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KIT-500 Quick Start Guide

This guide helps you install and use your KIT-500 for the first time.

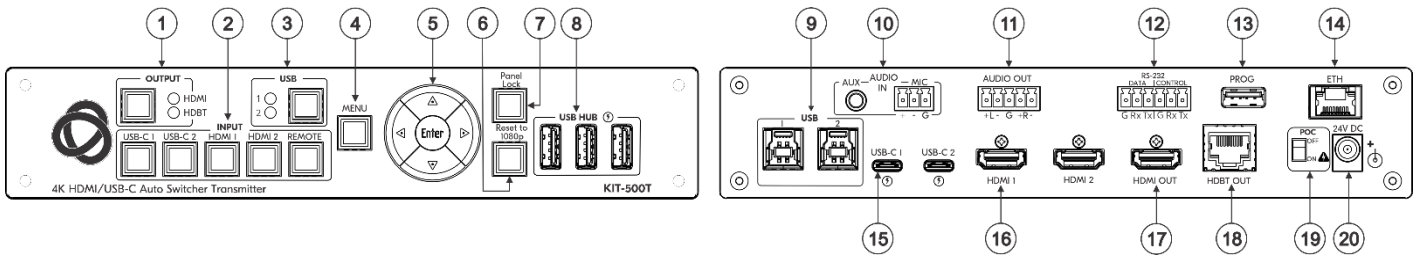
Go to www.kramerav.com/downloads/KIT-500 to download the latest user manual and check if firmware upgrades are available.

Step 1: Check what's in the box

- ✓ KIT-500 including:
 - KIT-500T 4K HDMI/USB-C Auto Transmitter
 - KIT-500R 4K HDBT/HDMI Receiver/Scaler
- ✓ 1 Multi-signal USB-C cable (1m)
- ✓ 2 Bracket sets
- ✓ 1 Power adapter
- ✓ Power cord
- ✓ 8 Rubber feet
- ✓ 1 Quick start guide

Step 2: Get to know your KIT-500

KIT-500T



#	Feature	Function
1	OUTPUT	Select Button
	HDMI/HDBT LEDs	LED lights green when selected.
2	INPUT Buttons	USB-C (1 and 2)
		HDMI (1 and 2)
		REMOTE
3	USB	Select Button
		1/2 LEDs
4	MENU Button	Press to display the KIT-500 OSD menu.  The OSD menu can be viewed on the acceptor that is connected to the KIT-500R.
5	Navigation Buttons	◀
		▲
		▶
		▼
		ENTER
6	RESET TO 1080p Button	Press and hold for about 5 seconds to reset the output resolution. The first press resets the resolution to 720p and the next press resets to 1080p.
7	PANEL LOCK Button	Press to lock/unlock the front panel buttons.
8	USB HUB USB 3.0 Type A Ports (3)	Connect to USB devices. The user can select which USB host (USB 1 or USB 2 on the transmitter) is connected to the USB devices.
9	USB 3.0 Host Port (1 and 2)	Connect to USB hosts.

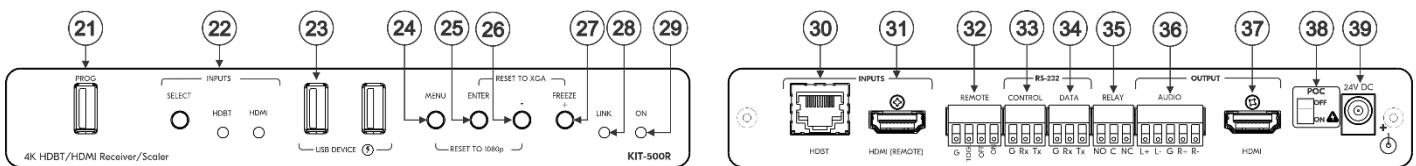
#	Feature		Function
10	AUDIO IN	AUX 3.5mm Mini Jack	Connect to an unbalanced, analog audio source (for example, the audio output of the laptop).
		MIC 3-pin Terminal Block	Connect to a dynamic or condenser (with 48V phantom power) microphone.
11	AUDIO OUT 5-pin Terminal Block		Connect to a balanced, stereo audio acceptor (for example, active speakers).
12	RS-232	DATA 3-pin Terminal Block Connector	Connect to a serial data source or acceptor to extend RS-232 between KIT-500T and KIT-500R .
		CONTROL 3-pin Terminal Block Connector	Connect to a serial controller or PC to control KIT-500 or for KIT-500 to control an external device.
13	PROGRAM USB Connector		Connect to a PC to perform a firmware upgrade.
14	ETH RJ-45 Connector		Connect to the LAN (Ethernet traffic or PC controller).
15	USB-C Port (1 and 2)		Connect to USB-C sources. Both USB-C ports support DP Alt mode, Ethernet and USB data transfer. USB-C 1 supports up to 60W charging.  Power delivery to USB-C 1 is not supported when KIT-500R delivers power to KIT-500T via PoC.
16	HDMI Connector		Connect to an HDMI source.
17	HDMI OUT Connector		Connect to an HDMI acceptor.
18	HDBT OUT RJ-45 Connector		Connect to KIT-500R .



Follow powering instructions in [Step 5: Connect power](#).
Failure to use PoC and power connector correctly may destroy the devices!

19	PoC (Power over Cable) Switch	Set the PoC switch to ON on both KIT-500T and KIT-500R .
20	24V DC Connector	Connect to the supplied power adapter, unless the power adapter is connected to KIT-500R .

KIT-500R



#	Feature		Function
21	PROG USB Connector		Connect to a USB stick to perform firmware upgrades.
22	INPUTS	SELECT Button	Press to toggle between the HDBT and HDMI inputs to select the input (HDBT or HDMI). By default, the SELECT button is locked. You can unlock it via the ADVANCED menu in the OSD.
		HDBT LED	Lights blue when the HDBT input is selected.
		HDMI LED	Lights blue when the HDMI input is selected.
23	USB DEVICE USB 2.0 Type A Ports (2)		Connect to USB devices. The user can select which USB host (USB 1 or USB 2 on the transmitter) is connected to the USB devices.
24	MENU Button		Press to enter/exit the on-screen display (OSD) menu. Press together with the – button to reset to 1080p.
25	ENTER Button		In OSD, press to choose the highlighted menu item. Press together with the FREEZE/+ button to reset to XGA.
26	–		In OSD, PRESS to move back through menus or decrement parameter values.
27	FREEZE/+ Button		In OSD, press to move forward through menus or increment parameter values. When not in OSD, press to freeze the display.
28	LINK LED		Lights blue when a link is established with the transmitter.
29	ON LED		Lights green when device is powered.
30	INPUTS	HDBT RJ-45 Connector	Connect to KIT-500T .
31		HDMI (REMOTE) Connector	Connect to an HDMI source.
32	REMOTE Contact-Closure 4-pin Terminal Block Connector		Connect to contact closure switches to send CEC commands to the display. The TOGGLE pin may be configured for toggling (edge-triggered), or for ON / OFF (level-triggered). See Step 6: Operate KIT-500 .



#	Feature		Function
33	RS-232	CONTROL 3-pin Terminal Block Connector	Connect to a serial controller or PC to control KIT-500 using P3K, or for KIT-500 to control an external device.
34		DATA 3-pin Terminal Block Connector	Connect to a serial data source or acceptor for extending RS-232 between KIT-500T and KIT-500R via HDBT.
35	RELAY SPDT 3-pin Terminal Block Connector		Connections to the internal relay's contact terminals: Normally open (NO), normally closed (NC), and common (C). Connect to devices to be controlled by relay (for example, a motorized projection screen).
36	OUTPUT	AUDIO 5-pin Terminal Block Connector	Connect to a balanced analog stereo audio acceptor.
37		HDMI Connector	Connect to an HDMI acceptor.



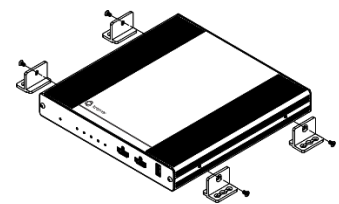
Follow powering instructions in [Step 5: Connect power](#).
Failure to use PoC and power connector correctly may destroy the devices!

38	PoC (Power Over Cable) Switch	Set the PoC switch to ON on both KIT-500T and KIT-500R .
39	24V DC Connector	Connect to the supplied power adapter, unless the power adapter is connected to KIT-500T .

Step 3: Mount KIT-500

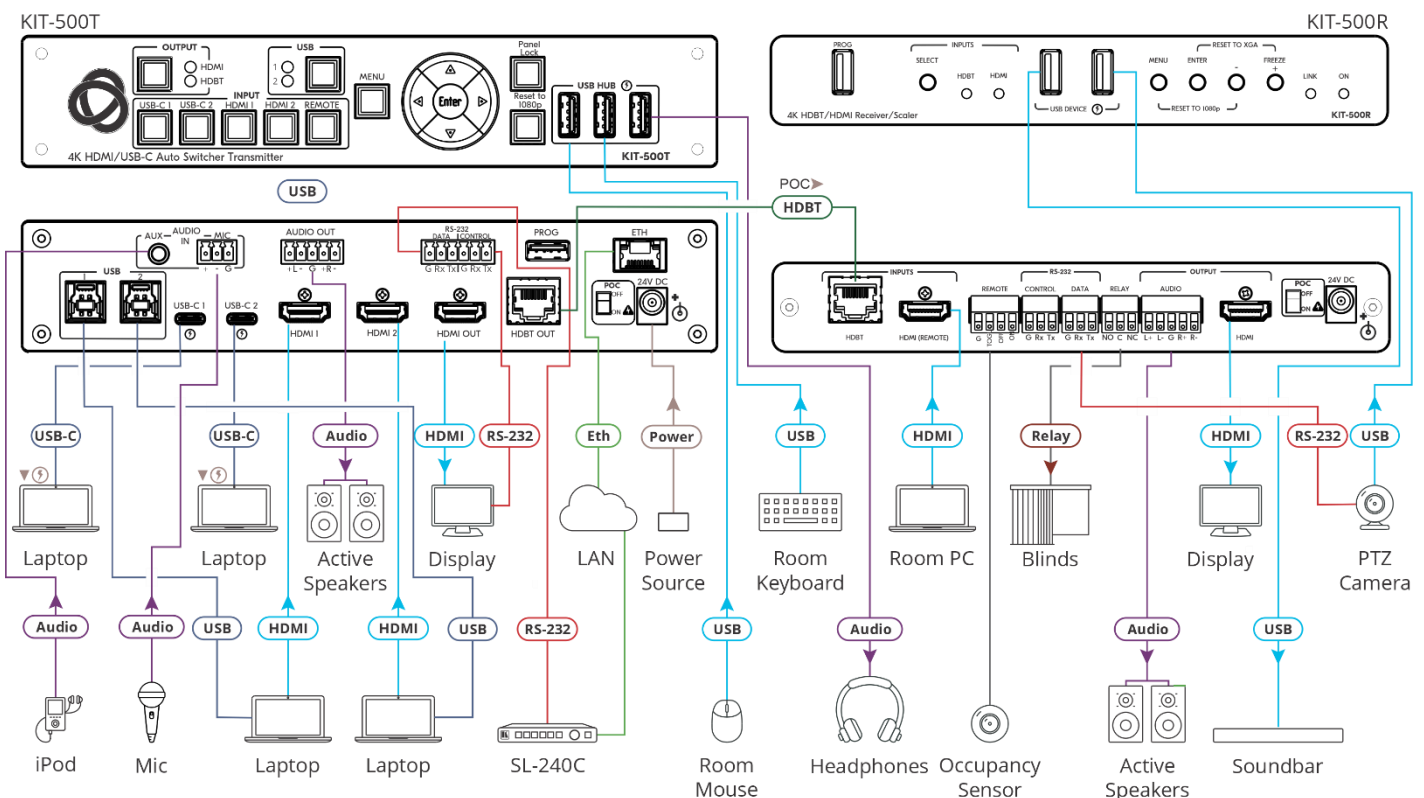
Install **KIT-500** using one of the following methods:

- 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 (see www.kramerav.com/downloads/KIT-500).
- Mount the unit in a rack using the recommended rack adapter (see www.kramerav.com/product/KIT-500).



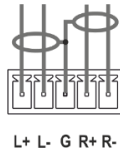
- Ensure that the environment (e.g., maximum ambient temperature & air flow) is compatible for the device.
- Avoid uneven mechanical loading.
- Appropriate consideration of equipment nameplate ratings should be used for avoiding overloading of the circuits.
- Reliable earthing of rack-mounted equipment should be maintained.
- Maximum mounting height for the device is 2 meters.

Step 4: Connect inputs and outputs



Connecting the audio output

To a balanced stereo audio acceptor:



To an unbalanced stereo audio acceptor:



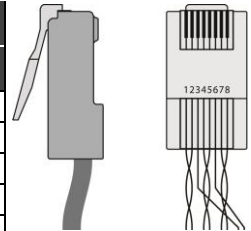
Wiring the RJ-45 connectors

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



For HDBT cables, it is recommended that the cable ground shielding 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



To achieve specified extension distances, use the recommended Kramer cables available at www.kramerav.com/product/KIT-400. Using third-party cables may cause damage!

Step 5: Connect power

To power the devices:

1. Set the PoC switches to **ON** on both devices.
2. Connect the power adapter to one of the devices (KIT-500T or KIT-500R).



Safety Instructions (See www.kramerav.com for updated safety information)

Caution:

- For products with relay terminals and GPIO ports, please refer to the permitted rating for an external connection, located next to the terminal or in the User Manual.
- There are no operator serviceable parts inside the unit.

Warning:

- Failure to use PoC and power connector correctly may destroy the devices!
- Use only the power cord that is supplied with the unit.

Disconnect the power and unplug the unit from the wall before installing.

Step 6: Operate KIT-500

Operate KIT-500 via:

- Front panel buttons
- Remotely, by RS-232 serial commands transmitted by a touch screen system, PC, or other serial controller
- Embedded web pages via the Ethernet
- Remote control switches.
- Room Automation Panel.

RS-232 Control / Protocol 3000

Baud Rate:	115,200	Parity:	None
Data Bits:	8	Command Format:	ASCII
Stop Bits:	1		

Example: (Set the Audio out volume level to 75): #AUD-IVL 1,1,75

Default IP Parameters – DHCP ON

Fallback IP Address:	192.168.1.39	UDP Port #:	50000
Subnet mask:	255.255.0.0	TCP Port #:	5000
Gateway:	0.0.0.0		

Default EDID

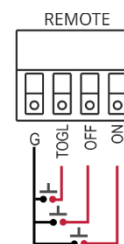
Default EDID Native Resolution	4K@60 4:4:4
	In the case that the HDMI display connected to KIT-500T does not support 4K60 4:4:4, copy your current EDID display to KIT-500T's inputs.

Operating via the remote control switches

Momentarily connect the desired pin to the GND pin to select an input:

Pin Name	Function
KIT-500R	
TOGL	One button toggles between display on and display off (instead of using two separate buttons for on and off). Alternatively, using the KIT-500R OSD, configure turning the display on or off according to whether a switch is open or closed (for example, when using an occupancy sensor).
OFF	Turn off the display.
ON	Turn on the display.

KIT-500R



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