



CAT5•7000

EXT-CAT5-7000
USER MANUAL



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Notice

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Thank you for purchasing the new extend-it CAT5•7000 series by Gefen, Inc.

The extend-it CAT5•7000 by Gefen allows users the benefits of extending USB, audio in, audio out, PS/2, RS232, and video 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 or moved to another room because of annoying fan noise.

The CAT5•7000 series can be used to extend computers with noisy fans, printers, hard drives, scanners, cameras, keyboards, mouse, and any other USB-type peripherals. The CAT5•7000 has the potential to cover the distance of 330 feet over industry standard Category 5 (CAT-5) cables. One can connect additional CAT5•7000 series to the same computer, allowing access to the same computer from other locations up to 330 feet apart.

OPERATION NOTES

READ THESE NOTES BEFORE INSTALLING OR OPERATING THE CAT5•7000 SYSTEM

- Industry standard Category-5 (CAT-5) cables are used to operate CAT5•7000 systems.
- One CAT-5 cable extends video 1 and USB. A second CAT-5 cable extends video 2. A third CAT-5 cable is used to extend PS/2 and RS232. A fourth CAT5 cable is used to extend audio in and audio out.
- When two monitors are used in the local and remote locations, the video monitors must be a multi-resolution type. 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 different types.
- The CAT5•7000 units are housed in a metal box for better RF shielding.

CONTENTS

The CAT5•7000 system consists of:

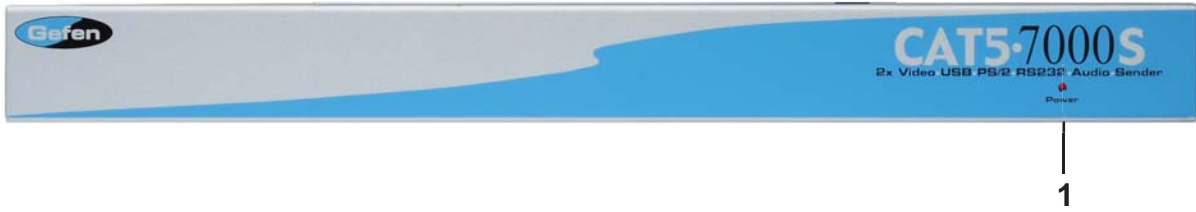
- (1) CAT5•7000S (sender unit)
- (1) CAT5•7000R (receiver unit)
- (2) 5 VDC power supply
- (2) Video cables (6FT)
- (1) USB cable (6FT)
- (1) PS/2 cable kit (keyboard & mouse) (6FT)
- (1) Audio cable (6FT)
- (1) Rack Ears
- (1) User Manual

HOW IT WORKS

In its most basic application, the CAT5•7000S sender unit resides next to the computer. Supplied with the system, VGA cables, PS/2 keyboard, PS/2 mouse, audio, and USB cables, they connect the computer to the CAT5•7000S sender unit.

The CAT5•7000R receiver unit is placed next to the monitors, keyboard, mouse, and USB peripherals at the remote location. The monitor and keyboard are connected to the CAT5•7000R, similar to the way they are connected to the back of the computer (PC or Macintosh).

Industry standard Category 5 (CAT-5) cables are used to link CAT5•7500S sender and CAT5•7500R receiver units together. Monitor 1 and USB are extended by one CAT-5 cable, monitor 2 is extended with a second CAT5 cable. PS/2 and RS232 are extended with a third CAT-5 cable and audio with a fourth CAT-5 cable.



Front Panel Function Descriptions

- 1 **Power On Indication** - Indicates that the unit is on and plugged in.

CAT5-7000R FRONT PANEL DESCRIPTION



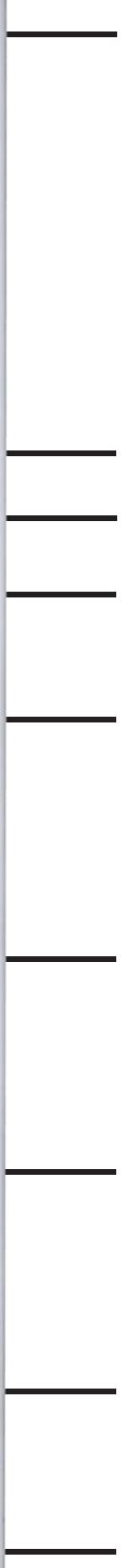
Front Panel Function Descriptions

- 1 **BRIGHTNESS 1** - Trim pot settings adjust video brightness for monitor 2
- 2 **BRIGHTNESS 2** - Trim pot settings adjust video brightness for monitor 1
- 3 **POWER ON INDICATOR** - Indicates that the unit is on and plugged in.

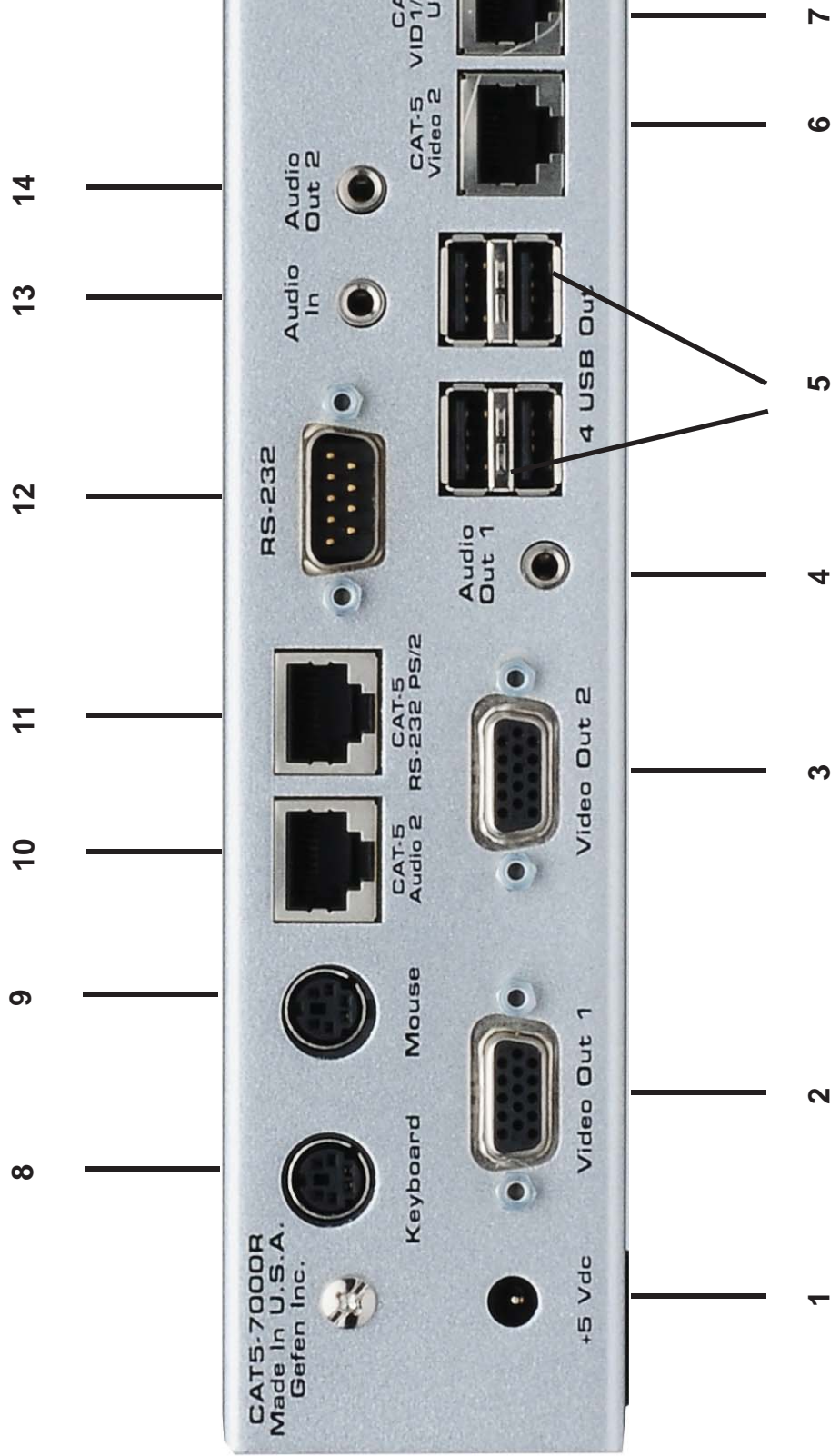
10 11 12 13 14 15 16



1 2 3 4 5 6 7 8 9



- 1 **POWER** - 5 VDC external power supply
- 2 **MONITOR 1** - HD15 output connects to the monitor 1 for local video
- 3 **VIDEO IN 1** - HD15 input from computer
- 4 **MONITOR 2** - HD15 output connects to the monitor 2 for local video
- 5 **VIDEO IN 2** - HD15 input from computer
- 6 **AUDIO IN 1** - Audio mini jack input connects to computers audio output
- 7 **CAT5 VIDEO 2** - RJ-45 input extends video input 2 with CAT-5 cable
- 8 **CAT5 1 VIDEO1/USB/AUDIO1** - RJ-45 input extends video, audio 1, and USB signals with CAT-5 cable
- 9 **USB IN** - USB input from computer
- 10 **KEYBOARD** - PS/2 keyboard input from computer
- 11 **MOUSE** - PS/2 mouse input from computer
- 12 **AUDIO** - RJ-45 input extends audio in and audio out 2
- 13 **SERIAL PS/2** - RJ-45 input extends RS-232 and PS/2 signals
- 14 **RS232 IN** - RS232 input from computer
- 15 **AUDIO OUT** - Audio mini jack input connects to computers microphone input
- 16 **AUDIO IN 2** - Audio mini jack input connects to computers audio output (Audio 2 offers improved signal to noise ratio by using differential signal technics)



- 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 1** - Audio mini jack connects to speakers
- 5 **USB OUT** - 4 port power USB hub, connects to USB devices
- 6 **CAT-5 VIDEO 2** - RJ-45 input connects CAT-5 cable to receive extended video signals
- 7 **CAT-5 VIDEO/USB/AUDIO** - RJ-45 input connects CAT-5 cable to receive extended video, audio 1, and USB signals
- 8 **KEYBOARD** - PS/2 mini din connects to PS/2 keyboard
- 9 **MOUSE** - PS/2 mini din connects to PS/2 mouse
- 10 **AUDIO** - RJ-45 input connects CAT-5 cable to receive extended audio in and audio out 2 signals
- 11 **SERIAL PS/2** - RJ-45 input connects CAT-5 cable to receive extended RS-232 and PS/2 signals
- 12 **RS232** - DB-9 connector connects to RS-232 devices
- 13 **AUDIO IN** - Audio mini jack connector connects to microphone
- 14 **AUDIO OUT 2** - Audio mini jack connects to speakers

Jumper settings are used to set the focus of the picture and characters to the best possible sharpness. The jumpers in the CAT5•7000R are set at the factory as shown in the diagram below. The first step to adjusting the video is to have the CAT5•7000S and CAT5•7000R connected together with the CAT-5 cable that is going to be used in the installation. Then set your computer to the resolution and refresh rate that you will be using most frequently be using. Then open up the CAT5•7000R by unscrewing the bottom three screws on back end of the box. Then two screws on each side of the box and the top. That is 9 screws in total that need to be removed. Lastly the 4 hex bolts around the Monitor Out port and the Video In port need to also be removed. After that look at some text on the monitor and set the jumpers to the recommended jumper setting based on the length of your CAT-5 cable. If you still see some smearing try moving all the jumpers up or down one from the recommended setting. If you see smearing of just one color adjust an individual jumper for the color that is smearing (it can be two colors). Repeat the same steps for monitor 2

Recommended Jumper Settings

Jumper Settings

Cable length

0-132 feet



*As shown in picture

133-198 feet



199-264 feet

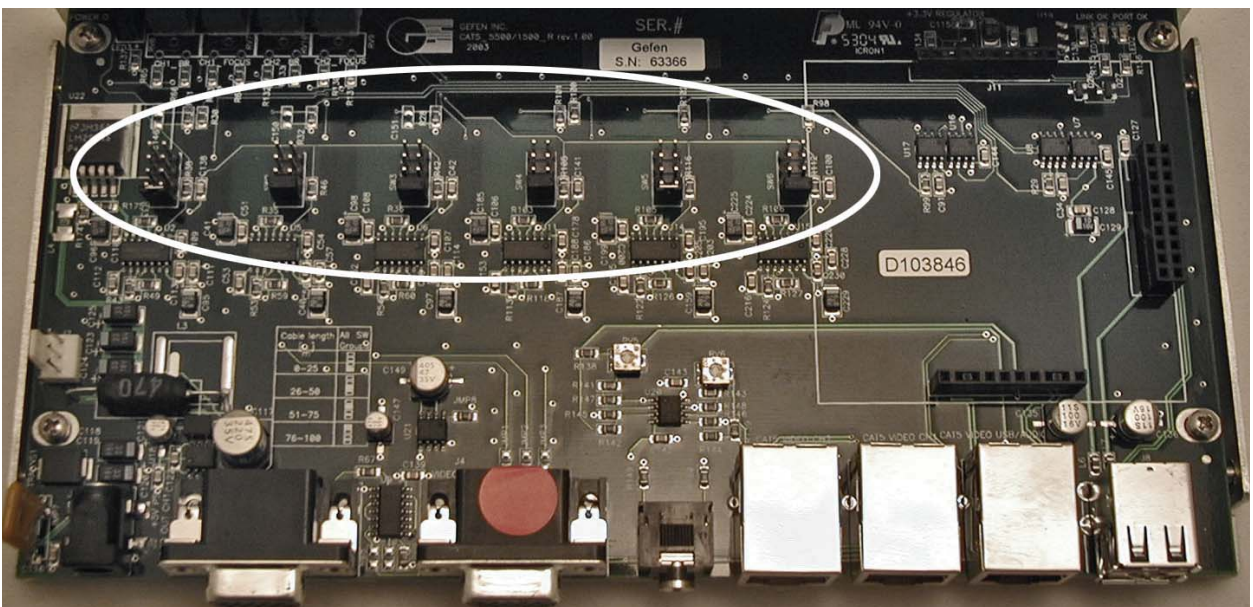
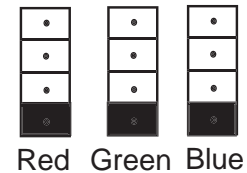
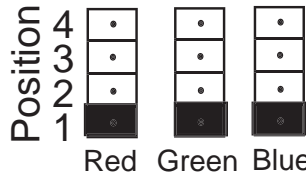


265-330 feet



Video 1 on the left

Video 2 on the right



RJ-45 Jack



White/Orange

Orange

White/Green

Blue

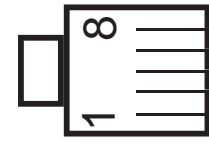
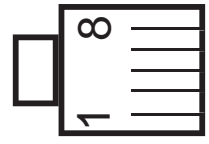
White/Blue

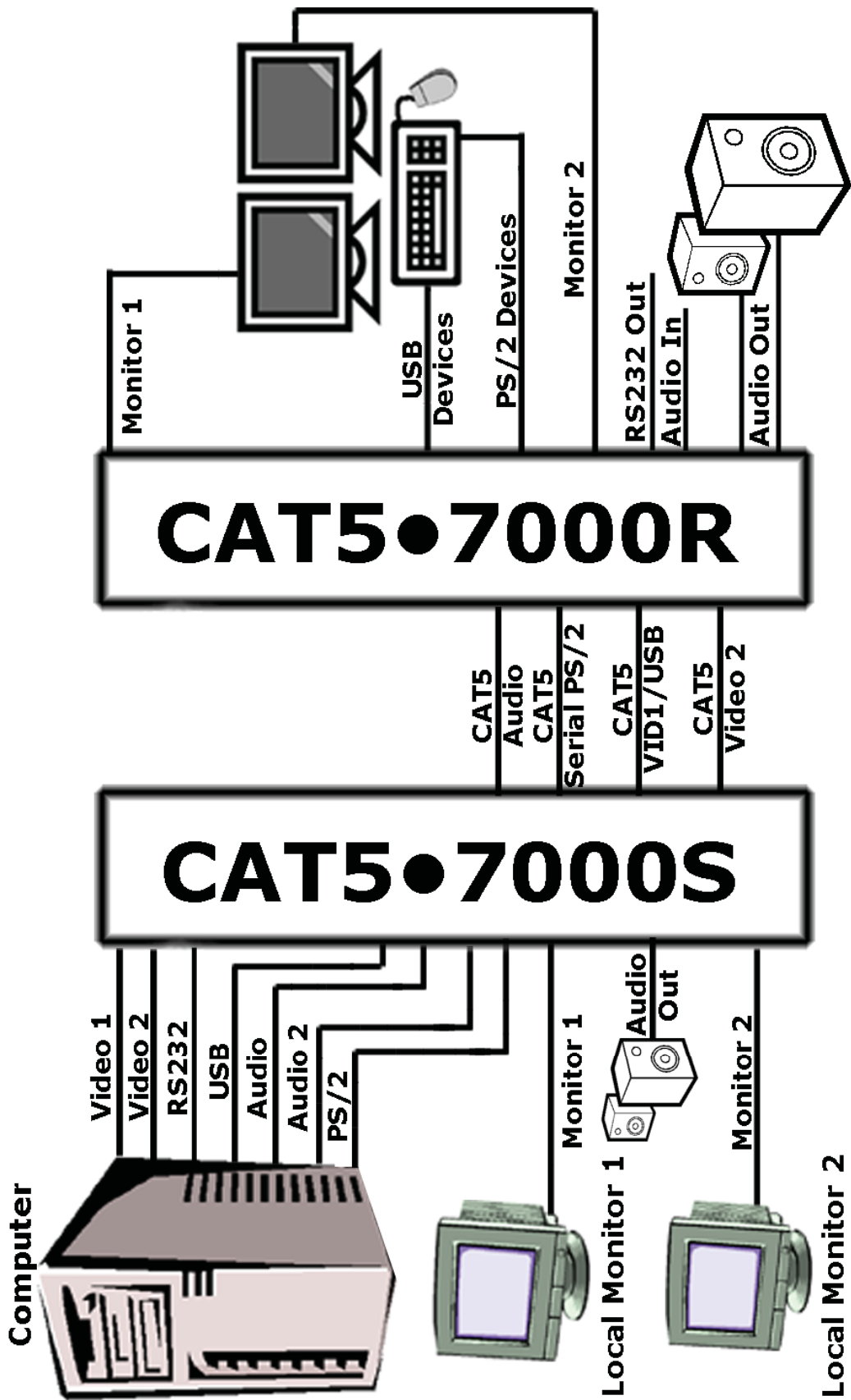
Green

White/Brown

Brown

RJ-45 Jack







Video Amplifier Bandwidth	350 MHz
Input Video Signal	1.2 Volts p-p
Input Sync Signal	5 Volts p-p (TTL)
Horizontal Frequency Range	15-70 KHz
Vertical Frequency Range	30-170 Hz
Video In.....	HD-15 male
Focus/Brightness Control	25 to 330 FT
Video out	HD-15 female
Link Connector	RJ-45
USB - "A" Connector	USB Computer output
USB - "B" Connector	USB Device input
RS232 Connector	DB9
PS/2 Connectors	6 pin Mini-DIN
Power Consumption	20 Watts (max.)
Power Supply	5 VDC (External)
Dimensions Send Unit	17.1"W x 1.1"H x 4.2"D
Dimensions Receive Unit ..	8.4"W x 2"H x 4.2"D
Rack Mountable	2U Rack Space
Shipping Weight	8 Lbs

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

If equipment fails because of such defects and Gefen is notified within two (2) years from the date of shipment, Gefen 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 cables must be in their original condition.

The information in this manual has been carefully checked and is believed to be accurate. However, Gefen assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will Gefen 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 the features and specifications is subject to change without notice.

For the latest warranty coverage information, please visit Gefen's Warranty web page at <http://www.gefen.com/kvm/aboutus/warranty.jsp>

PRODUCT REGISTRATION

Please register your product online by visiting Gefen's web site at <http://www.gefen.com/kvm/Registry/Registration.jsp>

* ma - cat 5 - 7000 *

Rev X1

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