

Bolt 6 XT Quick Start Guide

The Bolt 6 XT Set is a real-time wireless video transmission system that supports 4K video with Teradek's patented Zero-Delay technology, now with less interference using the newly opened 6GHz wireless frequency. Bolt 6 XT can send and receive color-accurate, True-HDR videos in under 0.001 seconds using the set's included Bolt 6 XT video Transmitter and Receiver. Bolt 6 XT has been redesigned to seamlessly fit into your setup, with a smaller, lighter-weight build that runs cooler and 50% quieter than the Bolt 4K. An integrated 5-pin USB port allows for effortless and wireless camera-control setup when using SmallHD Smart Monitors, and an improved long range wireless video mode. Bolt 6 also offers new tools for high-end users to have better visibility over their connections and signals, adding confidence to the workflow no matter how challenging the environment.

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What's Included

- Bolt 6 XT Transmitter and Receiver
- Lightstand Adapter 3/8in
- Hot Shoe Adaptor
- (Bit 118) 2pin Conn. to PowerTap - 18in Cable
- Ultra Thin HDMI Male Type A (Full) - HDMI Male Type A (Full) 18in Cable
- SDI 12G BNC to BNC Cable Length: 18in / 46cm
- USB 2.0 Type A Male to USB Type C Male - 1m Cable
- PSU 2pin Conn. to 30W AC Adapter (Int) - 6ft Cable

Physical Properties



Power and Connect

1. Connect your power source to the transmitter and receiver using the included A/C adapter. If both devices are equipped with battery plate accessories, attach a compatible battery (**Gold** or **V mount**).
2. Connect the output from your video source to either the SDI or HDMI input (**D** or **G**) on the Bolt transmitter.
3. Connect either the SDI or HDMI output (**E** or **K**) from the Bolt receiver to the video input on your monitor.
4. Turn the units on by moving the power switches on both the transmitter and receiver (**J**) to the ON position.

Pairing/Unpairing

Bolt devices purchased as a set (TX and RX), are paired by default, requiring no additional configuration. Bolt devices purchased separately need to be paired using the device's front panel (OLED) menu, **Bolt Manager**, or the **Bolt App**. To pair your transmitter with multiple receivers, you will need to use either Bolt Manager or the Bolt App. **NOTE: Before starting either pairing process, ensure that both the transmitter and receiver have the same firmware version and have Bluetooth enabled.**

PAIRING/UNPAIRING VIA FRONT PANEL

To Pair:

1. Using the Menu Joystick, navigate to the **Pair** menu on both the transmitter and the receiver front panel.
2. Select **Pair** to begin the pairing process. The transmitter will begin scanning for a receiver within range and automatically pair to the receiver.
3. Once paired, the front panel will indicate whether or not Pairing is successful.

To Unpair:

1. Navigate to the **Unpair** menu on either the transmitter and the receiver.
2. Select the transmitter/receiver you want to unpair. If you have multiple devices paired, you can select **Unpair All**.

PAIRING TIPS

If you're having trouble getting units to pair, we recommend keeping the transmitter and receiver six feet apart when pairing. Keep all other RF devices nearby turned off or out of range to ensure the transmitter and receiver are only detecting each other. To eliminate any chance of interference, perform the Wired Pairing process via Bolt Manager.

PAIRING VIA BOLT APP

To Pair:

1. Open the Bolt App from your iOS or Android device, then tap the **Pairing** button.
2. Select the transmitter you wish to pair, then tap the **Next** button.
3. Select the receiver(s) you wish to pair with the transmitter, then tap the **Pair!** button. The Bolt App will indicate when the pairing process is complete.

To Unpair:

1. Open the Bolt App from your iOS or Android device, then tap the settings button (3 dots) on the top right corner of the screen.
2. Enter the **Pairing** menu, select the receiver(s) you wish to unpair, then tap the **Unpair** button.

WIRED PAIRING VIA BOLT MANAGER

To Pair:

1. Connect both the transmitter and receiver(s) to your computer (Windows/Mac) via USB.
2. Open Bolt Manager, select the **Pairing** tab, then tap the **Wired Pairing** button.
3. Select the devices you want to pair, then click the **Pair Devices** button. Bolt Manager will indicate whether or not Pairing is successful.

To Unpair:

1. Connect both the transmitter and receiver(s) to your computer (Windows/Mac) via USB.
2. Open Bolt Manager, select the **Pairing** tab, then tap the **Unpair All** button.

Power Cables

2-Pin Power Connector

Bolt devices use a locking 2-pin power connector similar to the 0B 302 series LEMO connector.

2-Pin Power Connector Pin Out		
Pin	Description	
1*	GND	
2	+DC	

* Pin 1 is closest to the red dot on the connector.

Input Voltage: 6-28V DC

Max Power Consumption: 20W (TX) and 18W (RX)

Custom/3rd Party Cables

- Test the power cable polarity with **ONLY** the power cable connected to Bolt. Do not connect video cables.
- Check the power cable for shorts and proper grounding.

12G-SDI Input/Output Cables

Bolt 6 XT units require the use of 12G-SDI cables to reliably transport 12G video signals, and are included as a standard item. Ensure that your cables are rated for compatibility with your camera's output.

CAUTION:

Using a reverse polarity or improperly-constructed power cable can damage the product and is not covered under warranty. To prevent the inputs from being damaged, best practice is to

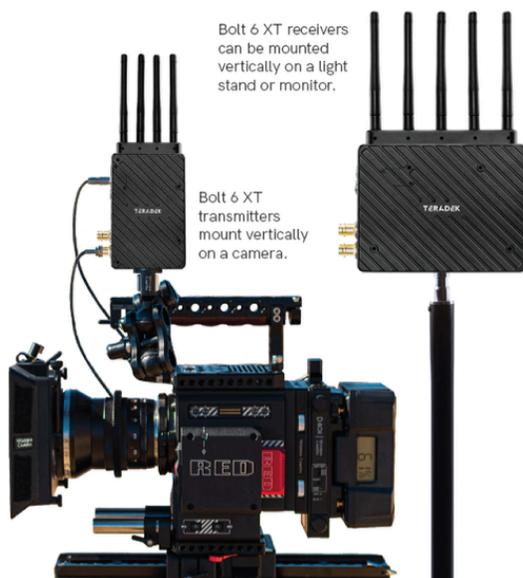
plug in the power cable first, THEN connect the video cable from the camera before powering on the TX unit.

Mounting

WITHOUT DUAL MOUNT

Bolt 6 XT devices have a 1/4"-20 threaded hole (additional 3/8"-16 threaded hole on the receiver) and two M3 threaded holes on the bottom for mounting the included light stand adapter or any other mounting accessory.

CAUTION: DO NOT OVERTIGHTEN SCREWS INSERTED INTO THE THREADED HOLES. Doing so can damage the device's chassis and internal components, voiding the warranty.



WITH DUAL MOUNT

Depending on the model, Bolt 6 XT devices are equipped with a dual mount battery plate that allows you to attach your device to either the back of a camera, monitor, or Bolt Panel Antenna.



TX/RX Configuration Menus

Wireless Settings

Switch TX (RX Only) - Bolt 6 receivers can pair with up to four transmitters at a time. Switch TX allows you to quickly switch from one paired transmitter's camera feed to another paired transmitter. This feature is especially useful in multi-camera situations when you need to switch to a different camera's view mid-shoot, without having to perform the pairing process every time. **NOTE: The transmitter(s) need to first be paired with the receiver.**

Band - Select either the **5GHz** or **6GHz** wireless frequency. The 5GHz frequency provides more channels but is utilized by more devices, resulting in frequent interferences and video dropouts. The 6GHz frequency is less crowded than the 5GHz frequency, resulting in faster connections and less interference. **NOTE: The 6GHz band is intended for indoor use only.**

Enable Broadcast Mode (Bolt 6 XT MAX units only)- Broadcast Mode allows you to transmit to multiple receivers simultaneously (non-DFS frequencies only), while also extending your Bolt 6's transmission range.

- **Broadcast Mode Disabled (Standard Multicast Mode)** - Transmitter and connected receiver(s) coordinate and maintain two-way communication with each other to optimize frequency usage and video transmission.
- **Broadcast Mode Enabled** - Data uplink channel is disabled, allowing the transmitter to connect to an unlimited number of receivers, as long as they have already been paired. To achieve even better range performance, attach the receiver to your Bolt Panel Antenna while in Broadcast Mode. **NOTE: Bolt 6 XT 750 and 1500 receivers will not link to a Bolt 6 XT MAX transmitter in Broadcast**

Mode, even if they were previously paired. You must use a Bolt 6 XT MAX receiver. Otherwise, the receiver's OLED will display **Broadcast Not Supported**.

Enable Fixed Frequency - Fixed Frequency Mode allows your transmitter to designate a specific non-DFS channel within the selected wireless region for use, providing a stronger connection in difficult environments. There are two options for Fixed Frequency Mode:

1. Non-DFS and non-6GHz channels
2. Specific non-DFS 5GHz channels

NOTE: By default, Bolt 6 XT will select the lowest available frequency from the Frequencies list if one has not been selected beforehand.

Bandwidth - Choose between 20MHz and 40MHz bandwidth options

Frequencies - Select which frequency to use (determined by **Fixed Frequency Mode** selection).

Video Quality - The Video Quality menu lets you adjust the balance between your signal's maximum range and quality according to the number of antennas used to transmit fine information. Bolt 6 XT has several picture quality levels that vary based on the lowest quality link or the furthest receiver.

- **Auto Mode** - (*Default*) Transmitter automatically determines how many fine antennas are needed based on the range and signal quality.
- **Longer Distance Mode** - (*One fine antenna*) Maintains the maximum range in situations where other sources of interference might be present, but will slightly reduce your video signal's maximum quality.
- **Better Quality Mode** - (*Two fine antennas*) Maintains higher signal quality but reduces the maximum range.
- **Best Quality Mode** - (*Three fine antennas*) Ideal for complex, high-contrast scenes that require the highest possible quality.
- **Low Power Mode** - (*One fine antenna with shorter range*) Reduces the transmitter's total power consumption by about 1.5W and may reduce any unwanted interference in multi-system environments.

Video Settings

HDMI/SDI Output (RX only) - Select the video output format. You can choose to match the video source's resolution (**Same As Input**) or choose from the resolutions listed. If using the receiver with a recorder or monitor that is sensitive to video signal changes, select **Continuous Output** to ensure the signal stays constant even if the link is interrupted. Note that this adds a small delay to the video output.

3D LUT Settings (RX Only) - The 3D LUT settings menu contains specific looks that can be applied to your video output that either match or simulate how the video will appear after editing, along with options for how they are overlaid on your video output (**Full** or **Split-screen**).

- **3D LUT Presets** - Select a specific look from the list of 3D LUT presets.
- **3D LUT Mode** - Select whether the look is applied to the entire video output (**Full Screen**) or half (**Split Screen**).

Video OSD Settings (RX Only) - Choose when to display the OSD.

- **Never show** - Disable OSD.
- **Show when operating** - Hide OSD until it is activated by the joystick.
- **Show when no video** - Display the OSD when there is no video feed; hide the OSD when video appears (default).
- **Always show** - Always display OSD unless temporarily deactivated by the joystick.

Display Settings - Use the Display Settings to control the OLED display operation. By default, the OLED display will invert every 30 minutes.

Tools

SDI Eye Pattern (TX only) - The SDI Eye Pattern provides a graphical display of the SDI signal coming from the camera to the transmitter, and is useful in determining the amount of interference present. The size of the "eye" displayed on the front panel indicates the quality of the SDI signal. The bigger the size of the eye pattern is, the better the SDI signal.

Signal Quality Graph (RX Only) - The Signal Quality Graph indicates the quality and reliability of the signal being received according to the amount of interference that is present between the RX and TX. Signal Quality is represented in percentages:

- Figures below 30% indicate **poor** signal quality
- Figures between 30% and 45% indicate **fair** signal quality
- Figures above 45% indicate **good** signal quality

Spectrum Analyzer (RX Only) - The built-in Spectrum Analyzer provides a visual indication of channel noise and saturation across the entire available frequency range. Move the Menu joystick left and right to select a frequency. Frequencies are represented by bars; the higher the bar, the more congested that frequency is.

Test Pattern (RX Only) - This menu allows you to select a video resolution format to output a test pattern over HDMI or SDI. Select a specific output resolution from the resolutions list.

Advanced/System Settings

Lock Keypad - The Lock Keypad feature prevents the menu joystick from being used to avoid any accidental or unauthorized configurations. There are two ways to lock the keypad:

- Navigate to **Advanced Settings** via the front panel and select **Lock Keypad**.
- Press and hold the menu joystick upward for 5 seconds.

To unlock, press and hold the menu joystick upwards for five seconds or until the display reads "**KEYPAD UNLOCKED**."

HDMI (RX only) - Bolt 6 supports all HDMI output modes. You can select from one of the following options:

- Auto
- RGB 8bit
- RGB 10bit
- YCbCR 4:4:4 8bit
- YCbCR 4:4:4 10bit
- YCbCR 4:2:2 10bit
- YCbCR 4:2:0 8bit
- YCbCR 4:2:0 10bit

Audio (RX only) - Configure Bolt's Audio settings. If **Beep on REC** is activated, you will hear a short tone whenever the camera begins or stops recording. The **Mute Settings** allow you to completely mute audio or only mute audio while recording.

Bluetooth - Use the Bluetooth menu to enable or disable Bluetooth communication. **NOTE: Bluetooth is enabled by default.**

- **Enable Bluetooth** - Allows transmitter and receiver to be paired and communicate with the Bolt App.
- **Use Bluetooth PIN** - Enables the use of a PIN for authentication when using the Bolt App.
- **Change PIN** - Press the Menu joystick towards the right to change the Bluetooth PIN

Background Color (RX only)- The Background Color feature allows you to select a screen color to be displayed on the monitor when there is no video being received from the transmitter. This is a useful tool that indicates to the crew that a signal has been dropped and the TX and RX need to be synced again.

Reset All Settings - Reset all configurable options to their factory settings.

Additional Information

Device Info - Displays the model and serial number of the device

Firmware Versions - Displays the current firmware versions for all device components.

Regulatory - Displays all compliance certifications and certification markings related to radio frequencies used by the TX and RX to communicate. For complete regulatory information and declarations of conformity, please visit the [Regulatory Information](#) section.

Bolt App

Use the Bolt App to remotely manage and monitor every parameter of Bolt 6 including pairing, frequency selection, and 3D LUTs.

CONNECT VIA BLUETOOTH

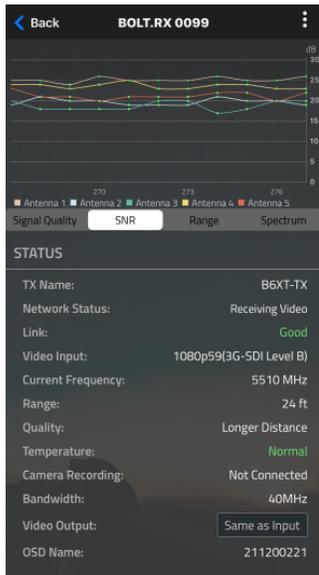
1. Download the Bolt App.
2. Enable Bluetooth on your iOS or Android device.
3. Navigate to the Bluetooth menu on both the transmitter and receiver, then select **Enable**.
4. Open the Bolt App from your iOS or Android device, then tap the **Bolt Devices** button.
5. Select the device(s) you want to pair or monitor.

Transmitter Status Display



- **Settings** (Descriptions listed in [Transmitter Menu](#) section) - Tap the settings button on the top right corner of the screen to customize the transmitter's various settings.
- **Status** - Displays the current status of:
 - Video Input
 - Network Status
 - Connected Receivers
 - Current Frequency
 - Quality
 - Temperature
 - Camera Recording
 - Region
 - Bandwidth
 - OSD name

Receiver Status Display



- **Settings** (Descriptions listed in [Receiver Menu](#) section) - Tap the settings button on the top-right corner of the display to customize the receiver's various settings such as the output format, audio, display, and OSD.
- **Signal Quality** - Determine the quality and reliability of the signal being received.
- **SNR (Signal to Noise Ratio)** - Compare the signal power level to the noise power level from the antennas.
- **Range Analyzer** - Displays the transmission distance between the transmitter and receiver.

- **Status** - Displays the current status of:
 - TX Name
 - Network Status
 - Link
 - Video Input
 - Current Frequency
 - Range
 - Quality
 - Temperature
 - Camera Recording
 - Bandwidth
 - Region
 - Video Output
 - OSD name

Other Resources

- **USER MANUAL:** <https://guide.teradek.com/m/112641>
- **FIRMWARE UPGRADE:** <https://teradek.com/pages/downloads#bolt6>