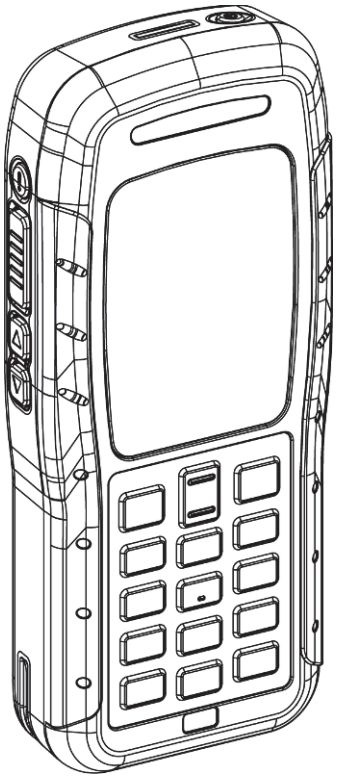
MINE SITE TECHNOLOGIES

Global Leader in Mining Communications

MP70 MinePhone

User Guide

Revision D



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Revision History

Revision	Change	Date
A	User guide for MinePhone hardware Rev D (main PCB) and firmware 1.4.0	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

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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	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.	
5	The fully charged indicator will be green when the handset is fully charged.	

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.

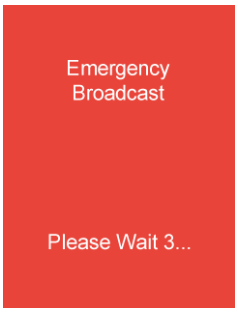
3.1.3 Emergency "Man Down" Call

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.

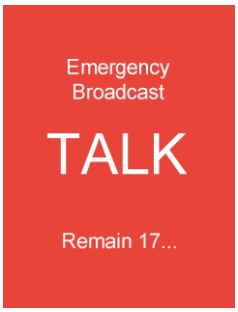
Important: The Emergency button should only be pressed in an emergency situation. Please check your site safety policies for appropriate use of this feature.

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.



2. 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:

1. 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.

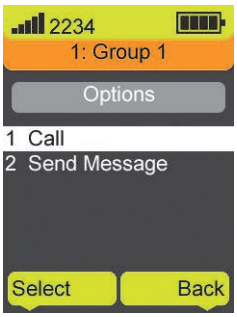
2. To look up a number, select **Contacts** from the **Home** screen.

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**.