

Elaho Astronomical TimeClock Configuration Manual

Version 3.3

Part Number: 8186M1230-3.3.4 Rev C Released: 2021-11

To view a list of Echoflex Solutions trademarks and patents, go to echoflexsolutions.com/ip. All other trademarks, both marked and not marked, are the property of their respective owners. Echoflex Solutions intends this document, whether printed or electronic, to be provided in its entirety.

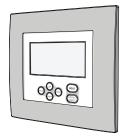
Table of Contents

Overview 1
Features 1
Warnings and Notice Conventions 2
Help from Technical Services 3
Specification 4
Ambient Environment 4
Compliance
Electrical Requirements
Elaho Control System7
Installation and Setup 9
Connect Wiring9
Install the E-ATC into the Back Box11
Install the Faceplate12
User Interface Overview
Keypad13
Display13
Status Display13
Menu13
Hold14

Timed Hold1 Indefinite Hold1	
Recall Preset1	15
Main Menu1	6
Schedule Events1	6
Auto Timed Hold1	6
Schedule an Event1	17
Open/Close Settings 1	8
Timeclock Settings1	9
Change Current Time1	9
Change Time Style1	9
Change Current Date2	20
Configure Hold Time2	20
Set Flick Warn2	20
Set Warn Time2	21
Set Time Zone2	21
Set Latitude and Longitude2	21
Set Daylight Saving Time2	22
Set Manual DST Dates2	22
Presets	23
Activate a Preset2	23
Record a Preset2	24
Deactivate2	24
Holiday Shut-Off2	25
Configuration of Holiday Spaces	25
Change Default Shut-Off Time Duration 2	26
Menu Flow Chart	27

Overview

Welcome to the Elaho Astronomical TimeClock (E-ATC) Installation and Configuration Manual. This guide contains the procedures for successful programming of the E-ATC when used as part of an Elaho control system.



The E-ATC provides Elaho power control systems with low-cost, easy-to-use, and easy-to-program time-based control.

The six-button user interface and large back lit display allow for simple setup and operation for time based events, manual control hold, override, event recurrence mode, and built-in FlickWarn.

Features

- Supports 16 Elaho control spaces
- Astronomical timeclock with +/- sunset or sunrise settings and programmable latitude/longitude
- 24-hour real time clock with user configurable Daylight Saving Time (DST)
- 50 field-programmable events
- Manual Hold, keeps the system in the current event up to two hours or until canceled
- Simple manual control of presets with overrides
- Resumes program automatically after a power loss event
- Backlit graphical display
- Meets California Title 24 and ASHRAE-90.1 requirements

Warnings and Notice Conventions

These symbols are used throughout Echoflex Solutions documentation to alert you to danger or important information.



Note: Notes are helpful hints and information that are supplemental to the main text.



CAUTION: A Caution statement indicates situations where there may be undefined or unwanted consequences of an action, potential for data loss or an equipment problem.



WARNING: A Warning statement indicates situations where damage may occur, people may be harmed, or there are serious or dangerous consequences of an action.



WARNING: RISK OF ELECTRIC SHOCK! This warning statement indicates situations where there is a risk of electric shock.

Help from Technical Services

If you are having difficulties and your problem is not addressed by this document, try the Echoflex Solutions website at echoflexsolutions.com. If none of these resources are sufficient, contact Technical Services directly at the office identified below.

When calling for help, take these steps first:

- Prepare a detailed description of the problem
- Go near the equipment for troubleshooting
- Find your notification number if you have called in previously

Echoflex Solutions

38924 Queensway Unit #1 Squamish, British Columbia Canada, V8B 0K8 888-324-6359 (toll-free) +1-778 733-0111 info@echoflexsolutions.com

Corporate Headquarters

Technical Services Department 3031 Pleasant View Road Middleton, WI 53562 800-775-4382 (USA, toll-free) +1-608 831-4116 service@echoflexsolutions.com

Specification

1

Note: *Installation must follow all national and local codes for electrical equipment.*

Ambient Environment

For indoor, commercial controls use only. Operating temperature 0°C–40°C (32°F–104°F), 5–95% non-condensing humidity.

Compliance

- UL and cUL LISTED
- CE marked
- Meets California Title 24
- Meets ASHRAE-90.1

Electrical Requirements

The E-ATC ships with a termination kit for the required terminations. This kit contains a 24 VDC auxiliary power pigtail, EchoConnect bus pigtail, ESD ground wire pigtail, spacers, and all required wire termination connectors for installation.

The E-ATC requires external power provided to the unit by an auxiliary 24 VDC (Class 2) power supply and EchoConnect which supports data and control to the EchoConnect station communication bus.



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

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.

24 VDC

Requires two 1.5 mm² (16 AWG) wires (typically a black and red wire pair), which terminate to a provided 24 VDC auxiliary power pigtail. WAGO[®] cage clamp connectors are provided.

The 24 VDC auxiliary power pigtail is connectorized for installation to the two position receptacle on the rear side of the E-ATC.

EchoConnect

The E-ATC requires EchoConnect. EchoConnect is a bi-directional protocol that uses one pair of wires (data + and data -) for both data and power. Echoflex Solutions recommends using Belden 8471 Class 2 wire (or approved equal – see the Echoflex Solutions 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.

EchoConnect and ESD ground wire pigtails are provided, as well as the required wire termination connectors, to make the terminations from the building wire to the pigtails.



Note: Category 5 (Cat5) wiring is supported for the EchoConnect station communication bus with some limitations. Reference the Cat5 Cable Preparation Setup Guide for more details. Echoflex Solutions documentation is available for download from our website at echoflexsolutions.com.

The EchoConnect bus pigtail is connectorized for installation to the two position receptacle on the rear side of the E-ATC. The ESD ground wire pigtail has a spade terminal for installation to the receptacle on the E-ATC, near the EchoConnect bus connection.

Mounting Requirements

The E-ATC is capable of flush or surface mounting for installation in any location with conditions meeting the ambient environment requirements listed in *Ambient Environment on page 4*.

Alternatively, the E-ATC can be integrated into an Elaho Room Controller.

Flush

Flush mount the E-ATC to an industry standard two-gang back box, not provided. 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.

Surface

A surface mounted back box is available, sold separately, from Echoflex Solutions.

Elaho Room Controller

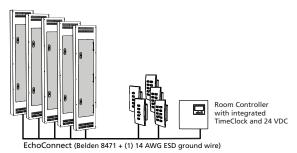
Echoflex Solutions offers the Elaho Room Controller with integrated Elaho Astronomical TimeClock. Reference the Elaho Room Controller Installation and Configuration Manual information for wire terminations in this installation scenario. Refer back to this manual for timeclock configuration information.

Elaho Control System

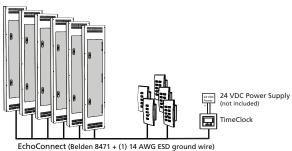
Elaho control system utilizes the EchoConnect bus for communication, allowing Elaho enabled products to interact. An Elaho control system is limited to 16 Elaho control products and 16 Elaho output products. If more Elaho products are required in a system, an Elaho Expansion Bridge may be added to the system.

The Elaho Astronomical TimeClock (E-ATC) is considered to be a control station when calculating the system limitations.

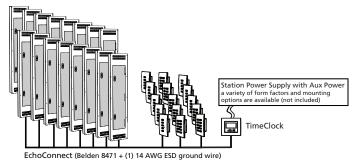
E-ATC installed in an Elaho Room Controller



E-ATC with External 24 VDC Auxiliary Power



E-ATC with Elaho Station Power Module with Aux Power



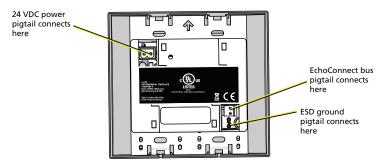
Installation and Setup

The Elaho Astronomical Timeclock (E-ATC) is designed to install into a flush mounted, industry standard, two gang back box (provided by others). Installation should follow local codes and standard practices.

Install the back box flush and square for best installation results. Alternatively, a surface mounted back box may be used (sold separately and available from Echoflex Solutions.)

Connect Wiring

The E-ATC ships with an EchoConnect pigtail, a 24 VDC power pigtail, spacers and all required screws and connectors for the installation.



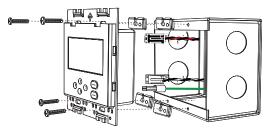
Note: When using Category 5 (or equivalent) cable on the EchoConnect communication bus, please note the following:

- Cat5 wiring must be terminated using EchoConnect Cat5 Termination 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.
- 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 station ESD ground wire pigtail.
 - a. Strip 11 mm (7/16 in) 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[®] 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. Terminate EchoConnect 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 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.
- 4. Terminate and connect 24 VDC auxiliary power wires. 24 VDC is required to power the Astronomical TimeClock.
 - a. Strip 11 mm (7/16 in) from the ends of each wire.
 - b. Use the WAGO connectors provided to connect the auxiliary power pigtail and the installed auxiliary power wires .One WAGO should be used for the red pair (positive +) and one for the black wire pair (negative -). Open the terminal levers on the WAGO connector and insert the installed auxiliary power wire and the lead from the pigtail into the terminals, then close the levers.
- 5. Install the two position connector from the 24 VDC aux power pigtail to the mating receptacle on the station electronics.

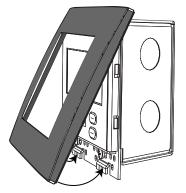
Install the E-ATC into the Back Box

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.
- 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.
- 4. Secure the station in place using the four screws provided.
- 5. Using a level, align the E-ATC perfectly square to the walls. If the station is not installed level and flush, the faceplate will not fit properly to the unit or against the wall. Refer to step 2 for information regarding use of the provided spacers to mitigate flush mount issues.

Install the Faceplate



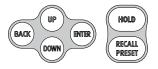
The faceplate is secured to the station with built-in magnets.

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

User Interface Overview

Keypad

The user interface has an easy to use menunavigation keypad that includes [UP], [DOWN], [BACK], and [ENTER] buttons. The [RECALL PRESET] and [HOLD] buttons are provided for everyday time clock operation.



Pressing [UP], [DOWN], or [ENTER] will activate the main menu. Pressing the [RECALL PRESET] or [HOLD] buttons wakes the display and invokes the respective timeclock function.

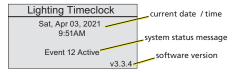
Display

The display is backlit for easy viewing. Press any button to wake the display and backlight. The backlight sleeps after two minutes of inactivity.

To change the display contrast press and hold the **[BACK]** button while tapping the up or down button.

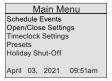
Status Display

The default menu reverts to the status display after two minutes of inactivity. The status display may also be viewed by pressing the **[BACK]** button while navigating the main menu.



Menu

The menu is displayed during manual activity. After two minutes of inactivity the menu will revert to the status display.



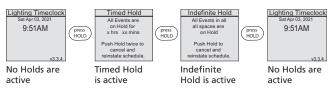
Hold

A Hold triggers an override to one or more scheduled events, allowing manual lighting control to persist. When a hold is active, regularly scheduled events are ignored and "-Schedule on Hold -" is displayed for the affected space.

When an active hold is cleared, the originally scheduled event is restored. Without an active hold condition any manual lighting control will be replaced by the next scheduled event that occurs.

Pressing the **[HOLD]** button cycles through the available hold types including Timed Hold, Indefinite Hold, and No Hold.

A Holiday Shutoff is an additional type of hold that is configured from the main menu and also shuts off lights for a period of time. For more information, see *Holiday Shut-Off on page 25*.



Pressing the **[HOLD]** button once during a Timed Hold will start an Indefinite Hold, pressing twice will cancel the hold and reinstate the normal schedule.

If only some spaces have an active Timed Hold but not all, the first press of **[HOLD]** will start a new Timed Hold in all spaces.

Timed Hold

Timed Holds can be initiated two ways:

Pressing the [HOLD] button triggers a Timed Hold in all spaces.

By default, all scheduled events default to allow Auto Timed Hold. A scheduled event with Auto Timed Hold enabled can be interrupted by a manually triggering a preset or sequence.

Set *Auto Timed Hold* within the *Schedule Events* Menu to dictate if an event responds to a manually activated preset or sequence by starting a Timed Hold automatically. For more information, see *Auto Timed Hold on page 16*.

The display indicates the affected space with a Timed Hold enabled. Both the space number and the time remaining are shown. If additional spaces have a Timed Hold enabled, the display will cycle through all spaces at two second intervals.

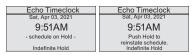


A Timed Hold will automatically clear after the configured Hold Time, which defaults to two hours (120 min).

Indefinite Hold

Manual Indefinite Hold is enabled by pressing the **[HOLD]** button; press once if a Timed Hold is already active, or twice if no hold is currently active.

An Indefinite Hold can only be cleared by pressing the [Hold] button once. Until cleared, all scheduled events will be overridden and will not occur. When the Indefinite Hold is cleared, the current scheduled event will be reinstated.



Recall Preset

The **[RECALL PRESET]** button provides easy, manual preset activation. When pressed, the Presets Menu displays.



Use the **[UP]** and **[DOWN]** buttons to scroll to and select the desired preset number. See for information on programming presets.

Press the [BACK] button to exit the Presets menu.

Main Menu

The Main Menu provides access to set up and configure events, timeclock settings, Preset and Sequence controls, and Holiday Shut-Off settings.



Schedule Events



The E-ATC supports up to 50 programmed events. Event control actions may include Preset, Sequence, Off, or None. Events may be set to occur and re-occur every day, on weekdays, on weekends, or on individual days of the week.

Events can also be set to occur at a particular time of day by specifying hours and minutes, and am. or pm., or with an offset time based on an astronomical event, such as before sunrise, after sunrise, before sunset, or after sunset.

It is also possible to program master Open and Close settings that remain available to all scheduled events. See *Open/Close Settings on page 18*.

Manual control replaces an active or scheduled event in a last takes precedence (LTP) manner. If there is not an active hold condition when the next scheduled event should occur, the scheduled event will execute and the manual control will be overridden.

Auto Timed Hold

All scheduled events support a configurable Auto Timed Hold property with options of No, Yes, and While Closed. By default, all events are set to use Yes for the Auto Timed Hold setting.

When a preset or sequence is manually triggered during an event and Auto Timed Hold is set to Yes, that active event is placed on hold until the interrupting action has completed and the hold timer lapses (hold timer is default is 120 minutes), or in the case of the While Closed setting, the Open event occurs.

When the hold timer expires, the currently scheduled event executes.

When a manual lighting control event occurs during an event, and Auto Timed Hold set to No, the events schedule is not placed on hold. Instead the next scheduled event will override the manual control at its preconfigured event time.

Schedule an Event

- 1. From the Main Menu, select Schedule Events. The Schedule Events menu appears with event number selected.
- 2. Press [ENTER] to modify the event number.
- 3. Use the **[UP]** and **[DOWN]** buttons to increment / decrement the list of available event numbers. Press **[ENTER]** to accept the current displayed selection.
- 4. Scroll to select Action and press [ENTER]. Each press of [ENTER] cycles through the available list of action options including Preset, Sequence, Off, and None.



- a. Scroll to select either Preset or Sequence and press [ENTER]. The focus changes to Action.
 - When Preset or Sequence is the selected action, additional menu options display for specification.
- b. Press [DOWN] to advance to Space.
- c. Press [ENTER] to choose the Space number.
- d. Use the **[UP]** and **[DOWN]** buttons to scroll to the desired Space number from the available Spaces in the system. A maximum of 16 spaces can be programmed per system.
- e. Press [ENTER] to commit the selection.
- 5. Scroll through the Schedule Events menu and select either Preset or Sequence, depending on what was chosen in Step 4a.
- 6. Press [ENTER] to modify the number.
- 7. Scroll to select the Preset or Sequence number and press **[ENTER]** to commit the current displayed selection.
- 8. Press [ENTER] to return to Preset or Sequence.
- 9. Scroll to select Recurrence from the menu list and press **[ENTER]**. The recurrence list displays for selection.
 - a. Scroll the recurrence list and select the desired option.
 - b. Press [ENTER] to accept the selection.

10. Scroll to select When from the menu list and press **[ENTER]**. A list displays for selection of either a time of day or astronomical time settings.

a. Scroll the listing and select the desired option.

- b. Press [ENTER] to accept the selection.
- 11. Scroll to select Time from the menu list and press **[ENTER]**. Time displays differently depending on the type of When menu selection made in step 10a.
 - If Time of Day was selected, the time selection will display as hh:mm (am or pm).
 - If an astronomical setting was selected, the time selection will display as 00h: 00m (##:## am). You must enter the specific desired hour and minute offset from the selected astronomical setting. For example, if Before Sunset is selected, you must choose how long before sunset you would like your event to execute in hours and minutes. The time displayed in parenthesis is the automatically calculated time of execution based on your selected offset.
 - If Open/Close times are selected for an event, Time will not be available. The Open/Close times take precedence.
- 12. Scroll to select Auto Timed Hold from the menu list and press **[ENTER]** to change the setting from default While Closed to either No or Yes.
 - See Auto Timed Hold on page 16 for operation details.

Open/Close Settings

The Open/Close settings allow you to program the E-ATC to have a master Open and Close time that will be available to all scheduled events.

- 1. From the Main Menu, navigate to Open/Close Settings and press **[ENTER]**.
- 2. Press [ENTER] once to navigate to the Time field. Each subsequent press of [ENTER] commits the current selection and progresses to the next available selection field. Pressing [BACK] discards any changes and highlights the previous selection.
 - The default for Open is 8:00 am.
 - The default for Close is 9:00 pm.

Timeclock Settings

Timeclock	Settings
Time: Time Style: Date: Hold Time: Flick Warn: Warn Time: Time Zone:	1:05 am 12 hour Apr / 3 / 2021 120 min Yes 2 min GMT -6
Latitude: Longitude: DST: Manual DST Dates Restore Defaults	43 8 N 89 20 W US

The Timeclock Settings menu provides access to display preferences such as current Time and Time Style (12 hour or 24 hour clock), current Date, Hold Time, Flick Warn, Warn Time, Time Zone, and Daylight Saving Time (DST) location details. In addition, this menu provides the ability to restore the Timeclock to factory defaults.

Change Current Time

- 1. Select Timeclock Settings from the Main Menu. The Timeclock Settings menu displays with current Time selected.
- 2. Press [ENTER] to modify the current hour.
 - a. Use the **[UP]** or **[DOWN]** buttons to increment/decrement the current hour. The Time Style determines a.m. and p.m. settings.
 - b. Press **[ENTER]** to accept the selection.
- 3. Scroll to the current minute and press **[ENTER]** to modify the selection.
 - a. Use the **[UP]** or **[DOWN]** buttons to increment/decrement the current minute.
 - b. Press [ENTER] to accept the selection.

Change Time Style

Change the Timeclock display style from a 12 hour clock to a 24 hour clock.

- 1. Select Time Style from the Timeclock Settings menu.
- 2. Press [ENTER] to modify the current selection.
 - a. Use the **[UP]** or **[DOWN]** buttons to scroll the menu and select either 12 Hour or 24 Hour, then press **[ENTER]**.

Change Current Date

- 1. Select Date from the Timeclock Settings menu.
- 2. Press **[ENTER]** to modify the current selection. The Month field will display selected.
- 3. Use the **[UP]** or **[DOWN]** buttons to scroll to the current month and press **[ENTER]**. The Day field will display selected.
- 4. Use the **[UP]** or **[DOWN]** buttons to scroll to the current day and press **[ENTER]** to select a new date. The Year field will display selected.
- 5. Use the **[UP]** or **[DOWN]** buttons to scroll to the current year and press **[ENTER]** to select a new year.

Configure Hold Time

Hold Time is the length of time that all Timed Hold conditions will remain, until the schedule resumes normal operation. Hold Time is set to 120 minutes by factory default to comply with energy conservation standards. You may change the Hold Time to any value from 10-360 minutes, in 10 minute increments.

- 1. Select Hold Time from the Timeclock Settings menu.
- 2. Press [ENTER] to modify the current selection.
- 3. Use the **[UP]** or **[DOWN]** buttons to scroll to the desired Hold Time and press **[ENTER]**.

Set Flick Warn

Flick Warn is a feature that provides visual warning to occupants in a space when the next pending scheduled event is an Off action. The E-ATC will flash the lights on and off for a set length of time before the pending Off action occurs, allowing a user to either issue a Hold command, or use manual lighting control to issue an Auto Timed Hold. The amount of time before Flick Warn activates is determined by the Warn Time setting within the Timeclock Settings menu. This setting applies to all scheduled Off events.

- 1. Select Flick Warn from the Timeclock Settings menu.
- 2. Press [ENTER] to modify the current selection.
- 3. Use the **[UP]** or **[DOWN]** buttons to scroll and select either Yes or No, then press **[ENTER]** to confirm the current displayed selection.

Set Warn Time

Warn Time is the amount of time before the TimeClock issues a scheduled Off action, preceding a Flick Warn. Factory default Warn Time is two minutes, but can be set to any value from 1-60 minutes.

- 1. Select Warn Time from the Timeclock Settings menu.
- 2. Press [ENTER] to modify the current selection.
- 3. Use the **[UP]** or **[DOWN]** buttons to scroll to the desired Warn Time and press **[ENTER]**.

Set Time Zone

For accurate real-time and astronomical events, the E-ATC must be set to reflect your current time zone. Select the time zone based on hours offset from GMT (Greenwich Mean Time). See www.greenwichmeantime.com for a complete listing of GMT time zones.

- 1. Select Time Zone from the Timeclock Settings menu.
- 2. Press [ENTER] to modify the current selection.
- 3. Use the **[UP]** or **[DOWN]** buttons to scroll and select the current GMT time zone offset and press **[ENTER]**.

Set Latitude and Longitude

Set your accurate location for proper calculation of sunrise and sunset times.

- 1. Select Latitude from the Timeclock Settings menu.
- 2. Press [ENTER] to modify the current selection.
- 3. Use the **[UP]** or **[DOWN]** buttons to scroll and select the accurate angle and press **[ENTER]**.
- 4. Use the **[UP]** or **[DOWN]** buttons to scroll and select the accurate minutes location and press **[ENTER]**.
- 5. Use the **[UP]** or **[DOWN]** buttons to scroll and select either N (North) or S (South), and then press **[ENTER]**.
- 6. Select Longitude from the Timeclock Settings menu and repeat steps 2 through 5 above.

Set Daylight Saving Time

Set the current Daylight Saving Time (DST) location. Selecting an option from this menu list utilizes default Daylight Saving Time dates for the selected location.

- 1. Select DST from the Timeclock Settings menu.
- 2. Press [ENTER] to modify the current selection.
- 3. Use the **[UP]** or **[DOWN]** buttons to scroll to the correct Daylight Saving Time location (choices include None, US, EU, and Manual), then press **[ENTER]**.

Set Manual DST Dates

Set custom or manual Daylight Saving Time dates as needed.

- 1. Select Manual DST Dates from the Timeclock Settings menu.
- 2. Press **[ENTER]** again. The manual DST Dates menu list displays with the current DST start and end dates displayed.
- 3. Press [ENTER] to set new start and end dates.
- 4. Using typical E-ATC navigation and menu set techniques (**[UP]** or **[DOWN]** buttons to scroll and press **[ENTER]** to set), select and set the start of daylight saving time Month, Day of Week, and Occurrence settings.
- 5. Scroll to DST End Date and set the end of daylight saving time Month, Day of Week, and Occurrence settings.

Presets

The Presets menu provides access to manually activate, record, and deactivate host presets. The number of presets available is dependent on the product type.

- Elaho Relay Panel and the ETC Sensor IQ up to 64 presets
- ETC Unison DRd rack with E-ACP up to 64 presets
- ETC Sensor3 with CEM3 up to 64 presets
- Elaho Zone Controllers up to 8 presets
- Elaho Room Controller up to 16 presets
- Elaho DMX Scene Controller up to 32 presets

The Presets menu displays the status of the active preset in the selected space. When no preset is active, "No Active Preset" appears and the last preset that was controlled from the E-ATC menu displays for control activation or recording.

Presets	
Space:	1
Preset 15 active	
Preset #	12
Activate	
Record	
- Schedule on Hold -	

Recording a preset from this menu records the preset data across all connected hosts for that specific preset number.

Activate a Preset

- 1. Select Presets from the Main Menu.
- 2. Press [ENTER] to modify the currently selected Space number.
- 3. Use the **[UP]** or **[DOWN]** button to scroll the list of available Spaces, numbered 1–16, and then press **[ENTER]** to commit the selection.
- 4. Press [DOWN] to advance to Preset #, and then press [ENTER] to modify the current selected Preset number.
- Use the [UP] or [DOWN] button to scroll the list of available preset numbers from 1–64, then press [ENTER] to select the new selection. (Maximum number of preset is dependent on the host product type.)
- 6. Press the **[DOWN]** button once to advance to Activate, then press **[ENTER]**. The selected preset will activate across all connected Echo hosts.

Record a Preset

Before recording a new preset or recording over an existing preset, set the desired lighting look using Elaho Inspire or Preset stations, the product user interface, or an external DMX control source.



Note: *Recording a preset will affect the function of the button stations and other products in the system.*

- 1. Select Presets from the Main Menu.
- 2. Press [DOWN] to advance to Preset #, and then press [ENTER] to modify the current selected preset number.
- 3. Use the **[UP]** or **[DOWN]** button to scroll the list of available preset numbers from 1–64, and then press **[ENTER]** to select the new selection. (Maximum number of preset is dependent on the product type.)
- Press the [DOWN] button twice to advance to Record, and then press [ENTER] to initiate the record action. This will record the new preset values to the selected preset across all connected Elaho hosts.

Deactivate

- 1. Select Presets from the Main Menu. The Presets menu displays the status of the active preset in the selected space.
- Press [DOWN] to advance the selection to Deactivate, and then press [ENTER]. The preset will deactivate and the status will display "No Active Preset".

Holiday Shut-Off

The Holiday Shut-Off feature enables override of scheduled events (per individual space) for a specified period of time (1–7 days). The default override is set to 1 day. The Holiday Shut-Off feature is compliant with California Title 24.



When "Start Shut-Off" is selected, a five minute countdown begins. At any time during this countdown, you may cancel the Holiday Shut-Off by pressing the **[BACK]** button.

After five minutes have lapsed, the Shut-Off executes an Off command in the specified spaces and the status display shows the time remaining before the Holiday Shut-Off expires. To reinstate the normal event schedule, press the **[HOLD]** button.

If manual control is initiated while a Holiday Shut-Off is applied, a Timed Hold will start, temporarily permitting the manual lighting control. When the Hold Time expires, lights will shut off in the specified spaces, replacing any manual control, and Holiday Shut-Off will be reinstated using the time remaining.

Configuration of Holiday Spaces

All spaces default to Shut-Off but can be individually configured to be excluded from the Holiday Shut-Off feature, set to unaffected, meaning their normal scheduled events will persist on schedule.

Spaces that are configured to Shut-Off will suspend all scheduled events and their connected lights will be forced off for the selected number of days. See *Holiday Shut-Off above* for more information.

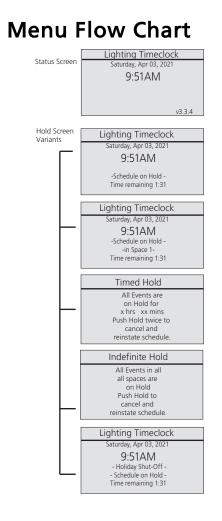
Spaces set to Unaffected will continue to allow normally scheduled events.

- 1. Select Holiday Shut-Off from the Main Menu and press [ENTER].
- 2. Press **[DOWN]** to scroll to Config Holiday Spaces and press **[ENTER]**. The spaces that are configured to the connected system display with their currently set Shut-Off status.
- 3. Use the **[UP]** or **[DOWN]** buttons so scroll through the list and select the space to be modified, then press **[ENTER]** to select the space.
- 4. Press [DOWN] to cycle through the option of Unaffected or Shut-Off.

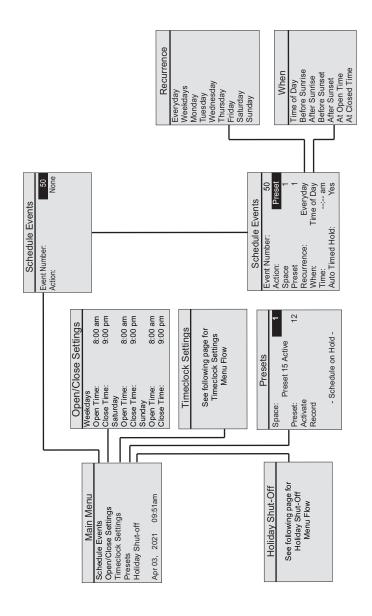
- 5. Press [ENTER] to commit the current selection.
- 6. Repeat steps 3 through 5 for all spaces you want to configure.

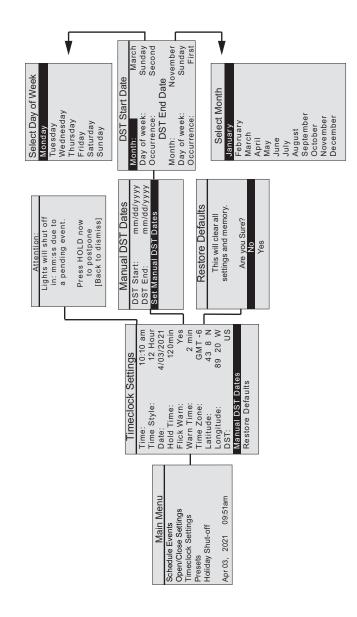
Change Default Shut-Off Time Duration

- 1. Select Start Holiday Shut-Off from the Holiday Shut-Off menu and press [ENTER].
- 2. Use [UP] and [DOWN] to scroll to Shut-Off, and then press [ENTER].
- 3. Press the **[UP]** or **[DOWN]** buttons to increment or decrement the value, then press **[ENTER]** to accept the selection.



Astronomical TimeClock Configuration Manual





Holiday Shut-Off begins in 5:00 Lights will shut off and Scheduled Events will be on Hold for xx days. [Enter to Start now] [Back to Cancel]	Spaces Shut-Off Shut-Off Shut-Off Shut-Off Diaffected Shut-Off Shut-Off Shut-Off
Holiday Shut-Off This feature shuts off gipting and ignores scheduled events in the configured Spaces. Start Shut-Off Shut-Off for: 1 days	Config Holiday Spaces Space 1: Shut-O Space 2: Shut-O Space 3: Shut-O Space 5: Unaffecte Space 5: Shut-O Space 7: Shut-O
Holiday Shut-Off Start Holiday Shutoff Config Holiday Spaces	



Corporate Headquarters ■ Middleton, WI, USA | +1 608 831 4116 Web echoflexsolutions.com | Email info@echoflexsolutions.com | Support service@echoflexsolutions.com @2021 Echoflex Solutions, Inc. Trademark and patent info: echoflexsolutions.com/jp Product information and specifications subject to change. Echoflex intends this document to be provided in its entirety. 8186M1230-3.3.4 Rev C Released 2021-11