# 1:2 VGA Audio Over CAT5

**EXT-COMPAUD-CAT5-142**

**User Manual**


**www.gefen.com**

## ASKING FOR ASSISTANCE

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

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# CONTENTS

# INTRODUCTION

Congratulations on your purchase of the 1:2 VGA Audio over CAT5. Your complete satisfaction is very important to us.

**Gefen**

Gefen delivers innovative, progressive computer and electronics add-on solutions that harness integration, extension, distribution and conversion technologies. Gefen's reliable, plug-and-play products supplement cross-platform computer systems, professional audio/video environments and HDTV systems of all sizes with hard-working solutions that are easy to implement and simple to operate.

**The Gefen 1:2 VGA Audio over CAT5**

The 1:2 VGA Audio over CAT5 extends and duplicates your audio and VGA video signals at distances of up to 1000 feet away. Remote A/V signals are received from the 1:2 VGA Audio over CAT5 Sender via industry-standard CAT5 network cables.

The 1:2 VGA Audio over CAT5 will extend analog VGA as well as analog Audio and provide two full sets of A/V signal output on the receiving end.

**How It Works**

The 1:2 VGA Audio CAT5 Distribution Amplifier Sender unit is placed at the source location. A standard CAT5 cable is run from the 1:2 VGA Audio over CAT5 Sender up to 1000 feet to the 1:2 VGA Audio over CAT5 Receiver unit. The 1:2 VGA Audio over CAT5 Receiver unit connects to your remote video displays and audio inputs. A microphone jack provides bi-directional audio support.

## READ THESE NOTES BEFORE INSTALLING OR OPERATING THE 1:2 VGA AUDIO OVER CAT5

- Use only industry standard Category-5 Enhanced (CAT-5e) cable to operate the 1:2 VGA Audio over CAT5. Cat-6 cables can also be used.
- Both the sending and receiving units must be powered with the supplied power adapters for proper operation.
- Field termination of CAT5e cabling must adhere to the TIA/EIA-568-B specification. Please see page 10 for additional information.

# FEATURES

**Features**

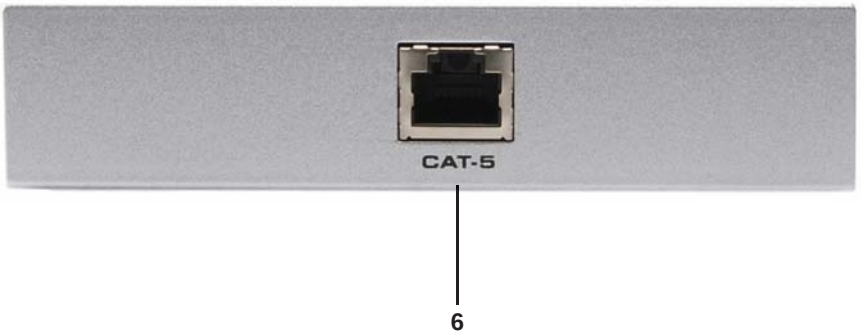
- Supports up to 1920x1200 VGA video at 60 Hz
- Supports analog L+R audio
- No Loss of Quality
- Simple plug-and-play installation
- Equalizations for different CAT-5 skews

**Package Includes**

(1) 1:2 VGA and Audio over CAT5 Extender Sender
(1) 1:2 VGA and Audio over CAT5 Extender Receiver
(2) 5V DC Power Supplies
(1) 6-Foot VGA Cable (M-M)
(1) 6-Foot 3.5mm mini-phono jack audio cable
(1) User's Manual

***Front Panel***


***Back Panel***



## SENDER PANEL DESCRIPTIONS

***1 5V DC Power Input***
Connect the included 5V DC power supply input this port. Once this has been properly connected the power LED will become active.

***2 3 RCA Component Input***
Connect the component source device to this input.

***3 2 RCA Analog Stereo Input***
Connect the source's analog audio to this input.

***4 SPDIF Digital Audio Input***
Connect the source's SPDIF digital audio to this input.

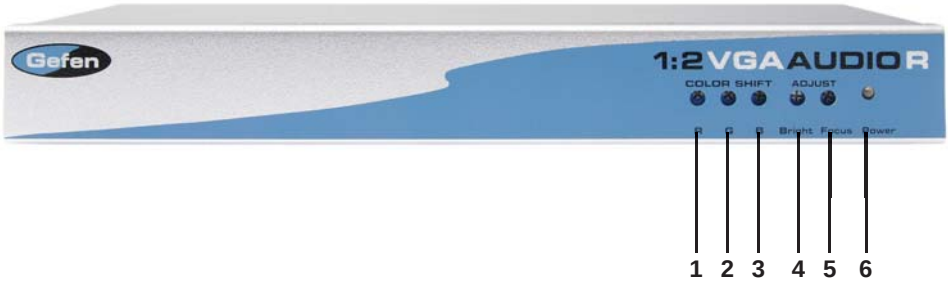
***5 Optical Digital Audio Input***
Connect the source's optical digital audio to this input.

***6 Power LED Indicator***
This LED will become active once the included 5V DC power supply is properly connected.

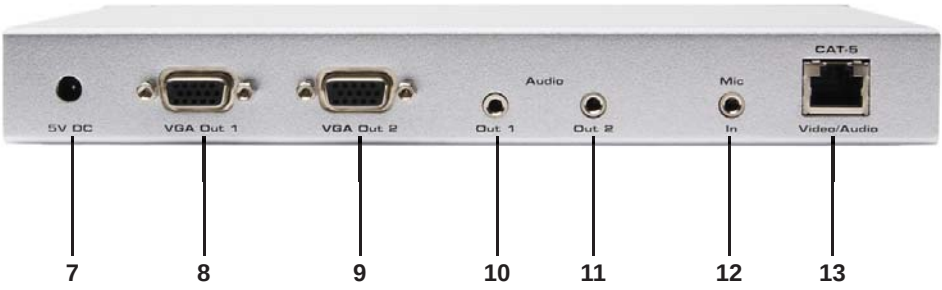
***7 RJ-45 Jack***
Connect the sending and receiving units together using a TIA/EIA-568-B terminated CAT-5, CAT-5e or CAT-6 cable. See page 10.

**NOTE:** Only one audio input type, digital or analog, should be connected at one time.

***Front Panel***




***Back Panel***



## RECEIVER PANEL DESCRIPTIONS

***1 Brightness Trim Pot***
Use this adjustment Trim Pot to brighten/darken the output video signal. See page 9.

***2 Focus Trim Pot***
Use this adjustment Trim Pot to focus/blur the output video signal. See page 9.

***3 Power LED Indicator***
This LED will become active once the included 5V DC power supply is properly connected.

***4 5V DC Power Input***
Connect the included 5V DC power supply input this port. Once this has been properly connected the power LED will become active.

***5 3 RCA Component Output 1***
Connect one component display device to this output.

***6 3 RCA Component Output 2***
Connect one component display device to this output.

***7 2 RCA Analog Stereo Output 1***
Connect this output to either the display or audio receiver.

***8 2 RCA Analog Stereo Output 2***
Connect this output to either the display or audio receiver.

***9 SPDIF Digital Audio Output 1***
Connect this output to either the display or audio receiver.

***10 SPDIF Digital Audio Output 2***
Connect this output to either the display or audio receiver.

***11 Optical Digital Audio Output 1***
Connect this output to either the display or audio receiver.

***12 Optical Digital Audio Output 2***
Connect this output to either the display or audio receiver.

***13 RJ-45 Jack***
Connect the sending and receiving units together using a TIA/EIA-568-B terminated CAT-5, CAT-5e or CAT-6 cable. See page 10.

## CONNECTING AND OPERATING THE 1:2 VGA AUDIO OVER CAT5

### How to Connect the 1:2 VGA Audio over CAT5

1. Connect the VGA video source to the VGA Audio Over CAT5 sending unit using the supplied VGA cable.

2. Connect the audio source to the VGA Audio Over CAT5 sender unit using the user supplied 3.5mm mini-phono jack stereo cable.

3. Optionally, connect the 3.5mm mini-phono jack stereo output from the sender to a compatible device using a user supplied 3.5mm mini-phono jack stereo cable.

   Example: Use a microphone at the receiver's location in this example scenario. Connect a microphone to the 3.5mm mini-phono jack input on the receiver. Then use a 3.5mm mini-phono jack stereo cable to connect the sender's output to a microphone input port on a computer or amplified receiver.

4. Connect up to 2 VGA displays to the 1:2 VGA Audio over CAT5 receiving unit using user supplied VGA cables.

**NOTE: Both outputs are mirrored images of the VGA video source.**

5. Connect up to 2 of the 3.5mm mini-phono jack audio outputs on the 1:2 VGA Audio over CAT5 receiving unit to amplified audio devices using user supplied 3.5mm mini-phono jack stereo audio cables.

6. Optionally, connect a 3.5mm mini-phono jack stereo audio device to the receiver for transmission back to the sender's location. Please see the example in step 3 for an example scenario.

7. Connect the 1:2 VGA Audio over CAT5 sending and receiving units together using a single CAT-5, CAT-5e or CAT-6 cable (terminated according to the TIA/EIA-568-B specification).

8. Connect the included 5V DC power adapters to both the sending and receiving units.

9. Power on all displays first, and then the source.

# ADJUSTING THE VIDEO QUALITY

## *Focus & Brightness*

The 1:2 VGA Audio over CAT5 receiving unit can adjust both the brightness and focus of the reproduced video signal. Differences in cable skew and distance are factors that can affect these settings. To adjust these settings and tune the video signal please use the steps below.

### Brightness

If the image appears too dim or too bright, adjust the brightness Trim Pot on the front of the 1:2 VGA Audio over CAT5 Receiver.

Insert a small flathead device into the brightness Trim Pot hole and turn the Trim Pot in either a clockwise or counterclockwise direction. Turn the Trim Pot in very small increments until the desired brightness is reached.

### Focus

If the image is out of focus or if the image appears too sharp, adjust the focus Trim Pot on the front of the 1:2 VGA Audio over CAT5 Receiver.

Insert a small flathead device into the focus Trim Pot hole and turn the Trim Pot in either a clockwise or counterclockwise direction. Turn the Trim Pot in very small increments until the image clears and there is not blurriness or smearing.

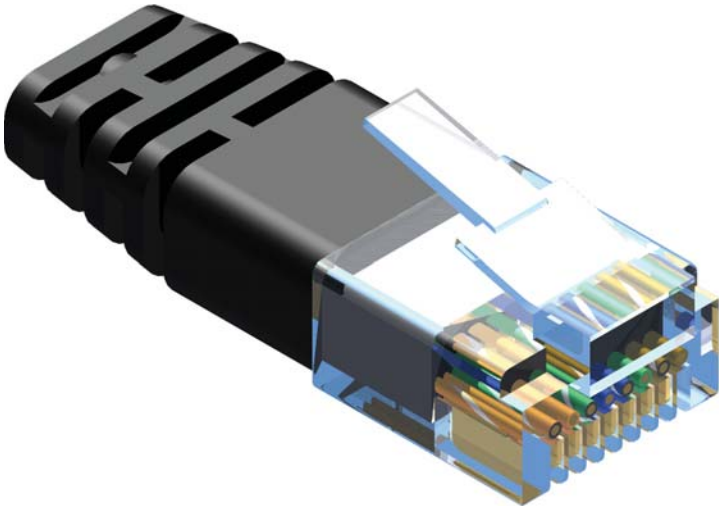
## *Color Shifting*

The 1:2 VGA Audio over CAT5 receiving unit can also adjust each color component (red, green, and blue) individually if color shifting appears on the reproduced video signal. Differences in cable skew and distance are factors that can affect these settings. To adjust these settings and tune the video signal please use the steps below.

If an individual color, or multiple colors, appear to be shifted in the reproduced video signal, please use the individual color Trim Pots on the 1:2 VGA Audio over CAT5 receiver to fix the convergence issues.

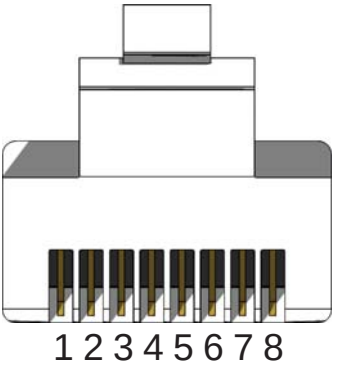
Insert a small flathead device into the desired color's Trim Pot hole and turn the Trim Pot in either a clockwise or counterclockwise direction. Turn the Trim Pot in very small increments until the image clears and the convergence has been corrected. Repeat this process for any of the three component colors.

# NETWORK CABLE 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 |




CAT-5, CAT-5e, and CAT-6 cabling comes in stranded and solid core types. Gefen recommends using solid core cabling. CAT-6 cable is also recommended for best results.

Each cable run must be one continuous run from one end to the other. No splices or use of punch down blocks.

## SPECIFICATIONS

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

Power Consumption ..... 20 Watts (max.)

Dimensions Sender ..... 9”W x 1”H x 4”D

Dimensions Receiver ..... 17”W x 1.3”H x 4”D

Video In/Out ..... 2 x HD15 VGA Female (out), 1 x HD15 VGA Male (input)

Audio In/Out ..... 3 x 3.5mm female mini-phone jack, stereo

Power Supply ..... 5V DC

Link Connector ..... RJ-45 Shielded

Shipping Weight ..... 5 lbs.

# WARRANTY

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.