



- 128 Channels (8 Zones, 16 Channels Each)
- Channel Annunciation
- H/L Power Level (25 / 45W)
- MDC 1200 Encode & Decode
- GPS Board (Optional)
- Wide Band: VHF 136-174 MHz, UHF 400-470 MHz, 450-520 MHz
- Mil Spec 810 C, D, E, & F
- DTMF Encode & Decode
- Voice Scrambler
- Software Upgradeable
- Password Protection
- External Speaker
- VOX
- Alarm
- PC Tuning
- Mini UHF Connector



We take great pride in introducing our mobile radio. The QM-790 Quantun professional mobile radio was designed by some of the most innovative and experienced engineers at Quantun Electronics, LLC. With a combination of cutting edge technology and years of experience within the two way radio industry. The outcome is a top of the line mobile radio which offers some unique features and specs that will surely make it the leader of its class.

### 8 Zones With 16 Channels Each

8 separate zones with 16 channels each allowing for a total of 128 channels.

### Channel Annunciation

A voice will announce the selected channel everytime the user changes from one channel to another. This feature is especially useful when a user cannot look at the channel knob in order to identify the channel which is selected.

### H / L Power Level (25W / 45W)

The power output toggles between high and low upon each press of the programmed Tx Power Select Key. The "L" icon will display on the LCD while using low power, which reduces the possibility of interference. High power output is also available for reaching a radio that might be farther away.

### Talk Around

When the talkaround feature is enabled the radio can talk and receive unit to unit without accessing a repeater station.

### VOX Operation

When hands free operation is desired, your radio can be easily activated by voice alone. Please note the VOX feature requires the proper VOX accessory device.

### Emergency Call

By holding down the Emergency Call key (programmable as long or short press), the radio will enter the Emergency Call mode & switch to the preset Emergency Zone / Channel.

### Time-Out Time (TOT)

The feature allows for more efficient use of channels by limiting the maximum time of each transmission. It also protects the radio from damage caused by long time transmissions.

### Built Tough: Mil-Spec 810 C / D / E / F

The QM-790 is built to be strong and tough & meets USA Military Standards: 810 C, E, D & F.

### Busy Channel Lockout (BCL)

The busy channel lockout feature is to prevent transmission on a channel that is already in use. The user has the option to have this feature enabled or disabled.

### BCL Override

If the BCL (Busy Channel Lockout) feature is enabled, you can override the BCL feature in order to transmit on a busy channel. Often used for emergencies or the transference of important information.

### Stun & Revive

This feature allows the user to enable or disable the transmission and/or reception over the air by transmitting a stun code. The stun code (between 1-16 digits) is programmable by the user. When receiving the stun code, the radio will enter "stun mode." The radio will return to normal mode only upon receiving the "Revive" code. This also offers the user protection if the radio is ever lost or stolen.

### Voice Scrambler

This feature allows the user to maintain secure communications making the audio transmission difficult to understand if you do not have the means to decode the signal. Ideal for applications in which privacy and security is essential.

### Rental Programmable (w/ Time Indicator)

The radio can be pre-programmed for use for a specified amount of time by the user. This feature will disable the radio once the pre-set rental timer expires. This feature also has a rental time indicator feature which allows the rental user to check the remaining time for the rental easily by selecting the key and displaying the time on the LCD display.

### PANEL FEATURES

Mini UHF Antenna Interface  
DC Cable  
Speaker Connector For An External Speaker  
GPS SMA Antenna Interface  
DB15 Interface  
(for multiple applications: ex, Repeater Configurations)

### FUNCTION FEATURES

16 Conventional Channels, 8 Zones  
Channel Annunciation  
H / L Power Level (25/45W)  
Squelch Level  
51 CTCSS, 104 CDCSS / User Definable  
Tail Elimination  
Scan  
Monitor  
BCL  
Repeater / Talkaround  
TOT  
Voice Scrambler  
Companion  
Kill & Revive  
VOX  
Emergency  
Rent  
GPS Board (Optional)  
Ignition Sense  
Transparent Data TX  
Embedded Message Programmable  
Wireless Clone  
Software Upgradeable  
Password Protection  
Electronic Serial Number

### FUNCTION MODES

User Mode  
Panel Tuning Mode  
PC Tuning Mode  
Model Setting Mode  
Clone Mode  
Firmware Version Display Mode  
Rewrite Mode

### MDC 1200 SIGNALING FEATURES

Selective Call Decode  
Call Alert Decode  
Radio Check Decode  
selective Radio Inhibit Cancel Decode  
PTT ID Decode  
PTT ID Encode  
Selective Call Encode

### 2 TONE SIGNALING FEATURES

Call Alert Encode  
Call Alert Decode  
Selective Call Encode  
Selective Call Decode

### DTMF SIGNALING FEATURES

DTMF PTT ID Encode  
DTMF PTT ID Decode  
16 Call Encode  
16 Call Decode



# Accessories

Quantun Electronics offers a vast and complete line of audio accessories to enhance the operation of your radio.



Programming Cable Kit with USB Port  
(Software & Service Manual Included)  
Item # QC790010010



Spare Power Cable with Fuse  
Item # QPSW-790



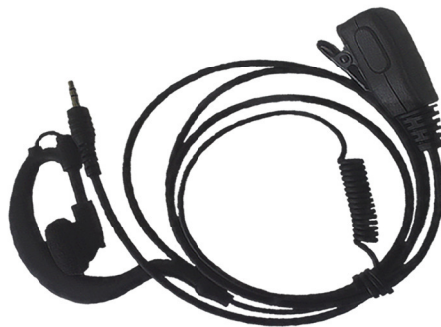
Handset Microphone  
Item # QSMA-610



Mobile Mounting Bracket with Six Screws  
Item #QSMA-210



Easy-VOX Microphone with Clip  
Item # QSMA-510



Easy-VOX Microphone with Ear Hook  
Item # QSMA-511



Easy-VOX Throat Microphone with Earbud  
Item # QSMA-521



Easy-VOX Throat Microphone  
Item # QSMA-520

5W External Speaker (125mm X 55mm X 75mm)  
Item # QSMA-550



## Also Available

Series Programming Cable, Item # QC790020010

Swiss Ublox GPS Module, Item # QSMA-110

GPS Active Export Antenna, Item # QSMA-120

Mobile Antenna, 3 dB Gain, 5/8" Wave, 132-174 MHz, Item # B1323

Mobile Antenna, 3 dB Gain, 5/8" Wave, 144-174 MHz, Item # B1443

Trunk Lid Mount, 17' RG58A/U and Mini UHF Crimp Connector, Item # TM8M

Desktop Switching Power Supply, 10 Amps, 13.8 VDC, Item # SEC-1212

Desktop Switching Power Supply, 120 VAC, 13.8 VDC, 23 Amps, Item # SEC-1223

Power Supply, 20 Amps ICS, 16 Amps Continuous, Item # RS-20A

Power Supply, 20 Amps ICS, 16 Amps Continuous, 220V, Item # RS-20A-220

Mobile Antenna, 5 dB Gain, Closed Coil Collinear, 450-470 MHz, Item # B4505C

3/4" Permanent Hole Mount with 17' of RF58A/U Cable, No Connector, Item # MB8

3/7" Brass Mount, 17' of RG58A/U and Mini UHF Crimp Connector, Loose Connector, Item # MB8M

3/4" Magnetic Mount, 12' of RG58A/U and Mini UHF Crimp Connector, Loose Connector, Item # G8M

### General Information

Frequency Range	VHF: 136-174 MHz & UHF: 400-470 MHz / 450-520 MHz
Channel Capacity	16 CH / Zone
Zone Capacity	8
Channel Spacing	25 / 20 / 12.5 KHz
Operating Voltage	13.6V DC $\pm$ 20%
Current Drain (Standby)	0.5A
Current Drain (Receive)	< 2.0A
Current Drain (Transmit)	< 8A (25W) / < 12A (45W)
Frequency Stability	+ 2.5ppm
Operating Temperature	-30°C ~ +60°C
Antenna Impedance	50Ω
Dimensions (WxHxD)	5.99in. X 1.73in. X 5.63in. (152mm X 44mm X 143mm)
Weight	2.20lbs. (1Kg)

### Transmitter

RF Power Output	25 W / 45W
Modulation	16KOF3E / 11KOF3E
Spurious and Harmonics	75 dB
FM Noise (Wide/Medium/Narrow)	> 45 dB (25 / 20 KHz) / > 40 dB (12.5 KHz)
Audio Distortion	< 3%
Modulation Limiting	+2.5 @ 12.5 KHz / +4.0 @ 20KHz / +5.0 @ 25KHz
Audio Response	+1 dB to -3 dB
<small>(from 6 dB / octave pre-emphasis 300-3000 KHz)</small>	

### Receiver

Sensitivity (12 dB SINAD) EIA (uV)	0.28 (12.5 KHz) / 0.25 (20/25 KHz)
Selectivity (Wide / Medium / Narrow)	70/65/60 (25/20/12.5 KHz)
Intermodulation (Wide / Medium / Narrow)	75 dB
Spurious Response Rejection	75 dB
S/N (Signal-to-Noise Ratio)	> 45 dB (25/20KHz) / > 40 dB (12.5KHz)
Internal Audio Power Output (Rated)	5W (Less than 5% Distortion)
External Audio Power Output (Rated)	10W (Less than 5% Distortion) / 8ohm Load
Audio Response (300-3000Hz)	+1 to -3 dB


### Mil-Specs

	810C Methods	810C Procedures	810D Methods	810D Procedures	810E Methods	810E Procedures	810F Methods	810F Procedures
Low Pressure	500.1	1	500.2	2	500.3	2	500.4	1
High Temperature	501.1	1, 2	501.2	1, 2	501.3	1, 2	501.4	1, 2
Low Temperature	502.1	1	502.2	1, 2	502.3	1, 2	501.4	1, 2
Temperature Shock	503.1	1	503.2	1	503.3	1	503.4	1
Solar Radiation	505.1	1	505.2	1	505.3	1	505.4	1
Rain	506.1	1, 2	506.2	1, 2	506.3	1, 2	506.4	1
Humidity	507.1	2	507.2	2, 3	507.3	2, 3	507.4	3
Salt Fog	509.1	1	509.2	1	509.3	1	509.4	1
Dust	510.1	1	510.2	1	510.3	1	510.4	1
Vibration	514.2	8, 10	514.3	1	514.4	1	514.5	1
Shock	516.2	1, 2, 5	516.3	1, 4	516.4	1, 4	516.5	1

### Accessories

Handset Microphone	Mobile Antenna, 3 dB Gain, 5/8 Wave, 132-174MHz
Easy-VOX Microphone with Clip	Mobile Antenna, 3 dB Gain, 5/8 Wave, 144-174MHz
Easy-VOX Microphone with Ear Hook	Mobile Antenna, 5dB, Closed Coil Collinear, 450-470MHz
Easy-VOX Throat Microphone	3/4" Permanent Hole Mount with 17' of RF58A/U and Mini UHF Crimp Connector (loose)
Easy-VOX Throat Microphone with Earbud	3/4" Magnetic Mount, 12' of RG58A/U and Mini UHF Crimp Connector (loose)
Spare Power Cable with Fuse	Trunk Lid Mount, 17' RG58A/U Mini UHF Crimp Connector
USB Programming Cable	Desktop Switching Power Supply, 10 Amps, 13.8 VDC
Swiss Ublox GPS Module	Desktop Switching Power Supply, 120VAC, 13.8 VDC, 23 Amps
GPS Active Export Antenna	Power Supply, 20 Amps ICS, 16 Amps Continuous
5W External Speaker	Power Supply, 20 Amps ICS, 16 Amps Continuous, 220V

### FCC & Canadian IC

	FCC Approved Bands: 136-174 MHz FCC ID Identifier: XMHQM-790V	Canadian IC Approved Bands: 136-174 MHz Canadian IC Identifier: 8502A-QM790V
	FCC Approved Bands: 400-470 MHz / 450-520 MHz FCC ID Identifier: XMHQM-790U1	Canadian IC Approved Bands: 400-470 MHz / 450-520 MHz Canadian IC Identifier: 8502A-QM790U1

### Distributed By

V6