

PMR446 Portable Two-Way Radio



Instruction Manual

Dynascan 1D

CE0700

Licence-free PMR446 two-way radio for instant free communication



This equipment is marked with the symbol for the selective relative classification of the waste of electric and electronic equipment. This means that his product must be disposed of at a designated collection point for the recycling of waste electrical and electronic equipment according to the European Directive 2012/19/EU, with the intention of being either recycled or dismantled in order to reduce any impact on the environment. For more information, please contact your distributor, reseller or the local or regional administration.

Electronic products that have not been disposed of in this way are potentially dangerous for the environment and public health due to the possible presence of dangerous substances.



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Note:

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1. INTRODUCTION:

- Thank you for purchasing this PMR446 two-way radio, we are confident that you will be very pleased with the quality and performance of this radio.
- Please read this manual completely in order to avoid damage to the equipment or incorrect use.
- It is important to note that some of the functions of this equipment are explained in relation to points mentioned in dedicated or previous chapters, therefore by reading only parts of this manual there is a risk of not understanding the equipment fully.
- After removing the product from the packaging, please ensure that none of the contents are damaged. In the event that you are unsure or the product does not work, please contact technical services or your distributor.
- The packing materials (plastic bags, etc.) should not be left within reach of children as they can be very dangerous.
- The manufacturer and reseller decline any responsibility for damages derived through the inadequate, incorrect or imprudent use of this equipment.
- Please pay special attention to the notes included in the grey boxes.
- Please retain this manual for future reference.
- Any repairs or adjustments to the equipment should be carried out by an authorized technical service.
- Internal manipulation, alteration or changes to the technical characteristics of the equipment by the user, without the knowledge of technical services, will henceforth invalidate the guarantee.
- This product has come from the distributor's warehouse and has suitable technical conditions according to the specific country's legislation for using this radio. Changing these characteristics, carrying out internal adjustments or unauthorized modifications can make using the radio illegal, causing an infraction sanction as well as generating interferences that could potentially harm other legally established communications.
- The inappropriate use of this equipment is entirely the responsibility of the user.
- This radio is designed for free communication, so it is not necessary to purchase administrative authorization or licences in order to use it. It is intended for use in the following countries of the European Union:

AT	BE	DK	FI	FR	DE	GR	IS
IE	IT	LI	LU	NO	PT	SP	NL
SE	CH	GB	CY	CZ	EE	HU	LV
LT	MT	PL	SK	SI	BG	RO	

Note:

- **The use of a two-way radio may be prohibited in some areas or enclosures. Please follow usage restrictions.**
- **Follow the legislation of your country regarding the use of radio communication devices.**

2. SAFETY PRECAUTIONS**• Environment and conditions of use:**

- Follow traffic regulations regarding the use of radio equipment whilst operating a vehicle. Some countries prohibit or apply restrictions on the use of radios and mobile phones while driving.
- Do not use this radio in close proximity to other electronic devices, especially medical equipment. It may cause interference to those devices.
- Keep the radio out of reach of children.

- In the case that any liquid leaks from the radio battery pack, do not touch it. It may cause damage to your skin. If the liquid comes into contact with your skin, rinse with plenty of cold water.
- Never use this radio in places where the use of radio equipment is prohibited, such as aboard aircrafts, in airports, ports, gas and petrochemical stations, near to electric medical equipment, etc.
- The manufacturer and distributor decline any responsibility against loss of life and/or property due to the failure of this radio when used to carry out important tasks such as lifeguarding, surveillance and rescue.
- Do not use this radio close to other types of radio equipment, as this may cause interference with the radio.
- There is a risk of explosion if the battery pack is replaced with one that is not compatible. Please recycle your used battery pack in accordance with your country's regulations.
- The manufacturer and distributor decline any responsibility for loss of life and/or property due to a fault in the radio when it is used with a device from another manufacturer.
- The used of a third party accessory may result in damage to this product. In this case, the warranty will be invalid.
- Do not use this radio in proximity to a television or radio. This may cause or receive interference.
- Do not use this radio in humid, dusty or insufficiently ventilated places. This may result in electric shock, fire and/or malfunction.
- Do not place this radio on an unstable or vibrating surface as it may fall to the ground.
- Do not place the radio near a source of heat or humidity, such as a heater, stove or humidifier.
- Avoid exposing the radio to direct sunlight for prolonged periods.
- Avoid exposing the radio, AC/DC adapter and battery pack to condensation or humidity.
- Please ensure that the radio and accessories are completely dry before use.

- **Using the radio:**

- Be sure to reduce the audio output level before using an earphone or headset. Excessive volumes may damage hearing.
- Never open the radio. All reparations must be carried out by an authorized technical service.
- Do not use this radio in wet places, such as a shower room.
- Do not place the radio on a surface that conducts electricity, such as metal objects. A short-circuit to the radio may result in damage or malfunction.



- **Charging the battery:**

- Do not use any battery chargers other than the one supplied with the radio. This may result in electric shock, fire and/or malfunction. Do not switch the radio on while the battery is charging.
- Do not handle the AC/DC adapter with a wet hand. This may result in electric shock.
- Ensure that the AC/DC adapter is securely plugged into the 230 VCA wall outlet. Insecure installation may result in short-circuiting, electric shock and/or fire.
- Do not use the AC/DC adapter if the plug or socket contacts are dirty. Overheating and/or short-circuiting may result in fire or electric shock.

- **Maintenance:**

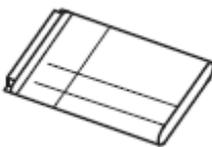
- Do not open the unit and its accessories. Please consult with your supplier or technical services for any reparation.

• **The radio:**

- Do not connect devices other than those specified to the jacks and ports on the radio. This may result in damage to the devices.
- Turn off the radio and remove the AC/DC adapter from the 230 VAC wall outlet when the radio is not in use for extended periods of time.
- Never pull the cord when unplugging the AC/DC adapter from the wall outlet.
- Use a clean, dry cloth to wipe dirt and condensation from the surface of the radio, battery charger and AC/DC adapter. Never use thinner or alcohol for cleaning.

3. PRODUCTS SUPPLIED

Open the package contents carefully. We recommend confirming that all the articles listed in the following table are present. If you find that the product or any of its accessories are missing or damaged, please contact your reseller or distributor.

 <p>PMR446 portable radio</p>	 <p>Li-Ion battery pack 3.7 V/1800 mAh</p>	 <p>AC/DC adapter</p>	 <p>Desktop charger</p>
 <p>Belt clip</p>	 <p>Lanyard</p>	 <p>User guide</p>	

Note:

- The articles supplied in the box may differ from the table above in relation to the country in which the products are supplied. For more information, please contact the reseller.

4. OPTIONAL ACCESSORIES:

Consult with your reseller or distributor for information on the accessories available for this PMR446 two-way radio.

5. GETTING STARTED:

i. **INSTALLING/REMOVING THE BATTERY PACK:**

The battery pack is located at the rear of the radio. To install it, simply insert the battery pack into the bottom of the radio and press on the top until it is securely fixed with the latch. To remove the battery pack, slide down the latch from the battery pack and remove it from the radio.

ii. **CHARGING THE BATTERY:**

Insert the battery pack or the radio with the battery pack attached into the charging station. Insert the output terminal of the AC/DC adaptor into the DC jack of the desktop charger and insert the AC/DC adaptor into a nearby and easily accessible 230 VAC wall outlet. The disconnection device is the AC/DC adaptor. You can also charge the battery pack by connecting the cable from the AC/DC adaptor directly into the side connection of the battery pack.



Note:

- **When the battery pack charging is performed with the battery installed into the radio, ensure that the radio is turned OFF.**



iii. **FITTING THE HEADSET (OPTIONAL):**

Connect the headset cable into the connector on the side of the radio.

iv. **FITTING THE BELT CLIP:**

Place the belt clip on the back of the battery pack and secure it with the screws supplied.

Note:

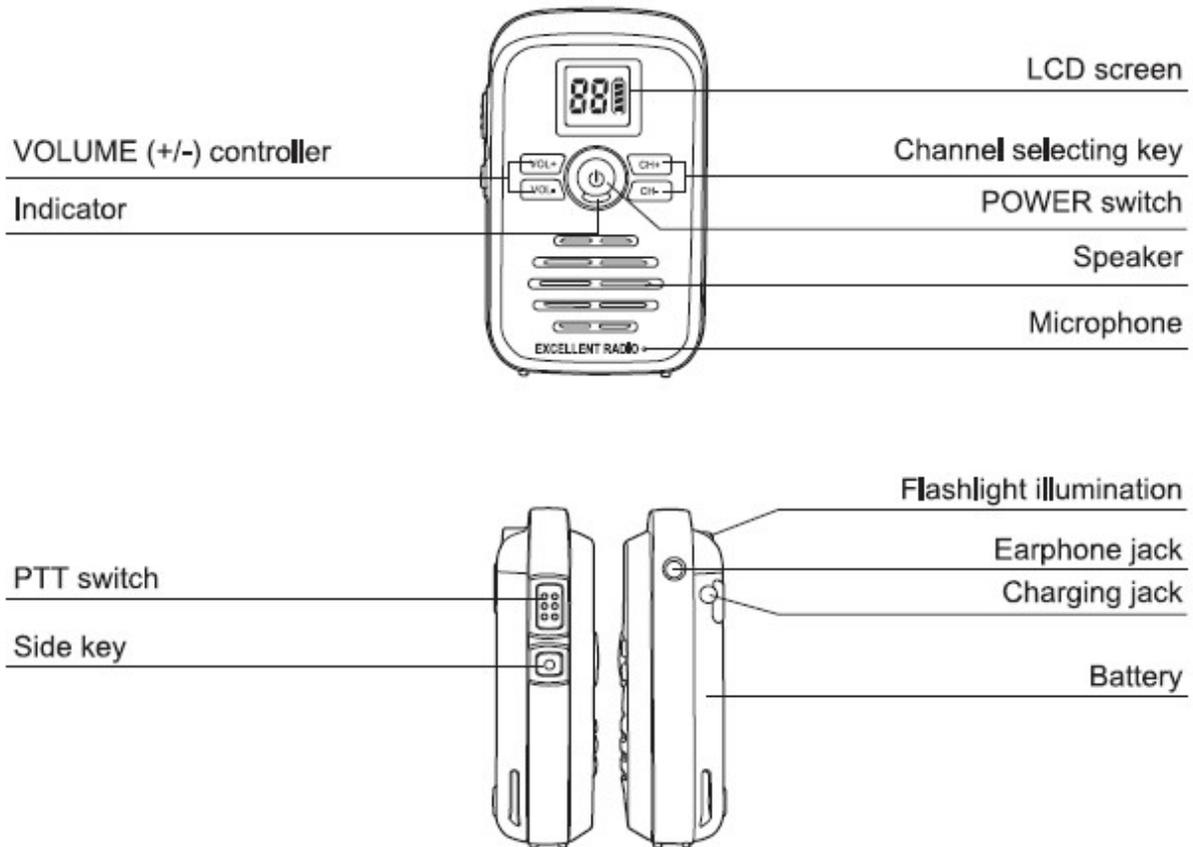
- **Do not use any type of glue to fix the belt clip, as this can damage the battery case.**

v. **FITTING THE LANYARD:**

Use the hole at the top of the radio to secure the neck strap.



6. YOUR DYNASCAN 1D



7. BASIC OPERATION:

i. **POWER ON/OFF:**

Power ON: Press the [] key for about 3 seconds to turn ON the radio. A beep will sound and the LCD screen will be displayed.

Power OFF: Press the [] key for about 3 seconds to turn OFF the radio. A beep will sound and the LCD display will disappear.

ii. **CHANNEL SELECT:**

Press the [CH+] key to increase the channel number and press the [CH-] key to decrease the channel number. The selected channel number will be displayed on the LCD screen. Hold down the [CH+] or [CH-] keys to skip through the channel numbers quickly.

iii. **VOLUME ADJUST:**

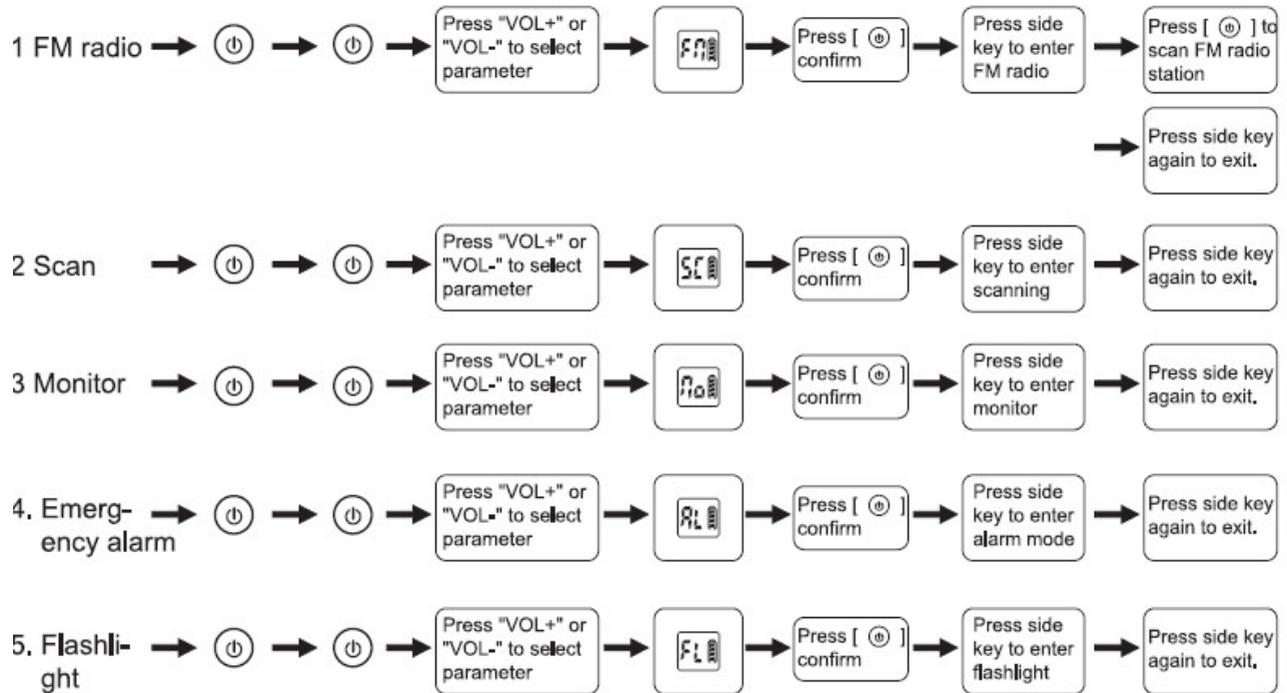
Press the [VOL+] key to increase the volume level and press the [VOL-] key to decrease it. There are 9 volume levels from 0 to 8. The higher the level selected, the louder the volume will be.

iv. TRANSMIT:

Press and hold the [PTT] key and talk in the direction of the radio microphone in a normal voice tone. The LED indicator will be illuminated in a red colour. Release the [PTT] to receive.

8. SHORTCUT MENU OPERATION:

Follow this procedure to program the side key to operate one of the following functions:



Note:

- When the [⏻] key is pressed briefly, "PF" will display on the screen. "PF" is not a function, but a method to access another function. Press the [⏻] key twice to access the functions of the side key.

9. ADVANCED OPERATION:

i. FM RADIO:

When the side key is defined as the FM radio function, press the side key to enter in FM radio mode and the LCD

screen will show .

Exiting the FM radio: When in FM radio mode, press the side key again to exit.

Scanning FM radio: When in FM radio mode, press this key to scan the FM radio stations. An orange indicator will flash and the radio will stop scanning when an effective FM radio station is detected. In FM radio mode, the radio also monitors the signals. When there is no signal being received, the radio will exit FM radio mode and return to transceiver mode for communication. If there is no signal or operation performed after 5 seconds, the radio will return to FM radio mode.

ii. CHANNEL SCANNING:

When you program the side key as a channel scanning function, press the side key to start scanning and press the key again to stop. Press the [CH+] and [CH-] keys to change the scanning direction when in scanning mode. The LED indicator will flash green when scanning.

iii. MONITORING:

When the side key is programmed as a monitoring function, press and hold the side key to open the squelch and listen to weak signals or background noise. Release the side key to deactivate the squelch.

iv. EMERGENCY BUTTON/ ALARM:

When the side key is programmed as an emergency alarm function, press the side key to start the alarm, then press it again to deactivate. You have the option to activate a self alarm and a remote alarm. Self alarm means that the radio itself will sound an alarm tone. Remote alarm means that all connected radios that receive the alarm code will sound an alarm tone.

The alarm code and remote alarm can be configured using PC software.

**v. FLASHLIGHT:**

When the side key is programmed to operate the flashlight, press the side key to turn on the flashlight and press it again to turn it off.

vi. KEYPAD LOCK:

This function is designed to prevent the keypad from being operated when not in use. When the keypad is locked, the volume control and channel buttons cannot be used.

Keypad lock: Press and hold the [] key, then press the [VOL+] key. A beep will sound and the keypad is now locked.

Keypad unlock: Press and hold the [] key, then press the [VOL-] key. A beep will sound and the keypad is now unlocked.

vii. QT/DQT SIGNALLING:

QT/DQT signalling can be modified using programming software. There are 38 standard QT channels and 83 standard DQR for this radio. Non-standard QT/DQT can also be programmed. When a channel is set with QT or DQT signalling, the squelch will only be opened when the radio receives a signal from a radio with the same QT and DQT signalling. If the channel is using a different QT/DQT signalling, the squelch will not be opened but the green indicator light will show.

viii. TIME OUT TIMER (TOT):

The time out function is designed to prevent the transmission of a channel by one single radio for too long, in order to avoid damages to the radio due to long term continuous transmission. If the transmission continues beyond the

time limit (which is pre-set by programming software), the radio will stop transmitting and an alarm will sound. To stop the alarm, release the [PTT] button and the radio will return to reception or standby mode.

ix. TIME OUT ALERT (TOA):

When the transmission time is about to reach the time limit, a tone will sound to alert you. This function can be set using programming software.

x. BUSY CHANNEL LOCKOUT (BCL):

You can turn on/off the busy channel lockout function of each channel using programming software. When the current channel is busy, transmission will be blocked and a tone will sound to alert you.

xi. BATTERY LEVEL:

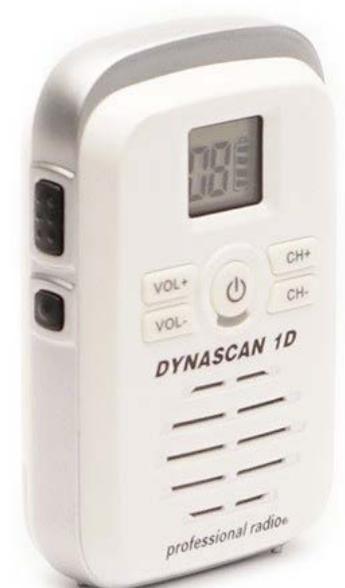
The battery power is divided into 5 levels from 0-4 (4 is the highest level). When the battery power is too low, a double beep sound will alert you.

The battery power levels are displayed in the following way:



10. TECHNICAL SPECIFICATIONS

Frequency range:	446.00625 MHz – 446.09375 MHz
Number of channels:	8 (can program up to 99 channels with different QT and DQT signalling)
Antenna:	Internal and built-in
Transmission power:	0.5 W
Channel spacing:	12.5 kHz
Modulation type:	FM (11K0F3E)
QT tones:	38
DQT tones:	83
Frequency stability:	±2.5 ppm.
Sensitivity:	<0.2 dBμ (12 dB S/N)
Distortion:	≤3 %
Power supply:	3.7 V/1800 mAh Li-Ion battery pack
Working temperature:	-20 °C to 55 °C
Duty cycle:	100%
Dimensions (with battery pack):	83 (H) x 50 (W) x 23 (D) mm
Weight (with battery pack):	90g



Note:

- The technical specifications of this radio cannot be modified through keyboard use.

i. CHANNELS AND FREQUENCIES

CHANNEL (CH)	FREQUENCY (MHz)
1	446.00625
2	446.01875
3	446.03125
4	446.04375
5	446.05625
6	446.06875
7	446.08125
8	446.09375

11. TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE/SOLUTION
The radio will not turn on	<ul style="list-style-type: none"> - The battery pack may have run out of charge. Recharge or replace the battery pack. - The battery pack may not be inserted correctly. Remove the battery pack and re-insert it. - The [] key is damaged. Consult with technical services for repair. - The life of the battery pack has been exhausted. Replace the battery pack with a new one that has the same characteristics as those of the battery pack supplied with the radio.
The battery pack only lasts a short time after charging.	<ul style="list-style-type: none"> - The life of the battery pack has been exhausted. Replace the battery pack with a new one that has the same characteristics as those of the battery pack supplied with the radio.
The radio will not scan.	<ul style="list-style-type: none"> - The squelch is open. Re-set the squelch level.
Background noise is heard continuously.	<ul style="list-style-type: none"> - Adjust the squelch to an appropriate level.
Nothing can be heard when using an external headset.	<ul style="list-style-type: none"> - The headset connector may be damaged. Consult with your reseller or technical services for repair.
The radio will not communicate with other members of the group.	<ul style="list-style-type: none"> - Ensure that you have selected the same channel and QT/DQT as the other members of the group. - You may be out of communication range.
The communication received is not continuous.	<ul style="list-style-type: none"> - You may be out of range or in an area with bad radio signal.
The signal received is distorted.	<ul style="list-style-type: none"> - The radio's internal speaker may be damaged. Consult with your reseller or technical services for repair.
The radio will not transmit.	<ul style="list-style-type: none"> - It is not possible to transmit when the channel is busy and you have activated the 'Busy Channel Lockout' function.
The LED indicator light is green but no communication can be heard.	<ul style="list-style-type: none"> - The volume level is set too low. Increase the volume level. - The QT/DQT signalling must be programmed to the same signalling as the other members of the group. Set the same signalling. - The radio headphone jack is damaged. Consult with your reseller or technical services for repair.
<p>If you have carried out the advice shown above and continue to experience problems with your radio, please consult with your reseller or technical services.</p>	