



# User Manual

V1.03

August 31, 2020

WaveWare Technologies, Inc.

## Contents

List of Figures .....	4
MARS Server Specifications .....	7
Overview .....	7
Base Operating Mode .....	10
Data Inputs.....	11
Data Outputs.....	11
Data Connections.....	11
Event Processing Operating Mode.....	11
Glossary of Terms.....	12
Installation of MARS.....	16
Configure Static IP Address.....	16
Discover the MARS Using WaveWare Discover and Reset Tool .....	16
Log Into MARS.....	18
Configuration of MARS Server .....	20
Setup .....	22
General Settings.....	22

E-mail Input Server.....	28
E-mail Output.....	30
Rules and Filters.....	31
LED Display.....	33
Mass Notification Msgs.....	35
Messaging Groups.....	36
Predefined Messages.....	38
Test Data Outputs.....	38
System Events <sup>EP</sup> .....	40
Utilities.....	41
Inputs/Outputs.....	44
Data Inputs.....	44
Data Outputs.....	48
Data Connections.....	50
Messaging Client.....	51
Facility.....	53
Rooms <sup>EP</sup> .....	53
Residents <sup>EP</sup> .....	54
Zones <sup>EP</sup> .....	55
Wireless Receivers.....	55
LED Displays.....	59
Digital Alert Viewers.....	60
Audio Gateways <sup>EP</sup> .....	62
Audio Files <sup>EP</sup> .....	63
Alert Sources.....	64
Alert Types <sup>EP</sup> .....	64
WaveTrac Sensors <sup>EP</sup> .....	66
Inovonics Sensors.....	68

Text Input Alerts <sup>EP</sup> .....	71
Alert Recipients.....	73
User Accounts .....	73
Avatars .....	76
Pagers.....	77
Alert Client .....	78
Zone Assignments <sup>EP</sup> .....	78
Zones <sup>EP</sup> .....	78
Zones/WaveTrac Sensors <sup>EP</sup> .....	80
Zones/Inovonics Sensors <sup>EP</sup> .....	81
Zones/ Text Input Alerts <sup>EP</sup> .....	83
Zones/Residents <sup>EP</sup> .....	83
Zones/Rooms <sup>EP</sup> .....	83
Zones/User Accounts <sup>EP</sup> .....	83
Zones/Wireless Receivers <sup>EP</sup> .....	83
Zones/Data Outputs <sup>EP</sup> .....	84
Zones/LED Displays <sup>EP</sup> .....	84
Zones/Backup Zones <sup>EP</sup> .....	84
Schedules <sup>EP</sup> .....	84
Reports.....	87
Report Templates.....	87
Scheduled Reports .....	91
Generate Reports.....	92
Appendices.....	93
Appendix A – Troubleshooting Inability to Discover MARS using the WaveWare Discover and Reset Tool .....	93
Appendix B - TAP Output Processing Flow Chart.....	94
Appendix C - Adjusting the MARS Boot Up Method.....	95
Appendix D – Remote Support Session .....	96

Appendix E – Using MARS with Inovonics and MARS Alerts App .....	96
Inovonics Interface Event Processing Enabled Configuration .....	96
Inovonics User Experience with Event Processing Enabled .....	97
Appendix F – HTTP Data Input Protocol.....	97
Appendix G - Honeywell Notifier NWS-3 Web Server Fire Panel Integration.....	98
Update History .....	99

## List of Figures

Figure 1 - MARS System Architecture .....	10
Figure 2 – WaveWare Discover and Reset Tool - Discovery .....	17
Figure 3 – WaveWare Discover and Reset Tool - Configure .....	17
Figure 4 – MARS Main Page .....	19
Figure 5 – General Settings Configuration when Event Processing is Disabled.....	23
Figure 6 - General Settings Configuration when Event Processing is Enabled .....	23
Figure 7 - Update Registration Key .....	28
Figure 8 - E-mail Input Server Configuration .....	29
Figure 9 - E-mail Output Configuration.....	30
Figure 10 - Rules and Filters Configuration.....	31
Figure 11 - LED Display Configuration.....	33
Figure 12 – Mass Notification Messages Configuration .....	35
Figure 13 - Messaging Groups Configuration .....	36
Figure 14- Messaging Group/Recipients Configuration.....	37
Figure 15 - Messaging Group Selector .....	37
Figure 16 - Predefined Messages Configuration.....	38
Figure 17 – Output Test Configuration .....	39
Figure 18 - System Events Configuration .....	40
Figure 19 - Utilities with Event Processing Disabled .....	41
Figure 20 - Utilities with Event Processing Enabled.....	42
Figure 21 - Data I/O Log .....	43

Figure 22 - Data I/O Log (Copy/Paste Friendly) .....	44
Figure 23 - Data Inputs Configuration.....	45
Figure 24 - Add New Row Popup .....	46
Figure 25 - Data Outputs Configuration.....	48
Figure 26 - Data Connections Configuration.....	51
Figure 27 - Messaging Client.....	52
Figure 28 – Rooms Configuration .....	53
Figure 29 – Residents Configuration .....	54
Figure 30 – Wireless Receivers Configuration with Event Processing Enabled .....	56
Figure 31 - Wireless Receivers Configuration with Event Processing Disabled .....	56
Figure 32 – LED Displays Configuration .....	59
Figure 33 - Digital Alert Viewers Configuration .....	61
Figure 34 – Audio Gateway Configuration.....	62
Figure 35 – Audio Files Configuration .....	63
Figure 36 - Audio File Selection.....	64
Figure 37 – Alert Types Configuration .....	65
Figure 38 – WaveTrac Sensors Configuration .....	66
Figure 39 - Inovonics Sensors Configuration.....	69
Figure 40 – Text Input Alerts Configuration.....	71
Figure 41 - User Accounts Configuration when Event Processing is Enabled.....	73
Figure 42 - User Accounts Configuration when Event Processing is Disabled.....	74
Figure 43 - Pagers Configuration.....	77
Figure 44 - Zones Configuration.....	79
Figure 45 - Zones/WaveTrac Sensors Configuration.....	80
Figure 46 - Assignment to a Zone .....	81
Figure 47 - Zones/Inovonics Sensors Configuration .....	82
Figure 48 - Assignment to Zone with Filtering.....	82
Figure 49 - Alert Processing Schedules Configuration .....	85

Figure 50 - Alert Processing Schedule Configuration - Default.....	86
Figure 51 - Alert Processing Schedule Configuration - Two Rows .....	86
Figure 52 - Report Templates Configuration .....	87
Figure 53 - Report Template Configuration .....	89
Figure 54 - Test Template Example Report.....	90
Figure 55 - Scheduled Reports Configuration .....	91
Figure 56 - Report Generator.....	92
Figure 57 - General Settings System Configuration .....	94



## MARS Server Specifications

- Intel NUC computer, with an AC/DC power adapter
- Linux operating system
- 8 GB RAM
- 80 GB solid state drive
- Ethernet port
- 4 USB ports
- Belkin USB-to-Serial Portable Adapter, as required, per serial port connection
- MySQL database
- Apache web server

## Overview

The WaveWare MARS (Mobile Alert Response System) is designed to perform alert detection, alert event processing, alert annunciation, logging, and reporting. MARS uses serial port and Ethernet

communications to perform these functions, as well as a web server, Android app, iOS app and various methods of alert annunciation. In addition, MARS can perform protocol conversion, data filtering, data translation, data output splitting, and data input combining.

MARS is configured via a web browser.

MARS data inputs can include the following:

- Alert messages via serial port and/or Ethernet , using a variety of protocols, including:
  - COMP1
  - COMP2
  - Inovonics central receiver
  - Messaging Client (browser based messaging)
  - SMTP
  - TAP
  - HTTP
  - R5000 (Rauland Responder™ 5000)

MARS can be configured to detect alert activation using the above types of data inputs, and also using the following methods:

- WaveTrac sensor related events delivered through WaveTrac Tracking/Control devices, including proximity, wander proximity, caregiver call, and exit risk
- Contact closure events at WaveTrac Tracking/Control devices

MARS can output information via the following methods:

- MARS Response App (Android and iOS)
- Alert Client (browser based alerting)
- Digital TV, using HDMI port and the Digital Alert Viewer (DAV) protocol
- On-Site Radio Pagers, using a radio paging system, and Ethernet or serial port protocols, including:
  - TAP
  - COMP2
- E-mail
- Adaptive LED display model 4080 RGB MNS, via Ethernet



MARS reports can be delivered via schedule or generated manually. A MySQL based third party reports API is also available.

MARS has two main operating modes: a Base mode, and a Base Mode plus Event Processing Mode (See Fig. 1 below). The Base mode of operation includes:

- Device drivers (interface protocols)
- Protocol conversion functions
- Data logging

The Event Processing Mode includes all Base Mode functions, plus:

- Alert event life cycle processing functions
- Zone based alert notification routing
- Alert escalation notification routing
- Schedule based alert notification routing

# WaveWare MARS System Architecture

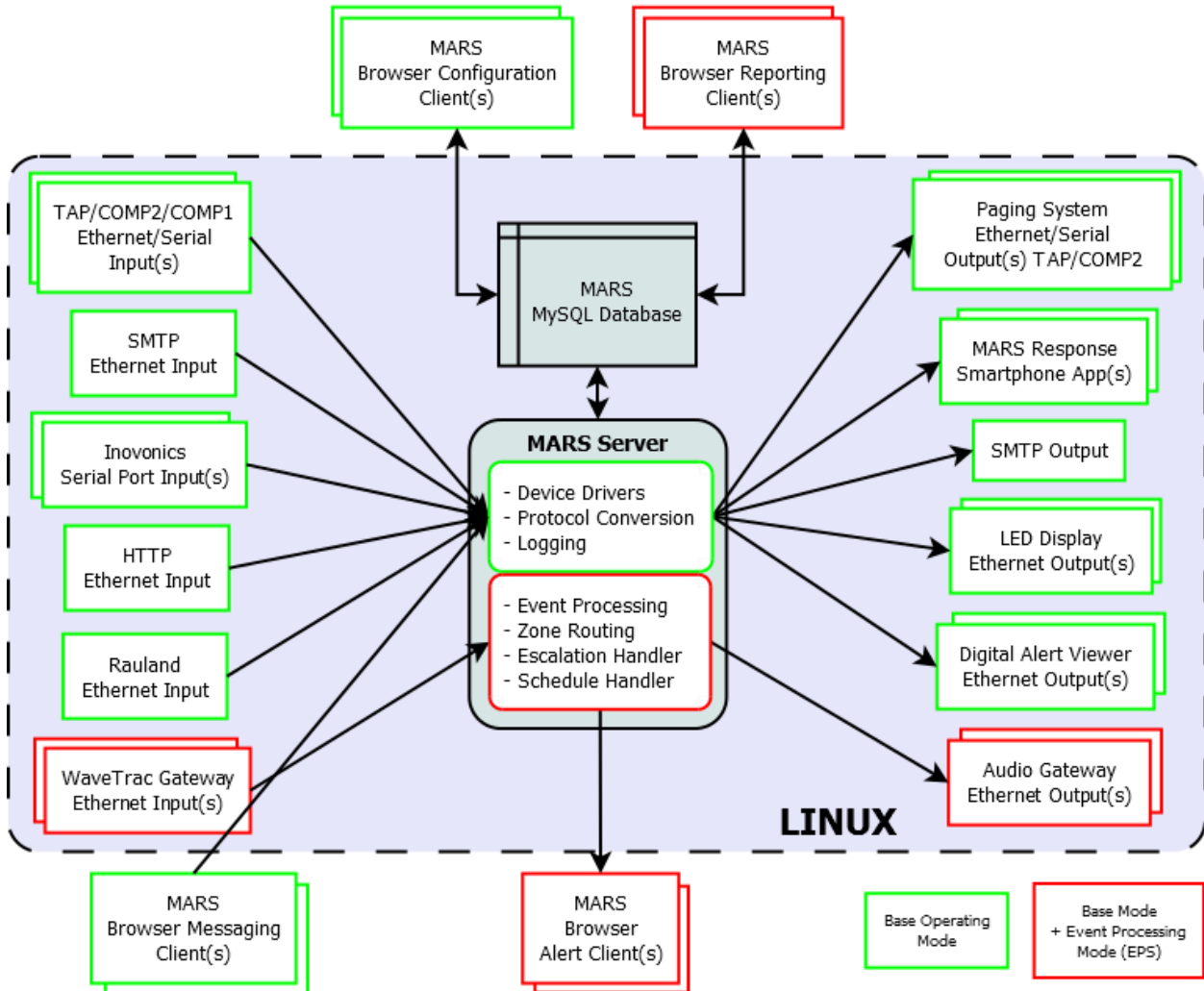


Figure 1 - MARS System Architecture

## Base Operating Mode

Configuration of the MARS Base Mode of operation routing consists of defining the following:

- Data Inputs
- Data Outputs
- Data Connections

Note that any MARS operations require the definition of the appropriate Data Connections, with each Data Connection associated with the appropriate Data Input and Data Output. Note that the Data Input and Data Output relationships are defined by the Data Connections, which can create one-to-one, one-to-many, many-to-one, and many-to-many data processing relationships.

## Data Inputs

Data Inputs define how to monitor for alerts in incoming data streams, using a variety of protocols and methods. Two specialized and protected Data Input types are:

- Event Processing System – The MARS Event Processing System, when enabled, can act as a Data Input as it can generate specific types of system level alerts, including:
  - Caregiver call signal from a WaveTrac sensor
  - Proximity detection event for either WaveTrac or Inovonics sensors
  - Wander Proximity detection event for WaveTrac sensors assigned Wander class monitoring
  - Exit Risk detection event for WaveTrac sensors assigned Wander class monitoring
  - Maintenance class alerts, such as low battery on Inovonics and WaveTrac sensors, and tamper on Inovonics sensors
- Messaging Client – The MARS browser based Messaging Client can act as a Data Input. The population of the Messaging Client Recipients list is dependent upon how the Data Outputs and Data Connections are configured into the system.

## Data Outputs

Data Outputs define how to deliver alerts to outbound data streams, using a variety of protocols and methods. A specialized and protected Data Output type is the Event Processing System, where alert events detected from a particular Data Output can be routed to the Event Processing System for further processing and routing.

## Data Connections

Data Connections both associate Data Inputs with Data Outputs and they define how detected alerts should be routed to the appropriate Data Outputs. Note that any MARS operations require the definition of the appropriate Data Connections, with each Data Connection associated with the appropriate Data Input and Data Output.

## Event Processing Operating Mode

The Event Processing mode of operation requires configuration of the Base Operating Mode, including defining one or more Data Connections that use the Event Processing System Data Output, to ensure alert data gets delivered to the Event Processing System for alert processing and routing.

The system configuration items associated with the Event Processing System are marked in this manual with an <sup>EP</sup> superscript.

## Glossary of Terms

<b>Sensor</b>	A device designed to sense alert conditions or specific environmental conditions and interface to a sensor monitoring infrastructure. Examples are an Inovonics sensor or a WaveTrac sensor.
<b>Sensor Monitoring Infrastructure</b>	A system designed to collect and route sensor information to a head-end system for processing of the sensor information. Examples are Inovonics repeater networks and WaveTrac receiver networks.
<b>Data Input</b>	A feature that allows monitoring and processing alert messages generated by typical alert interface protocols, such as TAP, COMP2, and COMP1, where the alert contains an address value and a message. The Data Input alert messages are processed to try to detect both event activation and event cancellation conditions.
<b>Data Output</b>	A feature that allows output of alerts using various protocols
<b>Data Connection</b>	A relationship between a Data Input and a Data Output, such that alerts arriving on a Data Input can be routed to the associated Data Output defined in the Data Connection.
<b>Event Activation</b>	A condition detected in Data Input alert messages that allows the system to mark that alert message as triggering an Event Activation condition. All Data Input alert messages are, by default, treated as Event Activation conditions
<b>Event Cancellation</b>	A condition detected in Data Input alert messages that allows the system to mark that alert message as triggering either an Event Cancellation condition. Some input protocols provide Event Cancellation signaling, while others may require use of the Cancel Prefix or Cancel Suffix method defined in Data Input configuration.
<b>Event Processing System</b>	An MARS sub-system that allows data input to cause processing, alerting, and logging of alert events. The Event Processing System is a standard Data Output, allowing you to link a Data Input directly to the Event Processing System when configuring a Data Connection
<b>Text Input Alert</b>	A component of the Event Processing System where a specific data input unique event is configured to trigger alert event processing for that data input unique event
<b>Inovonics Echostream</b>	A wireless sensor monitoring infrastructure manufactured by Inovonics that requires no radio license to install, and uses 900 MHz band frequency hopping technology
<b>WaveTrac Sensor</b>	A Bluetooth Low Energy transmitter that uses regular Bluetooth advertisement transmissions to communicate its status to the WaveTrac sensor monitoring infrastructure

<b>WaveTrac Gateway</b>	A wireless sensor monitoring infrastructure that requires no radio license to install, senses WaveTrac sensors, and uses WiFi to deliver the signals to the head-end system
<b>TAP</b>	Telocator Alphanumeric Protocol, used for radio paging system control and alert system interface communications on a serial port or via Ethernet
<b>COMP2</b>	Used for radio paging system control and alert system interface communications on a serial port or via Ethernet
<b>RTLS</b>	Real-Time Locating System, supports tracking of mobile humans and equipment and alert events associated with mobile humans and equipment. The humans and equipment need to have an Inovonics sensor or a WaveTrac sensor attached to them in order to allow tracking to occur.
<b>Proximity-Based Locating</b>	Proximity-based Locating is a pseudo-RTLS that does not perform triangulation calculations and does not require the definition or training of Points-of-Interest. Proximity based locating works well with WaveTrac sensors because the WaveTrac sensors output a check-in advertisement signal often enough to allow WaveTrac Gateways to sense their proximity, and to report those proximity events to the head-end system. Proximity-based RTLS provides the benefits of being able to receive alert messages and to look up the last known location of a sensor without being required to maintain Points-of-Interest tables or to perform real-time triangulation calculations.
<b>Point-of-Interest</b>	A physical point inside a facility, where an RTLS system is trained to recognize when mobile humans and equipment are nearest that point, to aid in providing location information in alert messages. Points-of-interest are required to be both defined and trained in order to be able to perform triangulation calculations to determine where a sensor is located. Proximity-based Locating eliminates points-of-interest configuration and management.
<b>LAN</b>	Local Area Network
<b>WLAN</b>	Wireless Local Area Network
<b>Momentary vs Latching Alerts</b>	Momentary alerts are alerts that are reported once and are not tracked for an alert cancellation event. Latching alerts are alerts that can be reported both on alert initiation and then on alert cancellation. Latching alerts are tracked for cancellation events, and logged so that alert response performance reports can be generated.
<b>Receivers</b>	Receivers are used by both the Inovonics infrastructure as well as the WaveTrac Sensor infrastructure. All receivers need to be registered with the system for purposes of helping to perform basic alert location calculations when alerts occur, by identifying which receiver was closest to a sensor when an alert is generated. Inovonics receivers can be in the form of a central receiver with serial port output, or in the form of a wireless repeater.

WaveTrac gateways can be used for both basic location services as well as Proximity Based Locating services.

<b>WaveTrac Receiver</b>	A receiver that performs the purpose of sensing WaveTrac sensor signals and routing those signals to the head-end system for processing. WaveTrac receivers can be configured to perform autonomous signal processing and include the monitoring of dry contact inputs and the control of open collector outputs as a means of providing additional sensing as well as autonomous operating behavior at the receiver location.
<b>Inovonics Receiver</b>	A receiver that performs the purpose of sensing Inovonics sensor signals and routing those signals to the head-end system for processing.
<b>Elopement Sensor</b>	A receiver that is installed and configured to perform doorway elopement sensing with WaveTrac sensors, while also monitoring for door opening events and while controlling local audible/visual annunciation
<b>Zone</b>	A system reference that allows configuration of relationships between sensors, residents, rooms, and alert recipients, to allow proper alert message routing, schedule based alert delivery, and management of the system by operating shift
<b>Alert Type</b>	A reference for a given sensor to allow alert message formatting and to allow an alert recipient the ability to better understand the context of the alert
<b>Alert Client</b>	An application or browser page that allows a system user to observe active alerts from a desktop browser or from a mobile device.
<b>Digital Alert Viewer</b>	A feature that allows a list of active alerts to be viewed in either a desktop browser or on a digital TV
<b>Slow Response Threshold</b>	A time value that is compared to the length of time that an alert has been active, such that when the Slow Response Threshold time value is exceeded by an active alert's age, the alert can be marked as a slow response alert to aid in prioritizing attention to active alerts, and can also trigger notification of the alert recipients assigned to any backup zones assigned to the affected zone
<b>Backup Zone</b>	A zone that is designed to be notified if an alert ages beyond the Slow Response Threshold time
<b>Audio File</b>	An audio representation of a portion of an alert message, where the system can concatenate audio files and deliver those to alert recipients in an audio fashion. The audio files can be delivered to desktop browser Digital Alert Viewer, to walkie-talkies via two way radio interface, and to PA systems or amplified speaker systems
<b>Report Template</b>	A predefined template for delivery of scheduled standardized reports via e-mail.

<b>Audio Gateway</b>	A device that allows Ethernet based audio output to PA systems, speakers, and two-way radio systems
<b>Messaging Client</b>	A function that allows users to manually generate messages to be sent to pagers, e-mail, and/or XMPP apps, by selecting one or more recipients that are associated with those types of outputs
<b>Messaging Groups</b>	A function that allows creation of groups of Messaging Client recipients, for ease of multi-selecting recipients in the Messaging Client function
<b>Pager ID</b>	A numerical value that defines how alerts are routed through the system. Synonyms to Pager ID can include Address, Extension, Capcode, PIN, and UserID
<b>Whitelist</b>	A Settings field parameter that can be used to help the system filter the routing of messages. The Whitelist contains a list of one or more Pager ID values and tells the system to route messages to all listed Pager ID values. The Whitelist can be used with Data Inputs that use the COMP1 or Inovonics protocol. The Whitelist can be used with all Data Outputs. The Whitelist and Blacklist cannot be both in the same Settings field, as they contradict each other. An example Whitelist is <code>whitelist=101;105;223</code> , or <code>whitelist=101</code>
<b>Blacklist</b>	A Settings field parameter that can be used to help the system filter the routing of messages. The Blacklist contains a list of one or more Pager ID values and tells the system to route messages to all Pager ID values other than the listed Pager ID values. The Blacklist can be used with Data Inputs that use the COMP1 or Inovonics protocol. The Blacklist can be used with all Data Outputs. The Whitelist and Blacklist cannot be both in the same Settings field, as they contradict each other. An example Blacklist is <code>blacklist=101;105;223</code> , or <code>blacklist=101</code>
<b>Maintlist</b>	A list of one or more Pager ID values, defined as a parameter in a Settings field for a Data Input configuration record, when that Data Input uses the Inovonics protocol. The Maintlist tells the system to route maintenance related messages to all listed Pager ID values. Those maintenance related messages can include Battery and Tamper notifications for Inovonics sensors. An example Maintlist is <code>maintlist=221;145</code> , or <code>maintlist=221</code>

## Installation of MARS

To install MARS, you may need the following:

- MARS Unit
- One or more WiFi Access Points
- One or more Android or iOS smartphones with MARS Response App
- Windows PC running the WaveWare Discover and Reset Tool, connected to LAN, for purposes of discovering the MARS on the LAN (only required if using DHCP to assign an initial IP address to the MARS, or if the static IP address is incompatible with the LAN the MARS is connected to.
- An Inovonics central receiver, and zero or more Inovonics repeaters, to process Inovonics signals
- An Ethernet controlled paging system and/or up to four serial port controlled paging systems or downstream devices that process TAP protocol. Note: When connecting WaveWare paging systems to the MARS USB ports, you will need a Belkin USB-to-Serial Portable Adapter for each paging system.

The MARS should be installed using the following procedure:

- Before powering up the MARS, make all of the connections, including:
  - Ethernet
  - One Belkin USB-to-Serial Portable Adapter per serial port connection
- Connect power to the MARS, then press the button on top of the MARS to launch the boot-up process. Wait a few minutes for the MARS to boot up.

### Configure Static IP Address

The MARS ships with DHCP enabled, so that it can obtain a dynamically assigned IP address when it is connected to a LAN. The MARS requires a static IP address assignment in order to have uninterrupted operation monitoring the alerts. Use the following procedures to set a static IP address in the MARS.

### Discover the MARS Using WaveWare Discover and Reset Tool

The WaveWare Discover and Reset Tool is designed to make it simple to install and configure an MARS. Simply connect the MARS to your LAN, then run the Discover and Reset Tool's Discovery function to discover the MARS on the LAN.

You can download the WaveWare Discover and Reset tool at the following link:

[http://www.wirelessmessaging.com/software/misc/discover\\_reset\\_setup.exe](http://www.wirelessmessaging.com/software/misc/discover_reset_setup.exe)

Install the Discover and Reset Tool. Note: WaveWare Discover and Reset Tool requires Microsoft .NET runtime files to be installed on the PC that will be used to run the app.

Connect a Windows PC running the WaveWare Discover and Reset Tool to the LAN that the MARS is connected to. Launch the Discovery function to open the Discover WaveWare Systems screen. Click on the Discover button (magnifying glass icon) to start the discovery process. Any MARSs and WaveWare systems on the LAN should appear in the list within a second or two. Click on the displayed record of a discovered MARS to launch the default browser and to pull up the MARS configuration page.



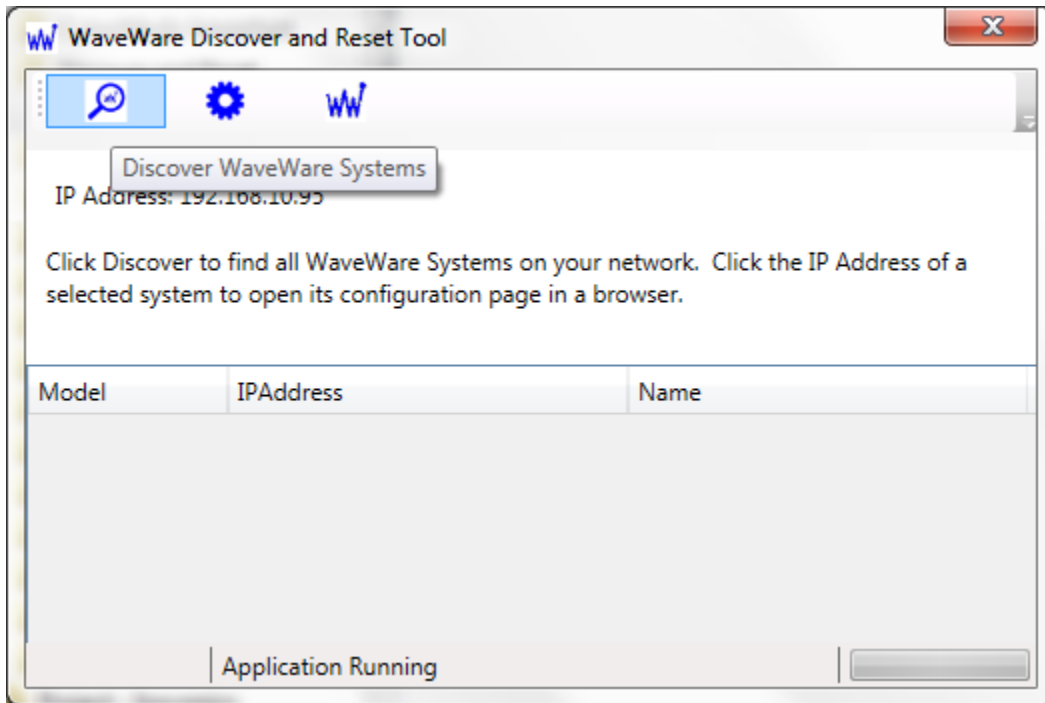


Figure 2 – WaveWare Discover and Reset Tool - Discovery

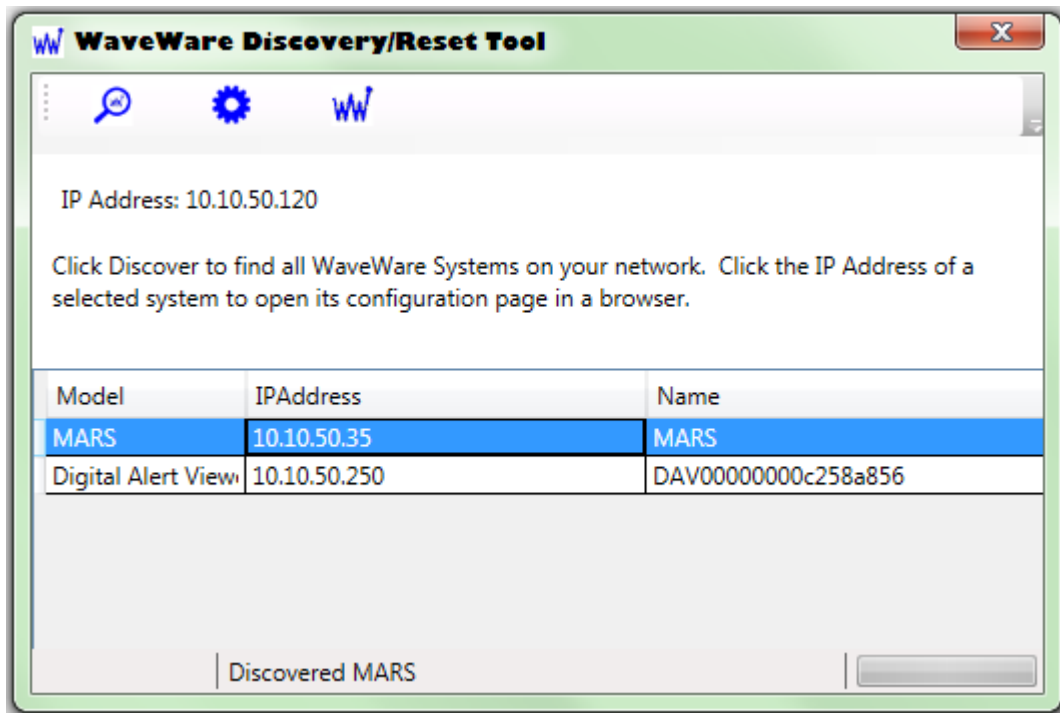


Figure 3 – WaveWare Discover and Reset Tool - Configure

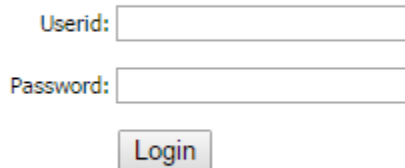
**Note:** If the MARS is configured with DHCP disabled and the IP address assigned to the MARS is incompatible with the LAN that the MARS is connected to, when you click the the record of the

discovered MARS, a popup window will occur that tells you that you need to reset the MARS to DHCP mode.

**Note:** The MARS ships with DHCP enabled. If the LAN that the MARS is connected to does not allow UDP broadcast packets, then the WaveWare Discover and Reset Tool will not discover the MARS. Refer to Troubleshooting section for how to address this issue.

### Log Into MARS

Once you click on the discovered MARS, if there are no IP address configuration problems, you should be prompted for userid and password in the browser. The Master Userid value is defined by a label on the MARS unit, and the default password value is blank. In addition, the MARS ships with a default userid value of admin and a default password MARSpass1234.



The image shows a login form with two input fields and a button. The first field is labeled "Userid:" and is empty. The second field is labeled "Password:" and is also empty. Below the password field is a button labeled "Login".

A successful login will cause display of the MARS main page in the browser. The drop down menus and main page contents are filtered by the Role assigned to the user account. The default user account is assigned a Role value of Super, which provides full configurability. Any other Role assignment only causes display of the drop down menu bar.

Configuration is described in more detail below. You are also offered a link for downloading the MARS manual, which requires internet access.

You can identify the system version number by clicking About in the MARS web config menu. You can observe the Master Userid value once you log in by opening the General Settings web config page.



- Setup
- Inputs/Outputs
- Facility
- Alert Sources
- Alert Recipients
- Zone Assignments
- Schedules
- Reports
- Log Out
- About

Logged in as admin

[Click Here for MARS Manual](#)

It is recommended that the system be configured in the following sequence:

- Setup
  - General Settings
  - E-mail Input Server
  - E-mail Output
  - Rules and Filters
  - LED Display
  - Mass Notification Msgs
  - Messaging Groups
  - Predefined Messages
  - System Events
- Inputs/Outputs
  - Data Inputs
  - Data Outputs
  - Data Connections
- Facility
  - Rooms
  - Residents
  - Zones
  - Wireless Receivers
  - LED Displays
  - Digital Alert Viewers
  - Audio Gateways
  - Audio Files
- Alert Sources
  - Alert Types
  - WaveTrac Sensors
  - Inovonics Sensors
  - Text Input Alerts
- Alert Recipients
  - User Accounts
  - Avatars
  - Pagers
- Zone Assignments
  - Zones/WaveTrac Sensors
  - Zones/Inovonics Sensors
  - Zones/Text Input Alerts
  - Zones/Residents
  - Zones/Rooms
  - Zones/User Accounts
  - Zones/Wireless Receivers
  - Zones/Data Outputs
  - Zones/LED Displays
  - Zones/Backup Zones
- Schedules
  - Alert Processing Schedules
- Reports
  - Report Templates
  - Scheduled Reports

Figure 4 – MARS Main Page

## Configuration of MARS Server

The MARS is configured via a browser based configuration page that can be located at the current IP address of the MARS. Reference the configuration sequence defined on the main page. The primary means of navigating in the MARS configuration interface is the drop down menus. The drop down menus are organized based upon the following primary factors:

- Role of Logged in User (User, Admin, or Super)
- Event Processing <sup>EP</sup> System Activation/Deactivation. The default setting is that Event Processing is disabled. The menu items and associated functions that are marked with <sup>EP</sup> are only available when the Event Processing system is activated in the General Settings config page.

### Setup

- General Settings
- E-mail Input Server
- E-mail Output
- Rules and Filters
- LED Display
- LED Display Priority Msgs
- Messaging Groups
- Predefined Messages
- Test Data Outputs
- System Events <sup>EP</sup>
- Utilities

### Inputs/Outputs

- Data Inputs
- Data Outputs
- Data Connections
- Messaging Client

### Facility

- Rooms <sup>EP</sup>
- Residents <sup>EP</sup>

- Zones <sup>EP</sup>
- Wireless Receivers
- LED Displays
- Audio Gateways <sup>EP</sup>
- Audio Files <sup>EP</sup>

## Alert Sources

- Alert Types <sup>EP</sup>
- WaveTrac Sensors <sup>EP</sup>
- Inovonics Sensors
- Text Input Alerts <sup>EP</sup>

## Alert Recipients

- User Accounts
- Pagers
- Alert Client <sup>EP</sup>

## Zone Assignments <sup>EP</sup>

- Zones <sup>EP</sup>
- Zones/WaveTrac Sensors <sup>EP</sup>
- Zones/Inovonics Sensors <sup>EP</sup>
- Zones/Text Input Alerts <sup>EP</sup>
- Zones/Residents <sup>EP</sup>
- Zones/Rooms <sup>EP</sup>
- Zones/User Accounts <sup>EP</sup>
- Zones/Wireless Receivers <sup>EP</sup>
- Zones/Data Outputs <sup>EP</sup>
- Zones/LED Displays <sup>EP</sup>
- Zones/Backup Zones <sup>EP</sup>

## Schedules <sup>EP</sup>

### Reports

- Report Templates
- Scheduled Reports
- Generate Reports

### Notes:

1. All configuration edits are directly saved to the database when you are operating in the grid view. A successful database update is indicated by the selected row flashing green. A failed database update is indicated by the selected row flashing red. If an update is not allowed, you may see a popup message in addition to the row flashing red.
2. The grid view may offer read-only fields, text editing fields, numeric editing fields, drop-down lists, and checkboxes. When you edit text and numeric fields, simply click on the cell you want to edit, then hit the Enter key or Tab key to cause the new value to be written to the database. On the other fields, the database edits are made immediately when you make your selection, as indicated by the row flashing green. On drop lists, you can type the first character(s) of the selection you want to make and the selection is automatically written to the database when a single match is found.

### Setup

#### General Settings

The General Settings page allows general configuration of the MARS system. It also indicates the authorized features available with the system. A Generate Request Key button is available to allow you to communicate with your distributor using a Request Key to adjust authorizations.

Toggling the Event Processing checkbox changes how the General Settings page is displayed. You must refresh the page to see the effect of the checkbox toggle. The items required for configuring Event Processing operation are displayed only when Event Processing is enabled. Note that toggling Event Processing also affects the display of MARS web configuration menu items.

**MARS General Settings Configuration**

ID	System Name	Site Password	Time Zone	Event Processing	IP Address	Default Gateway	Subnet Mask	Time Server	Include Location	Reg Key
1	R5000-Bob	password	Central Time	<input type="checkbox"/>	192.168.10.113	192.168.10.1	255.255.255.0		<input checked="" type="checkbox"/>	P3aZSZJMZZ#sR8TERC hFWdTWt6Tnp8hE6LfQ

Registration: Successful  
System IP: 192.168.10.113  
Master Userid: KZX7Y3LN

**Authorizations**

Feature	Authorizations
Max Data Inputs	2
Max Data Outputs	2
Messaging Client Enabled	Y
Max Concurrent Smartphone App Connections	2

Update Registration Key

**Figure 5 – General Settings Configuration when Event Processing is Disabled**

**MARS General Settings Configuration**

ID	System Name	Site Password	Time Zone	Event Processing	IP Address	Default Gateway	Subnet Mask	Time Server	Shift 1 Start	Shift 2 Start	Shift 3 Start
1	R5000-Bob	password	Central Time	<input checked="" type="checkbox"/>	192.168.10.113	192.168.10.1	255.255.255.0		08:00	16:00	24:00

Registration: Successful  
System IP: 192.168.10.113  
Master Userid: KZX7Y3LN

**Authorizations**

Feature	Authorizations
Max Data Inputs	2
Max WaveTrac Sensors	100
Max Inovonics Sensors	100
Max Text Input Alerts	100
Max Data Outputs	2
Messaging Client Enabled	Y
Max Concurrent Browser/App Alert Client Connections	2
Max Concurrent Smartphone App Connections	2

Update Registration Key

**Figure 6 - General Settings Configuration when Event Processing is Enabled**

Following are the components of General Settings page with a description of how they affect system operation. Items marked with **EP** are displayed only if Event Processing is enabled.

## System Name

Defines a value that the system uses to respond to the Discovery and Reset Tool, to allow easy identification of the system on the network.

## Site Password

Defines a value that wireless receivers and other system level devices use as a password to log into the server.

## Time Zone

Defines the time zone that the system uses. When Time Zone is adjusted, the system may be non-responsive for up to 30 seconds.

## Event Processing

If checked, the Event Processing System will be enabled, offering the ability to configure for the management of alert life cycles, logging, and reporting. Otherwise, only data protocol conversion, data filtering, data translation, data input combining, and data output splitting functions will be available, via the Inputs/Outputs functions.

## IP Address

If non-blank, this is the IP address that the system will be assigned, as a static IP address. If blank, the system will use DHCP to obtain an IP address.

## Default Gateway

If non-blank, this is the default gateway value that the system will be assigned. This setting will only be applied upon restart of the system.

## Subnet Mask

If non-blank, this is the subnet mask value that the system will be assigned. This setting will only be applied upon restart of the system.

## Time Server

If non-blank, this is the URL to a time server. The system will, by default, attempt to connect to time servers on the internet. If this field is non-blank, this URL will be added to the list of time servers to attempt to connect to. This setting will only be applied upon restart of the system.

## Shift 1 Start <sup>EP</sup>

The time that shift 1 operations start, to help the system perform shift based operations, formatted as HH:MM in 24 hour format, e.g. 08:00. If the update fails, modify your entry to match the HH:MM format and try again.

## Shift 2 Start <sup>EP</sup>

The time that shift 2 operations start, to help the system perform shift based operations, formatted as HH:MM in 24 hour format, e.g. 16:00. If the update fails, modify your entry to match the HH:MM format and try again.



### **Shift 3 Start** <sup>EP</sup>

The time that shift 3 operations start, to help the system perform shift based operations, formatted as HH:MM in 24 hour format, e.g. 24:00. If the update fails, modify your entry to match the HH:MM format and try again.

### **Freq Call TH** <sup>EP</sup>

The minimum time, in minutes, between the time of deactivation of a call for a particular sensor and reactivation of that call, at which that call should be marked as a frequent call, for use in the Frequent Calls report

### **Slow Resp TH** <sup>EP</sup>

The minimum time, in minutes, between the time of activation of a call for a particular sensor and deactivation of that call, at which that call should be marked as a slow response call, for use in the system reports. The Slow Response Threshold is also used to determine when to route the active call to any defined Backup Zones, or if no Backup Zones are defined for the affected zone, to determine when to escalate the active call to supervisory level. A value of 0 indicates that this feature is disabled.

### **Backup Resp TH** <sup>EP</sup>

The Backup Response Threshold is used to determine when to escalate an active call to supervisory level, after that call has been routed to any defined Backup Zones. A value of 0 indicates that this feature is disabled.

### **Sec/Repeat Paging** <sup>EP</sup>

The time, in seconds, that should occur between radio paging based repeat notifications of an active alert. Applies to both POCSAG and audio file based radio paging.

### **Page Cancel** <sup>EP</sup>

When checked, radio paging output includes a cancel notification when an alert is deactivated. This setting is only applied within the event processing system. Cancel notification can also be configured for each Data Output in the data output's Settings field.

### **Default Zone** <sup>EP</sup>

The Zone that newly detected sensors should be auto-assigned to. If Unassigned is selected, newly detected sensors will not be auto-assigned to a Zone. Selecting a Default Zone makes zone to wireless receiver assignments and zone to sensor assignments much easier to accomplish due to the auto-assignment process.

### **Include Location**

When checked, alert notification text will include information defining the location where the alert was generated, for sensors that can be mobile.

## **OOP Timeout** <sup>EP</sup>

The amount of time, in seconds, required to trigger an out-of-proximity event once an in-proximity signal is no longer detected from a WaveTrac sensor

## **Motion OOP Timeout** <sup>EP</sup>

The amount of time, in seconds, required to trigger an out-of-proximity event once an in-proximity signal is no longer detected from a WaveTrac sensor, and a motion signal has been detected within the OOP timeout period

## **Audio Preamble** <sup>EP</sup>

If the Audio Preamble is not Unassigned, the server will play an audio preamble each time an assigned audio file is played.

## **Audio Postamble** <sup>EP</sup>

If the Audio Postamble is not Unassigned, the server will play an audio postamble each time as assigned audio file is played.

## **Max Log Age** <sup>EP</sup>

The maximum number of days that the call logs should be retained, in days. 60 days is recommended.

## **Auto Compl TH** <sup>EP</sup>

The Auto Completion Threshold, in units of minutes, is used to determine when the system should automatically mark an active call as complete. The primary use of this feature is when the system is primarily deployed with alerts that do not signal completion/cancellation and/or when alert notification methods do not support telling the server when an alert is completed, e.g. e-mail, radio pager, audio output. A value of 0 indicates this feature is disabled.

## **Install Mode** <sup>EP</sup>

If checked, Install Mode causes the system to provide additional information to the Alert Client app and to the Digital Alert Viewer, to aid the technician during the installation of the system. In addition, you can assign a Network Template to a WaveTrac receiver in the Wireless Receivers page.

## **Demo Mode** <sup>EP</sup>

If checked, the server will auto-generate and auto-cancel sensor based alerts as a means of demonstrating how the system works. The system should also process alerts normally while in demo mode

## **Source Prefix** <sup>EP</sup>

If checked, the server will prepend the name of the associated Data Input to outgoing messages, which is pulled from the Source field of Text Input Alerts. This feature only applies to messages generated in the Event Processing System.

## Reg Key

The registration key provided by the distributor to define activation of system features and any system scalability limits. The Authorizations table on the General Settings page indicate what is allowed to function. Inserting a new Registration Key value into the Reg Key field, and pressing the enter key will adjust the Authorizations. To refresh the Authorizations table, reload the General Settings page.

## Registration

The Registration value defines if the Registration Key has successfully been processed by the system, allowing the system to operate, with the Authorizations section of this page defining the authorized functions allowed by the Registration Key. This value updates each time this page is refreshed.

## System IP

The System IP value identifies the current IP address assigned to the MARS. Note that the editable IP Address field defined above, could be blank, to cause DHCP processing to occur. Otherwise, both the IP Address value and the System IP value should be the same, representing a static IP address assignment.

## Master Userid

The Master Userid value identifies a Userid value that can gain master access to the system. This Master Userid will work with any password value, including blank. The Master Userid value is unique to this particular installation and is derived from the CPU serial number. The Master Userid should also be printed on a label on the system housing.

## Authorizations

The Authorizations table in the General Settings page displays the authorizations allowed by the Registration Key.

### ***Max Data Inputs***

Defines the maximum quantity of Data Inputs that will be allowed to be configured

### ***Max WaveTrac Sensors***<sup>EP</sup>

Defines the maximum quantity of WaveTrac Sensors that will be allowed to be configured in the Event Processing System, when it is enabled. This field only appears when Event Processing is enabled.

### ***Max Inovonics Sensors***<sup>EP</sup>

Defines the maximum quantity of Inovonics Sensors that will be allowed to be configured in the Event Processing System, when it is enabled. This field only appears when Event Processing is enabled.

### ***Max Text Input Alerts***<sup>EP</sup>

Defines the maximum quantity of Text Input Alerts that will be allowed to be configured in the Event Processing System, when it is enabled. This field only appears when Event Processing is enabled.

### **Max Data Outputs**

Defines the maximum quantity of Data Outputs that will be allowed to be configured

### **Messaging Client Enabled**

Identifies if the Messaging Client feature is enabled

### **Max Concurrent Browser/App Alert Client Connections <sup>EP</sup>**

Defines the maximum quantity of Browser and App Alert Client connections that will be allowed to be concurrently connected to the system. This field only appears when Event Processing is enabled.

### **Max Concurrent Smartphone App Connections**

Defines the maximum quantity of Smartphone App connections that will be allowed to be concurrently connected to the system. Note that this version of MARS is only compatible with the MARS Response app, which supports connectivity to the Rauland Responder™ 5000 system, in addition to being able to be used for general purpose alert messaging.

## **Update Registration Key Button**

You can update your system Registration Key by either pasting a new Registration Key value into the Reg Key field of the table, or you can click the Update Registration Key button. This button requires the system to have access to the internet, as it attempts to automatically retrieve the latest Registration Key from the wirelessmessaging.com server.

When you click the Update Registration Key button, you will see the Registration Key Update page as shown below. If there is no internet access from the system, the response will be Registration Key Update Failed. The Request Key, Serial Number and Version values are for reference purposes only.

---

**Request Key:**

Y4J8QEW9TDe8Nm7Sme-PDi7PDKCTna6PES5Nda9TmpCPCJwJDJwJDE2NC2iNVA2MCA3NDAwJDEwJDAwJDAwJDKf

**Serial Number:**

68E7D76295B7948542BFF44D3067F9B4

**Version:**

1.00

**Registration Key Update Succeeded**

**Figure 7 - Update Registration Key**

### **E-mail Input Server**

The E-mail Input Server page allows configuration of how e-mail input processing should be performed. This is required only if you have enabled SMTP protocol on a Data Input.

### MARS E-mail Input Server Configuration

ID	IP Address/Domain	Address Filtering	Sender In Msg	Incl From Header	Subject In Msg	Incl Subj Header	Body In Msg	Incl Body Header
1	wirelessmessaging.com	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### Notes

##### IP Address/Domain

The domain name or IP address of the SMTP server that will process the incoming e-mail. Typically this is the IP address of the system.

##### Address Filtering

If checked, incoming e-mail will be rejected if the the domain name or IP address portion of the To: address does not match the IP Address/Domain value. Otherwise, only first part of the To: address will be matched against the Zone names, then against the User Account names in the system.

##### Sender In Msg

If checked, the From: address will be included in the message delivered by the system.

##### Incl From Header

If checked, a header value of "From: " will be included in front of the From: address value in the message delivered by the system.

##### Subject In Msg

If checked, the Subject: value will be included in the message delivered by the system.

##### Incl Subj Header

If checked, a header value of "Subject: " will be included in front of the Subject: address value in the message delivered by the system.

##### Body In Msg

If checked, the Body: value will be included in the message delivered by the system.

##### Incl Body Header

If checked, a header value of "Body: " will be included in front of the Body: address value in the message delivered by the system.

Figure 8 - E-mail Input Server Configuration

## IP Address/Domain

The domain name or IP address of the SMTP server that will process the incoming e-mail. Typically this is the IP address of the system.

## Address Filtering

If checked, the incoming e-mail will be rejected if the domain name or IP address portion of the To: address does not match the IP Address/Domain value. Otherwise, only the first part of the To: address will be matched against the Zone names, then against the User Account names in the system.

## Sender In Msg

If checked, the From: address will be included in the message delivered by the system

## Incl From Header

If checked, a header value of "From: " will be included in front of the From: address value in the message delivered by the system.

## Subject In Msg

If checked, the Subject: value will be included in the message delivered by the system.

## Incl Subj Header

If checked, a header value of "Subject: " will be included in front of the Subject: address value in the message delivered by the system.

## Body in Msg

If checked, the Body: value will be included in the message delivered by the system.

## Incl Body Header

If checked, a header value of “Body: “ will be included in front of the Body: address value in the message delivered by the system.

## E-mail Output

The E-mail Output page allows configuration of how e-mail output processing should be performed. This is required only if you have enabled SMTP protocol on a Data Output, you have scheduled Reports, or you intend to e-mail user generated reports.

### MARS E-mail Output Configuration

ID	Host	From Name	From Address	Subject	Msg in Subject	User ID	Password	Test To Address	Port	Successfully Tested
1	192.168.10.142	DMS	mars@wirelessmessaging.com	DMS Report	<input checked="" type="checkbox"/>	mars@wirelessmessaging.com	MARSpass1234	alex@wirelessmessaging.com	1025	Yes

Test Mail Server

#### Notes

##### Host

The URL or IP address of the SMTP server that will process and deliver the e-mail

##### From Name

The reference name used to identify who generated the e-mail, e.g. MARS

##### From Address

The e-mail address used to identify who generated the e-mail, e.g. mars@wirelessmessaging.com

##### Subject

The subject line in the e-mail. This is used only if Msg In Subject is unchecked.

##### Msg In Subject

If checked, the alert message will be in the subject line instead of in the e-mail body. If unchecked, the alert message will be in the e-mail body and the Subject line will use the Subject value above.

##### User ID

The User ID value used to log into the e-mail server. Can be blank if the e-mail server does not require authentication.

##### Password

The Password value used to log into the e-mail server. Can be blank if the e-mail server does not require authentication.

##### Test To Address

The e-mail To Address used when testing the e-mail server connection

##### Port

The IP port value to use in communications to the SMTP server

Figure 9 - E-mail Output Configuration

## Host

The URL or IP address of the SMTP server that will process and deliver the e-mail

## From Name

The reference name used to identify who generated the e-mail, e.g. MARS

## From Address

The e-mail address used to identify who generated the e-mail, e.g. MARS@somewhere.com

## Subject

The subject line in the e-mail. This is used only if Msg In Subject is unchecked

## Msg In Subject

If checked, the alert message will be in the subject line instead of in the e-mail body. If unchecked, the alert message will be in the e-mail body and the Subject line will use the Subject value above.

## User ID

The User ID value used to log into the e-mail server. Can be blank if the e-mail server does not require authentication

## Password

The password value used to log into the e-mail server. Can be blank if the e-mail server does not require authentication.

### **Test To Address**

The e-mail To address used when testing the e-mail server connection

### **Port**

The IP port value to use in communications with the SMTP server

### **Successfully Tested**

A reference value indicating if the e-mail connection settings have been successfully tested. After you use the Test Mail server function, you will need to reload this page to see this value get updated.

### **Test Mail Server Button**

Click Test Mail Server button to test the e-mail output configuration settings. You should see a new page open and in a few seconds see Email Sent appear on the page.

### **Rules and Filters**

The Rules and Filters page allows a user to define how MARS manages the triggering of mass notification messages and filters out incoming alert events based on key string values. The Rules and Filters records are applied to incoming alert messages before they are processed downstream, such as by the Event Processing System.

ID	Name	Key String	Translation	Priority	Color	Not Answerable	MNS Msg	Filter Out	Delete
0	Default Behavior	N/A		Normal	Black	<input type="checkbox"/>	Unassigned	<input type="checkbox"/>	
1	BOMB THREAT	BOMB THREAT	BOMB THREAT, EXIT IMMEDIATELY	Priority 3	Red	<input type="checkbox"/>	Bomb Threat	<input type="checkbox"/>	
2	Area 6	alarm: Area 6	Area 6 panic button	Priority 1	Black	<input type="checkbox"/>	Unassigned	<input type="checkbox"/>	
3	fire panel ping	z213: checkin		Normal	Black	<input type="checkbox"/>	Unassigned	<input checked="" type="checkbox"/>	

**Figure 10 - Rules and Filters Configuration**

### **Filter**

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

### **Add new rule/filter**

The Add new rule/filter button allows you to create a new record. To create a new record, click the Add new key string button.

## **Default Behavior rule/filter**

The Default Behavior rule/filter defines the default filtering logic for Data Input values that do not contain any of the rule/filter record Key String values. The only editable field in the Default Behavior rule/filter is the Filter Out checkbox. The Default Behavior rule/filter cannot be deleted. Caution: If the Filter Out checkbox is checked in the Default Behavior record, ALL Data Input values will be filtered out of the system, unless a Data Input value matches one or more Key String values in the Rules/Filters table.

## **ID**

The ID field is a reference field identifying the database record ID value

## **Name**

A reference name to assign to the rule/filter to help you remember what the rule/filter record is supposed to do.

## **Key String**

The Key String is a text value that is compared to all incoming Data Input values. All rule/filter records will be compared to all incoming Data Input values. If the Data Input value contains the key string, the Data Input value will be processed by any associated processing/translation rule for that rule/filter record. If the Translation field for a given matching Rules/Filters record is non-blank, the incoming Data Input value will be translated to the Translation value. If the Filter Out checkbox is checked for the matching record, the incoming Data Input value will be filtered out and take precedence over any other rule/filter record settings. If multiple Key String matches occur for a given Data Input value, the rule/filter assignments will be applied sequentially from top to bottom of the Rules/Filters table.

## **Translation**

The Translation value provides a simple way of replacing an incoming Data Input value with a new alert message. When an incoming Data Input value contains the associated Key String value, the entire Data Input value will be replaced by the Translation value and processed by the system. The Translation value can be blank.

## **Priority**

The Priority value tells the system what priority level to assign an incoming Data Input value. The default priority value is Normal. The Priority value assigned to the Default Behavior key string record applies to all incoming Data Input values that do not include a Key String value.

## **Color**

The Color value tells the system what color to assign an incoming Data Input value, when that item appears on the smartphone app. The default color value is Blue. The Color value assigned to the Default Behavior key string record applies to all incoming Data Input values that do not include a Key String value.



## Not Answerable

If checked, the system will mark any Data Input value that contains the associated Key String as not answerable in the client app. By default, all R5000 protocol Data Input values are considered answerable.

## MNS Msg

The priority message to be used for mass notification, including being displayed on all LED Displays connected to the system, if the associated alert is activated. Default is Unassigned. Once the alert is completed, the priority message will be removed from all LED Displays. Note that any MNS Msg defined here can be overridden by any defined within the Rules and Filters section.

## Filter Out

If checked, the system will filter out the Data Input value and not process it in the system if the Data Input value contains the associated Key String.

## LED Display

The LED Display page allows configuration of how the system manages message display on all of the LED Displays in the system. To accomplish output to one or more LED displays in the system, both Data Outputs and Data Connections need to be created, where they use LED Display protocol. See more information in the Data Outputs section.

Note that the LED Display data is formatted to go to LED sign address value of zero (0), which means that all LED displays connected to the IP addresses defined in the Data Outputs will display the data.

### MARS LED Display Configuration

ID	Max Msgs	Max Msg Life	Timestamp Msgs	Timestamp Format	Hold Mode Long Msgs	Use Header	Model	Header Color	Normal Color	Priority Color	Default Hdr	Default Msg
0	10	300	<input type="checkbox"/>	AM/PM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MNS	White	Green	Red	Birthday!	Happy Birthday Alex

#### Notes

##### Max Msgs

The maximum quantity of active messages to be displayed on all LED displays connected to the system, ranging from 1 to 26. New messages will replace the oldest messages.

##### Max Msg Life

The quantity of seconds that a message will be allowed to be in LED display memory before it is automatically removed. Messages can also be removed if the event processing system determines that an active alert event has been cancelled.

##### Timestamp Msgs

If checked, a timestamp value will be prepended to each message, using the format defined by the Timestamp Format value.

##### Timestamp Format

AM/PM or 24 Hr timestamp display formats

##### Hold Mode Long Msgs

If checked, when message lengths are longer than the visible character length of the display, the message will be presented in hold mode. Otherwise, long messages will be displayed in right to left scrolling mode. Messages shorter than the visible character length of the display always display in hold mode, regardless of this setting.

##### Use Header

If checked, a header value will be displayed with the message, with the header value derived from either the name of the Data Input, or from the name of the Data Input Alert associated with the alert message. The header will be displayed in top line of a two line display, or will be prepended to the message on a single line display.

##### Model

The LED display model to be used in the system. 215 is either a red only or multi-color single line display. 4080 is a two line multi-color display. MNS is a two line RGB color display.

##### Header Color

The color that will be applied to the message header. Note that blue and white colors are only applicable to the MNS display model.

Figure 11 - LED Display Configuration

## Max Msgs

The maximum quantity of active messages to be displayed on all LED display connected to the system, ranging from 1 to 26. New messages will replace the oldest messages.

## Max Msg Life

The quantity of seconds that a message will be allowed to be in LED display memory before it is automatically removed. Messages can also be removed if the system determines that an active alert

message has been cancelled. Note that it is possible for messages to be delivered to the LED displays under conditions where there is no detectable cancel event, which would trigger the Max Msg Life method of LED display message removal. These rules also apply to the use of LED Display Priority Messages, where the LED display exclusively displays a priority message until the condition causing that priority message display goes away, e.g Event Cancellation condition.

### ***Timestamp Msgs***

If checked, a timestamp value will be prepended to each message, using the format defined by the Timestamp Format value.

### ***Timestamp Format***

AM/PM or 24 Hr timestamp display format will be applied, based upon your selection

### ***Hold Mode Long Msgs***

If checked, when message lengths are longer than the visible character length of the display, the message will be presented in hold mode. Otherwise, long messages will be displayed in right to left scrolling mode. Messages shorter than the visible character length of the display always display in hold mode, regardless of this setting.

### ***Use Header***

If checked, a header will be displayed with the message, with the header value derived from either the name of the Data Input, or from the name of the Text Input Alert associated with the alert message. The header will be displayed in the top line of a two line display, or will be prepended to the message on a single line display.

### ***Model***

The LED display model to be used in the system. Currently, only the MNS is supported. MNS is a two line RGB color display.

### ***Header Color***

The color that will be applied to the message header. Note that blue and white colors are only applicable to the MNS display model.

### ***Normal Color***

The color that will be applied to the normal message body. Note that blue and white colors are only applicable to the MNS display model.

### ***Priority Color***

The color that will be applied to the priority message body. Note that blue and white colors are only applicable to the MNS display model.

## Default Hdr

The header value that will display when there are no active events or active priority messages to be displayed.

## Default Msg

The message value that will display when there are no active events or active priority messages to be displayed. Default messages can also be applied at the individual LED Display level. If the individual LED Display Default Msg is defined, it will take precedence over this Default Msg.

## Mass Notification Msgs

The Mass Notification Msgs page allows configuration of priority messages that can appear on LED Displays and can be distributed via a mass notification function. The mass notification messages are assigned in Setup/Rules and Filters, in Alert Sources/WaveTrac Sensors, in Alert Sources/Inovonics Sensors, and in Alert Sources/Text Input Alerts.

### MARS Mass Notification Messages Configuration

Filter :type any text here <span style="float: right;">+ Add new mass notification msg</span>		
ID	Name	LED Display Command
0	Unassigned	
8	Bomb Threat	{00}{00}{00}{00}{00}{01}Z00{02}A0{1B}{22}b{1C}Z0066FF{12}BOMB THREAT{0D}{1B}&a{1C}ZC0C0C0EXIT IMMEDIATELY{0C}{04}
9	Evacuate	{00}{00}{00}{00}{00}{01}Z00{02}A0{1B}{22}b{1C}ZFF0000{12}EVACUATE{0D}{1B}&a{1C}ZC0C0C0PROCEED TO NEAREST EXIT{0C}{04}
10	EXIT	{00}{00}{00}{00}{00}{01}Z00{02}A0{1B}{22}b{1C}ZFF0000{1A}9{12}{0D}{1B}{22}&b{1C}ZFF0000{12}{1A}3{1B}&a{1C}ZC0C0C0USE STAIRWELL{0D}DO NOT USE ELEVATOR{0C}{04}
11	Fire Alarm	{00}{00}{00}{00}{00}{01}Z00{02}A0{1B}{22}b{1C}ZFF0000{1A}3{07}1{05}1{12}FIRE ALARM{0D}{07}0{05}0{1B}{22}b{1C}ZFF0000{12}FIRE ALARM{1A}3{1B}&a{1C}ZC0C0C0PROCEED TO NEAREST EXIT{0C}{04}
12	Severe Weather	{00}{00}{00}{00}{00}{01}Z00{02}A0{1B}{22}b{1C}ZFF0000SEVERE WEATHER{1A}3{1B}&a{1C}ZC0C0C0TAKE SHELTER IMMEDIATELY{0C}{04}
13	All Clear	{00}{00}{00}{00}{00}{01}Z00{02}A0{1B}{22}b{1C}Z40FF00{12}ALL CLEAR{0D}{1B}&a{1C}ZC0C0C0RETURN TO NORMAL ACTIVITY{0C}{04}

#### Notes

##### Name

Reference text used to allow assignment to alert events. Note that the Unassigned record cannot be edited or deleted, so that mass notification messages can be unassigned events.

##### LED Display Command

The LED display command code used by the system to cause the mass notification message to appear on all LED displays in the system.

Figure 12 – Mass Notification Messages Configuration

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new mass notification msg

The Add new mass notification msg button allows you to create a new record. To create a new record, click the Add new mass notification msg button.

## ID

The ID field is a reference field identifying the database record ID value

## Name

Reference text used to allow assignment to alert events. Note that the Unassigned record cannot be edited or deleted, so that priority messages can be unassigned from alert events.

## LED Display Command

The LED display command code used by the system to cause the priority message to appear on all LED displays in the system. It is recommended that you coordinate with WaveWare before editing or creating any Command values, due to the sensitivity of the LED displays to errors in command code formatting.

## Messaging Groups

The Messaging Groups page allows the creation and configuration of groups of Recipients for the Messaging Client function.

### MARS Messaging Groups Configuration

Filter: type any text here		<a href="#">+ Add new messaging group</a>	
ID	Name	Configure	Delete
7	Group 1	<a href="messaging_group_config.php?id=7">messaging_group_config.php?id=7</a>	

#### Notes

##### Name

The name of the Messaging Group

##### Configure

The path to the Messaging Group configuration page. Click on the Configure link to edit the User Accounts assigned to the selected Messaging Group.

**Figure 13 - Messaging Groups Configuration**

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new messaging group

The Add new messaging group button allows you to create a new record. To create a new record, click the Add new messaging group button.

## ID

The ID field is a reference field identifying the database record ID value

## Name

The name of the messaging group.

## Configure

Clicking on the Configure link for the selected Messaging Group will cause the Messaging Groups/Recipients Configuration page to appear.

### MARS Messaging Groups/Recipients Configuration

Messaging Group: Group 1

All selected (14) ▾

Save Configuration

Notes

#### Selection Process

Click on a messaging group's selection object. You can enter a search term to filter the choices. When you click Select All, it selects all of the items defined by the search filter. When you unselect Select All, it will unselect all of the items defined by the search filter. Click Save Configuration to save the edited Messaging Group assignments.

#### Messaging Group

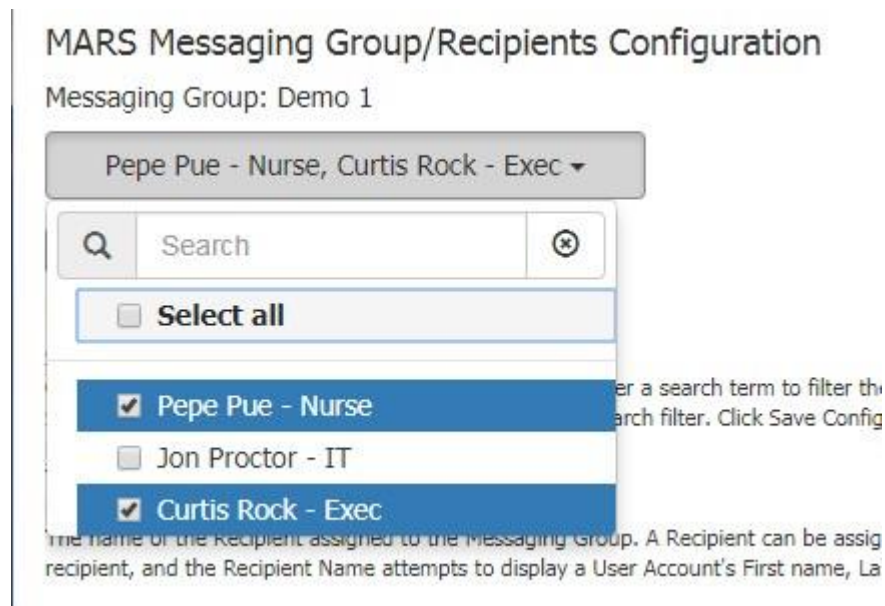
The name of the Messaging Group

#### Recipient

The name of the Recipient assigned to the Messaging Group. A Recipient can be assigned to multiple Messaging Groups. A Recipient is a User Account that qualifies to be a Messaging Client recipient, and the Recipient Name attempts to display a User Account's First name, Last name and Dept.

**Figure 14- Messaging Group/Recipients Configuration**

Click on the Messaging Group selector to assign or unassign Recipients from the Messaging Group. All of the eligible recipients defined in the system will be displayed. Those assigned to the messaging group will be checked and highlighted as shown in the figure below.



**Figure 15 - Messaging Group Selector**

The Search field allows you to narrow your list of items and is case insensitive. If you type a term in the Search field, such as "em", only items that contain "em" will be displayed.

When you click the Select All checkbox, all of the filtered records will be selected. If you uncheck the Select All checkbox, all of the filtered records will be un-selected. If there is no active filter, all of the records are affected by the Select All checkbox.

Once you finish editing the Messaging Group assignments, click the Save Configuration button to save your edits.

### Predefined Messages

The Predefined Messages page allows configuration of messages that will be selectable from the browser based Messaging Client, to optimize the messaging process.

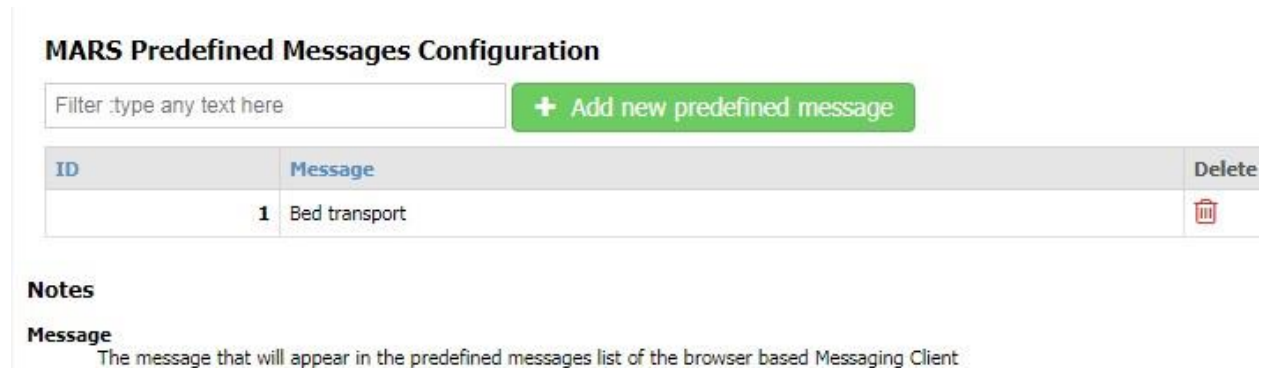


Figure 16 - Predefined Messages Configuration

### Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

### Add new predefined message

The Add new predefined message button allows you to create a new record. To create a new record, click the Add new predefined message button.

### ID

The ID field is a reference field identifying the database record ID value

### Message

The message that will appear in the predefined messages list of the browser based Messaging Client

### Test Data Outputs

The Test Data Outputs page allows configuration of testing processes for selected Data Outputs.

### MARS Output Test Configuration

Data Output	Base Test Msg	Test PIN	Repeat Test Interval	Max Test Repeats	Max Msg Age	Test Active	
R5K App	Test Message	222		5	30	60	<input type="checkbox"/>

#### Notes

##### Data Output

The Data Output that you want to test.

##### Base Test Msg

Defines the base value of the test messages to be output during the test. During the test, the system will add a sequential number value to the Base Test Msg to form the complete test message, with the sequence value changing at each test interval.

##### Test PIN

Defines the PIN value (address) to accompany the test message. The PIN value does not change during the test cycle.

##### Repeat Test Interval

Defines the test output time interval, in seconds.

Figure 17 – Output Test Configuration

## Data Output

The Data Output that you want to test.

## Base Test Msg

Defines the base value of the test messages to be output during the test. During the test, the system will add a sequential number value to the Base Test Msg to form the complete test message, with the sequence value changing at each test interval.

## Test Pager ID

Defines the Pager ID value (address) to accompany the test message. The Pager ID value does not change during the test cycle.

## Repeat Test Interval

Defines the test output time interval, in seconds.

## Max Test Repeats

Defines the maximum quantity of output test intervals to perform. Once the Max Test Repeats value is reached, output testing will stop and the Test Active value will be reset in the system. You will need to refresh this page to see the Test Active state change occur. Max Test Repeats values can range from 0 to 999. A value of 0 is a special case that causes the base message to be output once without a sequential number suffix.

## Max Msg Age

Defines the maximum age, in seconds, of a given test message. When a given test message age reaches the defined Max Msg Age value, the message will be cancelled for any Data Outputs that support message cancellation.

## Test Active

Once checked, the system will commence testing the specified output, using the parameters defined on this page. Once the Max Test Repeats value is reached, output testing will stop and the Test Active value



will be reset in the system. You will need to refresh this page to see the Test Active state change occur. If you uncheck the Test Active checkbox, the testing cycle will stop.

### System Events <sup>EP</sup>

The System Events page allows configuration of how MARS system generated events are reported. The System Events menu item is only available when Event Processing is enabled.

**MARS System Events Configuration**

ID	Name	System Event	Avatar	Audio File
19	Nurse Call Mobile	Duress	Unassigned	Nursecall Mobile
20	Proximity	Proximity	Unassigned	Unassigned
21	Door Proximity	Wander Proximity	Unassigned	Unassigned
22	Door Exit Risk	Exit Risk	Unassigned	Door Exit Risk

**Notes**

**Name**  
The name of the system event that you want the system to use when reporting the specified system event, to allow adjustment of the system alert reporting to a customer's preference.

**System Event**  
A system generated event that can be reported to system user accounts. Duress is generated when a Bluetooth sensor that is a Resident model, has its pushbutton pressed. Proximity is generated when a Bluetooth sensor with Mobile alert class assigned to it, is detected within the configured proximity of a Wireless Receiver. Wander Proximity is generated when a Bluetooth sensor model, with Wander alert class assigned to it, is detected within the configured proximity of a Wireless Receiver. Exit Risk is generated when a Bluetooth sensor that is a Resident alert class assigned to it, is detected within the configured proximity of a Wireless Receiver, and a Door Open event is detected by that receiver during the Wander Proximity event.

**Figure 18 - System Events Configuration**

### ID

The ID field is a reference field identifying the database record ID value

### Name

The reference name for the System Event. The reference name will be used to represent the system event when system event related alerts are generated.

### System Event

A system generated event that can be reported to system user accounts. Duress is generated when a WaveTrac sensor that is a Resident model, has its pushbutton pressed. Proximity is generated when a WaveTrac sensor with Mobile alert class assigned to it, is detected within the configured proximity of a Wireless Receiver. Wander Proximity is generated when a WaveTrac sensor that is a Resident model, with Wander alert class assigned to it, is detected within the configured proximity of a WaveTrac Receiver. Exit Risk is generated when a WaveTrac sensor that is a Resident model, with Wander alert class assigned to it, is detected within the configured proximity of a WaveTrac Receiver, and a Door Open event is detected by that receiver during the Wander Proximity event.

### Audio File

The audio file assigned to the System Event. The audio file will be played by either the audio file to two way radio interface device or in a Digital Alert Viewer in either a desktop browser or on a digital TV screen. Default is Unassigned. Audio files are configured in the Outputs/Audio Files section.



## Utilities

The Utilities page allows troubleshooting of system communications and status. The elements of the Utilities page that are marked here with **EP** will not appear when Event Processing is disabled.

### MARS Utilities

Troubleshooting Logging ▾

### User Account Logs

User Account	User Account Comm Log
admin	../tablets.xml?device=admin
102	../tablets.xml?device=102
223	../tablets.xml?device=223
157	../tablets.xml?device=157

[HTTP Access Log](#)

[Web Server Error Log](#)

[Data I/O Log](#)

[Data I/O Log \(Copy/Paste Friendly\)](#)

[Support Session](#)

[Restart Server](#)

**Figure 19 - Utilities with Event Processing Disabled**

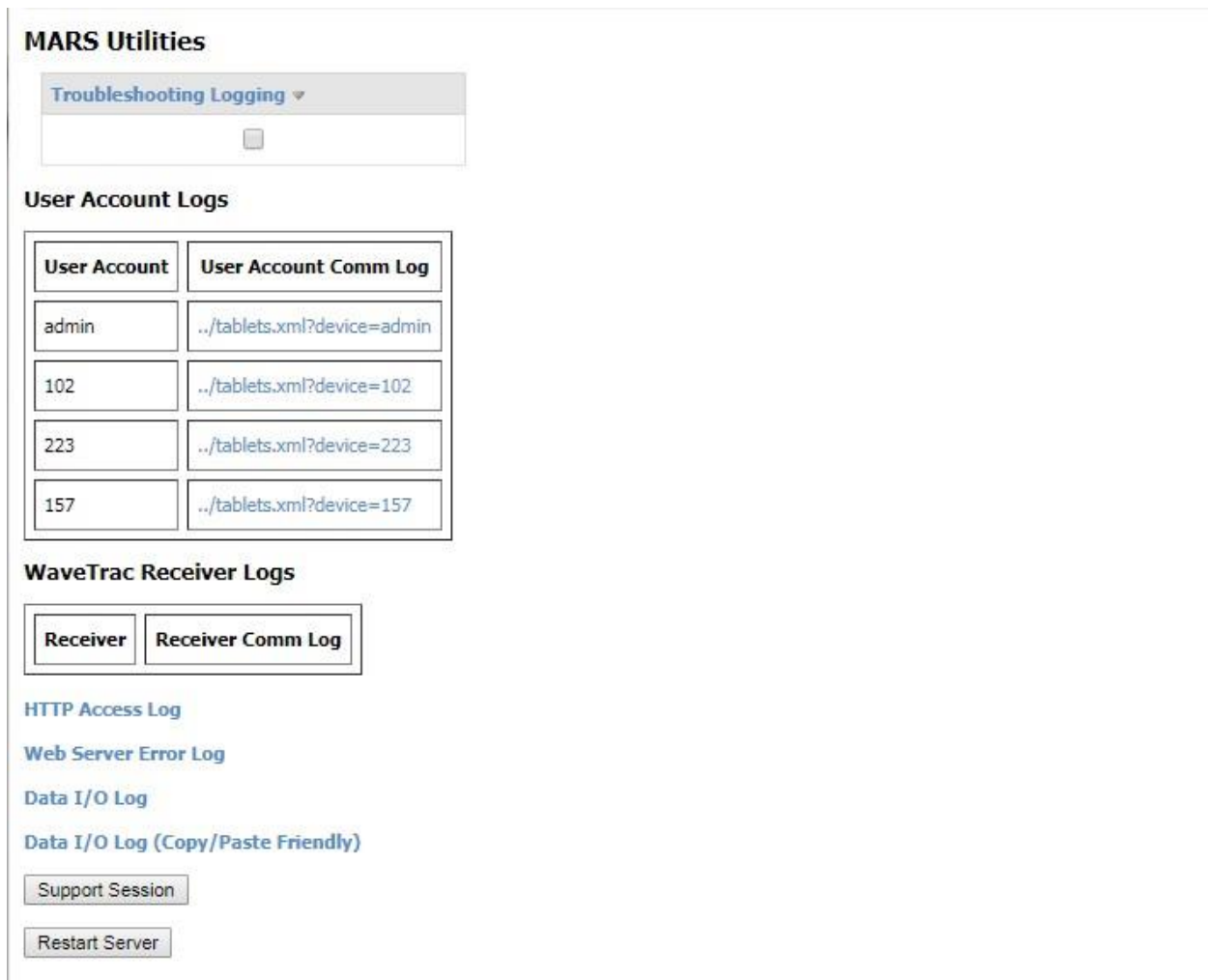


Figure 20 - Utilities with Event Processing Enabled

## Troubleshooting Logging

If checked, the system will perform troubleshooting logging, so that the WaveTrac Receiver Logs will have useful data in them.

## WaveTrac Receiver Logs <sup>EP</sup>

Any WaveTrac Wireless Receivers with assigned Behaviors will be listed here. If Troubleshooting Logging is enabled, click the Receiver Comm Log link to observe a log of WaveTrac Receiver communications for the selected receiver.

## HTTP Access Log

Click the HTTP Access Log link to display a listing of the last 1,000 HTTP access records.

## Web Server Error Log

Click the Web Server Error Log link to display a listing of the last 1,000 Web Server error records.

## Data I/O Log

Click the Data I/O Log link to display a listing of the last 1,000 data input/output records.

9:49:10 AM	Event Processing System		'=Raw Protocol Input and Response= Received:{"tonc": 20, "pagerid": 6, "destination": "101", "source": 0, "cancel": 1, "message": "Pendant Demo Room 1 Smith, J. @ IN06252738"}<0d> Replied: '
9:49:11 AM		TAP Out	'=Raw Protocol Output and Response= Sent:<02>101<0d>cancel Pendant Demo Room 1 Smith, J. @ IN06252738<0d><03>?55<0d> Received:211 Page Accepted for Delivery<0d><06><0d> '
9:00:56 AM	Messaging Client		From Inovonics: IN08756818, Cancel = False
9:01:13 AM	Messaging Client		From Inovonics: IN08756818, Cancel = True
9:01:25 AM	Messaging Client		From Inovonics: IN08756818, Cancel = False
9:01:52 AM	Messaging Client		From Inovonics: IN08756818, Cancel = True
9:10:43 AM	Messaging Client		From Inovonics: IN08756818, Cancel = False
9:16:39 AM	Messaging Client		From Inovonics: IN08756818, Cancel = True
12:57:18 PM			Core system started at: 2017-08-16 12:57:18.731919
12:58:34 PM			Core system started at: 2017-08-16 12:58:34.156321
12:58:34 PM	Inovonics		Starting Inovonics Input Protocol.
12:58:34 PM		TAP Out	'Output Protocol STARTING. Name: TAP Out Protocol: TAP Output ID: 20 Port: USB1 Settings: baud=9600, parity=none, databits=8, stopbits=1 '
1:01:13 PM	Messaging Client		From Inovonics: IN10619399, Cancel = False

Figure 21 - Data I/O Log

## Data I/O Log (Copy/Paste Friendly)

Click the Data I/O Log (Copy/Paste Friendly) link to display a listing of the last 1,000 data input/output records.

```

==== 2017-08-14 09:49:10 - In on Input protocol 1
Queued Item from Messaging Client.
==== 2017-08-14 09:49:10 - In on Input protocol 0
'=Raw Protocol Input and Response=
Received:{"tonc": 20, "pagerid": 6, "destination": "101", "source": 0, "cancel": 1, "message": "Pendant Demo Room 1 Smith, J. @ IN06252738"}<0d>
Replied:
'
==== 2017-08-14 09:49:11 - Out on Output protocol 20
'=Raw Protocol Output and Response=
Sent:<02>101<0d>cancel Pendant Demo Room 1 Smith, J. @ IN06252738<0d><03>>55<0d>
Received:211 Page Accepted for Delivery<0d><06><0d>
'
==== 2017-08-15 09:00:56 - In on Input protocol 1
From Inovonics: IN08756818, Cancel = False
==== 2017-08-15 09:01:13 - In on Input protocol 1
From Inovonics: IN08756818, Cancel = True
==== 2017-08-15 09:01:25 - In on Input protocol 1
From Inovonics: IN08756818, Cancel = False
==== 2017-08-15 09:01:52 - In on Input protocol 1
From Inovonics: IN08756818, Cancel = True
==== 2017-08-15 09:10:43 - In on Input protocol 1
From Inovonics: IN08756818, Cancel = False
==== 2017-08-15 09:16:39 - In on Input protocol 1
From Inovonics: IN08756818, Cancel = True
==== 2017-08-16 12:57:18 - None on None protocol None
Core system started at: 2017-08-16 12:57:18.731919
==== 2017-08-16 12:58:34 - None on None protocol None
Core system started at: 2017-08-16 12:58:34.156321
==== 2017-08-16 12:58:34 - In on Input protocol 5
Starting Inovonics Input Protocol.
==== 2017-08-16 12:58:34 - Out on Output protocol 20
'Output Protocol STARTING.
Name: TAP Out
Protocol: TAP
Output ID: 20
Port: USB1
Settings: baud=9600, parity=none, databits=8, stopbits=1
'
==== 2017-08-16 13:01:13 - In on Input protocol 1
From Inovonics: IN10619399, Cancel = False

```

**Figure 22 - Data I/O Log (Copy/Paste Friendly)**

## Support Session Button

Clicking on the Support Session button allows your system to attempt to open a secure communications session between the device and technical support staff. This feature requires the system to be on a network segment with internet access and to be able to use IP port 22 on that connection.

## Restart Server Button

Click the Restart Server button to cause the server to restart. The restart process may take a few minutes.

## Inputs/Outputs

### Data Inputs

The Data Inputs page allows configuration of incoming system level data connections, or connection to any system that supports one of the following communications protocols:

- COMP1
- COMP2
- Inovonics (central receiver serial protocol)
- Messaging Client (browser based messaging)
- R5000

- SMTP (e-mail)
- TAP
- HTTP

See appendices for interface protocol details.

Note that the Event Processing System and Messaging Client are system specific Data Inputs that cannot be modified. The Event Processing System performs event detection, alert event life cycle management, alert event notification, alert event logging, and alert event reporting. The Messaging Client allows creation and sending of messages to Users via MARS Alerts App, pager, and e-mail.

The typical nursecall system or alarm contact panel has a paging system port that communicates TAP or COMP2 protocol over a serial port. If an Ethernet output is offered, or you want to use Ethernet serial servers, you can configure an Ethernet interface.

**MARS Data Inputs Configuration**

Filter :type any text here + Add new data input

ID	Name	Input Interface	Settings	Protocol	Cancel Prefix	Cancel Suffix	Delete
0	Event Processing System	Unassigned		Unassigned			
1	Messaging Client	Unassigned		Messaging Client			
5	R5000	Ethernet	port=5060	R5000			

**Figure 23 - Data Inputs Configuration**

Following are the components of the Data Inputs page with a description of how they affect system operation.

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new data input

The Add new data input button allows you to create a new record. To create a new record, click the Add new data input button. A popup will appear prompting for a Name. Type something in the Name field, then click on the Apply button. The Name value can be changed later by simply clicking on the Name cell in the grid and editing it. You will see another popup confirming the addition of the new row. Click on the confirmation window's OK button, then you will see the new row added to the grid, with default values applied. The Add new row button may be renamed to represent the element type you are adding.

selected, the server will use that serial port as well as the value defined in the Settings field.



**Figure 24 - Add New Row Popup**

## **ID**

The ID field is a reference field identifying the database record ID value

## **Name**

The reference name for the Data input.

## **Input Interface**

The input interface used to communicate with the selected data input. The selection options include "Ethernet" and any USB based serial ports that are active on the server.

## **Settings**

The Settings value used by the selected system to connect to the server. If an Ethernet interface is used with TAP, COMP2 or SMTP protocols, the Settings value should represent an IP Port value, formatted as port=NNNN, e.g. port=5060. If a USB based serial port interface is used, the Settings value should contain the baud and parity of the serial connection, formatted as baud=NNNN, parity=aaaa, databits=N, stopbits=N, e.g. baud=9600, parity=none, databits=8, stopbits=1.

The default serial port setting is baud=9600, parity=none, databits=8, stopbits=1. You can choose to use a subset of this definition when defining your Settings value. As an example, to operate at 2400N81, you could simply use baud=2400 and the remaining part of the settings is assumed from the default values.

With Inovonics protocol or COMP1 protocol, the Settings field should include a tolist parameter, e.g. tolist=101, or tolist=103;114. With Inovonics protocol, you can route low battery and tamper alerts using a maintlist parameter, e.g. maintlist=112. When the tolist and/or maintlist parameters contain more than one value, they should be semi-colon delimited values, while each list should be comma delimited, e.g. tolist=101;114,maintlist=111.

Following is a list of Settings parameters available for use with Data Inputs, their range of values, and their default behaviors:

- **port=NNNN**, with values including any valid IP port value
- **baud=NNNN**, with valid values of 300, 1200, 2400 or 9600 (default 9600)
- **parity=XXXX**, with valid values of none or even (default none)
- **databits=N**, with valid values of 7 or 8 (default 8)
- **stopbits=N**, with valid values of 0 or 1 (default 1)
- **tolist=NNN;NNN...**, with NNN being any pager ID value accepted by the equipment connected to the associated Data Output (default blank). If Event Processing is enabled, the tolist will be processed by the event processing system. Otherwise, output messages will be created for each element of the tolist.
- **maintlist=NNN;NNN...**, with NNN being any pager ID value accepted by the equipment connected to the associated Data Output (default blank). If Event Processing is enabled, the maintlist will be processed by the event processing system. Otherwise, output messages will be created for each element of the maintlist.

## Protocol

The communications protocol used by the selected interface on the selected data input. For the Ethernet interface, any of the protocols can be selected. For a USB based interface, the SMTP and R5000 protocol is not applicable.

## Cancel Prefix

If the Cancel Prefix value is non-blank, the system will try to detect alert cancel events by comparing the original alert activation message with new arriving messages to determine if the difference between the two messages is a prefix value matching the Cancel Prefix value. If a match is found, the alert will be marked cancelled. This is not applicable to SMTP protocol. To define a data separator, such as a space char, you can use {SP}, e.g. Cancel{SP} to make it more clear that a separator character should be included.

## Cancel Suffix

If the Cancel Suffix value is non-blank, the system will try to detect alert cancel events by comparing the original alert activation message with new arriving messages to determine if the difference between the two messages is a suffix value matching the Cancel Suffix value. If a match is found, the alert will be marked cancelled. This is not applicable to SMTP protocol. To define a data separator, such as a space char, you can use {SP}, e.g. {SP}Cancel to make it more clear that a separator character should be included.

## Delete

Click the Trash Can icon if you want to delete this database record

## Data Outputs

The Data Outputs page allows the configuration of one or more outgoing data system connections or connection to any system that supports one of the following communications protocols:

- COMP2
- LED Display (Adaptive model MNS)
- Smartphone (Requires MARS Response App)
- SMTP (e-mail)
- TAP
- DAV (Digital Alert Viewer)

Data outputs can be configured to connect via serial port or via Ethernet.

Note that the Event Processing System is a system specific Data Output that cannot be modified. The Event Processing system performs alert event detection, alert event life cycle management, alert event notification, alert event logging, and alert event reporting.

### MARS Data Outputs Configuration

Filter :type any text here							+ Add new data output
ID	Name	Output Interface	IP Address	Settings	Protocol	Delete	
0	Event Processing System	Unassigned			Unassigned		
4	Rauland App	Ethernet			Smartphone		
5	Paging Transmitter	USB1		baud=9600, parity=None, databits=8, stopbits=1	TAP		

**Figure 25 - Data Outputs Configuration**

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new data output

The Add new data output button allows you to create a new record. To create a new record, click the Add new data output button.

## ID

The ID field is a reference field identifying the database record ID value

## Name

The name of the data output. Note: The Event Processing System is a system specific Data Output that cannot be modified. The Event Processing System performs alert event detection, alert event life cycle management, alert event notification, alert event logging, and alert event reporting.



## Output Interface

The output interface used to communicate with the selected data output. The selection options include "Ethernet" and any USB serial ports that are active on the server. If Ethernet is selected, the server will use the values defined in both the IP Address field and the Settings field. If a USB serial port is selected, the server will use that serial port as well as the value defined in the Settings field. Note that Ethernet output interface is required for any Data Outputs that use LED Display protocol.

## IP Address

The IP Address field defines the IP address of the data output. If the edit process fails, it is likely caused by invalid formatting or extraneous characters in the IP address. Note that IP Address values are required for Data Outputs that use the LED Display protocol, and that all LED Display outputs are formatted to use sign Address value of zero (0), which causes the message to be displayed by all LED displays connected to the assigned IP address.

## Settings

The Settings parameter and value used to configure management of selected the data output. Individual parameters are comma separated, e.g. `baud=9600,cancelprefix=cancel{SP}`

If an Ethernet interface is used, the Settings value should include an IP Port value, e.g. `port=3330`. If a serial port interface is used, the Settings value should contain the baud and parity of the serial connection, e.g. `baud=9600,parity=none,databits=8,stopbits=1`.

If you want to add a cancel prefix or suffix to an outgoing message when an incoming message is marked by the system with a cancel state, you can use the `cancelprefix=` and/or `cancelsuffix=` parameters. To define a data delimiter, such as a space char, you can use `{SP}`, e.g. `cancelprefix=cancel{SP}` or you can use a regular space character, but space characters are difficult to see when troubleshooting failed system operation.

You can use `blacklist` and `whitelist` settings values to filter which Pager ID values are associated with the output, allowing the output to only be delivered messages associated with the defined Pager ID values. List values are always semi-colon delimited. `Blacklist` tells the system to NOT output messages associated with the list of Pager ID values, while `whitelist` tells the system to output messages associated with the list of Pager ID values. An example `blacklist` setting is `blacklist=101;105`. An example `whitelist` setting is `whitelist=102;103;104;200`.

You can use a Settings parameter of `sendcancel=0` for TAP, COMP2, and SMTP protocols, as a means of suppressing the output of event cancellation detection notifications, for the selected Data Output. The default behavior of specific Data Outputs is that event cancellation notifications are enabled unless otherwise disabled via `sendcancel=0`.

Following is a list of Settings parameters available for use with Data Outputs, their range of values, and their default behaviors:

- **baud=NNNN**, with valid values of 300, 1200, 2400 or 9600 (default 9600)
- **parity=XXXX**, with valid values of none or even (default none)

- **databits=N**, with valid values of 7 or 8 (default 8)
- **stopbits=N**, with valid values of 0 or 1 (default 1)
- **cancelprefix=XXXX**, example value of cancel{SP} (default cancel{SP})
- **cancelsuffix=XXXX**, example value of {SP}cancel (default blank)
- **blacklist=NNN;NNN**, with NNN being any pager ID value delivered by the equipment connected to the Data Input that the original data was collected on (default blank)
- **whitelist=NNN;NNN**, with NNN being any pager ID value accepted by the equipment connected to the Data Output (default blank)
- **sendcancel=N**, with valid values of 0 or 1 (default 1)

## Protocol

The communications protocol used by the data output.

## Delete

Allows you to delete this record.

### Data Connections

The Data Connections page allows the configuration of one or more connections between Data Inputs and Data Outputs, to tell the system how to perform the following types of functions:

- Protocol conversion
- Protocol splitting
- Protocol combining
- Event processing, including:
  - Alert event detection,
  - Alert event life cycle management
  - Alert event notification
  - Alert event logging
  - Alert event reporting

Data connections are required to be configured into the system to allow MARS to perform any processing of incoming or outgoing data. Data Inputs and Data Outputs are required to be configured in order to create any Data Connections in the system.

Note that the Rules and Filters configuration process is also required to optimize the MARS system operation.

### MARS Data Connections Configuration



ID	Name	Input	Output	Delete
6	R5000 > Paging Transmitter	R5000	Paging Transmitter	
7	R5000 > Rauland App	R5000	Rauland App	

Figure 26 - Data Connections Configuration

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new data connection

The Add new data connection button allows you to create a new record. To create a new record, click the Add new data connection button.

## ID

The ID field is a reference field identifying the database record ID value

## Name

The name of the data connection.

## Input

The Data Input assigned to this data connection.

## Output

The Data Output assigned to this data connection. Note: If you are going to use the MARS Event Processing System, it is necessary that you create a Data Connection that includes Event Processing System as a Data Output, for each of the Data Inputs that you want processed by the Event Processing System. To fully enable data output from the Event Processing System, you will also need to associate each Zone with one or more Data Outputs, in the Zones/Data Outputs page.

## Delete

Allows you to delete this record.

## Messaging Client

The Messaging Client page allows a user to generate manual messages to be sent to MARS Alerts apps, pagers, and/or e-mail. Messaging Client recipients are defined in the User Accounts page and only select User Accounts are displayed in the Messaging Client Recipients list.

Messaging Client generated messages are limited to 200 characters in length.

## MARS Messaging

Logged in as admin [Log Out](#)

The screenshot displays the MARS Messaging interface. It features three main sections: 'Recipients', 'Message to Send', and 'Groups'. The 'Recipients' section is a list box containing 'admin (Paging 1)' and 'admin (E-mail)'. The 'Message to Send' section includes a text area with the message '9/18/2017 19:44:16 Test Message', a 'Predefined Msgs' dropdown menu, and 'Time' and 'Date' buttons. To the right of the message area are 'Send' and 'Clear' buttons. The 'Groups' section shows a list box with 'Test messaging group' and a 'Load Group' button.

Select one or more recipients (Click or Ctrl+Click), edit a message, then click SEND or Press the Enter key

You can auto-select recipients by selecting a predefined group and clicking Load Group

You can load a predefined message by selecting from the Predefined Msgs list

The Recipients list is populated using the following rules:

- One or more User Accounts are assigned a Pager, and/or have a non-blank E-mail value.
- One or more Data Connections have been configured that use the Messaging Client Data Input and that use a Data Output whose protocol matches one or more of the protocols required by the selected User Accounts defined above.

### Figure 27 - Messaging Client

The Messaging Client Recipients list is populated using the following rules:

1. One or more User Accounts have been configured that are assigned a Pager, and/or have a non-blank E-mail value.
2. One or more Data Connections have been configured that use the Messaging Client Data Input and that use a Data Output whose protocol matches one or more of the protocols required by the selected User Accounts defined above.
3. One or more Pagers have been defined and one or more Data Connections have been configured that use the Messaging Client Data Input and that use a Data Output with TAP, COMP2, or Pager App protocol assigned.

To add User Accounts to an existing Messaging Client Recipients list, edit User Accounts to meet the first rule above. The Recipient list information indicated in parentheses identifies the name of the Data Output associated with that particular recipient.

While editing the message to send box, hitting the Enter key or clicking the Send button will send the message. The server will respond with a message of **Queued For Delivery** if the server accepted the message and recipients selection.

Recipients can be automatically multi-selected by selecting a group and clicking the Load Group button.

## Facility

### Rooms <sup>EP</sup>

The Rooms page allows configuration of rooms. The Rooms menu item is only available when Event Processing is enabled.

Rooms are an optional part of the MARS system configuration, but provide a useful means of managing relationships that affect alert message formatting, alert message routing, as well as organization of activity reports. Rooms must be assigned to one or more Zones in the Zone Assignments configuration section, and can optionally be assigned to sensors in the Sensors configuration section.

**MARS Rooms Configuration**

Filter: type any text here + Add new row

ID	Name	Audio File	Delete
0	Unassigned	Unassigned	
2	Rm 102	Unassigned	
3	Rm 401	Unassigned	
5	Lobby	Unassigned	
6	East Wing	Unassigned	
7	West Wing	Unassigned	
8	Pool Area	Unassigned	
9	Restroom A7	Unassigned	

**Notes**

**Name** The name of the room. Note: the first room in the list is always be named "Unassigned" to allow the unassignment of a room from a sensor

**Audio File** The audio file assigned to the alert type. The audio file will be played by the ReDIRAC System. Default is Unassigned. If one or more ReDIRAC Systems are used for audio output, audio files need to be created and assigned.

**Delete** If the Delete function fails, it is probably caused by the existence of associated Zones/Rooms records, which should be removed first before the deletion can be successful.

**Figure 28 – Rooms Configuration**

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new room

The Add new room button allows you to create a new record. To create a new record, click the Add new room button.

## ID

The ID field is a reference field identifying the database record ID value

## Name

The reference name for the Room. Note that the first room in the list is always named “Unassigned” to allow the unassignment of a room from a sensor. Records of ID value 0 and Name value of Unassigned, cannot be deleted from the system.

## Audio File

The audio file assigned to the room. The audio file will be played by either the audio file to two way radio interface device or in a Digital Alert Viewer in either a desktop browser or on a digital TV screen. Default is Unassigned. Audio files are configured in the Outputs/Audio Files section.

## Delete

Click the Trash Can icon if you want to delete this database record. If the Delete function fails, it is probably caused by the existence of associated Zones/Rooms records, which should be removed first before the deletion can be successful.

## Residents <sup>EP</sup>

The Residents page allows configuration of residents. The Residents menu item is only available when Event Processing is enabled.

Residents are an optional part of the MARS system configuration, but provide a useful means of managing relationships that affect alert message formatting. Residents must be assigned to one or more Zones in the Zone Assignments configuration section, and can optionally be assigned to sensors in the Sensors configuration section.

### MARS Residents Configuration

Filter :type any text here		+ Add new row	
ID	Name	Room	Delete
0	Unassigned	Unassigned	
8	C. Rock2	Rm 102	
9	A. Tyuluman	Unassigned	

#### Notes

##### Name

The name of the resident. Note: the first resident in the list is always named “Unassigned” to allow the unassignment of a resident from a sensor

##### Room

The room the resident is assigned to. This improves the system’s ability to format alert messages. The Room can remain Unassigned

##### Delete

If the Delete function fails, it is probably caused by the existence of associated Zones/Residents records, which should be removed first before the deletion can be successful.

Figure 29 – Residents Configuration

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new resident

The Add new resident button allows you to create a new record. To create a new record, click the Add new resident button.

### ID

The ID field is a reference field identifying the database record ID value

### Name

The reference name for the Resident. Note that the first resident in the list is always named "Unassigned" to allow the unassignment of a room from a sensor. Records of ID value 0 and Name value of Unassigned, cannot be deleted from the system.

### Room

The room the resident is assigned to. This improves the system's ability to format alert messages. The Room can remain Unassigned.

### Delete

Click the Trash Can icon if you want to delete this database record. If the Delete function fails, it is probably caused by the existence of associated Zones/Residents records, which should be removed first before the deletion can be successful.

#### [Zones](#) <sup>EP</sup>

Please refer to the Zone Assignments section for information on configuring Zones. The Zones menu item is only available when Event Processing is enabled.

#### [Wireless Receivers](#)

The Wireless Receivers page allows configuration of the wireless receivers used with the MARS system.

Both Inovonics receivers and WaveTrac receivers are configured on this page. The purposes of configuring wireless receivers into the system include adjusting their operating behavior. Wireless receiver records are automatically added by the MARS system. Receiver activity is not processed by the system until a specific Behavior is assigned to a receiver.

Receivers are automatically recognized and added to the system, but you need to assign a Behavior value to them before their signals are processed by the server.

### MARS Wireless Receivers Configuration

Filter :type any text here

ID	Name	Address	Behavior	Level	Coordinates	Coordinates Config	Audio File	Schedule	Proximity Threshold	Proximity Threshold Hi	Lo
16	IN Central	IN12356821	Inovonics	Mentis Houston	573,293	rcvr_coord.php?id=16	Unassigned	Unassigned			
34	Central Receiver	IN09853062	Inovonics	Mentis Houston	0,0	rcvr_coord.php?id=34	Unassigned	Unassigned			
35	Dicks Desk	IN06252738	Inovonics	Mentis Houston	0,0	rcvr_coord.php?id=35	Unassigned	Unassigned			
47	Repeater 1	IN10662860	Inovonics	Mentis Houston	391,332	rcvr_coord.php?id=47	Unassigned	Unassigned			
48	Repeater 2	IN10662702	Inovonics	Mentis Houston	397,318	rcvr_coord.php?id=48	Unassigned	Unassigned			
71	BT0f027031	BT0f027031	Wander-Unlocked	Bldg 1 Level 2	95,233	rcvr_coord.php?id=71	Unassigned	Unassigned	179	184	
73	BT0f023021	BT0f023021	Unassigned	Bldg 1 Level 2	346,142	rcvr_coord.php?id=73	Unassigned	Unassigned	87	180	
78	BT0f01f02e	BT0f01f02e	Tracking	Bldg 1 Level 2	543,176	rcvr_coord.php?id=78	Unassigned	Unassigned	170	180	
79	East Hall	BT0f00601f	Tracking	Bldg 1 Level 2	717,255	rcvr_coord.php?id=79	Unassigned	Unassigned	164	178	

Figure 30 – Wireless Receivers Configuration with Event Processing Enabled

### MARS Wireless Receivers Configuration

Filter :type any text here

ID	Name	Address	Behavior	Delete
194	IN10802672	IN10802672	Inovonics	
195	IN06252738	IN06252738	Inovonics	
196	IN06157680	IN06157680	Unassigned	

**Notes**

**Name**

The name of the Wireless Receiver

**Address**

Wireless Receiver records are automatically created by the server. The Address field displays an address value formatted as TTAA...AA, where TT is a receiver type p identifies the unique address of the receiver. IN indicates Inovonics, BT indicates Bluetooth, etc.

**Behavior**

The autonomous behavior that the wireless receiver is expected to use. This feature applies only to Bluetooth wireless receivers. A behavior must be assigned to Blue receivers in order for them to be properly configured for use.

Figure 31 - Wireless Receivers Configuration with Event Processing Disabled

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## ID

The ID field is a reference field identifying the database record ID value



## Name

The reference name for the Wireless Receiver. The default Name inserted by the system is the detected Address value of the receiver.

## Address

The Address field is a reference field displaying the detected address value of the receiver. The Address field displays an address value formatted as TTAA...AA, where TT is a receiver type prefix and AA...AA identifies the unique address of the receiver. IN indicates Inovonics, BT indicates WaveTrac.

## Behavior

The Behavior field allows you to assign an autonomous behavior to a WaveTrac receiver, or references an Inovonics receiver. The default Behavior value is Unassigned. A behavior other than Unassigned must be assigned to a WaveTrac wireless receiver in order for it to function properly. As an example, the Wander-Unlocked behavior is designed to allow a WaveTrac receiver to provide exit risk detection at a doorway where the door normally remains unlocked. The Tracking behavior is designed to allow a WaveTrac receiver to provide sensing of mobile WaveTrac sensors, for tracking, alerting, and reporting purposes.

## Audio File <sup>EP</sup>

The audio file assigned to the wireless receiver. The Audio File column is only available when Event Processing is enabled.

The audio file will be played by either the audio file to two way radio interface device or in a Digital Alert Viewer in either a desktop browser or on a digital TV screen. Default is Unassigned. Audio files are configured in the Outputs/Audio Files section.

## Schedule <sup>EP</sup>

The Alert Processing Schedule assigned to the associated WaveTrac Wireless Receiver. The Schedule column is only available when Event Processing is enabled.

If no schedule is assigned, alerts associated with the wireless receiver may be monitored continuously. Schedules can be assigned in other areas of the system, such as Rooms, Residents and Alert Sensors. Where schedules are layered during the process of generating alerts or delivering alert notifications, for the system elements where a schedule is assigned, if any one or more of those assigned schedules indicate that the alert should be generated, the alert will be generated. You will need to configure one or more schedules in the Schedules section before making schedule assignments.

## Proximity Threshold <sup>EP</sup>

The RSSI value of the wireless signal that the associated WaveTrac Wireless Receiver will use to detect proximity events from WaveTrac Sensors, to allow tuning of sensitivity at each receiver. The Proximity Threshold column is only available when Event Processing is enabled.

The Proximity Threshold value can range from 50 to 250, with the higher numbers making the WaveTrac wireless receiver less sensitive to proximity detection. This setting does not apply to Inovonics wireless receivers.

### **Proximity Threshold Hi** <sup>EP</sup>

The RSSI value of the wireless signal that the associated WaveTrac Wireless Receiver will use to detect proximity events from WaveTrac Sensors when those WaveTrac Sensors are outputting a high RF signal level, to allow tuning of sensitivity at each receiver. The Proximity Threshold Hi column is only available when Event Processing is enabled.

The Proximity Threshold Hi value can range from 50 to 250, with the higher numbers making the WaveTrac wireless receiver less sensitive to proximity detection. This setting does not apply to Inovonics wireless receivers.

### **Keypad Override** <sup>EP</sup>

If checked, when the server is notified of a keypad activation event at the selected wireless receiver, and if the facility installs an access keypad, the wireless receiver, if configured with Wander behavior, will be directed to override the reporting of wander proximity events and exit risk events for the duration of the interval defined in Override Duration. In addition, local audible/visual annunciation of wander proximity and exit risk events will be suppressed for that duration. This setting does not apply to Inovonics wireless receivers.

The Keypad Override column is only available when Event Processing is enabled.

### **Override Duration** <sup>EP</sup>

The number of seconds, ranging from 0 to 99, that the Keypad Override of wander proximity and exit risk reporting will remain in effect. The Override Duration column is only available when Event Processing is enabled.

This setting does not apply to Inovonics wireless receivers or wireless receivers configured with a Behavior different than Wander-Locked or Wander-Unlocked.

### **Invert Polarity** <sup>EP</sup>

If checked, the wireless receiver reverses the polarity that it uses to detect a door open event, when the wireless receiver is configured with Wander behavior. The Invert Polarity column is only available when Event Processing is enabled.

This setting does not apply to Inovonics wireless receivers.

### **Repl Addr** <sup>EP</sup>

Repl Addr can be used to simplify the replacement of WaveTrac wireless receivers, where if a WaveTrac wireless receiver address value is stored in this field, a replacement WaveTrac wireless receiver with that address can be shipped to a customer site, allowing the customer to swap out the receiver. Once

the new receiver is detected by the system, the previously assigned behavior and settings will be assigned to the replacement receiver.

The Repl Addr column is only available when Event Processing is enabled.

## Delete

Click the Trash Can icon if you want to delete this database record.

## LED Displays

The LED Displays Configuration page allows the configuration of LED displays.

**MARS LED Displays Configuration**

Filter :type any text here + Add new LED display

ID	Name	IP Address	Settings	Default Msg	Schedule	Delete
1	LED Sign 1	192.168.10.101	port=3737	East 2	Unassigned	

**Notes**

**Name**  
The name of the LED display

**IP Address**  
The IP Address of the LED display. Edit this field to match the IP address programmed into the associated LED display.

**Settings**  
The Settings value used with the associated LED display. The Settings value can be blank but can also be used to allow filtering of which messages get delivered to the associated LED display. If the Settings value is blank, and the Event Processing System is disabled, then all alerts processed by the system will be delivered to the associated LED display. If the Settings value is defined, the LED display can use blacklist and whitelist settings values to filter which PIN values are associated with the LED display, allowing the LED display to only display messages associated with defined PIN values. Blacklist tells the system to NOT output messages associated with the list of PIN values, while whitelist tells the system to output messages associated with the list of PIN values. An example blacklist setting is blacklist=101;105. An example whitelist setting is whitelist=102;103;104;200.

**Default Msg**  
The message value that will display when there are no active events or active priority messages to be displayed. If the individual LED Display Default Msg is defined, it will take precedence over the system level LED Display Default Msg.

**Schedule**  
The Alert Processing Schedule assigned to the LED display. If no schedule is assigned, the LED display will be used continuously.

Figure 32 – LED Displays Configuration

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new LED display

The Add new LED display button allows you to create a new record. To create a new record, click the Add new LED display button.

## ID

The ID field is a reference field identifying the database record ID value

## Name

The reference name for the LED display.

## **IP Address**

The IP Address of the LED display. Edit the IP address to match that configured into the LED display.

## **Settings**

The Settings value used with the associated LED display. The Settings value can be blank but can also be used to allow filtering of which messages get delivered to the associated LED display. If the Settings value is blank, and the Event Processing System is disabled, then all alerts processed by the system will be delivered to the associated LED display.

You can use blacklist and whitelist settings values to filter which Pager ID values are associated with the LED display, allowing the LED display to only display messages associated with the defined Pager ID values. Blacklist tells the system to NOT output messages associated with the list of Pager ID values, while whitelist tells the system to output messages associated with the list of Pager ID values.

An example blacklist setting is `blacklist=101;105`. An example whitelist setting is `whitelist=102;103;104;200`.

## **Default Msg**

The message value that will display when there are no active events or active priority messages to be displayed. If the individual LED Display Default Msg is defined, it will take precedence over the system level LED Display Default Msg.

## **Schedule**

The Alert Processing Schedule assigned to the LED display. If no schedule is assigned, the LED display will be used continuously.

## **Delete**

Allows you to delete this record.

### [Digital Alert Viewers](#)

The Digital Alert Viewers Configuration page allows the configuration of Digital Alert Viewers.

## MARS Digital Alert Viewers Configuration

Filter :type any text here

ID	Name	Address	Pager ID List	Max Msgs	Max Msg Life	Delete
4	West Wing #1	c258a856	101	26	300	

### Notes

#### Name

The name of the Digital Alert Viewer, which default displays Address value until you edit this field. The Digital Alert Viewer displays its Name field value as a title on the display

#### Address

The Address of the Digital Alert Viewer. Digital Alert Viewer records are automatically created by the server.

#### Pager ID List

The Pager ID List used to determine how to route messages to the Digital Alert Viewer. Any messages associated with a Pager ID value defined in the Pager ID List will be routed to the associated Digital Alert Viewer, allowing the Digital Alert Viewer to only display messages associated with the defined Pager ID values. The Pager ID List should be comma separated values. An example Pager ID List value is 102,202,200.

#### Max Msgs

The maximum quantity of active messages to be displayed on the associated Digital Alert Viewer, ranging from 1 to 26. New messages will replace the oldest messages.

#### Max Msg Life

The quantity of seconds that a message will be allowed to be displayed before it is automatically removed. Messages can also be removed if the system determines that an active alert event has been cancelled.

Figure 33 - Digital Alert Viewers Configuration

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## ID

The ID field is a reference field identifying the database record ID value

## Name

The name of the Digital Alert Viewer, which default displays Address value until you edit this field. The Digital Alert Viewer displays its Name field value as a title on the display.

## Address

The Address of the Digital Alert Viewer. Digital Alert Viewer records are automatically created by the server.

## Pager ID List

The Pager ID List used to determine how to route messages to the Digital Alert Viewer. Any messages associated with a Pager ID value defined in the Pager ID List will be routed to the associated Digital Alert Viewer, allowing the Digital Alert Viewer to only display messages associated with the defined Pager ID values. The Pager ID List should be comma separated values. An example Pager ID List value is 102,202,200.

## Max Msgs

The maximum quantity of active messages to be displayed on the associated Digital Alert Viewer, ranging from 1 to 26. New messages will replace the oldest messages.

## Max Msg Life

The quantity of seconds that a message will be allowed to be displayed before it is automatically removed. Messages can also be removed if the system determines that an active alert event has been cancelled.

## Delete

Allows you to delete this record.

## Audio Gateways <sup>EP</sup>

The Audio Gateway Configuration page allows the configuration of audio gateways, which perform audio output to PA systems, speakers, and two-way radio systems. The Audio Gateways menu item is only available when Event Processing is enabled.

The audio gateways are automatically added to the Audio Gateways Configuration table, as it obtains an IP address automatically and registers itself with the system.

### MARS Audio Gateway Configuration

<input type="text" value="Filter :type any text here"/>				<a href="#">+ Add new audio gateway</a>
ID	Name	IP Address	Schedule	
11	Walkie-Talkie Interface	10.57.57.5	Unassigned	

#### Notes

##### Name

The name of the audio gateway

##### IP Address

The IP Address of the audio gateway. Reference only.

##### Schedule

The Alert Processing Schedule assigned to the audio gateway. If no schedule is assigned, the audio gateway will be used continuously

Figure 34 – Audio Gateway Configuration

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new audio gateway

The Add new audio gateway button allows you to create a new record. To create a new record, click the Add new audio gateway button.

## ID

The ID field is a reference field identifying the database record ID value

## Name

The reference name for the audio gateway.

## IP Address

The IP Address of the audio gateway. Reference only.

## Schedule

The Alert Processing Schedule assigned to the audio gateway. If no schedule is assigned, the audio gateway will be used continuously.

## Delete

Allows you to delete this record.

### Audio Files <sup>EP</sup>

The Audio Files page allows the configuration of audio files that can be delivered. The Audio Files menu item is only available when Event Processing is enabled.

The audio files can be delivered to desktop browser Digital Alert Viewer, to walkie-talkies via two way radio interface, and to PA systems or amplified speaker systems.

### MARS Audio Files Configuration

Filter :type any text here		<a href="#">+ Add new audio file</a>	
ID	Name	Audio File Path	Configure Audio File
0	Unassigned		object_path.php?type=audio_file&id=0
1	Chime	/audio/chime_2.mp3	object_path.php?type=audio_file&id=1
2	Warble	/audio/warble_4.mp3	object_path.php?type=audio_file&id=2
63	Asset Tamper	/audio/asset_tamper.mp3	object_path.php?type=audio_file&id=63
64	Bed Exit	/audio/bed_exit.mp3	object_path.php?type=audio_file&id=64
66	Fall	/audio/fall.mp3	object_path.php?type=audio_file&id=66
67	IV	/audio/iv.mp3	object_path.php?type=audio_file&id=67
68	Nursecall Bath	/audio/nursecall_bath.mp3	object_path.php?type=audio_file&id=68

Figure 35 – Audio Files Configuration

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new audio file

The Add new audio file button allows you to create a new record. To create a new record, click the Add new audio file button.

## ID

The ID field is a reference field identifying the database record ID value

## Name

The reference name for the audio file, used when assigning the audio file to Alert Types, etc..

## Audio File Path

The path to the audio file. Click on the link to listen to the audio file.

## Configure Audio File

Click on the Configure Audio File link to upload a new audio file for the selected record.

### MARS Audio File Selection

[Back to Audio Fil](#)

File names must be 32 characters or less in size and should be named in a user friendly manner, e.g. Room\_11\_Bath.mp3, so that the appropriate audio file can be selected during system configuration.

Click Choose File to select file to upload, then click Upload Selected File

Choose File | No file chosen

Upload Selected File

Figure 36 - Audio File Selection

## Delete

Allows you to delete this record.

## Alert Sources

### Alert Types <sup>EP</sup>












The Alert Types page allows configuration of alert types. The Alert Types menu item is only available when Event Processing is enabled.

Alert types are required to help the system properly format alert messages. Following is a view of the Alert Types Configuration screen.



**MARS Alert Types Configuration**

Filter: type any text here + Add new row

ID	Name	Avatar	Initials	Audio File	Delete
0	Unassigned	Unassigned		Unassigned	
1	Staff Beacon	Beacon	SB	Unassigned	
2	Wander Beacon	Beacon	WB	Unassigned	
3	Asset Beacon	Beacon	AB	Unassigned	
4	Resident Beacon	Beacon	RB	Pendant	
5	Pendant	Pendant	P	Pendant	
6	Vent	Vent	V	Unassigned	
7	PulseOx	PulseOx	PO	PulseOx	
10	Bed Call	Bed Call	BC	Nursecall Bed	
15	WIMS	Res Beacon	WS	Bed Exit	
17	Pull Cord	Pull Cord	PC	Nursecall Bath	

**Figure 37 – Alert Types Configuration**

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new alert type

The Add new alert type button allows you to create a new record. To create a new record, click the Add new alert type button.

## ID

The ID field is a reference field identifying the database record ID value

## Name

The reference name for the Alert Type, used to create part of the alert text for an active alert. Create this list, then assign an Alert Type for a given sensor. The complete alert message format either **Alert Type + Room + Resident + " @ " + Location**, e.g. **Pendant 201 J. Larsen @ Cafeteria**. Location information is added to the alert text if the alert sensor is assigned a non-Fixed Class value. The Unassigned record cannot be edited or deleted.

## Avatar

The avatar image assigned to the alert type. Default is Unassigned. If an avatar is unassigned, a default avatar will be used in the Alert Client app. Avatars are created in the Avatars page.

## Initials

An up to two character value that can be rendered on top of an avatar in the Alert Client app, to help differentiate similar avatars that are used for multiple purposes.

## Audio File

The audio file assigned to the alert type. The audio file will be played by either the audio file to two way radio interface device or in a Digital Alert Viewer in either a desktop browser or on a digital TV screen. Default is Unassigned. Audio files are configured in the Outputs/Audio Files section.

## Delete

Click the Trash Can icon if you want to delete this database record. If delete fails, you may need to unselect audio file assignments for the selected audio file, throughout the system, then try again.

## WaveTrac Sensors <sup>EP</sup>

The WaveTrac Sensors page allows configuration of WaveTrac sensors. The WaveTrac Sensors menu item is only available when Event Processing is enabled.

WaveTrac sensors are auto-detected and auto-registered by the system. A Class needs to be assigned to a WaveTrac Sensor before it will be actively used by the system.

WaveTrac sensors can be used in fixed or mobile sensing applications, and special WaveTrac sensor models can be used to track wandering residents and detect call events from the sensor. WaveTrac sensors require deployment of WaveTrac Wireless Receivers as a sensor monitoring infrastructure, in order to successfully manage the tracking of the WaveTrac sensors.

### MARS WaveTrac Sensors Configuration

ID	Name	Address	Model	Class	Alert Type	Room	Reference	Resident	Schedule	Priority	Audio File	MNS Msg
260	BW10010	BW10010	Resident	Unassigned	Resident Beacon	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassigned
261	BW10011	BW10011	Resident	Unassigned	Resident Beacon	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassigned
262	BW10012	BW10012	Resident	Unassigned	Resident Beacon	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassigned
263	BW10013	BW10013	Resident	Unassigned	Resident Beacon	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassigned
264	BW10014	BW10014	Resident	Unassigned	Resident Beacon	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassigned
265	BW10015	BW10015	Resident	Unassigned	Resident Beacon	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassigned
266	BW10016	BW10016	Resident	Unassigned	Resident Beacon	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassigned
267	BW10017	BW10017	Resident	Unassigned	Resident Beacon	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassigned
268	BW10018	BW10018	Resident	Unassigned	Resident Beacon	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassigned

Figure 38 – WaveTrac Sensors Configuration

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## ID

The ID field is a reference field identifying the database record ID value

## Name

The reference name for the WaveTrac Sensor. Used for assigning the sensor to one or more Zones.

## Address

The unique ID of the sensor as detected by the system. Sensor records are automatically created by the server, and the Address value is non-editable.

## Model

Non-editable field auto-detected by the system when the WaveTrac sensor is detected and registered by the system.

## Class

The class of signal processing that should be assigned to the sensor. The default value is Unassigned. A sensor with an Unassigned class will not be processed by the system. This is the first item you should adjust to place a sensor into service. The Class types are Mobile, Fixed, and Wander. The Mobile class causes proximity based location tracking of the sensor. The Fixed class does not perform tracking on the sensor. The Wander alert class causes tracking, exit risk sensing, and call event sensing.

## Alert Type

Reference text used to create part of the alert text for an active alert associated with this sensor. Alert text format is **Alert Type + Room + Resident + " @ " + Location**, e.g. **Pendant Rm. 201 J. Larsen @ Cafeteria**. Location information is added to the alert text if the Include Location feature is enabled in the General Settings section.

## Room

The room that the sensor is assigned to. Typically used with fixed sensors. Room can be an optional assignment that affects the formatting of alert messages and activity reports.

## Reference

Reference text used to create part of the alert text for an active alert associated with this WaveTrac Sensor. The Reference value can be edited in the Alert Client app to allow dynamic reconfiguration of alert messages. Alert text format is **Alert Type + Reference + " @ " + Location**, e.g. **Pendant Alert J. Larsen @ Cafeteria**. Location information is added to the alert text if the Include Location feature is enabled in General Settings.

## Resident

The resident that the sensor is assigned to. Typically used with mobile sensors. Resident can be an optional assignment that can improve the detail in an alert message, as required. If a resident is

assigned to a sensor, and a room is assigned to a resident in the Residents table, the assigned room will take precedence over the Room assigned in this table when the alert is processed.

## **Schedule**

The Alert Processing Schedule assigned to the sensor. If no schedule is assigned, alerts associated with the sensor may be monitored continuously. Schedules can be assigned in other areas of the system, such as Rooms, Residents and Wireless Receivers. Where schedules are layered during the process of generating alerts or delivering alert notifications, for the system elements where a schedule is assigned, if any one or more of those assigned schedules indicate that the alert should be generated, the alert will be generated.

## **Priority**

Checked if any alerts generated by this sensor should be automatically marked as priority.

## **Audio File**

The audio file assigned to the sensor. The audio file will be played by either the audio file to two way radio interface device or in a Digital Alert Viewer in either a desktop browser or on a digital TV screen. Default is Unassigned. Audio files are configured in the Outputs/Audio Files section.

## **MNS Msg**

The priority message to be used for mass notification, including being displayed on all LED Displays connected to the system, if the associated alert is activated. Default is Unassigned. Once the alert is completed, the priority message will be removed from all LED Displays. Note that any MNS Msg defined here can be overridden by any defined within the Rules and Filters section.

## **Delete**

If the Delete function fails, it is probably caused by the existence of associated Zones/ WaveTrac Sensors records, which should be removed first before the deletion can be successful.

### [Inovonics Sensors](#)

The Inovonics Sensors page allows configuration of Inovonics sensors.

Inovonics sensors are auto-detected and auto-registered by the system. A Class needs to be assigned to an Inovonics Sensor before it will be actively used by the system.

Inovonics sensors can be used in fixed or mobile sensing applications. Inovonics sensors require deployment of wireless repeaters and receivers as a sensor monitoring infrastructure, in order to successfully manage the tracking of the Inovonics sensors.

The configuration grid items marked with <sup>EP</sup> below are only available when Event Processing is enabled.

## MARS Inovonics Sensors Configuration

Filter :type any text here

ID	Name	Address	Model	Class	Alert Type	Room	Reference	Resident	Schedule	Priority	Audio File	LED Pr
182	DEMO PND	IN07367366	EN1223S	Mobile	Pendant	Demo Room 1	Demo Pendant	Smith, J.	Demo	<input type="checkbox"/>	Unassigned	Unassig
183	DEMO PC	IN07583764	EN1210	Fixed	Pull Cord	Demo Room 1	Demo Pull Cord	Smith, J.	Demo	<input type="checkbox"/>	Unassigned	Unassig
184	IN10963926	IN10963926	EN1223S	Mobile	Pendant	Demo Room 2	Demo Pendant 2	Demo, R.	Demo	<input type="checkbox"/>	Unassigned	Unassig
185	IN10619399	IN10619399	EN1210	Unassigned	Unassigned	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassig
186	IN08756818	IN08756818	EN1221S	Unassigned	Unassigned	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassig
187	IN06270678	IN06270678	EN1215EOL	Unassigned	Unassigned	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned	Unassig

Figure 39 - Inovonics Sensors Configuration

### Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

### ID

The ID field is a reference field identifying the database record ID value

### Name

The reference name for the Inovonics Sensor. Used for assigning the sensor to one or more Zones.

### Address

The unique ID of the sensor as detected by the system. Sensor records are automatically created by the server, and the Address value is non-editable.

### Model

Non-editable field auto-detected by the system when the Inovonics sensor is detected and registered by the system.

### Class

The class of signal processing that should be assigned to the sensor. The default value is Unassigned. A sensor with an Unassigned class will not be processed by the system. This is the first item you should adjust to place a sensor into service. The Class types are Mobile, Fixed, and Wander. The Mobile class causes proximity based location tracking of the sensor. The Fixed class does not perform tracking on the sensor. The Wander class does not apply to Inovonics sensors. If Wander class is assigned to an Inovonics sensor, it will be treated as a Mobile class assignment.

## Alert Type <sup>EP</sup>

Reference text used to create part of the alert text for an active alert associated with this sensor. Alert text format is **Alert Type + Room + Resident + " @ " + Location**, e.g. **Pendant Rm. 201 J. Larsen @ Cafeteria**. Location information is added to the alert text if the Include Location feature is enabled in the General Settings section.

## Room <sup>EP</sup>

The room that the sensor is assigned to. Typically used with fixed sensors. Room can be an optional assignment that affects the formatting of alert messages and activity reports.

## Reference

Reference text used to create part of the alert text for an active alert associated with this Inovonics Sensor. The Reference value can be edited in the Alert Client app to allow dynamic reconfiguration of alert messages. Alert text format is **Alert Type + Reference + " @ " + Location**, e.g. **Pendant Alert J. Larsen @ Cafeteria**. Location information is added to the alert text if the Include Location feature is enabled in General Settings.

## Resident <sup>EP</sup>

The resident that the sensor is assigned to. Typically used with mobile sensors. Resident can be an optional assignment that can improve the detail in an alert message, as required. If a resident is assigned to a sensor, and a room is assigned to a resident in the Residents table, that room will take precedence over the Room assigned in this table when the alert is processed.

## Schedule <sup>EP</sup>

The Alert Processing Schedule assigned to the sensor. If no schedule is assigned, alerts associated with the sensor may be monitored continuously. Schedules can be assigned in other areas of the system, such as Rooms, Residents and Wireless Receivers. Where schedules are layered during the process of generating alerts or delivering alert notifications, for the system elements where a schedule is assigned, if any one or more of those assigned schedules indicate that the alert should be generated, the alert will be generated.

## Priority

Checked if any alerts generated by this sensor should be automatically marked as priority.

## Audio File <sup>EP</sup>

The audio file assigned to the sensor. The audio file will be played by either the audio file to two way radio interface device or in a Digital Alert Viewer in either a desktop browser or on a digital TV screen. Default is Unassigned. Audio files are configured in the Outputs/Audio Files section.

## MNS Msg

The priority message to be used for mass notification, including being displayed on all LED Displays connected to the system, if the associated alert is activated. Default is Unassigned. Once the alert is completed, the priority message will be removed from all LED Displays. Note that any MNS Msg defined here can be overridden by any defined within the Rules and Filters section.

## Delete

If the Delete function fails, it is probably caused by the existence of associated Zones/Inovonics Sensors records, which should be removed first before the deletion can be successful.

## Text Input Alerts <sup>EP</sup>

The Text Input Alerts page allows configuration of Text Input Alerts that require alert event detection from Data Inputs. The Text Input Alerts menu item is only available when Event Processing System is enabled.

Text Input Alerts are auto-detected and auto-registered by the system once a Data Connection is created that links a Data Input to the Event Processing System. The Text Input Alert is not processed by the system until an Alert Type value is assigned to a specific Text Input Alert.

### MARS Text Input Alerts Configuration

Filter :type any text here

ID ▾	Name	Incoming Alert Msg	Source	Alert Type	Room	Reference	Resident	Schedule	Priority	Audio File
133	Exam1-800-2-Transport Needed	Exam1-800-2-Transport Needed	Nurse Call	Unassigned	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned
132	Exam4-400-4-Priority Transport	Exam4-400-4-Priority Transport	Nurse Call	Unassigned	Unassigned		Unassigned	Unassigned	<input checked="" type="checkbox"/>	Unassigned
131	Exam3-300-3-Transport	Exam3-300-3-Transport	Nurse Call	Unassigned	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned
130	Exam2-200-2-Patient	Exam2-200-2-Patient	Nurse Call	NurseCall Station	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned
129	Exam1-100-1-Code Blue	Exam1-100-1-Code Blue	Nurse Call	Unassigned	Unassigned		Unassigned	Unassigned	<input checked="" type="checkbox"/>	Unassigned
128	Exam4-400-4-Patient	Exam4-400-4-Patient	Nurse Call	NurseCall Station	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned
127	Exam3-300-3-Alert	Exam3-300-3-Alert-Priority	Nurse Call	Unassigned	Unassigned		Unassigned	Unassigned	<input type="checkbox"/>	Unassigned

Figure 40 – Text Input Alerts Configuration

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## ID

The ID field is a reference field identifying the database record ID value

## Name

The reference name for the Text Input Alert. Used for assigning the alert to one or more Zones.

## Incoming Alert Msg

The unique alert message that the associated Data Input outputs for a given alert. Incoming Alert Message records are automatically created by the server, and the Incoming Alert Message value is non-editable. When the system detects an incoming Data Input alert message, it will compare that to the Incoming Alert Msg field in this table, and generate a new active alert if there is a match and if the Alert Type value for this Text Input Alert is other than Unassigned.

## Source

The name of the Data Input that the Text Input Alert originated from.

## Alert Type

Controls whether or not a Text Input Alert is processed or not. Alert Type is also a reference text used to create part of the alert text for an active alert associated with this Text Input Alert message. Alert text format is **Alert Type + Room + Resident + " @ " + Location**, e.g. **Pendant Rm. 201 J. Larsen @ Cafeteria**. Location information is added to the alert text if the Add Location feature is enabled.

## Room

The room that the sensor associated with the Text Input Alert message is assigned to. Typically used with fixed sensors. Room can be an optional assignment and can also represent common areas, such as bathrooms, meeting rooms, lobbies, cafeteria, etc.

## Reference

Reference text used to create part of the alert text for an active alert associated with this Text Input Alert message. The Reference value can be edited in the Alert Client app to allow dynamic reconfiguration of alert messages. Alert text format is **Alert Type + Reference + " @ " + Location**, e.g. **Pendant Rm. 201 J. Larsen @ Cafeteria**. Location information is added to the alert text if the Add Location feature is enabled.

## Resident

The resident that the sensor associated with the Text Input Alert message is assigned to. Typically used with mobile sensors. Resident can be an optional assignment that can improve the detail in an alert message, as required.

## Schedule

The Alert Processing Schedule assigned to the sensor associated with this Text Input Alert message. If no schedule is assigned, alerts associated with the sensor may be monitored continuously. Schedules can be assigned in other areas of the system, such as Rooms, Residents and Wireless Receivers. Where schedules are layered during the process of generating alerts or delivering alert notifications, for the



system elements where a schedule is assigned, if any one or more of those assigned schedules indicate that the alert should be generated, the alert will be generated.

## Priority

Checked if any alerts generated by this sensor associated with this Text Input Alert message should be automatically marked as priority.

## Audio File

The audio file assigned to the sensor. The audio file will be played by either the audio file to two way radio interface device or in a Digital Alert Viewer in either a desktop browser or on a digital TV screen. Default is Unassigned. Audio files are configured in the Outputs/Audio Files section.

## MNS Msg

The priority message to be used for mass notification, including being displayed on all LED Displays connected to the system, if the associated alert is activated. Default is Unassigned. Once the alert is completed, the priority message will be removed from all LED Displays. Note that any MNS Msg defined here can be overridden by any defined within the Rules and Filters section.

## Delete

If the Delete function fails, it is probably caused by the existence of associated Zones/ Text Input Alerts records, which should be removed first before the deletion can be successful.

## Alert Recipients

### User Accounts

The User Accounts page allows configuration of alert types. Alert types are required to help the system properly format alert messages.

### MARS User Accounts Configuration

ID	User ID	Password	Role	Last	First	Mid	Dept	Avatar	Initials	E-mail	Pager	App	Hide Recipient	Schedule
0	Unassigned		Unassigned								Unassigned	<input type="checkbox"/>	<input type="checkbox"/>	Unassigned
37	admin	RMSpass1234	Super								Unassigned	<input type="checkbox"/>	<input type="checkbox"/>	Unassigned
41	101		Unassigned					Unassigned			Unassigned	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Unassigned
44	102										Unassigned	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Unassigned
45	103		Unassigned					Unassigned			Unassigned	<input type="checkbox"/>	<input type="checkbox"/>	Unassigned
46	105										Unassigned	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Unassigned
47	178										Unassigned	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Unassigned

Figure 41 - User Accounts Configuration when Event Processing is Enabled

## MARS User Accounts Configuration

Filter :type any text here													+ Add new user account
ID	User ID	Password	Role	Last	First	Mid	Dept	E-mail	Pager	App	Hide Recipient	Delete	
0	Unassigned		Unassigned						Unassigned	<input type="checkbox"/>	<input type="checkbox"/>		
37	admin	RMSpass1234	Super						Unassigned	<input type="checkbox"/>	<input type="checkbox"/>		
41	101		Unassigned						Unassigned	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
44	102								Unassigned	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
45	103		Unassigned						Unassigned	<input type="checkbox"/>	<input type="checkbox"/>		
46	105								Unassigned	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
47	178								Unassigned	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Figure 42 - User Accounts Configuration when Event Processing is Disabled

### Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

### Add new user account

The Add new user account button allows you to create a new record. To create a new record, click the Add new user account button.

### ID

The ID field is a reference field identifying the database record ID value

### User ID

The User ID value to use to log into the system from the MARS Response App, an XMPP Client, from the system web configuration interface, or from a digital alert viewer. If digital alert viewers are also used in the system, each digital alert viewer requires a user account configured here. The Digital Alert Viewer modules that are attached to digital TV units will be auto-detected and auto-populated into this list, and their User ID value will be non-editable and begin with the value "DAV".

Note that MARS Alert app login events are automatically registered as user accounts, and have the App checkbox checked as they register for the first time.

### Password

The password to use to log into the system from the Alert Client, from the system web configuration interface, or from a digital alert display.

### Role

The role of the user account, affecting what features are available in the web configuration interface. The default role is User. The other roles are Admin and Super. Each role allows different accessibility to

the web configuration interface, with Super providing full access. The difference between Admin and Super, is that Admin does not have access to some of the web configuration functions. Note that the User role allows access to the Messaging Client and Alert Client features.

### **Last**

The last name of the user, as a reference. Editing this value affects how the user is presented in the Messaging Client Recipients list.

### **First**

The first name of the user, as a reference. Editing this value affects how the user is presented in the Messaging Client Recipients list.

### **Mid**

The middle name of the user, as a reference. Editing this value affects how the user is presented in the Messaging Client Recipients list.

### **Dept**

The department that the user is assigned to, as a reference. Editing this value affects how the user is presented in the Messaging Client Recipients list.

### **Avatar**

The avatar image assigned to the user account. Default is Unassigned. If an avatar is unassigned, no avatar will be used in the browser Alert Client.

### **Initials**

An up to two character value that can be rendered on top of an avatar in the Alert Client app, to help differentiate avatars used for multiple purposes.

### **E-mail**

Optional E-mail address for the user. If the E-mail address is non-blank, alerts will be routed to the e-mail address based on any assigned zones, assigned schedules, as well as on the checkboxes of Normal Alerts, and Maint Alerts

### **Pager**

Optional pager assigned to user. If Pager value is other than Unassigned, alerts will be routed to the Pager based on any assigned zones, assigned schedules, as well as on the checkboxes of Normal Alerts, and Maint Alerts. Pagers are defined in the Alert Recipients/Pagers page.

### **App**

If checked, this user record was created when an app user logged into the server with that userid (Extension) value. If

## Hide Recipient

If checked, hide the user from the Messaging Client recipients list.

## Schedule <sup>EP</sup>

The assigned schedule for a given user. The Schedule feature is only available when the Event Processing System is enabled.

If the schedule is unassigned, alerts associated with that user will always be sent to the defined recipient. Schedules can be assigned in other areas of the system, such as Rooms, Residents and Wireless Receivers. Where schedules are layered during the process of generating alerts or delivering alert notifications, for the system elements where a schedule is assigned, if any one or more of those assigned schedules indicate that the alert should be generated, the alert will be generated.

## Normal Alerts <sup>EP</sup>

The Normal Alerts feature is only available when the Event Processing System is enabled.

If checked, the logged in user receives all normal alerts for sensors assigned to Zones that this user is associated with, filtered by any schedule assignments. Normal alerts are any alert that is not defined as a maintenance alert or a supervisory alert. If none of these three checkboxes are checked, the logged in user will receive no alerts.

## Maint Alerts <sup>EP</sup>

The Maint Alerts feature is only available when the Event Processing System is enabled.

If checked, the logged in user receives all maintenance alerts for sensors assigned to Zones that this user is associated with, filtered by any schedule assignments. Maintenance alerts are alerts that require system maintenance, such as low battery alerts and tamper alerts.

## Supv Alerts <sup>EP</sup>

The Supv Alerts feature is only available when the Event Processing System is enabled.

If checked, the logged in user receives all supervisory alerts for sensors assigned to Zones that this user is associated with, filtered by any schedule assignments. Supervisory alerts are alerts that are escalated, typically due to an escalation triggered by an alert that ages past the escalation point configured into the system.

## Delete

If the Delete function fails, it is probably caused by the existence of associated Zones/User Accounts records, which should be removed first before the deletion can be successful.

## Avatars

The Avatars page allows the configuration of avatars used in the system. Avatars are used in the browser Alert Client app.

### MARS Avatars Configuration

Filter :type any text here					<a href="#">+ Add new avatar</a>
ID	Name	Avatar Path	Configure Avatar	Delete	
0	Unassigned		<a href="object_path.php?type=avatar&amp;id=0">object_path.php?type=avatar&amp;id=0</a>		
1	WiFi 1		<a href="object_path.php?type=avatar&amp;id=1">object_path.php?type=avatar&amp;id=1</a>		

Figure 43 - Avatars Configuration

### ID

The ID field is a reference field identifying the database record ID value

### Name

Reference text used for the avatar. Create this list, then assign an avatar to a User.

### Avatar Path

The path to the avatar image. Click on the link to review the avatar image.

### Configure Avatar

Click on the Avatar Config link to upload a new avatar image.

### Delete

If the Delete function fails, it is probably caused by the existence of associated Zones/User Accounts records, which should be removed first before the deletion can be successful.

### Pagers

The Pagers page allows the configuration of pagers used in the system. Both normal POCSAG radio pagers can be configured, in addition to combination POCSAG/WiFi pagers made by Daviscomms.

### MARS Pagers Configuration

Filter :type any text here					<a href="#">+ Add new pager</a>
ID	Name		Pager ID	Delete	
0	Unassigned				
9	WiFi 1		103		

Figure 44 - Pagers Configuration

### ID

The ID field is a reference field identifying the database record ID value

### Name

Reference text used for the pager. Create this list, then assign a pager to a User.

## Pager ID

The Pager ID value used for this pager, when communicating to a Data Output that uses a pager compatible protocol, such as TAP, COMP2, or Pager App.

### Alert Client

The Alert Client selection allows you to open a browser page and log in for viewing a list of active alerts. Log in using the Username and Password defined in Alert Recipients/User Accounts. The Alert Client can be run from any browser that has access to the server's IP address. An example Alert Client URL is <http://69.15.24.221/client.xml>

If the User Account used to log into the Alert Client has Create Alerts enabled, you will see a red plus sign in the top left of the Alert Client screen, which allows you to manually generate alerts into the system. Click on the red plus, type in a message, and press the Enter key to launch the alert. In addition, if Complete Alerts is enabled for the associated User Account, each of the alerts will be displayed as an underlined hyperlink. Clicking on the underlined alert allows you to alter the state of the alert, by clicking on one of the following:

- Complete (Alert will be marked complete and removed from the Alerts list)
- Escalate (Alert will be marked escalated and text changed to red color in the Alerts list)
- Claim (Alert will be marked claimed and text changed to green color in the Alerts list)
- Notate (Alert will be marked notated, and (n) will appear to the right of the alert text in the Alerts list). If you click on a notated alert, the notations will appear in a list below the Go Back option.
- Go Back (No changes made to the alert)

Note that the benefit of the Alert Client feature is that you can access the alerts list via desktop browser. You gain easier access to all alert management features when you deploy the Android or iOS MARS Response App on a smartphone.

### Zone Assignments <sup>EP</sup>

The Zone Assignments menu item is only available when the Event Processing System is enabled.

### Zones <sup>EP</sup>

The Zones page allows configuration of zones to be used in the system. The Zones menu item is only available when the Event Processing System is enabled.

A Zone is a system reference that allows configuration of relationships between sensors, residents, rooms, and alert recipients, to allow proper alert message routing, schedule based alert delivery, and management of the system by operating shift. If a part of the system is not assigned to a Zone, alerts will not be generated for that part of the system.

Zones can be associated with one or more operating shifts. The operating shift start times are defined in the General Settings section.

The system must have at least one Zone defined, and other parts of the system must be assigned to that Zone, before the system can process alerts.

You can configure a Default Zone in the General Configuration page, as a means to automatically assign sensors and wireless receivers to a Zone immediately upon being detected by the system.

### MARS Zones Configuration

Filter :type any text here + Add new row

ID	Name	1st Shift	2nd Shift	3rd Shift
1	Zone 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Zone 3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Zone 2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Maintenance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### Notes

##### Name

The name of the Zone

##### 1st Shift

If checked, the Zone is assigned to 1st Shift operations

Figure 45 - Zones Configuration

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new zone

The Add new zone button allows you to create a new record. To create a new record, click the Add new zone button.

## ID

The ID field is a reference field identifying the database record ID value

## Name

A reference name for the Zone

## 1<sup>st</sup> Shift

If checked, the Zone is assigned to 1<sup>st</sup> Shift operations, and alerts will be delivered to that Zone during 1<sup>st</sup> shift.

## 2<sup>nd</sup> Shift

If checked, the Zone is assigned to 2<sup>nd</sup> Shift operations, and alerts will be delivered to that Zone during 2<sup>nd</sup> shift.

### 3<sup>rd</sup> Shift

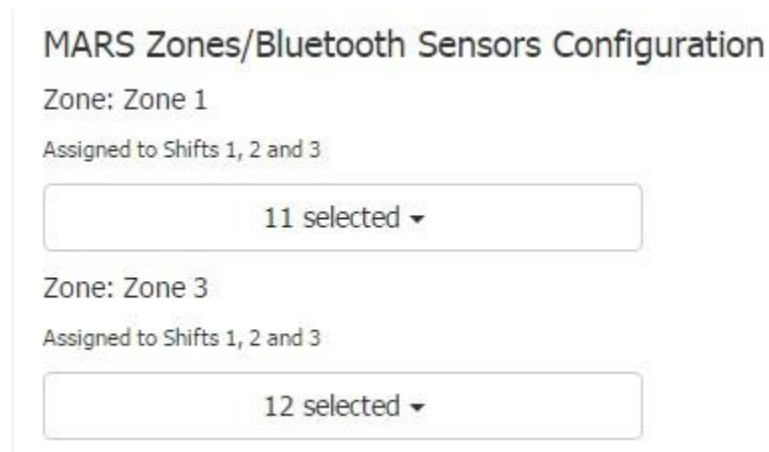
If checked, the Zone is assigned to 3<sup>rd</sup> Shift operations, and alerts will be delivered to that Zone during 3<sup>rd</sup> shift.

### Delete

Delete the selected record. The Unassigned zone cannot be deleted or edited.

### Zones/WaveTrac Sensors <sup>EP</sup>

The Zones/ WaveTrac Sensors Configuration page allows configuration of the relationships between WaveTrac sensors and the Zones configured into the system. The Zones/ WaveTrac Sensors menu item is only available when the Event Processing System is enabled.



**Figure 46 - Zones/WaveTrac Sensors Configuration**

All of the defined Zones are listed on this page. Click on a specific Zone selector to assign or unassign sensors from the Zone. All of the sensors defined in the system will be displayed. Those assigned to the zone will be checked and highlighted as shown in Figure 28 below.

The Search field allows you to narrow your list of items and is case insensitive. If you type a term in the Search field, such as “em”, only items that contain “em” will be displayed.

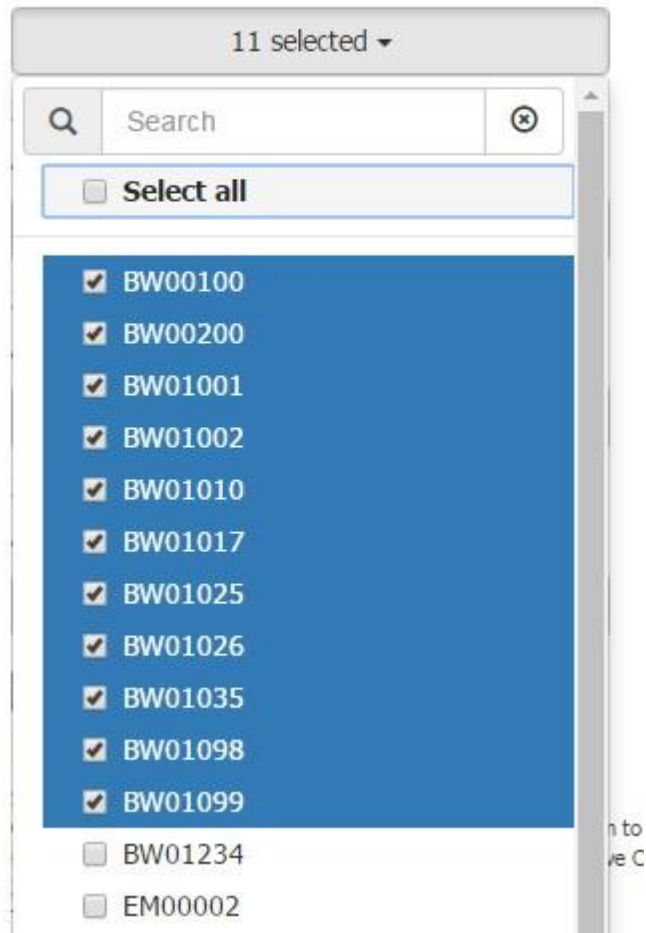
When you click the Select All checkbox, all of the filtered records will be selected. If you uncheck the Select All checkbox, all of the filtered records will be un-selected. If there is no active filter, all of the records are affected by the Select All checkbox.

Once you finish editing the Zone assignments, click the Save Configuration button to save your edits.



Zone: Zone 1

Assigned to Shifts 1, 2 and 3



**Figure 47 - Assignment to a Zone**

### Zones/Inovonics Sensors <sup>EP</sup>

The Zones/Inovonics Sensors Configuration page allows configuration of the relationships between Inovonics sensors and the Zones configured into the system. The Zones/Inovonics Sensors menu item is only available when the Event Processing System is enabled.

## MARS Zones/Inovonics Sensors Configuration

Zone: Zone 1

Assigned to Shifts 1, 2 and 3

24 selected ▾

Zone: Zone 3

Assigned to Shifts 1, 2 and 3

None selected ▾

Zone: Zone 2

Assigned to Shifts 1, 2 and 3

None selected ▾

**Figure 48 - Zones/Inovonics Sensors Configuration**

All of the defined Zones are listed on this page. Click on a specific Zone selector to assign or unassign sensors from the Zone. All of the sensors defined in the system will be displayed. Those assigned to the zone will be checked and highlighted.

The Search field allows you to narrow your list of items and is case insensitive. If you type a term in the Search field, such as "C", only items that contain "C" will be displayed, as shown in the figure below.

Zone: Zone 1

Assigned to Shifts 1, 2 and 3

25 selected ▾

Q c | ⊗

- Select all
- Cafeteria
- Classroom
- Conference Room
- Public Restroom
- Pull Cord Tester 1

Assigned to Shifts 1, 2 and 3

**Figure 49 - Assignment to Zone with Filtering**

When you click the Select All checkbox, all of the filtered records will be selected. If you uncheck the Select All checkbox, all of the filtered records will be un-selected. If there is no active filter, all of the records are affected by the Select All checkbox.

Once you finish editing the Zone assignments, click the Save Configuration button to save your edits.

#### [Zones/ Text Input Alerts](#) <sup>EP</sup>

The Zones/ Text Input Alerts Configuration page allows configuration of the relationships between Text Input Alerts and the Zones configured into the system. The Zones/ Text Input Alerts menu item is only available when the Event Processing System is enabled.

All of the defined Zones are listed on this page. Click on a specific Zone selector to assign or unassign Text Input Alerts from the Zone. See the above Zone assignment sections for details on assigning to Zones.

#### [Zones/Residents](#) <sup>EP</sup>

The Zones/Residents Configuration page allows configuration of the relationships between Residents and the Zones configured into the system. The Zones/Residents menu item is only available when the Event Processing System is enabled.

All of the defined Zones are listed on this page. Click on a specific Zone selector to assign or unassign Residents from the Zone. See the above Zone assignment sections for details on assigning to Zones.

#### [Zones/Rooms](#) <sup>EP</sup>

The Zones/Rooms Configuration page allows configuration of the relationships between Rooms and the Zones configured into the system. The Zones/Rooms menu item is only available when the Event Processing System is enabled.

All of the defined Zones are listed on this page. Click on a specific Zone selector to assign or unassign Rooms from the Zone. See the above Zone assignment sections for details on assigning to Zones.

#### [Zones/User Accounts](#) <sup>EP</sup>

The Zones/User Accounts Configuration page allows configuration of the relationships between User Accounts and the Zones configured into the system. The Zones/User Accounts menu item is only available when the Event Processing System is enabled.

All of the defined Zones are listed on this page. Click on a specific Zone selector to assign or unassign User Accounts from the Zone. See the above Zone assignment sections for details on assigning to Zones.

#### [Zones/Wireless Receivers](#) <sup>EP</sup>

The Zones/Wireless Receivers Configuration page allows configuration of the relationships between Wireless Receivers and the Zones configured into the system. The Zones/Wireless Receivers menu item is only available when the Event Processing System is enabled.

All of the defined Zones are listed on this page. Click on a specific Zone selector to assign or unassign Wireless Receivers from the Zone. See the above Zone assignment sections for details on assigning to Zones.

### Zones/Data Outputs <sup>EP</sup>

The Zones/Data Outputs Configuration page allows configuration of the relationships between Data Outputs and the Zones configured into the system. The Zones/Data Outputs menu item is only available when the Event Processing System is enabled.

All of the defined Zones are listed on this page. Click on a specific Zone selector to assign or unassign Data Outputs from the Zone. See the above Zone assignment sections for details on assigning to Zones.

### Zones/LED Displays <sup>EP</sup>

The Zones/LED Displays Configuration page allows configuration of the relationships between LED Display and the Zones configured into the system. The Zones/LED Displays menu item is only available when the Event Processing System is enabled.

All of the defined Zones are listed on this page. Click on a specific Zone selector to assign or unassign LED Displays from the Zone. See the above Zone assignment sections for details on assigning to Zones.

### Zones/Backup Zones <sup>EP</sup>

The Zones/Backup Zones Configuration page allows configuration of the relationships between Backup Zones and the Zones configured into the system. The Zones/Backup Zones menu item is only available when the Event Processing System is enabled.

A Backup Zone is defined as a zone that is designed to be notified if an alert ages beyond the Slow Response Threshold time. You should configure your backup zones to be assigned to the same shifts as the zones that the backup zone will be backing up.

All of the defined Zones are listed on this page. Click on a specific Zone selector to assign or unassign Backup Zones from the Zone. See the above Zone assignment sections for details on assigning to Zones.

### Schedules <sup>EP</sup>

The Schedules page allows configuration of alert processing schedules to be used in the system. Schedules are optional, but provide more flexibility in how alerts are processed. You can apply defined schedules multiple times throughout the system.

The places in the system that you can assign an Alert Processing Schedule include:

- WaveTrac Sensors
- Inovonics Sensors
- Text Input Alerts
- User Accounts
- Audio Gateways

### MARS Alert Processing Schedules Configuration

Filter :type any text here				<a href="#">+ Add new row</a>
ID	Name	Schedule	Delete	
0	Unassigned			
3	East Wing Wandering Patients 2	<a href="#">schedule.php?id=3</a>		
8	West	<a href="#">schedule.php?id=8</a>		
9	North	<a href="#">schedule.php?id=9</a>		
10	South	<a href="#">schedule.php?id=10</a>		
11	North 11	<a href="#">schedule.php?id=11</a>		

Figure 50 - Alert Processing Schedules Configuration

## Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## Add new schedule

The Add new schedule button allows you to create a new record. To create a new record, click the Add new schedule button.

## ID

The ID field is a reference field identifying the database record ID value

## Name

A reference name for the Schedule

## Schedule

The schedule defining when alerts should be processed. Click on the Schedule link to review/edit the selected Alert Processing Schedule. Schedules are configurable so that you can define up to three different schedules, and apply each to one or more days of the week.

In the following figure, the Schedule named West is being edited. In this example, the schedule is, by default, applied to all days of the week, and is active 24 hours a day. If you want this schedule to only be active on certain days of the week, you can click on a Day button to disable schedule operation for a particular day.

## MARS Alert Processing Schedule Configuration

[Back to Alert Proces](#)

test2



Save Schedule

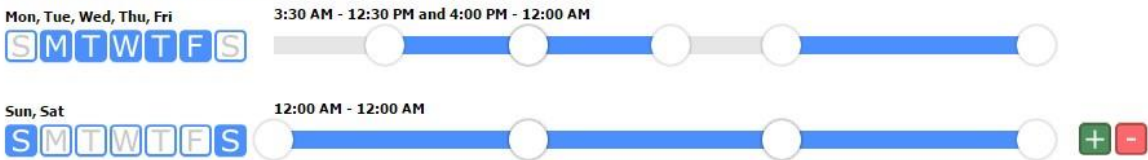
**Figure 51 - Alert Processing Schedule Configuration - Default**

In the following figure, the schedule is made more complex by clicking the green + button to the right, to create another schedule row. In this example, the Sunday button on the first row was clicked to unselect Sunday, then the Sunday button was clicked on the second row to assign Sunday to the second row. In addition, the sliders were adjusted on the first row to have the schedule be active from 3:30 AM to 12:30PM and from 4:00 PM to Midnight.

## MARS Alert Processing Schedule Configuration

[Back to Alert Processing](#)

East Wing Wandering Patients 2



Save Schedule

**Figure 52 - Alert Processing Schedule Configuration - Two Rows**

### **Schedules**

An Alert Processing Schedule is defined by adjusting time sliders and assigning one or more days of the week to a particular schedule row. Each schedule row can be configured to have up to three separate processing ranges within each 24 hour period defined in a day. Each schedule is defined for one or more of the days of the week, where the schedule is applied based on what the current time and day is. To have a different schedule for a different day, click on the green plus button to open a new schedule row. You can create up to three schedule rows per schedule. To reduce the quantity of schedule rows assigned to the schedule, click the red minus button.

## Assigned Days

Assigned days are the day assignment buttons with a white background. Once you assign a day for a particular schedule row, you cannot assign that same day to another schedule row until you unassign that day from a schedule row. You can create a schedule with one or more days unassigned. Alert processing will not occur on unassigned days for a particular schedule.

## Processing Ranges

A processing range is a span of time defined within a schedule, indicated by the blue areas with handles on each end. Alerts and/or recipients associated with the schedule, are processed by the server when an alert occurs at a time that falls within a defined processing range. Each daily schedule is composed of three processing ranges, which can either be joined or separated. When processing ranges are joined and separated, you can see the change in the defined time span text above the schedule slider. To adjust a time range, you can click and drag a range slider handle or click anywhere along the slider. Clicking along the slider will cause a handle for that slider to move to where you clicked.

## Selected Handle

When a particular handle on a slider is selected by clicking the handle, the handle has a blue highlight around it. Clicking the slider away from a handle causes slider adjustment, based on which handle is currently selected. You can observe the text above the slider to see what effect your selected slider has. To eliminate a gap in the schedule, adjust your handles to overlap each other.

## Save Schedule Button

Click the Save Schedule button to save the edits that you have made to the schedule.

## Reports

### Report Templates

The Report Templates page allows configuration of specific reports to be delivered on a daily schedule.

#### MARS Report Templates Configuration

ID	Name	Report Type	Sort Method	Filter Method	Filter Start	Filter End	Configure
0	Unassigned						
5	All Activity	Activity	Time	None	12 AM	12 AM	<a href="report_template_config.php?id=5">report_template_config.php?id=5</a>
6	Sensors	Sensor	N/A	N/A	12 AM	12 AM	<a href="report_template_config.php?id=6">report_template_config.php?id=6</a>
7	Wireless Receivers	Receiver	N/A	N/A	12 AM	12 AM	<a href="report_template_config.php?id=7">report_template_config.php?id=7</a>

#### Notes

##### Name

The name of the Report Template

##### Report Type

The type of report assigned to the Report Template. This field is for reference only and is configured using the Configure link associated with the selected Report Template

Figure 53 - Report Templates Configuration

## **Filter**

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

## **Add new report template**

The Add new report template button allows you to create a new record. To create a new record, click the Add new report template button.

## **ID**

The ID field is a reference field identifying the database record ID value

## **Name**

A reference name for the Report Template

## **Report Type**

The type of report assigned to the Report Template. This field is for reference only and is configured using the Configure link associated with the selected Report Template. Note that when Event Processing is disabled, only the Sensors report and the Connections report are available.

## **Sort Method**

The sort method assigned to the Report Template. This field is for reference only and is configured using the Configure link associated with the selected Report Template.

## **Filter Method**

The filtering method assigned to the Report Template. This field is for reference only and is configured using the Configure link associated with the selected Report Template.

## **Filter Start**

The hour of day that the report filter should start at.

## **Filter End**

The hour of day that the report filter should end at.

## **Configure**

The path to the Report Template Configuration page for the selected Report Template. Click on the Configure link to edit the report type, sort method, and filter method for the selected Report Template.



## Delete

If the Delete function fails, you likely have this Report Template assigned to a Scheduled Report. Review those assignments, then try again. The Unassigned Report Template record cannot be deleted.

The following figure shows the Report Template Configuration page, generated by clicking on the Configure link in the Report Templates Configuration page, where the selected report template is being edited.

**MARS Report Template Configuration**

**All Activity**

**Report Type**

- Response Times
- Event Activity
- Frequent Calls
- Sensors
- Wireless Receivers
- Connections Activity

**Sorted By**

- Time-of-Day
- Response Time

**Filtered By**

- All Zones and Rooms
- Room
- Zone
- Entire Day
- Start Time  End Time

**Notes**

**Report Type**

The Response Times report displays Total Calls, Avg Response Time, and also splits it out by shift. Time, Room, Type, Response Time, Shift, and Zone for calls detected as frequent calls. The Sensors Detected, and Duration. The Connections Activity report displays Time,

Figure 54 - Report Template Configuration

### Report Type

The Response Times report displays Total Calls, Avg Response Time, and also splits it out by shift. The Event Activity report displays Time, Room, Type, Response Time, Shift, and Zone for each call event. The Frequent Calls report displays Time, Room, Type, Response Time, Shift, and Zone for calls detected as frequent calls. The Sensors report displays Sensor, Type, Address, Battery, and Last Detected. The Wireless Receivers report displays Receiver, Type, Address, Last Detected, and Duration. The Connections Activity report displays Time, Message, Direction, Input, Output, Recipient, and State. Note that when Event Processing is disabled, only the Sensors

### Sorted By

When Response Times report is selected, you can select sorting by Date, Hour, Room, Zone, or Call Volume, with the default being Date. When Event Activity report is selected, you can select sorting by Time or Response, with the default being Time. When Frequent Calls report is selected, Sensors report is selected, Wireless Receivers report is selected, or Connections Activity report is selected, the sorting options are disabled.

### **Filtered By**

When Response Times report is selected, the filtering options are disabled. When Event Activity report is selected, you can filter by All Zones and Rooms, a particular Room, a particular Zone. You can also edit filtering by all or part of a day. For all other report types, filtering is disabled.

### **Save Template Button**

The template must be saved after any edits are made, to ensure the server processes the template properly.

### **Test Template Button**

The Test Template function exercises the currently selected template by generating a report in a new browser tab. The Test Template button is enabled after any edits are saved.

The figure below shows a sample activity report that appears when the Test Template button is clicked.

## **MARS Report**

### **All Activity**

#### **Event Activity Report, Sorted by Time-of-Day, No Filtering**

**Sat, 2017-01-14**

<b>Time</b>	<b>Room</b>	<b>Alert</b>	<b>Resp Time, mm:ss</b>	<b>Shift</b>	<b>Zone</b>
12:02:13 AM	Room 2	Wander Proximity BT0f01f02e Room 2 Resident Beacon	00:10	3	Zone 3
12:02:38 AM	Room 2	Wander Proximity BT0f01f02e Room 2 Resident Beacon	00:10	3	Zone 3
12:03:18 AM	Room 2	Wander Proximity BT0f01f02e Room 2 Resident Beacon	00:10	3	Zone 3
12:05:38 AM	Room 2	Wander Proximity BT0f01f02e Room 2 Resident Beacon	00:11	3	Zone 3
12:07:03 AM	Room 2	Wander Proximity BT0f01f02e Room 2 Resident Beacon	00:10	3	Zone 3
12:10:11 AM	Room 2	Wander Proximity BT0f027031 Room 2 Resident Beacon	<b>17:31:04</b>	3	Zone 3
12:11:54 AM	Room 2	Wander Proximity BT0f01f02e Room 2 Resident Beacon	00:11	3	Zone 3
12:12:29 AM	Room 2	Wander Proximity BT0f01f02e Room 2 Resident Beacon	00:10	3	Zone 3

**Figure 55 - Test Template Example Report**

## Scheduled Reports

The Scheduled Reports page allows configuration of the scheduled delivery of a specific Report Template, in HTML formatted e-mail, to up to 4 e-mail recipients.

### MARS Scheduled Reports Configuration

Filter <input type="text" value="type any text here"/>		<a href="#">+ Add new row</a>					
ID	Name	Report Template	1st Recipient	2nd Recipient	3rd Recipient	4th Recipient	Launch Time
1	All Activity	All Activity	a	c	Jodee	Unassigned	17:00
3	Sensors	Sensors	a	c	Jodee	Unassigned	08:00
4	Wireless Receivers	Wireless Receivers	a	c	Jodee	Unassigned	17:00
5	Receivers-7PM	Wireless Receivers	c	steve	Unassigned	Unassigned	19:00
6	Receivers-8PM	Wireless Receivers	c	steve	Unassigned	Unassigned	20:00

Figure 56 - Scheduled Reports Configuration

### Filter

The Filter field allows you to search the grid for any text value. The grid auto-adjusts to show you records that contain the filter value. To clear the filter, remove the filter text, press the Enter key when the cursor is in a blank Filter field, or refresh the page.

### Add new scheduled report

The Add new scheduled report button allows you to create a new record. To create a new record, click the Add new scheduled report button.

### ID

The ID field is a reference field identifying the database record ID value

### Name

A reference name for the Scheduled Report.

### Report Template

The report template assigned to this scheduled report.

### 1<sup>st</sup> Recipient

A recipient assigned to receive the scheduled report. Only User Accounts who have an e-mail address assigned can be selected to receive scheduled reports. Can be Unassigned.

### 2<sup>nd</sup> Recipient

A recipient assigned to receive the scheduled report. Only User Accounts who have an e-mail address assigned can be selected to receive scheduled reports. Can be Unassigned.

### 3<sup>rd</sup> Recipient

A recipient assigned to receive the scheduled report. Only User Accounts who have an e-mail address assigned can be selected to receive scheduled reports. Can be Unassigned.

### 4<sup>th</sup> Recipient

A recipient assigned to receive the scheduled report. Only User Accounts who have an e-mail address assigned can be selected to receive scheduled reports. Can be Unassigned.

### Launch Time

The time of day that the scheduled report is launched, formatted as HH:MM in 24 hour format, e.g. 23:00. If the update fails, modify your entry to match the HH:MM format and try again. Scheduled reports are launched once per day at the defined time.

### Generate Reports

The Report Generator page allows generation of custom reports that can be displayed in a browser or e-mailed to a recipient.

**MARS Report Generator**

**Report Type**

- Response Times
- Event Activity
- Frequent Calls
- Sensors
- Wireless Receivers
- Connections Activity

**Sorted By**

- Date
- Hour
- Room
- Zone
- Call Volume

**Filtered By**

- All Zones and Rooms
- Room: Cafeteria
- Zone: Central
- Entire Day
- Start Time: 12 AM
- End Time: 12 AM

Start Date: 08/14/2017    End Date: 08/14/2017

Generate Report

Report Recipient: alex@wirelessmessaging.com

E-mail Report

Figure 57 - Report Generator

### Report Type

The Response Times report displays Total Calls, Avg Response Time, and also splits it out by shift. The Event Activity report displays Time, Room, Type, Response Time, Shift, and Zone for each call event. The Frequent Calls report displays Time, Room, Type, Response Time, Shift, and Zone for calls detected as frequent calls. The Sensors report displays Sensor, Type, Address, Battery, and Last Detected. The Wireless Receivers report displays Receiver, Type, Address, Last Detected, and Duration. The Connections Activity report displays Time, Message, Direction, Input, Output, Recipient, and State.

### **Sorted By**

When Response Times report is selected, you can select sorting by Date, Hour, Room, Zone, or Call Volume, with the default being Date. When Event Activity report is selected, you can select sorting by Time or Response, with the default being Time. When Frequent Calls report is selected, Sensors report is selected, Wireless Receivers report is selected or Connections Activity is selected, the sorting options are disabled.

### **Filtered By**

When Response Times report is selected, the filtering options are disabled. When Event Activity report is selected, you can filter by All Zones and Rooms, a particular Room, a particular Zone. You can also edit filtering by all or part of a day. For all other report types, filtering is disabled.

### **Start Date**

Select a start date for the report. The start date must be earlier or equal to the end date but cannot be more than ten days earlier than end date.

### **End Date**

Select an end date for the report. The end date must be earlier or equal to today's date.

### **Generate Report Button**

Click the Generate Report button to generate the report to appear in your browser.

### **Report Recipient**

Select an E-mail address to send an E-mail Report to. The selection list is created from User accounts that have E-mail addresses assigned to them.

### **E-mail Report Button**

Click the E-mail Report button to generate the report to appear in an e-mail sent to the selected Report Recipient.

## Appendices

### Appendix A – Troubleshooting Inability to Discover MARS using the WaveWare Discover and Reset Tool

The MARS is normally shipped with DHCP enabled. The WaveWare Discover and Reset Tool, using broadcast UDP packets, is normally used to discover the MARS. If the network that the MARS is connected to prevents broadcast UDP packets, then the WaveWare Discover and Reset Tool will be unable to discover the MARS.

In that case, there are a number of workarounds, as follows:

1. Move the MARS to a LAN that does allow UDP broadcast, so that it becomes discoverable with the WaveWare Discover and Reset Tool.
2. Create a LAN using a laptop, a wireless router, and the MARS, so that the router can provide DHCP services to the MARS. Run WaveWare Discover and Reset Tool on the laptop to discover the MARS.

- Attach a video monitor to the HDMI port on the MARS. Attach a keyboard and mouse to USB ports on the MARS. You should see the MARS web config interface. Click on the Setup/General Settings menu item. The General Settings page should display the **System IP** value and the **Master Userid** value just above the Authorizations section. The System IP value is the currently assigned IP address that you allow connection to the system. In the configuration grid of General Settings, there is an IP Address field, a Default Gateway field, and a Subnet Mask field. These fields are used to configure static IP settings into the system. If the IP Address field is blank, DHCP mode is enabled.

**MARS General Settings Configuration**

ID	System Name	Site Password	Time Zone	Event Processing	IP Address	Default Gateway	Subnet Mask
1	Responder 5000	password	Central Time	<input type="checkbox"/>	10.0.1.131		

System IP: 10.0.1.131  
Master Userid: HJK4KJ6W

**Authorizations**

Feature	Authorizations

**Figure 58 - General Settings System Configuration**

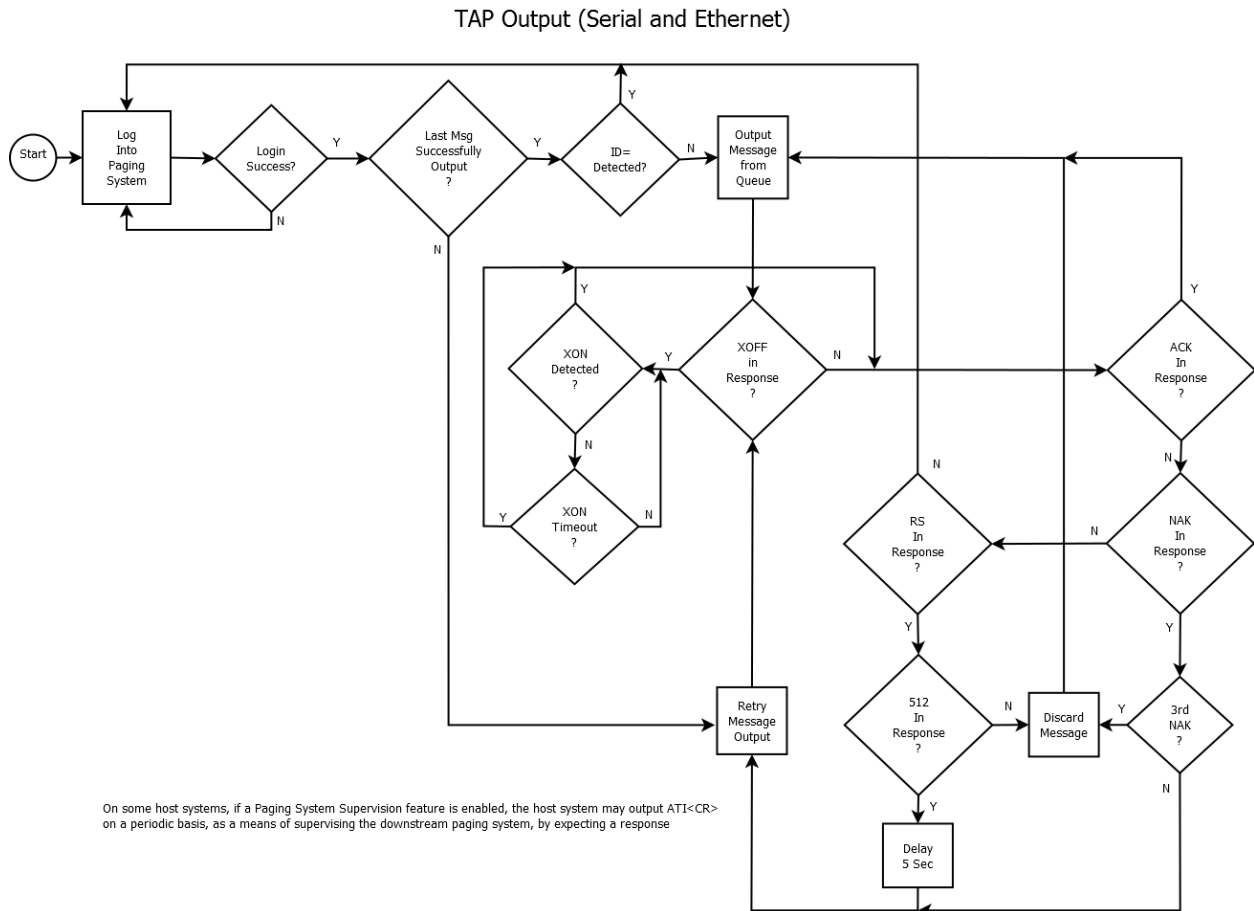
## Appendix B - TAP Output Processing Flow Chart

Following is a flow chart that documents how MARS manages both Ethernet and serial port TAP output. This flow chart is designed to accommodate a wide variety of devices that support TAP protocol.

### Notes:

- MARS logs into a paging system when first connecting, assumes that the Logged IN state is persistent, and outputs multiple messages with indeterminate periods of time between the messages, until it detects that a new login process needs to occur.
- When MARS initially attempts a login after a settings change, it will output **BYE<CR>**, then will output a **<CR>** every 3 seconds if the **ID=** response is not detected.
- An odd response to a paging message, such as an **ID=** triggers a new login process, as a means of re-establishing synchronization with the paging system. If the odd response is **ID=**, MARS will respond with **<ESC>PG1<CR>**. For any other odd response, MARS will respond with **BYE<CR>**, then will output a **<CR>** every 3 seconds if the **ID=** response is not detected.
- An **ID=**, sensed in any state of MARS, will cause MARS to respond with **<ESC>PG1<CR>** as a means of responding to the paging system request to re-establish synchronization.
- MARS maintains an independent outgoing message queue for each paging system, in order to not allow a failed message output on one paging system affect the throughput of messages on good paging system connections.

- If ATI Keepalive mode is enabled, the output of a message from the queue will reset the ATI Keepalive one minute timer.



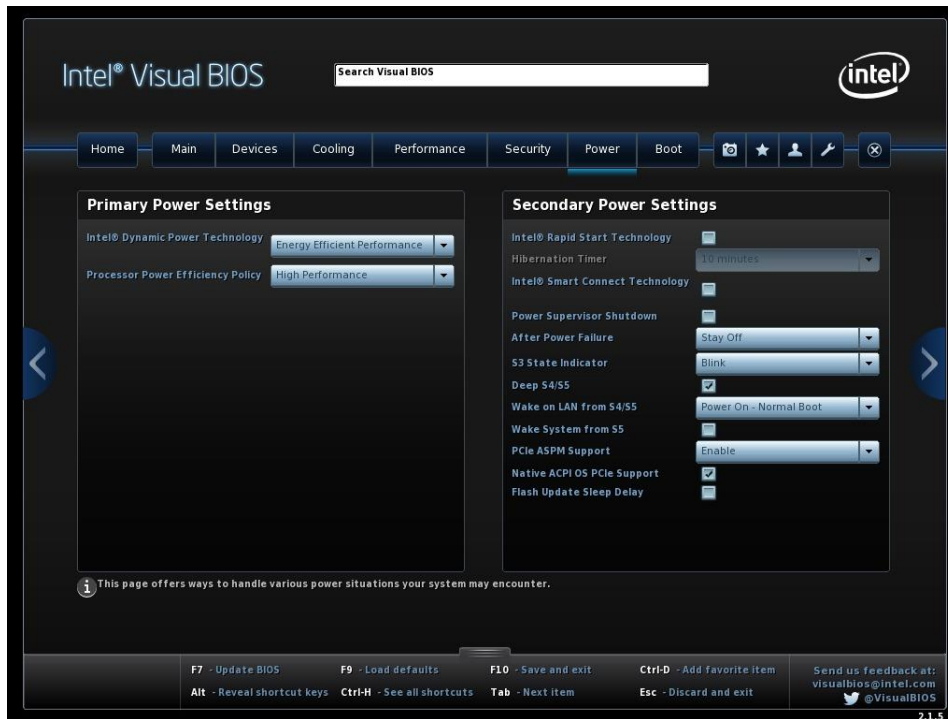
## Appendix C - Adjusting the MARS Boot Up Method

MARS is designed to boot up immediately when power is applied. If you want MARS to only boot up when you press the power button, you can adjust the MARS (Intel NUC) BIOS. The following BIOS screen shows an After Power Failure drop box in the Secondary Power Settings section of the Power tab. The options are:

- Power On
- Stay Off
- Last State

MARS should be configured to use the Power On option, which allows a full boot up process to automatically occur each time power is applied. If you need to adjust the MARS BIOS, attach a mouse, keyboard, and monitor with HDMI adapter to the MARS. BIOS Setup is accessed by pressing F2 after the Power-On Self-Test (POST) memory test begins and before the operating system boot begins.





## Appendix D – Remote Support Session

You can attempt to establish a secure connection to the support team server by launching the Support Session function from the system. The Support Session feature allows the system to attempt to connect to the support team server using IP port 22 and SSH secure tunneling. You can launch Support Session from either the web interface login page or from the Setup/Utilities page.

Once the Support Session is launched, if it successfully connects to the support team server, it will display a success message and a numeric value that you would provide to the support technician. The support technician would use that value to ensure they connect to the appropriate remotely connected system.

## Appendix E – Using MARS with Inovonics and MARS Alerts App

Following is an overview of how to implement Inovonics sensor monitoring with the MARS and the MARS app.

MARS is shipped with the Event Processing System disabled, but the admin user can enable it through the MARS web config interface. The Inovonics sensor handling works with either case, but the MARS app works only when Event Processing is enabled.

### Inovonics Interface Event Processing Enabled Configuration

- Inovonics sensors, Inovonics central receiver and Inovonics repeaters auto-register with MARS
- Name the Inovonics repeaters in the Facility/Wireless Receivers page
- Name the Inovonics sensors in the Alert Sources/Inovonics Sensors page, using either the Name field or the Reference field



- Check the Priority checkbox in the Inovonics sensor record if the alert should be delivered as a priority alert
- Starting with no Data Connections, create Data Input using Inovonics protocol
- Create Data Connection between Inovonics data input and Event Processing data output
- To configure an escalation system, enable Event Processing in Setup/General Settings page, and adjust the Slow Response Threshold and Backup Response Threshold values in that page
- Create one or more Zones in the Zones page, where one or more of those Zones can be used as Backup Zones
- Associate Backup Zones with your primary Zones using the Zones/Backup Zones page
- Associate Inovonics sensors with any primary Zones using the Zones/Inovonics Sensors page
- Create one or more User Accounts in the system that the MARS app can use for login credentials
- Associate User Accounts with your primary Zones and backup Zones using the Zones/User Accounts page

#### Inovonics User Experience with Event Processing Enabled

When an Inovonics sensor alert is initiated, all logged-in MARS app users that are associated with the same Zone as the active Inovonics sensor will receive those alerts. Those logged in MARS app users associated with other Zones will not receive those alerts.

The alert will appear on the app as a non-answerable notice, with the Name/Reference value of the Inovonics sensor in the Message field and the Name value of the nearest receiver appears in the Location field.

That alert persists on the MARS app until either Acknowledged by the app user or until the Inovonics sensor is physically reset.

When the Slow Response Threshold value for a given active alert is exceeded, that alert will be delivered to any logged-in MARS app users that are associated with any backup zones associated with the primary Zone that the Inovonics sensor is associated with.

If there are no Backup Zones assigned to the affected primary Zone, that alert will be delivered to any User Account that is marked to receive Supervisory Alerts, using all communication methods associated with that User Account. When there are Backup Zones assigned to the affected primary Zone, and the Backup Response Threshold value for a given alert is exceeded, that alert will be delivered to any User Account that is marked to receive Supervisory Alerts, using all communication methods associated with that User Account.

#### Appendix F – HTTP Data Input Protocol

The HTTP Data Input protocol is designed to allow systems to push data to MARS via HTTP GET or POST methods, on IP port 80. The HTTP Data Input protocol auto-detects GET vs POST methods of usage. A successful delivery of the HTTP Data Input command causes the server to respond with a plain text value of SUCCESS.

The HTTP input protocol supports the following parameters:

- pin
- msg
- cancel (0=not cancelled, 1=cancelled)

The HTTP Data Input protocol URL format for the GET method is as follows:

**http://ip\_address/http\_input.xml?pin=NNN&msg=AAAA&cancel=0**, where ip\_address is the IP address of the MARS, NNN is a numeric pager ID (PIN) value of any length, and AAAA is an alphanumeric message value of any length. Message lengths longer than 240 characters will be truncated.

The cancel parameter is optional.

The POST method passes the same parameters as the GET method, but uses POST header variables. The POST method URL would look like the following:

**http://ip\_address/http\_input.xml**

Following is an example URL using the GET method where the cancel parameter is not included (assumed cancel = 0):

**http://10.1.1.1/http\_input.xml?pin=53&msg=Testing!**

Following is an example URL using the GET method where the cancel parameter is included to indicate alert initiated

**http://10.1.1.1/http\_input.xml?pin=53&msg=Testing&cancel=0**

Following is an example URL using the GET method where the cancel parameter is included to indicate the alert is cancelled:

**http://10.1.1.1/http\_input.xml?pin=53&msg=Testing&cancel=1**

## Appendix G - Honeywell Notifier NWS-3 Web Server Fire Panel Integration

The Honeywell Notifier NWS-3 Web Server fire panel model has the ability to output e-mail on an alert. Those e-mail alerts may not include an e-mail To: address. In order to route those e-mail alerts through the RMS system, you need to both disable Address Filtering and define a Settings tolist.

To integrate SMTP Data Input with a Honeywell Notifier NWS-3 Web Server fire panel's e-mail output, do the following:

- Configure the RMS E-Mail Input Server by disabling Address Filtering
- Create a Data Input in RMS that uses the SMTP protocol
- In the Settings field of that SMTP related Data Input, define the IP port and a tolist, where the tolist defines the Pager ID(s) that will be associated with each incoming e-mail message. An example settings value is: **port=25,tolist=114;112**

In the above example tolist, each incoming e-mail alert will be routed into the system associated with both Pager IDs 114 and 112.

### Update History

V1.03 – Bug fixes and enhancement of Smartphone App interface protocol to improve connectivity experience

V1.02 – Added Rauland system interface

V1.01 – Initial release