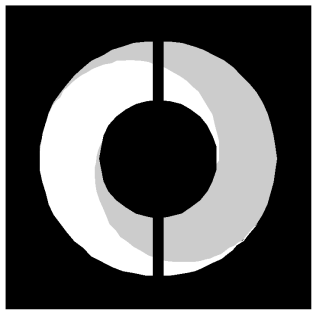
CVD 8200

Universal Interface



C O V I D

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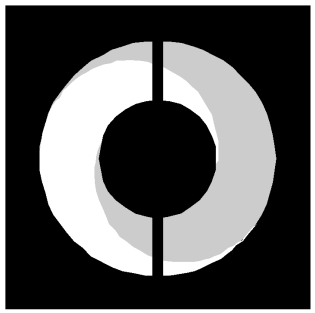

C O V I D

User's Manual

DISCLAIMER

The information contained in this document is subject to change without notice.

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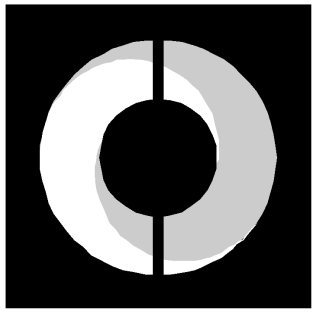
CVD 8200

Universal Interface

A Simple Solution for Converting A Computer Signal To A Selected Analog Format



C O V I D

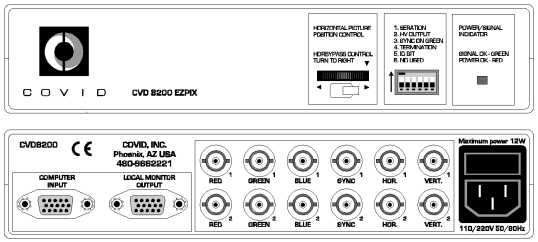
General Specifications

CVD 8200 UNIVERSAL INTERFACE

INPUT:	
Signal:	Analog RGBHV, RGBS, RGsB, RsGsBs
Connectors:	(1) HD-15Female
Video Impedance:	75 Ohms
Video Level:	0.3 – 1.2 Vpp
Sync Level:	Analog / TTL (-0.3 Vpp)
Sync Polarity:	+ / -
OUTPUT:	
Signal:	Analog RGBHV, RGBS, RGsB, RsGsBs
Connectors:	(12) BNC Female (1) HD-15 Female
Video Impedance:	75 Ohms
Video Level:	Analog 0.77 Vpp
Sync Impedance:	22 Ohms
Sync Level:	Analog / TTL (-0.3 Vpp)
Bandwidth:	350 MHz

PHYSICAL SPECIFICATIONS

DIMENSIONS:	1U High, 1/2 Rack Wide
(in)	1.75 H x 8.50 W x 4.93 D
(mm)	4.45 H x 21.60 W x 12.50 D
ENCLOSURE:	Aluminum, Black, Texture Finish
WEIGHT:	
Net:	2.0 lbs. / 0.91 kg
POWER:	
Input:	110 or 220 VAC, 60/50 Hz, Internal
Dissipated:	12 Watts



Troubleshooting Tips

1. The power LED should light when the correct voltage is applied to the interface.

2. The Termination DIP switch should be in the ON position if no “Y” cable (breakout) cable is used on the input.

3. Make sure that the cables have the correct pin outs and the connection and quality of the cable are good.

4. Make sure that the source and display are scan-rate compatible. The projector should support an appropriate signal format (RGsB, RGBS, RGBHV). Connect the projector directly to a computer with a shorter cable to verify the compatibility of the display and the source.

5. If you are using output RGBS or RGsB then the HV Output DIP switch is in the OFF position and the composite sync signal is taken from the sync connector. If the display needs an RGBHV signal then the HV Output DIP switch should be ON if sync and vertical connectors are used.

6. If the desired output is RGsB then the sync on green DIP switch should be ON.

Contents

Introduction

Thank you for purchasing a CVD 8200 universal interface. Covid's CVD 8200 provides a simple solution for converting a computer video signal to a selected analog format for interfacing with incompatible display devices. There are a wide variety of computers, video cards, data monitors, and large screen displays. When a computer image is displayed on large monitors or projectors, the computer is not always compatible with these devices. The CVD 8200 helps resolve this incompatibility. The CVD 8200 amplifies a computer video signal and converts the sync portion to a selected format. It does not change the scan rate or resolution of the video signal. Some of the features of the CVD 8200 universal interface include:

- Universal Interface for VGA, MAC, and Workstations
- 350 MHz Bandwidth
- Horizontal Control Bypass for Use with Sync Sensitive LCD Projectors
- Three buffered outputs including two amplified RGBSHV BNC outputs and one amplified HD 15-pin monitor output
- Active Signal Indicator changes color to reflect power and signal presence
- Horizontal position adjustment and switches for input termination and horizontal delay removal
- Terminal not required: an ID bit emulates a local monitor for laptops
- Internal Power Supply for US and International markets
- EZPix Characteristic Ease of Use
- Rack Mountable Enclosure

Frequently Asked Questions

Why does the termination switch have to be ON?
The termination switch should be ON if a local monitor is connected through a straight cable. It should be OFF if a monitor breakout cable is used at the local monitor output connector.

When and why should I use the Horizontal Position Control dial?
The Horizontal Position Control dial enables or disables the control of the horizontal position of the image. First, adjust the horizontal position using the monitor or projector's control. Then use the horizontal Position Control of the CVD 8200, if needed.

What DIP switch do I set to obtain a composite sync output?
If the desired output signal is composite sync, then turn OFF the H & V OUTPUT switch and connect 4-wires (RGBS) to the red, green, blue, and sync connectors.

When and why would I use the sync on green DIP switch, although the unit does not separate sync from green?
The CVD 8200 does not separate the sync signal from green. If the desired output is in RGsB format, turn the sync on green DIP switch to the ON position. The CVD 8200 combines sync on green if the the DIP switch is in the ON position.

When do I use the H & V OUT DIP switch?
If the desired output is in RGBHV format, turn ON the H & V OUT DIP switch. If H & V OUT DIP switch is OFF, then the output signal may have composite sync present on the horizontal sync connector.

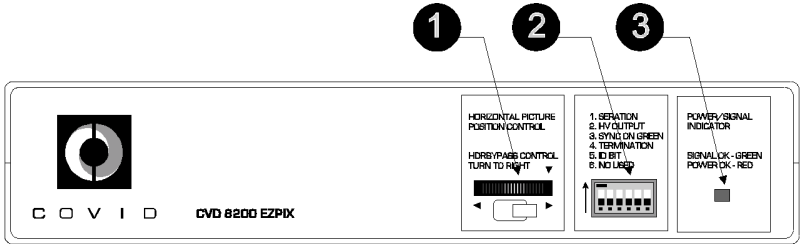
What is a common computer video card output?
HD-15 pin D-Sub Female

1. Red Video	6. Ground	11. ID Bit
2. Green Video	7. Ground	12. ID Bit
3. Blue Video	8. Ground	13. Horizontal Sync
4. ID Bit	9. Composite Sync	14. Vertical Sync
5. Ground	10. No Connection	15. No Connection

Power Requirements

The CVD 8200 may be used with either 110V or 220V and offers a universal connector for ease of use throughout the world. Always insure that the fuse box window above the power input connector displays the proper voltage. To change the setting, unplug the CVD 8200, squeeze the clips on either side of the fuse box and remove. Pull out the fuse holder and turn it 180 degrees, reseating with proper voltage showing through the window. The fuse box may then be re-inserted into the CVD 8200. The side clips of the fuse box should lock securely into place.

Panel Descriptions



FRONT PANEL LAYOUT

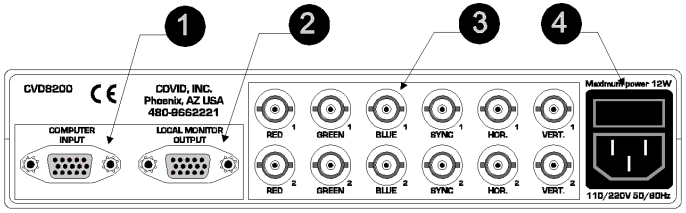
FRONT PANEL

1. **POWER ON:** The LED turns red when power is applied to the unit, green when power and signal is present.

2. **HORIZONTAL POSITION CONTROL:** Controls the horizontal position of the image. To turn off horizontal position control, turn fully to the right until it clicks into a locked position.

3. **DIP SWITCHES:** Set the DIP switches to match the output signal to the correct input format for the display.

Panel Descriptions



CVD 8200 REAR PANEL LAYOUT

CVD 8200 REAR PANEL

1. **INPUT:** HD-15 D-sub connector provided to connect to computer.

2. **LOCAL MONITOR OUTPUT:** HD-15 D-sub connector provided to connect to the local monitor.

3. **OUTPUTS:** BNC Female Connectors are provided to connect to display devices.

4. **AC IN:** Power Inlet accepts 110 VAC or 220 VAC.

H & V Out Switch

When the composite sync channel is used and RGBS format is desired on the outputs of the CVD 8200, this switch should be turned OFF. When this switch is ON, the composite sync channel will only output horizontal sync and not vertical sync. As an alternative to connecting cables to the separate H and V channels, it is possible to connect H to the composite and V to the vertical. Put this switch into the ON position to output RGBHV.

Sync On Green Switch

In some systems, the ability of the CVD 8200 to output Sync On Green can be a very helpful feature. It is important to note that the CVD 8200 will not strip sync from the green signal if the input is RGsB. It will simply amplify video and pass it through. It will, however, combine Sync with Green video when the switch is in the ON position, regardless of whether the input sync is composite or H & V.

Termination Switch

When set to the ON position, this switch will terminate the input of the interface. This switch should be OFF only when a “Y” type monitor breakout cable is used and the local monitor is connected.

ID Bit Switch

Many computers use ID bits or sense pins to recognize that a monitor has been connected to its video output port. Often, these ID bits will even allow the computer to recognize what type of monitor is connected (in terms of its scan rate compatibility). The ID bit switch on the CVD 8200 allows the main ID bit (pin 4 on the input connector) to be connected to ground when placed in the ON position.

This is used primarily when interfacing laptop computers to emulate the presence of a local monitor. Typically, this recognition will take place during the boot up stage. If your computer is not outputting video, place this switch in the ON position and reboot the computer. When left in the OFF position, this ID bit will be passed through to the Local Monitor Output port.

Horizontal Position Adjustment

Most monitors and projectors have the ability to adjust the horizontal position of the image, it is sometimes helpful to have control of this feature in the interface. This control is helpful when multiple computers are switched to a single display and the positions for each computer are slightly different. With the interface horizontal position control centered, the image should first be adjusted using the monitor or projector control and then if needed, the interface horizontal position control. To turn off the horizontal position control of the interface, turn the adjustment wheel to the right until it clicks into place.

Horizontal Delay Removal

The CVD 8200 offers the ability to bypass the horizontal delay. This may be necessary when interfacing with projectors or monitors with sensitive sync inputs, particularly with the LCD type projectors. By turning the horizontal position adjustment fully to the right, the control will click into place. This position outputs the same sync type that is supplied from the source. In this position, the CVD 8200 will not provide horizontal positioning and any horizontal positioning needed and must be done on the display or projector.

Bandwidth

The typical bandwidth of the CVD 8200 is 420 MHz. The minimum bandwidth is 350 MHz. This high bandwidth allows passing of the third harmonics of the video signal, thus maintaining the highest quality of the input signal.

Dip Switches

Serration Pulse Switch

Certain monitors and projectors will exhibit better image stability with the serration pulse switch ON. This switch is seldom used and in most cases should remain OFF.

Operational Setup

Turn off all equipment before connecting or removing cables.

1. Connect your computer video output to the connector labeled “Computer Input” on the CVD 8200 using the appropriate input cable. Make sure to set the Termination DIP switch to the ON position.

2. If needed, connect the local display to the connector labeled “Local Monitor Output”.

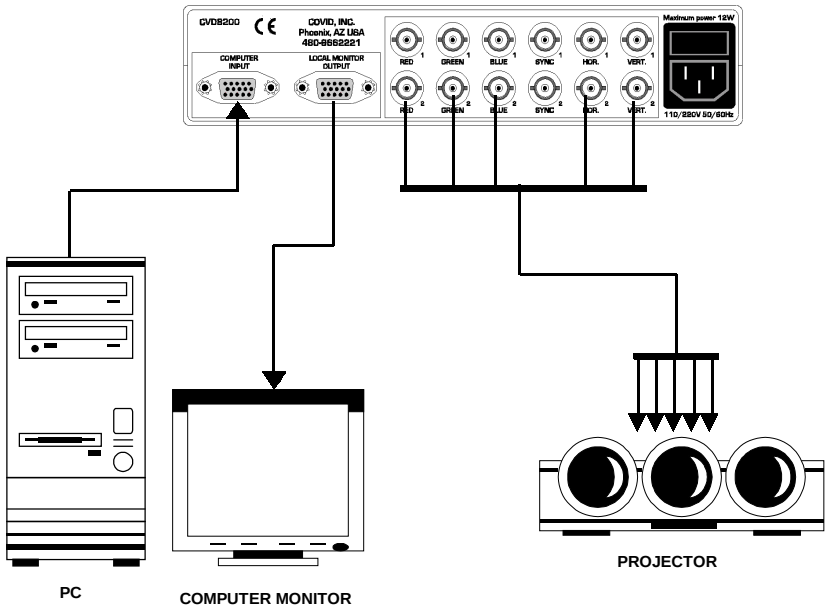
3. Connect coaxial cable between the main output of the CVD 8200 and your display. Be sure to match the proper components carefully.

4. Set DIP switches for desired sync output format.

5. Power up the unit and display devices.

6. Make sure the interfaces horizontal position con trol is centered, off. If necessary, adjust the image position using the monitor or projector control, then use the interface horizontal position control.

Typical Configuration



User Instructions

When the unit is first powered on, the LED should light red, green if both power and signal are present.

Input Formats

There are several acceptable input formats. They are the following: VGA, MAC, SUN and SGI type using the correct adapter cables. The CVD 8200 is compatible with standard VGA cables.

HD-15 D-sub Female Connector Pin-Out

1. Red Video	6. Ground	11. ID Bit
2. Green Video	7. Ground	12. ID Bit
3. Blue Video	8. Ground	13. Horizontal Sync
4. ID Bit (Grounded if ID bit is ON)	9. Composite Sync	14. Vertical Sync
5. Ground	10. No Connection	15. No Connection

Output BNC Connectors

By connecting to the appropriate connectors, the outputs can be configured to provide RGsB, RGBHV, or RGBS output.

For a RGsB type signal, the “Sync On Green” DIP switch must be set to the ON position.

For an RGBHV type signal, connect cables to the horizontal and vertical BNC connectors or connect the horizontal to the composite sync connector and set the HV OUTPUT DIP switch to the ON position.

For a RGBS type signal, connect the horizontal cable to the sync signal.