MIDLAND M24-S
MIDLAND M48-S
MIDLAND M99-S
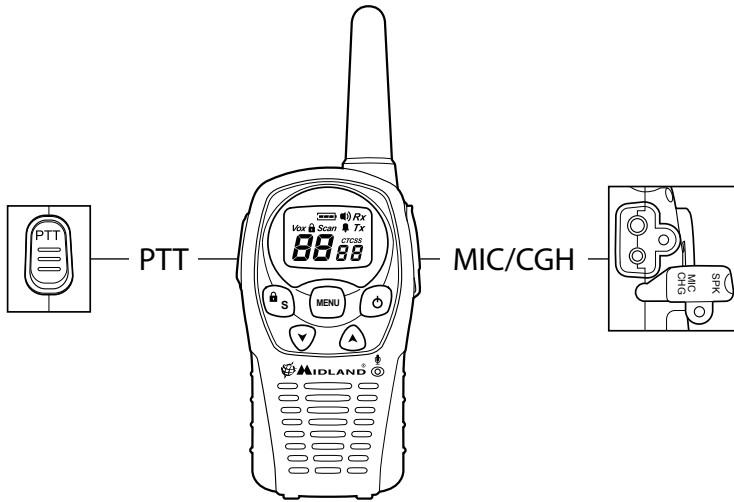
► User manual

MIDLAND®

Summary

Congratulations on your purchase!
M24-S, M48-S and M99-S are PMR 446 transceivers which may be used, without license, all over Europe. Please consult the "Restrictions on the use" charts for information regarding country specific limitations.

PTT — **PTT**

MIC/CGH — **MIC/CGH**

Main features:

- Freq. 446.00625 ÷ 446.09375 MHz
- Channels;
  M24-S: 24 channels (8+16 pre-programmed)
  M48-S: 48 channels (8+16 pre-programmed)
  M99-S: 99 channels (8+16 pre-programmed)
- 38 CTCSS-Sub-Tones
- Power: 500 mW ERP
- VOX sensitivity adjustable in 2 levels
- Battery pack: 800mAh 4,8V NiMH
- Alphanumeric LCD Display
- Battery life up to 12 hours
- Operating temperature −20° +55°
- Weight 103 gr (batteries excluded)
- Size 60x103x25 mm
- Jack MIC CHG: 2 pins for audio accessories, wall charger

Specifications are subject to change without notice.

Content model M24-S

- 2 transceivers with 24 channels
- 2 belt clips
- 8 batteries AAA type
- Quick Guide

Content model M48-S

- 2 transceivers with 48 channels
- 2 belt clips
- 2 800mAh rechargeable battery packs
- 2-way wall adaptor
- Quick Guide

Content model M99-S

- 2 transceivers with 99 channels
- 2 belt clips
- 2 800mAh rechargeable battery packs
- 2 single wall chargers
- 2 single desktop chargers
- 2 headsets
- Quick Guide

Coverage

The maximum range depends on terrain condition and is obtained during use in an open space.
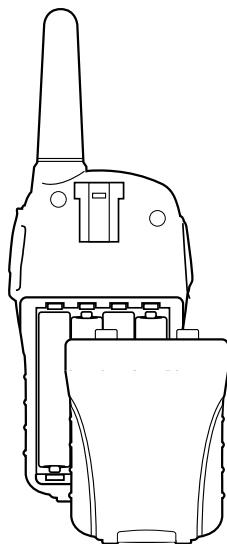
The only limitation to maximum possible range are environmental factors such as blockage caused by trees, buildings, or other obstructions. Inside a car or a metallic constructions, the range can be reduced. Normally the coverage in the city, with buidings or other obstructions is about **1 or 2 Km**. 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 **more that 10 Km**.

Battery and battery compartment

The transceiver accepts the rechargeable battery pack (included only in the M48-S and M99-S models) or 4AAA alkaline/ rechargeable batteries. To open the battery compartment, hold the unit face down and unhook the battery holder in the lower part of the radio and gently slide the cover.

Attention

The battery pack provided with the M48-S and M99-S models, must be recharged before the first use (see the section "Recharging" for more info).

LET'S COMMUNICATE!

To turn radio on/off

Hold down the ⏻ for 3 seconds.

Channel selection

Press once the **"menu"** button and then select the desired channel by the ▲/▼ buttons. Press **PTT** to confirm the selection. Remember in order to communicate, both radios must be set on the same channel.

Transmission

Keep the **PTT** button pressed and speak into the unit. Hold the radio 4/10cm away from your mouth. The display shows **'TX'**. When the **PTT** is released, the radio beeps to confirm to other users that your transmission has finished (Roger beep. See the paragraph).

Reception

Simply release the **PTT** button. When you receive a signal, **'RX'** is displayed.

Volume adjustment

Use the ▲/▼ buttons to adjust the volume to the desired level.

CALL function

Sending audio signal
By pressing rapidly the **PTT** button twice, you will send an audio signal to other users on the same channel.

"Menu" button

Following functions can be selected by pressing the **"menu"** button:
- VOX
- Roger Beep activation
- Channel setting
- CTCSS Tones setting
- Monitor

VOX function and its sensitivity

The VOX function lets you open the transmission by voice without the use of the **PTT** button. To get the most use from the VOX feature you must first determine what sensitivity (noise level) is needed to activate the VOX.
Push the **"menu"** button for three times; **'VOX'** blinks on the display. Select the desired VOX level (HI or LO) by means of the ▲/▼ buttons and then press the **PTT** button to confirm.
VOX can be adjusted in 2 positions:
- **HI: high sensitivity** (normal voice with no background noise)
- **LO: low sensitivity** (useful in very noisy areas or if you talk loudly)

To disable the VOX mode

Press the **"menu"** button for three times. **'VOX'** blinks on the display. Select **'OF'** by means of the ▲/▼ buttons and then push **PTT** to confirm.

Attention

To use the VOX with the headset provided with the M99-S model, move the small switch of the headset to the VOX position. Move it back to **PTT** position if you don't use the VOX function.

Roger Beep: end transmission tone

When **PTT** is released the radio will beep to confirm to other users that your transmission has finished. This feature is enabled by default and it is displayed with the ♠ icon.

To disable the Roger Beep

1. Push the **"menu"** until the display shows **"RB"** and the symbol 🔔
2. Select *'OF'* by means of the ▲/▼ buttons
3. Confirm the selection by pushing the **PTT** button.

Channel setting

Press once the **"menu"** button and then select the desired channel by the ▲/▼ buttons. Press **PTT** to confirm the selection.

CTCSS-sub-tone setting

The CTCSS sub-tones, are code numbers (from 1 to 38) to be added to the first 8 channels in order to create a new private channel. You can add up to 38 codes to the channels named from P1 to P8, that means you can create up to 308 new channels. For example if you add the CTCSS sub-tone "27" to the channel "**P3**" you will obtain the new channel "**P327**" that will be able to communicate to other transceivers only if they will be set on the same channel and sub tone.

To activate 38 different CTCSS sub-tones follow these steps:

1. Turn on the radio.
2. Press the "**Menu**" button and select with the ▲/▼ buttons one of the 8 channels (from P1 to P8).
3. Press twice the **"menu"** button until the display shows the selected channel with the flashing two digits CTCSS sub-tone (on the right of the channel)
4. Select with the ▲/▼ buttons the desired CTCSS sub-tone (from 1 to 38).
5. To confirm the setting press **PTT**.
   Now the radio transmits and receives using the programmed CTCSS sub-tone. If you don't want to use any CTCSS tone, select *"oF"*.

Show the CTCSS-sub-tone on the LCD

When you activate a CTCSS sub-tone, from P1 to P8, the tone is visible just on the right side of the channel. For the other channels (from 9 up) the CTCSS sub-code is pre-programmed and then "hidden". To temporary show a pre-programmed channel and his CTCSS sub-tone, press the "**menu**" button for more than 3 seconds.

Monitor function

This feature if activated, allows the possibility to receive very low and weak radio signals. This is very useful when you need to talk but the di-stance is as far as the maximum range possible. The disadvantage of this feature is the receipt of loud background noise.

Activation/Disactivation

1. Push the **"menu"** until the display shows the symbol ◁
2. To activate, select *'On'* by means of the ▲/▼ buttons
3. Confirm the selection by pushing the **PTT** button.
4. To switch off the monitorrepeat the same procedure but select *"oF"*.

🔒/S" button

Keypad lock

This feature is very useful to avoid pressing the buttons by chance. Press and hold the **"🔒/S"** button for more than 3 seconds. The 🔒 icon confirms that the keypad lock is activated. Only **PTT** and ⏻ will still be active. Repeat the same procedure to unlock the keypad.

SCAN-mode

The SCAN mode monitors the **busy channels**.
It is used to check the traffic radio on all the channels before transmitting and allows the unit to stop on a channel that someone is talking on. When the radio stops on a busy channel, the scan will resume after about 5 seconds.

To activate the SCAN function

Press the **"🔒/S"** button and you will see 'SCAN' on the display.

To deactivate it:

Push the **"🔒/S"** or **PTT** button.

Display backlight

When you push ⏻ or one of the 5 controls on the front side, the display lights up for approx. 10 seconds (only on the M48-S and M99-S models).

Recharging

When the battery pack or the batteries are discharged, the 🔋 icon starts blinking: it is necessary to change the batteries or to recharge it as soon as possible.
The 🔋 icon blinks only if the radio is turned on.

Attention

- Alkaline batteries cannot be recharged.
- Do not recharge the radio without the rechargable batteries or without the battery pack.
- For the very first recharge of the battery pack allow not less than 8 hours (only for M48-S and M99-S models).

M24-S model

This model is provided with 8 alkaline batteries: they cannot be recharged, therefore, when they are completely discharged, they must be replaced with new ones.

M48-S model

This model is provided with battery packs and wall adapter. Insert the battery packs and plug the wall adapter into the **MIC/CHG jack on the side of the transceiver. The wall adapter is a double plug type, so you can recharge both transceivers at the same time.** Only if the transceiver is left on during the charging, the ⊐ icon on the LCD display will blink indicating that the radio is being charged. This indication will not turn off when the batteries are fully charged.

M99-S model

This model is provided with battery packs, 2 single desktop chargers and wall adapters. Insert the battery packs, connect the wall adapters plug to the back of the desktop chargers and insert the transceivers into the desktop chargers cradles. If the transceivers have been inserted correctly, the red LED light on the desktop chargers will turn on, indicating that the radio is charging. Only if the transceiver is left on during the charging, the ⊐ icon on the LCD display will blink indicating that the radio is being charged. Both indications will not turn off when the batteries are fully charged.

Automatic power save

All the models are supplied with **an automatic current economy circuit.** If the transceiver receives no signal for more than 10 seconds, the "power save function" automatically activates. **The battery life may increase by up to 50 %.**

Accessories

All the models are provided with the **MIC/CHG jack** for connection to accessories such as mikes and headsets. This plug is a "2 pin type" and is compatible with all the Midland's range of accessories.

To use the headset provided with M99-S model, be sure the micro-switch is in the correct position:

PTT: for manual activation

VOX: for voice activation