

# Echoflex Installation Guide

## Elaho Preset Station

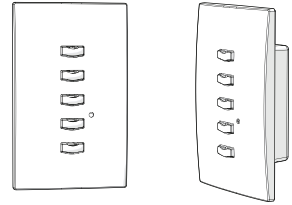
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### Overview

Elaho Preset Stations activate built-in presets in compatible power control products.

Station faceplates and buttons are available in cream, ivory, gray, black and signal white. Preset stations are provided with station electronics, buttons, faceplate, a termination kit, and installation hardware.

This document guides you through the installation and local configuration of the Preset Station. Advanced (custom) functionality is available using ElahoAccess.



### Custom Configuration

For information about the custom configuration options available for the Preset Station using ElahoAccess, reference the ElahoAccess Mobile App integrated help system. User documentation is available for download on our website [echoflexsolutions.com](http://echoflexsolutions.com).



**Note:** To use the configuration settings applied using ElahoAccess, DIP switch 2 must be enabled. Reference [Rotary and DIP Switches on the next page](#).

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### Prepare for Installation

Preset Stations ship with a termination kit for use with Belden 8471 (or equivalent wire) and contains a power pigtail, a ground wire pigtail, receptacle spacers, and all required wire termination connectors for installation.

The station installs into an industry standard single-gang back box (RACO 690 or equivalent - provided by others) or an optional surface mount back box (part number 7081A2004-1) sold separately and available from Echoflex.

Preset Stations connect to the EchoConnect® communication bus.

EchoConnect is a bidirectional protocol that uses one pair of wires (data + and data -) for both data and power. Echoflex recommends using Belden 8471 (or approved equal) Class 2 wire. The total combined length of an EchoConnect wire run (using Belden 8471, or equal) may not exceed 1,640 feet (500 m).



**Note:** All control wiring should be installed and terminated by a qualified installer and should follow standard wiring installation practices.

Leave approximately 8" (20 cm) of wiring in the back box for connection and to allow slack for future service needs.



**Note:** Echoflex requires that all Elaho stations and devices be grounded for ESD protection. Pull an additional 14 AWG (2.5 mm<sup>2</sup>) wire for grounding when control wires are not installed in grounded metal conduit.

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### Environmental

For indoor installation only - 0-50° C, 5-95 % non-condensing humidity.

### Rotary and DIP Switches

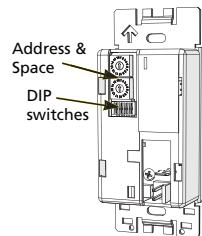
Rotary and DIP switch settings are accessible on the back side of the station.

#### Set Space and Address

The Preset Station participates in an Elaho system using the configured Space and Address which are selectable using the two rotary switches on the back of the station. Each station must be set to a unique station address for the assigned space.

By default, these switches are set to Address 1, and Space 1. Station commands are shared by all devices within an assigned space.

1. Set the Space rotary switch to the desired number (1 through 16) for the space you want the station to provide lockout.



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- Set the Address rotary switch to the desired address (1 through 16) for the station identification in the assigned Space.
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**CAUTION:** *Each device on the bus must have its address set to a unique number (1 through 16) for the space it controls. If two or more devices use the same address for the same space, the system will not function properly.*

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### DIP Switch Settings

Functionality is set using DIP switches located just beneath the rotary switches. The label on the rear of the station identifies these components and functions.

Switch #	Use
1	Use Off - When this is set to Off, the "Off" function of the station is not provided.
2	Custom Config - When set to On, custom configuration settings are applied using ElahoAccess. The default position is Off.
3	Disable IR Input - When On, the infrared input will be disabled.
4	Fade Time Disable - Applies a 0 second fade time to all station actions for non-dim switched mode behavior (when dimming features are not wanted).
5	Future development
6	Future development
7	Future development
8	Restore to Defaults at Boot - Setting this DIP switch On, then cycling power to the station restores the station to factory defaults. Reset the switch Off after power cycle.

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### Installation

Installation should follow all local codes and standard electrical practices. The back box should be installed level and square for best results. Ensure that the back box is clean and free of obstructions.



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

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**Note:** When using Category 5 (or equivalent) cable on the EchoConnect communication bus, please note the following:

- Cat5 wiring must be terminated using EchoConnect Cat5 Termination Kit and must be installed using a bus topology. Refer to the installation guide that is provided with the Cat5 Termination Kit (8186A1207) for information to terminate Cat5 wiring.
  - Not all topologies are supported using Cat5; careful planning is required to ensure the proper termination kits are available and the wire is pulled appropriately.
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### Connect Wiring

1. Pull all required wiring (data +, data -) and an additional 14 AWG (2.5 mm<sup>2</sup>) ESD ground wire into the back box.
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**Note:** A ground connection is required between every station and back box, even when installed with grounded metal conduit.

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2. Connect station ESD ground wire pigtail.
  - a. Strip 7/16" (11 mm) of insulation from the ends of the station ground wire pigtail, provided in the termination kit, and the incoming ground wire.
  - b. Use one WAGO 221 Series LEVER-NUTS<sup>®</sup> provided in the termination kit to connect the station ESD ground pigtail and the incoming ground. For stations using grounded metal conduit, connect the ground pigtail to the metal back box ground location.
  - c. Install the ESD ground wire pigtail FASTON connector to the mating receptacle on the station electronics.

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3. Terminate EchoConnect wires. EchoConnect is topology free, you may install the wires in any combination of bus, star, loop, or home-run.
  - a. Strip 7/16" (11 mm) from the ends of each power pigtail wire provided in the termination kit and the installed control wires.
  - b. Use the WAGO connectors provided to connect the power pigtail wires and the installed Belden 8471 control wires. One WAGO should be used for the white wire pair (data +) and one for the black wire pair (data -). Open the terminal levers on the WAGO connector and insert the installed Belden 8471 wire and the lead from the power pigtail into the terminals then close the levers.
  - c. Install the two pin connector from the power pigtail to the mating receptacle on the station electronics.

### Installing the Station in the Back box

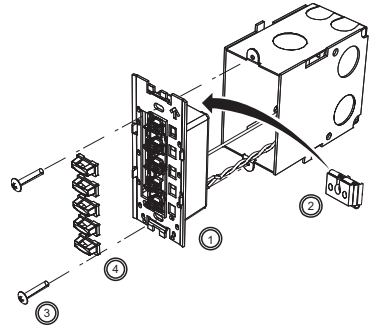
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**Note:** For some flush mount applications with certain trim rings it may be necessary to remove the station's back cover for insertion into the back box.

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1. Insert the station electronics and wiring into the back box. The arrow on the mounting plate must be directed up.
2. Use receptacle spacers as needed to provide a flush mounted station.
  - a. Fold the spacer in a zig-zag fashion and press them together to achieve the required thickness to fill the gap between the station, wall surface, and the back box.
  - b. Cut off and discard the excess.
  - c. Place the stack between the station electronics and the flush mounted back box.
3. Secure the station with two screws. If using spacers, insert the screws through the spacers as well.



**Note:** Over tightening of the mounting screws may result in poor button activation.

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

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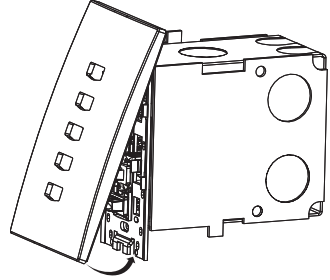
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### Installing the Faceplate

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

1. Align the top of the faceplate approximately 20 degrees to the station.
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 20 degrees from the wall.
3. Swing the bottom of the faceplate down until the magnets engage.
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.



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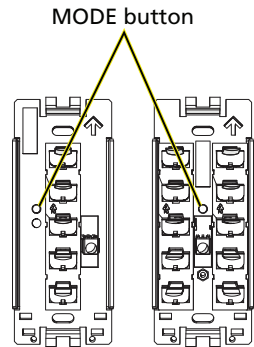
### Settings

Settings for Basic config mode (DIP switch 2 set to Off) can be modified locally including changing which presets are assigned to the station, changing the button LED color, and preset recording at the station.

### Assigning Presets

Stations default to controlling Presets 1 through 5. Any station can be set to control any consecutively numbered block of presets. For example: a 5-button station can control Presets 1 through 5, 3 through 7, 14 through 18, and so on. EchoConnect bus power must be connected to the station to assign the presets.

1. Press and hold the station **[MODE]** button for three seconds. The LED beneath the **[MODE]** button will illuminate.
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 six times to associate the station with Presets 6 through 10 (5-button station) or 6 through 15 (10-button station). The first preset button will respond by flashing to indicate the first preset number. The number of flashes equals the station's starting preset number.
  - After 90 seconds of inactivity, the MODE status will timeout and any changes will be aborted.
- a. While in this mode, button presses are cumulative. If you need to increase the desired number, press the first preset button additional times.
- b. If you have added too many, wait for the 90 second timeout to abort the changes, then repeat this procedure.
3. Press and release the **[MODE]** button to save the setting.



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### Changing Button LED Color

Stations default to illuminating preset buttons in green. To change the color of the LEDs at the station follow this procedure:

1. Press and hold the **[MODE]** button for five seconds. The LED beneath the **[MODE]** button will illuminate and all of the preset buttons will display in their current configured color.
2. Press the first preset button to cycle through the available colors until the desired color is shown.
  - After 90 seconds of inactivity, the MODE status will timeout and any changes will be aborted.
3. Press and release the **[MODE]** button to save the setting. The station preset buttons will show their new selected color.

### Preset Record

To record a preset to a button on the Preset Station:

1. Set the desired lighting look in the space.
2. Press and hold the preset button for three seconds. The preset is recorded to the selected button. The button LED flashes four times to confirm the record action.

### Service

If you have any difficulties installing your system or with system startup please contact Echoflex Technical Services. Echoflex contact information is located at the bottom of [page 1](#).