

DISTRIBUTION AMPLIFIERS



MANUAL PART NUMBER: 400-0007-003
PRODUCT REVISION: 1

DA1912SX

**1-IN, 2-OUT RGBS
DISTRIBUTION AMPLIFIER
USER'S GUIDE**

EALINEX



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DISTRIBUTION AMPLIFIERS

INTRODUCTION

Thank you for purchasing **DA1912SX** 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:

DA1912SX - 1-in, 2-out RGBS 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 DA1912SX	4
INPUT TERMINATION SWITCH	4
VIDEO LEVEL SWITCH	4
SYNC LEVEL SWITCH	4
POWER	4
MOUNTING THE DA1912SX	4
APPLICATION DIAGRAM	5
INSTALLING YOUR DISTRIBUTION AMPLIFIER	5
OPERATION	6
ACCESSORIES	6
FREQUENTLY ASKED QUESTIONS	7
TROUBLESHOOTING GUIDE	8
ALTINEX POLICY	8
LIMITED WARRANTY	8
RETURN POLICY	8
CONTACT INFORMATION	8

DISTRIBUTION AMPLIFIERS

PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **DA1912SX** Distribution Amplifier. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **DA1912SX** 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 DA1912SX

- Maximum operating ambient temperature is 35 (degrees C).
- Never restrict the airflow through the device's 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 **DA1912SX** 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 **DA1912SX** 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 **DA1912SX** Distribution Amplifier carefully. Dropping or jarring can damage internal components.
- Do not place heavy objects on top of the **DA1912SX**. If the **DA1912SX** is to be

mounted, to a table or wall, use only Altinex made mounting accessories, such as mini mount-brackets (**DA1295FC**) 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 **DA1912SX** Distribution Amplifier.
- If the **DA1912SX** Distribution Amplifier is not used for an extended, disconnect the power cord from the power outlet.

1.4 CLEANING

- Unplug the **DA1912SX** 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 the 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 required to correct the interference at his own expense.

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- 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 **DA1912SX** Distribution Amplifier is designed to allow the connection of one high resolution RGsB or RGSB source to up to two scan rate compatible monitors or projectors.

Although designed to pass an RGSB signal format, the **DA1912SX** can also pass RGsB, Component Video (Y, R-Y, B-Y), S-Video (Y/C), and Composite Video by using the appropriate channels. Video sources must be passed through Red, Green, and/or Blue channels. The sync channel is not designed to pass video.

The **DA1912SX** Distribution Amplifier is a state-of-the-art product with a video bandwidth of 350 MHz, enabling it to remain transparent to the video signal passing through it. Each output is individually buffered and is not affected by other output loading.

The **DA1912SX** accepts one input and offers up to two outputs. Compensation for cable loss is automatically made for distances up to 100 feet when set normally, though the **DA1912SX** can drive signals through longer runs depending on source signal resolution and cable quality.

The **DA1912SX** is supplied with a 9V 500mA External Power Adapter.

TECHNICAL SPECIFICATIONS 3

FEATURES/DESCRIPTION	DA1912SX
GENERAL	
Inputs	1
Input Connector	4 BNC Female
Outputs	2
Output Connectors	Two 4 BNC Female
Compatibility	High resolution RGSB, RGsB and RsGsBs, Component, S-Video and Composite Video

Table 1. **DA1912SX** General

MECHANICAL	DA1912SX
Width (inches)	4.56in (116mm)
Height (inches)	3.50in (89mm)
Depth (inches)	0.94in (24mm)
Weight (pounds)	0.6lbs (0.27kg)
Ship Weight (pounds)	2.0lbs (0.91kg)
Material	0.1" Al
Finish	Gray
Top Panel	Lexan
T° Operating	10°C-35°C
T° Maximum	50°C
Humidity	90% non-condensing
MTBF (calculations)	40,000 hrs

Table 2. **DA1912SX** Mechanical

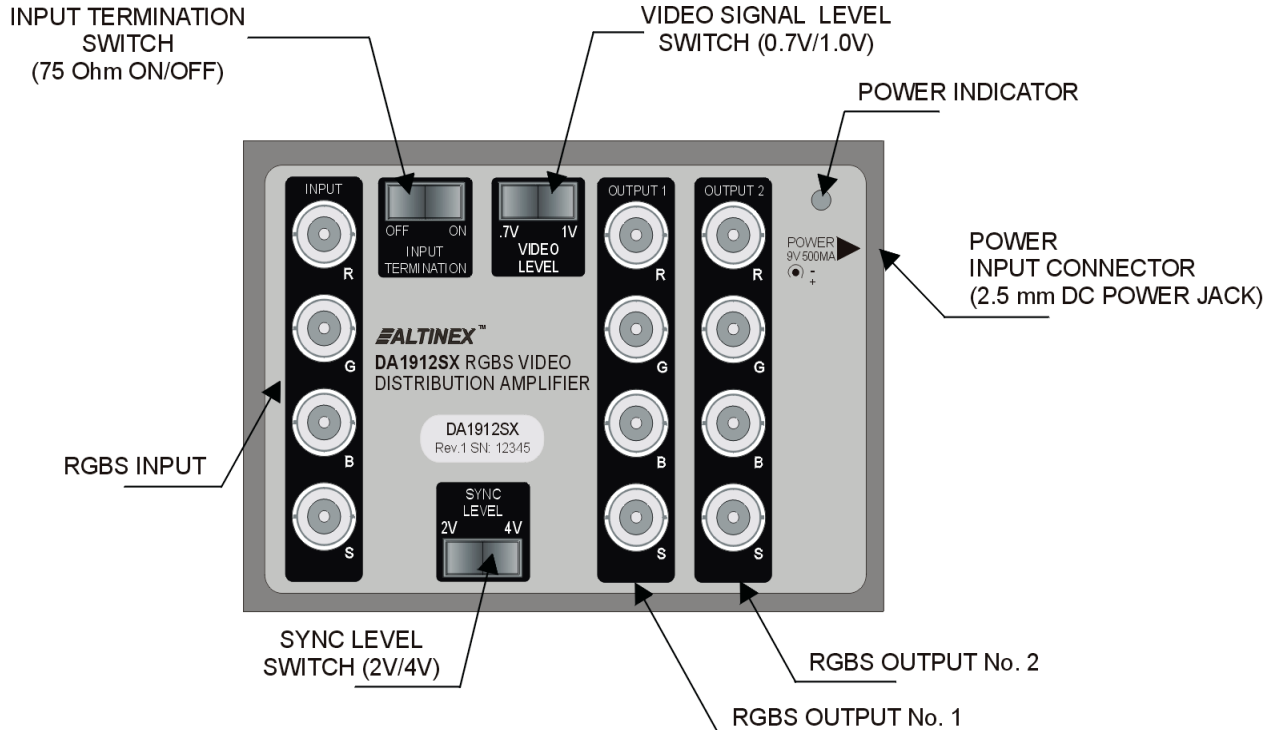
ELECTRICAL	DA1912SX
Input Video Signal	
Analog Signal	1.5V p-p max
Impedance	75 Ohms
Input Sync Signal	
Horizontal, Vertical, & C-Sync	TTL(+/-)
Sync on Green	-0.3V
Impedance	10 k Ohms
Output Video Signal	
Analog Signal	1.0V p-p/0.7V p-p
Impedance	75 Ohms
Output Sync Signal	
Composite Sync	TTL(+/-)
Sync on Green	-0.3V
Impedance	22 Ohms
Frequency Compatibility	
Typical Video Bandwidth	380 MHz
Minimum Video Bandwidth	350 MHz
Rise/Fall Time (ns)	1.4
Gain Default Setting	1.05
Cross-talk	-40dB @10 MHz
Coupling	AC
Power	
External Power	9V 500mA external adapter (included)
Power Consumption	4 watts max.

Table 3. **DA1912SX** Electrical

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DESCRIPTION OF DA1912SX

4



4.1 INPUT TERMINATION SWITCH

The Input Termination Switch is normally set to the ON position and provides 75 Ohms termination for the Red, Green, and Blue channels. By setting this switch in the OFF position and using BNC "T" connectors, the input may be looped to another **DA1912SX**, to a local monitor, or to another piece of equipment, if desired.

4.2 VIDEO LEVEL SWITCH

The Video Level Switch can be set to either the standard 0.7V output or to 1.0V output. When the switch is set in the 1.0V output position, this provides approximately a 35% increase in video signal level. This can be used in installations where cable runs exceed 100 feet. It is not recommended that this switch be set in the 1.0V position for shorter cable lengths as the increased level may reduce the life of CRT displays if they are overdriven.

4.3 SYNC LEVEL SWITCH

The Sync Level Switch allows the **DA1912SX** to output a Sync Level of either 2V p-p or 4V p-p. This switch should normally be set in the 4V position. Some older display equipment may require a sync level of 2V in which case this switch may be used, but this would be rare.

4.4 POWER

The **DA1912SX** requires the use of a 9V 500mA power supply, which is included with the unit. A variety of different power supplies are available for international use.

4.5 MOUNTING THE DA1912SX

To mount the **DA1912SX**, Altinex offers "L" shape mini-brackets, the **DA1295SX**, which provides wings on either side of the unit, allowing it to be installed on a rack plate, furniture, or a wall.

4

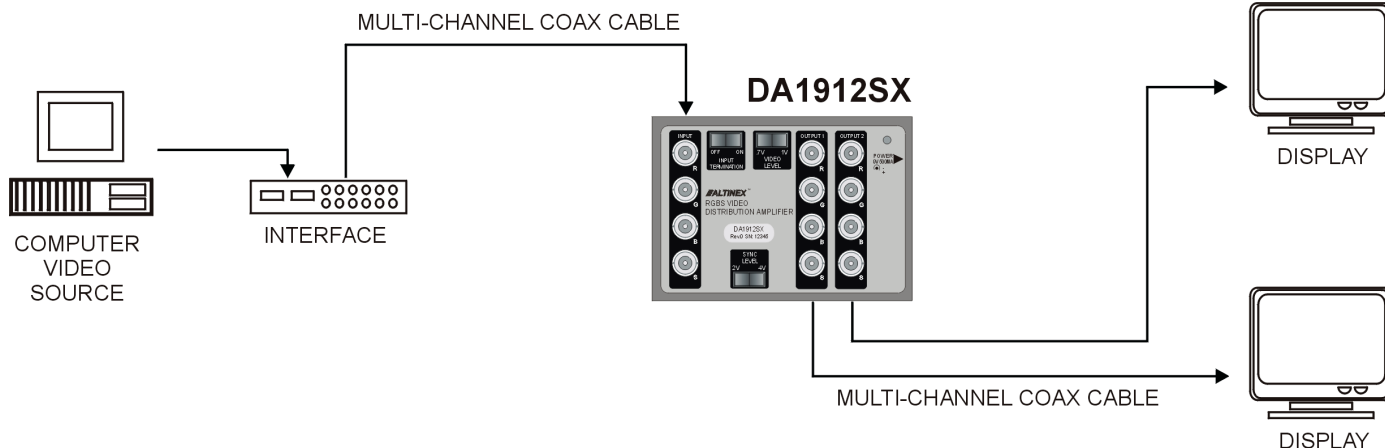
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APPLICATION DIAGRAM

5



INSTALLING YOUR DISTRIBUTION AMPLIFIER

6

- Step 1.** Make sure that the proper power supply is being used with the unit. The use of an incorrect power supply can result in equipment damage not covered by warranty.
- Step 2.** Connect the power cord to the unit and 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 the high resolution RGsB or RGBS source to the **DA1912SX** using coaxial cable with BNC connectors, making sure that the colors match correctly. Then connect one or two monitors or projectors to the output(s) of the **DA1912SX**. The monitors or projectors must be scan-rate compatible with the source signal - the **DA1912SX** does not affect scan rate.
- Step 4.** The Input Termination switch should normally be ON unless the input is being looped to another unit. If the output cables are longer than 100 feet, consider using the Video Level Switch to increase the gain on the outputs of the **DA1912SX**. The Sync Level switch should normally be in the 4V position.

- Step 5.** If the image is less than perfect, check all the connections. The unit is very reliable and seldom will 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.**

DISTRIBUTION AMPLIFIERS

OPERATION

7

The settings of the **DA1912SX** Distribution Amplifier can be adjusted using Input Termination, Video Level, and Sync Level switches as described in Section 4. There are no other adjustments necessary to operate the unit. The **DA1912SX** will operate successfully as long as cables are attached properly and other technical specifications are followed.

ACCESSORIES

8

Model No.	Description
	RACK MOUNTING BRACKETS
DA1295SX	Rack/Wall/Furniture Mount Mini-brackets (2-"L" shaped brackets)
	POWER SUPPLIES
PS5502US	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
	4 BNC to 4 BNC COAXIAL CABLE
CB4100MR	Bulk Cable 4 coaxes (500ft minimum)
CB4103MR	3 feet, 4 BNC to 4 BNC coaxial cable
CB4106MR	6 feet, 4 BNC to 4 BNC coaxial cable
CB4112MR	12 feet, 4 BNC to 4 BNC coaxial cable
CB4125MR	25 feet, 4 BNC to 4 BNC coaxial cable
CB4150MR	50 feet, 4 BNC to 4 BNC coaxial cable
CB4175MR	75 feet, 4 BNC to 4 BNC coaxial cable
CB41100MR	100 feet, 4 BNC to 4 BNC coaxial cable
CB41150MR	150 feet, 4 BNC to 4 BNC coaxial cable
	4 BNC to 4 BNC COAX (Super High Resolution)
CB4300MR	Bulk Cable 4 coaxes (500ft minimum)
CB4306MR	6 feet, 4 BNC to 4 BNC coaxial cable
CB4312MR	12 feet, 4 BNC to 4 BNC coaxial cable
CB4325MR	25 feet, 4 BNC to 4 BNC coaxial cable
CB4350MR	50 feet, 4 BNC to 4 BNC coaxial cable
CB4375MR	75 feet, 4 BNC to 4 BNC coaxial cable
CB43100MR	100 feet, 4 BNC to 4 BNC coaxial cable
CB43150MR	150 feet, 4 BNC to 4 BNC coaxial cable

DISTRIBUTION AMPLIFIERS

FREQUENTLY ASKED QUESTIONS 9

No:	Question	Answer
1	How many feet of cable can I use with the DA1912SX when the Video Level switch is set in the 1V position?	Compensation for cable loss is automatically made for distances up to 100 feet when set normally, though the DA1912SX can drive signals through longer runs depending on the source signal resolution and cable quality.
2	Can I use the DA1912SX power supply to power 2 units at the same time?	It is not recommended since one power supply is supplied with each unit. Please consider the PS5581SM , a rack mount power supply.
3	Are outputs 1 & 2 of the DA1912SX buffered?	The DA1912SX has two individually buffered outputs.
4	Why is the Sync level switch so important?	The Sync Level Switch allows the DA1912SX to output a Sync Level of either 2V p-p or 4V p-p. This switch should normally be set in the 4V position. Some older display equipment may require a sync level of 2V in which case this switch may be used, but this would be rare.
5	Why and when should I use the Input Termination switch?	The Input Termination Switch is normally set to the ON position and provides 75 Ohm termination for the Red, Green, and Blue channels. By setting this switch in the OFF position and using BNC "T" connectors, the input may be looped to another DA1912SX , to a local monitor, or to some other piece of equipment, if desired.

6	Why is the Video Level switch important?	The Video Level Switch can be set to either the standard 0.7V output or to 1.0V output. When the switch is set in the 1.0V output position, this provides approximately a 35% increase in video signal level. This can be used in installations where cable runs exceed 100 feet. It is not recommended that this switch be set in the 1.0V position for shorter cable lengths as the increased level may reduce the life of CRT displays if they are overdriven.
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TROUBLESHOOTING GUIDE 10

We have carefully tested and have found no problems in the supplied **DA1912SX** unit; however, we would like to offer the following suggestions:

- Please make sure that the input amplitude levels are as follows:
 1. Analog signal less than 1.5V.
 2. Sync signal less than 0.3V.
- Please use Altinex supplied external Power Supply/AC Adapter (9V, 500mA) only.
- Please check the settings of Sync Level, Video Level, and Input Termination Switches.
- Please make sure that a high quality of cables is used. We recommend Altinex made cables for best results.
- If the problem shows up 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 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 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 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