# SOLARTECH®

# Silent Messenger Web Interface Documentation

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## Solar Technology Inc.

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# INTRODUCTION

This document describes how to use the web interface on Silent Messenger message boards. The web interface allows users to perform a variety of common tasks from web browsers and HTML-enabled cell phones, without requiring the installation of Control Center 3000, except for initial configuration.

The web interface allows the user to:

- Blank the message board.

- Activate a message.

- Define a new text-only message.

- Edit an existing text-only message.

- View sign status information.

The web interface has been tested with the following web browsers:

- Firefox 3.0

- Internet Explorer 7

- Safari 3.2.1

and the following HTML-enabled cell phones:

- Apple iPhone

- Google Android

- Research in Motion Blackberry

in general, it should work on any computer or cell phone with an HTML-based web browser. It is not intended to work with "Mobile Web" or WAP browsers.

# ENABLING THE WEB INTERFACE

**Note:** *The web interface on a message board may have already been configured by the factory or an installer. If you have been supplied a web interface URL, username, and password, please skip this chapter.*

In order to enable the web interface, one must first determine the message board's IP address, and be able to connect to the board using Control Center 3000. Please refer to the Control Center 3000 documentation for details of how to connect to a message board.

Once connected to the message board, the web server can be enabled by going to the "CMSUnit" menu and choosing "Set the Unit's Web Interface Password...". This will prompt for a username and password. Enter these, and click "Ok". The web interface will then be enabled.

> **Warning:** Anyone knowing or guessing the web interface password can operate the message board over the web. It's important to choose a strong password that is at least 8 characters long, consisting of both letters and numbers.

Once the web server has been enabled, it can be accessed by visiting the message board's *web interface URL*. This URL is `http://` followed by the message board's IP address. For example, if the IP address is 1.2.3.4, the URL is:

> http://1.2.3.4

Visiting the web interface URL for the first time will display an authentication page.

## 2.1 Troubleshooting

If the login screen fails to load, please check:

- The unit's IP address is correct.

- The "web interface password" was set in Control Center 3000. Note that this is different from the "communications password".

- That access to the unit on port 80 is not firewalled off.

## 2.2 Disabling the Web Interface

The web interface may be disabled by setting the username and password to blank strings, using the method described above. The message board must be rebooted (by going to "CMSUnit", "Reboot Unit") to fully disable the web server.

# USING THE WEB INTERFACE

This chapter explains how to use the web interface to perform common tasks.

## 3.1 Authentication

When a one first accesses the web interface URL, one will be presented with the authentication screen, prompting them for their username and password.

Entering the username and password and choosing "Log In" will bring one to the home screen.

## 3.2 Home Screen

The home screen displays the status of the message board, and buttons that allow one to control the message board. The buttons will be described in the sections below. The status information is:

- What the message board is displaying. This is either the name of a message, "Sign Panel Blanked." to indicate the message board is blank, or "Sign Error" to indicate a hardware error. When displaying a message, clicking the preview link beneath it will display that message.

- The current battery voltage. (This value is meaningless on a sign that is not battery powered.)

- Estimates of the message board's battery runtime. This is the estimated amount of time the sign can run without running out of battery power. If $\infty$ is displayed, the sign will not run out of power while current conditions continue. The short-term estimate uses 3 days of data, while the long-term estimate uses between 7 and 28 days of data.

- The current temperature.

- The reading of the signs photocell, and the photocell limits.

- The current date and time.

Clicking the "Update Status" button on the home screen will update this status information.

## 3.3 Blanking the Message Board

The message board may be blanked by choosing "Blank Sign Panel" on the home screen.

## 3.4 Activating a Message

To change the message the message board is displaying, choose "Change Message" from the home screen. This will display a list of messages that are defined on the message board.

Choosing the name of a message from this will bring one to a preview of that message. The message can then be activated by choosing "Activate Message".

## 3.5 Editing an Existing Message

To edit an existing message, choose "Change Message" from the home screen. This will display a list of messages that are defined on the message board.

Choosing the name of a message from this will bring one to a preview of that message. The message can be edited by choosing "Edit Message" from the preview screen.

If the "Edit Message" button does not show up in the preview of a message, the message cannot be edited in the web interface. Please use TRAFIX or Control Center 3000 to edit the message.

Please read the next section for details of how to use the message editor.

## 3.6 Creating a New Message

To create a new message, choose "Change Message" from the home screen, then choose "Create New Message". This will display the message editor.

The top of the message editor displays information about how long each line can be, and how many lines can fit on a single page.

The message editor can create pages up to 6 pages long. Each page has a text field where one can edit the page's text, and a drop-down box that controls how long the page is displayed for.

If the text of a page is left empty, and it is not skipped, then a blank screen will be displayed.

The message title should be set to a name describing the purpose of the message. If a message with that title already exists, it will be overwritten.

Choosing "Save & Activate Message" will save the message and activate it on the sign. Choosing "Save Message" will save the message, but not activate it.

## 3.7 Setting the Web Name

Choosing the "set name" link at the bottom of the home screen allows one to set a message board's web name. This is a descriptive name that can be used to easily distinguish one message board from another. Once set, it is displayed at in the title of every page.

Setting it before bookmarking the web interface URL will include the web interface name in the bookmark.

## 3.8 Log Out

Clicking the "Log Out" button will log out the user. We recommend logging out when one finishes controlling the message board.

# CLIENT NOTES

This section contains information specific to particular web clients.

## 4.1 Apple iPhone & iPod Touch

When accessing the web interface URL from an Apple iPhone or iPod Touch, one can choose the add bookmark (+) button, and then choose "Add to Home Screen". This will add an icon to the home screen of the device.

We recommend doing this from the web interface's home screen, after setting the message board's web name, as described above.

# SECURITY IMPLICATIONS

This interface allows a party that does not have physical access to a message board to control what the message board is displaying. As a result, it's important to control access to this protocol. We can provide the following security advice:

- It is important to choose a good password, and maintain control of the passwords. When a person no longer has need to access a system, the password should be changed.

- To prevent "sniffing" and "man-in-the-middle" attacks, all traffic should be routed over networks that are difficult for untrusted parties to access. Examples of these networks include:

    - A wired network which unauthorized users are not allowed to connect to, connected to a reliable ISP.
    - A wireless network protected by WPA or WPA2 encryption.
    - A mobile network to which both the client and the message board are directly connected.

By observing these security precautions, one can prevent unauthorized users from accessing your message board.