MIDLAND

38

INSTRUCTIONS

USER MANUAL

Thank you for choosing Midland products!

38,
the multiband CB radio.

38: an audio perfection never achieved via CB.
Take your communication experience to a higher level with 38 CB radio.
Thanks to the advanced filters (ANL, NB, HIC) and to ECHO, VOX functions you will
have an unprecedented audio control, indispensable in very noisy environments.
Besides, you can set a sort of „private channels" through CTCSS / DCS sub-tones for
a safe and secure communication.
Your voice has never been so clear and powerful!

WHAT'S IN THE BOX
- 38 transceiver with power cord
- Microphone
- Mounting bracket
- Fixing screws for the bracket
- Screws to fix the radio to the bracket
- Mike holder

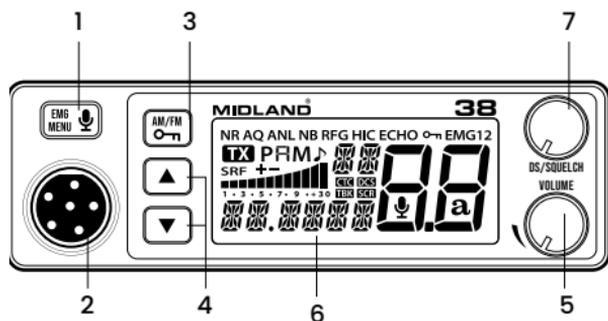If any item is missing, please contact your Midland dealer.

Cautions
38 is an electronic product of exact design and should be treated with care. The suggestions here below will help you to fulfill any warranty obligations and to enjoy this product for many years.
- Do not attempt to 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 been calibrated for maximum performance. Unauthorized opening of the transceiver will void the warranty.
- Do not store the Radio under the sunshine or in hot areas. High temperatures can shorten the life of electronic devices, and warp or melt certain plastics.
- Do not store the radio in dusty and dirty areas.
- Keep the Radio dry. Rainwater or damp will corrode electronic circuits.
- If it appears that the Radio diffuses peculiar smell or smoke, please shut off its power immediately.
- Do not transmit without antenna.
- Do not attempt to configure the transceiver while driving; it is very dangerous.

MAIN FEATURES

- Private channels setting (CTCSS/DCS sub-tones)
- ECHO function
- VOX with noise reduction
- Noise suppression filters (ANL, NB, HIC)
- 12/24V power supply
- 2.5" multi-color LCD display (7 colors)
- Display backlight adjustable in 10 levels
- Noise cancelling in TX/RX
- Roger Beep
- Microphone with UP/DOWN/Priority channels
- Microphone sensitivity adjustable in 9 levels
- Digital squelch
- Talkback function
- 10 levels of TOT (Time Out Timer)
- Dimensions: 12x19x3.5 cm

CONTROLS DESCRIPTION

1. **EMG – MENU:** Push briefly to select the emergency channel EMG1 or EMG2. Keep it pressed to enter the radio menu and its parameters and settings. Press **PTT + EMG** and the display will show the icon (VOX ON)
2. **6 pin microphone connector:** plug-in the microphone and fix it with the supplied screw;
3. **AM/FM:** press briefly to change from AM to FM modulation. Keep pressed to activate/deactivate the keypad lock.
4. **▲/▼:** Short press to change the channels, to move inside the menu of the radio and to select the parameters. Long press fast scrolling channels. if you keep it pressed for more than 7 seconds the scan will be activated.
5. **VOLUME - ON/OFF**
6. **LCD display:** shows all info, functions and parameters selected.
7. **DS-SQUELCH:** this knob allows to eliminate unwanted receiver background noise and to operate in DS (Digital Squelch) mode.
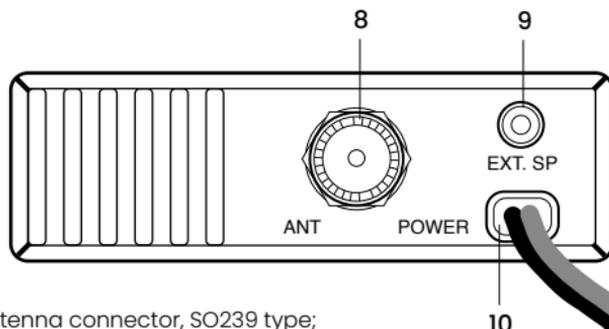
LCD display

A	♪	**I**	**TX**	**Q**	🯰🯰
B	� FM	**J**	AQ	**R**	🎤
C	O━┓	**K**	NR	**S**	**TBK**
D	ECHO	**L**	ANL	**T**	PA
E	RFG	**M**	NB	**U**	**a**
F	**CTC DCS**	**N**	HIC	**V**	∎
G	▁▂▃▄▅▆▇█	**O**	🯰🯰.🯰🯰🯰🯰	**W**	+−
	1 · 3 · 5 · 7 · 9 ·+30				
H	SRF	**P**	EMG12	**X**	🯰🯰

A. **Roger beep function ON**
B. **AM/FM indication**
C. **Keypad lock function ON**
D. **ECHO function ON**
E. **RF GAIN function ON**
F. **CTCSS / DCS indication.** It works only in FM mode. The blinking icon means that the radio is receiving only the carrier (missing CTCSS/DCS tone) and consequently the monitor is closed.
G. **RSSI indication.** It indicates the signal in RX or in TX
H. **SRF: "S"** is shown in RX mode; **"RF"** will be shown in TX mode
I. **TX mode**
J. **AQ** is shown when the DIGITAL SQUELCH is ON
K. **NOISE REDUCTION function** ON. The icon appears in RX and /or in TX modes.
L. **ANL (automatic noise limiter) function** ON, available in AM mode only.
M. **NB (noise blanker filter) function** ON.
N. **HIC filter** on. This is an audio filter, it reduces the high frequency note >2Khz
O. **Frequency channel in use**
P. **EMG1 or EMG2.** When EMG button is pressed the EMG1 or EMG2 will be shown with relative channel number and frequency
Q. **Operating band in use**
R. **VOX function ON**
S. **TBK (talkback) function** ON. during transmission you will be able to hear the modulation quality from the CB's internal loudspeaker
T. **PA function** activated.
U. **ALPHA channels indication.** It is used in EXPORT version only (HF band)
V. **"."** indicates the -5KHz frequency offset in the HF band (export version only)
W. **+−** indicates the frequency deviation of 100KHz. Function usable only for export market in HF/HAM band
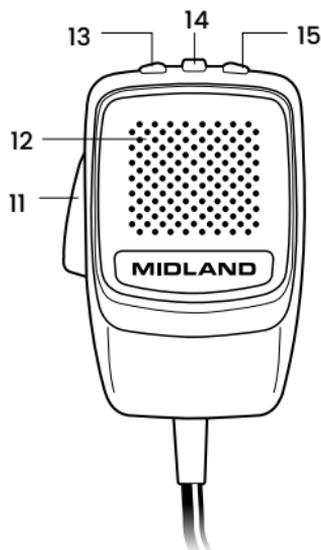X. **Indicates the selected channel number**

Rear panel

8. **ANT:** antenna connector, SO239 type;
9. **EXT SP**: External speaker jack, 3,5mm mono. This jack can also be used when the radio operates in PA mode.
10. **POW**: Power cord (red/black)

Microphone
11. **PTT:** press to transmit
12. **Microphone**
13. ▲: briefly press to change channels forwards. Keep it pressed to skip channels forwards. This button is also used to scroll through the menu settings. if you keep it pressed for more than 7 seconds the scan will be activated.
14. ★ : press to store a channel and to select it again. Press for more than 2 seconds to store a channel: a long beep will confirm your selection. Push briefly to recall the stored channel.
15. ▼: briefly press to change channels downwards. Keep it pressed to skip channels downwards. This button is also used to scroll through the menu settings. if you keep it pressed for more than 7 seconds scan will be activated.

INSTALLING THE RADIO

Mounting bracket

Safety and convenience are the primary considerations for mounting any piece of mobile equipment. All controls must be readily available to the operator without interfering with the movements necessary for safe operation of the vehicle. To install the transceiver select a location that will minimize danger to your passengers and yourself while the vehicle is in motion; the location should be well-ventilated and shielded from direct sunlight.

1. Install the mounting bracket into the vehicle using the supplied screws.
2. Fix the radio onto the bracket using the supplied self-tapping screws and tighten them properly, considering also the strong vibrations undergone by the vehicle.

Power supply

Be sure the transceiver is off.

On the rear of the radio you will see a bi-color power supply cable with a fuse holder on the red cable.

In the direct-voltage power supply, it is very important to observe the polarity even if the unit is protected against the accidental inversion.

Red = positive pole (+); Black = negative pole (-)

The same colors are present on the battery and in the fuse box of the car.

Correctly connect the cable terminal to the battery.

The battery of vehicle must have a nominal capacity of 12 or 24V.

Be sure the battery of the vehicle is able to supply enough power to the radio.

Connect the DC power cable to the regulated DC power supply and ensure that the polarities are correct.

Replacing fuses

If the fuse blows, try to find a cause before replacing it. If necessary, contact a service center for assistance.

The fuse on the rear of the radio has a current rating of 5A.

$$\boxed{F5A\ 250V\ +\ \dashv\backsim\frown\vdash}$$

Connecting the microphone

Plug-in the supplied microphone to the proper 6 pin connector on the front panel of the radio. For a better use of the microphone, you can also fix on the vehicle the supplied mike holder.

Installing an antenna

- Mount the antenna in the highest part of the vehicle, possibly on a metal surface. A sufficiently large metal surface is essential for a good performance of the antenna.
- The longer is the antenna, the better will be the performance.
- If possible, mount the antenna in the centre of the surface.
- Keep the antenna cable away from noise sources, such as the ignition switch, gauges, etc.
- Prevent cable damage during antenna installation.

Attention: To prevent damage, never operate your radio without connecting a proper antenna. A periodical control of the cable and of the S.W.R. is recommended.

External speakers

If you use external speakers, the impedance must be 8 Ω. The external speaker jack accepts a 3.5mm mono plug and must be connected to the 'EXP SP' plug on the rear side of the radio. The same plug will be used when the PA function is activated.

MAIN OPERATIONS

Turning on and off

Turn **VOLUME control** clockwise to switch on the unit. Turn the knob clockwise a little more to set the audio level, until you get a comfortable reception. With "*PA*" function ON, the knob controls the audio output level.

Channel selection

Press ▲/▼ to select the desired channel.
Channels can be selected by pressing shortly or long the ▲/▼ controls of the microphone or ▲/▼ buttons in the front panel.

SQ Squelch adjustment

Turn the **squelch knob** clockwise to manually set the desired level.

DS Squelch adjustment (digital squelch)

Turn the **squelch knob** fully counterclockwise. when the digital squelch function is activated the display will show the indication *AQ*.

Selecting AM/FM modulation

Press **AM/FM button**; the selected modulation will be shown in the display.

Keypad lock

To prevent accidental pressure of any key or changing channel, the keypad can be locked.
Keep press more then two seconds **O–n**.

Emergency channel 9/19

Press briefly **EMG – MENU** for a quick selection of the emergency channel 9; push it again to select the emergency channel 19. To return to the channel in use push **EMG – MENU** again.

VOX

To activate the VOX function, press the PTT and the **EMG – MENU key**. The 🎤 icon will appear on the display indicating that the function has been activated. now you can use your 38 in transmission without the aid of the hands.
Note: VOX mode works with the squelch closed. the open squelch inhibits transmission and is indicated by the flashing of the channel in use.

Channel priority

Press the middle key ★ of the microphone to recall the priority channel.
To store the priority channel:
- select the desired channel that you want to set as priority channel
- hold down the central button ★ on the microphone for two seconds. a long beep will tell you that the channel has been set

Selecting the frequency band

38 is a multi standard CB radio that can be used in many countries.
According to the country where you are operating, you have to select the proper and allowed frequency band.
Here below the chart indicating the frequency bands included in 38:

Band	Channels	Frequency	Mode	Power
EU	40CH	26.965-27.405MHz	AM/FM	
CE	40CH	26.965-27.405MHz	FM	
U	UE: 40CH	26.965-27.405MHz	AM/FM	
	UK: 40CH	27.60125-27.99125MHz	FM	
PL	40CH	26.960-27.400MHz	AM/FM	FM/AM 4W
I2	36CH	26.965-26.865MHz	AM/FM	
DE	80CH	40CH: 26.965-27.405MHz	AM/FM	
		80CH: 26.565-26.955MHz	FM	
IN	27CH	26.965-275MHz	AM/FM	

To select the desired frequency band follow this procedure:
1. 1. Switch off the radio;
2. Keep pressed **EMG – MENU button** and turn the radio on;
3. Release the keys when the display will show current band indication in use
4. Use ▲/▼ to select the desired band. To confirm turn the radio off and then back on.

Functions and parameters setting

The menu allows to customize the functions and parameters of the radio.
Press **EMG - MENU** for more than 2 seconds; the radio enter inside menu and you have the possibility to customize your CB on following items:

Display indication	Default setting	Description
COLOR	*bl*	seven colors available: orange, green, blue, cyan, yellow, purple, white
BRIGHT	*9*	backlight intensity adjustable to 10 levels
KEY.BP	*on*	keyboard tone activation / deactivation
ROG BP	*of*	Roger beep end of transmission - 6 tones available
DS.SET	*1*	Digital Squelch level adjustment. three levels available. level 1 = low, level 2 = +3dB, level 3 = +6dB
MIC GAIN	*9*	9-level adjustable microphone gain
MIC TP	*EL*	Chose type of mike electrect or dynamic
SC TYPE	*S9*	two options available: tl = scan stops on busy channel for 10 seconds, then resumes S9 = scan stops on busy channel for as long as the received signal is present
VOX L	*4*	VOX sensitivity. 9 levels available
VOX T	*2*	Delay VOX. This is a time to back in RX end of talking
TALBAK	*Of*	self listening: adjustable on 9 levels. lets you hear your own modulation during the transmission phase. levels adjust the volume level
TOT SET	*of*	Timer timeout. Maximum time in transmission
ANL	*Of*	Automatic Noise Limiter for the impulsive noises (caused by the engine of the car or other sources).
NB	*Of*	Noise Blanker filter. To prevent interferences, this filter blocks the signal at every pulse of high peak energy, such as the car ignition noise for example.
HI-CUT	*Of*	audio filter that attenuates frequencies other than they are typically the ones that make it annoying listening while receiving interference in the audio band
RX NR	*Of*	RX noise reduction filter. adjustable to 9 levels. is a digital filter that cleans the received audio. The higher the selected level the higher it is the ability to filter, which, however, could make the voice of the less faithful interlocutor.

TX NR	*Of*	TX noise reduction filter. adjustable to 9 levels is a digital filter that cleans the transmitted audio. The higher the selected level the higher it is the ability to filter, which, however, could make the least faithful voice. typically used in noisy environments
VOX NR	*Of*	Noise reduction filter in VOX mode.
ECHO	*Of*	ECHO function activation / deactivation
ECHO L	*15*	length of the ECHO effect
ECHO T	*15*	ECHO effect duration
RF GAIN	*of*	it controls the reception sensitivity. To increase sensitivity, simply set it OFF. Sensitivity decreases set it max value (48). Low sensitivity is useful when very strong signals are receiving.
CDTSET	*of*	setting of CTCSS/DCS tones in TX and RX
EMG1	*9*	Set channel for emergency 1
EMG2	*19*	Set channel for emergency 2
RESET	*AL*	Reset radio

Additional Functions and parameters setting in the MENU for export version:

Display indication	Default setting	Description
RF POW	*Lo*	medium (nI), low (Lo), high (HI) power (FM); low (Lo), high (HI) power (AM)
REPSET	*of*	shift repeater function. allows you to transmit with shift frequency + or - 100Khz with respect to the selected channel
B-NAME		You can change the name of the usage band. only HAM mode or HF mode

TECHNICAL SPECIFICATIONS

Channels	see frequency band chart
Frequency band****	26.565-27.99125 MHz FM (RX/TX) 26.965-27.405 MHz AM (RX/TX)
Power supply	12/24V
Current consumption	<2A
Operating temperature	-10ºC to + 55ºC
Antenna connector	UHF, SO239
Output power	4W
Modulation	A3E (AM), F3E (FM),
Max frequency deviation (FM)	≤ 1,9KHz
Spurious emissions	< -54dBm
Adjacent channel power	< 20 uW
Frequency stability	±5.0 ppm
Rx sensitivity @12dB SINAD	< 1uV
Audio output power	≥ 3W (8 Ohm)
Adjacent channel rejection	better than 60 dB
Frequency response	300-3000Hz
Dimensions	120x35x190mm (LxHxD)
Weight (mike included)	840g

**** covering all approved EU frequency bands
Specifications are subject to change without notice.