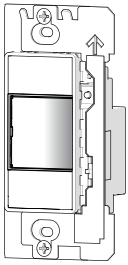
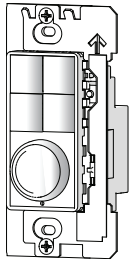
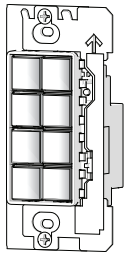
Echoflex Installation Guide
Elaho Inspire Station

Overview

Elaho Inspire Stations provide preset, zone, space combine, and color controls for use with Elaho control systems.

Reference the Echoflex website at echoflexsolutions.com for related Inspire station documentation, including the datasheet, which provides a complete listing of station types.

Stations are available in 1, 2, 4, 6, and 8–button assemblies and a 4–button with fader station. Station buttons are back lit by both blue and amber LEDs. The 4–button with fader station knob is back lit with a blue LED.

This document guides you through the installation and local DIP switch setup of the Inspire Station. For more detailed information about local configuration options available for the Inspire Station, reference the *Elaho Inspire Station Programming Guide*.

Custom Configuration

For information about the custom configuration options available for the Inspire Station using ElahoAccess, reference the ElahoAccess Mobile App integrated help system. User documentation is available for download on our website echoflexsolutions.com.

Note: *To configure the Inspire Station using ElahoAccess, the station Function switch must be set to Custom.*

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Prepare for Installation

Inspire Stations ship with station electronics, a decorator-style wall plate, termination kit, and a template of standard button labels. You can install the station into an industry-standard back box (provided by others) or a surface-mounted back box (sold separately and available from Echoflex).

Inspire stations connect to the EchoConnect station communication bus. EchoConnect is a bi-directional protocol that uses one pair of wires (data+ and data–) for both data and power. Echoflex recommends using Belden 8471 Class 2 wire (or approved equal – see the Echoflex cable cross database echoflexsolutions.com/files/Elaho_Data_Cable_Wire_Specs for equal alternatives). The total combined length of an EchoConnect wire run using Belden 8471 may not exceed 500 m (1,640 ft), with a maximum distance of 400 m (1,312 ft) between any two devices.

Note: *All control wiring should be installed and terminated by a qualified installer and should follow standard wiring installation practices. Leave approximately 25.4 cm (10 in) of wiring in the back box for connection and to allow slack for future service needs.*

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

Environmental

Indoor installation only, 0°C–50°C (32°F–122°F), 5%–95% non-condensing humidity.

Installation

Installation should follow all local codes and standard electrical practices.

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

The back box should be installed plumb and square for best results. Ensure that the back box is clean and free of obstructions and that all wiring is installed correctly.

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

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

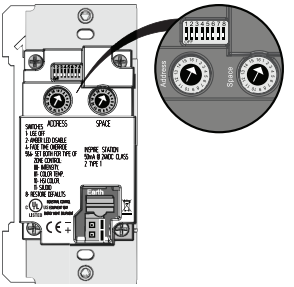
- *Cat5 wiring must be terminated using EchoConnect Cat5 Termination Kits and must be installed using a bus topology. Refer to the instructions provided with the Cat5 Termination Kit (8186A1207) for information to terminate Cat5 wiring.*
- *Not all topologies are supported using Cat5; careful planning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

Connect Wiring

1. Pull all required wiring (data–, data+) into the back box. As needed, pull an additional ESD ground wire (required only when the station is not installed in grounded metal conduit).
2. Connect the station ESD ground wire pigtail (green/yellow).
   a. Strip 11 mm (7/16 in) of insulation from the ends of the station ground wire pigtail and the incoming ground wire.
   b. Use one WAGO connector, 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.
3. Connect the EchoConnect data– (black) and data+ (white) power pigtail wires to the installed control wires. EchoConnect is topology free; you may install the wires in any combination of bus, star, loop, or home-run.
   a. Strip 11 mm (7/16 in) from the ends of each power pigtail wire provided in the termination kit and the installed control wires.
   b. Use the provided WAGO connectors to connect the power pigtail wires and the installed control wires. One WAGO should be used for the data– and another for the data+ wire pairs. 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, and then close the levers.
   c. Install the two-pin connector from the power pigtail to the mating receptacle on the station electronics.

Rotary and DIP Switches

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



Set Space and Address

Two rotary switches on the rear panel of the station provide for space assignment and station address assignment. Each station must be set to a unique station Address for the assigned Space. By default, these switches are set to Space 1, Station Address 1. Station commands are shared by all devices within an assigned space.

Note: *Do not duplicate a device Address within the same Space.*

DIP Switch Settings

DIP switches on the rear panel of the station provide for designation of "Off" functionality, the ability to disable amber button LEDs, 4–button station space combine controls, 4–button with fader station color control mode settings, and the ability to restore the station to its factory defaults.

Switch #	Use
1	Use Off – Provides "Use Off" functionality, or: **1–button station only**: When set to On and the Function switch is set to Preset mode, enables sequence toggle.
2	Amber LED Disable – Provides the ability to disable use of the amber LEDs. When this switch is set to On, the amber button LEDs on the station are disabled. The default setting is Off, enabling amber LEDs. (Amber LEDs is provided as the default so the station glows in darkened spaces, allowing it to be easily located.)
3	Space Combine Mode – **4–button station only**. Changes the station personality, enabling space combine.
4	Fade Time Override (Disable) – Applies a 0-second fade time to all station actions for non-dim switched mode behavior (when dimming features are not wanted).
5	Zone Color Control – **4–button with fader station only**. Changes the Zone mode (function selection switch) of the station to Color Control mode. See *page 5*.
6	
7	Reserved for future development.
8	Restore to Defaults at boot. Setting this DIP switch and cycling power to the station restores the station to factory defaults

Note: *When the station Function switch is set to Custom, only DIP switch number 8 applies. All other DIP switch settings are ignored. Reference the Elaho Inspire Station Programming Guide (available for download from echoflexsolutions.com) for details on use of the Function selection switch.*

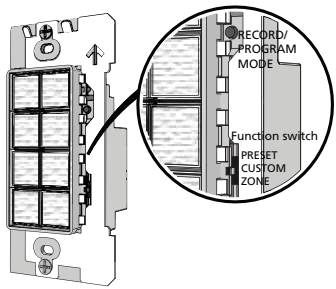
4–button with Fader Station Color Mode DIP Switch Settings

DIP switches 5 and 6 on the 4–button with fader station set Color Mode functionality for the fader knob when the station is also set to Zone control mode.

Mode	DIP 5	DIP 6	Push Action	Rotate Action
Intensity	Off	Off	Selection Toggle	Selection Raise / Lower
Color Temp	Off	On	Toggle between Intensity and Color Temp	Selection Raise / Lower for Intensity and Color Temp
HSI Color	On	Off	Toggle between Intensity, Saturation, and Hue	Selection Raise / Lower for Intensity, Saturation, and Hue
Studio	On	On	Toggle between Intensity, Color Temp, and Tint	Selection Raise / Lower for Intensity, Color Temp, and Tint

Station Configuration

The Inspire Station has on-board switch and button settings that are available from the front of the station when it is installed and the cover is removed. The default setting is Custom mode, but this can be changed to either Preset or Zone mode if basic functionality is preferred.



Reference the *Elaho Inspire Station Programming Guide* for information about local settings on your Inspire Station, including configuration, program and record mode, and station functionality. Echoflex user documentation is available for free download from our website echoflexsolutions.com. Reference the ElahoAccess Mobile App integrated help system for details about custom configuration using ElahoAccess.

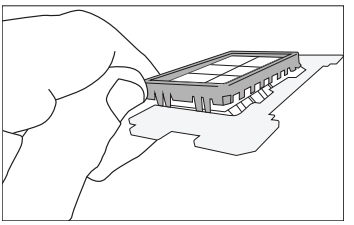
Install Button Legends

Inspire Stations ship with standard button legends installed beneath a clear lens. An additional sheet of standard button legends are provided for field installation as needed.

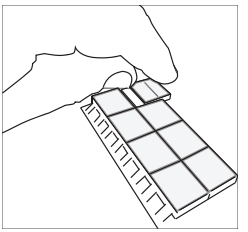
Note: *Customize and print your own button legends on standard transparency. Download the button legend template provided on the Echoflex website echoflexsolutions.com.*

Each button can have a legend, installed beneath the button lens. To remove, install, or replace a button legend you must first remove the bezel and button lens from the station electronics.

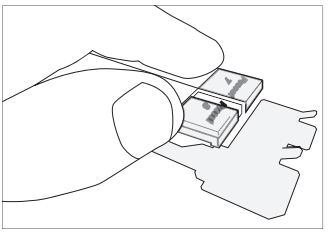
1. Remove the bezel from the station electronics.
   Each corner of the bezel is provided with a notch to assist with bezel removal. Use your thumbnail to lift a corner free, and then gently remove the bezel from the station.



2. Remove the button lens.
   Using the pads of your thumbs, press on the lens and slide the lens either left or right, toward the button hinge points.



3. Once the lens is removed, remove the existing legend and replace it with another standard legend as provided with this station, or insert a custom legend.
4. Reattach the lens onto the button by first aligning the grooves of the lens to the button, then sliding the lens in place starting at the hinge. Slide the lens until it covers the entire button and clicks into place.



5. Replace the bezel when all legends and lenses are in place.

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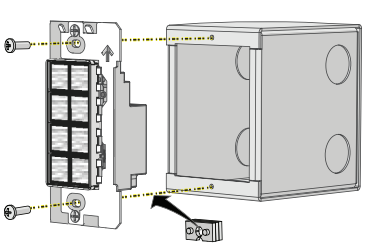
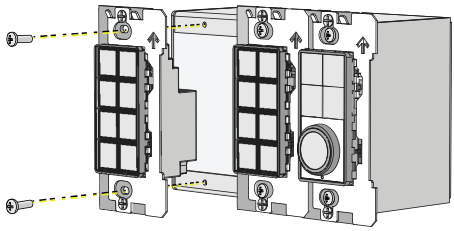
Install the Station into the Back Box

Receptacle spacers are provided to help align the station and cover flush against the wall in flush- mount applications. The spacers are not required when installing the station into a surface-mount back box.





1. Insert the station electronics and wiring into the back box. To install multiple stations (multi-gang), insert the station electronics into the back box from the right to the left side for the best alignment and fit. The alignment bracket will slightly overlap the station to the right when properly installed.
2. Use spacers as needed to provide a flush-mounted station.
   a. Fold the spacer in a zig-zag fashion and press the stack together to achieve the thickness needed 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 each station electronics in place using the two screws provided. If using spacers, insert the screws through the spacers as well.

Note: *To ensure successful station and wall plate installation, do not over tighten the screws. If screws are over tightened, button activation can be negatively impacted.*

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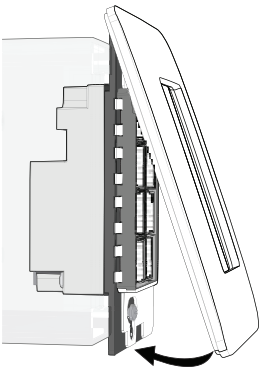
Install the Wall Plate

The wall plate is secured to the station with built-in magnets.



1. Align the top of the wall plate to the station and angle the bottom approximately 20 degrees.
2. Hook the top of the wall plate to the tabs located on the station electronics assembly. To ensure the wall plate is hooked properly on the top hook, wiggle it slightly side to side.
3. Swing the bottom of the wall plate down until the magnets engage.
4. If the wall plate does not fully attach automatically, wiggle the bottom of the plate until all of the magnets are seated properly to the station and the plate is secure.

Note: *If you are installing a multi-gang wall plate and the stations are misaligned in the back box, the wall plate will not attach properly. Loosen the screws that secure the station to the back box, adjust each station to improve the alignment, secure the screws, and then install the wall plate again.*

FCC Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation. Visit etcconnect.com/products for current and complete compliance information including FCC compliance.