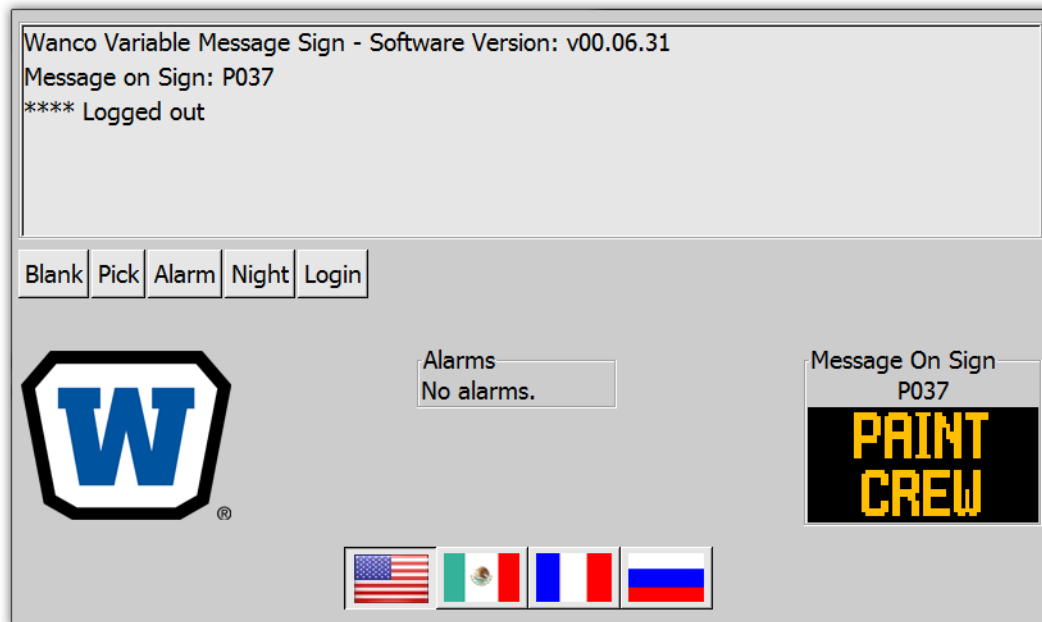


User-Interface for Wanco[®] Message Signs



User's Manual
January 2016

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1 Introduction

1.1 Read before using

For your safety and protection from injury, carefully read, understand, and observe all instructions in this manual. If you have questions regarding this product, please contact Wanco® service or sales using the information in Section 1.4.

Keep this manual or a copy of it with the user-interface. Additional and replacement manuals are available from Wanco.

1.2 About this manual

This manual describes how to use the Wanco user-interface for Wanco variable message signs. The instructions provided here assume a basic understanding of how to use a computer.

This manual is organized to match the structure of the user-interface, in the same order in which menus and buttons appear. An index is provided to help you find the information you need.

This manual does not include any information about installing hardware. For hardware installation and wiring information, see the message sign owner's manual.

1.3 User-interface

Your user-interface can be a Wanco touchscreen controller, or the Wanco RemoteUI program installed on a tablet or laptop computer. Regardless of which interface you are using, you can use it to manage the Wanco message sign to which it is connected.

The user-interface (Figure 1-1) is divided into two areas:

- The top area provides information, menus, selection buttons, and entry feedback.
- The bottom area continuously shows alarms and the message being sent to the message sign.
- The flag buttons in the bottom area allow you to change the language of the touchscreen interface. For information about languages, see Section 4.1.6, page 20.
- The bottom area provides a virtual keyboard when it is needed for entering text, numbers, and symbols. The virtual keyboard is described in Section 4.2, page 21.

To make use of advanced features, such as creating your own messages, you must first log into the system. For login information, see Section 4.1.5, page 17.

Figure 1-1. User-interface



1.3.1 Touchscreen controller

You use the touchscreen by tapping lightly with your finger on the “buttons” displayed on the screen.

When you tap in an area that requires you to enter text or numbers, a virtual keyboard appears in the lower half of the screen. The virtual keyboard is described in Section 4.2, page 21.

1.3.2 RemoteUI program

You use the Wanco RemoteUI program after installing it on your computer (see Section 3.2, page 7). The program operates like any other software. On a laptop computer, you interact with it using your keyboard and mouse or trackpad. On a tablet or other touchscreen device, you use it as described above for the Wanco touchscreen controller.

When you click in an area that requires you to enter text or numbers, a virtual keyboard appears in the lower half of the RemoteUI screen; however, you may use the physical keyboard on your laptop computer.

1.4 Where to obtain service

Contact our service department using the following information:

Wanco Inc.
5870 Tennyson Street
Arvada, Colorado 80003


303-427-5700
fax 303-427-5725

www.wanco.com
info@wanco.com

2 Safety Information

2.1 Safety statements in this manual

This manual contains the following types of callouts, which must be followed to reduce the possibility of personal injury, damage to the equipment, or improper service. Each alert has a specific meaning, as described below:

 The safety alert symbol alerts you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

WARNING

Indicates an imminently hazardous situation which, if not avoided, COULD result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

CAUTION

Used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, could result in property damage.

IMPORTANT!

Indicates information that is of particular importance when transporting, operating, or servicing the equipment.

2.2

General safety



WARNING

Improper use of equipment could cause serious injury or death.

Prior to using this product, carefully read, understand, and observe all instructions in this manual.



WARNING

Improper sign display could cause a traffic accident resulting in severe injury or death.

Visually inspect message sign to ensure correct message is displayed.



CAUTION

Adverse weather conditions can cause equipment damage and injury.

Whenever possible, perform maintenance indoors.

CAUTION

Improper use can cause damage to the touchscreen, possibly resulting in its failing to operate.

To prevent damage when using the touchscreen controller:

- Ensure hands are clean, or wear clean finger cots or gloves.
- Only grasp the controller outside the touchscreen display.
- Do not handle the controller by its cable.
- Do not press any heavy, hard, or sharp object to the screen.
- Do not apply excessive strain to the controller or its cable.
- Do not expose the controller to direct sunlight for extended periods.
- Do not drop the controller.

3 Before You Begin

3.1 Touchscreen controller

3.1.1 Installation

The controller is located inside the message sign battery box unless the sign is truck-mounted. For truck-mounted signs, the controller is usually installed under the dashboard or on the floor of the vehicle cab.

This manual describes how to use the controller to manage the sign. For truck-mounted signs, instructions for installing the controller are included in the message sign manual.

3.1.2 On/off behavior

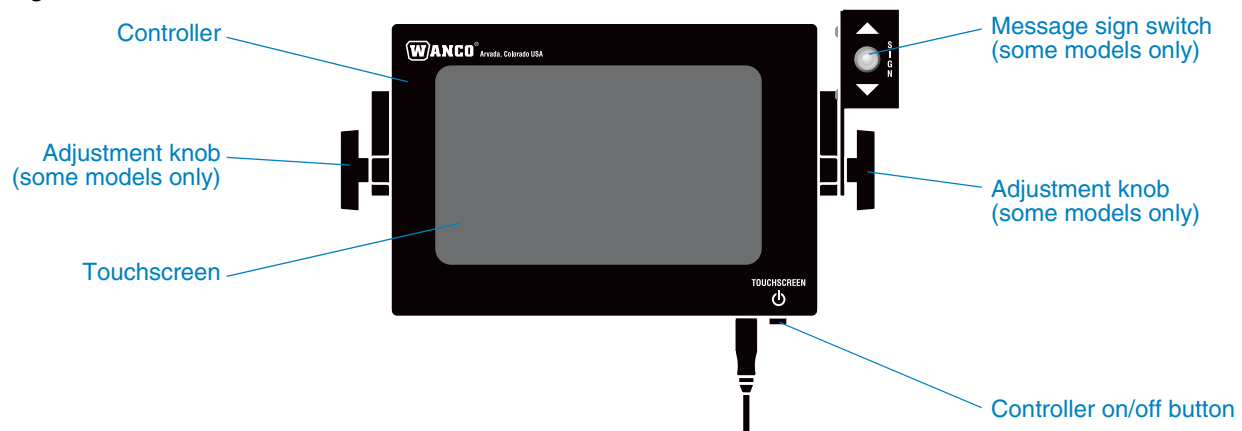
The controller has an on/off button that lets you turn the controller on and off manually (see Figure 3-1). This switch does not turn the message sign on or off.

- With trailer-mounted message signs, the controller display will go blank after 10 minutes of inactivity. The controller electronics will shut down after 20 minutes of inactivity.
- With truck-mounted message signs, the controller display will go blank after 10 minutes of inactivity. The controller electronics shut down when the vehicle engine is turned off.

To activate the display, press and release the on/off button. To switch the controller on or off, press and hold the button for two seconds or until the screen changes. After the controller turns on, the Main screen appears (see Section 4.1, page 11).

To make use of advanced features, such as creating your own messages, you must first log into the system (see Section 4.1.5, page 17).

Figure 3-1. Wanco touchscreen controller



3.1.3 **Mounting bracket**

The controller might be installed so that you may lift it out of the mounting bracket and hold it in your hands.

- The controller is designed to be handheld, but to avoid damaging it you should observe the safety precautions described in Section 2, page 3.
- When replacing the controller in the bracket, ensure it is pressed firmly into place, to prevent it from coming loose during transport.

If the controller mounting bracket has adjustment knobs, as illustrated in Figure 3-1, then the controller is not intended to be handheld, but it can be tilted and rotated. Tighten the knobs to lock its position. If necessary, the controller can be removed from this type of bracket by loosening the adjustment knobs.

3.1.4 **Message sign switch**

The controller mounting bracket may include a toggle switch to operate the message sign lift or tilt mechanism (see Figure 3-1).

- For trailer-mounted message signs with a hydraulic lift, use the switch to raise and lower the message sign display cabinet.
- For truck-mounted message signs, use the switch to raise the message sign to its full upright position and lower the sign into the travel position.
- See the message sign manual for deployment instructions.
- When deploying the message sign, observe the safety precautions described in Section 2, page 3.

3.2 RemoteUI program

3.2.1 Installing

The RemoteUI software is available for download at www.wanco.com. Contact the Wanco service department for access (see Section 1.4, “Where to obtain service,” page 2).

After downloading the program and saving it to your laptop computer, install it by double-clicking the file and following the on-screen instructions.

3.2.2 Using the program

IMPORTANT!

Before using the RemoteUI program, your computer must be connected to the message sign computer using an Ethernet cable (see the message sign manual).

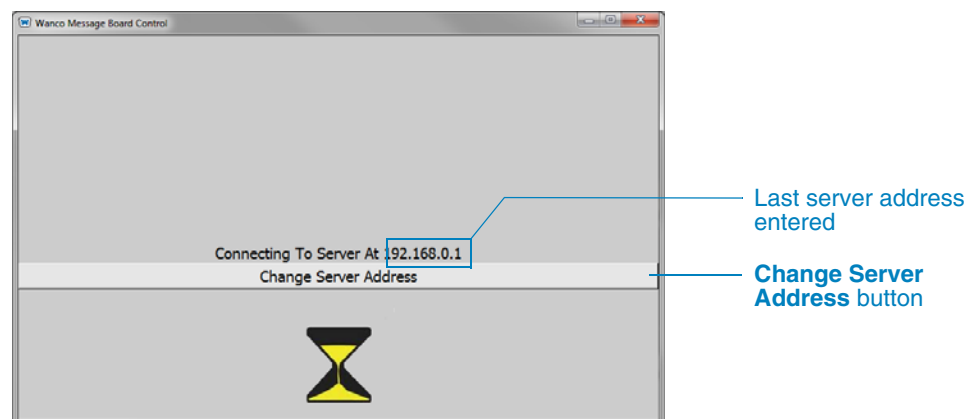
DO NOT attempt to use the RemoteUI program when connecting wirelessly to the message sign using a cellular modem. The program should not be used for wireless connections.

After installing the software, you can run the program by double-clicking the Wanco “W” icon on your desktop.

When the program starts, it will attempt to connect to a message sign using the last server address entered. The address is displayed on the Connecting screen (Figure 3-2).

- After the program connects to the message sign, the Main screen will appear (Section 4.1, page 11).
- If there is no message sign at the address, the screen will not change. In this case, click the **Change Server Address** button to enter a new address.

Figure 3-2. Connecting screen



After clicking the **Change Server Address** button, the Change Server Address screen will appear (Figure 3-3). To connect to the message sign:

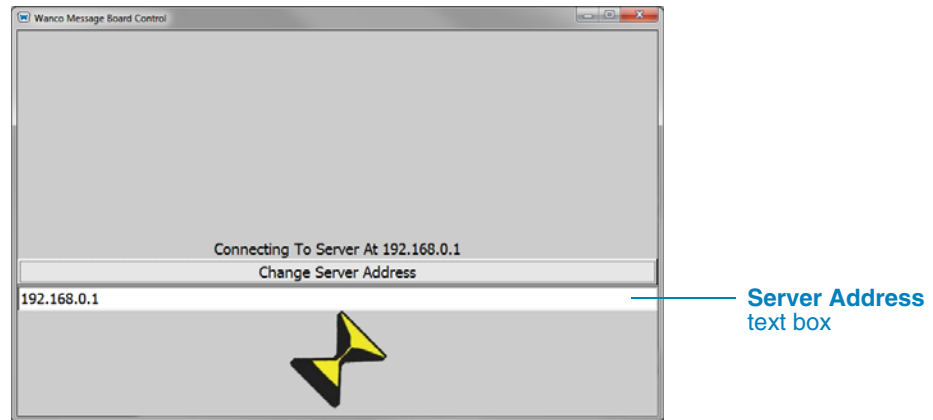
1. Click in the Server Address text box and use your keyboard to enter the IP address of the message sign.
2. Press **Enter** on your keyboard.

If you entered the correct IP address, the program will make a connection and the Main screen will appear (Section 4.1, page 11); otherwise, the screen will not change. To try entering a different IP address click the **Change Server Address** button again and repeat the above steps.

When the Main screen appears, you are ready to use the RemoteUI program to manage your message sign.

To make use of advanced features, such as creating your own messages, you must first log into the system. For login information, see Section 4.1.5, page 17.

Figure 3-3. Change Server Address screen



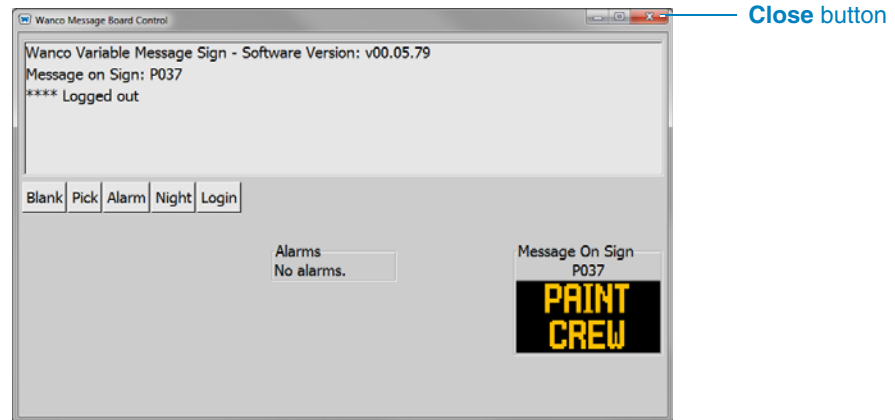
3.2.3

Closing the program

To close the program manually, click the **Close** button (Figure 3-4) or press Alt-F4 on your keyboard.

If the program is idle for more than 20 minutes, it closes automatically. To use the program again, restart it by double-clicking the Wanco “W” icon on your desktop.

Figure 3-4. Close button

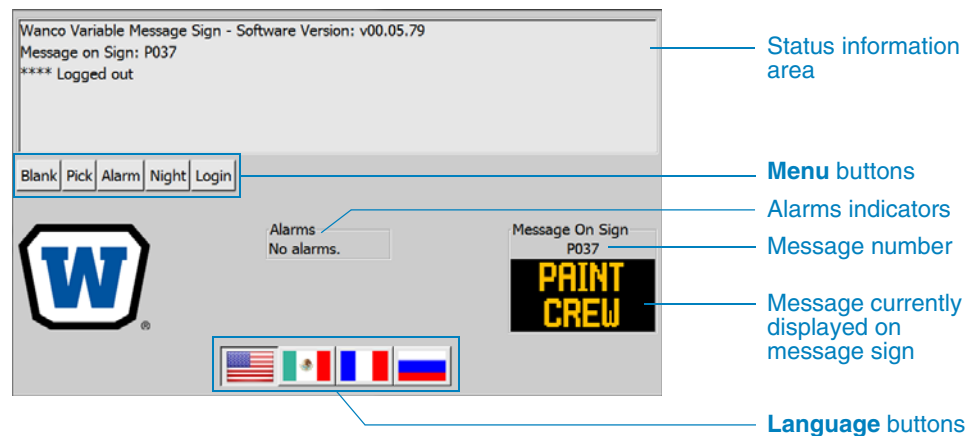


4 Using the Interface

4.1 Main screen

The Main screen (Figure 4-1) is the first screen to appear after the controller finishes initializing. Tapping the buttons on this screen with your finger, or clicking the buttons using your mouse or trackpad, will have the results described below.

Figure 4-1. Main screen



Status

The Main screen shows the status of the message sign and lets you choose what to do next.

Blank	Pick	Alarm	Night	Login
Clears the message sign	Displays a list of preprogrammed messages	Displays the status of active alarms	Dims the touchscreen	Lets you log in for more options
see Section 4.1.1, page 12	see Section 4.1.2, page 13	see Section 4.1.3, page 15	see Section 4.1.4, page 16	see Section 4.1.5, page 17

Language

On the touchscreen controller, the **Language** (flag) buttons let you change the interface language (see Section 4.1.6, page 20).

4.1.1

Blank button

After pressing or clicking the **Blank** button on the Main Screen, the sign is “blanked,” so that no message is displayed. The Message Blanked screen will indicate this status by displaying the Message On Sign as a black box (Figure 4-2).

Figure 4-2. Message Blanked screen



Blank message

The Message Blanked screen provides confirmation that the message sign has been “blanked,” and that no message is being displayed.

Back	Main
Returns you to the previous screen	Returns you to the Main screen
	see Section 4.1, page 11

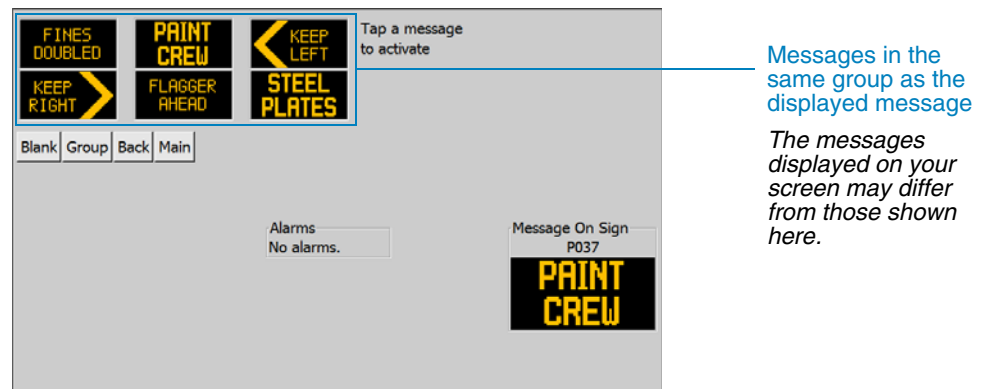
4.1.2

Pick button

The **Pick** button on the Main Screen displays the messages in the last “group” that was selected, or the first group in the list of groups. This provides a quick method of choosing a new message (Figure 4-3).

For additional information about message groups, see Section 4.3, page 23.

Figure 4-3. Pick screen



Messages in group

The Pick screen allows you to choose a new message from the displayed group simply by tapping it with your finger or clicking it using your mouse or trackpad (see Section 4.1.2.1).

Blank	Group	Back	Main
Clears the message sign	Displays a list of message groups	Returns you to the previous screen	Returns you to the Main screen
see Section 4.1.1, page 12	see Section 4.1.2.2, page 15		see Section 4.1, page 11

4.1.2.1

Activate message

After using the Pick screen to select a new message to be displayed on the sign, the Activate Message screen displays the newly selected message and the message currently displayed on the sign (Figure 4-4).

After activating the new message, the Activate Message screen shows that the newly selected message and the currently displayed message are the same (Figure 4-5).

Figure 4-4. Activate Message screen, before activation



New message

The Activate Message screen displays your newly selected message and offers you the choice of activating it.

Activate Message	Back	Main
Changes the message displayed on the sign. The screen then displays the new message in the Message On Sign area.	Returns you to the previous screen	Returns you to the Main screen
see Figure 4-5		see Section 4.1, page 11

Figure 4-5. Activate Message screen, after activation



New message

After pressing or clicking the **Activate Message** button, the Activate Message screen displays the new message you have selected and activated.

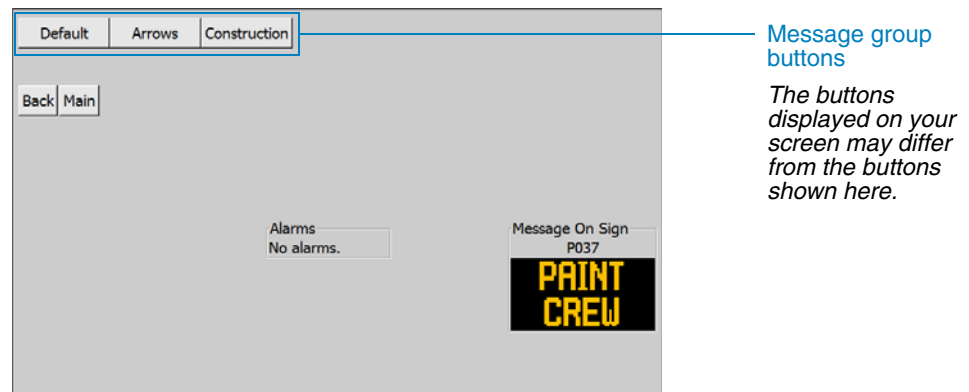
Activate Message	Back	Main
Lets you reactivate the new message. This feature is used during troubleshooting and message sign maintenance. Otherwise, there is no need to press this button again.	Returns you to the previous screen	Returns you to the Main screen
		see Section 4.1, page 11

4.1.2.2

Group button

After pressing or clicking the **Group** button on the Pick screen, a list of message groups is displayed (Figure 4-6).

Figure 4-6. Message Groups screen



Groups

Each message-group button displays the messages in that group and returns you to the Pick screen (see Section 4.1.2, page 13).

To edit, add, or delete message groups, see Section 4.3, page 23.

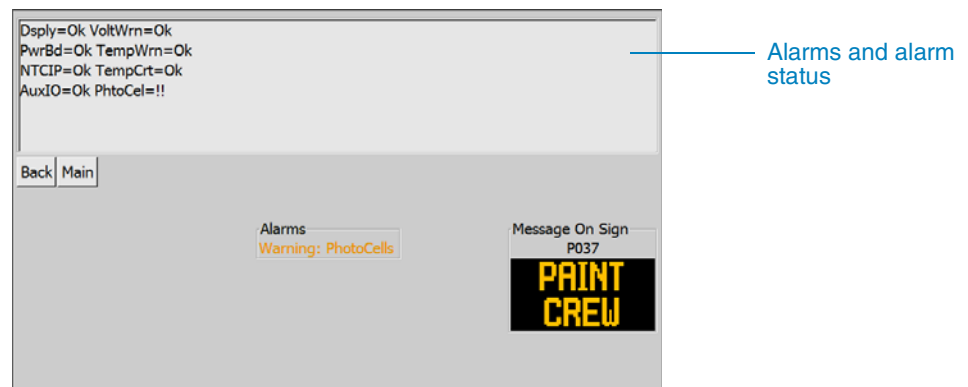
4.1.3

Alarm button

After pressing or clicking the **Alarm** button on the Main Screen, a list of alarms is displayed (Figure 4-7).

- For details about alarms, see Section 4.5.4.2, page 60.
- Troubleshooting information is provided in the message sign owner's manual.

Figure 4-7. Alarms screen

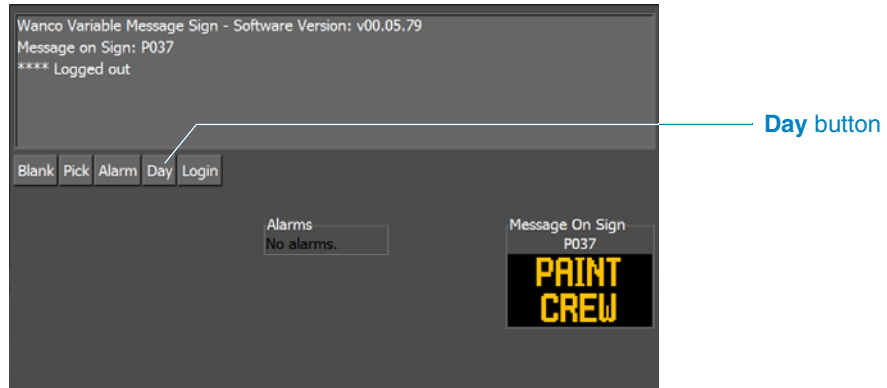


4.1.4 Night button

The **Night** button on the Main Screen darkens the interface for use at night (Figure 4-8).

After pressing or clicking the **Night** button, the **Night** button changes to **Day**. Pressing or clicking the **Day** button changes the display back to full brightness for daytime use.

Figure 4-8. Main screen, night mode



4.1.5

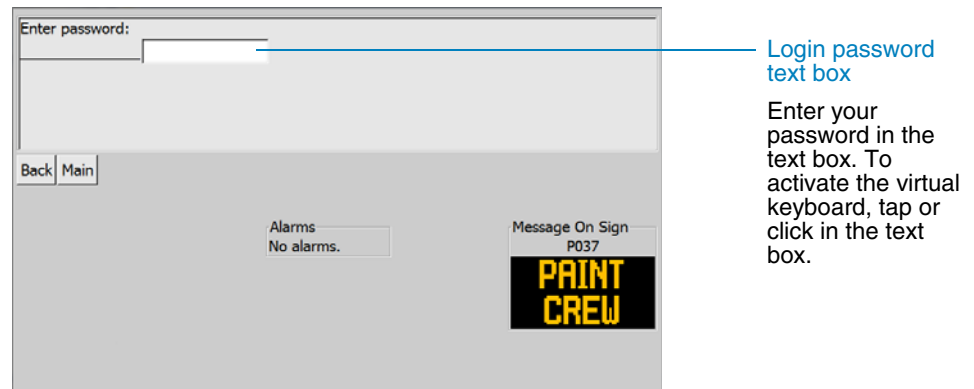
Login button

The **Login** button on the Main Screen displays the Login screen (Figures 4-9 and 4-10), which lets you enter the system using a password for more control and additional menu options.

After logging in, the Main screen displays additional buttons, and the **Login** button changes to **Logout** (Figures 4-11 and 4-12).

For information about passwords, see Section 4.1.5.1, page 19.

Figure 4-9. Login screen



Login password text box

Enter your password in the text box. To activate the virtual keyboard, tap or click in the text box.

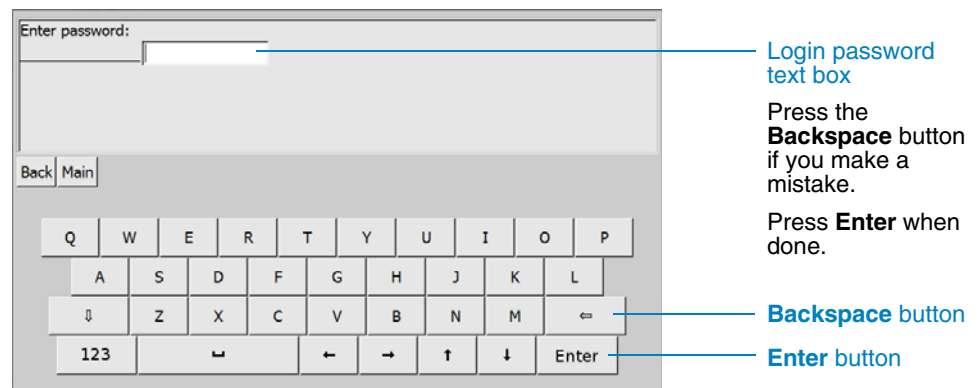
Password

Tap or click the password text box (Figure 4-10), then enter your password. Press **Enter** when done.

If the login is unsuccessful, the Login screen is shown again, ready for you to try entering the password. Enter a password and press **Enter**, or press or click **Main** to return to the Main screen.

- For more about the virtual keyboard, see Section 4.2, page 21.
- Laptop users may use their physical keyboard.

Figure 4-10. Login screen with virtual keyboard



Login password text box

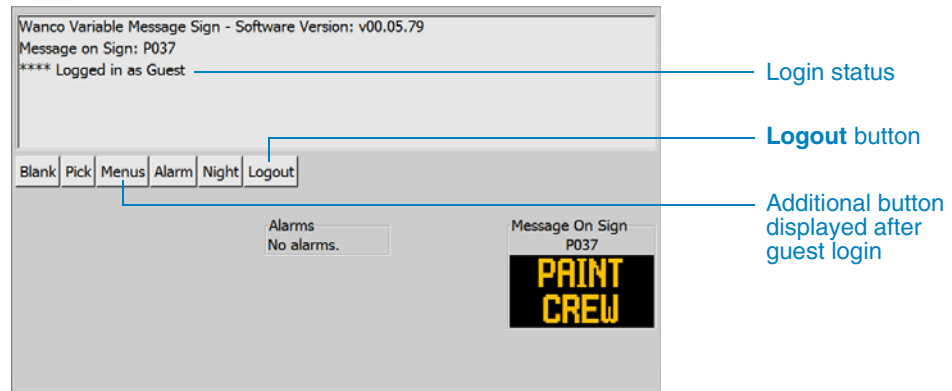
Press the **Backspace** button if you make a mistake.

Press **Enter** when done.

Backspace button

Enter button

Figure 4-11. Main screen after guest login

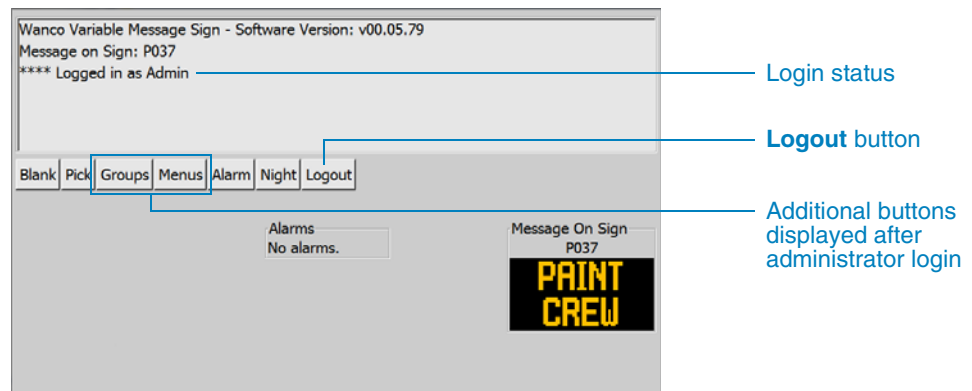


Status

After guest login, the Main screen indicates “Logged in as Guest” in the status area.

Menus	Logout	
Displays submenus for additional control	Lets you log out for protection against unauthorized access	For other buttons, see Section 4.1, “Main screen,” page 11
see Section 4.5, page 35	see Section 4.1.5.2, page 19	

Figure 4-12. Main screen after administrator login



Status

After administrator login, the Main screen indicates “Logged in as Admin” in the status area.

Groups	Menus	Logout	
Lets you manage message groups	Displays submenus for added control	Lets you log out	For other buttons, see Section 4.1, “Main screen,” page 11
see Section 4.3, page 23	see Section 4.5, page 35	see Section 4.1.5.2, page 19	

4.1.5.1

Login passwords

Two passwords provide two levels of access:

- The guest password allows access to additional menus that provide some configuration options (see Section 4.5, page 35). When shipped from the factory, the guest password is *ABCD*.
- The administrator's password* allows access to additional menus (see Section 4.5, page 35) and message group management (see Section 4.3, page 23).

IMPORTANT!

Wanco strongly recommends changing passwords immediately after logging in the first time, and periodically thereafter.

- Do not write passwords on or near the equipment. THIS IS A LEADING CAUSE OF VARIABLE MESSAGE SIGN ABUSE.
- Avoid using common phrases or obvious words for passwords. Do not use a password someone else can easily guess.
- After receiving a new message sign from the factory, change all of its default passwords.
- If you change the user-interface language before changing a password, users will have to use the same language to enter the password. For example, if you change the password using the Russian interface (see Section 4.1.6, page 20), users must enter the password using the Russian interface.

To change the system passwords:

1. On the Main screen, press or click the **Login** button.
2. On the Login screen, enter the administrator's password, then press **Enter**.
3. On the Main screen, press or click the **Menus** button.
4. On the Menus screen, press or click the **Advanced Menu** button.
5. On the Advanced Settings screen, press or click the **Change Password** button.
6. Follow the instructions in Section 4.5.5.4, page 82.

4.1.5.2

Logout button

After using the controller while logged in, return to the Main screen and press or click the **Logout** button. Logging out protects the system against unauthorized access.

If the interface is idle for more than 10 minutes, it logs out automatically. To log in again, press or click the **Login** button.

*To help ensure security, the administrator's password is not included in this document. Consult the factory for the initial, factory-set administrator's password.

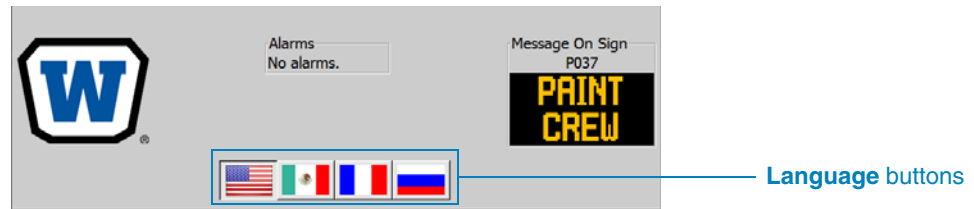
4.1.6 Language buttons

4.1.6.1 Touchscreen controller

The flag buttons at the bottom of the screen let you choose the interface language. The flag buttons appear on most screens on the touchscreen controller (see Figure 4-13).

When you press a flag button, the interface language changes within a few seconds.

Figure 4-13. Language buttons



IMPORTANT!

If you change the interface language and then use the interface to change the login password, users will have to use the same language to enter the password.

On the touchscreen controller, four buttons let you choose from the available languages:



Pressing the **American flag button** changes the display language to US English.



Pressing the **Mexican flag button** changes the display language to Spanish for Latin America.



Pressing the **French flag button** changes the display language to French.



Pressing the **Russian flag button** changes the display language to Russian.

4.1.6.2 RemoteUI program

The language buttons do not appear in the RemoteUI program. To change the interface language, you must use the touchscreen controller located at the message sign.

After changing the language at the sign, the RemoteUI program will appear in the selected language after it connects to the sign.

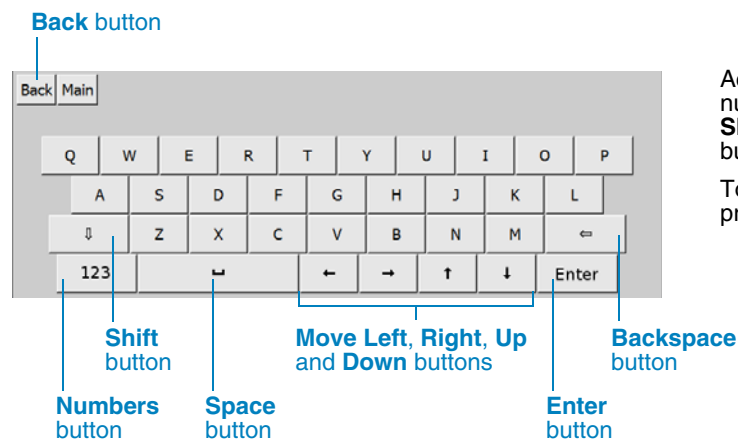
4.2 Virtual keyboard

Many screens allow you to enter text, numbers, and symbols using a virtual keyboard, which appears when it is needed.

To activate the virtual keyboard, tap or click in the area where your text will be entered, usually a white text box or the message area in the top left corner of the screen. To hide the keyboard, press or click the **Back** button.

- The default keyboard lets you enter upper-case (capital) letters (Figure 4-14).
- The lower-case keyboard lets you enter lower-case letters (Figure 4-15).
- The numbers & standard symbols keyboard lets you enter numerals and some common symbols (Figure 4-16).
- The alternate symbols keyboard provides access to additional symbols (Figure 4-17).
- The integer keyboard appears when you need to enter a number, but when decimals are not allowed (Figure 4-18).
- The decimal keyboard appears when you need to enter a number and decimals are allowed (Figure 4-19).
- Laptop users may use their physical keyboard or the virtual keyboard.

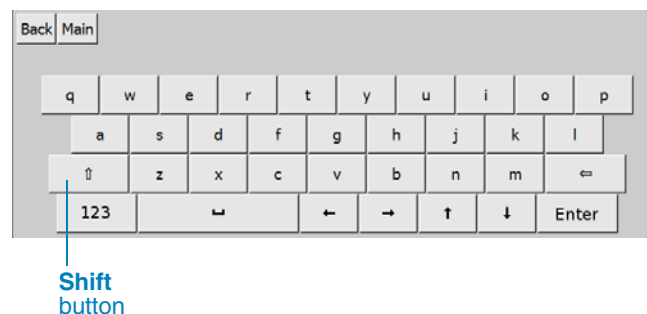
Figure 4-14. Upper case (default) keyboard



Access lower-case and number keys with the **Shift** and **Numbers** buttons, respectively.

To hide the keyboard, press the **Back** button.

Figure 4-15. Lower-case keyboard



To return to the default (upper-case) keyboard, use the **Shift** button.

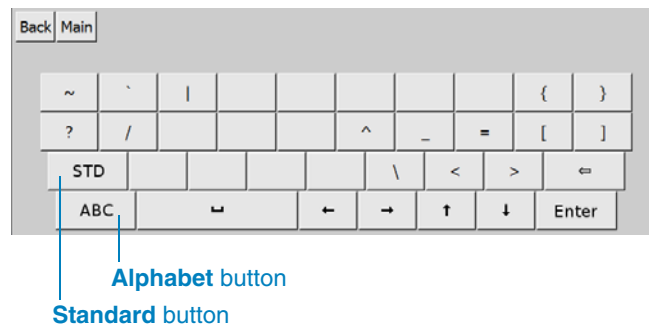
Figure 4-16. Numbers & standard symbols keyboard



To access alternate symbols, use the **Alternate** button.

To return to the default (upper-case) keyboard, use the **Alphabet** button.

Figure 4-17. Alternate symbols keyboard



To return to numbers and standard symbols, use the **Standard** button.

To return to the default (upper-case) keyboard, use the **Alphabet** button.

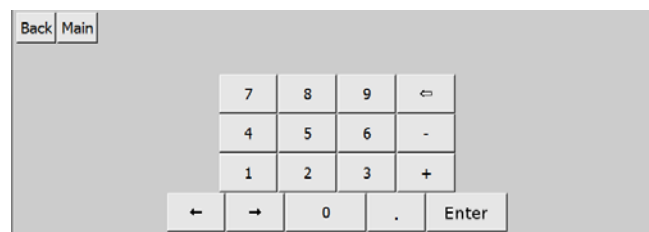
Figure 4-18. Numeric (integer) keyboard



The integer keyboard appears when you need to enter a number, but the field will not allow decimals.

Note the lack of a decimal point on the keyboard.

Figure 4-19. Numeric (decimal) keyboard



The decimal keyboard appears when you need to enter a number and the field allows decimals.

Note the inclusion of a decimal point on the keyboard, when compared with Figure 4-18.

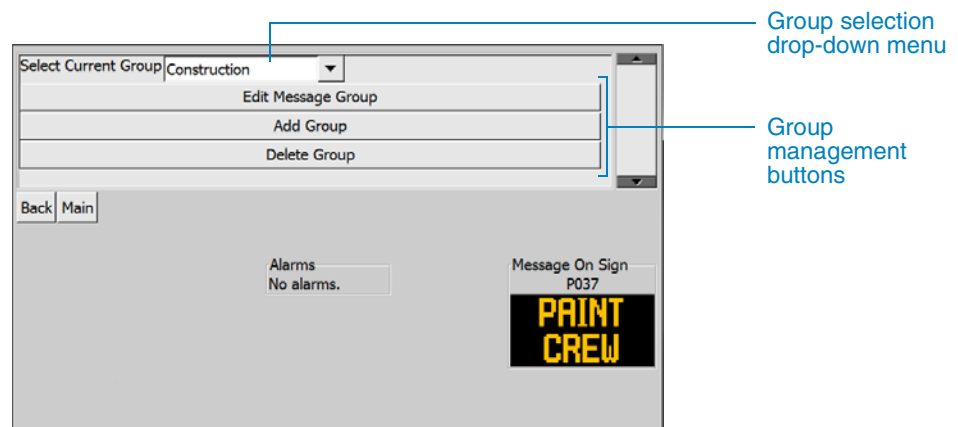
4.3 Message groups

Message groups provide easy access to messages for activating them on the sign. A message group consists of up to six messages, blank screens, or a combination of both. You can create up to eight groups.

After pressing or clicking the **Groups** button on the Main screen, the Manage Groups screen is displayed (Figure 4-20).

- The **Groups** button is only visible after you log in as an administrator (see Section 4.1.5, page 17).
- Procedures for selecting, editing, deleting, and adding message groups are described below.

Figure 4-20. Manage Groups screen



Group options

Select a message group using the drop-down menu (see Section 4.3.1).

Edit Message Group lets you edit the selected message group (see Section 4.3.2).

Add Group lets you create a new message group (see Section 4.3.3, page 26).

Delete Group lets you delete the selected message group (see Section 4.3.4, page 28).

4.3.1 Select Current Group drop-down list

In the Manage Groups screen (Figure 4-20), when you choose a message group using the drop-down menu, you activate that group for editing or deleting.

- To select a group, tap or click the drop-down menu, then tap or click on the group you want choose.
- When editing a group, you replace messages that are already in the group (see Section 4.3.2).
- When deleting a group, you purge the group from the system (see Section 4.3.4, page 28).

4.3.2 Edit Message Group button

After selecting a group and pressing or clicking the **Edit Message Group** button on the Manage Groups screen, the Edit Group screen is displayed (Figure 4-21). The messages shown on this screen will vary depending on the group you selected.

A message group can have up to six messages. When you want to add a new message to the group, you must choose an existing message (or blank screen) to replace. The message you replace will remain in the system, but will no longer be part of the group.

Figure 4-21. Edit Group screen



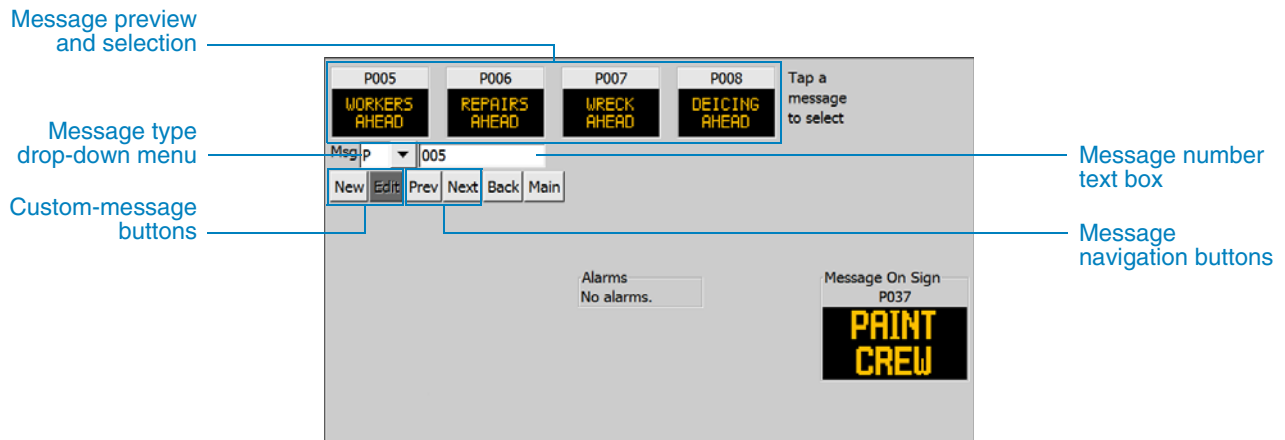
The messages displayed on your screen may differ from those shown here.

Messages in group

To replace one of the six displayed messages or blank screens, tap or click on it. The Select Message screen is then displayed (see below).

Pick	Back	Main
Displays a list of preprogrammed messages	Returns you to the previous screen	Returns you to the Main screen
see Section 4.1.2, page 13		see Section 4.1, page 11

After selecting a message to replace or edit by tapping or clicking it in the Edit Groups screen, the Select Message screen is displayed (Figure 4-22). The Select Message screen lets you locate and choose a message to add to the group, or create a new message.

Figure 4-22. Select Message screen**Message previews**

Choose a message by message type and number, or by browsing (see below). After you enter a message number and press **Enter**, that message and the next three messages will be shown in the preview area (e.g., if you enter P051, the previews will be P051, P052, P053, and P054).

New	Edit	Next	Prev	Back	Main
Lets you create a new message	Lets you edit the first preview message, if it is editable (otherwise, this button is not available)	Shows the next four preview messages	Shows the previous four preview messages	Returns you to the previous screen	Returns you to the Main screen
see Section 4.4.1, page 29	see Section 4.4.2, page 29				see Section 4.1, page 11

To locate the desired replacement message:

1. Tap or click the drop-down menu to select a message type, if necessary.

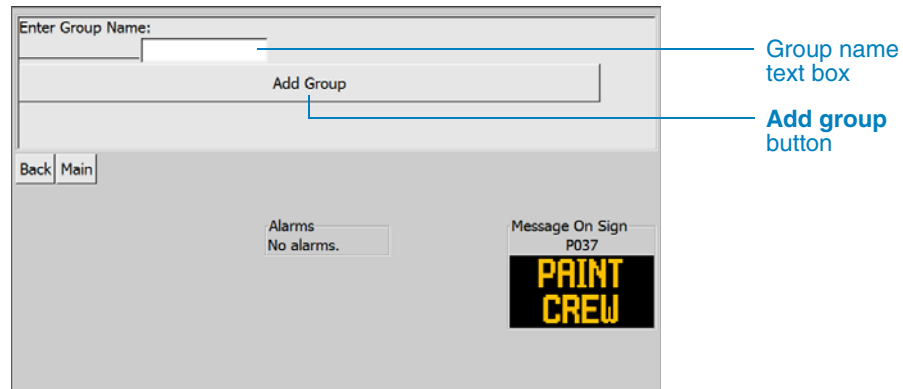
To aid in navigating through the system's programmed messages, all messages are categorized by type. The four message types are:

- C** Changeable messages, which can be created, edited, and deleted by the user.
 - V** Volatile messages are like changeable messages, but are not stored in memory. They are deleted when the sign's computer is rebooted.
 - P** Permanent messages, preprogrammed at the factory. These messages cannot be changed by the user.
 - B** Blank, no message is displayed on the sign.
2. If you know the message number, tap or click in the message number text box, enter the desired message number, and then press **Enter**.
 3. If you do not know the message number, or if you want to browse the messages, press or click the **Next** and **Previous** buttons.
 4. When you have found the message you want to use, tap or click it to add it to the group. The Edit Message Group screen is displayed (Figure 4-21) with the new message added to the group.

4.3.3 Add Group button

After pressing or clicking the **Add Group** button on the Manage Groups screen, the Add Group screen is displayed (Figure 4-23).

Figure 4-23. Add Group screen



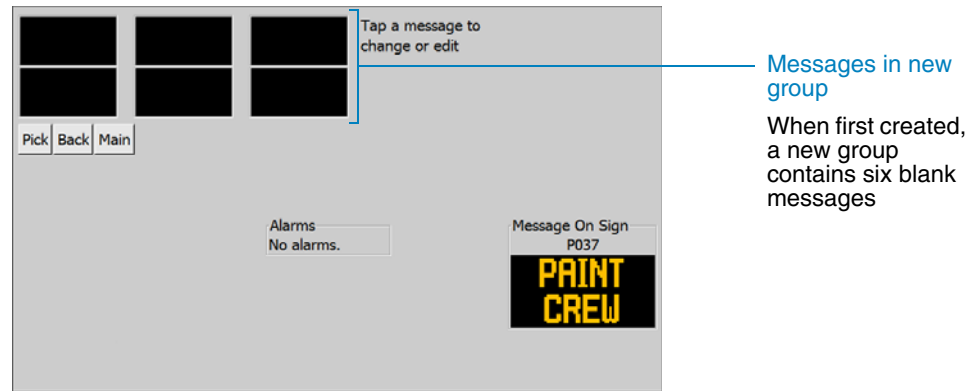
To add a group:

1. Tap or click the group-name text box, then enter the group name.
 2. If you are using a touchscreen device, press the **Enter** button in the virtual keyboard; otherwise, if you are using a computer, press **Enter** on the physical keyboard.
 3. Press or click the **Add Group** button.
- To cancel before adding the group, press or click the **Back** button.
 - When typing with the virtual keyboard, use the **Shift** button (⇩ or ⇧) to switch between upper- and lower-case letters, if desired.

After pressing or clicking the **Add Group** button, the Manage Groups screen is displayed (Figure 4-20, page 23).

To add messages to the new group, select the group name from the drop-down menu, then press or click the **Edit Group** button. The New Group screen is displayed (Figure 4-24).

Figure 4-24. New Group screen



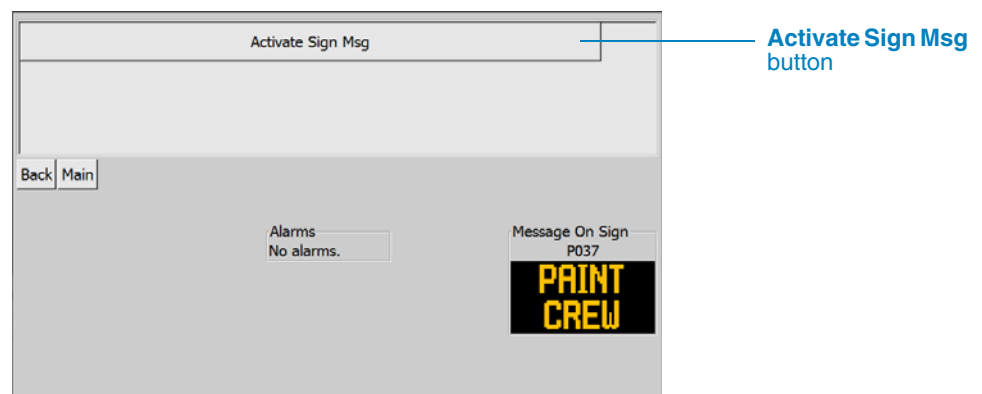
Blank messages in group

To replace one of the six displayed messages, tap or click on it. The Select Message screen is then displayed (see Figure 4-22, page 25).

Pick	Back	Main
Displays a list of messages	Returns you to the previous screen	Returns you to the Main screen
see Section 4.1.2, page 13		see Section 4.1, page 11

- To replace a blank with a message, see Section 4.3.2, page 24.
- The **Pick** button on the New Group screen exits the message management mode and jumps directly to the Select Message screen (Figure 4-22, page 25). After you select a message, you can activate the message by pressing or clicking the **Activate Sign Msg** button (Figure 4-25).

Figure 4-25. Activate Sign Msg button



After pressing or clicking the **Activate Sign Msg** button, the Activate Message screen shows that the newly selected message and the message on the sign are the same (Figure 4-26).

Figure 4-26. Activate Message screen, after direct activation

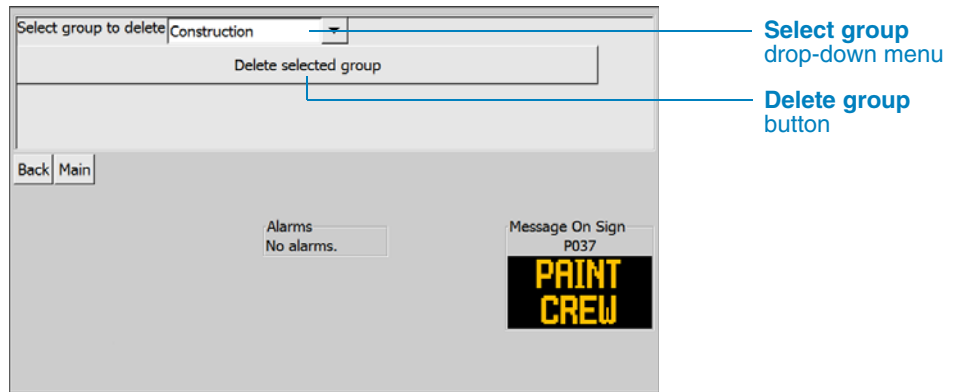


4.3.4

Delete Group button

After pressing or clicking the **Delete Group** button on the Manage Groups screen, the Delete Group screen is displayed (Figure 4-27).

Figure 4-27. Delete Group screen



Group to delete

To delete a group, first select it by tapping or clicking in the drop-down menu and choosing the group you want to delete, then press or click the **Delete selected group** button.

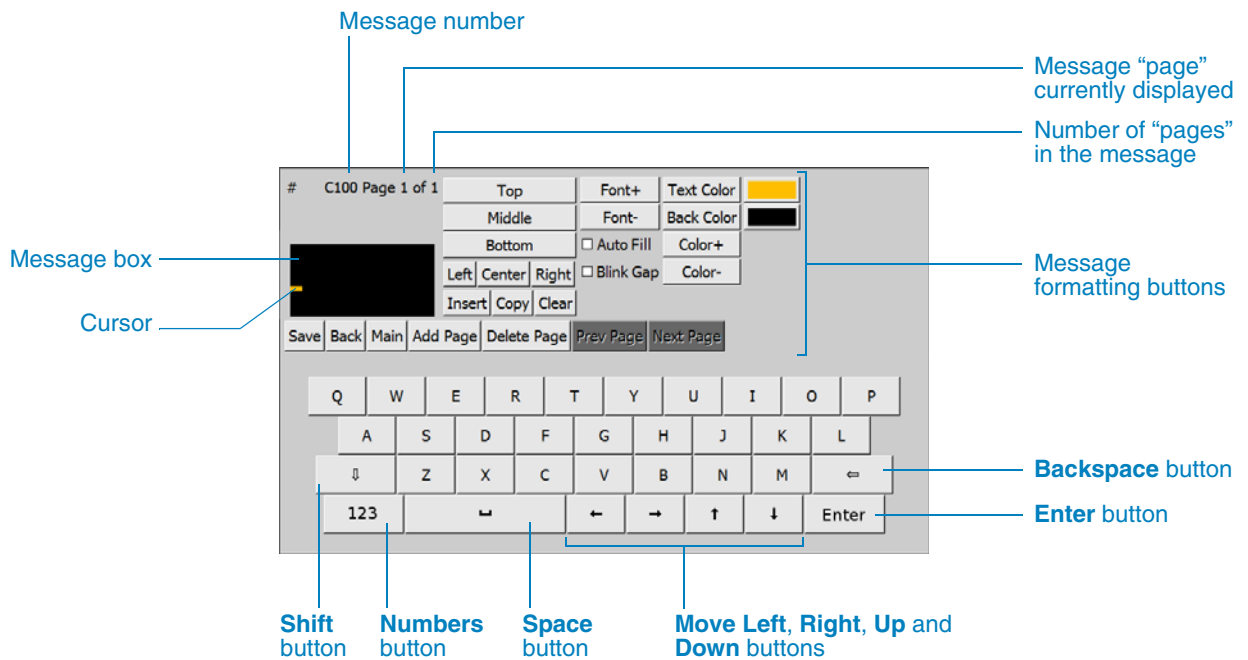
To cancel, press or click the **Back** button.

4.4 Messages

4.4.1 Create a new message

After choosing to create a new message, the Create Message screen is displayed (Figure 4-28).

Figure 4-28. Create Message screen



Message

When the Create Message screen is first displayed, the cursor is located in the message box, ready for you to begin typing a new message. The system assigns the next available message number in the C series (changeable messages).

Use the virtual keyboard to enter your message (see Section 4.2, page 21). Use the formatting buttons to define how the message will look on the sign (see Section 4.4.3).

Save	Back	Main
Save the newly created message	Returns you to the previous screen	Returns you to the Main screen
see Section 4.4.3.11, page 34		see Section 4.1, page 11

4.4.2 Editing a message

After pressing or clicking the **Edit** button on the Select Message screen, or the **Edit Quick Msg** button on the Quick Message screen, or the **Modify This Msg** button on the Message Options screen, the Edit Message screen is displayed. This screen and all its functions are identical to the Create Message screen (Figure 4-28), but a message is displayed in the message box, ready for editing.

To change the message format, see Section 4.4.3.

4.4.3 Formatting a message

Before formatting a message, it must be displayed in the message box. Either create a new message or choose a message to edit, then use the message formatting buttons to change how it will look on the sign.

Note that your changes are not saved until you press or click the **Save** button.

4.4.3.1 Top, Middle, and Bottom buttons

With a message shown in the message box, the **Top**, **Middle**, and **Bottom** buttons let you move the message vertically on the sign.

4.4.3.2 Left, Center, and Right buttons

With a message shown in the message box, the **Left**, **Center**, and **Right** buttons let you align the message horizontally on the sign.

4.4.3.3 Font+ and Font– buttons

The font buttons let you choose the font of the message text. For font examples, see Appendix D, page 103.

The cursor must be in the line of text before you can change the font. Move the cursor to the desired line of text using the **Up** (↑) or **Down** (↓) button on the keyboard, then:

- Repeatedly press or click the **Font+** button for the next font.
- Repeatedly press or click the **Font–** button for the previous font.
- When **Auto Fill** is checked (Section 4.4.3.4), the **Font+** and **Font–** buttons are disabled.

4.4.3.4 Auto Fill check box

When you check the **Auto Fill** check box, the controller automatically selects the best font size for your message, starting with the largest font size and changing to smaller sizes as you type your message.

If your message cannot fit on the sign, characters that do not fit will not appear in the message box or on the sign.

- You must click the **Auto Fill** check box before entering your message.
- When Auto Fill is checked, the **Font+** and **Font–** buttons are disabled.

4.4.3.5 Blink Gap check box

When you check the Blink Gap check box, the controller automatically inserts a “blink gap” into your message. The blink gap “blanks” the message on the sign for a brief period (usually a fraction of a second) then shows the message again.

- The on and off periods are controlled by the Page Time settings (see Section 4.5.5.3, page 81).
- When a message has more than one page (see Section 4.4.3.10, page 34), the **Blink Gap** check box is disabled.

4.4.3.6

Color buttons

For color message signs, the color buttons let you choose the colors for the message text and background. For other signs, these buttons do not appear.

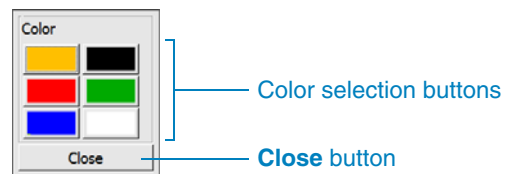
IMPORTANT!

If the text color and background color are the same, the text will look like it has disappeared (in the message box) until either the text or background color is changed.

Text color

- To choose a text color before you type your message text, press or click the **Text Color** button. The color-selection dialog box appears (Figure 4-29).
 - Click a color to select it. The selected text color will appear next to the **Text Color** button.
 - Click the **Close** button to close the color-selection dialog box.
 - The color-selection dialog box lets you choose a different color for any character you type.
- To choose a text color after you have typed your message text, the cursor must be in the line of text before you can change the text color. Move the cursor to the desired line of text using the **Up** (↑) or **Down** (↓) button on the keyboard, then:
 - Repeatedly press or click the **Color+** button for the next color.
 - Repeatedly press or click the **Color–** button for the previous color.
 - The **Color+** and **Color–** buttons change the color for the entire line of text.

Figure 4-29. Color selection dialog box



Background color

To choose a background color for your message, press or click the **Back Color** button. The color-selection dialog box appears (Figure 4-29).

- Click a color to select it. The selected background color appears next to the **Back Color** button.
- Click the **Close** button to close the color-selection dialog box.

The background color will appear muted in the user-interface, and will be dimmed from full brightness on the message sign. If you require a background with full brightness, use the Wanco Message Graphics program to create your message. Wanco recommends against a background color at full brightness, because of the rapid power drain on the message sign batteries.

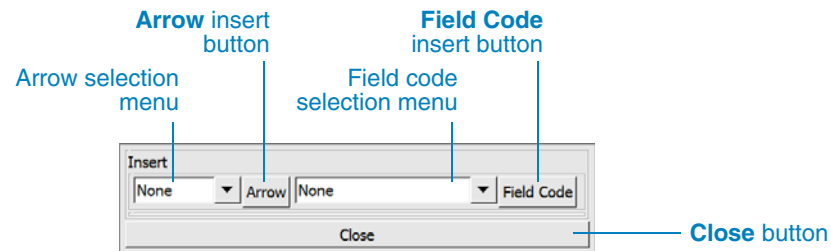
4.4.3.7

Insert button

The **Insert** button lets you put an arrow symbol or a dynamic field in your message. A dynamic field shows information on the sign that responds to real-time conditions (such as the ambient temperature) or configured settings (such as a desired speed limit).

When you press or click the **Insert** button, the Insert dialog box appears (Figure 4-30).

Figure 4-30. Insert dialog box



Use the drop-down menus to choose the desired arrow symbol or dynamic field for inserting into your message.

- After choosing an arrow symbol, press or click the **Arrow** button to insert it.
- After choosing a field, press or click the **Field Code** button to insert it. A list of fields, with descriptions, is provided in Appendix C, page 101.
- Click the **Close** button to close the Insert dialog box.

4.4.3.8

Copy button

The **Copy** button lets you copy a message. You would typically use this option to create a customized version of an existing message.

When you press or click the **Copy** button, the Copy dialog box appears (Figure 4-31 or 4-32).

Figure 4-31. Copy dialog box, single-page message

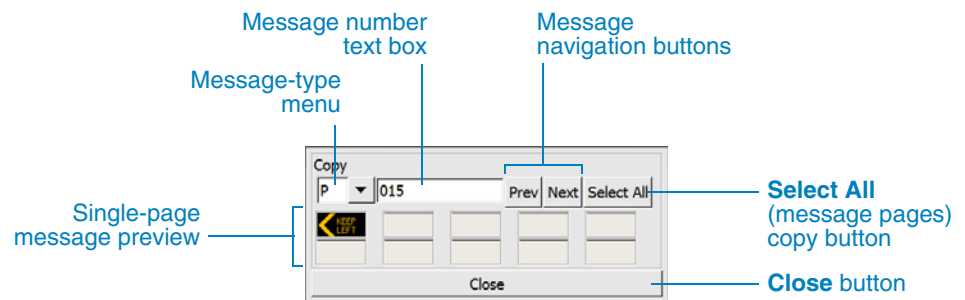
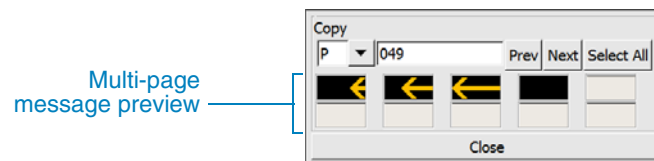


Figure 4-32. Copy dialog box, multi-page message



Use the drop-down menu and text box to choose the desired message for copying.

- Preview images show the message that will be copied. All pages of a multi-page message are shown (Figure 4-32). For more about multi-page messages, see Section 4.4.3.10.
- Choose a specific message using the message-type menu and message number text box. Use the **Prev** and **Next** buttons to browse messages.
- After locating a message to copy, press or click the **Select All** button to copy it; or, to copy just one page of a multi-page message, press or click the preview image for that page.
- Click the **Close** button to close the Copy dialog box.

4.4.3.9

Clear button

The **Clear** button lets you erase the message currently displayed in the message box.

For multi-page messages, only the displayed page is erased when you press or click the **Clear** button; other pages of the message are unaffected.

4.4.3.10

Add, Delete, Prev, and Next Page buttons

A message can appear all at once or on multiple “pages,” alternating between two pages (for example, 1,2,1,2...) or sequencing between more than two pages (for example, 1,2,3,1,2,3...). By default, a new message has one page until you add pages.

- The page indicator in the top-left corner of the Create Message screen indicates the number of the page currently displayed and the total number of pages that comprise the message.
- Press or click the **Add Page** button to add a new page to the message. The new, blank page is displayed, ready for editing. You can only add pages to the end of your message. You cannot insert pages into the middle of a multi-page message.
- Press or click the **Delete Page** button to delete the displayed page of the message. The previous page is displayed, ready for editing. If you choose to delete page 1 of 1, you will erase or clear the message.
- Press or click the **Prev Page** button to view the previous page of the message. The previous page is displayed, ready for editing. The **Prev Page** button is not available if the first page of a multi-page message is displayed, or if there is only one page.
- Press or click the **Next Page** button to view the next page of the message. The next page is displayed, ready for editing. The **Next Page** button is not available if the last page of a multi-page message is displayed, or if there is only one page.

4.4.3.11

Save, Back, and Main buttons

Your changes are not saved to memory until you press or click the **Save** button. If you exit this screen without saving the message, all changes to the message will be lost.

- When your new or edited message is ready, press or click the **Save** button to save it into memory. After pressing or clicking the **Save** button:
 - If you arrived from the Select Message screen, the Select Message screen appears (Section 4.5.2.1, page 39).
 - If you arrived from the Quick Message screen, the Message Options screen appears (see Section 4.5.2.2, page 40).
- Press or click the **Back** button to return to the previous screen without saving your changes.
- Press or click the **Main** button to return to the Main screen without saving your changes.

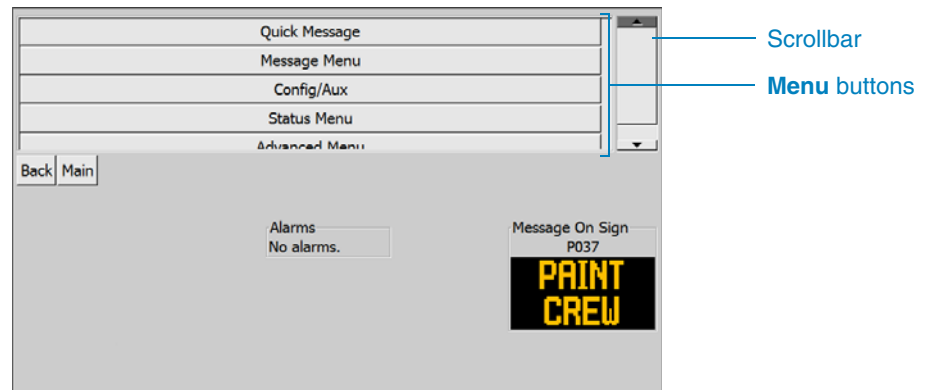
4.5

Menus

The advanced configuration menus described in this section are available only after you log into the system (Section 4.1.5, page 17).

After pressing or clicking the **Menus** button on the Main screen, the Menu screen is displayed (Figure 4-33).

Figure 4-33. Menu screen



Menu buttons

Quick Message lets you quickly create, edit, and select a Quick Message (see Section 4.5.1).

Message Menu provides access to message configuration options (see Section 4.5.2, page 38).

Config/Aux provides access to settings for auxiliary equipment (see Section 4.5.3, page 46).

Status Menu provides access to message sign status (see Section 4.5.4, page 58).

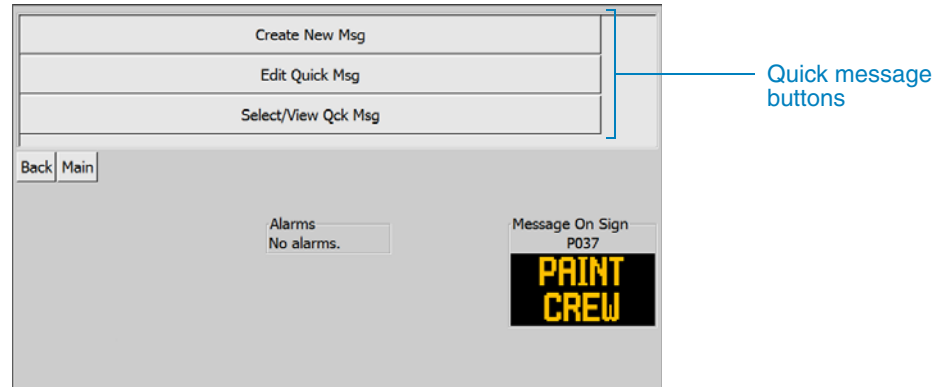
Advanced Menu provides access to advanced settings when logged in as an administrator (see Section 4.5.5, page 67).

Move the scrollbar up or down to see more buttons.

4.5.1 Quick Message button

After pressing or clicking the **Quick Message** button on the Menu screen, the Quick Message screen is displayed (Figure 4-34).

Figure 4-34. Quick Message screen



Quick-message buttons

Create New Msg lets you create a new Quick Message (see Section 4.5.1.1).

Edit Quick Msg lets you edit an existing Quick Message (see Section 4.4.2, page 29).

Select/View Qck Msg lets you view and choose an existing custom message (see Section 4.5.1.2).

4.5.1.1 Create New Msg button

You can create just one Quick Message (message number C100):

- To create a new Quick Message, press or click the **Create New Msg** button on the Quick Message screen. The Create Message screen is displayed (see Section 4.4.1, page 29).
- If a Quick Message already exists and you choose to create a new one, the existing one will be deleted when you press or click the **Create New Msg** button.

You can create up to 149 additional custom messages from a different screen:

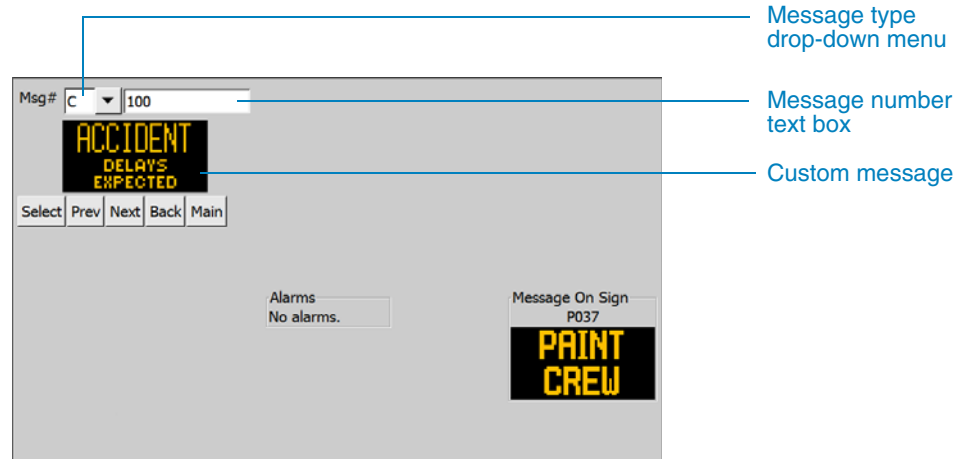
1. On the Main screen, press or click the **Menus** button.
2. On the Menu screen, press or click the **Message Menu** button.
3. On the Message Menu screen, press or click the **Select/View Msg** button.
4. Follow the instructions in Section 4.5.2.1, page 39, to choose a custom message to create or edit (C001 through C099, or C101 through C150).

4.5.1.2

Select/View Qck Msg button

After pressing or clicking the **Select/View Qck Msg** button on the Quick Message screen, the Select Custom Message screen is displayed (Figure 4-35).

Figure 4-35. Select Custom Message screen



Custom message

The Quick Message (C100) is displayed. Choose a different message by message type and number, or by browsing (see below). After you enter a message number and press **Enter**; that message will be shown in the preview area.

Select	Prev	Next	Back	Main
Selects the displayed message	Shows the previous message of the same message type	Shows the next message of the same type	Returns you to the previous screen	Returns you to the Main screen
see Section 4.5.2.2, page 40				see Section 4.1, page 11

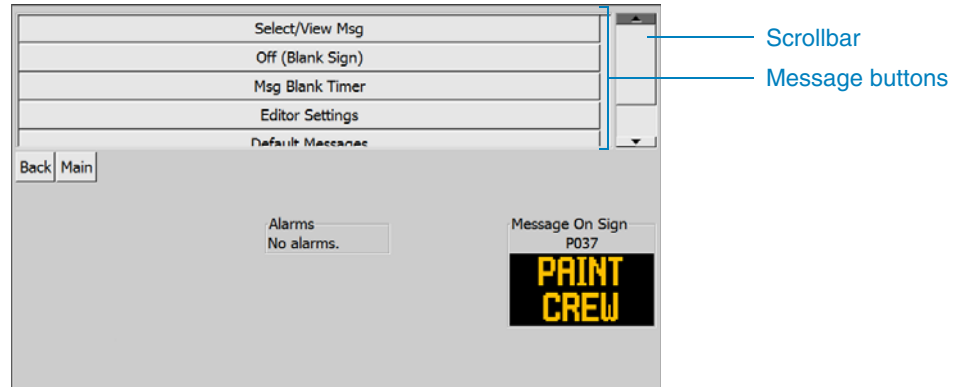
To locate a message:

- Tap or click the drop-down menu to select a message type, if necessary:
 - C** Changeable messages, which can be created, edited, and deleted by the user.
 - V** Volatile messages are like changeable messages, but are not stored in memory. They are deleted when the sign's computer is rebooted.
 - P** Permanent messages, preprogrammed at the factory. These messages cannot be changed by the user.
 - B** Blank, no message is displayed on the sign.
- If you know the message number, tap or click in the message number text box, enter the desired message number, and then press **Enter**.
- If you do not know the message number, or if you want to browse the messages, press or click the **Next** and **Previous** buttons.
- When you locate the message you want to use, press or click the **Select** button. The Message Options screen is displayed (see Section 4.5.2.2, page 40).

4.5.2 Message Menu button

After pressing or clicking the **Message Menu** button on the Menus screen, the Message Menu screen is displayed (Figure 4-36).

Figure 4-36. Message Menu screen



Message buttons

Select/View Msg displays the Select Message screen (see Section 4.5.2.1).

Off (Blank Sign) clears the message sign (see Section 4.1.1, page 12).

Msg Blank Timer lets you set the sign to go blank after a set time delay (see Section 4.5.2.3, page 42).

Editor Settings lets you configure default settings for editing messages (see Section 4.5.2.4, page 43).

Default Messages lets you configure NTCIP reset events (see Section 4.5.2.5, page 44).

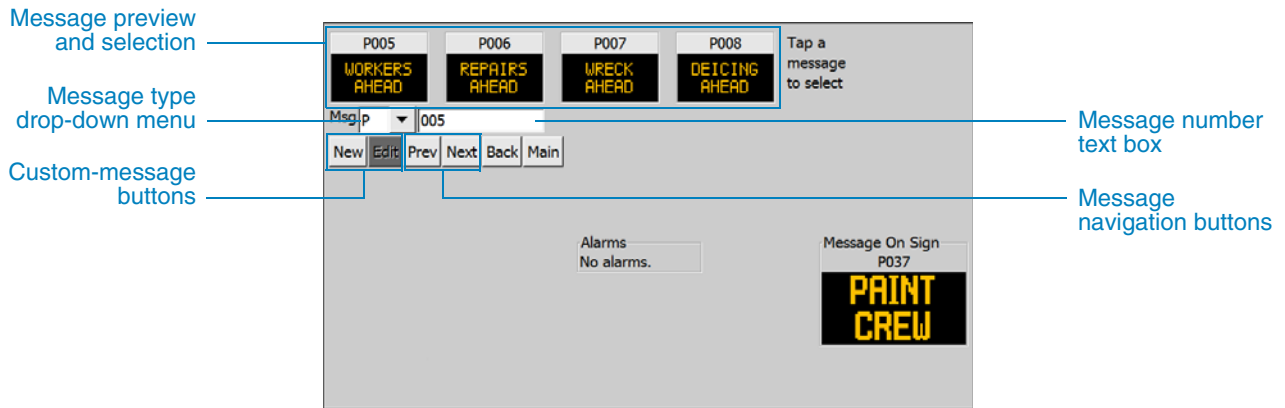
Default Msg Times lets you configure settings that override NTCIP reset events (see Section 4.5.2.6, page 45).

Move the scrollbar up or down to see more buttons.

4.5.2.1 Select/View Msg button

After pressing or clicking the **Select/View Msg** button on the Message Menu screen, the Select Message screen is displayed (Figure 4-37).

Figure 4-37. Select Message screen



Message previews

Choose a message by message type and number, or by browsing (see below). After you enter a message number and press **Enter**; that message and the next three messages will be shown in the preview area (e.g., if you enter P051, the previews will be P051, P052, P053, and P054).

New	Edit	Next	Prev	Back	Main
Lets you create a new message	Lets you edit the first preview message, if it is editable (otherwise, this button is not available)	Shows the next four preview messages	Shows the previous four preview messages	Returns you to the previous screen	Returns you to the Main screen
see Section 4.4.1, page 29	see Section 4.4.2, page 29				see Section 4.1, page 11

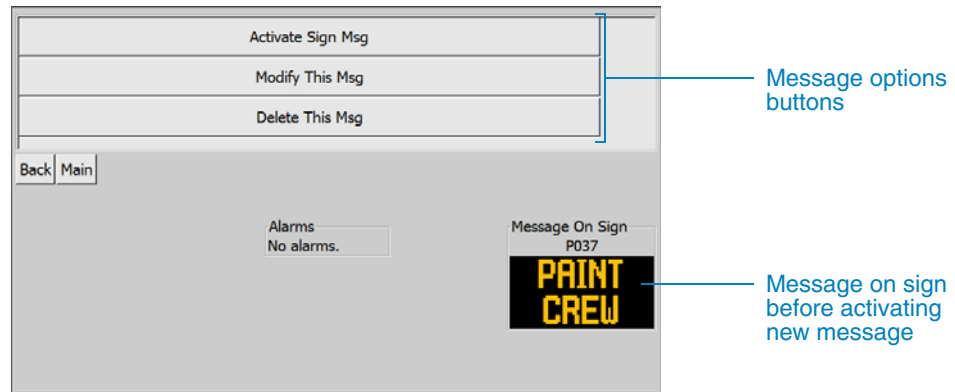
To locate a message:

1. Tap or click the drop-down menu to select a message type, if necessary:
 - C** Changeable messages, which can be created, edited, and deleted by the user.
 - V** Volatile messages are like changeable messages, but are not stored in memory. They are deleted when the sign’s computer is rebooted.
 - P** Permanent messages, preprogrammed at the factory. These messages cannot be changed by the user.
 - B** Blank, no message is displayed on the sign.
2. If you know the message number, tap or click in the message number text box, enter the desired message number, and then press **Enter**.
3. If you do not know the message number, or if you want to browse the messages, press or click the **Next** and **Previous** buttons.
4. When you locate the message you want to use, tap or click its preview image to select it. The Message Options screen is displayed (see Section 4.5.2.2).

4.5.2.2 Message Options screen

After saving a new or edited message, and when selecting a message, the Message Options screen is displayed (Figure 4-38).

Figure 4-38. Message Options screen



Message options buttons

Activate Sign Msg changes the message displayed on the sign (see below).

Modify This Msg lets you edit the message (see Section 4.4.2, page 29).

Delete This Msg lets you delete the message (see page 41).

Activate Sign Msg button

After activating the new message, the Message Status screen indicates the new message is displayed on the sign, and also shows the new message number (Figure 4-39).

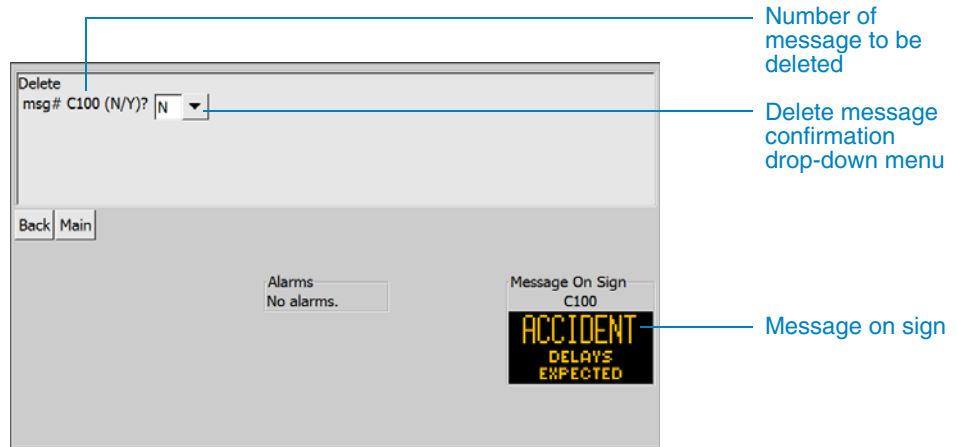
Figure 4-39. Message Status screen, after activating message



Delete This Msg button

After pressing or clicking the **Delete This Msg** button on the Message Options screen, the Delete Message confirmation screen is displayed (Figure 4-40).

Figure 4-40. Delete Message confirmation screen, before deletion



Delete message

To delete the selected message, tap or click the confirmation drop-down menu and select Y (Yes). The message is immediately deleted and the sign is blanked. After deleting a message:

- If the Quick Message (C100) was deleted, the Quick Message screen appears (Figure 4-41). The sign is already blanked, as indicated in the Message On Sign area. For more about the Quick Message, see Section 4.5.1, page 36.
- If any other custom message was deleted, the Activate Blank Message screen appears (Figure 4-42). The sign is already blanked, as indicated in the Message On Sign area.

Figure 4-41. Quick Message screen, after Quick Message deletion

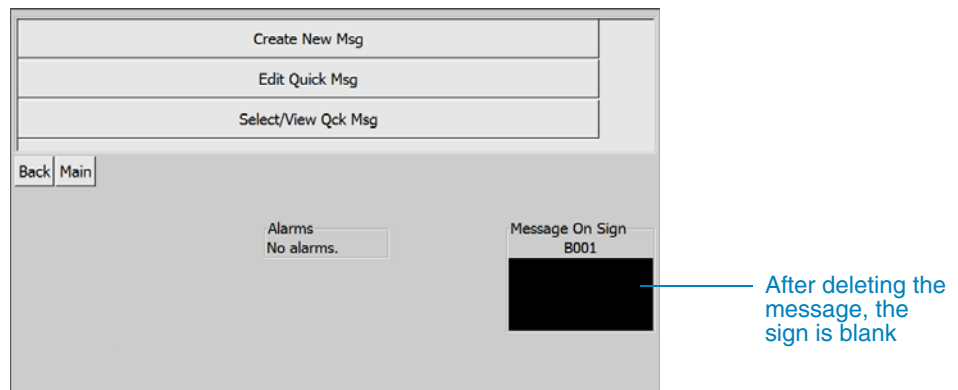


Figure 4-42. Activate Message screen, after custom message deletion

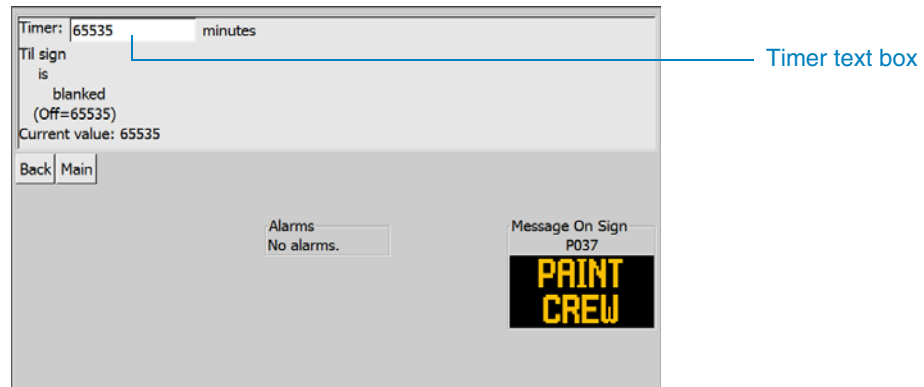


4.5.2.3

Msg Blank Timer button

After pressing or clicking the **Msg Blank Timer** button on the Message Menus screen, the Message Blank Timer screen is displayed (Figure 4-43).

Figure 4-43. Message Blank Timer screen



Timer

Tap or click the timer text box, then enter the amount of time (in minutes) you want the sign to show the current message. After this time, the sign will be blank.

The default value, 65535, disables the timer.

4.5.2.4

Editor Settings button

After pressing or clicking the **Editor Settings** button on the Message Menu screen, the Message Editor Settings screen is displayed (Figure 4-44).

Figure 4-44. Message Editor Settings screen



Condition	Settings
LineJust	Set the default format for new messages to be left-aligned, right-aligned, or centered. This setting can be overridden in the message editing screen.
PageJust	Set the default format for new messages to be aligned to the top, bottom, or middle of the sign. This setting can be overridden in the message editing screen.
Font Num	Set the default font for new messages. This setting can be overridden in the message editing screen. For font examples, see Appendix D, page 103.
Auto Fill	When enabled, messages entered in the Create Message and Edit Message screens will use the Auto Fill feature by default (see Section 4.4.3.4, page 30). This setting can be overridden in the message editing screen.

4.5.2.5 Default Messages button

After pressing or clicking the **Default Messages** button on the Message Menu screen, the NTCIP Reset Settings screen is displayed (Figure 4-45).

The settings on this screen determine what the sign will display if reset events occur. Conditions and settings for this screen are listed below.

Figure 4-45. NTCIP Reset Settings screen



Condition	Description
Power Lost/S	If power to the sign is lost... (see settings, below)
Power Lost/L	If line power is lost... (see settings, below)
Low Voltage	If voltage drops below a preset level... (see settings, below)
End Duration	If message-blank timer time expires... (see settings, below)
System Reset	If the system is reset by the user... (see settings, below)
Comm Lost	If remote communication with the sign is lost... (see settings, below)

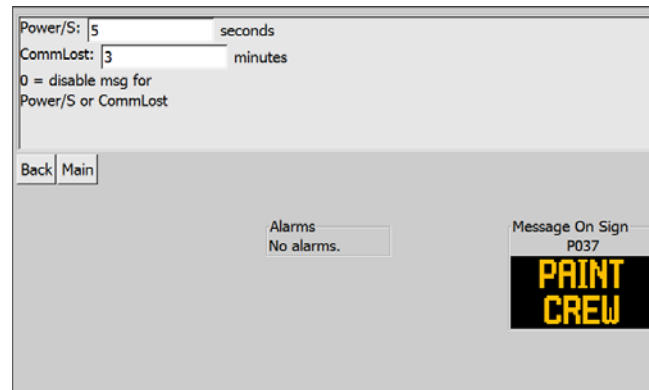
Setting	Description
L [Last]	...the last displayed message is displayed
B [B001]	...message on sign is blank
N [None]	...the event is ignored and does not cause the message on the sign to change
P [msg #]	...the designated P-series (permanent) message is displayed
C [msg #]	...the designated C-series (changeable) message is displayed
V [msg #]	...the designated V-series (volatile) message is displayed

4.5.2.6

Default Msg Times button

After pressing or clicking the **Default Msg Times** button on the Message Menu screen, the Default Message Times screen is displayed (Figure 4-46).

Figure 4-46. Default Message Times screen

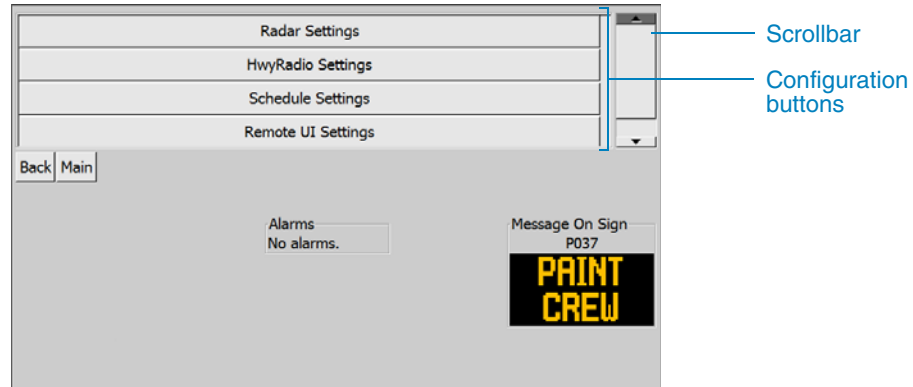


Condition	Setting
Power/S	<p>If power to the sign is interrupted, this is the time delay, in seconds, after which the Power Lost/S setting in the NTCIP Reset Settings screen will take effect (see Section 4.5.2.5).</p> <p>To disable the timer, set the value to 0.</p>
CommLost	<p>If wireless remote communications to the sign is interrupted, this is the time delay, in minutes, after which the Comm Lost setting in the NTCIP Reset Settings screen will take effect (see Section 4.5.2.5).</p> <p>To disable the timer, set the value to 0.</p>

4.5.3 Config/Aux button

After pressing or clicking the **Config/Aux** button on the Menu screen, the Auxiliary Equipment Configuration screen is displayed (Figure 4-47).

Figure 4-47. Auxiliary Equipment Configuration screen



Configuration buttons

Radar Settings lets you configure speed-detection radar^[1] (see Section 4.5.3.1).

HwyRadio Settings lets you configure a highway radio^[1] (see Section 4.5.3.3, page 51).

Schedule Settings lets you configure a schedule for the sign (see Section 4.5.3.4, page 52).

Remote UI Settings lets you change some configuration settings for the touchscreen interface (see Section 4.5.3.6, page 56).

Move the scrollbar up or down to see more buttons.

¹Optional equipment; may not be included with your message sign.

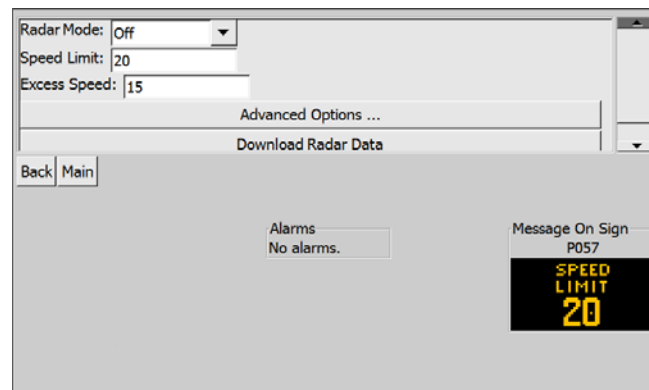
4.5.3.1

Radar Settings button

After pressing or clicking the **Radar Settings** button on the Auxiliary Equipment Configuration screen, the Radar Settings screen is displayed (Figure 4-48).

Speed-detection radar is optional auxiliary equipment that may not be included with your message sign.

Figure 4-48. Radar Settings screen



Condition/button	Setting
Radar Mode	Set the operating mode for optional speed-detection radar (see “Radar Mode” below).
Speed Limit	Set the speed above which the overspeed message is displayed on the message sign. Below this speed, the legal-speed message is displayed.
Excess Speed	Set the increment over the speed limit that triggers the excessive-speed message to be displayed on the message sign. For example, if the speed limit is 20 MPH, and you want the excessive-speed message to be triggered at 35 MPH, enter the number 15 ($35 - 20 = 15$).
Advanced Options	Lets you configure additional radar-related settings, including overspeed, legal-speed, and excessive-speed messages (see “Advanced Options button,” page 48).
Download Radar Data	Lets you download traffic data from the message sign radar unit onto a USB flash drive (see Section 4.5.3.2, page 51).

Radar Mode

If the message sign has a radar-speed detection device installed*, use the Radar Mode drop-down list to choose the appropriate operating mode for it:

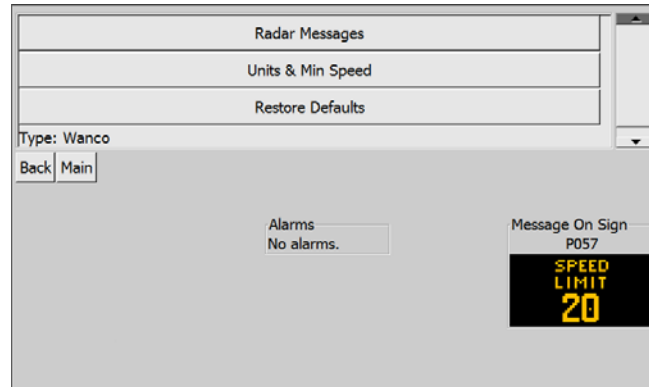
- Off** Use this setting when radar is not needed or not installed.
- Speed** Use this setting when providing radar-based messages to passing motorists on the message sign (see “Advanced Options button,” page 48). Traffic data collection is active with this setting, if the radar includes that capability.
- Capture** Use this setting when collecting traffic data. With this setting, the message sign does not display radar-based messages.

*Optional equipment; may not be included with your message sign.

Advanced Options button

After pressing or clicking the **Advanced Options** button on the Radar Settings screen, the Advanced Radar Settings screen is displayed (Figure 4-49).

Figure 4-49. Advanced Radar Settings screen



Radar settings buttons

Radar Messages lets you choose the speed-related messages to be displayed on the sign when triggered by basic radar settings (see “Radar Messages button,” page 49).

Units & Min Speed lets you set units of measure and minimum speed (see “Units & Min Speed button,” page 50). Always configure units before setting radar-related messages.

Restore Defaults lets you change all radar-related settings to their defaults. The change takes place immediately when you press or click the button (see “Restore Defaults button,” page 50).

Type identifies the installed radar, for reference.

Radar Messages button

After pressing or clicking the **Radar Messages** button on the Advanced Radar Settings screen, the Radar Messages screen is displayed (Figure 4-50).

Use the drop-down menus to choose a message type, then enter the message number in each text box.

IMPORTANT!

Before configuring radar messages, configure the units of measure. When you configure mph or km/h, the radar-speed messages are reset to their defaults.

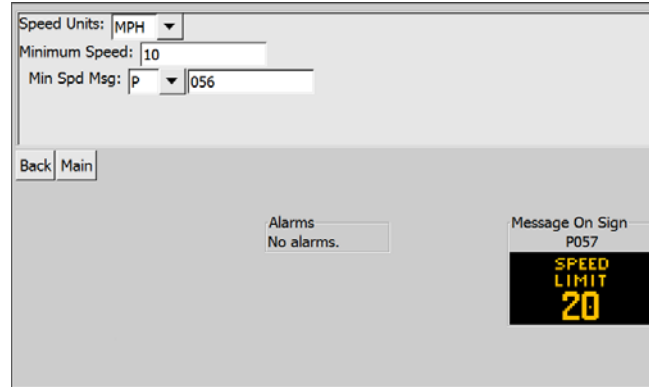
Figure 4-50. Radar Messages screen

Condition	Setting
Spd Limit Msg	Set the message to be displayed on the sign when there is no radar-detected speed.
Legal Spd Msg	Set the message to be displayed on the sign when the radar-detected speed is less than or equal to the Speed Limit that was set in the Radar Settings screen (page 47).
Overspeed Msg	Set the message to be displayed on the sign when the radar-detected speed is over the Speed Limit but lower than the total of the Speed Limit and Excess Speed values that were set in the Radar Settings screen (page 47).
Excessive Msg	Set the message to be displayed on the sign when the radar-detected speed is equal to or greater than the total of the Speed Limit and Excess Speed values that were set in the Radar Settings screen (page 47).

Units & Min Speed button

After pressing or clicking the **Units & Min Speed** button on the Advanced Radar Settings screen, the Units & Minimum Speed Settings screen is displayed (Figure 4-51).

Figure 4-51. Units & Minimum Speed Settings screen

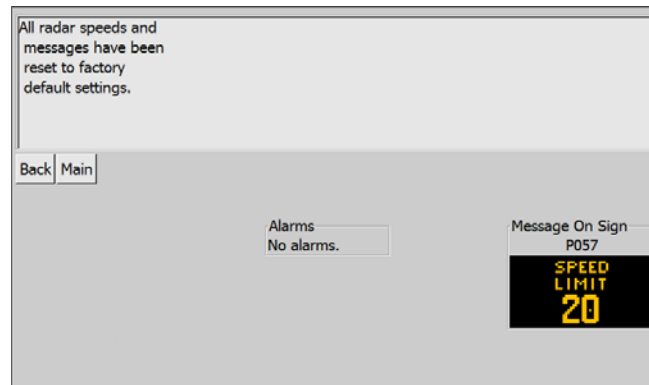


Condition	Setting
Speed Units	Choose either miles per hour (MPH) or kilometers per hour (KPH) for radar speed detection. Note that when you change the speed units, all radar messages (page 49) are reset to their defaults.
Minimum Speed	Set the speed that will be displayed on the sign when the minimum speed message is displayed.
Min Spd Msg	Set the default minimum speed message using its message number. The minimum speed message is not normally used with radar-speed detection, but could be selected for the Speed Limit message or used on its own without radar.

Restore Defaults button

After pressing or clicking the **Restore Defaults** button on the Advanced Radar Settings screen, the Radar Reset Confirmation screen is displayed (Figure 4-52). All radar-related settings are immediately reset when you press or click this button.

Figure 4-52. Radar Reset Confirmation screen



4.5.3.2

Download Radar Data button

If the message sign is equipped with a radar-based speed detection system, the **Download Radar Data** button lets you download collected traffic data to a USB flash drive.

- Before pressing or clicking the download button, the USB flash drive must be inserted into the USB port on the message sign computer box (see the message sign manual if necessary).
- If no flash drive is present when the download button is pressed or clicked, an error message will be displayed.

IMPORTANT!

The flash drive must be blank before you insert it into the USB port. Do not insert a flash drive if it has any files on it.

- If you insert a USB flash drive and do not remove it, traffic data will be downloaded to the drive automatically about every 15 minutes while the radar system is powered on.

4.5.3.3

HwyRadio Settings button

After pressing or clicking the **HwyRadio Settings** button on the Auxiliary Equipment Configuration screen, the Highway Radio Settings screen is displayed (Figure 4-53).

A highway radio is optional auxiliary equipment that may not be attached to your message sign.

Figure 4-53. Highway Radio Settings screen

The screenshot shows a configuration interface for a highway radio. At the top, there are several controls: a dropdown menu for 'HwyRadio Pwr' set to 'On', a text input for 'AM Frequency' with the value '1610', and another dropdown for 'Advisory Msg' set to 'P' with a text input for '055'. Below these, it says '(Default Msg: P055)' and 'Radio Status: Clear'. At the bottom left, there are two buttons labeled 'Back' and 'Main'. On the right side, there are two status indicators: 'Alarms' with the text 'No alarms.' and 'Message On Sign' with the code 'P037'. Below the 'Message On Sign' indicator, a digital sign is shown displaying the text 'PAINT CREW' in yellow on a black background.

Condition	Setting
HwyRadio Pwr	Switch power to the optional highway radio on or off.
AM Frequency	Set the radio frequency on which the highway radio will broadcast.
Advisory Msg	Set the message that will be displayed on the sign during radio broadcasts. The default advisory message is P055, "ADVISORY TUNE TO ##### AM"

4.5.3.4 Schedule Settings button

After pressing or clicking the **Schedule Settings** button on the Auxiliary Equipment Configuration screen, the Schedule Settings screen is displayed (Figure 4-54).

This screen lets you turn message schedules on or off, and allows you to configure up to three message schedules (see “Day Plan buttons,” page 54).

Although only one day plan can be active at any given time, the three plans allow you to configure, for example, one schedule for weekdays and another for weekends; or one plan for weekday mornings, another for weekday evenings, and a third for weekends.

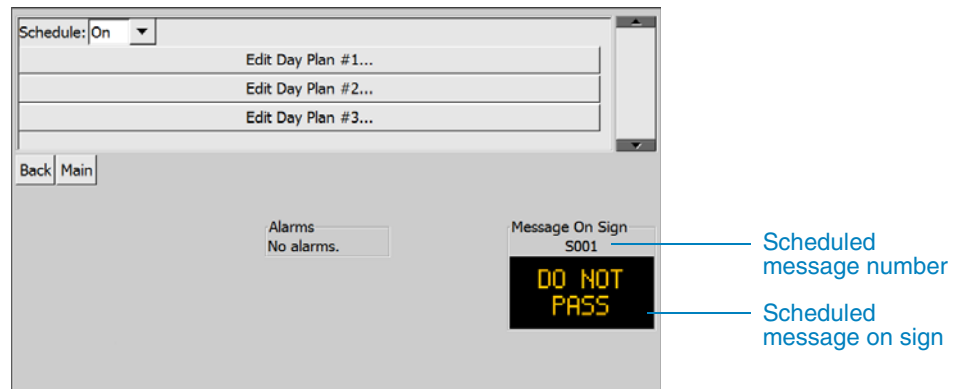
IMPORTANT!

If you manually activate a message on the sign, the scheduler is automatically disabled.

If you disable the schedule, the sign is immediately blanked.

Before configuring a schedule, ensure the message sign’s internal clock is correct (see page 53).

Figure 4-54. Schedule Settings screen



When Schedule is set to “On,” the message on sign area shows the message you configured for the active day plan (see Figure 4-54). To indicate the sign is running on a day plan, scheduled messages will always be numbered S001 through S018, regardless of the message numbers configured for each day plan.

Message sign clock

The schedule uses the message sign's internal clock. Each time you configure a new schedule, you should always confirm that the sign's date, time, and time zone are all correct; otherwise, the schedule might not work as expected.

1. To view the date, time, and time zone:
 - a. On the Main screen, press or click the **Menu** button.
 - b. On the Menus screen, press or click the **Status Menu** button.
 - c. On the Status Menu screen, press or click the **Time & Date** button.
2. To change the date, time, and time zone:
 - a. On the Main screen, press or click the **Menu** button.
 - b. On the Menus screen, press or click the **Advanced Menu** button.
 - c. On the Advanced Menu screen, press or click the **Set Time & Date** button.
 - d. Follow the instructions in Section 4.5.5.2, page 80.

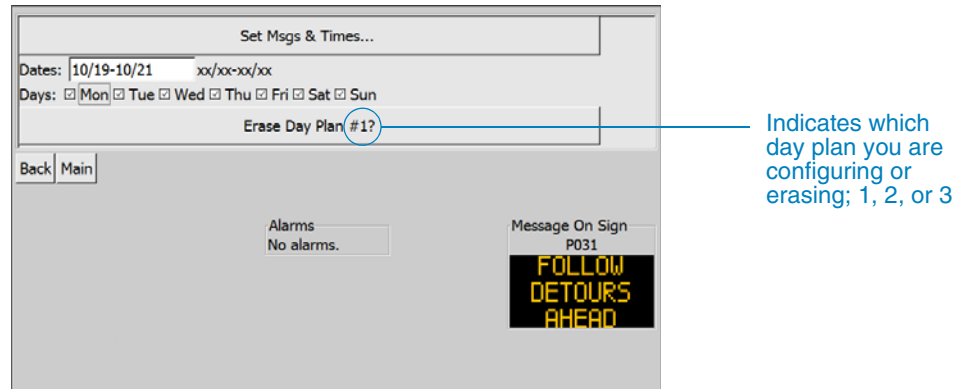
4.5.3.5 Day Plan buttons

After pressing or clicking any of the three **Edit Day Plan** buttons on the Schedule Settings screen, the Day Plan screen is displayed (Figure 4-55).

IMPORTANT!

Before configuring a day plan, you should always ensure the message sign’s internal clock is correct (see page 53).

Figure 4-55. Day Plan screen



Condition/button	Description
Set Msgs & Times	Lets you choose the messages that will be displayed and when (see “Set Msgs & Times button,” page 55).
Dates	Set the start and end dates for this day plan (the day plan number is indicated on the Erase Day Plan button). The date range must be in the format, mm/dd-mm/dd. For example, if you want the day plan to begin on July 20 and end on August 3, enter 07/20-08/03.
Days	Set the days of the week that the messages will be displayed while this plan is active. Tap or click the check box for each day you want this day plan to run.
Erase Day Plan?	Deletes the day plan settings for this day plan (see “Erase Day Plan button,” page 56).

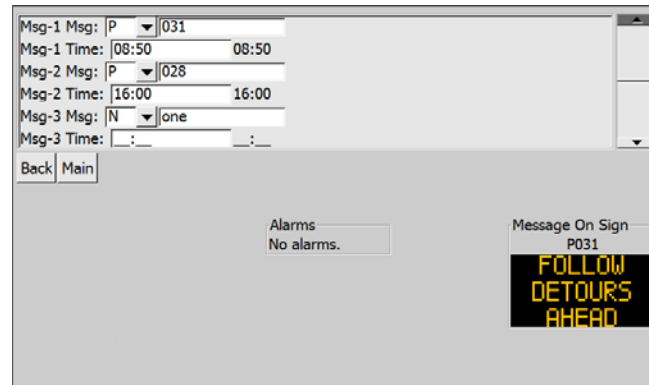
Set Msgs & Times button

After pressing or clicking the **Set Msgs & Times** button on the Day Plan screen, the Scheduled Messages screen is displayed (Figure 4-56).

IMPORTANT!

Before configuring scheduled messages, you should always ensure the message sign's internal clock is correct (see page 53).

Figure 4-56. Scheduled Messages screen



Condition	Setting
Msg- <i>n</i> Msg	Set the message that will be displayed from the Msg- <i>n</i> time until the next message time.
Msg- <i>n</i> Time	Set the time that the sign will begin displaying Msg- <i>n</i> .

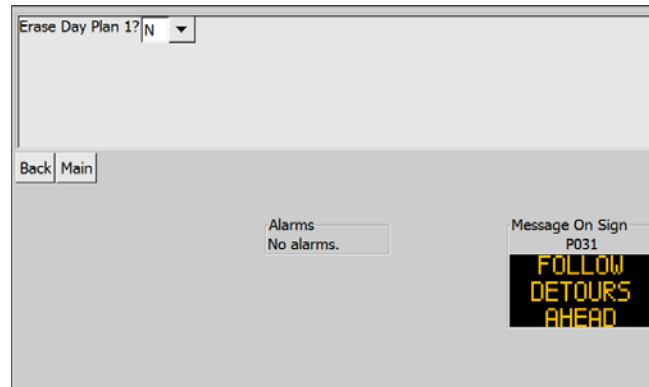
- Set messages using their message type and number.
- Enter time using 24-hour format (i.e., 08:00 is 8 A.M., 20:00 is 8 P.M.; 00:00 is midnight, 12:00 is noon).
- Each message starts at its associated time setting (i.e., Msg-2 Msg starts at Msg-2 Time) and ends at the time of the next message.
- The last message ends at Msg-1 Time, and the plan starts over with Msg-1.
- After the day plan's end date, the sign will be blank.
- To turn the sign off, use the blank message (B001).
- To deactivate a message, choose N (none) from the drop-down menu.
- Move the scrollbar up or down to see more messages and times. There are six message/time pairs for each day plan.

Erase Day Plan button

After pressing or clicking the **Erase Day Plan** button on the Day Plan screen, the Erase Day Plan Confirmation screen is displayed (Figure 4-57).

When you use the drop-down menu to select “Y” (yes), the schedule is immediately deleted.

Figure 4-57. Erase Day Plan Confirmation screen

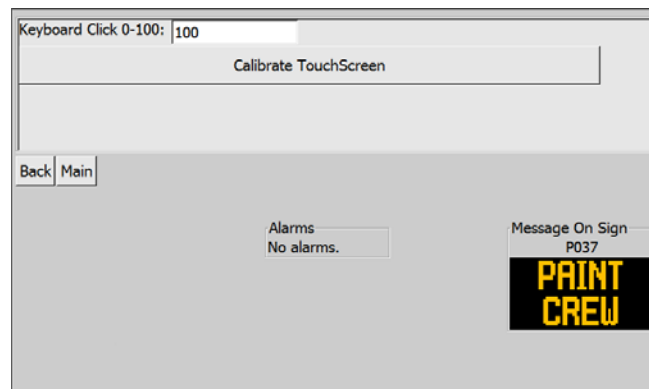


4.5.3.6

Remote UI Settings button

After pressing or clicking the **Remote UI Settings** button on the Auxiliary Equipment Configuration screen, the Touchscreen Settings screen is displayed (Figure 4-58).

Figure 4-58. Touchscreen Settings screen



Condition/button	Description
Keyboard Click	To change the volume of the Wanco touchscreen’s audible “click,” enter a number from 1 (the quietest) to 100 (the loudest).
Calibrate Touchscreen	Lets you initiate a touchscreen calibration, for Wanco touchscreens only (see below).

Calibrate Touchscreen button

If the Wanco touchscreen is out of calibration, it may misinterpret where you press when you try to activate a button, field, or drop-down menu. In this case, a touchscreen calibration is necessary.

After pressing or clicking the **Calibrate Touchscreen** button on the Touchscreen Settings screen, the touchscreen enters the calibration mode, in which a series of targets will appear on the screen, one at a time, until the calibration sequence is complete. After the calibration, the touchscreen will restart.

To calibrate the Wanco touchscreen, use a blunt object, such as the back of a ballpoint pen, to gently press the screen for a few seconds where each target appears.

CAUTION

Improper use can cause damage to the touchscreen, possibly resulting in its failing to operate.

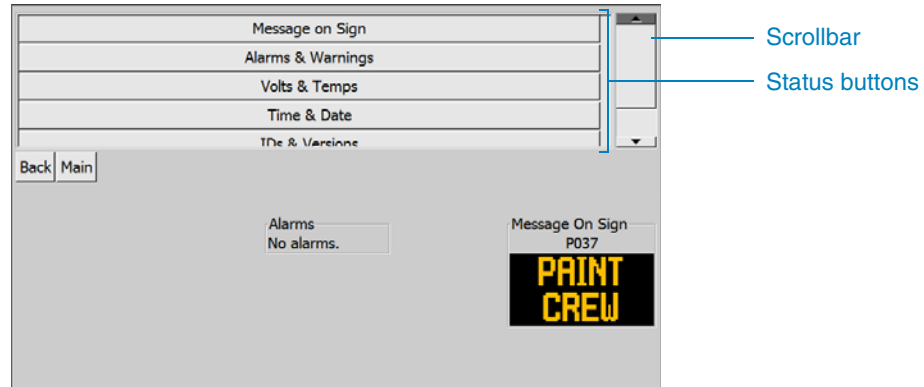
To prevent damage when calibrating the touchscreen:

- Do not press a pen point, pencil, or any marking implement to the screen.
- Do not press any heavy, hard or sharp object to the screen.

4.5.4 Status Menu button

After pressing or clicking the **Status Menu** button on the Menu screen, the Status Menu screen is displayed (Figure 4-59).

Figure 4-59. Status Menu screen



Status buttons

Message on Sign displays the message currently displayed on the sign (see Section 4.5.4.1).

Alarms & Warnings lets you view active alarms (see Section 4.5.4.2, page 60).

Volts & Temps lets you view temperatures and voltages at the sign (see Section 4.5.4.3, page 61).

Time & Date lets you view the sign's time and date settings (see Section 4.5.4.4, page 62).

IDs & Versions lets you view the sign's ID, model, and software version (see Section 4.5.4.5, page 63).

Display Modules lets you confirm the sign's display modules are working properly (see Section 4.5.4.6, page 64).

Power Controls lets you view the sign's power outputs status (see Section 4.5.4.7, page 66).

Move the scrollbar up or down to see more buttons.

4.5.4.1

Message on Sign button

After pressing or clicking the **Message on Sign** button on the Status Menu screen, the Message Status screen is displayed (Figure 4-60).

Figure 4-60. Message Status screen



4.5.4.2 Alarms & Warnings button

After pressing or clicking the **Alarms & Warnings** button on the Status Menu screen, the Alarms screen is displayed (Figure 4-61).

Alarms can indicate issues with the message sign that require attention. For troubleshooting information, see the message sign owner’s manual.

Figure 4-61. Alarms screen



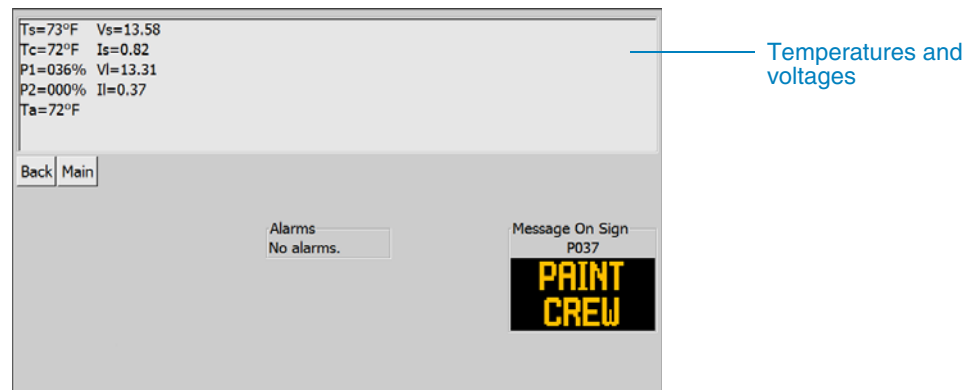
Alarm	Description
Dsply=!!	One or more sign display modules not responding
PwrBd=!!	Power control system not responding
NTCIP=!!	NTCIP system communications error
AuxIO=!!	Communications error between the sign and one or more auxiliary devices
VoltWrn=!!	One or more voltages are out of range
TempWrn=!!	One or more temperatures are out of range
TempCrt=!!	Sign temperature is critically high and the sign display has been blanked
PhtoCel=!!	One or more photocell inputs are out of range

4.5.4.3

Volts & Temps button

After pressing or clicking the **Volts & Temps** button on the Status Menu screen, the Voltages & Temperatures screen is displayed (Figure 4-62).

Figure 4-62. Voltages & Temperatures screen



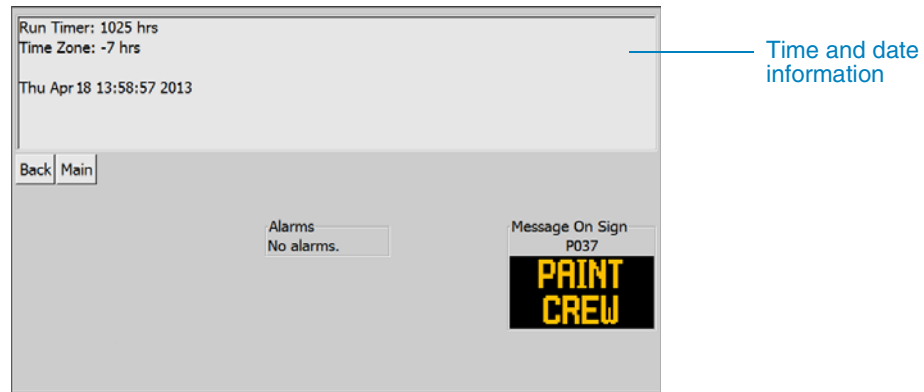
Code	Description
Ts	Temperature inside sign display cabinet (ambient plus solar heat)
Tc	Temperature inside sign computer box
Ta	Temperature of ambient sensor, if equipped
P1	Illumination detected by photocell #1
P2	Illumination detected by photocell #2
Vs	Sign voltage (battery or main power), in volts
Is	Sign current (battery or main power), in amperes
Vl	Line voltage (solar charger), in volts
Il	Line current (solar charger), in amperes

- Out-of-range warning limits are configurable via the Settings Menu, under the Advanced Menu option (see Section 4.5, page 35).
- For troubleshooting information, see the message sign owner's manual.

4.5.4.4 Time & Date button

After pressing or clicking the **Time & Date** button on the Status Menu screen, the Time & Date screen is displayed (Figure 4-63).

Figure 4-63. Time & Date screen



Item	Description
Run Timer	Number of hours the sign display has been powered (sign not blanked)
Time Zone	Time zone from Coordinated Universal Time (UTC); for example, in the USA: the Eastern time zone is UTC-5, or -5 hrs the Central time zone is UTC-6, or -6 hrs the Mountain time zone is UTC-7, or -7 hrs the Pacific time zone is UTC-8, or -8 hrs or, during daylight saving time: the Eastern time zone is UTC-4, or -4 hrs the Central time zone is UTC-5, or -5 hrs the Mountain time zone is UTC-6, or -6 hrs the Pacific time zone is UTC-7, or -7 hrs
Date & Time	Date (shown in US-standard format) and time (shown in 24-hour format)

Time and date settings are configurable via the Settings Menu, under the Advanced Menu option (see Section 4.5, page 35).

4.5.4.5

IDs & Versions button

After pressing or clicking the **IDs & Versions** button on the Status Menu screen, the IDs & Versions screen is displayed (Figure 4-64).

Figure 4-64. IDs & Versions screen



Item	Description
ID	Serial number, order number, or vehicle identification number (VIN)
PV	Message sign software version
AV	Internal (factory) use only
Model	Wanco message sign model number

4.5.4.6 Display Modules button

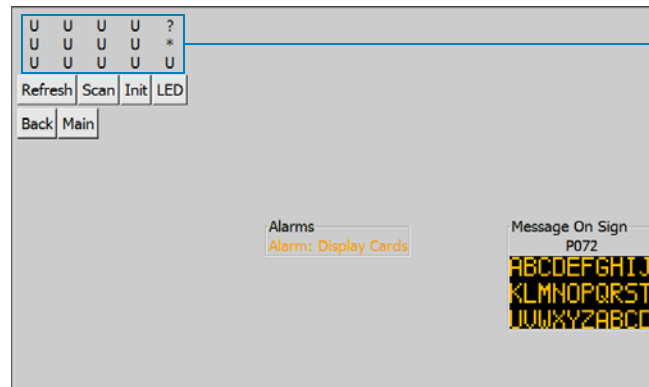
After pressing or clicking the **Display Modules** button on the Status Menu screen, the Display Modules screen is displayed (Figure 4-65).

When the Display Modules screen loads, the message on the sign automatically changes to the alphabet, and the message sign runs a diagnostic self-test on its display modules. To see the Test Results screen (Figure 4-66), press or click the **Refresh** button.

Figure 4-65. Display Modules screen



Figure 4-66. Display Modules Test Results screen



Test results
The test results displayed for your message sign may differ from the results shown here.

Test results

The test results indicate whether each display module is functioning properly. When a problem is indicated, it is important to look at the sign after running a diagnostic test, not just the Message On Sign area on the interface.

- A letter—the module’s firmware version—indicates the module is functioning properly.
- A question mark (?) indicates the controller could not communicate with the module, which indicates a problem with the module. In this case, the module should be replaced.
- An asterisk (*) indicates a pixel or LED failure. The module may need to be replaced.

Refresh	Scan	Init	LED
Refreshes the touchscreen display	Initiates a new self-test of all display modules	Initializes the sign and starts new self-test	Lights all LEDs
		see below	see below

Init button

The **Init** button is sometimes needed after changing or moving a display module on the sign.

IMPORTANT!

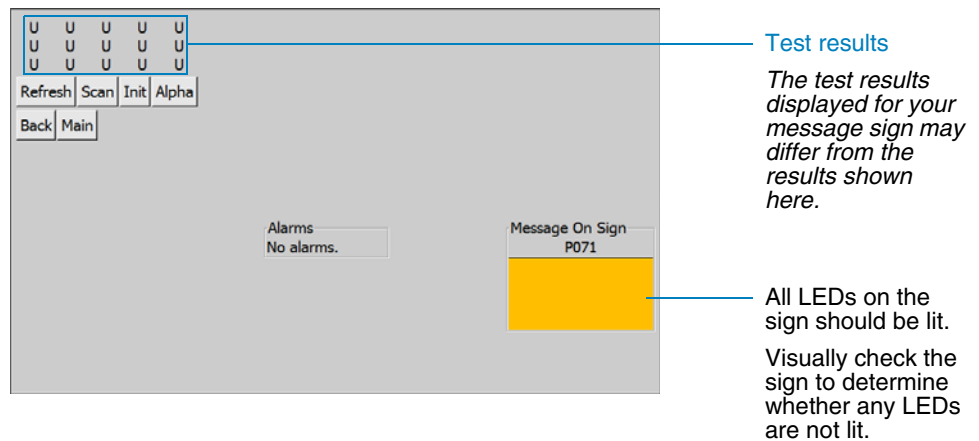
This is a maintenance action and should be used only by Wanco service personnel and advanced users. If improperly used, pressing the Init button can disable the sign.

After pressing or clicking the **Init** button on the Display Modules Test Results screen, the sign begins its initialization process, and starts a new self-test. After the test is complete, the Display Modules Test Results screen is shown again (Figure 4-65).

LED button

After pressing or clicking the **LED** button on the Display Modules Test Results screen, the Display Module LEDs screen is shown (Figure 4-67).

Figure 4-67. Display Module LEDs screen



Test results

Power is sent to all LEDs, allowing you to check the sign for LEDs that are not lit. It is necessary to look at the sign to see whether LEDs are lit, not just the Message On Sign area on the interface.

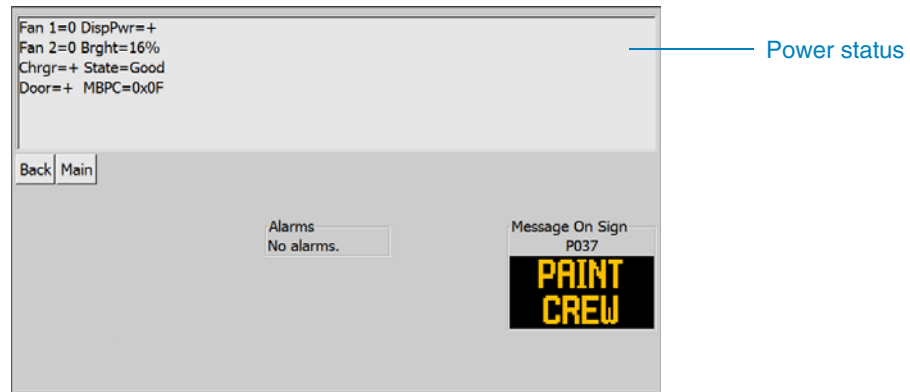
Replace display modules that have LEDs that are not lit.

Refresh	Scan	Init	Alpha
Refreshes the touchscreen display	Initiates a new self-test of all the display modules	Initializes the sign and starts new self-test	Shows the alphabet on the message sign
		see above	see Figure 4-66

4.5.4.7 Power Controls button

After pressing or clicking the **Power Controls** button on the Status Menu screen, the Power Controls Status screen is displayed (Figure 4-68).

Figure 4-68. Power Controls Status screen



Code	Description
Fan 1, Fan 2	Power to the cooling fans ^[1] is on (+) or off (0)
Chgr	The solar charging system ^[1] is on (+) or off (0)
Door	The control box door switch ^[2] is open (+) or closed (0)
DispPwr	Power to the sign display modules is on (+) or off (0)
Brght	Current brightness level of the display LEDs
State	Current power control state: Good, Low (warning), or Blnk (sign is blanked)
MBPC	Used for servicing only

¹Optional equipment; may not be included with your message sign.

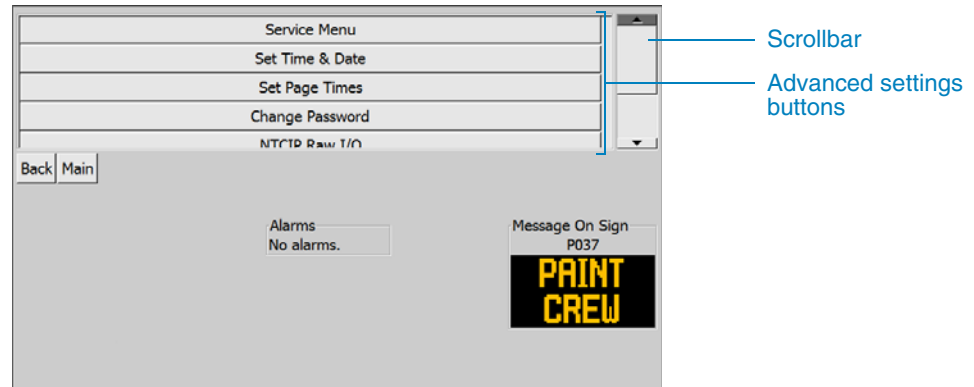
²Some models only; may not apply to your message sign.

4.5.5

Advanced Menu button

After pressing or clicking the **Advanced Menu** button on the Menus screen, the Advanced Settings screen is displayed (Figure 4-69). The **Advanced Menu** button is only available after logging into the system as an administrator (see Section 4.1.5, page 17).

Figure 4-69. Advanced Settings screen



Advanced settings buttons

Service Menu lets you modify many settings related to servicing the sign (see Section 4.5.5.1).

Set Time & Date lets you set time, time zone, and date (see Section 4.5.5.2, page 80).

Set Page Times lets you set default page and blink timing for new messages^[1] (see Section 4.5.5.3, page 81).

Change Password lets you modify system passwords (see Section 4.5.5.4, page 82).

NTCIP Community lets you set the NTCIP community string (see Section 4.5.5.5, page 83)

NTCIP Raw I/O lets you edit database settings directly using NEMA OID (see Section 4.5.5.6, page 84).

Modem/GPS lets you configure modem^[2] connectivity settings (see Section 4.5.5.7, page 84).

Board ID lets you set the sign's ID number (see Section 4.5.5.8, page 86).

Manage Logs lets you maintain a history of displayed messages (see Section 4.5.5.9, page 86).

Move the scrollbar up or down to see more buttons.

¹Presets should not be changed without consulting the factory. The message sign's battery life and performance can be significantly and adversely affected by changing these values.

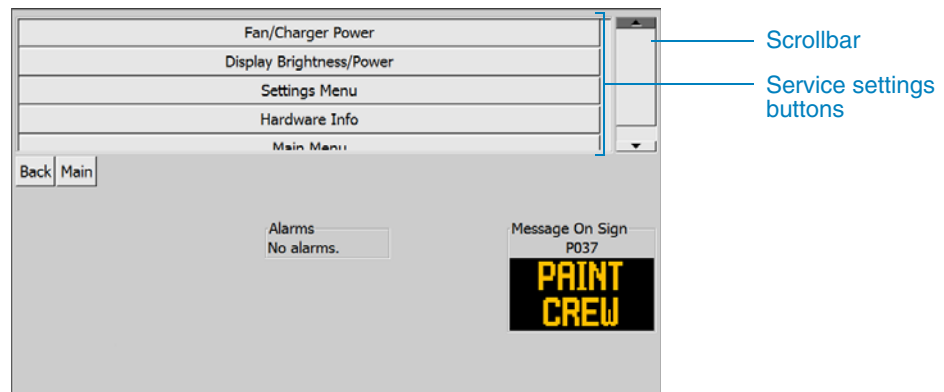
²Optional equipment; may not be included with your message sign.

4.5.5.1 Service Menu button

After pressing or clicking the **Service Menu** button on the Advanced Settings screen, the Service Menu screen is displayed (Figure 4-70).

The functions available through this screen relate to servicing or configuring the message sign. For maintenance information, see the message sign owner’s manual.

Figure 4-70. Service Menu screen



Service settings buttons

Fan/Charger Power lets you control power to cooling fans and solar charger¹ (see "Fan/Charger Power button," page 69).

Display Brightness/Power lets you control power to the sign display (see "Display Brightness/Power button," page 70).

Settings Menu lets you configure power and temperature limits (see "Settings Menu button," page 71).

Hardware Info lets you view information about the message sign hardware (see "Hardware Info button," page 79).

Main Menu returns you to the Menu screen (see Section 4.5, page 35).

Move the scrollbar up or down to see more buttons.

¹Optional equipment on some models; may not be included with your message sign.

Fan/Charger Power button

After pressing or clicking the **Fan/Charger Power** button on the Service Menu screen, the Fan & Charger Power screen is displayed (Figure 4-71). This screen is used when servicing the message sign.

Figure 4-71. Fan & Charger Power screen



Condition	Setting
Fan 1	To test the circuit for fan #1 ^[1] , change value from 0 to + and observe whether the fan is operating. If it is not, the fan filter may need cleaning or the fan might need to be replaced. The circuit returns to its normal on/off state after leaving this screen.
Fan 2	Same as above for fan #2 ^[1] .
Chrg	To test the circuit for the solar charging system ^[1] , change value from 0 to + and observe whether the line voltage (VI) drops toward the battery voltage and line current (II) rises. If not, the charging circuit may not be functioning correctly, the batteries may need charging, or both. The circuit returns to its normal on/off state after leaving this screen.
Light	To test the circuit for the control box light ^[2] , change value from 0 to + and observe whether the light goes on. If it does not go on, then the light bulb or the switch may need to be replaced. The circuit returns to its normal on/off state after leaving this screen.
Line/Charger	Displays the solar panel output voltage (VI) and current (II), for reference when testing the solar charging circuit.

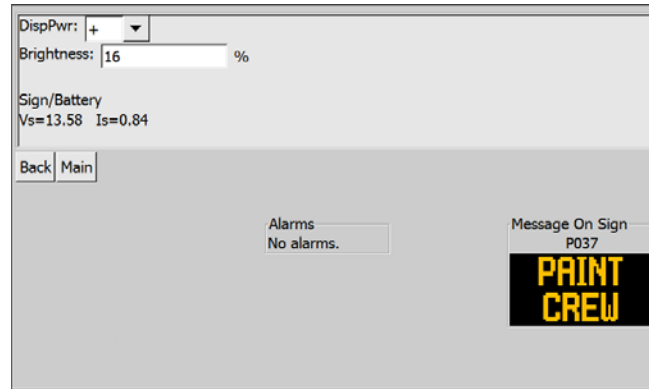
¹Optional equipment on some models; may not be included with your message sign.

²Some models only; may not apply to your message sign.

Display Brightness/Power button

After pressing or clicking the **Display Brightness/Power** button on the Service Menu screen, the Display Brightness & Power screen is displayed (Figure 4-72). This screen is used when servicing the message sign.

Figure 4-72. Display Brightness & Power screen

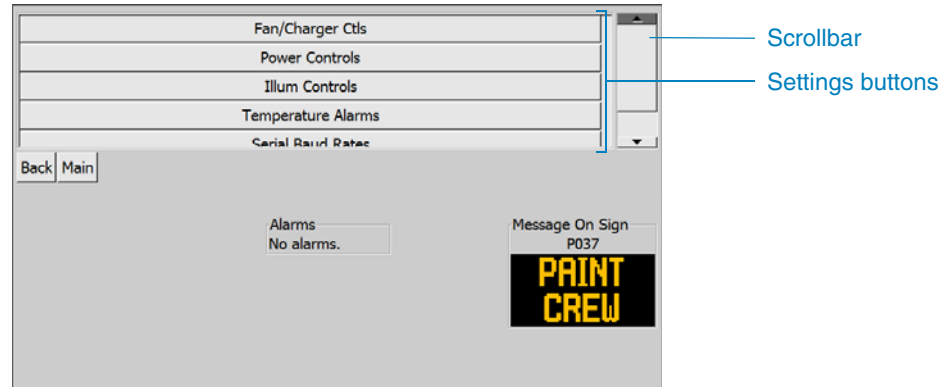


Condition	Setting
DispPwr	To test the circuit for the sign display, change value from 0 to + and observe whether the display is operating. For full LED testing, activate the LED test message (message #P071) before running this test. The circuit returns to its normal on/off state after leaving this screen.
Brightness	To test whether the display modules operate properly at different brightness settings, and ensure that all modules change brightness at the same time and with equal brightness, adjust the brightness value and observe the display. The brightness returns to its normal state after leaving this screen.
Sign/Battery	Displays the sign's battery voltage (Vs) and current (Is), for reference during the brightness test. The current indicates load from the display modules only, while the voltage is indicative of the full load on the batteries. If the voltage starts to drop rapidly while the LEDs are very bright the batteries have no capacity, either because they are weak and need charging or old and need replacing.

Settings Menu button

After pressing or clicking the **Settings Menu** button on the Service Menu screen, the Settings Menu screen is displayed (Figure 4-73).

Figure 4-73. Settings Menu screen



Settings buttons

Fan/Charger Ctls lets you set temperature and power limits for cooling fans and solar charger^{[1][2]} (see “Fan/Charger Ctls button,” page 72).

Power Controls lets you set power limits for solar charger^[1] and low-voltage alarms^[2] (see “Power Controls button,” page 73).

Illum Controls lets you set brightness for the sign display (LEDs)^[2] (see “Illum Controls button,” page 74).

Temperature Alarms lets you set limits for temperature alarms (see “Temperature Alarms button,” page 76).

Serial Baud Rates lets you set baud rates for remote communications^[1] (see “Serial Baud Rates button,” page 77).

HDLC Mode/Address lets you set the HDLC remote communications^[1] mode and drop address (see “HDLC Mode/Address button,” page 78).

Move the scrollbar up or down to see more buttons.

¹Optional equipment on some models; may not be included with your message sign.

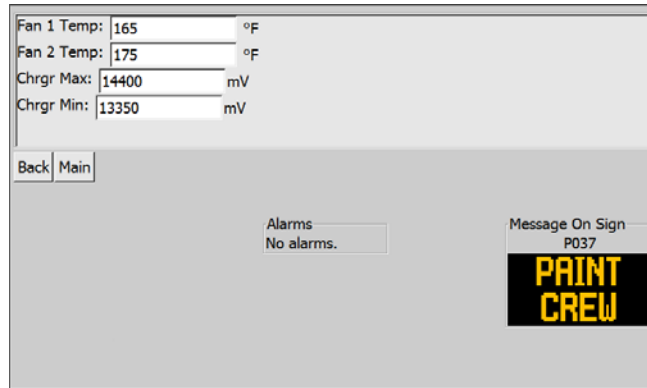
²Presets should not be changed without consulting the factory. The message sign's battery life and performance can be significantly and adversely affected by changing these values.

Fan/Charger Ctls button

After pressing or clicking the **Fan/Charger Ctls** button on the Settings Menu screen, the Fan & Charger Controls screen is displayed (Figure 4-74).

The presets on the Fan & Charger Controls screen should not be changed without consulting the factory. The message sign’s battery life and performance can be significantly and adversely affected by changing these values.

Figure 4-74. Fan & Charger Controls screen



Condition	Setting
Fan Temp	Set the temperature at which the sign’s display cabinet cooling fans ^[1] turn on.
Chrgr Max	Set the voltage at which the sign’s solar charging circuit ^[1] disengages.
Chrgr Min	Set the voltage at which the sign’s solar charging circuit ^[1] engages.

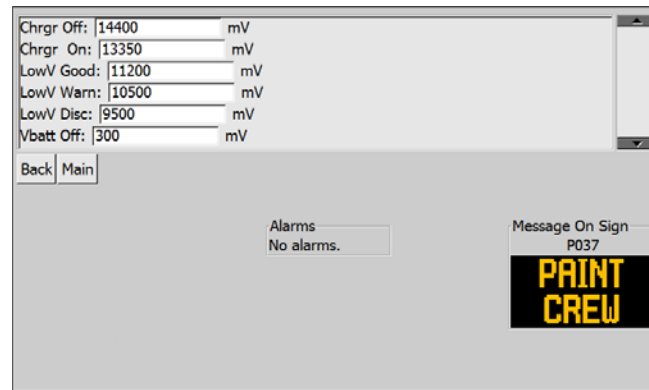
¹Optional equipment on some models; may not be included with your message sign.

Power Controls button

After pressing or clicking the **Power Controls** button on the Settings Menu screen, the Power Controls screen is displayed (Figure 4-75).

The presets on the Power Controls screen should not be changed without consulting the factory. The message sign's battery life and performance can be significantly and adversely affected by changing these values.

Figure 4-75. Power Controls screen



Condition	Setting
Chgr Off	Set the voltage at which the sign's solar charging circuit ^[1] disengages.
Chgr On	Set the voltage at which the sign's solar charging circuit ^[1] engages.
LowV Good	Set the voltage at which the system indicates the batteries are charged.
LowV Warn	Set the voltage at which the system presents a low-voltage alarm.
LowV Disc	Set the voltage at which the low-voltage-disconnect system shuts off power.
Vbatt Off	The battery voltage offset, determined and preset at the factory. Do not change this value.

¹Optional equipment on some models; may not be included with your message sign.

Illum Controls button

After pressing or clicking the **Illum Controls** button on the Settings Menu screen:

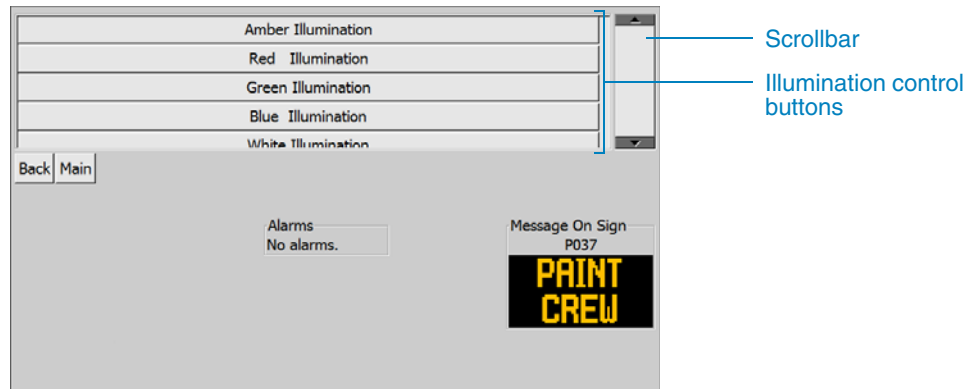
- For a standard (amber) message sign, the Illumination Settings screen is displayed (Figure 4-76).
- For a color message sign, the Color Illumination Controls screen is displayed (Figure 4-77).

The presets in the Illumination Settings screens should not be changed without consulting the factory. The message sign’s battery life and performance can be significantly and adversely affected by changing these values.

Figure 4-76. Illumination Controls screen



Condition	Setting
Night Day HiLED	The system uses three setpoints to construct a matrix of 16 levels with hysteresis control. The higher the LED setting, the greater the drain on the batteries. Increasing the settings beyond the factory defaults is not recommended, and may reduce battery life below 30 days.
Solar HiLED	Shows the default percentages for the illumination setpoints.

Figure 4-77. Color Illumination Controls screen**Illumination control buttons**

Choose the color for which you want to adjust the illumination settings, and press or click the appropriate button. The Illuminations Settings screen for the selected color appears (Figure 4-76).

Move the scrollbar up or down to see more buttons.

Temperature Alarms button

After pressing or clicking the **Temperature Alarms** button on the Settings Menu screen, the Temperature Alarms screen is displayed (Figure 4-78).

Figure 4-78. Temperature Alarms screen



Condition	Setting
-----------	---------

TSign max	Set the sign temperature at which the system indicates a high-temperature alarm.
-----------	--

TCtrl max	Set the control box temperature ^[1] at which the system indicates a high-temperature alarm.
-----------	--

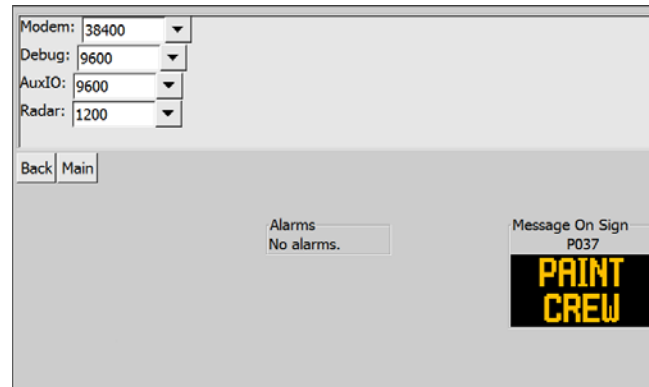
¹Some models only; may not apply to your message sign.

Serial Baud Rates button

After pressing or clicking the **Serial Baud Rates** button on the Settings Menu screen, the Baud Rates screen is displayed (Figure 4-79).

These settings should not be changed. If necessary, consult the Wanco service department for additional information.

Figure 4-79. Baud Rates screen



Condition	Application	Setting
Modem	Modem port	For connecting a modem ^[1] to the message sign controller, for a remote connection via NTCIP software. The default is 38400 baud.
Debug	GPS/serial modem bundle	If the modem does not have integrated GPS, the GPS ^[1] dongle plugs into its own port. The default is 9600 baud.
AuxIO	Auxiliary equipment	Varies based on equipment requirements. The default is 9600 baud.
Radar	Radar port	For connecting speed-detection radar ^[1] to the message sign controller. The default is 1200 baud.

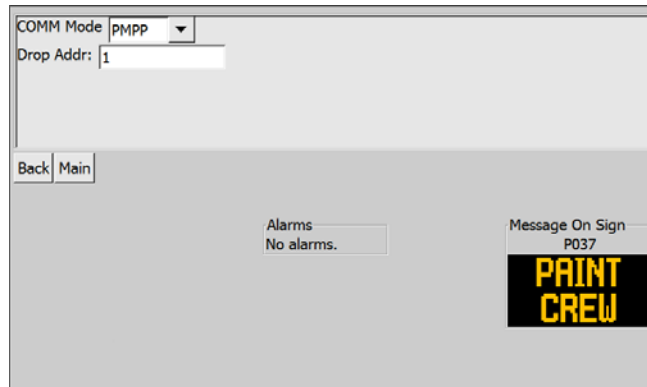
¹ Optional equipment; may not be included with your message sign.

HDLC Mode/Address button

After pressing or clicking the **HDLC Mode/Address** button on the Settings Menu screen, the HDLC Mode & Address screen is displayed (Figure 4-80).

These settings should not be changed. If necessary, consult the Wanco service department for additional information.

Figure 4-80. HDLC Mode & Address screen

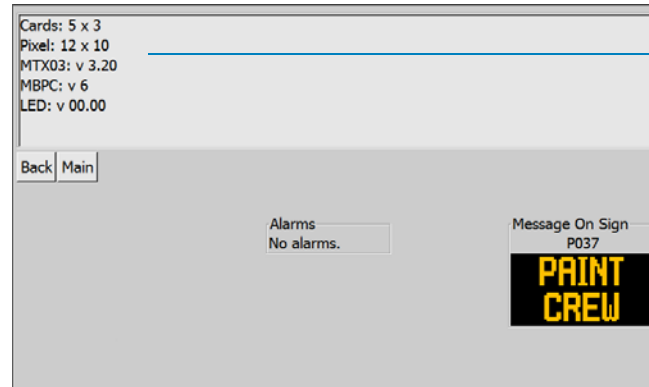


Condition	Setting
COMM Mode	The system uses these settings for remote communications. The settings must match the NTCIP program you are using. The default settings are PMPP and 1.
Drop Addr	

Hardware Info button

After pressing or clicking the **Hardware Info** button on the Service Menu screen, the Hardware Information screen is displayed (Figure 4-81). This screen is used when servicing the message sign.

Figure 4-81. Hardware Information screen



Hardware information

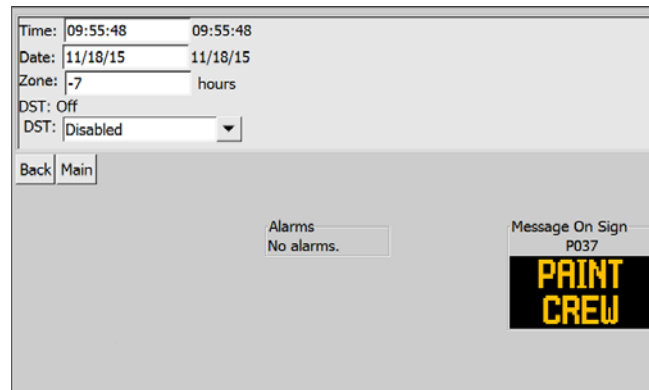
The information displayed on your screen may differ from the data shown here.

Code	Description
Cards	Number of display modules, or cards, on the sign (width by height)
Pixel	Number of pixels per display module (width by height)
MTX03	Message sign display module version
MBPC	Display module version
LED	LED version

4.5.5.2 Set Time & Date button

After pressing or clicking the **Set Time & Date** button on the Advanced Settings screen, the Time & Date Settings screen is displayed (Figure 4-82).

Figure 4-82. Time & Date Settings screen



Condition	Setting
Time	Set the time using 24-hour format, HH:MM:SS (hours, minutes, seconds)
Date	Set the date in US format, MM/DD/YY (month, date, year)
Zone	Set the time zone from Coordinated Universal Time (UTC); for example, in the USA: the Eastern time zone is UTC-5, or -5 hrs the Central time zone is UTC-6, or -6 hrs the Mountain time zone is UTC-7, or -7 hrs the Pacific time zone is UTC-8, or -8 hrs
DST	Enable or disable daylight saving time. When you enable DST, the time will advance by one hour and automatically return to standard time on the appropriate day of the year (USA only). When you disable DST, the time will decrease by one hour, immediately returning to standard time.

IMPORTANT!

The time zone is used by the message sign when you configure scheduled messages (see Section 4.5.3.4, page 52). Before creating a day plan or schedule, ensure the time zone is correct.

You must account for daylight saving time, either by enabling or disabling DST (see “DST” above), or by manually changing the time zone as follows.

During daylight saving time:

- the Eastern time zone is UTC-4, or -4 hrs
- the Central time zone is UTC-5, or -5 hrs
- the Mountain time zone is UTC-6, or -6 hrs
- the Pacific time zone is UTC-7, or -7 hrs

4.5.5.3

Set Page Times button

After pressing or clicking the **Set Page Times** button on the Advanced Settings screen, the Page and Blink Times screen is displayed (Figure 4-83).

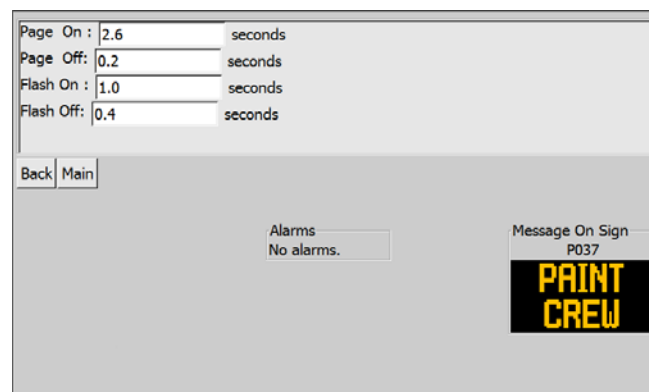
A message can appear all at once or on multiple “pages,” alternating between two pages (for example, 1,2,1,2...), or sequencing between more than two pages (for example, 1,2,3,1,2,3...). The settings on the Page and Blink Times screen allow you to configure the time a page is displayed, and the time between pages during which the sign is blank.

For single-page messages that were configured with Blink Gap turned on, the page times on this screen control the page display and blink gap times. (For information about the Blink Gap, see Section 4.4.3.5, page 30.)

For messages that are configured with flashing characters (such as vehicle-speed messages), this screen lets you set both the on and off duration.

The presets in the Page and Blink Times screens should not be changed without consulting the factory. The message sign’s battery life and performance can be significantly and adversely affected by changing these values.

Figure 4-83. Page and Blink Times screen



- For messages with multiple pages, and for single-page messages with Blink Gap turned on:

Condition	Setting
Page On	Set the time (in seconds) that the message is displayed.
Page Off	Set the time (in seconds) of the interval between pages of a multi-page message or the blink gap for single-page messages.

- For messages with flashing characters:

Condition	Setting
Flash On	Set the time (in seconds) that flashing characters are displayed.
Flash Off	Set the time (in seconds) that flashing characters are not displayed.

4.5.5.4 Change Password button

To change passwords, you must be logged in as an administrator. For login information, see Section 4.1.5, page 17.

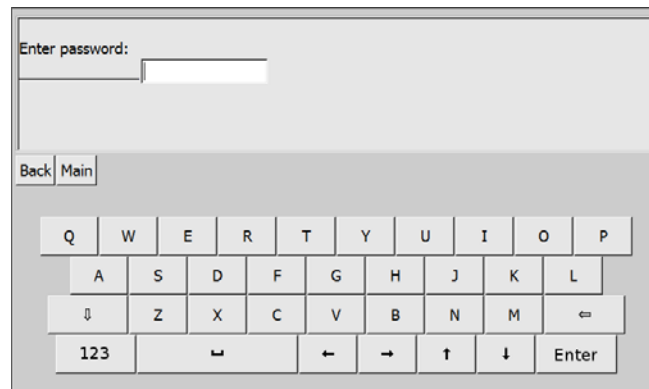
IMPORTANT!

- Do not write passwords on or near the equipment. THIS IS A LEADING CAUSE OF VARIABLE MESSAGE SIGN ABUSE.
- Avoid using common phrases or obvious words for passwords. Do not use a password someone else can easily guess.
- If you lose your passwords, they can be reset by the factory. Contact the Wanco service department for assistance (see Section 1.4, “Where to obtain service,” page 2).

After pressing or clicking the **Change Password** button on the Advanced Settings screen, the Change Password screen is displayed (Figure 4-84).

Follow the instructions below for entering the password you want to change and the new password.

Figure 4-84. Change Password screen



Enter password

Enter your current guest or administrator’s password (the password you want to change), then press **Enter**. If the password is valid, the New Password screen is displayed (Figure 4-85); otherwise, the Advanced Settings screen is displayed (Figure 4-69, page 67) and you must begin again.

Figure 4-85. New Password screen
New password

Enter the new password, then press **Enter**. The Confirm New Password screen is displayed (Figure 4-86).

Figure 4-86. Confirm New Password screen
Confirm new password

The Confirm New Password screen ensures that you enter the new password correctly, *before* the password is changed.

Enter the new password again, then press **Enter**. If the password you entered here matches the password you entered in the previous screen, the Password Changed screen is displayed (Figure 4-87); otherwise, the Advanced Settings screen is displayed (Figure 4-69, page 67) and you must begin again.

Figure 4-87. Password Changed screen
Password changed

The Password Changed screen confirms that the password has been changed.

4.5.5.5**NTCIP Community**

After pressing the **NTCIP Community** button on the Advanced Settings screen, the NTCIP Community Settings screen is displayed.

This feature is used only by Wanco service personnel and advanced users.

4.5.5.6 NTCIP Raw I/O button

After pressing or clicking the **NTCIP Raw I/O** button on the Advanced Settings screen, the NEMA OID screen is displayed.

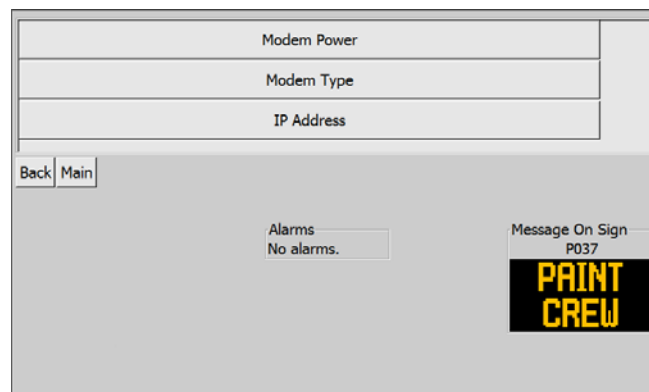
This feature is used only by Wanco service personnel and advanced users.

4.5.5.7 Modem/GPS button

After pressing or clicking the **Modem/GPS** button on the Advanced Settings screen, the Modem/GPS Settings screen is displayed (Figure 4-88).

The modem and GPS modem are optional auxiliary equipment that may not be included with your message sign.

Figure 4-88. Modem/GPS Settings screen



Modem/GPS settings buttons

Modem Power lets you switch power to the optional modem on or off. (see “Modem Power button,” below).

Modem Type lets you configure the system for your specific modems. (see “Modem Type button,” page 85).

IP Address lets you configure the message sign’s network settings (see “IP Address button,” page 86).

Modem Power button

After pressing or clicking the **Modem Power** button on the Modem/GPS Settings screen, the Modem Power Settings screen is displayed (Figure 4-89).

To power the modem on or off, choose the appropriate setting from the drop-down menu.

IMPORTANT!

The modem power setting only applies to certain hardware configurations. If you do not know whether your configuration uses this setting, contact the Wanco service department before changing this setting (see Section 1.4, “Where to obtain service,” page 2).

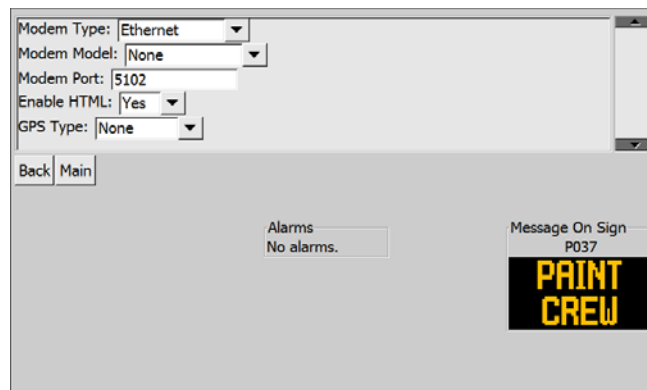
Figure 4-89. Modem Power Settings screen



Modem Type button

After pressing or clicking the **Modem Type** button on the Modem/GPS Settings screen, the Modem Type screen is displayed (Figure 4-90).

Figure 4-90. Modem Type screen



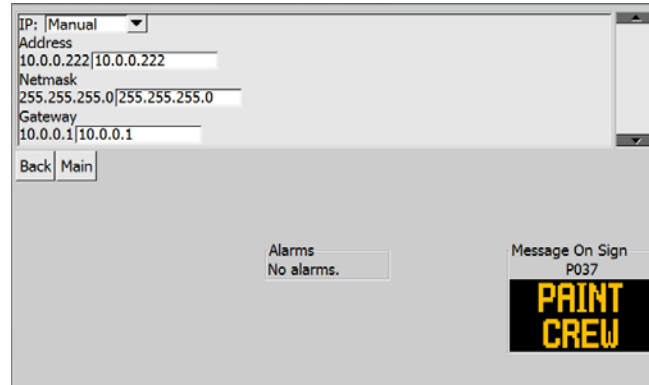
Condition	Setting
Modem Type	Set the type of connection between the modem and the message sign computer: Standard For a modem attached to the modem serial port PPP For a modem attached to the serial port running the PPP protocol Ethernet For a modem or other device attached to the RJ45 connector or via USB
Modem Model	Set the model of modem, Sierra Wireless™ or BlueTree Wireless.
Modem Port	Set the port number to use for NTCIP access.
Enable HTML	If the modem type is set to PPP or Ethernet, you can enable HTML to allow access to the modem via a computer’s Web browser.
GPS Type	Set the type of connection between the GPS modem and the message sign computer: Standard For GPS through the installed cellular modem Serial For GPS through a standalone GPS dongle, attached to the AUX/Debug port

IP Address button

After pressing or clicking the **IP Address** button on the Modem/GPS Settings screen, the Network Configuration screen is displayed (Figure 4-91).

The data you enter on this screen are the message sign computer’s internal addresses, not the addresses used by the modem for remote communications.

Figure 4-91. Network Configuration screen



Condition	Setting
IP	Set the method of determining the message sign IP address, manual entry or automatic discovery.
Address	Enter the message sign IP address.
Netmask	Enter the message sign subnet mask address.
Gateway	Enter the message sign network gateway address.
Name Server	Enter the message sign name server. Changing the name server overrides the default name servers. This variable should only be changed when requested by your IT department.

4.5.5.8

Board ID button

After pressing or clicking the **Board ID** button on the Advanced Settings screen, the Board ID screen is displayed.

This feature is used only by Wanco service personnel and advanced users.

4.5.5.9

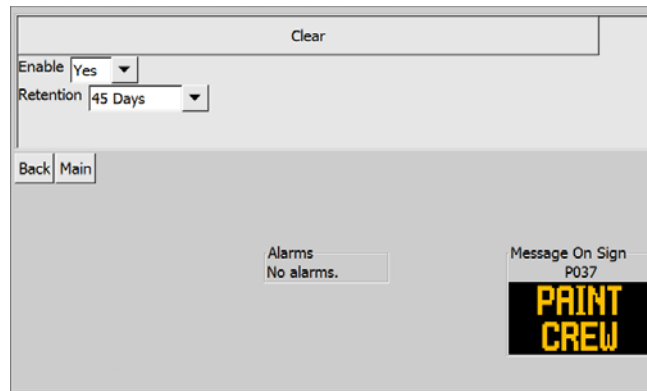
Manage Logs button

After pressing or clicking the **Manage Logs** button on the Advanced Settings screen, the Manage Logs screen is displayed (Figure 4-92).

While the message log is enabled, the system records a log of the messages it has displayed. This log can be retrieved using a computer’s Web browser if necessary. The Manage Logs screen allows you to enable or disable the log, clear the log, and set the number of days the message history is retained.

To access the log using a computer, either connect the computer to the Ethernet port on the message sign controller or using a cellular modem installed at the sign. Access the sign’s IP address using a Web browser and

Figure 4-92. Manage Logs screen

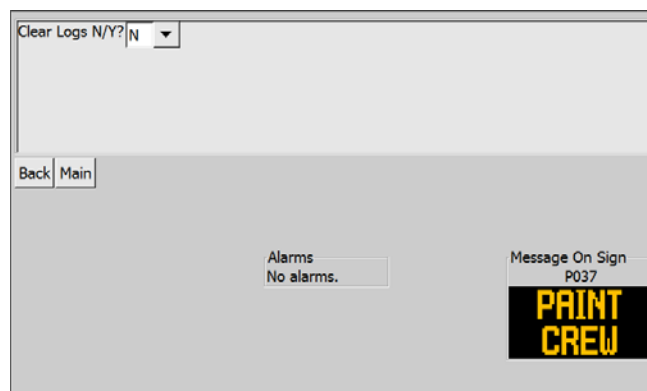


Condition/button	Description
Clear	Lets you manually clear the message log (see below).
Enable	Enable the message log by choosing Y (yes) or disable it by choosing N (no). When disabled, the message history is not retained and the Retention drop-down menu is not available.
Retention	Set the number of days the log will retain the message history before deleting the oldest messages from the log.

After pressing or clicking the **Clear** button, the Clear Logs confirmation screen is displayed (Figure 4-93).

When you use the drop-down menu to select “Y” (yes), the log, with all its message history, is immediately cleared.

Figure 4-93. Clear Logs screen

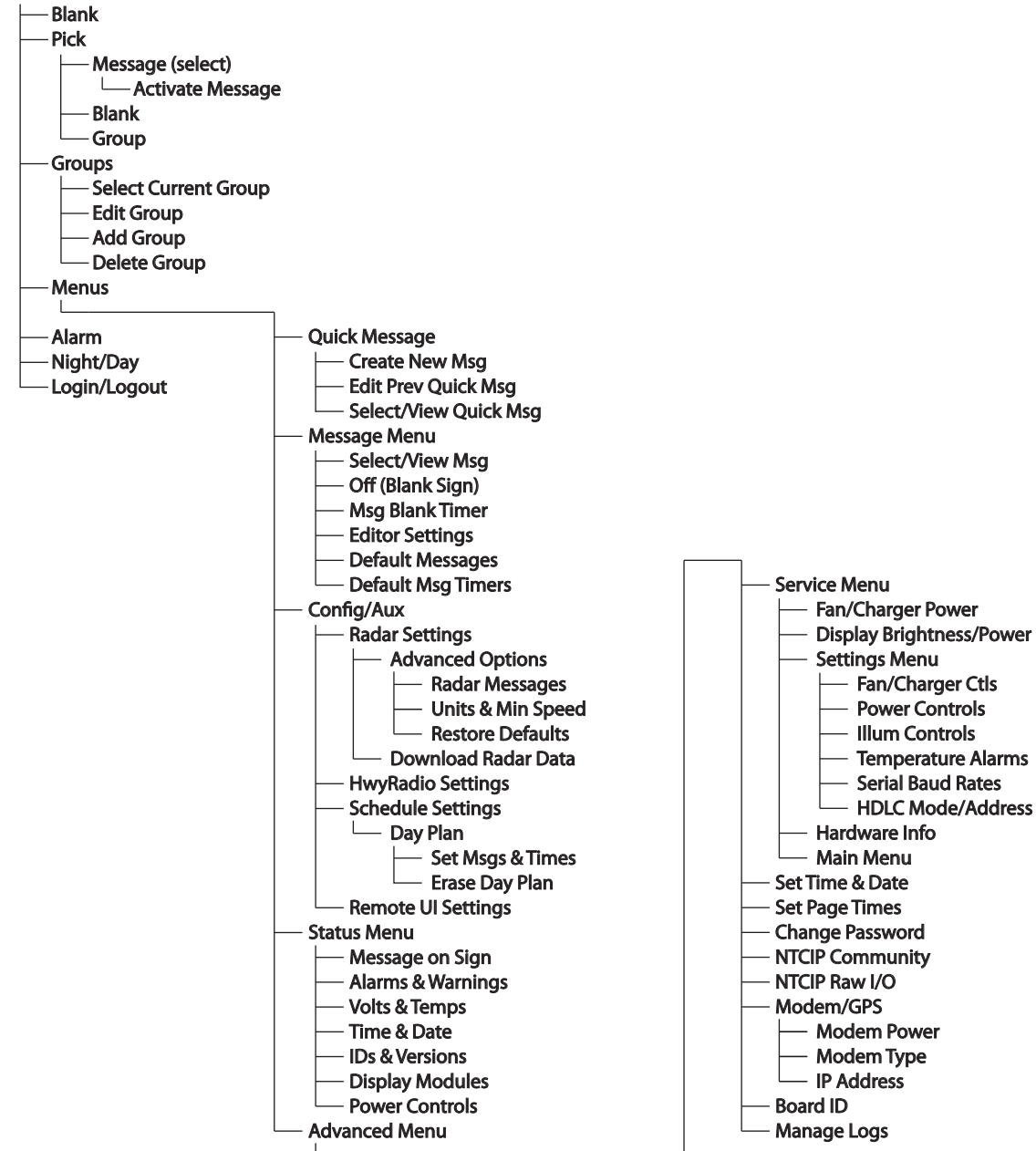


Appendix

A

Menus

Main



Appendix

B**Permanent Messages****B.1****Message list**

The following messages are standard on most Wanco message signs.





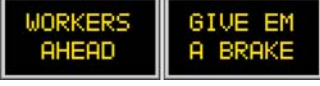


Msg. #	Message	Message Type
P001	Blank sign (no message)	Standard message
P002	Time & temperature	Standard message
P003	CLICK IT OR TICKET	Standard message
P004	CONSTR. ZONE FINES DOUBLED	Standard message
P005	WORKERS AHEAD GIVE EM A BRAKE	Standard message
P006	REPAIRS AHEAD USE CAUTION	Standard message
P007	WRECK AHEAD REDUCE SPEED	Standard message
P008	DEICING AHEAD STAY BACK	Standard message
P009	SNOW REMOVAL STAY BACK	Standard message
P010	PAINT CREW LANES WET DO NOT PASS	Standard message
P011	PAINT CREW < KEEP LEFT	Standard message
P012	PAINT CREW KEEP RIGHT >	Standard message
P013	<----- MERGE	Standard message
P014	MERGE ----->	Standard message
P015	< KEEP LEFT	Standard message
P016	KEEP RIGHT >	Standard message
P017	ALL LANES OPEN	FHWA message
P018	BLOWING SNOW	FHWA message
P019	BRIDGE CLOSED AHEAD	FHWA message
P020	CAUTION DUST STORM	FHWA message
P021	CAUTION FOG AHEAD	FHWA message
P022	CAUTION HIGH WINDS	FHWA message
P023	CAUTION ICY ROAD	FHWA message
P024	CAUTION ROAD FLOODED	FHWA message
P025	CAUTION SLIPPERY ROAD	FHWA message
P026	CHAINS REQUIRED AHEAD	FHWA message
P027	DANGER FALLING ROCKS	FHWA message
P028	DO NOT PASS	FHWA message
P029	EMERGENCY VEHICLES	FHWA message
P030	FLAGGER AHEAD	FHWA message
P031	FOLLOW DETOURS AHEAD	FHWA message
P032	FOLLOW PACE CAR	FHWA message
P033	HEAVY TRAFFIC AHEAD	FHWA message
P034	LANES CHANGE AHEAD	FHWA message

Msg. #	Message	Message Type
P035	LOAD SPILL	FHWA message
P036	WORKERS AHEAD	FHWA message
P037	PAINT CREW	FHWA message
P038	ROAD CLOSED AHEAD	FHWA message
P039	SLOW MOVING TRAFFIC	FHWA message
P040	STEEL PLATES	FHWA message
P041	TRAFFIC SIGNAL OUT	FHWA message
P042	WATCH FOR TRUCKS	FHWA message
P043	Four-corner caution (flashing)	Arrow message
P044	Diamonds caution (flashing)	Arrow message
P045	Bar caution (flashing)	Arrow message
P046	Double arrow (flashing)	Arrow message
P047	Left arrow (flashing)	Arrow message
P048	Right arrow (flashing)	Arrow message
P049	Left arrow (walking)	Arrow message
P050	Right arrow (walking)	Arrow message
P051	Left chevrons (walking)	Arrow message
P052	Right chevrons (walking)	Arrow message
P053	Left stem arrow (walking)	Arrow message
P054	Right stem arrow (walking)	Arrow message
P055	ADVISORY TUNE TO ##### AM	Highway radio message
P056	MINIMUM SPEED ## mph	Speed message
P057	SPEED LIMIT ## mph	Radar message
P058	## mph YOUR SPEED	Radar message
P059	## mph YOUR SPEED (flashing)	Radar message
P060	MINIMUM SPEED ## kph	Speed message
P061	SPEED LIMIT ## kph	Radar message
P062	## kph YOUR SPEED	Radar message
P063	## kph YOUR SPEED (flashing)	Radar message
P064	SLOW DOWN (flashing)	Radar message
P065	SLOW	Speed message
P066	STOP	Speed message
P067	LOW POWER	NTCIP message
P068	POWER RESET	NTCIP message
P069	COMM LOST	NTCIP message
P070	SYSTEM RESET	NTCIP message
P071	LED test page	Test message
P072	Alphabet test page	Test message
P073	Time & voltages	Test message
P074	Time & temperatures	Test message
P075	Detour <-----	MUTCD sign, M4-10L
P076	Detour ----->	MUTCD sign, M4-10R
P077	<----- Lanes Shift Left	MUTCD sign, W1-4bL
P078	Lanes Shift Right ----->	MUTCD sign, W1-4bR
P079	Hill (Truck Downhill)	MUTCD sign, W7-1



Msg. #	Message	Message Type
P080	Curvy Road (Reverse Curve)	MUTCD sign, W1-5
P081	Median Begins 2-Way Traffic (Begin Divided Hwy)	MUTCD sign, W6-1
P082	Median Ends 2-Way Traffic (End Divided Hwy)	MUTCD sign, W6-2
P083	Keep Right Median Begins	MUTCD sign, R4-7
P084	Merge Ahead (Incoming from Right)	MUTCD sign, W4-1R
P085	Flagger Ahead	MUTCD sign, W20-7a
P086	Workers Ahead	MUTCD sign, W21-1a
P087	Slippery Road	MUTCD sign, W8-5
P088	Double Arrow (non-flashing)	MUTCD sign, W1-7
P089	Left Arrow (non-flashing)	MUTCD sign, W1-6L
P090	Right Arrow (non-flashing)	MUTCD sign, W1-6R
P091	OPEN	Special
P092	CLOSED	Special
P093	Manufacturer logo	Special
P094	Factory test sequence	Test message

B.2 Message samples
















Sign sizes and pixels vary; therefore, the messages shown on your sign may look different from the samples provided here.






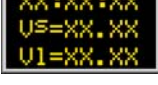
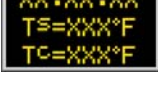








Message	Sample
P001 Blank sign (no message)	
P002 Time & temperature	
P003 CLICK IT OR TICKET	
P004 CONSTR. ZONE FINES DOUBLED	
P005 WORKERS AHEAD GIVE EM A BRAKE	
P006 REPAIRS AHEAD USE CAUTION	
P007 WRECK AHEAD REDUCE SPEED	












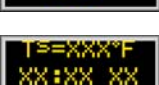






Message	Sample
P008 DEICING AHEAD STAY BACK	
P009 SNOW REMOVAL STAY BACK	
P010 PAINT CREW LANES WET DO NOT PASS	
P011 < PAINT CREW < KEEP LEFT	
P012 PAINT CREW > KEEP RIGHT >	
P013 MERGE <-----	
P014 MERGE ----->	
P015 < KEEP LEFT	
P016 KEEP RIGHT >	
P017 ALL LANES OPEN	
P018 BLOWING SNOW	
P019 BRIDGE CLOSED AHEAD	
P020 CAUTION DUST STORM	
P021 CAUTION FOG AHEAD	
P022 CAUTION HIGH WINDS	

Message	Sample
P023 CAUTION ICY ROAD	
P024 CAUTION ROAD FLOODED	
P025 CAUTION SLIPPERY ROAD	
P026 CHAINS REQUIRED AHEAD	
P027 DANGER FALLING ROCKS	
P028 DO NOT PASS	
P029 EMERGENCY VEHICLES	
P030 FLAGGER AHEAD	
P031 FOLLOW DETOURS AHEAD	
P032 FOLLOW PACE CAR	
P033 HEAVY TRAFFIC AHEAD	
P034 LANES CHANGE AHEAD	
P035 LOAD SPILL	
P036 WORKERS AHEAD	
P037 PAINT CREW	

Message	Sample
P038 ROAD CLOSED AHEAD	
P039 SLOW MOVING TRAFFIC	
P040 STEEL PLATES	
P041 TRAFFIC SIGNAL OUT	
P042 WATCH FOR TRUCKS	
P043 Four-corner caution (flashing)	
P044 Alternating diamonds caution (flashing)	
P045 Bar caution (flashing)	
P046 Double arrow (flashing)	
P047 Left arrow (flashing)	
P048 Right arrow (flashing)	
P049 Left arrow (walking)	
P050 Right arrow (walking)	
P051 Left chevrons (walking)	
P052 Right chevrons (walking)	

Message	Sample
P053 Left stem arrow (walking)	
P054 Right stem arrow (walking)	
P055 ADVISORY TUNE TO #### AM	
P056 MINIMUM SPEED ## mph	
P057 SPEED LIMIT ##	
P058 ## MPH YOUR SPEED	
P059 ## MPH YOUR SPEED (flashing)	
P060 MINIMUM SPEED ## kph	
P061 SPEED LIMIT ### KPH	
P062 ### KPH YOUR SPEED	
P063 ### KPH YOUR SPEED (flashing)	
P064 SLOW DOWN (flashing)	
P065 SLOW	
P066 STOP	
P067 LOW POWER	

Message	Sample
P068 POWER RESET	
P069 COMM LOST	
P070 SYSTEM RESET	
P071 LED test page	
P072 Alphabet test page	
P073 Time & voltages	
P074 Time & temperatures	
P075 Detour left	
P076 Detour right	
P077 <----- LANES SHIFT LEFT	
P078 LANES SHIFT RIGHT ----->	
P079 Hill (downhill truck)	
P080 Curvy road (reverse curve)	
P081 Median begins, 2-way traffic (begin divided hwy)	
P082 Median ends, 2-way traffic (end divided hwy)	

Message	Sample
P083 Keep right (median begins)	
P084 Merge ahead (incoming from right)	
P085 Flagger ahead	
P086 Workers ahead	
P087 Slippery road	
P088 Double arrow	
P089 Left arrow	
P090 Right arrow	
P091 OPEN	
P092 CLOSED	
P093 Manufacturer logo	
P094 Factory test sequence	      

Appendix

C

Field Codes

Field	Description
Date m/d/y	Date — US format, 8 characters
Date d-m-y	Date — European format, 8 characters
Date y.m.d	Date — Japanese format, 8 characters
Date dd	Day of the month — 2 characters
Date mm	Month — 2 characters
Date yy	Year — 2 characters
Date yyyy	Year — 4 characters
Date day	Day of the week — English, 3 characters
Frequency	AM radio frequency — 4 characters (e.g., for traffic information)
Speed mph	Radar speed — mph, 2 digits
Speed mph	Radar speed — mph, 3 digits
Speed kph	Radar speed — km/h, 3 digits
Speed kph	Radar speed — km/h, 2 digits
SpeedLim m	Speed limit — mph, 2 digits
SpeedLim k	Speed limit — km/h, 3 digits
SpeedMin m	Minimum speed — mph, 2 digits
SpeedMin k	Minimum speed — km/h, 2 digits
SpeedXX m	Radar speed — mph, 2 digits, XX for over-speed
SpeedXXX m	Radar speed — mph, 3 digits, XXX for over-speed
SpeedXX k	Radar speed — km/h, 2 digits, XX for over-speed
SpeedXXX k	Radar speed — km/h, 3 digits, XXX for over-speed
Temp ambi°F	Temperature — ambient, °F, 3 digits
Temp ambi°C	Temperature — ambient, °C, 3 digits
Temp ambi°F	Temperature — ambient, °F, 2 digits
Temp ambi°C	Temperature — ambient, °C, 2 digits
Temp ctrl°F	Temperature — message sign control box, °F, 3 digits
Temp ctrl°C	Temperature — message sign control box, °C, 3 digits
Temp disp°F	Temperature — message sign display cabinet, °F, 3 digits
Temp disp°C	Temperature — message sign display cabinet, °C, 3 digits
Time 12:00	Time — hours & minutes, 12-hr. format, 5 characters
Time 12 AM	Time — hours & minutes, 12-hr. format with AM/PM, 8 characters

Field	Description
Time 12:ss	Time — hours, minutes & seconds, 12-hr. format, 8 characters
Time 24:00	Time — hours & minutes, 24-hr. format, 5 characters
Time 24:ss	Time — hours, minutes & seconds, 24-hr. format, 8 characters
Time :ss	Time — seconds only, 3 characters
Timer msg	Msg time remaining — days, hours & minutes, 8 characters
Volts line	Line voltage (solar charger) — 5 characters
Volts sign	Sign voltage (battery or main power) — 5 characters
Weight lb	Scale weight — pounds, 6 characters

Appendix

D

Message Fonts

Figure D-1. Sample fonts, Metro™ message sign, 60x30-pixel display



Font 1
5x9 pixels, fixed-width font with lower-case letters (default font)



Font 7
7x12 pixels, bold fixed-width font with 6x8-pixel capitals for lowercase letters



Font 2
5x9 pixels, fixed-width font with lower-case letters and increased horizontal spacing



Font 8
7x23 pixels, large fixed-width font, with 14x6-pixel capitals for lowercase letters



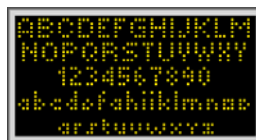
Font 3
6x9 pixels, bold proportional font with 4x9-pixel capitals for lowercase letters



Font 9
11x23 pixels, large bold fixed-width font, capitals only (no lower-case letters)



Font 4
6x11 pixels, bold proportional font with lowercase letters and accented characters



Font 10
4x5 pixels, mini proportional font with limited lower-case



Font 5
6x11 pixels, bold proportional font with lowercase letters, accented characters, and increased spacing



Font 11
7x10 pixels, large fixed-width font, capitals only (no lower-case letters)



Font 6
5x14 pixels, tall fixed-width font with 5x8-pixel capitals for lowercase letters



Font 12
9x14 pixels, large bold fixed-width font, capitals only (no lower-case letters)

Figure D-2. Sample fonts, Metro™ and truck-mount signs, 48x30-pixel display



Font 1
5x9 pixels, fixed-width font with lower-case letters (default font)



Font 7
7x12 pixels, bold fixed-width font with 6x8-pixel capitals for lowercase letters



Font 2
5x9 pixels, fixed-width font with lower-case letters and increased horizontal spacing



Font 8
7x23 pixels, large fixed-width font, with 14x6-pixel capitals for lowercase letters



Font 3
6x9 pixels, bold proportional font with 4x9-pixel capitals for lowercase letters



Font 9
11x23 pixels, large bold fixed-width font, capitals only (no lower-case letters)



Font 4
6x11 pixels, bold proportional font with lowercase letters and accented characters



Font 10
4x5 pixels, mini proportional font with limited lower-case



Font 5
6x11 pixels, bold proportional font with lowercase letters, accented characters, and increased spacing



Font 11
7x10 pixels, large fixed-width font, capitals only (no lower-case letters)



Font 6
5x14 pixels, tall fixed-width font with 5x8-pixel capitals for lowercase letters



Font 12
9x14 pixels, large bold fixed-width font, capitals only (no lower-case letters)

Figure D-3. Sample fonts, truck-mount message sign, 48x20-pixel display



Font 1

5x9 pixels, fixed-width font with lower-case letters (default font)



Font 2

5x9 pixels, fixed-width font with lower-case letters and increased horizontal spacing



Font 3

6x9 pixels, bold proportional font with 4x9-pixel capitals for lowercase letters



Font 4

6x11 pixels, bold proportional font with lowercase letters and accented characters



Font 5

6x11 pixels, bold proportional font with lowercase letters, accented characters, and increased spacing



Font 6

5x14 pixels, tall fixed-width font with 5x8-pixel capitals for lowercase letters



Font 7

7x12 pixels, bold fixed-width font with 6x8-pixel capitals for lowercase letters

Font 8

7x23 pixels, does not fit on sign

Font 9

11x23 pixels, does not fit on sign

Font 10

4x5 pixels, mini proportional font with limited lower-case



Font 11

7x10 pixels, large fixed-width font, capitals only (no lower-case letters)



Font 12

9x14 pixels, large bold fixed-width font, capitals only (no lower-case letters)



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