

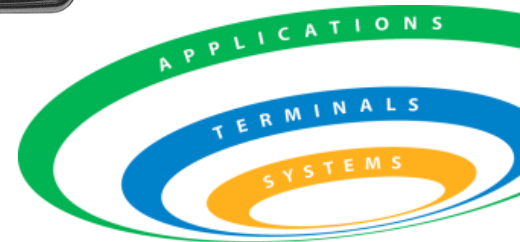
Quick Reference Guide

DMR Two Way Radio
SEP8040



sepura

Going further in critical communications



General

This guide covers the basic operation of the DMR Portable.
Please refer to the DMR Portable user guide for more detailed information on using this product.

Disclaimer notice

Sepura's policy is to continually improve its products. The features and facilities described in this document were correct at publication, but are subject to change without notice.

Contact Us

Sepura plc.
Radio House,
St Andrew's Road,
Cambridge CB4 1GR
United Kingdom
Tel: +44 (0)1223 876000
Fax: +44 (0)1223 879000

sepura

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Safety

Read these safety instructions carefully.

Attention!

Sepura terminals are designed for use by mobile workforces, often working alone, and are intended for use in occupational and controlled conditions.

It is the responsibility of the person operating the product to ensure that it is operated safely at all times, and that local laws and regulations governing the usage of Radio Frequency (RF) products are observed.

This product must not be operated in environments that exceed those listed in the Regulatory section of the user guide.

Users must be trained to operate this product safely. Their personal safety could be affected if they do not understand how to operate this product correctly.

Exposure to RF energy

Sepura designs and manufactures products to meet strict guidelines and international standards relating to Radio Frequency energy and the potential health risks associated with using such products.

Sepura terminals contain low powered radio transmitters and receivers that receive and transmit Radio Frequency (RF) signals when switched on. The antenna radiates RF energy only when transmitting and not in standby mode.

Users should be informed of the potential health risks associated with long term exposure to RF energy by their employer.

RF energy interference with electronic equipment

Some personal medical devices, such as hearing aids and pacemakers, can be affected by RF energy. Always consult your service provider or the manufacturer of the medical device before using RF wireless devices.

Some electronic devices are sensitive to RF energy. Always obey signs restricting the use of wireless devices. It is recommended that the terminal be switched off when operating within health care facilities.

Safely operating the product

Users should always ensure that the terminal is operating correctly before entering any environment that has a potential risk to personal safety.

The terminal should be used in its normal operating position when hand-held, worn on the body or secured within a cradle. Always ensure that the antenna is pointed away from the body, particularly the eyes, during operation. When worn on the body, the terminal should be secured using a clip or body vest.

Operate the terminal in a vertical position and with the microphone 5 cm(2 in.) away from your mouth when transmitting.

When body-worn, the antenna must be at least 2.5 cm (1 in.) away from the body when transmitting.

The terminal has a loud speaker designed for hand-held and body-worn use. Never place the terminal close to your ear when receiving; it may damage your hearing. Always check the volume level before making and receiving calls.

Safety in hazardous environments

These terminals are not designed for use in potentially explosive environments where RF wireless devices could potentially cause an explosion. SWITCH OFF the terminal if you are unsure if the terminal is a risk in these environments. Potentially hazardous areas are not always signed. Obey all signs and instructions relating to the usage of RF wireless devices.

Do not use the terminal in the presence of gas fumes, explosives dust situations, nuclear facilities, fuel or chemical transfer or storage facilities, around aircraft navigation and control systems, and weapons.

Switch off the terminal in blasting areas. It may interfere with blasting equipment. Always obey signs relating to the usage of wireless devices and two-way radios in blasting areas.

Safety when driving a vehicle

Always obey local laws and regulations governing the operation of RF wireless devices when driving and whilst at locations.

Do not operate the product if it creates a distraction from driving safely and observing road conditions.

Always switch the terminal off at refuelling stations. Always observe and obey warning signs relating to the use of RF wireless devices in the vicinity of refuelling stations.

Important safety notes about the Antenna

Never touch the antenna when the terminal is transmitting, this may affect the operational range of the antenna.

Never use the terminal if the antenna shows signs of damage. Do not touch a damaged antenna when the terminal is transmitting, this may cause a minor burn to the skin.

Never hold the terminal by its antenna. This may damage the antenna and the terminal.

Do not use the terminal without an antenna attached. Transmitting without an antenna may damage the terminal.

Operational Conditions

Do not exceed the operational conditions for the terminal and battery. Check the technical data for this product before operating in extreme conditions.

Leaving the terminal in extreme temperatures (over 55 °C or 131 °F), for example behind glass in direct sunlight may cause damage to the casing and the battery.

Accessories

Sepura products have been tested to meet strict guidelines for personal safety and operational conditions. Only accessories approved by Sepura are recommended for use with this product.

Always read the instructions supplied with the accessory for additional safety instructions.

Unauthorised modifications to the product could cause the product to become non-operational.

The use of non-approved accessories may invalidate any product warranty.

If a non-approved accessory is fitted, it may compromise the product safety ratings.

Safe installation into vehicles

Electronic control mechanisms within a vehicle can be affected by the use of RF energy such as ABS and transmission controls. Always refer to the vehicle manufacturer's instructions and technical information relating to electronic modules and their wiring harnesses before installing an RF wireless device into a vehicle.

Do not install the product within the air bag deployment area. In the event of the air bag deflating, the terminal could be propelled at great force potentially causing serious injury.

Servicing

Do not attempt to dismantle this product.

Servicing and repairs to this product must be performed by trained service technicians at Sepura approved service centres.

FCC NOTICE

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for a controlled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IC Warning

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The term "IC:" before the certification/registration number only signifies that the Industry Canada technical specifications were met. Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada.

Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée

équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This radio transmitter (identify the device by certification number, or model number if

Category II) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (identifier le dispositif par son numéro de certification ou son numéro de modèle s'il fait partie du matériel de catégorie I) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

IC Radiation Exposure Statement: This equipment complies with IC RF radiation exposure limits set forth for a controlled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IC exposition aux radiations:

Cet équipement est conforme avec IC les limites d'exposition aux rayonnements définies pour un contrôlé environnement.

Cet émetteur ne doit pas être co-localisés ou fonctionner en conjonction avec une autre antenne ou émetteur.

Regulatory



Sepura declares that this product is compliant with the essential requirements and other relevant provisions of the European R&TTE directive 1999/5/EC relating to radio and telecommunications

terminal equipment and the mutual recognition of their conformity. This product is also compliant with directive 2011/65/EU having been designed and manufactured to the RoHS requirements.

Disposing of this product



This symbol on the product or its packaging indicates that this product must not be disposed of as household or commercial waste. Some countries have set up collection and recycling systems for waste electrical and electronic products. By ensuring that this product and its packaging is disposed of

correctly, you will help prevent potentially negative consequences for the environment and human health, and help conserve natural resources. Please dispose of your waste product according to your national and local regulations. Contact your Service Provider for information about disposing of this product in your region of the world.

Disposing of batteries



The terminal is supplied with a rechargeable lithium-ion battery. This symbol on the battery and its packaging indicates that it must not be disposed of with household or commercial waste. Please dispose of your waste batteries according to your national and

local regulations. Contact your Service Provider about recycling batteries in your region of the world.

Caring for your product

The terminal does not require regular servicing. Caring for your product as described in this guide will help maintain the product in good operational condition.

Sepura supplies a range of accessories to protect the terminal during use, including a protective cover. Contact Sepura for more information.

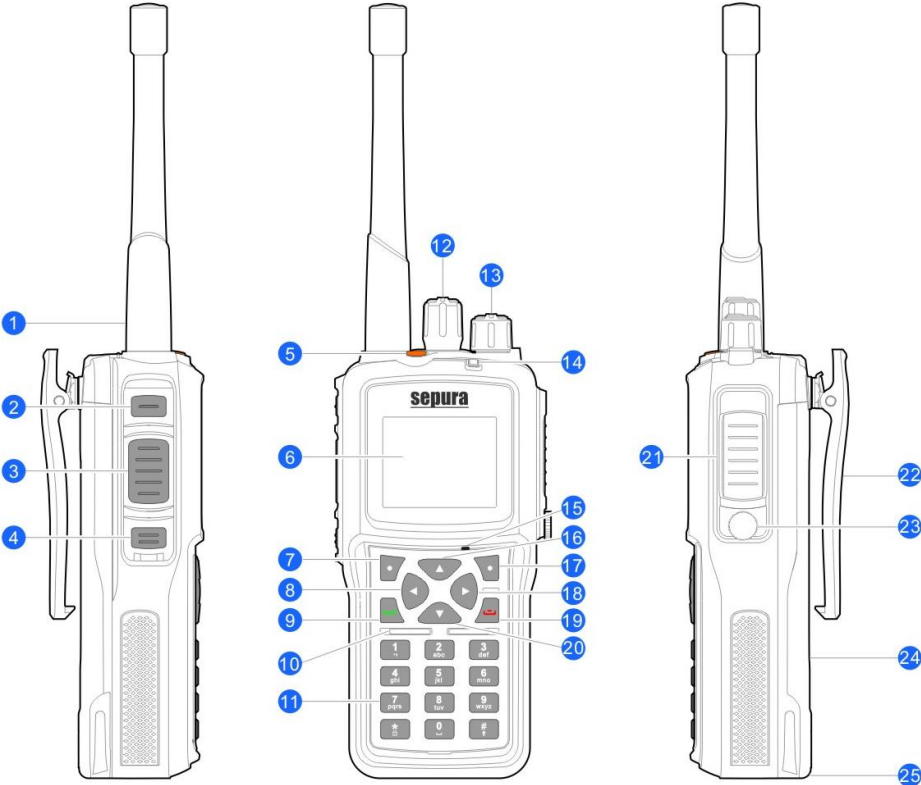
Always wear eye protection when using brushes or other tools to clear debris from connectors or other parts of the terminal.

Do not use chemicals, aerosols or abrasive cleaners. Chemical coatings must not be applied to any part of the terminal or battery.

Clean the exterior surfaces daily using a lint free soft cloth.

Clean the battery contacts periodically using a soft brush.

To keep the Rugged Accessory Connector (RAC) clean always fit the protective cover when the connector is not in use.



Connectors, controls, buttons and keys

Refer to the illustration for the location of the following connectors, controls, buttons and keys:

- (1) Antenna
- (2) Programmable side button1
- (3) PTT button
- (4) Programmable side button 2
- (5) Emergency/Programmable button
- (6) LCD display
- (7) Left context key
- (8) Left navigation button
- (9) Dial key
- (10) Speaker
- (11) Keypad
- (12) Channel selector knob
- (13) Power/volume knob
- (14) LED status indicator
- (15) Microphone
- (16) Up navigation key
- (17) Right context key
- (18) Right navigation button
- (19) Cancel/Home key
- (20) Down navigation key
- (21) Rugged access connector (RAC)
- (22) Belt clip (optional)
- (23) RAC cover (screw fixing)
- (24) Battery
- (25) Battery latch

Keys, buttons and knobs overview

Power/volume knob

Rotate clockwise to switch the terminal **on**. Rotate counter-clockwise to switch the terminal **off**.

Continue rotating the knob clockwise to increase the volume. Rotate counter-clockwise to decrease the volume.

Context keys

Press to select the option displayed above the left or right context key.

Emergency/Programmable button

Press and hold button to activate an Emergency alert. Your Service Provider may program this button for an alternative function or disable the emergency alert.

Channel selector knob

Rotate clockwise to change channels. Your Service Provider may program your terminal with up to 16 channels.

Navigate left, right, up and down buttons

Your terminal has four navigational buttons in the centre of the keypad. Use these buttons to navigate through the menus and select options.








Cancel/Home key


Ends a call or returns to the Home display.

Status indicators and icons








Status indicators show the operational state of your terminal. Icons appear on your terminal display when you perform certain activities or activate certain features.


Signal and security icons

Icon	Description
	Receiving Signal Strength Indicates the receiving signal strength. Bars indicate the strength of the signal. Maximum 4 bars indicate strongest signal.
	Transmission Power Low transmission power for current channel. High transmission power for current channel.
	Security Analogue scrambling or digital encryption is active.
	Emergency Indicates that the emergency alarm mode is activated.
 	GPS tracking GPS feature is available and the terminal is receiving valid GPS data. GPS feature is available but the terminal does not have valid location information.
	Man Down Indicates that the terminal is in Man-down mode. Indicates that Man Down is activated.







Icon	Description
	USB connected Indicates that USB device is connected.

General icons

Icon	Description
	New Message You have an unread message in your mailbox .
	Message inbox full You need to clear your message inbox. If the message inbox is not cleared, older messages will be deleted when a new message is received.
	Battery level Indicates the amount of power in the battery. When the icon is full, the battery is fully charged. A red empty icon indicates the battery charge is low.
	Speaker Off The speaker is muted.
	Monitor Channel Indicates that monitor channel is active.
	Talk-around Indicates that Talk-around is active for repeater mode or the current channel is in direct mode.
	Channel Scanning Scanning is in process when the icon rotates. Scanning stops on a priority channel when the centre triangle is red. Scanning stops on a non-

Icon	Description
	priority channel when the centre triangle is green.
	External Device connected Indicates that an external microphone or speaker is connected.

Calls

Icon	Description
	Voice-operated-transmit is enabled
	Initialising a call
	Receiving a call
	Private call in progress
	Group call in progress
	All call in progress

LED status indicators

The LEDs on the radio change colour to show the operational states of your terminal.

LED	Operational State
Solid red	In use and transmitting
Solid green	In use and receiving voice, short message or data. Can also indicate channel activity
Solid orange	Call hang time period, press PTT to talk back
Flashing orange	Emergency state or there is a missed call/incoming call alert or the terminal is scanning
Flashing red	Incoming emergency alarm
No indication	Switched off

Battery information

Your terminal is supplied with a Sepura battery to provide optimum performance. Optional single charger or six-way charger units are available.

The following guidelines will help you get the best performance from your Sepura battery and help to ensure your safety.

Battery safety

Refer to the instructions supplied with the charger for more safety information.



Warning!

Take care when handling and charging batteries. Accidental short-circuiting of the battery electrical circuit (battery terminals) by metal objects may cause bodily injury such as a burn.



Warning!

Do not disassemble, mutilate or incinerate the battery.



Caution!

This product has been tested and certified using Sepura approved batteries. Using alternative batteries may damage the product and invalidate any product warranty.



Caution!

When recharging batteries, always ensure that the battery charger is placed in a well-ventilated area away from combustible materials.



Caution!

Never use a battery that shows signs of damage (not minor scratches) or has been dropped or received a 'sharp blow'. Damage to the battery may not always be obvious.

Storage and transportation

Use the original packaging to store and transport batteries.

To obtain the best performance from your battery, store it in a cool dry place.

Failure to store batteries correctly could lead to reduced capacity and battery life.

Do not store a fully charged battery for periods exceeding 6 months. For storage periods exceeding 6 months apply a conditioning charge of 7 minutes for standard and 12 minutes for high capacity batteries every 6 months.

Storage temperature guidelines:

<1 months	-20 to +55°C (-4 to 131 °F)
1 to 3 months	-20 to +40°C (-4 to 104 °F)
>3months	-20 to +30°C (-4 to 86 °F)

Do not store a fully charged battery for periods exceeding 6 months.

Charging your battery

If the battery is new, it is important that it is fully charged before first use.

Your terminal will sound an audible alert when the battery has less than 15% charge remaining.

Typical charging time is approximately 3-4 hours. This may vary depending on the battery and environmental conditions.

Charge your battery between 5 °C to 35 °C (41 °F to 95 °F) temperatures only.

Always ensure that the terminal is switched **off** before charging the battery.

The charger must be placed onto a flat surface away from flammable materials when charging.

Place the terminal with battery attached or battery separately into the charger pocket by aligning the slots on the battery with the guides on the charger pocket. Ensure the terminal or battery is secure in the charger pocket.

Never leave the terminal or battery in the charger when not charging.

The charger unit has LEDs that indicate the state of charging.

Charger LED	State
Solid red	Battery is charging
Solid green	Battery is fully charged. Standby mode without battery
Flashing yellow	Battery is damaged. Contact your Service Provider

Accessory information

Sepura supply a range of accessories for this product. Contact your Service Provider or visit our website for a full list of accessories:

<http://www.sepura.com/products/terminals/accessories/dmr-accessories.aspx>

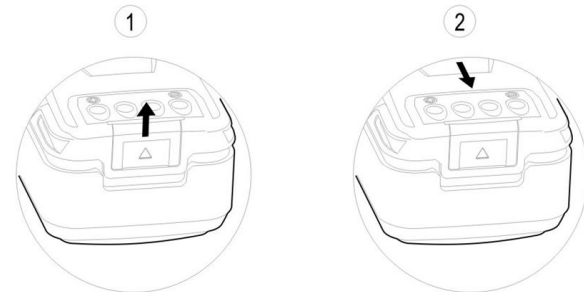
Attaching the battery

Align the battery with the two slots on the back of the terminal. Carefully slide the battery forward along the slots until it clicks into place.

Removing the battery

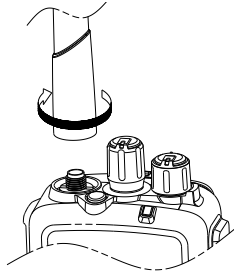
Ensure the terminal is switched **off**.

Press the battery latch in an upwards direction (1) and then slide the battery backwards (2) until it detaches from the terminal.



Attaching the antenna

Place the antenna into its receptacle.
Turn the antenna clockwise until finger tight.



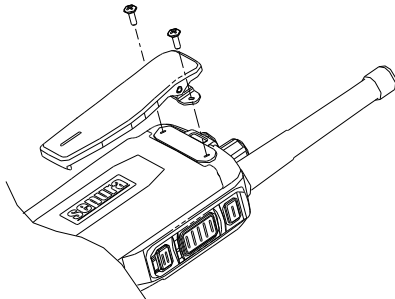
Attaching the belt clip

Ensure the terminal is switched **off**.
Remove the two screws at the back of the terminal using the cross-head PH1 screwdriver.
Align the screw holes on the belt clip with the mounting holes on the back of the terminal.
Secure into position using the two screws.



Caution!

Do not over tighten the screws, this may damage the product.



Basic operation

Power On/Off

To power **on**, rotate the Power/volume knob clockwise.
To power **off**, rotate the Power/volume knob counter-clockwise until the knob clicks.

Adjusting the volume

Rotate the Power/volume knob clockwise to increase the volume.
Rotate the Power/volume knob counter-clockwise to decrease the volume.
Adjust the level of volume using the indicator bars displayed on the screen.

Selecting a channel

Your Service Provider may program the terminal with up to 16 channels. Each channel can have a different contact group or person.
To change a channel, rotate the Channel Selector knob. The name of the channel appears on the display.

Making a PTT call

Your terminal may already be programmed with contact persons and groups by your Service Provider. Each group may be allocated to a different channel. The contact person or group can be programmed as a private call, group call or All Call.

Call a default contact group or person

A contact person or group may be added as a default contact. The default contact is called when you press the PTT button.

You may need to select the channel before making the call.
In the Home display, press the PTT button to initiate a call.

Call a group or person from the contact list

Press the right context key to activate the **Contacts** menu.

Select the **Contacts List** option and then press the left context key to **Confirm**.

Use the navigation keys to scroll through the list. With the contact group or person highlighted, press PTT button to initiate a call.

Call a group or person by manually dialling

Press the right context key to activate the **Contacts** menu.

Use the navigation keys to select the **Manual Dial** option.

Enter the ID number of the group or person.

Press the PTT button to initiate a call.

Receiving a PTT call

When the terminal is in standby mode the green LED will light to indicate an incoming call. The display changes to show the call type, either the private call icon or the group call icon, alias or the ID of the caller. The incoming call icon appears to indicate that the call is being received. You will hear the person speaking.



Private call incoming



Group call incoming

Press the PTT button to respond to the caller within the hang time duration.

You cannot respond to an All Call.

Emergency alarm

Your terminal may not be programmed for an Emergency alarm. If an alarm is programmed it may not sound an audible alert. Ask your Service Provider for information on how your terminal is programmed for Emergency alarms.

The Emergency alarm sounds an audible beep and sends an emergency message to others in your call group and you can speak to alert others of your situation.

Press and hold the Emergency button until the audible beep is heard.

The Emergency alarm icon appears on the status bar. The alarm group alias or ID display on the screen with the Emergency Alarm icon and outgoing call icon.



Emergency Alarm status icon



Emergency Alarm icon



Outgoing icon

If the emergency call is successful the terminal displays the message "emergency alarm succeed". If the alarm call has failed the terminal displays the message "emergency alarm failed".

To cancel the emergency alarm call, press and hold the Emergency button.

Sepura plc
Radio House
St Andrew's Road
Cambridge
CB4 1GR
UK

Tel: +44 (0)1223 876000

Fax: +44 (0)1223 879000

Sepura.com

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