American Signal Company

NTCIP SERIES
PORTABLE CHANGEABLE MESSAGE SIGNS
GEN 4

331, 332, 333 NTCIP
4260, 4280, 42100 USA & UK

SOFTWARE OPERATIONS MANUAL
(Local GUI and Web Interface)

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1.0 REVISION INFORMATION

Rev.	Date	Author	Description	Page
A	7-12-2010	D. Goulart	CREATED FOR GEN 4 SYSTEM	ALL
B	8-1-2011	D. Goulart	ADDED SEQUENCED MESSAGES TO MANUAL	3,24-26
C	6-8-2012	D. Goulart	ADDED THERMAL SENSOR OPTION TO MANUAL	6,60-66
D	10-12-12	D. Goulart	ADDED RADAR PAGE TO WEB PAGE OPTION	4, 65
E	2-4-13	D. Goulart	ADDED GRAPHICS IMPORT DIRECTIONS	4, 40

2.0 NTCIP LOCAL GENERAL USER INTERFACE

2.1 The Main Screen *level 1,2,3*:

This is the screen from which most action will take place.

NOTE: Some buttons on this screen may not be accessible for level 1 and level 2 access users.

Sign Name – displays the current name given to the sign in the *Setup* screen (See chapter 3.1)

Logout Clock – this clock counts down the time until the system automatically logs out. The timer is reset every time a button is pressed or the mouse is moved. The default setting is 15 minutes.

Current Date and Time – this text box displays the current date and time from the system clock.

Message - What type of message is currently displayed. Options are: (Permanent, Changeable, Volatile, and Blank) along with the number of the message.

Duration – how long the current message is set to display.

Day Plan – the current day plan number the system is set to display.

WYSIWYG – (What You See Is What You Get) displays the current message on the display board as if you were looking directly at the sign. (If a pixel test has been run any defective pixels will be displayed in purple/ magenta.)

DESCRIPTIONS OF BUTTONS ON THE MAIN SCREEN:

Log In/Out – pressing this button will log the current user out of the system and return to the *User Login* screen pictured in Chapter 2.2 of this manual.

Status – pressing this button brings up the current operational status of the sign. The information displayed is as follows:

- Battery Current – measure of amps being drawn by the system.
- Battery Voltage – total voltage of battery bank. (Low Voltage Lockout is set for 11.2Vdc)
- Solar Cell Relay 1 – reflects the charging status of relay 1.
- Solar Cell Relay 2 – reflects the charging status of relay 2.
- Temperature – temperature of internal sign case.
- Avg Lux – reading from photocell measuring ambient light.
- GPS – latitude and longitude coordinates from telemetry board if module is installed.

NOTE: The Status button changes from 'Green' to 'Red' when the unit goes into low voltage lockout.

Admin – this button takes you to the **Set Time, Set up, Parameters, Reset, and Factory Defaults Buttons.** (See chapter 3.1)

Brightness – this button takes you to the screen used to control the brightness of the LED's on the display board. (See chapter 6.0)

Blank Sign – this button clears the display board of the current message.

Message – this button takes you to the *Message Control* screen. From this screen you can activate particular messages, create new messages, edit saved messages, and set defaults. (See chapter 8.0)

Scheduler – this button takes you to the *Scheduler* screen. From this screen you are able to schedule when certain messages appear throughout the day. (See chapter 9.0)

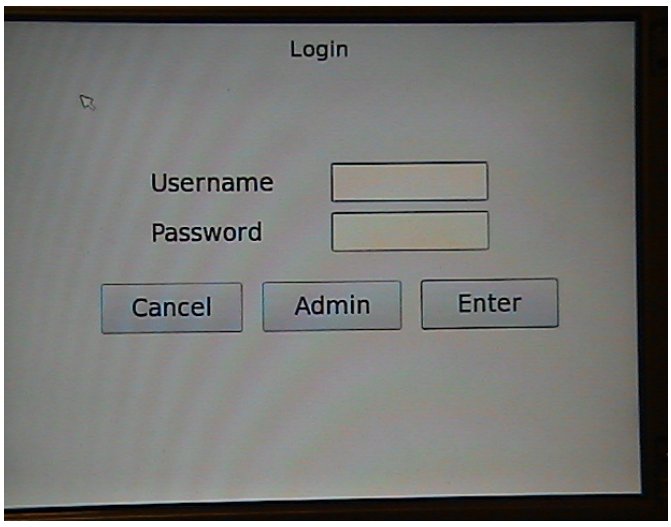
Pixels – this button brings up the current status of the LED's on the display board. This screen also provides the ability to clear the saved pixel data and run a 'Pixel' (LED) test to ensure proper operation of the display board. (See chapter 4.0)

Radar – this button opens the *Radar Configuration* screen which allows the user to set trigger speed and upper limit. This page also provides for radar testing. (See chapter 10.0)

Temperature – this button opens the Thermal Sensor Option Page. This option allows a thermal sensor to be set so up to two different temperatures allow different messages to over ride the current activated messages.

NOTE:
When the sign is idle (monitor assembly off but circuit breaker on) a single pixel in the top left-hand board will be lit.

2.2 The User Login screen



TO LOG IN:

- Use the trackball / touchpad on the keyboard to position the cursor in the 'Select User' text box and click the left mouse button.
- Enter the appropriate user name.
- Position the cursor in the 'Enter Password' text box and click the left mouse button.
- Enter the appropriate password based on your user name.
- Position the cursor over the 'Enter' button and click the left mouse button or press <Enter> on the keyboard.

2.3 Access Levels

Currently there are three access levels:

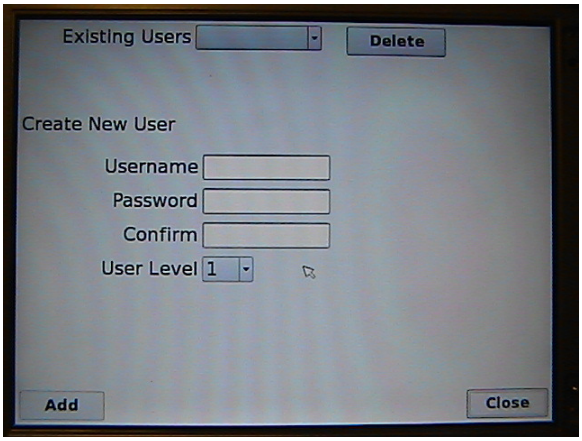
	User Name	Password (case sensitive)	Able to:
LEVEL 1 Access is a limited access level	User	Host	· View sign status · Run a pixel test · Blank the sign · Monitor, select and activate the messages · Use scheduler function · Configure the radar (if option is installed)
LEVEL 2 Access	Owner	Admin	Same as level 1, plus: · Control the sign setup · Set system date and time · Control sign brightness · Edit, create changeable and volatile messages
LEVEL 3 Access is a maximum access level	Bolts	Service	Same as level 2, plus: · Control parameters · · Add, delete and manage users

NOTE: It is strongly recommended to replace the default User Names and Passwords with new unique User Names and Passwords for each user.

Each chapter of this manual is marked with the user levels required to access the screens and functions described in the chapter.

2.4 Add and delete users *level 3*:

If this is the first time you are logging in, use the default User Names and Passwords provided by American Signal Company. The above User Names and Passwords can be removed from the system, after the primary (level 3) user creates unique User Names and Passwords for each user. The "master" User Name and Password is available from the factory if your User Name(s) and Password(s) become lost. All users can be deleted except one of any level 3 users.



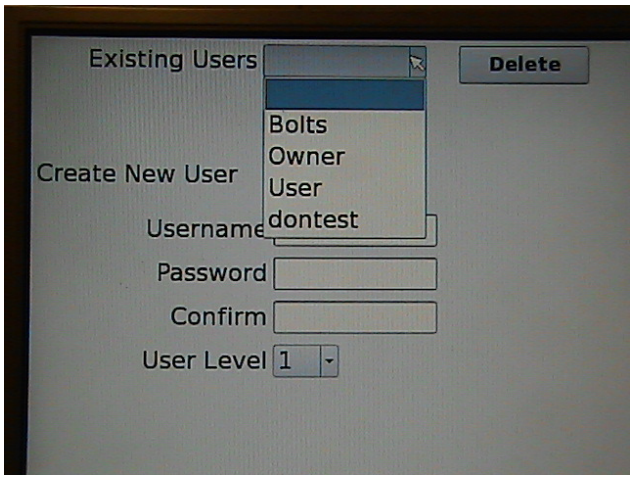
TO ADD OR DELETE USERS:
From *The User Login Screen*:

- Use the trackball/ touch pad on the keyboard to position the cursor in the 'Admin' text box and click the left mouse button.
- Enter the appropriate user name (level 3).
- Position the cursor in the 'Enter Password' text box and click the left mouse button.
- Enter the appropriate password based on your user name.
- Position the cursor over the ''User Admin'' button and click the left mouse.
- You should see the screen pictured below.

In this screen you can ADD a user:

- Use the trackball/ touch pad on the keyboard to position the cursor in the 'User Name' text box and click the left mouse button.
- Enter new user name.
- Position the cursor in the 'Password' text box and click the left mouse button.
- Enter the new password for this user name.
- Position the cursor in the 'Confirm' text box and click the left mouse button.
- Enter the same password to confirm.
- Position the cursor in the 'User Level' text box and click the left mouse button.
- Enter 1, 2 or 3 to assign the access level. (Chapter 2.2)

- Position the cursor over the ''Add'' button and click the left mouse button.
- When finished adding / deleting users position the cursor over the ''Close'' button and click the left mouse button to return back to the *Login Screen.*



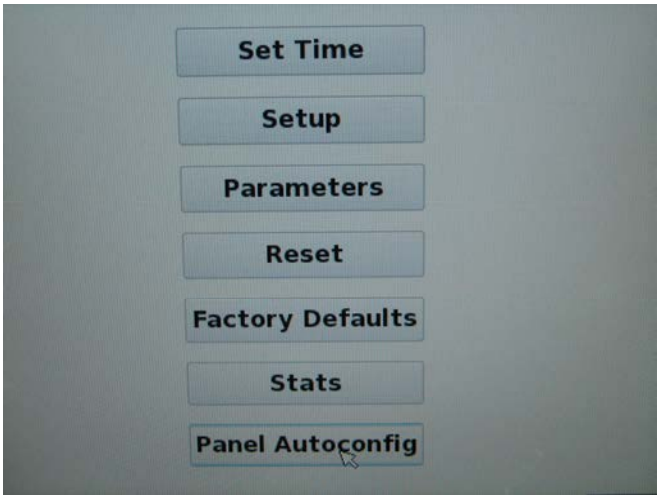
To DELETE a user:

- Use the trackball/ touch pad on the keyboard to position the cursor on the 'downward arrow' next to the 'Existing Users' text box and click the left mouse button.
- Select a user to delete.
- Position the cursor over the 'Delete' button and click the left mouse button.
- When finished adding / deleting users position the cursor over the ''Close'' button and click the left mouse button to return back to the *Login Screen.*

3.0 SIGN SETUP FUNCTIONALITY

3.1 Admin Screen [level 2, 3]:

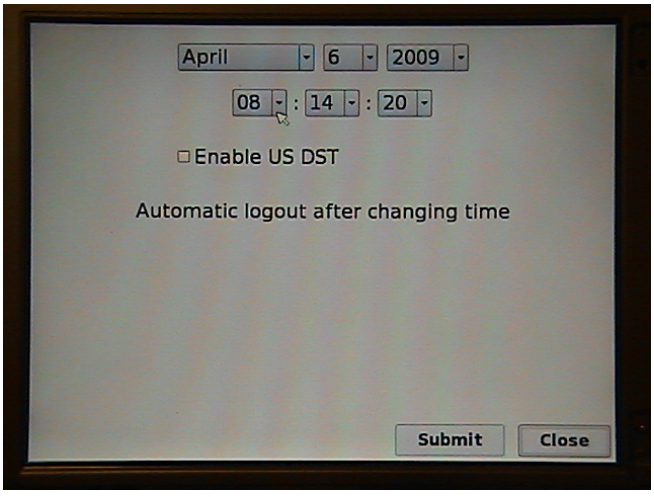
This screen contains information regarding the general setup of the message board. From the *Main* screen position the cursor over the 'Admin' button and click the left mouse button. You should see the screen pictured below.



The list of the buttons displayed are as follows:

1. **Set Time**
2. **Setup**
3. **Parameters**
4. **Reset**
5. **Factory Defaults**
6. **Stats**
7. **Panel Autoconfig**

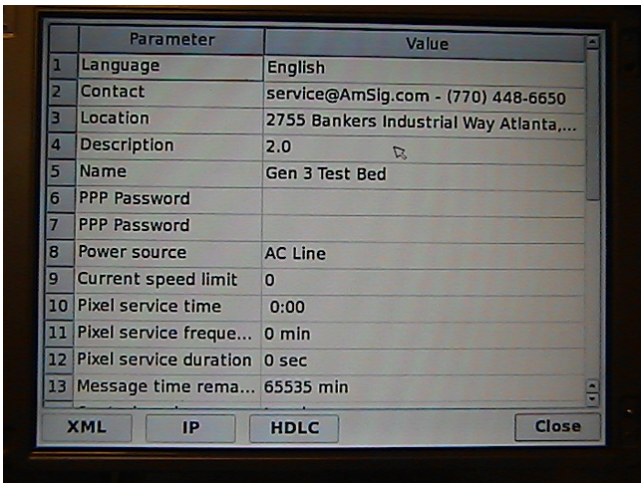
Set time Button: This Button allows the user to set the date and time for the unit. Move trackball over button and click the left mouse button. The below screen will appear on the LCD.



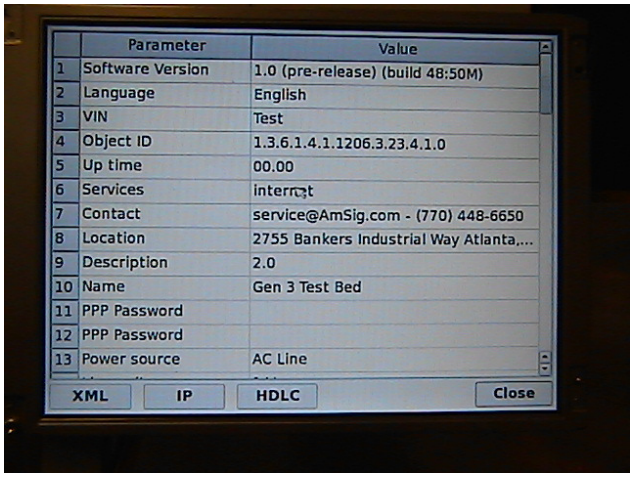
Note: (Once you have selected the desired date and time and you click the "Submit" Button you will be taken back to the Login screen.)

- Use the cursor and left mouse button to make the appropriate changes to the date and time.
- Either enable or disable the Daylight savings function by clicking on the button next to 'Enable US DST'.
- To save the changes and exit, position the cursor over the 'Set Time' button and press the left mouse button.
- To exit without saving click the 'Close' button.

Set up Button: Clicking on this button will take you to the Set up page shown below.



Parameters Button: Clicking this button opens the Parameters Menu shown below.



The *Parameters* screen shown next contains information regarding all of the parameters of the message board.
NOTE: Only certain Parameters are capable of being changed.

From the *Main* screen position the cursor over the 'Parameters' button and press the left mouse button. You should see the screen pictured next.

TO EDIT A CERTAIN PARAMETER:

- Move the cursor to the desired row and double-click the left mouse button to bring up the individual setting screen.
- Either enter a new value (if applicable), or move the cursor to the right-hand side of the drop down box where the downward pointing arrow is and click the left mouse button.
- Select the new setting with the cursor.
- When the new setting is selected (or entered), use the cursor to press the 'Submit' button below the drop down box.
- You should be taken back to *The Parameters Screen.*
- When you are done checking/editing parameters, position the cursor over the 'Close' button and press the left mouse button to be taken back to *The Main Screen*.

NON-EDITABLE FIELDS WITHIN THE PARAMETERS SCREEN:

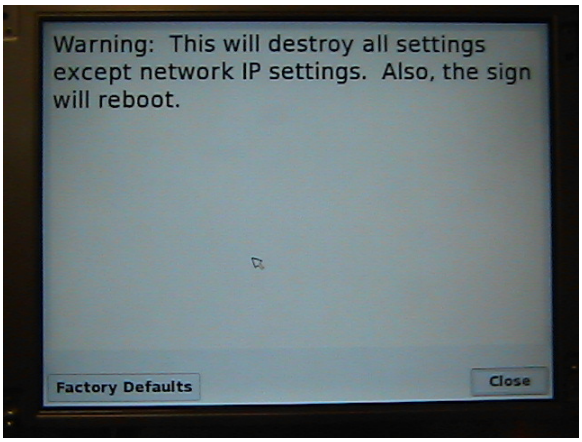
DmsSignAccess – Front
DmsSignType – Portable VMS Full
DmsSignHeight – 1230mm
DmsSignWidth – 2340mm
DmsHorizontalBorder – 20mm
DmsVerticalBorder – 20mm
DmsLegend – No Legend
DmsSignTechnology – LED
VmsCharacterHeightPixels – 0
VmsCharacterWidthPixels – 0
VmsSignHeightPixels – 42
VmsSignWidthPixels – 100
VmsHorizontalPitch – 29
VmsVerticalPitch – 29
MaxFontCharacters – 255
NumFonts – 8
MaxAuxIODigital – 6
StatMultiFieldRows – 17
PixelFailureTableNumRows – 0
SignVolts – current battery voltage (~12v)
LineVolts – line in voltage
SysServices – internet
SysUpTime – 0.00
WatchdogFailureCount – 0
DmsNumChangeableMsg – the number of messages currently stored in memory.
DmsMaxChangeableMsg – the maximum number of messages capable of being stored in memory.
DmsFreeChangeableMemory – amount of memory remaining for changeable messages
DmsNumVolatileMsg – the number of volatile messages stored in memory
DmsMaxVolatileMsg – maximum number of volatile messages capable of being stored in memory
DmsFreeVolatileMemory – amount of memory remaining for volatile messages
DmsMessageRequesterID – 1157736640
RS232Number – 4
NumActionTableEntries – 100
MaxAuxIOAnalog – 7

EDITABLE FIELDS WITHIN THE PARAMETERS SCREEN:
DmsBeaconType – allows user defined control over the 4 beacons located on the corners on the message board (if beacon option is installed). **NOTE: Beacons must be enabled in order to activate with messages.**
Radar Units – changes the radar units between MPH and KPH.
DefaultBackgroundColor – changes the background color of the virtual message board.
DefaultForegroundColor – changes the text color of the virtual message board.
DefaultFlashOn – changes the time the text is displayed when in flash mode.
DefaultFlashOff – changes the time that no text is displayed when in flash mode.
DefaultJustificationLine – changes the default line justification for new messages.
DefaultJustificationPage – changes the default page justification.
DefaultPageOnTime – changes default message ontime for new messages.
DefaultPageOffTime – changes the default message offtime for new messages.

DefaultFont – the default font setting to which the text will be displayed if no other setting is chosen during message creation.
DmsGraphicVertSpacing – pixels spacing vertically, default - 0
DmsGraphicHorzSpacing pixels spacing horizontally, default - 0
DefaultCharacterSet – Local
DmsControlMode – Central (changes to Local while using GUI interface)
DmsMessageTimeRemaining – Varies depending on settings
VmsPixelServiceDuration – 0 sec
VmsPixelServiceFrequency – 0 min
VmsPixelServiceTime – 0:00
DmsCurrentSpeedLimit – changes speed limit threshold for radar overspeed detection
PowerSource – use this to manually change the power source for the trailer.
SysName – changes the name of the sign.
SysDescription – changes the description of the system associated with this particular sign.
SysLocation – changes the home address of the trailer.
SysContact – changes the contact information in regards to the trailer

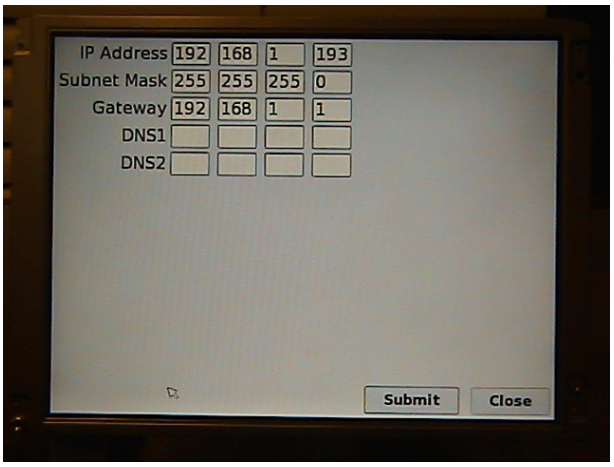
Reset Button: Clicking on this button Resets the sign and will log current user out. No setting will be changed or lost.

Factory Defaults Button: Clicking on the button will open the page below and clicking on the submit button will restore unit as if it just came from the factory. All Changeable and Volatile Messages will be erased. Any Modified Permanent Messages will be returned to original version, all scheduler information will be erased. All users that have been added or changed will be erased. Owner/Admin, User/User, and Bolts/Service will be the only passwords remaining.



3.2 IP Address button *level 2, 3*:

Use this button to change the IP Address, Subnet Mask, and Default Gateway for remote sign operation. Position the cursor over the IP Address button and press the left mouse button. You should be taken to the screen shown below. The default IP for all signs is 192.168.1.199. If the unit is connected to an IP modem the modem's IP will be used to communicate with the sign.

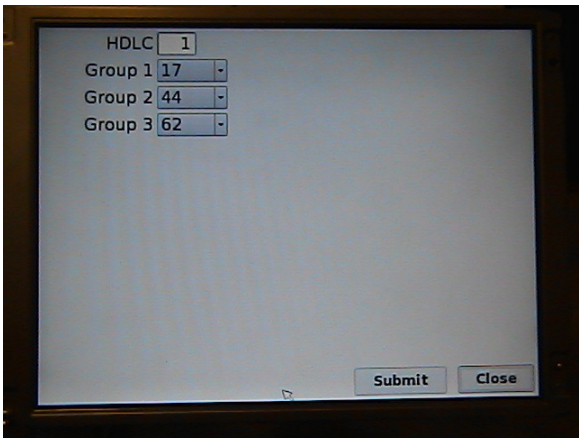


TO EDIT A PARTICULAR FIELD:

- Position the cursor over the appropriate text box and press the left mouse button.
- Use the <BACKSPACE> or <Del> key to delete the previously entered data.
- Enter the new data.
- Repeat this process until all fields contain the correct information.
- Use the 'OK' button to save the entered data and exit back to *The Sign Setup Screen*.
- If you want to exit without saving, use the 'Cancel' button.

3.3 HDLC Settings button *level 2, 3*:

Use this button to set up the HDLC addresses of the signs in your fleet (High-Level Data Link Control). Position the cursor over the HDLC Settings button and press the left mouse button. You should be taken to the screen shown below. **HDLC's are used for large projects that have many signs and are controlled in groups instead of individually.**



TO CHANGE THE CURRENT HDLC:

- Position the cursor in the HDLC text box and click the left mouse button.
- Delete the current information and enter the new HDLC.

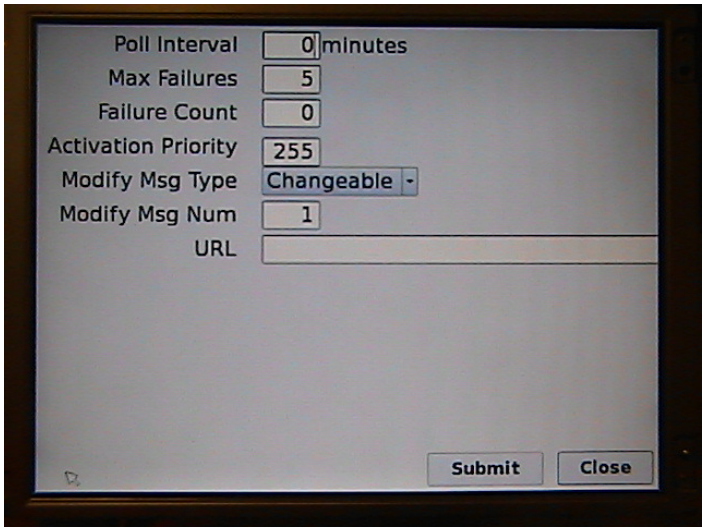
NOTE: Only numbers 1 through 62 can be used to assign the HDLC number. HDLC number will appear next to the Sign Number in *The Main Screen* (See chapter 2.4).

TO CHANGE GROUP ADDRESSES:

- Position the cursor over the drop-down selection box of the group you are trying to edit and press the left mouse button.
- Select the appropriate address in regards to the group and press the left mouse button.
- Repeat until all group addresses are correct.
- Position the cursor over the 'Set HDLC Address' button and press the left mouse button.
- You should be taken back to the *Sign Setup* screen.

3.4 XML Settings *level 2,3:*

Use this button to set up the XML feature for this sign (Extensible Markup Language). Position the cursor over the XML… button and press the left mouse button. The screen shown below will open. **XML is normally used with a traffic control system that uses radar and flow of traffic to control the message displayed on the sign.**

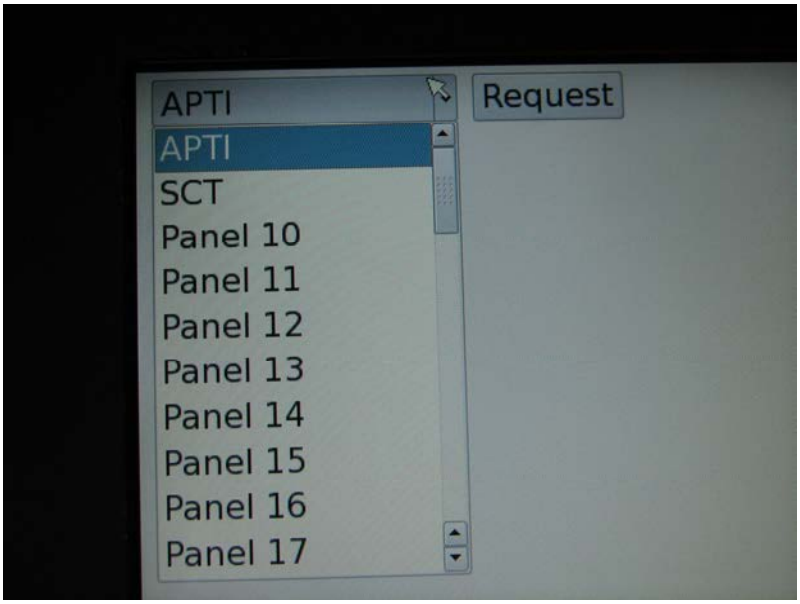


- Poll Interval – Sets how much time in between communication polling
- Max Failures - Sets the total number of communication failed responses before unit ceases XML operations.
- Failure Count – Current amount of communication failures.
- Activation Priority – This number is to set up the priority at which this XML message would overide the currently displayed message.
- Modify Msg Type – This field selects what type of message will be displayed: Permanent, Changeable, or Volitile.
- Modify Msg Number – Is the message number for the selected type of message desired to be displayed when XML communications actives sign.
- URL – This the field where the URL of the polling devide is entered into the sign. It will tell the sign what an when to display the desired message.

Once all fields are set click on the save button and the page will close and the Admin page will be displayed.

3.5 STATS Button *level 2,3*:

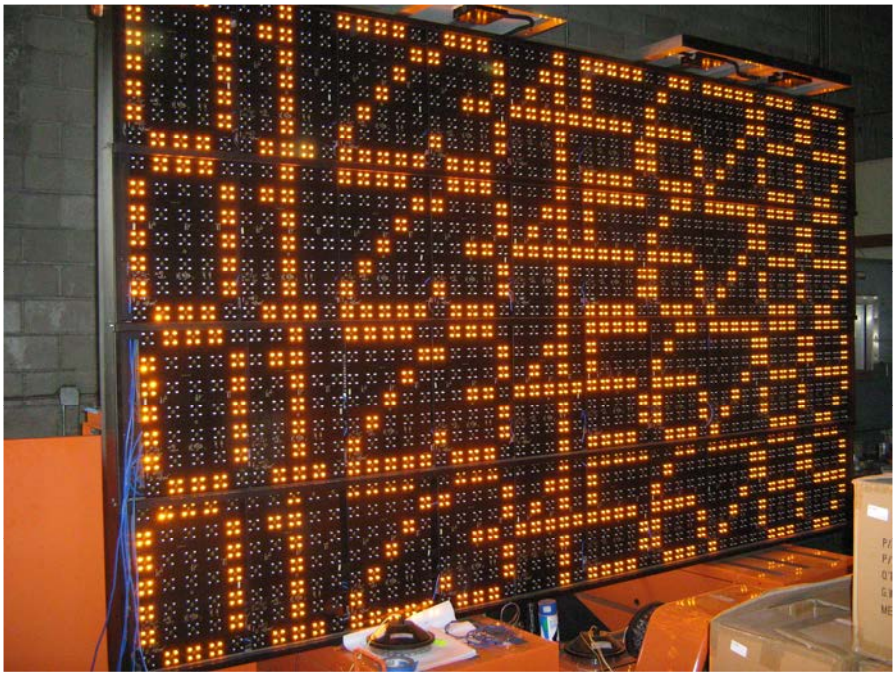
Use this button to review communications between the Arcom Embedded PC and the other boards in the system (Sign Case Telemetery – SCT , Advanced Pedestal Telemetry Interface – APTI, and LED Panels) Once you click on the button the below screen will open. You must then select which board's statistics you want to view using the field in the upper left hand corner (a drop down menu list show all available selections).



Once you select the needed board the information page for that board will open. It will show all the communications, errors and dropped packets that have happened since the sign was last turned on.

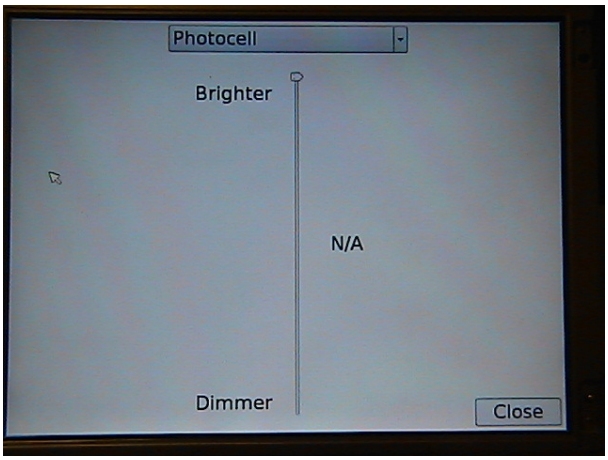
3.6 AUTOCONFIG Button *level 2,3*:

This button allows the user to readdress all LED panels in the system. If for some reason a panel was replaced or moved press this button and all the panels will be correctly addressed for displaying proper charcters. All panels will light up the adrress, first number is the row and the second number shown below is the column.



4.0 ADJUSTING BRIGHTNESS OF THE PIXELS (LED'S) *level 2, 3*

From the *Main* screen position the cursor over the 'Brightness' button and press the left mouse button. You should see the screen pictured below.



TO SET THE BRIGHTNESS AUTOMATICALLY IN RESPONSE TO AMBIENT LIGHT:

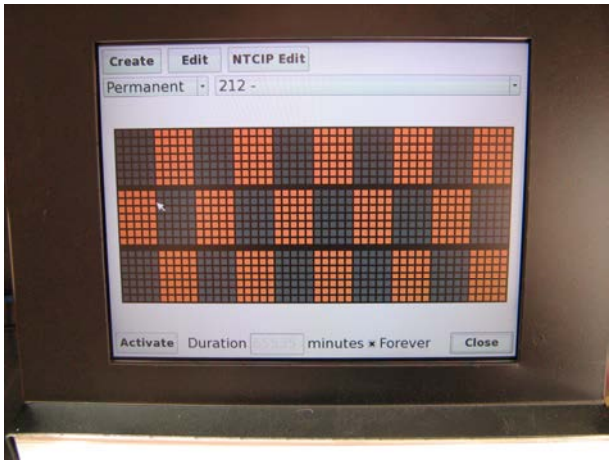
- Position the cursor over the drop down box at the top of the screen and press the left mouse button.
- Select 'Photocell' with the cursor and press the left mouse button.

TO SET THE BRIGHTNESS MANUALLY:

- Position the cursor over the drop down box at the top of the screen and press the left mouse button.
- Select 'Manual' with the cursor and press the left mouse button.
- Position the cursor in the upper portion of the brightness slider bar and continually press the left mouse button until the desired brightness is reached.
- To save the changes and return to the *Main* screen; position the cursor over the 'Close' button and press the left mouse button.

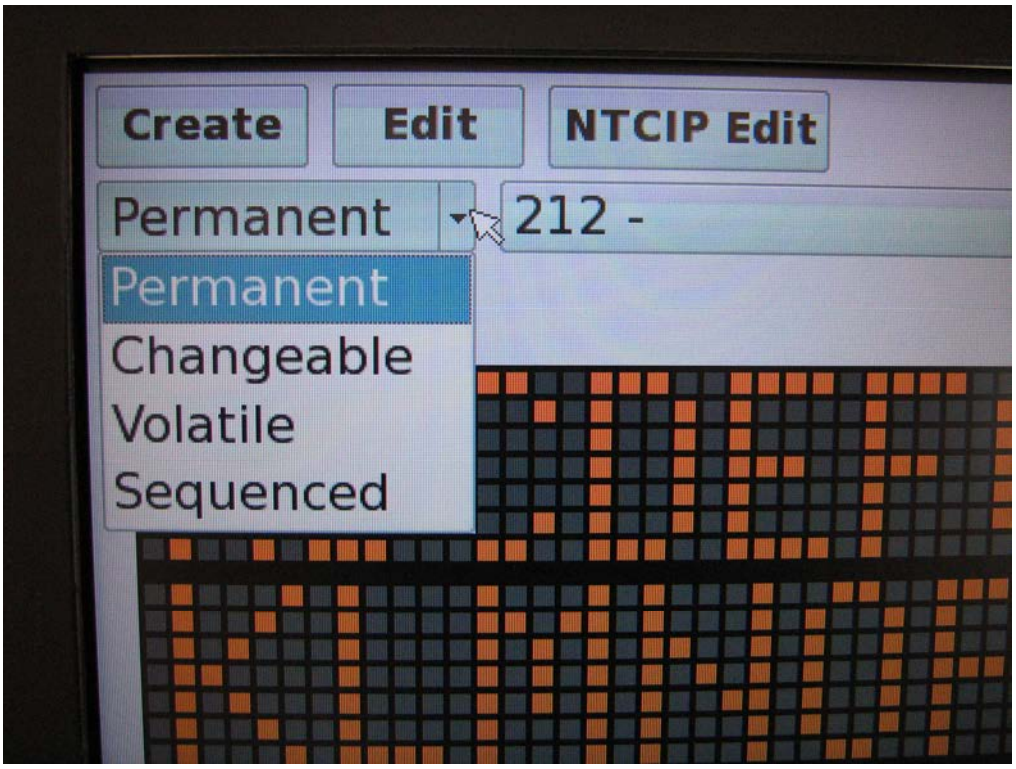
5.0 CREATING / EDITING A MESSAGE *level 2,3*:

To create a message or edit a previously created message position the cursor over the 'Message' button on the *Main* screen and press the left mouse button. You should be taken to the screen pictured below.



THE SIGN HAS THE CAPABILITY OF DISPLAYING THREE TYPES OF MESSAGES:

- Permanent (Specific messages that are stored in the software)
- Changeable (User created messages that can be stored in the software)
- Volatile (User created messages that can not be stored in the software)
- Each type can be assigned a priority from 1-255. 1 being low and 255 being high. The priority determines what messages can be displayed over another message already being displayed.
- Sequenced (Group Messages that the user can configure. Up to 10 messages can be grouped together.) There are only 30 of these slots available. All messages must be created and saved prior to configuring the sequence.



- **NOTE: See attached list of permanent messages.**

FROM THIS SCREEN YOU CAN DO THE FOLLOWING:

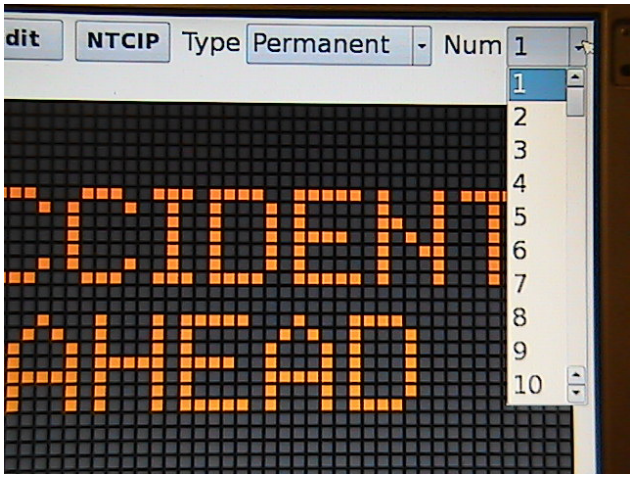
- Activate a previously created message.
- Create a new message.
- Edit a previously created message.
- Close screen and go back to the *Main* screen.

5.1 Activating a Previously Created Message *level 1,2,3*

From the *Main* screen:

- Move the cursor to the 'Message' button and press the left mouse button.
- The *Message Control* screen will appear.
- Move the cursor to the 'Type' drop down box and press the left mouse button.
- Select either: **Permanent**, **Changeable**, or **Volatile** based on what type of message you are looking for and press the left mouse button to make the selection

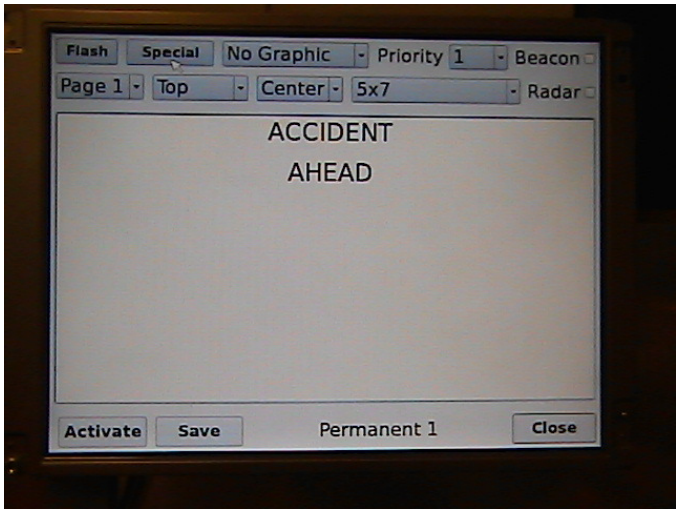
.



- Move the cursor to the 'Num' drop down box, select the message to activate, and press the left mouse button.
- Use the <Up / Dn> arrow keys on the keyboard to scroll through the saved messages.
- Press <Enter> on the keyboard to select a message.
- Move the cursor to the 'Activate' button in the top left corner and push the left mouse button.
- You should be taken back to the *Main* screen and the message you selected should now be displayed on the LED board.

5.2 Creating a New Message *level 2,3:*

Click on the Edit button and the below screen will open. What you type in is exactly what you will see on the display. This is a very simple edit page, if you have a multi-page message or have a special font it is recommended that you use the NTCIP page to create your message.



From the *Main* screen:

- Move the cursor to the 'Message' button and press the left mouse button.
- The *Message Control* screen will appear.
- Move the cursor to the 'Create' button and press the left mouse button.
- You should see the screen pictured below.

SCREEN AREA DESCRIPTIONS:
This is the virtual message board. The virtual message board allows you to properly edit your message and see it before you display it on the main LED board. To the right is the Beacon and radar enable boxes. Also the Priority Selection box.

Beacon Enable Box - Turns on beacon when selected.

Radar Enable Box - When radar is triggered by passing vehicle this messages will be displayed.

Priority Selector - (1-255) The higher the number the higher the NTCIP priority will be. If you set the message to a high priority the next message displayed must have an equal or higher priority to activate.

Below the WYSIWYG is the main text-editing box. This is where you enter the text you want to be displayed on the board.

These buttons are used to format text in different manners:
+ Line – produces a new line
+ Page – produces another page for longer messages
Moving – creates moving text
Flash – creates blinking / flashing text
Font – changes the size of the characters. **NOTE: Font Indicators are changed manually. See chapter 8.4 for font listings.**
H Cntr – sets the horizontal center of the message
V Cntr – sets the vertical center of the message
Right – sets message to right side justification
Left – sets message to left side justification
Top – sets message to top justification
Bottom – sets message to bottom justification
12 Hr – display the time in 12hr format
24 Hr – display the time in 24hr / military format
Temp F – not currently supported
Temp C – not currently supported

CREATING A MESSAGE:

NOTE: The sign is designed to display only ONE font type per line.

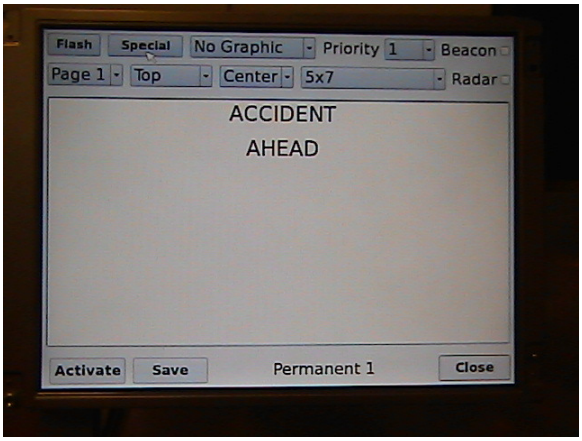
- Select any formatting tools directly **before** the text you want to be affected by them.
- Enter the text you want displayed.
  - You should see the text you entered on the Virtual Display Board.
  - If you do not see the text in the Virtual Display Board something is wrong and you need to verify your message is inserted correctly.
- If you want the beacons to be activated with this message:
  - Position the cursor over the square next to the 'Beacon' text and press the left mouse button.
  - **Ensure that the beacons are assigned in the *Sign Setup*** or else they will not become operational with the message.
- If you want this message to be able to be activated by Radar, position the cursor over the square next to 'Radar' and press the left mouse button.
  - Ensure that Radar is properly configured to your specifications
- If you want to set a priority for this message:
  - Position the cursor in the 'Priority' text box and press the left mouse button.
  - Enter the priority **Number** you wish to assign to this particular message. (1-255)
- If you want to save the message:
  - Position the cursor over the 'Save' button and press the left mouse button
  - You should be taken back to the *Message Control* screen.
- If you want to activate the message:
  - Position the cursor over the 'Activate' button and press the left mouse button.
  - You should be taken back to the *Message Control* screen and your message should now be displayed on the main LED board.

NOTE: Activating a message without saving will save the message. The created message will be saved under Changeable category in next available empty slot / number.

5.3 Editing a Previously Created Message *level 2,3*

From the *Main* screen:

- Move the cursor to the 'Message' button and press the left mouse button.
- The *Message Control* screen will appear.
- Move the cursor to the 'Type' drop down box and press the left mouse button.
- Select either; **Changeable** or **Volatile** and press the left mouse button to make the selection.
- Move the cursor to the 'Number' drop down box, select the message or empty slot / number to edit, and press the left mouse button.
- Use the <Up / Dn> arrow keys on the keyboard to scroll through the message slots.
- Press <Enter> on the keyboard to select a message or a blank slot.
- Move the cursor to the 'Edit' button and push the left mouse button.
- You should see a screen similar to the one pictured below.
-



- Edit the message in the same manner as if you were creating a new message. This was discussed in the previous section this manual.
- If you want the beacons to be activated with this message:
  - Position the cursor over the square next to the 'Beacon' text and press the left mouse button.
- If you want this message to be able to be activated by Radar:
  - Position the cursor over the square next to 'Radar' and press the left mouse button.
  - Ensure that Radar is properly configured to your specifications.

- If you want to set a priority for this message:
  - Position the cursor in the 'Priority' text box and press the left mouse button.
- Enter the priority **Number** you wish to assign to this particular message.
- If you want to save the message:
  - **Take note of the message type and message number (example: changeable 6). This will be the identifying information for the saved message.**
  - Position the cursor over the 'Save' button and press the left mouse button
  - You should be taken back to the *Message Control* screen.
- If you want to activate the message without saving:
  - Position the cursor over the 'Activate' button and press the left mouse button.
  - You should be taken back to the *Message Control* screen and your message should now be displayed on the main LED board.

5.4 Fonts & Permanent Messages *level 2,3*

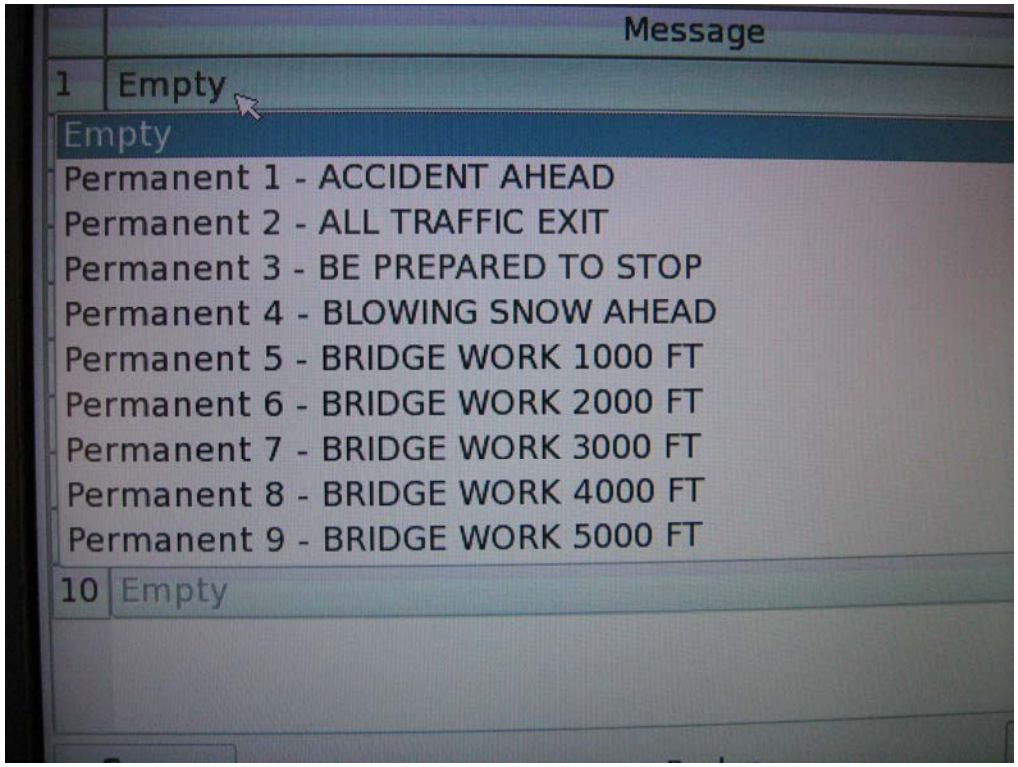
This section of the manual lists and describes the fonts and permanent messages that are pre-loaded into sign memory. These fonts and messages cannot be changed or edited unless proper administrative access has been granted. You may also create a new font. **(This can be done on the Web Page only.)**

THERE ARE A TOTAL OF 8 ENGLISH FONTS, WHICH THE SIGN IS CAPABLE OF GENERATING:
EU Compliant Fonts – fonts, which meet both character-size requirements, **and** line spacing requirements.
Non-Compliant Fonts – fonts, which only meet character-size requirements. Between character spacing is reduced in order to create more useable space.

Description	Character Height	Pixels	Identifier					
			331	332	333	4260	4280	42100
Tiny Characters	18"	3 x 7		[fo4]	[fo5]			
Narrow Characters	18"	4 x 7		[fo1]	[fo1]			
Standard Characters	18"	5 x 7	[fo1]	[fo2]	[fo2]			
Bold Characters	18"	7 x 7		[fo3]	[fo3]			
Std. w/ extra spaces between characters	18"	5 x 7 W		[fo5]	[fo6]			
Bold w/ extra spaces between characters	18"	7 x 7 W		[fo6]	[fo7]			
Large Characters	30"	6 x 11			[fo4]			
Larger Characters	55"	7 x 20			[fo8]			
Largest Characters	55"	9 x 20			[fo9]			
Graphic Font	18"	14 x 7	[fo2]	[fo7]	[fo10]			
Small Characters	200mm	5 x 7				[fo1],[fo5]	[fo1],[fo5]	[fo1],[fo5]
Medium Characters	240mm	5 x 7				[fo2],[fo6]	[fo2],[fo6]	[fo2],[fo6]
Large Characters	320mm	5 x 7				[fo3],[fo7]	[fo3],[fo7]	[fo3],[fo7]
Largest Characters	400mm	5 x 7				[fo4],[fo8]	[fo4],[fo8]	[fo4],[fo8]

5.5 Sequenced Messages *level 2,3:*

This feature allows the user to create large messages that have multiple messages with multiple pages. If the user needs to display Permanent Message 41 and 46 those messages are selected and put in the order the user desires. If a Changeable Message is to be displayed in the sequence, then the user must create and save the message prior to including it into the desired Sequenced Message.



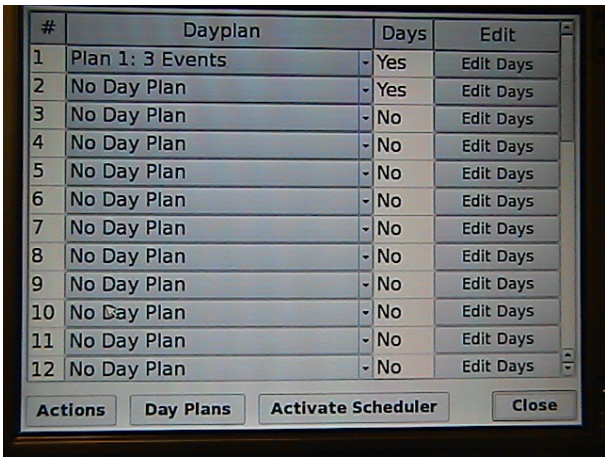
Once the Sequenced Message is completed to the users specifications then press the save button at the bottom of the screen.

6.0 TO BLANK THE SIGN *level 1,2,3*:

To blank the sign, position the cursor over the 'Blank Sign' button on the *Main* screen and press the left mouse button. The sign will stay blanked until the message has been reactivated. On the main page of the GUI it will display next to the TEXT field the word BLANK. There is also a button of the front panel of the monitor assembly that will blank the sign when pressed and a red light will appear in the switch to inform you that it is blanked. To un-blank the sign simply push the switch again and a green light will illuminate on the switch.

7.0 USING THE SCHEDULER FUNCTION *level 2,3*:

From the *Main* screen:
Position the cursor over the 'Scheduler' button and press the left mouse button. You should see the screen pictured below.



SCREEN DESCRIPTIONS:
This is the Scheduler Main Page:

Day Plan – These are the individual schedules that the system runs to display the desired messages.

Days – Have Days been selected to run schedule.

Edit – This opens another page that allows you to set the days and months for the selected day plan.

Buttons on bottom of page:

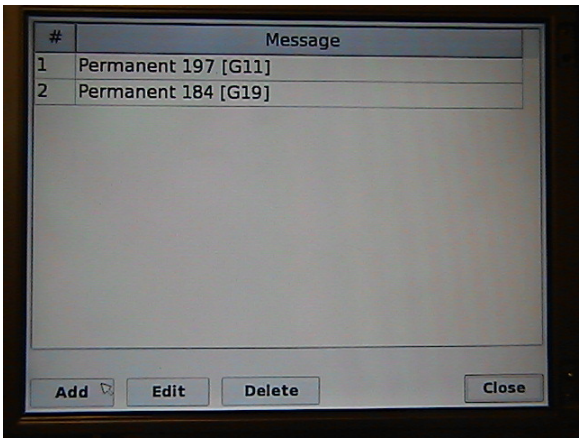
Actions – Opens the Action selection page. An action is the lowest level item contained under the Scheduling function. For any message to be displayed in a schedule it must be associated to an action. Each action is automatically assigned an **Index** number when it is added to the list.

Day Plans – Opens the Day Plan page so you can see all the actions and times for each event. A day plan is the next level up from an action. A day plan is created by adding actions to a specific plan and setting the time at which they will be displayed. Actions are added to a day plan with the 'Add Event' button located at the bottom of the **Day Plan** screen. There are a total of 20-day plans available.

Activate Scheduler – This button enables the Scheduler. It will allow the day plan selected to run. **NOTE:** If another message is selected this will disable the scheduler. Upon exiting this page and going to the Main page you will see that the Scheduler button has turned green signifying that its running.

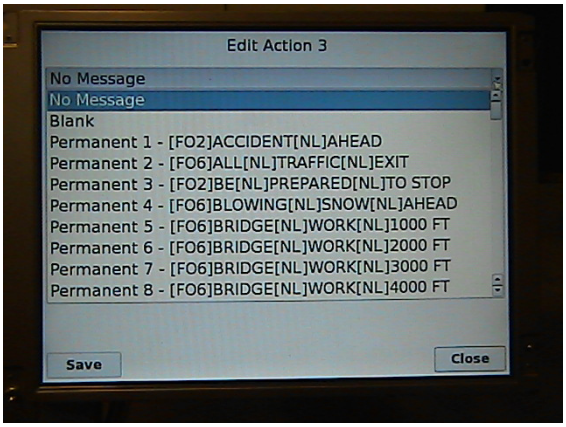
Close – This button exits from the scheduler page.

Actions Page -



TO ADD A NEW ACTION TO THE LIST:

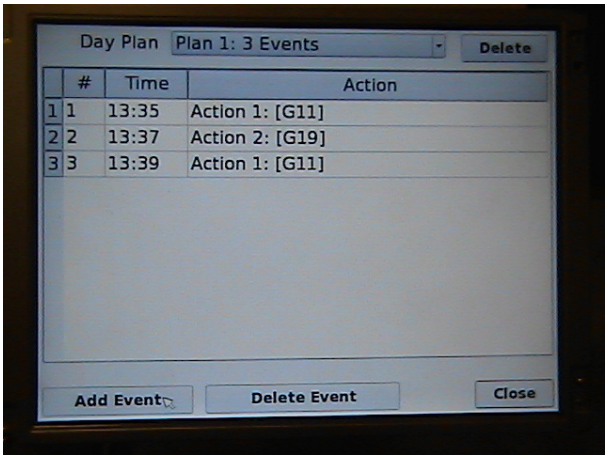
- Position the cursor over the 'Add' button and press the left mouse button.
- You should be taken to *The Edit Action Screen*.



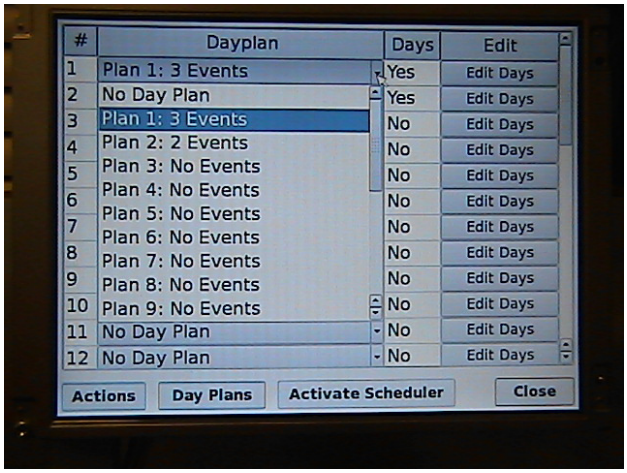
- From *The Edit Action Screen* you will select the message you want from the drop down box and click the 'Save' button. The drop down box contains every permanent message stored in memory.
- To exit *The Edit Action Screen* without making any changes press the 'Cancel' button.

If you saved a message, it should appear in the list of actions on *The Actions Page*.

Day Plan Page-

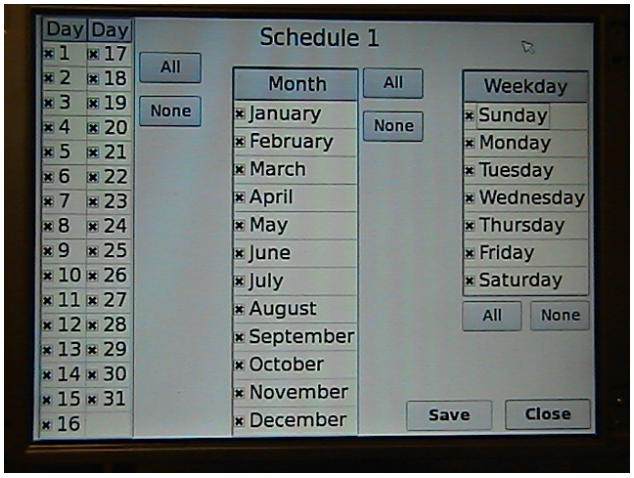


- Click on the Day Plan bar and select the desired day plan number you want.
- Select the Add Event button and add the action and time as desired.
- **NOTE: The hour and minute drop down boxes relate to a specific time in military format. They do not function as a timer.**
- If you want to delete and event click on the event then click on the Delete Event button.
- When all required actions and times have been set click on the Close button.



- Position the cursor over the 'Day plan' drop down box at the top of the screen and select the day plan you wish to edit.

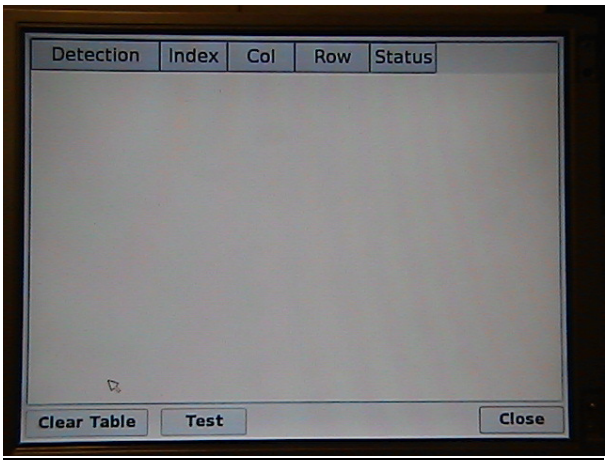
Edit Days Page –



- Click on the desired days, months, and days of the week. X means it has been selected.
- When finished click on the Save button before exiting or no changes wil be made.
- To exit this page click on the Close button.

8.0 PIXEL (LED) TEST FUNCTION *level 1,2,3*:

Select the Pixels Button on the Main Page and the below page will open.

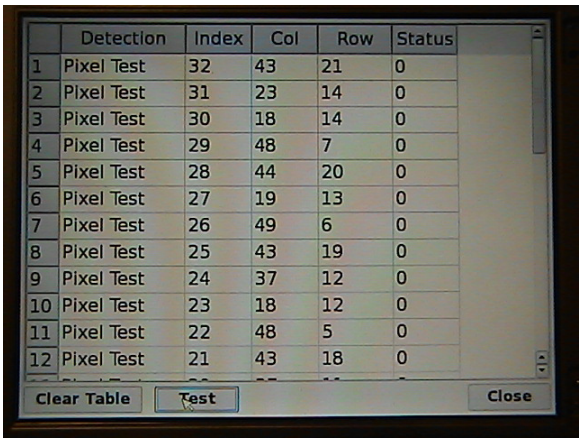


- The pixel tests for all Gen 4 signs are done the same. All pixels are automatically tested every 1/10th of a second. Detective pixels are indicated by a purple/ magenta block instead of either black or amber. A manual pixel test can be run by pushing the Test button on this page. Prior to testing press the Clear button to remove previous results.

TO RUN A PIXEL TEST:

- Position the cursor over the 'Test' button and press the left mouse button.
- It will take a few seconds to complete the test. When the test is finished you will see the results of the test appear in *The Pixel Test Results Table.*

PIXEL TEST RESULTS TABLE:



Detection – will display 'Pixel Test' in each row
Index – numerical identifier for each defective pixel
Column(X), Row(Y) – location identifier for defective pixel
Status – displays a number based on the problem found

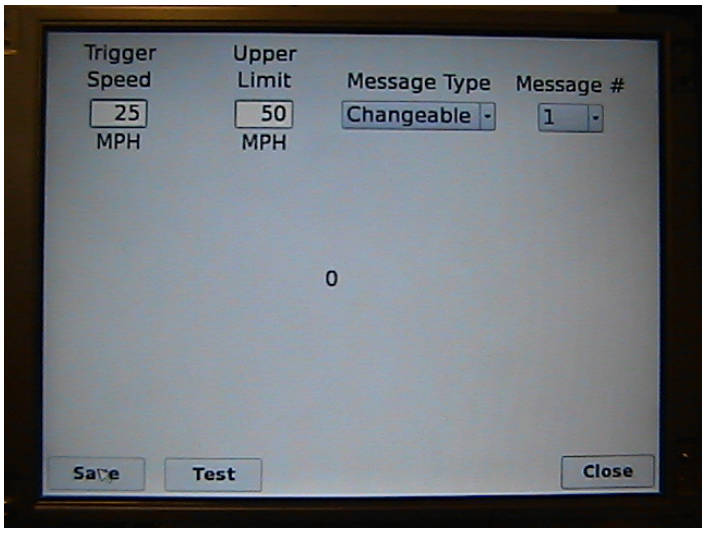
NOTE: If NO defective pixels were found, nothing will appear in the table.
NOTE: If defective pixels were found, please call service phone number listed at the end of this manual.

- To clear the table, position the cursor over the 'Clear Table' button and press the left mouse button.
- When you are finished running the pixel test, position the cursor over the 'Close' button and press the left mouse button.
- On the Main and Message pages you can see all of the reported bad pixels in Purple/Magenta color. Once you clear the pixel feedback table these will be removed and displayed as good pixels. See picture below.

9.0 RADAR CONFIGURATION *level 1,2,3*:

This section of the manual describes the steps for using the radar option. The following assumes that the radar option is installed and working.

From the *Main* screen, select the 'Radar' button. Link **A** refers to the button in the following figure. Move the cursor over the button and press the left mouse button to go to the radar configuration screen. The radar screen will be loaded on the display. The screen is made up the following buttons and fields.



DESCRIPTION OF BUTTONS:
Test – Allows the radar to detect speeds approaching to/from the trailer after being selected. Radar returns to normal detection after leaving the Radar screen.
Save – Saves current selections and returns to the Main Screen.
Close – Removes all selections and returns to the Main Screen.

FIELDS:
Trigger Speed – Set value to have the display use the selected Message Type and Message Number when radar detects a speed equal or greater.
Upper Limit – Set value to disable the selected message chosen by Message Type and Message Number when the radar reads a value equal to or greater.
Message Type - Three selections to choose from (Permanent, Changeable, and Volatile)
Message Number – Refers to the number of the desired message to be display when radar is triggered.
Speed - Unlabeled number in the center of the screen.

10.0 AmSigWeb 4.0 Web Based Access

AmSigWeb4.0 is a Web based feature that provides easy access and communication with and operation of American Signal Company's Dynamic Message Signs (DMS). AmSigWeb4.0 is flexible and able to control a verity of Signs having various features. This Manual includes information for sign features that may not be found on your sign. Use only that information that pertains to your sign.

With AmSigWeb4.0 you can manage many signs from one or more remote computers. Only one computer is able to actively operate the DMS at any given time.

USING AmSigWeb 4.0 YOU CAN:

- Check which message is currently displaying on a sign
- View status of the sign
- Check and adjust brightness of the sign
- Check the battery voltage
- View and modify many sign parameters
- Retrieve a list of all the messages that are stored in the sign controller
- Edit message or make new messages to store or display on a sign
- If you have the GPS Option installed, you can view the location of the sign
- Create a Schedule for messages to be displayed at different times and days.
- Add or modify Fonts and Graphics.
- Set the time at the sign
- Check the status of every electronics circuit board communications and operations errors and time in service

If you are looking for more options to control your American Signal Company's Dynamic Message Signs (DMS) remotely, you may choose **AmSig.net**.

NOTE: The passwords for the sign are the same for the Web Page with the same levels of accessibility.

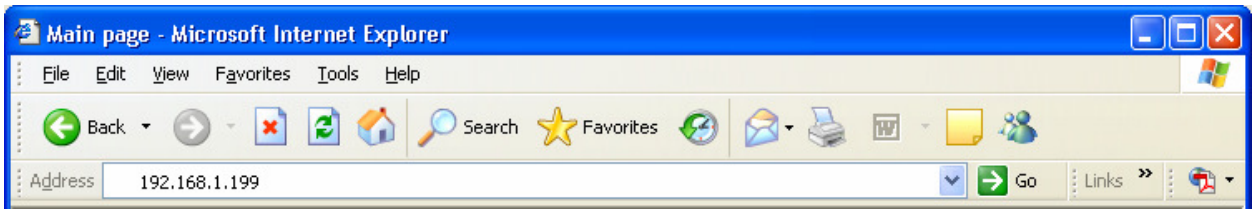
Starting AmSigWeb 4.0 main page

To access your sign via Web Browser, open Internet Explorer.

Other types of browsers can also be used. The Internet Explorer Icon looks like this 

and typically is located on your desktop, task bar, or start menu.

Enter the sign's IP address in the 'Address' field to connect with the sign. Example: 192.168.1.199

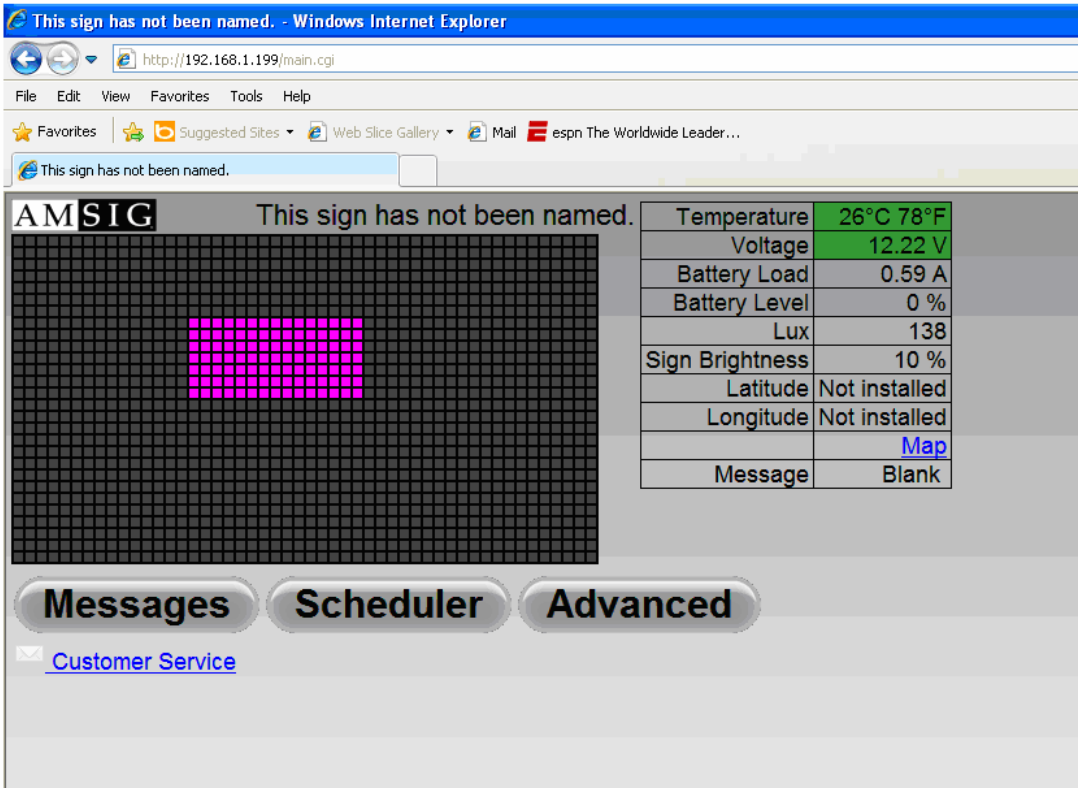


Press 'Enter'. You will be taken to AmSigWeb4.0 Main Page, similar to the following:

11.0 AmSigWeb 4.0 Main Page Overview

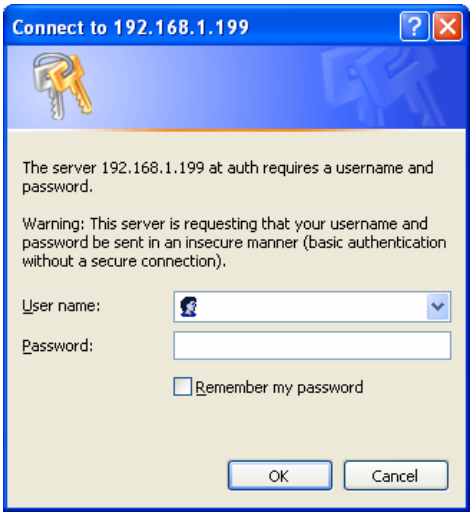
ON THE MAIN PAGE YOU WILL SEE:

- Name of your device. If your sign has not been named yet the following will appear: “This sign has not been named“
- Currently displayed message:
- Sign parameters: Temperature, Voltage, Battery Current Usage, Solar Charge Current, Battery Level, Lux, and Brightness Level.
- If your sign is equipped with GPS option, you will see the location of the sign listed. Click on the word ‘Map’ to open a new Goggle Maps Page. There you will see the location of the sign marked on the map.
- Number and Type of the message displayed: Permanent, Changeable, or Volatile.
- Message button to view, edit, create and activate messages.
- Scheduler button to view set or create a schedule of messages for a set period of time.
- Advanced button to open the higher access features of the device.
- Link to send an e-mail to AmSig customer service



12.0 Logging On To the Sign

When you will click on 'Messages', 'Scheduler', or 'Advanced' buttons AmSigWeb 3.0 Main Page you will be presented with the following screen:

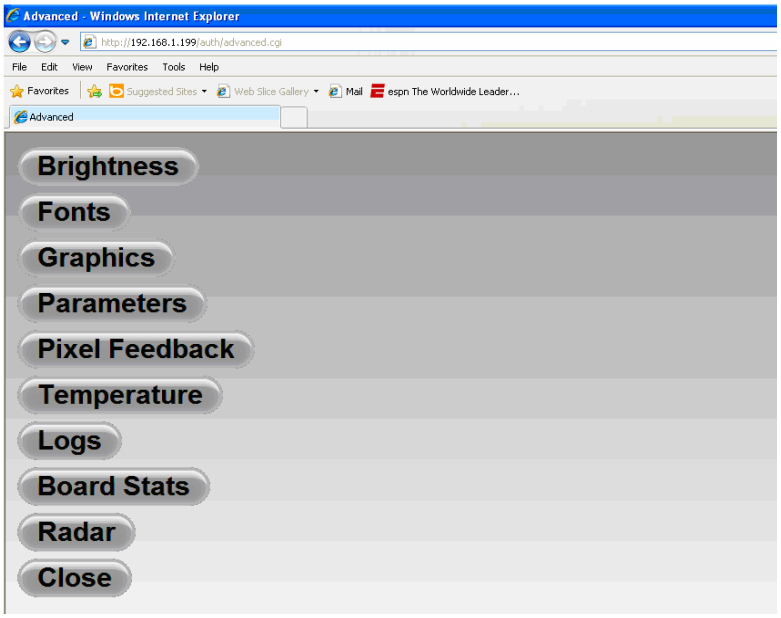


Enter your Username and Password to begin. After logging on to the sign you will be able to view and edit sign parameters and messages.

13.0 ADVANCED BUTTON

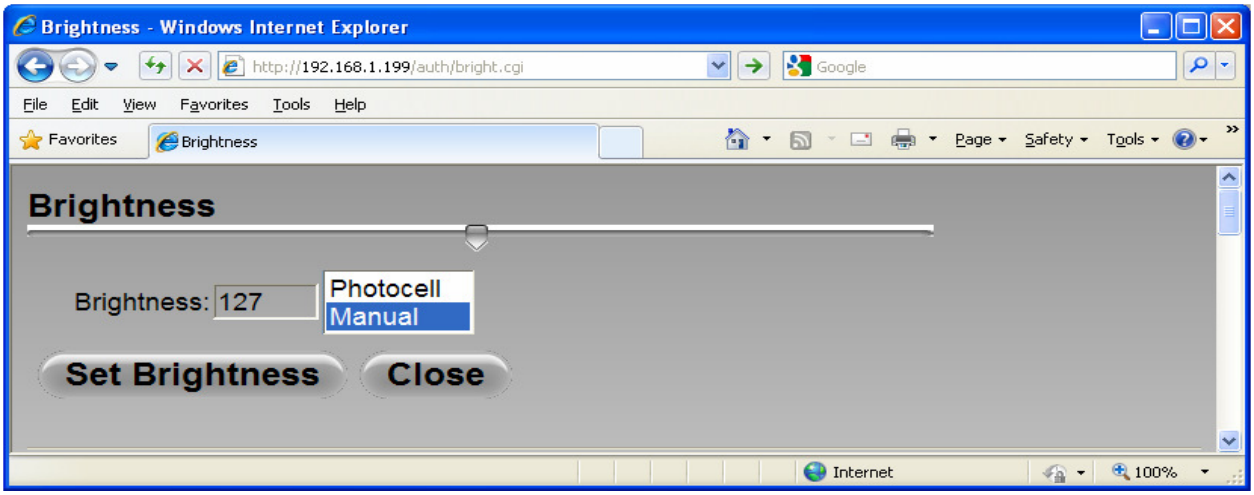
You must be logged on to the sign to access system settings (see chapter 5.0).

Click the Advanced button on the AmSigWeb3.0 Main Page. You will see the Settings Page below. To go back to the Main Page click on the CLOSE button.



13.1 Sign Brightness Settings

To access the brightness control click on the Brightness button and the below page will open.

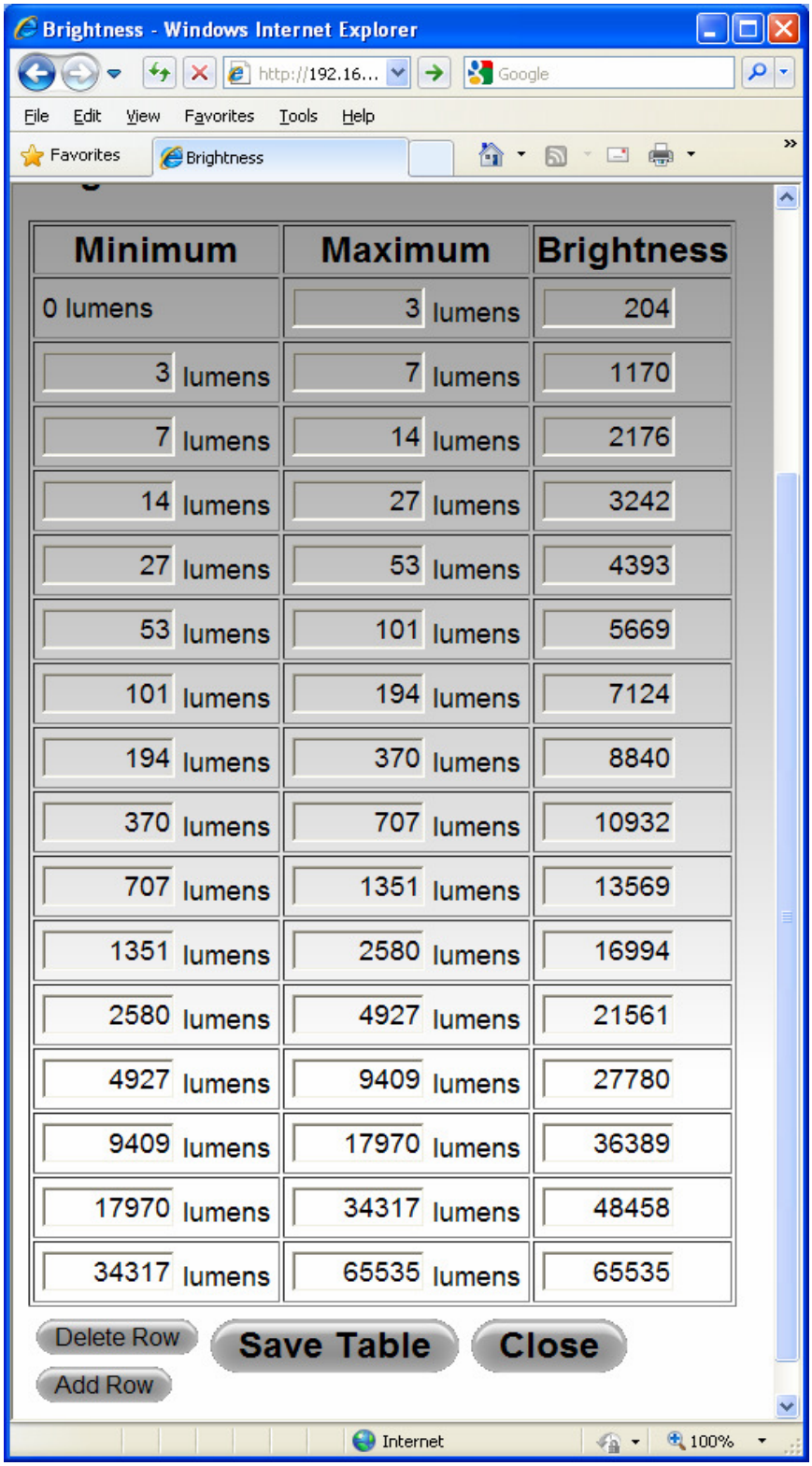


The screen now displays the current brightness mode and levels. A brightness table is also shown in the below picture if the brightness levels need to be modified.

Photocell (Automatic) mode and Manual mode are supported. Unless the photocells are damaged, it is strongly recommended that the sign stay in automatic mode. This will maximize sign visibility during unattended operation while optimizing power consumption.

To set brightness manually select 'Manual' then move the slider bar to the desired level, or enter brightness level value in the 'Brightness' field. **NOTE: To exit back to the Main Page without saving and activating a new brightness setting, click on "Close' button.** OR click 'Set Brightness' to save and activate your new Brightness setting.

If the brightness table needs to be modified adjust the bands to the necessary levels and click on save if the levels are correct. **Please note that once you modify and save the brightness table and you wish to return to the original table, go to the RESET FACTORY DEFAULTS button. If you have any other settings or messages that are different than the original settings they will be LOST and have to be reentered.**



You should see the confirmation on the screen that Brightness was set.
To exit the Settings Page back to the Main Page, click on the Close button.

13.2 FONTS

To access the Fonts page:

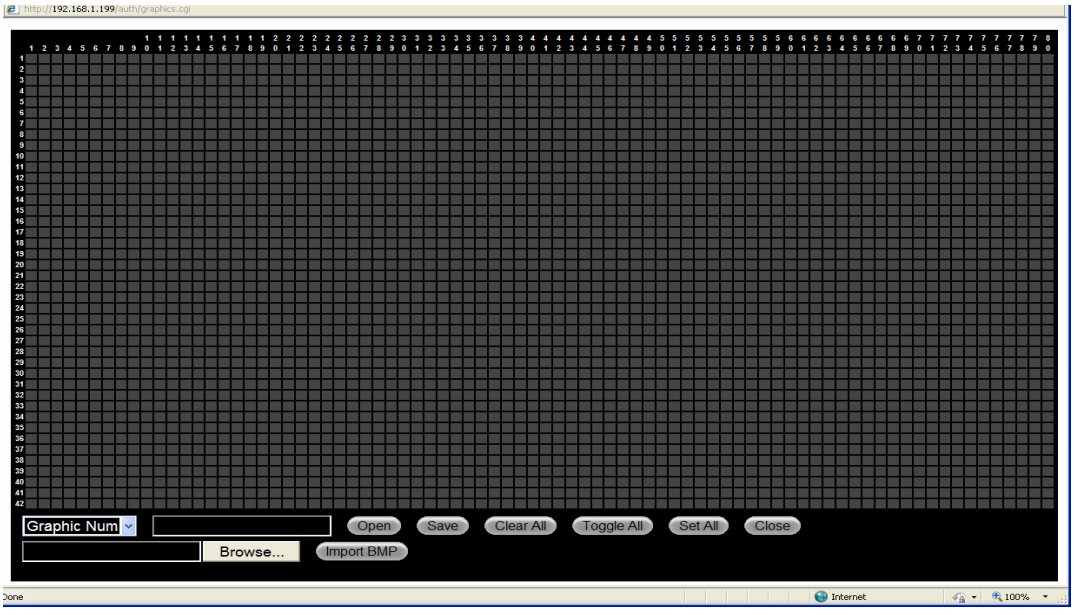
Click on the Fonts button and the below page will open.

On this page you can open an existing font, create a new font, or modify an existing character in a font. To display an existing font just use the font selector window on the top left-hand side of the page and select the desired font and click on the OPEN button. This will take a couple of minutes to load all the characters. You can then review all the characters and modify each one as needed.

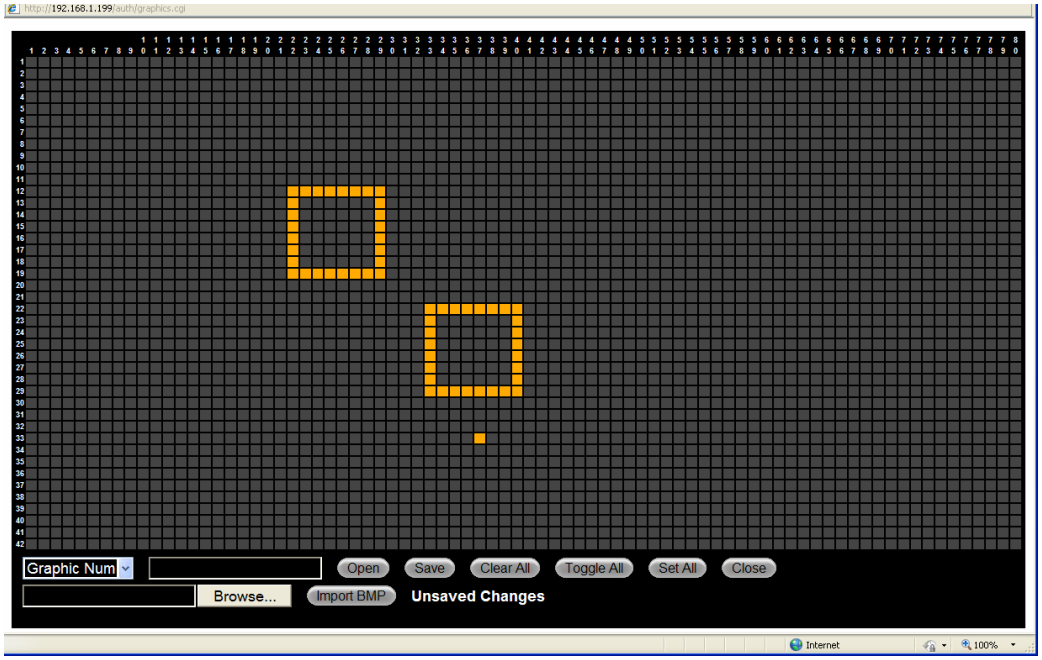
If you wish to create a new font click on the NEW FONT button and the below page will open. Enter the data specific for the new font.

13.3 Graphics

To access the Graphics feature of this device click on the GRAPHICS button and the below page will open.



To design your graphic you can either import a graphic or you can design it on the layout provided. Click on a pixel one time it will indicate a lit pixel and a second time to remove.



To save the Graphic use the graphic number field to select which graphic file you wish to save it to and then click on the save button. If a file is already saved to that file number it will be over written. To exit this page click on the CLOSE button and it will close the page and return you to the Advanced page.

13.3.1 IMPORTING A FILE

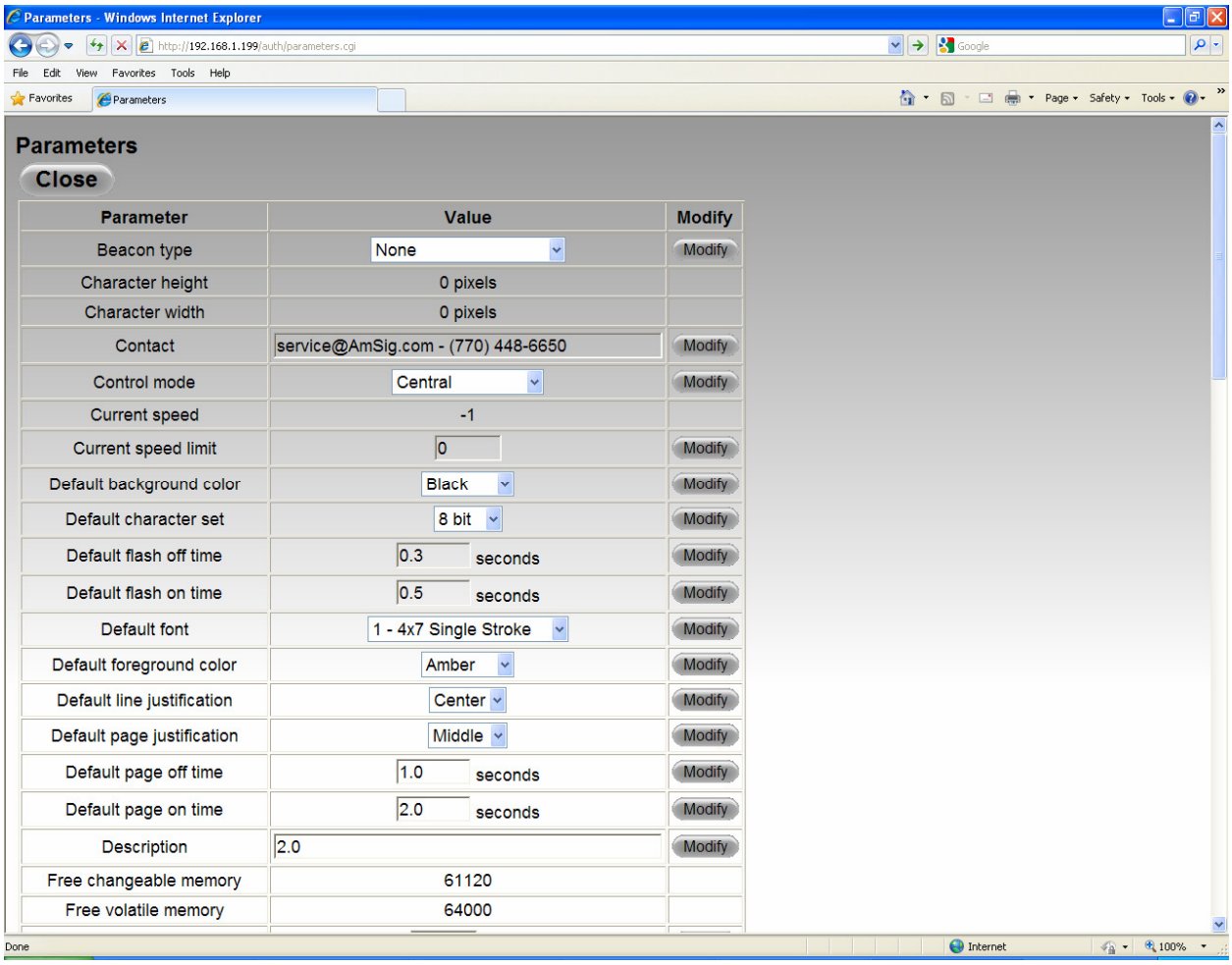
To Import an image that you have created it must be in the following format:

1. Must be the same size as the sign you have. If you have 50 X 28 pixels then that must be the size of your image.
2. It must be monochrome. Black indicates a lit pixel.
3. It must be a bitmap file.

Once you have imported the file select the graphic number that is currently not in use and then click on the save button.

13.4 Parameters

Clicking on the button will open the Parameters page and it will take a few seconds to load all of the fields on the page. Some parameters can be modified and others cannot. To change a parameter click on the field and enter the value or selection desired and click the modify button and the page will update if the selection is valid.



PARAMETER DESCRIPTIONS:

DefaultBackgroundColor – changes the background color of the virtual message board.
DefaultCharacterSet – Local
DefaultFlashOffTime– changes the time that no text is displayed when in flash mode.
DefaultFlashOnTime – changes the time the text is displayed when in flash mode.
DefaultFont – the default font setting to which the text will be displayed if no other setting is chosen during message creation.
DefaultForegroundColor – changes the text color of the virtual message board.
DefaultJustificationLine – changes the default line justification for new messages.
DefaultJustificationPage – changes the default page justification.
DefaultPageOffTime – changes the default message offtime for new messages.
DefaultPageOnTime – changes default message ontime for new messages.

DmsBeaconType – allows user defined control over the 4 beacons located on the corners on the message board (if beacon option is installed). **NOTE: Beacons must be enabled in order to activate with messages.**
DmsControlMode – Central (changes to Local while using GUI interface).
DmsCurrentSpeed – Used to retrieve the current speed value as detected by the attached device.
DmsCurrentSpeedLimit – changes speed limit threshold for radar overspeed detection.
DmsFreeChangeableMemory – amount of memory remaining for changeable messages.
DmsFreeVolatileMemory – amount of memory remaining for volatile messages.
DmsGraphicHorzSpacing pixels spacing horizontally, default – 0
DmsGraphicVertSpacing – pixels spacing vertically, default – 0
DmsHorizontalBorder – 20mm
DmsLegend – NA
DmsMaxChangeableMsg – the maximum number of messages capable of being stored in memory.
DmsMaxVolatileMsg – maximum number of volatile messages capable of being stored in memory.
DmsMessageTimeRemaining – Varies depending on settings.
DmsMessageRequesterID – 2130706433
DmsNumChangeableMsg – the number of messages currently stored in memory.
DmsNumVolatileMsg – the number of volatile messages stored in memory
DmsSignAccess – Front
DmsSignHeight – 1230mm
DmsSignTechnology – LED
DmsSignType – Portable VMS Full
DmsSignWidth – 2340mm
DmsVerticalBorder – 20mm
LineVolts – line in voltage
MaxAuxIOAnalog – 7
MaxAuxIODigital – 6
MaxFontCharacters – 255
NumActionTableEntries – 100
NumFonts – 8
PixelFailureTableNumRows – 0
PowerSource – use this to manually change the power source for the trailer.
Radar Units – changes the radar units between MPH and KPH.
RS232Number – 4
SignVolts – current battery voltage (~13v)
StatMultiFieldRows – 17
SysContact – changes the contact information in regards to the trailer
SysDescription – changes the description of the system associated with this particular sign.
SysLocation – changes the home address of the trailer.

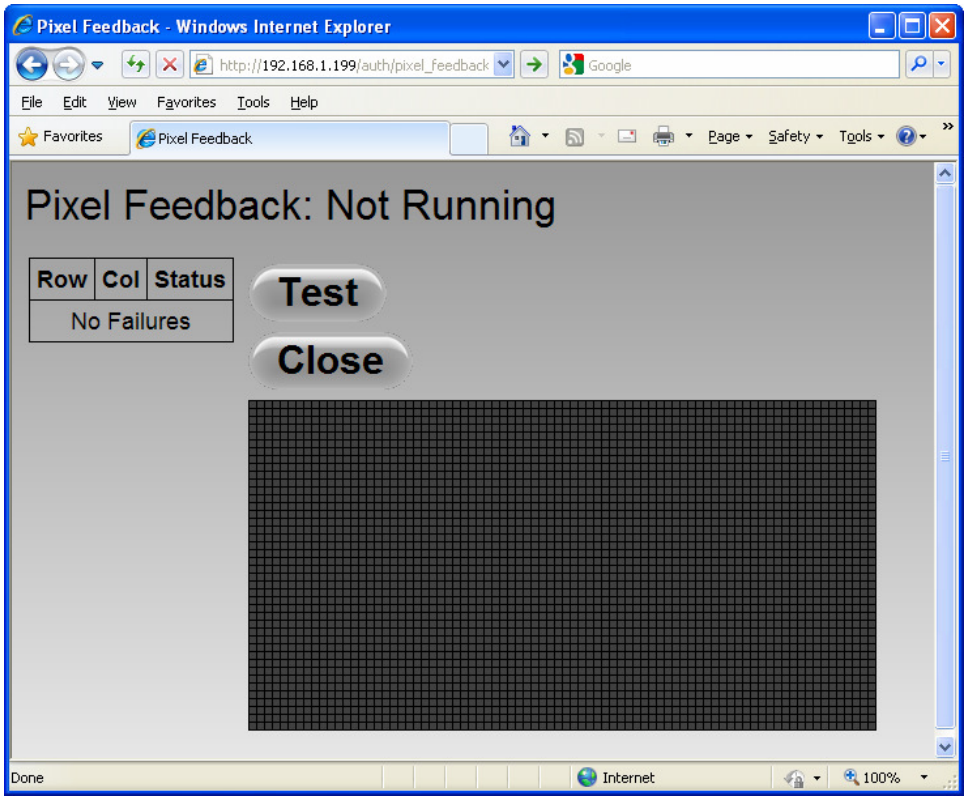
SysName – changes the name of the sign.
SystemObjectID - NA
SysServices – Internet
SysUpTime – 0.00
VmsCharacterHeightPixels – 0
VmsCharacterWidthPixels – 0
VmsHorizontalPitch – 29 mm
VmsPixelServiceDuration – 0 sec
VmsPixelServiceFrequency – 0 min
VmsPixelServiceTime – 0 min
VmsSignHeightPixels – 42
VmsSignWidthPixels – 80

VmsVerticalPitch – 29mm
WatchdogFailureCount – 0
XmlActivationPriority – 0
XmlFailureCount – 0
XmlMaxFailure – 0
XmlModifyMsgNum – 0
XmlModifyMsgType – Select the message type
XmlPollInterval – 0 minutes
XmlUrl –

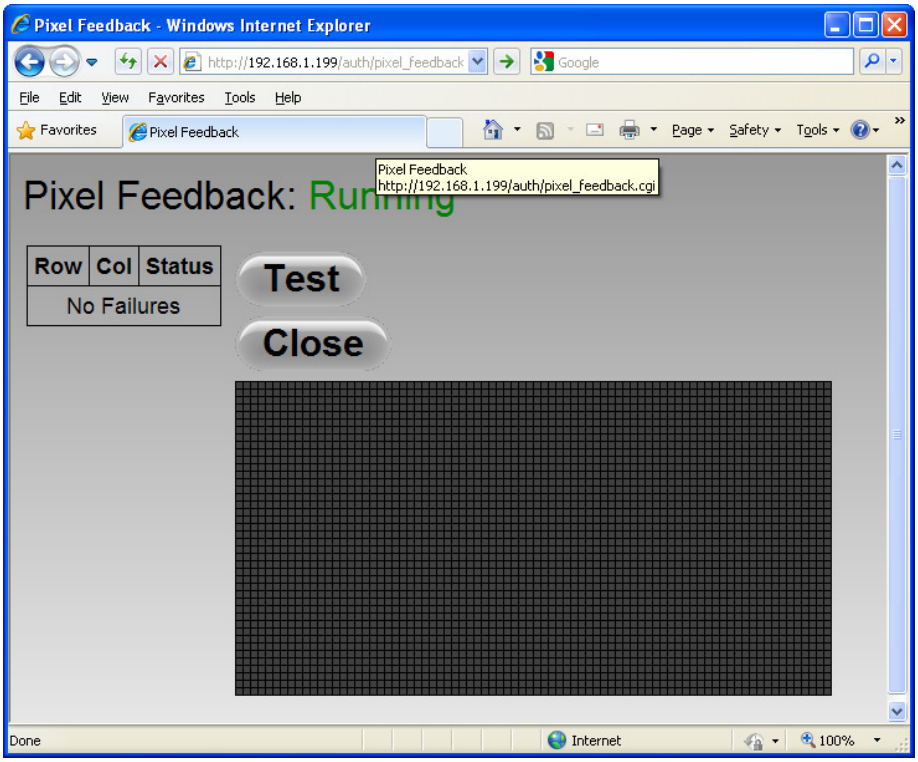
To exit the Parameters Page click on the CLOSE button and the Advanced page will open.

13.5 Pixel Feedback (Test)

To run the pixel feedback test you click on this button. Pixel test does not interfere with the display of any message and will not be visibly seen when running.



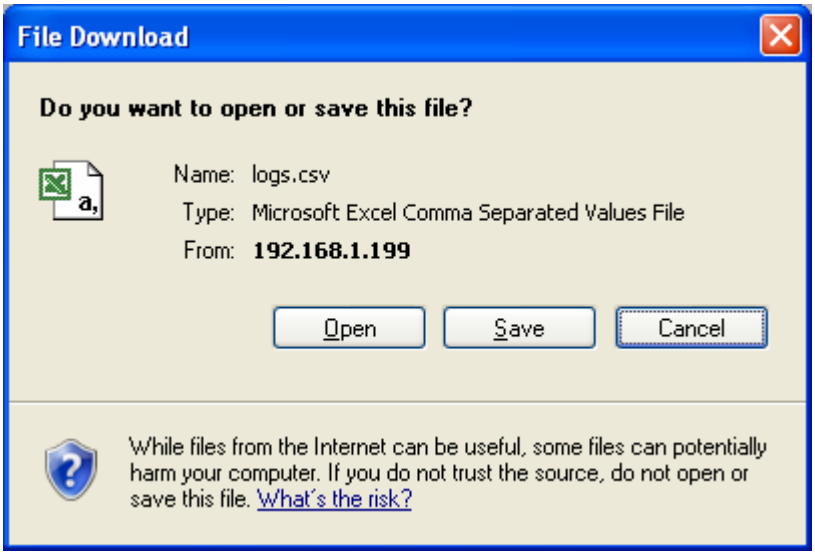
Click on the test button and the page will change to the below screen.



Any failures will be indicated on the table on the left side of the screen and also on the WYSIWYG of the sign face. The failure will be displayed in a magenta color instead of amber. Click on the CLOSE button to exit this page.

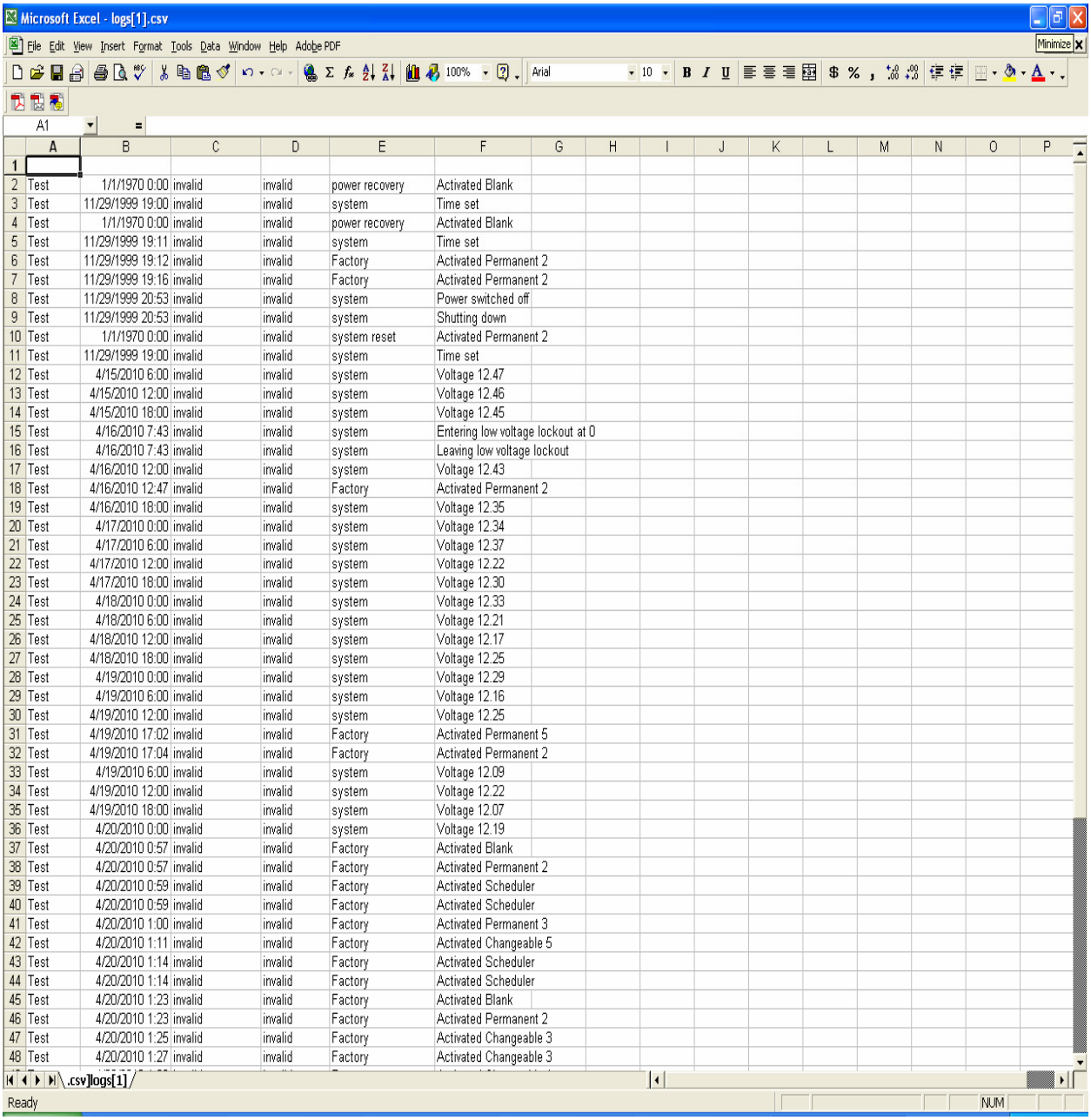
13.6 LOGS

This feature allows the user to review the operational logs of the device. System functions as well as which user was in the sign and when messages are changed.



To view the files the computer must have a spreadsheet software program to open the files.

The below caption displays what the log files look like. It shows the date and time, GPS data if installed the user logged into the device or system if device performed function and action taken.

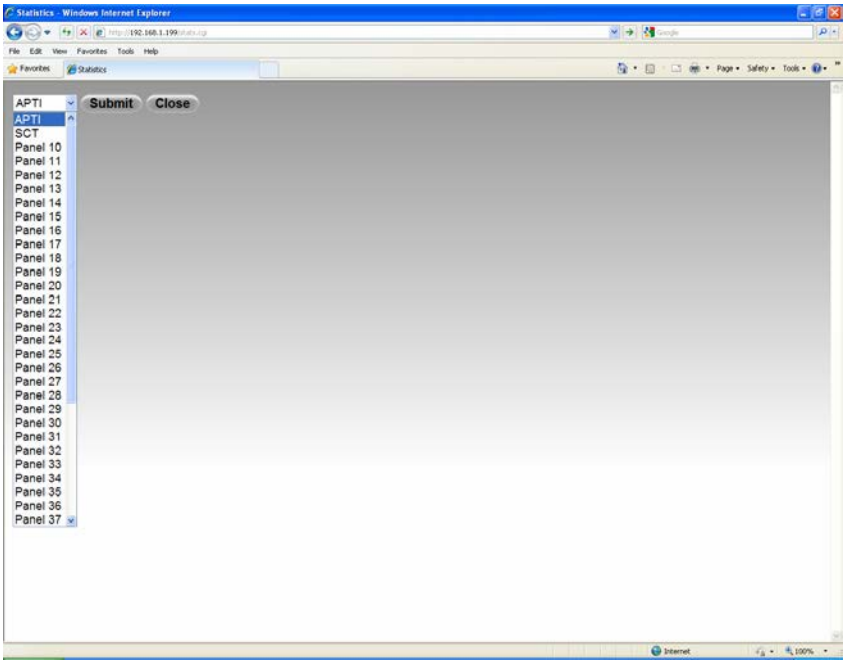


Microsoft Excel - logs[1].csv

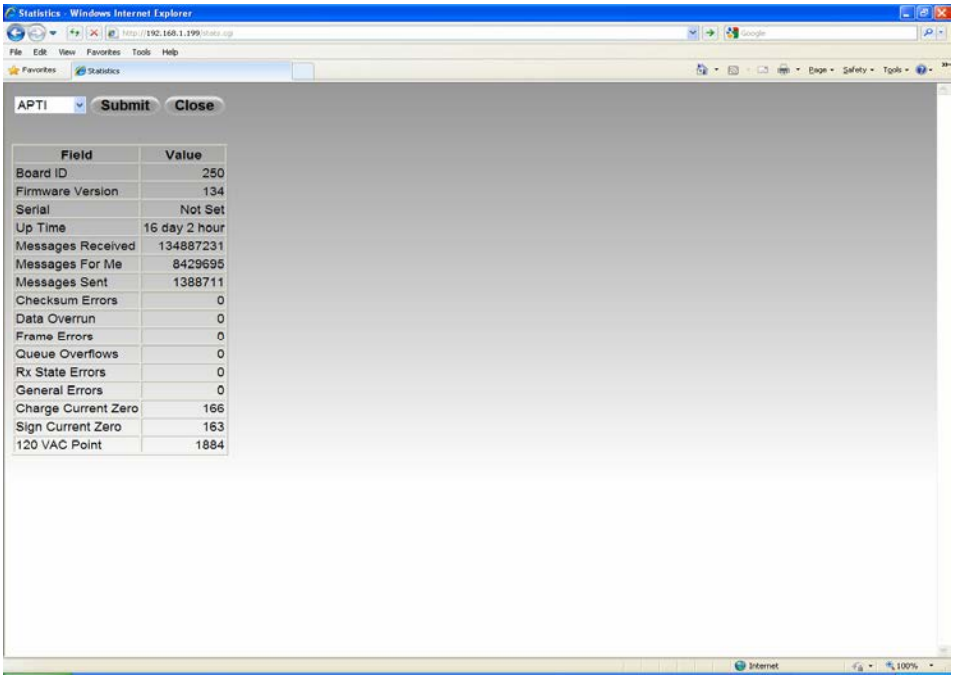
	A	B	C	D	E	F
2	Test	1/1/1970 0:00	invalid	invalid	power recovery	Activated Blank
3	Test	11/29/1999 19:00	invalid	invalid	system	Time set
4	Test	1/1/1970 0:00	invalid	invalid	power recovery	Activated Blank
5	Test	11/29/1999 19:11	invalid	invalid	system	Time set
6	Test	11/29/1999 19:12	invalid	invalid	Factory	Activated Permanent 2
7	Test	11/29/1999 19:16	invalid	invalid	Factory	Activated Permanent 2
8	Test	11/29/1999 20:53	invalid	invalid	system	Power switched off
9	Test	11/29/1999 20:53	invalid	invalid	system	Shutting down
10	Test	1/1/1970 0:00	invalid	invalid	system reset	Activated Permanent 2
11	Test	11/29/1999 19:00	invalid	invalid	system	Time set
12	Test	4/15/2010 6:00	invalid	invalid	system	Voltage 12.47
13	Test	4/15/2010 12:00	invalid	invalid	system	Voltage 12.46
14	Test	4/15/2010 18:00	invalid	invalid	system	Voltage 12.45
15	Test	4/16/2010 7:43	invalid	invalid	system	Entering low voltage lockout at 0
16	Test	4/16/2010 7:43	invalid	invalid	system	Leaving low voltage lockout
17	Test	4/16/2010 12:00	invalid	invalid	system	Voltage 12.43
18	Test	4/16/2010 12:47	invalid	invalid	Factory	Activated Permanent 2
19	Test	4/16/2010 18:00	invalid	invalid	system	Voltage 12.35
20	Test	4/17/2010 0:00	invalid	invalid	system	Voltage 12.34
21	Test	4/17/2010 6:00	invalid	invalid	system	Voltage 12.37
22	Test	4/17/2010 12:00	invalid	invalid	system	Voltage 12.22
23	Test	4/17/2010 18:00	invalid	invalid	system	Voltage 12.30
24	Test	4/18/2010 0:00	invalid	invalid	system	Voltage 12.33
25	Test	4/18/2010 6:00	invalid	invalid	system	Voltage 12.21
26	Test	4/18/2010 12:00	invalid	invalid	system	Voltage 12.17
27	Test	4/18/2010 18:00	invalid	invalid	system	Voltage 12.25
28	Test	4/19/2010 0:00	invalid	invalid	system	Voltage 12.29
29	Test	4/19/2010 6:00	invalid	invalid	system	Voltage 12.16
30	Test	4/19/2010 12:00	invalid	invalid	system	Voltage 12.25
31	Test	4/19/2010 17:02	invalid	invalid	Factory	Activated Permanent 5
32	Test	4/19/2010 17:04	invalid	invalid	Factory	Activated Permanent 2
33	Test	4/19/2010 6:00	invalid	invalid	system	Voltage 12.09
34	Test	4/19/2010 12:00	invalid	invalid	system	Voltage 12.22
35	Test	4/19/2010 18:00	invalid	invalid	system	Voltage 12.07
36	Test	4/20/2010 0:00	invalid	invalid	system	Voltage 12.19
37	Test	4/20/2010 0:57	invalid	invalid	Factory	Activated Blank
38	Test	4/20/2010 0:57	invalid	invalid	Factory	Activated Permanent 2
39	Test	4/20/2010 0:59	invalid	invalid	Factory	Activated Scheduler
40	Test	4/20/2010 0:59	invalid	invalid	Factory	Activated Scheduler
41	Test	4/20/2010 1:00	invalid	invalid	Factory	Activated Permanent 3
42	Test	4/20/2010 1:11	invalid	invalid	Factory	Activated Changeable 5
43	Test	4/20/2010 1:14	invalid	invalid	Factory	Activated Scheduler
44	Test	4/20/2010 1:14	invalid	invalid	Factory	Activated Scheduler
45	Test	4/20/2010 1:23	invalid	invalid	Factory	Activated Blank
46	Test	4/20/2010 1:23	invalid	invalid	Factory	Activated Permanent 2
47	Test	4/20/2010 1:25	invalid	invalid	Factory	Activated Changeable 3
48	Test	4/20/2010 1:27	invalid	invalid	Factory	Activated Changeable 3

13.7 Board Stats

This page allows you to check on any board in the sign for communications, operations, and run time.

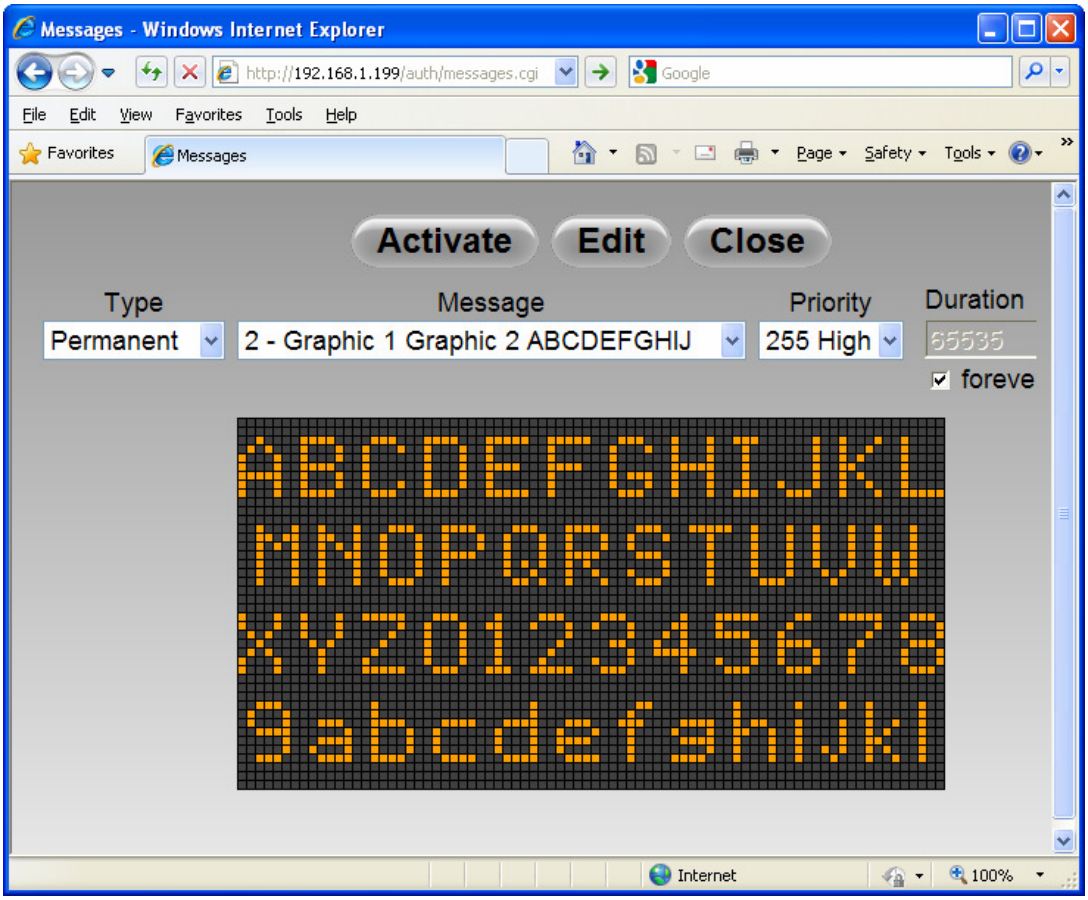


Once you have selected the desired board click on the Submit Button to view status.



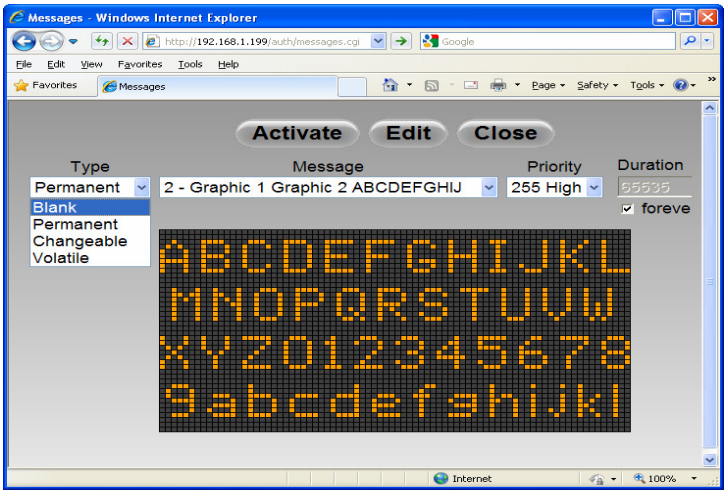
14.0 MESSAGES

You must be logged into the Sign to access the system messages (see chapter 5.0). Once you click on the Message Button the below page will open.



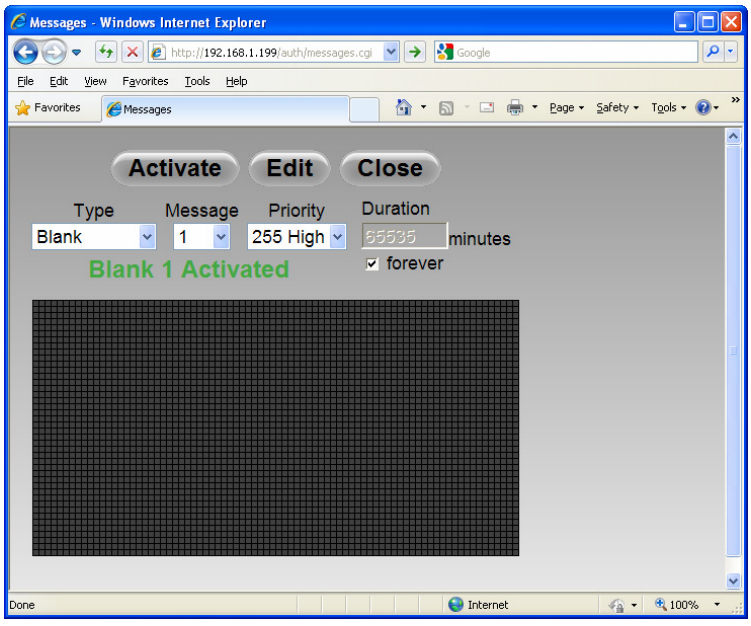
14.1 To Blank the Sign

From dropdown menu in Messages Page select Type: **Blank**.



Click 'Activate' button to blank the sign.
You should see the confirmation on the screen that the blank mode was activated.

The sign will remain blank until the message has been reactivated. The timed message duration feature is not active with this function.



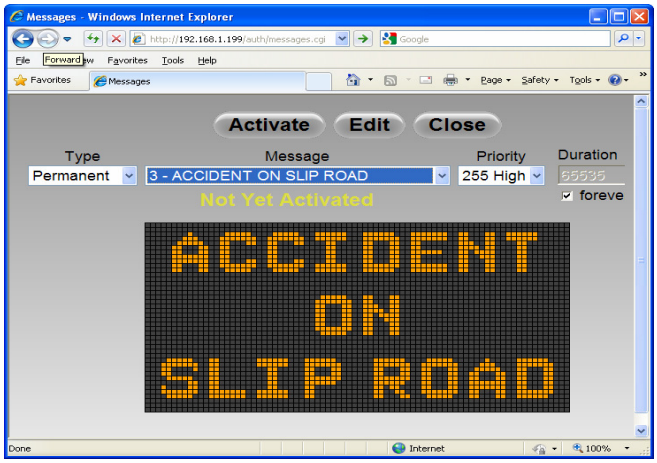
To exit the Message Page and go back to the Main Page, click the 'Close' button.

14.2 Activating A Previously Created Message

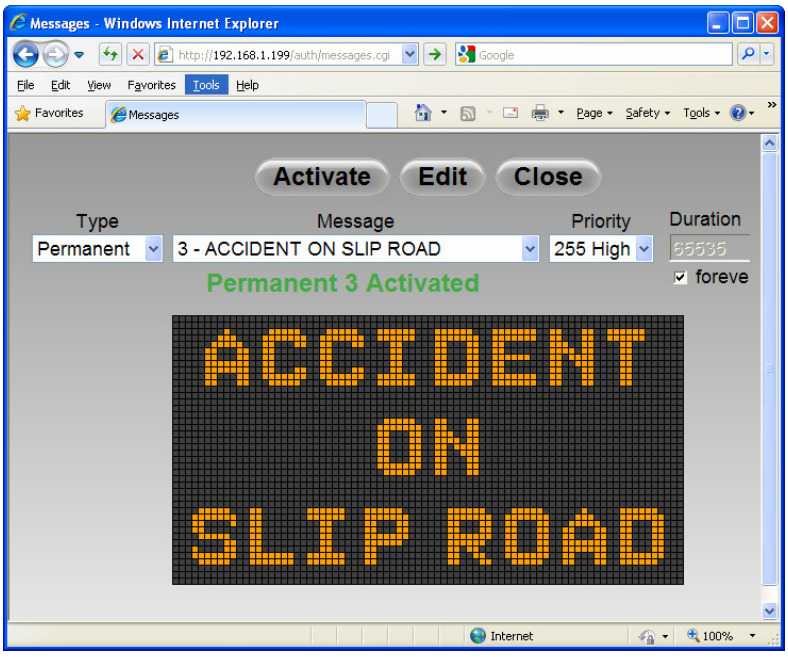
From dropdown menus on Messages Page select a message that you wish to activate:

- Type: Permanent, Changeable, or Volatile.
- Message
- Type Duration. **NOTE: After message is displayed for the specified period of time, sign will go blank until scheduler or new message is activated.**

NOTE: During the activation process the Priority of the message cannot be changed.



Click the 'Activate' button to activate the selected message.



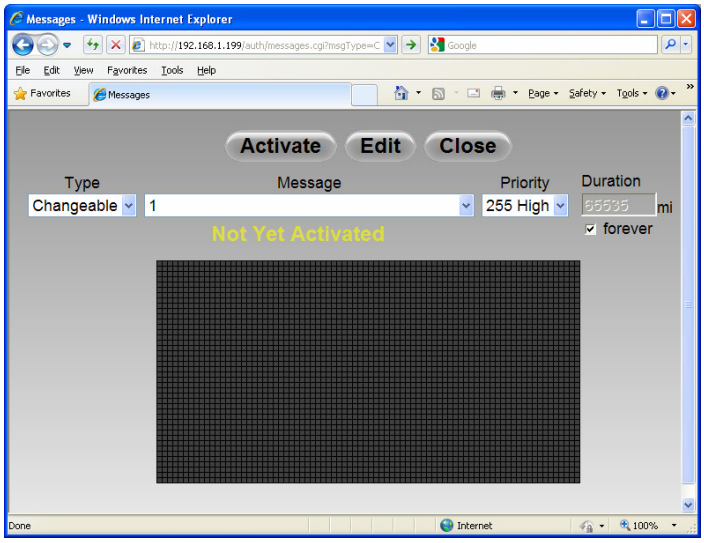
You should see the confirmation on the screen that the message was activated.

To exit the Massages Page back to the Main Page, click on the 'Close' button.

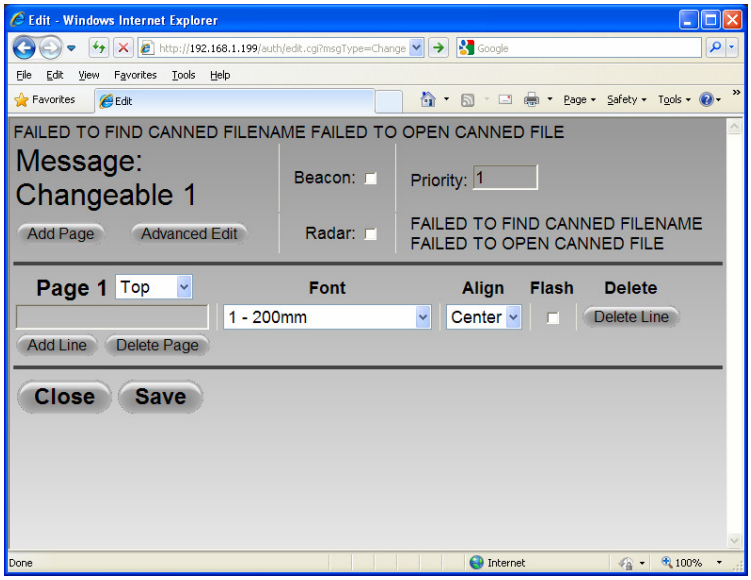
14.3 Creating or Editing a Message

From the dropdown menus on the Messages Page select a changeable or volatile message that you wish to edit. You may also select the next available or any empty slot for a new changeable or volatile message.

- Type: Changeable, or Volatile. **NOTE: Permanent messages are not editable by design.**
- Message



Click 'Edit' button and the Message Edit Page will appear:

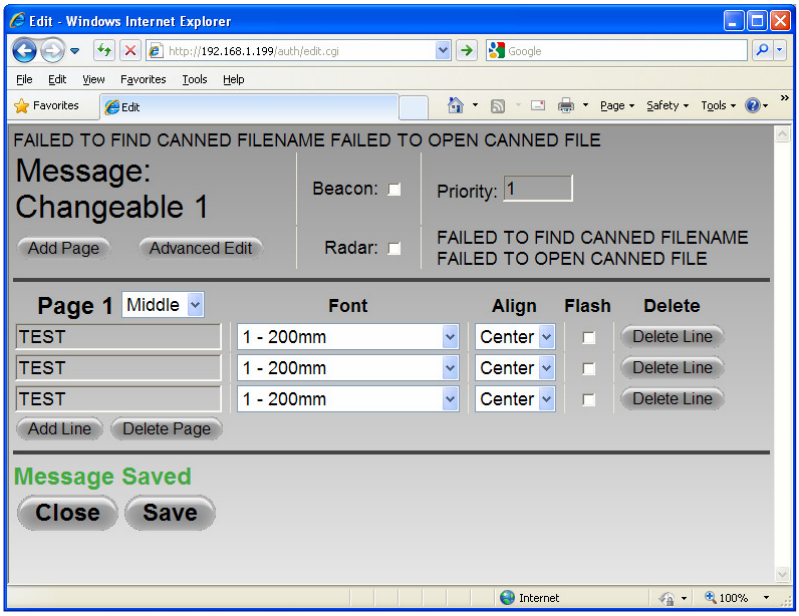


TO COMPOSE OR EDIT A MESSAGE:

- Type your message.
- Select the desired font.
- Use the buttons on the screen to add/delete lines and pages.

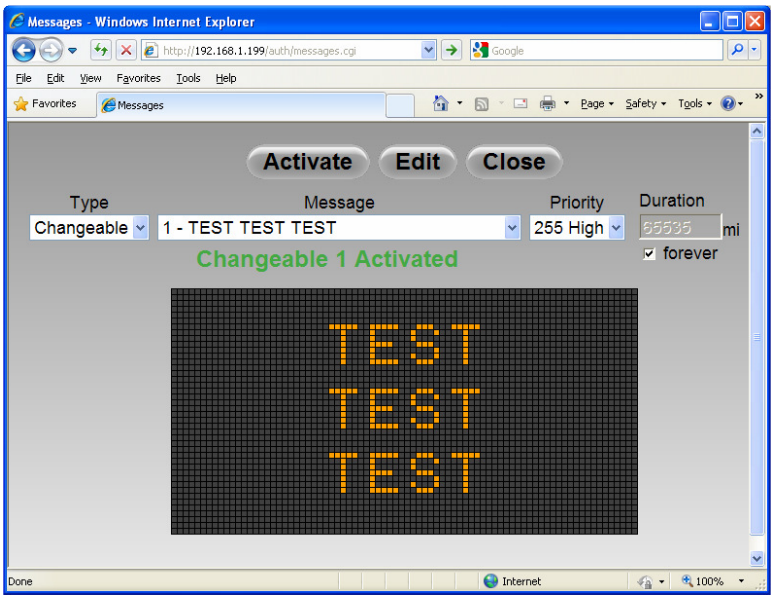
- Select page and line alignments.
- Use check boxes to enable Radar, Beacon and Flash.

NOTE: Beacons must be enabled in order to activate with message. Your unit must be equipped with the Radar option in order to enable the Radar.
Click the 'Save' button to save the message.



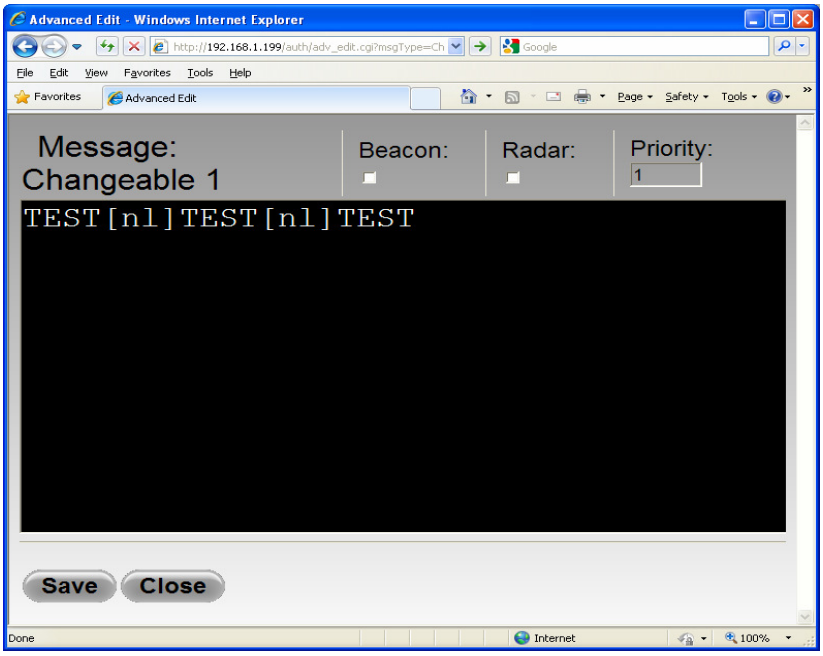
You should see the confirmation on the screen that the message was saved.

NOTE: To exit back to the Messages Page without saving the message click 'Close'.



Click 'Close' to exit the Message Edit Page back to the Messages Page.

If you choose to type in your multi-string message, click 'Advance Edit' button in Message Edit Page. The Advance Message Edit Page will appear:



NOTE: Beacons must be enabled in order to activate with message. Your unit must be equipped with the Radar option in order to enable the Radar.

To exit the Advanced Message Edit Page back to the Messages Page without saving the message click 'Close'.
To exit the Advanced Message Edit Page back to the Messages Page saving the message click 'Save'.

14.4 Font Information

Certain fonts and permanent messages are pre-loaded into sign memory. These fonts and messages cannot be changed or edited unless proper administrative access has been granted.

NOTE: See attached list of permanent messages.

THERE ARE A TOTAL OF 8 ENGLISH FONTS, WHICH THE SIGN IS CAPABLE OF GENERATING:

EU Compliant Fonts – fonts, which meet both character-size requirements, **and** line spacing requirements.
Non-Compliant Fonts – fonts, which only meet character-size requirements. Between character spacing is reduced in order to create more useable space.

Description	Character Height	Pixels	Identifier					
			331	332	333	4260	4280	42100
Tiny Characters	18"	3 x 7		[fo4]	[fo5]			
Narrow Characters	18"	4 x 7		[fo1]	[fo1]			
Standard Characters	18"	5 x 7	[fo1]	[fo2]	[fo2]			
Bold Characters	18"	7 x 7		[fo3]	[fo3]			
Std. w/ extra spaces between characters	18"	5 x 7 W		[fo5]	[fo6]			
Bold w/ extra spaces between characters	18"	7 x 7 W		[fo6]	[fo7]			
Large Characters	30"	6 x 11			[fo4]			
Larger Characters	55"	7 x 20			[fo8]			
Largest Characters	55"	9 x 20			[fo9]			
Graphic Font	18"	14 x 7	[fo2]	[fo7]	[fo10]			
Small Characters	200mm	5 x 7				[fo1],[fo5]	[fo1],[fo5]	[fo1],[fo5]
Medium Characters	240mm	5 x 7				[fo2],[fo6]	[fo2],[fo6]	[fo2],[fo6]
Large Characters	320mm	5 x 7				[fo3],[fo7]	[fo3],[fo7]	[fo3],[fo7]
Largest Characters	400mm	5 x 7				[fo4],[fo8]	[fo4],[fo8]	[fo4],[fo8]

15.0 RADAR Features

INTRODUCTION TO RADAR OPTION
If you have equipped your units with the optional Radar, the message board can also work as a speed trailer. The Radar speed can be continuously displayed, or only shown when a passing vehicle surpasses the threshold speed set on the radar option page. The radar can also be set to not display if a maximum speed is surpassed.

USING THE RADAR OPTION
To use the Radar feature, first select the primary changeable message you plan on displaying. Select the message edit feature. From the message edit screen select the button to activate the radar option.

Second, select the Radar button from the main menu. From this screen, you can set the radar threshold. This is the speed that will set off the radar, and force the message board to change displays. From this screen, you will also set the High threshold. A vehicle passing the sign at a speed above this threshold will be ignored.

Next, you will select the message number you want displayed once the radar is triggered by a vehicle exceeding the threshold.

CREATING A MESSAGE THAT WILL DISPLAY THE RADAR SPEED
If you choose to create a changeable message that shows the vehicle speed, this is possible.

From the create message screen, type the text you wish to use. At the point you want to insert the speed type, insert the following into the message editor [F06 3] or [F05 3]. The F06 will display the speed in MPH; The F05 will display the speed in KPH. The "3" denotes the number of character spaces you want to use for speed display. "3" is the minimum required.

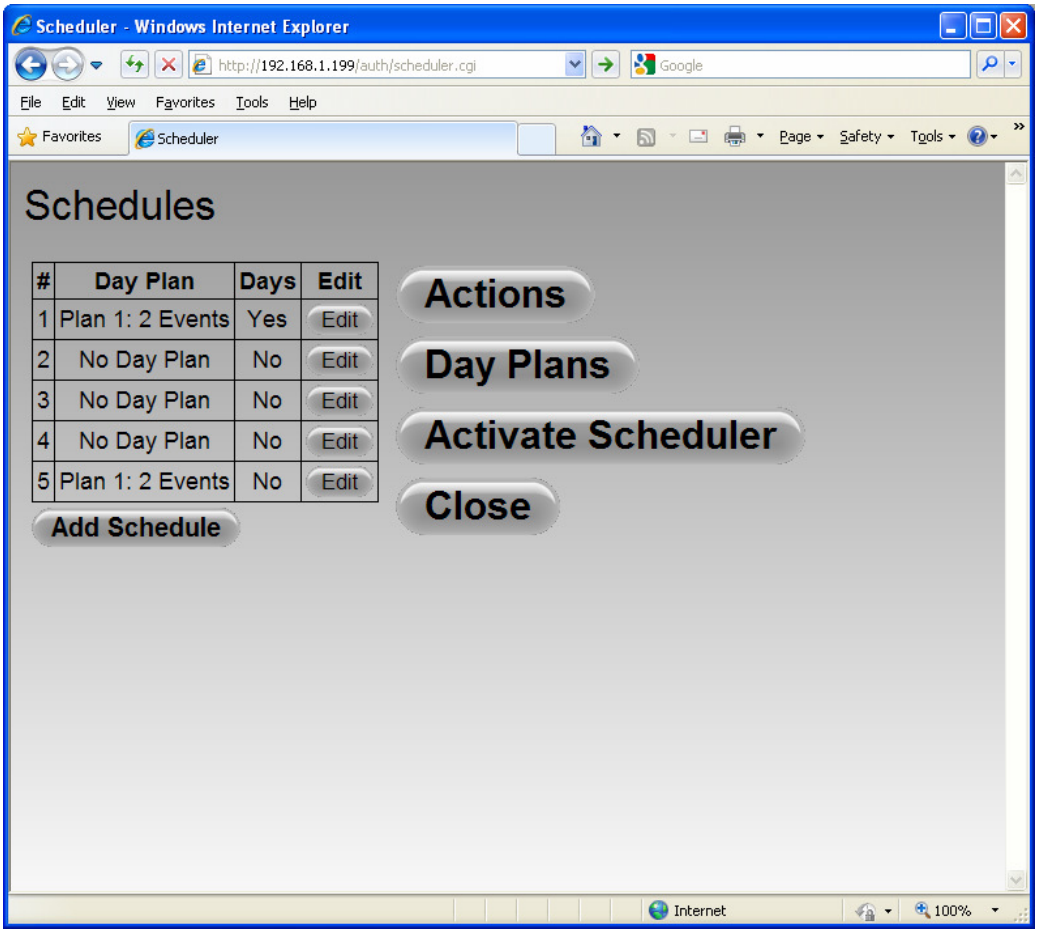
16.0 Global Positioning System

If you have purchased the GPS option for your Message board, you will see a Longitude and Latitude displayed on the AmSigWeb1.0 Main Page. If the display reads 'not installed', you have not equipped your units with GPS. Once you have a GPS fix and are reading this data on the Main Page, you may also view the location of the device using Goggle Maps. To do this, the computer you are using must be connected to the Internet. Once the connection is established, click on the 

button on the AmSigWeb3.0 Main Page. A Google Map Page will open in the new browser window and you will be able to see the location of the remote device.

17.0 SCHEDULER

To open the scheduler page click on the SCHEDULER Button and the below page will open.

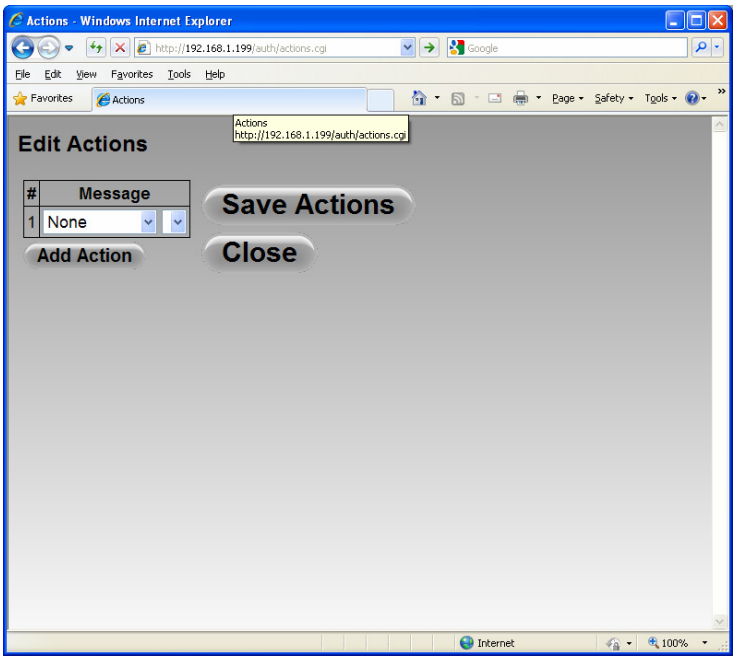


To set up the Scheduler you must do the following:

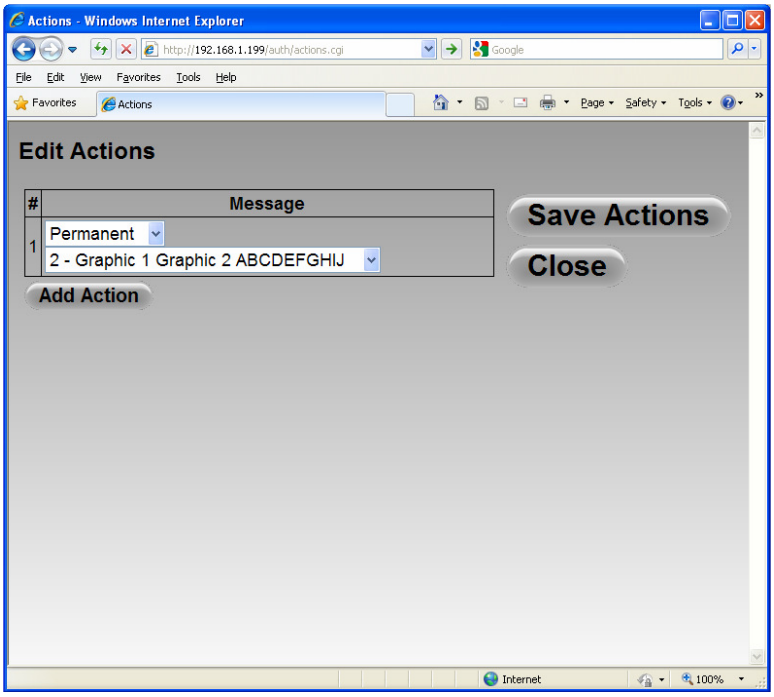
1. Select Actions. (These are the messages that you would like to display.)
2. Configure Day Plans (Select the times the Actions occur.)
3. Set the days the schedule is to operate.

Once the schedule has been set up and is activated ANY change to the Message Activated on the device WILL HALT the Scheduler and unless reactivated no further actions will occur automatically.

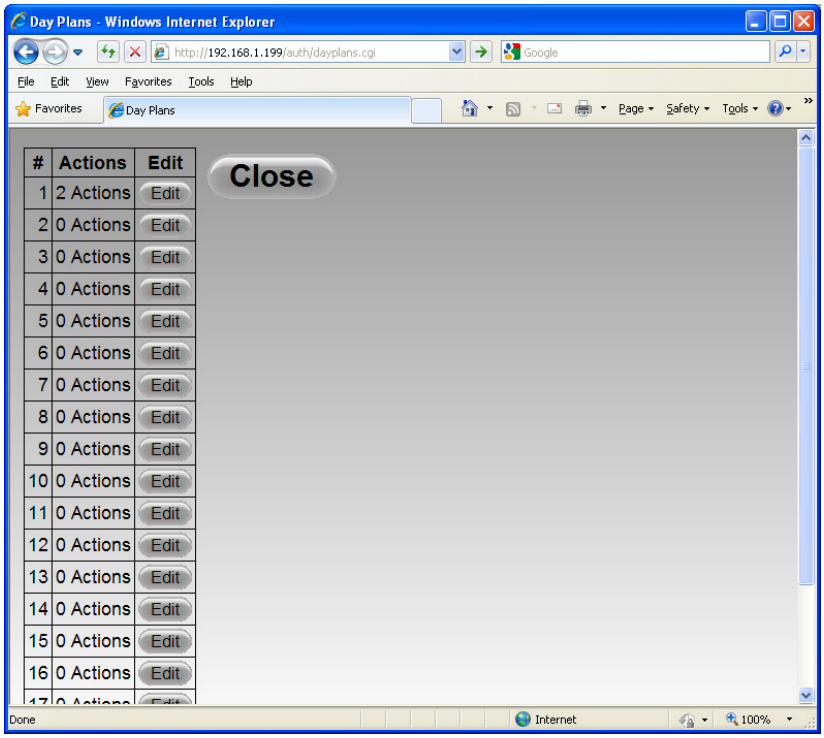
Actions Page:

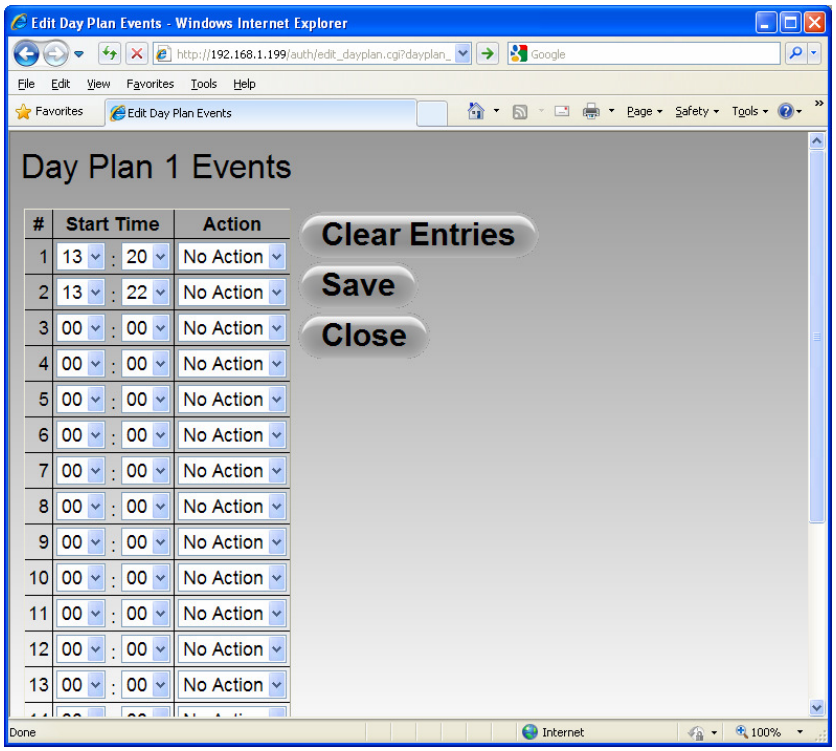


Select the Add Action button and ALL the messages (permanent, changeable, and volatile) saved to the device will be listed. Just select the desired message(s) to be included for this day plan and click the SAVE button. Click on the Close button when finished.



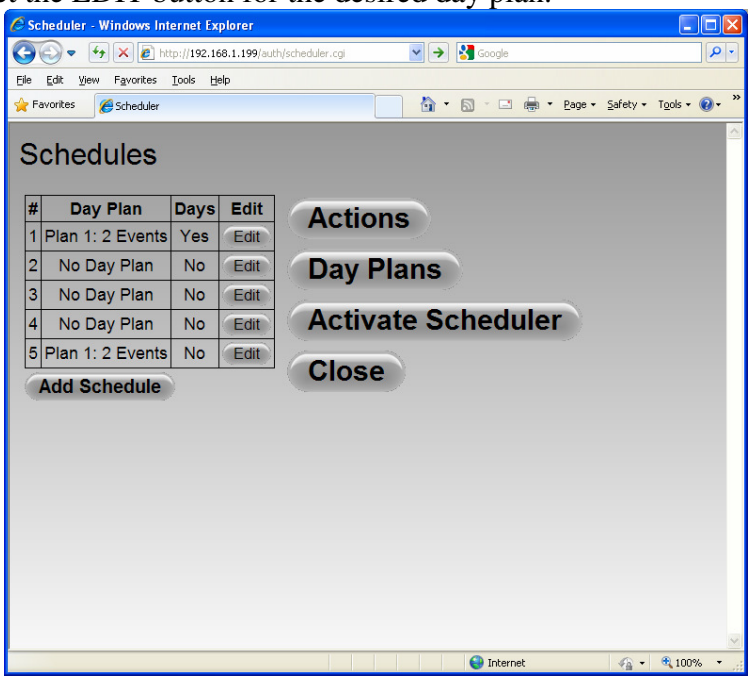
Once the Actions have been selected click on the Day Plans button and the list of all the day plans will open. Select the desired day plans edit button to configure it.

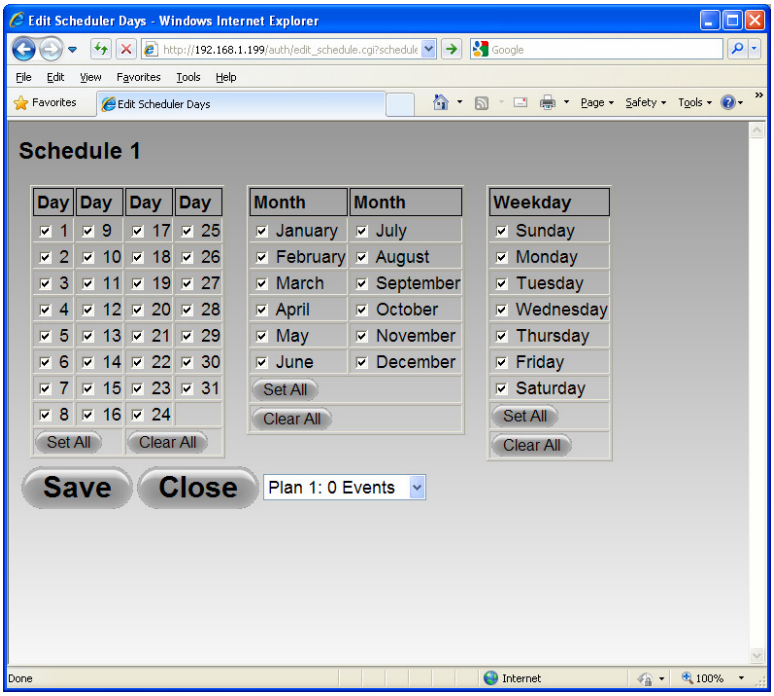




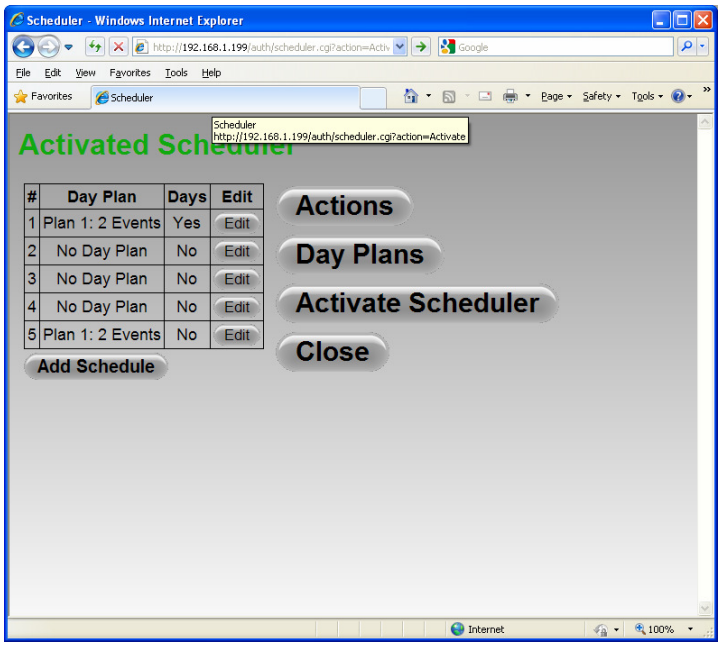
Enter the times required and the action to take place. Once you have completed all the required actions and times click on the SAVE button and then the CLOSE button to return to the Scheduler Page.

Next step is to select the EDIT button for the desired day plan.

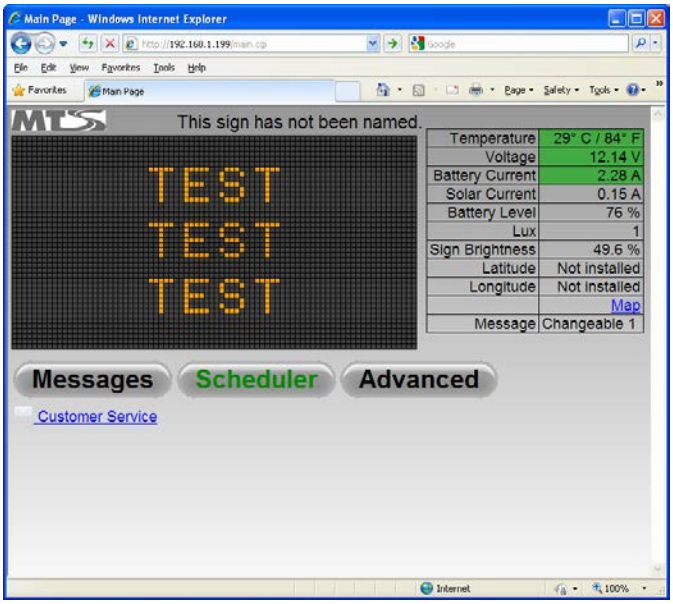




Select the Date (day), the Month, and the day of the week. All three of them must intersect for the scheduler to activate. The scheduler will prioritize more specific schedules over less specific. As an example if all days, months and weekdays are selected, the schedule will have a lower priority then if just Mondays in April for every day. If any of the sections are left empty the Scheduler page will say No under days and will not run. Once you have saved the selected fields by clicking on the SAVE button you can click on the CLOSE button to exit.

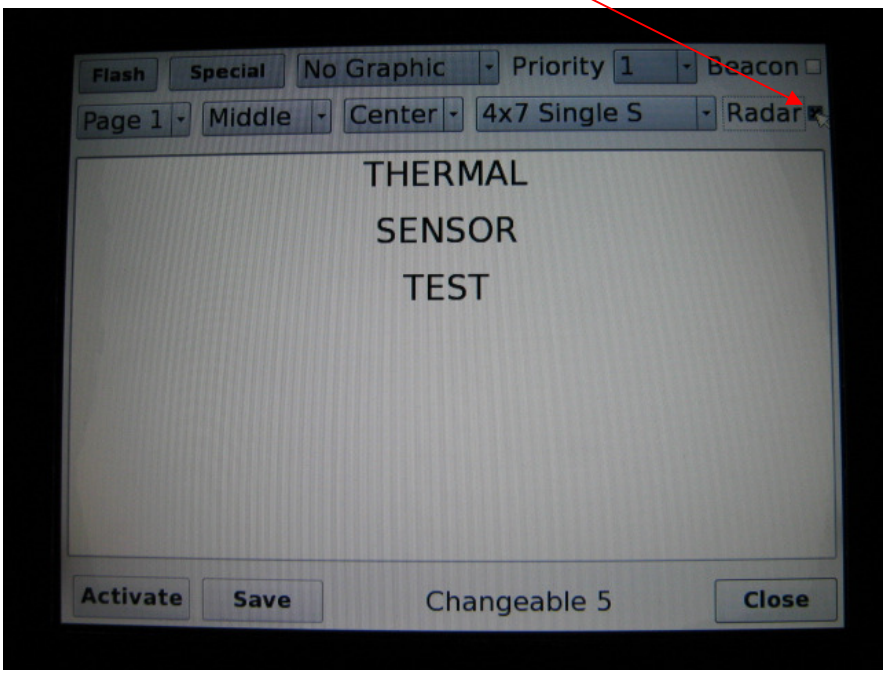


Select Activate Scheduler to activate the scheduler. Once the Scheduler is activated on the Main Page you should see the Scheduler Button turn GREEN. This indicates that the scheduler is running.

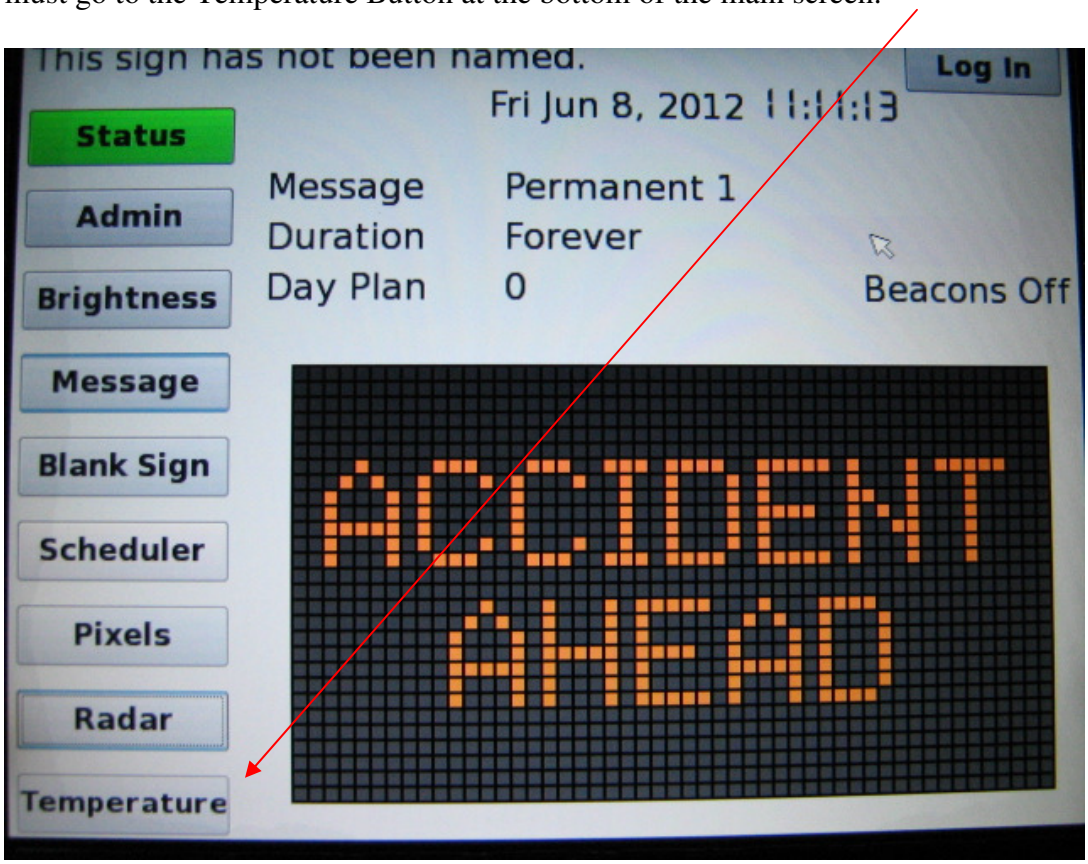


18.0Temperature Sensor (Option):

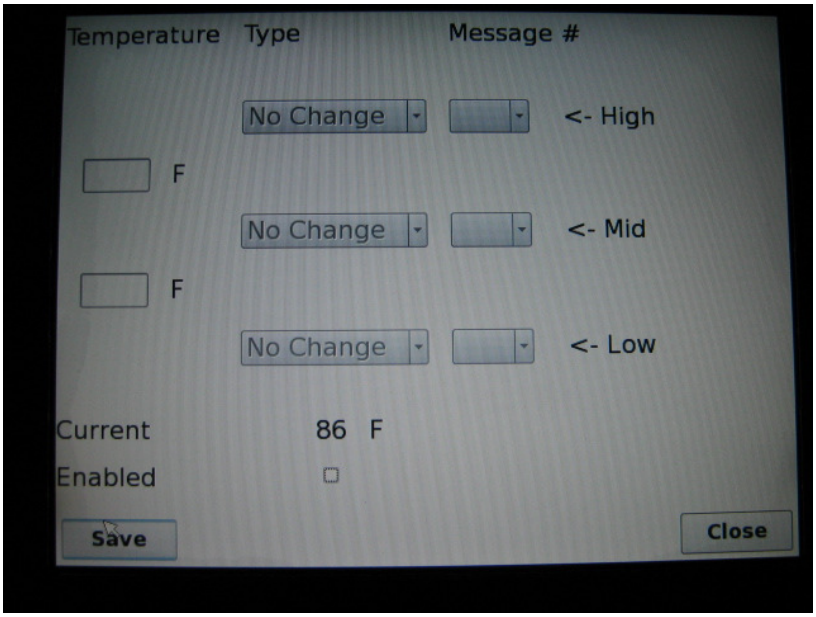
This option allows an external sensor to input temperature data to allow the software to over-ride the activated message. The software allows a high and low temperature setting and allows up to three different over-ride messages: a High Temp, Mid Temp, and Low Temp. This option must have the radar box selected on the activated message.



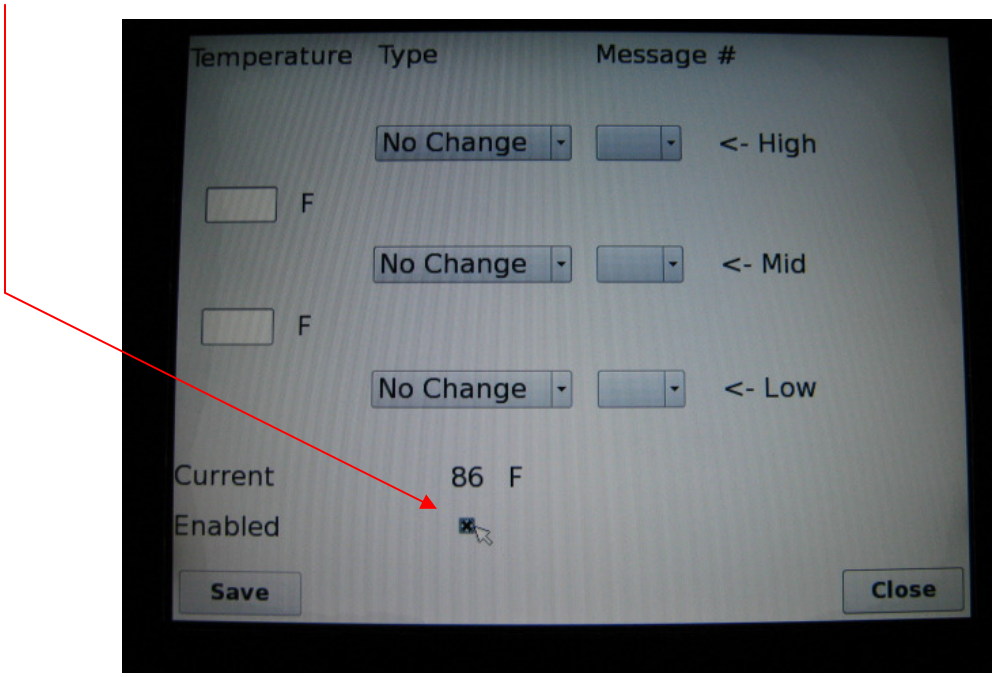
Once the activated message has been set up for the radar to be active, saved , and activated you must go to the Temperature Button at the bottom of the main screen.



The Temperature Page opens and allows you to set up the option as you need.



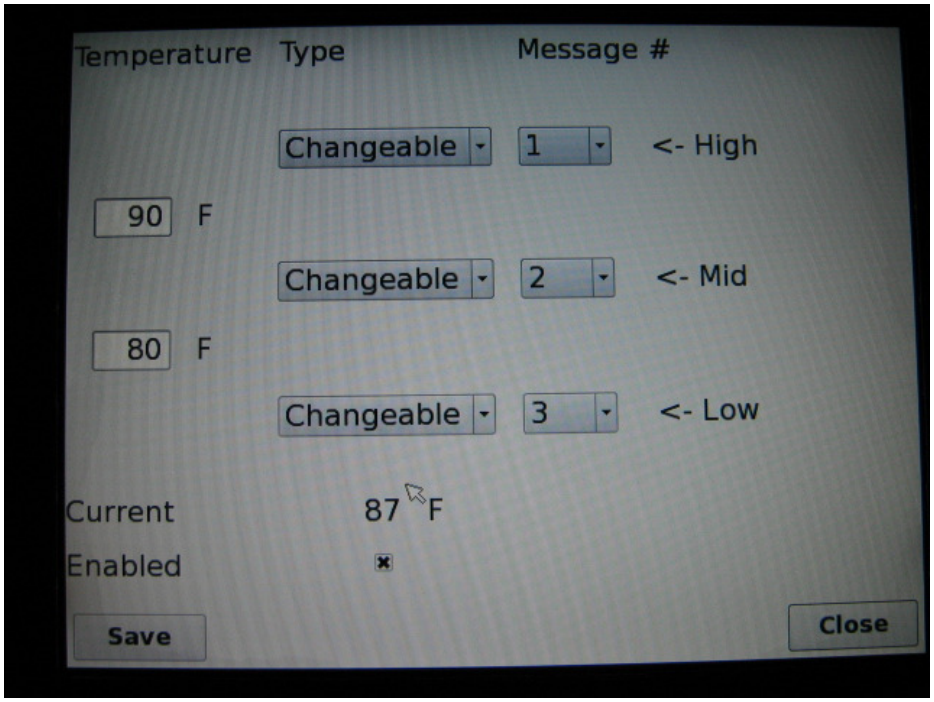
The first thing to do is to click on the Enabled Box. (All fields will be disabled (grayed out) until you have clicked on the box.)



The upper Temperature field MUST always be the higher of the two settings. Once the fields are set you can select the desired messages to be displayed when temperature sensor over-rides activated message.

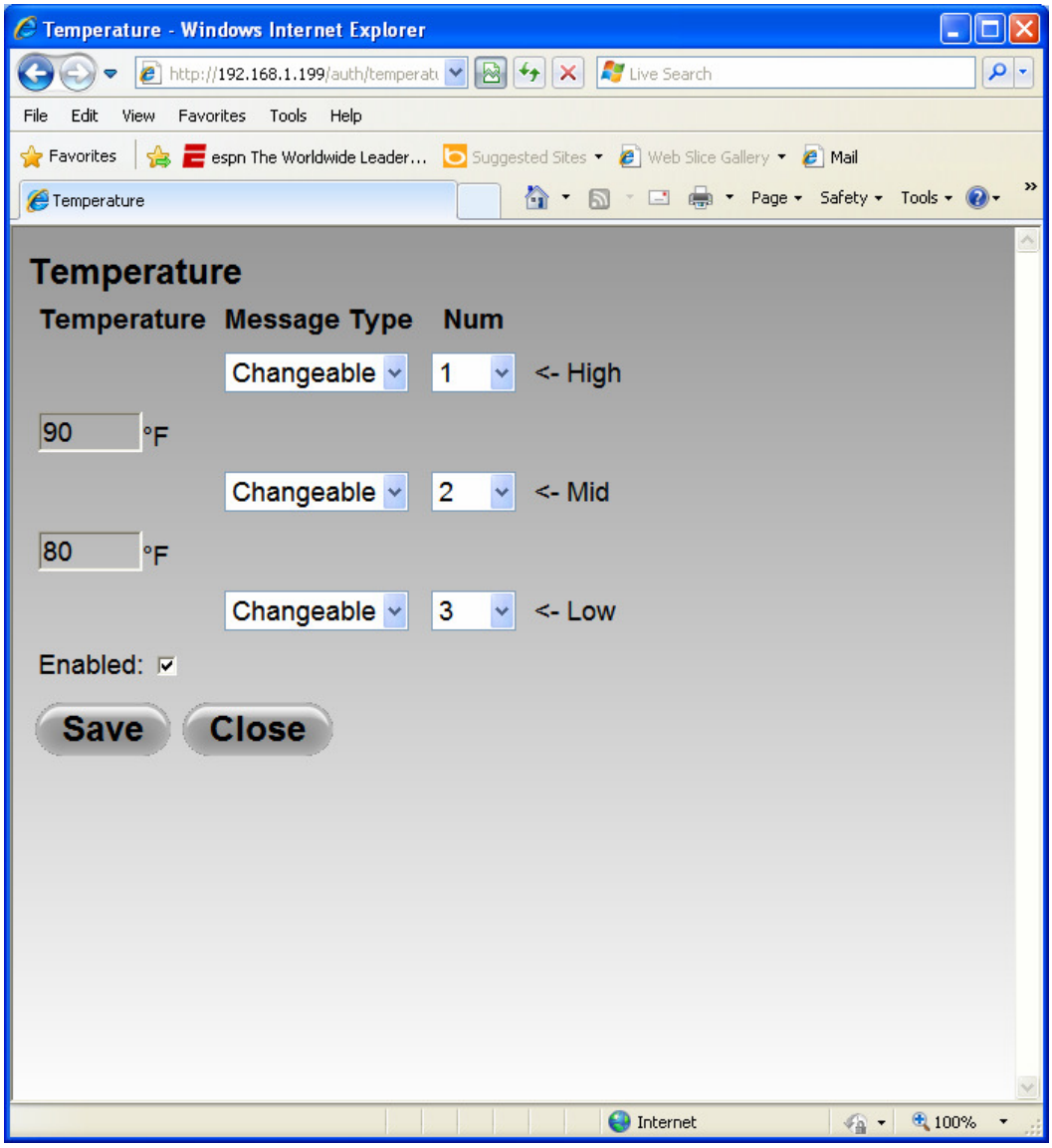
(NOTE: The over-ride messages WILL NOT be shown on the WYSIWYG on either the web page or the GUI.)

The HIGH Message will over-ride only when the ambient air temperature exceeds the high temp setting. The MID Message will over-ride when the ambient temperature is between the High and Low Temp settings. The LOW message will only over-ride when the ambient air temperature is below the low setting. **(You need to create all the changeable messages on the Message Page before selecting them on this page.)**



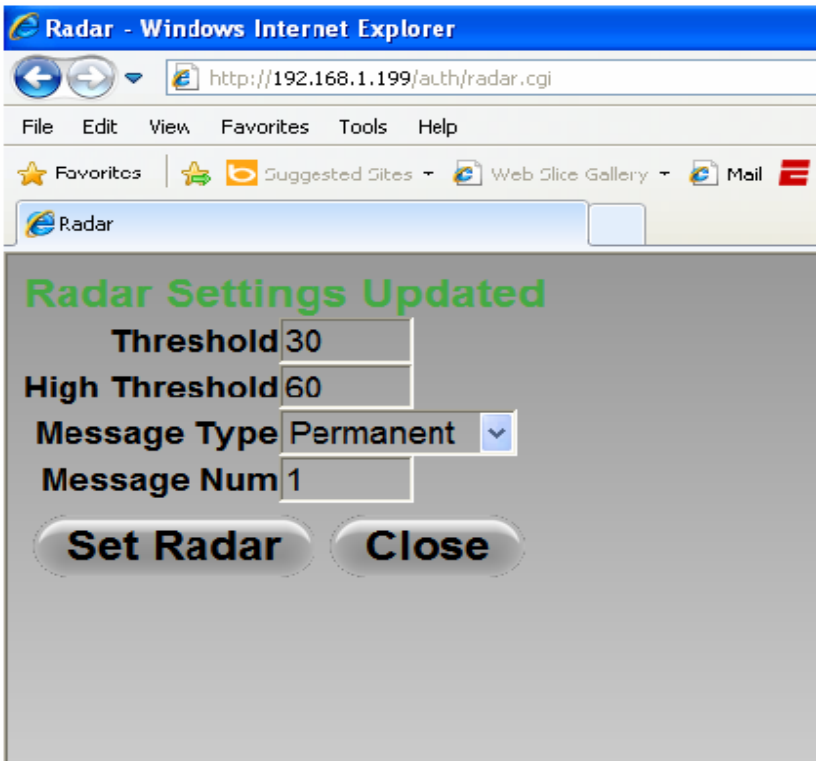
You may use the NO CHANGE message to allow the sign to continue displaying the current activated message until the conditions you've selected are met. **(EXAMPLE: Low temp is set to 32 degrees and you wish to have a message over-ride to indicate that icy roads ahead. You can then select the HIGH and MID message to NO CHANGE.)** The radar module will also be able to function normally with the NO CHANGE message selected otherwise it will be over-ridden by the temperature sensor.

The web page feature of the sign also allows you to set up the temperature sensor remotely. Below is a capture of what the page looks like and can be accessed by clicking on the ADVANCED Button on the main web page.



19.0 Radar Option Page

This page allows the user to configure the radar option if one is installed onto the sign.



Threshold: This is set to the speed that you want the radar to trigger the sign into displaying the Radar Override Message.

High Threshold: This is the top speed you wish the radar to trigger. Any speeds in excess of this will NOT trigger the override message.

Message Type: This box allows the user to select what type of message stored in the message base to be displayed when the radar is triggered.

Message Num: This is the number of the message to be displayed. i.e. Permanent 100, Changeable 12.

Once the user has all the fields populated as desired press the Set Radar Button and the information is forwarded to the sign and saved. An indication of green lettering will appear saying that the Radar Setting Updated above the Threshold field.

To exit the page click on the Close Button and you will be taken to the Advanced Page.

20.0 Disclaimers

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