



Time-Keeper 2W Programming Manual

Table Of Contents

Precautions.....	2
Compatible Hardware	2
Warranty.	2
Time-Keeper 2W Keypad Overview.....	3
Time-Keeper 2W Menu Overview..	4
Time-Keeper 2W Menu Definitions.....	5
Time-Keeper 2W Scene Setup	6
Time-Keeper 2W Switch Input Setup.	7
Time-Keeper 2W Events Setup	8
Time-Keeper 2W Holiday Setup	9
Time-Keeper 2W Sequence Setup.	10
Time-Keeper 2W System Configuration Setup	11
Time-Keeper 2W Time/Date/Location Setup	12
Time-Keeper 2W Diagnostics.	13
Time-Keeper 2W Dimming Configuration.	14
Time-Keeper 2W Dimming Configuration (cont.)	15
Time-Keeper 2W Smart Switch Configuration..	16
Time-Keeper 2W Sensor Configuration	17
Time-Keeper 2W Sensor Configuration (cont.)..	18
Time-Keeper 2W Virtual Switch Diagnostic	19
Time-Keeper 2W Remote Access	19
Appendix I - Scene/Switch Actions.....	20
Appendix II - Events.....	21
Appendix III - LEDs	22
Appendix IV - Sensors	23

Precautions

The Time-Keeper 2W hardware is designed to be in environments that have a temperature range of 0-60°C (non-condensing atmosphere). Installing in an environment outside of these parameters will shorten the life span of the hardware.

Touch-Plate recommends the use of 18 to 22 AWG wire for low voltage wiring of contact closure products, 18 AWG wire for all 24V power connections, and 16 AWG wire for 2-wire Smart Switch Stations.

All 120VAC wiring must use wire as specified by National Electric Code for load size and wire length.

Compatible Hardware

- Digital Control Stations
 - 2-Wire Stations (Mystique and Ultra Series)
 - 5-Wire Stations (Mystique and Ultra Series)
- Contact Closure Control Stations via Smart Switch Hub
- Panel Products (Solare, Soluxe, Calypso, and ZoneZ Series)

Warranty

Touch-Plate warrants this product against defects in materials or workmanship, under normal use, for a period of ONE (1) year from date of shipment. If a defect arises and a valid claim is received within the Warranty Period, Touch-Plate will repair or replace the product at no charge.

This warranty does not apply to:

- a. Damage to unit(s) caused by accident, acts of God, inappropriate installation, faulty installation, or any negligent use;
- b. Unit(s) which have been subject to being taken apart or otherwise modified;
- c. Unit not used in accordance with instructions;
- d. The finish on any portion of the product, such as surface and/or weathering, as this is considered normal wear and tear;
- e. Non-Touch-Plate hardware installed by the user;
- f. Damage caused by Non-Touch-Plate products;
- g. Damage caused by operating the product outside the permitted or intended uses described by Touch-Plate;
- h. -or- Specific plans or Specific application requirements, unless the plans and specifications have been forwarded to Touch-Plate and Touch-Plate has approved and accepted the plans in writing.

EXCEPT AS PROVIDED IN THIS WARRANTY, TOUCH-PLATE IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, INCLUDING BUT NOT LIMITED TO, INSTALLATION OR REPLACEMENT LABOR COSTS.



Time-Keeper 2W Keypad Overview

The Time-Keeper 2W's menu is accessed through the Welcome Screen.

The blinking black box on the TK 2W's screen is the cursor. As you navigate through the menu options look for and use the cursor.

- A** Basic Screen Navigation/Welcome Screen
From the Welcome Screen, press MENU to enter the Main Menu.
- B** Back, Menu, and Forward Buttons
To scroll through the Main Menu, press FWD continually. Use BACK to return to the Welcome Screen.
To enter a Main Menu option, press MENU.
- C** Arrows and Enter Buttons
Within a menu option screen, use the arrow keypad to move the cursor up, down, left, and/or right. On many screens, the left and right arrows allow you to scroll through the available options.



Time-Keeper 2W Menu Overview

Main Menu	Utilities Sub-Menu	Diagnostics/Dimming Sub-Menu	Purpose/Function
>SETUP SCENES?			Create up to 72 unique scenes.
>SWITCH INPUTS?			Associate inputs with outputs. Define actions for target loads.
>SETUP EVENTS?			Create a timed action that takes place at a set time.
>HOLIDAY SETUP?			Create a schedule that overrides normally programmed schedules.
>SEQUENCE SETUP?			Create a series of actions with defined timing.
>UTILITIES?	>SYSTEM CONFIG		Save to SD card; Load program from SD card; Clear program; Update firmware.
	>TIME/DATE/LOC		Set time, date, and location.
	>DIAGNOSTICS		Tools to troubleshoot and setup the system.
		OUTPUTS ON/OFF	Turns all outputs on/off. Used to find loads, burned out lamps, and to make sure panels are communicating.
		SMRT SWTCH PRES?	Verifies smart stations are communicating with TK MAX.
		SMRT SWTCH DIAG?	Performs diagnostics on specific control stations.
		STATION DETECT?	Detects station addresses and button presses.
		TEST OUTPUT	Turns specific outputs on or off.
		LOAD SEARCH?	Check to find specific loads on the system.
	>DIMMING CONFIG		Configure how dimmers work in the system.
		DIMMING RATE?	Change the default dimming rate.
		MIN. DIMMER PRE.	Change the default minimum level the light turns on to.
		DIURNAL CONFIG	Configure diurnal settings.
	>SMART SW CONFIG		Select color, intensity, pilot mode, and flash patterns for control station LEDs.
	>SENSOR CONFIG		Set sensor parameters.
	>VIRTUAL SWITCH		Allows factory to assist on site technicians.
	>REMOTE ACCESS		Baud rate selection.



Time-Keeper 2W Menu Definitions

Main Menu	Description	Example	Page #
>SETUP SCENES?	A scene is a defined action for a group of relays and/or dimmers.	A common residential scene is goodbye. Specific interior loads turn on and all other loads turn off. A common commercial scene is nighttime. Specific interior loads turn off and exterior loads turn on.	6
>SWITCH INPUTS?	An input is a control station, a Hub, or a sensor.	A common residential input is to associate control station buttons with relays or dimmers. A common commercial input is to associate control station buttons or sensors with relays or dimmers.	7
>SETUP EVENTS?	An event is a timed action for an output, scene, or sequence (or a combination), that takes place at a set time.	A common residential event is landscape lighting. Loads turn off at dawn and on at dusk. A common commercial event is sign lighting. Loads turn off at dawn and on at dusk.	8
>HOLIDAY SETUP?	A holiday is a schedule that overrides the normally programmed schedule on specified dates.	A common residential holiday is a vacation. Normal load schedules are overridden for the specified date(s). A common commercial holiday is Thanksgiving. Normal load schedules are overridden for the specified date(s).	9
>SEQUENCE SETUP?	A sequence is a series of actions with defined timing.	A common residential sequence is morning. Loads turn on sequentially to light the path in the morning. A common commercial sequence is end of day. All loads turn off except hall lights, exterior lights, and parking lights. After 15 minutes all lights turn off.	10
>UTILITIES?	Utilities are used to configure, setup, and/or troubleshoot the TK system.	A common use of the utilities is to help the installer(s) troubleshoot the system.	11 - 19



Time-Keeper 2W Scene Setup

To setup scenes you must know where the associated loads are, what relay or dimmer number that load is connected to, and what action you want the load(s) to perform.

Scene Setup Walkthrough

1. To get from the main menu screen to setup scenes, press MENU and then FWD until you see >SETUP SCENES?. Press MENU to begin setting up scenes.
2. Press the right arrow to scroll up through the scene numbers. To scroll from highest to lowest, press the left arrow. There are 72 available scenes.
3. Press the down arrow once the desired scene number is selected. This will move the cursor on the semi-colon between OUTPUT and Relay 1.
4. Press FWD to change the output to either relay or dimmer. Press the right arrow to scroll up through the relay and dimmers available. To scroll from highest to lowest, press the left arrow. There are 192 available relays and 72 available dimmers.
5. Press the down arrow once the desired output is selected. This will move the cursor on the semi-colon between ACTION and NONE.
6. Press the right or left arrows to scroll through the available actions. The table on page 20 shows and defines the available actions. If choosing the 'DIM TO' action, skip to step 8.
7. To save the configuration, press ENTER.

For 'DIM TO' Action Only

8. Press the down arrow once the desired action is selected. This will move the cursor on the semi-colon between LEVEL and 000%.
9. Press the right arrow to move the cursor onto the light level percent. Use the up and down arrows to change the percent. To move between the ones, tens, and hundreds positions, use the right and left arrows.
10. Press the down arrow once the desired light level is selected. This will move the cursor on the semi-colon between TIME and 00000s.
11. Press the right arrow to move the cursor onto the time default: 00000s. Use the up and down arrows to change the amount of time that the dimmer will take to dim to the set light level. To move between the number positions, use the right and left arrows.
12. To save the configuration, press ENTER.

To add additional relays or dimmers to the same scene, return to Step 2. Repeat the steps for as many outputs as you want to include in that scene.

To create a new scene, return to Step 1.



Time-Keeper 2W Switch Input Setup

To setup switch inputs you must know what the target is going to be. A target is a relay, dimmer, event, sequence, scene, or input group.

Switch Input Walkthrough

1. To get from the main menu screen to setup switch inputs, press MENU and then FWD until you see >SWITCH INPUTS?. Press MENU to begin setting up switch inputs.
2. Press the right arrow to move the cursor onto the input number. Press the up arrow to scroll up through the input numbers. To scroll from highest to lowest, press the down arrow. There are 96 available inputs.
3. Press the right arrow to move the cursor onto the button number. Press the up arrow to scroll through the button numbers. To scroll from highest to lowest, press the down arrow. There are 8 available buttons, even if the station has fewer than 8 buttons. Sensors will show 8 available virtual buttons.
4. Press the left arrow twice to move the cursor back to the semi-colon.
5. Press the down arrow once the desired input and button are selected. This will move the cursor on the semi-colon between TARGET and NONE.
6. Press FWD to change the target to search, relay, dimmer, scene, ingrp, event, or sequence. Press the right arrow to scroll up through the relays, dimmers, scenes, ingrps, events, or sequences available. If not utilizing the search option, skip to step 9.
7. Press the Enter button to enter the search option. This option is to help associated the correct load with the button.
8. Press the up arrow if the load is on. Press the down arrow if the load is off. Continue to press either the up or down arrow until the load has been found.
9. Press the down arrow once the desired target is selected. This will move the cursor on the semi-colon between ACTION and NONE.
10. Press the right or left arrows to scroll through the available actions. The table on page 20 shows and defines the available actions.
11. To save the configuration, press ENTER.

To add additional buttons to the same station, return to Step 2. Repeat the steps for as many buttons as you want to include on that station.

To add another station, return to Step 1.



Time-Keeper 2W Events Setup

To setup events you must have configured the scene(s), input group(s), or sequence(s) that you select as your target before you can setup events. If choosing the sunrise or sunset option, the zip code needs to be entered before programming. This option is under the Utilities menu.

Event Setup Walkthrough

1. To get from the main menu screen to setup scenes, press MENU and then FWD until you see >SETUP EVENTS?. Press MENU to begin setting up events.
2. Press the right arrow to scroll up through the event numbers. To scroll from highest to lowest, press the left arrow. There are 64 available events.
3. Press the down arrow once the desired event number is selected. This will move the cursor on the semi-colon between TARGET and NONE.
4. Press FWD to change the target to scene, di in 1, or stpsq 1. Press the right arrow to scroll up through the scenes, disable/enable ingroups, or step sequences available. The table on page 21 shows and defines the target options.
5. Press the down arrow once the desired target is selected. This will move the cursor on the semi-colon between DAY(S) and xxxxxx.
6. Press the right arrow to move the cursor onto the days of the week. Use the up and down arrows to activate the day of the week. To move between the days, use the right and left arrows.
7. Press the left arrow to move the cursor back to the semi-colon.
8. Press the down arrow once the desired day(s) are selected. This will move the cursor on the semi-colon between TIME and 12:00a.
9. Press the right arrow to move the cursor onto the hour. Use the up and down arrows to scroll through the available hours, sunset, or sunrise options. Use the right arrow to move onto the minutes. Use the up and down arrows to change the minutes. The table on page 21 shows and defines the sunset and sunrise options. If choosing the 'SS' or 'SR' time, skip to step 11.
10. To save the configuration, press ENTER.

For 'SS' or 'SR' Action Only

11. Press the right arrow to move the cursor onto the default -00 or +00. Use the up and down arrows to change the number of minutes. To move between the number positions, use the right and left arrows.
12. To save the configuration, press ENTER.

To create a new event, return to Step 1.



Time-Keeper 2W Holiday Setup

To setup holiday you must have configured the event(s) beforehand. The dates of the holiday also have to be decided before programming. Holidays that occur on the same day of the month every year (such as Christmas) can be used more than one (1) year in a row. For holidays that occur on different days of the month (such as Thanksgiving) can only be used for one (1) year.

Holiday Setup Walkthrough

1. To get from the main menu screen to setup scenes, press MENU and then FWD until you see >HOLIDAY SETUP?. Press MENU to begin setting up events.
2. Press the right arrow to scroll through the holiday numbers. To scroll from highest to lowest, press the left arrow. There are 64 available holidays.
3. Press the down arrow once the desired holiday number is selected. This will move the cursor on the semi-colon between DATE and MM/DD.
4. Press the right arrow to move the cursor onto the month. Use the up and down arrows to change the month. Use the right arrow to move onto the day. Use the up and down arrows to change the day. Press the left arrow to move the cursor back to the semi-colon.
5. Press the down arrow once the desired month and day has been chosen. This will move the cursor on the semi-colon between EV1 and NA.
6. Press the right arrow to scroll through the available events. To scroll from highest to lowest, press the left arrow. There are 4 available events per holiday.
7. Press the down arrow once the first desired event has been chosen. This will move the cursor on the semi-colon between EV2 and NA. Follow step six (6) if more than one event is desired.
8. To save the configuration, press ENTER.

To create a new holiday, return to Step 1.



Time-Keeper 2W Sequence Setup

To setup sequences you must have configured the scene(s), in group(s), or sequence(s).

Sequence Setup Walkthrough

1. To get from the main menu screen to setup sequences, press MENU and then FWD until you see >SEQUENCE SETUP?. Press MENU to begin setting up events.
2. Press the right arrow to scroll up through the sequence numbers. To scroll from highest to lowest, press the left arrow. There are 48 available sequences.
3. Press the down arrow once the desired sequence number is selected. This will move the cursor on the semi-colon between ELEMNT and 01. An element is a step in the sequence
4. Press the right arrow to scroll up through the element numbers. To scroll from highest to lowest, press the left arrow. There are 8 available elements.
5. Press the down arrow once the desired element number is selected. This will move the cursor on the semi-colon between TARGET and NONE.
6. Press FWD to change the target to scene, en in 1, or seqnc 1. Press the right arrow to scroll up through the scenes, disable/enable ingroups, or sequences available.
7. Press the down arrow once the desired target is selected. This will move the cursor on the semi-colon between OFFSET and 00000.
8. Press the right arrow to move the cursor onto the seconds. Use the up and down arrows to change the seconds. The maximum number of seconds available is 65535.
9. To save the configuration, press ENTER.

To create a new sequence, return to Step 1.



Time-Keeper 2W System Configuration Setup

System configuration allows you to save your programming to the SD card, upload programming from the SD card, clear the programming, and/or update the firmware from the SD card.

System Configuration Walkthrough

1. To get from the main menu screen to system configuration, press MENU and then FWD until you see >UTILITIES?. Press MENU, you will see >SYSTEM CONFIG, Press MENU to begin the system configuration.
2. Press FWD to scroll to change the menu options. If choosing load program, skip to step 5. If choosing clear program, skip to step 7. If choosing update firmware, skip to step 9.

Saving the Program

3. Press enter to save the program. SD cards are typically provided from Touch-Plate. If not using a provided SD card, ensure that it is not larger than 2GB. It is recommended that you remove the SD card and save the files remotely. Return the SD card to the Time-Keeper after saving the files remotely.
4. Press FWD to change the menu option to load program.

Loading the Program

5. Press enter to load the program.
6. Press FWD to change the menu option to clear the program.

Clearing the Program

7. Press enter to clear the program. This will restore the Time-Keeper to factory defaults and erase all configurations. This does not erase the SD card data.
8. Press FWD to change the menu option to update the firmware.

Updating the Firmware

9. Press enter to update the firmware. This step is typically only used during a customer service or technical service call. There is an approximate 20 second waiting period during the update. The Time-Keeper will say "Bootloading...." and when complete will restart at the main menu screen.



Time-Keeper 2W Time/Date/Location Setup

Time/Date/Location Walkthrough

1. To get from the main menu screen to time/date/loc., press MENU and then FWD until you see >UTILITIES?. Press MENU to enter the sub-menu.
2. Press FWD until you see >TIME/DATE/LOC. Press MENU to begin setting up the time, date, and/or location. To use the setting location, skip to step 10. To use the daylight savings, skip to step 15.

Setting the Date/Time

3. Press the right arrow to move the cursor onto the month. Use the up and down arrows to change the month. Use the right arrow to move onto the day. Use the up and down arrows to change the day. Press the right arrow to move the cursor onto the year. Use the up arrow to change the year. Press the left arrow to move the cursor back to the semi-colon.
4. Press the down arrow once the current date has been chosen. This will move the cursor on the semi-colon between TIME and 12:42a.
5. Press the right arrow to move the cursor onto the hour. Use the up and down arrows to change the hour. Use the right arrow to move onto the minutes. Use the up and down arrows to change the minutes. Press the left arrow to move the cursor back to the semi-colon.
6. Press the down arrow once the current time has been chosen. This will move the cursor on the semi-colon between DAY and TUE.
7. Use the right and left arrows to scroll up through the available days of the week.
8. To save the configuration, press ENTER.
9. Press FWD to change the menu option to set location.

Setting the Location

10. Press the right arrow to move the cursor onto the zip code. Use the up and down arrows to change the number. Continue to use the right arrow to move to the other zip code positions. Continue to use the up and down arrows to change the numbers. Press the left arrow to move the cursor back to the semi-colon.
11. Press the down arrow once the zip code has been chosen. This will move the cursor on the semi-colon between T ZONE and EASTERN.
12. Use the right or left arrows to scroll up through the available time zones.
13. To save the configuration, press ENTER.
14. Press FWD to change the menu option to daylight savings.

Setting Daylight Savings

15. Press the right arrow to enable daylight savings. Press the left arrow to disable daylight savings. Spring and fall dates will automatically update when enabled. Zip code must be set first for daylight savings to function correctly.
16. To save the configuration, press ENTER.



Time-Keeper 2W Diagnostics

Switch and Load Diagnostics

1. To get from the main menu screen to diagnostics, press MENU and then FWD until you see >UTILITIES?. Press MENU to enter the sub-menu.
2. Press FWD until you see >DIAGNOSTICS. Press MENU to begin using the diagnostics. To use the smart switch present, skip to step 5. To use the smart switch diagnostic, skip to step 7. To use the station detect, skip to step 12. To use the test output, skip to step 14. To use the load search, skip to step 17.

Using Outputs On/Off

3. Press the up arrow to turn all outputs on. Press the down arrow to turn all outputs off. This will allow for verification that all loads are communicating with the Time-Keeper.
4. Press FWD to change the menu option to smart switch present.

Verifying Smart Switches

5. Press ENTER to refresh and show the smart station addresses communicating with Time-Keeper. Press the down arrow to see any additional addresses beyond address 5. An O means the station is present, an X means the station is not present.
6. Press FWD to change the menu option to smart switch diagnostics.

Smart Station Diagnostics

7. Press the right arrow to scroll up through the station addresses. To scroll from highest to lowest, press the left arrow. There are 96 available station addresses.
8. Press ENTER to start the diagnostics. Verify that all LEDs on the smart station are blinking on and off.
9. Press any button on the control station. Verify that each button's LEDs light up.
10. Press ENTER to exit the diagnostics.
11. Press FWD to change the menu option to station detect.

Station Detect

12. Press any button on a control station to verify the address and button being pressed.
13. Press FWD to change the menu option to test output.

Test Output

14. Press the right or left arrow to change the relay or dimmer number.
15. For relays, press the up arrow to turn the relay on. Press the down arrow to turn the relay off. For dimmers, press the up arrow to turn the dimmer light levels up. Press the down arrow to turn the dimmer light levels down.
16. Press FWD to change the menu option to load search.

Load Search

17. Press ENTER to start the load search.
18. Once the search is started, press the up arrow if the load is on or press the down arrow if the load is off. Repeat step 18 until the load is found.
19. Press ENTER to start a new load search or to end the current load search.



Time-Keeper 2W Dimming Configuration

To configure your dimming you must know the dimming rate. The dimming rate is how quickly the light dims up or down while the button is pressed. This will affect all dimmers on the system.

Dimming Configuration Walkthrough

1. To get from the main menu screen to dimming configuration, press MENU and then FWD until you see >UTILITIES?. Press MENU to enter the sub-menu.
2. Press FWD until you see >DIMMING CONFIG. Press MENU to begin setting up dimming options. To change the minimum dimmer preset, skip to step 6. To change the diurnal settings, skip to step 11.

Setting the Dimming Rate

3. Press the right arrow to scroll through the dimming rates. To scroll from highest to lowest, press the left arrow. The lowest dimming rate is 5% and the highest is 25%.
4. To save the configuration, press ENTER.
5. Press FWD to change the menu option to set the minimum dimmer preset.

Changing the Minimum Dimmer Preset

6. Press the right arrow to move the cursor onto the dimmer number. Use the up and down arrows to change the numbers. There are 72 available dimmers. Press the left arrow to move the cursor back to the semi-colon.
7. Press the down arrow once the dimmer has been chosen. This will move the cursor on the semi-colon between MIN % and 10.
8. Press the right arrow to move the cursor onto the light level percent. Use the up and down arrows to change the percentage. The highest percent is 90, the lowest is 10.
9. To save the configuration, press ENTER.
10. Press FWD to change the menu option to diurnal configuration.

Setting the Diurnal Configuration

The light level is expressed in DMX protocol values, where 0 = OFF and 255 = 100%. To calculate the light level in terms of a percentage, use the following. $\% \text{ light level} = \text{DMX value} / 255 \times 100$

11. Press the right or left arrow to scroll through the minimum light levels. The lowest minimum level is 000 and the highest is 254.
12. Press the down arrow once the minimum light level has been chosen. This will move the cursor on the semi-colon between MAX LVL and 255.
13. Press the left or right arrow to scroll through the maximum light levels. The lowest maximum level is 001 and the highest is 255.
14. Press the down arrow once the maximum light level has been chosen. This will move the cursor on the semi-colon between TYPE and 0-10V.
15. Press the right arrow to change the response curve for the dimmers. The choices are linear (0-10V) and easy light.



Time-Keeper 2W Dimming Configuration (cont.)

16. Press the down arrow once the response curve has been chosen. This will move the cursor on the semi-colon between SUNRISE and ASTRO.
17. Press the right arrow to move the cursor onto the fixed time. Press the up and down arrows to change the hours. Use the ASTRO setting if you want to use the Time-Keeper's astronomical clock. Press the left arrow to move the cursor back to the semi-colon.
18. Press the down arrow once the sunrise option has been chosen. This will move the cursor on the semi-colon between SUNSET and ASTRO.
19. Press the right arrow to move the cursor onto the fixed time. Press the up and down arrows to change the hours. Use the ASTRO setting if you want to use the Time-Keeper's astronomical clock.
20. To save the configuration, press ENTER.



Time-Keeper 2W Smart Switch Configuration

To configure your control stations you must know the desired behaviors, color, intensity, and flash patterns desired.

Smart Switch Configuration Walkthrough

1. To get from the main menu screen to dimming configuration, press MENU and then FWD until you see >UTILITIES?. Press MENU to enter the sub-menu.
2. Press FWD until you see >SMART SW CONFIG. Press MENU to begin setting up station options.
3. Press the right arrow to move the cursor onto the station number. There are 96 available stations. Use the up and down arrows to change the station number.
4. Press the right arrow to move the cursor onto the LED number. There are 8 available LEDs per station. Use the up and down arrows to change the LED number on the station. If all LEDs are to be configured the same, leave the LED option as P#. Press the left arrow to move the cursor back to the semi-colon.
5. Press the down arrow once the station and LED number has been chosen. This will move the cursor on the semi-colon between MODE and AUTO.
6. Press the left or right arrow to scroll through the available LED behavior modes. The table on page 22 shows and defines the available behavior modes.
7. Press the down arrow once the behavior mode has been chosen. This will move the cursor on the semi-colon between COLOR and DEFAULT.
8. Press the right arrow to move the cursor onto the color. Use the up and down arrows to change the LED color on the station. If the LEDs are to be configured locally at each control station, leave the option as DEFAULT.
9. Press the right arrow to move the cursor onto the LED intensity percent. Use the up and down arrows to change the intensity of the LED. Press the left arrow to move the cursor back to the semi-colon.
10. Press the down arrow once the station LED color and intensity have been chosen. This will move the cursor on the semi-colon between FLASH and ON. If the DEFAULT option was chosen at step 8, the FLASH option cannot be used.
11. Press the left and right arrow to change the flash pattern for the LEDs. The table on page 22 shows and defines the available flash patterns.
12. To save the configuration, press ENTER.



Time-Keeper 2W Sensor Configuration

To configure your sensors you must know the desired parameters, sensor type, hysteresis, light delay, and/or threshold.

Sensor Configuration Walkthrough

1. To get from the main menu screen to dimming configuration, press MENU and then FWD until you see >UTILITIES?. Press MENU to enter the sub-menu.
2. Press FWD until you see >SENSOR CONFIG. Press MENU to begin setting up sensor options.
3. The cursor will be on the semi-colon between the words OCC/LITE or LIGHT and 01. This indicates that either a multi-sensor or a light sensor is detected. The number indicates the address that the sensor is set at.
4. Press the down arrow after the sensor address and light level have appeared. This will move the cursor on the semi-colon between HYSTERESIS and 010%.
5. Press the right arrow to move the cursor onto the hundred position. Use the up and down arrows to change the number. Continue to use the right arrow to move to the ten and one positions. Continue to use the up and down arrows to change the numbers. Press the left arrow to move the cursor back to the semi-colon.
6. Press the down arrow once the hysteresis has been chosen. This will move the cursor on the semi-colon between LITE DLY and 0001s.
7. Press the right arrow to move the cursor onto the thousand position. Use the up and down arrows to change the number. Continue to use the right arrow to move to the hundred, ten, and one positions. Continue to use the up and down arrows to change the numbers. The minimum light level is 1. The maximum light level is 3600. Press the left arrow to move the cursor back to the semi-colon.
8. Press the down arrow once the light level has been chosen. This will move the cursor on the semi-colon between B12 THRESH and 00100. The table on page 23 defines the sensor threshold options. Use step 9 if changing virtual buttons 1 and 2. Use step 10 if changing virtual buttons 3 and 4. Use step 11 if changing virtual buttons 5 and 6. Use step 12 if changing virtual buttons 7 and 8.
9. Press the right arrow to move the cursor onto the ten thousand position. Use the up and down arrows to change the number. Continue to use the right arrow to move to the thousand, hundred, ten, and one positions. Continue to use the up and down arrows to change the numbers. Press the left arrow to move the cursor back to the semi-colon.
10. Press the down arrow once the B12 has been chosen. This will move the cursor on the semi-colon between B34 THRESH and 00100. Use step 9 to set the B34 threshold.
11. Press the down arrow once the B34 has been chosen. This will move the cursor on the semi-colon between B56 THRESH and 00100. Use step 9 to set the B56 threshold.
12. Press the down arrow once the B56 has been chosen. This will move the cursor on the semi-colon between B78 THRESH and 00100. Use step 9 to set the B78 threshold.
13. To save the configuration, press ENTER.



Time-Keeper 2W Sensor Configuration (cont.)

For Multi-Sensors or Motion Sensors Only

14. Press the down arrow once the B78 has been chosen. This will move the cursor on the semi-colon between VAC DELAY and 015m.
15. Vacancy delay is used when lights are to go off in an unoccupied room. Press the right arrow to move the cursor onto the hundred position. Use the up and down arrows to change the number. Continue to use the right arrow to move to the ten and one positions. Continue to use the up and down arrows to change the numbers. Press the left arrow to move the cursor back to the semi-colon.
16. Press the down arrow once the vacancy delay has been chosen. This will move the cursor on the semi-colon between MOT SENSI and 025.
17. To correctly use motion sensitivity note that the higher the number, the more motion it will take for the sensor to detect motion. Press the right arrow to move the cursor onto the hundred position. Use the up and down arrows to change the number. Continue to use the right arrow to move to the ten and one positions. Continue to use the up and down arrows to change the numbers. The lowest sensitivity is 2 and the highest is 254. Press the left arrow to move the cursor back to the semi-colon.
18. Press the down arrow once the motion sensitivity has been chosen. This will move the cursor on the semi-colon between MOTION and ON.
19. Press the right arrow to move the cursor onto the motion options. Press the up arrow to enable the motion sensor and press the down arrow to disable the motion sensor.
20. To save the configuration, press ENTER.



Time-Keeper 2W Virtual Switch Diagnostic

To verify that loads and/or smart control stations are connected properly and respond to a button press.

Virtual Switch Diagnostic Walkthrough

1. To get from the main menu screen to virtual switch diagnostics, press MENU and then FWD until you see >UTILITIES?. Press MENU to enter the sub-menu.
2. Press FWD until you see >VIRTUAL SWITCH. Press MENU to begin using the virtual switch diagnostics.
3. Press the right arrow to move the cursor onto the station number. There are 96 available stations. Use the up and down arrows to change the station number.
4. Press the right arrow to move the cursor onto the button number. There are 8 available buttons per station. Use the up and down arrows to change the button number on the station.
5. If the station and button have been programmed, the target and status information will show up on the screen. Press the ENTER button once to simulate a button press. This will show if the station and/or the load(s) have been wired and are communicating correctly.
6. To test another button, follow steps three (3) through five (5).

Time-Keeper 2W Remote Access

To properly set up the baud rate if using the serial port.

Remote Access Walkthrough

1. To get from the main menu screen to remote access, press MENU and then FWD until you see >UTILITIES?. Press MENU to enter the sub-menu.
2. Press FWD until you see >REMOTE ACCESS. Press MENU to begin setting up the remote access.
3. Press the right arrow to change the baud rate to 115.2K. This is the default baud rate from the factory.
4. Press the left arrow to change the baud rate to 57.6K.
5. To save the configuration, press ENTER.



Appendix I - Scene/Switch Actions

Relay Actions	Purpose/Function
NONE	The load is excluded from the scene.
OFF	The load turns off.
ON	The load turns on.
CYCLE	The load turns either on or off with each button press. It is not recommended to use cycles in a scene with multiple loads.
MAINT NO	The load is off during a button press.
MAINT NC	The load is on during a button press.
FLASH	The load goes on for 1 second and off for 1 second as long as the button is held. The lights will flash on and off.
BLINK WN	The load will turn off (if currently on) and then quickly come back on and the timer will start. After 5 minutes, if no button is pressed, the lights will turn off.
A-OFF 15	The load will turn off after 15 minutes if they are turned on. If the loads are turned off, they will turn on and after 15 minutes, they will turn back off.
A-OFF 30	The load will turn off after 30 minutes if they are turned on. If the loads are turned off, they will turn on and after 30 minutes, they will turn back off.
A-OFF 1H	The load will turn off after 1 hour if they are turned on. If the loads are turned off, they will turn on and after 1 hour, they will turn back off.
A-OFF 2H	The load will turn off after 2 hours if they are turned on. If the loads are turned off, they will turn on and after 2 hours, they will turn back off.

Dimmer Actions	Purpose/Function
NONE	The load is excluded from the scene.
OFF	The load turns off.
ON	The load turns on.
MAINT NO	The load is off during a button press. This is rarely used with dimmers.
MAINT NC	The load is on during a button press. This is rarely used with dimmers.
FLASH	The load goes on for 1 second and off for 1 second as long as the button is held. The lights will flash on and off. It is not recommended for use with dimmers.
BLINK WN	The load will turn off (if currently on) and then quickly come back on and the timer will start. After 5 minutes, if no button is pressed, the lights will turn off.
A-OFF 15	The load will turn off after 15 minutes if they are turned on. If the loads are turned off, they will turn on and after 15 minutes, they will turn back off.
A-OFF 30	The load will turn off after 30 minutes if they are turned on. If the loads are turned off, they will turn on and after 30 minutes, they will turn back off.
A-OFF 1H	The load will turn off after 1 hour if they are turned on. If the loads are turned off, they will turn on and after 1 hour, they will turn back off.
A-OFF 2H	The load will turn off after 2 hours if they are turned on. If the loads are turned off, they will turn on and after 2 hours, they will turn back off.
DIM UP	The load will dim up as long as the button is held.
DIM DOWN	The load will dim down as long as the button is held.
DIM TO	The load dims to a preset level with a button press.
DIM CYCL	The load will turn off with a short button press if currently on. The load will turn on with a short button press if currently off. Pressing and holding the button will dim the light up or down.
DIURNAL	The load follows sunrise or sunset.



Appendix II - Events

Event Targets

Event Targets	Description	Purpose/Function
NONE	None	No target is selected for the event. Select this to deactivate an event you no longer want used.
SCENE	Scene	The selected scene will activate when the event is scheduled to occur.
DI IN	Disable Input Group	The selected input group will be disabled when the event is scheduled to occur.
EN IN	Enable Input Group	The selected input group will be enabled when the event is scheduled to occur.
STPSQ	Stop Sequence	The selected sequence will stop running when the event is scheduled to occur.
RUNSQ	Run Sequence	The selected sequence will run when the event is scheduled to occur.

Event Targets

Abbreviation	Purpose/Function
SS	Sunset
SS-	Before sunset by x minutes.
SS+	After sunset by x minutes.
SR	Sunrise
SR-	Before sunrise by x minutes.
SR+	After sunrise by x minutes.



Appendix III - LEDs

LED Behavior

Mode	Purpose/Function
AUTO	If any output associated with that button is on the button's LED is on. If no outputs are on the button's LED is off. For dimmers, the button's LEDs will be on as long as the load is 1-100%.
FOLLOW 1	If the button is pressed the LED turns on. It will stay on until another button in Group 1 is pressed. The LED "follows" the button press by turning on, even if the button triggers an ALL OFF scene. In follow mode only one (1) LED per group is on at a time.
FOLLOW 2	Follow 2 works just like Follow 1, except that it acts as a separate group. If follow 1 is configured for buttons 1-3 and follow 2 is configured for buttons 4-6, then one (1) LED could be lit, two (2) LEDs could be lit, or no LEDs could be lit. Example: When multiple scene buttons are configured on one (1) control station, using follow 1 and follow 2 you will be able to see which scene is on just by looking at the control station. Even when all lights are part of both scenes, only one (1) LED comes on at a time per group. If all buttons were in auto mode, all LEDs on the control station would come on any time a connected load was on. In follow mode the last pressed button's LED will light up, providing that at least one (1) output within the scene is on and that the output is part of the follow group.
DISABLED	The LED is off regardless of whether the associated load is on or off. This is useful in situations where it could be confusing to have a LED lit. Example: When button 1 is SCENE ON and button 2 is SCENE OFF, disable button 2's LED. Both buttons are pointing to the same scene and if both buttons are in auto mode, then both LEDs would turn on when any relay or dimmer within that scene is on. This can be confusing for some who would not expect the SCENE OFF LED to be lit when the scene is on. In this scenario, selecting the disabled mode for button 2 will ensure that when any relay or dimmer in the scene is on, the LED will stay off.

LED Flash Patterns

Flash	Description	Purpose/Function
ON	On	Solid, unblinking light.
OFF	Off	No light. No light even with a button press.
SLW FLSH	Slow Flash	Light slowly flashes.
SLW FL R	Slow Flash Reverse	Light slowly flashes in reverse on/off pattern compared to the slow flash setting.
FST FLSH	Fast Flash	Light flashes quickly.
FST FL R	Fast Flash Reverse	Light flashes quickly in reverse on/off pattern compared to the fast flash setting.
WINK	Wink	Light blinks quickly twice, then blinks off for two beats.
WINK REV	Wink Reverse	Light blinks in reverse on/off pattern compared to the wink setting.



Appendix IV - Sensors

Sensor Thresholds

Screen	Buttons	Button Press Triggers
B12	1	Button 1 turns on if ambient light is less than threshold 12 minus the hysteresis.
	2	Button 2 turns on if ambient light is more than threshold 12 plus the hysteresis.
B34	3	Button 3 turns on if ambient light is less than threshold 34 minus the hysteresis.
	4	Button 4 turns on if ambient light is more than threshold 34 plus the hysteresis.
B56	5	Button 5 turns on if ambient light is less than threshold 56 minus the hysteresis.
	6	Button 6 turns on if ambient light is more than threshold 56 plus the hysteresis.
B78	7	Button 7 turns on if ambient light is less than threshold 78 minus the hysteresis.
	7	Button 8 turns on if ambient light is more than threshold 78 plus the hysteresis.





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Programming Manual
Revision: 1.0a



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