MIDLAND

D10

INSTRUCTIONS

MANUALE D'USO

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About this guide
The content in this document is for information purpose and is subject to change without prior notice. We made every effort to ensure that this User Guide is accurate and complete. However, no liability is assumed for any errors and omissions that may have occurred.
The manufacturer reserves the right to change the technical specifications without prior notice.

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D10
PMR446 DMR446

Thank you for choosing Midland products!

The **D10** is a digital transceiver that can be used without license all over Europe. Midland **D10** is a PMR446 DMR446 transceiver with multiple functionalities, practical and functional.
D10 incorporates a wide range of innovative features in a compact design that fits comfortably in your hand. It is extraordinarily intuitive to use.
It supports both analog and digital modes. You can easily switch between the two, making it ideal for use with a mixed fleet of devices.

Index

Package Contents

- 1 **D10** transceiver
- 1 belt clip
- 1 USB-A/USB-C charging and programming cable
- 1 rechargeable Li-ion battery pack (2600mAh)
- 1 desktop charger

Main Features

- Frequency 446/446.2 MHz
- 256 channels split in 16 zones
- Crystal clear voice communication
- Distance up to 14km in digital mode (in optimal conditions)
- Li-Ion battery pack 7,4 V, 2600 mAh
- Digital battery life up to 50 hrs
- IP54 protection grade
- Voice announcement
- Customizable 50 CTCSS tones (analogic band)
- DCS codes: 116 "N" + 116 "I" (analogic band)
- 11 pre-set and customizable Scrambler codes 1,3 K-4,1 K (analogic band)
- Auto power save

Programming Software (optional)

With the PRG10 programming software, available for download from our website, you can enhance your radio's performance or minimize functions by disabling certain default features (e.g., assigning different functions to the two side buttons and customizing analog and digital channels).
The optional programming software includes some explanations (only in English) that will help you program the radio .
Any attempt to change the frequency or power of the device will void its certification.

Coverage/Range

The performance of transceivers depends on environmental and weather conditions. Factors such as terrain, buildings, trees, and foliage can reduce coverage. Optimal performance is achieved in open areas, whereas range may be reduced inside vehicles or buildings. Typical urban coverage, in the presence of buildings, is **1-2 km**. In open areas with trees, houses, or foliage, coverage is **4-6 km**.
In completely open areas with no interference, such as mountains, coverage can exceed **14 km** (in digital mode).

Radio Parts Description

1. **Antenna**
2. **Encoder:** Rotate clockwise or counterclockwise to select the desired channel.
3. **Power/Volume Knob (PWR/VOL)**: Turn clockwise to power on and increase the volume; turn counterclockwise to power off and decrease the volume.
4. **Speaker**
5. **Microphone**
6. **LED Indicator**: Red - Transmitting; Green - Receiving analog channels.
7. **PTT (Push-To-Talk):** Press to transmit, release to receive.
8. **Function Button 1:** *Short press* for battery level voice indication (low - medium - high); *1-second press* to switch to the next zone.
9. **Function Button 2:** *Short press* to open Squelch (Analog mode); *1-second press* to switch to the previous zone.
10. **Microphone/Speaker/USB-C Port:** For connecting a microphone or speaker or for charging/programming via USB-A/USB-C cable. When not in use, cover the port with the rubber cap to prevent water infiltration.

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PTT

D10
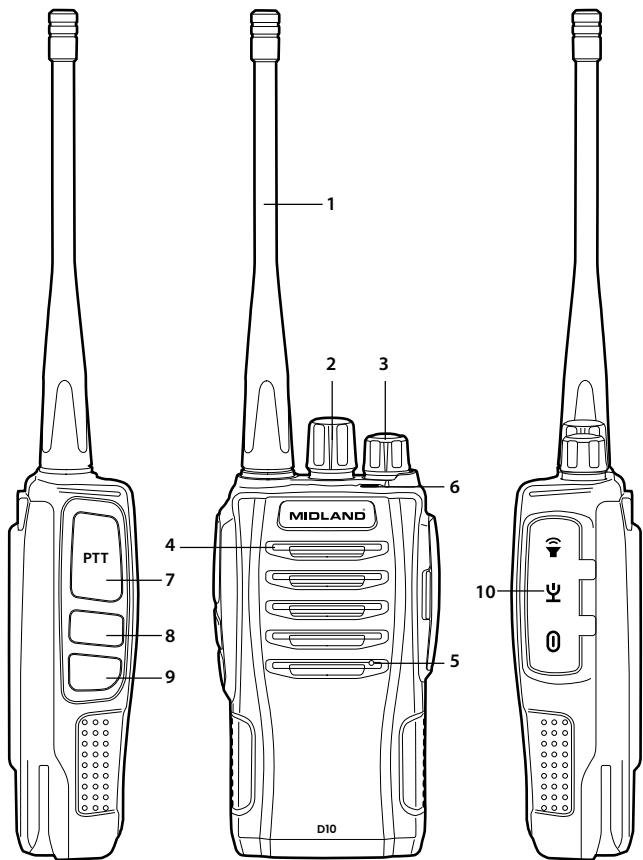
Functions

Power On/Off and Volume Adjustment

Turn the **PWR/VOL** knob clockwise to turn on the radio.
Once **D10** is turned on, adjust the volume by turning the knob clockwise/counter-clockwise.
Turn the knob fully counterclockwise until a "click" is heard to turn off the radio.

Transmitting

All radios must be set to the same channel to communicate.
Analog Channels: Briefly press **Function 2 key**; thanks to the **"SQ-Cancel"** function you can check if the channel is free, then press the **PTT** button.
Speak into the microphone at a normal volume.
Release the **PTT** button to receive.

In radio communications, only one user can speak at a time. For this reason, do not transmit while receiving a communication (the other party cannot hear you) and keep your transmissions as short as possible to allow others to talk. Transmission is the phase that has the highest battery consumption. Therefore, try to minimize transmission time to extend operational autonomy.

*If you are unable to talk to a station even though you are receiving it clearly, it is possible that the station is using CTCSS tones or DCS codes in **analog channels**. In **digital channels**, make sure that the same parameters, such as "color code" and "radio ID," are set (via programming software).*

Monitor

Only in the analog channels, the **Monitor** function disables the automatic squelch to receive weak signals that might otherwise be lost. Press **Function Button 2** to activate it.

Squelch (Analog Channels Only)

Squelch eliminates background noise in the channel in use and allows the reception of weak signals. **D10** has 5 squelch levels (1 = most sensitive, 5 = least sensitive). The default level is 1. Adjustments can be made via programming software.
Setting a too high level may block weak signals while a too low level may allow noise interference.

The squelch adjustment must be absolutely done in absence of received signals.

Battery Pack Charging

The **D10** comes with a 7.4V Li-ion rechargeable battery pack, which can be charged by placing the device into the desktop charger. The recharge can be also done by connecting the supplied USB-A/USB-C cable to the USB-C port of the radio, which

is under the rubber protectio. To recharge the 2600mAh battery pack takes about 2h/2h30", but this however depends on the type of charger connected to the USB-C cable and the battery level. For optimal performance, charge the battery when the radio is off and only when it is completely discharged.

Using a non-original charger may damage the device or cause explosions and injuries.

The **AUTO POWER SAVE** function reduces power consumption. If no signal is received for more than 5 seconds, the radio enters "Power Save" mode, minimizing functionality to conserve battery life. This function can only be disabled via software.

Precautions

D10 has been designed to give you safe and reliable performance over the years. As for all electronic devices, there are some precautions that we recommend you follow:

- Do not attempt to open the radio; you could cause damages and therefore void the warranty
- Do not expose the device to hot temperatures and do not leave it in dusty environments
- Do not get the device wet. Moisture can corrode electrical circuits
- If it appears that the radio diffuses peculiar smell or smoke, please shut off its power immediately and remove the battery from the radio
- Do not transmit without antenna
- To reset the unit to factory settings: turn on the radio by keeping pressed **Function key 1** and **PTT**.

Technical Specifications

General	
Frequency	446.0 – 446.2 MHz
Programmable channels	256
Zones	16
Channel spacing	12.5KHz
Battery capacity	4V 2600mAh
Battery life (5/5/90)	Analogic: up to 40hrs- Digital: up to 50hrs
Frerquency stability	±1.5PPM
Operating temperature	-20/+55° C
Store temperature	-40/+85° C
Protection grade	IP54
Weight	253g
Dimensions	118x60x35mm (battery excluded)
Receiver	
Sensitivity (analogic)	≤0.25uV@12dB SINAD
Sensitivity (digital)	≤0.25uV@5% BER
Adjacent channel selectivity	≥60dB@12.5KHz
Blocking	84dB
Audio output power:	1W / 16 Ω
Audio distortion	≤3%
Spurious rejection	< -57dBm
Signal/noise ratio	≥40dB@12.5KHz
Transmitter	
Output power	≤0.5W (ERP)
Analogic FM modulation	11KQF3E@12.5KHz
Digital modulation	4FSK 12.5KHz (data+voice) 7K6ΦFXW
Conducted/irradiated emissions	-36dBm <1GHz, -30dBm >1GHz
Adjacent channel power	≤60dB@12.5KHz

Channel Zone Chart

ZONES 1 = ANALOGIC

No.	RX frequency	TX frequency	Channel type
1	446.00625	446.00625	A-Analogico
2	446.01875	446.01875	A-Analogico
3	446.03125	446.03125	A-Analogico
4	446.04375	446.04375	A-Analogico
5	446.05625	446.05625	A-Analogico
6	446.06875	446.06875	A-Analogico
7	446.08125	446.08125	A-Analogico
8	446.09375	446.09375	A-Analogico
9	446.10625	446.10625	A-Analogico
10	446.11875	446.11875	A-Analogico
11	446.13125	446.13125	A-Analogico
12	446.14375	446.14375	A-Analogico
13	446.15625	446.15625	A-Analogico
14	446.16875	446.16875	A-Analogico
15	446.18125	446.18125	A-Analogico
16	446.19375	446.19375	A-Analogico

ZONE 2 = DIGITAL

No.	RX frequency	TX frequency	Channel type
17	446.00625	446.00625	D-Digitale
18	446.01875	446.01875	D-Digitale
19	446.03125	446.03125	D-Digitale
20	446.04375	446.04375	D-Digitale
21	446.05625	446.05625	D-Digitale
22	446.06875	446.06875	D-Digitale
23	446.08125	446.08125	D-Digitale
24	446.09375	446.09375	D-Digitale
25	446.10625	446.10625	D-Digitale
26	446.11875	446.11875	D-Digitale
27	446.13125	446.13125	D-Digitale
28	446.14375	446.14375	D-Digitale

29	446.15625	446.15625	D-Digitale
30	446.16875	446.16875	D-Digitale
31	446.18125	446.18125	D-Digitale
32	446.19375	446.19375	D-Digitale

Troubleshooting

Problem	Possible cause	Solution
The radio does not turn on	Battery pack discharged and/or not installed correctly	Check that the battery pack is charged and installed correctly
The radio turns off immediately after turning on	Battery pack discharged	Charge the battery pack
The battery pack does not charge	Charger not properly connected or battery pack not installed correctly	Check the charger connection and battery installation
The radio turns on but does not receive signals	The radio is located in a too-shielded area	Move to a more open location
	Volume level too low	Adjust the volume level
	Incorrect CTCSS or DCS for ANALOG mode; for DIGITAL mode, check "color code" and "radio ID"	Ensure that the CTCSS or DCS tone is the same as the one set by the other correspondents
Unable to contact the counterpart	Incorrect radio channel selection	Select the same radio channel as the counterpart
	The radio is located in a shielded area or too far from the counterpart	Move to a more favorable location
	Incorrect CTCSS or DCS for ANALOG mode; for DIGITAL mode, check "color code" and "radio ID"	Ensure that the CTCSS or DCS tone is the same as the one set by the other correspondents

Problem	Possible cause	Solution
Reception is choppy and/or disturbed	Extremely weak signal	Try temporarily disabling the analog Squelch
	The counterpart is too far away and/or the transceiver is shielded by obstacles in the direction of the counterpart	Move closer to the counterpart and relocate to a more favorable position
	Other users are using the same radio channel	Check the radio traffic on the channel using the SQ Cancel function and change the channel if necessary
	The radio is too close to interfering devices (TVs, computers, etc.)	Move the radio away from interfering devices
Battery pack life is short	Excessive use of transmission	Try to reduce transmission time and/or use low power mode