G15

▸ Instruction guide

PMR446 TRANSCEIVER |

MIDLAND®

Index

*Thanks for choosing Midland! **G15** is a portable transceiver that is free use in almost all European countries. For further information, we suggest you look at the "Restrictions on the use" chart.*

Midland G15 is a multi-task PMR446 transceiver.
Combining the latest technology in radio communication along with a sturdy mechanical frame, **G15** is the ideal and effective solution for the professionals who need to stay in touch with the working team (in construction sites, buildings, shows, trade fairs or hotels) or for leisure users that just want to keep up with friends and family.

Programming software (optional)

Thanks to Midland Programming software **PRG-G15**, it is possible to increase the performance of your radio or to reduce its functionality by enabling or disabling some features (CTCSS, TOT, VOX, ROGER BEEP, SQUELCH, VOICE...)
For further information, please consult the Programming software manual.

Content

- 1 G15 transceiver
- 1 belt clip
- 1 wall adaptor
- 1 1600mAh Li-ion rechargeable battery pack
- 1 desktop charger

Main characteristics

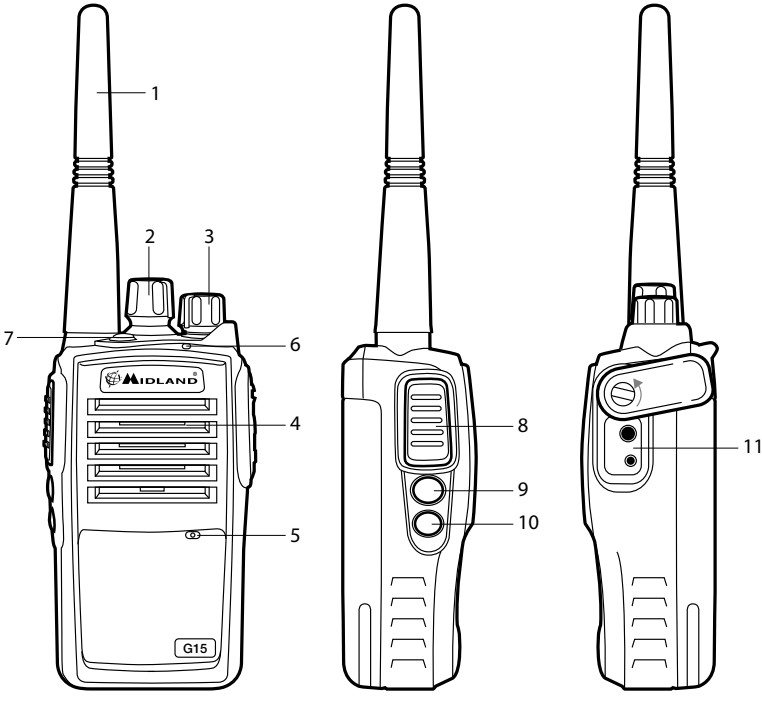
- PMR446 Transceiver
- **IP67 certified:** the housing protects the device from dust and from water infiltration up to a depth of 1 meter for 30 minutes
- Output power: ≤ 500mW ERP
- Channel spacing: 12.5KHz
- Scan
- Vocal tuning
- Roger Beep
- Battery save
- Monitor
- Squelch
- Vox

COVERAGE/RANGE

The maximum range depends on terrain condition and is obtained during use in an open space.
The only limitation to maximum possible range are environmental factors such as blockage caused by trees,buildings, or other obstructions. Inside a car or a metallic constructions, the range can be reduced. Normally the coverage in the city, with buildings or other obstructions is about **1 or 2 Km**. In open space but with obstructions like trees, leaves or houses the maximum possible range is about **4-6 Km**. In open space, without obstructions and in sight, like for example in mountain, the coverage can be more than **12 Km**.

Main controls and parts of the radio

1. **Antenna**
2. **Encoder:** rotate clockwise or counter-clockwise to select the desired channel
3. **Power/volume knob**- turn clockwise to power on and increase the volume level. Turn counter-clockwise to decrease the volume level and power off.
4. **Speaker**
5. **Built-in microphone**
6. **Led indicator:** RED: TX; GREEN: RX.
7. **Emergency button** (it can be activated through the programming software)
8. **PTT:** push this button to transmit, release it to receive.
9. **Function key 1:** Short pressure: Monitor function activation. Long pressure: VOX function activation
10. **Function key 2:** Long pressure: SCAN function activation
11. **External Speaker/Mic Jack**- allows the connection with external devices such as headsets, microphones.


1
2
3
7
6
MIDLAND
4
5
G15
8
9
10
11

Operations

Power on/off and volume adjustment

Rotate the **Power/Volume knob** clockwise to turn the radio on.
Rotate the control clockwise /counter-clockwise to adjust the volume level as you prefer.
To turn the radio off, rotate the control counter-clockwise till hearing a mechanical "click".

Transmission

To communicate, all radios in your group must be set to the same channel.
Briefly press the **Function key 1** to enable the Monitor feature in order to make sure that the frequency is not busy, then press the **PTT** button.
For a maximum clarity, hold the device at a distance of about 4/10 cm.
Release the **PTT** key to receive.
Only one user at a time can talk during radio communications. Therefore, it is important not to transmit when you are receiving a communication and use the transmission mode sparingly to allow other users to talk.
Transmission consumes a significant amount of energy and should therefore be used sparingly to prolong the battery life.
If you are unable to contact a station that you have no problems in receiving, the station may be using CTCSS tones or DCS codes.

Monitor

The Monitor feature is for excluding (opening) the Squelch, in order to listen to signals that are too weak to keep the Squelch permanently opened.
Press briefly the **Function key 1** to enable such function.

Scan

This function is enabled by pushing the Function key2 for 3 seconds; the led will alternately blink green.

Whenever any signal is detected, the scanning will stop on a busy channel and, if no operation is done, will start after 5 seconds.
If you press the **PTT**, the radio will transmit on the latest busy channel; after 10 seconds that you released the **PTT**, G15 will return on the default channel and the scanning will be active.

Squelch

The Squelch function suppresses noises on free channels and allows to receive even weak signals.
G15 has 10 different Squelch levels that can be set by programming software: 0 means that the Squelch is turned off; from level 1 to level 9 you will have different levels of noise reduction. The higher is the level, the louder will be the Squelch.
By default, the Squelch level of **G15** is set on level 5.
Make sure you do not set an excessively high squelch level because in this case you may not be able to receive weaker signals. On the other hand an excessively low Squelch value could enable the Squelch even when no signals are present.
Squelch must always be adjusted when no signals are present.
The Time Out timer is settable from 30 sec to 270 sec. only through the programming software.
This feature is disabled by default.

Battery recharge

G15 is equipped for using a 7,4V Li-ion rechargeable battery pack which can be recharged connecting the socket of the AC/DC wall adaptor to a mains power socket and inserting the jack of the wall adaptor into the desktop charger plug.
It takes 4 hours to fully recharge the radio. The led of the desktop charger indicates the status of the recharge:
Red = charging, **Green** = full charge
For maximum battery life, we recommend charging the battery pack when the **G15** is off and the battery pack is fully discharged.

! Using a different battery charger other than the one specified can cause damage to your device or may even cause explosions and personal injuries.

The **Battery power saving** feature enables a reduction in consumption of up to 50%. If it has been set, it automatically activates when the transceiver does not receive any signal for more than 5 seconds in order to save the battery life. Power saving can be disabled only through Programming software.

Roger Beep (End transmission tone)

When the PTT button is released, the radio will beep to confirm to other users that you've finished your transmission and that they can start talking.
The Roger Beep can be enabled through the programming software.

Keypad Beep

If this function is active, you will hear a beep tone everytime you press a button (It can be disabled through the programming software).

Vox

The VOX feature enables hands free conversations without using **PTT**: just speak in the direction of the microphone and the communication will be automatically activated. The VOX sensitivity can be adjusted in 10 different levels (0,1,2,3…9) through the programming software:
0 means that the VOX is turned off, **level 1** is set by default and has the lowest VOX sensitivity, 9 is the highest one.
To activate the VOX feature, keep pressed for about 4 sec. the **Function key1**.
With the programming software you can enable/disable the VOX feature on the Function key and select the sensitivity levels.

Maintenance

Your **G15** was designed to fulfill any warranty obligations and to enjoy this product for many years.
As for all the electronically devices, we recommend you to follow this few suggestions:

- Do not attempt to open the unit. Non-expert handling of the unit may damage it and/or annul the warranty.
- When using regulated power supply, take notice of power voltage, that must be between 6V and 8V to avoid damages.
- High temperatures can shorten the life of electronic devices, and warp or melt certain plastics. Do not store the radio in dirty areas.
- If it appears that the Radio diffuses peculiar smell or smoke, please shut off its power immediately and take off the charger or battery from the Radio.
- Do not transmit without antenna.

Technical specifications

General	
Frequency range	446.00625- 446.09375 MHz (PMR446)
Working temperature	-20°/+55° C
Operating voltage	7.4V
Operate mode	Simplex
Dimensions	105mm×50mm×32mm (without Antenna)
Weight	227g (Battery pack included)
Antenna impedance	50Ω
Duty cycle	5/5/90%
Transmitter	
Frequency stability	±2.5PPM
Output power	≤500mW ERP
Max frequency deviation	≤2,5KHz
Audio distortion	≤3%
Adjacent channel power	< 60 dB
Spurious radiation	Within European legal terms
Occupied bandwidth	Within European legal terms
Receiver	
RF sensibility	<0.2UV@20 dB SINAD
Audio distortion	≤3%
Audio response	300Hz ÷ 3KHz
Adjacent channel selectivity	Within European legal terms
Intermodulation rejection	Within European legal terms
Spurious response	Within European legal terms
Blocking	Within European legal terms

Hereby, CTE International declares that this **G15** is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. **WARNING:** Direct plug-in ac/dc power supply must be used for disconnecting the transceiver from the mains; the desktop charger must be positioned close to the unit and easily accessible.

Troubleshooting

Problem	Possible Cause	Solution
The radio doesn't switch on	The battery pack is discharged and/or has not been installed correctly.	Verify that the battery pack is charged and that it has been correctly installed.
The radio switches off shortly after it has been switched on	Discharged battery pack.	Recharge the battery pack.
The battery pack does not recharge	The battery-charger has not been connected or installed correctly.	Inspect the connections of the battery-charger and the installation of the batteries.
The radio switches on but is unable to receive signals	The site of installation is too shielded.	Move to an another area.
	The volume is too low	Adjust the volume level.
	Incorrect CTCSS or DCS	Check that the CTCSS tone or DCS code corresponds to the one set by the parties you are communicating with.
It is not possible to communicate with other parties	An incorrect radio channel has been selected.	Select the same radio channel used by the parties you are communicating with.
	The radio is installed in a shielded area or is too far from the party you are communicating with	Move to another area.
	Incorrect CTCSS or DCS	Check that the CTCSS tone or DCS code corresponds to the one set by the parties you are communicating with.

Reception is fragmented and/or disturbed	The signal is very weak.	Try temporarily disabling the Squelch by means of the Monitor feature.
	The transmission distance is excessive and/or there are obstacles in the transmission path	Move closer to the party you are communicating with or to another area.
	Other parties are using the same channel	Check the traffic on the radio channel by means of the Monitor feature and select another channel if required.
	The radio has been installed too close to equipment that causes interference (televisions, computers, etc.)	Increase the distance between the radio and this equipment.
The autonomy of the battery pack is limited	Commission time is too high.	Try reducing the transmission time and/or using a low power.