

NDA-24159 ISSUE 2 STOCK # 151906

# NEAX<sup>®</sup> 2000 IVS

### **CCIS Features and Specifications**

MARCH, 1996

NEC America, Inc.

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Feature	X = available — = not available E = enhanced or changed → = carried over to next level software							
	1000	1200	1300	1500	1600	1700	1800	1900
Attendant Camp-On with Tone Indication - CCIS	Х	$\rightarrow$						
Attendant Controlled Conference - CCIS	Х	$\rightarrow$						
Brokerage - Hot Line - CCIS	Х	$\rightarrow$						
Busy Verification - CCIS	Х	$\rightarrow$						
Call Back - CCIS	Х	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	E
Call Forwarding - All Calls - CCIS	Х	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	E
Call Forwarding - Busy Line - CCIS	Х	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	E
Call Forwarding - Don't Answer - CCIS	Х	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	E
Call Forwarding - Intercept - CCIS	Х	$\rightarrow$						
Call Forwarding - Override - CCIS	Х	$\rightarrow$						
Call Transfer - All Calls - CCIS	Х	$\rightarrow$						
Call Transfer - Attendant - CCIS	Х	$\rightarrow$						
Calling Name Display - CCIS	—	_	—	Х	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$
Calling Number Display - CCIS	Х	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	E	$\rightarrow$
Centralized Billing - CCIS	Х	$\rightarrow$	$\rightarrow$	$\rightarrow$	E	$\rightarrow$	$\rightarrow$	$\rightarrow$
Centralized Day/Night Mode Change - CCIS Note 1	Х	$\rightarrow$						
Consultation Hold - All Calls - CCIS	Х	$\rightarrow$						
Deluxe Traveling Class Mark - CCIS	Х	$\rightarrow$						
Dial Access to Attendant - CCIS	Х	$\rightarrow$						
Direct-In Termination - CCIS	Х	$\rightarrow$						
Distinctive Ringing - CCIS	Х	$\rightarrow$						
Do Not Disturb - CCIS	Х	$\rightarrow$						
Dual Hold - CCIS	Х	$\rightarrow$						
Elapsed Time Display - CCIS	Х	$\rightarrow$						
Flexible Numbering of Stations	Х	$\rightarrow$						

Feature	X = available — = not available E = enhanced or changed → = carried over to next level software							
	1000	1200	1300	1500	1600	1700	1800	1900
Hands Free Answerback - CCIS	Х	$\rightarrow$						
Hot Line - CCIS	Х	$\rightarrow$						
House Phone - CCIS	Х	$\rightarrow$						
Incoming Call Identification - CCIS	Х	$\rightarrow$						
Individual Attendant Access - CCIS Note 2	Х	$\rightarrow$						
LDN Night Connection - CCIS	Х	$\rightarrow$						
Link Alarm Display - CCIS	Х	$\rightarrow$						
Message Waiting Lamp Setting - Attendant - CCIS Note 1	х	$\rightarrow$						
Message Waiting Lamp Setting - Station - CCIS Note 1	х	$\rightarrow$						
Miscellaneous Trunk Access - CCIS	Х	$\rightarrow$						
Miscellaneous Trunk Restriction - CCIS	Х	$\rightarrow$						
Multiple Call Forwarding - All Calls - CCIS	Х	$\rightarrow$						
Multiple Call Forwarding - Busy Line - CCIS	Х	$\rightarrow$						
Multiple Call Forwarding - Don't Answer - CCIS	Х	$\rightarrow$						
Night Connection - Fixed - CCIS	Х	$\rightarrow$						
Night Connection - Flexible - CCIS	Х	$\rightarrow$						
Outgoing Trunk Queuing - CCIS	Х	$\rightarrow$						
Paging Access - CCIS	Х	$\rightarrow$						
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Station-to-Station Calling -Operator Assistance - CCIS	х	$\rightarrow$						
Toll Restriction 3/6 Digits - CCIS	Х	$\rightarrow$						

### Table of Features (Continued)

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Feature	X = available — = not available E = enhanced or changed → = carried over to next level software							
	1000	1200	1300	1500	1600	1700	1800	1900
Trunk Answer from Any Station - CCIS	Х	$\rightarrow$						
Trunk-to-Trunk Restriction - CCIS	Х	$\rightarrow$						
Uniform Numbering Plan - CCIS	Х	$\rightarrow$						
Voice Call - CCIS	Х	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	E
Voice Mail Integration - CCIS	Х	E	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$

### Table of Features (Continued)

**Note 1:** As a remote office, this feature is avilable on the NEAX2000 IVS or smaller.

**Note 2:** This service is available when the Attendant Console is provided at the NEAX2400 IMS on the network.

**Note 3:** An attendant/extension of the NEAX2400 IMS must be a conference leader.

# Attendant Camp-On With Tone Indication - CCIS

#### **General Description**

This feature permits the Attendant, when the desired station at another switching office is busy, to hold an incoming call in a special waiting mode. A distinctive *Camp-On* tone is sent to the busy station when the Attendant sets *Camp-On*. When that station becomes idle, it is automatically rung and connected to the waiting trunk party.

#### **Station Application**

Attendant Consoles

#### **Operating Procedure**

To activate a Attendant Camp-on with Tone Indication - CCIS from an Attendant Console:

- 1. Dial the desired station number at another switching office, and receive busy tone.
- 2. Press the **RELEASE** key.
- 3. A Camp-On tone is sent to the busy station and Camp-On is set.

To cancel a Attendant Camp-on with Tone Indication - CCIS from an Attendant Console:

- 1. Press the LOOP key corresponding to the held call; connect to the waiting trunk party.
- 2. Press the **DEST** key and receive busy tone.
- 3. Press the CANCL key.

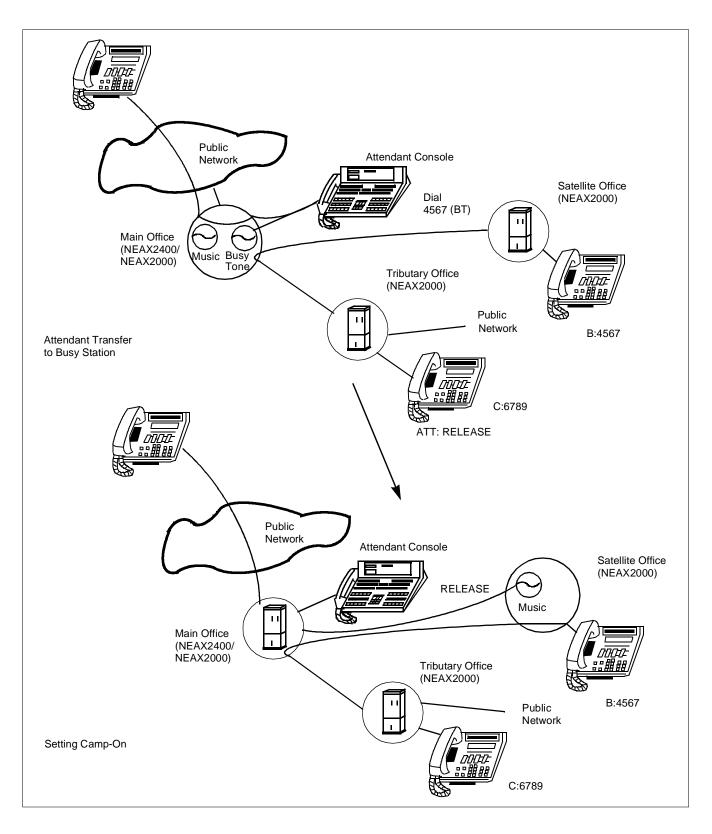
#### Service Conditions

- 1. This feature is available from an *Attendant Console* of either the NEAX2400 IMS or NEAX2000 IVS in the CCIS Network.
- 2. This feature is limited to one call waiting per station line.
- 3. The maximum number of simultaneous *Camp-On* calls is 32.
- 4. Attendant Camp-On may be denied if the busy station is:
  - Dialing or in *Line Lockout* mode
  - Receiving a system generated tone
  - Being rung
  - Protected from Camp-On by Class of Service
  - Being connected to an Attendant.

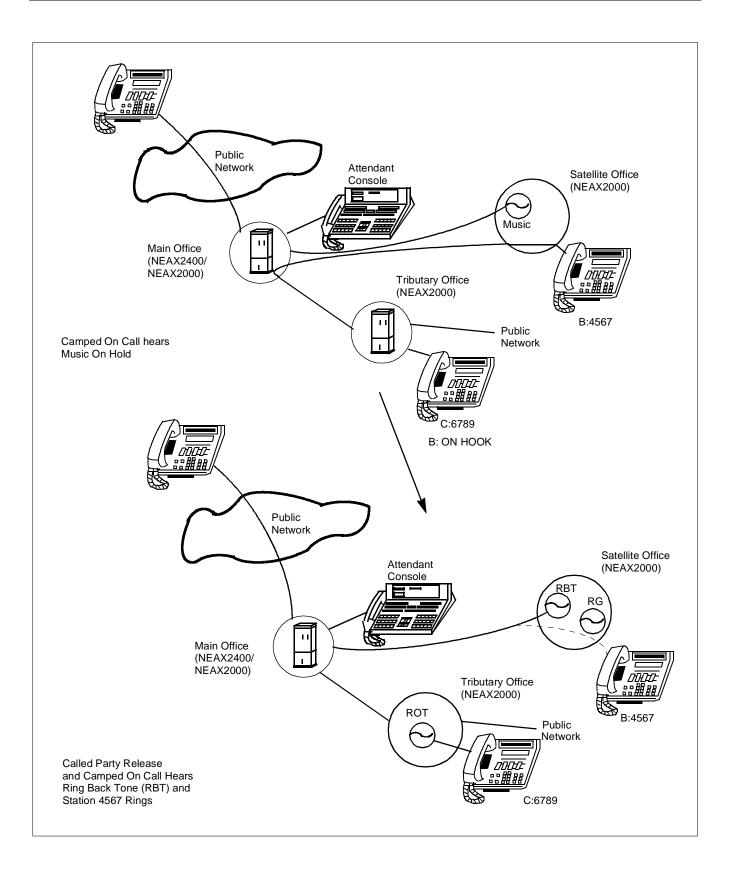
When Camp-On is denied, the Attendant will receive reorder tone.

5. The connecting link between the calling party and the called party will be reserved in the normal manner, and the **RELEASE** key will be inoperative when the link between the two switching offices cannot be reserved.

- 6. All calls completed by the Attendant to a busy station are held waiting. A single 128 millisecond burst tone is directed toward the busy station every eight seconds.
- 7. Only the called station hears the *Camp-On* tone.



The linking procedure between two switching offices is as follows in the next two illustrations:



# Attendant Controlled Conference - CCIS

#### **General Description**

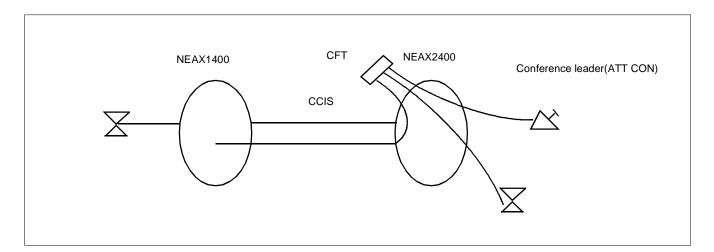
This feature permits an Attendant (NEAX2400 IMS) to establish a conference, via CCIS, with up to eight parties of stations and/or trunks (inside and outside parties).

#### **Operating Procedure**

To activate an Attendant Controlled Conference - CCIS:

- 1. A station (conference leader) calls an Attendant (NEAX2400 IMS only) to request a conference.
- 2. The Attendant connects the conference leader to one of the assigned line circuits.
- 3. The Attendant sequentially calls all desired parties and connects them to the other assigned line circuits.
- 4. Once all the parties are connected, any conferee with a push-button telephone may dial a "9" to block additional participants, thereby assuring privacy.
- 5. If any push-button station user connected to the conference trunk dials a "**0**", all the conference will be disconnected. Otherwise, the conference is terminated only after all the parties hang up.
- 6. To release from the conference trunk individually, a station user hangs up. The remaining conferees may continue without interruption.

- 1. A conference unit (PA-CFTB) must be mounted on the NEAX2400 IMS.
- 2. Stations and Attendants of the NEAX2000 IVS system cannot be the conference leader.



### Brokerage - Hot Line - CCIS

#### **General Description**

This feature provides a ringdown connection between two stations, each using a Multiline Terminal, in different offices in the CCIS Network.

#### **Operating Procedure**

To access a Brokerage - Hot Line - CCIS from a Multiline Terminal:

- 1. Lift the handset or press the **SPKR** key.
- 2. Press the line/feature key associated with the preassigned station. The destination station is automatically dialed, ringback tone is heard and the destination station answers.
- 3. After completing the conversation, hang up or press the **RELEASE** key.

To make another *Brokerage - Hot Line - CCIS* call immediately, press another line/feature key without going on hook and off hook.

#### **Service Conditions**

Calling party:

- 1. Any Multiline Terminal, used for this feature, must be assigned a Primary Extension.
- 2. When a *Brokerage Hot Line CCIS* call is made from a Multiline Terminal with LCD display the display shows the destination number.
- 3. The feature is applicable for inter-office connections on the CCIS Network. The destinations must be a station or an Attendant Console at different offices.
- 4. There is a maximum of 100 Brokerage Hot Line CCIS destination assignments.
- 5. Attendant Camp-On, Executive-Right-Of-Way, and Busy Verification can be prohibited to the Brokerage Hot Line CCIS connection through Class Of Service-Individual.

Called party:

- 1. A Brokerage Hot Line CCIS call can be transferred to another station using the Call Transfer feature.
- 2. *Call Forwarding* is applied whenever the destination station of the *Brokerage Hot Line CCIS* call has set *Call Forwarding (All Calls, Busy and Don't Answer).*
- 3. Station hunting works if the destination station is a pilot in a hunt group. The UCD function works if the destination station is a pilot of a UCD group.
- 4. When a destination is an Attendant Console, the *Brokerage Hot Line CCIS* call terminates as a *Tie Line* call.

### **Busy Verification - CCIS**

#### **General Description**

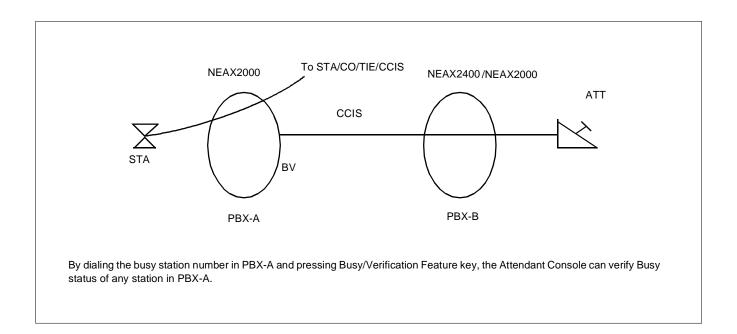
This feature permits an Attendant, via the *Attendant Console* on the NEAX2400 IMS or the NEAX2000 IVS, to interrupt a busy station's call at another switching office that connected through CCIS.

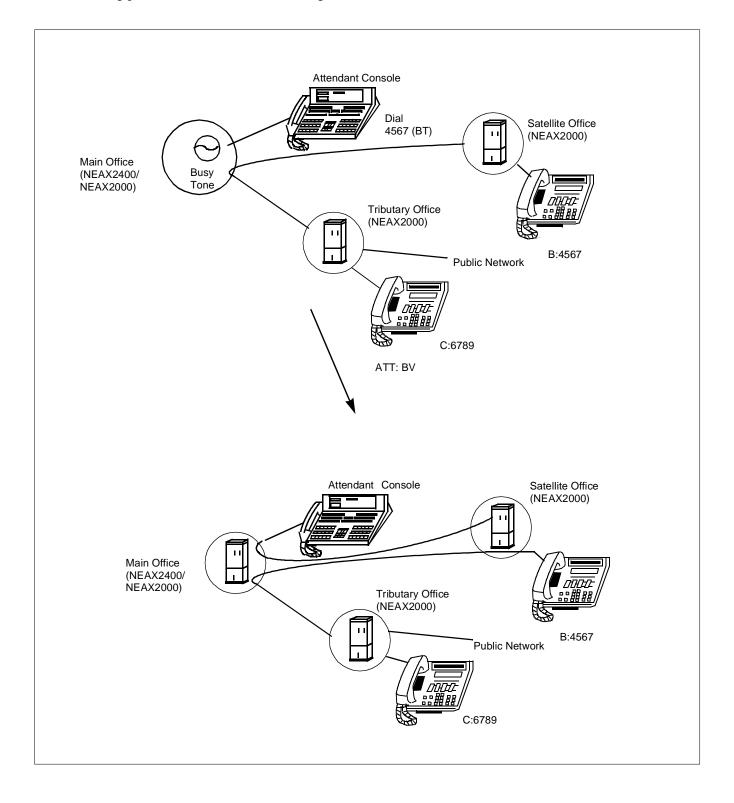
#### **Operating Procedure**

To activate a Busy Verification - CCIS:

- 1. Press an idle **LOOP** key.
- 2. Dial the desired station number; receive busy tone.
- 3. Press the **BV** key.
- 4. A two-burst tone is sent to the connected parties.
- 5. The Attendant may monitor or join the conversation.
- 6. Press the **RELEASE** key to disengage.

- 1. This feature can be activated from an Attendant Console of either the NEAX2400 IMS or the NEAX2000 IVS in the CCIS network.
- 2. This feature can be used to monitor two-party calls (station and trunk or another station).
- 3. This feature cannot be established to a busy station when the station is:
  - Dialing
  - Listening to a tone
  - Being rung
  - Protected from Busy Verification by Class of Service
  - Being connected to an Attendant





The linking procedure between two switching offices is as follows:

### Call Back - CCIS

#### **General Description**

This feature provides inter-office *Call Back*. A station who has dialed a busy station at another office can set *Call Back* - *CCIS* by dialing a feature access code. When this feature has been set, the setting station will ring as soon as the busy station becomes available.

#### **Operating Procedure**

To set a *Call Back* - *CCIS* from a Single Line Telephone:

- 1. Dial the desired station number; receive busy tone.
- 2. Press the hook switch; receive feature dial tone.
- 3. Dial the *Call Back* feature access code; receive service set tone.
- 4. Replace the handset.
- 5. When the busy station becomes idle, the setting station will ring.
- 6. When the setting station answers, the originally called station will ring.

To cancel a *Call Back* - *CCIS* from a Single Line Telephone:

- 1. Lift the handset; receive dial tone.
- 2. Dial the *Call Back* cancellation code; receive service set tone.

To set a *Call Back* - *CCIS* from a Multiline Terminal:

- 1. Dial the desired station number; receive busy tone.
- 2. Press the *Call Back* feature key; receive service set tone. The LCD display shows:

Series III	Series E
SET XXXX	SET XXXX
(TIME DISPLAY)	(TIME DISPLAY)

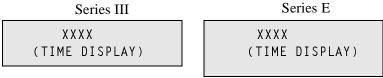
Called station number

- 3. Replace the handset.
- 4. When the busy station becomes idle, the setting station will ring. The LCD display shows:



Called station number flashes at calling station

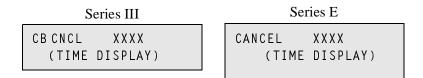
- 5. When the setting station answers, the originally called station will ring.
- 6. The originally called station's LCD display shows:



Calling station number

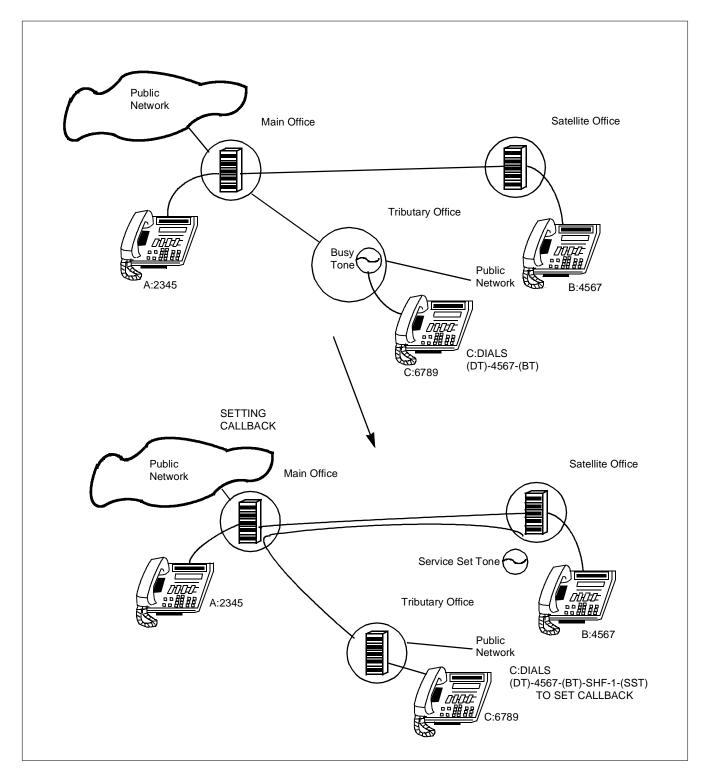
To cancel a *Call Back* - *CCIS* from a Multiline Terminal:

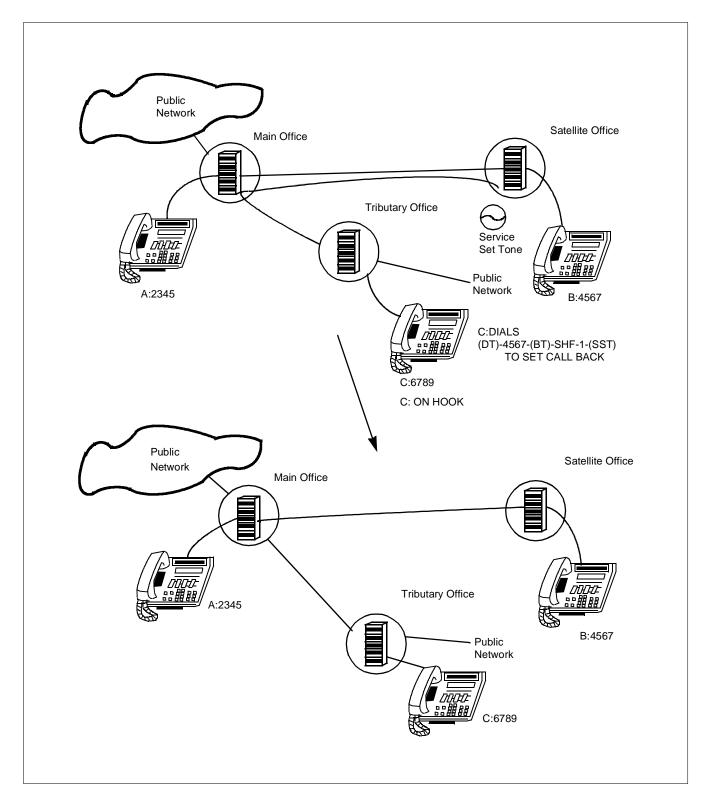
- 1. Lift the handset or press the **SPKR** key; receive dial tone.
- 2. Press the *Call Back* feature key; receive service set tone. The feature is canceled.
- 3. The LCD display shows:



- 1. If *Call Back CCIS* is not answered within 30 seconds (at the calling station), ringing will stop and *Call Back CCIS* is automatically canceled.
- 2. Call Back CCIS is allowed or denied via Class Of Service.
- 3. Call Back CCIS to a busy station cannot be established if that station is in the Line Lockout mode.
- 4. There is no time limit for *Call Back CCIS*. Once *Call Back CCIS* is activated, it will remain in status memory until completed or manually canceled.
- 5. Call Back CCIS cannot be set to more than one station at a time.
- 6. A station can utilize Call Back CCIS and Outgoing Queuing CCIS at the same time.
- 7. When the setting station is called back, *Station Hunting* and *Call Pickup* will not apply.
- 8. A maximum of 32 stations can access this feature simultaneously.
- 9. A station user calling a busy station line can be automatically connected to the called station when both stations are idle. The activating station may originate and receive calls while *Call Back CCIS* is active.
- 10. Call Back CCIS records are lost when the system is initialized.
- 11. If *Call Back CCIS* is activated from a NEAX2000 IVS station and both the activating and called stations become idle, the activating station receives distinctive ringing. If the called station goes off hook before the activating station answers, ringback tone is heard at the called station and distinctive ringing is provided at the activating station. When the activating station answers, a two-party talk state is established.
- 12. When *Call Back CCIS* is activated from a NEAX2400 IMS, both the activating and called stations will receive ringing at the same time. If either station goes off hook before the other, ringback tone is heard by the first station. When the other station answers, a two-party talk state is established.

13. When the calling party dials the *Call Back - CCIS* feature access code or presses the **CALL BACK** key, if the called party goes idle (while the calling party is still off hook), the calling party hears ringback tone and the called party hears ringing. If the called party goes off hook, the parties can talk with each other.

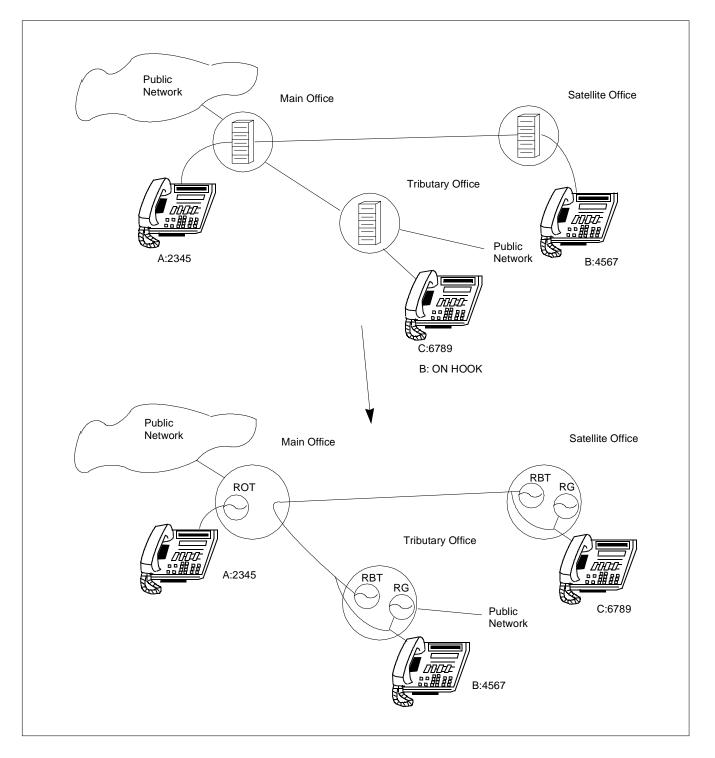




14. When the calling party waits on hook after having set *Call Back-CCIS*, the link is established as shown below:

15. If the called party goes on hook while the calling party is waiting on hook for *Call Back-CCIS*, both the calling and called parties will be rung simultaneously, if the setting station is in the NEAX2400 IMS system.

When both parties go off hook, they can talk with each other. The party who answers first hears ringback tone. If the setting station is in the NEAX2000 IVS system, the calling station is called first.



### Call Forwarding - All Calls - CCIS

#### **General Description**

This feature permits all calls destined for a particular station to be routed to another station or to an *Attendant Console*, in another office in the CCIS network, regardless of the status (busy or idle) of the called station. The activation and cancellation of this feature may be accomplished by either the station user or an Attendant.

#### **Operating Procedure**

To set a Call Forwarding - All Calls - CCIS from a Single Line Telephone:

- 1. Lift the handset; receive dial tone.
- 2. Dial the Call Forwarding All Calls feature access code; receive feature dial tone.
- 3. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan)
- 4. Dial the desired target station number and receive service set tone.
- 5. Wait approximately five seconds; receive service set tone.

To cancel a Call Forwarding - All Calls - CCIS from a Single Line Telephone:

- 1. List the handset; receive dial tone.
- 2. Dial the Call Forwarding All Calls cancellation code; receive service set tone.

To set a Call Forwarding - All Calls - CCIS from an Attendant Console:

- 1. Press an idle LOOP key.
- 2. Dial the Call Forwarding All Calls feature access code; receive feature dial tone.
- 3. Dial the originating station number.
- 4. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan)
- 5. Dial the desired target station number and receive service set tone.
- 6. Press the **RELEASE** key.

To cancel a Call Forwarding - All Calls - CCIS from an Attendant Console:

- 1. Press an idle **LOOP** key.
- 2. Dial the Call Forwarding All Calls cancellation code; receive feature dial tone.
- 3. Dial the originating station number; receive service set tone.
- 4. Press the **RELEASE** key.

To set a Call Forwarding - All Calls - CCIS from a Multiline Terminal:

1. Lift the handset or press the SPKR key; receive dial tone.

- 2. Press the Call Forwarding All Calls feature key; receive feature dial tone.
- 3. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan)
- 4. Dial the desired target station number and receive service set tone.

Wait approximately five seconds; receive service set tone. The LED lights and the LCD display shows:

Series III	Series E
SET XXXX	SET XXXX
(TIME DISPLAY)	(TIME DISPLAY)

Forwarding station number

1. Replace the handset or press the **SPKR** key.

To cancel a Call Forwarding - All Calls - CCIS from a Multiline Terminal:

- 1. Lift the handset or press the **SPKR** key; receive dial tone.
- 2. Press the Call Forwarding All Calls feature access key. The LCD display shows:



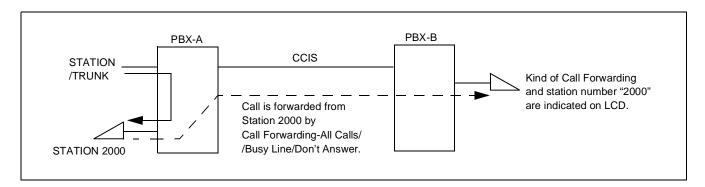
3. Dial "\*"; receive service set tone. The LED of the associated feature key will go out. The LCD display shows:



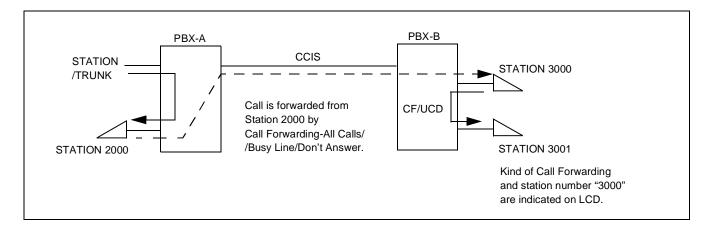
4. Replace the handset or press the **SPKR** key.

- 1. Stations with this feature set may originate calls.
- 2. A maximum of 240 stations can set *Call Forwarding (including -All Calls, -Busy Line, -Don't Answer-CCIS)* across CCIS simultaneously.
- 3. Stations can be allowed or denied this feature by *Class Of Service-Individual* programming.
- 4. Call Forwarding-All Calls CCIS can be set from the Multiline Terminal primary or secondary extension.
- 5. *Call Forwarding-All Calls CCIS* may be set or canceled by either a station user or an Attendant. The Attendant can set or cancel this service only for a station in the same switching office.
- 6. Call Forwarding-All Calls CCIS to an Attendant, when the system is in Night mode, will not be forwarded.

- 7. *Call Forwarding-All Calls CCIS* can be used from any number of forwarding stations to the same designated station.
- 8. When calls are forwarded to the Attendant, the *Incoming Call Identification* feature does not allow the Attendant to identify the call as a forwarded call.
- 9. When *Outgoing Trunk Queuing* is provided, ringback is applied to the forwarding station and not to the designated station.
- 10. When a call is forwarded, the station number recorded for Station Message Detail is the forwarding station.
- 11. When an ACD/UCD group station activates call forwarding, only calls directed to that telephone number are forwarded. Calls directed to the ACD/UCD pilot will bypass member stations that are forwarded.
- 12. If the forwarding station is the pilot station and the designated station is idle, a call to the ACD/UCD group is routed immediately to the designated station. If the designated station is busy, a call to the ACD/UCD group receives a busy tone.
- 13. When a forwarding station places a call using the *Call Back CCIS* feature, the automatic callback rings at the forwarding station, not the designated station.
- 14. When *Attendant Camp-On* is directed toward a station with *Call Forwarding-All Calls CCIS* in effect, the busy designated station receives call waiting treatment if the designated station is involved in a steady two-party talking state and there is no call already waiting.
- 15. If a call with the *Attendant Camp-On* feature in effect is forwarded to a busy station which has *Station Hunt-ing*, the call hunts for an idle line and then waits on the designated station if no idle line is found.
- 16. If either of the restriction features listed below are active for the designated station, *Call Forwarding All Calls CCIS* to that station should not be allowed. It should be noted that a non-restricted station can activate *Call Forwarding All Calls CCIS* to the stations below, but incoming trunk calls that are forwarded will not be completed (intercept arrangements will apply).
  - Fully Restricted Station
  - Inward Restricted Station
- 17. When a call is forwarded through CCIS by Call Forwarding All Calls/Busy Line/Don't Answer, the kind of Call Forwarding and the station number which is setting the service can be indicated on the LCD of the forwarding destination Multiline Terminal.



18. When a call is forwarded through CCIS, and then forwarded to another station by Call Forwarding - All Calls/Busy Line/Don't Answer or UCD Hunting, the last forwarding station number or the pilot station number of UCD Group is indicated.



# Call Forwarding - Busy Line - CCIS

#### **General Description**

This feature permits a call to a busy station to be immediately forwarded to a predesignated station or to an *At*-*tendant Console* in another office in the CCIS network.

#### **Operating Procedure**

To set a Call Forwarding-Busy Line - CCIS from a Single-Line Telephone:

- 1. Lift the handset, receive dial tone.
- 2. Dial the *Call Forwarding-Busy Line* feature access code; receive feature dial tone.
- 3. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan)
- 4. Dial the desired target station number and receive service set tone.
- 5. Wait approximately five seconds; receive service set tone.

To cancel a *Call Forwarding-Busy Line - CCIS* from a Single-Line Telephone:

- 1. Lift the handset, receive dial tone.
- 2. Dial the Call Forwarding-Busy Line cancellation code; receive service set tone.

To set a Call Forwarding-Busy Line - CCIS from an Attendant Console:

- 1. Press an idle **LOOP** key.
- 2. Dial the Call Forwarding-Busy Line feature access code; receive feature dial tone.
- 3. Dial the originating station number.
- 4. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan)
- 5. Dial the desired target station number and receive service set tone.
- 6. Press the **RELEASE** key.

To cancel a Call Forwarding-Busy Line - CCIS from an Attendant Console:

- 1. Press an idle **LOOP** key.
- 2. Dial the Call Forwarding-Busy Line cancellation code; receive feature dial tone.
- 3. Dial the originating station number; receive service set tone.

To set a Call Forwarding-Busy Line - CCIS from a Multiline Terminal;

- 1. Lift the handset or press the SPKR key; receive dial tone.
- 2. Press the Call Forwarding-Busy Line feature access key; receive feature dial tone.

- 3. Dial the desired target station number and receive service set tone.
- 4. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan)
- 5. Wait approximately five seconds; receive service set tone. The LED lights and the LCD display shows:

Series III	Series E
SET XXXX	SET XXXX
(TIME DISPLAY)	(TIME DISPLAY)

Forwarding station number

6. Replace the handset or press the **SPKR** key.

To cancel a *Call Forwarding-Busy Line - CCIS* from a Multiline Terminal:

- 1. Lift the handset or press the **SPKR** key; receive dial tone.
- 2. Press the *Call Forwarding-Busy Line* key. The LCD display shows:



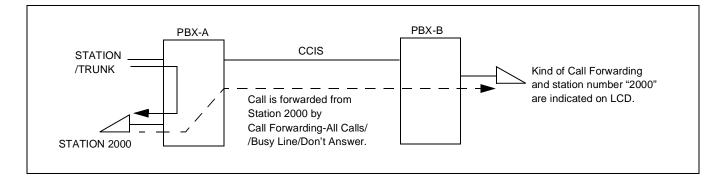
3. Dial "\*"; receive service set tone. The LED of the associated feature key will be extinguished. The LCD display shows:



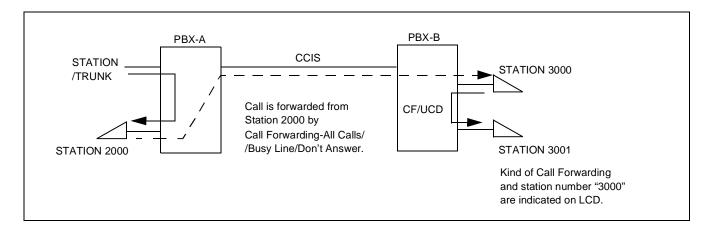
4. Replace the handset or press the **SPKR** key.

- 1. This feature may be set and canceled by either the station user or the operator in the same switching office.
- 2. *Call Forwarding-Busy Line CCIS* data remains programmed even if the system is re-initialized or a power failure occurs.
- 3. If the called station is the pilot of an ACD/UCD group and activates Call Forwarding-Busy Line CCIS, the calling station will Call Forward if all ACD/UCD group stations are busy.
- 4. If a calling *Attendant Console* receives busy tone after being *Call Forwarded Busy* and activates *Camp On*, these services will be activated at the destination station.
- 5. Stations can be allowed or denied this feature by Class Of Service Individual.
- 6. A station programmed for access to *Call Forwarding-Busy Line CCIS* is automatically allowed *Call Forwarding Don't Answer CCIS*.
- 7. If separate access codes are programmed into system data for *Call Forwarding-Don't Answer CCIS* and *Call Forwarding-Busy Line CCIS*, separate feature access keys must be programmed on the Multiline Terminal.

- 8. There is a maximum of 240 stations which can set *Call Forwarding (including -All Calls, -Busy Line, -Don't Answer CCIS)* across CCIS simultaneously.
- 9. Call Forwarding-Busy Line CCIS can be set from the Multiline Terminal primary or a secondary extension.
- 10. Individual Call Forwarding-Busy Line CCIS supersedes system Call Forwarding.
- 11. *Call Forwarding-Busy Line CCIS*, when set to a *Station Hunting* group member, is effective only when the entire hunt group is busy.
- 12. If the forwarding number is an ACD/UCD group number and a member of the group is idle, the call rings at the idle group member's station. If all members of the group are busy, the call remains in queue waiting for a member to become available.
- 13. If any of the restriction features listed below are active for the designated station, call forwarding to that station should not be allowed. It should be noted that a non-restricted station can activate *Call Forwarding-Busy Line CCIS* to the stations below, but incoming trunk calls that are forwarded will not be completed (intercept arrangements will apply).
  - Fully Restricted Station
  - Inward Restricted Station
- 14. Non-controlling ACD/UCD stations can activate *Call Forwarding-Busy Line*. All calls directed to the extension are forwarded.
- 15. Call Forwarding-Busy Line CCIS to an operator will receive reorder tone when the system is in Night mode.
- 16. When the *Call Forwarding-Busy Line CCIS* feature is in effect, if the forwarding station is idle and the designated station is busy, the forwarding station continues to ring.
- 17. Call Forwarding-Busy Line CCIS can be used from any number of forwarding stations to the same designated station.
- 18. When calls are forwarded to the operator, the *Incoming Call Identification* feature allows the Attendant to identify the call as a forwarded call.
- 19. When *Outgoing Trunk Queuing* is provided, ringback is provided to the forwarding station and not to the designated station.
- 20. When a call is forwarded, the station number recorded for *Station Message Detail Recording (SMDR)* is the forwarding station.
- 21. When a call is forwarded through CCIS by *Call Forwarding-All Calls/-Busy Line/-Don't Answer*, the kind of Call Forwarding and the station number which is setting the service can be indicated on the LCD of the forwarding destination Multiline Terminal.



22. When a call is forwarded through CCIS, and then forwarded to another station by Call Forwarding - All Calls/Busy Line/Don't Answer or UCD Hunting, the last forwarding station number or the pilot station number of UCD Group is indicated.



# Call Forwarding - Don't Answer - CCIS

#### **General Description**

This feature permits a call to an unanswered station to be forwarded to a predesignated station or to an *Attendant Console* in another office, when the called station does not answer after a predetermined time interval.

#### **Operating Procedure**

To set a Call Forwarding-Don't Answer - CCIS from a Single-Line Telephone:

- 1. Lift the handset; receive dial tone.
- 2. Dial the Call Forwarding-Don't Answer feature access code; receive feature dial tone.
- 3. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan.)
- 4. Dial the desired target station number and receive service set tone.
- 5. Wait approximately five seconds; receive service set tone.

To cancel a Call Forwarding-Don't Answer - CCIS from a Single-Line Telephone:

- 1. Lift the handset; receive dial tone.
- 2. Dial the *Call Forwarding-Don't Answer* cancellation code; receive service set tone.

To set a Call Forwarding-Don't Answer - CCIS from an Attendant Console:

- 1. Press an idle LOOP key.
- 2. Dial the *Call Forwarding-Don't Answer* feature access code; receive feature dial tone.
- 3. Dial the originating station number.
- 4. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan.)
- 5. Dial the desired target station number and receive service set tone.
- 6. Press the **RELEASE** key.

To cancel a Call Forwarding-Don't Answer - CCIS from an Attendant Console:

- 1. Press an idle **LOOP** key.
- 2. Dial the Call Forwarding-Don't answer cancellation code; receive feature dial tone.
- 3. Dial the origination station number; receive service set tone.
- 4. Press the **LOOP** key.

To set a Call Forwarding-Don't Answer - CCIS from a Multiline Terminal;

1. Lift the handset or press the SPKR key; receive dial tone.

- 2. Press the Call Forwarding-Don't Answer feature access key; receive feature dial tone.
- 3. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan.)
- 4. Dial the desired target station number and receive service set tone.
- 5. Wait approximately five seconds; receive service set tone. The LED lights. The LCD display shows:

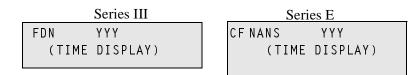


Forwarding station number

6. Replace the handset or press the **SPKR** key.

To cancel a Call Forwarding-Don't Answer - CCIS from a Multiline Terminal:

- 1. Lift the handset or press the SPKR key; receive dial tone.
- 2. Press the Call Forwarding-Don't Answer feature access key. The LCD display shows:



3. Dial "\*"; receive service set tone. The LED of the associated feature key will be extinguished. The LCD display shows:

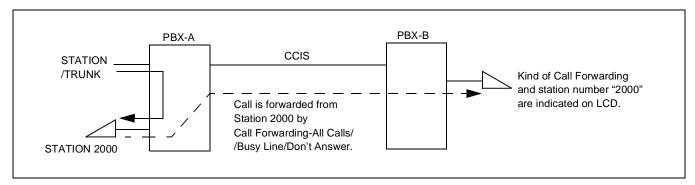


4. Replace the handset or press the **SPKR** key.

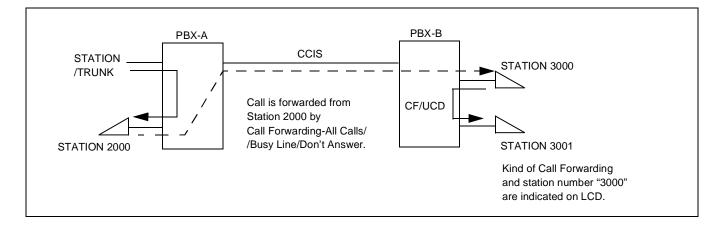
- 1. This feature may be set and canceled by a station user or an Attendant in the same switching office.
- 2. Stations can be allowed or denied this feature by to *Class Of Service Individual* programming in system data.
- 3. A station programmed for access to *Call Forwarding-Don't Answer CCIS* is automatically allowed *Call Forwarding-Busy Line CCIS*.
- 4. If separate access codes are programmed into system data for *Call Forwarding-Don't Answer CCIS* and *Call Forwarding-Busy Line CCIS*, separate feature access keys must be programmed on Multiline Terminals to equip them with both features.

- 5. A maximum number of 240 stations can set *Call Forwarding* (including *-All Calls, -Busy Line, -Don't Answer CCIS*) across CCIS simultaneously.
- 6. Call Forwarding-Don't Answer CCIS can be provided on either a Tenant or an individual basis.
- 7. Individual Call Forwarding-Don't Answer CCIS supersedes Tenant-basis Call Forwarding.
- 8. Call Forwarding-Don't Answer CCIS is applicable to Consultation Hold All Calls CCIS and Call Transfer All Calls CCIS.
- 9. *Call Forwarding* on a system basis allows direct incoming trunk calls which encounter a don't answer condition to be forwarded to a predetermined station or the attendant console.
- 10. The operator answering a *Call Forwarding* call can identify the called station number on the *Attendant Console* display if the calling party line is a trunk.
- 11. When the Attendant extends a call to a station in the same switching office which has set *Call Forwarding-Don't Answer CCIS*, the called station will ring for 30 seconds. If, after this time the call has not been answered, *Automatic Recall* is activated. If desired, this timing can be changed through the *Variable Timing Parameter* feature.
- 12. When the Attendant extends a call to a station in another switching office in the CCIS network, which has set *Call Forwarding-Don't Answer CCIS*, the call will be forwarded if the called station does not answer within a predetermined time period.
- 13. If any of the restriction features listed below are active for the designated station, call forwarding to that station should not be allowed. It should be noted that a non-restricted station can activate call forwarding to the stations below, but incoming trunk calls that are forwarded will not be completed (intercept arrangements will apply).
  - Fully Restricted Station
  - Inward Restricted Station
- 14. If the forwarding number is an ACD/UCD group number and a member of the group is idle, the call rings at the idle station. If all members of the group are busy, the call remains in queue until a member becomes available.
- 15.Non-controlling ACD/UCD stations can activate *Call Forwarding-Don't Answer CCIS*. Only calls to the extension number are forwarded.
- 16. *Call Forwarding-Don't Answer CCIS* to an Attendant will continue to ring the called station when the system is in Night mode.
- 17. When the *Call Forwarding-Don't Answer CCIS* feature is in effect, if the forwarding station is idle and the designated station is busy, the forwarding station continues to ring beyond the no answer time interval.
- 18. Call Forwarding can be used from any number of forwarding stations to the same designated station.
- 19. When calls are forwarded to the operator, the *Incoming Call Identification* feature allows the Attendant to identify the call as a forwarded call.
- 20. When *Outgoing Trunk Queuing* is provided, ringback is provided to the forwarding station and not to the designated station.
- 21. When a call is forwarded, the station number recorded for *Station Message Detail Recording (SMDR)* is the forwarding station.

22. When a call is forwarded through CCIS by *Call Forwarding-All Calls/-Busy Line/-Don't Answer*, the kind of Call Forwarding and the station number which is setting the service can be indicated on the LCD of the forwarding destination Multiline Terminal.



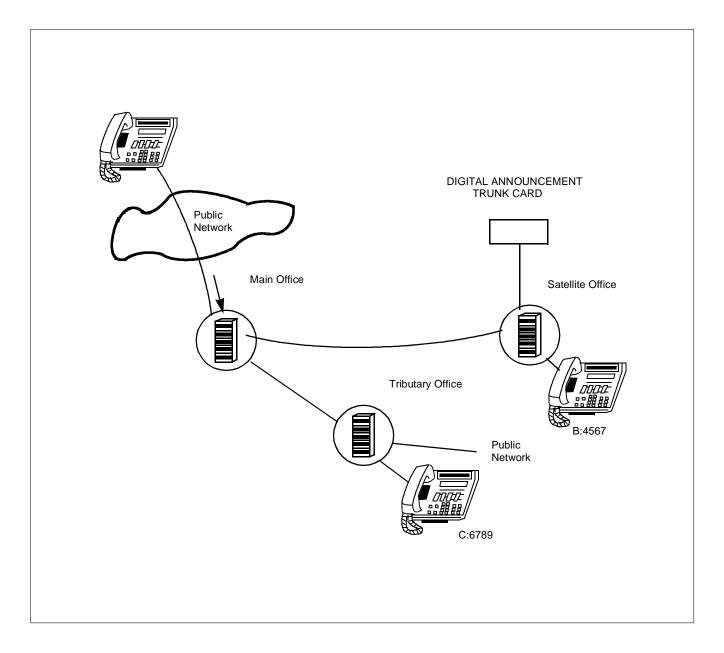
23. When a call is forwarded through CCIS, and then forwarded to another station by *Call Forwarding - All Calls/Busy Line/Don't Answer* or UCD Hunting, the last forwarding station number or the pilot station number of UCD Group is indicated.



### Call Forwarding - Intercept - CCIS

#### **General Description**

This feature allows calls to an inoperative number, through a CCIS trunk, to be intercepted and automatically routed to a recorded announcement informing the caller that an inoperative number was dialed and giving the Listed Directory Number for information.



#### **Operating Procedure**

No manual operation is required once this feature has been programmed in system data.

- 1. This feature requires a Digital Announcement Trunk Card (DAT).
- 2. This feature is provided on a system basis.
- 3. Calls to restricted codes will receive reorder tone.
- 4. Only one common message can be provided for the different intercept conditions.
- 5. The following call conditions are routed to Call Forwarding Intercept CCIS:
  - Vacant level
  - Unassigned station number

# Call Forwarding - Override - CCIS

#### **General Description**

This feature allows a target station user (Station A) to call a station (Station B) which has *Call Forwarding - All Calls - CCIS* set.

#### **Operating Procedure**

No manual operation is required.

- 1. This feature is allowed to all stations in the NEAX2000 IVS, except Attendant Console(s).
- 2. Any station which has set *Call Forwarding All Calls CCIS* can activate any feature, if the station is allowed the feature, via *Class of Service*.

# Call Transfer - All Calls - CCIS

## **General Description**

This feature allows a station user to transfer incoming or outgoing Central Office, intra-office and inter-office calls to another station in the CCIS network, without Attendant assistance.

## **Operating Procedure**

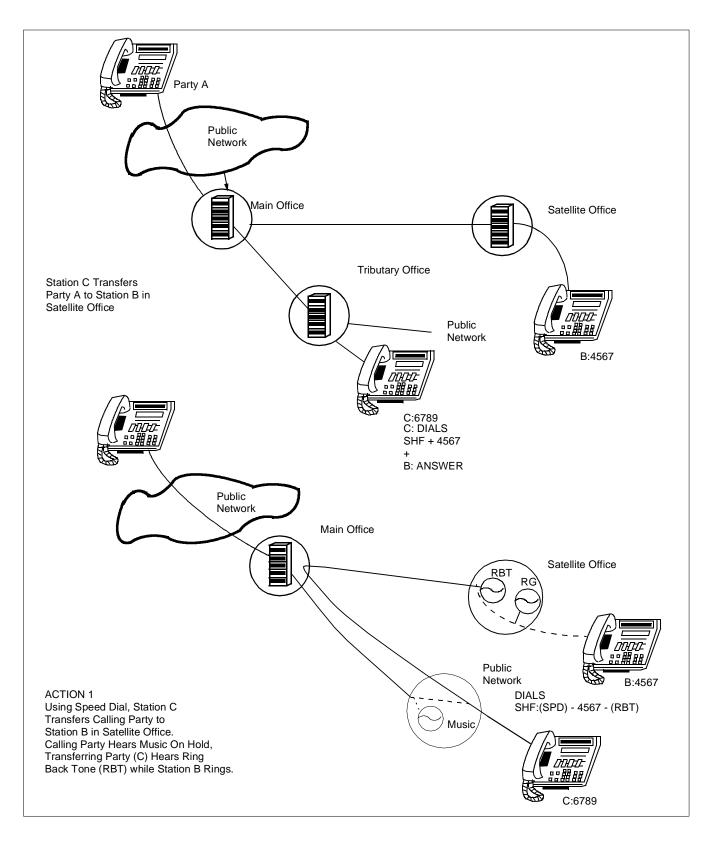
To transfer a call in progress from a Single-Line Telephone:

- 1. Press the hookswitch momentarily and receive feature dial tone.
- 2. Dial the third party and receive ringback tone.
- 3. Wait for the third party to answer and announce the transfer while keeping the first party on Consultation *Hold All Calls CCIS*. When the station user hangs up, the first and third parties will automatically be connected.

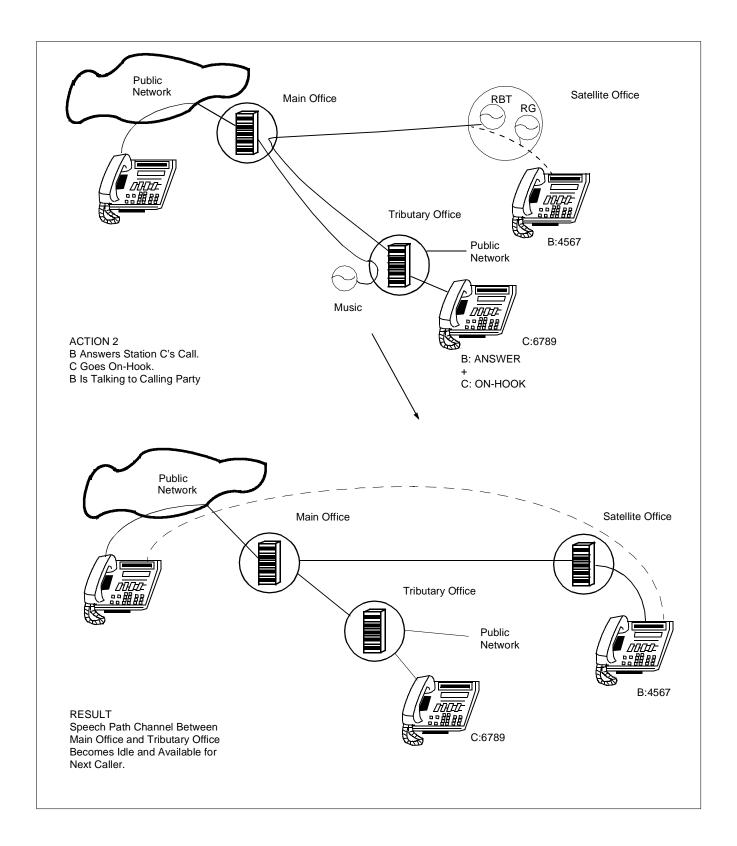
To transfer a call in progress from a Multiline Terminal:

- 1. Press the **TRF** key and receive feature dial tone.
- 2. Dial the third party and receive ringback tone.
- 3. Wait for the third party to answer and announce the transfer while keeping the first party on *Consultation Hold -ALL Calls -CCIS*. When the station user hangs up, the first and third parties will automatically be connected.

- 1. When *Trunk-To-Trunk Connection* is provided, an incoming or outgoing network or *Tie Line* call may be transferred to an outgoing network trunk, provided that the trunk can provide release supervision. The station user who transfers the call gives line control to the two remaining parties upon hanging up. Therefore, if the trunk is loop-start, *Call Transfer All Calls CCIS* from trunk to trunk will not function when loop release supervision is not provided.
- 2. The linking sequence between switching offices in the CCIS network is shown in the following diagrams.



The linking procedure between two switching offices is as follows in the next two illustrations:



## Call Transfer - Attendant - CCIS

## **General Description**

This feature permits a station user, while connected to a CCIS network call, to transfer a call to an *Attendant Console* via the CCIS network.

## **Operating Procedure**

To transfer a call to an Attendant Console:

- 1. While engaged in a Central Office trunk call, press the hookswitch momentarily; receive feature dial tone.
- 2. Dial the operator access code.
- 3. The **ATND** lamp, on the *Attendant Console*, flashes and the buzzer sounds. The station receives ringback tone.

To answer from an Attendant Console:

1. Refer to the "NEAX2400 IMS Attendant Console User Guide."

If the station wishes to return to the Central Office trunk call while the Attendant Console is being called:

- 1. Press the hookswitch momentarily; the **ATND** lamp on the *Attendant Console* is extinguished and the buzzer stops.
- 2. Ringback tone ceases; the station returns to the Central Office trunk call.

- 1. This feature is available when the *Attendant Console* is in a NEAX2000 IVS or a NEAX2400 in the CCIS network.
- 2. This feature is available for incoming or outgoing Central Office trunk calls and for station-to-station calls.
- 3. The feature allows a station user, while participating in a two-party connection (two stations or a station and a trunk), to call the operator so that the operator may transfer the call or provide other assistance as required.
- 4. If all registers are busy and the station user switch hook flashes, the switch hook flash is ignored by the system and the parties remain connected.

# **Calling Name Display - CCIS**

### **General Description**

This feature permits the station name of a calling or called party at another switching office via the CCIS network to be displayed either on a Multiline Terminal or an Attendant Console.

#### **Operating Procedure**

No manual operation is required.

- 1. The calling/called station name (maximum of eight characters) is displayed on the lower line of the LCD of a Multiline Terminal or an Attendant Console.
- 2. The called station name will be displayed on the calling Multiline Terminal or Attendant Console during ringing period and for six seconds after the called party answers the call.
- 3. The calling station name will be displayed when the Multiline Terminal is ringing on its Prime Line or the Attendant Console and for six seconds after the called party answers the call.
- 4. If the called party is forwarded via Call Forwarding Outside, the called name display at the calling Multiline Terminal or Attendant Console will be the name of the station which answers the call.
- 5. If the network includes the office which Calling Name Display is restricted, or is connected via no CCIS line, this feature may not be allowed.
- 6. If the network includes 2400 RDS, MDS, HDS, they must have L version software for Name Display to work.
- 7. Index 241 bit 1 in the 2400 must be set for 16 digits to display the 2000 IVS Name.
- 8. If 56K CCIS is used, ESF (24 multiframe) must also be used.

# Calling Number Display - CCIS

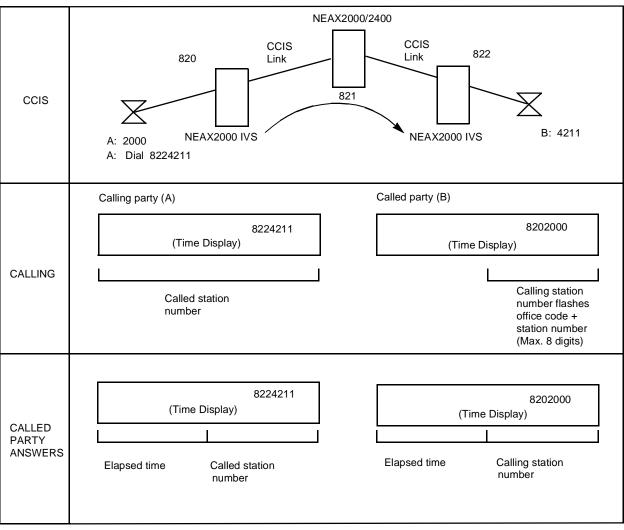
## **General Description**

This feature permits the number of a calling or called party, at another switching office, to be displayed either on a Multiline Terminal or an *Attendant Console*.

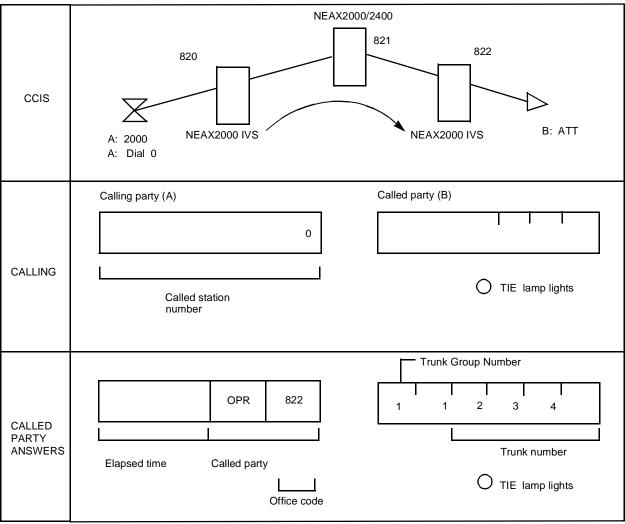
## **Operating Procedure**

No manual operation is required.

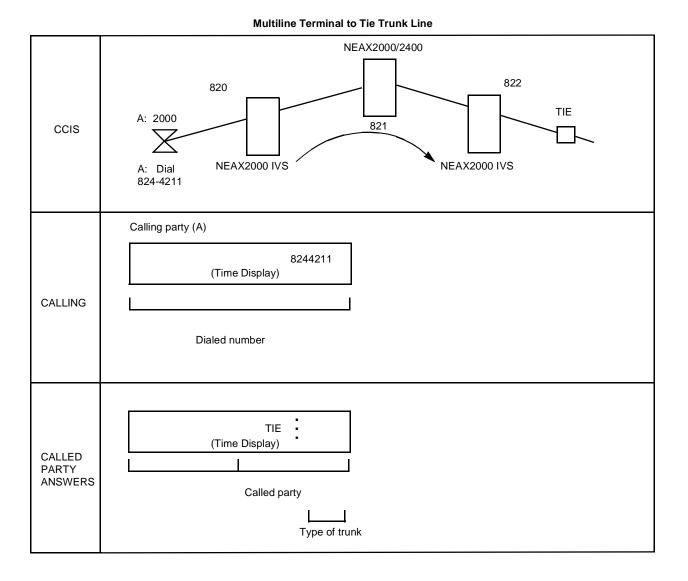
- 1. The called party's number (maximum of sixteen digits) will be displayed on the Multiline Terminal when the called party answers the call.
- 2. The calling party's number will be displayed when the Multiline Terminal is ringing on its Prime Line.
- 3. If the called party is forwarded via *Call Forwarding All Calls, Call Forwarding Busy Line*, etc., the called number display at the calling Multiline Terminal will be the number of the station which answers the call.
- 4. When a call with calling party number information (ISDN CPN/Caller-ID/T1-ANI) is received over CCIS, the information can be transferred transparently, a maximum of 16 digits can be displayed on the LCD of the Multiline Terminal, and it also can be sent to the SMDR, or MCI with ANI if provided. Below shows the conditions whether the calling party number is displayed or not when the call is transferred or forwarded to another station.
  - When the call is transferred or forwarded to the station in the same office, the LCD of the transferred/ forwarded station displays the calling party number.
  - When the call is transferred to the station of another office over CCIS, the LCD, SMDR, MCI, or ANI of the transferred station does not display the calling party number.
  - When the call is forwarded to the station of another office over CCIS, the LCD of the forwarded station displays the calling party number.
- 5. Examples of number displays for inter-office connections are shown in the attached diagrams for the following cases:
  - Multiline Terminal to Multiline Terminal
  - Multiline Terminal to Attendant Console
  - Multiline Terminal to trunk
  - Attendant Console to Multiline Terminal
  - Trunk to Multiline Terminal
  - Intermediate station number display (1)
  - Intermediate station number display (2)

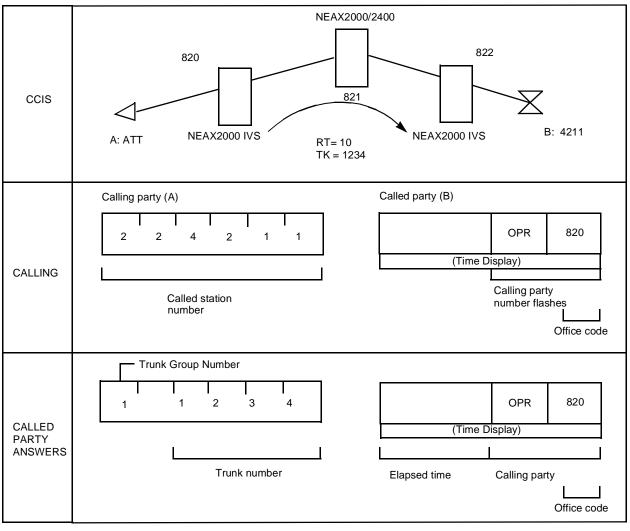


**Multiline Terminal to Multiline Terminal** 

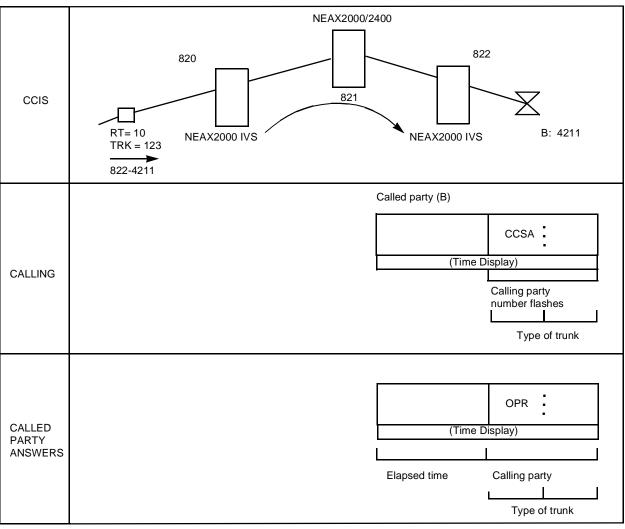


**Multiline Terminal to Attendant Console** 

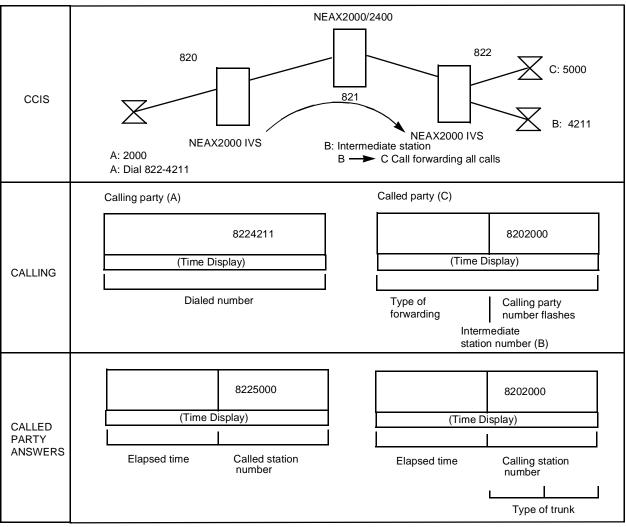




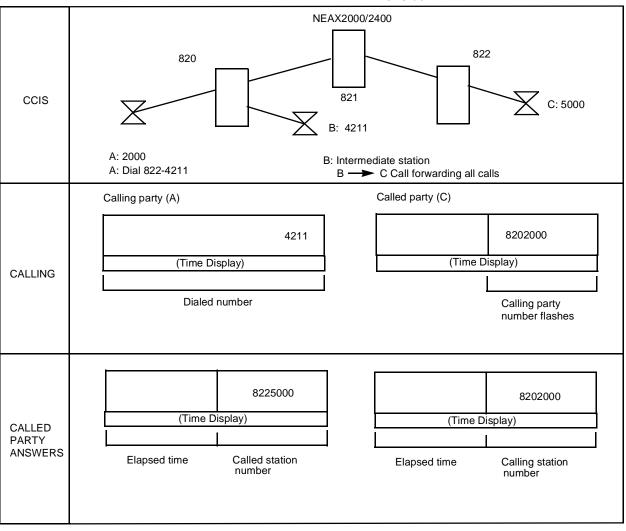
Attendant Console (HA610Z) to Multiline Terminal



**Central Office to Multiline Terminal** 



Intermediate Station Number Display (1)



Intermediate Station Number Display (2)

# **Centralized Billing - CCIS**

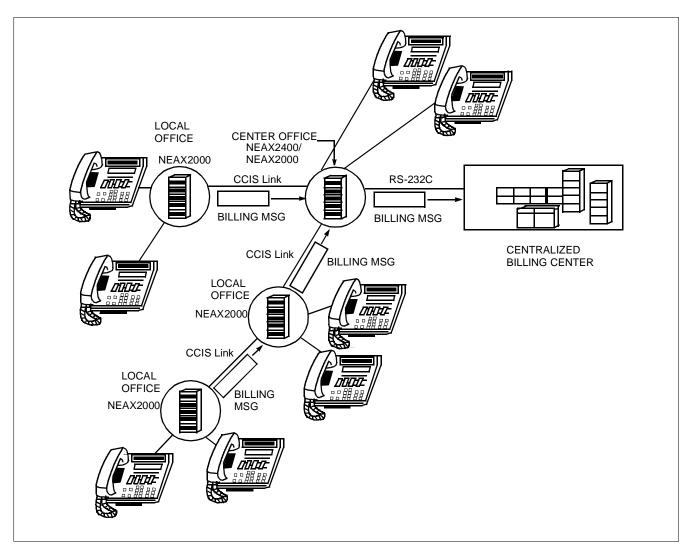
## **General Description**

This feature is used to collect billing information from each office within the network and to direct it to the associated center office. Billing information is then forwarded to the central billing centers via RS-232C interfaces.

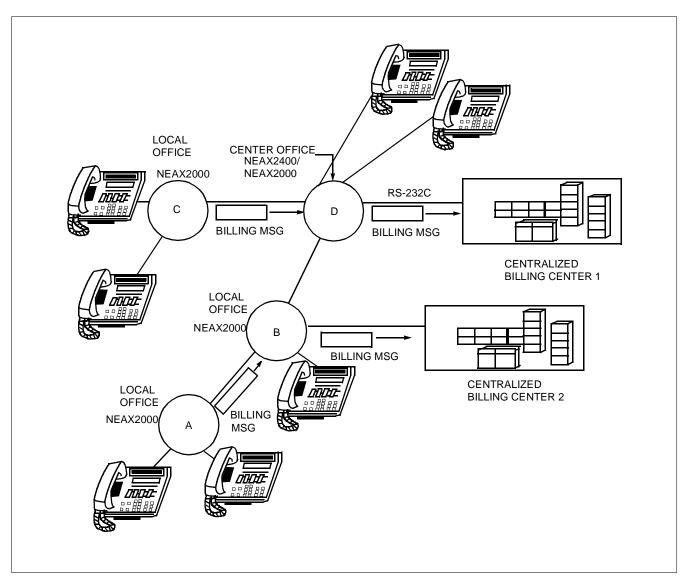
## **Operating Procedure**

No manual operation is required. The call record outputs are produced automatically.

- 1. An IVS is generally used as a local office. However if all the PBXs within the network are IVS, an IVS can be a center office for centralized billing.
- 2. The information storage capacity of the local office is approximately 1,000 calls.
- 3. If billing information in excess of the above mentioned storage capacity is required for a local office, then the addition of a PN-ME00 card with SRAM card allows 12,000 records of storage per system.
- 4. When an IVS is the center office, the billing information is sent to a SMDR system with NEAX2400 IMS format.
- 5. When an IVS is the center office, a maximum number of call records which can be sent to the SMDR system is about 4000 per hour at 4800 bps on the RS-232C port. When the AP of the center office can not send the call records to the SMDR, due to such as a failure of the SMDR system, call records are stored in the memory buffer on the AP (about 500 call records). Moreover, if the memory buffer is filled, the call records are stored in an AP of a local office.
- 6. When a NEAX2400 is the center office, either the Sub Line or the My Line number can be selected by system programming to be sent to the SMDR terminal.
- 7. When an IVS is the center office, only the My Line number can be sent to the SMDR terminal.

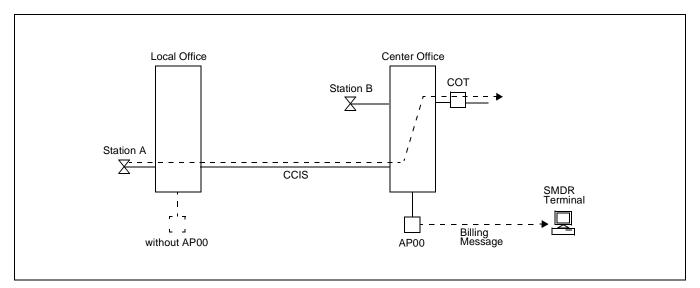


8. Billing messages are made in each gateway to the public network.



9. Each location can send Billing Messages to either Center Office.

Example:	Location A $\longrightarrow$ B $\longrightarrow$	→ Billing Center 2
	Location B ———	→ Billing Center 2
	Location C $\longrightarrow$ D $\longrightarrow$	→ Billing Center 1
	Location D —	→ Billing Center 1



- 10. When a call is originated from a station (Station A) of a local office (without AP00), via a COT of a center office (with AP00), a message is sent to the center office from the local office via CCIS. According to the station number of the calling party, the AP00 of the center office generates billing a message to the SMDR terminal.
- 11. When a call is originated from a Sub Line on the Multiline Terminal station (Station A) of the local office, either the Sub Line or the Primary Extension number can be selected by system programming to be sent to the SMDR terminal.
- 12. When a call is originated from a station (Station B) of the center office, only the Primary Extension number can be sent to the SMDR terminal.
- 13.By predetermined office data, Local Office Number of the calling station can be forwarded to the center office, and output to the SMDR terminal.

# Centralized Day/Night Mode Change - CCIS

## **General Description**

This feature switches the Day/Night mode of a remote office, linked to the main office NEAX2400 IMS via CCIS, in accordance with the Day/Night mode switching on the *Attendant Console* at the main office.

#### **Operating Procedure**

Main Office:

- 1. The Attendant executes Day/Night mode changeover operation using the normal *Attendant Consoles* (no master) method or the master *Attendant Console* method.
- 2. After a specified time, the Day/Night mode at the remote office is changed over.

#### Remote Office:

1. No operation is required.

- 1. The NEAX2000 IVS can only be used as a remote office.
- 2. At a remote office, only one Tenant (Tenant number 01) can use this feature.
- 3. When a remote office is equipped with an *Attendant Console*, a changeover of the remote office's Day/Night mode should not be performed from the *Attendant Console* of the remote office.
- 4. An indication on external equipment at a remote office can be provided when Day/Night mode status is changed by the *Attendant Console* of the main office. The external equipment is to be provided by the customer and to be connected with a PN-DK00 card. The indication is as follows:

Status	Indication
NIGHT mode	ON
DAY mode	OFF

# **Consultation Hold - All Calls - CCIS**

## **General Description**

This feature permits a station user, within the CCIS network, to hold any incoming or outgoing public network or Tie Line call while originating a call to another station within the CCIS network.

## **Operating Procedure**

To hold the original call and place a second call from a Single-Line Telephone:

- 1. Press the hookswitch momentarily and receive feature dial tone.
- 2. The original call is placed on hold and receives Music On Hold, if provided.
- 3. Dial the second station number and receive ringback tone.
- 4. The second station answers. The original call is now on Consultation Hold All Calls CCIS.

To return to the original call from a Single-Line Telephone:

- 1. In any of the following cases, the calling station can return to the original call by momentarily pressing the hookswitch:
  - A. The second station called is busy.
  - B. The calling station cannot gain access to the second station due to restriction.
  - C. The second station does not answer.
- 2. If the second party hangs up, the calling station will automatically be returned to the original call.
- 3. If the originating station momentarily presses the hookswitch, a three-party Conference will be initiated.

To hold the original call and place a second call from a Multiline Terminal:

- 1. Press the **TRF** key and receive feature dial tone.
- 2. The original call is placed on hold and receives Music On Hold, if provided.
- 3. Dial the second station number and receive ringback tone.
- 4. The second station answers. The original call is now on Consultation Hold All Calls CCIS.

To return to the original call from a Multiline Terminal:

- 1. In any of the following cases, the calling station can return to the original call by pressing the **TRF** key:
  - A. The second station called is busy.
  - B. The calling station cannot gain access to the second station due to a restriction.
  - C. The second station does not answer.
- 2. If the second station hangs up, the calling station will automatically be returned to the original call.
- 3. If the second station remains in the conversation, pressing the **TRF** or **ANS** key returns the original call to the Multiline Terminal while the second call enters *Consultation Hold -All Calls CCIS*.
- 4. By pressing the CNF key, a three-party conference will be initiated.

#### **Service Conditions**

When *Trunk-To-Trunk Connection* is provided, an outgoing exchange network or *Tie Line* call can be made by the station user.

# **Deluxe Traveling Class Mark - CCIS**

## **General Description**

This feature provides outgoing call restrictions within the CCIS network.

The following three types of restrictions are allowed:

- Deluxe Traveling Class Mark Restriction
- Route Restriction
- Numbering Restriction

## **Operating Procedure**

No manual operation is required.

- 1. The Route Restriction Class (RSC) of the calling party is sent to the called office as a *Deluxe Traveling Class Mark* (TCM), which is used for call restriction.
- 2. A maximum of eight restriction levels can be sent as a TCM.
- 3. The Transmitted Restriction Class (TRC) is used to check restrictions on calls outside the CCIS network, from a different switch.
- 4. The Route Restriction method is used to restrict a call based on the caller's restriction class and the selected route.
- 5. Numbering Toll Restriction is used to restrict a call based on the number dialed.
- 6. The following additional restriction features can be used by an office within the CCIS network:
  - Time of Day Change
  - Day of Week Change

# **Dial Access To Attendant - CCIS**

## **General Description**

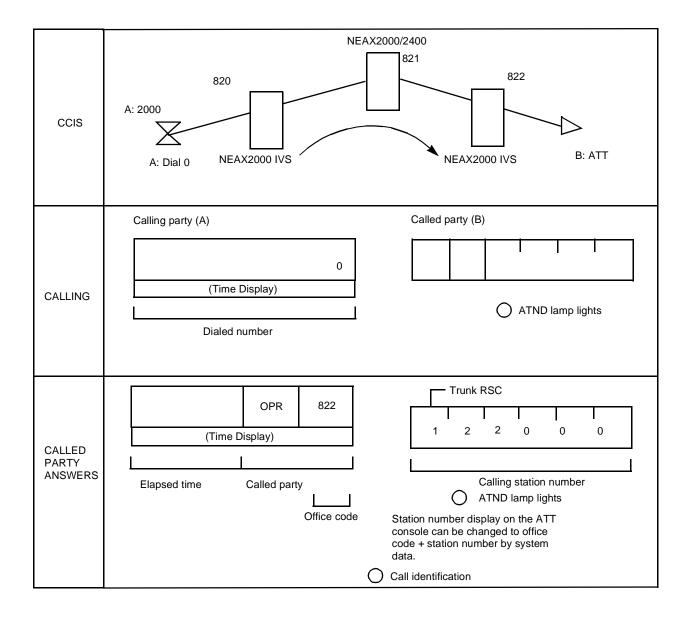
This feature allows a station user to call an *Attendant Console* by dialing an operator call code through the CCIS network.

## **Operating Procedure**

To call an Attendant Console:

- 1. The station user dials the operator call code and receives ringback tone.
- 2. The **ATND** lamp for *Incoming Call Identification* flashes on the *Attendant Console*; the Attendant answers the call.

- 1. The operator call code must be an Individual Attendant Access CCIS number.
- 2. This feature allows any station user or dial repeating Tie Trunk to call an *Attendant Console* by dialing an operator call code.
- 3. This feature is available when the *Attendant Console* is in a NEAX2000 IVS or a NEAX2400 in the CCIS network.



## **Direct-In Termination - CCIS**

### **General Description**

This feature automatically routes incoming exchange calls through CCIS to a preassigned station in the network, without Attendant assistance.

#### **Operating Procedure**

The outside calling party dials the telephone number, as usual. The call is answered at a predetermined station, within the CCIS network, bypassing the *Attendant Console*.

- 1. Bothway trunks can be used for Direct-In Termination CCIS; however, incoming trunks are recommended.
- 2. It is not necessary to order special DID trunks from the telephone company. However, care should be taken in the application of Incoming Signaling Groups (Central Office Hunting).
- 3. Destination station numbers at another office are stored in *System Speed Dialing*.
- 4. The maximum number of destination stations is 100.
- 5. Call billing to the outside party starts when the incoming call connects to the CCIS trunk.
- 6. If the called station does not answer, after a predetermined time, the incoming call (without release signal), is automatically cut off.

# **Distinctive Ringing - CCIS**

## **General Description**

This feature provides distinctive station ringing patterns for terminated calls, through the CCIS network, so that a station user can distinguish between incoming internal and external calls.

## **Operating Procedure**

No manual operation is required.

- 1. Ringing patterns for incoming **internal** calls on the CCIS network:
  - A. 1 second ring, 2 seconds silence
  - B. 2 seconds ring, 4 seconds silence
- 2. Ringing patterns for incoming **external** calls on the CCIS network:
  - A. 2 seconds ring, 4 seconds silence
  - B. 2 seconds ring, 2 seconds silence
  - C. 4 seconds ring, 2 seconds silence
  - D. 1 second ring, 2 seconds silence
- 3. When calling a third station (*Conference, Consultation Hold*, etc.), the ringing signal to the called station is the same as an incoming internal call.

## Do Not Disturb - CCIS

### **General Description**

This feature allows a station user to establish *Do Not Disturb (DND)* status on a temporary basis, during which time incoming CCIS calls will be denied access to the station.

#### **Operating Procedure**

To set Do Not Disturb from a Single-Line Telephone or Multiline Terminal:

- 1. Lift the handset; receive dial tone.
- 2. Dial the Do Not Disturb CCIS feature access code; receive service set tone.
- 3. Replace the handset.

To cancel *Do Not Disturb* from a Single-Line Telephone or Multiline Terminal:

- 1. Lift the handset; receive dial tone.
- 2. Dial the *Do Not Disturb CCIS* cancellation code; receive service set tone.
- 3. Replace the handset.

To set *Do Not Disturb - CCIS* from a Multiline Terminal:

- 1. Press the **SPKR** key and receive dial tone.
- 2. Press the *Do Not Disturb* feature access key and the associated LED lights. If the Multiline Terminal is equipped with an LCD, the display will indicate *SET*.
- 3. Press the **SPKR** key.

To cancel *Do Not Disturb* - *CCIS* from a Multiline Terminal:

- 1. Press the **SPKR** key and receive dial tone.
- 2. Press the *Do Not Disturb* feature access key and the associated LED is extinguished. If the Multiline Terminal is equipped with an LCD, the display will indicate *CNCL*.
- 3. Press the SPKR key.

- 1. Calls to stations that are in *Do Not Disturb CCIS* mode will receive reorder tone, or on a tenant basis, can be assigned to transfer to the Attendant or a predesignated station.
- 2. A station in Do Not Disturb CCIS mode can originate calls in the normal manner.
- 3. Call Forwarding can be set to a station in Do Not Disturb CCIS.
- 4. A Do Not Disturb CCIS station will be omitted from a Station Hunting chain.
- 5. This feature can only be set or canceled while the station is receiving internal dial tone.

- 6. When a Multiline Terminal is set to DND, calls to the primary and secondary extensions will not ring. Trunks programmed to ring will not do so while DND is set, but flashing LED indications are still provided. DND will not deny an *Executive Override*.
- 7. If the *Do Not Disturb* feature access key is pressed while connected to a trunk or station, the following interruptions are denied until that call is completed:
  - Attendant Camp-On With Tone Indication
  - Attendant Override
  - Boss Secretary Override
  - Busy Verification CCIS
  - Call Waiting Terminating
  - Call Waiting Stations
  - Voice Call CCIS

## **Dual Hold - CCIS**

### **General Description**

This feature allows two connected Multiline Terminals to be placed on hold simultaneously over the CCIS link. This enables the held parties to answer or originate a call from a secondary extension or the idle primary extension.

## **Operating Procedure**

To operate *Dual Hold* - *CCIS* from a Multiline Terminal:

- 1. The user at Station A presses the **HOLD** key; the user at Station B is placed on hold.
- 2. The user at Station B presses the HOLD key; the user at Station A is placed on hold.
- 3. Dual Hold CCIS is now in progress.

## Service Conditions

1. This feature is available for inter-office calls, through CCIS.

# **Elapsed Time Display - CCIS**

## **General Description**

This feature provides an LCD display which shows the duration of time that a Multiline Terminal is connected to any trunk through the CCIS network.

## **Operating Procedure**

No manual operation is required.

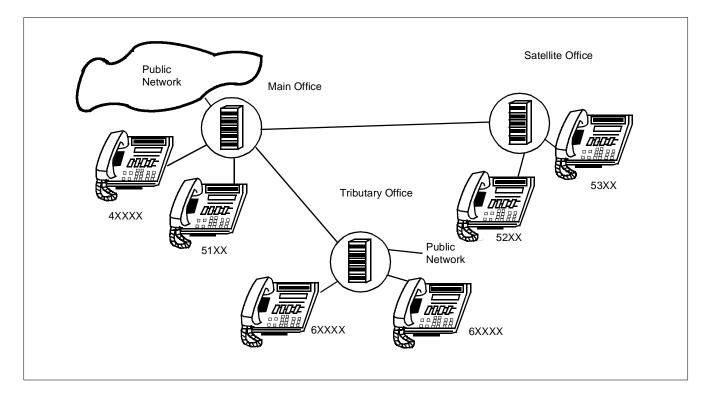
- 1. The elapsed time is displayed in the seven left-most positions of the LCD display.
- 2. The elapsed time can reach a maximum of 9 hours, 59 minutes and 59 seconds, after which the clock returns to zero.
- 3. A continuous time display appears when a call is retrieved from *Consultation Hold All Calls CCIS, Conference Call, Exclusive Hold* and *Non-Exclusive Hold* retrieved by the same station.
- 4. When a call is transferred, the elapsed time of the party receiving the transfer begins at zero.
- 5. The elapsed time is not displayed when the station is in conference.

# Flexible Numbering Of Stations - CCIS

## **General Description**

This feature allows voice and data station numbers to be assigned to any instrument in the CCIS network, based solely upon numbering plan limitations.

Office location is indicated by all digits of the station number (see below).



## **Operating Procedure**

No manual operation is required.

- 1. Careful consideration should be given to the network numbering plan to avoid needless loss of access codes or duplication of station numbers.
- 2. Tenant Service is not provided, i.e., numbers cannot be duplicated for different tenants.
- 3. One to five digits can be assigned as a station number.
- 4. The first digit or second digit of a station number distinguishes one system from another system.

## Hands-Free Answerback - CCIS

## **General Description**

This feature allows a Multiline Terminal station user to respond to a voice call, through the CCIS network, without lifting the handset.

## **Operating Procedure**

To answer a Voice Call-CCIS:

- 1. Press the **FNC** key followed by 1 to turn on the microphone; **MIC** LED is lit.
- 2. Respond to the call in a hands-free manner.

- 1. *Hands-Free Answer Back CCIS* may only be utilized when responding to a *Voice Call CCIS* on the primary extension of a Multiline Terminal.
- 2. Refer to the Voice Call CCIS Features and Specifications for further information.

## Hot Line - CCIS

## **General Description**

This feature allows two stations, at different nodes in the CCIS network, to be mutually associated on an automatic ringdown basis through the CCIS network.

## **Operating Procedure**

To place a Hot Line - CCIS call:

- 1. The user at Station A lifts the handset.
- 2. Station B is rung.
- 3. The user at Station B lifts the handset and the connection is established.

- 1. If both phones in a *Hot Line CCIS* pair are equipped with dials, either one may transfer a *Hot Line CCIS* call to another station, in the CCIS network, using the *Call Transfer All Calls CCIS* feature.
- 2. A maximum of 100 (inclusive) Hot Line or Brokerage Hot Line stations are permitted in the system.
- 3. *Hot Line CCIS* assignments are programmed into system data via the *Maintenance Administration Terminal* (MAT) or the *Customer Administration Terminal* (CAT).
- 4. The System Speed Dialing feature is used to call the station in the other office.

## House Phone - CCIS

## **General Description**

This feature allows selected stations to call an *Attendant Console*, through the CCIS network, simply by going off hook.

## **Operating Procedure**

To call an Attendant in another office:

- 1. The House Phone CCIS user lifts the handset.
- 2. The Attendant in another office is automatically called. The **ATND** lamps on the *Attendant Console* flash and the console buzzer sounds.

- 1. *House phones CCIS* may be equipped with or without dials.
- 2. *House Phone CCIS* assignments are programmed into system data using the *Maintenance Administration Terminal* (MAT) or the *Customer Administration Terminal* (CAT).
- 3. A maximum of 100 House Phones are permitted in the system.
- 4. The System Speed Dialing feature is used to call an Attendant in another office.
- 5. This feature is available when a *Attendant Console* is in a NEAX2000 IVS or a NEAX2400 in the CCIS network.

## **Incoming Call Identification - CCIS**

## **General Description**

This feature allows an Attendant to visually identify the type of service and/or trunk group which is arriving or waiting to be answered at the *Attendant Console* through the CCIS network.

#### **Operating Procedure**

No manual operation is required.

- 1. A flashing lamp indicates a call waiting to be answered.
- 2. A steady lamp indicates an answered call.
- 3. A maximum of 12 lamp and key groups can be associated with Incoming Call Identification.
- 4. An example of lamp and key assignment is as follows:

LDN	C.O. Incoming Calls
ATND	Operator Calls
RCL	Operator Recall
ICPT	Intercept Calls
NANS	Do Not Answer Calls
BUSY	Busy Line Calls
TIE	Tie Line Incoming Calls

- 5. More than one *Incoming Call Identification* (ICI) lamp can be lit at one time on the Attendant Console. The Attendant can select any incoming call by pressing the associated key.
- 6. Calls can be answered via the ANSWER key for first-in, first-out priority.
- 7. *Attendant Consoles* are limited to 6 unique *Incoming Call Identification* indications. However, more than one incoming trunk group can be programmed for the same *Incoming Call Identification*.
- 8. Assignment of ICI lamp and key can be assigned on a trunk route basis.

## Individual Attendant Access - CCIS

## **General Description**

This feature permits a station user to call a specific *Attendant Console*, in the CCIS network, using an individual Attendant Identification Number.

## **Operating Procedure**

- 1. The station user dials an individual Attendant Identification Number.
- 2. The Attendant at the directed *Attendant Console* receives an *Incoming Call Identification* indication and can answer using the normal operating procedures.

- 1. An Attendant Identification Number must be assigned to each Attendant Console.
- 2. This feature is available when the *Attendant Console* is attached to the main NEAX2400 IMS, in the CCIS network.

# LDN Night Connection - CCIS

## **General Description**

This feature routes Listed Directory Number (LDN) calls to a preselected station, in the CCIS network, when the Night mode has been entered.

## **Operating Procedure**

No manual operation is required.

## **Service Conditions**

- 1. The maximum number of LDNs is eight.
- 2. The destination party is assigned to Day/Night mode.

Examples:

- A. There is an Attendant Console in the same office.
  - DAY Incoming to *Attendant Console* in the same office.
  - NIGHT Incoming to station or TAS line in the other office.
- B. There is an Attendant Console in the other office.
  - DAY Incoming to Attendant Console in the other office.
  - NIGHT Incoming to station or TAS line in the same office.
- 3. When the NEAX2000 IVS system is in the Night mode, a DID incoming call with an LDN from another switching office through CCIS can be routed to a preselected TAS line or station in the NEAX2000 IVS system.

# Link Alarm Display - CCIS

### **General Description**

This feature provides an indication on external equipment when the CCIS link is connected/disconnected, when the system is initialized, or when the CCH is in make-busy.

# **Operating Procedure**

No manual operation is required.

### **Service Conditions**

- 1. An external equipment is to be provided by the customer and to be connected with a PN-DK00 card.
- 2. The indication is as follows:

Status	Indication					
Link disconnected	ON					
Link connected	OFF					
System Initialized	ON					
CCH make busy	ON					

3. When the CCH (PN-SC00) is in make-busy, an external indication is provided about one minute later.

# Message Waiting Lamp Setting - Attendant - CCIS

### **General Description**

This feature allows an Attendant, in the NEAX2400 IMS system, to set or cancel a Message Waiting lamp indication, through the CCIS network, on a station in a NEAX2000 IVS system.

### **Operating Procedure**

To set a *Message Waiting* indication from the NEAX2400 IMS ATTCON:

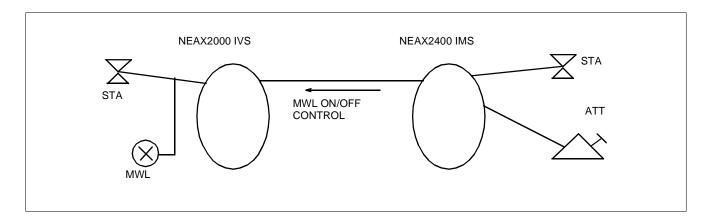
- 1. Press an idle LOOP key; receive dial tone.
- 2. Dial the *Message Waiting* feature access code (maximum of three digits); receive feature dial tone.
- 3. Dial the station number; receive special set tone.
- 4. Message Waiting indication is set.
- 5. Press the **RELEASE** key to return to an idle condition.

To cancel a Message Waiting indication:

- 1. Press an idle **LOOP** key; receive dial tone.
- 2. Dial the Message Waiting cancellation code (maximum of three digits); receive feature dial tone.
- 3. Dial the station number; receive special set tone.
- 4. Message Waiting indication is canceled.
- 5. Press the **CANCEL** key to return to an idle condition.

- 1. The Message Waiting lamp on a Single-Line Telephone or a Multiline Terminal is lit when this feature is activated.
- 2. If an Attendant attempts to set *Message Waiting* to a station which already has *Message Waiting* set, the Attendant will receive service set tone.
- 3. Message Waiting indications are retained when the system is initialized.
- 4. An *Attendant Console* or station in the NEAX2000 IVS system does not have the facility to set or cancel a Message Waiting lamp on a station at another switching office, through CCIS.

5. A 4LCD card is required to provide Single Line Telephones with the *Message Waiting* function. Single Line Telephones must be equipped with Message Waiting lamps for 70VDC.



# Message Waiting Lamp Setting - Station - CCIS

### **General Description**

This feature allows a station user, in the NEAX2400 IMS system, to set or cancel a Message Waiting lamp indication, through the CCIS network, to a station in the NEAX2000 IVS system with this feature.

### **Operating Procedure**

To set a Message Waiting indication:

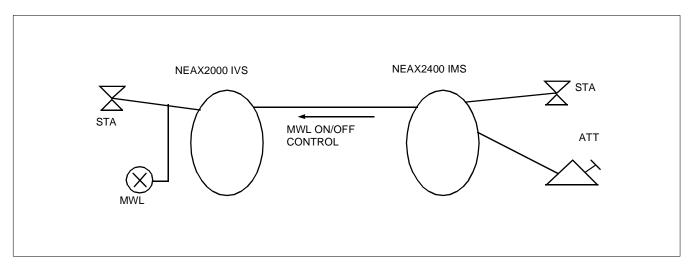
- 1. Lift the handset; receive dial tone.
- 2. Dial the *Message Waiting* feature access code (maximum of three digits); receive feature dial tone.
- 3. Dial the desired station number; receive service set tone.
- 4. Message Waiting indication is set at the station.

To cancel Message Waiting indication:

- 1. Lift the handset; receive dial tone.
- 2. Dial the Message Waiting cancellation code (maximum of three digits); receive feature dial tone.
- 3. Dial the desired station number; receive service set tone.
- 4. Message Waiting indication at station is canceled.

- 1. If a station attempts to set *Message Waiting* to a station which already has *Message Waiting* set, the station will receive service set tone.
- 2. This service can be allowed or denied by Class Of Service.
- 3. Message Waiting indications are retained when the system is initialized.
- 4. *Message Waiting* for one station can be controlled from the *Attendant Console* and any other station at the same time.
- 5. Message Waiting cannot be activated on a Multiline Terminal virtual line.
- 6. An *Attendant Console* or station in the NEAX2000 IVS system does not have the facility to set or cancel a Message Waiting Lamp on a station at another switching office, through CCIS.

7. If the recipient of the *Message Waiting* is a NEAX2000 Multiline Terminal without a *Message Waiting* key assigned, the LCD will indicate *MSGX*. When scrolling through *Message Waiting* indications, the station number which set the *Message Waiting* will not be indicated.



8. A 4LCD card is required to provide Single Line Telephones with the *Message Waiting* function. Single Line Telephones must be equipped with Message Waiting lamps for 70VDC.

# **Miscellaneous Trunk Access - CCIS**

### **General Description**

This feature provides access to all types of external and customer-provided equipment/facilities, such as *Tie Line* and exchange network, along with *Dictation, Paging Access - CCIS* and Code Calling through the CCIS network.

# **Operating Procedure**

No manual operation is required.

- 1. Access to these trunk routes is allowed or denied via Class Of Service Individual.
- 2. An interface circuit must be provided for each required trunk.
- 3. *Miscellaneous Trunk Access CCIS* is programmed in system data via the *Maintenance Administration Terminal* (MAT) or the *Customer Administration Terminal* (CAT).

# **Miscellaneous Trunk Restriction - CCIS**

### **General Description**

This feature denies certain stations and dial-repeating tie trunks access to specific trunk groups, such as *Tie Line*, exchange network, *Dictation* or *Paging Access - CCIS* through the CCIS network.

### **Operating Procedure**

No manual operation is required.

- 1. Restricted call attempts will receive reorder tone.
- 2. Station line access to a given miscellaneous trunk group is controlled by assigning a Route Restriction Class (RSC) to each line. There can be a maximum of eight different RSCs (1-8) per system, each of which can be programmed to restrict an assigned station from none, one, or more than one miscellaneous trunk group (maximum of 64 trunk groups).
- 3. This feature can be assigned to stations or dial-repeating tie trunks in *Class Of Service Individual* restrictions.
- 4. If a station user's *Class Of Service Individual* allows outgoing route completion via the Attendant, the station user can dial the Attendant access code for completion of miscellaneous trunk calls.
- 5. The Call Transfer All Calls feature will operate as follows:
  - If the restricted station line is the second party, this station cannot add a trunk from which this station is restricted.
  - If the restricted station line is not the second party, the second party cannot connect the restricted station line to a trunk from which the station is normally restricted.
  - If a restricted station user calls another station, the called station cannot use the *Call Transfer* feature to connect the calling station to a trunk group to which the restricted station is denied dial access. If a transfer is attempted, the second party station will receive an immediate transfer recall.
- 6. *Night Service*: Restrictions can be changed for a given station when the system is in the Night mode of operation.
- 7. *Tie Line Access*: If the station user accesses a tie trunk to a distant PBX, access to outside exchanges can only be controlled by the distant PBX.
- 8. *Miscellaneous Trunk Restriction CCIS* is programmed in system data via the *Maintenance Administration Terminal* (MAT) or the *Customer Administration Terminal* (CAT).

# Multiple Call Forwarding - All Calls - CCIS

### **General Description**

This feature allows the last hop of a *Multiple Call Forwarding - All Calls* sequence to be forwarded over a CCIS network to a station in another office.

### **Operating Procedure**

To set Call Forwarding - All Calls from a Single-Line Telephone:

- 1. Lift the handset; receive dial tone.
- 2. Dial the Call Forwarding All Calls feature access code; receive feature dial tone.
- 3. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan.)
- 4. Dial the desired target station number and receive service set tone.
- 5. Wait approximately five seconds; receive service set tone.

To cancel Call Forwarding - All Calls from a Single-Line Telephone:

- 1. Lift the handset; receive dial tone.
- 2. Dial the Call Forwarding All Calls cancellation code; receive service set tone.

To set Call Forwarding - All Calls from the Attendant Console:

- 1. Press an idle **LOOP** key.
- 2. Dial the Call Forwarding All Calls feature access code; receive feature dial tone.
- 3. Dial the originating station number.
- 4. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan.)
- 5. Dial the desired target station number and receive service set tone.
- 6. Press the **RELEASE** key.

To cancel Call Forwarding - All Calls from the Attendant Console:

- 1. Press an idle **LOOP** key.
- 2. Dial the Call Forwarding All Calls cancellation code; receive feature dial tone.
- 3. Dial the originating station number; receive service set tone.

To set Call Forwarding - All Calls from a Multiline Terminal:

- 1. Lift the handset or press the SPKR key; receive dial tone.
- 2. Press the Call Forwarding All Calls feature access key; receive feature dial tone.

- 3. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan.)
- 4. Dial the desired target station number and receive service set tone.
- 5. Wait approximately five seconds; receive service set tone. The LED lights and the LCD displays:



Forwarding station number

6. Replace the handset or press the **SPKR** key.

To cancel *Call Forwarding - All Calls* from a Multiline Terminal:

- 1. Lift the handset or press the SPKR key; receive dial tone.
- 2. Press the *Call Forwarding All Calls* feature key; the LCD displays:



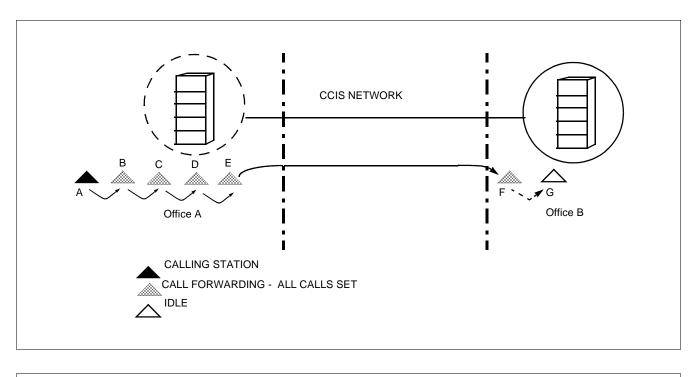
3. Dial "\*"; receive service set tone. The LED of the associated feature key will be extinguished. The LCD displays:

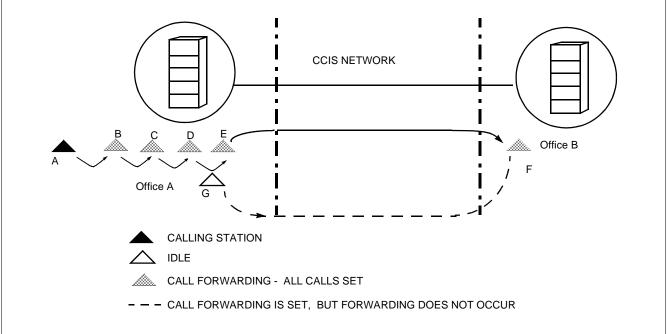


4. Replace the handset or press the **SPKR** key.

- 1. Multiple Call Forwarding All Calls CCIS service can forward a call up to five times within the same office.
- 2. If the calling station is set as the destination in a multiple hop scenario, *Multiple Call Forwarding All Calls CCIS* will not be performed, i.e., an infinite loop will not occur.
- 3. If the incoming call terminates to one of the stations that has once taken part in the process of a multiple hop scenario (Busy or All Calls), *Call Forwarding All Calls CCIS* service from that station will be performed and the system will ignore further forwards, i.e., the call will terminate at the station prior to an infinite loop taking place.
- 4. If a station is *Call Forwarding All Calls CCIS* to another station in a different tenant and that station is *Call Forwarded Busy or All Calls CCIS* to the *Attendant Console*, the calling station (via CCIS) will be connected to the called station's *Attendant Console*.
- 5. For *Multiple Call Forwarding All Calls CCIS* service, the display on a Multiline Terminal will show the terminating station number for the calling party. For the terminating station, the display on the Multiline Terminal will show the called station number and the calling party number (station or trunk).

- 6. If a calling station has been *Call Forwarding All Calls CCIS* five times within the same office and encounters a sixth *Call Forwarding All Calls CCIS* condition, the calling station will not be forwarded and will ring at the fifth destination.
- 7. If two stations have set *Call Forwarding All Calls CCIS* to each other, an incoming call will not be forwarded.
- 8. If the destination station in a *Multiple Call Forwarding All Calls CCIS* situation is busy and has not set *Call Forwarding Busy*, the calling party will receive busy tone.
- 9. *Multiple Call Forwarding All Calls CCIS* and *Call Forwarding Busy CCIS* may be mixed; up to five combined multiple forwardings may occur.
- 10. When combining *Call Forwarding Busy* and *Call Forwarding All Calls CCIS*, if the destination station is busy, then the calling party will hear busy tone after five forwards.
- 11.If an incoming call encounters *Multiple Call Forwarding All Calls CCIS* and the destination is the attendant, the incoming call will light the *LDN* lamp.
- 12. Each call forward over a CCIS link will impact the BHCA rating of the respective CCIS link. Please refer to the diagram on the next page.
- 13. When Multiple Call Forwarding All Calls CCIS is used, the following conditions exist:
  - A. Station A calls Station B. Station B is set to *Multiple Call Forwarding All Calls CCIS* from Station C to Station G. *Multiple Call Forwarding All Calls CCIS* occurs to station G. If Station G is idle, Station G will ring. If Station G is busy, busy tone is returned from Station G. Station A may not activate *Call Back CCIS* to Station G. Please refer to the first diagram on the next page.
  - B. Station A calls station B. Station B is set to *Multiple Call Forwarding All Calls CCIS* from Station C to Station G. *Multiple Call Forwarding All Calls CCIS* does not occur to Station G. If Station F is idle, Station F will ring. If Station F is busy, busy tone is returned from Station F. Station A may not activate *Call Back CCIS* to Station F. Please refer to the second diagram on the next page.





# Multiple Call Forwarding - Busy Line - CCIS

#### **General Description**

This feature allows the last hop of a *Multiple Call Forwarding - Busy Line* sequence to be forwarded over a CCIS network to a station in another office.

#### **Operating Procedure**

To set Call Forwarding - Busy Line - CCIS from a Single-Line Telephone:

- 1. Lift the handset; receive dial tone.
- 2. Dial the Call Forwarding Busy Line feature access code; receive feature dial tone.
- 3. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan.)
- 4. Dial the desired target station number and receive service set tone.
- 5. Wait approximately five seconds; receive service set tone.

To cancel Call Forwarding - Busy Line - CCIS from a Single-Line Telephone:

- 1. Lift the handset; receive dial tone.
- 2. Dial the Call Forwarding Busy Line cancellation code; receive service set tone.

To set Call Forwarding - Busy Line - CCIS from the Attendant Console:

- 1. Press an idle **LOOP** key.
- 2. Dial the Call Forwarding Busy Line feature access code; receive feature dial tone.
- 3. Dial the originating station number.
- 4. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan.)
- 5. Dial the desired target station number and receive service set tone.
- 6. Press the **RELEASE** key.

To cancel Call Forwarding - Busy Line - CCIS from the Attendant Console:

- 1. Press an idle **LOOP** key.
- 2. Dial the Call Forwarding Busy Line cancellation code; receive feature dial tone.
- 3. Dial the originating station number; receive service set tone.

To set Call Forwarding - Busy Line - CCIS from a Multiline Terminal:

- 1. Lift the handset or press the SPKR key; receive dial tone.
- 2. Press the Call Forwarding Busy Line feature key; receive feature dial tone.

- 3. Dial the outgoing trunk access code; receive a single burst of service set tone.
- 4. Dial the desired target station number and receive service set tone. (This operation is required for a network using Open Numbering Plan.)
- 5. Wait approximately five seconds; receive service set tone. The LED lights and the LCD displays:



Forwarding Station Number

6. Replace the handset or press the **SPKR** key.

To cancel Call Forwarding - Busy Line - CCIS from a Multiline Terminal:

- 1. Lift the handset or press the SPKR key; receive dial tone.
- 2. Press the Call Forwarding Busy Line feature key; the LCD displays:

Series III	 Serie	es E
FDB XXXX	CF BUSY	XXXX
(TIME DISPLAY)	(TIME DI	SPLAY)

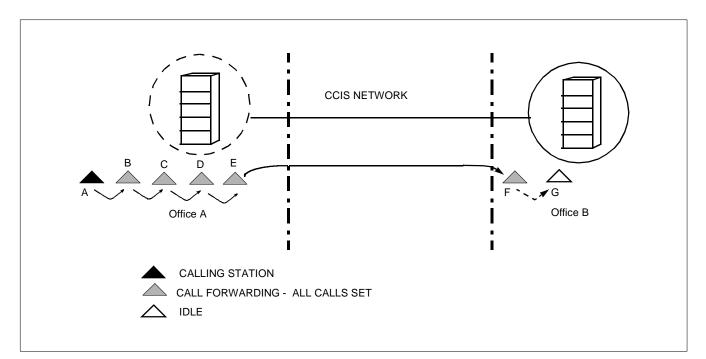
3. Dial "\*"; receive service set tone. The LED of the associated feature key will be extinguished. The LCD displays:

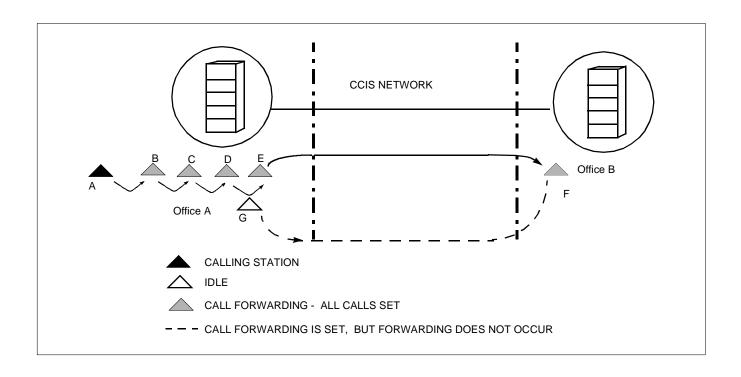


4. Replace the handset or press the **SPKR** key.

- 1. Multiple Call Forwarding Busy Line CCIS service can hop up to five times within the same office.
- 2. If the calling station is set as the destination in a multiple hop scenario, *Multiple Call Forwarding Busy Line CCIS* will not be performed, i.e., an infinite loop will not occur.
- 3. If the incoming call returns to one of the stations that has once taken part in the process of a multiple hop scenario, *Call Forwarding Busy Line CCIS* service from that station will not be performed.
- 4. If all the stations are busy in a multiple call forwarding environment, the calling station may then activate *Call Back* to the called station.
- 5. If the called station is the set as the forwarded to destination in the multiple hop service, *Call Forwarding Busy Line* will not be performed at the point.
- 6. If a station is *Call Forwarded Busy Line* to another station in a different tenant and the station is *Call Forwarded Busy Line* to the *Attendant Console*, the calling station (via CCIS) will be connected to the called station's *Attendant Console*.

- 7. For *Multiple Call Forwarding Busy Line* service, the display on a Multiline Terminal will show the terminating station number for the calling party. For the terminating station, the display on the Multiline Terminal will show the called station number and the calling party number (station or trunk).
- 8. When Multiple Call Forwarding Busy Line CCIS is used, the following conditions exist:
  - A. Station A calls Station B. Station B is set to *Multiple Call Forwarding Busy Line CCIS* from Station C to Station G. *Multiple Call Forwarding Busy Line CCIS* occurs to Station G. If Station G is idle, Station G will ring. If Station G is busy, busy tone is returned from Station G. Station A may not activate *Call Back CCIS* to Station G. Please refer to the first diagram on the next page.
  - B. Station A calls Station B. Station B is set to *Multiple Call Forwarding Busy Line CCIS* from Station C to Station F. Station F is *Call Forwarded Busy Line CCIS* to Station G. *Multiple Call Forwarding Busy Line* does not occur to Station G. If Station F is idle, Station F will ring. If Station F is busy, busy tone is returned from Station F. Station A may not activate *Call Back CCIS* to Station F. Please refer to the second diagram on the next page.





# Multiple Call Forwarding - Don't Answer - CCIS

### **General Description**

This feature allows the last hop of a *Multiple Call Forwarding - Don't Answer* sequence to be forwarded over a CCIS network to a station in another office.

### **Operating Procedure**

To set Call Forwarding - Don't Answer - CCIS from a Single-Line Telephone:

- 1. Lift the handset; receive dial tone.
- 2. Dial the Call Forwarding Don't Answer feature access code; receive feature dial tone.
- 3. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan.)
- 4. Dial the desired target station number and receive service set tone.
- 5. Wait approximately five seconds; receive service set tone.

To cancel Call Forwarding - Don't Answer - CCIS from a Single-Line Telephone:

- 1. Lift the handset; receive dial tone.
- 2. Dial the Call Forwarding Don't Answer cancellation code; receive service set tone.

To set Call Forwarding - Don't Answer - CCIS from the Attendant Console:

- 1. Press an idle **LOOP** key.
- 2. Dial the Call Forwarding Don't Answer feature access code; receive feature dial tone.
- 3. Dial the originating station number. (This operation is required for a network using Open Numbering Plan.)
- 4. Dial the outgoing trunk access code; receive a single burst of service set tone.
- 5. Dial the desired target station number and receive service set tone.
- 6. Press the **RELEASE** key.

To cancel Call Forwarding - Don't Answer - CCIS from the Attendant Console:

- 1. Press an idle **LOOP** key.
- 2. Dial the Call Forwarding Don't Answer cancellation code; receive feature dial tone.
- 3. Dial the originating station number; receive service set tone.

To set Call Forwarding - Don't Answer - CCIS from a Multiline Terminal:

- 1. Lift the handset or press the SPKR key; receive dial tone.
- 2. Press the Call Forwarding Don't Answer feature key; receive feature dial tone.

- 3. Dial the outgoing trunk access code; receive a single burst of service set tone. (This operation is required for a network using Open Numbering Plan.)
- 4. Dial the desired target station number and receive service set tone.
- 5. Wait approximately five seconds; receive service set tone. The LED lights and the LCD displays:



Forwarding Station Number

6. Replace the handset or press the **SPKR** key.

To cancel *Call Forwarding - Don't Answer - CCIS* from a Multiline Terminal:

- 1. Lift the handset or press the SPKR key; receive dial tone.
- 2. Press the Call Forwarding Don't Answer feature key; the LCD displays:

Series III	Series E
FDN XXXX	CFNANS XXXX
(TIME DISPLAY)	(TIME DISPLAY)

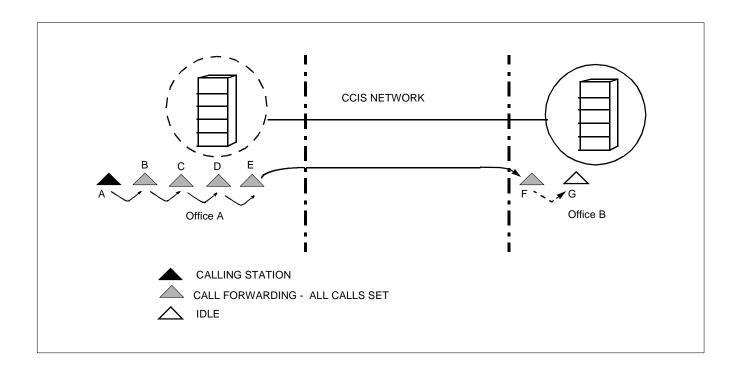
3. Dial "\*"; receive service set tone. The LED of the associated feature key will be extinguished. The LCD displays:

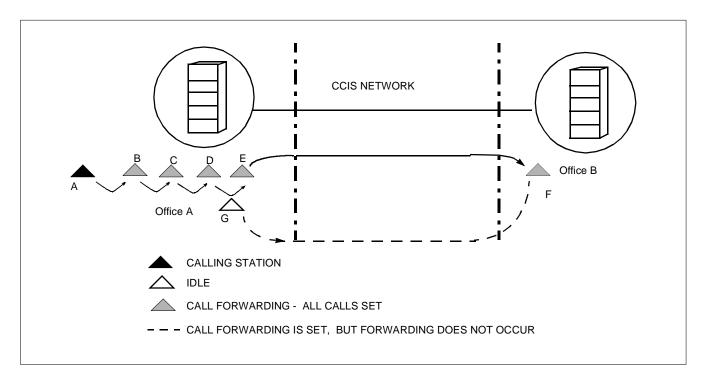


4. Replace the handset or press the **SPKR** key.

- 1. *Multiple Call Forwarding Don't Answer CCIS* service can be forwarded as many times as desired. The call will stop forwarding when it terminates to an *Attendant Console* or to a station that is not assigned this feature.
- 2. When a station encounters a *Call Forwarding Don't Answer CCIS* condition and the forwarded to station (in the same office) is busy, the system will check the status of the forwarded to busy station at intervals of approximately ten seconds.
- 3. Multiple Call Forwarding Don't Answer CCIS service can be utilized by the following incoming calls:
  - Intra Office
  - Direct Inward Dialing (DID)
  - Direct-In Termination (DIT)
  - Night Connection
  - Hot Line

- 4. If a station transfers a call to another station with *Call Forwarding Don't Answer CCIS* service and releases from the connection, *Recall* will override *Call Forwarding Don't Answer CCIS* if the call is unanswered after a predetermined time.
- 5. *Multiple Call Forwarding Don't Answer CCIS* will not be activated if the calling party encounters a busy station that has activated *Call Forwarding Busy CCIS* service.
- 6. If a station is *Call Forwarding Don't Answer CCIS* to another station in a different tenant and that station is *Call Forwarding Don't Answer CCIS* to the *Attendant Console*, the calling station (via CCIS) will be connected to the called station's *Attendant Console*.
- 7. For *Multiple Call Forwarding Don't Answer CCIS* service, the display on a Multiline Terminal will show the terminating station number for the calling party. For the terminating station, the display on the Multiline Terminal will show the forwarded from station number and the calling party number (station or trunk).
- 8. When Multiple Call Forwarding Don't Answer CCIS is used, the following conditions exist:
  - A. Station A calls Station B. Station B is set to *Multiple Call Forwarding Don't Answer CCIS* from Station C to Station G. *Multiple Call Forwarding Don't Answer CCIS* occurs to Station G. Refer to the first diagram on the next page.
  - B. Station A calls Station B. Station B is set to *Multiple Call Forwarding Don't Answer CCIS* from Station C to Station F. Station F is *Call Forwarded Don't Answer CCIS* to station G. *Multiple Call Forwarding Don't Answer CCIS* does not occur to Station G. If Station F is idle, Station F will ring beyond the expiration of the *Don't Answer Timer*. Refer to the second diagram on the next page.





# Night Connection - Fixed - CCIS

### **General Description**

When the Night mode has been entered, this service feature routes calls normally directed to the *Attendant Console* to a preselected station in another office, through the CCIS network.

### **Operating Procedure**

To answer a Night Connection - Fixed - CCIS call:

- 1. An incoming call to the *Attendant Console* in Night mode is automatically transferred to a preselected *Night Connection* station belonging to a different office.
- 2. The calling party hears ringback tone.
- 3. Ring signal is sent to the Night Connection station.
- 4. The Night Connection station goes off-hook to answer the incoming call.

- 1. The night stations to which calls are routed are designated by Speed Calling System.
- 2. There is a maximum of 100 destination stations.
- 3. The night stations to which calls are routed via this service can be assigned on an individual trunk basis.
- 4. Destination stations can be part of a Hunt Group.
- 5. A destination station can be changed using the Call Forwarding All Calls CCIS feature.
- 6. Call billing to the outside party starts when the incoming call connects to the CCIS trunk.
- 7. If the called station does not answer after a predetermined time, the incoming call (without release signal) is automatically cut off.

# Night Connection - Flexible - CCIS

### **General Description**

This feature provides an inter-office night connection service, via the CCIS network, when the calling station and the night station belong to different offices.

# **Operating Procedure**

To set Night Connection - Flexible - CCIS:

1. The Attendant or fixed night station user in the destination office sets *Call Forwarding - All Calls - CCIS* to a station in another office.

To answer Night Connection - Flexible - CCIS calls:

- 1. In the Night mode, incoming calls to the *Attendant Console* are automatically transferred to a preselected *Night Connection* station belonging to a different office.
- 2. The calling party hears ringback tone.
- 3. Ring signal is sent to the Night Connection station.
- 4. The Night Connection station goes off hook to answer the incoming call.

- 1. The night stations to which calls are routed via this service are designated by *Night Connection Fixed* and *Call Forwarding All Calls CCIS*.
- 2. The night stations to which calls are routed via this service can be assigned on an individual trunk basis.
- 3. Destination stations can be part of a Hunt Group.
- 4. Destination stations are assigned on a flexible basis via the Call Forwarding All Calls CCIS feature.
- 5. Call billing to the outside party starts when the incoming call connects to the CCIS trunk.
- 6. If the called station does not answer after a predetermined time, the incoming call (without release signal) is automatically cut off.

# Outgoing Trunk Queuing - CCIS

#### **General Description**

This feature allows a CCIS network station, upon encountering an all trunk busy signal, to dial a specified access code and enter a first-in, first-out queue. As soon as a CCIS trunk becomes available, stations in the queue will be called back on a first-come, first-served basis.

#### **Operating Procedure**

To activate Outgoing Trunk Queuing - CCIS:

- 1. Dial the trunk access code; receive dial tone.
- 2. Dial the desired number; receive busy tone.
- 3. Press the hookswitch momentarily; receive feature dial tone.
- 4. Dial the Outgoing Trunk Queuing CCIS feature access code; receive service set tone.
- 5. Replace the handset.

To cancel Outgoing Trunk Queuing - CCIS:

1. Dial the Outgoing Trunk Queuing - CCIS cancellation code; receive service set tone.

- 1. When an outgoing trunk becomes available, the user's station will ring for 30 seconds. If not answered within that time, the station will automatically be dropped from the queue.
- 2. The system will automatically dial out the called subscriber number when the handset is lifted.
- 3. Individual stations can only initiate one *Outgoing Trunk Queue CCIS* at a time. Subsequent attempts will result in reorder tone.
- 4. Stations may be allowed or denied by Class Of Service Individual.
- 5. This feature is allowed from a station without a held call.
- 6. This feature is not available for an Attendant Console.
- 7. The maximum number of simultaneous Outgoing Trunk Queues is 32.
- 8. *Call Pickup Group* cannot be used to answer a call directed to another station using the *Outgoing Trunk Queuing* feature.
- 9. *Outgoing Trunk Queuing* is common to all the Central Office type trunks (DDD, FX, WATS, etc.) in the system.
- 10. The *Outgoing Trunk Queuing* callback will return to the originating station, not the *Call Forwarding* terminating station.
- 11. Account Code information can be recorded on the Station Message Detail System (SMDR) when used in conjunction with Outgoing Trunk Queuing CCIS.

- 12. This feature is not available under the following conditions:
  - When a station user in the NEAX2000 IVS system encounters a situation where all the outgoing trunks from another switching office (connected through CCIS) are busy.
  - When a station user in another switching office (connected through CCIS) encounters a situation where all the outgoing trunks from the NEAX2000 IVS system are busy.
- 13. If a station user dials a station in another office, via CCIS, and encounters a situation where all the CCIS trunks are busy, the NEAX2000 IVS system can automatically provide an alternate route employing the *Least Cost Routing* (LCR) feature.

# Paging Access - CCIS

# **General Description**

This feature provides dial access to paging equipment from an *Attendant Console* or a station, through the CCIS network.

# **Operating Procedure**

To access paging equipment through CCIS:

- 1. Lift the handset; receive dial tone.
- 2. Dial the Paging feature access code.
- 3. The connection to paging equipment is established.

- 1. Amplifiers and speakers must be provided by the customer.
- 2. One trunk circuit from a Central Office Trunk (COT) circuit card is required for each Paging Access.
- 3. Where *Tenant Service* is provided, separate access codes and hardware should be provided for each tenant.
- 4. A maximum of three digits can be used for the Paging feature access code.

# **Restriction From Outgoing Calls - CCIS**

### **General Description**

This feature automatically restricts users of preselected stations from placing outgoing calls and/or certain miscellaneous trunk calls through CCIS, without Attendant assistance.

#### **Operating Procedure**

No manual operation is required.

- 1. The restricted station will automatically receive reorder tone upon attempting to place a restricted outgoing call.
- 2. This feature is programmed in system data from the *Maintenance Administration Terminal* (MAT) or *Customer Administration Terminal* (CAT).
- 3. Non-restricted stations within the system can use the *Call Transfer All Calls* feature for outgoing calls to stations restricted by this feature.
- 4. Refer to the *Class Of Service Individual* and *Day/Night Class Of Service* Features and Specifications for further details.
- 5. Station line access to a given trunk group is controlled by assigning a Route Restriction Class (RSC) to each line. There can be a maximum of eight different RSCs (1-8) per system, each of which can be programmed to restrict an assigned station from none, one, or more than one trunk route (maximum of 64 trunk routes).
- 6. *Call Transfer All Calls*: If a restricted station user calls another station, the called station cannot use the *Call Transfer* feature to connect the calling station to a trunk route to which the restricted station is denied dial access. If a transfer is attempted, the second party station is rung back.
- 7. *Tie Line Access*: If the station user accesses a tie line trunk to a distant office (outside the CCIS network), access to outside exchanges can only be controlled by the distant office.
- 8. *Conference*: If a restricted station user calls another station, the called station cannot add on an outside exchange party via a trunk route in which the restricted station is denied dial access. An attempt to add on will result in a split connection, via switch hook flash.
- 9. *Night Service*: Restrictions can be changed for a given station when the system is in the Night mode of operation.

# Single-Digit Station Calling - CCIS

# **General Description**

This feature allows the assignment of single-digit station numbers.

### **Operating Procedure**

- 1. Lift the handset; receive dial tone.
- 2. Dial the single-digit preprogrammed station number.
- 3. The called station will be rung.

- 1. The single-digit station number must be different from the first digit of:
  - A Trunk Access Code
  - A Service Feature Access Code
  - Other Station Numbers
- 2. Timing start is not available with this feature.

# Station-Controlled Conference - CCIS

### **General Description**

This feature allows any station of the NEAX2400 IMS to establish a conference among a maximum of eight parties of stations and/or trunks (inside and outside parties) of the NEAX2000 IVS system, through CCIS.

### **Operating Procedure**

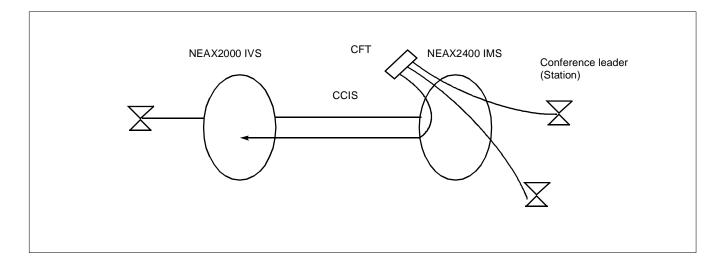
To initiate a *Station-Controlled Conference*:

- 1. The station user wishing to establish the conference (the conference leader) calls all parties and advises them of the conference.
- 2. All participating stations then call the Conference extension number.
- 3. The conferees are automatically connected.
- 4. Any push-button station within the conference can dial "9" to lock out additional parties, thereby ensuring privacy.
- 5. If the conference leader desires, each participant may be transferred into the conference.

To release from a *Station-Controlled Conference* call:

- 1. If any push-button station user in the conference dials "**0**", all the conference will be disconnected. Otherwise, the conference is terminated after all the parties have hung up.
- 2. An individual conferee releases from the conference call by hanging up. All other conferees remain connected.

- 1. A conference unit (PA-CFTB) must be mounted in the NEAX2400 IMS.
- 2. Stations and Attendants of the NEAX2000 IVS system cannot be the conference leader.



# Station-to-Station Calling - CCIS

### **General Description**

This feature permits any station user to dial another station directly, through CCIS, without Attendant assistance.

### **Operating Procedure**

To place a Station-To-Station Call:

- 1. Lift the handset and receive dial tone.
- 2. Dial the desired station number.

- 1. If the called station is off-hook, the originating station receives a busy tone. Otherwise, the called station will ring and the caller will hear ringback tone.
- 2. Station-To-Station Calling between tenants in the CCIS network will not be restricted.
- 3. The maximum number of digits per station number (not including the office code) is four.
- 4. The same station numbers cannot be duplicated in the same system.
- 5. The release process is First Party Release.

# Station-to-Station Calling - Operator Assistance - CCIS

# **General Description**

This feature allows a station user to call another station in the CCIS network, with the assistance of an *Attendant Console* operator.

# **Operating Procedure**

To place a *Station-To-Station Call* through the *Attendant Console*:

- 1. Lift the handset; receive dial tone.
- 2. Dial the operator access code.
- 3. Relay the desired station number to the Attendant.
- 4. The Attendant dials the station number.
- 5. The calling and called parties are connected when the Attendant presses the **RELEASE** key.

- 1. The Attendant may drop out of the connection either before or after the called party has answered.
- 2. Even if the called station does not answer within 30 seconds, the *Automatic Recall* feature will not be activated.

# Toll Restriction - 3/6 Digits - CCIS

#### **General Description**

This feature allows the NEAX2000 IVS to be programmed to restrict outgoing calls, through CCIS, according to specific Area and/or Office Codes. This restriction is determined on the basis of a three-digit Area Code or six-digit Area and Office Code numbering plan.

### **Operating Procedure**

No manual operation is required.

- 1. The programmed restriction pattern can consist of codes to be allowed or codes to be denied.
- 2. The Toll Restriction CCIS feature is assigned on a per-line, Class Of Service Individual basis.
- 3. When a toll call is denied, reorder tone is returned to the calling party.
- 4. The *Toll Restriction* feature is assigned on a per-line, Route Restriction Class (RSC), *Class-Of-Service* basis. When provided, this feature is applicable on a per-trunk route basis.

# Trunk Answer From Any Station - CCIS

### **General Description**

This feature allows any station, not restricted from incoming calls, to answer incoming calls when the network is in Night mode.

When this feature is activated, incoming exchange network calls will activate a common alert *Trunk Answer From Any Station (TAS)* signal at the customer premises. By dialing a specified code, any station may answer the call and extend it to any other station, in the CCIS network, using *Call Transfer - All Calls - CCIS*.

# **Operating Procedure**

To answer an incoming call in Night mode:

- 1. The TAS signal (bell, buzzer, etc.) sounds indicate an incoming call.
- 2. Lift the handset; receive dial tone.
- 3. Dial the TAS access code.
- 4. Connect to the incoming call.

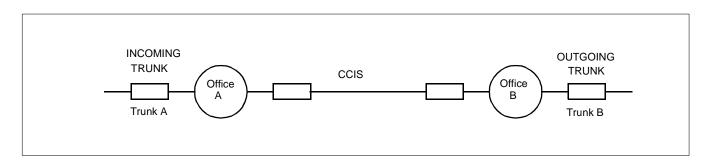
- 1. A Listed Directory Number (LDN) incoming call, from the main office on the CCIS network, will be forwarded to the TAS equipment.
- 2. A TAS indicator can be provided on a CCIS trunk route basis.
- 3. A maximum of eight LDNs can be assigned in the same system.
- 4. A LDN incoming call, from the main office in the CCIS network, will be terminated in the following order:
  - A. Night Connection Flexible CCIS
  - B. Night Connection Fixed CCIS
  - C. Trunk Answer From Any Station CCIS
- 5. Individual stations can be denied access to this feature via Class Of Service Individual.
- 6. A C.O. incoming call, terminating in Night mode, may be forwarded to the main office through the CCIS network.
- 7. This feature is a combination of the *Night Connection Fixed* and *Listed Directory Number Display Attendant* features.

# Trunk-to-Trunk Restriction - CCIS

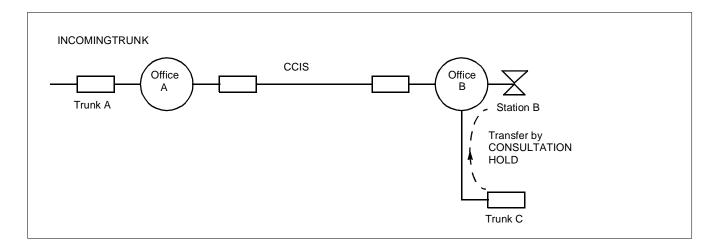
#### **General Description**

This feature allows trunk-to-trunk tandem restriction at counterpart's sending of caller's information (e.g., caller is a trunk) through the CCIS Network.

Case 1: A tandem connection at the following office can be restricted by Trunk Restriction Class of Trunk A and Outgoing Connection Restriction data of Trunk B.



Case 2: When Station B transfers an Incoming Call through CCIS to Trunk C, a trunk-to-trunk connection can be restricted by Trunk Restriction Class of Trunk A and Outgoing Connection Restriction data of Trunk C.



### **Operating Procedure**

No manual operation is required.

- 1. This feature is programmed in system data on a trunk route basis.
- 2. When the distant office is a NEAX2400 IMS, transfer of Trunk Restriction Class must be set in system data.

# **Uniform Numbering Plan - CCIS**

#### **General Description**

In a CCIS network, a *Uniform Numbering Plan* enables a station user to call any other station in the network. Two alternative numbering plans are provided. In the first plan, the station user dials a three-, four- or five-digit station number. The office in which the called station is located is identified by either the first digit or the first two digits of the station number. In the second plan, the station user dials a one-, two- or three-digit office number and a two-, three- or four-digit station number.

### **Operating Procedure**

To call a station at another office using Numbering Plan 1:

- 1. Lift the handset; receive dial tone.
- 2. Dial the three-, four- or five-digit station number.
- 3. The call is routed to another office according to programmed routing information, and the called station rings.
- 4. The called station answers and the parties are connected.

To call a station at another office using Numbering Plan 2:

- 1. Lift the handset; receive dial tone.
- 2. Dial the one-, two- or three-digit office code and the two-, three- or four-digit station number.
- 3. The call is routed to the office designated by the office code. The called station rings.
- 4. The called station answers and the parties are connected.

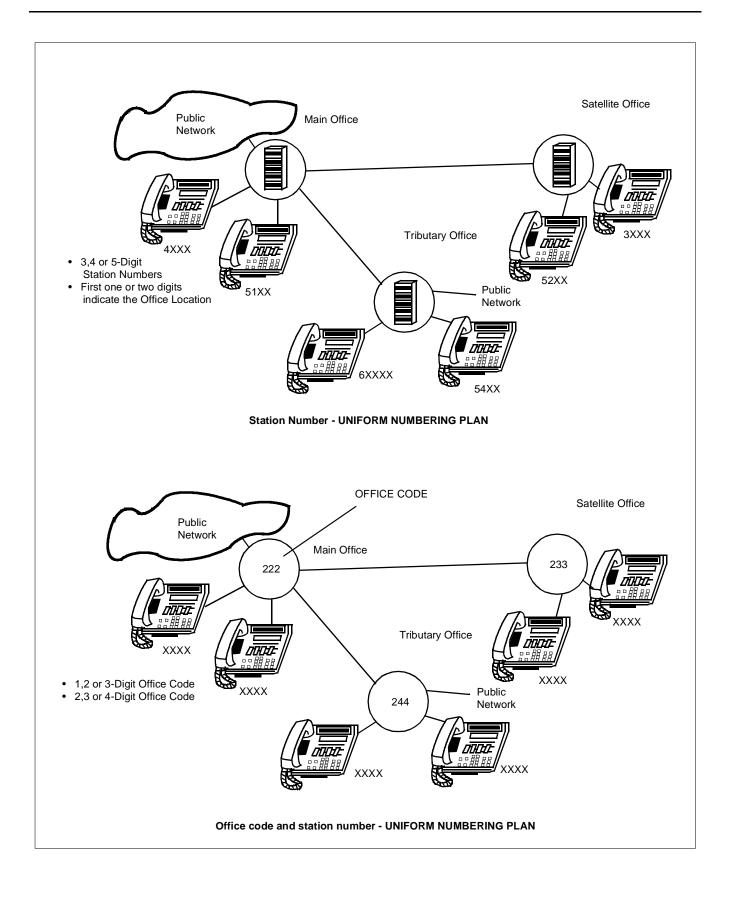
### **Service Conditions**

Numbering Plan 1:

- 1. All the station numbers must be three, four or five digits in length.
- 2. The location of the office can be identified by either the first digit or the first two digits of the station number.

Numbering Plan 2:

- 1. Each office in the CCIS network is assigned a one-, two- or three-digit office code and each station in the office is assigned a two-, three- or four-digit station number.
- 2. Within the same office, a station-to-station call is made by simply dialing the two-, three- or four-digit station number.



# Voice Call - CCIS

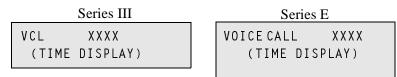
#### **General Description**

This feature provides a voice path, through the CCIS network, between a Multiline Terminal in one office and a Multiline Terminal in another office. This path is established from the calling party to the called party's built-in speaker. If the called party's **MIC** lamp is on, the called party can converse hands-free.

### **Operating Procedure**

From a Multiline Terminal to another Multiline Terminal:

- 1. The originating Multiline Terminal user dials the desired station number, in a different office, and receives ringback tone.
- 2. The calling party presses the *Voice Call* feature key. A signal tone is transmitted over the CCIS network to the called party's speaker. The calling party's LCD display shows:



#### Called Multiline Terminal

3. The called party presses the **MIC** key (if the **MIC** LED is not lit) to allow two-way conversation with the calling party.

- 1. Once a *Voice Call CCIS* has been activated, the called station will appear busy on Multiline Terminals with a secondary extension.
- 2. A Voice Call will follow Call Forwarding All Calls CCIS and Call Forwarding Busy.
- 3. A Voice Call CCIS will terminate at the station whose primary extension equals the called extension.
- 4. Only the called station user can respond in a hands-free manner.
- 5. The *Hands-Free Answerback* feature, for answering a voice call, is possible only when the **MIC** lamp of the called Multiline Terminal is illuminated.

# Voice Mail Integration - CCIS

# **General Description**

This feature allows any station user in the CCIS Network to utilize the *Voice Mail System* (VMS) with the *Message Center Interface* (MCI).

### **Operating Procedure**

To record a message into the VMS:

- 1. Go off-hook and receive Dial Tone.
- 2. Dial the voice mail station number and receive Ringback Tone.
- 3. Follow the instructions given by the VMS.

To retrieve a message from the VMS:

- 1. Go off-hook and receive Dial Tone.
- 2. Dial the voice mail station number and receive Ringback Tone. The LCD display
  - [ xxx]

VMS: Voice mail station number

3. Follow the instructions given by the VMS.

To set call forwarding to the VMS:

- Call Forwarding All Calls
- Call Forwarding Busy Line
- Call Forwarding Don't Answer
- Split Call Forwarding All Calls
- Split Call Forwarding Busy Line
- Split Call Forwarding Don't Answer
- 1. Go off-hook and receive Dial Tone.
- 2. Dial the Call Forwarding or Split Call Forwarding feature access code and receive Special Dial Tone.
- 3. Dial the voice mail station number; receive Service Set Tone. The LCD displays: [SET xxxx]
   VMS: Voice mail station number

Connection when a station line number whose call forwarding is set to a VMS is called from another station:

1. Go off-hook and receive Dial Tone.

- 2. Dial the desired station number; receive Ringback Tone. The LCD displays: [FDA xxx]
   VMS: Voice mail station number
- 3. Follow the instructions given by the VMS.

- 1. Rotary telephones are denied access to the VMS.
- 2. A station in either NEAX2000 IVS or NEAX2400 may set call forward outside to the VMS. Any calls forwarded to the VMS will be directed to the personal Mail Box of the station that is forwarded.
- 3. Once a message is left in the VMS, the VMS can send *Message Waiting Indication* to the forwarded station.
- 4. The destination station number of the VMS must be assigned in system programming for message retrieval via the *Message Wait* feature.
- 5. The station user may set, *Call Forwarding-All Calls- CCIS*, *-Busy Line-CCIS*, *-Don't Answer CCIS* to transfer an incoming call to the VMS.
- 6. When a call is received from the CCIS trunk to the VMS, the ANI information is not added to the call connection status information even though the ANI information is sent from the network.

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