

## TECHNICAL SPECIFICATIONS

General	VHF 1	VHF 2	UHF 2	UHF 3
Frequency	136 - 162 MHz	146 - 174 MHz	438 - 470 MHz	465 - 495 MHz
Channel Capacity	16 Channels (CP140)		32 Channels (CP160)	64 Channels (CP180)
Power Supply	7.5 Volts ± 20%			
Dimensions	(H x W x D) 130.5 x 62 x 42mm (with Slim Li-Ion Battery)			
Weight (with Slim Li-Ion Battery)	377g (CP140)	3	97g (CP160/180)	
Average Battery Life at Room Temperature (5:5:90 duty cycle)	1 W	5 W	1 W	4 W
Standard Capacity NiCd Battery	10 Hrs	8 Hrs	10 Hrs	8 Hrs
Standard Capacity FM NiMH Battery	11 Hrs	9 Hrs	11 Hrs	9 Hrs
Standard Capacity NiMH Battery	13 Hrs	10 Hrs	13 Hrs	10 Hrs
Slim Li-Ion Battery	17 Hrs	12 Hrs	17 Hrs	12 Hrs
High Capacity Li-Ion Battery	19 Hrs	14 Hrs	19 Hrs	14 Hrs

General	VHF 1		VHF 2		UHF 1		UHF 2		UHF 3	
	12.5kHz	20/25kHz	12.5kHz	20/25kHz	12.5kHz	20/25kHz	12.5kHz	20/25kHz	12.5kHz	20/25kHz
Sensitivity	(12 dB EIA SINAD) 0.25 µV (Typical)									
Adjacent Channel Selectivity	-60 dB	-70 dB	-60 dB	-70 dB	-60 dB	-70 dB	-60 dB	-70 dB	-60 dB	-70 dB
Intermodulation	-70 dB									
Frequency Stability	(-30°C to +60°C) 0.00025%									
Spurious Rejection	-70 dB									
Audio Output @ < 5% Distortion	500 mW									

Transmitter	VHF 1	VHF 2	UHF 1	UHF 2	UHF 3
RF Output: NiMH @ 7.5V	Low 1 W	High 5 W	Low 1 W	High 4 W	
Channel Spacing	12.5/20/25 kHz				
Frequency Stability (-30°C to +60°C)	0.00025%				
Spurs/Harmonics	-36 dBm < 1 GHz		-30 dBm > 1 GHz to 4 GHz		
Audio Response (from 6 dB/oct. Pre-emphasis, 300 to 3000 Hz)	+1, -3 dB				
Audio Distortion @ 1000 Hz, 60% Rated Max. Dev.	<3%				
FM Noise	-40 dB (12.5 kHz)		-45 dB (25 kHz)		

All specifications are subject to change without notice.

### MIL Standard 810F

Applicable MIL-STD	Methods	Procedures
Low Pressure	500.4	1
High Temperature	501.4	1,2
Low Temperature	502.4	1,2
Temperature Shock	503.4	1
Solar Radiation	505.4	1
Rain	506.4	1
Humidity	507.4	3
Salt Fog	509.4	1
Dust	510.4	1
Vibration	514.5	1
Shock	516.5	1

### ENVIRONMENTAL STANDARDS & SPECIFICATIONS

Operating Temperature	-30°C to +60°C
Storage Temperature	40°C to +85°C
Thermal Shock	-40 to +80°C
Dust & Water Intrusion	IP54
ISO 9001 Standard – Compliance with ISO 9001, an international quality system assurance on design, development, production, installation and servicing of a product.	

### MODEL NUMBERS

Name	Model Number	Signalling	Channels	Frequency	Power
CP140	MDH65JDC9AA2_N	MDC/PL	16	VHF1 136-162 MHz	1-5 W
CP140	MDH65KDC9AA2_N	MDC/PL	16	VHF2 146-174 MHz	1-5 W
CP140	MDH65QDC9AA2_N	MDC/PL	16	UHF1 403-440 MHz	1-4 W
CP140	MDH65RDC9AA2_N	MDC/PL	16	UHF2 438-470 MHz	1-4 W
CP140	MDH65SDC9AA2_N	MDC/PL	16	UHF3 465-495 MHz	1-4 W
CP160	MDH65JDF9AA3_N	MDC/PL	32	VHF1 136-162 MHz	1-5 W
CP160	MDH65KDF9AA3_N	MDC/PL	32	VHF2 146-174 MHz	1-5 W
CP160	MDH65QDF9AA3_N	MDC/PL	32	UHF1 403-440 MHz	1-4 W
CP160	MDH65RDF9AA3_N	MDC/PL	32	UHF2 438-470 MHz	1-4 W
CP160	MDH65SDF9AA3_N	MDC/PL	32	UHF3 465-495 MHz	1-4 W
CP180	MDH65JDH9AA4_N	MDC/PL	64	VHF1 136-162 MHz	1-5 W
CP180	MDH65KDH9AA4_N	MDC/PL	64	VHF2 146-174 MHz	1-5 W
CP180	MDH65QDH9AA4_N	MDC/PL	64	UHF1 403-440 MHz	1-4 W
CP180	MDH65RDH9AA4_N	MDC/PL	64	UHF2 438-470 MHz	1-4 W
CP180	MDH65SDH9AA4_N	MDC/PL	64	UHF3 465-495 MHz	1-4 W

# COMMERCIAL SERIES CP140, CP160 AND CP180

Portable Radios - Value And Versatility In A Classic Design



# Designed for our customers - whatever business they are in

The Commercial Series portable radios from Motorola offer simple and effective communication, allowing you to focus on your business.



Designed with our customers in mind, whatever business they are in, the Commercial Series has the radios with the feature set to match your requirements. From simple and instant communication to more advanced features, this family of three radios enables work-teams to keep in touch wherever they are working.

## Effective and simple

Easy to set-up and use, the radios deliver superb audio quality and instant communication at the push of a button.

## Reliable and robust

Tested to MIL Spec 810F and Motorola's unique Accelerated Life Test standards to ensure that they will operate in the toughest conditions.

## Cost effective

Combining the benefits of a dedicated network together with no monthly fee and low investment costs, the Commercial Series delivers a professional solution at an affordable price.

## Designed for your business

Ideal for both small teams and larger organisations with simple communication requirements, the radios suit a variety of customers. A wide range of accessories are also available to enable you to tailor your communications solution.



**CP140**  
The CP140 is the perfect choice for smaller work teams that need access to instant communication between colleagues and managers. With 16 communications channels the CP140 facilitates one-to-one or one-to-many communication at low cost.

**CP160**  
With the display with standard easy to understand icons, four programmable buttons, 32 channels and scroll buttons for easy menu access, the CP160 offers supervisors a tool for easy access to teams and individuals. Channel Alias allows users to view their selected channel in a user friendly way.

**CP180**  
The choice for management and those working for larger organizations. The radio features 64 communication channels, display and full keypad allowing instantaneous calls to individuals or groups and easy access to the menu and contact list. Programmable buttons give easy access to frequently used features; whilst a configurable keypad allows speed-dial style access to often used individuals and groups.

## Tailored To Your Needs

A wide range of accessories enable you to tailor your communications solution to meet your own needs, including microphones, hands-free communications and in-vehicle mounting. All radios are supplied with a battery, aerial, belt clip and charger as standard. For full details of available accessories please contact your local dealer or distributor.

## Which Radio Is Right For Me?

Feature	CP140	CP160	CP180
Channels	16	32	64
Programmable Buttons	2	4	4
Quick Access Features	4	8	8
Option Board Capable	✓	✓	✓
Make Telephone Calls*	-	✓	✓
Receive Telephone Calls*	✓	✓	✓
Tricolour LED	✓	✓	✓
Keypad	-	Limited	✓
Keypad Lock	-	✓	✓
Contact List	-	✓	✓
Speed Dials	-	-	✓
Backlit 8 Character Display	-	✓	✓

\*Requires additional base station and telephone interface

## CP140, CP160 & CP180 Accessories



Covert Ear Piece for RSM - MDRLN4941



D-Shell Ear Piece for RSM - MDPMLN4620



Over Ear Piece for RSM - WADN4190



Nylon Carry Case - HLN9701



Remote Speaker Microphone with improved noise cancellation capabilities (IP57) - MDPMMN4029



High Capacity Li-Ion Battery, Slim Li-Ion Battery and NiMH Battery - NNTN4497, NNTN4970 and NNTN4851