CRESTRON

Description

The HTT-B10EX provides a simple, convenient wireless controller for lighting, home automation, and entertainment in the home or office. Two-way infiNET EX® wireless communications supports true feedback, allowing lighting and security settings to be checked and changed with confidence from any room. A clean array of 10 backlit push buttons with individual feedback LEDs affords easy, tactile control of any custom function. The HTT-B10EX is a fully programmable controller designed to operate as part of a complete Crestron® automation system, communicating via the infiNET EX wireless control network.

Additional Resources

Visit the product page on the Crestron website (www.crestron.com) for additional information and the latest firmware updates. Use a QR reader application on your mobile device to scan the QR image.

Button Installation

The HTT-B10EX is shipped with 10 blank buttons (two columns of five buttons).

NOTE: Observe the following points.
- This product should be installed and used in accordance with appropriate electrical codes and regulations.
- This product should be installed by a qualified electrician.

To replace one or both button columns.
1. Disconnect the 12 volt power pack and remove the batteries.
2. Remove the four Phillips screws from the four corners on the bottom of the unit.
3. Remove the faceplate from the front of the unit.
4. Remove the old button column(s) and replace it with the new one(s). Make sure the column is seated in the two small holes on the side. No screws are required.
5. Replace the faceplate on the front of the unit.
6. Replace the four Phillips screws on the bottom of the unit.
7. Reinstall the batteries or reconnect the 12 volt power pack.

Button Installation
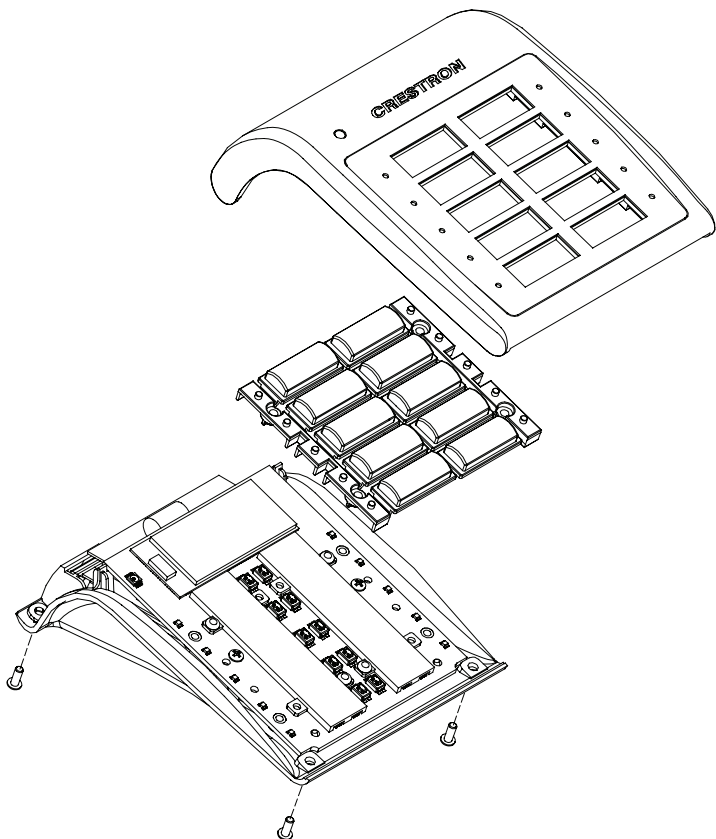
NOTE: The HTT-B10EX comes from the factory with a protective plastic overlay installed to prevent scratches on the metal face. Remember to remove this overlay prior to handing the product over to the customer.

Hardware Hookup

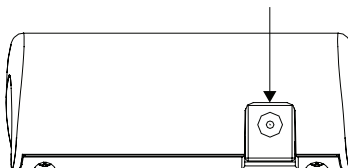The only connection to the HTT-B10EX is for the included 12 volt power pack.

NOTE: The HTT-B10EX cannot charge rechargeable AA batteries.

When connecting the HTT-B10EX, consider the following:
- Use Crestron power supplies for Crestron equipment.
- The included cable cannot be extended.

Hardware Connection

12V 0.5A:
From ac power pack

Wireless Communications

The device connects to the Crestron network via the infiNET EX® communications protocol. Use the procedures outlined below to join or leave an infiNET EX network and to verify communications between the device and the control system.

Joining an infiNET EX Network

Before a device can be used in a lighting system, it must first join an infiNET EX network by being acquired by an infiNET EX gateway.

NOTE: A device can be acquired by only one gateway.

1. Put the infiNET EX gateway into Acquire mode from the unit itself or from Crestron Toolbox, as described in its manual at www.crestron.com/manuals.

   NOTE: In an environment where multiple gateways are installed, only one gateway should be in Acquire mode at any time.

2. Place the device into Acquire mode.
   a. Tap the top right or left button three times, and then press and hold it down (tap-tap-tap-press+hold) until the top left or right LED on the device flashes once (this can take up to 10 seconds).
   b. Release the button to start the acquire process. The top left or right LED flashes slowly to show that the device is actively scanning the infiNET EX network.
      - The top left or right LED turns on for 5 seconds to show that the device has been successfully acquired to the infiNET EX network.
      - The top left or right LED flashes quickly to indicate that the device was not successfully acquired by the infiNET EX network. Press the top left or right button to acknowledge failure to acquire the infiNET EX network. Ensure the gateway is in Acquire mode and within range before attempting the acquire process again.

3. Once all devices have been acquired, take the gateway out of Acquire mode. Refer to the gateway's manual for details.

Leaving an infiNET EX Network

To leave an infiNET EX network, put the device into Acquire mode, as described in "Joining an infiNET EX Network" above, when no gateway is in Acquire mode.

Verifying Communications Status

To check the communications status of the device, tap the top left or right button three times and then press and hold it down (tap-tap-tap-press+hold) for up to 2 seconds. The top left or right LED flashes to indicate the communications status. Refer to the following table for details.

LED	COMMUNICATIONS STATUS
Turns on for 5 seconds	The device is communicating with the control system.
Flashes three times	The device is communicating with the gateway, but the gateway is not communicating with the control system.
Flashes twice	The device was previously joined to the network but is not communicating with the gateway.
Flashes once	The device is not joined to the network.

Firmware Upgrade

The firmware upgrade procedure varies based on how the device is powered.

NOTE: Before using the HTT-B10EX, ensure the device is using the latest firmware. Check for the latest firmware for the HTT-B10EX at www.crestron.com/firmware. Load the firmware onto the device using Crestron Toolbox™ software.

Firmware Upgrade Using Power Pack

Upgrade the HTT-B10EX firmware via Crestron Toolbox when powered via a 12 volt power pack:

1. Establish communications with the HTT-B10EX and display the System Info window.
2. Select **Functions** > **Firmware** to upgrade the HTT-B10EX firmware.

Firmware Upgrade using Battery Power

Upgrade the HTT-B10EX firmware via Crestron Toolbox (v. 2.36.216 or later) when powered via batteries:

1. Select **Tools** > **Network Device Tree View**.
2. Right-click the gateway in the Network Device Tree View window.
3. Select **Functions** > **Firmware Upload (Deep Sleep)**.
4. Click the **Load Firmware File** button in the Firmware Upload (Deep Sleep) window and browse for the firmware in the Open window.
5. Once the firmware is selected, click **Open** to add the firmware to Firmware Images.
6. In the Assignments section, click the device (CTRL + click or SHIFT + click for multiple devices) that the firmware should be assigned to. The row turns light gray.

   NOTE: If a device is not located in the Assignments section, click **Show all Available IDs**.

   NOTE: If a deep sleep device has not been acquired by the gateway, assign the firmware to an ID if the future ID number of the device is known.

7. In the Firmware Images section, click the firmware that should be assigned to the device(s). The row turns light gray.
8. Once the device(s) and firmware are selected, click **Assign Selected Image to Selected Target(s)** to assign the firmware to the device(s). The firmware is stored on the gateway and assigned to the device(s).
9. Select a method to initiate the firmware upgrade on the HTT-B10EX:
   - Allow the HTT-B10EX to automatically initiate the firmware upgrade, which occurs every 24 hours.
   - To manually initiate the firmware upgrade, enter or exit the room. The occupancy sensor initiates the firmware upgrade once it detects occupancy or vacancy.

Operation

The behavior of the HTT-B10EX differs if the device is powered with the included 12 volt power pack or two AA batteries.

12 Volt Operation

When operating with a 12 volt connection, the HTT-B10EX operates in Bright and LED Off mode.

When the HTT-B10EX enters Bright mode, the device maintains network connectivity, provides rapid button press response time, and retrieves rapid feedback from the gateway. It also enables the backlight control via ambient light sensors. The HTT-B10EX is transitioned to LED Off mode if no button press or motion is detected for 30 seconds.

When the HTT-B10EX is in LED Off mode, the device maintains network connectivity. The device disables the backlight and feedback. The HTT-B10EX reverts to Bright mode when a button is pressed or motion is detected.

When 12 volt power is connected to the HTT-B10EX, the device acts as a router and repeater for other infiNET EX devices.

Battery Power Operation

NOTE: The HTT-B10EX does not function as a repeater when using battery power.

When operating with battery power (no 12 volt connection is made), the HTT-B10EX operates in Sleep mode, Fast Polled Wake mode, and Slow Polled Wake mode.

If no activity is present, the panel operates in Sleep mode, which disables the radio, backlight, and feedback. The HTT-B10EX transitions to Fast Polled Wake mode when a button is pressed or motion is detected.

When the HTT-B10EX enters Fast Polled Wake mode, the device maintains network connectivity, provides rapid button press response time, and retrieves rapid feedback from the gateway. It also enables backlight and button feedback. The HTT-B10EX is transitioned to Slow Polled Wake mode if no button presses are detected for 5 seconds (motion does not keep the device awake).

When the HTT-B10EX enters Slow Polled Wake mode, the device maintains network connectivity and responds immediately to button presses, retrieves feedback response from the gateway every 3 seconds, enables the backlight, and enables feedback. The device reverts to Fast Polled Wake mode on any button press. The device transitions to Sleep mode after 10 seconds of no button activity (motion does not keep the device awake).

Manner Mode

In applications where the LED light from the device may be distracting (e.g., bedroom or home theater), the device can be placed in Manner mode. In Manner mode, the LEDs turn off after the desired period of time.

NOTE: Manner mode is only available when the device is operating with power from the 12 V power pack.

To enable Manner mode.

1. Press and hold the bottom left and bottom right buttons while plugging in the power pack. Hold the buttons for 5 seconds, the LEDs start to flash.
2. Press the top left button to enable or disable Manner mode. If the LED is illuminated, Manner mode is enabled. If the LED is off, Manner mode is disabled.
3. Unplug the power pack to exit.

   NOTE: The duration that the LEDs remain illuminated is controlled by the control system program.

LED Feedback

The status of the device is reported by the control system and displayed using the LEDs on the HTT-B10EX. The LEDs on the HTT-B10EX display the status feedback for lighting presets, motorized shades, and door locks. The two banks of LEDs form a bar graph that display feedback, such as lighting level. If Manner mode is enabled, the state of the device is reported on a button press or when the HTT-B10EX is moved.

NOTE: Real-time feedback is not enabled when operating using battery power.