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KIT-500 Quick Start Guide

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

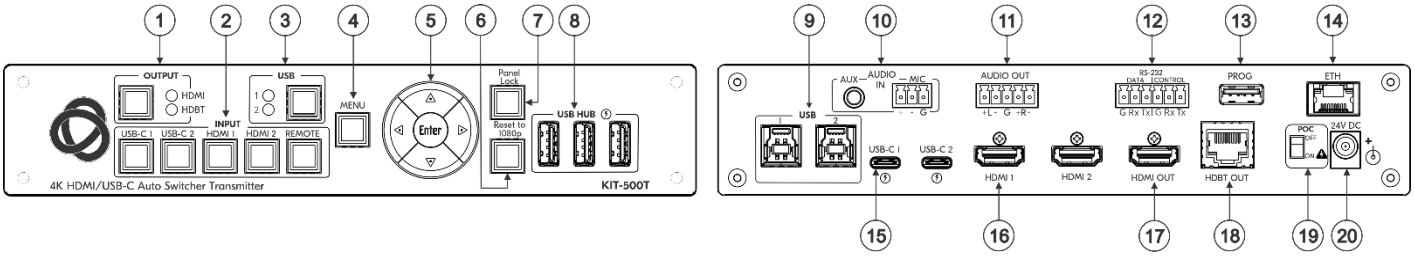
Go to www.kramerav.com/downloads/KIT-500 to download the latest user manual and check if firmware upgrades are available.

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	Press to select the output to be switched when a selected input button is pressed.
		HDMI/HDBT LEDs	LED lights green when selected.
2	INPUT Buttons	USB-C (1 and 2)	Press to select a USB-C input. Button illuminates when that input is selected.
		HDMI (1 and 2)	Press to select an HDMI input. Button illuminates when that input is selected.
		REMOTE	Press to select the HDMI (REMOTE) input as the input to **KIT-500R**. Button illuminates when that input is selected. Note that this button is only operational if HDBT is selected via the OUTPUT button.
3	USB	Select Button	Press to select the USB HOST port to connect to the USB HUB devices.
		1/2 LEDs	Lights green when selected.
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	◄	Press to decrease numerical values or select from several definitions. When not in the OSD menu, press to reduce the output volume.
		▲	Press to move up the menu list values.
		►	Press to increase numerical values or select from several definitions. When not in the OSD menu, press to increase the output volume.
		▼	Press to move down the menu list.
		ENTER	Press to accept changes and change the SETUP parameters.
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.

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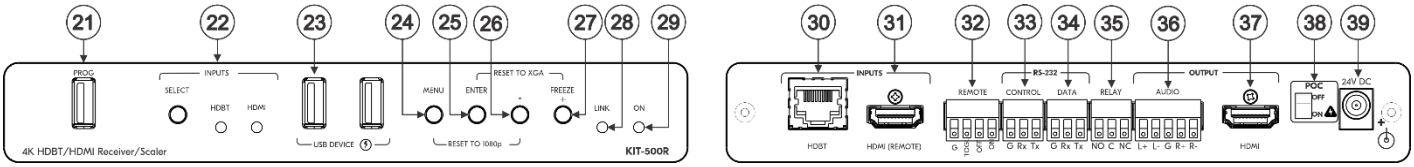
#	Feature		Function
10	AUDIO IN	AUX 3.5mm Mini Jack	Connect to an unbalanced, analog audio source (for example, the audio output of the laptop).
		MIC 3-pin Terminal Block	Connect to a dynamic or condenser (with 48V phantom power) microphone.
11	AUDIO OUT 5-pin Terminal Block		Connect to a balanced, 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. Ports support DP Alt mode, Ethernet and USB data transfer, and up to 60W charging capabilities. If both ports are connected to devices requiring charging, the priority for charging is as follows: 1. The port that is selected as the input that is routed to the HDBT output. 2. The port that is selected as the input that is routed to the HDMI output. 3. USBC-C input 1. 4. USB-C input 2. Power delivery to USB-C 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.

#	Feature		Function
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.
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.

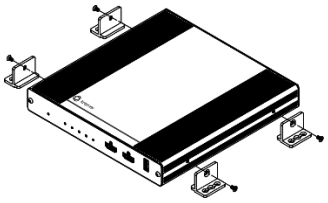
Follow powering instructions in **Step 5: Connect power**.
Failure to use PoC and power connector correctly may destroy the devices!

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:

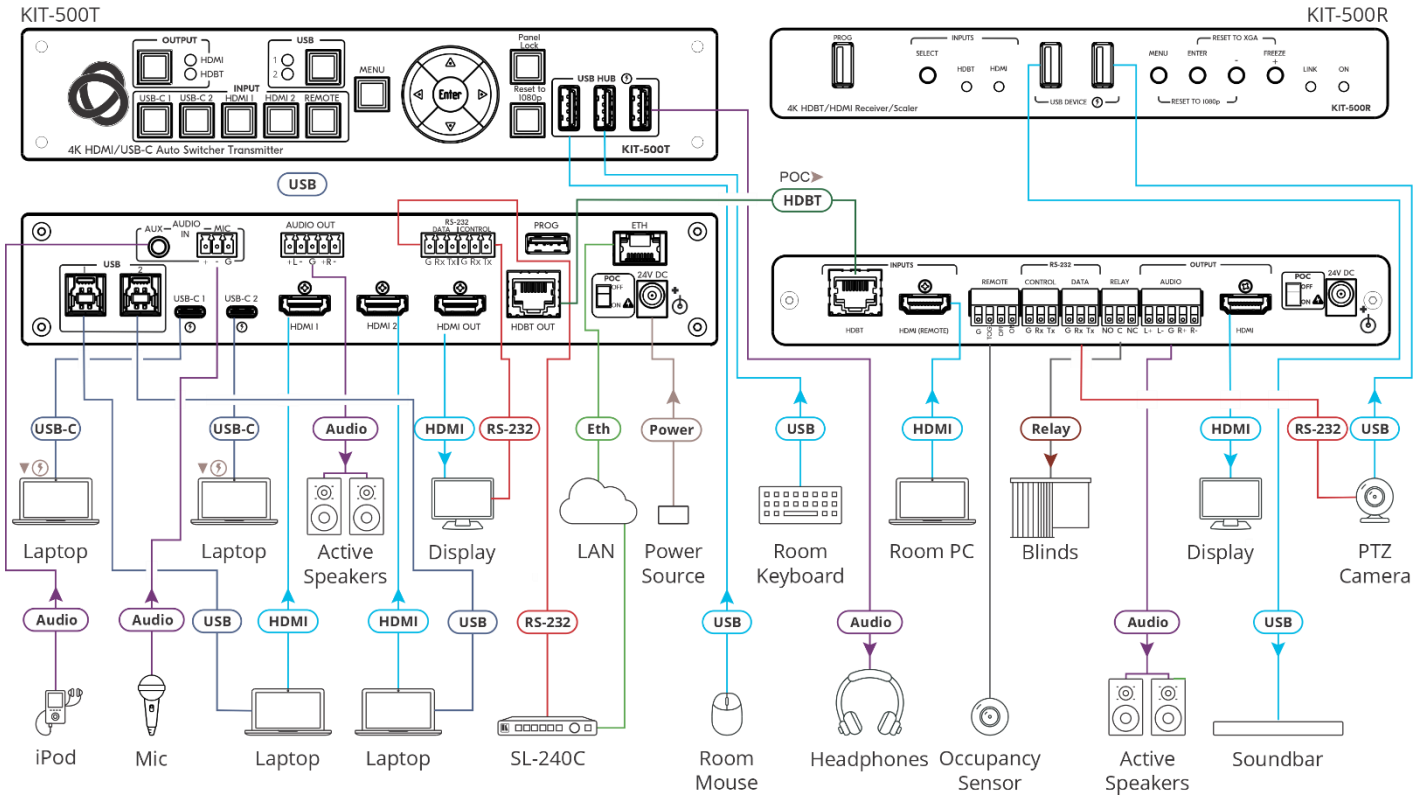
- Attach the rubber feet and place the unit on a flat surface.
- Fasten a bracket (included) on each side of the unit and attach it to a flat surface (see www.kramerav.com/downloads/KIT-500).



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

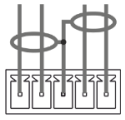
- Ensure that the environment (e.g., maximum ambient temperature & air flow) is compatible for the device.
- Avoid uneven mechanical loading.
- Appropriate consideration of equipment nameplate ratings should be used for avoiding overloading of the circuits.
- Reliable earthing of rack-mounted equipment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

Step 4: Connect inputs and outputs

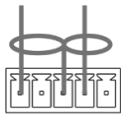


Connecting the audio output

To a balanced stereo audio acceptor:



To an unbalanced stereo audio acceptor:

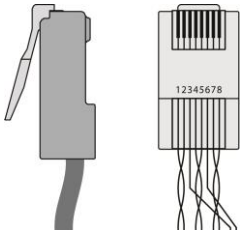


Wiring the RJ-45 connectors

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 GPI\O 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-LVL 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.		

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