



MANUAL PART NUMBER: 400-0152-001
PRODUCT REVISION: 0

SK2002DA

SIDEKICKER 1-IN, 2-OUT VGA-UXGA

DISTRIBUTION AMPLIFIER CABLE

USER'S GUIDE

DISTRIBUTION AMPLIFIERS

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PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **SK2002DA** Distribution Amplifier Cable. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **SK2002DA** and to prevent fire and shock hazard. Please read them carefully and heed all warnings.

1.1 GENERAL

- Qualified ALTINEX service personnel, or their authorized representatives must perform all service.

1.2 INSTALLATION

- For best results, place the **SK2002DA** Distribution Amplifier Cable in a dry area away from dust and moisture.
- Handle the **SK2002DA** Distribution Amplifier Cable carefully. Dropping or jarring can damage internal components.

1.3 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 cable.

1.4 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 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.

DISTRIBUTION AMPLIFIERS

ABOUT YOUR DISTRIBUTION AMPLIFIER 2

The **SK2002DA** is a high-resolution 1-in 2-out Distribution Amplifier Cable designed to allow the connection of a single VGA/SVGA/XGA/UXGA source to up to two scan-rate compatible displays. Offering a minimum video bandwidth of 400 MHz, the **SK2002DA** allows very high-resolution video signals to pass without degradation to the image quality. The local monitor output of the **SK2002DA** is pre-compensated for up to 12 feet of high-resolution coaxial-type VGA cable. The main output of the **SK2002DA** is pre-compensated for up to 250 feet with high-resolution coaxial-type VGA cable.

The **SK2002DA** is perfect for audio/visual installations, where a single computer needs to be connected to a projector (or presentation monitor) and a local monitor simultaneously. The **SK2002DA** has female 15-pin HD (VGA type) connectors on all input and output connectors. If desired, the input and/or output of the **SK2002DA** can be easily adapted to 5 BNC connectors. The **SK2002DA** is compatible with RGsB, RGSB, or RGBHV signal types. The **SK2002DA** can be used with MAC, SUN or SGI platform computer.

TECHNICAL SPECIFICATIONS 3

FEATURES/DESCRIPTION	SK2002DA
GENERAL	
Inputs	One
Input Connector	15-pin HD Male
Outputs	Two
Local Monitor Connector	15-pin HD Female
Main Output Connector	15-pin HD Female
Compatibility	VGA, SVGA, XGA, UXGA, MAC, SUN, SGI

Table 1. **SK2002DA** General

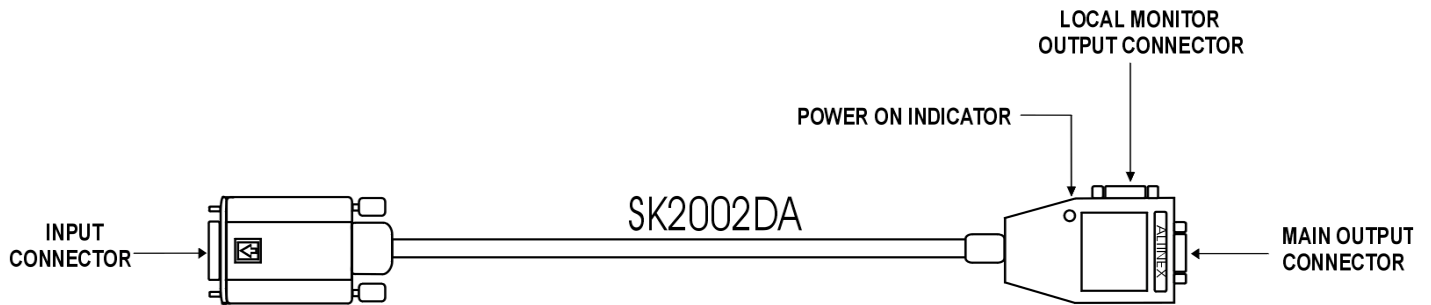
ELECTRICAL	SK2002DA
Input Video Signal	
Analog Signal Level	1.5V p-p max
Impedance	75 Ohms
Input Sync Signal	
Horizontal, Vertical, & C-Sync	TTL(+/-)
Sync on Green	-0.3V
Impedance	10 k Ohms
Output Video Signals	
Analog Signal Level	Gain of 1.05 (+/-5%)
Fall/Rise Time (ns)	1.0
Impedance	75 Ohms
Output Sync Signals	
Composite Sync	TTL(+/-)
Sync on Green	-0.3V
Impedance	22 Ohms
Frequency Compatibility	
Typical Video Bandwidth	430 MHz @ -3 dB
Minimum Video Bandwidth	400 MHz @ -3 dB
Horizontal	15-200 kHz
Vertical	47-180 Hz
Cable Equalization at Main Output	3 dB @ 120 MHz
Coupling	DC
Cross-talk	-40 dB @ 10 MHz

Table 2. **SK2002DA** Electrical

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DESCRIPTION OF SK2002DA

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4.1 INPUT

The computer input connector of **SK2002DA** is connected to the video output of a laptop or desktop computer. If desired, the HD-15 input can be easily adapted to 5-BNC connector output.

Often, laptop computers will require a toggle command, which will instruct the laptop to output to the internal display as well as to the external video port simultaneously. You may need to check the user's manual for your laptop computer to determine this command.

PIN No.	Input signals on 15-pin HD female connector
1	Red
2	Green
3	Blue
4	No connection
5	Ground
6	Ground
7	Ground
8	Ground
9	+5V DDC
10	No connection
11	No connection
12	SDA
13	Horizontal Sync
14	Vertical Sync
15	SCL

Table 3. **SK2002DA** Input pin-outs

4.2 OUTPUTS

The **SK2002DA** has two buffered outputs with 15-pin HD female connectors. The local monitor output is amplified output. The main output is for the distant presentation display (large screen monitor or LCD projector) up to 100 feet away. The main output is pre-compensated for optimal performance with 75 Ohms of ALTINEX super high-resolution VGA cable.

PIN No.	Main Output signals on 15-pin HD female connector
1	Red
2	Green
3	Blue
4	No connection
5	No connection
6	Ground
7	Ground
8	Ground
9	No connection
10	Ground
11	No connection
12	No connection
13	Horizontal Sync
14	Vertical Sync
15	No connection

Table 4. **SK2002DA** Main Output pin-outs

DISTRIBUTION AMPLIFIERS

PIN No.	Local Monitor Output signals on 15-pin HD female connector
1	Red
2	Green
3	Blue
4	No connection
5	Ground
6	Ground
7	Ground
8	Ground
9	No connection
10	No connection
11	No connection
12	No connection
13	Horizontal Sync
14	Vertical Sync
15	No connection

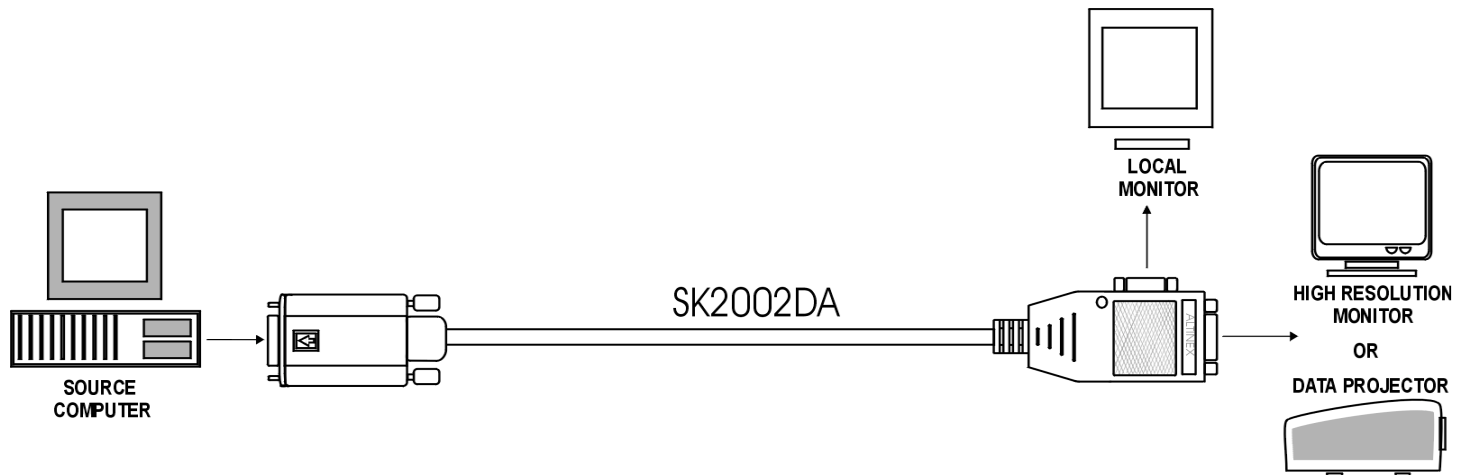
Table 5. **SK2002DA** Local Monitor Output pin-outs

4.3 LED INDICATOR

The **SK2002DA** offers a special LED located near its output connectors, which provides feedback to the user. When an active computer source is connected to the **SK2002DA**, the LED will turn red, indicating that it is receiving a signal by sensing the presence of the sync portion of the signal.

APPLICATION DIAGRAM

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DISTRIBUTION AMPLIFIERS

INSTALLING YOUR DISTRIBUTION AMPLIFIER

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- Step 1.** Connect the video output from the computer to the computer input connector on the **SK2002DA**.
- Step 2.** Verify that the LED near the output connectors of the **SK2002DA** has now turned red, indicating an active source. If the LED is not red, the computer may not be sending video signals (check your Computer's User's Manual). If you are using a laptop computer, you will have to toggle (a command that instructs the laptop to output to the internal display and the external video port simultaneously) the display or connect simultaneous displays.
- Step 3.** Connect your display device (monitor or projector) to the main output connector. Connect a monitor to the local monitor output port.
- Step 4.** Verify that the picture quality on all displays is good. If you are not receiving a signal, make sure that the display is compatible with the resolution of the computer graphics card. Note: High levels of static discharge under some conditions may shutdown the unit. To reset the **SK2002DA**, disconnect it and then reconnect it again.

FREQUENTLY ASKED QUESTIONS

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No:	Question	Answer
1.	How many feet of cable can I use with the SK2002DA ?	The local monitor output is aligned for optimal performance up to approximately 12 feet, while the main output is aligned for optimal performance at 75 Ohms, with capability of driving as far as 100 feet depending on the input and cable quality.
2.	Does the SK2002DA pass DDC signals/ID bits between the display and computer?	Yes, the SK2002DA does pass DDC signals and ID bits to a local monitor output connector as long as the pin-outs of the computer are standard.
3.	What are the resolutions of input computer signals that can pass through the SK2002DA ?	1280x1024 – UXGA 1024x768 – XGA 800x600 – SVGA 640x480 – VGA.
4.	What is the difference between main output and local monitor output?	The main output is capable of driving video signals up to 100 feet away, while the local monitor output is used for displays located less than 15 feet away.

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- Please make sure that the amplitude of input video analog signal is less than 1.5V and is at TTL level for SYNC signal.
- Please make sure that the outputs are terminated properly and the cable run does not exceed 15 feet for the local monitor output and 100 feet for the main output port.
- If a problem arises after continuous usage at higher voltage, higher temperature, higher humidity, or at other extreme environmental conditions, please correct the problem.

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9.1 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 shall 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.

9.2 RETURN POLICY

It is very important to ALTINEX that you receive the products that you have ordered and that this product fulfills your need. 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.

9.3 CONTACT INFORMATION

ALTINEX, Inc

Phone: 714-990-2300
Fax: 714-990-3303