User manual

777 PRO

PMR446/LPD TRANSCEIVER

MIDLAND®

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Main features

- Dual Band PMR446/LPD transceiver
- 8 new PMR446 channels*
- 85 Channels: 16 PMR446 + 69 LPD
- Extended frequency band: 446.00625 – 446.19375MHz*
- Wide black LCD Display EED™ with white indications
- High tech and ultra compact design
- Extra loud speaker
- Li-Ion battery pack 1000mAh (battery life up to 14 hours)
- Auto power save: automatic` current economy circuit
- 38 CTCSS tones in TX and RX and 104 DCS codes
- CALL function with 5 selectable melodies
- Squelch adjustment in 10 different levels
- Controls for the channel selection
- SCAN` function, Roger Beep on/off
- Keypad lock to prevent accidental pressure of any button
- High/low power selection (PMR band)
- Side tone: end transmission noise muffler
- VOX function with 9 selectable levels
- Jack 1 Pin 4 contacts 3.5mm for external earphone/mike
- Recharge through the microUSB port or desktop charger

* Extended PMR446 band: it is possible to use either the PMR446 traditional band or a “new” one (8 further PMR446 channels).

The package includes

- 2 radios with belt clip
- 2 Li-Ion battery packs 1000mAh
- 1 double desktop charger
- 1 micro USB cable

Coverage referred to the PMR446 frequency band

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 buidings or other obstructions is about 1 or 2 Km. In open space but with obstructions like trees, leafs 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 12 Km.

Above all... Safety!

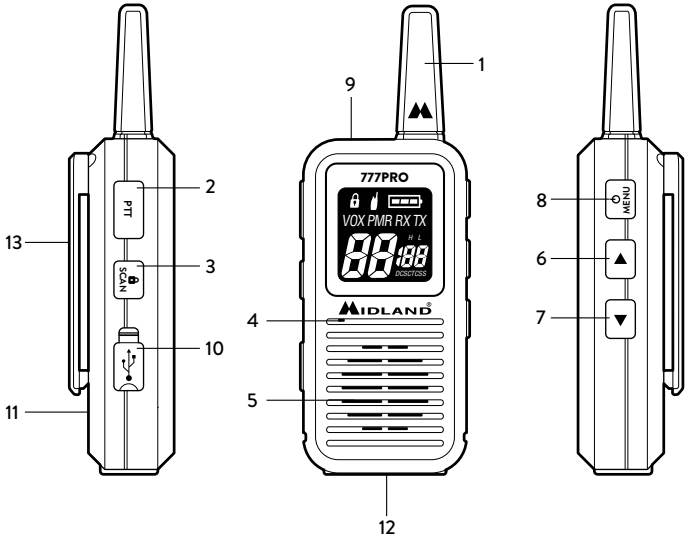
Warnings

- Do not open the radio for any reason! The radio's precision mechanics and electronics require experience and specialized equipment; for the same reason, the radio should under no circumstances be realigned as it has already been calibrated for maximum performance. Unauthorized opening of the transceiver will void the warranty.
- Do not use detergents, alcohol, solvents, or abrasives to clean the equipment. Just use a soft, clean cloth. If the radio is very dirty, slightly dampen the cloth with a mixture of water and a neutral soap.

Batteries

- Using a different battery charger other than the one specified can cause damage to your device or may even cause explosions and personal injuries.
- Do not throw batteries into fire or place them near heat as this may cause explosions or personal injuries. Dispose of the batteries according to procedures set out by local regulations

Identifying the parts



Radio

1. **Antenna**
2. **PTT** – Press this button to transmit. Press it twice to send out a call tone on the selected channel
3. **/SCAN** – Push this control to activate the SCAN function. Keep it pressed for 3 seconds to activate the keypad lock.
4. **MIC** – Built-in microphone
5. **Built-in speaker** – Here is where the speaker is housed
6. ▲ – this control is useful to change the settings in the menu and to adjust the volume level
7. ▼ – this control is useful to change the settings in the menu and to adjust the volume level
8. **/MENU** – Keep pressed to turn on/off 777 PRO. Press to enter the radio's menu.
9. S**PK/MIC jack** – Jack for external speaker/mike 3.5mm
10. **USB port** for the recharge

11. **Battery compartment** – Insert the rechargeable battery pack supplied in the package
12. **Recharge contacts** in the bottom side – Place the radio into the cradle of the desktop charger
13. **Belt clip** with its proper fixing screw

Display

88	The two bigger digits indicate the selected channel
VOX	VOX function indication
	Keypad lock activated
	Battery status
H L	High or low power selection in TX (only in the PMR446 band)
RX	Reception mode (busy channel)
TX	Transmission mode (PTT pressed)
188	The three smaller digits indicate the CTCSS tone or DCS code selected (CTCSS: 1-38; DCS: 1–104)
DCSCTCSS	Type of subaudio tone selected
	Vibra-Call function activated
PMR	This icon indicates the radio is operating on the new 8 PMR446 channels

Recharging the Li-Ion battery pack "PB-777PRO"

1. Place your transceiver into the cradle of the desktop charger or connect the USB cable into the proper USB port of the radio.
2. At first, the processor makes a sort of checking of the battery status and the display will blink for 10 seconds.
   - while the radio is being charged, the battery icon on the display will blink;
   - when the recharge is complete, the display will show "FULL"

Basic operations

Turning on/off

To turn on the transceiver, keep pressed the **MENU** control for about 3 seconds: the display will light up, will make an Auto-Test and then you will hear 2 Beeps of different tones.
To turn off the transceiver, keep pressed again the **MENU** button for 3 seconds.

Selecting the PMR446 bands: 16CH or 8CH

777 PRO can operate on two PMR446 bands thanks to a simple procedure described in this chapter: a traditional band with 8 channels and a new one with 16 channels.

- With the 8 channels it is possible to communicate with all radios working on the operative band 446Mhz-446.1Mhz.
- While with the 16 channels, the operating band is extended up to 446.2Mhz.

When 777 PRO is set on the "new channels", the display will show ***"PMR"***.

How to activate the PMR446 bands

1. Switch off the radio
2. Turn it on by pressing ▲ and ▼
3. The display will show "-_ _"
4. Press the following keys in the correct sequence: ▼ - **MENU** - ▲; the symbol "-_ _" on the display will be replaced by a series of ***"o"***.
5. In case of wrong sequence, 777 PRO will exit the procedure
6. At the end of the sequence, the display will show the frequency band currently in use. Now you can select ***"P8"*** (traditional band) or ***"P16"***(new band) by means of the ▲/▼ controls
7. Press **PTT** to confirm your selection

Volume adjustment

As soon as the radio receives a signal, you can adjust the volume to a comfortable level thanks to the ▲ o ▼ controls. If no signal is detected, you can use the squelch as described in the following paragraph.

Squelch adjustment

This function allows to adjust the squelch in 10 different levels:

- **Level 0:** open squelch. With the squelch open, all signals , even the weakest ones, are received as well as the background noises.
- **Levels 1- 9:** level 1 (lowest squelch), level 9 (highest level of squelch).

If you set the squelch at the highest level, you will only hear the strongest signals.

1. Press the **MENU** button for three times.
2. The display will show ***"SL"*** followed by a number that identifies the squelch level.
3. Select the desired level by pushing the ▲/▼ controls, then confirm with **PTT** (or wait for 4 seconds).

Transmission and reception

When you press the **PTT** the transceiver transmits with high or low power (depending on the setting of the **MENU**: "***H"*** or "***L"***).

To transmit:

1. Make sure that no one else is currently talking on the selected channel;
2. Keep button **PTT** firmly pressed: "***TX"*** and ***"To"*** will appear on the display;
3. Before you start talking wait for a fraction of a second then speak normally, in the direction of the microphone.
4. When you have finished, release the **PTT**: ***TX"*** and ***"To"*** will disappear from the display;
5. When the radio is in reception mode (**PTT** not pressed) you will automatically receive any communication (***"RX"*** displayed).

During transmission and reception try, as far as possible, to keep the antenna in vertical position and to avoid obstacles towards the direction of the other party.

Scanning all channels

777 PRO can automatically search for signals throughout the PMR/LPD bands by scanning, i.e. selecting the channels in rapid sequence.

When a signal is detected, the scanning pauses on that channel and you can transmit by pushing **PTT** . If you press **PTT** during scanning you can transmit on the channel from which the scanning started.

The scroll buttons ▲/▼ allow you to change the direction of scanning (from lower

channels to higher ones or vice versa) and therefore to skip communications which are of no interest.
Press briefly the button **/SCAN** to start scanning.
If you want to stop it, press again **/SCAN**. Your transceiver will go back to the channel from which the scanning originally started.

Display backlight

If there is insufficient light to read the display you can press the **MENU** button to switch on the display backlight for about 5 seconds.
Switching the backlight on the display adds an additional drain on the batteries. Try to make a moderate use of this.

Backlight always on

It is also possible to have the backlight always on.
Press **11** times the **MENU** button, the display will show ***"bl of"***.
With the ▲/▼ buttons select ***"bl on"*** and confirm by pushing **PTT** or wait for 4 seconds.

Keypad lock

Keep pressed **/SCAN** for about 5 seconds and will be displayed as confirmation. Only **PTT** and **/SCAN** remain active. To disable this function, keep pressed again **/SCAN** for 5 seconds approx

Power Save

The battery power saving feature enables a reduction in the consumption of up to 50%; power saving automatically activates when the transceiver does not receive any signal for more than 5 seconds. When the batteries are discharged, ***"bt LO"*** appears on the display: recharge the battery pack.

When the backlight is always on, the Power Save won't be enabled.

MENU button

Channel selection

1. Press the **MENU** button.
2. The number of the channel will start flashing on the display.
3. Press the ▲/▼ buttons to scroll up or down the PMR and then LPD channels till you select the desired channel.
   PMR446 traditional band: from P1 to P8
   PMR446 new band: from 1 to 16
   LPD: from 1 to 69.
4. Press the **PTT** button to confirm, or wait for 5 seconds.

CTCSS /DCS tones selection

777 PRO can receive in two modes:

- **Open traffic:** in this case you will hear any communication transmitted on the selected channel;
- **Group mode CTCSS /DCS:** CTCSS/DCS tones are access keys that allow you to receive only messages coming from parties using the same channel and code. The speaker will remain muted until the correct tone is received.

To activate the 38 CTCSS tones/104 DCS codes in RX and TX:

1. Turn on the radio.
2. Select the desired channel.
3. Press twice **MENU** until the Display shows ***"oF"*** (blinking on the right side).
4. By pushing the ▲/▼ controls the display will show CTCSS (***"ct"*** blinking) or DCS (***"dc"*** blinking); press **MENU** to enter the CTCSS or DCS tones. Now select the desired tone with the ▲/▼ keys.
5. To confirm the setting, press the **PTT** key or wait for approximately 5 seconds

Selecting high or low transmission power (PMR band)

Batteries are drained more quickly during transmission. In order to extend the battery life you can select the low power when transmitting over short distances.
To activate the low power:

1. Press the **MENU** button for 4 times and "***Pr H***" will be displayed.
2. Select "***L***" using the scroll buttons ▲/▼.
3. Press **PTT** to confirm, or wait for 5 seconds.

If you want to transmit over a longer distance repeat the above procedure to select the high power. At step 2 select ***"H"***. When the batteries are in good conditions, high power is 500mW, whereas low power is 10mW.

A low battery level during transmission will reduce the performance of your device.

VOX

777 PRO enables hands free conversations through VOX function.
You can enable it with or without accessories. The VOX sensitivity can be set in 9 different levels:

- **1 = highest sensitivity** (normal voice with no background noise)
- **9 = lowest sensitivity** (useful in very noisy areas or if you talk loudly)

1. All these options can be selected on two levels as follows:
2. To activate VOX function press the **MENU** button 5 times and ***"VOX"*** will appear on the display.
3. Use the scroll ▲/▼ buttons to select the desired setting:
   OFF: Disabled;
   1,2,3,4,5,6,7,8,9
4. Press **PTT** to confirm or wait for 5 seconds.

To disable the VOX function follow the instructions above and select option ***"oF"***.

ROGER BEEP function (End transmission tone)

When your transmission is finished (**PTT** released), 777 PRO will emit a sound that indicates to the other party that s/he can start talking. This function is enabled by default.
To deactivate it:

1. Press 6 times the **MENU** button in the PMR band until the display shows ***"rb on"***;
2. Using the scroll buttons ▲/▼ select ***"of"*** and ***"rb of"*** will be displayed;
3. To confirm the roger beep deactivation, press **PTT** button or wait for 5 seconds.

CALL function

To send out an audio signal to other users, press twice the **PTT**.
In this function, it is possible to choose the type of melody, 5 different melodies are available.
To select the call tones:

1. In the PMR band Press the **MENU** button 7 times, till the display shows ***"CA 01"***.
2. By pushing ▲/▼ you will hear the 5 pre-set melodies.
3. Confirm by pressing the **PTT** or wait for 5 seconds.

Now, each time your 777 PRO sends out a call tone, it will beep with the selected melody.

Keypad Beep

To deactivate the keypad beep, follow these steps:

1. Press for 8 times the **MENU** button in the PMR band, until ***"bP on"*** is displayed.
2. Use the ▲/▼ buttons until the display shows ***"bP of"***.
3. Confirm by pushing the **PTT** or wait for 5 seconds.

Now you won't hear any beep at the pressure of any button.

Vibra-Call function

777 PRO is equipped with the "Vibra-Call" feature, which provides a vibration for incoming calls.

To activate it, follow these steps:

1. In the PMR band, press the **MENU** button for 9 times, until the display shows ;
2. Use the ▲/▼ buttons to disable or enable this feature (***"on"***: enables, ***"oF"***:disables);
3. Push **PTT** to confirm or wait for 5 seconds.

Everytime 777 PRO receives a call, it will vibrate.

When the Vibracall function is enabled, the call tone won't be heard.

Dual Watch

This function allows the monitoring of 2 channels at your choice.

Procedure:

1. Select one of the 2 channels you want to monitor.
2. In the PMR band, press the **MENU** button for 10 times till the display shows ***"oF RX TX"***.
3. Select the second channel to monitor with the ▲/▼ controls.
4. Press **PTT** or wait for 5 seconds for confirmation.
5. To stop Dual Watch, push **🔒/SCAN**.

Troubleshooting and radio reset

777 PRO is designed to provide you with years of optimal performance. If for some reason any problems arise, refer to this chapter before contacting a service centre in your region.

Reset

If your transceiver experiences a logical malfunction (improper symbols on the display, blocking of functions, etc.), it may not be experiencing a true failure, but rather a problem caused by external factors. For example, it may have an incorrect setting brought on by a noise or spikes in the electrical system during battery recharging. In such cases, you can reset the transceiver to its factory-programmed settings, by resetting all parameters:

- Turn off the transceiver
- Keep pressed the ▲ key and turn on the radio at the same time. All the functions will be reset ex-factory.

Before you go ahead with the reset, we recommend that you take note of all the setting you have carried out as they will be deleted.

Technical specifications

Channels	Traditional band:	8 PMR446 + 69 LPD
	New band:	16 PMR446 + 69 LPD
Frequency	PMR446 traditional band:	446.00625 ÷ 446.09375MHz
	PMR446 new band:	446.00625 ÷ 446.19375MHz
	LPD	433.075 - 434.775MHz
Channel spacing		12.5 KHz (PMR); 25 KHz (LPD)
Power supply		Li-Ion rechargeable battery pack 1000mAh 3,7Vdc
Operating temperature		from -20° to +55°
Dimensions		44 x 27 x 85 mm
Weight (w/out batteries)		65gr
Duty cycle		TX 5%, RX 5%, stand-by 90%
Category		B

Transmitter	
Output power	10 or 500 mW (Selectable only in PMR446 band)
Modulation	FM
Spurious rejection	Within European legal terms

Receiver	
Sensitivity @ 12dB Sinad	< 0,25µV
Adjacent channel rejection	70dB
Audio output power	400mW at 10% THD
Receiver category	3 (for LPD only)
Jack for ext speaker/mike	jack stereo 3.5 mm
Maximum TX time in 1 hour	6 minutes, equivalent to a duty cycle of 10%

Specifications are subject to change without notice.

Prodotto o importato da: **CTE INTERNATIONAL s.r.l.**
Via R. Sevardi 7- 42124 Reggio Emilia Italia
www.midlandreurope.com
L'uso di questo apparato può essere soggetto a restrizioni nazionali (per l'uso in Italia in modalità PMR446, è richiesta una dichiarazione di possesso). Prima dell'uso leggere attentamente le istruzioni.

Produced or imported by: **CTE INTERNATIONAL s.r.l.**
Via R. Sevardi 7 - 42124 Mancasale Reggio Emilia Italy

Imported by: **ALAN - NEVADA UK**
Unit 1 Fitzherbert Spur Farlington Portsmouth Hants.
P06 1TT - United Kingdom
www.nevada.co.uk
The use of this transceiver can be subject to national restrictions. Read the instructions carefully before installation and use.

Importado por: **MIDLAND IBERIA, SA**
C/Cobalt, 48 - 08940 Cornellà de Llobregat (Barcelona - España)
www.midland.es
El uso de este equipo puede estar sujeto a la obtención de la correspondiente autorización administrativa. Lea atentamente las instrucciones antes de usar el equipo.

Vertrieb durch: **ALAN ELECTRONICS GmbH**
Daimlerstraße 1K - D-63303 Dreieich Deutschland
www.alan-electronics.de
Die Benutzung dieses Handfunkgerätes ist von den landesspezifischen Bestimmungen abhängig. Vor Benutzung Bedienungsanleitung beachten.

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5, Rue Ferrie, Zac les Portes du Vexin 95300 Ennery - France
www.alan-midland.fr
L'utilisation de cet appareil peut être sujet à des restrictions nationales. Avant l'utilisation, lire les instructions.

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