trunk Gain: high
    - Group Type: CO
    - Direction: two-way

- Digit Absorption List: blank
  - Prefix-1: No
  - Trunk Type:
    - loop-start (for Loop-Calling, Guarded Clearing)
    - ground-start (for Earth Calling)
  - Outgoing Dial Type: tone
  - Trunk Termination: rc (complex impedance)
  - Auto Guard: no
  - Dial Access: yes
  - Call Still Held: no
  - Terminal Balanced: yes
  - Receive Answer Supervision: no
  - Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
  - Disconnect Supervision - In:
    - no (for LCGC Trunks)
    - yes (for Earth Calling Trunks)
  - Disconnect Supervision - Out: Selection is customer's choice.
  - Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Trunk Group Administration Screen (Timing)
- Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:
- Incoming Disconnect: 500 ms
  - Outgoing Disconnect: 500 ms
  - Outgoing Dial Guard: 1600 ms
  - Incoming Glare Guard: 1500 ms
  - Outgoing Glare Guard: 1500 ms
  - Outgoing Dial Pulse Rate (PPS): 10 pps
  - Outgoing Rotary Digit Dial Make: 35 ms
  - Outgoing Rotary Digit Dial Break: 65 ms

- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 250 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 240 sec
- Programmed Dial Pause: 1500 ms
- Disconnect Signal Error: 240 sec
- End-To-End Signaling Pause: 150 ms (accept default)
- End-To-End Signaling Tone: 350 ms (accept default)
- Flash Length: 100 ms
- PPM: yes
- Frequency: 50 Hz

— PPM

The PPM frequency monitored will depend upon the particular CO trunk CP being used (a CP capable of monitoring the required frequency must be provided. Some trunk CPs do not support any PPM monitoring.) For this country, the CP used for PPM monitoring must detect 50Hz pulses.

■ DID Trunks

— Trunk Group Screen

- Group Type: DID
- Country: 10
- Gain: high
- Digit Absorption List: blank
- Incoming Dial Type: tone
- Trunk Type: immed-start
- Trunk Termination: rc (complex impedance)
- Disconnect Timing: 500 msec (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Digit Treatment: blank
- Digits: blank
- Expected Digits: depends on system size and numbering plan
- Terminal Balanced: yes

- Extended Loop Range: (Used Only with TN459) no
- Drop Treatment: silence
- Disconnect Supervision: yes
- Incoming Rotary Timeout (sec): 5 sec

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms
  - Incoming Dial Guard: 50 ms
  - Incoming Partial Dial: 18 sec
  - Incoming Incomplete Dial: 255 sec
  - Flash Length: 100 ms
- Tie Trunks  
No special Type Approval regulations apply. Tie trunks are administered on a case-by-case basis.

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:

- CO Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN2464
    - Bit Rate: 2.048 (bit-rate selection cannot be made with TN464B)
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 10<sup>24</sup>
    - Interconnect: CO
    - CRC?: No

---

24. 10a is for connection to the UK-specific DASS II ISDN or DPNSS service (through TN-CSCC-1/TN-CSCC-2 converters).  
10b is for connection to the ETSI-ISDN-PRI services by cable and wireless or British Telecom (called ISDN 30, and ISDN 30e (BT's offer with fully ETSI compliant call control)).

- Idle Code: 01010100
- Trunk Group Administration Screen (Timing) Digital trunk timing values should be set as for analog CO trunks.
- DID Trunks
  - DS1 Administration Screen
    - Circuit Pack: TN2464
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 10<sup>25</sup>
    - Interconnect: CO
    - CRC?: No
    - Idle Code: 01010100
  - Trunk Group Administration Screen (Timing)  
Digital trunk timing values should be set as for analog DID trunks.
- Tie Trunks
  - Non-ISDN Signaling Example (DS1 Administration screen)
    - Circuit Pack: TN2464
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 1
    - Interconnect: pbx
    - CRC?: No
    - Idle Code: 01010100
  - ISDN-PRI (Private Network) Signaling This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.
    - DS1 Administration screen

---

25. 10a is for connection to the UK-specific DASS II ISDN or DPNSS service (through TN-CSCC-1/TN-CSCC-2 converters).  
10b is for connection to the ETSI-ISDN-PRI services by cable and wireless or British Telecom (called ISDN 30, and ISDN 30e (BT's offer with fully ETSI compliant call control))



- Circuit Pack: TN2464
- Bit Rate: 2.048
- Interface Companding: A-law
- Line Coding: HDB3
- Signaling Mode: isdn-pri
- Country Protocol: 1
- Connect: pbx
- Interface: user
- CRC: No
- Idle Code: 01010100
- Signaling Group screen
  - Associated Signaling: Yes
  - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)
- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: tie
- ISDN-PRI (Public Network)
  - DS1 Administration screen
    - Circuit Pack: TN2464
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: isdn-pri
    - Country Protocol: 10<sup>26</sup>
    - Connect: Network
    - Idle Code: 01010100
  - Signaling Group screen
    - Associated Signaling: Yes
    - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)

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26. 10a is for connection to the UK-specific DASS II ISDN or DPNSS service (through TN-CSCC-1/TN-CSCC-2 converters).  
10b is for connection to the ETSI-ISDN-PRI services by cable and wireless or British Telecom (called ISDN 30, and ISDN 30e (BT's offer with fully ETSI compliant call control))

- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: public\_ntwrk

## Venezuela

[Table 61](#) shows the recommended circuit packs.

**Table 61. Recommended and Available CPs in Venezuela**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC AC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	120V/60Hz 240V/60Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D TN748D TN756
Tone Clock	> TN2182B TN780 TN756
R2MFC Circuit	> TN744D TN744B
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B TN750
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	> TN747B
Analog CO Trunk (w/PPM)	#TN465C> TN465B
4 Wire Tie Trunk	> TN760D
2 Wire Tie Trunk	> TN439
Auxiliary Trunk	> TN763D TN763C
Digital CO/DID Trunk	n/a
Digital Tie Trunk	> TN464F TN464E TN464D TN464C
Digital PRI CO Trunk	n/a
Digital BRI Trunk	
Digital Converter PRI-DASS	
Digital Converter PRI-DPNSS	
Digital Converter PRI-BRI	
8 Port Analog Line	TN742
16 Port Analog Line	> TN746B
24 Port Analog Line	n/a

*Continued on next page*

**Table 61. Recommended and Available CPs in Venezuela — Continued**

Equipment	Equipment Type
4 Wire Digital Line	> TN754B TN413
2 Wire Digital Line	#TN2224 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	

**NOTE:**

A-law companding is the national standard in Venezuela. However, Mu-law is used internally to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

## Feature Administration

The screen displays shown in this section were effective the date the type approval was awarded. The screens may have changed since that date.

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- ARS/AAR Administration
- To enable ARS administration, on the System-Parameters Customer-Options screen, set the `ARS` field to `y`. You also should check all ARS/AAR defaults. All default ARS analysis codes are deleted before dialed strings are added for routing when DEFINITY is installed outside of North America. Be aware that the default for the 10 digits cause dialing problems. In particular, the following call types (appear as ARS/AAR defaults) typically are not used in non-North American ARS/AAR tables:

fnpa: North American numbers with an area code.

hnpa: North American numbers without an area code.

svc: North American numbers of the screen "x11".

Lucent recommends only the following call types be used outside North America:

int:	For all international numbers.
natl:	For all national PN numbers.
pubu:	For all other external (that is, not extensions) numbers.

## **System Parameter Administration**

Only those feature-related parameters that may have a Type Approval or basic connectivity implication for a particular country are listed here.

- Feature-Related System Parameters Administration
  - Trunk-to-Trunk Transfer: Permitted by country's regulations - Selection is customer's choice.
  - Public Network Trunks on Conference Call: 5
  - Conference Parties With PNTs: 6
  - Conference Parties Without PNTs: 6
  - Line Intercept Tone Timer: 30
  - Night Service Disconnect Timer: 180 sec
  - Short Interdigit Timer: 3 sec
  - Unanswered DID Call Timer: 60
  - Auto-Hold: Yes<sup>27</sup>
  - Attendant Tone: Yes
  - Bridging Tone: No
  - Conference Tone: No
  - Intrusion Tone: Yes
  - Repetitive Call Waiting Tone: No
  - DID Busy Treatment: Attendant
  - Pull Transfer: No
  - Level of Tone Detection: Broadband
  - Outpulse Without Tone: Yes
  - (Station-to-switch) Recall Timing:
    - Flashhook Interval: Yes

- Upper Bound: 1000 ms
- Lower Bound: 200 ms
- System Parameter Multifrequency Signaling Administration
  - Incoming Call Type: non-group-ii-mfc (use default translations)
  - Test Call Extension: As Negotiated
  - Incoming Interdigit Timer: 10 sec
- Country Options Parameters
  - Companding Mode: mu-law

**NOTE:**

Companding Mode: A-law is the national standard. Mu-law is used internal to the system for service circuits and analog lines. Network interfaces are configured as A-law if required.

- Base Tone Generation Set: 1
- Tone Detection Mode: default
- Interdigit Pause: default
- Digital Loss Plan: 1
- Analog Ringing Cadence: 1

## Analog Trunk Administration

- CO Trunks
  - Trunk Group Screen
    - Group Type: CO
    - Country: 1
    - Trunk Gain: high
    - Direction: two-way
    - Digit Absorption List: blank
    - Prefix-1: No
    - Trunk Type: loop-start
    - Outgoing Dial Type: tone
    - Trunk Termination: rc (complex impedance)
    - Auto Guard: no
    - Dial Access: yes
    - Call Still Held: no
    - Terminal Balanced: yes

- Receive Answer Supervision: no
- Answer Supervision Timeout: 10 (This sets both the CP firmware timer and software timer. Set to 0 for any trunk that will receive answer supervision.)
- Disconnect Supervision - In: no
- Disconnect Supervision - Out: Selection is customer's choice.
- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following CO trunk timer values for this country:

- Incoming Disconnect: 500 ms
- Outgoing Disconnect: 500 ms
- Outgoing Dial Guard: 1600 ms
- Incoming Glare Guard: 1500 ms
- Outgoing Glare Guard: 1500 ms
- Outgoing Dial Pulse Rate (PPS): 10 pps
- Outgoing Rotary Digit Dial Make: 35 ms
- Outgoing Rotary Digit Dial Break: 65 ms
- Outgoing Rotary Dial Interdigit: 800 ms
- Ring Monitor Timer: 5200 ms
- Incoming Seizure: 500 ms
- Outgoing End-of-Dial: 10 sec
- Outgoing Seizure Response: 240 sec
- Programmed Dial Pause: 1500 ms
- Disconnect Signal Error: 240 sec
- Flash Length: 100 ms
- PPM: Yes
- Frequency: 16kHz

- DID Trunks

— Trunk Group Screen

- Group Type: DID

- Country: 1
- Trunk Gain: high
- Digit Absorption List: blank
- Incoming Dial Type: MF
- Trunk Type: immed-start
- Trunk Termination: rc (complex impedance)
- Disconnect Supervision: no
- Disconnect Timing: 500 ms (This field will not be used with CPs that can accept the Incoming Disconnect and Outgoing Disconnect timers. Set these latter two timers from the Administrable Timers Screen.)
- Digit Treatment: blank
- Digits: blank
- Terminal Balanced: yes
- Extended Loop Range: (Used Only with TN459) no
- Drop Treatment: silence
- Incoming Rotary Timeout (sec): 5 sec (This field will not be used with CPs that can accept the Incoming Partial Dial timer. Set this timer from the Administrable Timers Screen.)

— Trunk Group Administration Screen (Timing)

Set the following timers from the Administrable Timers screen during administration of each trunk group. Select the following DID trunk timer values for this country:

- Incoming Disconnect: 500 ms
  - Incoming Dial Guard: 50 ms
  - Incoming Partial Dial: 18 sec
  - Incoming Incomplete Dial: 255 sec
  - Flash Length: 100 ms
- Tie Trunks

No special Type Approval regulations apply. Tie trunks are administered on a case-by-case basis.

## Digital Trunk Administration

This section does not list all possible valid administrable combinations. Rather the most common or standard combination, compatible with public-network and Type Approval standards for each country, is presented:



- CO Trunks
  - Not available in this country.
- DID Trunks
  - Not available in this country.
- Tie Trunks
  - Non-ISDN Signaling Example (DS1 Administration Screen)
    - Circuit Pack: TN464D (or TN464C)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: CAS
    - Country Protocol: 1
    - Interconnect: pbx
    - CRC?: no
    - Idle Code: 11111111
  - ISDN-PRI (Private Network) Signaling
    - This example assumes use of US Option 1 with facility associated signaling. Other feature options will require changes in one or more administered items.
  - DS1 Administration screen
    - Circuit Pack: TN464D (or TN464C,B from upgrades)
    - Bit Rate: 2.048
    - Interface Companding: A-law
    - Line Coding: HDB3
    - Signaling Mode: isdn-pri
    - Country Protocol: 1
    - Connect: pbx
    - Interface: user
    - CRC: No
    - Idle Code: 11111111
  - Signaling Group screen
    - Associated Signaling: Yes
    - Primary D\_Channel: xxxx16 (xxxx=>depends on CP physical location)

- Trunk Group Administration screen
  - Group Type: isdn-pri
  - Service Type: tie
- ISDN-PRI (Public Network)
  - Not available in this country.

## Vietnam

[Table 62](#) shows the recommended circuit packs.

**Table 62. Recommended and Available CPs in Vietnam**

Equipment	Equipment Type
Cabinet Type & Power	GAC-MCC DC-MCC AC-SCC DC-SCC AC-CSCC AC-CMC
AC Power Voltage & Freq	230V/50Hz
Ring Generator	20Hz
Tone Detector	> TN2182B > TN744D
Tone Clock	> TN2182B TN780
R2MFC Circuit	TN744D TN744B
Speech Synthesizer	> TN725B
Call Classifier	> TN744D
Announcement	TN750C TN750B TN750
Analog DID Trunk	> TN753
Analog CO Trunk (No PPM)	TN747B
Analog CO Trunk (w/PPM)	n/a
4 Wire Tie Trunk	TN760D
2 Wire Tie Trunk	n/a
Auxiliary Trunk	> TN763D TN763C
Digital CO/DID Trunk	> TN2464
Digital Tie Trunk	> TN2464
Digital PRI CO Trunk	TN2464
Digital BRI Trunk	> TN2185
Digital Converter PRI-DASS	n/a
Digital Converter PRI-DPNSS	n/a
Digital Converter PRI-BRI	
8 Port Analog Line	TN746B
16 Port Analog Line	TN791 TN746B
24 Port Analog Line	TN2793

*Continued on next page*

**Table 62. Recommended and Available CPs in Vietnam**

<b>Equipment</b>	<b>Equipment Type</b>
4 Wire Digital Line	> TN754B
2 Wire Digital Line	#TN2214 > TN2181
Data Line	> TN726B
BRI-U Line	
BRI-ST Line	TN556B