



KRAMER ELECTRONICS LTD.

# USER MANUAL

MODEL:

**WP-120**  
XGA Line Receiver

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P/N: 2900-000335 Rev 2

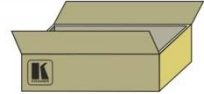


## WP-120 Quick Start Guide

This guide helps you install and use your product for the first time. For more detailed information, go to [http://www.kramerelectronics.com/support/product\\_downloads.asp](http://www.kramerelectronics.com/support/product_downloads.asp) to download the latest manual or scan the QR code on the left.

### Step 1: Check what's in the box

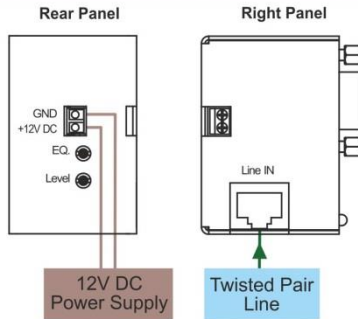
- WP-120 XGA Line Receiver
- 1 Power supply (12V DC)
- 1 Quick Start sheet



Save the original box and packaging materials in case you need to return your **WP-120** for service.

### Step 2: Connect the TP line and power

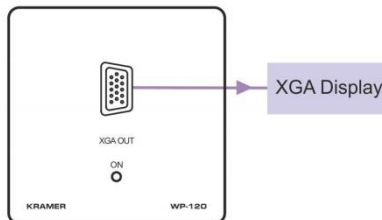
Always switch off the power on each device before connecting it to your **WP-120**.



Always use Kramer high-performance cables for connecting AV equipment to the **WP-120**.

### Step 3: Install the WP-120

- Mount the **WP-120** in the wall or in a rack using an optional RK-121WP 19" adaptor (for EU size wall plates only).
- Connect a computer graphics acceptor



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# 1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront video, audio, presentation, and broadcasting professionals on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Our 1,000-plus different models now appear in 11 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters and GROUP 11: Sierra Products.

Congratulations on purchasing your Kramer **WP-120 XGA Line Receiver**, which is ideal for the following typical applications:

- Presentation and multimedia applications
- Long range graphics distribution for schools, hospitals, security, and stores

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## 2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual



Go to [http://www.kramerelectronics.com/support/product\\_downloads.asp](http://www.kramerelectronics.com/support/product_downloads.asp) to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

### 2.1 Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables (we recommend Kramer high-performance, high-resolution cables) to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Do not secure the cables in tight bundles or roll the slack into tight coils
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality
- Position your Kramer **WP-120** away from moisture, excessive sunlight and dust



This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

## 2.2 Safety Instructions



**Caution:** There are no operator serviceable parts inside the unit

**Warning:** Use only the Kramer Electronics input power wall adapter that is provided with the unit

**Warning:** Disconnect the power and unplug the unit from the wall before installing

## 2.3 Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer's recycling arrangements in your particular country go to our recycling pages at <http://www.kramerelectronics.com/support/recycling/>.

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## 3 Overview

The Kramer **WP-120** wall plate is an XGA line receiver that receives an encoded CAT5 signal transmitted by a transmitter (for example, the Kramer **WP-110** or **PT-110**), decodes it and converts it to an XGA output. In particular, the **WP-120** features:

- EQ. and level controls
- The Power Connect™ feature where a single connection to the transmitter or the receiver powers both units when the devices are within 150ft (50m) of each other
- 12V DC power

### 3.1 About the Power Connect Feature

The Power Connect feature applies as long as the cable can carry power. The distance does not exceed 50 meters on standard CAT 5 cable. For longer distances, heavy gauge cable should be used. For a CAT 5 cable exceeding a distance of 50 meters, separate power supplies should be connected to the transmitter and to the receiver simultaneously.

CAT 5 cable is still suitable for the video/audio transmission, but not for feeding the power at these distances

### 3.2 Shielded Twisted Pair (STP) / Unshielded Twisted Pair (UTP)

The decision whether to use shielded twisted pair (STP) cable or unshielded twisted pair (UTP) cable depends on the nature of the application.

In applications with high interference, shielded twisted pair (STP) cable is recommended. However, the shield itself does create a capacitance that degrades the frequency response of the machines. For shorter distances, of 50m or so, shielded twisted pair (STP) cable is preferred because it provides protection from interference (degradation is not apparent).

For long range applications, unshielded twisted pair (UTP) cable is preferred. However, the unshielded twisted pair (UTP) cable should be installed far away

from electric cables, motors and so on, which are prone to create electrical interference.

### 3.3 Defining the WP-120 XGA Line Receiver

This section defines the **WP-120**.

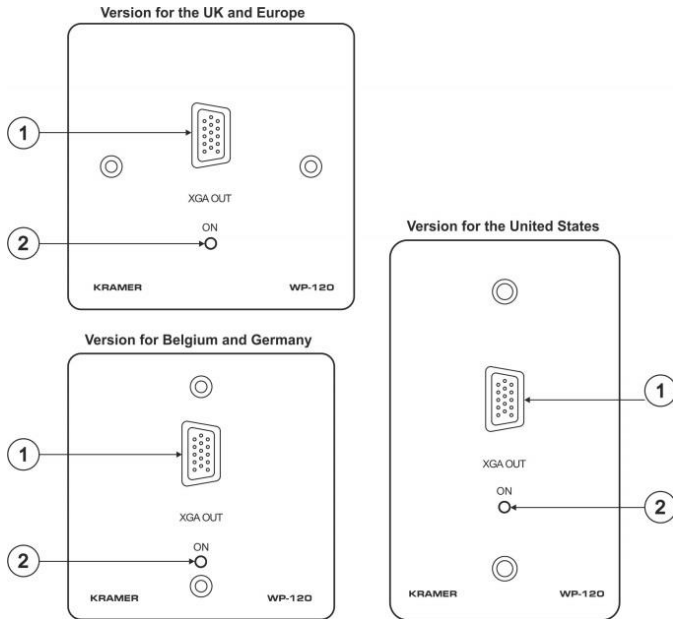


Figure 1: WP-120 XGA Line Receiver Front

#	Feature	Function
1	XGA OUT 15-pin HD Connector	Connect to the XGA acceptor
2	ON LED	Illuminates when receiving power



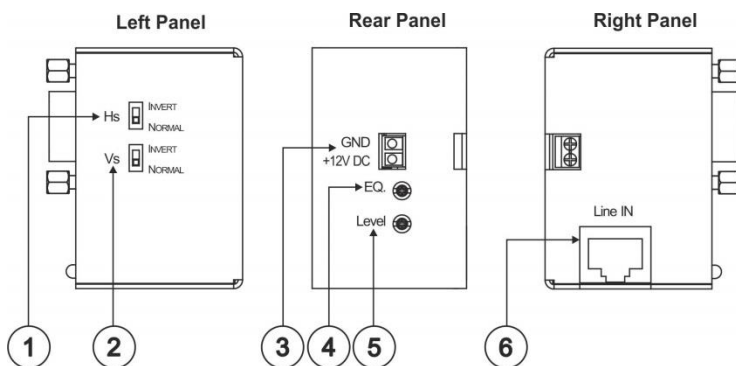


Figure 2: WP-120 XGA Line Receiver Sides and Rear

#	Feature	Function	
1	HS Switch (sync)	Slide the switch down (by default, both switches are set to NORMAL) to invert the HS polarity (downgoing syncs) Slide the switch up (to NORMAL) to retain the polarity	
2	VS Switch (sync)	Slide the switch down to invert the VS polarity Slide the switch up (to NORMAL) to retain the polarity	
3	POWER	+12V PIN	Connect (+) to the connector for powering the unit
		GND PIN	Connect (-) to ground
4	EQ. Trimmer	Adjust the cable compensation equalization level  Degradation and VGA/XGA signal loss can result from using long cables (due to stray capacitance), sometimes leading to a total loss of sharpness in high-resolution signals.  Use a screwdriver to carefully rotate the trimmer, adjusting the appropriate level	
5	Level Trimmer	Adjust the output signal level	
6	Line IN RJ-45 Connector	Connect to the LINE OUT RJ-45 connector from a receiver For example, the PT-110 or WP-110	

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## 4 Connecting the WP-120



Always switch off the power to each device before connecting it to your **WP-120**. After connecting your **WP-120**, connect its power and then switch on the power to each device.

To connect the **WP-120**:

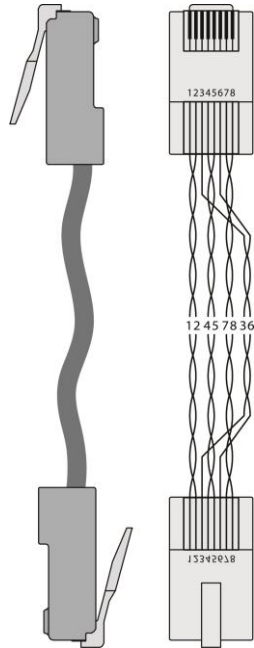
1. Connect the line out RJ-45 connector of the transmitter to the pre-installed UTP wiring in the wall box opening that connects via UTP cabling to the LINE IN RJ-45 connector of the **WP-120**.
2. Connect your 12V DC power supply to the *POWER SUPPLY* pins, taking care that polarity is correct.  
Connect the wire labeled “+” to the +12V pin, and the wire labeled “-” to the GND pin.
3. Insert the **WP-120** directly into the wall box opening, and then mount the front panel securely using the screws.
4. Connect the XGA acceptor to the *XGA OUT* 15-pin HD connector.

## 4.1 Wiring the TP LINE IN / LINE OUT RJ-45 Connectors

This section defines the TP pinout, using a **straight** pin-to-pin cable with RJ-45 connectors.

EIA /TIA 568B	
PIN	Wire Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown

Figure 3: TP PINOUT



## 5 Technical Specifications

INPUT:	1 RJ-45 connector
OUTPUT:	1 XGA on an 15-pin HD connector
MAX. OUTPUT LEVEL:	1.5Vpp
RESOLUTION:	Up to UXGA
DIFF. GAIN:	2.7% (for the transmitter/receiver pair)
DIFF. PHASE	0.22Deg
K-FACTOR:	<0.1%
S/N RATIO:	61dB
CONTROLS:	Level: -9.4dB to +2.2dB; EQ.: 0dB to +30.9dB
COUPLING:	DC
POWER CONSUMPTION:	12V DC, 250mA
OPERATING TEMPERATURE:	0° to +40°C (32° to 104°F)
STORAGE TEMPERATURE:	-40° to +70°C (-40° to 158°F)
HUMIDITY:	10% to 90%, RHL non-condensing
DIMENSIONS:	USA: 6.9cm x 3.8cm x 11.4cm (2.72" x 1.5" x 4.5", W, D, H) Belgium and Germany: 8cm x 3.8cm x 8cm (3.15" x 1.5" x 3.15", W, D, H) UK and most of Europe: 8.6cm x 3.8cm x 8.6cm (3.39" x 1.5" x 3.39", W, D, H)
WEIGHT:	0.14kg (0.31lbs) approx.
ACCESSORIES:	Power supply
OPTION:	RK-121WP 19" rack adapter
Specifications are subject to change without notice at <a href="http://www.kramerelectronics.com">http://www.kramerelectronics.com</a>	

## LIMITED WARRANTY

The warranty obligations of Kramer Electronics for this product are limited to the terms set forth below.

### What is Covered

This limited warranty covers defects in materials and workmanship in this product.

### What is Not Covered

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product.

Without limiting any other exclusion herein, Kramer Electronics does not warrant that the product covered hereby, including, without limitation, the technology and/or integrated circuit(s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.

### How Long Does this Coverage Last

Seven years as of this printing; please check our Web site for the most current and accurate warranty information.

### Who is Covered

Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.

### What Kramer Electronics will do

Kramer Electronics will, at its sole option, provide one of the following three remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1. Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition. Kramer Electronics will also pay the shipping costs necessary to return this product once the repair is complete.
2. Replace this product with a direct replacement or with a similar product deemed by Kramer Electronics to perform substantially the same function as the original product.
3. Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

### What Kramer Electronics will not do Under This Limited Warranty

If this product is returned to Kramer Electronics or the authorized dealer from which it was purchased or any other party authorized to repair Kramer Electronics products, this product must be insured during shipment, with the insurance and shipping charges prepaid by you. If this product is returned uninsured, you assume all risks of loss or damage during shipment. Kramer Electronics will not be responsible for any costs related to the removal or re-installation of this product from or into any installation. Kramer Electronics will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

### How to Obtain a Remedy under this Limited Warranty

To obtain a remedy under this limited warranty, you must contact either the authorized Kramer Electronics reseller from whom you purchased this product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics resellers and/or Kramer Electronics authorized service providers, please visit our web site at [www.kramerelectronics.com](http://www.kramerelectronics.com) or contact the Kramer Electronics office nearest you.

In order to pursue any remedy under this limited warranty, you must possess an original, dated receipt as proof of purchase from an authorized Kramer Electronics reseller. If this product is returned under this limited warranty, a return authorization number, obtained from Kramer Electronics, will be required. You may also be directed to an authorized reseller or a person authorized by Kramer Electronics to repair the product.

If it is decided that this product should be returned directly to Kramer Electronics, this product should be properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization number will be refused.

### Limitation on Liability

THE MAXIMUM LIABILITY OF KRAMER ELECTRONICS UNDER THIS LIMITED WARRANTY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID FOR THE PRODUCT. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

### Exclusive Remedy

TO THE MAXIMUM EXTENT PERMITTED BY LAW, THIS LIMITED WARRANTY AND THE REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF KRAMER ELECTRONICS CANNOT LAWFULLY DISCLAIM OR EXCLUDE IMPLIED WARRANTIES UNDER APPLICABLE LAW, THEN ALL IMPLIED WARRANTIES COVERING THIS PRODUCT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY TO THIS PRODUCT AS PROVIDED UNDER APPLICABLE LAW.

IF ANY PRODUCT TO WHICH THIS LIMITED WARRANTY APPLIES IS A "CONSUMER PRODUCT" UNDER THE MAGNUSON-MOSS WARRANTY ACT (15 U.S.C.A. §2301, ET SEQ.) OR OTHER APPLICABLE LAW, THE FOREGOING DISCLAIMER OF IMPLIED WARRANTIES SHALL NOT APPLY TO YOU, AND ALL IMPLIED WARRANTIES ON THIS PRODUCT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR THE PARTICULAR PURPOSE, SHALL APPLY AS PROVIDED UNDER APPLICABLE LAW.

### Other Conditions

This limited warranty gives you specific legal rights, and you may have other rights which vary from country to country or state to state.

This limited warranty is void if (i) the label bearing the serial number of this product has been removed or defaced, (ii) the product is not distributed by Kramer Electronics or (iii) this product is not purchased from an authorized Kramer Electronics reseller. If you are unsure whether a reseller is an authorized Kramer Electronics reseller, please visit our Web site at [www.kramerelectronics.com](http://www.kramerelectronics.com) or contact a Kramer Electronics office from the list at the end of this document.

Your rights under this limited warranty are not diminished if you do not complete and return the product registration form or complete and submit the online product registration form. Kramer Electronics thanks you for purchasing a Kramer Electronics product. We hope it will give you years of satisfaction.



For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

**We welcome your questions, comments, and feedback.**

Web site: [www.kramerelectronics.com](http://www.kramerelectronics.com)

E-mail: [info@kramerel.com](mailto:info@kramerel.com)

CE



**SAFETY WARNING**

Disconnect the unit from the power supply before opening and servicing



P/N: 2900-000335



Rev: 2