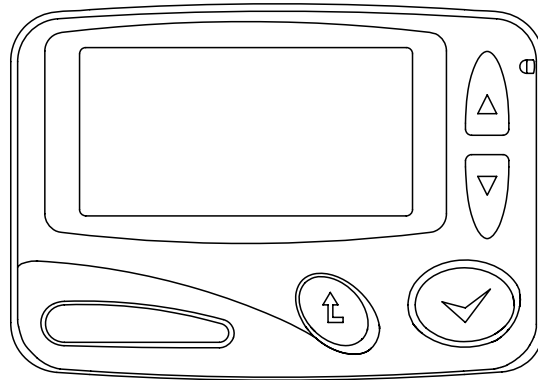


M1501



RESPONDER™

USER'S GUIDE

Firmware Version 1.12
Document Version 1.4
March 5, 2007

Document Information

RESPONDER™ and SPARKGAP™ are trademarks of Critical Response Systems, Inc.

FLEX and ReFLEX are trademarks of Motorola.

The M1501, M1577, and M1599 are manufactured in Korea by Hahntech.

For More Information, please contact

**Critical Response Systems, Inc.
1670 Oakbrook Drive, Suite 370
Norcross, GA 30093-1849
770-441-9559
www.criticalresponse.com**

Preface	6
Audience	6
Conventions.....	6
Notes, Cautions, and Warnings	6
Safety Information.....	6
Radio Device for Hazardous Locations	6
RF Operation Characteristics.....	6
Electronic Devices	7
Aircraft.....	7
Blasting Areas	7
Potentially Explosive Atmospheres	7
1 Getting Started	8
1.1 Unpacking Your M1501	8
1.2 Installing the Battery	8
1.3 Turning the Pager On.....	8
2 M1501 Pager	9
2.1 User Interface.....	9
2.2 Status LED.....	9
2.3 LCD Display.....	10
2.4 Buttons.....	10
2.5 Holster and Belt Clip.....	10
2.6 External Contact Points.....	11
3 M1577 Standard Charger	12
3.1 Charging Socket.....	12
3.2 Status LED.....	12
4 M1599 Advanced Charger	13
4.1 Charging Sockets	14
4.2 Status LEDs	14
4.3 Volume Control.....	14
4.4 Message Read Button	14
4.5 Serial Port.....	14
4.6 Contact Closure.....	14
5 General Operation	15
5.1 Main Menu	15
5.2 Identification Screen.....	16

6 Receiving Messages	17
7 Viewing Received Messages.....	18
7.1 Message Options.....	19
7.2 Replying to a Message	20
8 Sending Messages.....	21
9 Device Settings.....	22
9.1 Quick Mode On/Off.....	22
9.2 Device Mode	22
9.3 Alert Setup	23
9.3.1 Global Setup	23
9.3.2 Folder Setup	24
9.4 Alarm	25
9.5 System Settings	25
9.5.1 LCD Contrast.....	25
9.5.2 LCD Off Time	26
9.5.3 Font Size	26
9.5.4 Message Header.....	26
9.5.5 Folder Sort	26
9.5.6 Time Setup.....	27
9.5.7 Key Click.....	27
9.5.8 Charger Mount Beep.....	27
9.5.9 Backlight.....	28
9.5.10 Status LED.....	28
9.5.11 Serial Port Mode.....	28
9.5.12 System Information	29
9.6 Power Off	29

PREFACE

Congratulations on your selection of the **M1501 Responder™** pager! This device, together with a **SPARKGAP™ Wireless Data System**, represents the state of the art for alerting, notification, and mobilization.

AUDIENCE

This guide is intended for users of the M1501 Responder pager.

CONVENTIONS

This guide uses the following conventions for instructions and information.

NOTES, CAUTIONS, AND WARNINGS

Notes, cautions, and warnings use the following conventions and symbols:



This symbol indicates that the reader should take note. Notes contain useful suggestions, references to other documents, or helpful hints.



This symbol indicates that the reader must be careful. In this situation, you might do something that could result in equipment damage or loss of data.



This symbol means danger! You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents.

SAFETY INFORMATION

RADIO DEVICE FOR HAZARDOUS LOCATIONS

This equipment is suitable for use in Class I, Div. 2, Groups A, B, C, D, Class II, Div. 2, Groups F and G, or Non-Hazardous Locations Only.



EXPLOSION HAZARD! Substitution of Components May Impair Suitability For Class I Div. 2 and Class II, Div. 2.



EXPLOSION HAZARD! Battery must only be changed in an area known to be non-hazardous.

RF OPERATION CHARACTERISTICS

Your M1501 contains a transmitter and a receiver. When it is ON, it receives and transmits radio frequency (RF) energy. The M1501 transmits in the frequency range of 896-902 MHz and employs digital modulation techniques. The M1501 output power level is typically 1 Watt, but transmission occurs infrequently and usually follows within a few seconds of a page that has been received or when the unit is first turned on. In 1991, the Institute of Electrical and Electronics Engineers (IEEE), and in 1992, the

American National Standards Institute (ANSI), updated the 1982 ANSI Standard for safety levels with respect to human exposure to RF Energy. Over 120 scientists, engineers, and physicians from universities, government health agencies and industry, after reviewing the available body of research, developed this updated standard.

ELECTRONIC DEVICES

Most modern electronic equipment is shielded from RF energy; however, RF energy from your *M1501* may effect inadequately shielded electronic equipment. Check with the manufacturer or it's representative to determine if the following equipment or systems are adequately shielded from external RF energy:

- Motor Vehicle electronic and entertainment systems (standard and any add-on equipment)
- Medical Equipment, hospital or personal devices (such as pacemakers, hearing aids, etc.)

*Turn your M1501 **OFF** in health care facilities where any regulation posted in the areas instructs you to do so.* Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

AIRCRAFT

Current regulations prohibit the use of certain types of portable electronic devices (PEDs) on board commercial aircraft, due to the potential of interference with navigational and communications equipment. *Turn your M1501 **OFF** before entering any aircraft.*

BLASTING AREAS

Construction crews often use remote control RF devices to set off explosives. To avoid interfering with blasting operations, *turn your M1501 **OFF** when in a "blasting area" or in areas posted "Turn off two-way radio".*

POTENTIALLY EXPLOSIVE ATMOSPHERES

Do not change your batteries or operate your battery charger within the proximity of any potentially explosive atmospheres. It is rare, but these actions may generate sparks. Areas with a potentially explosive atmosphere are often, but not always, clearly marked and include the following:

- Gas stations
- Below deck on boats
- Fuel or chemical transfer/storage facilities
- Areas where air may contain chemicals or particles, such as grain dust, or metal powders
- Any area where you would normally be advised to turn OFF your motor vehicle

1 GETTING STARTED

1.1 UNPACKING YOUR M1501

Your *M1501* comes with the following parts and accessories

- 3.6V Lithium Ion Battery
- Holster
- Belt Clip
- *Standard* or *Advanced* Battery Charger
- Wall Adapter Power Supply

1.2 INSTALLING THE BATTERY

- Using a coin or screwdriver, unscrew the battery cover lock screw and remove the cover.
- Slide the battery into the battery case with the label facing upward and the terminals sliding into the pager:



- Press cover into place, snap it closed, and carefully tighten its lock screw using a coin or screwdriver.



Only use a 3.6V rechargeable lithium ion battery manufactured by HahnTech. Use of any other battery or power supply could result in damage to your device.

1.3 TURNING THE PAGER ON

Once the battery is inserted into your *M1501*, you can turn it on by simply holding down the green **Select** key for 5 seconds.

2 M1501 PAGER



Your *M1501* consists of a digital radio and CPU in a polycarbonate housing, a 160x64 LCD display, four buttons, a replaceable/rechargeable Li-Ion battery pack, and contact points for charging and programming. It also comes with a belt holster and detachable belt clip.

2.1 USER INTERFACE

The *M1501* user interface is a hierarchical menu system, displayed on the LCD and navigated with the four buttons **Up**, **Down**, **Select**, and **Escape**. The **Up** and **Down** buttons move the current selected menu item up or down, and it scrolls displayed message text up or down. The **Select** button selects the current menu item, and the **Escape** moves the user up one menu level.

The LCD display and buttons are backlit for use in low light conditions. The backlight can be disabled, or enabled upon keystroke or alert. You can configure when the LCD and the backlight activate, and how long they stay on.

2.2 STATUS LED

Your *M1501* pager has one status/alert LED on its front, top right hand corner. This LED provides the following information.

- Receiver Operation**
 The status LED flashes each time it receives a control frame from the *SPARKGAP* network. It flashes green when it is not registered, or when it is registered in normal mode. It flashes blue when it is registered in quick mode. It also flashes yellow if the battery is low.
- Alerting**
 The status LED rapidly flashes red when the pager is alerting you to a new message.

2.3 LCD DISPLAY

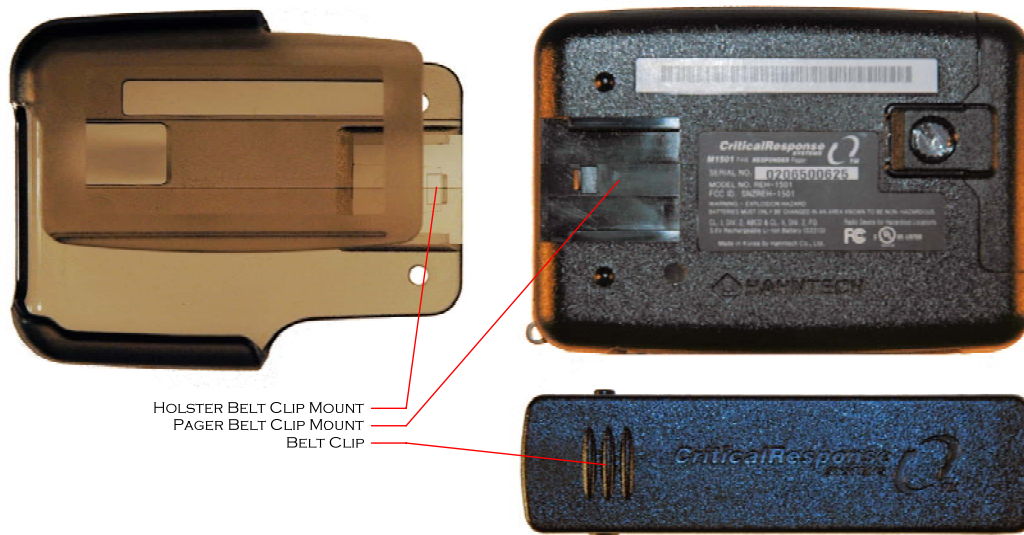
The *M1501* display is a 160x64 LCD matrix displays that shows textual information as well as several icons:

Icon	Description
	Control Channel Strength
	No Control Channel
	Battery Capacity
	Battery Charging Indicator
	Encryption On/Off
	Campus / Roaming Coverage
	Surveillance Mode
	Alarm Set
	No Coverage
	1-way Coverage
	2-way Coverage
	New Received Message Received Indicator
	Received Message Unread/Read
	Received Message Read and Replied
	Outbound Message Waiting for Transmission
	Outbound Message Sent
	Outbound Message Failed

2.4 BUTTONS

The *M1501* user interface is controlled by four buttons: **Up**, **Down**, **Escape**, and **Select**. The *M1501* user interface is a hierarchal menu system, and in this system, the **Up** and **Down** buttons move the selection bar up and down on the screen, the **Select** button opens the selected item, and **Escape** moves up one screen.

2.5 HOLSTER AND BELT CLIP



The *M1501* includes a translucent polycarbonatone holster, and a belt clip that can be attached to the holster as well as directly to the pager.

When using the holster, slide the belt clip into the holster belt clip mount until it clicks into place. Once the holster is secured on your belt, slide your pager into the holster with the battery cover at the top and the LCD facing outward. The pager is held firmly in place and can be easily grasped and removed when needed. When not using the holster, slide the belt clip into the pager belt clip mount until it clicks into place.

2.6 EXTERNAL CONTACT POINTS

External contact points are located on the bottom front edge of your *M1501*. These points make contact with corresponding points in the **Standard** or **Advanced Chargers**, facilitating battery charging, amplified alert tones, contact closure activation, and a serial cable connection.

3 M1577 STANDARD CHARGER



The *M1501* pager may come with the *M1577 Standard Charger*. You can recharge your pager's battery by inserting the pager into the charge. To turn on your charger, simply take the following steps:

- Connect the included wall transformer to the battery charger using the DC power connector on the back of the charger.
- Plug the battery charger transformer into a 115VAC power source.
- During the automatic power-up self-test, verify that the LED glows red, then green, then turns off.



The basic charger is not water or weather resistant. Never expose this device to moisture, and use only in a dry, indoor environment. Failure to adhere to these guidelines may result in damage to the device, fire, electrocution, and injury.

3.1 CHARGING SOCKET

The *M1577* includes a charging socket for the pager. To charge a pager, slide it into socket with the screen facing forward and the electrical contacts facing down. The charging process begins automatically when you insert the pager or battery into the charger.

3.2 STATUS LED

During the charging process, the LED displays the charging status of the pager, and **EXT** LED displays the charging status of the extra battery, as follows:

Action	Meaning
●	LED Off – No battery or pager present
★ - -	Red Flashing LED – The battery is charging
★ —	Green LED – The battery is fully charged



You may leave your *M1501* in the standard charger indefinitely, without harming the battery or the pager. Under these conditions, the LED may periodically change from green to flashing red, then back to green. This is normal behavior.

4 M1599 ADVANCED CHARGER



The **M1501** pager can come with the optional **M1599 Advanced Charger**, which includes several extra capabilities beyond the **M1577 Standard Charger**:

- Amplified Alert Speaker With Digital Volume Control
- Extra Battery Charging Socket
- Message Read Button
- Alerting Contact Closure
- Serial Port

To turn on your charger, simply take the following steps:

- Connect the included wall transformer to the battery charger using the DC power connector on the back of the charger.
- Plug the battery charger transformer into a 115VAC power source.
- During the automatic power-up self-test, verify that both LEDs glow red, then green, then turn off.



The basic charger is not water or weather resistant. Never expose this device to moisture, and use only in a dry, indoor environment. Failure to adhere to these guidelines may result in damage to the device, fire, electrocution, and injury.

4.1 CHARGING SOCKETS

The Advanced Charger includes 2 charging sockets – one for the pager, and one for an extra battery. To charge a battery, insert it into the rear socket with the battery label facing forward and the gold electrical contacts facing down. To charge a pager, slide it into the front socket with the screen facing forward and the electrical contacts facing down. The charging process begins automatically when you insert the pager or battery into the charger.

4.2 STATUS LEDs

During the charging process, the **MAIN** LED displays the charging status of the pager, and **EXT** LED displays the charging status of the extra battery, as follows:

Action	Meaning
●	LED Off – No battery or pager present
★ - -	Red Flashing LED – The battery is charging
★ —	Green LED – The battery is fully charged



You may leave your *M1501* and extra battery in the advanced charger indefinitely, without harming the battery or the pager. Under these conditions, the LEDs may periodically change from green to flashing red, then back to green. This is normal behavior.

4.3 VOLUME CONTROL

The Volume Up and Volume Down buttons set the volume of the Advanced Charger speaker. At any point while the pager is not alerting, if the pager is configured properly, the *Message Read Button* may be pressed to emit a reference chirp at the present volume level.

4.4 MESSAGE READ BUTTON

The Message Read button serves two purposes. First, when your pager alerts, you can respond that you have read the message by pressing this button. This saves the time and trouble of removing the pager from the charger. Secondly, if the pager is configured properly, you can press this button to hear a reference chirp at the present volume level.

4.5 SERIAL PORT

The serial port allows you to connect a Star Micronics TSP-600, TSP-700, or TSP-1000 serial printer to your charger, to print alert messages under certain conditions. It also allows you to connect your pager to a personal computer to upgrade the firmware.



A serial printing kit is available from Critical Response Systems, as part number CRS-1599-TSP.

4.6 CONTACT CLOSURE

The contact closure comprises two dry (electrically isolated) contacts which are normally open, but can be shorted together (closed) when your *M1501* alerts. These can be used to turn on lights or other actuators, of to trigger external sequencing systems (e.g., PLCs). To use this feature, you must configure your *M1501* as described in section 9.3.

5 GENERAL OPERATION

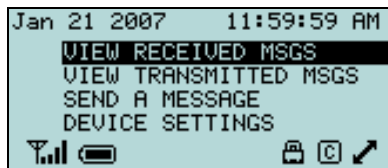
Your *M1501* is an *acknowledgement pager*, designed to operate as part of a *SPARKGAP* wireless data system. When your *M1501* receives messages, it alerts you and allows you to read and reply to these messages. Depending on network configuration, the person (or computer system) sending the message can be notified when you receive, read, and reply to each message.

Your *M1501* receives both *personal messages*, sent specifically to you, and *group messages*, sent simultaneously to you and others in the same group. The way these messages are received and displayed are very similar, but there are some important differences. Personal messages are sent using *guaranteed delivery*. If you are out of range when a personal message is sent, the *SPARKGAP* system will hold the message for up to several days until it locates you and delivers the message. Group messages are sent to multiple members of a particular group, and the sender is quickly notified of who received the message and who did not. Group messages are not held for delivery for more than a few seconds.

As your *M1501* receives messages, it stores them into **folders**. Personal messages are stored in your *personal* folder, while group messages are stored in the appropriate group folder named after the group. From the main menu, by selecting VIEW RECEIVED MSGS then navigating into the relevant folders, you can review previously received messages. Your *SPARKGAP* system administrator can assign email addresses and phone numbers to each folder in your *M1501*, depending on operational and security policies.

Your *M1501* can also transmit preprogrammed messages to pre-programmed email addresses. This type of messages is called a *canned message*. These canned messages and destination addresses are programmed into your pager over the air by your *SPARKGAP* system administrator, or directly by you through the *SPARKGAP Management Gateway*. Message transmission is available from the main menu by selecting SEND MESSAGE.

5.1 MAIN MENU



The main menu is the first screen displayed by your *M1501* after power-on. It provides menu options into the four main functions of your pager. You can use the up/down button to select one of the following choices:

- **VIEW RECEIVED MSGS**
View, and respond to messages previously received by your pager.
- **VIEW TRANSMITTED MSGS**
View and retransmit messages sent from your pager.
- **SEND A MESSAGE**
Send a message.
- **DEVICE SETTINGS**
Change the settings of your pager.

5.2 IDENTIFICATION SCREEN



The *Identification Page* appears when you press the **Escape** button from the main menu. Also, if your LCD blanks after a period of inactivity, you may hit any key to display this page. The *Identification Page* shows your personalized information, as programmed by your *SPARKGAP* system administrator. This information may help you find your pager if it is lost. From this screen, you may press **Select** to display the *Main Menu*.

6 RECEIVING MESSAGES

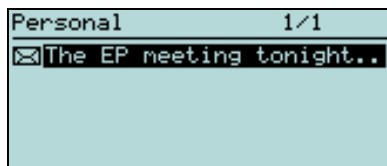
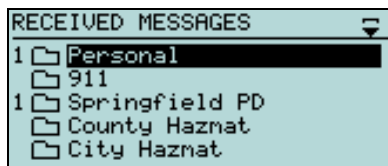
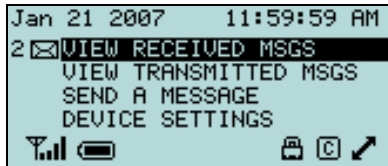
When your *M1501* receives a new message, it immediately displays a *message pop-up screen* and stores the message into the appropriate folder. Upon receipt, the pop-up screen shows the top few lines of the new message. You may push the **Select** button to open the message, where you can see additional information and take further action (see section 7). You may also push the **Escape** button to return to the main menu.

```
RECEIVED MESSAGE
Unit 17 requesting
immediate backup in
domestic dispute, 12
Henlock near Austin and
WU155. Please respond.
```

```
RECEIVED MESSAGE
From:PD Dispatch
Recv:Sep 28, 2005 11:59AM
Subject:Please Respond
Unit 17 requesting
```

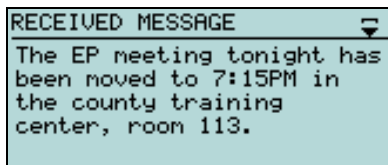

7 VIEWING RECEIVED MESSAGES

As your *M1501* receives messages, it stores them into memory so that you can view them later. Each message is stored into a folder, either the **Personal** folder or a group folder. You can view the folder list by selecting **VIEW RECEIVED MSGS** from the menu, and then you can select the folder you want to examine.



Note that an envelope icon (and a number) will appear to the left of **VIEW RECEIVED MSGS** if there are unread messages waiting for you. The number indicates the number of unread messages stored in your pager. Likewise, when you view the folder list, each folder with unread messages will display a corresponding unread message count to its left. If there are more than 9 messages, your pager will show an **M** instead of a digit.

Once you navigate to a message, pressing **Select** will open the message for viewing, allowing you to scroll through the whole message and view the header information. Pressing **Select** again will open the list of message options.



Each received message contains a **body** and a **header**, which are both shown to you. The **body** contains the actual message sent to the pager, and the **header** contains additional information fields describing the message:

- **From**
This field contains the email address (or similar identifying information) of the person or computer system who sent you the message. The contents of this field depend on where the message came from as well as how it entered the system (email, telephone, CAD, etc.)
- **Sent**
This field contains the time and date the message was sent into the *SPARKGAP* system
- **Recv**
This field contains the time and date the message was received by the *M1501*
- **Subject**
This field contains the subject of the message

7.1 MESSAGE OPTIONS



- **Reply**
This selection allows you to reply to the sender of the message with a **Canned Reply**.
- **Message Lock**
This selection locks the message, protecting it against deletion.
- **Message Unlock**
This selection unlocks the message, allowing it to be deleted.
- **Delete Message**
This selection deletes the message.
- **Delete All**
This selection deletes all messages in the folder

7.2 REPLYING TO A MESSAGE

Certain messages allow you to reply with multiple-choice responses, also called **canned responses**. With this type of message, your message option list will include the **Reply** selection. Selecting **Reply** will allow you to select a canned response, which can be sent to the person who sent you the message.

```
RECEIVED MESSAGE
Unit 17 requesting
immediate backup in
domestic dispute, 12
Herlock near Austin and
WU155. Please respond.
```

```
RECEIVED MESSAGE
Ur
ir
dc
He
WU
REPLY
MESSAGE LOCK
DELETE MESSAGE
DELETE ALL
```

```
DOMICILE MESSAGE
SELECT RESPONSE
Enroute 2 min
Enroute 5 min
On Scene
Cannot Respond
```

You may navigate through the list and select the appropriate response by pressing **Select**. You may also return to the message at any point, without sending a reply, by pressing **Escape**. The responses shown in the list may include **preprogrammed responses** or **embedded responses**. Preprogrammed responses are loaded into your pager over the air by a **SPARKGAP** system administrator, or directly by you through the **SPARKGAP Management Gateway**. Embedded responses are included with each individual message.

8 SENDING MESSAGES

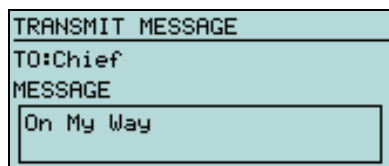
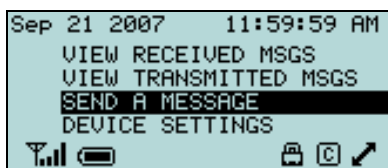


To use this feature, your *SPARKGAP* system and your pager must be configured to support it. Please contact your *SPARKGAP* system administrator with any questions.

Your *M1501* can transmit **canned messages**, which are preprogrammed messages, selected from a list, sent to preprogrammed recipients, also selected from a list. **Canned Messages** are similar to **canned responses**, but they are not the same. **Canned responses** (section 7.2) allow you to reply to messages that you receive, while **Canned Messages** allow you to originate a new message to a specific recipient. The list of messages and recipients are configured over the air by a *SPARKGAP* system administrator, or by you directly through the *SPARKGAP Management Gateway*.

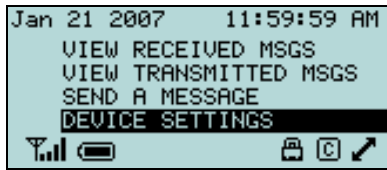
Canned messages are a useful way to quickly and easily send short status-type messages (*Running Late*, *Out of Service*, *In Service*, etc.) to administrative personnel, or to issue quick commands (*signal TAC4*, *report status*, etc.) to small groups. In some cases this feature can also be used for more complex interoperability tasks, depending on your agency's procedures and circumstance. Your *M1501* supports up to 32 canned messages and 15 canned addresses.

To send a message from your *M1501*, select the **SEND A MESSAGE** item from the main menu. Your *M1501* will then prompt you to select a recipient and then a message, from 2 lists. Use your **Up** and **Down** buttons to navigate these lists, and then press **Select** to select the correct item. You will then see the final message composed on the screen. Pushing **Select** one more time will bring up your final options, **SEND** and **QUIT**. To send the message, select **SEND**; to abandon the message select **QUIT**.



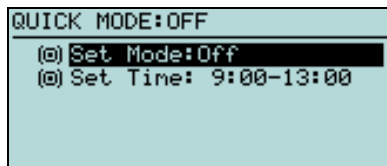
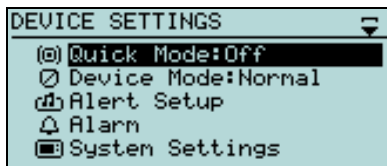
Once you select **SEND**, the message is placed into the *M1501* transmit queue, where it will wait for a few seconds until the *M1501* transmits it to the *SPARKGAP* network. While messages are in queue, a pending transmission icon will appear next to the **VIEW TRANSMITTED MSGS** main menu item. Once the message is successfully transmitted, this icon will vanish.

9 DEVICE SETTINGS



The functionality and behavior of your *M1501* is defined using the **Device Settings** menu item. Selecting this menu item presents a list of settings to configure your *M1501* pager.

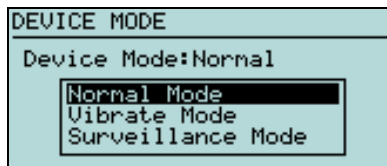
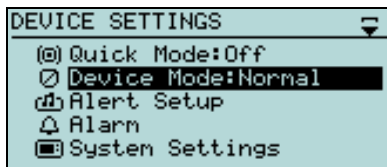
9.1 QUICK MODE ON/OFF



Your *M1501* can receive messages more quickly at the expense of some battery life. This is called **Quick Mode**, which receives messages more quickly than **Normal Mode**. You can either turn **Quick Mode** on or off continuously, or you can specify a schedule -- a start time and end time, along with which days of the week to use it. The **Quick Mode** menu selection contains two settings:

- Set Mode**
 This setting defines whether quick mode is **On**, **Off**, or **Auto**. **On** selects **Quick Mode**, and **Off** selects **Normal Mode**. **Auto** instructs the pager to use **Quick Mode** or **Normal Mode** according to the schedule defined with the **Set Time** menu item below.
- Set Time**
 This setting defines the schedule used to enable **Quick Mode**. Using this menu item, you can enter the start time and stop time, and the days of the week to use it.

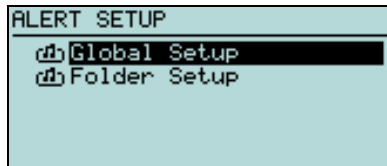
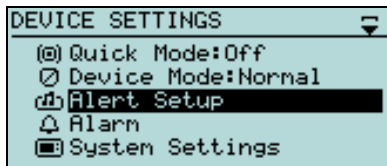
9.2 DEVICE MODE



Your *M1501* has 3 device modes, **Normal** mode, **Vibrate** mode, and **Surveillance** mode. In **Normal** mode, the device alerts according to your **Alert** setup, using both the vibrator and sound transducer as instructed. In **Vibrate** mode, the transducer is disabled and only the vibrator is used. In **Surveillance**

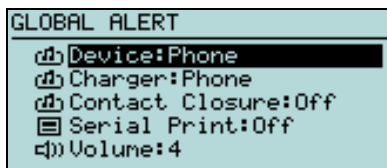
mode, neither the transducer nor the vibrator is enabled, and additionally the status LED is also disabled.

9.3 ALERT SETUP



You can customize the way your *M1501* alerts you when it receives your messages. The *M1501* can alert differently depending on folder, and depending on whether or not the pager is plugged into the *M1599 Advanced Charger* when the message is received. Under Alert Setup, there are two submenu items, **Global Setup** and **Folder Setup**. Global Setup represents a pager-wide set of alert preferences, while Folder Setup contains alerting parameter overrides specific to each different folder.

9.3.1 GLOBAL SETUP

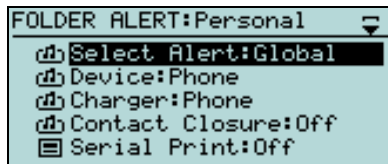
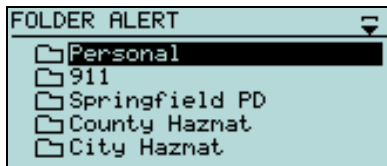


The **Global Setup** menu selection sets the default alerting behavior for your pager. Except for folders specifically overridden through **Folder Setup** as described below, the settings in **Global Setup** will apply to messages received by all folders. The **Global Setup** menu selection contains 6 settings:

- **Device**
This setting defines how the *M1501* will alert when it is not inserted into the *M1599 Advanced Charger*. Choices include **Vibrate**, **Chirp Vibrate**, **Silent**, and several alert melody titles.
- **Charger**
This setting defines how the *M1501* will alert when it is inserted into the *M1599 Advanced Charger*. Choices include **Silent** and several alert melody titles.
- **Contact Closure**
This setting specifies whether the *M1599 Advanced Charger* contact closure (section 4.6) is engaged upon receiving a message. **OFF** means that the contacts will be left unaffected (open). **ON** means that the charger contacts will close when a message is received.
- **Serial Print**
This setting specifies whether the message will be printed on a serial printer attached to the *M1599 Advanced Charger*. **OFF** means that messages will not be printed; **ON** means that messages will be printed when they are received.
- **Volume**
This setting specifies the volume level of the audio alert, from 1 (quietest) to 4 (loudest).
- **Repeat**

This setting determines the number of times the alert repeats, selected from 1 time, 3 times, 5 times, or forever.

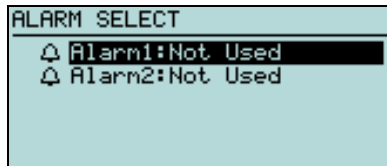
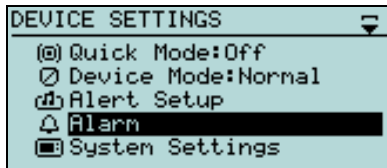
9.3.2 FOLDER SETUP



The Folder Setup menu selection sets the alerting behavior of individual message folders, overriding the Global Setup values. Selecting this menu item will present a FOLDER ALERT menu containing one menu selection for each folder. Selecting a particular folder allows you to edit 7 settings for that folder:

- **Select Alert**
This setting defines whether the **Global Setup** or **Folder Setup** settings control how messages alert for the selected folder. **Global** uses the **Global Setup** settings, and **Folder** selects the **Folder Setup** settings.
- **Device**
This setting defines how the *M1501* will alert when it is not inserted into the *M1599 Advanced Charger*. Choices include **Vibrate**, **Chirp Vibrate**, **Silent**, and several alert melody titles.
- **Charger**
This setting defines how the *M1501* will alert when it is inserted into the *M1599 Advanced Charger*. Choices include **Silent** and several alert melody titles.
- **Contact Closure**
This setting specifies whether the *M1599 Advanced Charger* contact closure (section 4.6) is engaged upon receiving a message. **OFF** means that the contacts will be left unaffected (open). **ON** means that the charger contacts will close when a message is received.
- **Serial Print**
This setting specifies whether the message will be printed on a serial printer attached to the *M1599 Advanced Charger*. **OFF** means that messages will not be printed; **ON** means that messages will be printed when they are received.
- **Volume**
This setting specifies the volume level of the audio alert, from 1 (quietest) to 4 (loudest).
- **Repeat**
This setting determines the number of times the alert repeats, selected from 1 time, 3 times, 5 times, or forever.

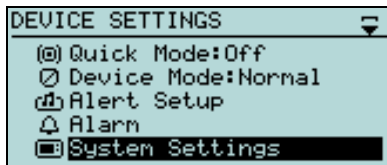
9.4 ALARM



Your *M1501* allows you to set two alarms, which cause the pager to sound an audio alarm at a predetermined time. These can be used as a wake-up alarm, or as a schedule reminder, or for other purposes. Selecting the **Alarm** menu selection brings up a new sub-menu with **Alarm1** and **Alarm2** selections. Each of these selections contains four settings defining the particular behavior of each alarm:

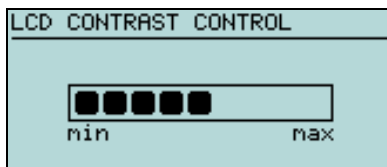
- **Set Alarm**
This setting turns the alarm OFF or ON.
- **Time**
This setting identifies the hour and minute of the alarm.
- **Melody**
This setting identifies the melody to use for the alarm.
- **Volume**
This setting specifies the volume level of the audio alert, from 1 (quietest) to 4 (loudest).

9.5 SYSTEM SETTINGS



The System Settings menu item allows you to make other adjustments to your *M1501* pager.

9.5.1 LCD CONTRAST



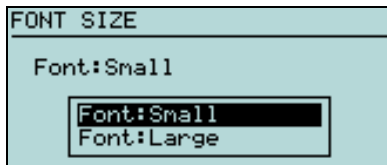
This screen allows you to adjust the contrast of your pager. You may increase the contrast by pressing **Up**, and you may decrease the contrast by pressing **Down**. When you are satisfied with your selection, you may press **Select** to save the new setting. To exit the screen without changing the setting, you may press **Escape**.

9.5.2 LCD OFF TIME



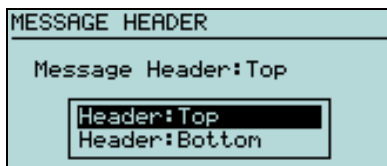
Your *M1501* LCD turns on whenever you touch a button, or whenever your pager receives a message; this screen allows you to change how your LCD turns off. You may select **30 Sec**, **60 Sec**, or **Always On** to determine how long it stays on. When you are satisfied with your selection, you may press **Select** to save the new setting. To exit the screen without changing the setting, you may press **Escape**.

9.5.3 FONT SIZE



This screen allows you to select the **Small** or **Large** font for displaying your messages. When you are satisfied with your selection, you may press **Select** to save the new setting. To exit the screen without changing the setting, you may press **Escape**.

9.5.4 MESSAGE HEADER



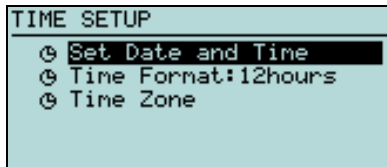
This screen allows you to select where the message header is displayed when you read your messages. You may select either **Top** or **Bottom**; when you are satisfied with your selection, you may press **Select** to save the new setting. To exit the screen without changing the setting, you may press **Escape**.

9.5.5 FOLDER SORT



This screen allows you to select how your group folders are organized. You may select either **Static** or **Last Recv Message**. **Static** leaves your folders in the same orders regardless of how messages are received. **Last Recv Message** changes the folder order dynamically so that folders with unread messages are listed first. When you are satisfied with your selection, you may press **Select** to save the new setting. To exit the screen without changing the setting, you may press **Escape**.

9.5.6 TIME SETUP



Your *M1501* pager continually updates time and date from the *SPARKGAP* network. This screen allows you to specify how time is displayed on your pager.



When operating on a *SPARKGAP* network, time and date are managed automatically and you will not need to modify any settings using this screen. However, when you are roaming on a national carrier, your current timezone and daylight savings time settings may not be automatically updated.

9.5.6.1 SET DATE AND TIME

This menu item allows you to manually set the time and date of your pager. This is useful when you are not presently in network coverage, and wish to set your pager's clock correctly for alarms or other purposes.

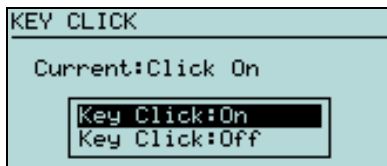
9.5.6.2 TIME FORMAT

This menu item allows you to specify the display format of the clock on your pager. You can either select **24 Hours** for military time or **12 Hours** for AM/PM.

9.5.6.3 TIME ZONE

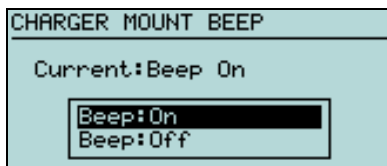
This menu item allows you to manually select the timezone of your pager from a list.

9.5.7 KEY CLICK



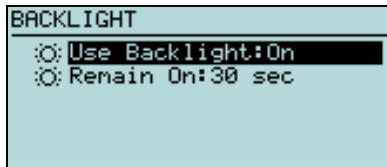
This screen allows you to turn key click **On** or **Off**. When you are satisfied with your selection, you may press **Select** to save the new setting. To exit the screen without changing the setting, you may press **Escape**.

9.5.8 CHARGER MOUNT BEEP



Your pager can beep whenever it is placed in the *M1599 Advanced Charger*, as well as when you press the message read button. This screen allows you to turn this feature **On** or **Off**. When you are satisfied with your selection, you may press **Select** to save the new setting. To exit the screen without changing the setting, you may press **Escape**.

9.5.9 BACKLIGHT



Your *M1501* backlight can come on whenever you receive a message or press a button. This configuration screen allows you to specify when the backlight comes on and how long it stays on.

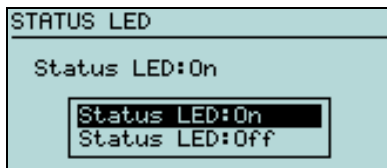
9.5.9.1 USE BACKLIGHT

Using this menu item, you may select **On**, **Only at Night**, or **Off**. **On** means that the backlight will always be enabled, and **Off** means that the backlight is disabled. **Only at Night** means that the backlight will be enabled during evening hours, but disabled during daylight hours.

9.5.9.2 REMAIN ON

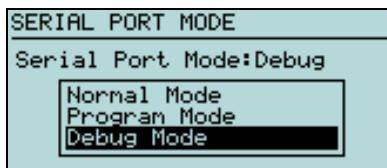
This menu item allows you to select how long the backlight will remain on after it is activated. You may select **10 sec**, **20 sec**, or **30 sec** to select how long it will remain on after the last button press.

9.5.10 STATUS LED



This screen allows you to turn your status LED **On** or **Off**. When you are satisfied with your selection, you may press **Select** to save the new setting. To exit the screen without changing the setting, you may press **Escape**.

9.5.11 SERIAL PORT MODE

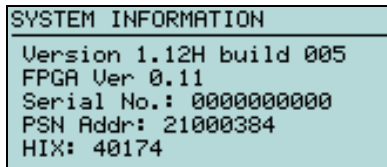


This screen allows you to configure your *M1501* serial communications port mode, to **Normal Mode**, **Program Mode**, or **Debug Mode**, as follows:

- **Normal Mode**
This setting supports printing messages to a serial printer (with an *M1599 Advanced Charger*) as they are received. Use this setting for normal operations.
- **Program Mode**
This setting is used to set and change various settings from a computer.
- **Debug Mode**
This setting is used to capture diagnostic logs from your pager, or upgrade your firmware, through the *M1599 Advanced Charger*.

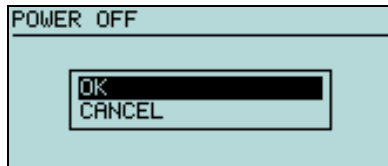
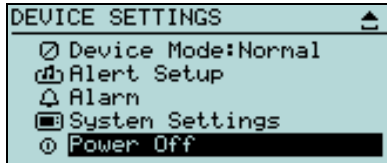
When you are satisfied with your selection, you may press **Select** to save the new setting. To exit the screen without changing the setting, you may press **Escape**.

9.5.12 SYSTEM INFORMATION



This menu item tells you certain manufacturing and revision information about your pager.

9.6 POWER OFF



This menu item allows you to turn off your pager. Once your pager is turned off, it can be turned back on by pressing **Select** and holding it down for 5 seconds.