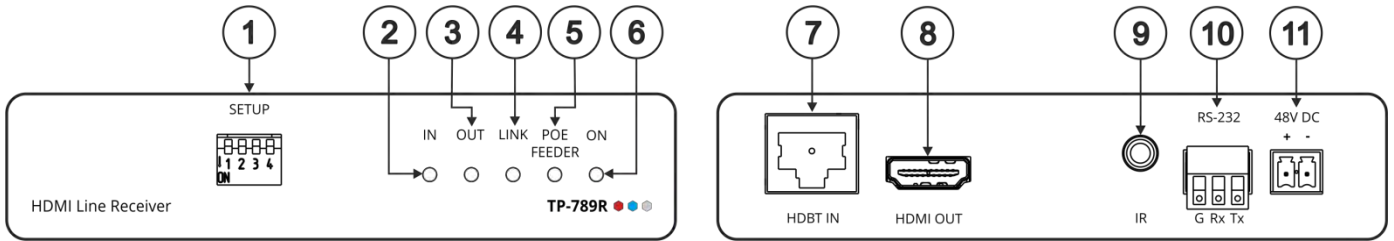# KRAMER

TP-789R Quick Start Guide

This guide helps you install and use your **TP-789R** for the first time.

Go to www.kramerav.com/downloads/TP-789R to download the latest user manual and check if firmware upgrades are available.

Step 1: Check what's in the box

- ☑ **TP-789R** HDMI Line Receiver
- ☑ 4 Rubber feet
- ☑ 1 Quick start guide
- ☑ 1 Power adapter and cord
- ☑ 1 Bracket set
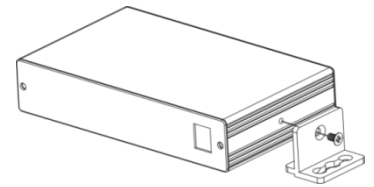
Step 2: Get to know your TP-789R

#	Feature	Function
1	SETUP DIP-switches	Set the operation DIP-switches.
2	IN LED	Lights green when an active far-end source device input signal is detected.
3	OUT LED	Lights green when an active sink (acceptor) output signal is detected via the HDBT link.
4	LINK LED	Lights green when an HDBT link is established with the HDBaseT transmitter.
5	POE FEEDER LED	Lights green when the device is feeding PoE power to the HDBT connected transmitter.
6	ON LED	Lights green when the device receives power either from the power supply unit or by PoE.
7	HDBT IN RJ-45 Connector	Connect to the RJ-45 HDBT OUT connector on a transmitter (for example, **WP-20**, **TP-780T**).
8	HDMI® OUT Connector	Connect to an HDMI acceptor.
9	IR 3.5mm Mini Jack Connector	Connect to an external infrared emitter / sensor.
10	RS-232 (G, Rx, Tx) 3-pin Terminal Block Connector	Connects to an RS-232 port for serial link extension to a transmitter.
11	48V DC Power Terminal Block Connector	If **TP-789R** provides PoE, connect it to the Kramer power adapter. If it accepts PoE, no power connection is needed.

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Step 3: Install TP-789R

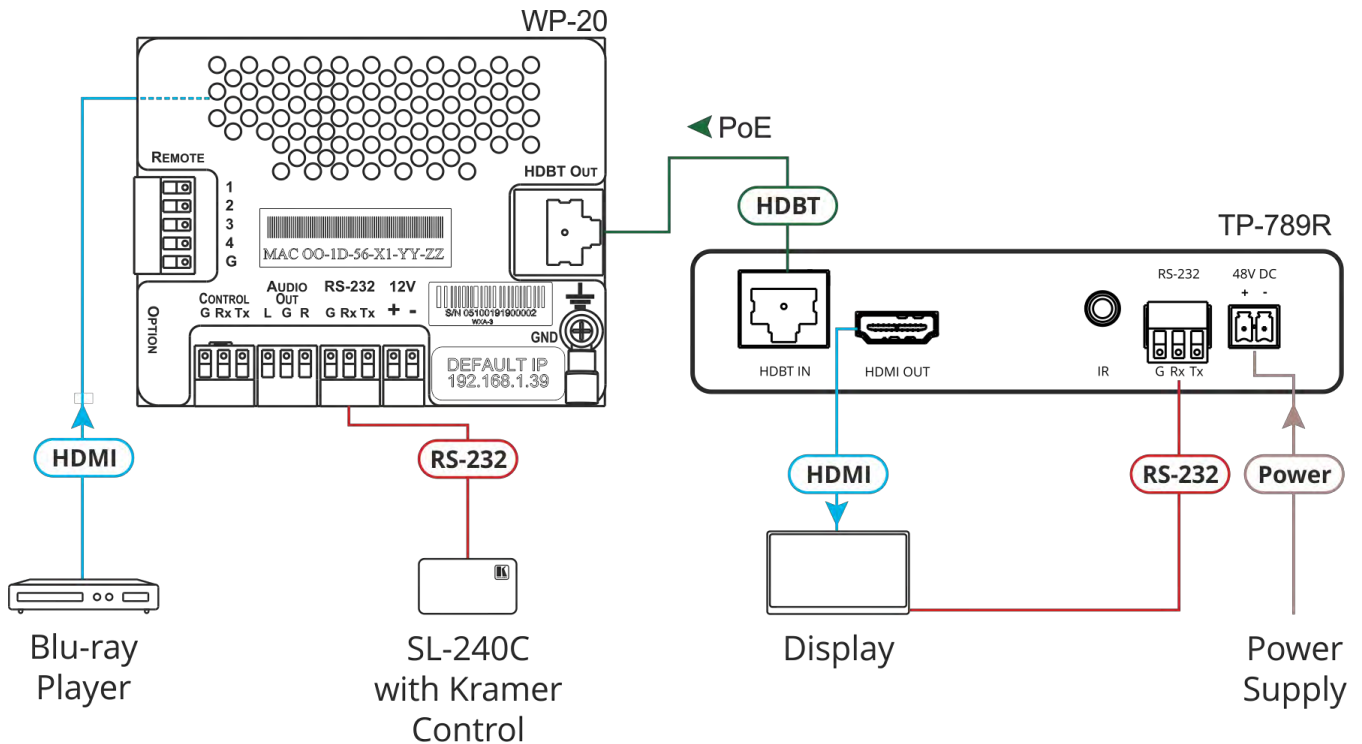Install **TP-789R** using one of the following methods:

- Attach the rubber feet and place the unit on a flat surface.
- Fasten a bracket (included) on each side of the unit and attach it to a flat surface.
  For more information go to
  www.kramerav.com/downloads/TP-789R.
- Mount the unit in a rack using the recommended rack adapter
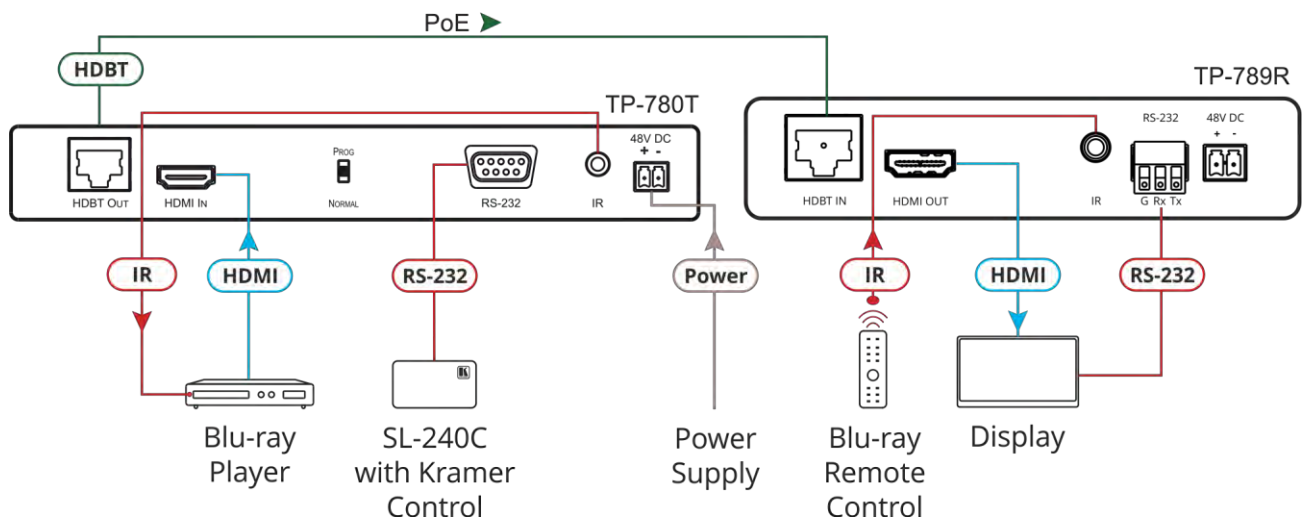 (see www.kramerav.com/product/TP-789R).

Step 4: Connect the inputs and outputs

Always switch OFF the power on each device before connecting it to your **TP-789R**. For best results, we recommend that you always use Kramer high-performance cables to connect AV equipment to **TP-789R**.
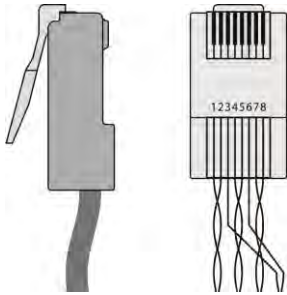
Connecting TP-789R as a power provider:

Connecting TP-789R as a power acceptor:

RJ-45 Pinout:

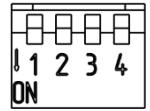For the Ethernet connector, see the wiring diagram below:

PIN 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

For optimum range and performance use the recommended Kramer cables available at www.kramerav.com/product/TP-789R.

DIP-Switch Settings

All DIP-switches are set to OFF (up) by default. Changes to DIP-switch 4 only take effect after rebooting the device.

SETUP

#	Feature	Dip-switch Settings
1	Reserved	For future use.
2	Reserved	For future use. Set to OFF (up).
3	IR Frequency	OFF (up) – IR frequency is 38kHz. ON (down) – Wide-range modulated IR frequency. ⓘ Set to OFF for backward compatibility with 38kHz IR extension.
4	FW Upgrade	OFF – Normal operation mode. ON – HDBT FW upgrade mode. ⓘ When set to ON device operation is disabled.

Step 5: Connect the power

When used as a PoE provider, connect the 48V DC power supply to **TP-789R** and plug it into the mains electricity (to also provide power to a transmitter).
When accepting power from an HDBT transmitter via PoE there is no need to connect the 48V DC power supply.

Safety Instructions

Caution: There are no operator serviceable parts inside the unit.
Warning: Use only the Kramer Electronics power adapter that is provided with the unit.
Warning: Disconnect the power and unplug the unit from the wall before installing.
See www.KramerAV.com for updated safety information.

Step 6: Upgrade the firmware

Upgrade the firmware by:

- Setting the DIP-switches.
- Loading the new firmware via the RS-232 port on the **TP-789R**.

RS-232 Pass-through Data	
Baud Rate:	115,200
Data Bits:	8
Stop Bits:	1
Parity:	None
Command Format:	ASCII

Technical Specifications

Input	HDBT	On an RJ-45 connector
Output	HDMI	On a female HDMI connector
Ports	RS-232	On a 3-pin terminal block connector for serial link extension
	IR	On a 3.5mm mini-jack connector for IR link extension
Video	Max Bandwidth	10.2Gbps
	Max Resolution	4K@60 (4:2:0)
	Compliance	HDMI 2.0 and HDCP 2.2
Extension Range	4k@60 (4:2:0)	Up to 40m (130ft)
	Full HD (1080p@60Hz)	Up to 70m (230ft)
Extended RS-232	Baud Rate	300 to 115200 baud
Extended IR	Frequency	20kHz to 100kHz
	Direction	Bidirectional (IR sensor or emitter)
Controls	Front Panel	IN, OUT, LINK, POE FEEDER and ON LED indicators
	Rear Panel	DIP-switches
Power	Consumption	48V DC, 350mA
	Source	48V DC, 1.36A
Environmental Conditions	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
Regulatory Compliance	Safety	CE
	Environmental	RoHs, WEEE
Enclosure	Size	Tool
	Type	Aluminum
	Cooling	Convection ventilation
General	Net Dimensions (W, D, H), each	12cm x 7.2cm x 2.4cm (4.7" x 2.8" x 0.94")
	Shipping Dimensions (W, D, H)	15.7cm x 12cm x 8.7cm (6.2" x 4.7" x 3.4")
	Net Weight, each	0.2kg (0.44bs) approx.
	Shipping Weight	0.72kg (1.6lbs) approx.
Accessories	Included	1 Power adapter, 1 power cord and 1 bracket set per device
Specifications are subject to change without notice at www.kramerav.com		