



## ***Silent Messenger© MegaTech© Control Console***

### **TRAFIX© Operating System (Ver. 2.1.0) Menu Structure & Operating Instructions:**

**SolarTech® Splash Screen:** The **SolarTech® Splash Screen** is presented at the completion of system boot-up (power-up & initialization) and whenever an operator logs out. **Note:** If no touch-screen activity is detected for more than 15 minutes, control console will automatically return to the **SolarTech® Splash Screen** and turn the back-light off to conserve power and restore **Password Security** if enabled (unless **Auto-Logout Feature** is disabled – see **Disable Automatic Log Out** in **Settings Main Screen**). To re-activate the **SolarTech® Splash Screen** and turn on the back-light, simply touch the touch-screen [**Note:** ensure that the main power switch on the Energy Management System (EMS) is in the “On” position!]

**Enabling Password Security:** Unless specified otherwise at time of order, all **MegaTech©** control consoles equipped with the **TRAFIX©** operating system software are shipped with **Password Security** disabled (no password required for log-in). To enable **Password Security:** log-in, select the **Settings Main Screen**, select **Administrators** and create at least one **Administrator Password**. **Password Security** is now enabled and multiple passwords may be created for **Quick Picks Users, General Users, Supervisors** and other **Administrators**. Additional passwords may be added and/or removed for any operational level at anytime by the appropriate authority. All passwords, and all **Password Security**, may be removed, at any time, by selecting **Restore Initial Configuration** located in **Controller Resets** from the **Tools Main Screen** – see below for additional details.

### **Menu Structure and Operating Instructions:**

#### **Display Main Screen:**

- **Blank the Sign Panel:** Requires Log-in with a **User, Supervisor** or **Administrator** Password (if **Password Security** enabled – see **Enabling Password Security**).
  - o Blanks the Sign Panel – follow instructions provided on screen. **Note:** It is recommended that when the Silent Messenger PCMS is not in use the operator select this option to blank the sign panel, place the system in a low-power consumption mode, and leave the Main Power switch on to avoid system boot up prior to next usage. Only turn the Main Power switch (located on the Energy Management System) off for prolonged periods of non-use or storage.
- **Instant Message:** Requires Log-In with a **User, Supervisor** or **Administrator** Password (if **Password Security** enabled – see **Enabling Password Security**).

- Takes the operator directly to the **Message Creation and Editing Screen** (see **Message Creation and Editing Screen** below) for **Instant Message** creation and display on the Sign Panel. Upon completion of Message Creation the newly created Message will be automatically named “Instant Message”, placed in the Message Library and set as the Default Message (unless set as the Override Message – follow instructions provided on screen).
  
- **Quick Picks:** Requires Log-In with a **Quick Picks, User, Supervisor** or **Administrator** Password (if **Password Security** enabled – see **Enabling Password Security**).
  - **Up to Six (6) Pre-Programmed Quick Pick Messages for Preview & Display** that are user assigned (see **Set Quick Picks in Manage Messages**). To preview a **Quick Picks Message** touch the desired **Message Window** once (**Message Window** will turn yellow and Message will be displayed in **Message Window**). To select a **Quick Picks Message** as the **Default Message**, and display it on the Sign Panel, touch the desired **Message Window** a second time [**Message Window** will turn from yellow to green indicating that the selected Message is now set as the Default Message (unless set as the Override Message – follow instructions provided on screen) and will be displayed on the Sign Panel].
  - **Blank** – Blanks the Sign Panel – follow instructions provided.
  - **Finished** – Returns to **Display Menu** or directly to **SolarTech® Splash Screen** if Logged-In with a **Quick Picks Password**).
  
- **Manage Messages:** Requires Log-In with a **User, Supervisor** or **Administrator** Password (if **Password Security** is enabled – see **Enabling Password Security**). Used to Create, Edit, Delete, Preview, Display Messages & Assign Quick-Picks.
  - **Message Screens:** Top left screen (Current Message Screen) displays Message currently being displayed on the Sign Panel (amber). Top right screen (Preview Screen) is for preview of Messages within Message Library (blue).
  - **Set Default Message (Yellow Check Mark):** Sets the selected Message from the Message Library as the Default Message and displays the selected Message in the top left screen (Current Message Screen) in amber and on the Sign Panel



unless a current Schedule, Event or Override Message is currently taking priority over the Default Message in which case follow instructions provided.

**Note:** The **Default Message** is that Message which will normally be displayed on the Sign Panel unless superseded by a Schedule or an Event. If there are no Schedules or Events programmed, then the Default Message will be displayed on the Sign Panel at all times; however, if any Schedules or Events are present in the system's Scheduler those Messages will take priority over the **Default Message** as programmed. In this case, when changing the **Default Message**, the operator will be given a warning and the choice of setting the newly selected Message as the **Default Message** or as the **Override Message**. If the newly selected Message is set as the **Override Message** it will not update or change the current **Default Message**, will take priority over all other Schedules and Events and will be displayed on the Sign Panel at all times until changed or cleared. If the newly selected Message is set as the **Default Message**, the system will function normally allowing all Schedules, Events (and the current **Override Message**) to take priority.

**Note:** To preview a Message from the Message Library touch the desired Message in the list of Messages. The Message will be displayed in blue in the Preview Screen (right). To set a Message from the Message Library as the Default Message and display it on the Sign Panel unless a current Schedule, Event or Override Message is currently taking priority over the Default Message touch the desired Message in the list of Messages and once it is displayed in blue in the Preview Screen (right) touch the **Set Default Message (Yellow Check Mark)** button to set the selected Message as the Default Message, display it in amber in the Default Message Screen (left) and display it on the Sign Panel unless a current Schedule, Event or Override Message is currently taking priority over the Default Message – if any Schedules or Events are present in the system's scheduler follow instructions provided on setting message as Default Message or Override Message – see above explanation.

- **Add Message (Green Plus Sign):** Activates the **Message Creation & Editing Screen** to enable creation, naming and saving of a new Message to the Message Library (see **Message Creation & Editing Screen**).
- **Add & Set Default Message (Green Plus Sign & Yellow Check Mark):** Activates **Message Creation & Editing Screen** to enable creation, naming, saving and *automatic display* of a new Message (sets the newly created and saved Message as the Default Message or Override Message (if any Schedules or Events are present in the system's Scheduler) and displays it in the Current Message Screen

in amber and on the Sign Panel unless a current Schedule, Event or Override Message is currently taking priority over the Default Message – see **Set Default Message (Yellow Check Mark), Add (Green Plus Sign) and (Message Creation & Editing Screen)** for additional information and explanation.

- **Edit Message (Pencil-Scissors-Glue):** Activates **Message Creation & Editing Screen** and loads the selected Message from the Message Library for editing and saving. To edit a Message from the Message Library, touch the desired Message and when it is displayed in blue in the Preview Screen (right) touch the **Edit Message (Pencil-Scissors-Glue)** button to activate the **Message Creation & Editing Screen** (see **Message Creation & Editing Screen**).
- **Delete Message (Black X):** Removes the selected Message from the Message Library. To delete a Message from the Message Library, touch the desired Message and when it is displayed in blue in the Preview Screen (right) touch the **Delete Message (Black X)** button and follow on-screen instructions. **Note:** The Default Message and Messages assigned to Current Quick Picks may not be deleted. To delete a Message from the Message Library ensure that it is not assigned as the Default Message or to Current Quick Picks.
- **Set Quick Picks:** Displays the Quick Picks Set-Up screen in which you can add or remove Messages to or from the Quick Picks Library.
  - To add a Message to the Quick Picks Library from the Message Library, touch the desired Message in the Message Library then touch the **Right Arrow Button ( ==> )** to move the desired Message to Current Quick Picks. If the desired Message is not in the Message Library touch the Green Plus (+) button and follow **Message Creation & Editing** procedures to automatically create and add the desired Message to the Message and Quick Picks Libraries. [Note: up to six (6) messages may be added to the Quick Picks\_Library.]
  - To remove a Message from Current Quick Picks touch the desired Message in Current Quick Picks and then touch **left arrow button ( <== )**.
  - When finished touch the **Finished** button and then touch the **Log Out** button.
- **Export:** Exports entire Message Library to a USB memory device for transfer to another controller (using Import) or Control Center 3000.



- **Import:** Imports Messages (exported from another controller or from Control Center 3000) from a USB memory device into the Message Library.
- **Finished:** Returns operator to the **Display Main Screen**.

**Message Creation & Editing Screen General Notes:**

- The Active Page in a Message during Message Creation & Editing is outlined in red. To edit an existing Page, touch the Page once to make it the Active Page (outlined in red). Touch the Active Page a second time to edit the Page contents. To place the cursor in a Text Page for editing, touch the desired location for cursor placement and edit as desired using the keyboard. To change the Page Display Time for the Active Page, touch the Page Display Time window (seconds) once and type in desired display time [Note: two (2.0) seconds is provided automatically as the default display time for all newly added Pages]. To remove a Page from a Message, touch the Page to make it the Active Page and then touch the **Delete (Trash Can)** button to remove the Page from the Message. New Pages added to a Message will always be added to the right of the current Active Page. When all editing is completed touch the **Finished (Green & Yellow Smile Face)** button to name and save the Message (naming is not required for Message editing as the Message already had a name prior to editing). To exit without saving any changes touch the **Cancel (Red w/Black X)** button.
- To add a Text Page to a Message, touch the **Create Text Page ( Te ][ )** button. Select desired font (an automatic sizing font labeled “Adaptive” is provided as the default font). Select the desired keyboard. (Note: availability of fonts and keyboard activation is dependent upon current controller font selection - see **Change Font Set in Administrator Menu**). Type desired text. To select specific lines within a Page for text creation/editing (such as in a 3-Line Normal font) touch desired line on the Active Text Page to place cursor as desired. To change the display time of the Active Text Page touch the display time window and type in desired display time.
- To add a Graphic Image Page to a Message touch the **Create Graphic Image Page (Mona Lisa Picture)** button and create a Graphic Image as desired by using the tools provided. When finished touch the **Finished** button. To change the display time of the Active Graphic Image Page touch the display time window and type in desired display time.

- To add a Dynamic Data Source (e.g. radar, time, date, etc.) Page, touch the **Create Dynamic Data Source Page (Thermometer & Time)** button and create the Dynamic Data Source Page by using the tools provided. When finished touch the “OK” button. To change the display time of the Active Dynamic Data Source Page touch the display time window and type in desired display time.
- To add a Page from the Master Library, touch the **Insert Page from Master Library (Books)** button. Select the desired Page for insertion from the menu provided, and then touch the “OK” button. To change the display time of the Active Page touch the display time window and type in desired display time.
- To add a Page by copying an existing Page from within the Message simply select the Page to be copied and touch the **Copy** button (**Two Sheets of Paper**) – a copy of the currently selected Page will be inserted into the Message just to the right of the selected Page. The newly copied Page may now be edited and/or moved about within the Message just like any other Page.
- To move Pages left or right within a Message simply select the Page to be moved and use the **Move Left (Left Arrow)** or **Move Right (Right Arrow)** buttons to move the Page left or right one space at a time.
- To add Special Effects (Annotations) to a Page, select the Page to which Special Effects (Annotations) are to be added, touch the **Fx** button and select the desired Special Effects (Annotations) to be added to the Page.

#### **Menu Selections:**

- **Create Text Page ( Te)[ ]**: Inserts a new Text Page in a Message
  - **Keyboard** – standard keyboard input – multiple keyboards are available and may be selected at anytime by use of the keyboard button at lower right – note keyboard activation is dependent upon current controller language setting – see **Set Controller Fonts** in **Administrator Menu**.
  - **Display Time** (Seconds) – Page Display Time within Message – touch in window to edit display time (2 seconds is provided as the default display time for all newly added Pages).

- **Font** – Font Selection – font availability is based upon current controller language setting – An Adaptive font (an automatic sizing font) is provided as the default font in all cases unless changed by the operator. – see **Set Controller Fonts in Administrator Menu.**
- **Create Graphic Image Page (Mona Lisa Picture):** Inserts a new Graphic Image Page in a Message
  - **Pencil** – Pixel by Pixel Editing – turns pixels on or off based upon pixel on/off selection.
  - **Line** – Draw/Remove Pixels w/Line Editing.
  - **Circle** – Draw/Remove Pixels w/Circle Editing.
  - **Pixels On** – Turn Pixels on while editing.
  - **Pixels Off** – Turn Pixels off while editing.
  - **Undo** – Undo last edit.
  - **Redo** – Redo last edit.
  - **Finished** – save changes and return to Message Creation & Editing Screen.
  - **Cancel** – cancel and discard changes and return to Message Creation & Editing Screen.
- **Create Dynamic Data Source Page (Thermometer & Time):** Inserts a Dynamic Data Source Page in a Message.
  - **Insert Text** – adds a text block to a Dynamic Data Source Page.
  - **Insert Source** – adds a Data Source to Dynamic Data Source Page.
  - **Edit** – enables editing of previously created text blocks within the Dynamic Data Source Page (select text block for editing and then select Edit).
  - **Delete** – deletes selected text block or data source from Dynamic Data Source Page.

- **Move Up** – moves selected text or data source up in display order on Dynamic Data Source Page.
- **Move Down** – moves selected text or data source down in display order on page on Dynamic Data Source Page.
- **Insert Page from Master Library (Books):** Inserts a new Page from the Master Library into the Message.
- **Delete (Trash Can):** Deletes the Active Page from the Message – **Note:** a Message must contain at least one Page.
- **Copy (Two Pages):** Creates and inserts into the Message a Copy of the Active Page.
- **Move Page Left (Left Arrow):** Moves the Active Page left one position within the Message.
- **Move Page Right (Right Arrow):** Moves the Active Page right one position within the Message.
- **Page Special Effects / Page Annotations (Fx):** Used to add Special Effects to a Page (a.k.a. Page Annotations) within a Message such as flashing an entire Page, flashing specific line(s) on a Page, adding static or dynamic (moving) arrows or chevrons to a Page or adding Signal Lamps to (all Pages in) a Message.
- **Cancel (Red w/Black X):** Cancels Message Creation & Editing without saving any changes to the Message Library.
- **Finished (Green & Yellow Smile Face):** accepts changes and saves them to the Message Library (newly created Messages will require naming prior to saving to Message Library).
- **Keyboard:** Standard keyboard function for selected language.
- **Keyboard Button** (lower right-hand corner next to space bar): Enables selection of available keyboards for supported languages. Requires proper selection of controller language (see **Set Controller Fonts** in **Administrator Menu**).



- **Schedule Messages:** Requires Log-In with a **User, Supervisor or Administrator** Password (if **Password Security** is enabled – see **Enabling Password Security**). When selected the operator is presented with a standard calendar (one month at a time) which provides a graphical representation of the current Date & Time Based Scheduled Messages. **Note:** to view the list of Schedules for any given day touch the desired day twice. The following controls are provided:
  - **Schedules:** View the List of all Date & Time Based Scheduled Messages.
    - **Add** – Adds a New Scheduled Message to the Scheduler – follow on-screen instructions provided.
    - **Edit** – Edits Selected Scheduled Message – follow on-screen instructions provided.
    - **Delete** – Deletes Selected Scheduled Message from Scheduler – follow on-screen instructions provided.
    - **Finished** – Return to Scheduler Main Screen.
  - **Events:** View the List of Event (Data Source) Based Scheduled Messages – Data Driven Events may be created for various Data Sources including: System Battery Voltage, Internal and External Temperature Inputs, System Photocell Readings, Radar Gun Input, and External Switch Closures. The following controls are provided:
    - **Add** – Adds a New Event Based Scheduled Message to Scheduler – follow on-screen instructions provided.
    - **Edit** – Edits the Selected Event Based Scheduled Message – follow on-screen instructions provided.
    - **Delete** – Deletes the Selected Event Based Scheduled Message from Scheduler – follow on-screen instructions provided.
    - **Finished** – Return to Scheduler Main Screen.
  - **Export:** Exports all Schedules & Events to a USB memory device for transfer to another controller (using Import) or Control Center 3000.
  - **Import:** Imports Schedules & Events (exported from another controller or from Control Center 3000) from a USB memory device into Schedules & Events on controller.



- **Finished:** Returns to **Display Main Screen**.
- **Signal Lamps:** Enables operator to set (optional) Sign Panel Signal Lamps to: **On** (Signal Lamps ON at all times); **Off** (Signal Lamps OFF at all times); **Automatic** (Signal Lamps turned ON / OFF AUTOMATICALLY as determined by current Message displayed on sign panel - see Page Special Effects).
- **Log Out:** Logs Out to Main Splash Screen.

**Information Main Screen:** Displays: Software Version, Time, Date, Photocell Reading & Setpoints, Battery Voltage & Power Source (Solar / Battery / AC-Line), Temperature, IP Address, MAC Address, Up-Time, Current Run-Time, Lifetime Run-Time, Serial Modem Type, Serial Modem Signal Strength, Serial Modem Signal Quality, GPS Position and Sign Panel Compass Heading.

- **Refresh:** Requires Log-In with a **User, Supervisor or Administrator** Password (if **Password Security** is enabled – see **Enabling Password Security**). Updates all Data on the Information Screen.
- **Help:** Requires Log-In with a **User, Supervisor or Administrator** Password (if **Password Security** is enabled – see **Enabling Password Security**). Displays Help File (Basic Operational Instructions).
- **Comm. Passwords:** Requires Log-In with a **Supervisor or Administrator** Password (if **Password Security** is enabled – see **Enabling Password Security**). Displays Controllers Remote Communications Security Passwords.
- **Log Out:** Logs Out to Main Splash Screen.

**Tools Main Screen:** Troubleshooting, Configuration and Reset Tools.

- **Test Display Modules** (Tests LED Display Modules & Sign Panel operation): Requires Log-In with a **User, Supervisor or Administrator** Password (if **Password Security** is enabled – see **Enabling Password Security**). Use arrow buttons provided to turn on and test specific LED Display Modules on the Sign Panel. The numerical address of current LED Display Module under test is provided to aid in diagnostics. For assistance contact Customer Service.
- **Test Entire Sign Panel** (Tests All LED Display Modules): Requires Log-In with a **User, Supervisor or Administrator** Password (if **Password Security** is enabled – see **Enabling**



**Password Security**). This test sends a test pattern to all LED Display Modules in the sign panel to enable an operator to easily and rapidly determine failures and make repairs. For assistance contact Customer Service.

- **Provision Unit:** Requires Log-In with a **Supervisor** or **Administrator** Password (if **Password Security** is enabled – see **Enabling Password Security**). This utility uses a special file from a USB memory device (provided by the factory) to configure a controller to specific agency requirements, etc. For assistance contact Customer Service.
- **Controller Resets:** Requires Log-In with a **Supervisor** or **Administrator** Password (if **Password Security** is enabled – see **Enabling Password Security**).
  - **Reset Run-Time Counter** – Resets the resettable Run-Time Counter viewable from the **Information Main Screen**.
  - **Reset Schedules and Events** – Deletes all Schedules and Events from the Scheduler.
  - **Reset Message Library** – Deletes all Schedules and Events from the Scheduler, all Messages from the Message Library and all user-assigned Messages from Quick Picks.
  - **Restore Initial Configuration** – Restores all user configurable settings to factory defaults.
  - **Reset Sign Panel Configuration** – Clears currently saved/stored Sign Panel Configuration and initiates Sign Panel Auto-Detection & Configuration upon next system boot-up. Contact Customer Service for assistance.
  - **Recalibrate Touch-Screen** – Initiates a touch-screen calibration routine upon next system boot-up. Only used when replacing a damaged touch-screen. Not included as part of a standard Master Reset operation. Contact Customer Service for assistance.
  - **User Master Reset** – Restores all controller settings to original factory settings including photocell set-points, and deletion of all passwords.
  - **Factory Master Reset** – Resets Message Library; Resets Schedules and Events; Resets Controller Settings (Deletes all Schedules and Events from the Scheduler, all Messages from the Message Library, all user-assigned Messages from Quick Picks, all passwords and restores all controller set-points to original factory settings).



- **Solar Panel Orientation:** Requires Log-In with a **User, Supervisor** or **Administrator** Password (if **Password Security** is enabled – see **Enabling Password Security**). Controls actuator equipped solar arrays (follow on-screen instructions provided).
- **Log Out:** Logs Out and returns to **SolarTech® Splash Screen**.

### **Settings Main Screen:**

- **Administrators:** Add & Remove Administrators.
- **Supervisors:** Add & Remove Supervisors.
- **Users:** Add & Remove General Users.
- **Quick Picks Users:** Add & Remove Quick Picks Users.
- **IP Address:** Set up IP Address for Networkability (Select between Dynamic IP Address and Static IP Address – see Control Center 3000 Operating Instructions for additional information on network settings).
- **Serial Modem:** Set up Serial Modem Port for desired device.
- **NTCIP/UTMC:** Enables an Operator to Enable or Disable NTCIP & UTMC servers, select between Central and Local control and establish/change the Administrator Password (Community String) for NTCIP/UTMC access and control. For more information see NTCIP & UTMC supporting documentation or contact Customer Service for assistance.
- **Automatic Log Out:** Enables and operator to disable or enable the Automatic Log-Out Security Feature. Follow on-screen instructions provided.
- **Date & Time:** Set Date, Time & Time Zone (for proper DST operation).
- **Font Set & Blanking:** Select among US DOT Fonts, Canadian Fonts, International Fonts, etc.
  - **US DOT Font Set** – Fonts Provided: Adaptive, One-Line, Two-Line, Three-Line Normal, Three-Line Bold, Three-Line Narrow, Three-Line Condensed, and Four-Line. Keyboards Activated: English.
  - **STD US DOT 3-Line** – Fonts Provided: Adaptive & Three-Line Normal (5x7) only. Keyboards Activated: English.



- **International Font Set** – Fonts Provided: Language specific. Keyboards Activated: All (English, Arabic, French-Canadian MTO, Portuguese/Spanish).
- **French Canadian MTO Font Set** – Fonts Provided: French Canadian MTO-2 Three-Line Font. Keyboards Activated: English and French-Canadian.
- **Adaptive Blanking:**
  - **Automatic:** The software will automatically insert blank pages (approximately 0.5 seconds in duration) between all pages of the currently displayed message to conserve power whenever logged or actual battery terminal voltage drops below 12.4VDC.
  - **On:** Blank pages (approximately 0.5 seconds in duration) will be inserted between all pages of the currently displayed message to conserve power at all times regardless of logged or actual battery terminal voltage.
  - **Off:** No blank pages will be inserted between all pages of the currently displayed message regardless of logged or actual battery terminal voltage.
- **Radar & Compass:** Select between MPH and KPH for Radar. Place Radar Gun in Tuning Fork Test Mode. Set Sign Panel Compass Heading Correction Factor.
- **Battery Voltage Offset:** Set the offset for voltage drop in Control Console power lines to ensure accurate display of actual battery terminal voltage in vehicle mount installations.
- **Photocell Limits:** Used to adjust Photocell Light Level Parameters. Note: factory default settings are 1500 and 3750 – it is highly recommended that changes not be made to these set-points without consulting with the factory.
- **Interface Language:** Change Control Console GUI (Graphical User Interface) language. Available languages are English, Spanish, French, Dutch, German, and Portuguese.
- **Sign Panel:** Enables an Operator to describe the sign panel type for NTCIP & UTMIC control and, if necessary, manually configure the system's Sign Panel Configuration for certain types of Sign Panels including dual Sign Panel systems. Contact Customer Service for additional assistance.
- **Log Out:** Logs Out and returns to SolarTech® Splash Screen.