

Signal-Tech
Smart Sign Software

Setup & User Manual

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Signal-Tech

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Web Interface



PNC Bank – Drive Thru | Milwaukee, WI

1.0 Software Overview

The Signal-Tech Sign Control Software is an interface used to control messages displayed on Static Smart Signs and Smart VMS Rebel Signs.

1.1 System Requirements

- Computer: Server grade PC with power backup running Windows 7 or Windows Server 2008 or higher
- Minimum: 8GB RAM and 128GB of hard drive space
- Network: Ethernet and DHCP enabled

1.2 General Features

- Runs as a Windows service
- Signs can be placed into logical groups for display and access purposes
- Notifications can be set up to send emails for communication failures or other exceptions
- Ethernet communication

1.3 Administrator Interface

- Shows a live overview of all your signs and what they are currently displaying
- Use to configure Smart Signs, schedules, messages and Web Interface users
- Allows setup of unlimited email notifications
- Logs all Web user activities

1.4 Web User Interface

- Self-contained in the software
- Web Interface is viewed in a web browser (default http port 80, default https port 443)

- Shows status of signs (by sign group) and what they are currently displaying
- Permissions-based user access to sign groups
- Allows users to manually override schedules or add scheduled overrides to the current schedule
- Optimized for viewing on mobile devices

1.5 Scheduling

- Allows for scheduling a repeating weekly schedule
- Allows scheduled and manual overrides of schedules
- Works across multiple time zones

1.6 Static Message Smart Signs

- Signs that have static (fixed) messages where strategically placed LEDs form the characters of the messages
- Software changes messages or blanks the sign automatically, based on schedules

1.7 VMS Rebel Smart Signs

- VMS Rebel Programmable signs can be programmed to display any message
- Software changes messages or blanks the sign automatically, based on schedules
- Provides an easy message editor with a live preview
- Supports date and time messages
- Supports scrolling text

Terminology and Organization

2.0 Terminology and Organization

HTTP User

Users are only applicable to the HTTP Web Interface, and can be given permissions to view specific sign groups.

Manual Override

Schedules can be overridden in real time through the Administrative Interface or Web Interface.

Message *(S-VMS Rebel Programmable Signs ONLY)*

A message can be either a single line or double line of text that is displayed on the sign. Multi-part messages can be created and will show in sequence for the selected amount of time. Messages will scroll automatically if too wide for the sign.

Organization

The organization of this software allows you to re-use message groups in schedules, and to use the same schedule on multiple signs.

Schedule

A schedule contains a daily time-based list of messages for each day in the week. Each day can have different message setups, including having time periods where the sign displays nothing. Schedules are specific to sign types and loop until edited or manually overridden.

Scheduled Override

These are part of a schedule, and can be used to override the schedule for holidays or other occasions. Scheduled overrides may be added to a schedule in the Administrative Interface or Web Interface by authorized users.

Sign

Each Smart Sign connected to the software must be configured in the software. Signs are accessed over TCP/IP.

Sign Group

Signs can be placed into logical groups, to make Smart Sign organization easier. Web Interface viewing will also be easier.

Sign Type

The sign type is the product ID of the sign. Same sign types can share schedules.

Static Message Smart Signs

S-TCL, S-PHX, S-PHXF, and S-TCIL series signs. Signs that can only display messages preset by the factory.

S-VMS Rebel Programmable Message Smart Signs

VMS Rebel Series signs. Variable message Smart Signs display programmed messages keyed in by the administrator or user. VMS message signs are only available in monochromatic displays.

Throughout this document the areas of the administrative software will be referred to as the following:

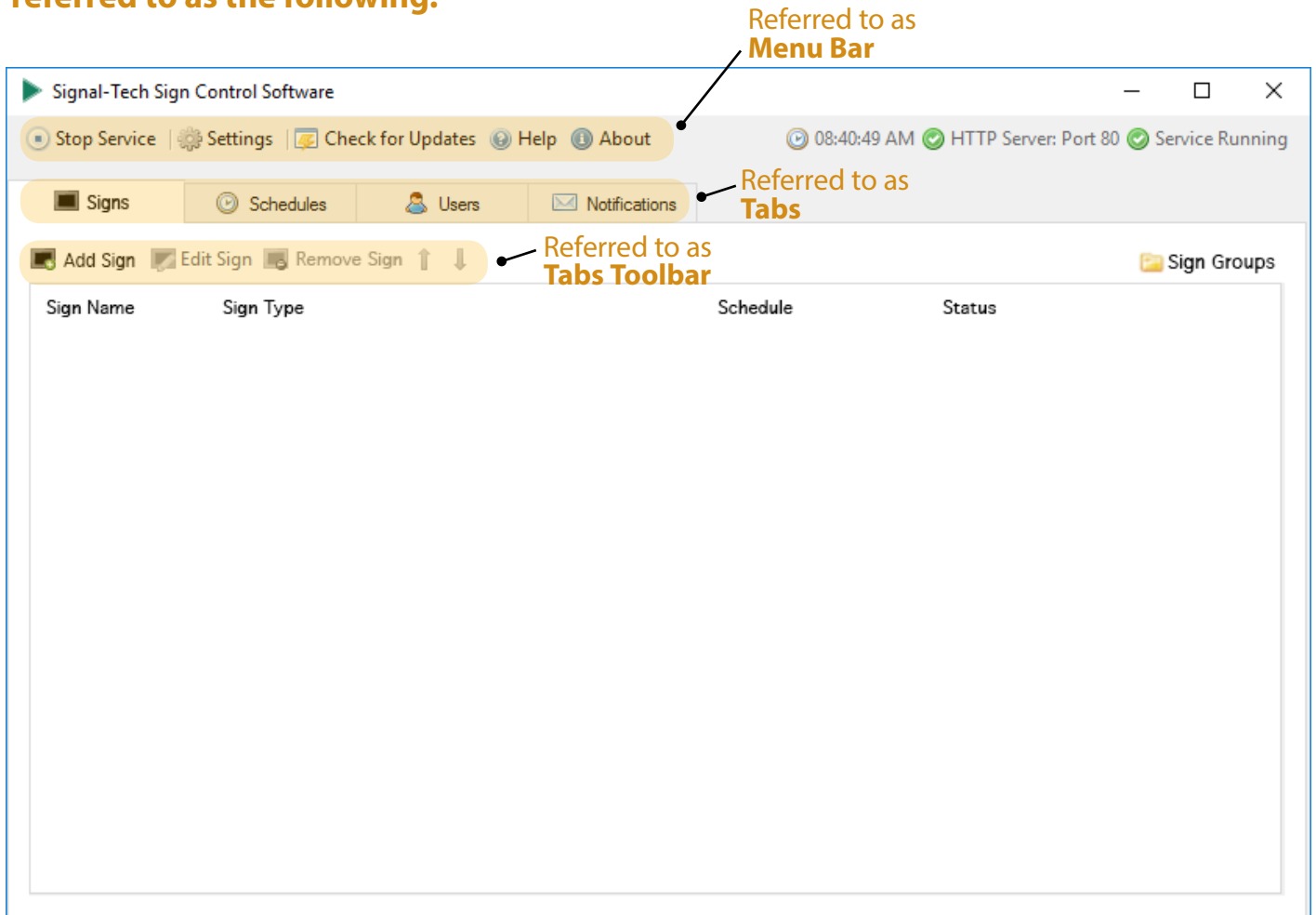


Figure 2-1. Sign Control Software Screen

3.0 Setup

3.1 Software Setup

(This section **MUST** be completed by IT/Network Administrator)

- Download the software, by following the link in the software case
- Complete the software registration page and agree to the license agreement
- Run the Sign Control Software Setup.exe file
- Read and agree to the License Agreement
- Follow the steps to install the software

3.2 Configure the Sign Control & Reporting Software

- Select Settings in the **Menu Bar**

General Tab

Use to change or set the Software Mode which is dependent upon the products the software will be controlling. View the Time Zone as well as the time and date. The time zone display uses the time zone settings from Windows®.

SMTP Tab

Used to set the email address where error notifications are sent from.

HTTP Server Tab

HTTP Server selection needs to be set to Enabled in order for the Web Interface to be active. You must provide users with a host name or IP address that is routed to the computer to allow access to the Web Interface. If a secure connection is required, select Enabled HTTPS and go to the HTTPS Tab to load the certificate. The time out selection is the amount of time someone can be inactive in the Web Interface before they are logged out. Contact selection is the internal person that users of the Web Interface can contact with questions or problems. Logo selection is the company logo and will only appear on the Web Interface.

HTTP Users Tab

Used to set password strength in the HTTP Web Interface.

HTTPS Tab

Only required when HTTP Server mode is Enabled HTTPS. Upload a certificate file and enter the password. The file must be a PKCS#12/PFX file containing the certificate and private key.

3.3 User Setup

Setup user configuration for logging into the Web Interface. Users can be assigned different permission levels for each Sign Group in the Sign Control and Reporting Software.

Sign Group Permissions

- None** – Does not have access to Web Interface
- View Only** – Allows viewing sign status and viewing the assigned schedules only

- Manual Override** – Allows viewing and also manually overriding sign messages

- Manual and Schedule Override** – Full access to viewing and overriding signs

3.3.1 Add, Edit, and Delete User

1. Select the **User Tab**
2. Select **New User** from the **Tabs Toolbar**
3. Enter the following fields for the User
 - a. **Name** – The name of the User, this is exactly how it will appear in the log file.
 - b. **Login Username** – Name used to log into the Web Interface.
 - c. **Login Password** – Password used to log into the Web Interface. Automatically defaults to **'password'**. The User will be prompted to change it immediately upon the first login attempt.
 - d. **Access** – Sign groups that this User will have access to and the permissions associated with each.

To Edit a User, select **Edit User** in the **Tabs Toolbar**. Adjust any selections as needed and Press **OK**.

To Delete a User, select the **User** to be deleted and use the **Delete User** selection in the **Tabs Toolbar**.

3.4 Notification Setup

Notifications can be sent to multiple emails; however each one must be set up independently.

1. Select the **Notifications Tab**
2. Select **New Notification** from the **Tabs Toolbar**.
3. Select the **Notification Type** from the drop down list
4. Enter the email address to receive the notification
5. Enter the specific variable to trigger the notification or leave it as the default; it can be adjusted at any time.

3.5 Notification Types

Sign Unresponsive – *by sign, minutes*

Example: Smart Sign not responding to software commands

Trigger: Email sent when software goes 15 minutes without response from sign

Sign Manually Overridden – *by sign, within 1 minute*

Example: Occurs when the sign is overridden in the Web Interface

Trigger: Email sent within 1 minute of the sign being overridden

4.0 Assigning IP Addresses

4.1 Assigning a Static IP Lease to Smart Signs (DHCP)

The Smart Sign must be on your network or the Internet and be accessible from the computer running the Sign Control Software. The TCP/IP controller inside the sign is configured for DHCP (Dynamic Host Control Protocol) and must be assigned a static IP lease. Since network topologies can vary greatly, the details of how the sign is assigned this IP address will be dependent upon your network and will generally fall to a network administrator.

1. Using the Smart Sign Install Log, use the MAC address to assign a static IP lease to each sign.
2. Fill in the IP address on the appropriate space on the install log.

4.2 Manually Assigning a Static IP Address to Smart Signs (Non-DHCP)

We highly recommend using DHCP to assign each sign a static IP lease. However, if this is not possible, each sign can be configured with a static IP.

Each sign has a configurable Ethernet controller installed. The controller can be configured through a Web Interface or a Telnet connection.

To access the Web Interface of the Ethernet controller in the sign, you will need to connect the sign to a temporary network that has DHCP enabled. Once the IP address of the sign has been established you can access the Web Interface.

1. To access the Ethernet controller Web Interface:
 - a. Use a browser to access the sign's IP address – configured by the temporary DHCP network: e.g. `http://192.168.1.50`
(not compatible with Internet Explorer)
 - b. After any settings are changed in the Web Interface, you must click the "Apply Settings" button to have the changes applied and the controller will reboot
2. To access the Telnet interface:
 - a. Use a Telnet client to access the sign using the IP address and port 9999
 - b. After making changes in the Telnet interface, you must choose the option to "Save and exit" to apply the changes.

By default, the username and password for both the web and Telnet interfaces are blank, simply press Enter; a password and username are not needed.

5.0 Static Message Smart Sign Setup

Refer to the Smart Sign Install Log(s) for sign and IP assigned during installation.

1. Select the **Signs** Tab.
2. Select **Add Sign** from the **Tabs Toolbar**.
3. Using the Smart Sign Install Log, enter the static IP lease, port, and address that was assigned to the sign. The port defaults to 10001 and the address to 1.
(In more complex setups the port entered in the software may need to be different because of port forwarding or other network configurations).

NOTE: It is important that the static IP lease does not change, since this will cause the software to be unable to communicate to your sign.

4. Enter **Sign Name**.

NOTE: We recommend the sign name be specific to the physical location of the sign. This will help differentiate the same sign types in the software. Ex. 'Branch 123 Lane 1'.

5. In the drop down next to **Sign Group**:
Select **New Sign Group** from the drop-down menu or if your sign group already exists you can make that selection.

NOTE: The sign group is a way to logically organize your signs. It may be easiest to create groups by location. (Ex. Smith Street Branch).

6. Select **Time Zone**.
The Time Zone defaults to 'Same as Server' but can be adjusted to fit any time zone the sign is in. If the server and sign are in the same time zone, keep the default.
7. In the drop down next to **Schedule**:
Select **Create New Sign Schedule** or select an existing one from the drop down menu. If you are creating a New Sign Schedule refer to **Section 6.0**.
8. After setting the schedule, Press **OK** to complete the process of adding that sign.
9. Repeat the steps in **Section 5.0** until all Static Signs have been added to the software.

NOTE: To edit or remove a sign, use the Edit Sign and Remove Sign selections from the Tabs Toolbar.

Creating a Smart Sign Schedule

6.0 Creating a Smart Sign Schedule

1. Select the **Schedules** Tab.
2. Select **New Schedule** from the **Tabs Toolbar**, a drop down will appear with all of the sign types in the software.
3. From the drop down menu, choose the sign type to correspond with the **New Schedule**.
4. Assign a **Schedule Name**.

NOTE: We recommend using the facility name + sign message such as, 'Branch 123' 'Open Closed'.

NOTE: Schedule names can only contain alphanumeric characters.

5. Double click anywhere in the schedule grid to get started.
6. Enter the following information:
 - a. **Message** – Select the button labeled <Click to Set Messages>, choose the message(s) to be displayed from the pop up box.
 - b. Select message(s) from each drop down to display during this time span and then Press **OK**.
 - c. **Day** – Select single or multiple days for the message to appear.
 - d. Enter the Start and End Times for the message to be displayed.
 - e. Press **OK**.
7. Using the on screen instructions, complete the rest of the schedule.

Tech Tip:

- Double-click an empty area within the grid display to create a new schedule item.
- Double-click an existing schedule item to edit it
- Right-click an existing schedule item to edit or delete
- Drag edges of the daily schedule to change start and end times of the schedule items

If there is a **gap in the schedule**, the sign(s) on that schedule will turn off until the sign schedule reaches an active part of the schedule.

If a **power outage occurs**, the signs will blank out until the power is restored. Once power is restored the sign(s) will resume the assigned schedule.

Weekly schedule repeats until the schedule is edited.

The weekly schedule can be temporarily interrupted by setting a **Manual or Scheduled Override** message.

8. When the schedule is complete, Press **OK**.

7.0 Add, Edit and Delete a Scheduled Override Message

A scheduled override is used to interrupt a regular schedule to display something different during a specific period of time.

7.1 Add a New Override Message

1. To add a new override message you must be in an active schedule.
2. Select **New Override** located to the left under the schedule grid.
3. Enter the Description of the override in the text box.

The Description is just an explanation of the reason for the override. An example may be "**Labor Day Holiday**".
4. Select the Message button labeled <Blank>.
5. Select the message(s) that need to display on the sign during this override period, and then Press **OK**.

7.2 Edit or Delete Overrides

1. You can edit or delete overrides by highlighting the override and using the **Edit Override** and **Delete Override** buttons.
2. Use the **Clear Past Overrides** button to delete expired overrides. If the same overrides occur each year, you can keep expired overrides and just change the date to reflect the next year.
3. The next scheduled override will appear on the **Schedules** screen.

8.0 Add and Delete a Manual Override Message

A manual override allows you to immediately interrupt a running schedule to display a different message on the sign. To schedule a future override of the schedule, see [Section 7.0 \(Add, Edit and Delete a Scheduled Override Message\)](#)

1. Select the **Signs** Tab.
2. Highlight the sign that needs to have an immediate Manual Override applied to it.
3. Select the **Manual Override** button located toward the bottom of screen on the right side of the sign image.
4. Select the message(s) that needs to display immediately.
5. Select the time that the override will expire. This time can be set for up to 24 hours from the current time, in 15 minute increments. The sign will resume its regular schedule when the override message expires.
6. Press **OK**.
7. The manual override will appear in the **Status** column in the **Signs** Tab.
8. You can remove the manual override at any time using the **Remove Manual Override** button at the bottom of the screen.

9.0 VMS Rebel Programmable Message Smart Sign Schedule Setup

1. Refer to the Smart Sign Install Log(s) for sign location and IP address entered during installation.
2. Select the **Signs** Tab.
3. Select **Add Sign** from the **Tabs Toolbar**.
4. Using the Smart Sign Install Log, enter the static IP lease, port, and address that was assigned to the sign. The port defaults to 10001 and the address to 1. *(In more complex setups the port entered in the software may need to be different because of port forwarding or other network configurations).*
5. Enter **Sign Name**.
6. In the drop down next to **Sign Group**:
Select **<New Sign Group>** from the drop-down menu or if your sign group already exists you can make that selection.
7. **Time Zone**
The Time Zone defaults to 'Same as Server' but can be adjusted to fit whatever time zone the sign is in. If the server and sign are in the same time zone, keep the default.
8. In the drop down next to **Schedule**:
Create New Sign Schedule or select an existing one from the drop down menu. If you are creating a New Sign Schedule see [Section 10.0](#).
9. After selecting the schedule, Press **OK** to complete the process of adding that sign.
10. Repeat [Section 9.0](#) steps until all VMS Rebel Programmable signs have been added to the software.

NOTE: It is important that the static IP lease does NOT change, since this will cause the software to be unable to communicate to your sign.

5. Enter **Sign Name**.

NOTE: We recommend the sign name be specific to the physical location of the sign. This will help differentiate the same sign types in the software. Ex. 'Branch 123 Lane 1'.

6. In the drop down next to **Sign Group**:

Select **<New Sign Group>** from the drop-down menu or if your sign group already exists you can make that selection.

NOTE: The sign group is a way to logically organize your signs. It may be easiest to create groups by location. (Ex. Branch 123).

NOTE: To edit or remove a sign, use the Edit Sign and Remove Sign selections from the Tabs Toolbar.

Creating a VMS Rebel Sign Schedule

10.0 Creating a VMS Rebel Sign Schedule

1. Select the **Schedules** Tab.
2. Select **New Schedule** from the **Tabs Toolbar**
3. From the drop down menu, select **New VMS Rebel Schedule**.
4. Assign a **Schedule Name**.
NOTE: We recommend using the facility name + sign message such as, 'Branch 123' 'VMS Rebel 16x48'.
NOTE: Schedule names can only contain alphanumeric characters.
5. Double click anywhere in the schedule grid
6. Enter the following information
 - a. Message - Click the drop down box next to the **Message** label and choose an existing **Message** or create a **<New Message>**.
If you are adding a **<New Message>**, go to **Section 11.0** for instructions
 - b. Select message(s) from each drop down to display during this time span and then Press **OK**.
 - c. Day - Select single or multiple days for the message to appear

Tech Tip:

- Double-click an empty area within the grid display to create a new schedule item.
- Double-click an existing schedule item to edit it.
- Right-click an existing schedule item to edit or delete.
- Drag edges of the daily schedule to change start and end times of the schedule items.

If there is a **gap in the schedule**, the sign(s) on that schedule will turn off until the sign schedule reaches an active part of the schedule.

If a **power outage occurs**, the signs will blank out until the power is restored. Once power is restored the sign(s) will resume the assigned schedule.

Weekly schedule repeats until the schedule is edited.

A schedule can be created to control a single S-VMS Rebel sign or to be shared among many S-VMS Rebel signs.

The weekly schedule can be temporarily interrupted by setting a **Manual or Scheduled Override** message.

- d. Enter Start and End Time for the message to be displayed.
 - e. Press **OK**.
7. Using the on screen instructions, complete the rest of the schedule.
 8. When the schedule is complete Press **OK**.

11.0 Add, Edit and Delete a VMS Rebel Message

The VMS Rebel Messages Name is used to organize and schedule display messages for the VMS Rebel Sign.

1. Select the **VMS Messages** Tab.
2. Select **New Message** from the **Tabs Toolbar**.
3. Enter the **Message Name**.
The Message Name is a unique description of the message parts.
4. Enter the message for the sign to display in the box labeled **Text**.
5. You can preview the message in a specific LED display size by setting the **Preview Sign Type** to the sign display size. This setting is located on the bottom left corner of the pop-up window.
6. While typing, the message will appear in the preview screen. The message will automatically scroll if the message is too long for the VMS Rebel Sign.
7. Check the box next to the words **Small Text** to change the height of the characters.

8. To add additional message parts select **Add Message Part**. Enter the message part in the next **Text** area. The message parts will run sequentially and display each message part for the number of seconds entered in the **Display For** selection.
9. To preview the parts of the message in sequence, press the **Preview All** button.
10. To display Date, Time or a symbol, select the **Insert Date Time or Symbol** button.

NOTE: When using symbols, date or time it is important to enter the Message Name with as much detail as possible. When the Message Parts appear in the Text Field on the schedule, they appear as the same symbol space holder as every other symbol. For example, if Date and Time are the display selections, set the Message Name to Date and Time. Make sure they are in the same order as the message parts.

11. To edit or delete an existing message, highlight the message you want to change and select either **Edit Message** or **Delete Message** from the **Tabs Toolbar**.

12.0 Web Interface

The Web Interface is for authorized users only. The administrator of the software will assign the user the proper level of access. The network administrator will provide the web path, user name and default password to access the Web Interface.

The Web Interface categorizes information first by Sign Groups. The Web Interface allows users, depending on permissions assigned in the administrative interface, to view status of Smart Signs, and override Smart Sign messages immediately or at a future time.

12.1 Smart Sign Functions of the Web Interface

1. View sign status.
2. View schedule being displayed by the sign.
3. Manually override current message schedule (*immediate*).
4. Add a scheduled override to the current message schedule (*future date*).
5. Return to perpetual message schedule.

12.2 Manually Override a Static Smart Sign in the Web Interface

A manual override is an immediate message override to the perpetual schedule. This is used when unforeseen circumstances require the sign message to change immediately.

1. Log in to the Web Interface.
2. Find the Static Smart Sign you need to override (*All Smart Signs are organized by Sign Group*).
3. Select the bar with the sign image in it.
4. Select the **Manual Override** button.
5. In the drop down menu next to the sign name and select the message to illuminate or change the sign to blank.
6. Set the expiration time. The time can be set for up to 24 hours from the current time at 15 minute increments.
7. Press **Override**.
8. Use the **Change Manual Override** button to change the message you selected and use the **Remove Manual Override** button to revert the sign message back to the scheduled message.

12.3 Manually Override a VMS Rebel Smart Sign in the Web Interface

1. Log in to the Web Interface.
2. Find the VMS Rebel Smart Sign you need to override (*All Smart Signs are organized by Sign Group*).
3. Select the bar with the sign image in it.

4. If a schedule is assigned to the VMS Rebel Sign:
 - a. Select the **Manual Override** button.
 - b. Type the message to be displayed on the sign.
 - c. Set the expiration time. The time can be set for up to 24 hours from the current time at 15 minute increments.
 - d. Press **Override**.
5. If there is **NO** schedule assigned to the VMS Rebel Sign, all of the VMS Rebel Messages in the software will appear as selections in the manual override screen.
 - a. Select either the **Manual Override** button or the predefined message created through the Administration Interface.
 - b. Using an existing message: Select the button with administrator created existing message, there is no expiration time and this selection will display until manually changed to a different message.
 - c. For a **Manual Override**:
 - i. Select the **Manual Override** button.
 - ii. Type the message to be displayed on the sign.
 - iii. Set the expiration time. The time can be set for up to 24 hours from the current time at 15 minute increments.
 - iv. Press **Override**.

12.4 Adding a Scheduled Override For Static and VMS Rebel Smart Signs in the Web Interface

A scheduled override is a future override of the perpetual schedule. Special events, weekends, and holidays are examples of when to use a scheduled override.

1. Log in to the Web Interface.
2. Find the VMS Rebel or Static Message Smart Sign you need to override (*All Smart Signs are organized by Sign Group*).
3. Select the bar with the sign image in it.
4. Scroll down to the bottom of the page, select **Add New Override** bar.
5. Type in the override name.
(*This name is not a sign message but a label for the override*)
6. Select the Start and End Date of the override as well as the time for the override.
7. Select the message to display as the override.
8. Press **Save**.

NOTE: New messages for the VMS Rebel must be created in the Administrator Interface. Refer to Section 10.0.



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