



Motorola P140, P160 & P180

Portable Two-Way Radios



P140

P160

P180

Easy-to-handle, lightweight, compact design.

Tough construction and reliable performance thanks to Motorola's unique Accelerated Life Testing (ALT)

High power 5 watt (VHF) / 4 watt (UHF) adjustable power levels help extend battery life.

Multi-channel capability* - 99 channels to support communication amongst all your employees.

Standard Lilon battery provides up to **11 hours of battery life** at high power (5/5/90 duty cycle) to meet the demands of your employee's work shift. A high-capacity Lilon battery option is available for those with longer shift requirements or increased communication needs.

Tighter specifications provide **enhanced rejection of interference** so you can get your message through clearly.

X-Pand technology provides **crisp, clear and strong audio quality**.

5 programmable buttons* enabling easy, **one-touch access to up to 10 user selected features**.

VOX ready for **hands-free communication** using a suitable headset.

Built-in simple voice scrambling for **increased privacy (programmable feature)**.

Built-in DTMF, MDC & QCII signalling provides **caller identification and private communication**.

User programmable** feature allows customisation of radio profiles while on the go.

Talkaround capability enabling communication even when a repeater is not being used.

Rapid-rate drop-in charging - charge standard capacity batteries in less than 3 hours with the single unit charger.

Get the most from your radio using the wide range of **Motorola Original® accessories**: microphones, earpieces, carry cases, a high capacity battery and more allow the user to match the radio to their needs.

Remote Speaker Microphones can be clipped to a lapel or pocket, allowing messages to be sent and received more easily.

Earpieces and headsets let you keep your hands free without missing messages.

Carry cases let you put the radio on your belt and help prevent damage.

High capacity battery means longer run-times between recharging.

*P140 has 16 channels and 2 programmable buttons
**P160/180 models only

Enhanced functionality, reliable communication

Easy and prompt communication with your workforce is vital to improving response time, strengthening employee efficiency and increasing customer satisfaction. Motorola's two-way radios provide a durable, high-quality voice communication solution that helps your business increase productivity and provide excellent customer service. Ideal for light manufacturing, retail, hospitality services,

property and real estate management. The Motorola P140, P160 and P180 portable radios bring you quality features you need at a competitive price. With an extensive feature set and ergonomic shape for comfortable use in a durable, lightweight, compact design, you can enhance communication while increasing efficiency and productivity.

General Specifications	P140, P160 & P180	
	VHF	UHF
Frequency Range	136-174MHz	403-447MHz 435-480MHz
Channel Capacity	99 CH*	
Channel Spacing	12.5/25 kHz switchable	
Operating Temperature Range	-20°C to +55°C	
Storage Temperature Range	-40°C to +85°C	
Dimensions (H X W X D) with Lilon battery	120 x 55 x 35.5 mm	
NiMH battery	120 x 55 x 36.5 mm	
High Capacity Lilon battery	120 x 55 x 40.7 mm	
Weight with Lilon battery	335g	
NiMH battery	395g	
High Capacity Lilon battery	340g	
Average Battery Life @5-5-90% Duty Cycle, with Lilon battery	High Power up to 11 hrs	
NiMH battery	up to 9 hrs	
High Capacity Lilon battery	up to 16 hrs	
Sealing	Rated IP54 - protected against harm from dust or water spray	
Shock & Vibration	Diecast body with impact resistant polycarbonate housing, Meets MIL-STD810	
Dust & Humidity	Weather resistant housing Meets MIL-STD810	

Transmitter	High Power 5W	Low Power 1W	High Power 4W	Low Power 1W
RF Output				
Spurs and Harmonics	9kHz - 1GHz <-36dBm >1GHz <-30dBm			
Frequency Stability (-20°C to +55°C)	1.5 kHz @ 12.5 kHz 2.0 kHz @ 25 kHz			
Modulation Limiting	≤ ± 5KHz @ 25KHz ≤ ± 2.5KHz @ 12.5KHz			
Audio Response (from 6dB/oct pre-emphasis, 300-3000Hz)	≤ +1/-3dB			
Audio Distortion @ 1kHz tone, 60% rated max dev.	<5%			

Receiver	
Sensitivity (20dB SINAD)	< -107 dBm (1μV/50 Ohm)
Adjacent Channel Selectivity	>70dB (25kHz), >65dB (12.5kHz)
Intermodulation	>65dB
Spurious Rejection	>70dB
Audio Distortion	<5%
Conducted Emission	< -57dBm for below 1GHz < -47dBm for above 1GHz
Audio Output @ <5% Distortion	500mW (at 24 Ohm)

Applicable MIL-STD	810C		810D		810E		810F		810G	
	Methods	Proc./Cat.	Methods	Proc./Cat.	Methods	Proc./Cat.	Methods	Proc./Cat.	Methods	Proc./Cat.
Low Pressure	501.1	I	500.2	II	500.3	II	500.4	II	505.5	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/Hot A1, II/Hot (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
Temp. Shock	503.1	-	503.2	I/A1C3	503.3	I/C1A3	503.4	I	503.5	I/C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	505.5	I
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	-
Salt Fog	509.1	-	509.2	-	509.3	-	509.4	-	509.5	-
Blowing Dust	510.1	I	510.2	I	510.3	I	510.4	I	510.5	I
Blowing Sand	-	-	510.2	II	510.3	II	510.4	II	510.5	II
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/24
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV	516.6	I, IV

*** Availability subject to individual country's law and regulations. Radios meet applicable regulatory requirements. All specifications listed are typical and are subject to change without notice. Specifications are issued for guidance only.

To ensure compliance with RF energy exposure standards and regulations, use only Motorola-approved batteries and accessories.
Contact your local Motorola Authorised Dealer to find out more about how communicating with Motorola radios will benefit your organisation.

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For more information please contact your local Motorola Authorised Dealer or Distributor

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