

# DISTRIBUTION AMPLIFIERS

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MANUAL PART NUMBER: 400-0025-003  
PRODUCT REVISION: 3

**DA1226AT**

**1-IN, 6-OUT RGBHV**

**DISTRIBUTION AMPLIFIER**

**USER'S GUIDE**

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**ALTINEX**

SIGNAL  
MANAGEMENT  
SOLUTIONS

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# DISTRIBUTION AMPLIFIERS

## INTRODUCTION

Thank you for purchasing the **DA1226AT** 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:

**DA1226AT** - 1-in, 6-out RGBHV Distribution Amplifier

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# DISTRIBUTION AMPLIFIERS

## PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **DA1226AT** Distribution Amplifier. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **DA1226AT** 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 DA1226AT

- 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 **DA1226AT** 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 **DA1226AT** 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 **DA1226AT** Distribution Amplifier carefully. Dropping or jarring can damage internal components.

- Do not place heavy objects on top of the **DA1226AT**. If the **DA1226AT** is to be mounted to a table or wall, use only Altinex made mounting accessories (Rack Mount Ears **DA1292FC**) and cables for optimum setup.
- To turn off the main power, be sure to remove the cord from power outlet. The power outlet socket should be installed as near to the equipment as possible, and should be easily accessible.
- Do not pull power cord or any cable that is attached to the **DA1226AT** Distribution Amplifier.
- If the **DA1226AT** Distribution Amplifier is not used for an extended period of time, disconnect the power cord from the power outlet.

### 1.4 CLEANING

- Unplug the **DA1226AT** power cord 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

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cause harmful interference in which case the user will be required to correct the interference at his own expense.

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

## ABOUT YOUR DISTRIBUTION AMPLIFIER 2

The **DA1226AT** is a 1-in 6-out RGBHV distribution amplifier designed to allow the connection of a single computer video or interface source to as many as six monitors or projectors capable of handling the source resolution.

The **DA1226AT** offers excellent bandwidth performance (minimum 350 MHz) and a typical bandwidth of nearly 450 MHz, allowing it to remain virtually transparent to high resolution signals.

Though primarily designed to pass an RGBHV signal format, the **DA1226AT** can also pass RGBS, RGsB, Component Video (Y, R-Y, B-Y), S-Video (Y/C), and Composite Video by using the appropriate channels. The **DA1226AT** outputs the same sync level as it receives on its input.

The **DA1226AT** offers a low-profile design, which helps to prevent tilting due to cable drag when used in desktop applications. The **DA1226AT** uses an internal 90-140/200-240V switchable power supply. It may be rack-mounted using optional hardware.

## TECHNICAL SPECIFICATIONS 3

FEATURES/DESCRIPTION	DA1226AT
<b>GENERAL</b>	
<b>No. of Inputs</b>	One
Input Connectors	Set of 5 BNC Female
<b>No. of Outputs</b>	Six
Output Connectors	Set of 5 BNC Female
<b>Compatibility</b>	High resolution RGBHV, RGBS, RGsB and RsGsBs, Component, S-Video and Composite Video

Table 1. **DA1226AT** General

MECHANICAL	DA1226AT
Material	0.1" Al
Finish	Gray
Front/Back panels	Lexan
Height (inches)	1.75in (44mm) (1U)
Width (inches)	17.0in (432mm) (1 rack wide)
Depth (inches)	4.50in (114mm)
Weight (pounds)	5.0lbs (2.27kg)
Ship Weight (pounds)	7.0lbs (3.18kg)
T° Operating	10°C-35°C
T° Maximum	50°C
Humidity	90% non-condensing
MTBF (calculations)	40,000 hrs

Table 2. **DA1226AT** Mechanical

ELECTRICAL	DA1226AT
<b>Input Video Signal</b>	
Analog Signal	1.5V p-p max
Impedance	75 Ohms
<b>Input Sync Signal</b>	
Horizontal, Vertical, & C-Sync	TTL(+/-)
Sync on Green	-0.3V
Impedance	10 k Ohms
<b>Output Video Signals</b>	
Analog Signal	Gain of 1.05 (+/-5%)
Fall/Rise Time (ns)	1.0
Impedance	75 Ohms
<b>Output Sync Signal</b>	
Composite Sync, (Horizontal, Vertical)	TTL(+/-)
Sync on Green	-0.3V
Impedance	22 Ohms
<b>Frequency Compatibility</b>	
Horizontal	15-200 kHz
Vertical	47-180 Hz
Typical Video Bandwidth	450 MHz @ -3dB
Minimum Video Bandwidth	350 MHz @ -3dB
<b>Cable Equalization</b>	3dB @ 120 MHz
<b>Coupling</b>	DC
<b>Cross-talk</b>	-40dB @ 10 MHz
<b>Power</b>	
Internal Power Supply	90-140/200-240 V switchable
<b>Power Consumption</b>	10 watts max

Table 3. **DA1226AT** Electrical

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## DESCRIPTION DIAGRAM

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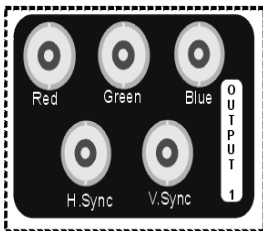
### FRONT PANEL OF DA1226AT



POWER INDICATOR LED

### BACK PANEL OF DA1226AT

#### 5-BNC FEMALE CONNECTOR

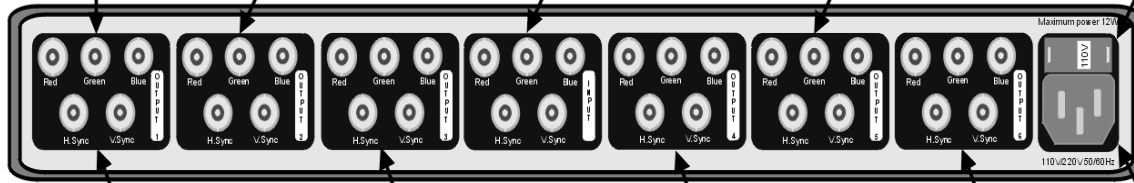


RGBHV OUTPUT 2  
(5-BNC FEMALE  
CONNECTORS)

RGBHV INPUT

RGBHV OUTPUT 5  
(5-BNC FEMALE  
CONNECTORS)

FUSE BOX AND  
VOLTAGE SELECTOR



RGBHV OUTPUT 1  
(5-BNC FEMALE  
CONNECTORS)

RGBHV OUTPUT 3  
(5-BNC FEMALE  
CONNECTORS)

RGBHV OUTPUT 4  
(5-BNC FEMALE  
CONNECTORS)

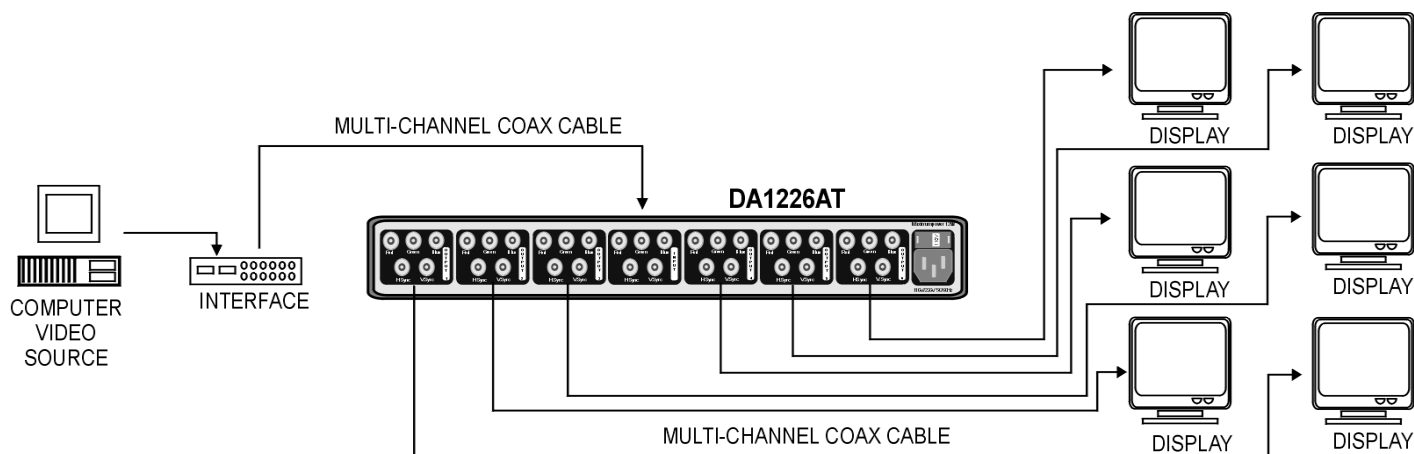
RGBHV OUTPUT 6  
(5-BNC FEMALE  
CONNECTORS)

POWER  
CONNECTOR

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## APPLICATION DIAGRAM

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## INSTALLATION

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- Step 1.** Please attach the Interface on the rack or table using the optional hardware.
- Step 2.** The **DA1226AT** may be used with either 110V or 220V and offers a universal IEC connector for ease of use throughout the world. Before plugging in the power cord to the unit, please verify that the voltage rating of 110V/220V on the FUSE CLIP located at the rear of the unit is the same as the voltage rating on the power outlet. To change setting, unplug the power cord from the **DA1226AT** and squeeze the clips on either side of the fuse box. Then turn the FUSE DIP 180 degrees, repositioning it in the clip so that the voltage is visible through the window. Please reinsert the fuse box, and push it in until the side clips of the fuse box click and lock securely into place.
- Step 3.** Then connect the appropriate power cord for your country into the power input socket of the **DA1226AT** gently, but firmly. The power indicator light on the front panel of the **DA1226AT** should turn on.

- Step 4.** Connect the video output of the source of the (computer or other high-resolution source) to input of the **DA1226AT** using a high quality of coaxial-type cables. If the source offers a VGA-type 15 pin HD connector, use a HD 15 to 5-BNC made for the **MS8102CA** or the **MS8112CA**. NOTE: You may have to use an interface with your source to provide the appropriate signal format type for **DA1226AT** or to use a local monitor if needed.
- Step 5.** Connect the output channels of the amplifier to the display devices (monitors and/or projectors.) using a good quality of coaxial cables.
- Step 6.** Confirm picture quality on all displays. If you are not receiving a signal, make sure that the display is compatible with the resolution of the computer graphics card. If the picture quality is less than perfect, check to make sure that all of your connections are solid and that you are using a high quality cable.

**CONGRATULATIONS! YOU ARE DONE.**

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

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## OPERATION 7

The DA1226AT will operate successfully as long as cables are attached correctly and other technical specifications are followed. There are no other adjustments necessary to operate the unit.

## ACCESSORIES 8

Model No.	Description
	<b>RACK MOUNT HARDWARE</b>
DA1292FC	19"-1U Rack Mount Ears for rack wide units
DA1293FC	<b>HIGH RESOLUTION 5-CHANNEL COAX CABLE</b> (for input of output)
CB4203MR	3 feet, 5-BNC M to 5-BNC M
CB4206MR	6 feet, 5-BNC M to 5-BNC M
CB4212MR	12 feet, 5-BNC M to 5-BNC M
CB4225MR	25 feet, 5-BNC M to 5-BNC M
CB4250MR	50 feet, 5-BNC M to 5-BNC M
CHB4275MR	75 feet, 5-BNC M to 5-BNC M
CB42100MR	100 feet, 5-BNC M to 5-BNC M
CB42150MR	150 feet, 5-BNC M to 5-BNC M
DA1226AT	<b>SUPER HIGH RESOLUTION 5-CHANNEL COAX CABLE</b> (for input or output)
CB4406MR	6 feet, 5-BNC M to 5-BNC M
CB4412MR	12 feet, 5-BNC M to 5-BNC M
CB4425MR	25 feet, 5-BNC M to 5-BNC M
CB4450MR	50 feet, 5-BNC M to 5-BNC M
CB4475MR	75 feet, 5-BNC M to 5-BNC M
CB44100MR	100 feet, 5-BNC M to 5-BNC M
CB44150MR	150 feet, 5-BNC M to 5-BNC M
	<b>HIGH RESOLUTION PLENUM-FLEX 5-CHANNEL COAX CABLE</b>
CB500PL-5BM00035BM	3 feet, 5BNC M to 5-BNC M
CB500PL-5BM00065BM	6 feet, 5BNC M to 5-BNC M
CB500PL-5BM00125BM	12 feet, 5BNC M to 5-BNC M
CB500PL-5BM00255BM	25 feet, 5BNC M to 5-BNC M
CB500PL-5BM00505BM	50 feet, 5BNC M to 5-BNC M
CB500PL-5BM00755BM	75 feet, 5BNC M to 5-BNC M
CB500PL-	100 feet, 5BNC M to 5-BNC M

5BM01005BM	
CB500PL-5BM01505BM	150 feet, 5BNC M to 5-BNC M
CB500PL-5BM02005BM	200 feet, 5BNC M to 5-BNC M
CB500PL-5BM02505BM	250 feet, 5BNC M to 5-BNC M
	<b>SUPER HIGH RESOLUTION PLENUM-FLEX 5-CHANNEL COAX CABLE</b>
CB5100PL – 5BM00035BM	3 feet, 5-BNC M to 5-BNC M
CB5100PL-5BM00065BM	6 feet, 5-BNC M to 5-BNC M
CB5100PL – 5BM00125BM	12 feet, 5-BNC M to 5-BNC M
CB5100PL – 5BM00255BM	25 feet, 5-BNC M to 5-BNC M
CB5100PL – 5BM00505BM	50 feet, 5-BNC M to 5-BNC M
CB5100PL – 5BM00755BM	75 feet, 5-BNC M to 5-BNC M
CB5100PL – 5BM01005BM	100 feet, 5-BNC M to 5-BNC M
CB5100PL – 5BM01505BM	150 feet, 5-BNC M to 5-BNC M
CB5100PL – 5BM02005BM	200 feet, 5-BNC M to 5-BNC M
CB5100PL – 5BM02505BM	250 feet, 5-BNC M to 5-BNC M
	<b>VGA TO RGB ADAPTER CABLES</b>
MS8102CA	15-pin HD M to 5 BNC M, 6ft
MS8104CA	15-pin HD M to 5 BNC M, 15ft
MS8105CA	15-pin HD M to 5 BNC M, 50ft
MS8112CA	15-pin HD F to 5 BNC M, 6ft
MS8114CA	15-pin HD F to 5 BNC M, 15ft
	<b>POWER CABLES</b>
PC5301US	Power Cable for US
PC5302UK	Power Cable for UK
PC5303AU	Power Cable for Australia
PC5304GR	Power Cable for Germany

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## FREQUENTLY ASKED QUESTIONS 9

No:	Question	Answer
1	How many feet of cable can I use with the <b>DA1226AT</b> ?	The outputs of the <b>DA1226AT</b> allow signals to be driven through 10 feet or more of cable depending on cable quality and the source signal resolution.
2	Does the <b>DA1226AT</b> offer buffered outputs?	The <b>DA1226AT</b> offers all six as individually buffered outputs.
3	What is meant by buffered output?	Buffered output means that the output signal is isolated from the input signal. The loaded output does not affect the input, or any other output on the device. A buffered output may vary in terms of the gain or peaking adjustments made to the video signal.
4	Which type of format signal may I pass through the <b>DA1226AT</b> ?	The <b>DA1226AT</b> can pass RGBHV, RGBS, RGsB, Component Video, S-Video, and Composite Video by using appropriate channels. Video sources may be passed through red, green, and blue channels as well as the horizontal and vertical sync channels.
5	Can I use CAT-5 cables instead of coaxial cables?	You can't use cat 5 cable instead of coaxial cable, because you will lose quality of the receiving signal. Since there is no isolation of the signal in each wire, the signals will interfere with each other, so CAT-5 is not recommended at all.
6	What is the maximum resolution of input video signal that	Resolution format describes the number of pixels and lines in a given video image, as well as the rate at which each frame is redrawn or

can pass through <b>DA1226AT</b> ?	refreshed. Offering a minimum video bandwidth of 350 MHz and typical bandwidth close 450 MHz, the <b>DA1226AT</b> allows very high resolution video signals (up to 1600x1200) to pass without affecting image quality.
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## TROUBLESHOOTING GUIDE 10

- Please make sure that the input amplitude of the analog signal is less than 1.5V.
- Please make sure that sync levels at the TTL level are between 1.4 Vp-p and 5 Vp-p.
- Please make sure that the highest quality of cables is used. We recommend Altinex made cables for best results.
- If a problem arises after continuous usage at a higher voltage, higher temperature, higher humidity, or at other extreme environmental conditions, please correct the problem. NOTE: The sync pulse voltage must be at least 1.4 V for proper operation of the distribution amplifier. If lower voltage is used, contact Altinex for additional information.
- If there is no image on the display, make sure that the source has a compatible refresh rate and resolution with the display by a direct connector of the source and display.
- If the image quality is poor, then check the input of the cable so that the source is capable of driving signals to the **DA1226AT** through the length of the cable.
- If you are using a HD-15 to 5-BNC cable to connect a computer directly to the **DA1226AT** and do not see the picture or display use an interface to make the video signal compatible to display.



## ALTINEX POLICY

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### 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 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 the products. This warranty shall not apply to any product that shall have been repaired or altered outside of 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 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 should be returned in an unopened package.

If a 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