



## FUNCTION

The TST Touch Screen Timers are high quality home automation controllers that are capable of transmitting UPB (Universal Powerline Bus) digital commands (via an attached PIM-R) over the existing power wiring to remotely turn on and off UPB devices at the press of a button or at preset times and days. The TST can be freely located anywhere within 50 feet where conventional 120VAC 60Hz electricity is available.

## FEATURES:

- High-resolution 3.6-inch touch-sensitive color display.
- Battery backed up full Astronomical (dawn/dusk) Real Time Clock for activating pre-scheduled Events.
- Full individual and scene control of 250 UPB devices with status feedback.
- Stores up to 99 individual scheduled Events.
- Programmed with a computer using TouchUP Software, but doesn't require one for operation.

## Wall-Mount and Desktop Styles

The TST is available in two different styles: wall-mount and desktop. The TSTW is the wall-mount version mounted in any dual-gang low voltage ring or wall box. The TSTD is an elegant desktop version that can be freely located near any wall outlet that exists throughout the home.

## UNPACKING

The Touch Screen Timer should be carefully removed from the box and the protective plastic coverings removed (there may be protective plastic on the front of the bezel as well as on the top of the LCD display. Be very careful when removing the protective covering of the LCD display). The TST is designed for indoor use only.

## OTHER NECESSARY ITEMS

The TST communicates on the powerline via a PCS PIM-R (sold separately). The TST obtains operating power from the TSTPA Power Adapter Kit (also sold separately). In order to operate, the TST must be properly connected to the TSTPA Power Adapter through a standard CAT5 "Ethernet" cable sold at any local electronics store.

## WIRING

The TST should be connected with a CAT5 cable and be no longer than 50 feet in length terminated with a RJ45 connector at both ends. The CAT5 cable connects between the RJ45 jack of the TSTPA and the RJ45 jack of the TSTD (desktop model). If you are using a TSTW (wall-mount model) the CAT5 cable is connected as follows:

1. Cut off the RJ-45 connector from one end of the cable and discard it.
2. Locate the 4-wire terminal block on the back of the TSTW.
3. The terminals are marked as follows and should be connected to the CAT5 cable wire colors as listed below:

Label	568 A Cable colors	568 B Cable colors
V+	Green	Orange
GND	White/Brown	White/Brown
TX	Brown	Brown
RCV	White/Green	White/Orange

4. Make sure the 4 unused wires are insulated and do not connect to anything on the TSTW.

## INSTALLATION

The TSTW (wall-mount model) is designed to be mounted in a two-gang electrical wall box. Screw holes are provided for attaching directly to the wall box with screws. Follow the instructions below to install the TST.

1. Connect one end of the CAT5 cable to the TST as described in the wiring section of this manual.
2. Remove the front bezel of the TSTW by firmly pulling on it. This will expose the four screw holes. Mount the TSTW into the wall box using appropriate screws. Re-mount the front bezel onto the TSTW.
3. Plug-in the PIM-R Powerline Interface Module into a nearby electrical outlet per its installation instructions.
4. Plug-in the TSTPA Power Adapter into a nearby electrical outlet and the TSTPA box per its installation instructions.
5. Connect the Serial Cable between the PIM-R and the TSTPA Power Adapter Kit DB-9 connectors.
6. Plug the other end of the CAT5 cable into the TSTPA Power Adapter Kit's RJ45 jack.
7. The TST Touch Screen Timer should power up and display the Home Screen.

### CONFIGURATION

Configuration of the TST Touch Screen Timer is done with the TouchUP software on a Windows® computer. TouchUP is an intuitive software application which allows you to easily configure using a Graphical User Interface (GUI).

Use TouchUP to create Room Buttons, Module Buttons, Scene Buttons, and Schedule Buttons which will be displayed on your Touch Screen Timer. TouchUP is also used to create schedules which will automatically control any UPB device or group of UPB devices at pre-set times and days. Timed Events may be specified as absolute times or as times relative (plus or minus) to dawn and dusk.

Once your design is complete, it is downloaded into your TST using TouchUP via a standard mini-USB cable. The TouchUP software and User's Manual are available to download on the Support page at [www.PulseWorx.com](http://www.PulseWorx.com).

### OPERATION

Once installed and configured your TST Touch Screen Timer will operate on the stored configuration settings without need of further user intervention. The TST will automatically adjust for Daylight Saving Time (DST) and changes in dawn/dusk times.

#### Home Screen

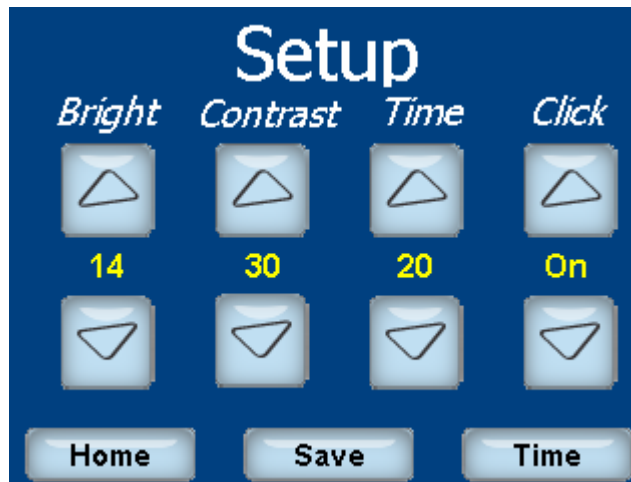
The Home Screen will display the current date and time along with the status of the pre-set schedules. Three buttons are displayed on the bottom to navigate to the Scenes Screen, the Rooms Screen, and the Schedules Screen.



Also, pressing and holding the PulseWorx logo will gain access to the Setup Screen.

#### Setup Screen

The Setup Screen allows the user to customize the TST brightness, contrast, time, and beep of the display.



The Time button controls how many minutes the display will remain active without being touched. Use the Click button to turn on and off the audible beep. Use the Time button to set the clock and calendar. User should press the Save button to save these settings.

#### Scenes Screen

The Scenes Screen will display a button for each scene. Pressing a scene button will activate the selected Scene. All receiving UPB devices will be commanded to go to their preset light levels at their preset fade rates.



The TST will indicate that the scene was activated by turning the circle on the Scene Button green. Pressing the Scene Button again will deactivate this Scene and turn off the circle.

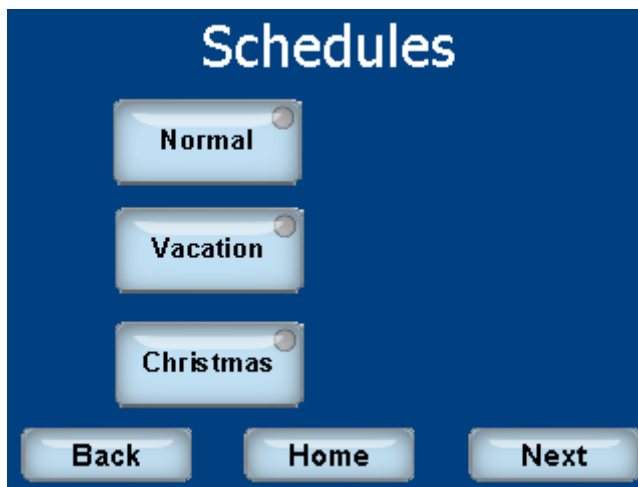
### Rooms Screen

The Rooms Screen will display a button for each room. Pressing a room button will bring up a Room Control Screen for the selected Room.



### Schedules Screen

The Schedules Screen will display a button for each pre-configured schedule. Pressing a schedule button will enable the Schedule and light up the button's green circle.



### Room Control Screen

The Room Control Screen will display a button for each Module in the room. Each module button has an intensity bar showing the current state of each module's load.

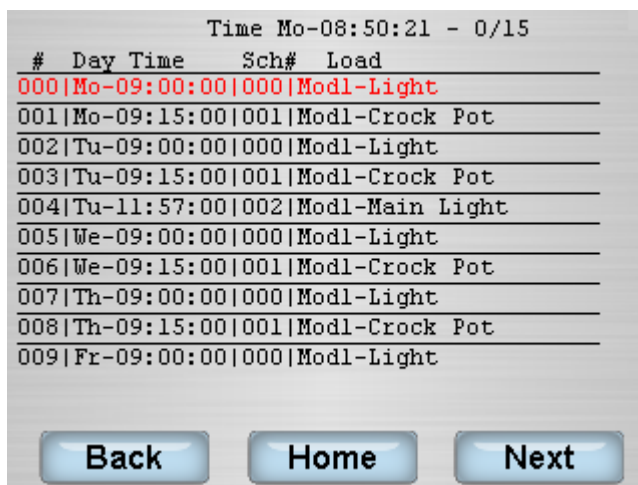


Whenever a module button is pressed the TST will light up the button's green circle and display a set of module control buttons for that selected module. The module control buttons allow the user to turn on and off the selected module. If the module is a dimmer then extra controls will be available to brighten and dim the light.

Whenever a schedule is enabled, the TST will monitor the current time and date. It will automatically send pre-configured control commands to your lighting system at the pre-configured times and days. When the button circle is off this indicates that the corresponding schedule is disabled. More than one schedule may be enabled at a time.

### Weekly Schedule Screen

Pressing on the header **Schedules** will allow the user to see a list of scheduled events. The list contains one week of events and is updated weekly.





# Model: TSTW & TSTD Touch Screen Timers

## Installation Guide and Owner's Manual

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### **FIRMWARE/SOFTWARE DOWNLOADS**

Please visit the PCS website at [www.pcslighting.com](http://www.pcslighting.com) for new firmware and software downloads. New firmware may be loaded into your TST from your computer using the BFLOADER application supplied with TouchUP.

### **LIMITED WARRANTY**

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in materials and workmanship for a period of five years from the date of purchase. Refer to the warranty information on the PCS website ([www.pcslighting.com](http://www.pcslighting.com)) for exact details.



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