# DEP™450 PORTABLE RADIO

## YOU'RE SIMPLY MORE EFFICIENT


You want to connect your workforce as efficiently as possible. You expect your radios to be affordable but flexible, so they can evolve with you. Now there's a portable that gives you great voice communications today, and a path to crisp and clear digital voice communications when you're ready.

The rugged DEP™450 is the digital radio that offers all the benefits of the latest technology – from superior audio to greater coverage to longer battery life. This affordable portable is compatible with advanced business-essential features. For example, a transmission can be interrupted to prioritise critical communications.

Now you can improve the efficiency of your operation with easy-to-use voice communication that's right for you.

### FEATURES

- Dual Capacity Direct Mode
- Digital Mobile Radio (DMR) Standards Compliant
- IP54 Rated
- 16 Channels
- 2 Programmable Buttons
- Dedicated RX Channel
- Internal Voice Operated Transmission (VOX)
- Time-Out Timer
- Repeater / Talkaround
- Dual Priority Scan

### OPTIONS

- Radio Management Suite
- Transmit Interrupt (decode only)

SIMPLE VOICE COMMUNICATIONS
FOR THE EVERYDAY USER WHO WANTS TO STAY CONNECTED

## CONNECT AND COORDINATE CREWS

When you need a simple, reliable, cost-effective communication solution to help multiple work crews connect, coordinate and collaborate, DEP 450 two-way portable radios are made to get the job done right. With their easy-to-use ergonomics and crisp, clear audio, now your teams can work more efficiently.

Unleash the power of your DEP 450 radios with Motorola Original® accessories. They're the only accessories designed, built and tested with your radio to optimise its performance (see separate accessory fact sheet for full portfolio).

## IMPROVE THE WAY YOU WORK

A construction worker carries the DEP 450 as an essential part of their toolkit. The digital technology gives them excellent coverage across the entire site. And it has significantly better battery life too, so they'll have reliable voice communications all day long.

The manufacturing team in a parts factory relies on DEP 450 portables to coordinate operations. The digital noise-cancelling software filters out the worst of the background noise, allowing them to hear clearly over loud machinery. Factory capacity is expanding, so they're running Dual Capacity Direct Mode, which can fit twice as many calls into the same spectrum.

A security guard uses their DEP 450 to alert the control room to some suspicious activity. The radio's intuitive design is easy to use in the dark, and even when they speak softly, they know that the digital AGC (Automatic Gain Control) will automatically boost the volume so they're heard clearly back in the office. And if it comes to the worst, they can use one of the programmable side buttons to call for help – with one touch.

## MANAGE YOUR FLEET MORE EFFICIENTLY

We've designed the DEP 450 to be as efficient to operate as it is cost-effective to buy. That's why we've integrated the powerful fleet management capabilities of Motorola's Radio Management solution into every radio.

Gain even greater efficiency when you migrate to digital. Your radio will operate up to 40% longer than analogue on the same battery – and you get twice the capacity from the same 12.5 kHz channel, using our Dual Capacity Direct Mode feature.

## BASIC PRIVACY

The security guards at the hotel all carry DEP 450 radios. They never worry that their calls will be intercepted, because they have the digital "Basic Privacy" feature enabled.

## GET DURABILITY THAT ENDURES

The DEP 450 is made to last. It is rated IP54 (splashproof, virtually dustproof), so it can be used even in harsh environments. Moreover, the design has been proven tough in Motorola's grueling Accelerated Life Test program, in which the radio must survive a simulated 5 years of hard service before it is accepted. You can be confident in the durability of your DEP 450.

| GENERAL SPECIFICATIONS | |
|---|---|
| | **DEP 450** |
| | **UHF BAND 2** |
| Channel Capacity | 16 |
| Typical RF Output<br>Low Power<br>High Power | <br>1 W<br>4 W |
| Frequency | 450-527 MHz |
| Radio Dimensions (H x W x D) with battery: | |
| Slim Li-Ion 1600mAH | 5.0 x 2.4 x 1.5 in (127.7 x 61.5 x 39.0 mm) |
| Li-Ion 2200mAH | 5.0 x 2.4 x 1.8 in (127.7 x 61.5 x 44.0 mm) |
| Weight with battery: | |
| Slim Li-Ion 1600mAH | 12.1 oz (341 g) |
| Li-Ion 2200mAH | 12.2 oz (346 g) |
| **BATTERY** | |
| Average battery life at 5/5/90 duty cycle with carrier squelch and transmitter in high power. | |
| Power Supply | 7.5V (Nominal) |
| Li-Ion Slim (1600 mAH) Battery | Analogue: 10.5 hrs / Digital: 13.5 hrs |
| High Cap Li-ion (2200 mAH) Battery | Analogue: 14.5 hrs / Digital: 18.5 hrs |
| **RECEIVER** | |
| Frequency | 450-527 MHz |
| Channel Spacing | 12.5 kHz / 20 kHz / 25 kHz |
| Frequency Stability (-30°C, +60°C, +25°C Ref) | ± 0.5 ppm |
| Analogue Sensitivity (12 dB SINAD) | 0.3 uV / 0.22 uV (typical) |
| Digital Sensitivity (5% BER) | 0.25 uV / 0.19 uV (typical) |
| Intermodulation (TIA603D) | 70 dB |
| Adjacent Channel Selectivity (TIA603D) | 45 dB @ 12.5 kHz<br>70 dB @ 20/25 kHz |
| Spurious Rejection (TIA603D) | 70 dB |
| Rated Audio | 0.5 W (Internal) |
| Audio Distortion @ Rated Audio | 5% (3% typical) |
| Hum and Noise | -40 dB @ 12.5 kHz<br>-45 dB @ 20/25 kHz |
| Audio Response | TIA603D |
| Conducted Spurious Emissions (TIA603D) | -57 dBm |
| **TRANSMITTER** | |
| Frequency | 450-527 MHz |
| Channel Spacing | 12.5 kHz / 20 kHz / 25 kHz |
| Frequency Stability (-30°C, +60°C, +25°C Ref) | ± 0.5 ppm |
| Low Power Output | 1 W |
| High Power Output | 4 W |
| Modulation Limiting | ± 2.5 kHz @ 12.5 kHz / ± 4.0 kHz @ 20 kHz<br>± 5.0 kHz @ 25 kHz |
| FM Hum and Noise | -40 dB @ 12.5 kHz<br>-45 dB @ 20/25 kHz |
| Conducted / Radiated Emission | -36 dBm < 1 GHz / -30 dBm > 1 GHz |
| Adjacent Channel Power | 60 dB @ 12.5 kHz<br>70 dB @ 20/25 kHz |
| Audio Response | TIA603D |
| Audio Distortion | 3% (typical) |
| 4FSK Digital Modulation | 12.5 kHz Data: 7K60F1D and 7K60FXD<br>12.5 kHz Voice: 7K60F1E and 7K60FXE<br>Combination of 12.5 kHz Voice and Data: 7K60F1W |
| Digital Vocoder Type | AMBE +2™ |
| Digital Protocol | ETSI TS 102 361-1, -2, -3 |

## MILITARY STANDARDS

| | 810C | | 810D | | 810E | | 810F | | 810G | |
|---|---|---|---|---|---|---|---|---|---|---|
| Applicable MIL-STD | Method | Procedures | Method | Procedures | Method | Procedures | Method | Procedures | Method | Procedures |
| Low Pressure | 500.1 | I | 500.2 | II | 500.3 | II | 500.4 | II | 500.5 | 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 |
| Low Temperature | 502.1 | I | 502.2 | I/C3, II/C1 | 502.3 | I-C3, II/C1 | 502.4 | I-C3, II/C1 | 502.5 | I-C3, II |
| Temperature Shock | 503.1 | – | 503.2 | I/A1/C3 | 503.3 | I/A1/C3 | 503.4 | I | 503.5 | I-C |
| Solar Radiation | 505.1 | II | 505.2 | I | 505.3 | I | 505.4 | I | 505.5 | I-A1 |
| Rain | 506.1 | I, II | 506.2 | I, II | 506.3 | I, II | 506.4 | I, III | 506.5 | I, III |
| Humidity | 507.1 | II | 507.2 | II | 507.3 | II | 507.4 | – | 507.5 | II - Aggravated |
| Salt fog | 509.1 | – | 509.2 | – | 509.3 | – | 509.4 | – | 509.5 | – |
| Dust | 510.1 | I | 510.2 | I | 510.3 | I | 510.4 | I | 510.5 | I |
| Vibration | 514.2 | VIII/F, Curve-W | 514.3 | I/10, II/3 | 514.4 | I/10, II/3 | 514.5 | I/24 | 514.6 | I-cat.24 |
| Shock | 516.2 | I, II | 516.3 | I, IV | 516.4 | I, IV | 516.5 | I, IV | 516.6 | I, IV, V, VI |

## ENVIRONMENTAL SPECIFICATIONS

| | |
|---|---|
| Operating Temperature | -30°C / +60°C |
| Storage Temperature | -40°C / +85°C |
| Thermal Shock | Per MIL-STD |
| Humidity | Per MIL-STD |
| ESD | IEC 61000-4-2 Level 3 |
| Dust and Water Intrusion | IEC60529 - IP54 |
| Packaging Test | MIL-STD 810D and E |

Specifications subject to change without notice. All specifications shown are typical.

For more information on the DEP™450, visit
**www.motorolasolutions.com.au**



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