



**ex·tend·it**

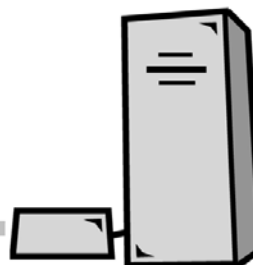
KVM & USB Extenders

**Professional Series**

**CAT5·3000**

**User Manual**

**CAT5-3000S/R**



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# INTRODUCTION

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Thank you for purchasing the new ex\*tend\*it CAT5-3000 series by Gefen, Inc.

The ex\*tend\*it CAT5-3000 by Gefen allows users the benefits of extending PS/2, ADB, and USB 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 CAT5-3000 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 330 feet, industry standard Category 5 (CAT-5) cables are used for the extension of all the devices. One can connect additional CAT5-3000 series to the same computer, allowing access to the same computer from other locations up to 330 feet apart.

## CONTENTS

The CAT5-3000 system consists of:

- (1) CAT5-3000S sender unit
- (2) CAT5-3000R receiver unit
- (2) 17VAC power supply
- (1) 16VAC power supply
- (2) Video cable (6FT)
  
- (1) ADB cable (6FT)
- (2) PS/2 cable (6FT)
- (1) USB cable (6FT)
- (1) Audio cable (6FT)
  
- (1) User Manual

## HOW IT WORKS

In its most basic application, the CAT5-3000S sender unit resides next to the computer. Supplied with the system, straight monitor, keyboard, mouse, and USB cables connect the computer to the CAT5-3000S sender unit.

The CAT5-3000R receiver units are placed next to the monitors and keyboard, or USB device, at the remote location. The monitor and keyboard are connected to the CAT5-3000R 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 CAT5-3000S sender and CAT5-3000R receiver units together. The first monitor, PS/2 keyboard and ADB signals are extended by one CAT-5 cable, monitor 2 and PS/2 mouse is extended with a second CAT5 cable, USB and audio signals are extended with a third CAT-5 cable, and RS232 signals are extended with a fourth CAT5 cable.

# OPERATION NOTES

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## READ THESE NOTES BEFORE INSTALLING OR OPERATING THE CAT5-3000 SYSTEM

- \* Use industry standard Category-5 (CAT-5) cable to operate the CAT5-3000 system. CAT-5 E cable is preferred.
- \* When two monitors are used in the local and remote locations, the video monitors must be able to use 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.
- \* Please connect all the cables between the computer and the CAT5-3000S before power up the CAT5-3000S unit.
- \* The CAT5-3000S unit can be powered from the USB cable without the external power supply.
- \* For PS/2 operation, both CAT5-3000R units must be connected.
- \* The CAT5-3000 units are housed in a metal box for better RF shielding.

# CAT5-3000S SENDER FRONT PANEL LAYOUT

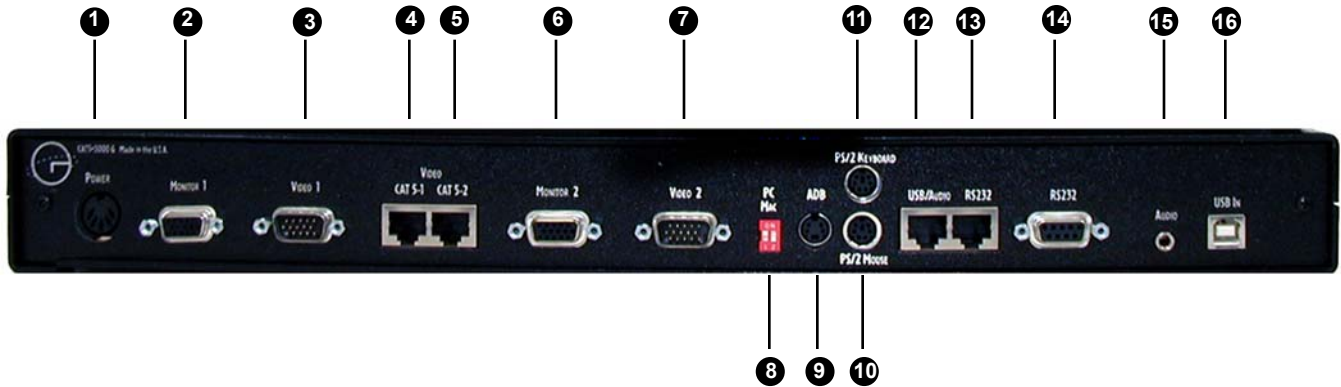
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## FRONT PANEL FUNCTION DESCRIPTIONS

- ❶ **Reset**  
Not used.
- ❷ **Power On Indicator**  
Indicates that the unit is on and plugged in.

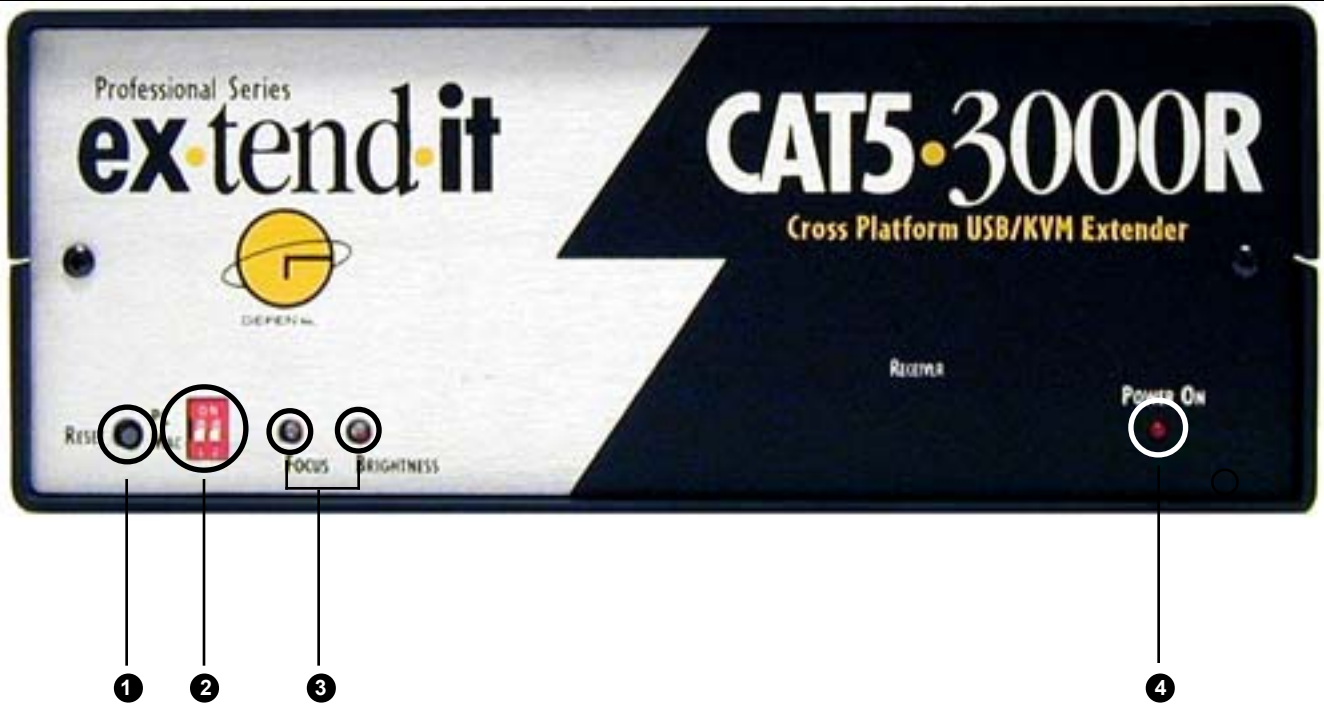
# CAT5-3000S SENDER BACK PANEL LAYOUT



## BACK PANEL FUNCTION DESCRIPTIONS

- 1 Power**  
16V Transformer
- 2 Monitor 1**  
HD-15 output relays video signal for local monitor
- 3 Video 1**  
HD-15 input receives video signals from computer
- 4 CAT-5 1**  
RJ-45 input extends video 1, PS/2 and ADB signal with CAT-5 cable.  
CONNECT CAT-5 CABLE FROM CAT-5 1 INPUT ON THE SENDER TO THE RECEIVER WITH USB PORTS.
- 5 CAT-5 2**  
RJ-45 input extends video 2 signal with CAT-5 cable
- 6 Monitor 2**  
HD-15 Output relays video signal for local monitor
- 7 Video 2**  
HD-15 input receives video signals from computer
- 8 Dip Switch**  
ADB keyboard / mouse for Macintosh types - Switches 1 and 2 set to OFF  
PS/2 keyboard / mouse for PC types - Switches 1 and 2 ON
- 9 ADB**  
Mini din ADB connector connects to ADB Mac for keyboard and mouse controls
- 10 PS/2 Mouse**  
Mini din PS/2 connector connects to PC for mouse controls
- 11 PS/2 Keyboard**  
Mini din PS/2 connector connects to PC for keyboard controls
- 12 USB/Audio**  
RJ-45 input extends USB and audio signals with CAT-5 cable
- 13 CAT-5 RS232**  
RJ-45 input extends RS232 with CAT-5 cable
- 14 RS232**  
9 pin DB connector
- 15 Audio**  
Mini din Audio jack Input
- 16 USB IN**  
USB from computer (type B)

# CAT5-3000R FRONT PANEL LAYOUT

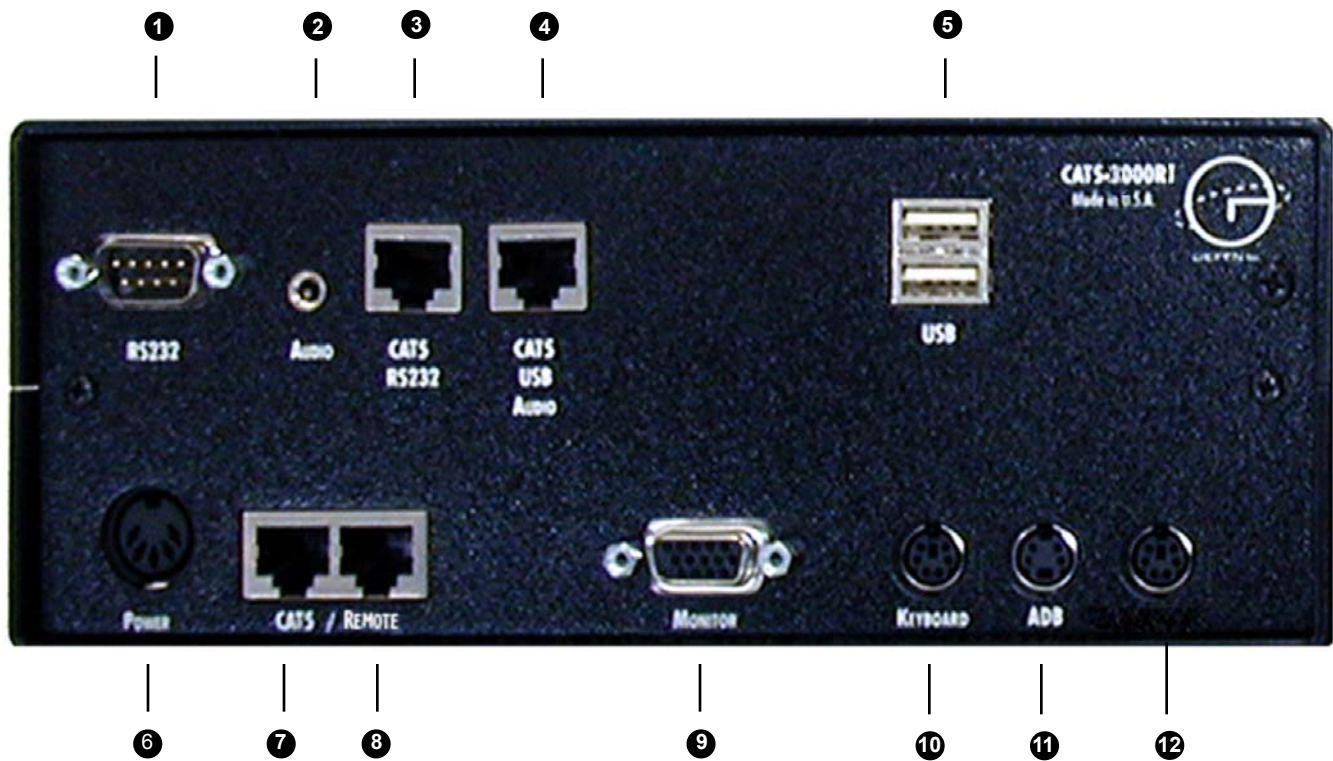


## FRONT PANEL FUNCTION DESCRIPTIONS

- 1 RESET**  
Clears the programmed setting
- 2 PC or MAC**  
Setting for either ADB Keyboard or PS/2 keyboard/mouse  
MAC: 1 & 2 OFF  
PC: 1 ON 2 OFF
- 3 FOCUS / BRIGHTNESS**  
Trim pot settings adjust the focus and brightness settings based on cable length
- 4 POWER ON**  
Indicates that the unit is on and plugged in



# CAT5-3000R W/USB RECEIVER BACK PANEL LAYOUT



## BACK PANEL FUNCTION DESCRIPTIONS

- 1 RS232**  
9 Pin DB Connector
- 2 Audio**  
Audio Mini Jack
- 3 CAT-5 RS232**  
RJ-45 input extends RS232 with CAT-5 cable
- 4 CAT-5 USB Audio**  
RJ-45 input extends USB and audio signal with CAT-5 cable
- 5 USB In**  
2 port USB input connects to USB devices
- 6 POWER**  
17VAC external power supply
- 7 CAT5**  
RJ-45 input connects CAT-5 cable extended from the CAT5-3000S unit. CAT5-1 from the CAT5-3000S unit must connect here.
- 8 REMOTE**  
Used only for CAT5-4000 operation.
- 9 MONITOR**  
HD15 output connecting to the video monitor
- 10 KEYBOARD**  
PS/2 output connects to the keyboard
- 11 ADB**  
ADB output connects to ADB keyboard and mouse, only works on the receiver with USB
- 12 NOT USED**

# CAT5-3000R RECEIVER BACK PANEL LAYOUT

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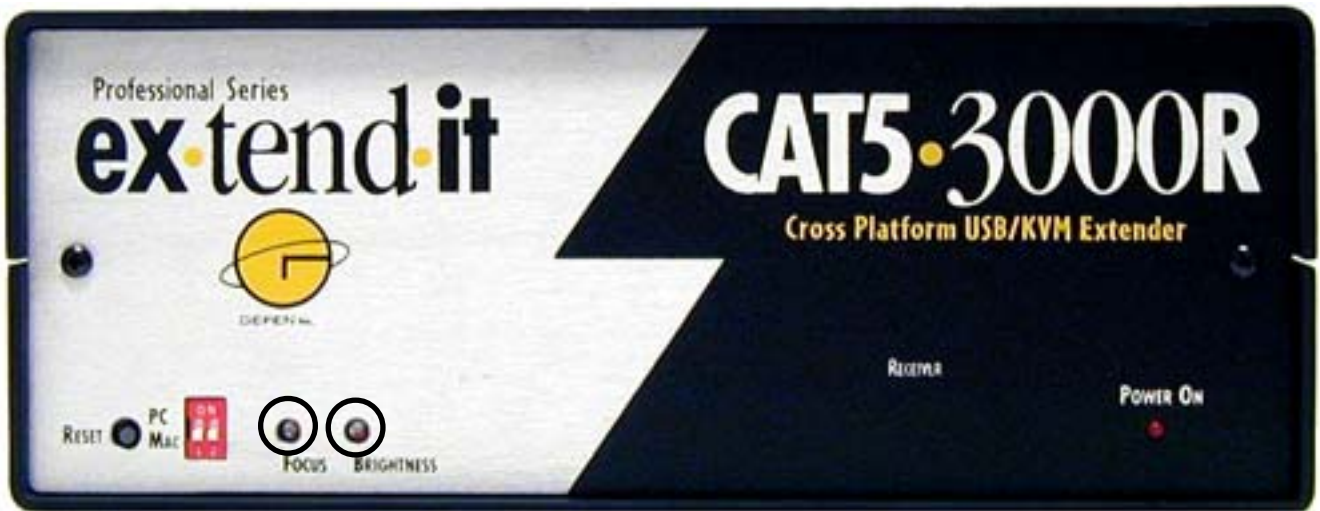


## BACK PANEL FUNCTION DESCRIPTIONS

- ❶ **POWER**  
17VAC external power supply
- ❷ **CAT5**  
RJ-45 input connects CAT-5 cable extended from the CAT5-3000S unit. CAT5-2 from the CAT5-3000S must connect here.
- ❸ **REMOTE**  
Used only for CAT5-4000 operation.
- ❹ **MONITOR**  
HD15 output connecting to the video monitor
- ❺ **Mouse**  
PS/2 output connects to the mouse
- ❻ **NOT USED**
- ❼ **NOT USED**

## BRIGHTNESS AND FOCUS SETTING DESCRIPTION

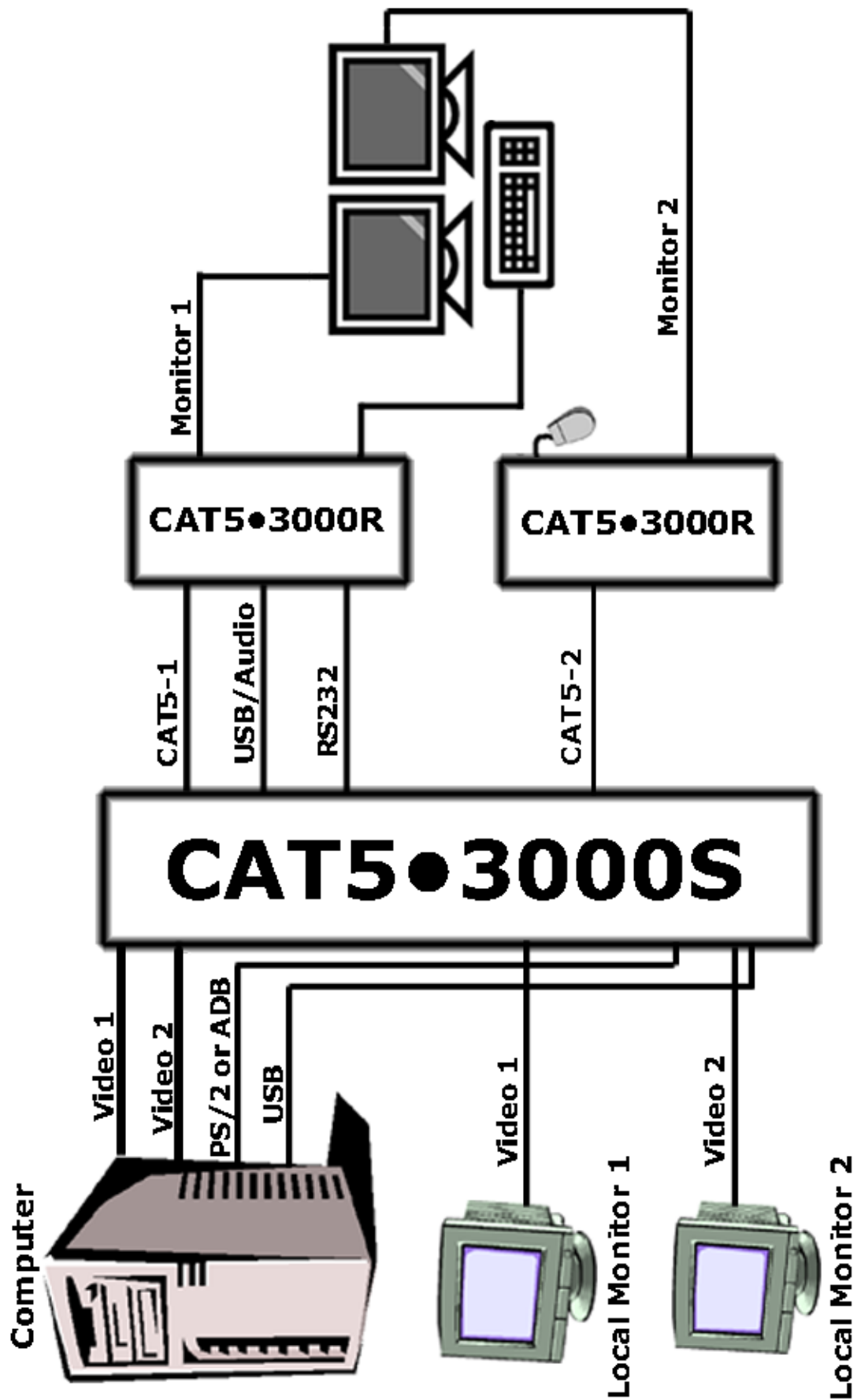
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The **Brightness** and **Focus** turn pots are designed to adjust for best video quality. The desired settings might be different from received default factory settings due to the difference in cable extension length. Generally, the longer the cable -- the more compensation that will be needed for optimum video quality results.

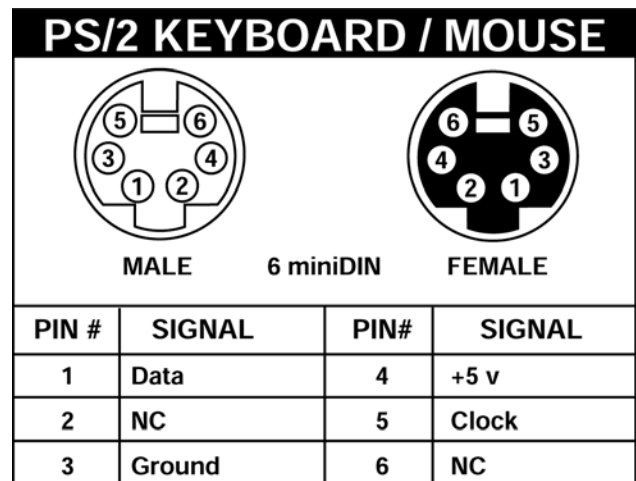
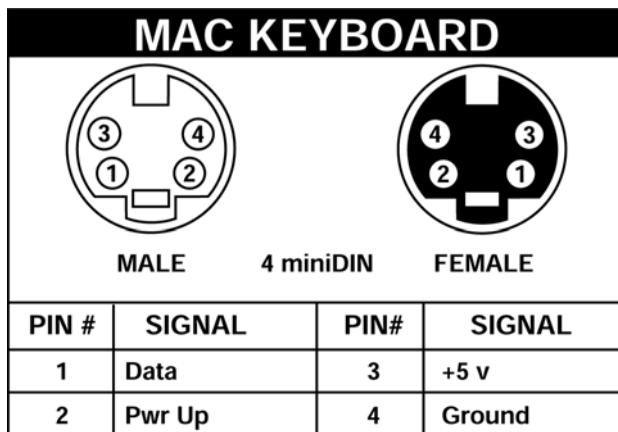
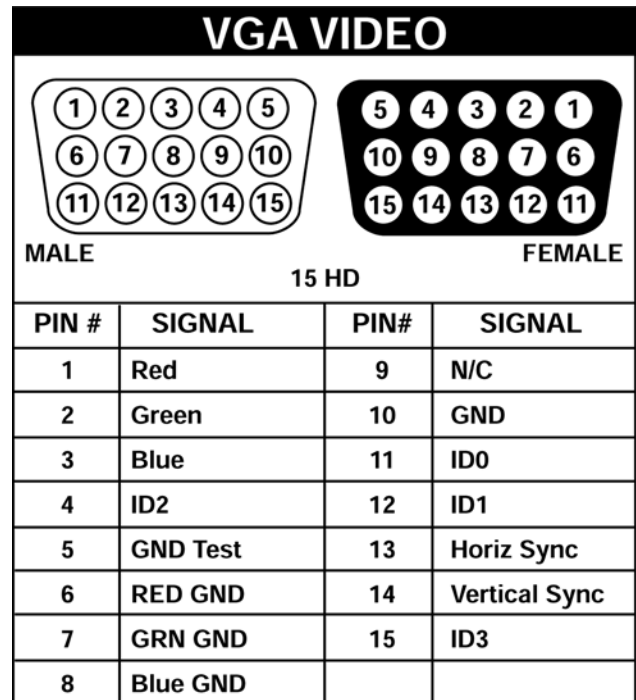
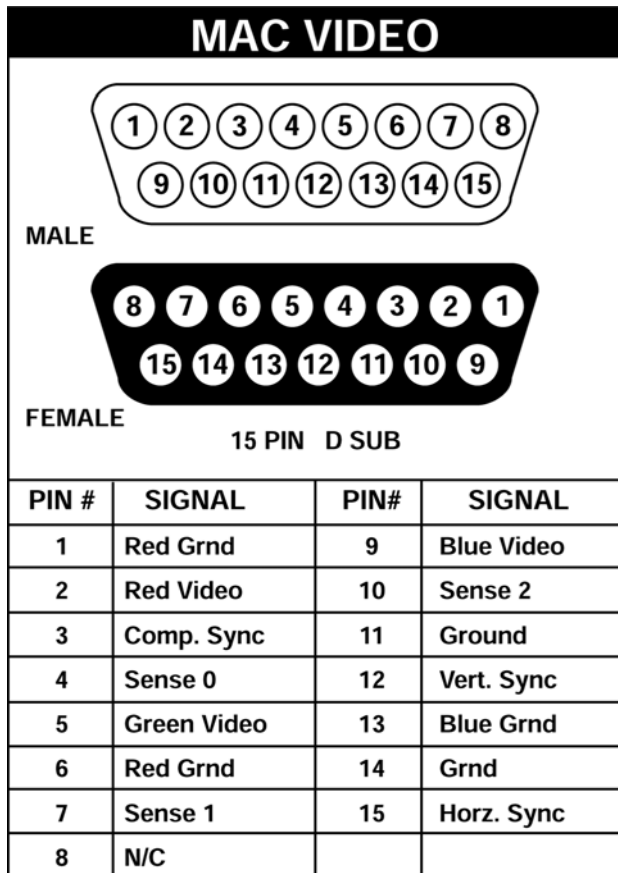
Note: The order of adjustment is not critical (i.e. focus first vs brightness first).

# 1 WORKSTATION EXTENDED - WIRING DIAGRAM



# CONNECTOR PIN-OUT DIAGRAMS

The illustrations below show the connector pin-outs as seen from the CAT5-3000 unit, or seen looking directly into the connector end. The pin numbers and signals are standard.



# 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 .....	(4) RJ-45
ADB Keyboard Connectors .....	4 Pin MiniDin
PS/2 Keyboard Connectors .....	8 Pin MiniDin
PS/2 Mouse Connectors .....	8 Pin MiniDin
USB - "A" Connector .....	USB Input
USB - "B" Connector .....	USB Device Input
Power Consumption .....	1.45Amps
Power Supply .....	(CAT5*3000S) 16VAC (External)
Power Supply .....	(CAT5*3000R) 17VAC (External)
Dimensions .....	(CAT5*3000S) 1.7"H x 17"W x 4.6"D
Dimensions .....	(CAT5*3000R) 3.2"H x 8.4"W x 4.5"D
Rack Mountable .....	2 Rack Spaces
Shipping Weight .....	15 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 one (1) year from the date of shipment, Gefen, Inc. will, at its option, repair or replace the equipment free of charge, 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 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.

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 CAT5-3000 features and specifications is subject to change without notice.