Gefen

CAT5•8000

USER MANUAL

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ASKING FOR ASSISTANCE

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Notice

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INTRODUCTION

The CAT5•8000 sends three analog monitors, one USB 1.1 equipped keyboard/ mouse, one analog audio signal, and one RS-232 device (like a touchscreen) up to 330 feet from the computer using multiple CAT5e cables. It's designed for those situations where multiple extended video screens need to be relocated to a distant location. USB 1.1 control, audio and RS-232 support is provided to enable remote operation.

How It Works

The CAT5•8000 uses a sender and receiver methodology to transmit signals from the computer to the workstation. The sender connects to the computer using the cables provided. The receiver connects to the three monitors, one RS232 serial device, and one analog audio device up to 330 feet away. Multiple CAT5e extension cables (up to 4 for the CAT5-8000), user provided, connect the sender to the receiver units. Both the sender and the receiver are powered separately using the provided power supplies. When connected and operational, the units extend all signals efficiently and reliably.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE CAT5•8000

- Use only industry standard Category-5 Enhanced (CAT5e) cable to operate the CAT5•8000 system.
- Local video outputs are provided on the CAT5•8000 Sender unit for monitoring purposes. Any monitor connected to a local video output port (Monitor Out 1, 2, or 3) must be able to display a matching resolution with its corresponding remote display on the CAT5•8000 Receiver unit.
- The CAT5•8000 system does not pass EDID (Extended Display Identification Data) from the extended monitors back to the source. EDID is not necessary to output standard VESA VGA video from a computer. In situations where non-VESA VGA resolutions are required, a DVI Detective (EDID storage device), part #EXT-DVI-EDID, will be required for each non-VESA resolution monitor connected to the CAT5•8000.
- The CAT5•8000 units are housed in a metal box for better RF shielding.
- The CAT5•8000 Sender unit can be powered from the USB cable without the external power supply.

Features

- Relocate a triple display workstation up to 330 feet away
- Supports resolutions up 1920 x 1200
- Supports USB 1.1 compliant devices
- Analog audio and RS-232 extension

Package Contents

(1) CAT5•8000 Sender Unit
(1) CAT5•8000 Receiver Unit
(3) 6 ft VGA Cable (M-F)
(1) 6 ft USB Cable (A-B)
(1) 6 ft Mini Stereo Audio Cable (M-M)
(2) 5V DC 4 AMP Power Supply
(1) Set of Rack Ears

Front Panel

Power LED Indicator

Back Panel

Local Monitor Output 3

Video In 3

CAT 5 Ports

RS-232 Input

Audio In 2

5V DC Power Input

Local Monitor Output 1

Video In 1

Local Monitor Output 2

Video In 2

Audio In 1

CAT 5 Ports

USB B Input

Front Panel

Brightness Adjustment For Display 3

Brightness Adjustment For Displays 1 & 2

Power LED Indicator

Back Panel

5V DC Power Input

Video Out 1

Video Out 2

Audio Output 1

USB A Outputs

CAT 5 Ports

Video Out 3

Video Out 3

CAT 5 Ports

RS-232 Output

Audio Output 2

CONNECTING THE CAT5•8000

1 Connect the computer's VGA output ports (supports up to three displays) to the CAT5•8000 Sender unit using the supplied VGA male to female cables.

2 Connect the computer's stereo audio mini-jack output to the CAT5•8000 Sender unit using the supplied stereo audio mini-jack cable.

3 Connect the USB from the computer to the CAT5•8000 Sender unit using the supplied USB A to B cable. The A side of the USB cable needs to be connected to a free USB A port on the computer, while the B side needs to be connected to the B connector on the CAT5•8000 Sender unit.

4 Optionally, you can connect the RS-232 to the CAT5•8000 Sender unit using a user supplied RS-232 cable. This cable must be a straight-through patch cable. A null-modem cable will not work for this application.

5 Connect the CAT5•8000 Sender unit to the CAT5•8000 Receiver unit using four user supplied CAT5e cables. Termination of the cabling must adhere to the TIA/EIA-568-B standard. See page 9 for more details.

6 Connect the displays to the CAT5•8000 Receiver using user supplied VGA cables. Up to 4 displays can be connected to the CAT5•8000 Receiver. Video Out 1 and 2 on the CAT5•8000 Receiver correspond to Video In 1 and 2 on the CAT5•8000 Sender. Both VGA output ports labeled as Video Out 3 on the CAT5•8000 Receiver corresponds to Video In 3 on the CAT5•8000 Sender. The second Video Out 3 VGA output port is a mirrored output for Video In 3 and is for the connection of an additional display.

7 Connect amplified speakers to the CAT5•8000 Receiver unit using a user supplied stereo audio mini-jack cable.

8 Connect USB peripherals to the CAT5•8000 Receiver unit using user/device supplied USB cables. The connection to the CAT5•8000 Receiver unit must be USB A type.

9 Optionally, connect a RS-232 peripheral to the CAT5•8000 Receiver unit with a user supplied RS-232 cable.

10 Plug both supplied 5V DC power supplies into the CAT5•8000 Sender and Receiver units.

11 Power all monitors first, and then power on the computer.

Note: There is a second stereo audio mini-jack input and output for an additional audio signal to be transmitted to the remote location. It is not necessary to connect these audio ports for the CAT5•8000 to function properly.

CAT5•8000

Once all connection have been made and an image appears on the remote monitors, the images may need to be tuned to perfect the video signal. The CAT5•8000 has been engineered to provide exceptional video quality and user functionality, but the variance in cable length and quality is a variable that can create color separation and ghosting. These artifacts can be eliminated by fine tuning the CAT5•8000. Please refer to the section below if the CAT5•8000 exhibits any video issues.

Brightness Adjustment

The CAT5•8000 Receiver has three brightness adjustment trim pots on its front panel. If the resulting image is either too bright or too dim, use a small flathead device to turn each trim pot in either a clock-wise or counter-clock-wise direction. Turn the trim pot in small increments to either brighten or dim the image. Once a satisfactory brightness level has been achieved, remove the flathead device.

Jumper Settings

Variances in CAT5e cable skew and quality may cause the individual colors in the VGA signal (red, green, and blue) to arrive at the CAT5•8000 Receiver at slightly different times. These delays can cause the colors in the image to be offset, cause the video to appear slightly out of focus, and ultimately degrade the video image. Inside the CAT5•8000 Receiver unit are sets of jumper pins that will allow the user to fine tune each color and compensate for these delays in the CAT5e cable. Because there are multiple displays that are being sent from the CAT5•8000 Sender to the Receiver, a separate bank of jumper pins are provided for each display. Because this operation requires the unit to be partially disassembled, please follow these steps ONLY if there are issue in the video quality.

1 Open the CAT5•8000 Receiver by removing all screws on the underside and sides of the unit.

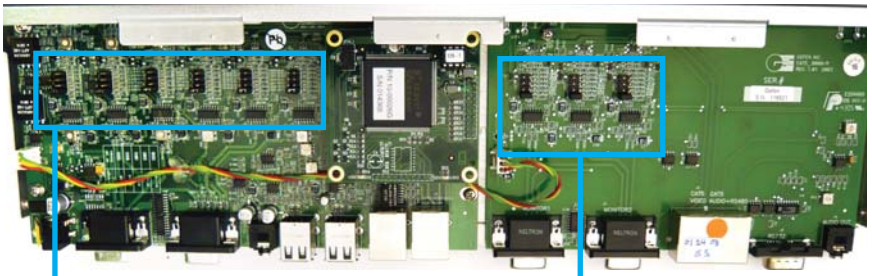
2 Remove the hex nuts associated with all HD-15 (VGA) and RS-232 heads on the rear panel of the CAT5•8000 Receiver unit.

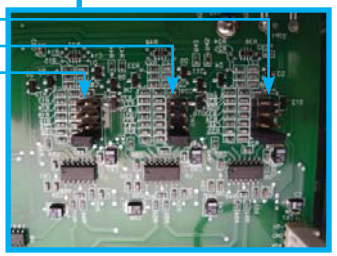
3 Carefully slide the unit apart to reveal the circuit board of the CAT5•8000 Receiver unit.

4 Locate the jumper pin banks using the diagram on the next page.

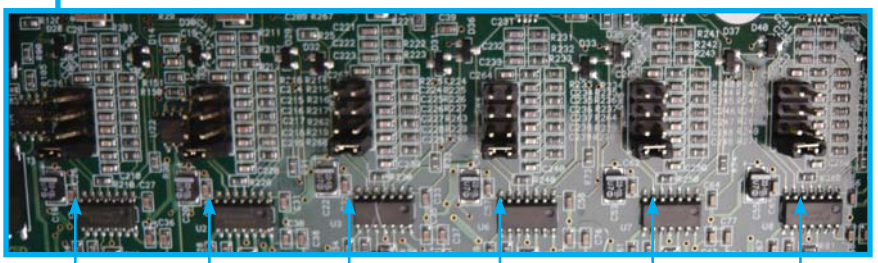
5 First, focus the image by setting the jumper pins according to the distance of CAT5e cabling using the table on the next page. Move the red, green, and blue jumpers together for each of the video outputs.

6 Fine adjustment to each color can now be done to individual colors based on what is viewed on screen. Move the jumper either up or down on each color to adjust the delay until the picture no longer appears smeared.





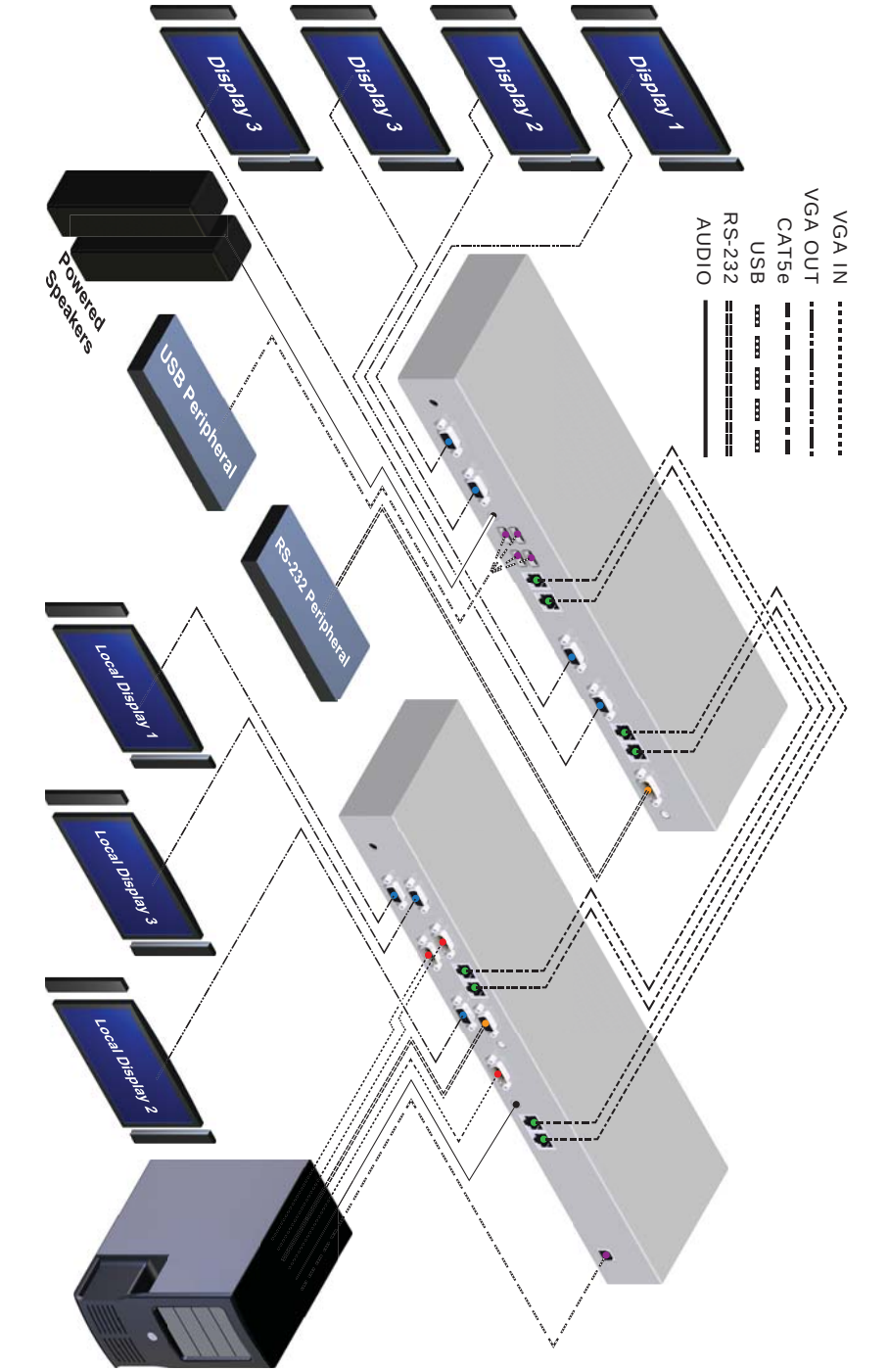
Note: The jumpers on this board affect both Video 3 outputs.

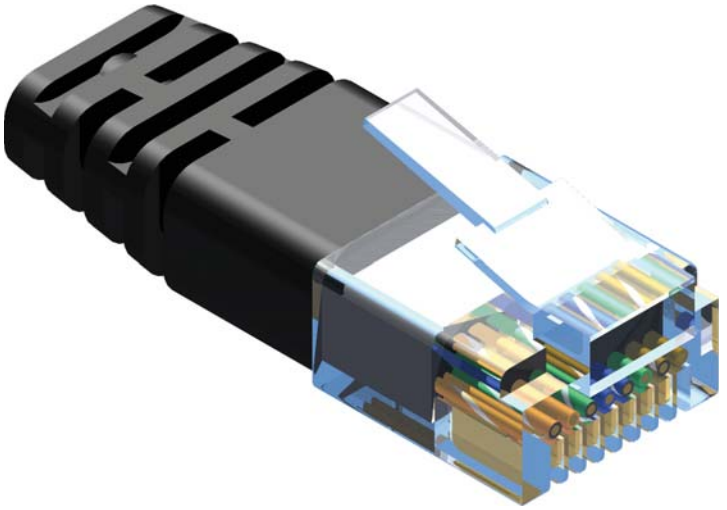


CAT5 Distance	Position
81-100 Meters	4
61-80 Meters	3
41-60 Meters	2
21-40 Meters	1 (Default)

For 0-20 Meters please remove the jumper pin

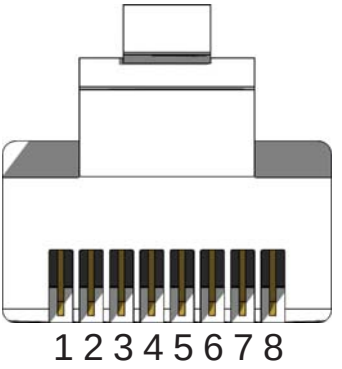
WIRING DIAGRAM





Gefen has specifically engineered their products to work with the TIA/EIA-568-B specification. Please adhere to the table below when field terminating cable for use with Gefen products. Failure to do so may produce unexpected results and reduced performance.

Pin	Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown



Category 5 cabling comes in stranded and solid core types. Gefen recommends using solid core cabling.