

IMPORTANT:
Go to www.extron.com for the complete user guide, installation instructions, and specifications before connecting the product to the power source.

This guide provides quick start instructions for an experienced installer to set up and operate the Extron FOX3 SR 201 Fiber Optic scaling receivers. This scaling receiver scales resolutions up to 4K @ 60 Hz, 4:4:4 video, and extends with 2-CH audio, RS-232, and IR over fiber. The FOX3 SR 201 is available in either singlemode (SM) or multimode (MM) transmission mode.

⚠ WARNING: The FOX3 SR 201 outputs continuous invisible light (Class 1 rated), which may be harmful to the eyes; use with caution. Plug the attached dust caps into the optical transceivers when the fiber cable is unplugged.

CLASS 1 LASER PRODUCT, see the *FOX3 SR 201 User Guide*, at www.extron.com.

AVERTISSEMENT : Le FOX3 SR 201 émet une lumière invisible en continu (conforme à la classe 1) qui peut être dangereux pour les yeux, à utiliser avec précaution. Associez les bouchons anti-poussière à l'ensemble émetteur/récepteur optique lorsque le câble fibre optique est débranché.

Produit laser de classe 1, voir le *FOX3 SR 201 User Guide* sur www.extron.com (en anglais).

Installation

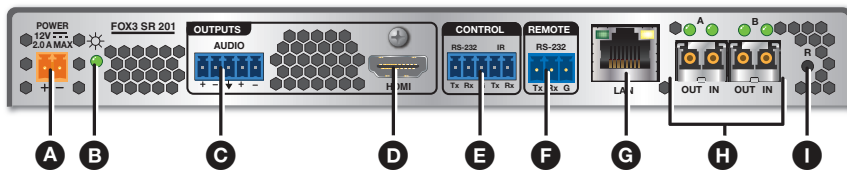


Figure 1. FOX3 SR 201 Rear Panel

- A** Power Inlet
- B** Power LED
- C** Audio output
- D** HDMI output
- E** Control RS-232/IR port
- F** Remote RS-232
- G** LAN Ethernet port
- H** SFP module and LEDs
- I** Reset button

Step 1 – Mounting

Turn off or disconnect all equipment power sources and mount the scaling receiver as required. For mounting details and considerations, see the *FOX3 SR 201 User Guide* at www.extron.com.

Step 2 – Output Connections

- a. Connect an HDMI display to the HDMI output (see figure 1, **D**).
- b. Connect an audio output device to the Audio 5-pole captive screw port (**C**) (see figure 2 to wire the captive screw connector).

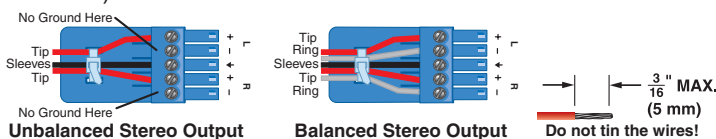


Figure 2. Audio Wiring Diagrams

ATTENTION:

- For unbalanced audio, connect the sleeves to the ground contact. DO NOT connect the sleeves to the negative (-) contacts.
- Pour l'audio asymétrique, connectez les manchons au contact au sol. Ne PAS connecter les manchons aux contacts négatifs (-).

Step 3 – Control Connections

- a. To pass serial, IR data, or control signals, such as for serial control of a projector, connect the master device to the transmitter and the controlled device to the receiver via the CONTROL 5-pole captive screw connector (see **E** and figure 3 for wiring).

NOTE: For returned RS-232 and IR responses (from the scaling receiver to the transmitter) install the receiver-Tx-to-transmitter-Rx fiber cable in [step 4b](#).

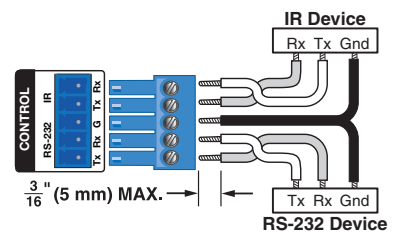


Figure 3. RS-232 and IR Wiring

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- b. For remote control of a unit and loading firmware (LAN or USB only), connect a host device, such as a computer or control system, to one of the following ports (see the *FOX3 SR 201 User Guide*, available at www.extron.com, for details):
 - **Remote RS-232 port** — Connect the 3-pole captive screw connector to this port (F). The protocol for the Remote port is as follows:
 - 9600 baud
 - 1 stop bit
 - no parity
 - no flow control
 - 8 data bits
 - **LAN Ethernet port** — Connect an RJ-45 connector to this port (G).
 - **USB Configuration port** — Connect a USB mini-B connector to this port (see figure 5, B on page 2).

Step 4 – Throughput Connections

NOTE: See figure 4 for fiber cable connections. Connect the transmitter to a receiver in one of three ways:

- One way (transmitter to receiver) only, perform step 4a.
- Two way (transmitter to receiver and return), perform steps 4a and 4b.
- Output B is available to transmit 4K @ 60 Hz uncompressed signal when the FOX3 Uncompressed Video LinkLicense is purchased.

- a. Connect the fiber between the A Out port on the transmitter and the A In port on the receiver (1).

NOTE: Ensure that the transmitter and connected receiver are in the same transmission mode, singlemode (SM) or multimode (MM) and use the correct SM or MM fiber cable to connect the devices.

- b. To return serial data from the receiver (such as responses from a controlled device) or IR data to the transmitter, connect a cable between the A Out port on the receiver and A In port on the transmitter (2).
- c. To transmit an uncompressed 4K @ 60 Hz signal, using the Uncompressed Video LinkLicense, repeat step 4a on the SFP B port on the scaling receiver

SFP Link LEDs —

- **Transmit Optical OUT LED** — Lights solid green when powered and lights off when there is no power on the endpoint.
- **Receive Optical IN LED** — Lights solid green when light is present and lights off when there is no power or light present.

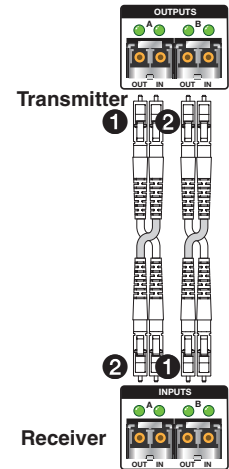


Figure 4.
Fiber Cable Connection

Step 5 – Power Connection

Connect the included external 12 VDC power supply into the 2-pole connector (see figure 1, A on page 1). The power LED lights (B) when the unit is receiving power.

Operation

After the receiver, transmitter, and their connected devices are powered up, the system is fully operational. If any problems are encountered, verify that the cables are routed and connected properly and the display device has a compatible resolution and refresh rate. If problems persist, call the Extron S3 Sales & Technical Support Hotline (see the [contact number](#) on page 6).



Figure 5. FOX3 SR 201 Front Panel

- A Power LED** — Indicates power is applied to the unit.
- B USB Config port** — Connect a USB Mini-B cable to a computer to configure the device and update the firmware via Product Configuration Software (PCS), Simple Instruction Set (SIS) commands, or internal web pages.
- C Input LEDs** —
 - **Signal LED** — Lights when the unit detects an input video signal.
 - **HDCP LED** — Lights when the input signal is HDCP encrypted.

- D Menu and Enter buttons** — Press these buttons to access and navigate the on-screen display menu system.
- E Navigation buttons** — Press these buttons to navigate through the on-screen display menu system or change settings.

Reset

Press the rear panel recessed reset button (see [figure 1](#), **I** on page 1) if the FOX3 scaling receiver firmware is corrupted or the unit gets disconnected during the update process. The different resets allow the device to revert to the factory loaded firmware, reset IP settings, or reset configuration to default (see the Reset Modes table, for details on the reset modes).

| Reset Modes | | | |
|--|--|---|---|
| Mode | Activation | Result | Purpose and Notes |
| Use Factory Firmware | 1 | Hold in the recessed rear panel Reset button while applying power to the unit. | The unit reverts to the factory default firmware for a single power cycle. |
| | NOTE: Do not operate with the default firmware loaded by a mode 1 reset. Use it only to load the most current firmware to the device. | | |
| Reset IP Setting | *4 | Hold in the Reset button about 6 seconds until the Power LED blinks twice. Then, release and press the Reset button momentarily (<1 second) again within 1 second. | Sets the following back to factory default: <ul style="list-style-type: none"> • Port mapping • IP address: 192.168.254.254 • Subnet mask address: 255.255.255.0 • Gateway address: 0.0.0.0 Turns DHCP off. Power LED blinks 4 times during reset. |
| Reset to Factory Default | *5 | Hold in the Reset button until the Power LED blinks three times (once at 3 seconds, again at 6 seconds, again at 9 seconds). Then, release and press the Reset button again within 1 second*. | A complete reset to factory defaults (except the firmware). <ul style="list-style-type: none"> • Does everything mode 4 does. • Clears port configurations. • Resets all IP options. • Clears all user settings. • Clears all files from the unit. • Power LED blinks four times. |
| NOTES: <ul style="list-style-type: none"> • *For modes 4 and 5, nothing happens if the momentary press does not occur within 1 second. • The factory configured passwords for all accounts on this device have been set to the device serial number. In the event of a complete system reset, the passwords convert to the default, which is ext ron. | | | |

Front Panel Lockout Mode (Executive Mode)

The front panel lockout mode limits operation of the device from the front panel. When enabled, use SIS commands or the Product Configuration Software (PCS) to configure the device. To enable or disable the front panel lockout mode through the front panel, press and hold the **Menu** (see [figure 5](#), **D** on page 2) and down arrow (**E**) buttons simultaneously for 5 seconds or until the power LED blinks.

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Configuration and Control

To configure the FOX3 SR, use the front panel controls and the on-screen display (OSD) menu, Simple Instruction Set (SIS) commands, or PCS.

On-screen display menu system

The OSD menu consists of two submenus, Device Info and Setup, that can be accessed using the front panel **Menu** button. View the menu on a display connected to the HDMI output connector (see [figure 1, D](#) on page 2). The Device Info submenu is view only. The following fields can be configured from the Setup submenu:

- **Output Rate** — Select from a list of refresh rates (see [Output Resolution table](#) on page 5). The default setting is 1080p @ 60 Hz.
- **HDMI Format** — Select the output format:
 - Auto (default)
 - DVI RGB 444
 - HDMI RGB 444 Full
 - HDMI RGB 444 Limited
 - HDMI YUV 444 Full
 - HDMI YUV 444 Limited
 - HDMI YUV 422 Full
 - HDMI YUV 422 Limited
- **Test Pattern** — Select an available test pattern to display or turn a test pattern off. The available test pattern selections are Crop, Alternating Pixels, Crosshatch, and Color Bars. The default setting is Off.
- **Factory Reset** — Reset the unit to its factory default values (removing any user-specified values) while retaining all TCP/IP settings.

| Extron | | FOX3 SR 201 | |
|---------------------------------|--|---------------------------------------|-------------------|
| DEVICE INFO | | Output Rate | 1080p @ 60 Hz |
| QUICK SETUP | | HDMI Format | HDMI RGB 444 Full |
| | | Test Pattern | Off |
| | | Factory Reset | Hold ENTER |
| Input 1080p @ 60.05Hz | | Scaled Output 1080p @ 60 Hz | |

To adjust settings:

1. Press the **Menu** button to access the main menu.
2. Press the directional arrows to navigate to a desired submenu.
3. Press the **Enter** button to access submenu items of a selected submenu.
4. Press the directional arrows to navigate a desired submenu item.
5. Press the **Enter** button to select a submenu item for adjustment.
6. As required, press the directional arrows or press the **Enter** button to adjust submenu items.
7. Press the **Menu** button to return to the list of submenus or exit the OSD menu.

Product Configuration Software

The FOX3 scaling receiver can be configured via the Product Configuration Software when it is installed on a connected host device, such as a PC, through the front panel USB port or LAN port (see the *FOX3 SR 201 User Guide* for more details).

NOTE: An Extron Insider account is required to download and use PCS. Contact an Extron support representative, to obtain an Insider Account.

Internal Web Pages

To configure the FOX3 SR 201 using the factory-installed internal web pages in a web browser, connect the LAN port on the receiver to a LAN or WAN. The default IP address is 192.168.254.254.

NOTE: Compatible web browsers are Microsoft® Edge®, Mozilla® Firefox®, Google Chrome™, and Apple® Safari®.

Basic Scaler SIS Commands

Use Simple Instruction Set (SIS) commands for operation and configuration of the scaling receiver using a PC connected to:

- A LAN or WAN using the rear panel RJ-45 LAN port (see [figure 1, G](#) on page 1) via an SSH client and port 22023.
- The Remote RS-232 port (see [figure 1, F](#)) via DataViewer.
- The front panel USB config port (see [figure 5, B](#) on page 2) via an SSH client using IP address 203.0.113.22 and port 22023.

NOTE: The following table is a partial list of SIS commands and output resolutions. For a complete listing of SIS commands, output resolutions, and instructions to install an SSH client, see the *FOX3 SR 201 User Guide*.

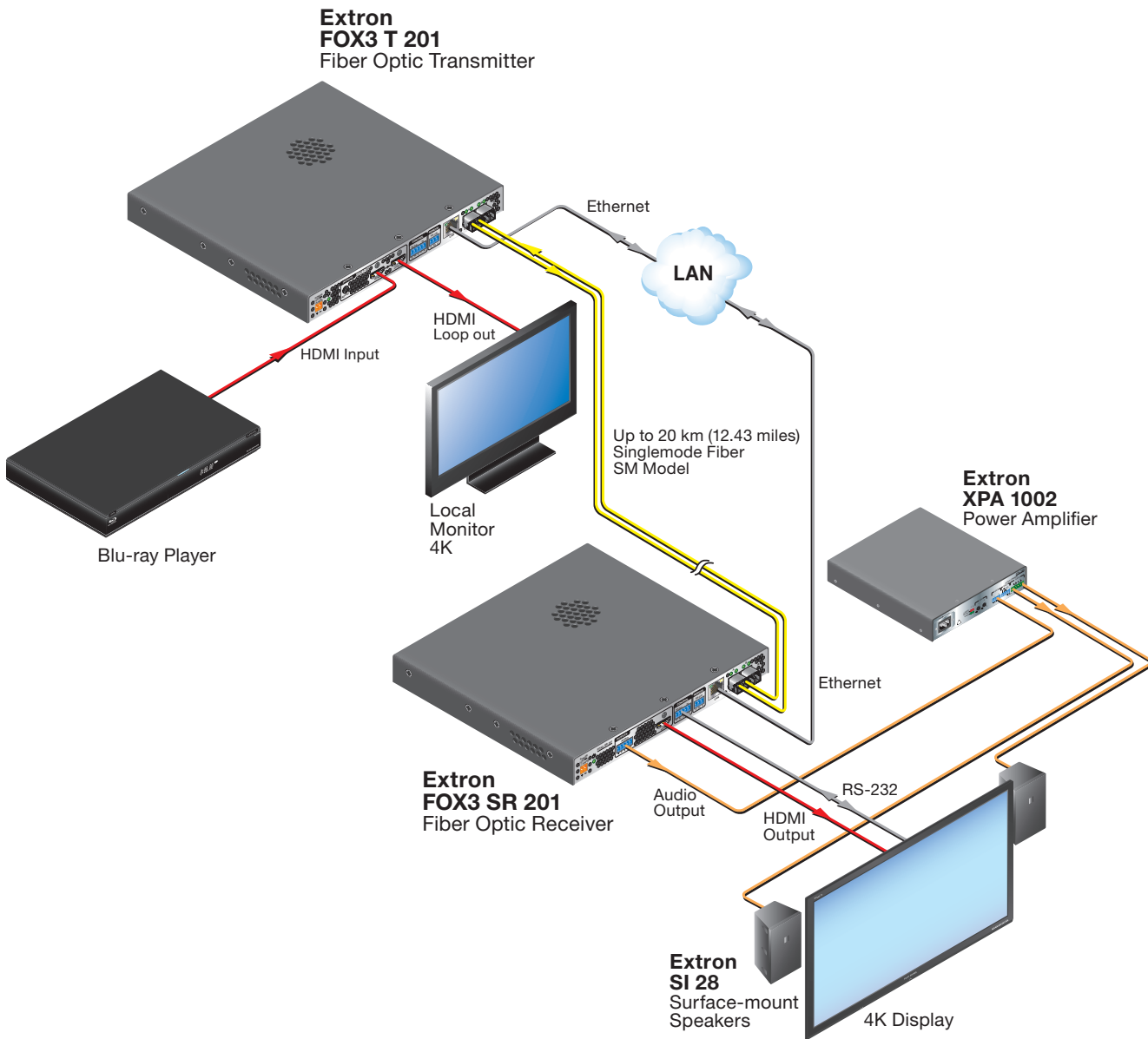
Command and Response Table for SIS Commands

| Command Name | SIS Command | SIS Response | Additional Description |
|---|---------------------------------------|-----------------------------------|---------------------------------|
| Output scaler rate | | | |
| Set output rate | Esc X24 RATE ← | Rate X24 ↵ | Set output rate to X24 . |
| View current output rate | Esc RATE ← Verbose mode 2/3 | X24 ↵ Rate X24 ↵ | |
| KEY: X24 = Scaler resolution 3-digit response with 0 padding (see the Output Resolution table) | | | |
| Output aspect ratio | | | |
| Set output aspect ratio | Esc X25 ASPR ← | Aspr X25 ↵ | Set output rate to X25 . |
| View current output aspect ratio | Esc ASPR ← Verbose mode 2/3 | X25 ↵ Aspr X25 ↵ | |
| KEY: X25 = Aspect Ratio 1 = Fill (default) 2 = Follow | | | |
| Freeze | | | |
| Set freeze | X30 F | Frz X30 ↵ | Enable freeze setting. |
| View current freeze setting | F Verbose mode 2/3 | X30 ↵ Frz X30 ↵ | |
| KEY: X30 = Enable or disable 0 = Disable (default) 1 = Enable | | | |
| Executive mode (front panel lockout) | | | |
| Set executive mode | X30 X | Exe X30 ↵ | Enable executive mode setting. |
| View current executive mode setting | X Verbose mode 2/3 | X30 ↵ Exe X30 ↵ | |
| KEY: X30 = Enable or disable 0 = Disable (default) 1 = Enable | | | |
| Global unsolicited response | | | |
| Output scaler rate | | Rate X24 ↵ | When output rate is changed. |
| Output aspect ratio | | Aspr X25 ↵ | When aspect ratio is changed. |
| Freeze | | Frz X30 ↵ | When freeze setting is changed. |
| KEY: X24 = Scaler resolution 3-digit response with 0 padding (see the Output Resolution table) X25 = Aspect Ratio 1 = Fill (default) 2 = Follow X30 = Enable or disable 0 = Disable (default) 1 = Enable (front panel is locked) | | | |

SIS Variable (**X24**) for Selected Output Resolution and Refresh Rate Combinations

| Resolution | 23.98 Hz | 24 Hz | 25 Hz | 29.97 Hz | 30 Hz | 50 Hz | 59.94 Hz | 60 Hz |
|---------------------------|----------|-------|-------|----------|---------------------------|-------|----------|-------|
| 1024x768 | | | | | | | | 12 |
| 1280x800 | | | | | | | | 14 |
| 1280x1024 | | | | | | | | 15 |
| 1680x1050 | | | | | | | | 21 |
| 1920x1200 | | | | | | | | 23 |
| 720p | | | 29 | 30 | 31 | 32 | 33 | 34 |
| 1080p | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45* |
| 2048x1080 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 |
| 3840x2160 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
| Custom output rate | | | | 201 | Captured or uploaded EDID | | | |

*Default output resolution



For information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the [Extron Safety and Regulatory Compliance Guide](#) on the Extron website.