AVOCENT® LONGVIEW™ 3000 SERIES
HIGH PERFORMANCE KVM EXTENDER SYSTEMS
## Quick Installation Guide

VERTIV™

LongView™ Extender Single-user Configuration
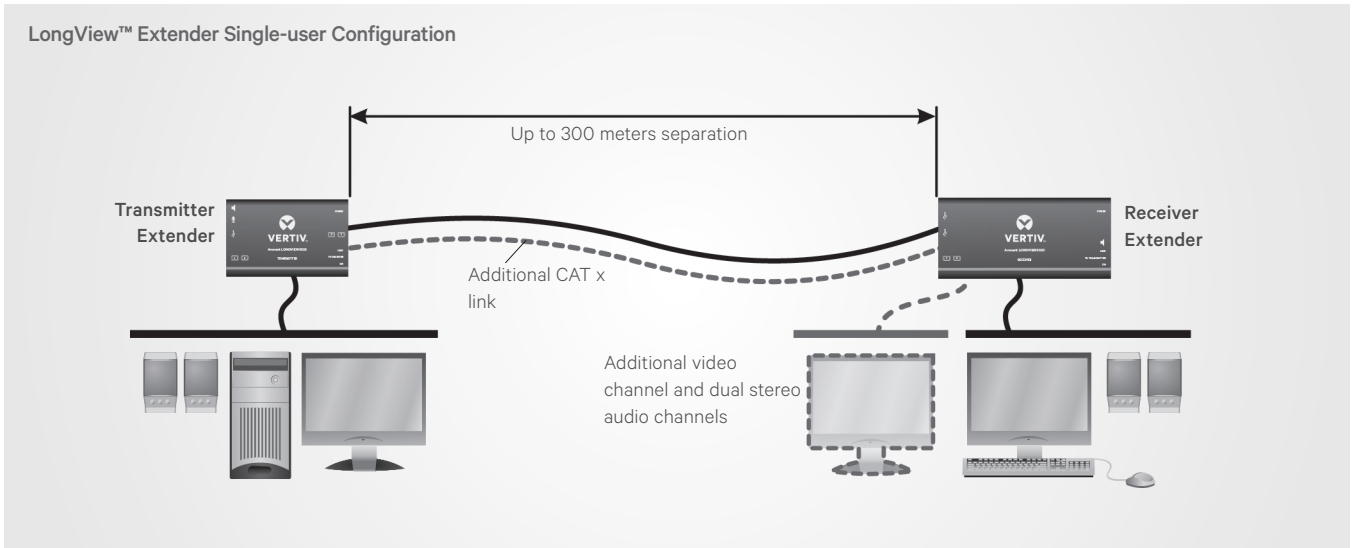
The LongView™ high performance KVM extender system provides the fastest way to extend high-quality video, audio and USB data across your network. Transmitter and receiver extenders can be configured in a single or dual-user configuration to best meet the needs of your system. Configuration options are illustrated on the right, and general system information is provided in the following section. Proceed to the next page for installation instructions.

Supported Hardware

LongView™ 3010 and 3020 extenders support most standard speakers/ headsets, microphones and USB keyboards and mice. While both extender versions provide dual stereo audio, the LongView™ 3020 extenders also provide an additional video channel. Each receiver extender provides four USB outlets that can individually support USB 2.0 peripherals at speeds of up to 12 Mbps. The USB connections are seamless to ensure that all four full-speed USB 2.0 devices can be used simultaneously with full support for a disconnect/re-connect at any time without causing any errors in the system.

LongView™ Extender Dual-user Configuration
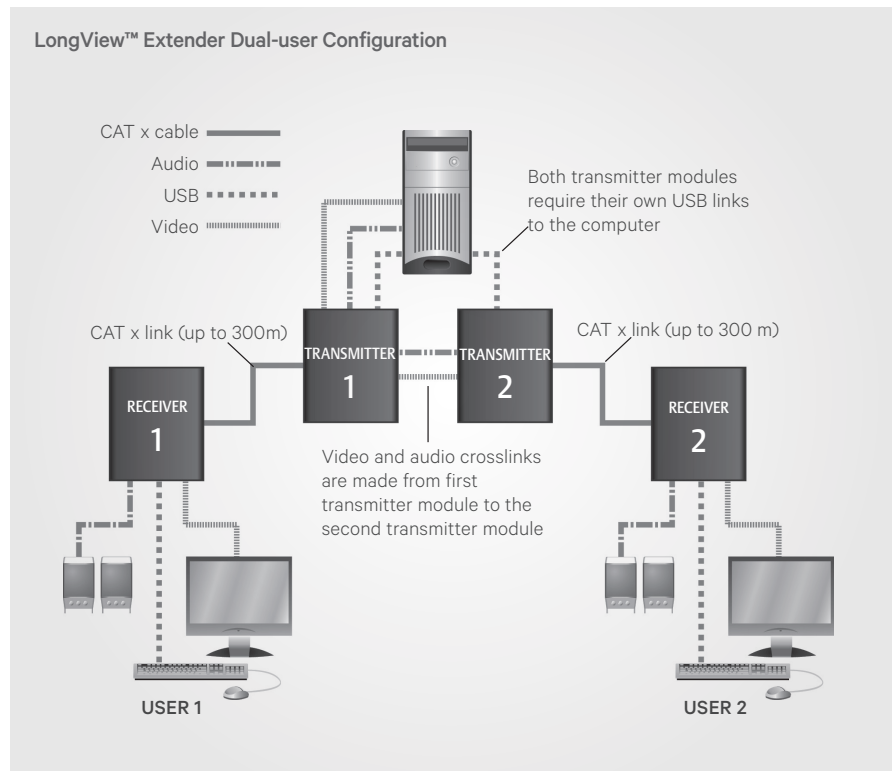
Video and Audio Features

The LongView extender system provides CD quality sound and high video resolutions of up to 1920 x 1200. The system supports the Display Data Channel (DDC) scheme, allowing video display capabilities to be optimized by a computer video adaptor. All receiver extenders also provide Video Compensation Mode for configuration of cable types and lengths, video gains and color skew. Three equalization bands within the receiver extenders ensure that a sharp video image is received every time.

VERTIV.

Cable Extension Rules

Use the following table to determine the appropriate cable type to support the distance of your configuration.

Maximum Cable Length	
CAT5 / CAT5e	250 m
CAT6 / CAT7	300 m
CAT7a Patch	200 m

Installation

Instructions apply for both modules unless referenced specifically.

NOTE: Prior to the following steps, ensure your computer is turned off.

1. **Connecting transmitter extender video**

   For the LongView™ 3010 extender, connect a video cable from the computer to the video port on the left end of the extender.

   For the LongView™ 3020 extender, connect the video cable from the primary video port on the computer to the bottom (primary) video port on the left end of the extender. Then, connect the cable from the secondary video port on the computer to the top (secondary) video port on the left end of the extender.

2. **Connecting other transmitter extender peripherals**

   The LongView 3010 transmitter extender is designed to be powered on the right end of the extender via a USB connection from the computer (see step 5).

   If this is not possible, the USB port on the left end of the extender can be used for a USB device.
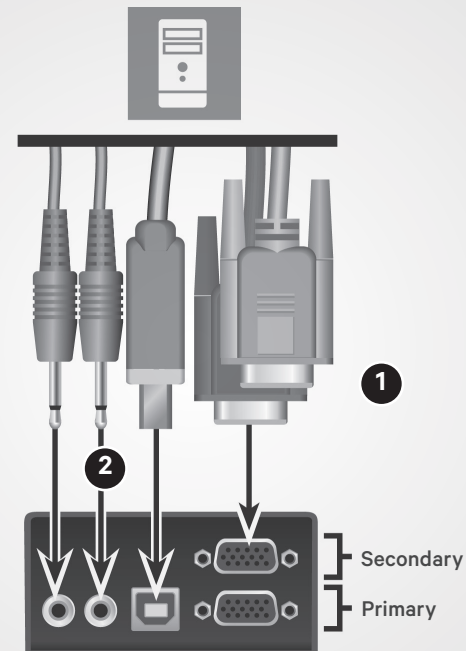
   To connect a USB device to the left end of a LongView 3010 or 3020 extender, use a cable no longer than three meters and plug the USB connector into the designated transmitter port. Connect the other end to a USB computer port.

LongView™ Extender Left End Configuration (Transmitter)
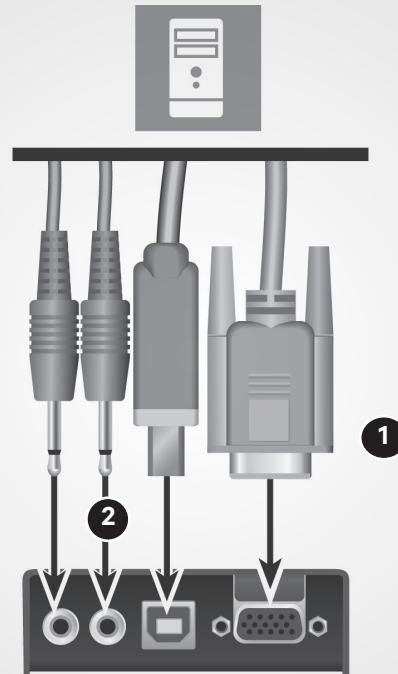
LongView™ 3010 Extender

LongView™ Extender Left End Configuration (Transmitter)

LongView™ 3020 Extender

NOTE: Although the LongView™ extender system may be used with other USB hubs in the system, due to power constraints, do not connect the transmitter extender to the downstream port of a bus-powered USB hub. Also, LongView™ 3020 transmitter extenders must always be powered via the supplied power adaptor.

While audio is usually connected to the receiver extender (see step 9), if you wish to use the optional speaker connections on the transmitter extender, attach the cables to the appropriately labeled ports on the left end.

3. Connecting the transmitter extender to the receiver extender

On the right end of your extender model, insert one end of a CAT cable into the TO RECEIVER port on the transmitter extender and the other end into the TO TRANSMITTER port on the receiver extender.

If you are using the LongView 3020 extenders, the initial connection is made between the bottom ports on the transmitter and receiver extenders. If you choose to make a secondary connection on the LongView 3020 extender, that connection is between the top ports.

4. (Optional) Connecting an additional video monitor to the transmitter extender in a single-user configuration

NOTE: If you plan to use a dual-user configuration, skip this step.

If you wish to add a transmitter monitor directly to the transmitter extender, connect the video cable between monitor and the OUT video port on the right side of the transmitter extender.

For LongView 3020 extenders, the initial connection should be made from the bottom (primary) extender port and an additional connection should

Transmitter LongView™ 3020 Extender Configuration Shown

Optional on the LongView™ 3010

Secondary
Primary

Transmitter Extender
Right End

Receiver Extender
Right End
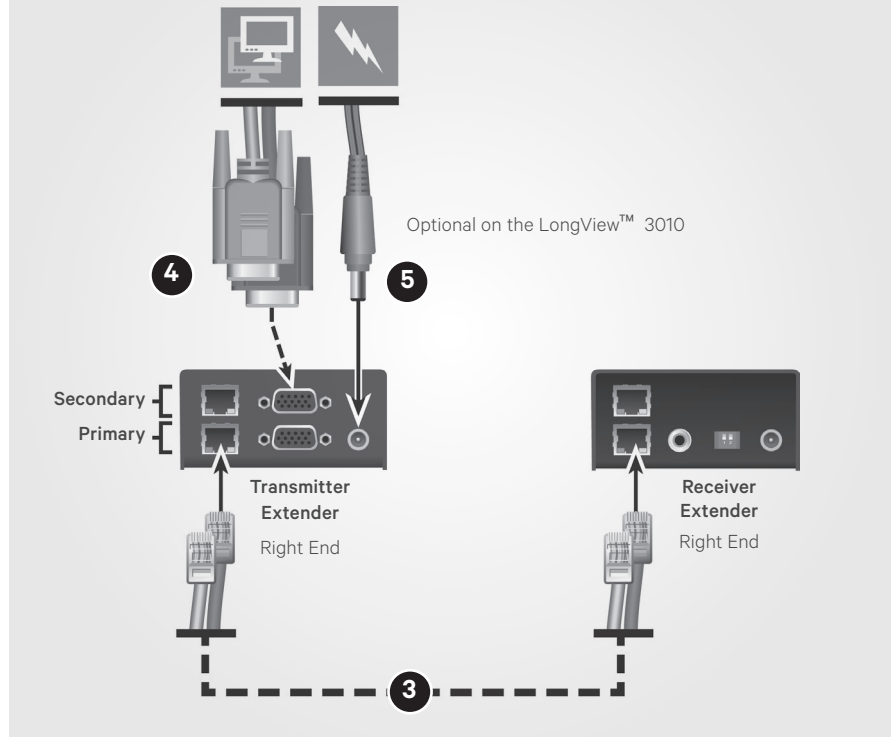
be from the top (secondary) extender port.

5. Connecting transmitter extender power

For the LongView™ 3010 extender, use a cable no longer than three meters and plug the USB connector into the designated transmitter extender port on the right end. Connect the other end to a USB computer port with high power output.

NOTE: If your computer does not have a high power output for the USB port, the LongView 3010 extender must be powered with an optional power adaptor. Contact your sales representative for more information.

If you are using a LongView 3020 extender (or the LongView 3010 optional power adaptor), assemble the power adaptor and the power cord. Insert one end of the power cord into the transmitter extender and plug the other end into an appropriate power source.

### 6. (Optional) Expanding your system to a dual-user configuration

In a dual-user configuration, a single computer is controlled from two transmitter extenders (Transmitter 1 and Transmitter 2). Each extender receives the same audio and video output and also has equal concurrent control over the computer. General installation is already complete for Transmitter 1 if you have completed steps 1-5.

NOTE: Arbitration between extenders is handled via a computer USB system, so this configuration is best suited for users not required to frequently have simultaneous access.

To connect video to Transmitter 2, insert one end of a video cable into the video port on the left side of the Transmitter 2 extender. Plug the other end into the video port on the right side of the Transmitter 1 extender.

NOTE: For LongView™ 3020 extenders, the initial connection should be made between the bottom (primary) extender ports and any additional connections should be from the top (secondary) extender ports.

For both extender models, establish the USB connection to the computer by using a cable no longer than three meters to plug the USB connector into the Transmitter 2 extender USB port and connect the other end to a USB computer port. Connect an audio cable from the OUT audio port on the left side of the Transmitter 1 extender to the IN audio port on the left side of the Transmitter 2 extender. Repeat step 3 to connect the Transmitter 2 to a receiver extender, then repeat step 5 to connect the transmitter extender power.
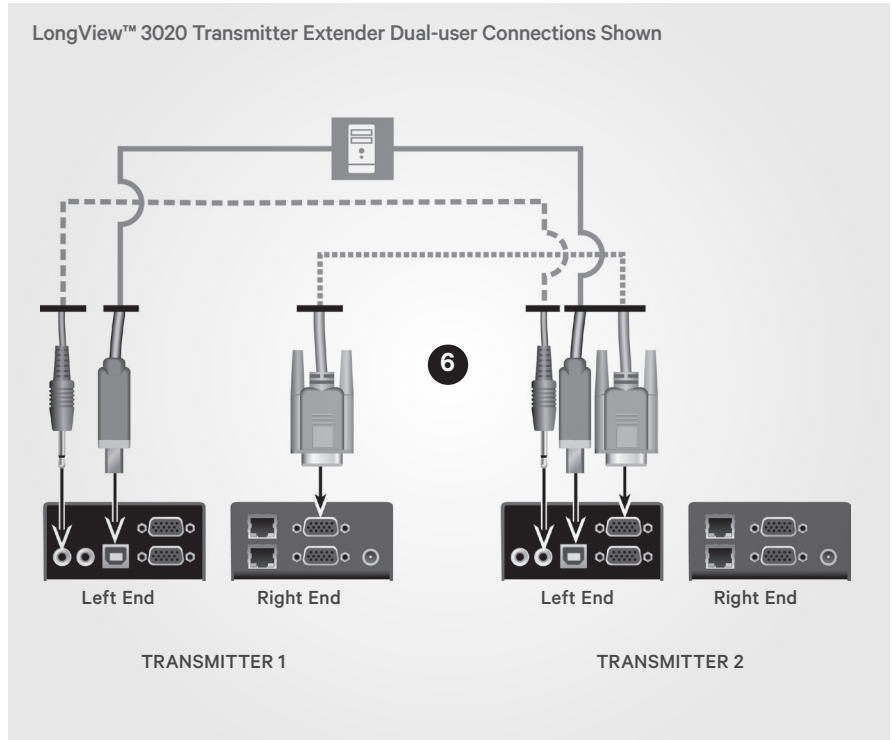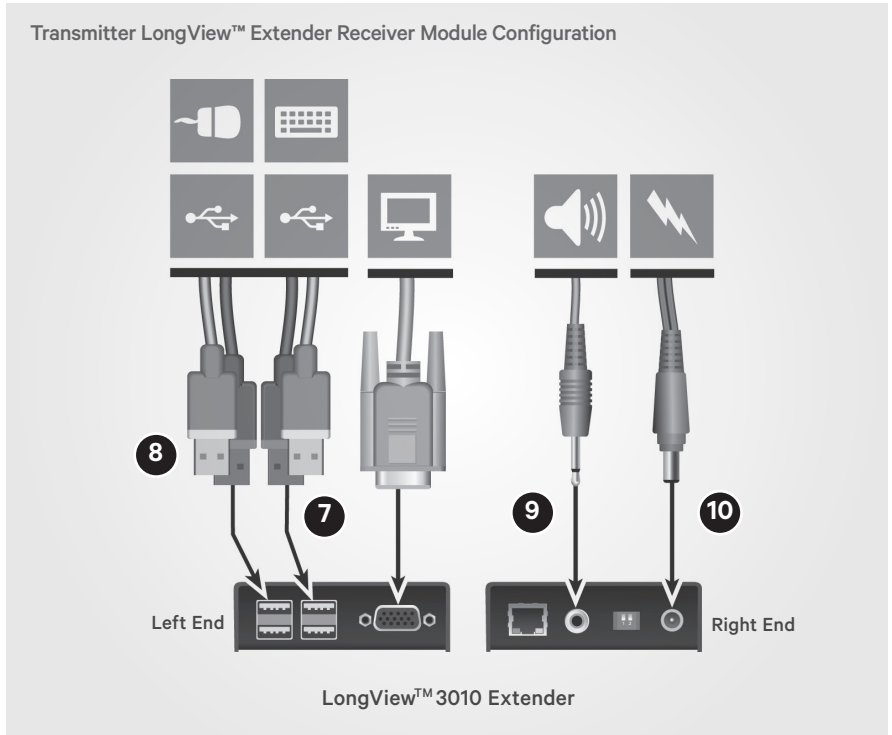
7. **Connecting receiver extender video**

   On the left end of the receiver LongView™ 3010 extender, connect a video cable from your monitor to the video port on the extender.

   On the left end of the receiver LongView 3020 extender, connect the cable from the video port on a monitor to the bottom (primary) video port on the extender. Then, connect the cable from an additional video port on a monitor computer to the top (secondary) video port on the extender.

8. **Connecting the keyboard and mouse**

   For either model, plug one end of the keyboard and mouse connectors into USB ports on the left end of the receiver extender and plug the other ends into USB computer ports. The extender system allows up to four USB devices to be connected at one time.

LongView™ 3020 Transmitter Extender Dual-user Connections Shown

Left End   Right End   Left End   Right End
TRANSMITTER 1   **TRANSMITTER 2**

Transmitter LongView™ Extender Receiver Module Configuration

Left End   Right End
LongView™ 3010 Extender

NOTE: Ensure the total power requirements of the connected USB devices does not exceed 1.7 A, preferably with a maximum allowable current draw of .5 A per device. Each extender contains a self-resetting fuse that will shut the extender down to prevent damage if the total power draw is excessive.

9. **Connecting audio**

   On the right end of the receiver extender for both models, attach the speaker and microphone cables to the appropriately labeled ports.

10. **Connecting receiver extender power**

    For both models, assemble the power adaptor and the power cord. Insert one end of the power cord into the POWER port on the right end of the receiver extender and plug the other end into an appropriate power source.

11. **Powering the extender system (either model)**

    NOTE: If you plan to use a dual-user configuration, ensure steps 7-11 are completed for both receiver extenders.

    Turn on the monitor and the receiver extender. If the transmitter extender is not powered by the computer, turn it on next.

    When you turn on the transmitter extender, observe the green LED lighting pattern on the right side of the extender. Then, turn on the computer.

Verifying transmitter extender video data

It is not possible for video display data to be transmitted from the monitor at a receiver extender across the transmitter extender and then to the computer video adaptor. To compensate for this, the LongView™ extender system uses a DDC scheme to prompt a transmitter extender to read and store the data from the receiver monitor and share it with the computer as needed. This DDC data search takes place at the transmitter extender video out port when the extender is turned on and status is shown via LEDs on the TO RECEIVER port.

NOTE: Dual video channels are handled separately for LongView™ 3020 extenders. If you wish to capture DDC data from both receiver monitors, temporarily connect both monitors to the

Transmitter LongView™ Extender Receiver Module Configuration

Left End

Right End

LongView™ 3020 Extender
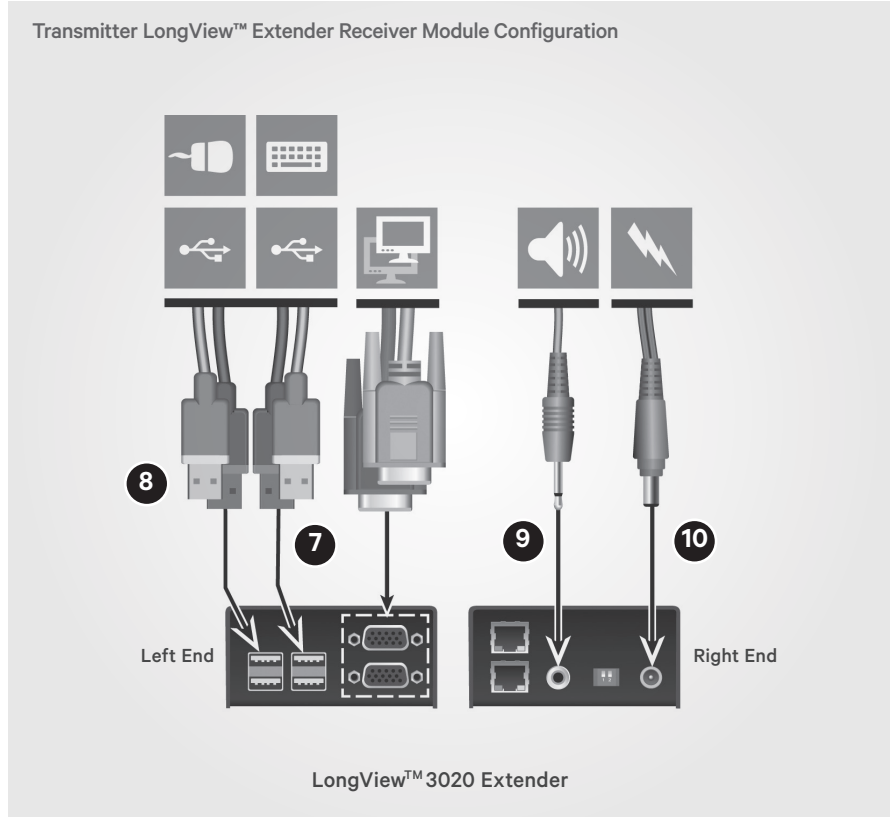
Video Out ports on the transmitter extender.

When you turn on the transmitter extender, a green LED will flash once to indicate that data is being read. If the information matches what is already stored on the transmitter extender, normal extender operation resumes. If the information is different, the green LED will flash rapidly as new information is stored. A single flash after that indicates that normal operation will resume.

LED Flashing Indications

- Two flashes: indicates a checksum error and no information is programmed

- Three flashes: indicates too much data to fit into the extender; the extender holds no more than two pages of DDC data

- Rapid flashing, then four flashes: indicates data was lost during copying and default data was substituted; power cycle the

transmitter extender

- Rapid flashing, then five flashes: indicates a checksum error during copying and default data was substituted; power cycle the transmitter extender

Adjusting Receiver Extender Video Quality

LongView receiver extenders contain a video compensation system that allows you to delay or advance timing of color signals so that they arrive at the video monitor at the correct times and provide an optimal display of video content. Receiver extenders feature a miniature switch to enable Video Compensation Mode. When you enable this mode by moving miniature switch 1 to the ON position, the Num Lock, Caps Lock and Scroll Lock keys on the USB keyboard at the receiver extender will flash in sequence. A green LED located on the TO TRANSMITTER port on the receiver extender will also flash.

NOTE: During Video Compensation Mode, all connected USB devices are temporarily isolated from the computer.

The key flashing sequence indicates Standby level within Video Compensation mode. From this level, set the cable types and lengths, then use the video gain and color skew adjustments to fine-tune the receiver video image.

See the Video Compensation Adjustments table on the following page for more information.

Move miniature switch 1 on the receiver extender to the off position to exit this mode. All USB devices are then reconnected and normal operations resume.

Video Compensation Adjustments Table			
Adjustment	**To Activate**	**Flashing Indicators**	**Description**
Video Compensation Changes to each LongView™ 3020 extender channel separately	Press **H**	Alternate flashing between Num Lock and Scroll Lock, then Caps Lock	Press **1** or **2** to select the primary or secondary video display. Make any compensation changes indicated in this table, then press **H** and **0**. The green LEDs on your receiver extender will flash.
Set Cable Type	Press **C**	Num Lock and Caps Lock	Press the number that corresponds to the category of cable used: • Press **1** for CAT5 • Press **2** for CAT5e • Press **3** for CAT6 • Press **4** for CAT7 • Press **5** for CAT7a. Press **Enter** to save or **Esc** to discard and return to standby.
Set Cable Length	Press **L**	Caps Lock and Scroll Lock	Use the keyboard to enter the cable length in meters. Use the **Up Arrow** or **Down Arrow** keys to increase/decrease the setting. Press **Home** to return to a neutral setting. Press **Enter** to save or **Esc** to discard and return to standby.
Change Video Gain Level	Press the **Left Arrow** or **Right Arrow** key	n/a	The arrow keys enable you to increase or decrease the setting. Press **Home** to return to a neutral setting. Gain adjustments are saved automatically.
Fix color skew	Press **R**, **G** or **B**	Num Lock (Red), Caps Lock (Green), Scroll Lock (Blue)	Use the **Left Arrow** or **Right Arrow** to adjust the delay for chosen color. If the screen goes blank, press the opposite Arrow key or press **Home**. Press **Enter** to save or **Esc** to discard and return to standby.