



Scan for full manual

## KIT-401 Quick Start Guide

This guide helps you install and use your KIT-401 for the first time.

Go to [www.kramerav.com/downloads/KIT-401](http://www.kramerav.com/downloads/KIT-401) to download THE latest user manual and check if firmware upgrades are available.

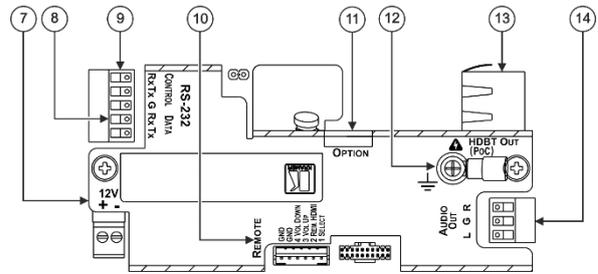
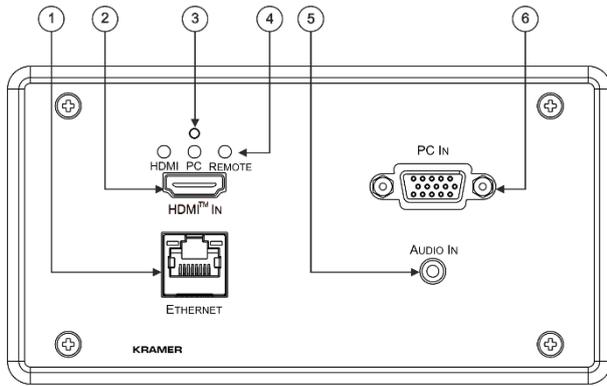
### Step 1: Check what's in the box

- ✓ KIT-401, including:  
KIT-401T 4K HDMI/PC Auto Switcher Transmitter  
and  
KIT-400R 4K HDBT/HDMI Receiver/Scaler
- ✓ 1 Power adapter, cable adapter and cord
- ✓ 1 Quick start guide
- ✓ 1 Installation accessories
- ✓ 4 Rubber feet
- ✓ 2 Bracket sets (KIT-400R)
- ✓ 1 Frame or frame kit (KIT-401T)

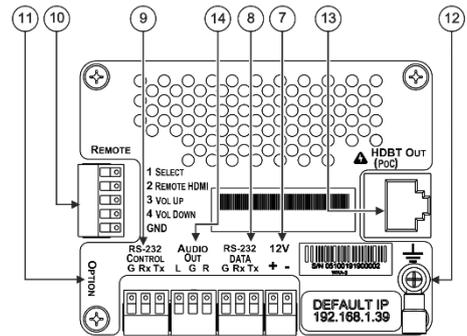
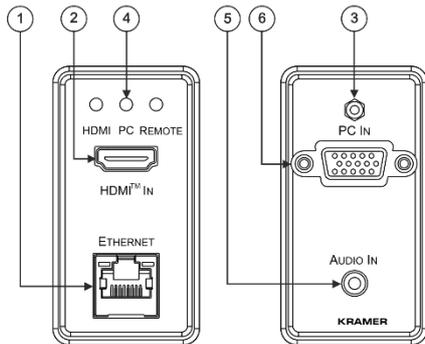
### Step 2: Get to know your KIT-401

#### KIT-401T

EU + UK



US

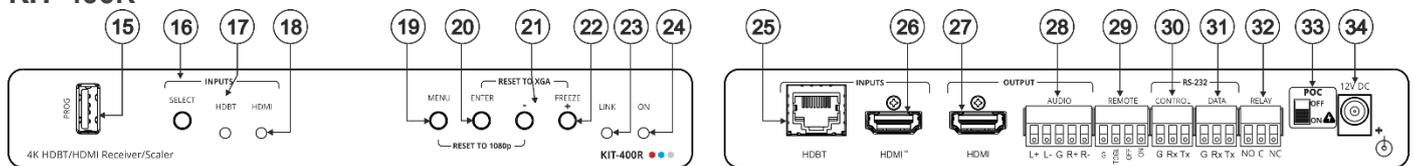


#	Feature	Function
1	ETHERNET LAN RJ-45 Connector	Connect to the LAN (Ethernet traffic or PC controller).
2	HDMI™ IN Connector	Connect to an HDMI source.
3	RESET Button	Sends a reset command to KIT-400R and then reboots KIT-401T.
4	HDMI	Lights green when the HDMI source is selected as the input.
	PC	Lights green when the PC source is selected as the input.
	REMOTE	Lights green when the HDMI INPUT source on KIT-400R is selected as the input.
5	AUDIO IN 3.5mm Mini Jack	Connect to an unbalanced, stereo audio source (for example, the audio output of the laptop).
6	PC 15-pin HD Connector	Connect to a PC graphics source.

#	Feature	Function
7	12V Power Supply 2-pin Terminal Block Connector	Connect to the supplied power adapter (if required). Connect + to +, - to -. Follow powering instructions in <a href="#">Step 5: Connect power</a> .  Connect power to either this terminal block or to the KIT-400R 12V power connector (item 34). Do not connect to both!
8	RS-232 DATA 3-pin Terminal Block Connector	Connect to a serial data source or acceptor.
9	CONTROL 3-pin Terminal Block Connector	Connect to a serial controller or PC.
10	Remote Contact-closure 4-pin Terminal Block Connector	Connect to contact closure switches (by momentary contact between the desired pin and GND pin) to select an input, the remote HDMI IN and audio volume (up or down), see <a href="#">Step 6: Operate KIT-401</a> .
11	SETUP 4-way DIP-switch	Set the device behavior, see <a href="#">Step 4: Connect inputs and outputs</a> .
12	Ring Tongue Terminal Grounding Screw	Connect to grounding wire (optional).
13	HDBT OUT (PoC) RJ-45 Connector	Connect to KIT-400R.
14	AUDIO OUT 3.5mm Mini Jack	Connect to the unbalanced, stereo audio acceptor (for example, active speakers).

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

## KIT-400R



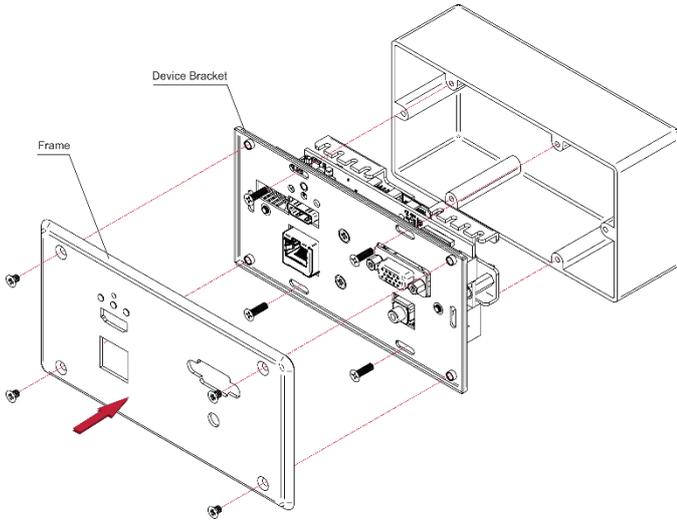
#	Feature	Function	
15	PROG USB Connector	Connect to a USB stick to perform firmware upgrades.	
16	INPUTS	SELECT Button	Press to select the input (HDBT or HDMI).
17		HDBT LED	Lights blue when the HDBT input is selected.
18		HDMI LED	Lights blue when the HDMI input is selected.
19	MENU Button	Press to enter/exit the on-screen display (OSD) menu. Press together with the – button to reset to 1080p.	
20	ENTER Button	In OSD, press to choose the highlighted menu item. Press together with the FREEZE/+ button to reset to XGA.	
21	–	In OSD, press to move back through menus or decrement parameter values.	
22	FREEZE/+ Button	In OSD, press to move forward through menus or increment parameter values. When not in OSD, press to freeze the display.	
23	LINK LED	Lights blue when a link is established with the transmitter.	
24	ON LED	Lights green when device is powered.	
25	INPUTS	HDBT RJ-45 Connector	Connect to KIT-401T.
26		HDMI™ Connector	Connect to an HDMI source.
27	OUTPUT	HDMI Connector	Connect to an HDMI acceptor.
28		AUDIO 5-pin Terminal Block Connector	Connect to a balanced stereo audio acceptor.
29	REMOTE Contact-Closure 5-pin Terminal Block Connector	Connect to contact closure switches (by momentary contact between the desired pin and GND pin). To turn display on or off, see <a href="#">Step 6: Operate KIT-401</a> .	
30	RS-232	CONTROL 3-pin Terminal Block Connector	Connect to a serial controller or PC.
31		DATA 3-pin Terminal Block Connector	Connect to a serial data source or acceptor.
32	RELAY 3-pin Terminal Block Connector	Connections to the internal relay: normally open (NO), normally closed (NC) and common (C). Connect to devices to be controlled by relay (for example, a motorized projection screen).	
33	PoC (Power Over Cable) Switch	Set to on.	
34	12V DC Connector	Connect to the supplied power adapter (if required). Follow powering instructions in <a href="#">Step 5: Connect power</a> .  Connect power to either this 12V power connector or to the KIT-401T terminal block (item 7). Do not connect to both!	

## Step 3: Install KIT-401T and Mount KIT-400R

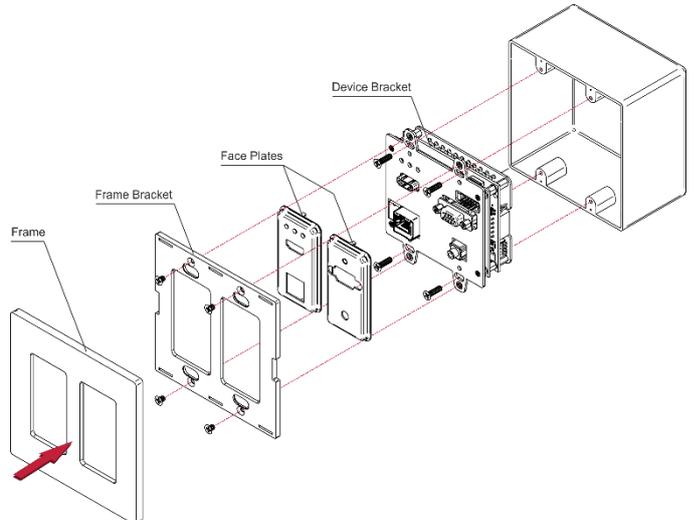
### Install KIT-401T

Insert the device into the in-wall box. Note that first you need to connect the HDBT cable (and power – if powering via the transmitter) and connect the parts as shown in the illustrations below:

#### EU/UK Version



#### US-D Version



DECORA® design frames are included in US-D models.

DECORA® is a registered trademark of Leviton Manufacturing Co., Inc.

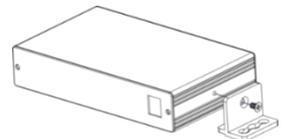
We recommend that you use any of the following standard 2 gang in-wall junction boxes (or their equivalent):

- **US-D:** 2 gang US electrical junction boxes.
- **EU:** 2 gang in-wall junction box, with a cut-hole diameter of 2x68mm and depth that can fit in both the device and the connected cables (DIN 49073).
- **UK:** 2 gang in-wall junction box (BS 4662), 135x75mm (W, H) and depth that can fit in both the device and the connected cables.
- **EU/UK:** 2 gang on-wall junction box (use the recommended Kramer on-wall box available at [www.kramerav.com/product/KIT-401T](http://www.kramerav.com/product/KIT-401T)).

### Mount KIT-400R

Install KIT-400R using one of the following methods:

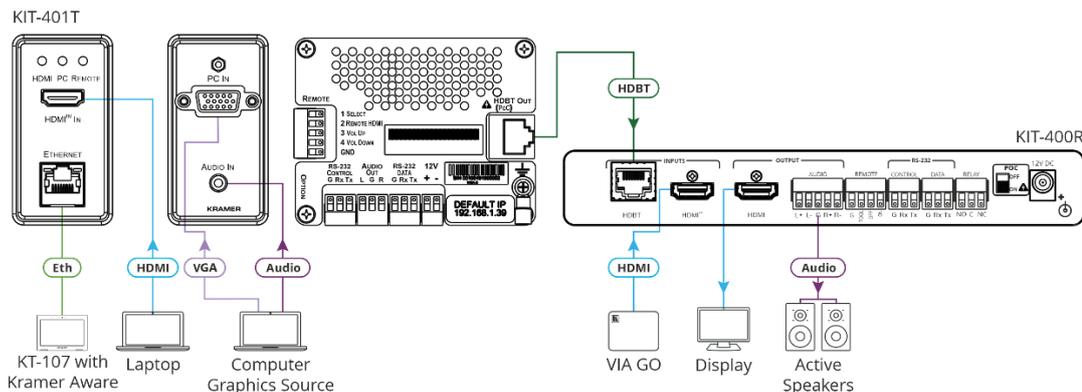
- Attach the rubber feet and place the unit on a flat surface.
- Fasten 2 brackets (included) on each side of the unit and attach them to a flat surface (see [www.kramerav.com/downloads/KIT-401](http://www.kramerav.com/downloads/KIT-401)).
- Mount the unit in a rack using the recommended rack adapter (see [www.kramerav.com/product/KIT-401](http://www.kramerav.com/product/KIT-401)).



- 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.

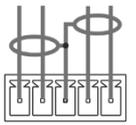
## Step 4: Connect inputs and outputs

Always switch OFF the power before connecting to your KIT-401.

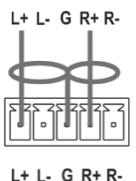


#### Connect the audio output:

To a balanced stereo audio acceptor:



To an unbalanced stereo audio acceptor:



To achieve specified extension distances, use the recommended Kramer cables available at [www.kramerav.com/product/KIT-401](http://www.kramerav.com/product/KIT-401).

Using third-party cables may cause damage!

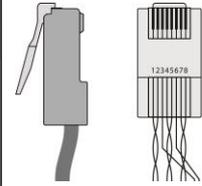
## Wiring the RJ-45 connectors

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	PIN	Wire Color
1	Orange / White	5	Blue / White
2	Orange	6	Green
3	Green / White	7	Brown / White
4	Blue	8	Brown



## Setting the KIT-401T OPTION DIP-switches

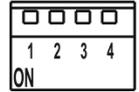
A switch that is down is on; a switch that is up is off. By default, all the switches are up (off). After changing a DIP-switch you must power cycle the device to implement the change.

DIP-switch 1 set to off (up).

DIP-switch 2 set to off (up).

## Audio Switching Selection

DIP-switch 3	DIP-switch 4	Audio Input Selection
Off (up)	Off (up)	Automatic – Priority selection: Embedded HDMI → analog Audio In (high to low priority).
Off (up)	On (down)	Automatic – Priority selection: Analog Audio In → embedded HDMI (high to low priority).
On (down)	Off (up)	Embedded HDMI.
On (down)	On (down)	Analog Audio In.



## Step 5: Connect power

**KIT-401** uses a PoC (Power over Cable) system, meaning that the system is powered by connecting the 12V adapter to either **KIT-401T** or to **KIT-400R**. Do not connect power to both devices.



Safety Instructions (See [www.kramerav.com](http://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-401

Operate **KIT-401** via:

- 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.

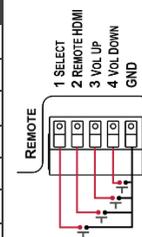
RS-232 Control / Protocol 3000					
Baud Rate:	115,200	Parity:	None	Stop Bits:	1
Data Bits:	8	Command Format:	ASCII		
Example: (Set the Audio out volume level to 75): #AUD-LVL 1, 1, 75					
Default Ethernet Parameters					
IP Address:	192.168.1.39	UDP Port #:	50000		
Subnet mask:	255.255.0.0	TCP Port #:	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
<b>KIT-401T</b>	
SELECT	Short press – Select the input. Long press – Adjust the VGA phase shift.
REMOTE	Select the HDMI input on <b>KIT-400R</b> .
VOL UP	Press to increase the analog audio output level.
VOL DN	Press to decrease the analog audio output level.
<b>KIT-400R</b>	
TOGL	One button toggles between display on and display off (instead of using two separate buttons for on and off). Alternatively, using the <b>KIT-400R</b> OSD, configure toggling display on and off according to whether a switch is open or closed, for example, using an occupancy sensor.
OFF	Turn off the display.
ON	Turn on the display.

## KIT-401T



## KIT-400R

