



KRAMER ELECTRONICS LTD.

# USER MANUAL

MODELS:

**717**

Video-Audio Line Transmitter

**718-05**

Video-Audio Line Receiver

**718-10**

Video-Audio Line Receiver

**718-15**

Video-Audio Line Receiver

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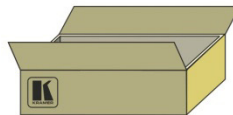
## 717/718 Quick Start Guide

This page guides you through a basic installation and first-time use of your **717/718**. For more detailed information, see the **717/718** User Manual. You can download the latest manual at <http://www.kramerelectronics.com>.

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

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> <b>717/718</b> Video/Audio Line Transmitter/Receiver | <input checked="" type="checkbox"/> 4 Rubber feet       |
| <input checked="" type="checkbox"/> 1 Power supply (12V DC)                              | <input checked="" type="checkbox"/> 1 Quick Start sheet |
|  | <input checked="" type="checkbox"/> 1 User Manual       |



Save the original box and packaging in case your **717/718** needs to be returned to the factory for service.

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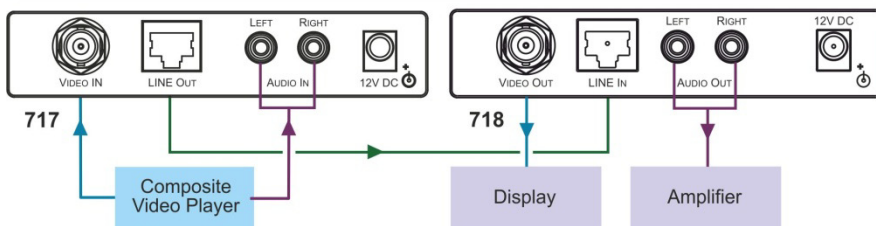
### Step 2: Install the 717/718

Attach the rubber feet and place on a table or mount the machine in a rack (using an optional RK-3T rack mount).

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### Step 3: Connect the inputs and outputs

Always switch off the power on each device before connecting it to your **717/718**.



Always use Kramer high-performance cables for connecting AV equipment to the **717/718**.

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### Step 4: Connect the power

Connect 12V DC power adapters to the **717** and **718** and power on the **717** before powering on the **718** (see Section 5).



# Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Getting Started</b>	<b>2</b>
2.1	Achieving the Best Performance	2
<b>3</b>	<b>Overview</b>	<b>3</b>
3.1	Shielded Twisted Pair/Unshielded Twisted Pair	3
<b>4</b>	<b>Defining the 717 and 718</b>	<b>4</b>
4.1	Defining the 717 Video-Audio Line Transmitter	4
4.2	Defining the 718 Video-Audio Line Receiver	5
4.3	Wiring the TP LINE IN / LINE OUT RJ-45 Connectors	6
<b>5</b>	<b>Connecting the 717 and 718</b>	<b>7</b>
<b>6</b>	<b>Technical Specifications</b>	<b>9</b>

# Figures

Figure 1:	717 Video-Audio Line Transmitter	4
Figure 2:	718 Front and Rear Panels	5
Figure 3:	TP PINOUT	6
Figure 4:	Connecting the Video-Audio Line Transmitter/Receiver System	8

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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 the video, audio, presentation, and broadcasting professional 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 **717 Video-Audio Line Transmitter** and **718 Video-Audio Line Receiver**, which are ideal for the following typical applications:

- Remote monitoring for CCTV, medical and schools
- Existing facilities with TP cable already installed
- Teleconferencing in offices and hospitals using existing intercom or telephone wiring
- Security systems

There are three models of the **718** available that support different ranges:

- **718-05** up to 500m (1640ft)
- **718-10** up to 1000m (3280ft)
- **718-15** up to 1500m (4920ft)

All references to the **718** in this manual apply to all three models.

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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
- Use Kramer high-performance, high-resolution cables



Go to <http://www.kramerelectronics.com> 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 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 products away from moisture, excessive sunlight and dust



**Caution:** 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

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## 3 Overview

The **717** and **718** are a twisted pair (TP) transmitter and receiver for composite video and unbalanced stereo audio signals. The **717** transmitter converts composite video and stereo audio into a twisted pair signal and the **718** receiver converts the twisted pair signal back to composite video and stereo audio.

The **717/718** feature:

- A system range of up to 500m (1640ft) for the **718-05**, 1000m (3280ft) for the **718-10** and 1500m (4920ft) for the **718-15**
- Automatic audio and video equalization (EQ) control (**718**)

The **717** and **718** are part of the Kramer TOOLS™ family of compact high-quality and cost effective solutions which are fed from an external 12V DC source, making them suitable for field operation.

### 3.1 Shielded Twisted Pair/Unshielded Twisted Pair

We recommend that you use Shielded Twisted Pair (STP) cable, and stress that the compliance to electromagnetic interference was tested using STP cable. There are different levels of STP cable available, and we advise you to use the best quality STP cable that you can afford. Our non-skew-free cable, Kramer **BC-STP** is intended for analog signals where skewing is not an issue.

In cases where there is skewing, our Unshielded Twisted Pair (UTP) skew-free cable, Kramer **BC-XTP**, may be advantageous, and UTP cable might also be preferable for long range applications. In any event when using UTP cable, it is advisable to ensure that the cable is installed far away from electric cables, motors and so on, which are prone to create electrical interference.

**Note:** There is no requirement for and we do not recommend the use of skew-free cable.

## 4 Defining the 717 and 718

This section defines the:

- **717 Video-Audio Line Transmitter** (see [Section 4.1](#))
- **718 Video-Audio Line Receiver** (see [Section 4.2](#))

### 4.1 Defining the 717 Video-Audio Line Transmitter

[Figure 1](#) defines the front and rear panels of the **717 Video-Audio Line Transmitter**.

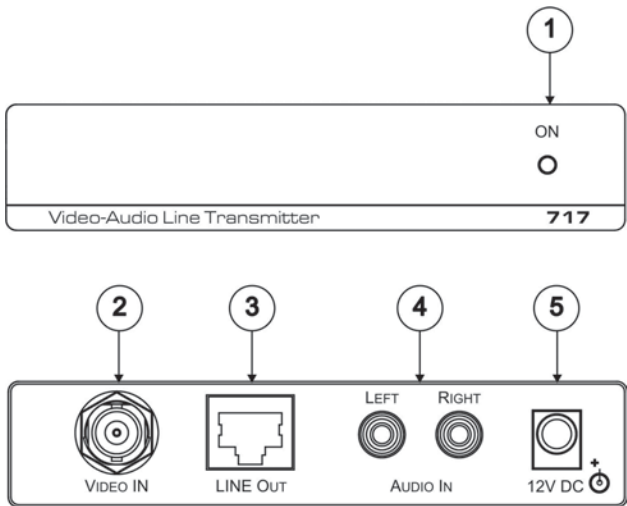


Figure 1: 717 Video-Audio Line Transmitter

#	Feature	Function
1	ON LED	Lights green when the unit is powered on
2	VIDEO IN BNC Connector	Connects to the composite video source
3	LINE OUT RJ-45 Connector	Connects to the LINE IN RJ-45 connector on the <b>718</b> using CAT 5 cable (see <a href="#">Figure 4</a> )
4	LEFT and RIGHT AUDIO IN RCA Connectors	Connect to the left and right channels of the unbalanced stereo audio source
5	12V DC Connector	Connects to the 12V DC power supply

## 4.2 Defining the 718 Video-Audio Line Receiver

[Figure 2](#) defines the front and rear panels of the **718 Video-Audio Line Receiver** for all models.

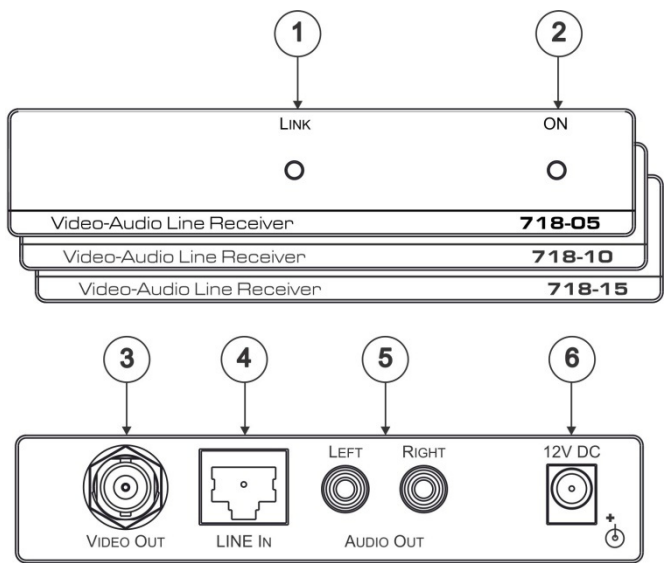


Figure 2: 718 Front and Rear Panels

#	Feature	Function
1	LINK LED	Lights green when the connection is established
2	ON LED	Lights green when the unit is powered on
3	VIDEO OUT BNC Connector	Connects to the composite video acceptor
4	LINE IN RJ-45 Connector	Connects to the LINE OUT RJ-45 connector on the 717 using CAT 5 cable (see <a href="#">Figure 2</a> )
5	LEFT and RIGHT AUDIO OUT RCA Connectors	Connect to the left and right channels of the unbalanced stereo audio acceptor
6	12V DC Connector	Connects to the 12V DC power supply



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

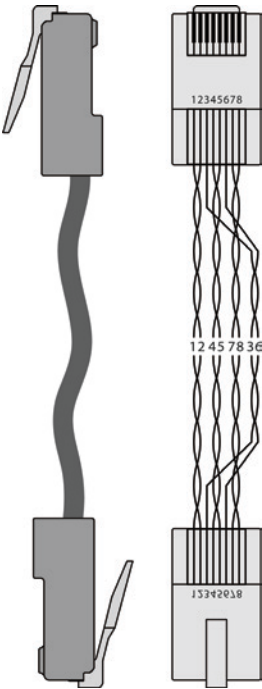
This section defines the TP pinout, using a **straight** pin-to-pin cable with RJ-45 connectors.



Note, that the cable Ground shielding must be connected / soldered to the connector shield.

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



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## 5 Connecting the 717 and 718

You can use the **717** and **718** to configure a long distance audio-video transmitter and receiver system.

**To connect the 717 and the 718 as illustrated in the example in [Figure 4](#):**

1. On the **717**, connect a composite video source (for example, a composite video player) to the VIDEO IN BNC connector, and connect the unbalanced stereo audio to the AUDIO IN LEFT and RIGHT AUDIO IN RCA connectors.
2. Using CAT 5 cabling, connect the LINE OUT RJ-45 connector on the **717** to the RJ-45 LINE IN connector on the **718**.
3. On the **718**, connect the VIDEO OUT BNC connector to a composite video acceptor (for example, a display), and connect the AUDIO OUT RIGHT and LEFT RCA connectors to an unbalanced audio acceptor (for example, an amplifier).
4. **Important:** You must connect a 12V DC power supply to each of the devices in the following order:
  - First connect power to the **717**
  - Then connect power to the **718**.

The **717** must be powered on first.

**Note:** The video and audio signals stabilize in a few seconds. If the picture contains artifacts or does not appear at all, reconnect either end of the twisted pair cable.

**Note:** The **717** and **718** do not have the Power Connect™ feature.

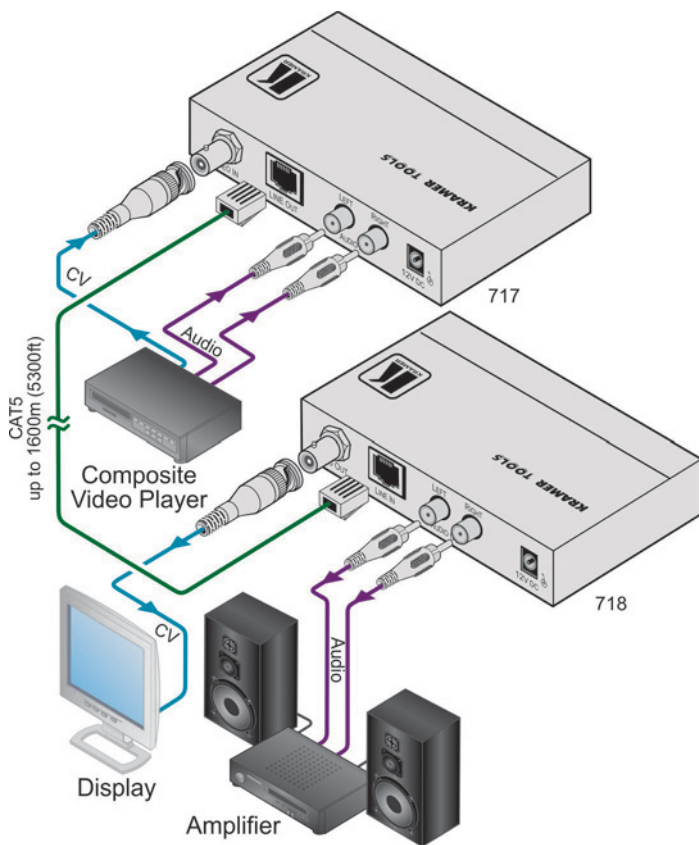


Figure 4: Connecting the Video-Audio Line Transmitter/Receiver System

## 6 Technical Specifications

	717	718-05 / 718-10 / 718-15
INPUTS:	Video: 1 composite 1Vpp/75Ω on a BNC connector Audio: 1 stereo unbalanced audio 16Vpp/10kΩ on two RCA connectors	1 RJ-45 CAT 5 connector
OUTPUTS:	1 RJ-45 CAT 5 connector	Video: 1 composite 1Vpp/75Ω on a BNC connector Audio: 1 stereo unbalanced audio 16Vpp/5kΩ on two RCA connectors
MAX. SIGNAL LEVEL*:	Video: 1.45Vpp (terminated 75Ω), Audio: 20Vpp	
BANDWIDTH (–3dB) *:	Video: 6.4MHz, Audio: 20Hz-20kHz	
S/N RATIO (unweighted) *:	Video:>64dB RMS, Audio: >85db @1kHz	
DIFF GAIN*:	0.6%	
DIFF PHASE*:	0.1Deg	
K-FACTOR*:	0.6%	
CONTROLS:	Fully automatic	
COUPLING:	Input: AC; Output: DC	
POWER CONSUMPTION:	12V DC, 120mA	12V DC, 130mA
OPERATING TEMPERATURE:	0° to +55°C (32° to 131°F)	
STORAGE TEMPERATURE:	-45° to +72°C (-49° to 162°F)	
HUMIDITY:	10% to 90%, RHL non-condensing	
DIMENSIONS:	12cm x 6.9cm x 2.4cm (4.7" x 2.7" x 0.96") W, D, H	
WEIGHT:	0.3kg (0.67lbs) approx. (each)	
ACCESSORIES:	Power supplies, mounting brackets	
OPTIONS:	RK-3T 19" rack adapter	
* For the transmitter and receiver paired together.		
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

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### Other Conditions

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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)



#### **SAFETY WARNING**

Disconnect the unit from the power supply before opening and servicing



PN: 2900-300165



Rev: 1