ETC Installation Guide

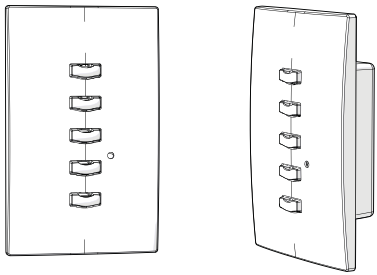
Echo Preset Station Installation

Overview

Echo preset stations are used to activate built-in presets in compatible power control products.

Stations mount using a standard single-gang back box (RACO 690 or equivalent), or an optional surface mount backbox (ETC part number 7081A2004-1). Station faceplates and buttons are available in cream, ivory, grey, black and signal white.

Preset stations are provided with station electronics, buttons, faceplate, a termination kit, and installation hardware.



Installation Requirements

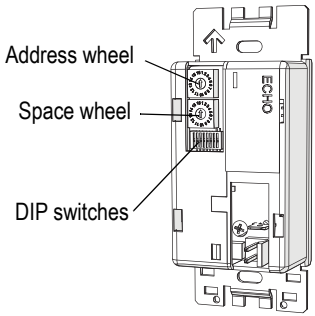
Preset station wiring uses (1) Belden 8471 and (1) 2.5mm^2 (14 AWG) ESD ground wire. Wiring is topology-free and may be bus, star, loop, home run or any combination of these. Data wiring is limited to a total of 1640 feet (500 meters).

NEC Class 2 product to be wired in accordance to NEC Article 725 and local jurisdiction requirements.

Note: *ETC requires that all stations be grounded by using grounded metal conduit or a 14 AWG ESD drain wire. All control wiring should be installed and terminated by a qualified installer and should follow standard wiring installation practices.*

Setting Station Functionality

Before installing, you must first assign an address to the station and, if desired, adjust the station's functionality. Address is set using the two numbered wheels on the rear of the station. Functionality is set using the DIP switches found just below the numbered wheels. The label on the rear of the station identifies these components and functions.



Setting the Address and Space

Station address is defined by the two numbered wheels found on the back of the station. The top address wheel defines the station address (1-16).

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The bottom wheel defines the space which the station will control (also 1-16).

CAUTION: *Each station must have its station address set to a unique number (1-16) for the space it controls. If two or more stations use the same address for the same space, the system will not function properly.*

Step 1: Set the space wheel to the appropriate number (1 thru 16) for the space you want the station to control.

Step 2: Set the address wheel to a unique number (1 thru 16) for the space.

Note: *Total number of preset stations is limited by the power supply at the host product. Refer to the host product documentation for the limits specific to your system.*

Setting Station Functionality

The bank of DIP switches found on the rear of the station can be set to alter station functionality. Using a micro-tool you can slide the DIP switches up (On) to activate them or down (Off) to deactivate. They are set to “OFF” by default.

The DIP switches have the following designations:

- DIP switch 1: “*Use Off*” - When set to on (up), the last button on the station is set as an “OFF” command for the space. When set to off (down) the button will activate a preset.
- DIP switch 2: “*Custom Config*” - for future development.
- DIP switch 3: *“Disable IR Input”* - When on (up), the infrared input for this station will be disabled.
- DIP switch 8: “*Restore Defaults*”- When on (up), a “restore defaults at boot” function is activated. Factory defaults can then be restored by:
  - a: disconnecting power from the station, then
  - b: reconnecting power to the station, then
  - c: resetting the DIP switch to down. This will prevent losing the configuration in the event of a power loss.

All other DIP switches are unused.

Installing the Preset Station

Install Back Box

Step 1: Mount the back box using appropriate hardware for the surface you are mounting to.

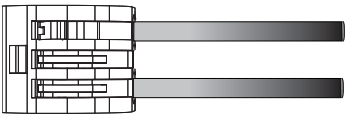
Step 2: Run conduit and wiring as required by the installation drawings.

Step 3: Leave a service loop of approximately 10” (254mm) of wiring in the backbox.

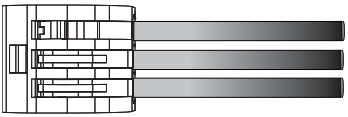
Connect the Wiring

Step 4: Terminate and connect the station wiring.

Topology of a single station installation



Topology of multiple stations installed in series

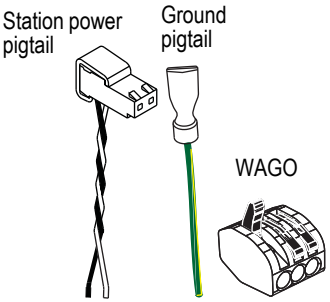


a: Locate the data pigtail and two WAGO LeverLock connectors found in the termination kit.

b: Strip 3/8” (9-10mm) from the ends of each wire (both pigtail and installed data wire).

c: Open the terminal levers on the WAGO connector and insert the Belden 8471 black (-) lead wire and the black (-) lead from the pigtail into the terminals.

d: Close the levers onto the wires, securing the connection between the two.



e: Repeat this process for the Belden 8471 white (+) wire and remaining white (+) pigtail wire using another WAGO connector.

f: Attach the connector onto the preset station data connector.

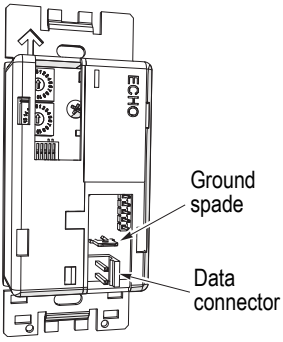
Step 5: Terminate the ESD drain (ground) wire.

a: Locate the ground pigtail and one WAGO LeverLock connector from the termination kit.

b: Strip 3/8” (9-10mm) from the end of the ground wire and ground pigtail.

c: Open the terminal levers on the connector and insert the installed (typically green/yellow) ESD drain (ground) wire and the green/yellow lead from the pigtail into the terminals.

d: Close the levers onto the wires, securing the connection between the two.



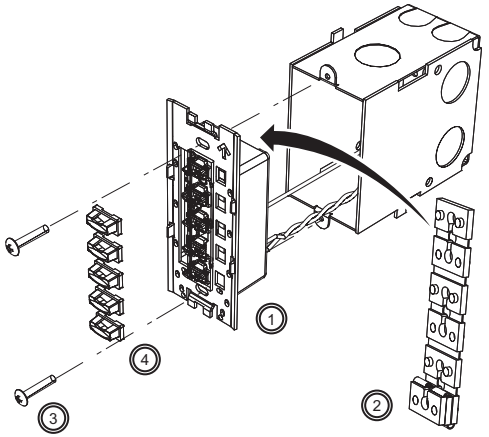
e: Attach the ground spade onto the preset station ground spade (indicated above).

Note: *A ground connection (14 AWG) is required for any station not installed with grounded metal conduit.*

Installing the Station in the Backbox

Spacers are provided to help position the station and cover flush with the wall in flush mount applications. The spacers are not used with surface mount backboxes.

Step 1: Insert the station electronics and wiring into the backbox. The arrow on the mounting plate must point up.



Note: *For some flush mount applications with certain trim rings it may be necessary to remove the station's back cover for insertion into the backbox.*

Step 2: If needed, fold sections of the spacer over each other and press them together to achieve the required thickness to fill the gap between the station and backbox. Cut off any excess spacers and place the spacer between the station and backbox.

Step 3: Secure the station with two screws. If using spacers, make sure the screws pass through them.

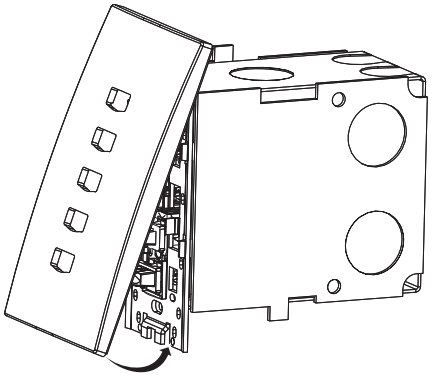
CAUTION: *Overtightening of the mounting screws may result in poor button activation.*

Step 4: Install the button caps (included with the faceplate kit) so that the clear light tunnels protrude through the caps.

Installing the Faceplate

The faceplate is secured to the station with two magnets that are located on the bottom edge of the faceplate.

Step 1: Align the top of the faceplate approximately 20 degrees to the station.



Step 2: Hook the top of the faceplate on the tabs located on the top of the station electronics assembly. To ensure the faceplate is hooked properly on the top hook, wiggle it slightly side to side while the bottom is angled about 20 degrees from the wall.

Step 3: Swing the bottom of the faceplate down until the magnets engage.

Step 4: If the faceplate does not fully attach, wiggle the bottom of the plate until the magnets are seated properly to the station and the faceplate is secure.

Custom Settings

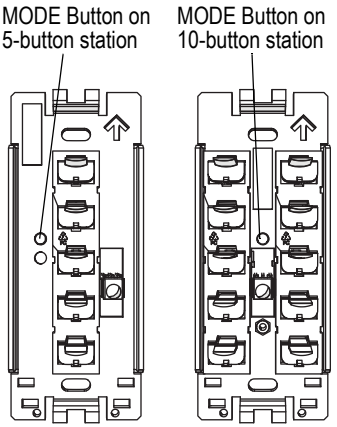
You can change the presets associated with the station as well as change the color of all the LEDs on any given station.

Assigning Presets

Stations default to controlling presets 1-5. Any station can be set to control any consecutively numbered block of presets. For example: a 5-button station can control presets 1-5, 3-7, 14-18, and so on.

Echo Preset Station Installation

Power must be connected to the station to assign the presets. To set the consecutively numbered presets for any station:



Step 1: Press and hold the “MODE” button for three seconds. “MODE” is found on the front of the station electronics near the middle preset button.The LED beneath the MODE button will illuminate.

Step 2: Press the first preset button on the station a number of times equal to the first preset you want the station to control. For example: press it 6 times to associate the station with presets 6-10 on a 5-button station (6-15 on a 10-button station). The first preset button will flash to indicate the first preset number. The number of flashes equals the station’s starting preset number.

a: After 90 seconds of inactivity, the “MODE” status will time out and any changes will be aborted.

b: Button presses are cumulative. If you need to increase the desired number, press the first preset button additional times.

c: If you have added too many, wait for the 90 second time-out to abort the changes and then repeat this procedure.

Step 3: Once you have added the desired number of presses, press and release the “MODE” button. The first preset button will now match the number of presses, with subsequent presets increasing by one.

Changing LED color

Stations default to illuminating preset buttons in green. To change the color of the LEDs for any station:

Step 1: Press and hold the “MODE” button for five seconds. “MODE” is found on the front of the station electronics near the middle preset button.The LED beneath the MODE button will illuminate and all of the preset buttons will display in their current color.

Step 2: Press the first preset button to cycle through the available colors until you find the desired one. After 90 seconds of inactivity, the “MODE” status will time out and any changes will be aborted.

Step 3: Press and release the “Mode” button. The selected color of the preset buttons for that station will display.

Service

If you have any difficulties installing your system or with system startup please contact ETC Technical Services at the office nearest you. ETC contact information is located at the bottom of page 1.