

# MOTOTRBO™ DEP 250 portable two-way radios

Easy to use, easy to migrate.  
Simple and effective for the light  
user who values ease and efficiency



When you are choosing cost-effective two-way portable radios, you do not have to compromise features. The MOTOTRBO DEP 250 is a range of practical, entry-level digital radios for professionals wanting to communicate with greater ease and efficiency.

The affordable DEP 250 radio offer all the benefits of digital technology – up to 40% longer talk-time, twice the voice capacity in a 12.5 kHz licensed channel, wider radio coverage and superior audio. In digital mode, your MOTOTRBO radio provides clearer voice communications throughout the coverage area, as compared to analogue radios, rejecting static and noise in the background.

The digital radios outperform analogue radios for demanding or extended work shifts, and ensure voice communications are easily and clearly understood. You get pre-programmed text messages for instant update at the push of a button.

You receive voice announcement as an audio confirmation of channel changes. A versatile alternative for those who require additional radio features to meet increasing communication needs, while lowering operating costs.

The DEP 250 is easy to use and migrate from analogue. Your radio users can operate and communicate on their new digital radios while on the job, as your business transitions to digital technology. Accessory compatibility ensures you can reuse your inventory of battery, antenna and charger, further protecting your investments. You can also choose the analogue-only version of the DEP 250 radio and unlock the capabilities of digital when the time is right with a simple software upgrade.

Experience MOTOTRBO digital voice communications trusted by millions of users for exceptional voice quality and exceptional performance. This means more productive workforce and lower operating costs for your business.

**Practical and easy to use.  
An entry-level digital  
radio solution for users  
in hospitality, light  
manufacturing and event  
management.**

## → Features

- Analogue / digital voice communications Digital Mobile Radio (DMR) standards compliant<sup>1</sup>
- Voice Announcement
- Pre-programmed text messaging
- IP54 rated
- Received audio levelling
- Dual Capacity Direct Mode
- IP Site Connect
- Transmit Interrupt (decode only)

<sup>1</sup> Features only available in Digital mode

## Versatile solution to start and grow

The DEP 250 Series includes a non display version with no keypad (NKP) and 16 channels, and monochrome display version with limited keypad (LKP) and 160 channels.

The ability to operate in both analogue and digital modes also makes it easy and affordable to adapt your new digital radios to work along with your existing analogue radios. You can migrate to a digital two-way radio platform at your own pace.

## Increased efficiency without increased costs

Powered by Time Division Multiple Access (TDMA) digital technology, your DEP 250 provides twice the calling capacity (as compared to analogue radio) for the price of one frequency license.

The radio features Dual Capacity Direct Mode that unlocks the full capacity of your digital radio system to double your channels without the cost of a repeater and its associated infrastructure. This is how it works: in order for both time slots of a 12.5kHz DMR channel to carry simultaneous and independent traffic, you usually need a repeater to provide the timing reference. Your radios, with Dual Capacity Direct Mode, are able to synchronize automatically and collaboratively, eliminating the requirement for a timing reference. Now you can use both time slots, thereby doubling capacity and increasing spectrum efficiency without the cost of a repeater and its associated infrastructure.

Your investment in radio accessories does not go to waste. The DEP 250 incorporate the 2-pin accessory connector so you can reuse your existing audio earpieces. The advantage of accessory compatibility also extends to batteries, antennas and charges.

## Clearer audio, better performance

When it comes to exceptional audio clarity, the quality of digital cannot be denied. The DEP 250 gives you digital audio performance throughout your coverage area. The digital voice processing with enhanced call signalling ensures faster and more reliable calls.

The pre-programmed text messages permit fast and flexible communication, reaching out to your radio users in a high noise environment where voice is difficult to hear or when sensitive information is being communicated.

When your workers cannot be distracted, voice announcement provides audible confirmation of channel changes, as well as programmable buttons that eliminate the need to view the radio display. This customizable feature uses default audio files for easy operation.

## Extend coverage across the city, state or country.

The IP Site Connect digital solution uses the internet to extend the coverage of your MOTOTRBO communication system no matter where you're located. Now you can create wide area coverage and automatically roam from one coverage area to another with no manual intervention. Or you can enhance coverage at a single site like a high-rise building that contains physical barriers.

## Made for life, made to last

The DEP 250 meet demanding specifications, including IP54 for dust and water and U.S Military Standard 810C, D, E, F, G and H for exceptional durability. They also surpassed Motorola Solutions Accelerated Life Testing (ALT) where they were subjected to simulation of 5 years of hard use in real life. These tests included drop, temperature shock, vibration, dust, ESD and humidity.



# Specifications

## GENERAL SPECIFICATIONS

	DEP 250 NKP ANALOGUE		DEP 250 LKP ANALOGUE		DEP 250 NKP ANALOGUE / DIGITAL		
	VHF	UHF	VHF	UHF	VHF	UHF	350MHz
Channel Capacity	16		160		16		
Typical RF Output							
Low Power	1 W	1 W	1 W	1 W	1 W	1 W	1 W
High Power	5 W	4 W	5 W	4 W	5 W	4 W	4 W
Frequency	136-174 MHz	403-480 MHz	136-174 MHz	403-480 MHz	136-174 MHz	403-480 MHz	350-400 MHz
Dimensions (H x W x L)							
Li-Ion 1700mAh	120.0 x 55.0 x 34.7 mm		120.0 x 55.0 x 36.5 mm		120.0 x 55.0 x 34.7 mm		
High Cap Li-Ion 2250 mAh	120.0 x 55.0 x 39.9 mm		120.0 x 55.0 x 41.7 mm		120.0 x 55.0 x 39.9 mm		
Weight with battery:							
Li-Ion 1700mAh	276 g		295 g		276 g		
High Cap Li-Ion 2250 mAh	281 g		300 g		281 g		
Power Supply	7.5V (Nominal)						

## BATTERY

Average battery life at 5/5/90 duty cycle with carrier squelch and transmitter in high power.<sup>2</sup>

Li-Ion 1750 mAh	Analogue: 10.7 hrs / Digital: 14.4 hrs
High Cap Li-Ion 2250 mAh	Analogue: 15.0 hrs / Digital: 20.0 hrs

## RECEIVER

Frequency	136-174 MHz	403-480 MHz	136-174 MHz	403-480 MHz	136-174 MHz	403-480 MHz	350-400 MHz
Channel Spacing	12.5 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)	N/A					0.25 uV / 0.19 uV (typical)	
Intermodulation (TIA603D)	70dB						
Adjacent Channel Selectivity (TIA603D)	45 dB @ 12.5 kHz / 70 dB @ 25 kHz						
Spurious Rejection (TIA603D)	70dB						
Rated Audio	0.5 W (Internal)						
Audio Distortion @ Rated Audio	5% (3% typical)						
Hum and Noise	-40 dB @ 12.5 kHz / -45 dB @ 25 kHz						
Audio Response	TIA603D						
Conducted Spurious Emissions (TIA603D)	-57 dBm						

## TRANSMITTER

Frequency	136-174 MHz	403-480 MHz	136-174 MHz	403-480 MHz	136-174 MHz	403-480 MHz	350-400 MHz
Channel Spacing	12.5 kHz / 25 kHz						
Frequency Stability (-30°C, +60°C, +25°C Ref)	± 1.5 ppm						
Low Power Output	1W	1W	1W	1W	1W	1W	1W
High Power Output	5 W	4 W	5 W	4 W	5 W	4 W	4 W
Modulation Limiting	± 2.5 kHz @ 12.5 kHz / ± 5.0 kHz @ 25 kHz						
FM Hum and Noise	-40 dB @ 12.5 kHz / -45 dB @ 25 kHz						
Conducted / Radiated Emission	-36 dBm < 1 GHz / -30 dBm > 1 GHz						
Adjacent Channel Power	60 dB @ 12.5 kHz / 70 dB @ 25 kHz						
Audio Response	TIA603D						
Audio Distortion	3% (typical)						
4FSK Digital Modulation	N/A					12.5 kHz Data: 7K60F1D and 7K60FXD 12.5 kHz Voice: 7K60F1E and 7K60FXE Combination of 12.5 kHz Voice and Data: 7K60F1W	
Digital Vocoder Type	N/A					AMBE +2™	
Digital Protocol	N/A					ETSI TS 102 361-1, -2, -3 DMR Tier II	

<sup>1</sup> Features only available in Digital mode

<sup>2</sup> Actual battery runtime observed may vary.

<sup>3</sup> Radio only - Li-Ion battery -10°C



## MILITARY STANDARDS

Applicable MIL-STD	810C		810D		810E		810F		810G		810H	
	Method	Procedures	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	I/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/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.5	I/C3, II/C1	502.7	I/C3, II/C1
Temperature Shock	503.1	I	503.2	I/A1C3	503.3	I/A1C3	503.4	I	503.5	I/C	503.7	I-C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	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	510.1	I	510.2	I	510.3	I	510.4	I	510.5	I	510.7	I
Blowing Sand	-	-	510.2	II	510.3	II	510.4	II	510.5	II	510.7	II
Vibration	514.2	VIII/F, W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24	514.6	I/24	514.8	I/24, II/5
Shock	516.2	I, III, V	516.3	I, VI, VI	516.4	I, VI, VI	516.5	I, VI, VI	516.6	I, VI, VI	516.8	I, IV, VI
Shock (Drop)	516.2	II	516.3	IV	516.4	IV	516.5	IV	516.6	IV	516.8	IV

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature <sup>3</sup>	-30°C <sup>2</sup> / +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	IP54. MIL-STD
Packaging Test	MIL-STD 810D and E

To learn more, visit: [motorolasolutions.com/mototrbo](https://motorolasolutions.com/mototrbo).



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