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MANUAL PART NUMBER: 400-0004-003  
PRODUCT REVISION: 0

## **DA1804NT**

### **1-IN, 4-OUT VIDEO**

## **DISTRIBUTION AMPLIFIER**

## **USER'S GUIDE**

# DISTRIBUTION AMPLIFIERS

## INTRODUCTION

Thank you for purchasing the **DA1804NT** Distribution Amplifier. We are sure you will find it a reliable and useful product.

Superior performance for the right price backed by solid technical and customer support is what we have to offer.

The product you are holding in your hands is designed using state-of-the-art technology and is superior to anything available on the market. You will find this and our other products reliable, long lasting, and simple to operate.

We are committed to providing our customers with solutions to the most demanding audio-visual installations at very competitive pricing.

We appreciate your selection of our products and are confident that you will join the ranks of our many satisfied customers throughout the world.

### This manual covers:

**DA1804NT** - 1-in, 4-out Video Distribution Amplifier.

## TABLE OF CONTENTS

	Page
PRECAUTIONS / SAFETY WARNINGS .....	2
GENERAL .....	2
RACK MOUNTING SAFETY GUIDELINES .....	2
INSTALLATION .....	2
CLEANING .....	2
FCC / CE NOTICE .....	2
ABOUT YOUR DISTRIBUTION AMPLIFIER .....	3
TECHNICAL SPECIFICATION .....	3
DESCRIPTION OF <b>DA1804NT</b> .....	4
APPLICATION DIAGRAM .....	5
INSTALLING YOUR DISTRIBUTION AMPLIFIER.....	5
OPERATION .....	5
ACCESSORIES.....	6
FREQUENTLY ASKED QUESTIONS.....	6
TROUBLESHOOTING GUIDE .....	7
ALTINEX POLICY .....	7
LIMITED WARRANTY .....	7
RETURN POLICY .....	7
CONTACT INFORMATION .....	7

# DISTRIBUTION AMPLIFIERS

## PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **DA1804NT** Distribution Amplifier. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **DA1804NT** and to prevent fire and shock hazard. Please read them carefully and heed all warnings.

### 1.1 GENERAL

- Unauthorized personnel shall not open the unit since there are high-voltage components inside.
- Qualified Altinex service personnel, or their authorized representatives must perform all service.

### 1.2 SAFETY GUIDELINES FOR THE RACK-MOUNTING OF THE DA1804NT

- Maximum operating ambient temperature is 35 (degrees C).
- Never restrict the airflow through the devices' fan or vents.
- When installing equipment into a rack, distribute the units evenly. Otherwise, hazardous conditions may be created by an uneven weight distribution.
- Connect the unit to a properly rated supply circuit.
- Reliable Earthing (Grounding) of Rack-Mounted Equipment should be maintained.

### 1.3 INSTALLATION

- For best results, place the **DA1804NT** Distribution Amplifier on a flat, level surface in a dry area away from dust and moisture.
- To prevent fire or shock, do not expose this unit to rain or moisture. Do not place the **DA1804NT** Distribution Amplifier in direct sunlight, near heaters or heat radiating appliances, or near any liquid. Exposure to direct sunlight, smoke, or steam can harm internal components.
- Handle the **DA1804NT** Distribution Amplifier carefully. Dropping or jarring can damage internal components.

- Do not place heavy objects on top of the **DA1804NT**. If the is to be mounted to a table or wall, use only Altinex made mounting accessories, such as mini mounting brackets **DA1295FC** (2-"L" shaped brackets) and cables for optimum setup.
- To turn off the main power, be sure to remove the cable from the power outlet. The power outlet socket should be installed as near to the equipment as possible, and should be easily accessible.
- Do not pull the input cable or any other cable that is attached to the **DA1804NT** Distribution Amplifier.
- If the **DA1804NT** Distribution Amplifier is not used for an extended period, disconnect the input cable from the power outlet.

### 1.4 CLEANING

- Unplug the **DA1804NT** input cable before cleaning. Clean surfaces with a dry cloth. Never use strong detergents or solvents, such as alcohol or thinner. Do not use a wet cloth or water to clean the unit.

### 1.5 FCC / CE NOTICE

- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be

# DISTRIBUTION AMPLIFIERS

required to correct the interference at his own expense.

- Any changes or modifications to the unit not expressly approved by Altinex, Inc. could void the user's authority to operate the equipment.

## ABOUT YOUR DISTRIBUTION AMPLIFIER 2

The **DA1804NT** is a 1-in 4-out distribution amplifier designed to allow the connection of a single video source to as many as four display or recording devices.

The **DA1804NT** can pass NTSC, PAL, and SECAM - type composite video signals. It can also pass high-resolution monochrome computer video, such as grayscale signals used in medical imaging. The **DA1804NT** can handle video signals with levels up to 1.5V p-p.

With state-of-the-art ICs, the **DA1804NT** offers a bandwidth of 350 MHz with a very flat frequency response up to 200MHz. It also offers a differential gain of 0.15% and a differential phase of 0.15 degrees.

The **DA1804NT** Distribution Amplifier has a pre-set gain of 1.05. Each output id is completely independent and can withstand shorts to ground indefinitely. Extremely rugged and compact, the **DA1804NT** fits easily into tight spots. Using a high quality 75 Ohms coaxial cable, it can drive an NTSC signal 400 feet or more.

## TECHNICAL SPECIFICATIONS 3

FEATURES/DESCRIPTION	DA1804NT
<b>GENERAL</b>	
<b>No. of Inputs</b>	1
Input Connector	Female BNC
<b>No. of Outputs</b>	4
Output Connector	Four BNC Female
<b>Compatibility</b>	NTSC, PAL, SECAM, High Resolution Monochrome Computer Video

Table 1. **DA1804NT** General

MECHANICAL	DA1804NT
Material	0.1" Al
Finish	Gray
Top Panel	Lexan
Height (inches)	3.00 (76mm)
Width (inches)	4.31 (109mm)
Depth (inches)	0.94 (239mm)
Weight (pounds)	0.4 (0.2kg)
Ship Weight (pounds)	2.0 (0.9kg)
T° Operating	10°C-35°C
T° Maximum	50°C
Humidity	90% non-condensing
MTBF (calculations)	40,000 hrs

Table 2. **DA1804NT** Mechanical

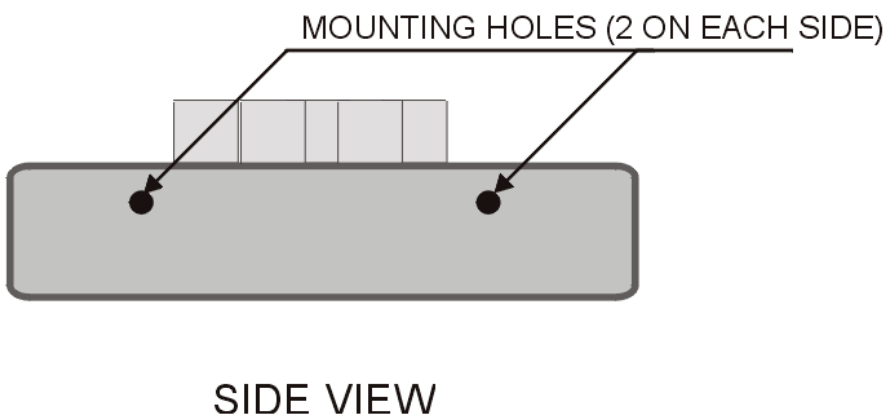
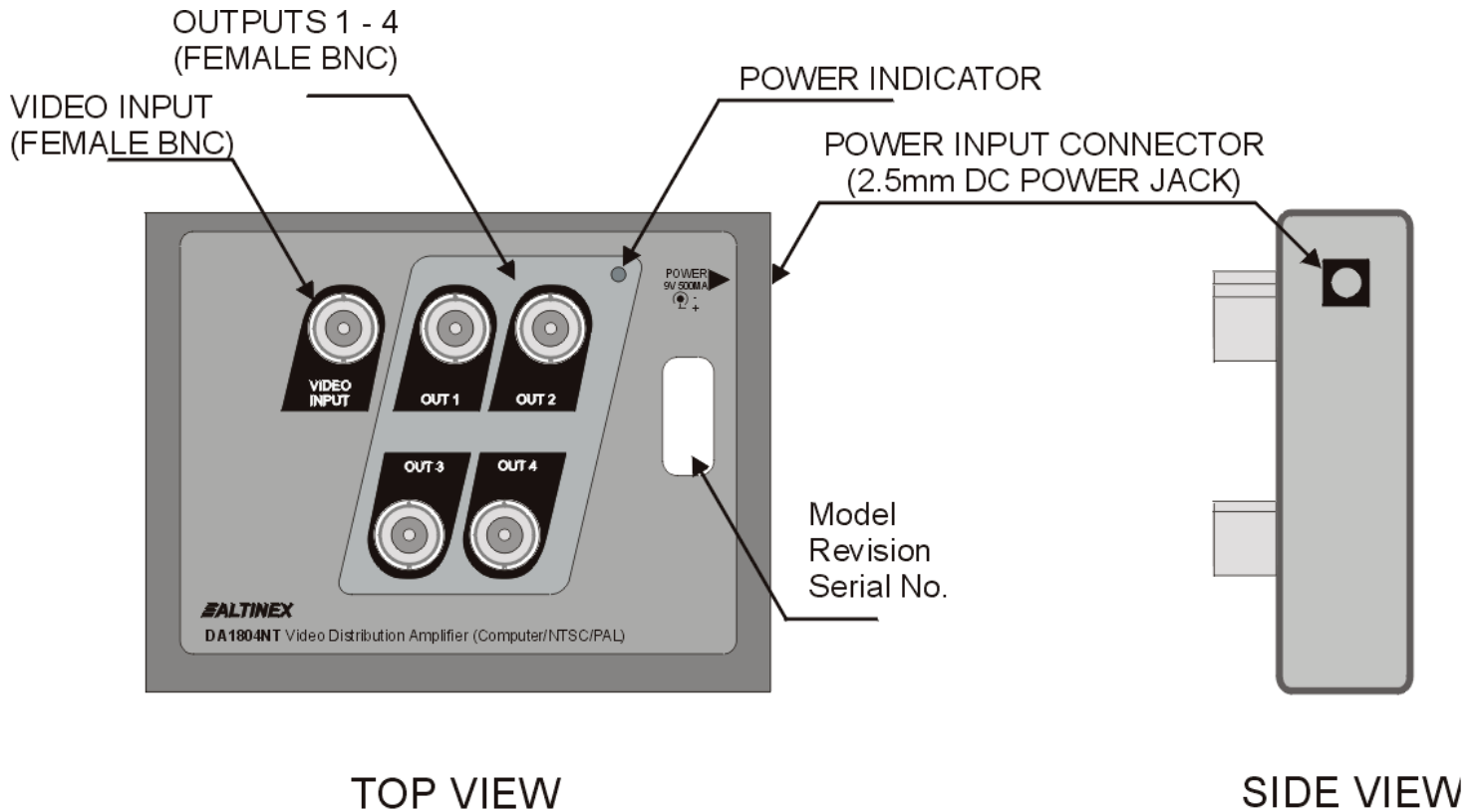
ELECTRICAL	DA1804NT
<b>Input Video Signal</b>	
Analog Signal	1.5V p-p max
Impedance	75 Ohms
<b>Output Video Signal</b>	
Analog Signal	Gain of 1.05 (+/-5%)
Fall/Rise Time (ns)	1.4
Impedance	75 Ohms
<b>Frequency Compatibility</b>	
Horizontal	15-200 kHz
Vertical	47-180 Hz
Minimum Video Bandwidth	350 MHz @ -3dB
Typical Video Bandwidth	380 MHz @ -3dB
<b>Coupling</b>	DC
<b>Power</b>	
External Power Adapter	9V DC 500mA (included)
<b>Power Consumption</b>	2 watts max

Table 3. **DA1804NT** Electrical

# DISTRIBUTION AMPLIFIERS

## DESCRIPTION OF DA1804NT

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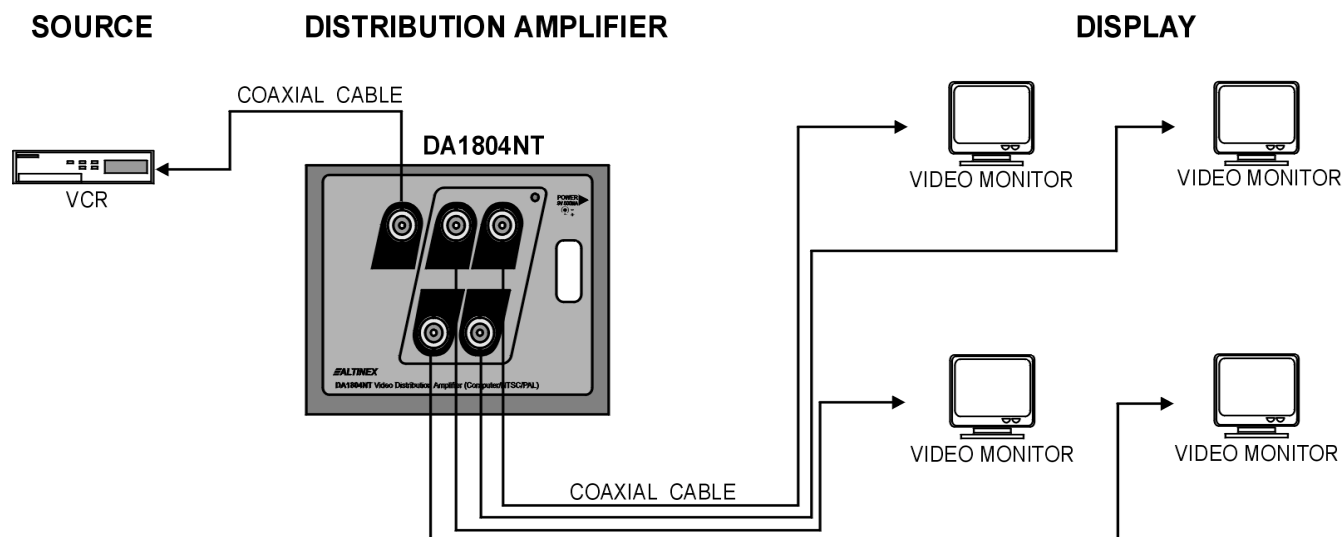
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## APPLICATION DIAGRAM

5



## INSTALLING YOUR DISTRIBUTION AMPLIFIER

6

- Step 1.** Connect one end of the input cable included with the unit to the video output port of your source computer and the 15-pin HD connector end to the video input port of the **DA1804NT**.
- Step 2.** Connect the input cable to the unit. Plug it into the power outlet. The power indicator LED on the front panel will light. This indicates that the unit is operational.
- Step 3.** Connect cable from the video source (VCR, Document Camera, etc.) to the input connector of the **DA1804NT**. Connect the output connector of **DA1804NT** to the display devices (monitors or projectors) through the coaxial cables.
- Step 4.** If the image is less than perfect check all of the connections. The unit is very reliable and seldom will this be the cause of malfunction. Poor quality cables may often degrade the performance of the product. Make sure that the cables used are coaxial cables and that all pins are in good condition.

## CONGRATULATIONS! YOU ARE DONE.

If you experience any problems, please call  
1-800-258-4623 or 1-714-990-2300 for  
international calls.

## OPERATION

7

The **DA1804NT** will operate successfully as long as cables are attached properly and other technical specifications are followed.

5

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## ACCESSORIES 8

Model No.	Description
	<b>RACK MOUNT HARDWARE</b>
DA1295FC	Mount mini-brackets (2 – “L” shape brackets)
	<b>High Resolution Coax Cable – conductor for output</b>
CB4100MR	Bulk cable (500 ft. minimum)
CB4103MR	3 feet, 4 BNC to 4 BNC
CB4106MR	6 feet, 4 BNC to 4 BNC
CB4112MR	12 feet, 4 BNC to 4 BNC
CB4125MR	25 feet, 4 BNC to 4 BNC
CB4150MR	50feet, 4 BNC to 4 BNC
CB4175MR	75 feet, 4 BNC to 4 BNC
CB41100MR	100 feet, 4 BNC to 4 BNC
CB41150MR	150 feet, 4 BNC to 4 BNC
	<b>Super High Resolution Coax Cable – conductor for output</b>
CB4300MR	Bulk cable (500 ft. minimum)
CB4303MR	3 feet, 4 BNC to 4 BNC
CB4306MR	6 feet, 4 BNC to 4 BNC
CB4312MR	12 feet, 4 BNC to 4 BNC
CB4325MR	25 feet, 4 BNC to 4 BNC
CB4350MR	50feet, 4 BNC to 4 BNC
CB4375MR	75 feet, 4 BNC to 4 BNC
CB43100MR	100 feet, 4 BNC to 4 BNC
CB43150MR	150 feet, 4 BNC to 4 BNC
	<b>POWER ADAPTERS</b>
PC5502US	9V 500mA Power Supply for US
PS5512UK	9V 500mA Power Supply for UK
PS5522AU	9V 500mA Power Supply for Australia
PS5532GR	9V 500mA Power Supply for Germany
PS5542JP	9V 500mA Power Supply for Japan

## FREQUENTLY ASKED QUESTIONS 9

No:	Question	Answer
1.	What is a Distribution Amplifier?	A Distribution Amplifier is a device that allows a connection of a single video source to multiple display devices, such as monitors or projectors used in presentation applications.
2.	When do I use the DA1804NT?	The DA1804NT should be used in certain cases when there is a need for a simultaneous connection of a single video source with as many as four display or recording devices.
3.	Which signal format can be passed through the DA1804NT?	The DA1804NT can pass NTSC, PAL, SECAM type video signals or high resolution monochrome computer video signals.
4.	May I use all outputs?	Yes, you may. All outputs of the DA1804NT are completely independent, so it is not necessary to terminate unused outputs.
5.	How far can the DA1804NT drive NTSC signals?	Using high quality 75-Ohms coaxial cable, it can drive an NTSC signal about 400 feet or less.

# DISTRIBUTION AMPLIFIERS

## TROUBLESHOOTING GUIDE 10

We have carefully tested and have found no problems in the supplied **DA1804NT** unit; however, we would like to present these suggestions:

- Please make sure that the input amplitude of the analog signal is less than 1.5V.
- Please use the Altinex supplied external adapter supplying 9V 500 mA.
- Please make sure that proper quality of cables is used. We recommend an Altinex made cable for the best results.
- If a problem arises after continuous usage at higher voltage, higher temperature, higher humidity, or at other extreme environmental conditions, please correct the problem.

## ALTINEX POLICY 11

### 11.1 LIMITED WARRANTY

Altinex warrants that its products and cables are free from defects in materials under normal use and service. This warranty is limited to repairing at the company's factory any part or parts of the product, which upon company's examination shall disclose to be, thus defective. Products considered defective should be returned to company with transportation charges pre-paid within 2 years (90 days for cables) from date of shipment to the purchaser. The warranty is expressly instead of all other warranties expressed or implied. Altinex neither assumes nor authorizes any other person to assume for it any other liability in connection with the sale of our products. This warranty shall not apply to any product that shall have been repaired or altered outside of the company's factory in any way so as, in its judgment, to affect its stability or reliability, or that has been subject to misuse, negligence or accident.

### 11.2 RETURN POLICY

It is very important to Altinex that you receive the products that you have ordered and that this product meets your expectations. In the unlikely event that an Altinex product needs to be returned, please follow the policies below:

Altinex will accept product returns for a period of 30 days from authorized Altinex dealers. Products must be returned in an unopened package.

If the product has been opened, the restocking fees will apply. For the restocking fee amount, please contact an Altinex Sales Representative.

If the product is in your possession for more than 30 days, the restocking fees will apply.

Altinex will not accept any returns on cables or custom products.

If your product is in warranty and needs service, contact the Altinex Sales Department for an RMA (Return Material Authorization). Products returned without an RMA number may experience a delay in service.

If your product is out of warranty and needs service, contact the Altinex Sales Department for an RMA (Return Material Authorization). Products returned without an RMA number may experience a delay in service. The service charges will be quoted to you before the actual repairs are done.

### 11.3 CONTACT INFORMATION

#### Sales Department

Phone: 714-990-2300

Fax: 714-990-3303

#### Accounting Department

Phone: 714-990-6088

Fax: 714-990-5778