

Mag One BPR 50dX

portable two-way radio

Built for the fast-paced
world of business

The Mag One BPR 50dX is a versatile and high-performing device for your business workforce. Whether managing a retail store, coordinating events or overseeing campus activity, the BPR 50dX connects your team with static-free, reliable communication – in a world where every second counts.



→ Take control

A radio this versatile should be able to keep up. With 23 hours of talk time, your radio should last an entire shift and then some. But just in case, the USB-C port also lets you charge your radio with an ordinary USB charger.

→ Listen up

With its 3-watt maximum audio power output, the BPR 50dX is the loudest radio in the Mag One family. Noise cancellation means clear audio, even in a noisy environment.

→ Stay safe

With features like a dedicated emergency button, Lone Worker and remote monitoring, the BPR 50dX helps protect you and your staff.



Ready to work

A connected workforce makes for smooth operations; with improved range performance, your team enjoys clear communication across a wide expanse. And at IP55, the BPR 50dX can handle the wear-and-tear of a high-energy workday.

Product Features

GENERAL

Analog and digital

DMR standards compliant¹

64 channels

USB-C (charging and programming)

3 programmable buttons

Voice announcements

Custom channel announcements

Dual priority scan

Nuisance channel delete

Voice operation transmission (VOX)

IP55 dust and water ingress protection

Rugged to MIL-STD 810

AUDIO

Enhanced audio power

Noise cancellation

SAFETY

Emergency alert¹

Lone worker¹

Remote monitor

Radio disable / enable

SYSTEM

Dual-capacity direct mode¹

ANALOG FEATURES

Analog scrambling

¹ Digital feature



Specifications

| GENERAL SPECIFICATIONS | | |
|---|---|------------------------------|
| BAND | UHF | VHF |
| FREQUENCY | 400 - 470 MHz | 136 - 174 MHz |
| Typical RF output | | |
| High power | 4 W | 5 W |
| Medium power | | 2.5 W |
| Low Power | | 1 W |
| Channel capacity | | 64 channels |
| Channel spacing | | 12.5 / 25.0 kHz ¹ |
| Dimension ² (H x W x D) with battery | 4.8 x 2.1 x 1.2 inches (122 x 54 x 30 mm) | |
| Weight with battery, antenna, belt clip | 10.6 oz (300 g) | |
| Battery life ³ (analog / digital) | 16 hours / 23 hours | |
| Power supply (Nominal) | 7.2 V | |

| TRANSMITTER SPECIFICATIONS | |
|---|---|
| 4FSK digital modulation | 12.5 kHz Data: 7K60F1D and 7K60FXD 12.5 kHz Voice: 7K60F1E and 7K60FXE Combination: 7K60F1W |
| Digital protocol | ETSI TS 102 361-1, -2, -3 |
| Conducted / radiated spurious emissions (TIA603E) | < -36 dBm for < 1 GHz ; < -30 dBm for > 1 GHz |
| Adjacent channel power | > 60 dB @ 12.5 kHz / >70 dB @ 25 kHz |
| Frequency stability | ± 1.5 ppm |
| Modulation limiting | ± 2.5 kHz @ 12.5 kHz / ± 5.0 kHz @ 25 kHz |

| RECEIVER SPECIFICATIONS | |
|---|---|
| Analog sensitivity (12dB SINAD) | 0.18 µV (typical) |
| Digital sensitivity (5% BER) | 0.18 µV (typical) |
| Conducted / radiated spurious emissions (TIA603E) | < -57 dBm for < 1 GHz ; < -47 dBm for > 1 GHz |
| Intermodulation (TIA603E) | > 65 dB |
| Adjacent channel selectivity (TIA603A)-1T | > 60 dB @ 12.5 kHz / > 70 dB @ 25 kHz |
| Spurious Rejection (TIA603D) | > 70 dB |
| Frequency stability | ± 1.5 ppm |

| AUDIO SPECIFICATIONS | |
|----------------------------------|-------------------------------------|
| Digital vocoder type | AMBE+2 |
| Audio output power (Rated / Max) | 1 W / 3 W |
| Audio distortion at rated power | 3% (typical) |
| Hum and noise | -40 dB @ 12.5 kHz / -45 dB @ 25 kHz |

¹ 25 kHz channels not available in USA

² Dimensions at grip area

³ Typical battery life, 5/5/90 profile at maximum transmitter power. Actual observed runtimes may vary.

⁴ Temperature listed are for radio specification.

Li-Ion battery discharge: -4°F to 140°F (-20°C to +60°C).

| ENVIRONMENTAL SPECIFICATIONS | |
|------------------------------------|-------------------------------------|
| Operating temperature ⁴ | -22°F to 140°F (-30°C to +60°C) |
| Storage temperature | -40°F to 185°F (-40 °C to 85 °C) |
| Temperature shock | Per MIL-STD 810C, D, E, F, G, H |
| Humidity | Per MIL-STD 810C, D, E, F, G, H |
| Electrostatic discharge | IEC 61000-4-2 Level 4 |
| Dust and water intrusion | IEC60529 IP55 |
| Salt fog | Per MIL-STD 810C, D, E, F, G, H |



MILITARY STANDARDS (MIL-STD 810)

| MIL-STD 810C | | MIL-STD 810D | | MIL-STD 810E | | MIL-STD 810F | | MIL-STD 810G | | MIL-STD 810H | |
|-------------------------|-----------------|-------------------|-----------|-------------------|-----------|---------------------|-----------|---------------------|-----------|---------------------|-----------|
| METHOD | PROCEDURE | METHOD | PROCEDURE | METHOD | PROCEDURE | METHOD | PROCEDURE | METHOD | PROCEDURE | METHOD | PROCEDURE |
| Low Pressure | 500.1 I | 500.2 II | | 500.3 II | | 500.4 II | | 500.6 II | | 500.6 II | |
| High Temperature | 501.1 I, II | 501.2 I/A1, II/A1 | | 501.3 I/A1, II/A1 | | 501.4 I/HOT, II/HOT | | 501.5 I/A1, II/A2 | | 501.7 I/A1, II/A1 | |
| Low Temperature | 502.1 I | 502.2 I, II | | 502.3 I, II | | 502.4 I, II | | 502.5 I, II | | 502.7 I, II | |
| Temperature Shock | 503.1 I | 503.2 A1/C3 | | 503.3 A1/C3 | | 503.4 I | | 503.5 I/C | | 503.7 I/C | |
| Solar Radiation | 505.1 II | 505.2 I/A1 | | 505.3 I/A1 | | 505.4 I/A1 | | 505.5 I/A1 | | 505.7 I/A1 | |
| Rain | 506.1 I, II | 506.2 I, II | | 506.3 I, II | | 506.4 I, III | | 506.5 I, III | | 506.6 I, III | |
| Humidity | 507.1 II | 507.2 II | | 507.3 II | | 507.4 – | | 507.5 II/Aggravated | | 507.6 II/Aggravated | |
| Salt Fog | 509.1 I | 509.2 I | | 509.3 I | | 509.4 – | | 509.5 – | | 509.7 – | |
| Blowing Dust & Sand | 510.1 I/- | 510.2 I, II | | 510.3 I, II | | 510.4 I, II | | 510.6 I, II | | 510.7 I, II | |
| Vibration | 514.2 VIII/F, W | 514.3 I/10, II/3 | | 514.4 I/10, II/3 | | 514.5 I/24, II/5 | | 514.6 I/24, II/5 | | 514.8 I/24, II/5 | |
| Shock | 516.2 I, II | 516.3 I, IV | | 516.4 I, IV | | 516.5 I, IV | | 516.7 I, IV | | 516.8 I, IV | |
| Contamination by Fluids | | | | | | | | 504.2 II | | 504.3 2.2.6 b | |

To learn more, visit: motorolasolutions.com/bpr50dx



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