System Manager TS-L Technical Guide
(End-User Interface Only)

For use with the following controllers: VCCX2, VCC-X, VCB-X, VCM-X E-BUS, VCM-X, VCM, and VAV/Zone Controllers
Requires SMTS-L Code: SS7013
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Features

The OE392-11 System Manager Touch Screen (Limited Access) - (SMTS-L) provides a direct, graphic-enhanced, menu-driven link to allow the end user to view status points, change Space Setpoints, and view certain alarms of most controllers on the Orion Controls System. **The System Manager TS-L cannot be used for full Controller configuration.**

The SMTS-L provides the following useful functions:

- Provides a 4.3” 480 x 272 WQVGA RGB TFT LCD Graphical Touch Screen LCD display
- Utilizes a graphical touch screen menu system with easy-to-understand menu options with plain English language messages
- Graphical screens provide easy setup and operation without the need for specialized training
- Provides protection from unauthorized users through passcode authorization
- Comes equipped with real-time clock backup power supply for short power losses
- Provides icons to indicate alarm conditions
- LEDs behind plastic panel indicate power, communications, and operation
- Plastic enclosure allows for easy flush wall mounting in hollow drywall or surface mounting on solid wall surface

System Requirements

- The SMTS-L is packaged and assembled as flush wall mount. Surface mount components are also included for your convenience.
- If using the surface mount version, you will need a double duplex outlet box (by others).
- The SMTS-L works with the following VCCX2, VCC-X, VCB-X, VCM-X E-BUS, VCM-X, and VCM Controller: All standard SS1016, SS1026, SS1030, SS1032, SS1033, SS1034, SS1051, SS1062, and SS1088
- The SMTS-L works with the following VAV/Zone Controllers: SS1001, SS1005, SS1025, SS8011
- USB-Link, CommLink, or MiniLink Polling Device

*NOTE:* Alarm polling must first be set up in Prism 2. This requires a personal computer with Prism 2 software and a USB-Link or CommLink and a MiniLink Polling Device. See page 25 for details. Ongoing alarm polling on the SMTS-L Main Screen requires a MiniLink to be connected to the system.

Adjustable Setpoints (VCCX2 Shown)

The following VCCX2 Setpoints are a sample of what can be adjusted using the SMTS-L:

- Cooling Mode Enable Setpoint
- Heating Mode Enable Setpoint
- Unoccupied Cooling Offset
- Unoccupied Heating Offset
- Push-Button Override Duration
- Daylight Savings Start Date
- Daylight Savings End Date

Status Points (VCCX2 Shown)

The following VCCX2 Status points represent what can be viewed using the SMTS-L:

- Space Temperature
- Cooling Setpoint
- Heating Setpoint
- Slide Adjust
- Indoor Humidity
- Outdoor Air Temperature
- Outdoor Air Humidity
- Outdoor Air Wetbulb
- Outdoor Air Dewpoint
- Return Air Temperature
- Supply Airflow
- Return Airflow
- Outdoor Air Airflow
- Exhaust Airflow
- CO₂
- Duct Static
- Control Signal
- Building Pressure
- Control Signal
- Cooling Status
- Cooling Stages
- Modulating Cooling
- Economizer Status
- Economizer
- Heating Status
- Heating Stages
- Modulating Heating
- Auxiliary Heat Status
- Main Fan
- Emergency Heat Status
- Fan Speed

Alarms (VCCX2 Shown)

The following VCCX2 alarms represent what can be viewed using the SMTS-L:

- Sensor Failure (any Sensor)
- Mechanical Failure (Heating, Cooling, etc.)
- Out of Range Temperature (Control or Supply Temperature)
- Missing Expansion Board
- Refrigeration Module Alarm
- Dirty Filter
- Emergency Shutdown
Environmental Requirements

The SMTS-L needs to be installed in an environment that can maintain a temperature range between 14°F and 158°F with less than 90% RH levels (non-condensing).

Mounting

The SMTS-L is housed in a plastic enclosure designed for mounting in hollow drywall construction or a control panel cover with the flush wall mount version (shown in Figure 2, page 5) or on a concrete, brick, or other solid wall surface with the surface mount version (shown in Figure 3, page 6).

The flush wall mount version has integral wingnut paddles that are tightened after installation to grip the drywall and hold the SMTS-L in place. For mounting in a control panel cover or other thin material, (4) adhesive backed rubber pads are provided to assist in securing the SMTS-L into the cutout in the panel. These pads are applied to the wingnut paddles to provide a non-slip mounting against the panel’s sheet metal surface. See Figure 2 for pad placement details.

The surface mount version is designed to be installed in a double duplex outlet box (by others). Both mounting styles of the SMTS-L feature an integral, magnetically-secured face plate which can be easily removed for reset of the display when required.

The SMTS-L should be mounted at approximately eye level to allow for ease of programming and reading of the display. The SMTS-L is typically mounted in the building manager’s or superintendent’s office or in an equipment room, but is also quite suitable for mounting in any location or with most decors.

Care

The SMTS-L should be cleaned with a soft, dust-free cloth. Do not use any liquid to clean your SMTS-L. You should press the <Suspend> button located behind the cover to temporarily freeze the touch pad before you attempt to clean your screen. See the Troubleshooting section on page 24 for details.

Wiring

The SMTS-L is connected to the local communications loop of the Orion system via 18 AWG 2-conductor, twisted pair with shield wire connected to the T, SHLD & R communication terminals on the back of the SMTS-L. The communications wire used can be either our Watt-Master #WR-LL-WG-18 communications wire or Belden #82760 wire or its equivalent.

The SMTS-L also requires that 24 VAC (6 VA) power be supplied (by others) to its + and – wiring terminal located on the back of the SMTS-L.

See Figures 4-8, pages 7-11 for wiring details. These wiring diagrams depict wiring the SMTS-L to the VCC-X Controller, VCB-X Controller, VCM-X Controller, VCM Controller, and VAV/Zone Controller. The SMTS-L can also be wired to the local loop terminals on the MiniLink PD, Power Comm Board, or any other add-on controller’s local loop terminals. It will still require a transformer to be wired as shown in Figures 4-7, pages 7-10.

Dipswitch and Jumper Settings

If you are using a VCC-X Controller or a VCB-X Controller set at high speed, Dipswitch OPT1 should be set to ON; in all other instances, it should be set to OFF. As of April 2014, Dipswitch OPT4 should be set to ON by default. Previous versions should be set to OFF. If you see your screen is not centered correctly, switch OPT4 to the opposite position. Dipswitches OPT2 and OPT3 should always be set to OFF. See Figures 4-8, pages 7-11 for details.

If you have a Stand-Alone system (no CommLink or MiniLink, the TERM Jumpers must be ON. For applications with CommLink(s) and/or MiniLink(s), the TERM Jumpers must be OFF. See Figures 4-8, pages 7-11 for details.

Technical Support

Call (866) 918-1100 to talk to a WattMaster Controls Technical Support Representative. Support is available Monday through Friday, 7:00 AM to 5:00 PM central standard time.
Figure 3: SMTS-L Dimensions and Components (Flush Wall Mount)
Figure 3: SMTS-L Dimensions and Components (Surface Mount)
### Components and Wiring

**SMTS-L to VCCX2 / VCC-X Controller Wiring**

**NOTE:** Dip Switch OPT1 Should Be Set To ON When VCB-X Is Set To High Speed. OPT2 & OPT3 Should Be Set To OFF. As Of April 2014, OPT4 Should Be Set To ON By Default. Previous Versions Should Be Set To OFF. If Your See Your Screen Is Not Centered Correctly, Switch OPT4 To The Opposite Position.

**NOTE:** For Stand-Alone Installations (No CommLink or MiniLink), Both TERM Jumpers Must Be ON. For All Applications With CommLink(s) or MiniLink(s), Both Jumpers Must Be OFF.

---

**Figure 4: SMTS-L to VCCX2 / VCC-X Controller Wiring**
SMTS-L to VCB-X Controller Wiring

Component and Wiring

System Manager TS - Back View

Run 2 Conductor Twisted Pair W/Shield Cable. WattMaster WR-LL-WG-18 Cable Or Equivalent From System Manager TS To VCB-X Controller

VCB-X Controller - Front View

NOTE: Dip Switch OPT1 Should Be Set To ON When VCB-X Is Set To High Speed. OPT2 & OPT3 Should Be Set To Off. As Of April 2014, OPT4 Should Be Set To ON By Default. Previous Versions Should Be Set To OFF. If You See Your Screen Is Not Centered Correctly, Switch OPT4 To The Opposite Position.

NOTE: For Stand-Alone Installations (No CommLink or MiniLink), Both TERM Jumpers Must Be ON. For All Applications With CommLink(s) Or MiniLink(s), Both Jumpers Must Be OFF.

White (T) BARE (S) BLACK (R)

Black (R) BARE (S) White (T)

BROWN (GND) RED (24 VAC)

24 VAC Transformer 5 VA Minimum

Run 2 Conductor 20 Ga. Minimum Cable From System Manager TS Terminals To 24 VAC Transformer.

Figure 5: SMTS-L to VCB-X Controller Wiring
Figure 6: SMTS-L to VCM-X Controller Wiring

NOTE: Dip Switches OPT1, OPT2 & OPT3 Should Be Set To Off. As Of April 2014, OPT4 Should Be Set To ON By Default. Previous Versions Should Be Set To OFF. If You See Your Screen Is Not Centered Correctly, Switch OPT4 To The Opposite Position.

NOTE: For Stand-Alone Installations (No CommLink or MiniLink), Both TERM Jumpers Must Be ON. For All Applications With CommLink(s) Or MiniLink(s), Both Jumpers Must Be OFF.
SMTS-L to VCM Controller Wiring

Figure 7: SMTS-L to VCM Controller Wiring

System Manager TS - Back View

VCM Controller - Front View

NOTE: For Stand-Alone Installations (No CommLink or MiniLink), Both TERM Jumpers Must Be ON. For All Applications With CommLink(s) Or MiniLink(s), Both Jumpers Must Be OFF.

NOTE: Dip Switches OPT1, OPT2 & OPT3 Should Be Set To OFF As Of April 2014. OPT4 Should Be Set To ON By Default. Previous Versions Should Be Set To OFF. If You See Your Screen Is Not Centered Correctly, Switch OPT4 To The Opposite Position.
COMPONENTS AND WIRING

SMTS-L to VAV/Zone Controller Actuator Package Wiring

Figure 8: SMTS-L Terminal Connection to VAV/Zone Controller or Modular Wiring to Power/Comm Distribution Board / VAV/Zone Actuator Package
**NAVIGATION**

**Main Screen Icons and Button Functions**

**Icons and Button Functions**

System settings and screens are easily accessible by simply touching one of the six icons on the Main Screen. The subscreens contain yellow highlighted data entry boxes with accessible number keypads for data entry and screen maneuvering buttons such as **<Esc>**, **<Back>**, and **<OK>**.

**NOTE:** Do not attempt to make changes to the Touch Screen while the Unit Controller is initializing. This can cause programming errors.

**Main Screen Icons**

There are six Main Screen icons. See Table 1 for a list of the Main Screen icons and their functions.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Main Screen Icons</th>
</tr>
</thead>
<tbody>
<tr>
<td>![My System]</td>
<td>The <strong>&lt;My System&gt;</strong> icon takes you to a Unit Selection Screen which takes you directly to the selected controller’s Status Screen.</td>
</tr>
<tr>
<td>![Active Alarms]</td>
<td>When bright red, the <strong>&lt;Alarms&gt;</strong> icon takes you to the Alarms Screen. When bright green, no alarms are present. This icon is only useful when your SMTS-L is set for multiple managers or network mode and you have configured alarm polling using Prism 2 software.</td>
</tr>
<tr>
<td>![Login]</td>
<td>The <strong>&lt;Login&gt;</strong> icon takes you to the Login Screen where you enter your passcode.</td>
</tr>
<tr>
<td>![User Passcodes]</td>
<td>The <strong>&lt;User Passcodes&gt;</strong> icon takes you to the System Manager Passcode Levels Screen. This screen is accessible to a Level 2 user.</td>
</tr>
<tr>
<td>![Settings]</td>
<td>The <strong>&lt;Settings&gt;</strong> icon takes you to the System Settings Screen where you can change the Backlight settings, set the System Manager address, and enable alarm polling. System settings are only accessible to Level 1 &amp; 2 users.</td>
</tr>
<tr>
<td>![Set Time &amp; Date]</td>
<td>The <strong>&lt;Set Time &amp; Date&gt;</strong> icon takes you to the Set Time and Date Screen. Only Level 1 or Level 2 users can set the time and date.</td>
</tr>
</tbody>
</table>

Table 1: Main Screen Icon Functions

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Esc</strong></td>
<td>Use the <strong>&lt;Esc&gt;</strong> (Escape) key to exit from data entry without saving any new data.</td>
</tr>
<tr>
<td><strong>Back</strong></td>
<td>Use the small <strong>&lt;Back&gt;</strong> button located in the top right corner of a Data Entry Screen to return to the controller’s Status Screen. Use the large <strong>&lt;Back&gt;</strong> button located at the bottom left of other screens to return to the previous screen.</td>
</tr>
<tr>
<td><strong>+</strong></td>
<td>Use the <strong>&lt;-&gt;</strong> key to step to the next screen.</td>
</tr>
<tr>
<td><strong>-</strong></td>
<td>Use the <strong>&lt;-&gt;</strong> key to step to the previous screen.</td>
</tr>
</tbody>
</table>

Table 2: Navigation Button Functions

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OK</strong></td>
<td>Use the <strong>&lt;OK&gt;</strong> key to save the data you just selected or entered.</td>
</tr>
<tr>
<td>![Holidays]</td>
<td>The <strong>&lt;Holidays&gt;</strong> button, appearing on various controllers’ Status Screens, takes you directly to the controller’s Holidays Screen.</td>
</tr>
<tr>
<td>![Schedules]</td>
<td>The <strong>&lt;Schedules&gt;</strong> button, appearing on various controllers’ Status Screens, takes you directly to the controller’s Schedule Screen.</td>
</tr>
<tr>
<td>![Setpoints]</td>
<td>The <strong>&lt;Setpoints&gt;</strong> button, appearing on the controller’s Status Screen, takes you directly to the controller’s Setpoint Screen.</td>
</tr>
<tr>
<td>![Overrides]</td>
<td>The <strong>&lt;Overrides&gt;</strong> button, appearing on various controllers’ Status Screens, takes you directly to the controller’s Force Schedules Screen.</td>
</tr>
<tr>
<td>![Alarm]</td>
<td>The <strong>&lt;Alarm&gt;</strong> button, appearing on the controller’s Status Screen, takes you directly to the controller’s Alarms Screen. If red, alarm(s) are present. If black, no alarm(s) are present.</td>
</tr>
</tbody>
</table>

Table 3: Configuration Selection Buttons
First Things First

The first thing you need to do when setting up your Touch Screen is to Login. The second thing you need to do is establish a user passcode for staff access. The third thing you need to do is set the clock. After you complete these simple tasks, you are ready to set your system’s settings, view controller status screens, and change schedules and setpoints.

NOTE: Do not attempt to make changes to the Touch Screen while the Unit Controller is initializing. This can cause programming errors.

Main Screen

Once you have connected your SMTS-L to a controller and have powered it up with the proper power supply, the Main Screen will appear. See Figure 9.

NOTE: The <ALARMS> icon will only appear on the Main Screen when alarm polling is selected and when there are MiniLink(s) detected.

Entering Your System Manager Passcode

NOTE: There are three passcode/access levels. Level 0 is no passcode, Level 1 defaults to 1111, and Level 2 defaults to 9288. You cannot change the Level 2 passcode, only the Level 1 passcode. The Level 1 passcode can only be changed by a Level 2 user.

When you power-up your SMTS-L, the message System Secured is displayed under the time in the upper right corner of the Main Screen.

NOTE: System Secured is displayed under the time in the upper right corner of the Main Screen.

Touch the <Login> icon found on bottom left of the Main Screen and type the default Level 2 passcode of “9288” using the number keypad to gain access to all setpoint and configuration items. See Figure 10.

NOTE: For security reasons, the current passcode characters displayed at the top of the screen are never shown and appear as asterisks.

Touch <OK> to <Esc> if you accessed this screen by mistake and do not wish to change the current access level.

The Login Screen will now be displayed under the time at the top right of the Main Screen.

NOTE: System Access will automatically default to System Secured after the time set for Backlight Timeout in the System Manager Settings Screen has elapsed (see Figure 15, page 16). If timeout is set to zero, the passcode will timeout after two minutes.
Passcode Clearance Levels

Below is a list of the passcode levels, default codes, and actions that can be performed at the various levels.

**Level 0—No Passcode Needed, System Secured**

Level 0 users can view controller status points, setpoints, schedules, holidays, and alarms. No changes to the time and date, controller setpoints, or schedules can be made.

**Level 1—Default: 1111**

Level 1 users can change available system settings, space setpoints, and schedules and can also clear alarms.

**Level 2—9288**

Level 2 users have the same access as Level 1 plus the ability to change the Level 1 passcode.

Edit Passcodes

---

**WARNING: MAKE SURE YOU CHANGE THE LEVEL 1 PASSCODE AS SOON AS POSSIBLE TO SECURE THE SYSTEM!**

From the Main Screen, touch the `<User Passcodes>` icon. The Passcode Levels Screen will appear. See Figure 11.

The current passcode will appear on the top menu bar. Type in the new four-digit passcode. You cannot use the period or minus characters in your passcode. Use the `<<<>` key if you make a mistake. Touch `<Esc>` to return to the previous screen without changing the passcode. When you have typed in the new passcode, touch `<OK>`. The Change Passcode Screen should display the passcode you entered.

*Touch `<Back>` to return to the Main Screen.*
Set Time and Date

When you first power up your SMTS-L, you will need to change the day of the week, the time, and the month, day, and year to the current time and date. If your system has been turned off or has been down for a long time, you may have to do the same, although the time and date can maintain itself for several days. Only Level 1 & 2 users can change the time and date settings.

The day of the week, the time, and the date appear at the top right on the Main Screen. See Figure 9, page 13.

From the Main Screen, touch the <Set Time & Date> icon. The Set Time & Date Screen will appear. See Figure 13.

In the example above, the current time and date is 2:12 PM, January 16, 2017. And the selected day of the week is Monday.

**Set Day of the Week:** Select the day of the week by simply touching your selection. The day of the week text will change from white to blue.

**Set Hour, Minute, Month, Day, and Year:** Touch the blue highlighted box to have each selection screen appear. See Figures 13 & 14. Read the instructions on each screen for entering data.

**Broadcast:** When you are finished setting the clock and day of the week, touch the <Broadcast> button to broadcast the Time and Date to all Units. The following message will appear:

**GENERAL USE**

- **Time & Date Broadcast to All Units:**
  - **OK**
System Manager Settings

Additional system settings are available under the <Settings> icon. These include setting the Backlight Timeout, the Backlight Intensity Percentage, the System Manager Address, Alarm Polling, and One to One Unit Connection. Only Level 1 & 2 users can change the System Manager Settings.

From the Main Screen, touch the <Settings> icon. The System Manager Settings Screen will appear. See Figure 15.

**Backlight Timeout:** This setting is actually a setting for three separate functions—Backlight Timeout, Main Screen Timeout, and Passcode Timeout. To set the Backlight Timeout, enter the amount of time you wish the screen to maintain the active intensity level after the last touch pad activity occurs. The High limit is 30 minutes and the Low limit is 0. 0 = No Timeout. The SMTS-L will return to the Main Screen display at the same rate as the Backlight Timeout, except that if set to 0, the Main Screen will display after 2 minutes. The Passcode will timeout at the same rate as the Backlight Timeout, except that if set to 0, the Passcode will timeout after 2 minutes and will return to System Secured Setting.

**Backlight Intensity Percentage:** Enter the percentage of light level you wish to maintain whenever touch pad activity occurs. The High limit is 100 and the Low limit is 0.

**System Manager Address:** Enter the address of the SMTS-L. 0 = Stand Alone Mode. 63 = Network System. 1-60 = Multiple Managers based on the following definitions:

- **Stand Alone**—If your SMTS-L is connected to one controller and you are not using a CommLink or MiniLink anywhere on the loop, your system is Stand Alone. If your SMTS-L is connected to more than one controller daisy-chained together and you are not using a CommLink or MiniLink anywhere on the loop, your system is Interconnected. If you have either a Stand Alone or Interconnected system, you must enter <63> for Stand Alone Mode. In order to view all controllers on an Interconnected System, make sure that One to One Unit Connection, described below, is not selected.

- **Network**—If you are using this SMTS-L on a communications loop that has a MiniLink or CommLink installed and you have a single SMTS-L for your entire system, you must enter <63> for Network System.

- **Multiple Managers**—If you are using this SMTS-L on a communications loop, have a MiniLink or CommLink installed, and have more than one SMTS-L, then you need to operate in Multiple Managers Mode. Enter the address <1-60> at which you want this particular SMTS-L to be set. When more than one SMTS-L is used on a local loop, each must be set with a unique address different from any other device on that loop. If you want one of the SMTS-L's to be able to indicate alarms for the entire system, you must enter <63> for Network System for that particular SMTS-L.

**Alarm Polling Enabled:** If you wish for the system to poll for alarms, touch the black box to the left of this item to select it. The box will turn white and the system will immediately check all loops for alarms. Touch <Cancel> to stop the process. If you wish to have Alarm Polling Disabled, you must now touch the white box to deselect this option. The box will return to its previously fully black state.

**NOTE:** For the SMTS-L to poll for alarms, you must also configure the unit(s) to poll for alarms on the MiniLink Polling Device Setpoints Screen using Prism 2. See the Appendix in this guide for more information.

**One to One Unit Connection:** If your SMTS-L is directly connected to only one unit, you may wish to select this option to bypass the Unit Selection Screen and go directly to the unit’s Status Screen. The controller must be set to address #1 for this to work. Touch the black box to the left of this item on the screen to select it. The box will turn white. If you wish to deselect this option, simply touch the box again.

**System Manager Version:** The version number of the System Manager software appears on the bottom menu bar. This version number is important to know for troubleshooting purposes.
**Alarm Polling**

In order for Alarm Polling to appear on the *Main Screen*, you must have the following items in place:

1. **Alarm Polling Enabled** must be selected in the Systems Settings Screen (see Figure 15, page 16).
2. You must have a MiniLink connected to your system and have your SMTS-L set to Network Mode.
3. You must configure each unit to poll for alarms on the MiniLink Polling Device Setpoint Screen using Prism 2. See page 25 in this guide for more information.

The <Alarms> icon on the Main Screen allows you to check for alarms, review alarms, and clear alarms. Only Level 1 & 2 users can clear the alarm log.

A green <No Alarms> icon appears on the Main Screen when no alarms are present. This icon changes to a red <Active Alarms> icon when alarms are present.

To check for alarms, review alarms, or clear alarms, from the Main Screen, touch the <Active Alarms> icon. The System Alarm Status Screen will appear. See Figure 16.

**NOTE:** Even if you don’t set up Alarm Polling using Prism 2, a controller’s first status screen will still alert you of an active alarm.

**NOTE:** You can also view alarms while in individual controller’s status screens by pressing the ALARMS button.

**Clear All:** Touch <Clear All> to clear all alarms logs. Active alarms will remain. You must be a Level 1 or 2 user to access this option. When all alarms have cleared, the following message will appear on the screen:

All alarms cleared. Any remaining active alarms will re-appear.

**My System Unit Selection**

From the Main Screen, touch the <My System> icon. The Selected Unit Screen will appear. See Figure 17.

**NOTE:** If you have chosen the One to One Unit Connection in the System Manager Settings Screen, this screen will not appear. Instead, the unit’s Status Screen will appear.

**System Alarm Status**

Checking

**Figure 16: System Alarm Status Screen**

Next Unit: Touch <Next Unit> to access the next unit’s alarms.
Viewing VCC-X, VCB-X, VCM-X & VCM Status Screens

Figures 18 & 19 depict the first Controller Status Screens. Notice that the controller is identified by loop number and unit number - in this case, 0102 represents Loop 1, Unit 2. Images vary based on controller type.

While in the Status Screen, touch the <<>> and <-> buttons to view more status screens displaying relays and operating setpoints. These screens roll back to the first Status Screen.

Figure 18: VCC-X/VCB-X Controller Status Screen 1

Figure 19: VCM/VCM-X Controller Status Screen 1
**Viewing Controller Alarm Status**

To view alarm status, touch the `<ALARM>` button on the unit’s first Status Screen. See **Figure 20**. The Alarm Status Screen will display. See **Figure 21**.

**NOTE:** The `<ALARM>` button will be red when an active alarm exists. At its normal or inactive state, the button will be grayed and display, “No Alarms”.

**NOTE:** Even if you don’t set up Alarm Polling in Prism 2, a controller’s first status screen will still alert you of an active alarm.

**NOTE:** Alarms are configured using Prism 2 and active alarms can only be cleared using Prism 2.

In the example above (**Figure 21**), there is an ALARM (designated by the word ALARM in red.) If there is no alarm condition, the word OK appears next to the alarm condition. 

*Touch the `<Next>` button to go to the next Alarm Status Screen.*
Viewing and Setting Schedules

To view and set schedules for the controller, touch the <Schedules> button found at the bottom of the Status Screen. The Schedules Screen will appear. See Figure 22. The default day will be Sunday and the default event start/stop times will be midnight.

Figure 22: VCCX2/VCC-X/VCB-X/VCM-X & VCM Controller Schedules

Once back at the Schedules Screen, you can continue setting schedules day by day or use the following options:

- **SEND TO <All Days>** - Touch this button to send the schedule appearing on the screen to all days of the week, except for holidays.
- **SEND TO <Weekdays>** - Touch this button to send the schedule to weekdays only. You will need to set up a separate schedule for Saturday and Sunday when selecting this option.
- **CLEAR <All Schedules>** - Touch this button to clear all schedules.
- **SET <24 Hr Mode>** - Touch this button to have the system run continuously, 24 hours a day, 7 days a week including holidays. All event times will display 11:59 PM.

Viewing and Setting Holidays

To view and set holidays for the controller, touch the <Holidays> button found at the bottom of the Status Screen (Figure 20). The Holidays Schedule Screen will appear. See Figure 24. The holidays in the screen will initially not be set. You can only set holidays for the current year. You must be a Level 1 or 2 user in order to set holidays.

Figure 24: Holidays Schedule Screen

- **DATA ENTRY**

  **Week Schedules**
  Enter the Start/Stop times in 24 hour military format.
  Example:
  5:00 AM = 500
  5:00 PM = 1700
  Hi Limit: 2359
  Lo Limit: 0

Touch <OK> to save the time you entered or touch <Esc> to exit the Schedule Times Screen without changing the time and return to the Schedules Screen (Figure 22).

To eliminate a schedule from any event, simply enter a zero for the Start and Stop time for that day. The screen will display 12:00 am for both the Start and Stop times, indicating that the equipment will not activate on that day.
Forcing Schedules & Viewing Setpoints

Schedule Override

To Force Schedules, from the VCCX2, VCC-X, VCB-X, VCM-X or VCM Main Status Screen, touch the <Overrides> button located at the bottom of the screen. The following options will appear:

- **Schedule AUTO Mode** — Select this to restore normal schedule operations.
- **Schedule FORCED ON** — Select this to Force the unit into continuous Occupied Mode operation.
- **Schedule FORCED OFF** — Select this to Force the unit into continuous Unoccupied Mode operation.

**NOTE:** Only a Level 1 or Level 2 user can override schedules.

Changing Setpoints

There are a limited number of setpoints that a Level 1 or Level 2 user can change. Configuration of the majority of setpoints must be performed using Prism 2 or the Modular Service Tool SD.

To change the setpoints that are available on the Setpoints Screen, simply touch the blue highlighted box to change the setpoint. Each setpoint data entry screen will provide a definition of the setpoint and specific instructions for entering the setpoint and will include the setpoint range as in the example below, Figure 26.

**NOTE:** All users can view setpoints. However, only Level 1 & 2 users can change setpoints.

Viewing Setpoints

To access the controller’s setpoints, from the VCCX2, VCC-X, VCB-X, VCM-X or VCM Main Status Screen, touch the <Setpoints> button located at the bottom of the screen. The Setpoints Screen will appear (Figure 25):

Figure 26: Cooling Mode Enable Setpoint Data Entry Screen (VCC-X Shown)

Figure 25: Controller Setpoints (VCC-X Shown)
Viewing VAV/Zone Status Screens and Alarms

Viewing VAV/Zone Status Screens and Alarms

_Figure 27_ depicts a _VAV/Zone Controller Status Screen_. Notice that the controller is identified by loop number and unit number - in this case, 0101 represents Loop 1, Unit 1.

![Figure 27: VAV/Zone Controller Status Screen](image)

**Figure 28: VAV/Zone Controller Alarm Status Screen**

### Viewing Alarm Status

To view alarm status, touch the red _<ALARM>_ button on the unit's _Status Screen_ located at the bottom right. See _Figure 27_. The _Alarm Status Screen_ will display. See _Figure 28_.

**NOTE:** The _<ALARM>_ button will be red when an active alarm exists. At its normal or inactive state, the button will be grayed and display, “No Alarms”.

**NOTE:** Even if you don’t set up Alarm Polling in Prism 2, a controller’s first status screen will still alert you of an active alarm.

**NOTE:** Alarms are configured using Prism 2 and active alarms can only be cleared using Prism 2.
Viewing VAV/Zone Setpoints

To access the VAV/Zone Controller’s setpoints, touch the <Setpoints> button located at the bottom of the screen. The Setpoints Screen will appear (Figure 29).

**NOTE:** All users can view setpoints. However, only Level 1 or 2 users can change setpoints.

Figure 29: VAV/Zone Controller Setpoints Screen

Changing Setpoints

There are a limited number of setpoints that a Level 1 or Level 2 user can change. Configuration of the majority of setpoints must be performed using Prism 2 or the Modular Service Tool SD.

To change the setpoints that are available on the Setpoints Screen, simply touch the blue highlighted box to change the setpoint. Each setpoint data entry screen will provide a definition of the setpoint and specific instructions for entering the setpoint and will include the setpoint range as in the example below, Figure 30.

*Touch <OK> to have the system accept the new value. If you enter a setpoint that is not in the valid range, the setpoint will remain as is and will not change.*

Each setpoint data entry screen is self-explanatory; however, each setpoint and configuration is explained in detail in each Controller’s Modular Service Tool SD Technical Guide.

Figure 30: Cooling Mode Enable Setpoint Data Entry Screen
SMTS-L LEDs, Buttons, Dipswitches & Jumpers

LEDs and system function buttons are located behind your SMTS-L’s cover. See Figure 31 for locations. Dipswitches and jumpers are located on the back of your SMTS-L.

**Power LED**
This LED will light up and stay on as long as power is supplied to your TS.

**Operation LED**
This LED will blink once a second to indicate that the system is alive.

**Update LED**
This LED will turn on when the Update program is running.

**Screen Refresh LED**
This LED will turn on when the screen refreshes.

**Communications LED**
This LED will light up and blink when there is a connection with the CommLink and/or network. If you are using your SMTS-L in stand-alone mode, this LED will not light up.

**Reset Button**
Press this button to reset the screen. The screen should refresh itself to the Main Screen within 2 minutes.

**Diagnostics Button**
Under the direction of WattMaster Controls Technical Support, you may have to perform diagnostics on your SMTS-L. Press this button to do so.

**Touch Screen Suspend Button**
Press this button to temporarily freeze the touch screen function of your SMTS-L in order to clean the screen. Always use a dry, dust-free cloth to clean the screen.

**OPT1 Dipswitch**
For High Speed applications, the OPT1 Dipswitch should be ON. For all other applications, it should be OFF. This Dipswitch is located on the back of the SMTS-L. See Figures 4-8, pages 7-11 for location.

**OPT4 Dipswitch**
Dipswitch OPT4 should be set to ON by default. If you see your screen is not centered correctly, switch OPT4 to the opposite position. This Dipswitch is located on the back of the SMTS-L. See Figures 4-8, pages 7-11 for location.

**TERM Jumpers**
Both TERM Jumpers must be ON for Stand-Alone applications (No CommLink or MiniLink). Both TERM Jumpers must be OFF for applications with CommLink(s) and/or MiniLink(s). See Figures 4-8, pages 7-11 for location.

---

Figure 31: SMTS-L LEDs and Buttons
Setting Up Alarm Polling for Controllers

In order to set up Alarm Polling to work with the SMTS-L, you must have a CommLink and MiniLink Polling Device installed on your system. The following procedure must be done for the MiniLink Polling Device on each loop.

In the Loop Selection Window of the Prism 2 Main Screen, select the loop where your MiniLink Polling Device is located. Then, in the Unit Selection Window scroll down to Address 60 - MiniLink PD and click once on your selection. (Figure 32)

The Polling Device Window will appear. (Figure 33)

In the Alarm / Override Polling Window, click the box to the left of each controller to choose alarm polling and push-button overrides for that controller. A check mark in the box designates alarm polling/push-button override.

Click <Setpoints> at the top of the screen. The Polling Device Setpoints Window will appear. (Figure 34)

Click the <Alarm Polling> option at the top far right of the Polling Device Setpoints Window. The Alarm / Override Polling Window will appear. (Figure 35)
Military Time Conversion

The main difference between regular and military time is how hours are expressed. Regular time uses numbers 1 to 12 and a.m. and p.m. to identify each of the 24 hours in a day. In military time, the hours are numbered from 0000 to 2300.

Military time is based on a 24-hour day. Hours are numbered 0000 through 2300 and are recorded first. The last two digits indicate the minute after the hour. Military time does not exceed 2359 hours. For example, midnight is recorded as 0000; one minute past midnight is 0001; 1 a.m. is 0100, 1 p.m. is 1300, and so on.

Regular and military time express minutes and seconds in exactly the same way. When converting from regular to military time and vice versa, the minutes and seconds do not change.

Regular time requires the use of a.m. and p.m. to clearly identify the time of day. Since military time uses a unique two-digit number to identify each of the 24 hours in a day, a.m. and p.m. are unnecessary.

The following table summarizes the relationship between regular and military time.

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<tr>
<th>Regular Time</th>
<th>Military Time</th>
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<tr>
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<td>12:30 a.m.</td>
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<tr>
<td>1:00 a.m.</td>
<td>0100</td>
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<tr>
<td>1:30 a.m.</td>
<td>0130</td>
</tr>
<tr>
<td>2:00 a.m.</td>
<td>0200</td>
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<tr>
<td>2:30 a.m.</td>
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</tr>
<tr>
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<td>0330</td>
</tr>
<tr>
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<tr>
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<tr>
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<td>2300</td>
</tr>
<tr>
<td>11:30 p.m.</td>
<td>2330</td>
</tr>
</tbody>
</table>

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