



## Extend your USB

### Optional Accessories



CAT-5 Cables

### USB•400

#### Extends any USB device up to 330 feet away the computer.

The extend-it USB•400 extends any USB device, including keyboard and mouse, up to 330 feet away from your computer, eliminating the 17.5 feet distance limitation of USB. The USB•400 also includes a remote 4 port USB HUB for operating up to four USB peripherals remotely using "Extreme USB" technology by Icron Systems Inc.

#### How it Works

The USB•400 sender unit is connected to the computer using the supplied USB cable. The extender peripheral(s) are connected to the receiver unit. A category-5 (CAT-5) cable is used to link the sender to the receiver.

#### Features:

- Extends any USB 1.1 device up to 330 feet (100 meters) away from the computer
- CAT-5 cable used for extension
- Saves space on your desktop
- Eliminates computer noise where you work
- Plug and play - installs in minutes
- For any computers with USB connection
- No power supply required at the receiving end
- Supports full 12 Mbs USB standard bandwidth

#### Specifications:

- USB device support: Full-speed 12 Mb/s Low-speed 1.5 Mb/s
- USB Input Connector: type B
- USB Output Connectors: type A
- Link Connector: RJ-45 shielded
- Power Supply: 15V DC
- Dimensions: 4.75" W x 1.75" H x 5" D
- Shipping Weight: 5 lbs.

#### Package Includes:

- USB•400S Send Unit
- USB•400R Receive Unit
- One 6ft A to B USB cable
- One 15v Power Supply



EXT-USB-400



**USB•400**  
USER MANUAL

## ASKING FOR ASSISTANCE

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### Technical Support:

Telephone (818) 772-9100  
(800) 545-6900

Fax (818) 772-9120

### Technical Support Hours:

8:00 AM to 5:00 PM Monday thru Friday.

### Write To:

Gefen Inc.  
C/O Customer Service  
20600 Nordhoff St.  
Chatsworth, CA 91311

support@gefen.com  
www.gefen.com

### Notice

Gefen Inc. reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

**USB•400** is a trademark of Gefen Inc.  
**ExtremeUSB** is a trademark of **Icron Inc.**  
**Macintosh** is a trademark of Apple  
Computer Inc.

# TABLE OF CONTENTS

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- 1** Introduction
- 2** Operation Notes
- 3** USB Series Installation
- 4** USB•400 Panel Layout
- 5** USB•400 Function Description
- 6** Wiring Diagram
- 7** Link Cable Diagram
- 8** Check List
- 9** Troubleshooting Hints
- 10** Warranty

# INTRODUCTION

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Thank you for purchasing the ex•tend•it USB•400 Series. The new USB•400 incorporates ExtremeUSB™ technology, which allows users the benefits of USB technology beyond the desktop. Extending your USB peripherals (i.e. computer keyboard, mouse or trackball) up to 330 feet away from the location of your Macintosh or PC computer are done easily with the USB•400.

The USB•400 system consists of two units. The USB•400S sender resides next to the host computer, and the USB•400R receiver is linked to the sender via Category-5 (CAT-5) cable and resides at the desired location away from the computer.

The USB•400 signal is sent between the sender and receiver controls USB peripherals by buffering the USB signal through send and receive line drivers. The signal is extended by using standard Category 5 (CAT-5) cabling.

You can connect additional USB•400 systems to the same computer, allowing you to access the computer from multiple locations up to 330 feet apart.

## OPERATION NOTES

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### READ THESE NOTES BEFORE INSTALLING OR OPERATING THE USB•400 SYSTEM.

- \* The USB•400 send and receive were designed to operate on USB enabled computers. **DO NOT** attempt to use this equipment with any other type of computer.
- \* Use the computer's USB port when using a local keyboard that is not extended with the USB•400 sender unit.
- \* In order to operate properly, the USB•400 receiver unit must be connected, powered, and the CAT-5 cable must be installed between the send and receive units.
- \* Only Dedicated Category 5 UTP type cable (CAT-5) is recommended for this application. Refer to the wiring diagram on page 7 for wiring instructions.
- \* The length of cable used to connect the USB•400S send unit to the USB•400R receiver unit **MUST NOT EXCEED** 330 feet.

#### **Includes:**

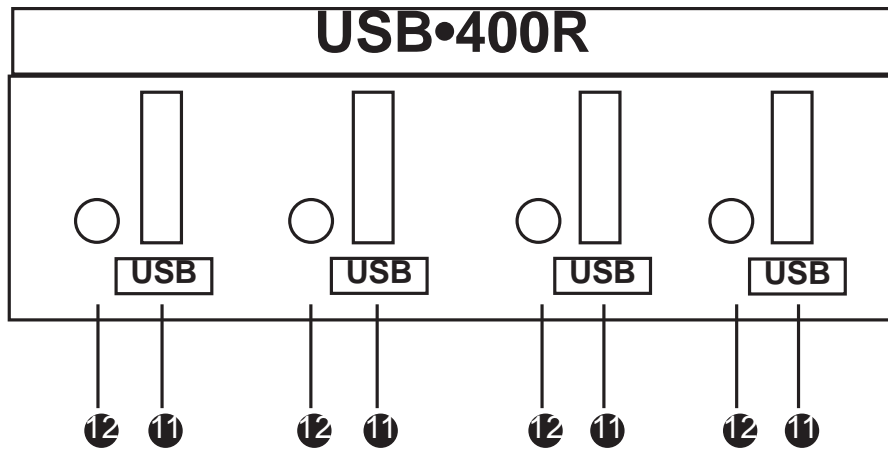
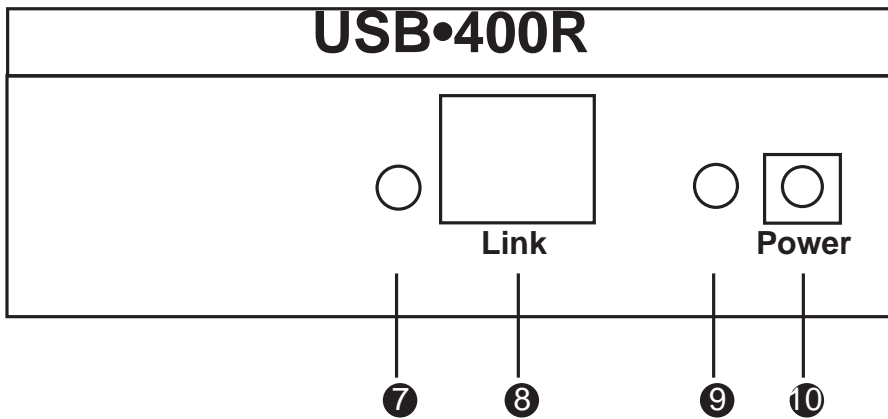
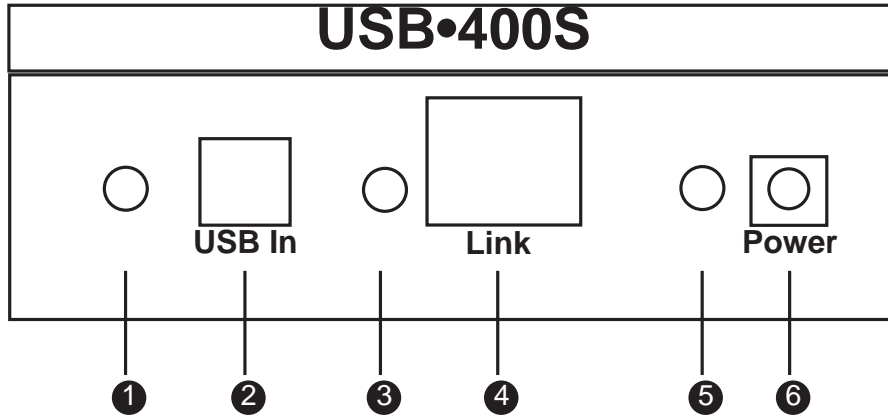
- (1) 6' USB Cable A-B
- (1) 15VDC Power Supply
- (1) USB 400 Sender and Receiver
- (1) Users Manual

## USB•400 SERIES INSTALLATION

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1. Place the USB•400R unit close to the USB devices at the remote end.
2. Connect the USB devices to the USB•400R unit.
3. Connect the power adapter to a suitable AC source wall outlet.
4. Connect the power adapter to the USB•400R unit using the supplied cable.
5. Place the USB•400S unit close to the host computer.
6. Connect the USB•400S unit to the USB•400R unit using the desired length of CAT5 cable
7. Connect the USB•400S unit to the host computer using the USB cable supplied with the unit. **This connection should be made last.**

# USB•400 PANELS LAYOUT



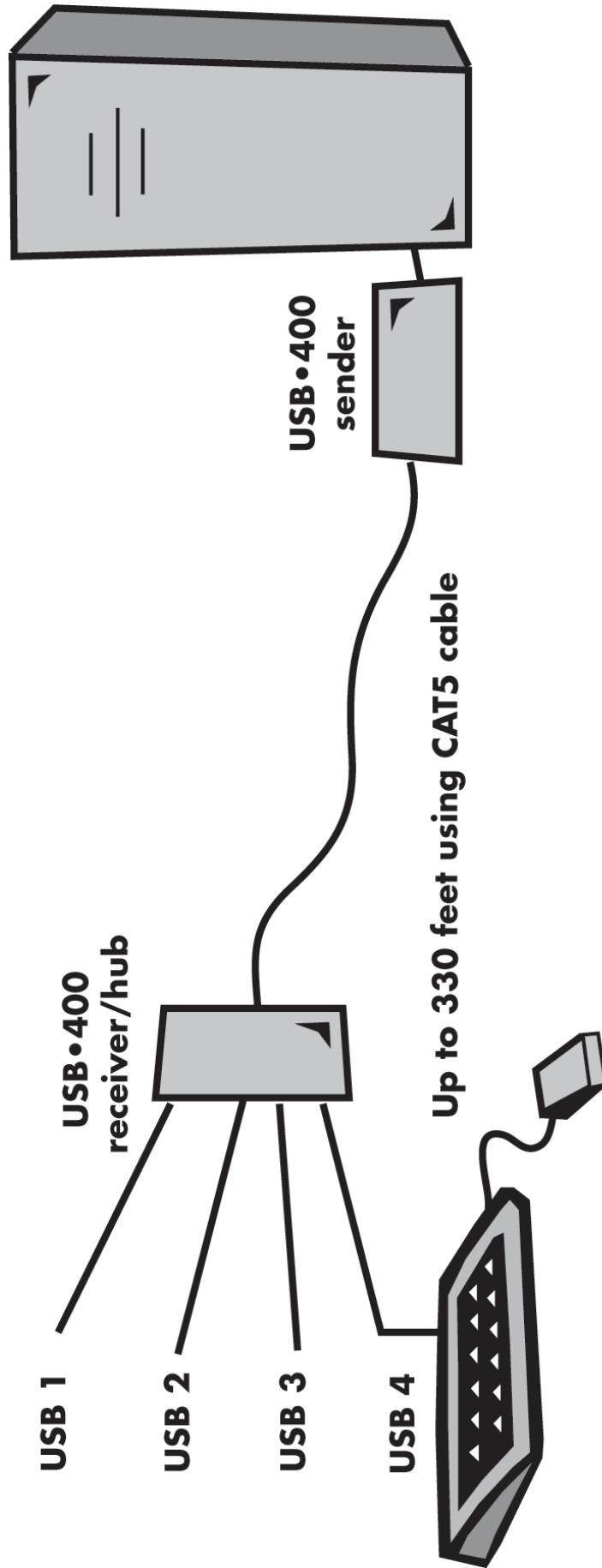
## USB•400 FUNCTION DESCRIPTION

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- 1 **USB LED** - Indicates if a USB connection is made properly
- 2 **USB In** - USB cable (A-B) cable from computer to sender
- 3 **Link LED** - Indicates if a link between the USB•400S send and the USB•400R Receive units
- 4 **Link** - CAT-5 Modular Jack which connects to the USB•400S send and the USB•400R Receive units
- 5 **Power LED** - Indicates the unit is plugged in and powered up.
- 6 **DC IN** - Power plug for 15VDC Wallmount power supply.
- 7 **Link LED** - Indicates if a link between the USB•400S send and the USB•400R Receive units
- 8 **Link** - CAT-5 Modular Jack which connects to the USB•400S send and the USB•400R receive units
- 9 **Power LED** - Indicates the unit is plugged in and powered up.
- 10 **DC IN** - Power plug for 15VDC Wallmount power supply.
- 11 **USB Led** - Indicates if a USB device is plugged in
- 12 **USB input A** - One USB A type connector

# WIRING DIAGRAM

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# LINK CABLE - WIRING DIAGRAM

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**RJ-45 Jack**



**White/Orange**

**Orange**

**White/Green**

**Blue**

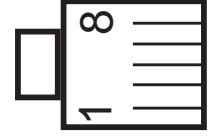
**White/Blue**

**Green**

**White/Brown**

**Brown**

**RJ-45 Jack**



## CHECK LIST

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1. On the USB•400S send unit, check that the power indicator is GREEN.
2. On the USB•400S send unit, check that the link indicator is GREEN.
3. On the USB•400R receiver unit, check that the power indicator is GREEN.
4. Once all LEDs are illuminated as suggested, the USB•400 is ready to accept a USB peripheral device at the USB port on the USB•400R receiver unit. Follow the installation instructions as if one were installing the device directly into a computer's USB port.
5. On the host computer, check that a general purpose hub is visible in the Control Panel. Once connected, a USB peripheral device causes its host computer to automatically enumerate it. This simply means that the computer must identify the new device, assign it an ID, and ensure that the required software drivers are available for loading when the device is to be used.
6. The USB•400 is not an end device. Consequently, it does not have a software component or driver to be loaded. Some peripheral devices that are to be attached to the USB•400 will have a USB Driver diskette or CD-ROM which will need to be inserted after initial connection to a USB port on the USB•400 model.

## TROUBLESHOOTING HINTS

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### **Power Indicator is not lit.**

-- Make certain the power supply unit is properly connected to the USB•400R unit and to a proper local power supply outlet.

### **Link Indicators are Green.**

-- Make certain that the host computer is operating and responding to commands. If required, reset the computer.

### **Problem Not Resolved**

-- Disconnect power (DC Adaptor) plug from wall outlet that feeds power to the USB•400R unit.

-- Disconnect the USB•400S USB connection from the computer.

-- Reconnect power (DC Adaptor) from the USB•400R unit to the wall outlet.

-- Reconnect the USB•400S USB connection to the computer.

## 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 USB•400 features and specifications is subject to change without notice.