



**CAT5•8500**  
USER MANUAL

[www.gefen.com](http://www.gefen.com)

## ASKING FOR ASSISTANCE

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### Notice

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**Macintosh** is a trademark of Apple Computer Inc.

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# INTRODUCTION

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Thank you for purchasing the new extend•it CAT5•8500 series by Gefen, Inc.

The extend•it CAT5•8500 by Gefen allows users the benefits of extending VGA, USB, RS232, and audio signals beyond the desktop. In a growing number of applications, broadcast stations and production facilities there is a need to locate a computer remotely from the keyboard, mouse, and video monitor. A CPU may need to be shared between several users, for example, or moved to another room because of annoying fan noise.

The CAT5•8500 series can be used to extend computers with noisy fans, printers, hard drives, scanners, cameras, keyboards, mouse, and any other USB-type devices. With the potential to cover the distance of 450 feet, industry standard Category 5 (CAT-5) cables are used for the extension of all the devices. One can connect additional CAT5•8500 series to the same computer, allowing access to the same computer from other locations up to 450 feet apart.

## CONTENTS

The CAT5•8500 system consists of:

- (1) CAT5•8500S sender unit
- (1) CAT5•8500R receiver unit
- (2) 5VDC power supply
- (3) VGA M-F cables (6FT)
- (1) USB cable (6FT)
- (1) Audio cables (6FT)
- (1) User Manual

## HOW IT WORKS

In its most basic application, the CAT5•8500S sender unit resides next to the computer. Supplied with the system, VGA cables, audio cables, and USB cables connect the computer to the CAT5•8500S sender unit.

The CAT5•8500R receiver unit are placed next to the monitors and USB device, at the remote location. The monitor, keyboard, mouse, and other USB devices are connected to the CAT5•8500R similar to the way they are connected to the back of the computer (PC or Macintosh).

Industry standard Category 5E (CAT-5) cables are used to link CAT5•8500S sender and CAT5•8500R receiver units together. Monitor 1 is extended by one CAT-5 cable, monitor 2 is extended with a second CAT5 cable, and monitor 3 is extended with a third CAT-5 Cable. USB and Audio 1 are with a fourth CAT-5 cable. RS232 and Audio 2 signals are extended with a fifth CAT5 cable.

## OPERATION NOTES

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### READ THESE NOTES BEFORE INSTALLING OR OPERATING THE CAT5•8500 SYSTEM

- Use industry standard Category-5 (CAT-5) cable to operate the CAT5•8500 system. CAT-5 E cable is preferred.
- When monitors are used in the local and remote locations, the video monitors must be able to sync to the same resolution. This pertains to monitors placed remotely, and those divided between local and remote locations. The video monitors will not initialize correctly at start-up if they are unable to sync the same resolution of the local monitors.
- The CAT5•8500S unit can be powered from the USB cable without the need to connect the external power supply.
- The CAT5•8500 units are housed in a metal box for better RF shielding.

## CAT5•8500S FRONT PANEL DESCRIPTION

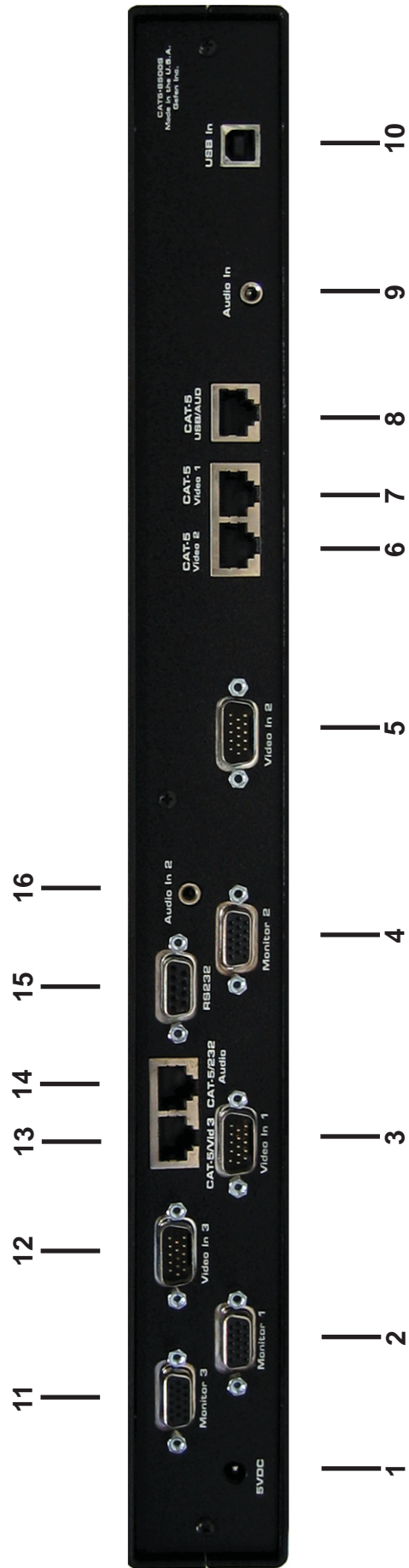
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### Front Panel Function Description

- 1 **POWER ON INDICATOR** - Indicates that the unit is plugged in and powered on

# CAT5•8500S BACK PANEL LAYOUT



## CAT5•8500S BACK PANEL DESCRIPTIONS

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- 1 **POWER** - 5 VDC external power supply
- 2 **MONITOR 1** - HD15 output connects to local monitor 1
- 3 **VIDEO IN 1** - HD15 input from computer
- 4 **MONITOR 2** - HD15 output connects to local monitor 2
- 5 **VIDEO IN 2** - HD15 input from computer
- 6 **CAT-5 VIDEO 2** - RJ-45 input extends video input 2 with CAT-5 cable
- 7 **CAT-5 VIDEO 1** - RJ-45 input extends video input 1 with CAT-5 cable
- 8 **CAT-5 USB/AUDIO** - RJ-45 input extends USB, and audio signals with CAT-5 cable
- 9 **AUDIO IN 1** - Audio Mini Jack input from computer
- 10 **USB IN** - USB input from computer
- 11 **MONITOR 3** - HD15 output connects to local monitor 3
- 12 **VIDEO IN 3** - HD15 input from computer
- 13 **CAT-5 VID 3** - RJ-45 input extends video input 3 with CAT-5 cable
- 14 **CAT-5/232/AUDIO** - RJ-45 input extends RS232, and audio 2 with CAT-5 cable
- 15 **RS232** - DB-9 input from computer
- 16 **AUDIO IN 2** - Audio Mini Jack input from computer

# CAT5•8500R FRONT PANEL DESCRIPTIONS

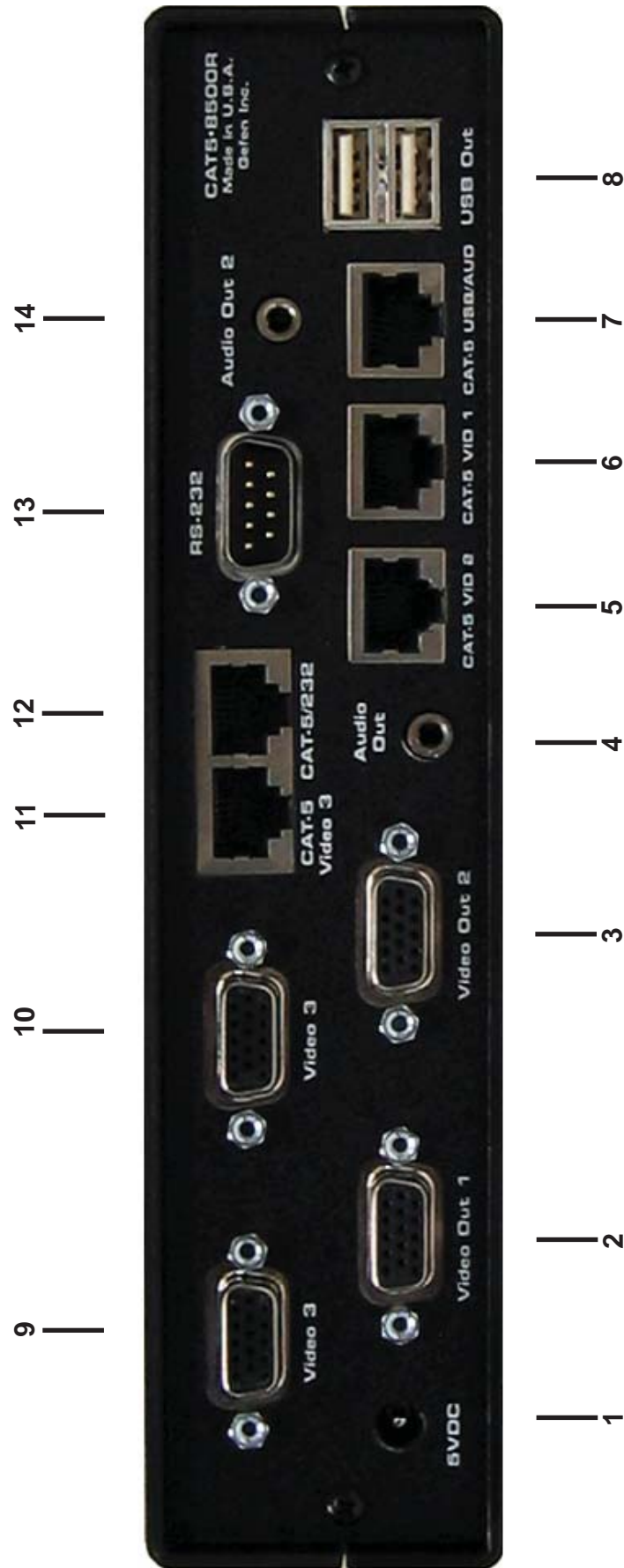
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## Front Panel Function Description

- 1 **F2** - Fine focus adjustment for monitor 2
- 2 **B2** - Adjusts the brightness for monitor 2
- 3 **F1** - Fine focus adjustment for monitor 1
- 4 **B1** - Adjusts the brightness for monitor 1
- 5 **POWER ON INDICATOR** - Indicates that the unit is plugged in and powered on
- 6 **3 Brightness** - Adjusts the brightness for monitor 3

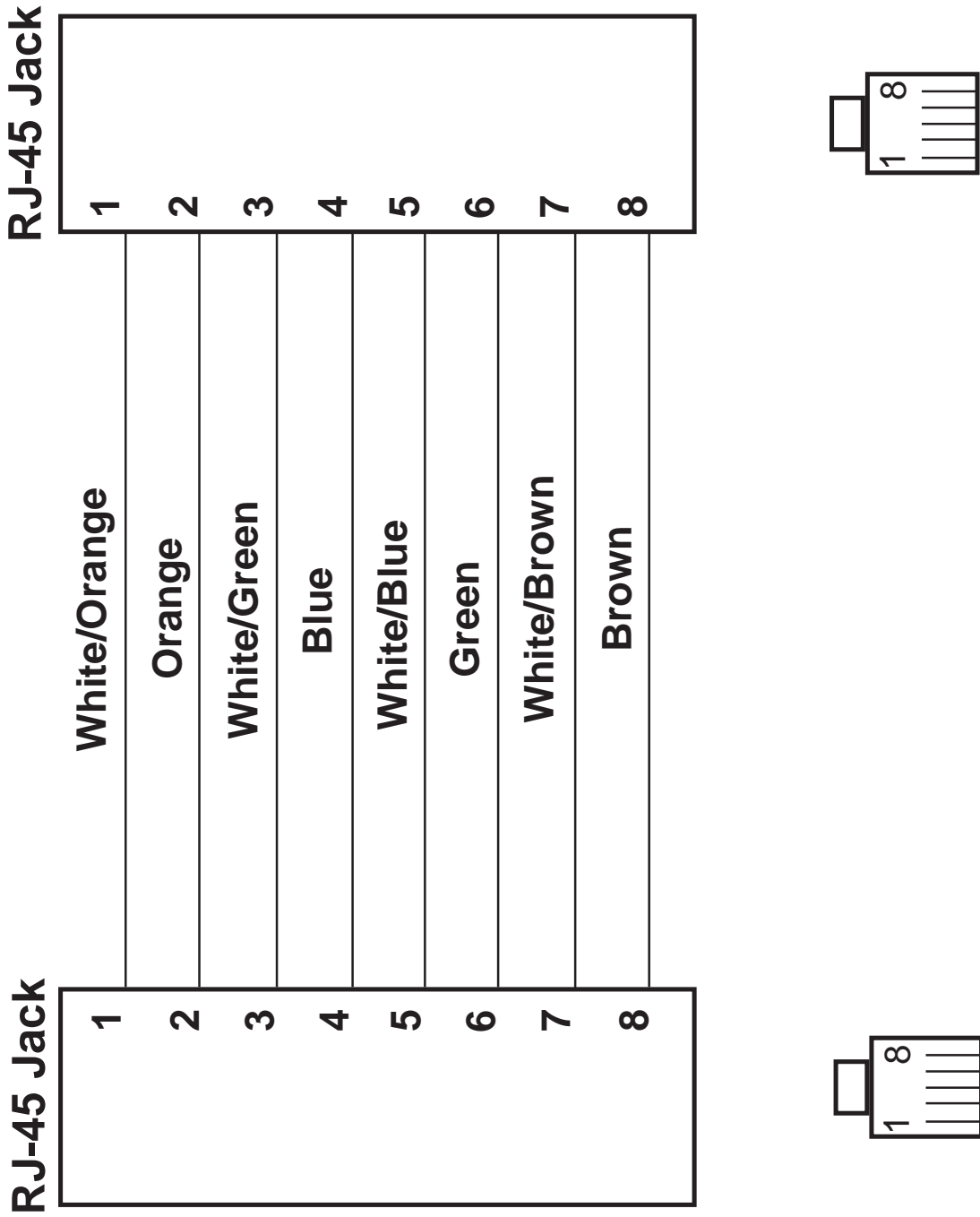
# CAT5•8500R BACK PANEL LAYOUT



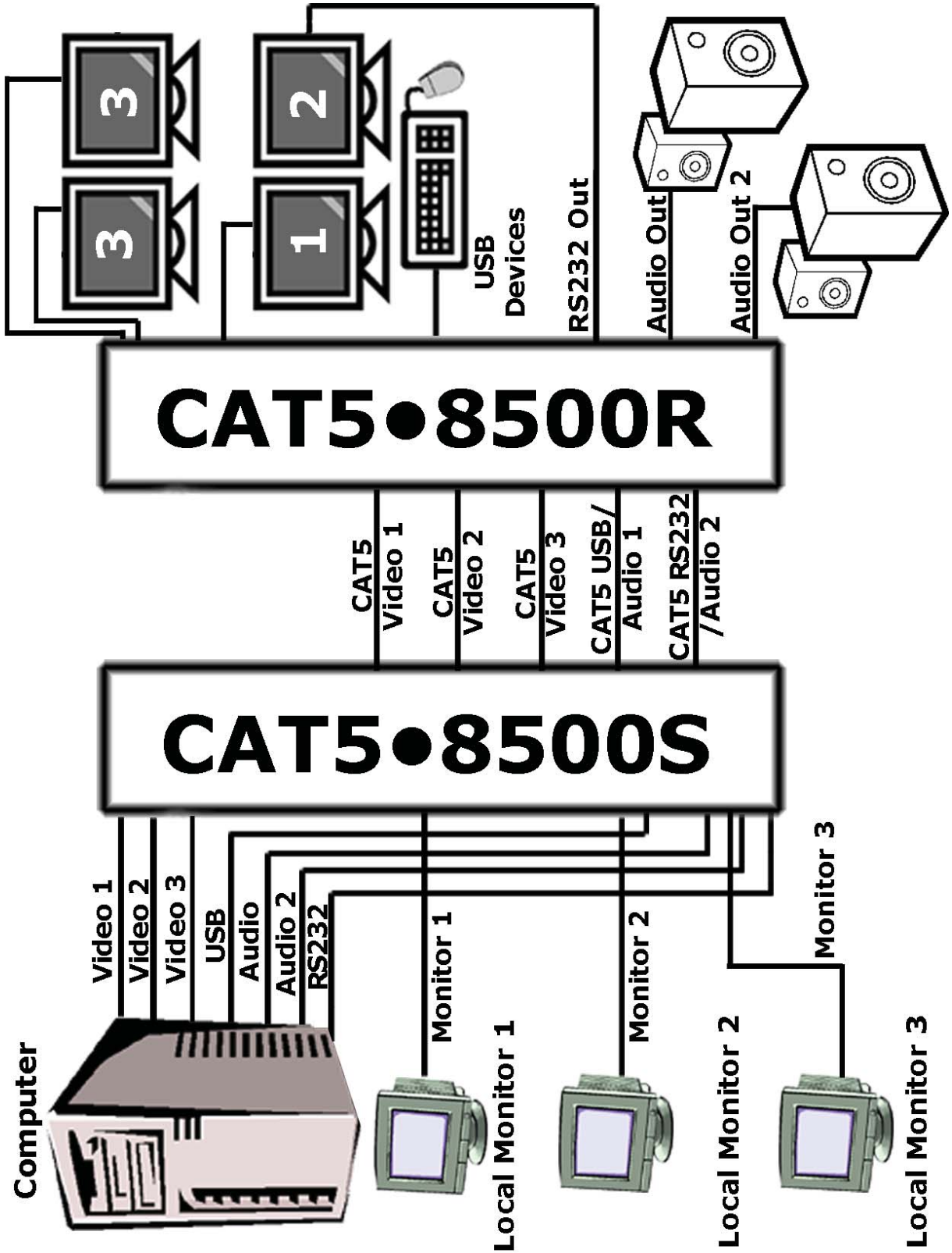
## CAT5•8500R BACK PANEL DESCRIPTIONS

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- 1 **POWER** - 5 VDC external power supply
- 2 **VIDEO OUT 1** - HD15 output connecting to the video monitor 1
- 3 **VIDEO OUT 2** - HD15 output connecting to the video monitor 2
- 4 **AUDIO OUT** - Audio mini jack connects to speakers
- 5 **CAT-5 VID 2** - RJ-45 input connects CAT-5 cable to receive extended video signals
- 6 **CAT-5 VID 1** - RJ-45 input connects CAT-5 cable to receive extended video signals
- 7 **CAT-5 USB/AUDIO** - RJ-45 input connects CAT-5 cable to receive extended USB and audio 1 signals
- 8 **2 USB OUT** - 2 port power USB hub, connects to USB devices
- 9 **VIDEO 3** - HD15 output connecting to the video monitor 3
- 10 **VIDEO 3** - HD15 output connecting to the video monitor 3 (mirror output)
- 11 **CAT-5 VIDEO 3** - RJ-45 input connects CAT-5 cable to receive extended video signals
- 12 **CAT-5/232** - RJ-45 input connects CAT-5 cable to receive extended RS-232 and audio 2 signals
- 13 **RS232** - DB-9 connector connects to RS-232 devices
- 14 **AUDIO OUT 2** - Audio mini jack connects to speakers



WIRING DIAGRAM



# CAT5 CABLE EQUALIZATION LENGTH SETUP

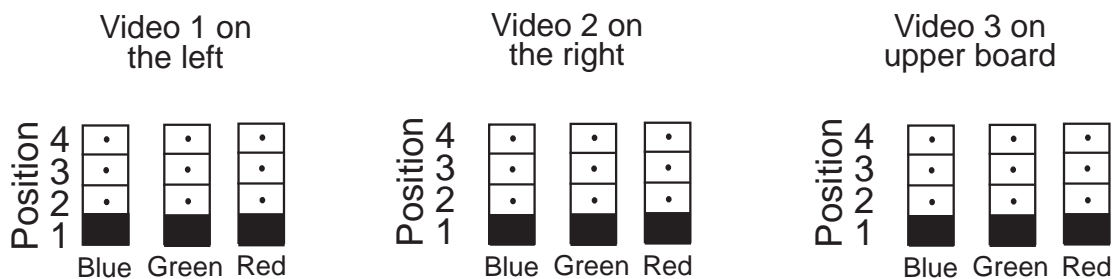
## Note:

The units are shipped with jumper setting equalized to 100 feet length. If you need the cable equalized for 200 or 300 feet, the jumpers must be changed to reflect the new changes. Please follow the explanation below.

This requires to open the top cover of the CAT5•8500 unit.

Jumper settings are used to set the focus of the picture and characters to the best possible sharpness. The first step to adjusting the video is to have the CAT5•8500S and CAT5•8500R connected together with the CAT-5 cable that is going to be used in the installation. Then set your computer to the resolution that you will be using most frequently, for best results set your computers refresh rate to 60Hz. Then removing the top of the CAT5•8500R by unscrewing the top two screws on either side of the box. The jumper settings for video 3 are on the upper board. Look at some text on monitor 3 and then move all the jumpers on the upper board to position 1, 2, 3, and 4, and set the jumper to the one that looks best. If you still see some smearing adjust an individual jumper for the color that is smearing (it can be two colors). Then remove the upper board, and repeat the same steps for monitor 1 and 2. You can now use the focus and brightness trim pods in the front of the unit for a finer adjustment of the video.

## Jumper Settings



## SPECIFICATIONS

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Video Amplifier Bandwidth .....	350 MHz
Actual Bandwidth .....	120 MHz
Input Video Signal .....	1.2 Volts p-p
Video In .....	HD-15
Focus/Brightness Control .....	25 to 450 FT
Video out .....	HD-15
Link Connector .....	RJ-45
USB - "A" Connector .....	USB Input
USB - "B" Connector .....	USB Device Input
Power Consumption .....	15 Watts
Power Supply .....	5VDC (External)
Dimensions .....	(CAT5•8500S) 1.75"H x 16"W x 4.6"D
Dimensions .....	(CAT5•8500R) 1.75"H x 8.4"W x 4.6"D
Rack Mountable .....	1 Rack Space (for the send unit)
Shipping Weight .....	9 Lbs

## WARRANTY

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Gefen Inc. warrants the equipment it manufactures to be free from defects in material and workmanship.

If equipment fails because of such defects and Gefen Inc. is notified within two (2) year from the date of shipment, Gefen Inc. will, at its option, repair or replace the equipment, provided that the equipment has not been subjected to mechanical, electrical, or other abuse or modifications.

Equipment that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for ninety (90) days from the day of reshipment to the Buyer.

This warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranty or merchantability or fitness for any particular purpose, all of which are expressly disclaimed.

1. Proof of sale may be required in order to claim warranty.
2. Customers outside the US are responsible for shipping charges to and from Gefen.
3. Copper cables are limited to a 30 day warranty and cable must be free from any scratches, markings, and neatly coiled.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen Inc. assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen Inc., be liable for direct, indirect, special, incidental, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. The technical information contained herein regarding CAT5•8500 features and specifications is subject to change without notice.