CVD 4200

Fiber Optic Transmission System

C O V I D

User's Manual

CVD 4200

Fiber Optic Transmitter and Receiver Set

A Simple Solution for Transmitting Super High Resolution Computer Video and Balanced Audio, or Mouse/Keyboard up to Three Kilometers Utilizing Fiber Optic Technology

C O V I D

Contents

Introduction

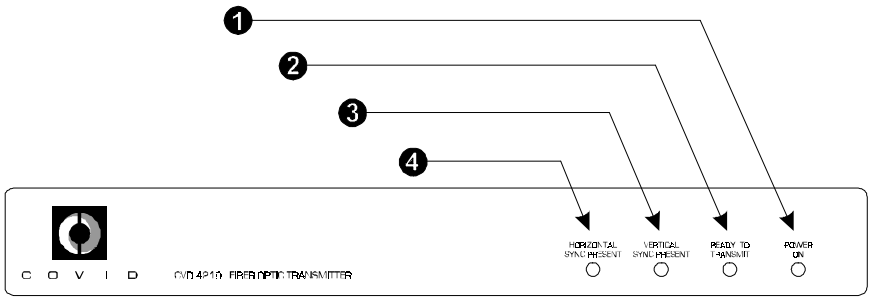
Thank you for purchasing one of the CVD4200 series products. Each is part of a high-resolution, state-of-the-art, fiber optic transmission system. The CVD 4210/4214/4218 transmitter and CVD 4220/4224/4228 receiver are designed to transmit and receive high resolution computer video, as well as, balanced audio signals or mouse/keyboard commands between remote locations up to 3 kilometers apart. Some of the features of the CVD 4200 Fiber Optic Transmission System include:

- 300 MHz Video Bandwidth
- Digital Signal Transmission of Balanced Audio
- Remote Mouse and Keyboard Control
- Automatic Gain Control (AGC)
- Complete Audio Frequency Range: 20Hz to 20kHz
- Standard VGA 15 pin Input and Output
- Elimination of Ground Loops
- Immunity to Electromagnetic Interference

CVD 4210 / 4214 / 4218

Fiber Optic
Transmitter

Panel Descriptions



FRONT PANEL LAYOUT CVD 4210/4214/4218

FRONT PANEL

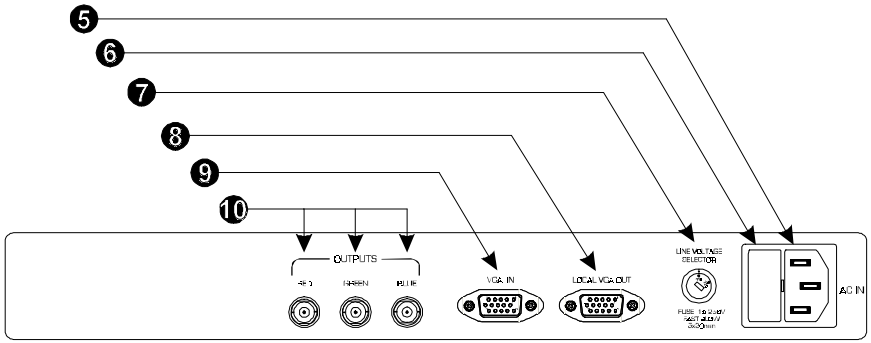
1. **Power on**: LED lights red whenever AC power cord is plugged in.

2. **Transmission on**: LED is green when transmitting capability is enabled (normal condition); if transmitting capability is disabled, LED flashes red.

3. **V-sync present:** when vertical sync pulse is present, LED is green; if pulse is absent, LED is continuous red or flashing red, depending on unit configuration.

4. **H-sync present:** when horizontal sync pulse is present, LED is green; if pulse is absent, LED is continuous red or flashing red, depending on unit configuration.

Panel Descriptions



*REAR PANEL LAYOUT CVD 4210**

REAR PANEL

5. **AC in:** AC power cord connector.

6. **Fuse:** fuse holder. Check rear panel for fuse type and rating.

7. **Line voltage selector**: allows the unit to operate on either 115V AC or 230V AC power. User must position switch to match avail able power.

8. **Local VGA monitor out**: allows user to connect a monitor at the transmission site to view the information being transmitted. Takes standard 15-pin HD VGA connector.

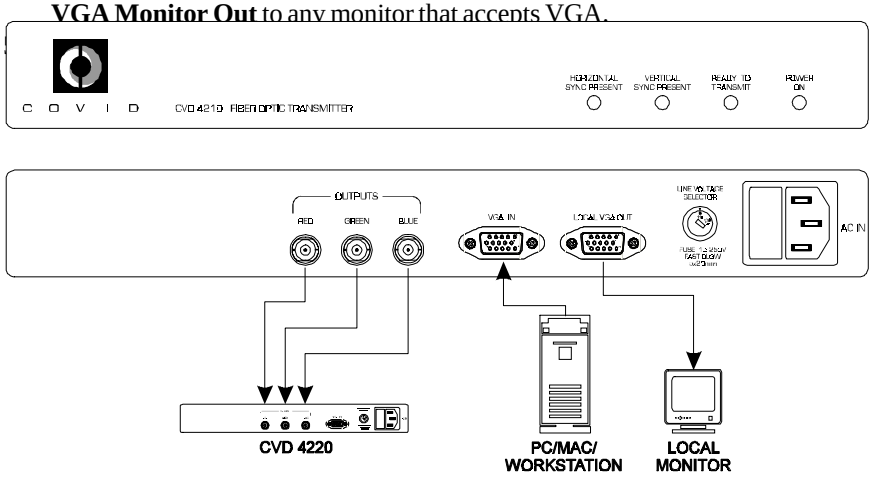
9. **VGA in:** input for computer signal to be transmitted. Takes stan dard 15-pin HD VGA connector.

10. **Outputs R, G, and B**: connect to ST-2A fiber optic strands, which transmit the Red, Green, and Blue video data to the re ceiver.

**Not Shown: Rear Panel Layout CVD 4214/4218*

Operational Setup

1. Set **Line Voltage Selector** switch to match AC power available in your area. Plug in AC power cord.
2. Connect output cable from computer or other VGA source to **VGA In**.
3. Connect output cable from audio source to **Audio In.** (CVD 4214 Not Shown)
4. Connect mouse/keyboard cables to **Mouse/Keyboard In.** (CVD 4218 Not Shown)
3. Check front panel LEDs. At this point, H-sync, V-sync and transmission LEDs should be green and Power LED should be red.
4. If you wish to view the signal at the transmission site, connect the **Local VGA Monitor Out** to any monitor that accepts VGA.



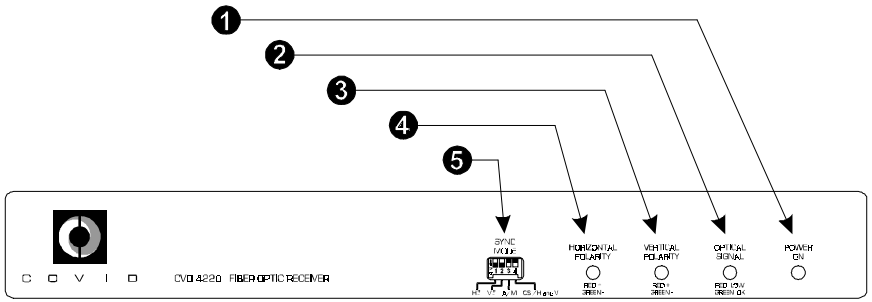
*Typical Setup Configuration CVD 4210**

The CVD 4210 is now transmitting. See setup instructions for the CVD 4220 for receiver connections and operation.

CVD 4220/4224/4228

Fiber Optic
Receiver

Panel Descriptions



FRONT PANEL LAYOUT CVD 4220/4224/4228

FRONT PANEL

1. **Power on**: LED lights red whenever AC power cord is plugged in.

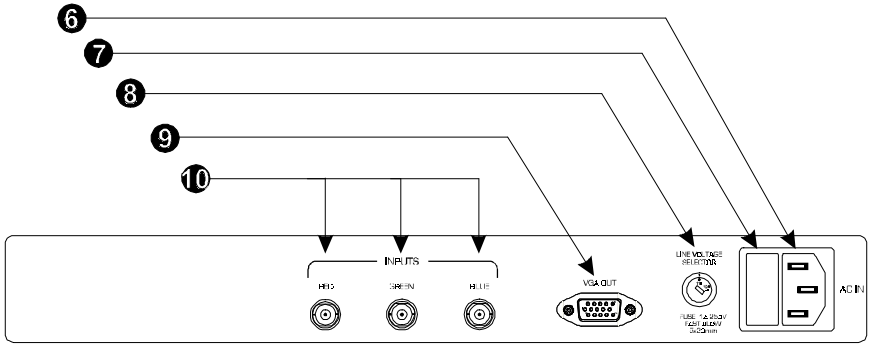
2. **Optical signal**: LED is green when signal strength is normal; if signal strength is low (below 700 mV peak to peak), LED flashes red.

3. **V polarity:** LED is red when vertical sync polarity is positive, green when polarity is negative.

4. **H polarity:** LED is red when horizontal sync polarity is positive, green when polarity is negative.

5. **Sync polarity/configuration switch:** allows the user to manually or automatically reverse the sync polarities, as well as configure the sync outputs to separate composite or separate H and V. See "Specifications" on page 12 for further information on this item.

Panel Descriptions



*REAR PANEL LAYOUT CVD 4220**

REAR PANEL

6. **AC in**: AC power cord connector.

7. **Fuse**: fuse holder. Check rear panel for fuse type and rating.

8. **Line voltage selector:** allows the unit to operate on either 115V AC or 230V AC power. User must position switch to match available power.

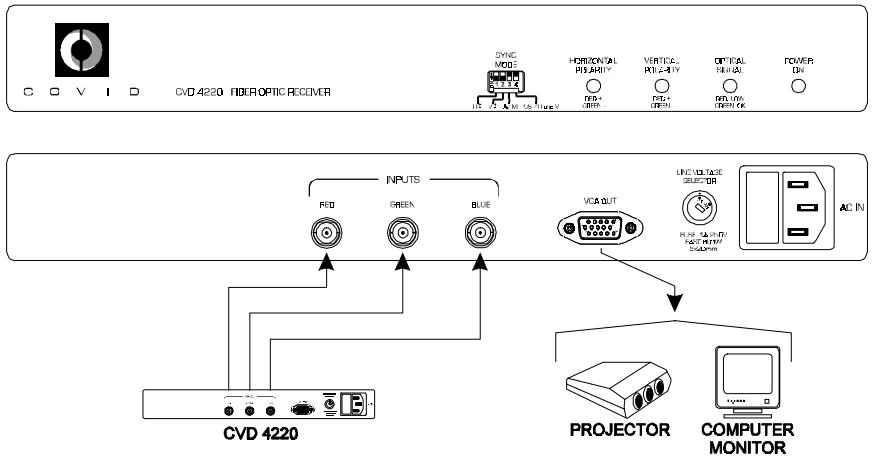
9. **VGA out**: outputs the computer signal to monitor or projector. Takes standard 15-pin HD VGA connector. See “Specifications” on page 12 for further information on this item.

10. **Inputs R, G, B**: connect to the ST-2A fiber optic cable that is connected to the transmission source.

**Not Shown: Rear Panel Layout CVD 4224/4228*

Operational Setup

1. Set **Line Voltage Selector** to match AC power available in your area. Plug in AC power cord. Check for **power on** LED.
2. Connect ST-2A fiber optic cable to R, G, and B inputs. Cable should also be connected to R, G, and B outputs of the transmitter. If a sig nal is being transmitted, **Optical signal** LED should now be green.
3. Connect **VGA output** to monitor or distribution amplifier.
4. If necessary, set sync polarity switches to meet your needs.



Typical Setup Configuration CVD 4220

Your CVD 4200 system is now operational.

General Specifications

CVD 4210/4214 Fiber Optic Transmitter

INPUT:

Video

Connector	(1) 15 pin HD VGA female
Video Impedance	75 Ohm
Video Level	.7Vpp
Video Polarity	Positive
Sync Configuration	Composite, Separate H & V
Sync Impedance	47kOhms
Sync Level	TTL
Sync Polarity	Any
Resolution	Maximum 1800 x 1440 @ 60 Hz
Frequency	15 - 160 kHz, 20-200 Hz

Audio

Connector	(1)5 pin 0.2" pitch, Phoenix Terminal Block
Signal Type	Analog, Stereo, Balanced or Unbalanced
Signal Level	775mV
Impedance	7.3kOhms
Frequency Response	20Hz - 20kHz
THD (typical)	0.003%
Dynamic Range (typ.)	94dB

OUTPUT:

Optical

Connector	(4) ST-2A Fiber Optic female
Light Source	(4) LEDs
Optical Wavelength	820nm
Modulation	1M (light intensity modulation)
Optical Mode	Multimode

Local Monitor

Connector	(1) 15 pin HD VGA female
Video Impedance	75 Ohm
Video Level	.7Vpp
Video Polarity	Positive
Sync Impedance	24 Ohm
Sync Level	5Vpp
Sync Polarity	Any

General Specifications

CVD 4220/4224 Fiber Optic Receiver

INPUT:	
Connector	(4) ST-2A Fiber Optic female
Light Source	(4) PIN diodes
Optical Wavelength	820nm
Modulation	1M (light intensity modulation)
Optical Mode	Multimode
OUTPUT:	
Video	
Connector*	(1) 15 pin HD VGA female
Video Impedance	75 Ohm
Video Level	.7Vpp
Video Polarity	Positive
Sync Configuration	Composite, Separate H & V
Sync Impedance	21 Ohms
Sync Level	5Vpp
Sync Polarity	Original or Manually Selectable for H & V
Resolution	Same as input
Frequency	Same as input
Audio	
Connector	(1)5 pin 0.2" pitch, Phoenix Terminal Block
Signal Type	Analog, Stereo, Balanced or Unbalanced
Signal Level	775mV
Impedance	100 Ohms
Frequency Response	20Hz - 20kHz
THD (typical)	0.003%
Dynamic Range (typ.)	94dB

**Output cabling can be either 15 pin HD to 15 pin HD, or 15 pin HD to 5 BNC for further distribution*

Physical & Power Specifications

All CVD 4200 Series Fiber Optic Systems

POWER:		
115 VAC / 60 Hz, 230 VAC / 50 Hz	Switch selectable on rear panel	
PHYSICAL:		
Dimensions	1U high, 3/4U wide (each)	
	12.75 (W) x 1.72 (H) x 8.5 (D) in (each)	
Enclosure	Aluminum, Dark Gray, Medium texture finish	
Weight	Net:	3.75lb/1.7kg (each)
	Shipping:	5.25lb/2.3kg (each)

C O V I D

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