

# MIDLAND G5 C

PMR446 TRANSCEIVER

## › USER MANUAL



### Coverage\*



\* Depending on terrain

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PUT YOURSELF IN ACTION

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*Thanks for choosing Midland! Midland G5 C 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 G5 C is a new PMR446 transceiver; small-size and easy to use but complete and reliable at the same time. Besides the many functions usually included in PMR446 radios, G5 C is also equipped with the Baby Sitter mode, to listen to your baby at distance.*

*In this manual you will find the detailed description of the functions supplied with G5 C.*

## Content

- 2 Midland G5 C transceiver
- 6 x AAA rechargeable batteries 800mAh
- 2 beltclips
- 2 wall chargers

## Coverage/range

The maximum range depends on terrain condition and is obtained during use in an open spaces.

The only limitations to maximum possible range are environmental factors such as blockage caused by trees, buildings, or other obstructions. Inside a car or a metallic construction, the range can be reduced.

Normally the coverage in the city, with buildings or other obstructions is about **1 or 2 Km**. In open spaces but with obstructions like trees, leaves or houses the maximum possible range is about **4-6Km**. In open spaces, without obstructions and insight, like for example in mountain, the coverage can be **more than 12Km**.

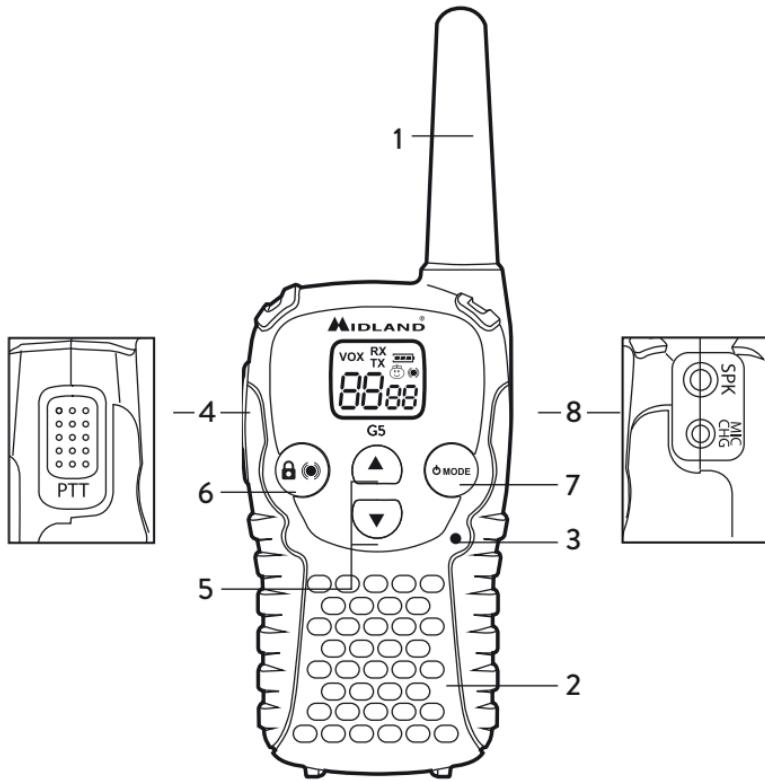
# Description of the controls and functions

## Display



Your midland G5 C 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:

- TX** Appears while you are transmitting a signal (PTT button pressed)
- RX** Means that the radio is receiving a signal.
- 88** Shows the channel selected
- 88** Indicates the selected sub audio tone (of-38).
- VOX** Indicates if VOX MODE is active.
- Shows the battery level.
- Indicates if the Out of Range is active.
- ☺** Indicates that the baby sitting function is on.



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

1. **ANTENNA**
2. **BUILT-IN SPEAKER** - Here is where the speaker is housed.
3. **BUILT-IN MICROPHONE** - Here is where sound is picked up by the microphone.
4. **PTT** (push to talk) Push this button to transmit.
5. **▲▼** use these buttons for changing the settings
6. **>Main menu button** - Pressing this button you can use the Out of range function. If you keep it pressed for about 5 seconds, the keypad lock is activated.
7. **MODE/Ø** - Press this button to enter the radio's menu. If you keep it pressed for about 3 seconds, you turn on/turn off the radio.
8. **EXTERNAL SPEAKER/MIC/CHG JACK** - It allows the connection with external devices such as headsets, microphones, charger...

# Operations and functions

## Power On/power Off

Press and keep pressing the button **Ø** for about 3 seconds. The transceiver will make 3 different beep tones and the display will do an auto scanning for about 1 second. You will visualize on the display the latest used channel.

## Volume adjustment

Use the **▲ ▼** to increase or decrease the volume setting.

## Channel selection

Press the **MODE** button. The number of the channel will start flashing on the display.

Press the scroll buttons **▼ ▲** till you select the desired channel. Press the **PTT** button to confirm, or wait for 5 seconds.

Channel	Freq. RX/TX (Mhz)	Channel	Freq. RX/TX (Mhz)
01	446.00625	05	446.05625
02	446.01875	06	446.06875
03	446.03125	07	446.08125
04	446.04375	08	446.09375

The pre-set channels correspond (as here following) to:

Channel	Channels and CTCSS tones
09	corresponds to channel 0116
10	corresponds to channel 0216
11	corresponds to channel 0316
12	corresponds to channel 0416
13	corresponds to channel 0516
14	corresponds to channel 0616
15	corresponds to channel 0716
16	corresponds to channel 0816
17	corresponds to channel 0131
18	corresponds to channel 0331

<b>19</b>	corresponds to channel 05 31
<b>20</b>	corresponds to channel 07 31
<b>21</b>	corresponds to channel 02 31
<b>22</b>	corresponds to channel 04 31
<b>23</b>	corresponds to channel 06 31
<b>24</b>	corresponds to channel 08 31

### For displaying the channel/sub audio tone

To momentarily display the PMR446 channel and the subaudio tone used in the pre-set channels, go to the desired channel (from 9 to 24) and keep pressed the buttons **▲ ▼** for 5 seconds.

## Transmission and reception

To communicate, all radios in your group must be set on the same channel.

To transmit, press and hold the **PTT** button and speak in a normal voice into the microphone. The “**TX**” icon will appear continuously on the LCD display while transmitting.

You can communicate also using an external accessory or a hand mic, pressing and holding the **PTT** button on the side of the hand mic.

To receive a CALL, release the **PTT** button. The “**RX**” icon will appear on the display when your radio is receiving a transmission.

## Squelch

In MIDLAND G5 C the squelch (filter to suppress noises) is always active.

## Monitor

Press **MODE** and **▲/●** at the same time to open the squelch and allow the reception of weak signals.

## Keypad Lock

Keep pressed the button **▲/●** for about 5 seconds and the lock function will be activated. “**Lc on**” will appear on the display. To disable this function, keep pressed again the button **▲/●** for 5 seconds approx. The display will show “**Lc of**”.

## CTCSS tones

The CTCSS tones are codes that can be added to the channels for creating new private ones. For each channel you can choose until 38 CTCSS. The addition of these codes can be made on the main PMR channels (from 01 to 08). The pre-set channels from 9 to 24 can not be modified.

To select a privacy code for the current channel press twice the **MODE** button, then with the scroll buttons **▲▼** select the desired code. To confirm the selection, press the **PTT** button or wait for 5 seconds.

The selected Privacy Code will appear on the display.

To disable the CTCSS function, select the private code and then press the **MODE** button, until you visualize the flashing CTCSS Privacy Code on the display. Select then “**off**” using the scroll buttons **▲▼**.

To confirm, press **PTT** or wait for 5 seconds.

**Note:** *To communicate with other radios, they must be set to the same channel and Privacy Code selections.*

## CTCSS Tone Table

Number displayed	Tone Frequ.Hz	Number displayed	Tone Frequ.Hz
01	67.0	20	131.8
02	71.9	21	136.5
03	74.4	22	141.3
04	77.0	23	146.2
05	79.7	24	151.4
06	82.5	25	156.7
07	85.4	26	162.2
08	88.5	27	167.9
09	91.5	28	173.8
10	94.8	29	179.9
11	97.4	30	186.2
12	100.0	31	192.8
13	103.5	32	203.5
14	107.2	33	210.7
15	110.9	34	218.1
16	114.8	35	225.7
17	118.8	36	233.6
18	123.0	37	241.8
19	127.3	38	250.3

## Vox

Your **G5 C** has **4 VOX levels** (off, 1, 2, 3, and 4). This function allows the user to activate the communication without pressing the **PTT** button. You just have to speak and the communication is on.

You can set the **VOX** on 3 levels, with or without accessories.

The fourth level activates the **VOX** with **Talkback function**: when one of the two devices transmit for more than 20 seconds, the VOX Talkback stops the transmission for 10 seconds; so the other user has himself the opportunity to talk.

To set the VOX level, press the **MODE** button, until the display shows “**Vo of**” and “**VOX**” flashing in the upper side of the display. After that, with the scroll buttons **▲▼**, select “**1**”, “**2**”, “**3**” or “**4**”.

To confirm, press the **PTT** button or wait for 5 seconds.

To disable the VOX function, follow the previous indications, but select “**oF**” and then push the **PTT** key to confirm.

## Beep Tone

This function permits you to produce a beep tone every time you press a button.

If you want to disable this function, press the **MODE** button until the display shows “**bp on**”, then select by the scroll buttons **▲▼** “**bp of**”. To confirm, press the **PTT** button or wait for 5 seconds.

In this way, all “beeps” and “tones” are disabled.

To re-enable this function, repeat the procedure selecting the “**bp on**” using the scroll buttons **▲▼** and confirm by pressing the **PTT** button or wait for 5 seconds.

## Roger Beep (end of 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 begin to talking. To turn the ROGER BEEP on, press the **MODE** button till the display shows “**rb of**”; then by the scroll buttons **▲▼**, select “**rb on**”.

To confirm, push the **PTT** button or wait for 5 seconds.

To disable this function, repeat the procedure selecting the “**rb of**”.

## Call Alert selection

**G5 C** allows to send a CALL alert signal to all the users of the same channel. To call, quickly press twice the **PTT** button. On the display the “**TX**” icon appears and the tone of confirmation can be heard by your own speaker.

**G5 C** has 3 selectable CALL alerts (oF, 1, 2 and 3).

To select, press the **MODE** button until a “**CA**” icon with the current CALL alert number is displayed.

Use the scroll button **▲▼** to make the CALL alert selections; the radio will emit a corresponding tone for each selection. Note that all this is possible only if the radio is set on “**BP on**”.

To confirm, press the **PTT** button or wait for 5 seconds.

To disable this function repeat this procedure selecting “**CA of**”.

## Dual Watch

The DUAL WATCH function enables users to monitor, only in reception, 2 selected channels for any activity. To turn on the DUAL WATCH function, press the **MODE** button until the display shows “**of-TX/RX**”.

Select the second channel with the scroll buttons **▲▼**. If you also want to select one of the 38 CTCSS tone for the second channel press again the **MODE** button and select with **▲▼** the desired tone.

To confirm press the **PTT** button or wait for 5 seconds.

To turn off the DUAL WATCH function, you can just press the **MODE** button. When the radio will receive a signal on one of the two channels selected, the “DUAL WATCH” function will temporarily stops, allowing the transmission and the reception of the active signal on the channel in use.

**G5 C** will stay in the active channel as long as the signal is present and will resume scanning 5 seconds after the signal is no longer present.

## Out of Range

The **G5 C** is equipped with the “out of range” function: with this feature you can verify if there are some radios within your range.

With the **Midland G5 C** you can choose between the automatic Out of Range or the manual one.

To enable/disable the Out-Of-Range function:

### Automatic Out of Range

Press **MODE** till the display shows “**OU of**”, than select “**OU AU**” (automatic) with the buttons **▲▼**. Confirm the settings with the **PTT** button or wait for 5 seconds. The display will show .

By setting this mode a pair of **G5 C** is transmitting every 60 seconds a data control code. As soon as the contact between both units is getting lost and one station doesn't receive this data control code twice consecutively, the icon “**OU no**” will flash on the display and  will be blinking till the radio goes back within the range.

### Manual Out of range:

Press **MODE** till the display shows “**OU of**”, than select “**OU PB**” (manual) with the buttons **▲▼**. Confirm the settings with the **PTT** button or wait for 5 seconds. The display will show .

To send out a manual call, press the button /.

If the radio is within the range, you will hear a beep tone.

*Note: a radio in reception mode will automatically reply to your call, even though it does not have the manual Out of range enabled.*

**! This function is automatically disabled when the Dual Watch will be activated.**

To disable this function, push **MODE** till “**OU AU**” or “**OU PB**” is displayed; select “**OU of**” (disabled) with the buttons **▲▼**. Confirm your selection by pushing **PTT** or waiting for 5 seconds.

## Baby Sitter function

Your **G5 C** is equipped with the “Baby Sitter” function.

Press the **MODE** button till the display shows “**Bp of**”.

Select with the scroll buttons **▲▼** the baby mode “**b**” or the sitter (parents) mode “**p**”.

To confirm, press the **PTT** button or wait for 5 seconds. The display will show the selected mode and the icon ☺.

The baby channels “**b**” (from b1 to b9) have the VOX with Talkback function activated by default.

This unit set on one of these baby channels, should be placed near the baby; while the one used for listening to the baby should be set on the sitter channels “**p**” (from p1 to p9).

This unit has the automatic Out of Range function activated by default.

In the baby channels you can set the Manual Out of Range and the VOX levels; in addition to these two functions, in the sitter channels you can also set the Automatic Out of Range.

These functions can be selected using the **MODE** button.

In order to have the baby-sitter function properly and correctly activated, the 2 radios should operate on the same frequency band (same channel and same CTCSS tone, see the table below).

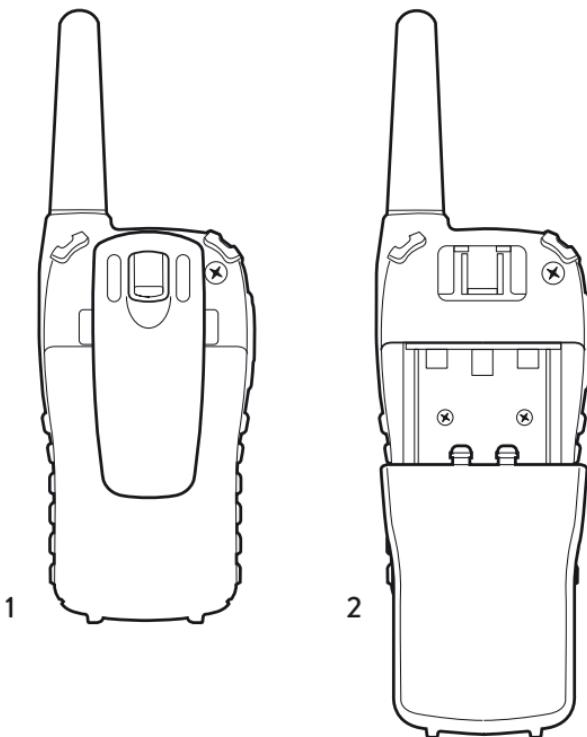
*For example: if the radio place near the baby is set on the channel b1, the other one used for listening to the baby should be set on channel p1.*

To momentarily display the PMR446 channel and the sub-audio tone of the Baby sitter channel, , go to the desired channel and keep pressed the **▲▼** buttons for 5 seconds.

## Canaux Baby Sitter

Channel	Frequency	CTCSS channel	Vox level	Out Of Range	Corresponding channel
b1	446.00625	156.7 (25)	On Lv 4	Of	P1 25
b2	446.01875	156.7 (25)	On Lv 4	Of	P2 25
b3	446.03125	156.7 (25)	On Lv 4	Of	P3 25
b4	446.04375	156.7 (25)	On Lv 4	Of	P4 25
b5	446.05625	156.7 (25)	On Lv 4	Of	P5 25
b6	446.06875	156.7 (25)	On Lv 4	Of	P6 25
b7	446.08125	156.7 (25)	On Lv 4	Of	P7 25
b8	446.09375	156.7 (25)	On Lv 4	Of	P8 25
b9	446.09375	Off	On Lv 4	Of	P8
S1	446.00625	156.7 (25)	Of	OnAU	P1 25
S2	446.01875	156.7 (25)	Of	OnAU	P2 25
S3	446.03125	156.7 (25)	Of	OnAU	P3 25
S4	446.04375	156.7 (25)	Of	OnAU	P4 25
S5	446.05625	156.7 (25)	Of	OnAU	P5 25
S6	446.06875	156.7 (25)	Of	OnAU	P6 25
S7	446.08125	156.7 (25)	Of	OnAU	P7 25
S8	446.09375	156.7 (25)	Of	OnAU	P8 25
S9	446.09375	Off	Of	OnAU	P8

# The battery compartment and the belt clip



## Installing and removing the belt clip:

with the belt clip you can easily attach the transceiver to your belt.

The clip however, must be removed in order to install or change the batteries.  
To remove the belt clip lift the trigger and slide the clip down.

To fix the clip back to the device slot it in the guides at the back of the transceiver until it clicks into place.

## Installation of the batteries:

Remove the belt clip. Insert the AAA Alkaline battery or the rechargeable battery into the battery compartment; replace the battery cover and fix the belt clip.

# Recharging the battery and power save

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.

To recharge the batteries you need to connect the socket of the wall adaptor to a main power socket and insert the jack of the wall adaptor into the charging jack of the **G5 C**. It takes 10/12 hours to fully recharge.

For maximum battery life, we recommend charging the battery pack when the G5 C is off and the low battery icon comes on. When the batteries are discharged, the icon appears  “bt lo” on the display.

## Warnings:

- ! *Do not overcharge the batteries! When these are fully charged the charging process does not stop automatically. Do not forget therefore, to remove the transceiver from the charger as soon as the batteries are charged.*
- ! *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 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. Therefore we recommend to used the wall charger model S0006MV1200020 supplied in this packaging.*
- ! *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.*
- ! *Do not mix old and new batteries or batteries of different types or batteries which have been used in different manners.*

# 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 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 batteries 3 or 4 times.

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.

# Battery level indicator

You can check the battery level thanks to the icon  at the top right of the display.

The greater the number of bars visible, the stronger the battery level will be. When the battery level is low, the battery icon “**bt lo**”  will flash in the display, indicating that your batteries should be replaced or recharged if using a rechargeable battery.

## Use and care

- ! Use a soft damp cloth to clean the radio. Do not use alcohol or cleaning solutions.*
- ! Do not immerse the radio in water.*
- ! Turn off the radio and remove the batteries during long term storage.*

## Warnings

### **! DO NOT OPEN THE RADIO FOR ANY REASON!**

The mechanics and electronics radio precision 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.

## Table of solutions

Problem	Possible cause	Solution
<b>The radio doesn't switch on</b>	The batteries are discharged and/or have not been installed correctly.	Verify that the batteries are charged and that they have been correctly installed.
<b>The radio switches off shortly after it has been switched on</b>	Discharged batteries.	Recharge the batteries if they are rechargeable or change them .
<b>The battery does not recharge</b>	The battery-charger has not been connected or installed correctly.	Inspect the connections of the battery-charger and the installation of the batteries.
<b>The radio switches on but is unable to receive signals</b>	The site of installation is too shielded.	Move to another area.
	The volume is too low	Adjust the volume.
	Incorrect CTCSS	Check that the CTCSS tone corresponds to the one set by the parties you are communicating with.
<b>It is not possible to communicate with other parties</b>	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	Check that the CTCSS tone corresponds to the one set by the parties you are communicating with.

<b>Reception is fragmented and/or disturbed</b>	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.
	The radio has been installed too close to equipment that cause an interference (televisions, computers, etc.)	Increase the distance between the radio and this equipment.
<b>VOX causes the radio to accidentally enable transmission</b>	The sensitivity and/or environmental noise are too high.	Reduce the VOX sensitivity
<b>The VOX feature requires speaking in a loud voice</b>	The sensitivity is too low.	If the environmental noise is not high, increase the sensitivity or use an optional microphone

# Technical specifications

Channels .....	1~8 PMR
Frequency generation .....	PLL synthesizer
Frequency range .....	446.00625 - 446.09375MHz (PMR)
Aerial .....	12.5 KHz
Rated power supply .....	3x 1.2 V 800 mAh (Rechargeable) (model: LR3, NiMH, rechargeable, manufactured by Midland)

**! 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 alkaline or manganese batteries). Batteries which are not suitable to be recharged may leak, explode or even burn and cause damage!**

Operating temperature.....	from -20° to +55°
<b>! while charging, be sure the environmental temperature is lower than 40°C</b>	
Size (without antenna) .....	51 x 31 x 99 mm
Weight (without batteries).....	80 g
Operation cycle (% on 1 h) .....	TX 5%, RX 5%, stand-by 90%
Category .....	B

## Transmitter

Output power (ERP) .....	≤500 mW
Type of circuit.....	FM
Suppression of spurious signals .....	Compliant with ETSI law

## Receiver

Sensitivity at 20dB Sinad.....	<-117dBm
Audio output power (10% THD).....	300mW @ 10% THD
Connection for external microphone and recharge .....	2,5 mm jack stereo
Connector for external speaker .....	3.5 mm jack mono

Specifications are subject to change without notice

## 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.





All articles displaying this symbol on the body, packaging or instruction manual of same, must not be thrown away into normal disposal bins but brought to specialised waste disposal centres. Here, the various materials will be divided by characteristics and recycled, thus making an important contribution to environmental protection.

Prodotto o importato da:

**CTE INTERNATIONAL s.r.l.**

Via. R.Sevardi 7- 42124 Reggio Emilia Italia

[www.cte.it](http://www.cte.it) - [www.midlandeurope.com](http://www.midlandeurope.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](http://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:

**ALAN COMMUNICATIONS, SA**

C/Cobalt, 48 - 08940 Cornellà de Llobregat (Barcelona - España)

[www.midland.es](http://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](http://www.alan-electronics.de)

Die Benutzung dieses Funkgerätes ist von den landesspezifischen Bestimmungen abhängig. Vor Benutzung Bedienungsanleitung beachten.



**MIDLAND®**  
PUT YOURSELF IN ACTION