

Kramer Electronics, Ltd.



USER MANUAL

Model:

611T, 611R

Fiber Optic Transmitter/Receiver

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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 groups¹ that are clearly defined by function.

Thank you for purchasing the Kramer TOOLS **611T, 611R** *Fiber Optic Transmitter/Receiver*, which are ideal for:

- Remote monitoring systems for CCTV, medical, broadcast, and industrial use
- Signal distribution in broadcast and production studios
- Board room and other presentation systems
- Rental and staging applications

Each package includes the following items:

- **611T, 611R** *Fiber Optic Transmitter/Receiver*
- Power supply (12V DC)
- This user manual²

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 cables³

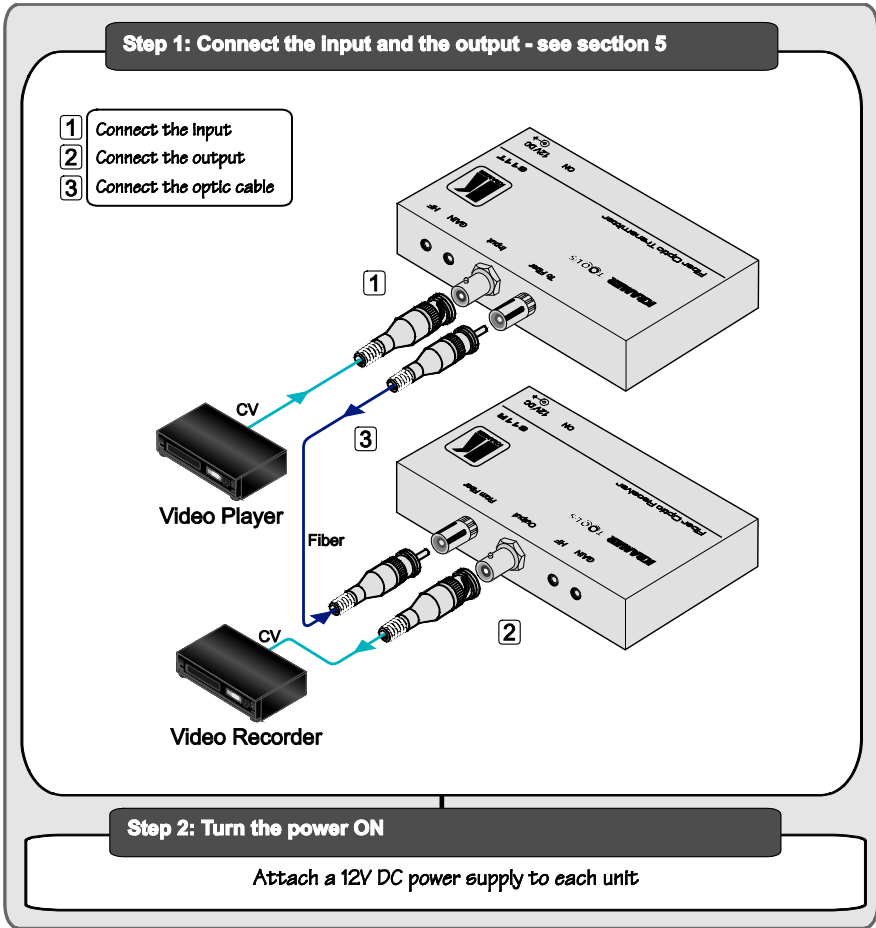
1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters; GROUP 11: Sierra Products

2 Download up-to-date Kramer user manuals from our Web site at <http://www.kramerelectronics.com>

3 The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com>

2.1 Quick Start

This quick start chart summarizes the basic setup and operation steps.



3 Overview


The **611T** and **611R** are a high-performance fiber optic transmitter and receiver for composite video signals. The **611T** transmitter converts a composite video signal into a fiber optic signal and the **611R** receiver converts the fiber optic signal back into a composite video signal.

More specifically, the **611T**, **611R** features:

- 55MHz (-3dB) bandwidth
- Level (gain) and EQ (peaking) controls
- A range of 5km (3.1mi) using multi-mode fiber optic cable

To achieve the best performance:

- Use only good quality connection cables¹ to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality and position your Kramer **611T**, **611R** away from moisture, excessive sunlight and dust

	Caution: No operator serviceable parts inside unit
	Warning: Use only the Kramer Electronics input power wall adapter that is provided with the unit
	Warning: Disconnect power and unplug unit from wall before installing or removing the device or servicing unit

¹ Available from Kramer Electronics on our Web site at <http://www.kramerelectronics.com>

4 Your 611T, 611R Fiber Optic Transmitter/Receiver

This section describes the:

- 611T *Fiber Optic Transmitter*, see section [4.1](#)
- 611R *Fiber Optic Receiver*, see section [4.2](#)

4.1 Your 611T Fiber Optic Transmitter

[Figure 1](#) and [Table 1](#) define the unit.

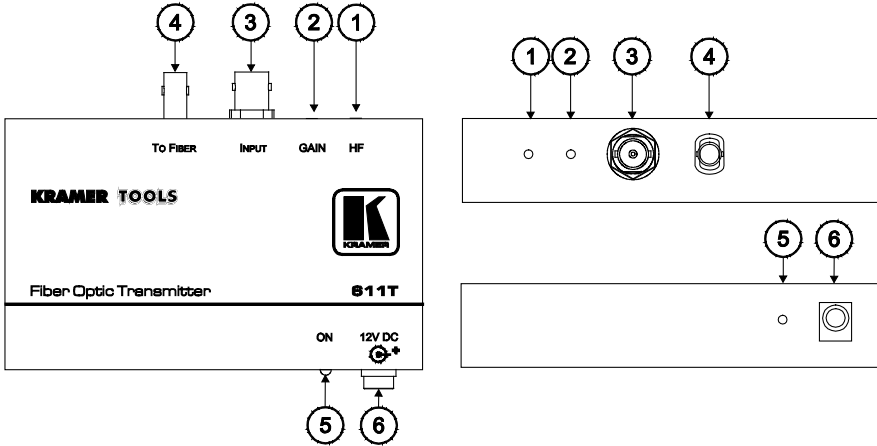


Figure 1: 611T Fiber Optic Transmitter Functions

Table 1: 611T Fiber Optic Transmitter Functions

#	Feature	Function
1	HF Trimmer	Cable compensation (high frequency) control trimmer
2	GAIN Trimmer	Video level control trimmer
3	INPUT BNC Connector	Connects to a composite video source
4	TO FIBER Connector	"ST" type connector outputting the converted video signal to the optical fiber
5	ON LED	Illuminates when the unit is powered ON
6	12V DC Power Connector	Connects to the power supply to supply power to the unit

4.2 Your 611R Fiber Optic Receiver

[Figure 2](#) and [Table 2](#) define the unit.

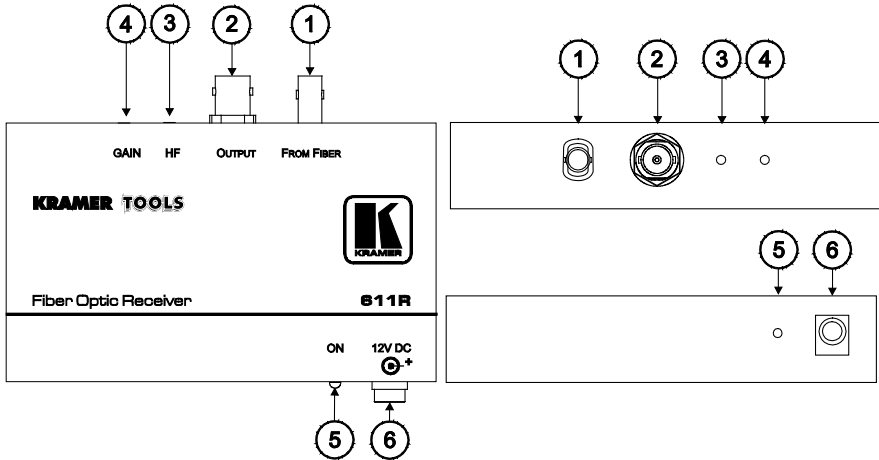


Figure 2: 611R Fiber Optic Receiver Functions

Table 2: 611R Fiber Optic Receiver Functions

#	Feature	Function
1	FROM FIBER Connector	"ST" type connector inputting the converted video signal from the optical fiber to the 611R
2	OUTPUT BNC Connector	Connects to a composite video acceptor
3	HF Trimmer	Cable compensation (high frequency) control trimmer
4	GAIN Trimmer	Video level control trimmer
5	ON LED	Illuminates when the unit is powered ON
6	12V DC Power Connector	Connects to the power supply to supply power to the unit

5 Connecting the 611T, 611R

To connect the **611T, 611R**, as shown in [Figure 3](#), do the following¹:

1. On the **611T**, connect a composite video source (for example, a video player) to the INPUT BNC connector.
2. On the **611R**, connect the OUTPUT BNC connector to a composite video acceptor (for example, a video recorder).
3. Connect a fiber optic cable from the TO FIBER connector on the **611T** to the FROM FIBER connector on the **611R**.
4. Connect a 12V DC power supply to each of the units (not shown in the illustration).
5. As needed, adjust the HF and GAIN trimmers on each unit with a small screwdriver².

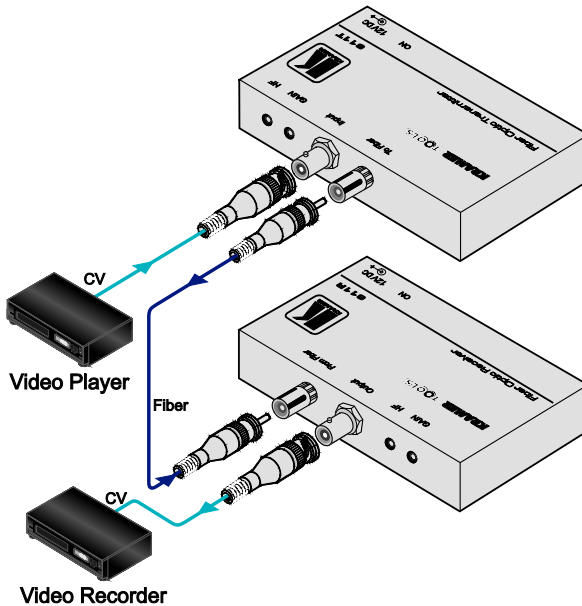


Figure 3: Connecting the 611T, 611R

¹ Switch OFF the power on each device before connecting it to your **611T, 611R**. After connecting your **611T, 611R**, switch on its power and then switch on the power on each device

² The units come pre-adjusted from the factory for optimum performance and transparent operation. Adjustment is not normally required if all cables and connectors are working properly

6 Technical Specifications

The **611T**, **611R** technical specifications are shown in [Table 3](#):

Table 3: 611T, 611R Technical Specifications¹

INPUT:	Composite video, 1Vpp/75Ω on a BNC connector (611T); Fiber optic ST connector (611R)
OUTPUT:	Fiber optic ST connector (611T); Composite video, 1Vpp/75Ω on a BNC connector (611R)
OPERATION DISTANCE:	Up to 5km (3.1mi)
VIDEO BANDWIDTH (-3dB):	55MHz
DIFF. GAIN:	0.4%
VIDEO S/N RATIO:	60dB
NON-LINEARITY:	0.6%
POWER SOURCE:	12V DC, 80mA
DIMENSIONS:	12cm x 7.5cm x 2.5cm (4.7" x 2.95" x 0.98") W, D, H.
WEIGHT:	0.27kg (0.59lbs) approx.
ACCESSORIES:	Power supply, mounting bracket
OPTIONS:	RK-3T 19" rack adapter

¹ Specifications are subject to change without notice

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for three years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the Web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with.
3. Damage, deterioration or malfunction resulting from:
 - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
 - ii) Product modification, or failure to follow instructions supplied with the product
 - iii) Repair or attempted repair by anyone not authorized by Kramer
 - iv) Any shipment of the product (claims must be presented to the carrier)
 - v) Removal or installation of the product
 - vi) Any other cause, which does not relate to a product defect
 - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.

This equipment has been tested to determine compliance with the requirements of:

- EN-50081: "Electromagnetic compatibility (EMC);
generic emission standard."
Part 1: Residential, commercial and light industry"
- EN-50082: "Electromagnetic compatibility (EMC) generic immunity standard."
Part 1: Residential, commercial and light industry environment".
- CFR-47: FCC* Rules and Regulations:
Part 15: "Radio frequency devices
Subpart B Unintentional radiators"

CAUTION!

- ⊗ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- ⊗ Use the supplied DC power supply to feed power to the machine.
- ⊗ Please use recommended interconnection cables to connect the machine to other components.

* FCC and CE approved using STP cable (for twisted pair products)



For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com where updates to this user manual may be found. We welcome your questions, comments and feedback.



Caution

Safety Warning:

Disconnect the unit from the power supply before opening/servicing.



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