

MONOPRICE

Blackbird™ 4K 2x5 HDBaseT™ Splitter Kit

P/N 24177

User's Manual

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SAFETY WARNINGS AND GUIDELINES

Please read this entire manual before using this device, paying extra attention to these safety warnings and guidelines. Please keep this manual in a safe place for future reference.

- This device is intended for indoor use only.
- Do not expose this device to water or moisture of any kind. Do not place drinks or other containers with moisture on or near the device. If moisture does get in or on the device, immediately unplug it from the power outlet and allow it to fully dry before reapplying power.
- Do not touch the device, the power cord, or any other connected cables with wet hands.
- Do not expose this device to excessively high temperatures. Do not place it in, on, or near heat sources, such as a fireplace, stove, radiator, etc. Do not leave it in direct sunlight.
- This device ventilates excessive heat through the slots and openings in the case. Do not block or cover these openings. Ensure that the device is in an open area where it can get sufficient airflow to keep from overheating.
- Do not place or install this device in an area where it can be exposed to excessive amounts of dust, humidity, oil, smoke, or combustible vapors.
- Prior to operation, check the unit and power cord for physical damage. Do not use if physical damage has occurred.
- Before plugging the unit into a power outlet, ensure that the outlet provides the same type and level of power required by the device.
- Unplug this device from the power source when not in use.
- Take care to prevent damage to the power cord. Do not allow it to become crimped, pinched, walked on, or become tangled with other cords. Ensure that the power cord does not present a tripping hazard.
- Never unplug the unit by pulling on the power cord. Always grasp the connector head or adapter body.

- Ensure that power is turned off and disconnected before making any electrical connections.
- Remove the batteries from the controller if it will go unused for a lengthy period of time.
- Clean using a soft, dry cloth only. Do not use chemical cleaners, solvents, or detergents. For stubborn deposits, moisten the cloth with warm water.
- This device has no user serviceable parts. Do not attempt to open, service, or modify this device.

INTRODUCTION

Thank you for purchasing this Blackbird™ 2x5 HDBaseT™ Splitter Kit! This kit is designed to provide HDMI® video switching, video distribution and extension, system control and audio de-embedding in a convenient package. One of two HDMI sources can be selected and distributed to four HDBaseT™ outputs and one local HDMI pass-through output. It can transmit 4K video signals to distances up to 131 feet (40 meters) and 1080p signals to distances up to 229 feet (70 meters) over a single Cat6 Ethernet cable. It includes a digital coaxial S/PDIF and stereo analog audio outputs and a wallplate control keypad for remote switching.

FEATURES

- Distributes one of two HDMI® inputs to four HDBase™ outputs and one pass-through HDMI output
- Includes digital coaxial S/PDIF and stereo analog audio outputs
- Supports video resolutions up to 4K@60Hz 4:2:0
- Fully compliant with the HDMI 1.4 and HDCP 2.2 specifications
- Can transmit 4K video to distances up to 131 feet (40 meters) and 1080p video to distances up to 229 feet (70 meters) over a single Cat6 Ethernet cable
- Supports the Power over Cable (PoC) feature, which allows the HDBaseT receivers and wallplate control keypad to receive their power from the splitter via the Ethernet cables
- Includes an external wall plate for remote control
- Supports IR pass-through for control of remote displays from the source location
- Supports advanced EDID management

CUSTOMER SERVICE

The Monoprice Customer Service department is dedicated to ensuring that your ordering, purchasing, and delivery experience is second to none. If you have any problem with your order, please give us an opportunity to make it right. You can contact a Monoprice Customer Service representative through the Live Chat link on our website www.monoprice.com during normal business hours (Mon-Fri: 5am-7pm PT, Sat-Sun: 9am-6pm PT) or via email at support@monoprice.com

PACKAGE CONTENTS

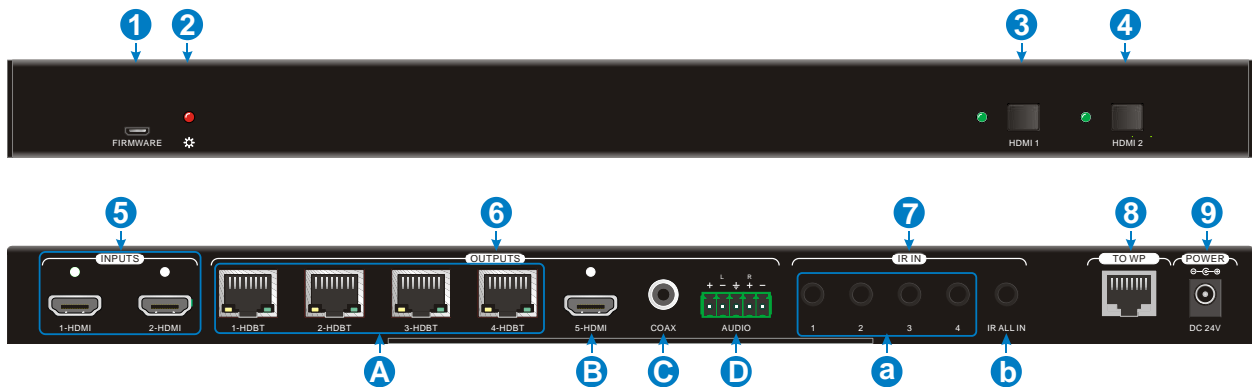
Please take an inventory of the package contents to ensure you have all the items listed below. If anything is missing or damaged, please contact Monoprice Customer Service for a replacement.

- 1x 4K 2x5 HDBaseT™ Splitter
- 1x Wallplate Control Keypad
- 4x HDBaseT Receivers
- 1x AC Power Adapter (24 VDC, 2.5A)
- 2x Splitter Mounting Ears
- 4x Splitter Mounting Ear Screws

- 8x Receiver Mounting Ears
- 8x Receiver Mounting Ear Screws
- 5x IR Receivers
- 4x Plastic Feet for Splitter
- 16x Plastic Feet for Receivers
- 1x Wallplate Connection Cable
- 1x User's Manual

PRODUCT OVERVIEW

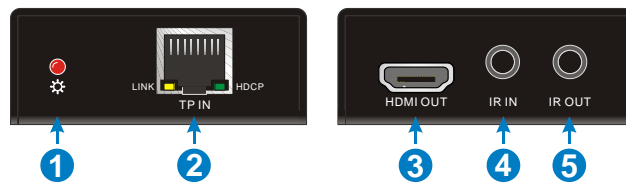
Splitter



1. **FIRMWARE:** USB port for performing firmware updates.
2. **POWER LED:** The LED illuminates red when power is applied.
3. **HDMI 1:** Switch for selecting the HDMI® 1 input. The corresponding LED illuminates when the input is selected.
4. **HDMI 2:** Switch for selecting the HDMI® 2 input. The corresponding LED illuminates when the input is selected.

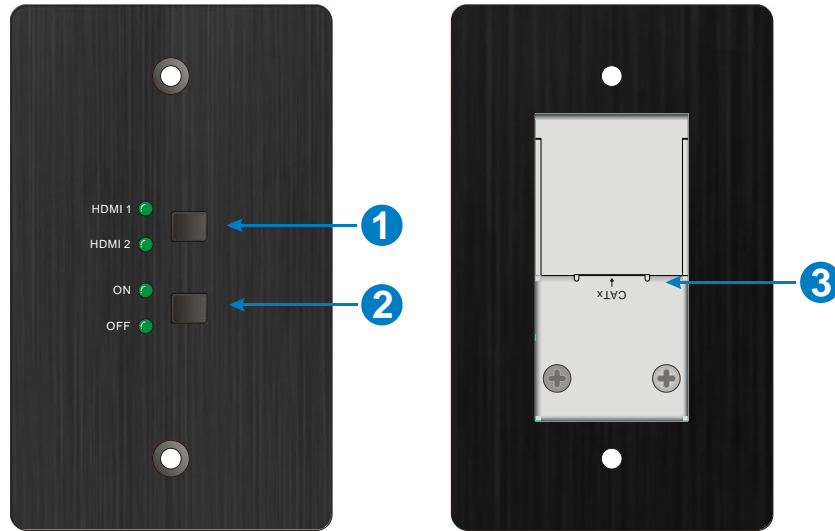
5. **INPUTS:** Two HDMI® inputs for connecting two HDMI source devices.
- 6A: **HDBT OUTPUTS:** Four RJ45 connectors for attaching a Cat6 Ethernet cable to connect the HDBaseT™ receivers.
- 6B. **HDMI OUTPUT:** HDMI pass-through connector for connecting a local display.
- 6C: **COAX OUTPUT:** A digital coaxial S/PDIF RCA connector for connecting an external amplifier or receiver.
- 6D: **AUDIO OUTPUT:** Balanced/unbalanced 5-pin push terminal audio connector for connecting to a mixer (balanced) or external amplifier (unbalanced).
- 7a. **IR IN:** 3.5mm jacks for connecting four of the included IR receivers.
- 7b. **IR ALL IN:** 3.5mm jack for connecting one of the included IR receivers.
8. **TO WP:** RJ45 jack for connecting the included Wallplate Control Keypad using the included Wallplate Connection Cable.
9. **POWER:** DC barrel connector for connecting the included AC power adapter.

Receivers



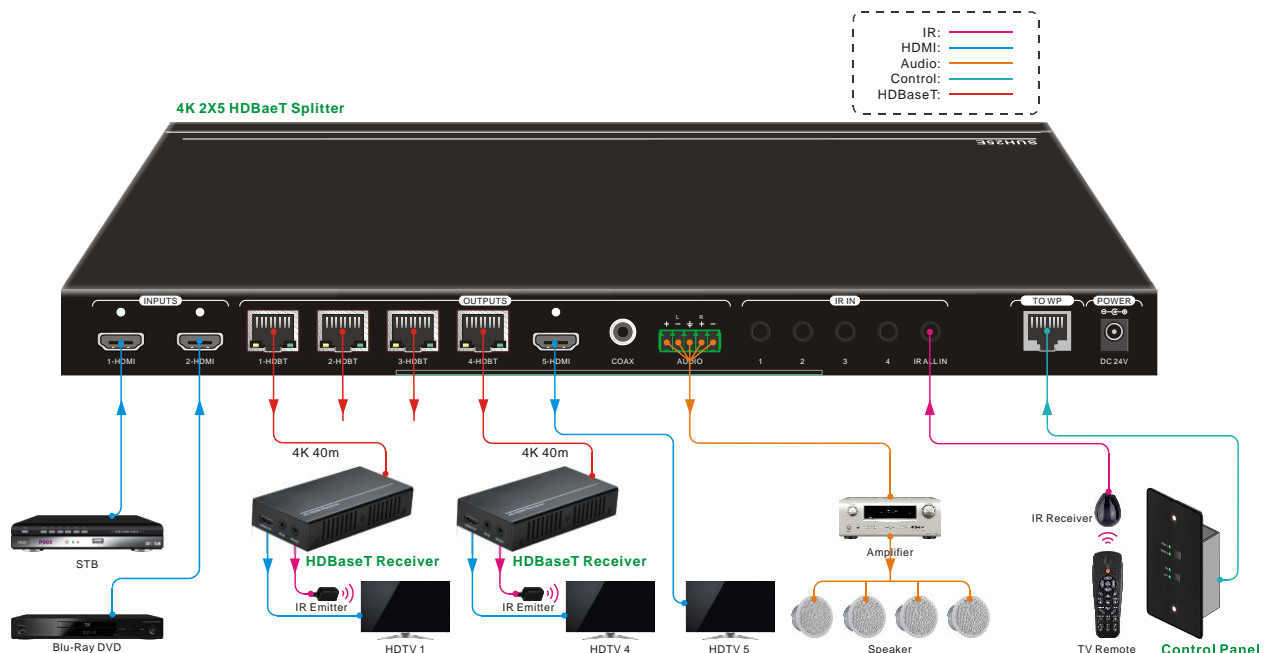
1. **POWER LED:** The LED illuminates red when the receiver is receiving power from the splitter via the Cat6 Ethernet cable.
2. **TP IN:** RJ45 connector for attaching the Cat6 Ethernet cable from the splitter.
3. **HDMI OUT:** HDMI® connector for attaching an HDMI display.
4. **IR IN:** 3.5mm jack for connecting one of the included IR receivers.
5. **IR OUT:** 3.5mm jack for connecting an IR transmitter (not included).

Wallplate



1. **SOURCE SELECTOR:** Press the button to swap between the HDMI® 1 and the HDMI 2 inputs. The corresponding LED will illuminate to indicate the selected source.
2. **POWER BUTTON:** Press the button to turn the splitter and all connected receivers on or off. The corresponding LED will illuminate to indicate the power status.
3. **CATx:** RJ45 jack connecting the Cat6 Ethernet cable from the splitter.

SAMPLE CONNECTION DIAGRAM



INSTALLATION

Perform the following steps to install the splitter kit.

1. Ensure that all equipment to be connected is powered off and unplugged from its power source.
2. Place or install the splitter in its intended location. Use the included mounting ears and/or plastic feet, as desired.
3. Place or install the HDBase™ receivers in their intended locations near the remote displays. Use the included mounting ears and/or plastic feet, as desired.
4. Using a High Speed HDMI® Cable (not included), plug one end into the HDMI input on one of your remote displays, then plug the other end into the **HDMI OUT** connector on the nearby receiver. Repeat for the other three displays and receivers.
5. (Optional) If you want to control the display from the source location, plug an IR Transmitter (not included) into the **IR OUT** jack on the receiver, then position the emitter where it can transmit IR signals to the display's IR "eye". Repeat as desired for the other three displays and receivers.
6. Using a Cat6 Ethernet cable of the appropriate length (not included), plug one end into the **TP IN** port on the receiver, then plug the other end into one of the **HDBT OUTPUTS** on the splitter. Note that if this cable will be run inside or through the walls, it must be rated for in-wall use. Repeat for the other three receivers.
7. Using a High Speed HDMI Cable (not included), plug one end into the HDMI input on your local display, then plug the other end into the **HDMI OUTPUT** on the splitter.
8. Using a High Speed HDMI Cable (not included), plug one end into one of the **HDMI INPUTS** on the splitter, then plug the other end into the HDMI output on your HDMI source device (e.g., Blu-ray Disc™ player, console, etc.). Repeat for a second HDMI source device.
9. (Optional) Using a digital coaxial S/PDIF cable (not included), plug one end into the digital coaxial S/PDIF input on your amplifier or receiver, then plug the other end into the **COAX OUTPUT** on the splitter.

10. (Optional) Build a stereo analog cable using a 5-pin push terminal (not included) and balanced or unbalanced connectors of the appropriate type. Once the cable is built and tested, plug one end into your external audio device (mixer or amplifier) and the other end into the **AUDIO OUTPUT** connector on the splitter.
11. (Optional) If you want to control the remote displays from the source location, plug four of the included IR Receivers into the four numbered **IR IN** jacks, then position the receiver's "eye" where it can receive IR signals from the remote control(s). Alternatively, plug a single IR Receiver into the **IR ALL IN** jack, then position the receiver's "eye" where it can receive IR signals from the remote control(s).
12. (Optional) Using the included Wallplate Connection Cable, plug one end into the **CATx** jack on the Wallplate Control Keypad, then plug the other end into the **TO WP** jack on the splitter. If this cable will be run inside or through the walls, it must be rated for in-wall use.
13. (Optional) If using the Wallplate Control Keypad, install the Wallplate in the desired location.
14. Plug the DC barrel connector on the included AC power adapter into the **POWER** jack on the splitter, then plug the adapter into a nearby AC power outlet.
15. Plug in and power on all connected equipment, then start video playback on the two source devices. Verify that the video can be seen on each of the remote displays, as well as the local display. If using the IR extenders, verify that you can control the remote displays from the source location. If using the Wallplate Control Keypad, verify that you can switch between the two inputs and that the splitter and all connected displays can be turned on and off.

Congratulations, you've successfully installed your new 2x7 splitter!

EDID MANAGEMENT

The splitter scan the active outputs and will send the EDID capabilities of the first detected display to the two inputs. If all your displays have the same number of audio channels and the same maximum resolution, all is well. However, if you have displays with differing capabilities, you should connect the display with the lowest maximum resolution and the least number of audio channels to the **1-HDBT** output. This ensures that the audio and video output by the source devices can be viewed and heard on all connected displays.

SPECIFICATIONS

2x5 Splitter	
Video Inputs	2x HDMI®
Video Outputs	4x HDBaseT™, 1x HDMI
Maximum Resolution	4K@60Hz 4:2:0
Bandwidth	10.2 Gbps
HDMI Version	1.4
HDCP Version	2.2
Input Power	24 VDC, 2.5A
AC Adapter Input Power	100 ~ 240 VAC, 50/60 Hz
Maximum Power Consumption	35 watts
Operating Temperature	+14 ~ +131°F (-10 ~ +55°C)
Operating Humidity	10 ~ 90% RH, non-condensing
Dimensions	14.2" x 5.9" x 1.1" (360 x 150 x 28 mm)
Weight	16.6 oz. (470 g)

Receivers	
Maximum Resolution	4K@60Hz
Bandwidth	10.2 Gbps
HDMI® Version	1.4
HDCP Version	1.4
Transmission Mode	HDBaseT™
Maximum Transmission Distance	1080p@60Hz: up to 229 feet (70 meters) 4K@60Hz: up to 131 feet (40 meters)
Input Power	Power over Cable (PoC)
Operating Temperature	+32 ~ +122°F (0 ~ +50°C)
Operating Humidity	10 ~ 90% RH, non-condensing
Dimensions (each)	4.7" x 2.4" x 0.9" (120 x 60 x 24 mm)
Weight (each)	9.9 oz. (280 g)

Wallplate	
Input Power	Power over Cable (PoC)
Operating Temperature	+32 ~ +122°F (0 ~ +50°C)
Operating Humidity	10 ~ 90% RH, non-condensing
Dimensions	4.5" x 2.8" x 1.5" (114 x 70 x 38 mm)
Weight	4.1 oz. (116 g)

REGULATORY COMPLIANCE

Notice for FCC



Modifying the equipment without Monoprice's authorization may result in the equipment no longer complying with FCC requirements for Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notice for Industry Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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