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**HDMI 3x1 Switcher Kit
AC565A**

Installation Guide



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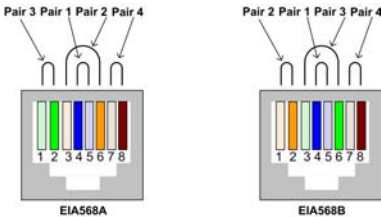
1.1. Description

The HDMI 3x1 Switcher Kit allows up to three (3) different HDMI sources to be connected to one (1) HDMI display via two (2) Cat5e unshielded twisted pair cables in a point-to-point configuration. The kit includes one transmitter and one receiver and supports up to 250 ft (75m) at 1080i via Cat5e cable.

1.2. Features

- Up to 250 ft (75m) @ 1080i via two (2) Cat5e cables
- Push button switch control
- Supports HDMI and DVI
- 2 year limited warranty

2. Technical Specifications

Environment	HDMI 1.2 and DVI-D
Devices	DVD, plasma, projectors, monitors, TV, PC, laptops, servers supporting HDMI or DVI-D
Transmission	Transparent to the user.
Bandwidth	165MHz
Signals	HDMI or DVI-D protocol
Connectors	Transmitter: Three (3) HDMI receptacles. Two (2) RJ45 Receiver: One (1) HDMI receptacle. Two (2) RJ45
Max. Distance	480i/p: Cat5e: 280 ft (85 m) Cat6: 280 ft (85 m) 720p, 1080i: Cat5e: 250 ft (75 m) Cat6: 280 ft (85 m) 1080p: Cat5e: 100 ft (30 m) Cat6: 130 ft (40 m) When installed in an electrically noisy environment, STP cable must be used. Also, cross connections reduce the effective distance depending on the grade of twisted cable used.
RJ45 Pin Configuration Reverse Polarity Sensitive Use EIA/TIA 568 A or B, straight-through wiring	<p>RJ45 A (Video) Pin 1 (R) Pin 2 (T) Pin 3 (R) Pin 6 (T) Pin 4 (R) Pin 5 (T) Pin 7 (R) Pin 8 (T)</p> <p>RJ45 B (DDC) Pin 1 (R) Pin 2 (T) Pin 3 (R) Pin 6 (T) Pin 4 (R) Pin 5 (T) Pin 7 (R) Pin 8 (T)</p> 
Cable	Two (2) Category 5e or better twisted pair cables required.
Switch	Push button port selector on transmitter and receiver
LED indicators	Power, Sync, Input Select
Power Supply	One (1) 110-220V/12VDC power supply with detachable North American or Continental Europe power cord
Power Cons.	3.6 W
Temperature	Operating: 0° to 55° C. Storage:-20° to 85° C. Humidity: up to 95% non-condensing.
Enclosure	ABS fire retardant plastic
Dimensions	4.5" x 3.8" x 1.25" (11.4 cm x 9.7 cm x 3.2cm)
Weight	23.5 oz (668 gms)
Compliance	Regulatory: FCC Class A. CE, RoHS Flammability: 94V0
Warranty	2 years
Order Information	AC565A HDMI 3x1 Switcher Kit, 110V

3.1. Parts List

The HDMI 3x1 Switcher Kit comes with the following parts. Please verify that all pieces are present before proceeding.

- Transmitter
- Receiver
- One (1) External Power Supply (12 VDC)
- One (1) AC Power Cord
- Installation Guide

HDMI jumper cables and Category 5 cable are not included.

3.2. Product Overview

The external connections and diagnostic indicators of the HDMI 3x1 Switch are detailed in the following diagrams. Please familiarize yourself with them before installing the components.

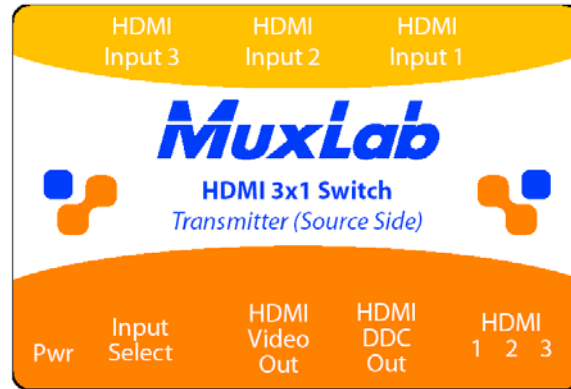


Figure 1: Transmitter



Figure 2: Receiver

3.3. Pre-Installation Checklist

There are two components: the transmitter and the receiver.

1. The transmitter is connected to the HDMI video sources which may be a satellite box, cable box, DVD player or game box via HDMI jumper cables (not included).
2. The transmitter is connected to the receiver by two (2) Category 5e (or higher) UTP cables (not included).
3. The HDMI receiver is connected to the display equipment, usually a projector or screen, by an HDMI jumper cable (not included).

3.4. Installation Procedure

Verify that the distance between the HDMI 3x1 Transmitter and Receiver is within Black Box specifications (see Technical Specifications). In order to install the transmitter, please follow the steps below:

1. Connect the HDMI transmitter to the HDMI video sources with an HDMI jumper cable.
2. Connect two (2) Category 5e (or higher) UTP cables to the transmitter.

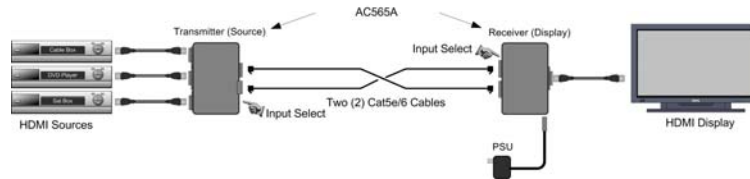
Note: Verify that the cables are connected straight-through (i.e. Video to Video, DDC to DDC) and not inverted.

To install the HDMI receiver, please follow the steps below:

3. Connect the HDMI Receiver to the display equipment with an HDMI jumper cable (not included).
4. Connect two (2) Cat5e cables to the Video and DDC connectors of the HDMI Receiver.
5. Connect the 12 VDC power supply to the receiver and then plug the power supply into an AC power outlet. If power is present, then the green power LED will be ON.

Note: Power on the HDMI 3x1 Switcher Kit only after all connections are made.

6. The following diagram shows the final configuration.



7. In order to select the HDMI source, press the Input Select button on the Transmitter or Receiver. The LED corresponding to the selected source will light up.

4. Troubleshooting

The following table describes some of the problem symptoms, the probable causes and possible solutions. If the information below does not solve the problem, the technical support contact information can be found at the end of this section.

Picture/ Sound	Power LED		Sync LED	Probable Cause	Possible Solution
	Source	Display			
No Image	OFF	OFF	OFF	No power	Check power connections
No Image	OFF	ON	OFF	Wiring	Check continuity Check correct wiring Verify that Video and DDC Cat5 cables are not inverted.
No Image	ON	ON	OFF	Wiring	Check the Data cable for continuity and wiring error.
No Image	ON	ON	ON	Synchronization	Power off the source and the display. Cycle power of the HDMI Extender and power on the devices.
Flickering Image	ON	ON	ON	Synchronization	Check cable length
Choppy Sound	ON	ON	ON	Synchronization	Check cable length
Green or pink hue	ON	ON	ON	DDC cable	Cycle power of the HDMI Extender. Check DDC cable and replace.
Image Flicker when Powering up equipment nearby	ON	ON	ON	Interference	Use STP cables.

When contacting your nearest Black Box dealer or Black Box Technical Support please have the following information ready:

- Unit model number.
- Cabling layout. Include models of HDMI equipment used, cable length and type.
- Description of problem.
- List of tests performed.



Order toll-free in the U.S.: Call 877-877-BBOX (outside U.S. call
724-746-5500)

FREE technical support 24 hours a day, 7 days a week:

Call 724-746-5500 or fax 724-746-0746

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