ISC2000-W/ISC2000-I

INTERA™
COMPUTER VIDEO + AUDIO INPUT
MODULE
USER'S GUIDE

ALTINEX

SiGNAL
MANAGEMENT
SOLUTIONS

DISTRIBUTION AMPLIFIERS

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INTRODUCTION

This manual covers:

   ISC2000-W – VGA & Audio (white) Line Driver

   ISC2000-I – VGA & Audio (ivory) Line Driver

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SIGNAL MANAGEMENT SOLUTIONS

Tel: 714-990-2300 • Toll-Free: 1-800-ALTINEX • FAX: 714-990-3303 • E-mail: solutions@altinex.com • Web: www.altinex.com

PRECAUTIONS / SAFETY WARNINGS   1

Please read this manual carefully before using your **ISC2000-W/ISC2000-I**. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **ISC2000-W/ISC2000-I** 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

- To prevent fire or shock, do not expose this unit to rain or moisture. Do not place the **ISC2000-W/ISC2000-I** 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 **ISC2000-W/ISC2000-I** carefully. Dropping or jarring can damage internal components.

- Never install the **ISC2000-W/ISC2000-I** in the same enclosure with high voltage wires or their associated components, such as power sockets, dimmers or switches. Always use proper isolation techniques to ensure that the **ISC2000-W/ISC2000-I** is never installed in an enclosure that has high voltages within it.

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 unit.

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.

ABOUT YOUR DISTRIBUTION AMPLIFIER 2

The **ICS2000** is a 1-in, 1-out VGA and Audio Line Driver designed for installation into a wall. The unit provides a method of transmitting signals to a remote display and audio receiver or amplifier.

The **ISC2000** offers a female VGA-type 15-pin HD input connector and a stereo audio mini jack on its front panel. The rear panel offers two terminal block connectors. One is for the connection of balanced stereo audio and the other is for low voltage input power. Additionally, there is a 10-pin IDC connector for use with either the 5-BNC connector cable provided or the VGA output connector that is also included.

The computer video RGB signals are passed through the **ISC2000**, but the video sync signals are buffered to ensure signal quality over long cable runs. Likewise, the incoming unbalanced stereo audio signal is converted to a balanced stereo audio on the output. This ensures better signal transmission over long cable runs.

TECHNICAL SPECIFICATIONS   3

FEATURES/ DESCRIPTION	ISC2000-W/ ISC2000-I
GENERAL	
Inputs	
Computer Video Input	15-pin HD Female
Audio Input Connector	3.5mm stereo audio
Outputs	
Video Output Connector	5 BNC/15pin HD
Audio Output Connector	Terminal Block
Power	
DC Source	2-pin terminal block.
Compatibility	VGA/SVGA/XGA UXGA MAC/SUN/SGI and other analog computer video sources

Table 1. ISC2000-W/ISC2000-I **General**

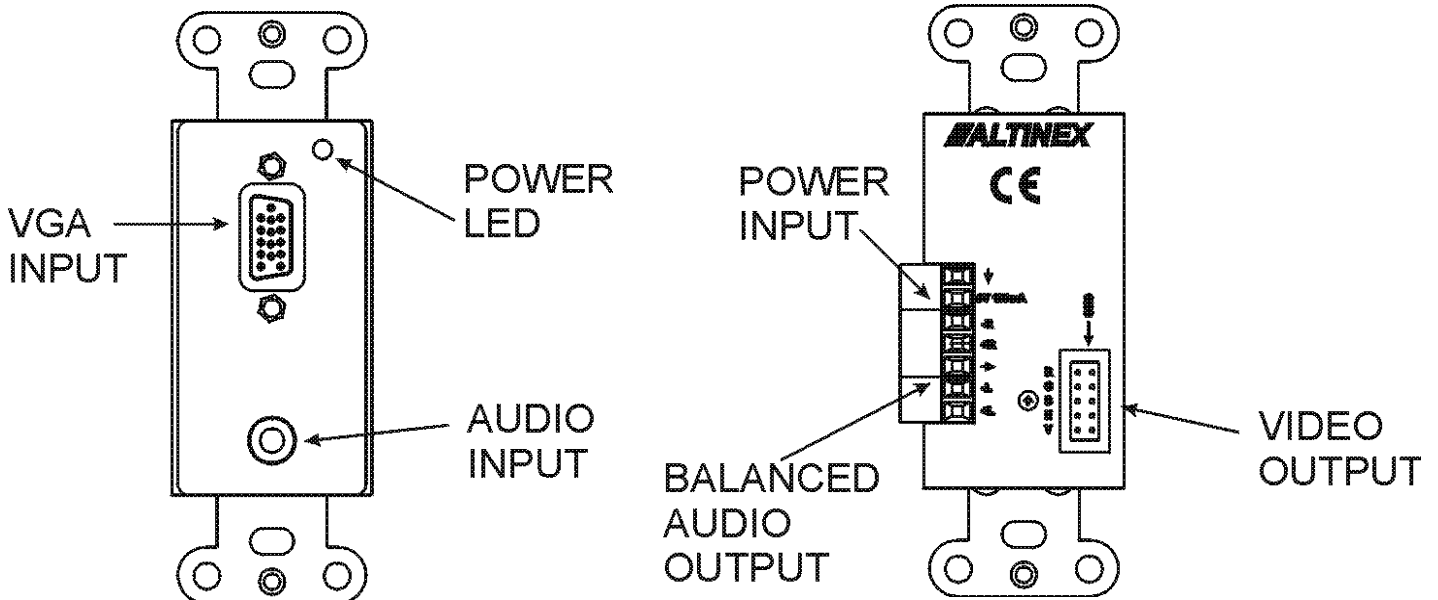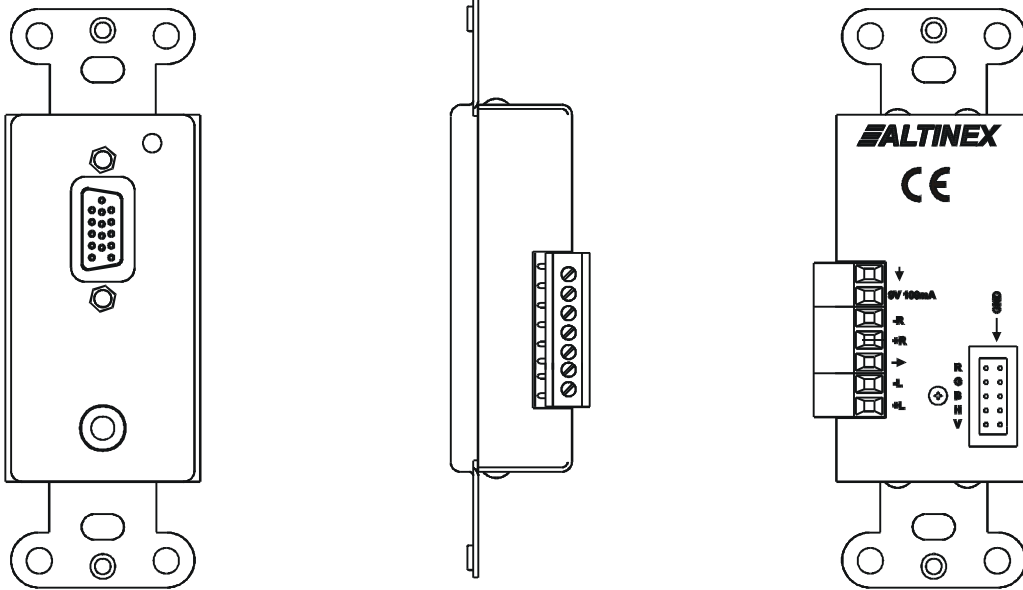| MECHANICAL	ISC2000-W/ ISC2000-I
Depth (inches)	1.2 in. (30.5mm)
Width (inches)	1.5 in (38.1mm)
Height (inches)	2.6 in. (66mm)
Weight (pounds)	.2 lb. (.12kg)
Ship Weight (pounds)	1.6 lb. (.73kg)
Material	Steel
Finish	Black Zinc
Front Panel	White or Ivory
T° Operating	10°C -35°C
T° Maximum	50°C
Humidity	90% non-condensing
MTBF (calculations)	40,000 hrs.

Table 2. ISC2000-W/ISC2000-I **Mechanical**

ELECTRICAL	ISC2000-W/ISC2000-I
Input Video Signal	Pass Thru
Input Sync Signals	
Horizontal & Vertical	TTL (+/-)
Impedance	10 kOhms
Output Video Signals	Pass Thru
Output Sync Signals	
Horizontal, & Vertical	TTL (+/-)
Impedance	75 Ohms
Bandwidth	-3dB @ 350MHz
Audio Input	
Impedance	10k Ohms
Max Level	0dBu
Audio Throughput	
Gain Balanced / Unbal.	+6dB / 0dB
Freq. Response	10Hz-20kHz, +/- .05 dB
Noise Floor	-98dB @ 20kHz
CMRR	<40dB, 10Hz - 20kHz
Audio Output	
Impedance	50 Ohms
Drive	>10dBu
External Power	9VDC 500mA supply

Table 3. ISC2000-W/ISC2000-I **Electrical**

PRODUCT DESCRIPTION   4

VGA INPUT

POWER LED

AUDIO INPUT

POWER INPUT

BALANCED AUDIO OUTPUT

VIDEO OUTPUT

4.1 VIDEO INPUT

The computer input is a 15-pin HD connector on the front of the **ICS2000-W/ISC2000-I**. It is connected to the video output of a desktop computer or similar device.

PIN No.	Input signals on 15-pin HD female connector
1	RED
2	GREEN
3	BLUE
4	SIGNAL RETURN
5	SIGNAL RETURN
6	SIGNAL RETURN
7	SIGNAL RETURN
8	SIGNAL RETURN
9	VESA POWER INPUT
10	SIGNAL RETURN
11	SIGNAL RETURN
12	SDA
13	HORIZONTAL
14	VERTICAL
15	SCL

Table 4. **ISC2000-W/ISC2000-I**'s Video Input Pins

4.2 VIDEO OUTPUT

The **ISC2000-W/ISC2000-I** offers a video output through a 10-pin IDC connector on the back of the **ISC2000-W/ISC2000-I**. The Distribution Amplifier allows a connection to different types of projectors or monitors using Altinex breakout cables.

PIN No.	VIDEO OUTPUTS ON 10-PIN IDC BLOCK
1	RED
2	GROUND
3	GREEN
4	GROUND
5	BLUE
6	GROUND
7	HORIZONTAL
8	GROUND
9	VERTICAL
10	SIGNAL RETURN

Table 5. 10-Pin IDC Connector Video Output Pins

4.3 AUDIO INPUT & OUTPUT

The **ISC2000-W/ISC2000-I** accepts computer audio input and offers balanced stereo output through a terminal block connector on the back. There is a 3.5mm jack for computer audio input. A 5-pin terminal block is available for stereo audio transmission to the main sound system. These connectors are easily adaptable to stereo mini or RCA type connectors.

PIN No.	AUDIO OUTPUTS ON 5-PIN MALE TERMINAL BLOCK
1	L+IN (Left Channel)
2	L-IN (Left Channel)
3	SIGNAL RETURN
4	R+IN (RIGHT Channel)
5	R-IN (RIGHT Channel)

Table 6. 5-Pin Male Terminal Block for Audio Output

4.4 POWER INPUT CONNECTOR

The **ISC2000-W/ISC2000-I** has a power terminal block for connection to a 9VDC 500mA external adapter. Power regulation is provided inside the unit.

PIN No.	INPUT POWER ON 2-PIN MALE TERMINAL BLOCK
1	+9VDC
2	GND

Table 7. 2-Pin Male Terminal Block for Power Input

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APPLICATION DIAGRAM 5

TYPICAL SETUP
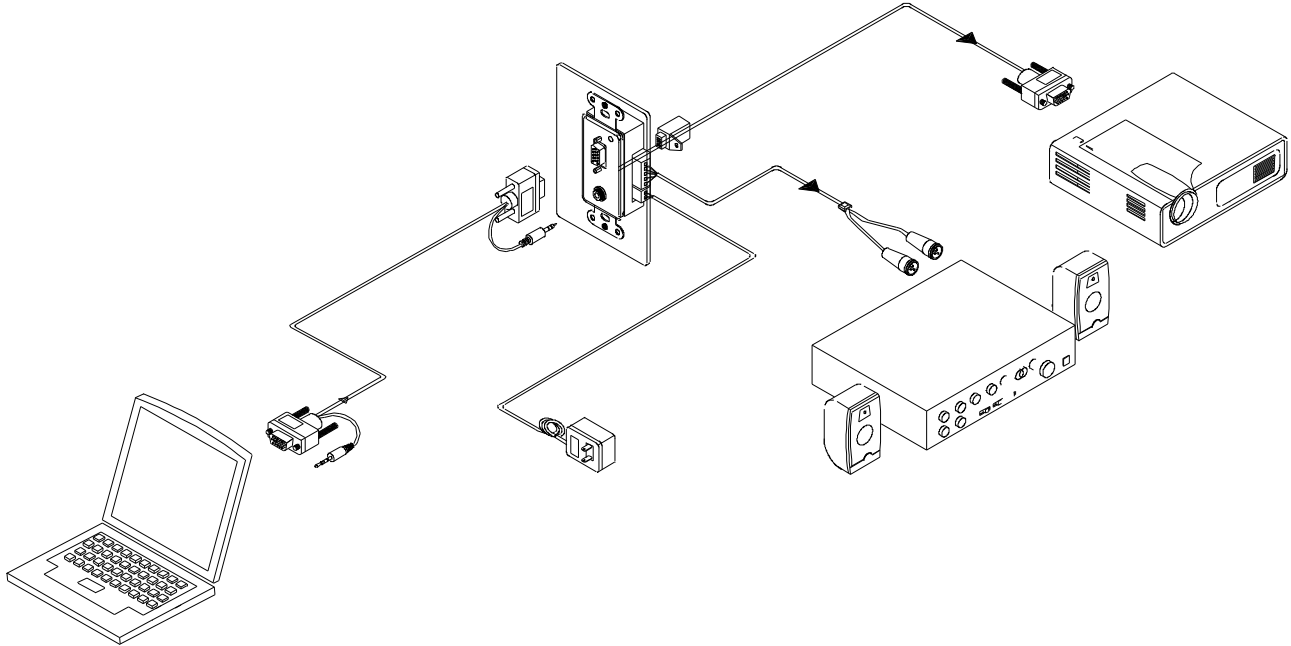
BREAKOUT VIDEO CABLE CONNECTION
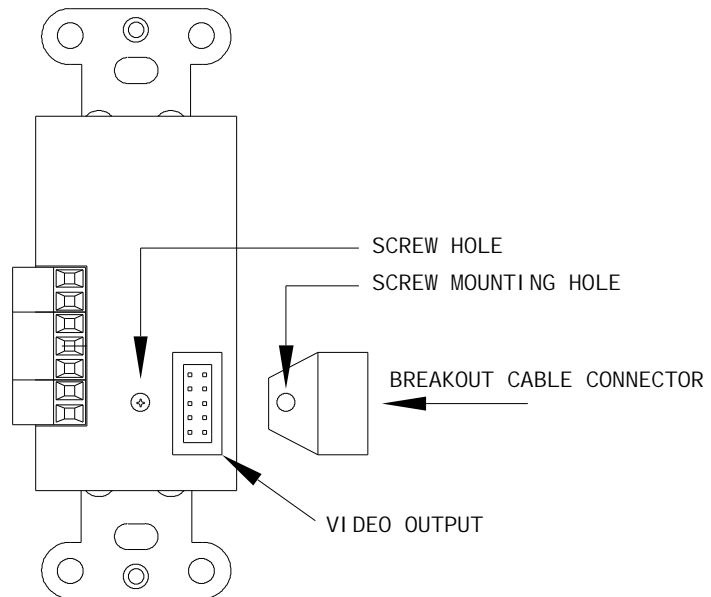
SCREW HOLE

SCREW MOUNTING HOLE

BREAKOUT CABLE CONNECTOR

VIDEO OUTPUT

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INSTALLING YOUR LINE DRIVER　　　6

PREPARATION

Step 1. There are a few common items to check before testing the setup connections:

　　a. Make sure the monitor and sound system work with the source computer before using the **ISC2000**.

　　b. Ensure the source computer screen-savers do not shut down the video source during the system check.

　　c. Verify the source audio level is reasonable, not too low or too high.

VERIFICATION

Step 2. In order to verify proper connections and operation before final installation, the following may be used to verify setup connections:

　　a. Video Inputs
　　　A video source such as a computer works well.

　　b. Audio Inputs
　　　A computer with a sound card is a convenient audio source.

　　c. Video Outputs
　　　A standard computer monitor.

　　d. Audio Outputs
　　　External computer speakers with built-in audio amplifier are sufficient.

OUTPUT CONNECTIONS

Step 3. Determine the proper breakout cable required for the video signal.

Two special breakout cables that attach to the **ISC2000** video output connector are included. One allows connection to a VGA 15 pin HD type connector cable. The other connects to RGBHV coaxial cables.

Step 4. Attach the breakout cable to the video output connector. Make sure the breakout cable's connector mounting hole aligns with the **ISC2000** screw hole and secure it with the screw provided. See Application Diagram 2 for details.

Step 5. Connect the video breakout cable to the receiving display device.

Step 6 The audio output from the **ISC2000** can be balanced or unbalanced.

If a balanced or unbalanced signal is needed, use a four-conductor cable with overall shield.

For an unbalanced signal, connect one of the wires to ground. Use only the positive output form the **ISC2000** to drive unbalanced signals. The negative output does not need to be connected to ground.

INPUT CONNECTIONS

Step 7. A 9VDC, 500mA power supply is needed to power the **ISC2000**. Connect the 9VDC power to the **ISC2000** power input terminal block.　The LED will turn red, indicating power is ON.

Step 8. Connect an active video source to the front of the **ISC2000**.　If the cabling on the back of the **ISC2000** is connected to a display, you should see an image.

Step 9. Connect an active audio source to the front of the **ISC2000**.　If the cabling on the back of the **ISC2000** is connected to an audio amplifier with speakers, you should hear sound.

OPERATION　　　　　　　　　　　7

There are no settings or adjustments on the **ISC2000**. The unit will operate successfully as long as cables are properly attached and other technical specifications are followed.

DISTRIBUTION AMPLIFIERS

TROUBLESHOOTING GUIDE   8

We have carefully tested and have found no problems in the supplied **ISC2000** unit; however, we would like to offer the following suggestions:

8.1 LED IS NOT LIT

Cause 1:   There is no 9VDC.

Solution: Verify the 9VDC adapter is connected to the 2 pin terminal block input. If it is and the LED is not on, see Solution 2.

Solution 2: Ensure there is AC power applied to the power adapter and that the cables are plugged in all the way. If there is AC power and the cabling is correct, see Solution 3.

Solution 3: Verify the power adapter is capable of supplying 500mA. If it is and the LED is still not on, call ALTINEX at (714) 990-2300.

8.2 NO DISPLAY

Cause 1:   The source has a problem.

Solution: Check the source and make sure that there is a signal present and all source connections are correct. Make sure that the input amplitude of the video analog signals are less than 1.5V and that the SYNC levels are TTL. If the source is good and there is still no display, see Cause 2.

Cause 2:   Cable connections are incorrect.

Solution: Make sure that the cables are properly connected. Also, make sure that the continuity and wiring are good. If there is still no display present, see Cause 3.

Cause 3:   The display has a problem.

Solution: Ensure the display has power and is ON. If there is still no display, call Altinex at (714) 990-2300.

8.3 NO SOUND/BAD SOUND QUALITY

NOTE: For very small audio signals, the amplifier for the speakers must necessarily amplify both the signal and any noise in the system. For very large audio output signals, distortion and clipping may occur. The source and the audio amplifier function best when the audio levels are set to midrange values. This is normal for an audio system regardless of whether an **ISC2000** is used.

If unwanted noise is heard on the audio circuit, consider alternate ways of wiring the audio output. Also, examine the system for possible sources of noise and route the audio signals as far as possible from the noise sources.

Cause 1:   The source has a problem.

Solution: Check the source and make sure that it is working at an appropriate volume level and all source connections are correct. If the source is working and there is still no sound, see Cause 2.

Cause 2:   Audio devices are not compatible.

Solution: Make sure that the audio devices are compatible. If so, see Solution 2.

Solution 2: Connect the receiving device directly to the source and verify proper operation. If there is still no sound, see Cause 3.

Cause 3:   Cable connections are incorrect.

Solution: Make sure that all cables are connected properly. Also, make sure that the continuity and wiring are good. If there is still no sound present, see Cause 4.

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Cause 4: **Destination amplifier is bad.**

Solution 1: Make sure that the destination amplifier is powered. If there is still no sound, see Solution 2

Solution 2: Set the volume of the destination amplifier to a reasonable level. If there is still no sound, call ALTINEX at (714) 990-2300.

ALTINEX POLICY   9

9.1 LIMITED WARRANTY/RETURN POLICY

Please see the Altinex website at www.altinex.com for details on warranty and return policy.

9.2 CONTACT INFORMATION

ALTINEX, INC

592 Apollo Street

Brea, CA 92821 USA

TEL: 714 990-2300

TOLL FREE: 1-800-ALTINEX

WEB: www.altinex.com

E-MAIL: solutions@altinex.com