Midland G7 XT

Two-colour and dual band PMR/LPD transceived

1 INTRODUCTION

Combing the latest technology in radio communication along with a sturdy mechanical frame, the Midland G7 XT makes the ideal and effective solution for both the professionals who need to stay in touch with colleagues (construction sites, buildings, hotels, trade fairs, shows) or with leisure users that just want to keep up with friends and family. Its robust frame, ease of use and simple design mean that it is ideal for use in any activity. The Midland G7 XT is extremely practical and operates on both PMR446 and LPD bands (please see chart in user guide for restrictions on use).

The Midland G7 XT incorporates all the functions that you would expect to see on the latest and most advanced two way radio transceivers and guarantees reliability and maximum efficiency. Other key features include an LCD backlit display, a Vibrating call alert feature for use in high-noise areas and an auto power save function which reduces battery consumption by up to 50%. All of the features on this outstanding radio are easily accessible thanks to the centrally mounted controls.

Coverage (referred to PMR 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 buildings 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 than 12 Km.

Main functions

Dual Band LPD/PMR transceiver

- VIBRACALL function
- LCD display with backlight
- Low battery indicator Auto power save: automatic current economy circuit
- 38 CTCSS tones in TX and RX
- CALL button with 5 tones selectable
- Automatic squelch adjustment
- Buttons for the channel selection SCAN function
- Keypad lock
- Hi/low power selection (PMR band)
- Roger Beep on/off
- VOX for hands-free communications
- 2 Pin jack for ext. mike / ext. speaker / battery recharge

NOTE: The manufacturer, with its effort to constantly improve product quality, reserves the right to change characteristics and features without prior notice.

2. ABOVE ALL....SAFETY

2.1 Simbols used

For ease and convenience of use, this manual uses symbols to highlight urgent situations, practical SCAN (scanning of channels). Keep the same button pressed advice, and general information. for about 2 seconds to activate MON function. This function 13

- Exclamation marks such as this one indicate a crucial description regarding technical repairs, dangerous conditions, safety warnings, advice, and/or other important information. Ignoring these symbols may result in serious problems and/or damage and/or personal
- Notes such as this one indicate practical advice that we suggest be followed for the optimal performance of the equipment

BATTERIES - Strictly follow all the directions and warnings on the batteries stated at chapter

TX VOX D

- ! 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. 4.1 Batteries recharge 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.

3. IDENTIFYING THE PARTS

3.2 Radio

Your Midland G7 XT keeps you constantly updated about its operational status through a Liquid Crystal Display (LCD). The symbols and their corresponding parameters that may appear, according to the operational status of the device, are described as follows: 2 5 3 6

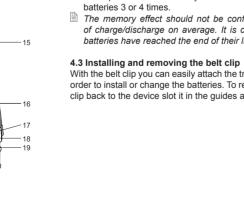
- VOX Activation of VOX function.
- TX- during transmission (PTT pressed).
- This symbol appears when the keypad lock is activated. CHANNEL - These two large digits indicate the channel
- selected (P1~P8 PMR 1~69 LPD) 5. It warns you of the battery pack / AA batteries low
- 6 Vibra-Call function activated
- 7. H (High) / L(Low) shows the high or low power selection (PMR band). 8. **RX** - (busy channel); appears on the display when the transceiver is receiving a signal.
- 9. CTCSS tones these 2 small digits indicate the selected CTCSS tone (1 38).

Refer to this picture to identify the various parts of the device:

- 10 VOLUME knob On/off switch for the device and adjusts
- volume of reception.
- 11. PTT button (push to talk) Press this button to transmit.
- 12.CALL/ button to send a call on the selected channel. If you keep it pressed for about 5 seconds, the keypad lock is
- 13. Built-in MICROPHONE Here is where sound is picked up by the microphone

temporarily cuts off Squelch (for weak signals).

- 14. Built-in SPEAKER Here is where the speaker is housed.
- 15. ANTENNA Receives and transmits radio signals. 16.SPK/MIC socket (under protective cover) - To connect to
- external audio devices (headphones, microphone etc.) and to the battery charger. 17.MENU button - Press this button to display the device's
- 18.MONITOR/SCAN button- Press this button once to activate
- 19 Scroll buttons ▲/▼ Press these buttons to change setting within the MENU.



4 PREPARING THE TRANSCEIVER

4.4.a Removal Make sure the following items are supplied in the package before you start using your transceiver 1) Remove the belt clip as explained in paragraph 4.3:A 1 transceiver; wall adaptor; 4 x AA rechargeable batteries 1800m A/h; belt clip: operational manual. 2) Open the battery compartment as shown in picture If any of the above is missing or damaged contact your supplier immediately.

used in different manners.

- Connect the socket of the wall adaptor to a mains power socket and insert the jack of the wall adaptor. 4.4.b Installation into the radio's plug. It takes 12-14 hours to fully recharge. 1) Remove the belt clip as explained in paragraph
- When charging is complete detach the socket of the wall adaptor from the mains.
- ! Do not overcharge the batteries! When these are fully charged the charging process does Insert the batteries into the battery not stop automatically. Do not forget therefore, to remove the transceiver from the charger as soon as the batteries are charged. Replace the battery cover and fix the belt clip.
- ! Do not try to charge alkaline batteries or non rechargeable batteries. Make sure that when you charge the radio, only rechargeable NI-MH batteries should be contained in the battery compartment! It is very dangerous attempting to recharge other types of batteries (for example 5.BASIC OPERATION alkaline or manganese batteries). Batteries which are not suitable to be recharged may leak. explode or even burn and cause damage! Using a different battery charger other than the one specified can cause damage to your device
- or may even cause explosions and personal injuries. will light up and do an Auto-Test. Subsequently you will hear 3 beens of different tones. ! Do not throw batteries into fire or place them near heat as this may cause explosions or personal To turn off the transceiver, turn the knob counter-clockwise until you hear another click. The LCD display
- injuries. Dispose of the batteries according to procedures set out by local regulations. will turn off and subsequently you will hear 3 beeps of different tones ! Do not mix old and new batteries or batteries of different types or batteries which have been

4.2 Memory effect of rechargeable batteries

Rechargeable NiMH (Nickel-Metal-Hydrate) batteries are affected by what is known as the "memory effect". This phenomenon is associated with a drastic reduction of battery autonomy and is triggered if 5.3 Transmission and reception the batteries are regularly charged before being fully discharged and/or are not completely recharged. To avoid the memory effect:

- · When possible, recharge the batteries only when they are completely discharged (until the device turns itself off during normal use)
- Do not disconnect the battery charger before the time indicated for a full battery charge.
- · Discharge and recharge your batteries completely at least twice a month. In any case, the best solution for avoiding the memory effect is to use in turn two battery sets: one in use, and the other as a spare set. The memory effect can be easily eliminated by completely discharging/charging the communication (RX [8] displayed).
- The memory effect should not be confused with the normal battery life, which is 300-400 cycles of charge/discharge on average. It is completely normal for operating duty to decrease when the batteries have reached the end of their life; at this point, you will need to substitute the batteries. 5.4 MON button (Monitor)

The Monitor button is for temporarily excluding (opening) the squelch, in order to listen to signals that

With the belt clip you can easily attach the transceiver to your belt. The clip however, must be removed in the communication "chopped" by the squelch. In order to activate the Monitor function, so as to listen to order to install or change the batteries. To remove the belt clip follow the indication of picture 1. To fix the all traffic on the selected channel, keep pressed the MON/SCAN [18] button for about 2 seconds. Keep clip back to the device slot it in the guides at the back of the transceiver until it clicks into place. pressed the button MON/SCAN [18] for about 2 seconds to disable this function.

4.4 Installing/removing the batteries

Replace the battery cover and fix the belt clip.

Remove the batteries:

5.2 Volume control

5.5 Scanning all channels

selecting the channels in rapid sequence. When a signal is detected, the scanning pauses on that channel and you can transmit by pushing PTT [11] . If you press PTT [11] during scanning you can transmit on the channel from which the scanning started. The scroll buttons A/V [19] 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 MON/SCAN [18] to start scanning.

If you want to stop it, press again MON/SCAN [18]. Your transceiver will go back to the channel from which the scanning originally started.

5.6 Display backligh

5.8 Power Save

If there is insufficient light to read the display you can press the MENU [17] button to switch the display

back light on for about 5 seconds. 6.4 VOX function Switching the backlight on the display adds an additional drain on the batteries. Try to make a Midland G7 XT enables hands free conversations through VOX function. The sensitivity of VOX function

moderate use of this can be adjusted in 2 different levels. You can enable VOX function with or without accessories To activate VOX function press the MENU [17] button 4 times in the PMR band and VOX [1] will appear

5.7 Keynad lock Keep pressed CALL/ 121 for about 5 seconds and 131 will be displayed as confirmation. Only PTT

Use the scroll ▲/▼ [19] buttons to select: [11] and CALL/ [12] remain active. To disable this function, keep pressed again CALL/ [12] for 5 • OFF: 1st Level (low sensitivity) seconds approx. 2nd Level (high sensitivity)

The battery power saving feature enables a reduction in the consumption of up to 50%; power saving

comes on automatically when the transceiver does not receive any signal for more than 7 seconds. When the batteries are discharged, the icon = [5] appears on the display; replace the batteries or recharge 6.5 Vibra-Call function the battery pack To activate it follow these steps:

b) Group mode CTCSS: CTCSS tones are access keys that allow you to receive only message

6.MFNU button 6.1 Channel selection

Refer to the table of frequencies of Chapter 9.

Midland G7 XT can receive in two modes:

6.2 CTCSS tones selection

To deactivate CTCSS tones

Everytime Midland G7 XT receives a call, it will vibrate. Press once the MENU [17] button. The number of the channel [4] will start flashing on the display. Press When the Vibracall function is enabled, the call tone won't be heard. the scroll buttons A/V [19] to scroll up or down the PMR and then LPD channels till you select the desired channel. Press the PTT [11] button to confirm, or wait for 5 seconds.

To turn on the transceiver, turn the **VOLUME [10]** knob clockwise until you hear it clicks: the LCD display

Turn the knob VOLUME[10] to about half way and adjust it to a comfortable level as soon as you receive

a signal. If you do not receive a signal you can use the button MON/SCAN [18] described at par. 5.4.

The button **PTT [111]** is located on the top left side of the device. To transmit: a) Open traffic: in this case you will hear any communication transmitted on the selected channel:

- Make sure that no one else is currently talking on the selected channel:
- 2) Keep button PTT [11] firmly pressed: TX [2]will appear on the display: coming from parties using the same channel and code. The speaker will remain muted until the
- 3) Before you start talking wait for a fraction of a second then speak normally, in the direction of the correct CTCSS tone is received. microphone, and hold the device at a distance of about 5 cm
- 4) When you have finished, release the PTT [111; TX [2]will disappear from the display: To activate 1 of 38 different CTCSS tones in RX and TX
- 5) When the radio is in reception mode (PTT [11] not pressed) you will automatically receive any 1 Turn on the radio Select the desired channel.
- During transmission and reception try, as far as possible, to keep the antenna in vertical position and 3. Press twice **MENU [17]** until the Display shows the channel with the CTCSS tone [9] flashing on the to avoid obstacles towards the direction of the other party. right ("of" default condition

are too weak to keep the squelch permanently opened. By excluding the squelch you will avoid listening If you want to operate with no CTCSS code: 1. Press twice the MENU [17] key until the display shows the desired channel and the CTCSS [9] tone Select "of" with ▲/▼ [19] buttons.

Midland G7 XT can automatically search for signals throughout the PMR/LPD bands by scanning, i.e. 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. 6.9 Keypad beep 1) Press the MENU [17] button for 3 times and Pr will be displayed. To deactivate the keypad beep, follow these steps: 1. Press for 8 times the MENU [17] button in the PMR band, until "bP on" is displayed.

 Select L [7] using the scroll buttons A/▼ [19]. 3) Press PTT [11] to confirm, or wait for 5 seconds.

Select the desired CTCSS tone by pushing the A/▼ [19] controls.

5. To confirm the setting, press the PTT [111] key or wait for approximately 5 seconds.

If you want to transmit a longer distance repeat the above procedure to select the high power. At step

6.3 Choosing high or low transmission power (PMR band)

3. Confirm by pushing the PTT [11] or wait for 5 seconds 2 select H [7]. When the batteries are in good conditions, high power is 500mW, whereas low power is Now you won't hear any beep at the pressure of any button

7 TROUBLESHOOTING

Your Midland G7 XT is designed to provide you with years of optimal performance. If for some reason problems arise, refer to this chapter before contacting a service centre in your region. PMR446 channels

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

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

Midland G7 XT is equipped with the "Vibra-Call" feature, which provides a silent alert for incoming calls.

Every time you end transmission (PTT [11] released). Midland G7 XT gives out a sound that indicates to

1. In the PMR band, press the MENU [17] button for 5 times, until the display shows

Use the A/▼ [19] buttons to disable or enable this feature (on: enables, oF: disables):

the other party that s/he can start talking. This function is factory disabled. To activate it:

2) Using the scroll buttons **A**/**▼** [19] select "on" and "rb on" will be displayed:

3) To confirm the roger beep activation, press PTT [11] button or wait for 5 seconds.

If the Vibracall function is activated (See par. 6.5), the call tone won't be heard.

This function allows the monitoring of 2 channels of your choice. Procedure:

1) Press six times the MENU [17] button in the PMR band until the display shows "rb oF":

Now, each time your Midland G7 XT sends out a tone call, it will beep with the selected melody.

Press 9 times the MENU [17] button in the PMR band until the display shows "TX oF RX".

on the display.

6.7 CALL function

To select the call tones:

6.8 Dual Watch function

12] key.

Press PTT [111] to confirm or wait for 5 seconds.

Push PTT [111] to confirm or wait for 5 seconds.

By pushing ▲/▼ [19] you will hear the 5 pre-set melodies.

Select one of the 2 channels you want to monitor

3. Confirm by pressing the PTT [11] key or wait for 5 seconds.

With the ▲/▼ [19] button select the second channel to monitor.

Push the PTT [11] key or wait for 5 seconds for confirmation. To disable the function, press the MON/SCAN [18] button.

Use the A/▼ [19] buttons until the display shows "bP of".

6.6 ROGER BEEP (End transmission tone)

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: LPD channels

.. 1~8 PMR. 1~69 LPD

- 1) Turn off the transceiver
- Remove the batteries for about 60 seconds (Par 4.4)
- 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.

If your transceiver experiences a logical malfunction (improper symbols on the display, blocking of

8 TECHNICAL SPECIFICATIONS

Frequency range	446.00625 ÷ 446.09375MHz (PMR)		
	433.075 ÷ 434.775MHz (LPD)		
Channel spacing	12.5 KHz (PMR); 25 KHz (LPD)		
Power supply	6+/- 10% Vdc		
Temperature	from -20° to +55°C		
Dimensions (w/o batteries)	58 (L)x 122 (H)x34 (D) mm		
Weight (w/o batteries)			
Duty cycle	TX 5%, RX 5%, stand-by 90%		

8.1 Transmitter Output power.

8.2 Receiver

..10 or 500 mW (Selectable) Modulation. Midland G7 XT can send 5 different call tones. To send this audio signal to other users, press the CALL/ Spurious rejection . within European legal terms

1 Push the MENU [17] button 7 times in the PMR band, until the display shows "CA 1"

Adjacent channel rejection ..300mW @ 10% THD Audio output power... 1st :21 4 MHz : 2nd:450 KHz Intermediate frequencies Jack for ext.mike and rechard .. stereo 2.5 mm Jack for ext. speaker ... mono 3 5 mm

Specifications are subject to change without notice.

Sensitivity @ 12dB Sinad.

9 FREQUENCY CHART

1	446.00625	P5	446.05625
2	446.01875	P6	446.06875
3	446.03125	P7	446.08125
4	446.04375	P8	446.09375

Channel

Frequency RX/TX

Frequency RX/TX (MHz)

Frequency RX/T

434.6250 434.6500

434.6750

434.7000 434.7250

Frequency RX/TX (MHz)

4	433.1500	28	433.7500	52	
5	433.1750	29	433.7750	53	
6	433.2000	30	433.8000	54	
7	433.2250	31	433.8250	55	
8	433.2500	32	433.8500	56	
9	433.2750	33	433.8750	57	
10	433.3000	34	433.9000	58	
11	433.3250	35	433.9250	59	
12	433.3500	36	433.9500	60	
13	433.3750	37	433.9750	61	
14	433.4000	38	434.0000	62	
15	433.4250	39	434.0250	63	
16	433.4500	40	434.0500	64	
17	433.4750	41	434.0750	65	
18	433.5000	42	434.1000	66	
19	433.5250	43	434.1250	67	
20	433.5500	44	434.1500	68	
21	433.5750	45	434.1750	69	
22	433.6000	46	434.2000		
23	433.6250	47	434.2250		
24	433.6500	48	434.2500		

of EC Directive 99/05/EC; the declaration of conformity of the device can be consulted onto

www.midlandradio.eu

CTE International herewith declares that the product complies with the essential requirements