Extron

FOX3 T/R 301 and FOX3 T/R 311 • Setup Guide

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 T/R 301 and FOX3 T/R 311 Fiber Optic transmitters and receivers.

WARNING: The FOX3 T/R 301 and FOX3 T/R 311 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 T/R 301 and FOX3 T/R 311 User Guide*, at **www.extron.com**.

AVERTISSEMENT : Le FOX3 T/R 301 and FOX3 T/R 311 émet une lumière invisible en continu (conforme à la classe 1) qui peut être dangereux pour les yeux, à utiliser avec précaution. Branchez les protections contre la poussière dans l'ensemble émetteur/récepteur lorsque le câble fibre optique est débranché.

Produit laser de classe 1, voir le *FOX3 T/R 301 and FOX3 T/R 311 User Guide* sur **www.extron.com** (en anglais).

NOTE: The front and rear panels for the FOX3 T 301 and FOX3 R 301 are shown in this guide. Some of the features on the FOX3 301 transmitter and receiver are not available on the FOX3 311 transmitter and receiver. See the *FOX3 T/R 301 and FOX3 T/R 311 User Guide* at **www.extron.com** to see the front and rear panels for the FOX3 T 311 and FOX3 R 311.

Installation

Step 1 — Mounting

Turn off or disconnect all equipment power sources and mount the transmitter as required. For mounting details and considerations, see the *FOX3 T/R 301 and FOX3 T/R 311 User Guide* at **www.extron.com**.

Step 2 — Input and Output Connections

a. Connect an HDMI video source to the HDMI input (see figure 1, H) on the transmitter.

b. **If desired**, connect an HDMI video display to the Loop Out port (I) for a local display.

c. Connect an HDMI display to the HDMI output (J) on the receiver.

d. Connect an audio input device to the Audio 5-pole captive screw port (D) on the transmitter (see figure 2 to wire the captive screw connector).

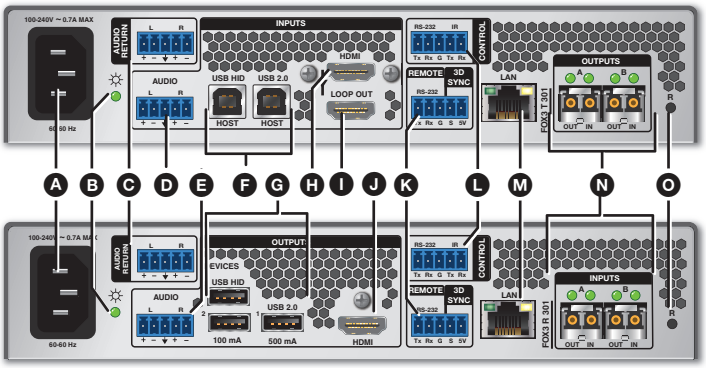
e. Connect an audio output device to the Audio 5-pole captive screw port (E) on the receiver (see figure 2 to wire the captive screw connector).

f. **For optional returned audio (C)** (see figure 2 to wire the captive screw connector):

- Connect an audio output device to the Audio Return 5-pole captive screw port on the transmitter.
- Connect an audio input device to the Audio Return 5-pole captive screw port on the receiver.

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 (–).



A Power Inlet
B Power LED
C Audio Return
D Audio input (transmitter)
E Audio output (receiver)
F USB Host ports
G USB Hub ports
H HDMI input (transmitter)
I HDMI Loop Out
J HDMI output (receiver)
K Remote RS-232/3D Sync port
L Control RS-232/IR port
M LAN Ethernet port
N SFP module and LEDs
O Reset button

Figure 1. FOX3 T/R 301 Rear Panels

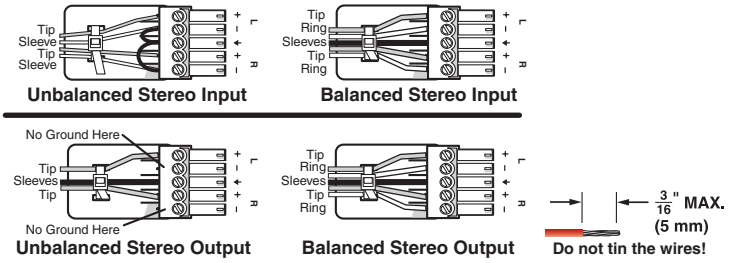


Figure 2. Audio Wiring Diagrams

g. Connect peripheral devices to the USB ports (see figure 3).

NOTES:

- The FOX3 matrix switches the USB HID and USB 2.0 inputs and outputs independently of the video and each USB connection.
- The USB 2.0 port is only available on the FOX3 T/R 301 devices.
- The USB HID ports are used only for a mouse or keyboard.
- The USB 2.0 ports are used for thumb drives, cameras, keyboards, a mouse, CAC reader, and such devices.

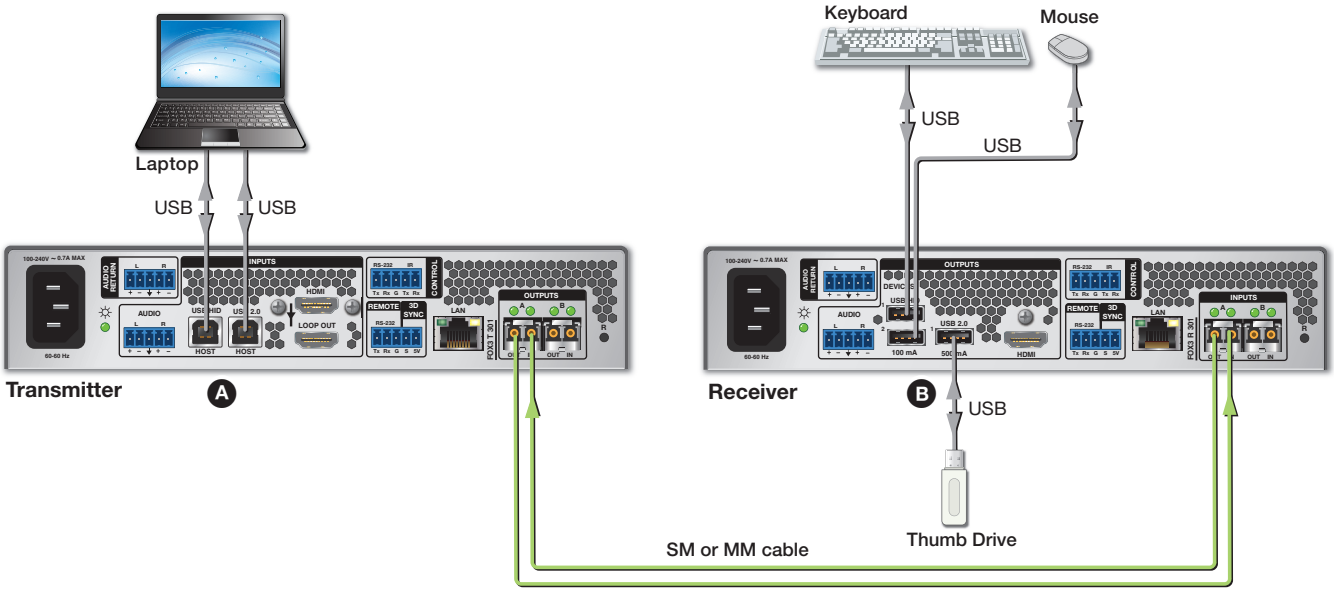


Figure 3. Peripheral USB Connections Diagram

- **USB Host ports** (A) — Connect a USB type A to B cable between this USB type B port and the USB port of a host.
- **USB Hub ports** (B) — Connect a USB type A cable between the USB type A port and peripherals.

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 figure 4 for wiring).

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

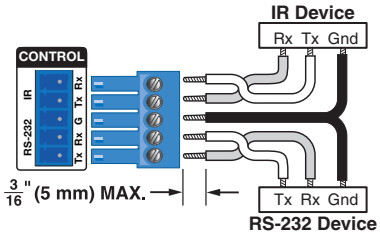


Figure 4. RS-232 and IR Wiring

b. For stereoscopic 3D sync such as an external IR emitter for glasses, connect a PC to the two right poles of the REMOTE RS-232/3D Sync 5-pole captive screw port on the transmitter (see **figure 1**, K on page 1).

Connect a display or projector to the two right poles of the REMOTE RS-232/3D Sync 5-pole captive screw port on the receiver (K).

c. 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 T/R 301 and FOX3 T/R 311 User Guide*, available at **www.extron.com**, for details):

- **Remote RS-232 port** — Connect the 3 left poles of this 5-pole captive screw connector to this port (K). The protocol for the Remote port is as follows:
  - 9600 baud
  - no parity
  - 8 data bits
  - 1 stop bit
  - no flow control
- **LAN Ethernet port** — Connect an RJ-45 connector to this port (M).
- **USB Configuration port** — Connect a USB mini-B connector to this port (see **figure 6**, B on page 3).

Step 4 — Throughput Connections

NOTE: See figure 5 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 transmitter A Out port and the receiver A In port (❶).

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), IR data, or returned audio to the transmitter, connect a cable between the receiver A Out port and the transmitter A In port (❷).

c. To transmit an uncompressed 4K @ 60 Hz signal, using the Uncompressed Video LinkLicense, repeat step 4a on the SFP B port on the transmitter and receiver

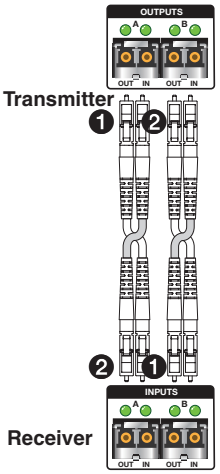


Figure 5.
Fiber Cable Connection

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.

Step 5 — Power Connection

Connect the IEC power connector to the power inlet (see **figure 1**, Ⓐ on page 1). The power LED lights (Ⓑ) 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 occur, 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 4).

Indications

Ⓐ **Power LED** — Indicates power is applied to the unit.

Ⓑ **USB Config port** — Connect a USB mini-B cable to a computer to configure the device and update the firmware via PCS or internal web pages.

Ⓒ **Inputs LEDs** —

- **Signal LED** — Lights when the unit detects an input video signal.
- **HDCP LED** — Lights when the input signal is HDCP encrypted.
- **Digital Audio LED** — Lights when digital audio is selected on the transmitter.
- **Analog Audio LED** — Lights when analog audio is selected on the transmitter.

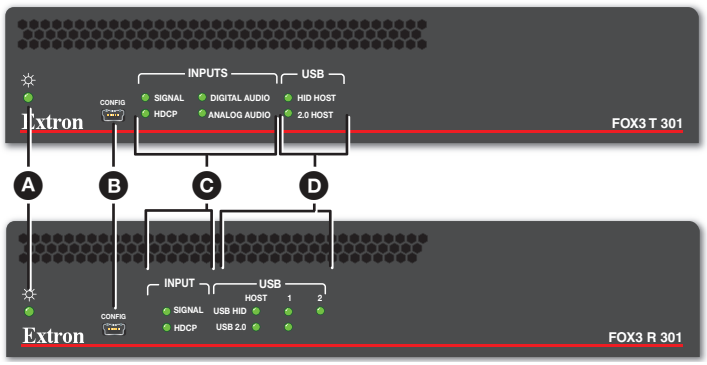


Figure 6. **FOX3 T/R 301 Front Panels**

Ⓓ **USB LEDs** —

- **Transmitter** — The HID Host LED and 2.0 Host LED light when the unit is connected to the host device.
- **Receiver** —
  - **USB HID Host LED** — When the transmitter and receiver are connected through the SFP port and a host device is connected to the transmitter, the LED remains lit to indicate an active connected device.
  - **USB HID 1 and 2 LEDs** —When an active USB peripheral device is connected to the HUB ports on the receiver, the LED remains lit to indicate an active connected device.

- **USB 2.0 Host LED** — When the transmitter and receiver are connected through the SFP port and a USB 2.0 Host device is connected to the transmitter, the LED remains lit to indicate an active connected device.
- **USB 2.0 1 LED** — When the transmitter and receiver are connected through the SFP port and a USB 2.0 Host device is connected to the transmitter, the LED remains lit to indicate an active connected device.

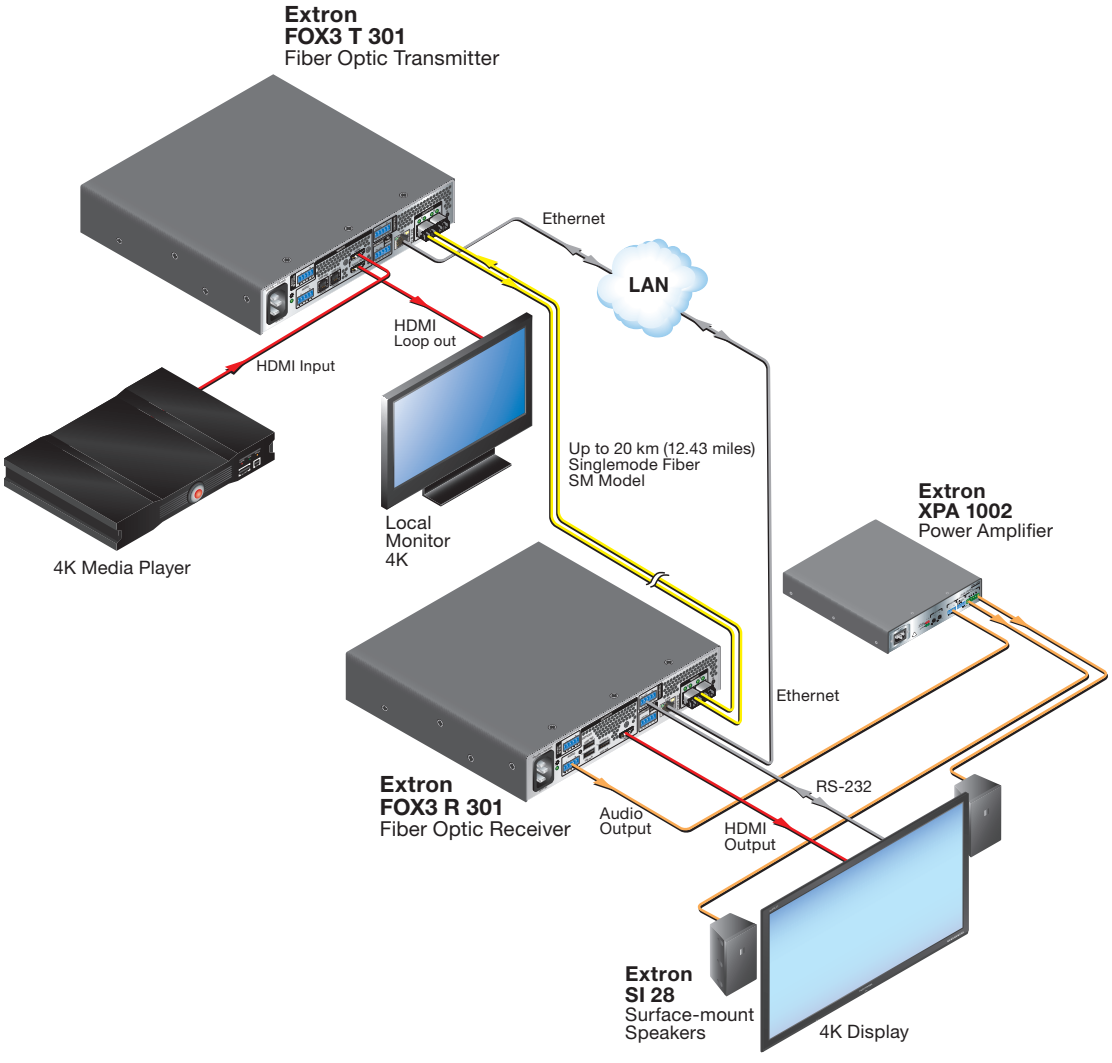
Reset

Press the rear panel recessed reset button (see **figure 1**, on page 1) if the FOX3 transmitter or receiver firmware is corrupted or the unit gets disconnected during the update process. The reset allows the product to revert to the factory loaded firmware (see the *FOX3 T/R 301 and FOX3 T/R 311 User Guide*, available at **www.extron.com**, for details on the reset modes).

Configuration and Control

See the *FOX3 T/R 301 and FOX3 T/R 311 User Guide* for details on operating and monitoring the transmitter and receiver using SIS commands, Extron Product Configuration Software, or the internal web pages.

Application Diagram



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.

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Worldwide Headquarters: Extron USA West, 1025 E. Ball Road, Anaheim, CA 92805, 800.633.9876