



## IN2200 / IN2200S Preliminary Operation Manual

### **INPUT**

The input button can be used to select Input 1 or Input 2. The appropriate LED will light to indicate the selected channel. Unique gain, sharp, horizontal position and vertical position settings are automatically stored for each input and recalled each time the input is selected.

### **LCD DISPLAY**

The LCD Display is used to display the horizontal and vertical scan rates as well as to provide feedback on adjustments. When an adjustment is being made, the LCD shows a description of the function and a bar graph to indicate the current location within the adjustment range. The LCD remains in this state for several seconds after the last change and then reverts to the Horizontal and Vertical scan rate display.

### **GAIN**

Gain up/down arrows are used to increase/decrease the video gain. You can press and release the button for small changes or press and hold for large changes. You can use this control to fade the image to black.

### **SHARP**

Sharp up/down arrows are used to increase/decrease the sharpness. You can press and release the button for small changes or press and hold for large changes.

### **POSITION**

The position arrows are used to shift the video image in the designated direction. You can press and release a button for small shifts or press and hold for large shifts. If the horizontal or vertical positioning controls are disabled, the LCD display indicates that the function is disabled when the user tries to adjust it.

### **SCREEN SHIFT (IN2200S Only)**

This function is enabled/disabled with a dipswitch setting (#7 of Switch 2). When enabled, the image is slowly shifted in a clockwise motion to help prevent CRT burn-in.

**Shift Range:** The amount that the image is shifted can be set to “High” or “Low” by a power-on sequence. The High range shifts the image more and is set by pressing and holding the ➤ button while turning on the power. The Low range is set similarly but holding the ◀ button while turning on the power.

**Shift Speed:** When adjusting the size of your display it is important to allow for the shift range. Therefore, there is a Fast screen shift speed which rapidly moves through the entire shifting range (so you don't have to wait a long time for the image to make a complete cycle). The shift speed is set with a dipswitch setting (#8 of Switch 2).

### **FRONT PANEL DISABLE**

The front panel is disabled/enabled with a dipswitch setting (#5 of Switch 2). When the front panel is disabled, none of the front panel buttons operate. The LCD display will read “Front Panel Disabled” whenever a front panel button is pressed. However, input selection can still be made via the remote port or by setting the unit for Automatic Input Selection.

## AUTOMATIC INPUT SELECTION

The IN2200 can be set to automatically select the active input. An input is considered active if it has a sync signal. If both inputs have an active signal, Input 2 is selected as it has a higher priority. If there is no active signal, Input 1 is the default.

When set to the Automatic Input Selection mode, you cannot manually select an input. The front panel and remote Input selection features are disabled. You can put the unit into the auto input select mode with a dip switch setting (#6 of Switch 2).

## STATUS/MODE INFORMATION

Each time the unit is powered up, the LCD display steps through a few screens to inform the user of how the IN2200 interface is configured. These screens show the following items: Automatic Input Selection Enabled/Disabled, Front Panel Enabled/Disabled, Screen Shift Settings (IN2200S only), and the Output Sync Format.

## RESET TO FACTORY DEFAULT

All front panel settings can be reset to factory default by holding the Position Down (▼) button while applying power to the unit. This resets the Gain, Sharp, Horizontal Position and Vertical Position settings to factory default settings. It also resets the unit to select Input 1.

## DIPSWITCH SETTINGS

### SWITCH 1

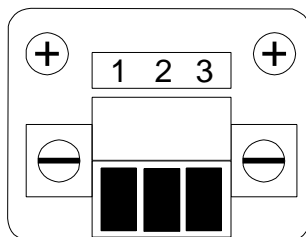
DIP	FUNCTION	SETTING	DESCRIPTION
1	Reserved	None	
2	Output Sync Format	1 Auto	Sync format is set automatically based on the number of cables connected to the unit.
		0 Manual	Sync format is set via dipswitches #5 and #6
3	Horizontal Position Control	1 Off	Disable Horizontal Position Control
		0 On	Enable Horizontal Position Control
4	Vertical Position Control	1 Off	Disable Vertical Position Control
		0 On	Enable Vertical Position Control
5	Output Sync Format (Must set #2 to 0)	1 RGBS/RGBHV	Sync format is RGBS or RGBHV depending on the setting of dipswitch #6
		0 RGsB	Sync format is sync on green (RGsB)
6	Output Sync Format (Must set #5 to 1)	1 RGBS	Sync format is RGBS
		0 RGBHV	Sync format is RGBHV
7	Output Sync Polarity (RGBHV In/Out Only)	1 Forced (see #8)	With RGBHV input signal and RGBHV output signal the H & V sync polarities are set with dipswitch #8
		0 Mirror Input	With RGBHV input signal and RGBHV output signal the H & V sync polarities are the same as the input
8	Output Sync Polarity (RGBHV In/Out Only)	1 Negative	With RGBHV input signal and RGBHV output signal the H & V sync polarities are negative, negative
		0 Positive	With RGBHV input signal and RGBHV output signal the H & V sync polarities are positive, positive
9	RGBS/RGsB Output Serration Pulses	1 Remove	The output sync will not have serration pulses when set for RGBS or RGsB output.
		0 Present	The output sync will have serration pulses present when set for RGBS or RGsB output.
10	Reserved	None	

## SWITCH 2

DIP	FUNCTION	SETTING	DESCRIPTION
1	Input 1 Monitor Emulation	1 Emulation On	Monitor emulation is always on for Input 1
		0 Automatic	Monitor emulation is automatic. Emulation is on when there is no local monitor present and off when there is a local monitor. (Dipswitch # 2 must be ON)
2	Input 1 Auto Emulation	1 Off	Disable the Auto Emulation
		0 On	Enable the Auto Emulation (Dipswitch #1 must be set for Automatic)
3	Input 2 Monitor Emulation	1 Emulation On	Monitor emulation is always on for Input 1
		0 Automatic	Monitor emulation is automatic. Emulation is on when there is no local monitor present and off when there is a local monitor. (Dipswitch # 2 must be ON)
4	Input 2 Auto Emulation	1 Off	Disable the Auto Emulation
		0 On	Enable the Auto Emulation (Dipswitch #1 must be set for Automatic)
5	Front Panel Operation	1 Enabled	Enable the front panel operation
		0 Disabled	Disable the front panel
6	Automatic Input Selection	1 On	An input is selected automatically based on the presence of sync. Input 2 has the higher priority.
		0 Off	Manual input selection
7	Screen Shift (IN2200S Only)	1 On	Turn on screen shift
		0 Off	Turn off screen shift
8	Screen Shift Speed (IN2200S Only)	1 Fast	Setup Mode: The image will be shifted fast to allow for proper setup of the image size and position.
		0 Slow	Normal Operation: The image will shift slowly
9	Reserved	None	
10	Reserved	None	

## REMOTE PORT

The remote port can be used to switch the input remotely. It also provides a status pin that can be used to determine what input is currently selected (to provide feedback to a remote system when a user uses the front panel.)



<u>PIN</u>	<u>FUNCTION</u>
1	Input Select
2	Ground
3	Status

**Input Select:** A momentary contact between pin 1 and 2 will toggle the input from 1 to 2 or 2 to 1.

**Status:** The status pin can be used to determine the selected input:  
 Pin 3 High - Input 2 selected  
 Pin 3 Low - Input 1 Selected

## STEREO AUDIO SWITCHING

**IN2200** has stereo audio-follow-video switching capability. When Input 1 or Input 2 is selected manually or automatically, the **IN2200** switches the stereo audio signals in conjunction with their corresponding video signals.

### Stereo Audio Inputs

**Connectors on IN2200:** (1) 3.5mm stereo female jack for each input

Located next to the 15-pin HD male video input connector, the stereo audio inputs are compatible with unbalanced line level audio signals from a computer audio card, CD player, audio from a VCR or laser disc player, or other stereo line level audio signal.

### Local Audio Output

**Connectors on IN2200:** (1) 3.5mm stereo female jack for each local output

Located next to the 15-pin HD female local video output connector, Inputs 1 & 2 each have a local audio output. The local output provides an unbalanced line level signal, identical to the input signal. This is a passive output (not buffered) designed to drive a local device such as powered speakers or other line level compatible audio equipment. The local outputs for each input are always active, even when that input is not currently selected.

**Adapter Cables:** The following cables are available to connect audio equipment to the stereo audio inputs and local outputs. For more information, see **Cable Pin Outs** below.

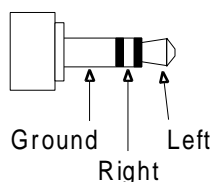
**IN9106** (1) 3.5mm Stereo Mini Male to (1) 3.5mm Stereo Mini Male, 6' long

**IN9107** (1) 3.5mm Stereo Mini Male to (1) RCA Stereo Male, 6' long

### **Adapter Cable Wiring Diagram**

*Please note that the diagram below is for input cables and local output cables only. The main audio output has a different pin configuration.*

### **Cable Pin Outs for Stereo Input / Local Output**



### Main Audio Output

**Connectors on IN2200:**

(1) 3.5mm female jack for Left Audio Signal - Unbalanced / Balanced Line Level

(1) 3.5mm female jack for Right Audio Signal - Unbalanced / Balanced Line Level

Located just to the right of the main BNC outputs, the main audio output provides a buffered audio signal from input 1 or input 2 depending on which input is currently selected. The main audio output signal is line level and can be set for unbalanced (factory default) or balanced. See **IN2200 Internal Jumpers & Pots** for information on setting the unit for unbalanced or balanced output.

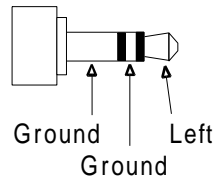
**Audio Adapter Cables:** The **IN2200** main audio outputs use one connector for left audio and a separate connector for the right audio signal. This is done to accommodate unbalanced or balanced audio signals. When the **IN2200** is set for unbalanced audio output signal, (2) **IN9107** can be used as output adapters for the left and right output jacks. In this configuration, the output signal is found on the red RCA connector on each **IN9107**. When the **IN2200** is set for balanced audio output, custom adapter cables should be constructed, conforming to the pin configuration shown in **Audio Connector Wiring Diagrams**.

### Adapter Cable Wiring Diagrams:

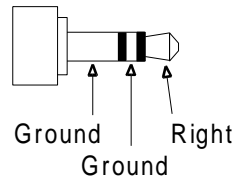
Please note that the diagram below is for the main audio left and right outputs only. Cables for the audio inputs and local audio outputs have a different pin configuration.

#### Cable Pin Outs for Unbalanced Output

Left Channel

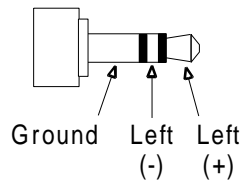


Right Channel

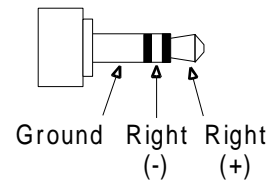


#### Cable Pin Outs for Balanced Output

Left Channel



Right Channel



### IN2200 INTERNAL CONTROLS

The location of the **IN2200** internal controls is shown in Diagram A on the next page.

**CAUTION:** Adjustment of the **IN2200** internal controls must only be carried out by qualified technicians. Care must be taken to avoid static shock to the internal components.

#### Set Audio Output to Unbalanced or Balanced

All four jumpers (**J9/J10/J15/J16**) must be set to the appropriate positions as indicated below:

##### Set Output for Unbalanced (Factory Default)

J15 / J16      Closed  
J9 / J10      Connect 2 Pins Closest to BNC Connectors

##### Set Output for Balanced

J15 / J16      Open  
J9 / J10      Connect 2 Pins Closest to Center of Unit

**The internal controls below are factory adjustments and are for factory trained technicians only:**

**J5** - This jumper must remain open for normal operation!!! Do not close this jumper.

If J5 is closed the microprocessor is continuously reset and the unit will not function normally.

**Pot R150**      Red Gain Adjustment Pot - Calibrated at Factory  
**Pot R11**      Blue Gain Adjustment Pot - Calibrated at Factory  
**Pot R190**      LCD Contrast Adjustment Pot - Set at Factory

# DIAGRAM A - IN2200 INTERNAL CONTROLS

