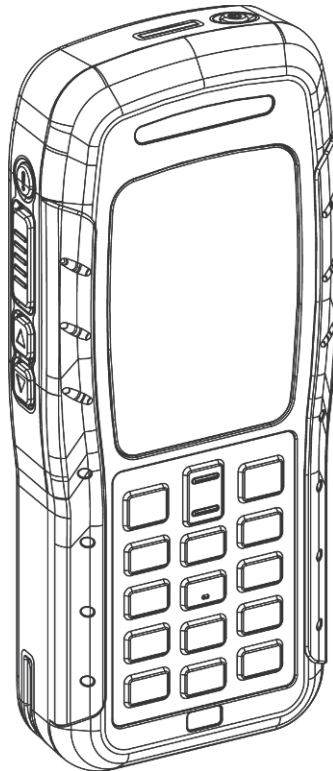


MP70 MinePhone

User Guide Revision

E



Contents

Revision History.....	5
Contact Information.....	7
About this Guide.....	9
Chapter 1: Product Overview.....	11
1.1 Inside the Box.....	12
1.2 Hardware Features	13
1.3 Display.....	14
1.4 Charging the Phone.....	15
Chapter 2: User Basics.....	17
2.1 Switching the MinePhone On and Off.....	18
2.2 Accessing Menu Features.....	18
2.3 Changing the Speaker Volume.....	19
2.4 Changing the Backlight Time and Brightness.....	20
2.5 Writing a Text Message.....	22
2.6 Sending a Text Message.....	22
Chapter 3: Voice Communications.....	25
3.1 Using Push To Talk	26
3.1.1 Push To Talk.....	26
3.1.2 Broadcast Push To Talk.....	27
3.1.3 Emergency "Man Down" Call.....	27
3.2 Phone Calls.....	28
3.2.1 Make a Call.....	28
3.2.2 Receive a Call.....	29
3.2.3 Hold a Call.....	30
3.2.4 Mute a Call.....	31
3.2.5 Transfer a Call.....	32
3.2.6 Call Waiting.....	33
3.2.7 Handsfree.....	34
Chapter 4: Remote Speaker Microphone.....	37
4.1 Attaching a Remote Speaker Microphone	38
4.2 Using the RSM on PTT Calls.....	39
Chapter 5: Other Phone Functions.....	41
5.1 Keypad Lock.....	42
5.2 Managing Messages.....	43

5.3 Viewing Network Details.....	44
5.4 Locator App.....	45
Chapter 6: Call Logs.....	47
6.1 Viewing Call Logs.....	48
Appendix A: Troubleshooting Guide.....	51
Appendix B: MP70 MinePhone Specification.....	53
Appendix C: Acronyms.....	55
Appendix D: Hardware Warranty.....	57
Appendix E: Firmware End User License Agreement.....	59
Appendix F: The Guide for the related Countries' Certifications.....	60

Revision History

Revision	Change	Date
A	User guide for MinePhone hardware Rev D (main PCB) and firmware 1.4.0.0	May 2011
B	Updated to reflect the functionality of firmware 1.4.4.2.	September 2011
C	Updated version and formatting to MST standard	November 2011
D	Firmware 1.4.7.14, updated screenshots	June 2012
E	Updated hardware Rev F(main PCB) and firmware 2.6.0.0	November 2015

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About this Guide

This manual describes the features and operation of the MP70 Minephone. The Table of Contents and Index will help find the information you need. You will get the most out of the MinePhone if you read each section.

Conventions used in this manual




This publication uses specific formatting for certain data types. These may differ or appear similar in certain languages. In this document, they appear as follows:

- User interface elements such as menu options, text fields and buttons (including physical buttons) look **like this**.
- Non-interactive elements such as message folders and hardware components look **like this**.
- Text entered and specific settings or options chosen by the user look *like this*.
- System messages and output in response to commands look *like this*.
- References to external documents look *like this*.

Icons

The following icons may appear in this document to highlight specific information:

Table 1: Icons

Icon	Description
 Note:	The Note icon indicates important or useful information and references.
 Important:	The Important icon contains information to prevent damage to the product and injury to the user.
 Caution:	The Caution icon indicates to stop and pay attention or an action not to be performed.


Related Documentation

The following documents, available from MST, include information relevant to the configuration and operation of the MP70 MinePhone:

- *MP70 MinePhone Administrator Guide*
- *ICA Administration Console User Manual*
- *MineDash User Manual*

Additional Support

For additional support please visit our website: <http://www.minesite.com.au/>

 **Note:** The information provided in this document ("**Information**") is presented in good faith and believed to be correct as at the date of this document. MST makes no representations as to the accuracy or completeness of the Information. The Information is supplied on the condition that the recipient will make their own determination as to the suitability of the Information for their purposes

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Chapter

1

Product Overview

Topics:

- *Inside the Box*
- *Hardware Features*
- *Display*
- *Charging the Phone*

This chapter describes the features of the MP70 MinePhone and the charging dock.

The Mine Site Technologies' MP70 MinePhone is a Voice over WLAN (VoWLAN) phone designed for use in hazardous mining environments. It provides two way voice and text communication over the underground wireless network. It has the following features:

- Intrinsically Safe design built to an IP54 rating
- Colour 320x240 pixel TFT LCD screen
- Push To Talk function
- Text messaging
- Noise and echo cancellation
- Emergency "Man Down" mode
- Battery life of 48 hours standby, 4 hours talk time.

1.1 Inside the Box

When you open the MinePhone packaging it will contain the following:

- MinePhone handset
- MinePhone User Guide
- Charging dock
- Power adaptor and three wall plug connectors
- Belt clip
- Screw and washer for attaching the belt clip
- Spare adhesive speaker grill pads
- Spare adhesive microphone grill pads
- Spare rubber stoppers to cover mounting screws



1.2 Hardware Features

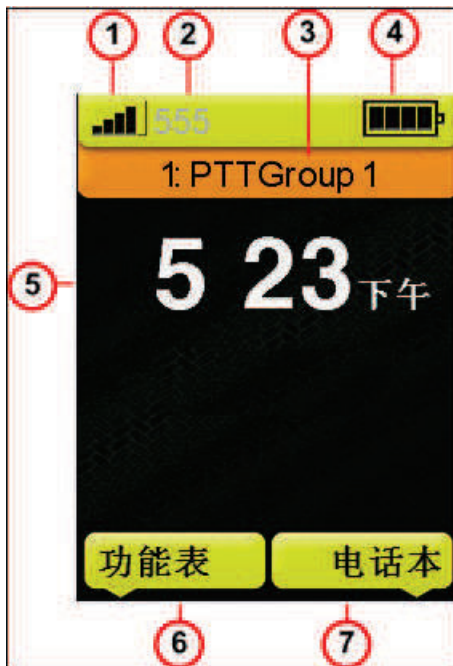


Key	Description	Function
1	Display	TFT display.
2	Speaker	Phone speaker.
3	Top microphone	Microphone for Push To Talk (PTT) calls.
4	Lower microphone	Microphone for phone calls.
5	Emergency / Man Down button	Emergency override button broadcasting to all MinePhone users.
6	Push to talk (PTT) button	Button for Push To Talk (PTT) communication.
7	PTT Channel Up	Changes the PTT group channel.
8	PTT Channel Down	Changes the PTT group channel.
9	External headset jack cover	Removable cover for attaching an external Remote speaker microphone. (only applicable in Hard Rock mining environments)
10	Serial number / MAC address label	Handset identification label.

Key	Description	Function
11	Beltclip mounting hole	Mounting hole for a attaching the included beltclip or optional metal beltclip.
12	Approvals label	IEC / MSHA approvals label.
13	Left selection key / Call key	Button to answer a call or left selection on the display.
14	Keypad	Keypad for entering contact numbers and text messaging.
15	Navigation key	Navigation key when accessing the phone menu.
16	Right selection key / End key	Button to end a call or right selection on the display.
17	Charging contacts	Contacts for charging the handset in the charging dock.
18	Receive call LED	LED on top of the phone will flash when receiving a call.
19	Power button	Button to switch the phone on or off.

1.3 Display

When the phone is switched on, the **Home** screen is displayed.








1. Network signal strength
2. Handset Extension number
3. PTT channel indicator
4. Battery level
5. Time display
6. Function of the left softkey
7. Function of the right softkey

1.4 Charging the Phone

The MinePhone has an internal battery providing up to 48 hours standby and 4 hours talk time. It can be charged using the supplied charging dock and power adaptor, which can operate at 110-240v AC. The charger should be placed in a well ventilated, non-hazardous area with access to power.

⚠ Caution: Use only charging docks and power adaptors approved by Mine Site Technologies. Use of any other type may be dangerous, breach Intrinsic Safety requirements and will void the warranty.

Step	Procedure	Picture
1	Connect the power adaptor to a wall socket.	
2	Connect the lead from the power adaptor to the charging dock.	
3	Place phone into the charger.	

Step	Procedure	Picture
4	<p>The charging indicator will be red if the battery is flat or less than fully charged. If the handset is flat, charging time will take about 3 hours.</p>	
5	<p>The fully charged indicator will be green when the handset is fully charged.</p>	

Chapter

2

User Basics

Topics:

- *Switching the MinePhone On and Off*
- *Accessing Menu Features*
- *Changing the Speaker Volume*
- *Changing the Backlight Time and Brightness*
- *Writing a Text Message*
- *Sending a Text Message*

This chapter describes the most commonly used functions of the phone.

2.1 Switching the MinePhone On and Off

To turn on the phone:

1. Press and hold down the **Power** button for 3 seconds. A splash screen briefly displays the hardware (HW), firmware (FW) and resource file (RES) version.



2. The **Home** screen will then be displayed and the phone will connect to the network.

To turn off the phone, press and hold down the **Power** button for 3 seconds. The phone will beep and turn off.



2.2 Accessing Menu Features

To access the menu:

1. Press the left softkey below the **Menu** option on the **Home** screen.



2. Use the vertical **Navigation** keys to scroll up and down the phone menu.



2.3 Changing the Speaker Volume

There are three options for changing the speaker volume as described below.

1. Adjusting speaker volume during a call:
 - a) Use the vertical **Navigation** keys to adjust the volume.



2. Changing the speaker volume for phone calls:
 - a) Select Menu on the **Home** screen, scroll to the **Sound** option and press **Select**.



- b) Select **Phone Call Volume**.



- c) Adjust the volume level using the vertical **Navigation** keys, and select **OK**.



- 3. Changing speaker volume for Push To Talk (PTT) calls:
 - a) Select **Menu** on the **Home** screen, scroll to the **Sound** option and press **Select**.



- b) Select **PTT Speaker Volume**.



- c) Adjust the volume level with the vertical **Navigation** keys, and select **OK**.



2.4 Changing the Backlight Time and Brightness

Context for the current task

- 1. To change the Backlight Time:
 - a) Select **Menu** on the **Home** screen, scroll to the **Settings** option and press **Select**.



- b) Scroll to **Backlight Time** with the **Navigation** keys and press **Select**.



- c) Use the **Navigation** keys to select the desired backlight time and press **Select**.



2. To change the Backlight Brightness:

- a) Select Menu on the **Home** screen, scroll to the **Settings** option and click **Select**.




- b) Scroll to **Backlight Brightness** and press **Select**.






- c) Adjust the brightness using the **Navigation** keys, and press **OK**.



 **Note:** Lower screen brightness will reduce battery power consumption.

2.5 Writing a Text Message

The MinePhone can use traditional or predictive text modes when writing text messages. When writing messages, press the * key to cycle between:

- Numeric input displayed as a  icon
- Character input displayed as an  icon
- Predictive text messaging (English only) displayed as an  icon.



Traditional text input

Press a number key between 2 and 9 repeatedly until the required character appears. If the next character is located on the same key as the present one, wait until the cursor appears and enter the letter / number.

Predictive text input

The MinePhone has a built in dictionary for predictive text input.

1. Press keys **2** to **9** to start typing a word, pressing only once for each letter.
2. Press **0** key to confirm the word and create a space.
3. Type the next word.

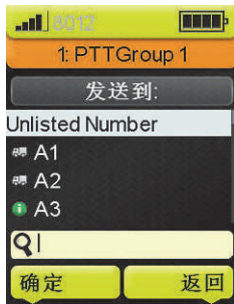
2.6 Sending a Text Message

Text messages can be sent to and from MinePhones on the network. To send a text message::

1. There are two ways to access the Messaging menu:
 - a) Select **Menu > Messages > Compose** .



- b) Use the **Navigation** keys to scroll to the contact, or use keypad to type the contact number and press **Select**.



2. Alternatively, messaging can be accessed via the **Contact List**:

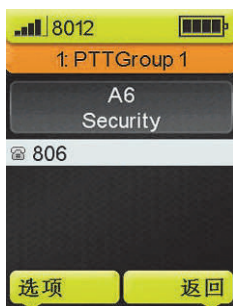
- a) Select **Contacts** on the **Home** screen.



- b) Use the **Navigation** keys to scroll to the contact, or use keypad to type the contact number and press **Select**.



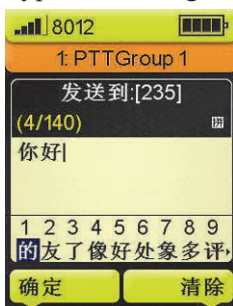
- c) If there are multiple numbers for the contact, select the correct one. Press **Option**.



d) Select **Send Message** and press **Select**.



3. Type the message using the keypad.



4. Select **Option** and press **Send**.



Chapter

3

Voice Communications

Topics:

- *Using Push To Talk*
- *Phone Calls*

This chapter describes how to use the Push To Talk and phone calling features of the MinePhone.

3.1 Using Push To Talk

The MinePhone's Push To Talk (PTT) feature is a "walkie talkie" style of communication using selectable PTT group channels. It can operate in three ways:

Regular PTT

Communication where one person talks and the other MinePhones in the same PTT group receive. Note that if a recipient MinePhone is already on a phone call, it will not receive the PTT call.

Broadcast PTT

Communication where one person talks and the other MinePhones on the network receive regardless of their current PTT group. Note that if a recipient MinePhone is on a phone call or is receiving on its designated PTT group, it will not receive the broadcast.

Emergency PTT

If a MinePhone in the network transmits in emergency PTT mode, all MinePhones will play the audio through their speakers. This will override all phone calls and all other PTT communications.

3.1.1 Push To Talk

To use Push to Talk (PTT):

1. Select the PTT group channel using the **PTT Channel** buttons on the side of the phone. Make sure you and the recipient are on the same channel.



2. Press and hold the **PTT** button. Wait for the short beep before speaking.



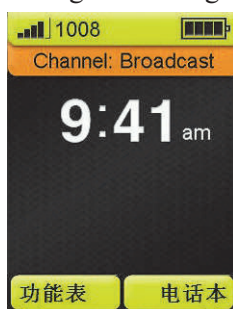
3. When you have finished speaking, release the **PTT** button. This allows one of the recipients to talk back on the PTT group.



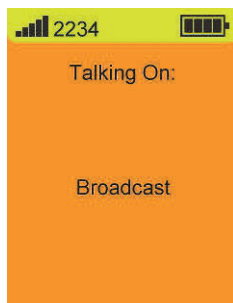
3.1.2 Broadcast Push To Talk

To make a Broadcast Push To Talk: call to all MinePhones on the network:

1. Change the PTT group channel to Channel : Broadcast using the left or right **Navigation** keys.




2. Press and hold the **PTT** button. Wait for the 2 short beeps before speaking. Your transmission will be broadcast to all MinePhones. Release the **PTT** button to stop broadcasting.



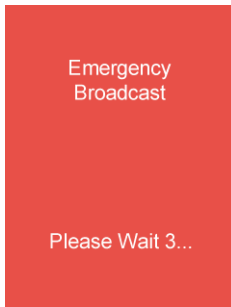
3.1.3 Emergency "Man Down" Call

The MinePhone has an **Emergency / Man Down** button on the side of the phone. When pressed, the call will be broadcast to all users and will override all phone calls on the network.

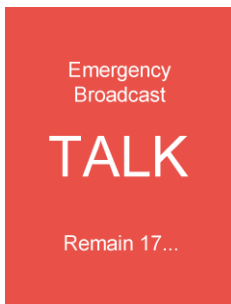
 **Important:** The Emergency button should only be pressed in an emergency situation. Please check your site safety policies for appropriate use of this feature.

To make an emergency call:

1. Press and hold the **Emergency** button  for 3 seconds. An emergency broadcast screen is displayed with a countdown to broadcast.



- The emergency call is broadcast to all users for 30 seconds. To end the call, press and hold any key for 3 seconds.



3.2 Phone Calls

Phone calls can be made to other MinePhones on the network and phones outside of the network (dependent upon the site network configuration).

3.2.1 Make a Call

Calls can be made to other MinePhones on the same network. Calls made to phones outside of the network may require a prefix number to be entered before dialling the number, for example '0'. The prefix may also be preconfigured in the contacts list.

Contact your System Administrator for details.

To make a call:

- If you know the number of the person you are calling, use the keypad to type the number and press the **Call** button or left softkey.




- To look up a number, select **Contacts** from the **Home** screen.

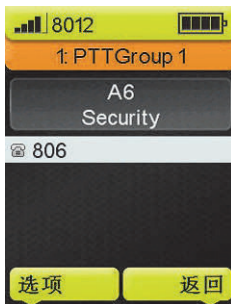


3. Select the contact using the **Navigation** keys and/or use the keypad to enter the first few letters of the contact name.

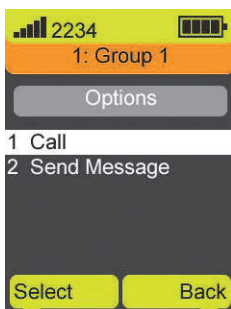


 **Note:** The Contacts list cannot be edited in the MinePhone. They are managed by the System Administrator on the server side.

4. Select **Option**.



5. Select **Call** to make the call. To end the call press the **End** key.



3.2.2 Receive a Call

To answer a call press the **Call** button. To end the call, press the **End** button.



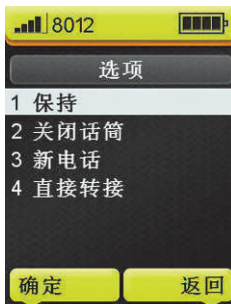
3.2.3 Hold a Call

To put a call on hold:

1. During a call, select **Option**.



2. Use the **Navigation** keys to select **Hold** and press **Select**.



3. Call will be put on hold.



4. To remove the call from hold, select **Option** and select **Unhold**.



3.2.4 Mute a Call

To mute a call:

1. During a call select **Option**.



2. Use the **Navigation** key to scroll to **Mute** and press **Select**.



3. The call will be muted.



4. To remove the call from mute, press the **Option** key, then select **Unmute**.



3.2.5 Transfer a Call

A call in progress can be transferred to another user. A procedure is described below.

1. During a call, press **Option**.

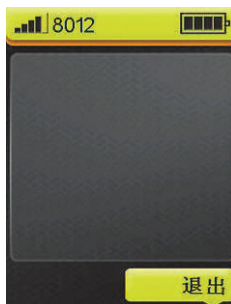


2. Scroll to **Transfer call** and press **Select**.

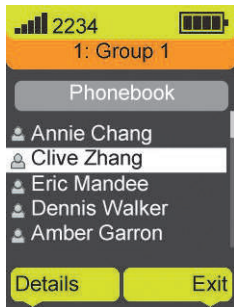


3. If you do not know the contact number, follow the substeps below, otherwise skip to the next step.

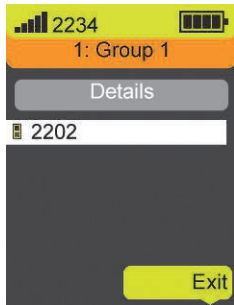
- a) Press **Contacts**.



- b) Use the **Navigation** keys to select the contact, or use the keypad to enter part of the contact name, and press **Details** to view the number.



- c) Press **Exit** twice, then go to the next step.



4. Type the contact number using the keypad and press **Select**.



5. The call will be transferred.



3.2.6 Call Waiting

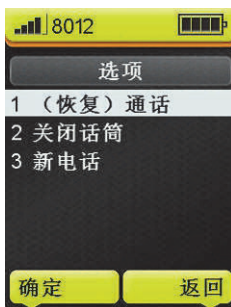
The **Call Waiting** feature tells you if another caller is contacting when you are on a call. This feature is enabled at an Administrator level.

1. The MinePhone will display when another caller is contacting you during a call. Press **Answer** to accept the call and put the current caller on hold.



2. During a call you can press **Options** to access the following call waiting options:

- End Call on Hold — Hang up the caller on hold
- Swap — Revert the phone call to the caller on hold
- Mute — Mute the current call.



3. Press **Hang up** to end the call.



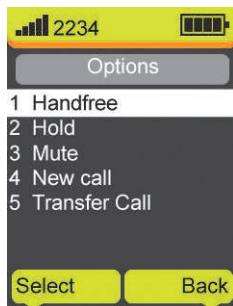
3.2.7 Handsfree

The MinePhone allows handsfree conversations during calls, using the speaker and bottom microphone. To activate handsfree operation:

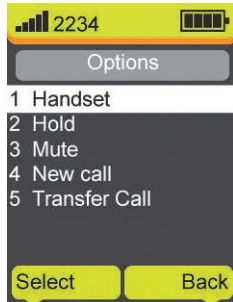
1. During a call, press the left softkey to select **Options**.



2. Select **Handsfree**.



3. To switch back to handset mode, access the **Option** menu again and select **Handset**.



Chapter

4

Remote Speaker Microphone

Topics:

- [Attaching a Remote Speaker Microphone](#)
- [Using the RSM on PTT Calls](#)

A third party Remote Speaker Microphone (RSM) can be attached to the MinePhone, which enables PTT calls without holding the handset. The RSM can only be used on MinePhones deployed in the Hard Rock mining environment. MinePhones used in an Intrinsically Safe environment cannot use the RSM feature.

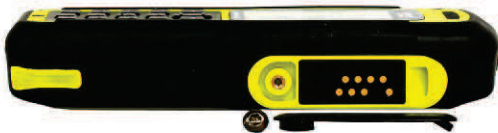
4.1 Attaching a Remote Speaker Microphone

The procedure below describes attaching the RSM to the MinePhone.

1. Turn off the phone and loosen the screw holding the RSM cover.



2. Remove the cover.



3. Align the RSM plug to the MinePhone socket.



4. Use a flathead screwdriver to tighten the screw on the RSM jack to the MinePhone.



4.2 Using the RSM on PTT Calls

To make a Push to Talk call using the Remote Speaker Microphone:

1. Select the PTT group channel using the **Channel Up Channel Down** keys on the side of the handset. Make sure you and the recipient are on the same channel.



2. Press and hold the side button on the RSM. Wait for the short beep before speaking.



3. When you have finished speaking, release the side button on the RSM. This will allow you to hear recipients to talk back on the PTT group.

Chapter 5

Other Phone Functions

Topics:

- *Keypad Lock*
- *Managing Messages*
- *Viewing Network Details*
- *Locator App*

This chapter describes configuring the keypad lock, viewing text messages and viewing network settings.

5.1 Keypad Lock

The MinePhone keypad can be manually locked and unlocked by pressing and holding the # key for 2 seconds. .

The keypad and **PTT** key can also be configured to auto lock after 60 seconds. .

1. Press **Menu** on the **Home** screen, scroll to the **Settings** option and press **Select**.



2. **Auto Lock Key** will be highlighted. Press **Select**.



3. Scroll to select one of the three menu options and press **Select**.

- **Keypad Auto Lock:** The keypad will auto lock after 60 seconds, but the **PTT** button will still function
- **Keypad & PTT Auto Lock:** The keypad and **PTT** button will auto lock after 60 seconds
- **Disable:** All auto lock options are disabled.





4. When the keypad and **PTT** button are locked, padlock icon is displayed on the top right of the screen.


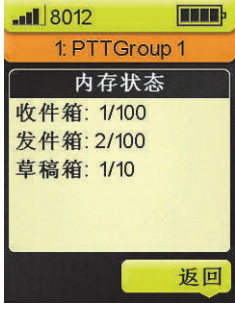


5.2 Managing Messages

Selecting **Menu > Messages** will display the options for text messages as described below.



Message folder	Description	Picture
Inbox	Up to 100 received messages are contained in the Inbox folder.	
Outbox	Up to 100 sent messages are contained in the Outbox .	

Message folder	Description	Picture
Draft	Up to 10 saved messages that are not sent are stored in Draft folder.	 A screenshot of a mobile phone interface showing the 'Draft' folder. At the top, it displays '8012' and '1: PTTGroup 1'. Below that is a grey bar with the text '草稿箱' (Draft Box) and a message icon with the text '你好' (Hello). At the bottom, there are two yellow buttons labeled '阅读' (Read) and '返回' (Return).
Status	Displays the number of messages in the Inbox, Outbox and Draft .	 A screenshot of a mobile phone interface showing the 'Status' screen. At the top, it displays '8012' and '1: PTTGroup 1'. Below that is a grey bar with the text '内存状态' (Memory Status). The main content area shows three lines of text: '收件箱: 1/100' (Inbox: 1/100), '发件箱: 2/100' (Outbox: 2/100), and '草稿箱: 1/10' (Draft: 1/10). At the bottom right, there is a yellow button labeled '返回' (Return).

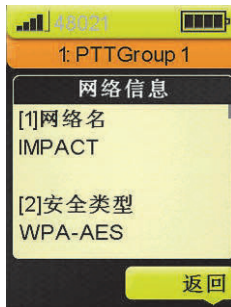
Message Options

Each message folder selection has options for modifying or sending a message.

Message Option	Function
Read	Open the message to read.
Edit	Edit the selected message.
Send	Send the selected message.
Delete	Delete the selected message.
Reply	Reply to the received message.
Forward	Message is forwarded to another contact.
Delete All	Delete all messages in the folder.
Call Back	Call the message sender.

5.3 Viewing Network Details

Network details can be viewed by selecting **Menu > Network > Network Info** . Use the **Navigation** keys to scroll down the screen to view the details.




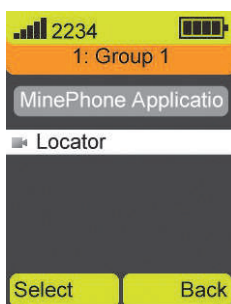
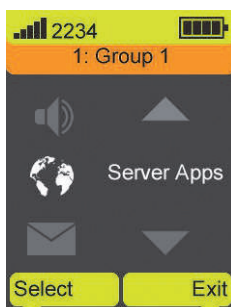
This screen contains useful troubleshooting information that may be requested by Technical Support personnel. It contains the following information:

- **SSID**
- **Security Type**
- **IP Address**
- **Subnet Mask**
- **Gateway IP Address**
- **DNS Address**
- **TFTP Server (IP Address)**
- **SIP Server (IP Address)**
- **MAC Address**
- **Control Port**

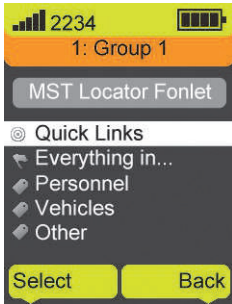
5.4 Locator App

The Locator app can be used to check the current zone in which a selected entity is located, or to see all entities in a selected zone. If activated, the app can be accessed in **Menu > Server Apps > Locator** .

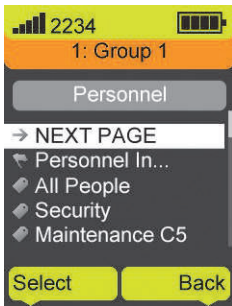
 **Note:** This feature is only available if operating the phone with the **MST ImPact Communications Appliance (ICA)** version 1.4 or greater.



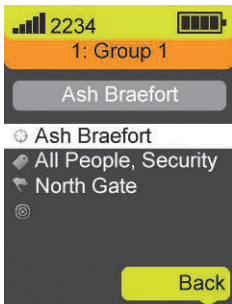
On the Locator menu, the **Everything in...** shows all entities in a specific zone, or a specific entity type can be selected.



Once an entity type is selected, a page of groups and entities is displayed. The **Personnel/Vehicles/Other in...** option will show all entities of that type in a selected zone, or scroll down to select a group/entity on that page. Use the **NEXT PAGE / PREVIOUS PAGE** options to move through the pages.



Once an entity is selected, their name, group(s), and current zone will be displayed.



Chapter

6

Call Logs

Topics:

- [Viewing Call Logs](#)





This chapter describes how to use call logs on the MinePhone.

6.1 Viewing Call Logs

Call logs can be accessed by selecting **Menu > Call Log** . A list of call log options are displayed and described below.




Call Log Menu	Description	Picture
All Calls	Lists all call types.	
Missed Call	Lists the last 20 missed calls.	
Received	Lists the last 20 calls received.	

Call Log Menu	Description	Picture
Dialled	Lists the last 20 dialled calls.	
Emergency Sent	Lists the last 20 emergency calls sent from the handset.	
Emergency Received	Lists the last 20 emergency calls received.	
Duration	Lists the total duration of all calls.	

Appendix

A

Troubleshooting Guide

Problem	Cause	Solution
MinePhone does not turn on.	Handset is not charged.	Charge the handset in the supplied charging dock.
	The MinePhone's internal electronics are damaged.	Return to a MST support centre to be repaired. MinePhones are not field serviceable and must be serviced in a workshop by technicians certified to repair Intrinsically Safe devices.
Battery is not charging.	The charger's power adaptor is not energised.	Check charger is plugged into an active power source.
	Internal battery is at the end of its life cycle.	Please contact an MST support centre for repair.
	The battery has failed.	Please contact an MST support centre for repair.
Battery operation time is shorter than expected.	Battery operation time will be shorter depending on phone settings and the amount of talk time.	Battery operation time can be increased by reducing backlight time and brightness.
No indicator light on the charging dock when charging the phone.	Charging dock is not plugged into the power adaptor or switched on.	Check the charger is plugged into a power adaptor that is switched on.
Phone takes more than 3 hours to charge.	Battery failure.	Please contact an MST support centre for repair.
No sound.	Volume setting is low or turned off.	Adjust the volume settings.
MinePhone cannot connect to the network.	Phone is not configured correctly.	Please consult your network administrator or MST System Engineer.
The MinePhone does not dial when making a call.	Call button was not pressed.	Make sure you press the Call button  after entering the phone number.
Poor audio quality during a call.	Poor network signal strength.	Stand in closer proximity to a wireless access point or improve the wireless network coverage.

Appendix

B

MP70 MinePhone Specification

Physical

Dimensions	150mm (W) x 75mm (D) x 35mm (H)
Weight	250g
Display	240 x 320 Colour TFT
Battery (internal)	1100mAh
Battery life	4 hours talktime 48 hours standby time
Transmit Power	+21dBm
Enclosure Ingress Protection (IP) rating	IP54

Network Protocols

- TCP / UDP / IP, IPV4, DNS ARP, Static IP, DHCP
- Caller ID
- Real Time Transfer Protocol (RTP). RFC 1889 / RFC 1890
- Session Description Protocol (SDP) RFC 2327
- Session Announcement Protocol (SAP)
- Session Initiation Protocol (SIP) RFC 3621, 3624 & 3515 V2
- Call control & text messaging (RFC 3261 & DPRFC 2321)
- DTMF RFC 2833
- Software updates by TFTP

WLAN and Voice Communications

Transmitter	Wi-Fi 802.11b/g
Antenna Type	Internal
Operating Channels	Wi-Fi — 1-11 PTT — 32 channels available
Wireless Security	WEP (64/128 bit encryption) WPA WPA2
Voice Features	G.711 (A-Law & u-Law 64kbps) G.729A (8kbps)

	Acoustic echo cancellation Background noise cancellation Jitter buffer control (default 80ms, max 320ms)
Voice Communication	Voice-over-IP (P2P, PBX, PTT) IEEE 802.11 b/g SIP support
Telephony features	Call forwarding Caller ID Call waiting Call mute Re-dial (last 20 calls) Hot-key dialling Text messaging (stores up to 100 messages) Multiple ring tones Phone book (up to 200 records) Power saving mode Speaker volume control Vibrating alert
Specific features	32 Push to talk (PTT) channels Emergency "man down" override External headset (non I.S. versions only)

Appendix

C

Acronyms

Acronym	Meaning
AP	Access Point
DHCP	Dynamic Host Configuration Protocol
ICA	ImPact Communication Appliance
MAC	Media Access Control
MST	Mine Site Technologies
NTP	Network Time Protocol
PTT	Push To Talk
P2P	Peer to Peer
RSM	Remote Speaker Microphone
RSSI	Received Signal Strength Indicator
RTP	Real Transport Protocol
SIP	Session Initiation Protocol
SSID	Service Set Identifier
WEP	Wired Equivalent Privacy
WPA	Wi-Fi Protected Access

Appendix

D

Hardware Warranty

Mine Site Technologies provide a 12 month warranty for hardware supplied to the original purchaser. Mine Site Technologies warrants that the hardware supplied will be free from material defects in workmanship and materials from the date of original purchase.

Mine Site Technologies will repair or replace the defective hardware during the warranty period at no charge to the original owner. Such repair or replacement will be rendered by Mine Site Technologies. Mine Site Technologies may at its sole discretion replace the defective hardware (or any part thereof) with a reconditioned product or parts that Mine Site Technologies determines is substantially equivalent (or superior) to the defective hardware. Repaired or replacement hardware will be warranted for the remainder of the original warranty period from the date of original purchase. All hardware (or part thereof) that is replaced by Mine Site Technologies shall become the property of Mine Site Technologies upon replacement.

Appendix

E

Firmware End User License Agreement

IMPORTANT: PLEASE READ CAREFULLY BEFORE USING THIS EQUIPMENT.

Mine Site Technologies End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and Mine Site Technologies. Mine Site Technologies (MST) firmware may include associated software components, media, printed materials and electronic documentation. By installing, copying or otherwise using MST firmware, you agree to be bound by the terms of this EULA. This license agreement represents the entire agreement concerning the program between you and Mine Site Technologies, and it supersedes any prior proposal, representation or understanding between the parties. If you do not agree to the terms of this EULA, do not install or use the software.

1. GRANT OF LICENSE

The MST firmware is licensed as follows:

(a) Installation and Use

Mine Site Technologies grants you the right to install and use copies of the MST firmware on associated MST hardware.

(b) Backup Copies

You may also make copies of the MST firmware if necessary for backup and archival purposes.

2. DESCRIPTION OF OTHER RIGHTS AND LIMITATIONS

(a) Maintenance of Copyright Notices

You must not remove or alter any copyright notices on any and all copies of the MST firmware.

(b) Distribution

You may not distribute copies of MST firmware to third parties.

(c) Prohibition on Reverse Engineering, Decompilation, and Disassembly

You may not reverse engineer, decompile, or disassemble the MST firmware.

(d) Rental

You may not rent, lease, or lend MST firmware.

(e) Support Services

Mine Site Technologies may provide you with support services related to the MST firmware. Any supplemental activation codes provided to you shall be considered part of the MST firmware and subject to the terms and conditions of this EULA.

(f) Compliance with Applicable Laws

You must comply with all applicable laws regarding use of the MST firmware.

3. TERMINATION

Without prejudice to any other rights, Mine Site Technologies may terminate this EULA if you fail to comply with the terms and conditions of this EULA. In such event, you must destroy all copies of the MST firmware in your possession.

4. COPYRIGHT

All title, including but not limited to copyrights, in and to the MST firmware and any copies thereof are owned by Mine Site Technologies. All title and intellectual property rights in and to the content which may be accessed through use of the MST firmware is the property of the respective content owner and may be protected by applicable copyright or other intellectual property laws and treaties. This EULA grants you no rights to use such content. All rights not expressly granted are reserved by Mine Site Technologies.

5. NO WARRANTIES

Mine Site Technologies disclaims any warranty for the MST firmware. The MST firmware is provided 'as is' without any warranty of any kind, including but not limited to any warranties of merchantability, non-infringement, or fitness of a particular purpose. Mine Site Technologies does not warrant or assume responsibility for the accuracy or completeness of any information, text, graphics, links or other items contained within the MST firmware. Mine Site Technologies makes no warranties respecting any harm that may be caused by the transmission of a computer virus, worm, time bomb, logic bomb, or other such computer program. Mine Site Technologies disclaims any warranty or representation to authorised users or to any third party.

6. LIMITATION OF LIABILITY

In no event shall Mine Site Technologies be liable for any damages (including, without limitation, lost profits, business interruption, or lost information) rising out of 'authorised users' use of or inability to use the MST firmware, even if Mine Site Technologies has been advised of the possibility of such damages. In no event will Mine Site Technologies be liable for loss of data or for indirect, special, incidental, consequential (including lost profit), or other damages based in contract, tort or otherwise. Mine Site Technologies shall have no liability with respect to the content of the MST firmware or any part thereof, including but not limited to errors or omissions contained therein, libel, infringements of rights of publicity, privacy, trademark rights, business interruption, personal injury, loss of privacy, moral rights or the disclosure of confidential information.