



Communication Solutions When It Matters

AIR Free-446 Portable Licence Free Radio Specification Sheet

It is that simple and tough.
Designed for fast-paced industries.



Durable and Water-resistant

With polycarbonate housing and aluminum die-cast chassis, the Free-446 is built for greater protection. And thanks to its sealed case, it offers reliable performance in severe weather and environments.

Extreme Long Battery Life

The full 1,800 mA Li-ion battery pack makes 34 hours working time for greater productivity when the battery save feature is ON.

Easy-To-Use

Thanks to the tough and textured buttons, chunky rotary channel, volume knobs and tricolor status LED. In addition, two programmable buttons can be set to give immediate access to the four most often-used features, making communication even simpler.

Talking Compatibility

As it's possible to pick frequency and CTCSS/DCS privacy codes channel settings, the radio can operate on the same channels with the same coded squelch tones as other business radio brands. So purchasing the Free-446 will not impact on any previous investments in radio equipment.

Compatible Accessories

Compatible with existing original Motorola accessories, thus save your investment.

Quality Audio

750 mW audio power output and unique audio box structure design make Free-446 providing clear crystal audio and ideal for a noisy environment.

The Free-446 is equipped with a large speaker offering a full audio output, while tailored response characteristics provide optimum clarity even in noisy environments.

16 Channels Capacity

Lock out interference and annoying breakthrough from other stations on the same channels by choosing from one of 44 CTCSS tones (6 CTCSS tones could be customized by the users) or from one of 174 DCS codes (6 DCS codes could be customized by the users) on one of the 8 preprogrammed RF channels in the PMR446 allocated frequency range. Up to 16 different channels with privacy code sequences can be programmed into the radio.

Programmable Function Side Buttons with Hold

The side buttons can be programmed for enhanced operating ease, while the adjustable Hold feature doubles the number of functions at your fingertips.





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Standard Package Includes:

- 1pcs S446 Radio
- 1pcs Li-ion Battery Pack P/N: BP-S1X
- 1pcs AC Adapter P/N: NLA050120W1U4
- 1pcs Desktop Charger P/N: DC-S1X
- 1pcs Belt Clip P/N: BC-S1X
- 1pcs User Guide



Optional Accessories List

Heavy-duty Remote Speaker Microphone
P/N: RSM-2X



Compact Remote Speaker Microphone
P/N: RSM-1X



Split-wire Earpiece with PTT & Air Tube
P/N: EP-2X



Split-wire Earpiece with PTT
P/N: EP-1X



Cloning Cable P/N: CC-S1X



Programming Kit P/N: PK-S1X





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General Specification

Frequency Range	446.00625 - 446.09375 MHz (8 PMR446 frequencies)
Channel Capacity	16 Channels
Channel Bandwidth	12.5 kHz
Operating Voltage	7.4 V DC
Dimensions	130 x 53 x 32 mm
Weight with battery	240 g

Transmitter

RF Output	0.5 Watts
Frequency Stability	< 1.5 ppm
Spurious & Harmonics	-36 dBm for $f < 1\text{GHz}$, -30 dBm for $f > 1\text{GHz}$
FM Hum & Noise	-45 dB
Modulation Deviation	2.5 kHz
Adjacent Channel Power	70 dBc
Audio Frequency Response	+1 ~ -3 dB (0.3 - 3kHz)
Audio Distortion	< 3%

Receiver

Sensitivity (12 dB SINAD)	-122 dBm (0.18 μV)
Adjacent Channel Selectivity	70 dB
Audio Distortion	< 5%
Radiated Spurious Emissions	< -54 dBm
Intermodulation Rejection	70 dB
Audio Output @ < 3% Distortion	750 mW @ 8 ohms

Military Standard - MIL 810 G / Environmental Test

Low Pressure	500.5 / Procedure 1
High & Low Temperature	501.5 / Procedure 1,2
Temperature Shock	503.5 / Procedure 1
Solar Radiation	505.5 / Procedure 1
Rain	506.5 / Procedure 1
Humidity	507.5 / Procedure 3
Dust	510.5 / Procedure 1
Vibration	514.6 / Procedure 1
Shock	516.5 / Procedure 1
Sealing	IP55

Specifications subject to change without notice.