



Installation Manual V6.1

Elapsed Timer Control Panel



Elapsed Timer Control Panel

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Important Safety Instructions

Liability Notice

Sapling is not responsible for damages resulting from improper configuration of the Digital Clock, Elapsed Timer Control Panel, and/or third party devices. It is the responsibility of the end-user to correctly configure, test, and confirm the functionality of the Control Panel, Clock, and third party device before use.

This product is UL Listed under UL 863 "Time and Recording Devices". It has not been tested or certified as a medical device.

⚠ DANGER

⚡ SHOCK HAZARD

- Keep the electricity to this device turned OFF until the installation is complete.
- Do not expose the clock movement to water, or install the clock in a location where it may be exposed to water.

NOTICE

- Do not install the device outdoors. Damage to the device if placed outdoors voids the warranty.
- Do not hang objects from the device or the device's mounting parts. It is not designed to support the weight of other objects.
- The device may be cleaned with a damp cloth or disinfectant. Test other cleaning products on a small part of the device housing before attempting to use on the rest of the clock. Avoid bleach and chemicals known to dissolve plastics.

⚠ WARNING

🔥 FIRE HAZARD

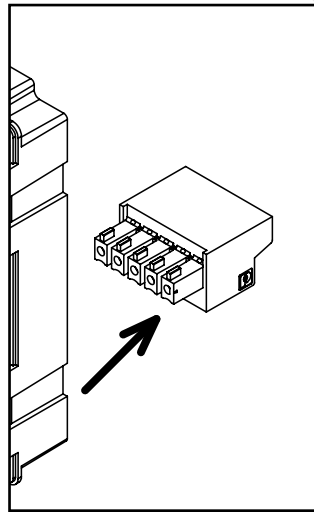
- Always follow your national and regional electrical codes or ordinances.
- The AC power circuit for the clock must be attached to a circuit breaker that can be reset by the user.

⚠ PHYSICAL INJURY HAZARD

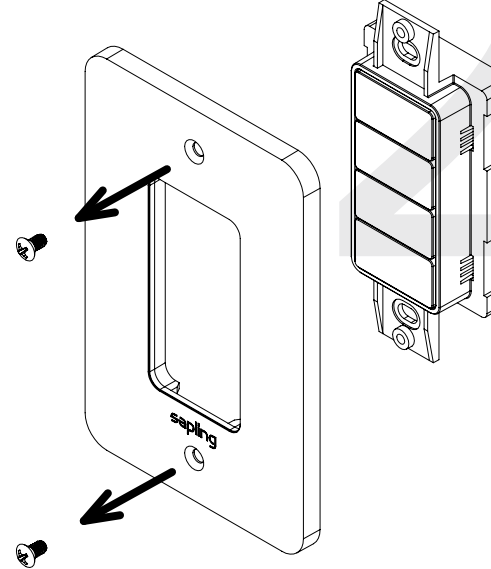
- If you are standing on an object while installing the device, make sure that the object can support your weight, and will not sway or move as you stand on it.
- Take precautions to avoid injury by potential safety hazards near the point of installation including (but not limited to) heavy machinery, sharp objects, hot surfaces, or exposed cables carrying an electric current.
- Follow all mounting instructions exactly as stated in this manual. Failure to do so may result in the device falling off the point of installation.
- Packaging materials and mounting items include plastic bags and small pieces, which pose a suffocation hazard to young children.

Changing the Elapsed Timer Buttons

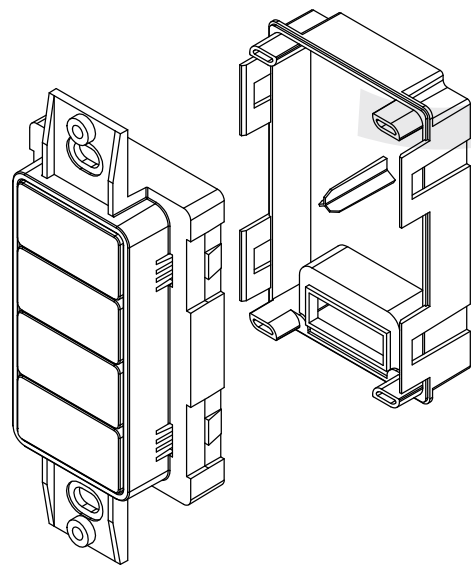
1) Disconnect the power/communications cable from the elapsed timer control panel.



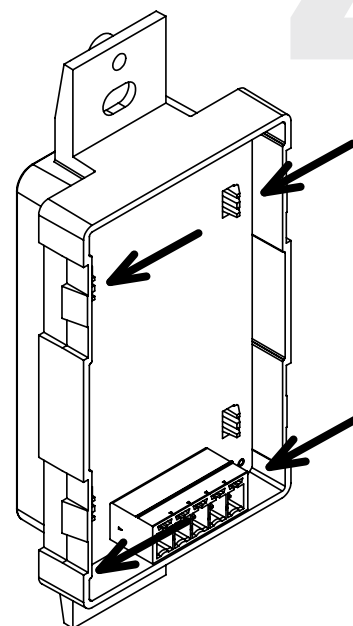
2) Remove the face of the Elapsed Timer by unscrewing the two screws on the front cover.



3) Flip the Elapsed Timer over with button side facing down. Remove the back cover by slightly pulling each tab (two on each side) away from the case. Lifting the back cover off will reveal a green circuit board.

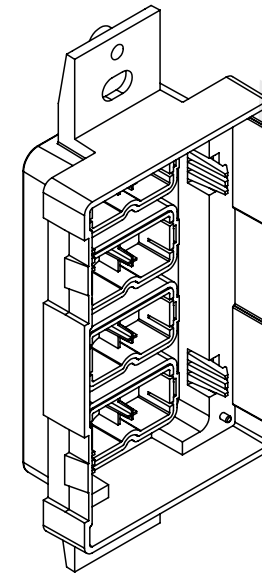


4) Remove the circuit board by squeezing the 4 gray tabs that hold the circuit board in place. Squeeze the top two tabs together, followed by the bottom two tabs, until the circuit board detaches from the button case. Remove the circuit board and set it aside.

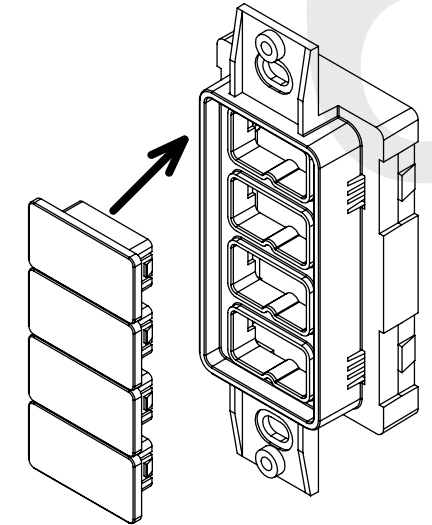


Changing the Elapsed Timer Buttons

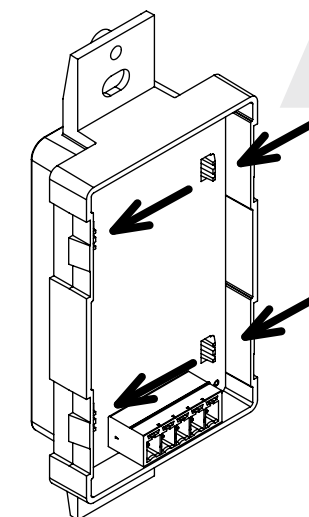
5) The backside of the standard four buttons should be visible. In order to remove a button, squeeze the tabs on either side of the button together until the button is released from the case. Remove as many buttons as needed.



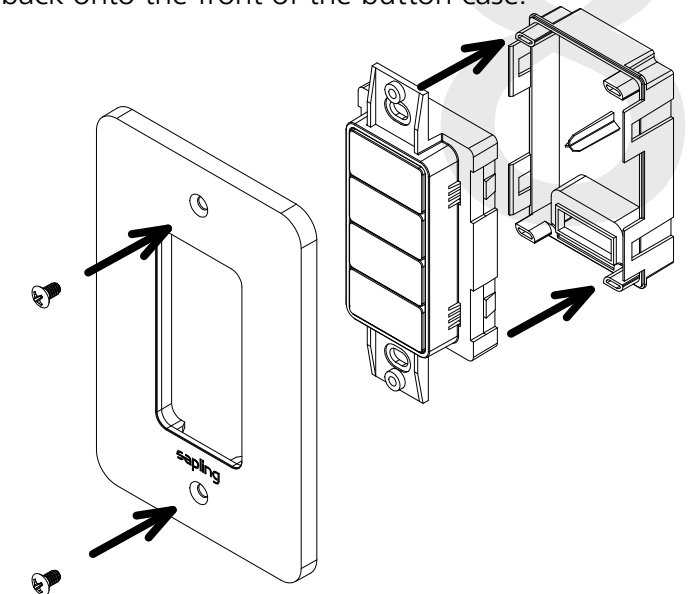
6) To add a button from the kit, position the button case button-side up, line up the selected button with the holes, and press the button into the hole so that it snaps into place.



7) Once the buttons are in place, position the button case button-side down, orient the green circuit board so that the green connector is towards the bottom of the timer and pointed up, then press the circuit board into place over the buttons until all four of the gray tabs are secured.

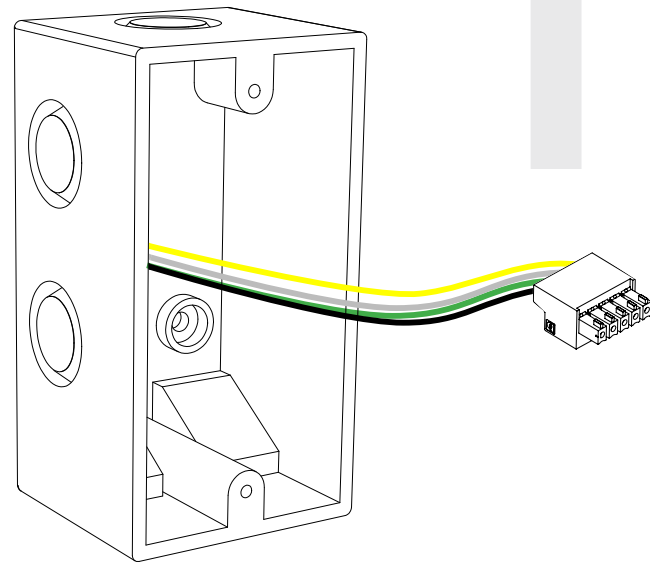


8) Place the back cover over the circuit board until all four white tabs have been secured, then use a screwdriver and screws to attach the front cover back onto the front of the button case.

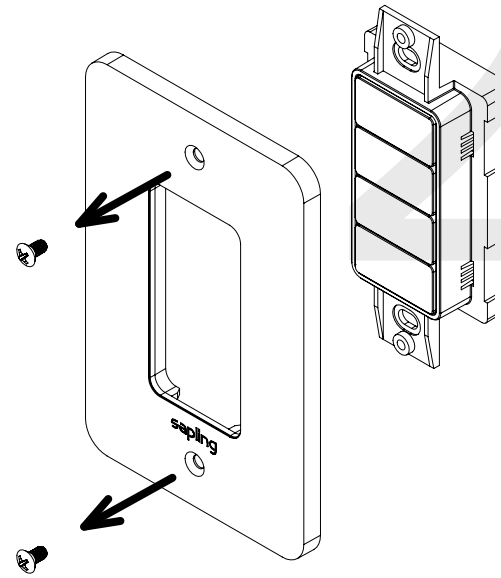


Installing the Elapsed Timer Control Panel

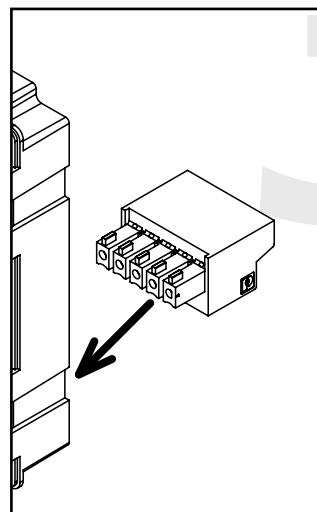
1) Run the power/communications cable to the gang box. Confirm that the green connector has been properly attached to the cables. Use the diagram on the next page as a guide.



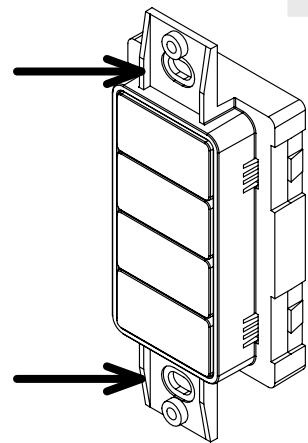
2) Remove the face of the Elapsed Timer by unscrewing the two screws on the front cover.



3) Attach the control panel to the power and communications cable by inserting the green connector into the port.

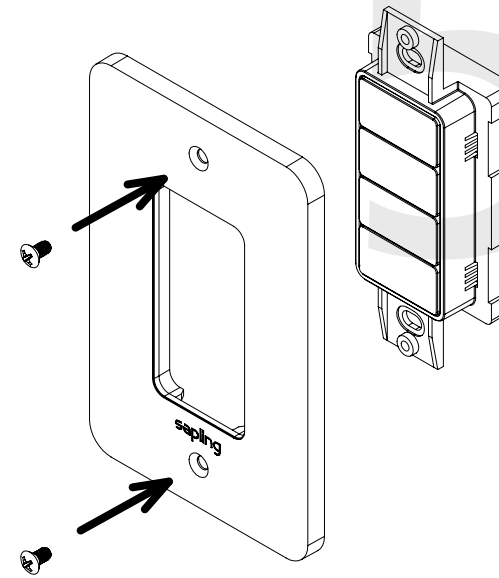


4) There will be a pair of holes above and below the buttons. Align the holes closest to the buttons with the connection holes on the gang box. Use screws to attach the control panel to the gang box. Do not use the outer holes as they are for the front panel screws. Remove the circuit board and set it aside.



Installing the Elapsed Timer Control Panel

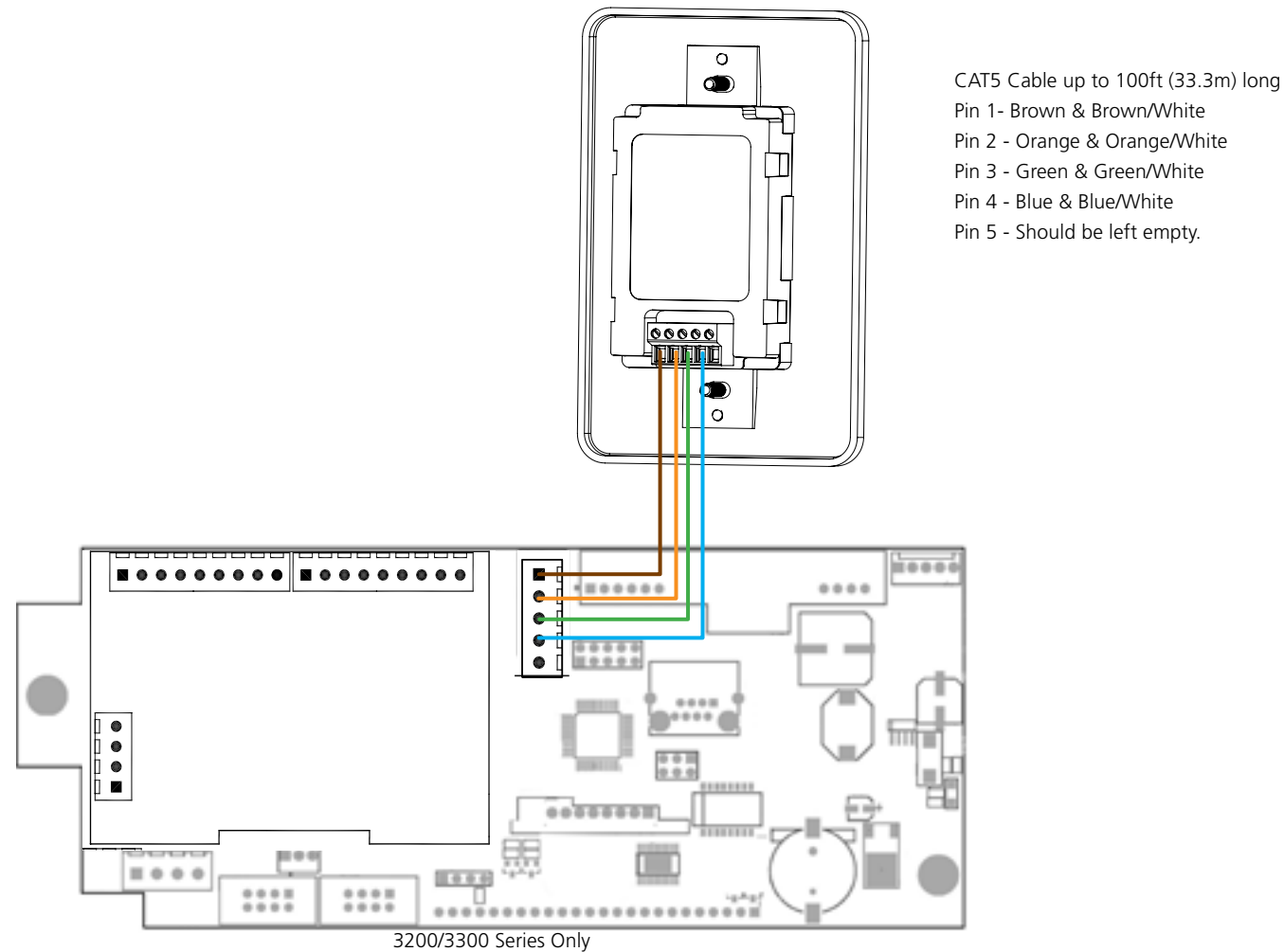
5) Use a screwdriver and screws to attach the front cover back onto the button case.



6) When the control panel is powered, it will perform a start-up test by cycling through the colored LEDs behind each button. If the LEDs do perform the start-up test, check the connection between the clock and control panel.

Wiring for the Control Panel (IP Only)

Reminder: Electricity can be dangerous at higher voltages. Keep the electricity to this device turned off until after the wiring has been added. Do not add new circuitry while the device is operating.



CAT5 Cable Notes:

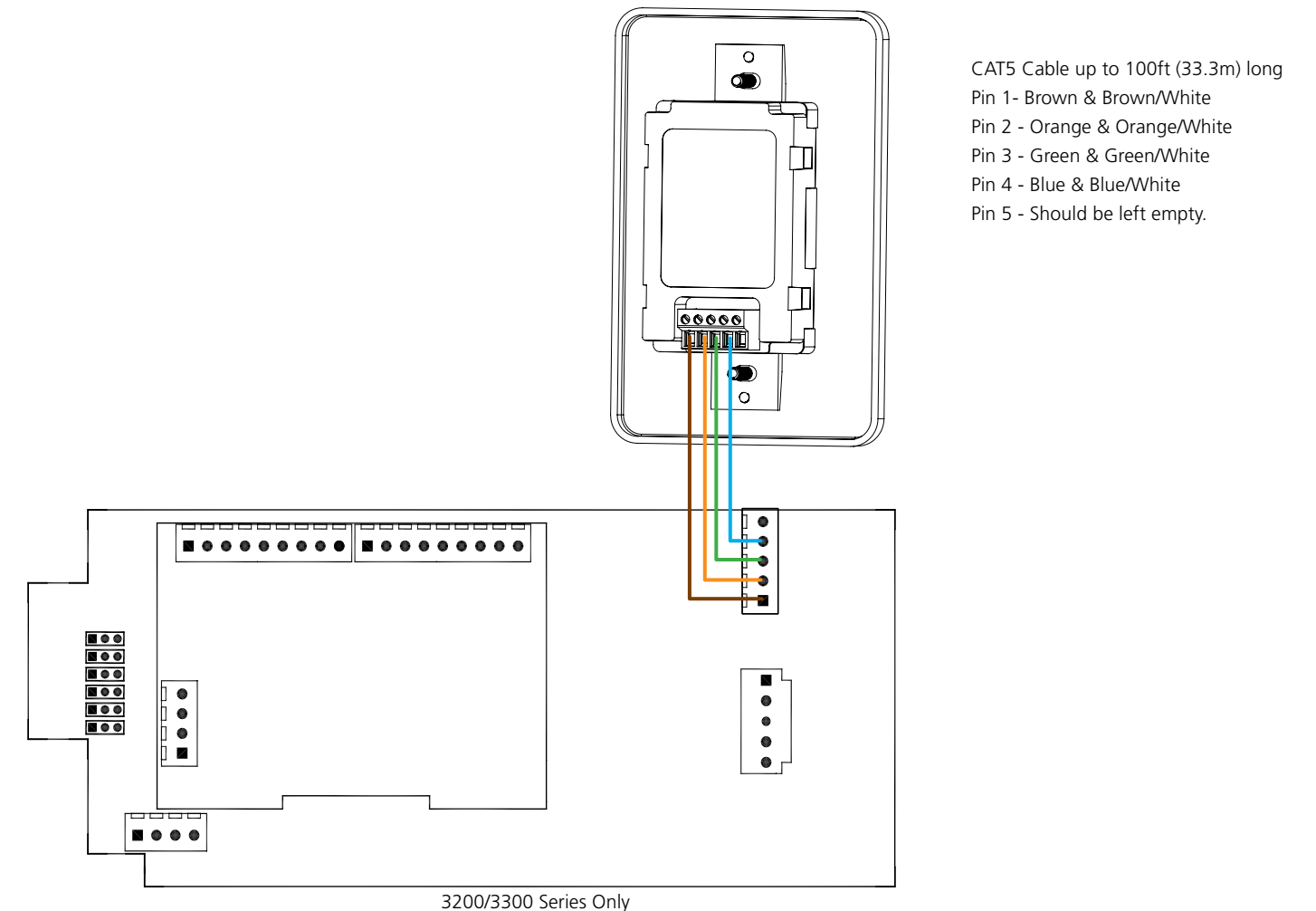
Use an 8 conductor 24AWG CAT5 cable up to 100 feet long, and use the wire colors shown above. Pin 1, Pin 2, Pin 3, and Pin 4 each use the wire pair described above. Both of the green 5-pin connectors should be wired the same way: a wire going into port 1 on one connector should also go into port 1 on the other connector.

Strip the insulation back 1/4 inch on all wires and twist the two wires of each pair together. Insert each pair of wires into the appropriate port on the connector and tighten the screws.

***Customer must supply CAT5 cable to connect the Elapsed Timer to the digital clock.**

Wiring for the Control Panel (All Other Clocks)

Reminder: Electricity can be dangerous at higher voltages. Keep the electricity to this device turned off until after the wiring has been added. Do not add new circuitry while the device is operating.



CAT5 Cable Notes:

Use an 8 conductor 24AWG CAT5 cable up to 100 feet long, and use the wire colors shown above. Pin 1, Pin 2, Pin 3, and Pin 4 each use the wire pair described above. Both of the green 5-pin connectors should be wired the same way: a wire going into port 1 on one connector should also go into port 1 on the other connector.

Strip the insulation back 1/4 inch on all wires and twist the two wires of each pair together. Insert each pair of wires into the appropriate port on the connector and tighten the screws.

***Customer must supply CAT5 cable to connect the Elapsed Timer to the digital clock.**

Registering the Elapsed Timer Control Panel with a Digital Clock

Registering with Digital IP Clocks

1. Type the IP address of the IP clock into a web browser such as Internet Explorer or Firefox. This will load the web interface for the IP Clock.
2. Log in to the interface. Refer to the digital IP clock manual for password help.
3. Once the Elapsed Timer is connected to the port on the digital IP clock, press any button on the Elapsed Timer.
4. Refresh the web interface page by clicking on the web browser's refresh button. The Elapsed Timer tab will appear in the menu bar. After this step is performed once, the IP clock will always recognize the Elapsed Timer.

Registering with All Other Digital Clocks

All other Digital clocks should have the elapsed timer already available as an option through the SBDCconfig menu

1. Connect the Digital clock to an applicable PC using the USB link cable. Refer to the digital clock manual for more information.
2. Open the sbdconfig.exe software on the PC.
3. Once the Elapsed Timer is connected to the back of the digital clock, press any button on the Elapsed Timer.
4. Close out of and reload the sbdconfig software page. The Elapsed Timer tab will appear in the taskbar. After this step is performed once, the digital clock will always recognize the Elapsed Timer.

Configuring the Elapsed Timer Buttons



1. Program the first button on the Elapsed Timer by selecting one of the options in the drop down list next to Button 1. Listed below are the options and their functions:

No Action - This function disables the button. Nothing will happen if the button is pressed.

Return to Time Display - Pressing the button causes the clock to display the time. If a countdown or count up is in progress, the function is reset when the button is pressed.

Briefly Display Date - Pressing this button causes the clock to briefly display the date. This only works if the clock is displaying the time, not a countdown.

Go to Count Up and Hold - Pressing the button causes the clock to display and hold at zero. If the Count Up and Hold button is pressed and held for three seconds while a count up is in progress, the count up will reset to zero and hold. Refer to the section "Performing a Count Up" for more information.

Go to Count Up and Start - Pressing the button causes the clock to switch from its current display and begin a count up from zero. If the Count Up and Start button is pressed and held for three seconds while a count up is in progress, the count up will reset to zero and begin again. Refer to the section "Performing a Count Up" for more information.

Go to Count Down and Hold - Pressing the button causes the clock to display and hold at a start time specified by the user. If the Count Down and Hold button is pressed and held for three seconds while a countdown is in progress, the count up will reset to its start time and hold. Refer to the section "Setting up a Countdown" for more information.

Go to Count Down and Start - Pressing the button causes the clock display to begin counting down from a time specified by the user. If the Count Down and Start button is pressed and held for three seconds while a countdown is in progress, the count up will reset to its start time. Refer to the section "Setting up a Count Down" for more information.

Reset - Pressing the button restarts whichever countdown/count up is in progress.

Start/Stop - Pressing the button causes the timer to pause or resume its counting functions.

Shift Digits - Pressing the button causes the digits to shift from displaying Hour/Minutes to Minutes/Seconds (Applies to 4 digit clocks only).

Configuring the Elapsed Timer Buttons (ctd.)

Flash Time - Pressing the button causes the clock to briefly display the time while another function, such as count up or count down, is occurring. Pressing the button does not pause, stop, or reset whichever function is occurring at the same time.

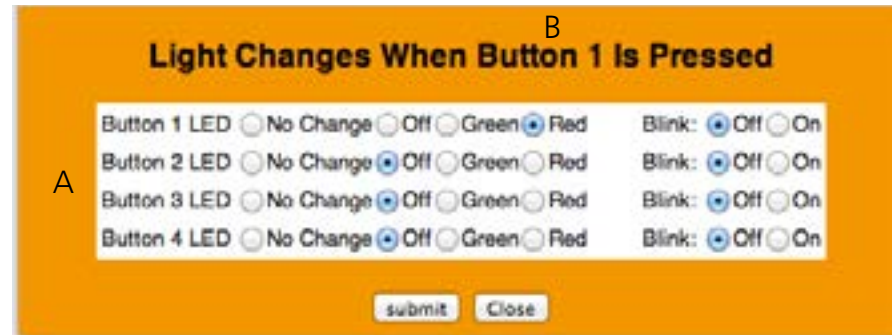
Relay 1 - Pressing the button causes Relay 1 to activate.

Relay 2 - Pressing the button causes Relay 2 to activate.

Code Blue - Performs a special-purpose count up. Refer to the section labeled "Code Blue"

2. Program the color settings for the control panel button lights.

The LED configuration window (Fig 4) allows the user to configure changes to each **LED (A)** whenever the **Title Button (B)** is pressed. For orientation purposes, Button 1 refers to the top button, while Button 4 refers to the bottom button.



No Change: The LED in the listed row will remain whichever color it was before the Title Button was pressed.

Off: The LED in the listed row will turn off whenever the Title Button is pressed.

Green: The LED in the listed row will emit green light whenever the Title Button is pressed.

Red: The LED in the listed row will emit red light whenever the Title Button is pressed.

Blink On / Off: When set to On, the LED in the listed row will cycle between lit and unlit whenever the Title Button is pressed. When set to OFF, the LED will remain in its initial state (No Change/Off/Green/Red)

Submit: This button saves and applies the entered selections.

Close: This button closes the LED configuration window. It does not save or apply changes to the selections.

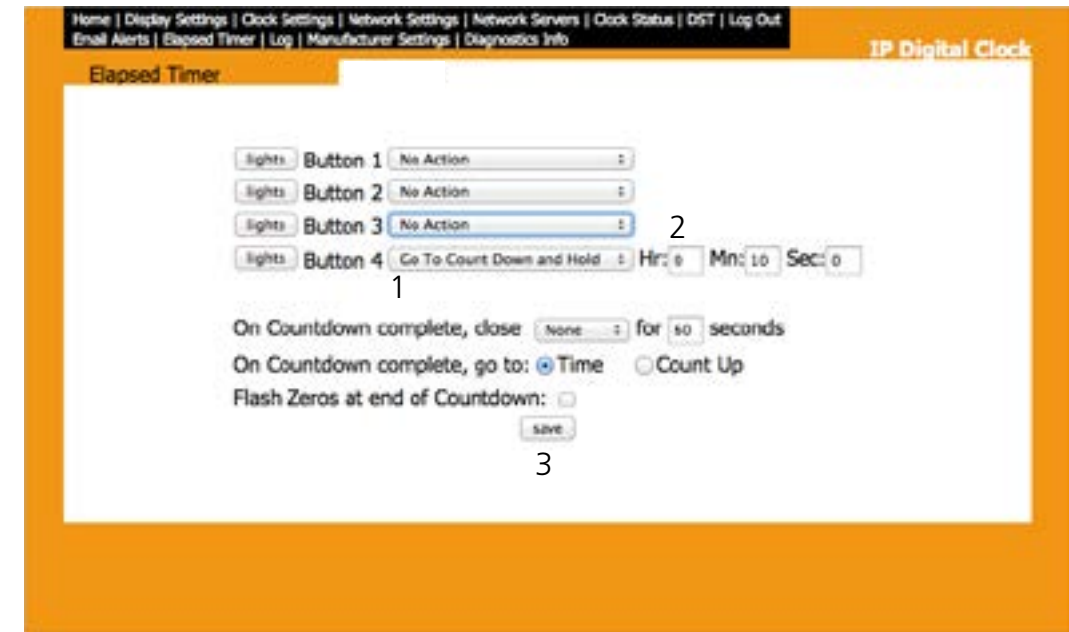
3. Repeat steps 1 and 2 for the three remaining buttons.

4. After all four buttons and the lights on the Elapsed Timer are set, click Save in the configuration window/web interface to store the selected options.

Note: Changes made for one Title Button are only applied to that Title Button. If Title Button 1 has LED 1 set to red, and Title Button 2 has LED 1 set to green, then LED 1 will emit red light when Button 1 is pressed, and green light when Button 2 is pressed.

Setting up a Countdown with sbdconfig or Web Interface

1. Before any of the countdown options can be used, the length of the countdown must be entered through the Elapsed Timer tab. Whenever the Count Down and Hold option or Count Down and Start option is selected for a given button, text boxes for hours, minutes, and seconds will appear next to the drop-down menu.



2. Enter the hours (Hr:), minutes (Mn:), and seconds (Sec:) to indicate where the countdown will begin.

3. Click Save to save and apply the selected data values.

Setting up a Countdown without sbdconfig or Web Interface

A user has the ability to adjust the start time of a countdown by using the buttons on the Elapsed Timer Control Panel.

1. Press and hold the button that is associated with the countdown. While holding down the selected Count Down button, press any other button on the Elapsed Timer. The display on the digital clock will change to hours (Hr:).

Note: If both buttons are pressed and held for more than 5 seconds, the Elapsed Timer will enter testing mode. When a control panel is in testing mode, the LEDs will turn on and off in sequence and users will be unable to program the buttons. In order to exit testing mode, press and hold any two buttons on the Elapsed Timer for 5 seconds and the device will return to normal mode.

2. Press the Count Down button repeatedly in order to advance the time in hours.

3. Once the hour is selected, press any other button on the Elapsed Timer to change the display to minutes (Mn:).

4. Press the Count Down button repeatedly in order to advance the time in minutes.

5. Once the minutes are selected, press any other button on the Elapsed Timer to change the display to seconds (Sec:).

6. Press the selected Count Down button in order to advance the time in seconds.

7. When the countdown start time has been chosen, press any other button on the Elapsed Timer to return to the time display.

Note: Changing the start time of a countdown using the Elapsed Timer will not affect the 'Lights' settings.

Performing a Countdown

If Count Down and Hold option is selected:

1. Press the button associated with the Count Down and Hold option. The preset countdown time will be shown.
2. In order to begin the countdown, press the Count Down and Hold button a second time.
3. Pressing the Count Down and Hold button a third time will reset the countdown (same as step 1).
4. In order to pause and resume the countdown, a button programmed with the start / stop function must be used.
5. The display will only revert to showing the time if a button programmed with "Return to Time Display" has been pressed.

NOTE: The Start / Stop option may also be used to start / stop the count up process.

If Count Down and Start option is selected:

1. Press the button associated with the Count Down and Start option. The preset countdown time will be shown and the clock will begin counting down.
2. Pressing the button a second time will reset the countdown and cause the countdown to begin again (same as step 1).
3. In order to pause and resume the countdown, a button programmed with the start / stop function must be used.
4. The display will only revert to showing the time if a button programmed with "Return to Time Display" has been pressed.

NOTE: The Start / Stop option may also be used to start / stop the count up process.

Performing a Count Up

If Count Up and Hold option is selected:

1. Press the button on the control panel associated with the Count Up and Hold option. Every digit on the display will become a zero.
2. To start the count up, press the Count Up and Hold button a second time.
3. To pause the count up, press the Count Up and Hold button again. To resume count up, press the Count Up and Hold button again.

NOTE: The Start / Stop option may also be used to start / stop the count up process.

4. To reset the count up, press and hold the Count Up and Hold button for at least three seconds.
5. The display will only revert to displaying the time if a button programmed with "Return to Time Display" has been pressed.

If Count Up and Start option is selected:

1. Press the button on the control panel associated with the Count Up and Start button. A count up from zero will automatically begin.
2. In order to pause the count up, press the Count Up and Start button again. To resume count up, press the Count Up and Start button again.

NOTE: The Start / Stop option may also be used to start / stop the count up process.

3. To reset the count up, press and hold the Count Up and Start button for at least three seconds.
4. The display will only revert to displaying the time if a button programmed with "Return to Time Display" has been pressed.

Code Blue

Code Blue is a special-purpose count up designed for use in hospitals and other medical facilities. This function overrides the control panel LED settings. The lights are green while the timer is running and red when the timer has been paused.

When a button programmed with Code Blue is pressed once, the count up starts.

When the button is pressed a second time, the count up pauses. If the button is pressed a third time, the countdown will resume.

When the button is pressed and held for three seconds, the count up resets to zero and the display goes back to showing the time.

If a button programmed with the Start/Stop function is pressed while Code Blue is running, the count up will pause. If Stop is pressed again, the count up will resume.

Programming Dedicated Code Blue and Stop Buttons

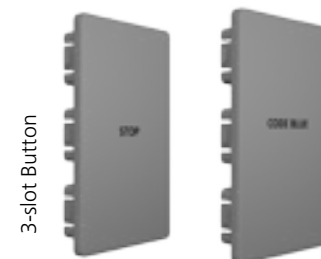
Dedicated Code Blue and Stop buttons are sold as part of a kit (Ask for Part Number SBD-ELT-BUT-0)

Some of the dedicated Code Blue and Stop buttons take up more than one slot on the control panel. In these cases, every slot that is taken up by a button should be programmed to perform the function of that button. This means that if a button is occupying slots 1, 2, and 3, then button slots 1, 2, and 3 should all be programmed with the same function and light settings.

Some examples are listed below:



In this configuration, the button takes up two of the four slots on the control panel. Depending on the label, the button must be programmed by entering the function "Code Blue" or "Stop" for two consecutive buttons on the Elapsed Timer tab. If the button was installed in the top two slots, then Buttons 1 and 2 should be configured for the same function. If the button was installed in the bottom two slots, then Buttons 3 and 4 should be configured for the same function. See Configuring the Elapsed Timer Buttons for more information.



In this configuration, the button takes up three of the four slots on the control panel. Depending on the label, the button must be programmed by entering the function "Code Blue" or "Stop" for three consecutive buttons on the Elapsed Timer tab. If the button was installed in the top three slots, then Buttons 1, 2 and 3 should be configured for the same function. If the button was installed in the bottom three slots, then Buttons 2, 3, and 4 should be configured for the same function. See Configuring the Elapsed Timer Buttons for more information.



In this configuration, the button takes up all four slots on the control panel. The button must be programmed by entering the function "Code Blue" for all four buttons on the Elapsed Timer tab. See Configuring the Elapsed Timer Buttons for more information.

WARNING

TEST THIS SYSTEM THOROUGHLY BEFORE USING IT ON CRITICAL CARE PATIENTS. FAILURE TO PROPERLY CONFIGURE THE BUTTONS WILL RESULT IN THE WRONG ACTION BEING PERFORMED BY THE TIMER.

Configuring Relays for Countdowns (3300 Only)

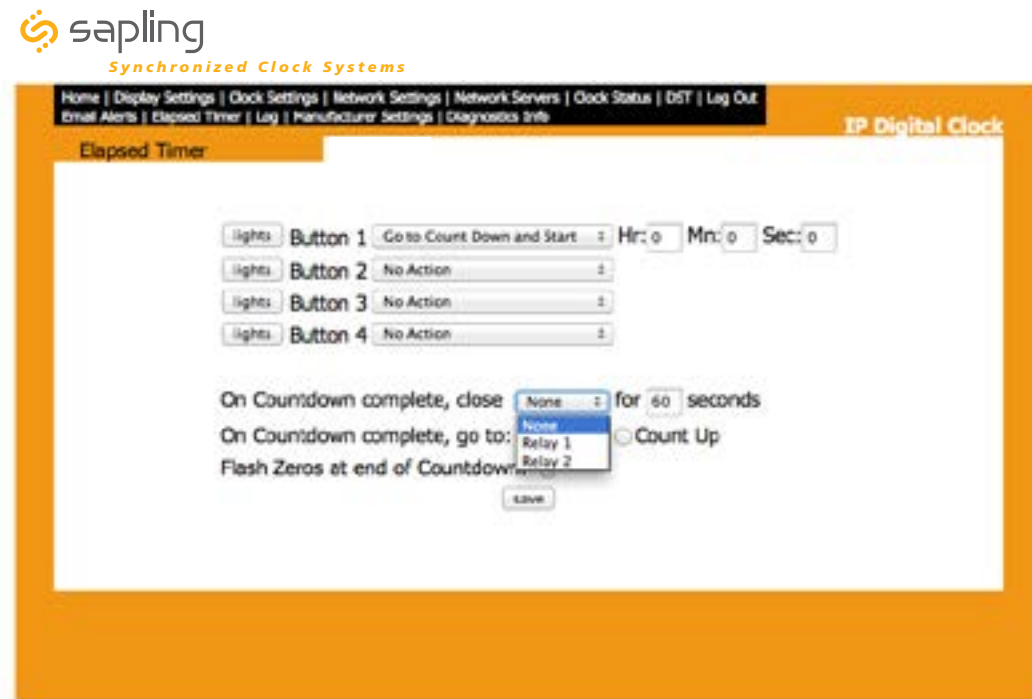


Fig. 6

1. When a user schedules a countdown, they may also command a relay to close after a countdown is complete (if using a 3300 Series Digital Clock). This is configured through the configuration window or web interface (Fig. 6). Listed below are the options for this function:

- None - When the countdown completes, neither relay will close.
- Relay 1 – When the countdown completes, Relay 1 will close for the number of seconds* entered into the box to the right.
- Relay 2 – When the countdown completes, Relay 2 will close for the number of seconds* entered into the box to the right.

* Relays may close for 60 seconds or less. They may not close for more than 60 seconds.

2. Click Save in order to save and apply the selected options.

Relay Contact Rating:

- 0.3A at 110 VAC
- 1A at 24 VDC

Warranty

Sapling Limited Warranty and Disclaimer

The Sapling Company, Inc. warrants only that at the time of delivery and for a period of 24 calendar months after delivery or the period stated in this invoice, if different, the Goods shall be free of defects in workmanship and materials, PROVIDED that this warranty shall not apply:

To damage caused by Buyer's or any third party's act, default or misuse of the Goods or by failure to follow any instructions supplied with the Goods.

Where the Goods have been used in connection with or incorporated into equipment or materials the specification of which has not been approved in writing by The Sapling Company, Inc.;

To Goods which are altered, modified or repaired in any place other than a Sapling Company, Inc. factory or by persons not expressly authorized or approved in writing by The Sapling Company, Inc.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WITH RESPECT TO GOODS DELIVERED UNDER THIS CONTRACT, WHETHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The foregoing warranty runs only to Buyer. There are no oral or written promises, representations or warranties collateral to or affecting this contract. Representatives of The Sapling Company, Inc. may have made oral statements about products described in this contract. Such statements do not constitute warranties, shall not be relied on by Buyer and are not part of the contract.

Note: An extended 5 year (60 month) warranty is also available at the time of the system purchase with a surcharge.