VHF/UHF AMATEUR RADIO EQUIPMENT

- C4FM Digital Transceivers
- C4FM Digital Repeaters
- FM Transceivers
Fusion of Conventional FM and Digital

System Fusion joins digital and conventional FM communication into a single, multi-function system.

With the revolutionary System Fusion, the user no longer needs to choose between digital or conventional FM; we can use the system best suited for our operations. Also, users can communicate freely between digital and conventional FM stations.

C4FM provides Excellent Audio Quality and Reliable Communication

C4FM modulation has better BER (Bit Error Rate) characteristics when compared to other Digital modulation systems, and guarantees reliable long distance communication. The YAESU C4FM digital clear voice technology uses a 12.5 kHz bandwidth which permits high quality voice communication.

AMS (Automatic Mode Select)

Thanks to AMS, a received signal is instantly recognized as C4FM digital or conventional FM. The transceiver switches operating modes to match the received signal. Even if you are operating in digital mode, the transceiver automatically switches so you can communicate instantly with a received FM station. This unique function enables hassle-free operation by removing the need to manually switch between the communication modes.

FM Friendly Digital

Until now, FM repeaters were only used for conventional FM communication; and digital repeaters were only used for digital communication. There has been no option for cross-communication in a single repeater. Now, System Fusion can be used in multiple ways: for digital message and data, for conventional FM communication and even internet linking. Most importantly, System Fusion enables intercommunication between all users of the different modes. This is made possible in System Fusion by the AMS (Automatic Mode Select) function. With AMS, the modulation mode of your station is automatically selected according to the received signal. If a member transmits in conventional FM, the other radios in System Fusion AMS automatically select their modulation to conventional FM and permit communication between all members.
The advantages of C4FM digital
9600 bps high speed data using 12.5 kHz bandwidth

The big advantage of digital communication methods is the ability to convey large amounts of data. C4FM digital attains 9600 bps data transmission speeds by using a 12.5 kHz frequency bandwidth. It achieves digital advantages, such as the data transmission of a snapshot, or high quality voice communication etc. 12.5 kHz C4FM modulation is excellent for digital communications, and provides for the expansion of amateur-radio communication without sacrificing other valued features.

Three C4FM digital modes and the conventional FM mode
In System Fusion, you can choose between three C4FM digital modes and the conventional FM mode to suit your needs.

12.5kHz C4FM Digital Communication

V/D mode (Voice/Data Simultaneous Communication Mode)
The digital voice signal is transmitted using one half of the bandwidth. Simultaneously the other half of the 12.5 kHz bandwidth channel is used for error correction of the voice signal and for other data. The standard C4FM Digital mode provides the ideal balance of error correction and sound quality with the Digital Clear Voice technology developed for C4FM digital.

Voice FR mode (Voice Full Rate Mode)
This mode uses the full 12.5 kHz bandwidth to transmit digital voice data. The increased amount of voice data permits high quality voice communication, providing superb sound quality for a “rag chew” with friends.

Data FR mode (High Speed Data Communication Mode)
This high-speed data communication mode uses the full 12.5 kHz bandwidth for data communication. The transceiver automatically switches to Data FR mode when transmitting Snapshot pictures, and can be used to transmit large quantities of data at high speed.

Conventional FM mode
Analog FM is effective when weak signal strength causes audio drop out in the digital mode. The FM mode enables communication up to the borderline of the noise level. Also the use of established Yaesu low power circuit designs provides far less battery consumption than the digital mode.
Advanced C4FM Technology Opens up New Vistas for Amateur Radio
The New Style Handheld Transceiver

C4FM/FM 144/430 MHz DUAL BAND 5W DIGITAL TRANSCiever

**FT2D**
FT2DR-US, Asia and Australia
FT2DE: Europe
(2200 mAh Lithium ion Battery SBR-14LI, Battery charger PA-48 / SAD-188(US version) / SAD-16FH(Australian version), USB Cable and Belt clip SBH-13 included)

**Easy Operation with Large Touch Panel Display**
A major highlight of the transceiver's sleek design is the large display measuring 1.7 x 1.7 inch (43.2 x 43.2mm). With 160 x 160 dots and a bright white LED backlight, it presents a wealth of information in superb high resolution. Function keys, numeric keys, and setup menu items appear on the display as needed, allowing direct operation without guesswork. Additional functions may be operated with the knobs and keys on the front and side of the transceiver.

**FM friendly digital realized by AMS (Automatic Mode Select)**
The Automatic Mode Select (AMS) function instantly selects the received signal mode.

**Support for Sophisticated C4FM Digital Functions**
**Enhanced Digital Group ID Feature**
Using the C4FM digital mode, a Digital Group ID can be set by all the members of a group and then communications can be directed specifically to the group. Also, the Group Monitor (GM) function automatically alerts the user when group members are within communication range, and displays their distance and direction on the screen.

**Snapshot function**
When the optional speaker microphone camera MH-85A11U is connected, you can easily take a snapshot. Captured images as well as received images can be viewed on the screen.

**Smart Navigation Function**
**Real-time navigation**
Digital V/D Mode communicates the position and station information simultaneously with the digitized audio. You can view the distance and direction of the other station in real time while communicating.

**Backtrack**
This function allows navigation back to the departure point, or a point previously added to the GPS memory.

**Simultaneous C4FM/4FM standby**
The FT2DR/DE supports simultaneous C4FM Digital monitoring for both the A Band and B Band. A digital signal received on either band takes priority of the transceiver operation. You can respond smoothly and swiftly to the digital communication. What's more, call sign and position information as well as other data can be received simultaneously on both bands.

- **Loud 700 mW audio output**
- **Built-in High Sensitivity 66ch GPS Antenna**
- **1200/9600 bps APRS* Data communication**
- **Micro SD card slot**
- **High-resolution band scope with fast display of up to 71 channels**
- **Standard configuration includes high-capacity Lithium-ion battery good for 12 hours of continuous operation**

**Battery Operating Time**
(Approximately)

<table>
<thead>
<tr>
<th>Band Mode</th>
<th>PNB-101LI</th>
<th>SBR-14LI</th>
<th>Battery Tray FBA-19D(R/R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>144 MHz</td>
<td>Analog Mode 8 hours</td>
<td>12 hours</td>
<td>14 hours</td>
</tr>
<tr>
<td></td>
<td>Digital Mode 5 hours</td>
<td>10 hours</td>
<td>12 hours</td>
</tr>
<tr>
<td>430 MHz</td>
<td>Analog Mode 5 hours</td>
<td>9 hours</td>
<td>13 hours</td>
</tr>
<tr>
<td></td>
<td>Digital Mode 4.5 hours</td>
<td>9 hours</td>
<td>11 hours</td>
</tr>
</tbody>
</table>

*Daily Cycle based on Tx 6 sec, Rx 6 sec, Standby 48 sec. (10 Power F Watts, Rx audio output 10% THD, Battery save 1.5, Monoband receive, and GPS function off.)*

*Operating times may vary depending on operating conditions.

**OPTIONS**

- **Speaker Microphone with separate input MH-85A1U**
- **Speaker / Microphone MH-63A**
- **Earpiece Microphone SSM-57A**
- **VOX Headset SSM-63A**
- **Microphone Adapter CT-44**
- **Lithium ion Battery Pack (1100 mAh) FNB-101LI**
- **Lithium ion Battery Pack (2200 mAh) SBR-14LI**
- **AC Adapter SAD-188® PA-48B/C/F/U®**
- **AC Adapter SAD-16F®**
- **Rapid Charger CD-41**
- **6xAAA Cell Battery Tray FBA-39**

*US version only. **2”B” for 120 VAC, **O” for 220-240 VAC, **I” for 220 VAC, **U” for 220-240 VAC w/IEC plug, **H” for 220-240 VAC w/Australian plug.*
C4FM Digital / FM
Exciting Amateur Digital Transceiver

C4FM/ FM 144/430 MHz DUAL BAND 5W DIGITAL TRANSCEIVER

FT1XD
FT1XDR:US
FT1XDE:Europe

(2200 mAh Lithium Ion Battery SBR-14U, Battery charger PA-48/SAD-188 (US version) and PC connection Cable included)

Enhanced Digital Group ID Feature
Using the C4FM digital mode, a Digital-Group-ID can be set by all the members of a group and then communications can be directed specifically to the group. Also, the GM function automatically alerts the user when group members are within communication range, and displays their distance and direction on the screen.

Smart Navigation Function
Real Time Navigation
Check station location relationships at any time with the Real Time Navigation Function.

Tough waterproof design equivalent to IPX5 (water-jet-resistant)
You will be safe using this transceiver in the field when sudden changes in weather may cause it to become wet with rain or splashed with water.

Built-in Improved 66ch GPS with antenna in the top section of the unit

Snapshot Function
(Image Data Transmission)
Simply connect an MH-BSA11U (option) speaker microphone with camera. Press the microphone shutter button to easily take snapshots, and then send them to other C4FM digital transceivers.

Battery Operating Time (Approximately)

<table>
<thead>
<tr>
<th>Band Mode</th>
<th>FNB-10U</th>
<th>SBR-14U</th>
<th>Battery Tray FBA-38C (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>144MHz</td>
<td>Analog Mode</td>
<td>6 hours</td>
<td>10 hours</td>
</tr>
<tr>
<td>Digital Mode</td>
<td>4 hours</td>
<td>9 hours</td>
<td>11 hours</td>
</tr>
<tr>
<td>430MHz</td>
<td>Analog Mode</td>
<td>4.5 hours</td>
<td>9 hours</td>
</tr>
<tr>
<td>Digital Mode</td>
<td>3.6 hours</td>
<td>7.4 hours</td>
<td>10.5 hours</td>
</tr>
</tbody>
</table>

* Duty Cycle based on Tx 6 sec, Rx 6 sec, Standby 48 sec.
* 1W Power 5 Watts, Ax audio output 10% THD, Battery save 1/5, Monitor receive, and GPS function off.
* Operating times may vary depending on operating conditions.

Equipped with micro SD card slot
(Micro SD card not included)

OPTIONS

<table>
<thead>
<tr>
<th>Options</th>
<th>FT2D</th>
<th>FT1XD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC Connection Cable (USB)</td>
<td>SCU-19</td>
<td>SCU-19</td>
</tr>
<tr>
<td>PC Connection Cable (SP)</td>
<td>CT-169</td>
<td>CT-169</td>
</tr>
<tr>
<td>Data Cable CT-170</td>
<td>CT-170</td>
<td>CT-170</td>
</tr>
<tr>
<td>Data Cable CT-176</td>
<td>CT-176</td>
<td>CT-176</td>
</tr>
<tr>
<td>DT Cable</td>
<td>CT-168</td>
<td>CT-168</td>
</tr>
<tr>
<td>DC Cable</td>
<td>E-DC-6</td>
<td>E-DC-6</td>
</tr>
<tr>
<td>DC Cable with cigarette lighter plug</td>
<td>SDD-13</td>
<td>SDD-13</td>
</tr>
<tr>
<td>BNC-A to SMA Adapter</td>
<td>CN-3</td>
<td>CN-3</td>
</tr>
<tr>
<td>Soft Case SC-24</td>
<td>SC-24</td>
<td>SC-24</td>
</tr>
<tr>
<td>Soft Case CSC-97</td>
<td>CSC-97</td>
<td>CSC-97</td>
</tr>
<tr>
<td>Belt Clip SHB-13</td>
<td>SHB-13</td>
<td>SHB-13</td>
</tr>
</tbody>
</table>
An Outstanding Choice
Sophisticated Dual Band Digital Transceiver

C4FM/FM 144/430MHz Dual Band Digital Transceiver

**FT-70D**
FT-70DR: US, Asia and Australia
FT-70DE: Europe

(7.4V 1800mAh Lithium Ion Battery SBR-24L, Battery Charger SAD-18B (US), SAD-11 (Europe, Asia, Australia), USB Cable and Belt Clip included)

System Fusion Compatible
C4FM Digital provides Excellent Audio Quality

Both conventional FM operation, and the advanced Yaesu C4FM Digital Mode are available. C4FM has better BER (Bit Error Rate) characteristics than other Digital modulation systems, and permits stable communications. C4FM digital modulation delivers exceptional audio quality.

FM Friendly Digital Operation with AMS and Large Multi-Color LED Mode Indicator

Conventional FM users and Digital C4FM users can communicate through the magic of AMS (Automatic Mode Select). AMS automatically recognizes the received signal as C4FM Digital or conventional FM, and sets the transceiver to the appropriate operating mode. The AMS function enables hassle-free operation by removing the necessity of manually switching between modes. The MODE indicator LEDs show the transmit/receive mode at a glance.

LOUD 700mW Audio Output

Loud, clear, crisp audio is delivered by 700mW of audio power, and the large 32mm front speaker.

Huge 1,105 Channel Memory

The FT-70D provides maximum operating efficiency and convenience with a wide variety of memory resources, including 300 “regular” memories, six “Home” channels for favorite frequencies, 99 for Skip search memories, and 50 pairs of “Programmable Memory Scan” memories.

Useful Features

- Rugged IP54 Rating (Dust & Water protection) Construction
- Wide Band Receive Coverage 108 - 579.9995MHz
- Versatile Scanning Capabilities: ( Programmed VFO Scan, Memory Scan, Priority Channel Scan )
- WX Channels with “Severe Weather” Alert (US version)
- 7.4V 1,800mAh Lithium Ion Battery pack (SBR-24L) Included
- Equipped with External DC Jack for DC Supply and Battery Charge
- Equipped with Mini USB port for Convenient Memory Management and Software updates
- CTCSS/DCS Operation
- RF Squelch
- Automatic Power Off (APO) Feature
- Transmitter Time Out Timer (TOT)

**BATTERY OPERATING TIME (Approximately)**

<table>
<thead>
<tr>
<th>Band</th>
<th>Operating Time (SBR-24L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>144 MHz</td>
<td>8 hours</td>
</tr>
<tr>
<td>430 MHz</td>
<td>7 hours</td>
</tr>
</tbody>
</table>

*SW: Tx 6 sec ; Rx 6 sec ; Standby 48 sec. Duty cycle (Operating time may vary depending on operating conditions)*

**OPTIONS**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker/ Microphone</td>
<td>MH-3484B</td>
</tr>
<tr>
<td>Cloning Cable</td>
<td>CT-27</td>
</tr>
<tr>
<td>Microphone Adapter</td>
<td>CT-44</td>
</tr>
<tr>
<td>Earphone Microphone</td>
<td>SSM-57A</td>
</tr>
<tr>
<td>VOX Headset</td>
<td>SSM-63A</td>
</tr>
<tr>
<td>Battery Charger</td>
<td>SAD-18B/SAD-11C/UHT</td>
</tr>
<tr>
<td>Li-Ion Battery (1800mAh)</td>
<td>SBR-24L</td>
</tr>
<tr>
<td>Rapid Charger</td>
<td>SBH-28</td>
</tr>
<tr>
<td>DC Cable</td>
<td>E-DC-6</td>
</tr>
<tr>
<td>DC Cable with Cigarette Lighter Plug</td>
<td>SDD-13</td>
</tr>
<tr>
<td>BNC-to-SMA Adapter</td>
<td>CN-3</td>
</tr>
<tr>
<td>Soft Case</td>
<td>SHC-27</td>
</tr>
</tbody>
</table>

*1 US version only *2: C: for 220-240 VAC, U: for 220-240 VAC w / BF plug, H: for Australian version *3: The same as the supplied accessory
AMS (Automatic Mode Select)

The Automatic Mode Select (AMS) function instantly detects the received signal mode.

- **V/D mode**
  (Voice/Data Simultaneous Communication Mode)
- **Voice FR mode**
  (Voice Full Rate Mode)
- **Data FR mode**
  (High Speed Data Communication Mode)
- **Analog FM mode**

3.5-inch full color touch panel operation

Icon symbols, multi-function key display and pop-up messages are all displayed in high-resolution color thanks to the full-color, high luminance TFT liquid crystal screen. The settings and status of the wireless devices are displayed in an easy-to-read format. You can perform various function operations simply and easily by gently touching the screen.

Snapshot Function (Image Data Transmission)

Simply connect the optional MH-85A11U microphone with camera. Press the microphone shutter button to take snapshots, and easily send them to other C4FM digital transceivers.

* micro SD card is required by the snapshot function.

Equipped with micro SD Card Slot
Built-in Improved 66ch GPS with Antenna

- Microphone with Snapshot camera MH-85A11U
- DTMF Microphone MH-48A6J
- Normal Microphone MH-42U6J
- Bluetooth® Adapter Unit BU-2
- Voice Guide Unit FVS-2
- High-Power External Speaker MLS-200-M10
- Vacuum Cup Mount Bracket for Controller MMB-98
- PC Connection Cable SCU-20
- Mic Extension Kit MEK-2
- Mic Extension Cable for MH-85A11U SCU-23
- Cloning Cable CT-166
- AC Power Supply (25 A) FP-1030A
- AC Power Supply (23 A) FP-1023
- Desktop Cooling Fan SMB-201
- AC Adapter for SMB-201 SAD-11B/C/UH

OPTIONS


Built in GPS with antenna

Front side of the Radio Unit

Rear side of the Controller

* micro SD card not included

Data communication Terminal micro SD card slot
**A digital mobile transceiver for a new age, with a wide variety of mobile operations made possible through advanced C4FM technology**

**C4FM/FM 144/430 MHz DUAL BAND 50W DIGITAL TRANSCEIVER**

**FTM-100D**

**FTM-100D:US, Asia and Australia**

**FTM-100D:Europe**

(DTMF Microphone MH-48A6JA, Mounting Bracket, Bracket for Front panel, Control Cable 10 ft (3m), PC connection Cable SCU-20, Stereo Monaural Plug and DC Power Cable included)

---

**An easy-to-read graphical interface via a full dot-matrix display**

The full 160 x 40 dot-matrix display reveals dedicated screens and icons so that you can quickly recognize each of a variety of features. Also, the white-LED backlight provides ample brightness and contrast for improving visibility.

**Support for Sophisticated Functions of C4FM Digital**

**Digital GM Function (Digital Group Monitor Function)**

The GM function automatically alerts the user when group members are within communication range. The distance, direction and call signs of the received GM stations are displayed on the screen.

**Image Data Transmission**

Snapshots received from other stations, or images downloaded from the WIRES-X News Station, are stored on a high-capacity microSD card. Image data stored on a microSD can be viewed and edited using a personal computer.

**The FTM-100DR/DE supports WIRES-X**

You can connect the FTM-100DR/DE to WIRES-X node stations and easily enjoy long-distance communications over VHF/UHF bands via the Internet. Furthermore, you can connect the FTM-100DR/DE to the optional HR-200 WIRES-X Internet Linking Kit to quickly establish a WIRES-X node station. The FTM-100DR/DE is ideally suited for use in node stations, and the display backlight can be completely turned off.

**A variety of features that ensures ease of use**

- 50 W of power output sufficient for communication on the VHF/UHF bands
- 1200/9600bps APRS® Data communication
- microSD card slot
- Built-in high sensitivity 66 channel GPS antenna
- GPS logging capability
- High sensitivity and full-fledged wideband reception
- Dual Watch Function
- Powerful 3W speaker output. 8W output for optional MLS-200-M10 External Speaker.

*Simultaneous reception on A band and B band is not supported.*

---

**OPTIONS**

<table>
<thead>
<tr>
<th>OPTIONS</th>
<th>FTM-100D</th>
<th>FTM-2200D/230270</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTMF Microphone MH-48A6JA</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>N Hamas Microphone MH-42X2U</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Bluetooth® Adapter BU-2</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>High Power External Speaker MLS-200-M10</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Voice Guide Unit FVS-2</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Vacuum Cup Mount Bracket for Controller MMB-98</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>PC connection Cable SCU-20</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Separation Cable 20 ft (6m) CT-162</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Mic Extension Kit MEK-2</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Cloning Cable CT-166</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>AG Power Supply 25 A FP-1030A*</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>AG Power Supply 25 A FP-1023*</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Desktop Cooling Fan SMB-201</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>AG Adapter for 220-240 VAC SAD-118/JU/H</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>High Power External Speaker MLS-100</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Data Cable CT-163</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>M30TM pin to M30N pin: CT-164</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>M14 pin to M18 pin CT-166</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9 pin to DB9 CT-167</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>10 pin to Open CT-168</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

*“*1 PIN for 120 VAC, “*2 for 220-240 VAC, “*3 for 220-240 VAC w/UK plug, “*4 for 220-240 VAC w/Australian plug, “*5 US and Asian versions only, “*6 US version only."
Heavy Duty C4FM/FM High Power Mobile

144MHz
65W High Power Mobile

- System Fusion Compatible
- Genuine High Output Power with FACC: Funnel Air-Convection Conductor (Wind Tunnel)
- Loud Audio output with 3 Watts 35 x 58mm front speaker
- Advanced Digital C4FM operation
- FM hospitable operation with AMS (Automatic Mode Select)
- Large LED Mode indicator for uncomplicated operation

Stable High Power Output with FACC

The FACC (Funnel Air-Convection Conductor) Wind Tunnel, gathers cool air through the wide open front air intake and directs it to the final amplifier heat sink, and out the rear cooling fan. This efficient cooling system ensures stable output power for continuous long-distance communications.

Loud Audio with
3W Front Speaker

The front facing speaker provides 3 watts of loud audio.
The FTM-3200D/FTM-3207D speaker audio has been tuned for even better sound quality.

The FTM-3200D/FTM-3207D operates
C4FM Digital and Conventional FM modes

C4FM Digital mode is available for FTM-3200D and FTM-3207D.
The C4FM digital modulation provides exceptional audio quality.

Enhanced Digital Group ID

Using the C4FM digital mode, a Digital Group-ID can easily be set by each group member to facilitate communications between the specific group participants. The Group Monitor (GM) function automatically alerts the users when group members are within communication range.

AMS with Multi-colored LED Mode-Indicator for Easy Operation

FM friendly digital operation is made possible by AMS (Automatic Mode Select)
AMS automatically recognizes the received signal as C4FM Digital or conventional FM, and switches the receiver to the appropriate mode.
The AMS function enables hassle-free operation by removing the need to manually switch between modes. The MODE indicator shows the Transmit/Receive mode at a glance.

Features

- 220 Memory channels with 8 alpha-numeric characters
- User-Programmable Microphone Keys (4 keys)
- 126 DSQ (Digital Squelch Code) signaling feature
- Memory-Only Mode

430MHz
55W High Power Mobile

C4FM/FM 430MHz SINGLE BAND
55W DIGITAL TRANSCEIVER

FTM-3207D

FTM-3207DR: US, Asia and Australia
FTM-3207DE: Europe

(DTMF Microphone MH-48A6JA, USB Cable, Mounting Bracket and DC Power Cable included)

Convenient and easy-to-use digital functions, advanced VoIP wireless WIRES-X

HRI-200 Features

- Available C4FM digital communication
- High quality voice communication by using C4FM digital
- Advanced features enabled by C4FM digital functions
YAESU DR-2X is a C4FM digital/Conventional FM dual mode and dual-Receive capable repeater that covers the VHF and UHF amateur radio bands. DR-2X incorporates the use of conventional FM communication integrated with the C4FM digital communication through its unique AMS capability.

DR-2X Features

- **Modulation Modes:** Conventional FM, C4FM Digital
- **AMS (Automatic Mode Select)** function automatically recognizes the received signal as C4FM digital or conventional FM signal
- **3.5-inch Full Color Touch panel Operation**
- **Extremely reliable, high RF Output Power:** 50W / 20W / 5W
- **Emergency Operation:** Supported by auto-switched backup battery power operation (US and Asian versions)
- **Front panel microphone connector** is provided for repeater transmitter testing and enables base station operation
- **Advanced Operation:** The rear panel Control I/O port permits connecting with the “S-COM 7330” repeater controller (Control up to three (3) DR-2X units)

DR-2X Exclusive Features:

- **Dual Receive Operation**
- **Improved “News Station” Feature** permits sharing the voice and text messages to members
- **Digital-Group-ID (DG-ID) Feature** supports easy Groupings Set-up and Comfortable Operation
- **Stable High Power Output with Large Heat sink**
- **Commercial grade components** for long-term reliable operation
- **IMRS (Internet-linked Multi-site Repeater System) function** for simple expanded area coverage via the Internet (Optional)

C4FM provides Excellent Audio Quality and Reliable Communication

C4FM modulation has better BER (Bit Error Rate) characteristics when compared to other Digital modulation systems, and guarantees reliable Communication. The YAESU C4FM digital clear voice technology uses a 12.5 kHz bandwidth which permits high quality voice communication.

FM Friendly Digital with AMS (Automatic Mode Select)

System Fusion enables interconnection between all users, even with different modes. This is made possible in System Fusion by AMS. The AMS function automatically recognizes the signal as a C4FM digital or a conventional FM signal, then the DR-2X retransmits the signal in the preset communication mode.

Dual Receive Feature provides Flexible Operation

The unique simultaneous Dual Receive Repeater DR-2X allows the control operator to assign an additional frequency for controlling the repeater, transmitting emergency messages, or simply a second up-link frequency. The control operator may also assign separate Downlink frequencies according to the Up-link frequencies.
Enhanced Digital Group ID Feature

The revolutionary Digital Group ID feature allows tracking multiple communications resources quickly and efficiently by displaying the telemetry and signal strength information of the members that share the same Digital Group Identification number.

**DG-ID (Digital Group Identification)**
A Group ID of 0 to 99 can be assigned to operators that participate in group communications.

**DP-ID (Digital Personal Identification)**
A unique ID can be assigned to each radio for individual operator identification.

IMRS (Internet-linked Multi-site Repeater System) for Wide Coverage Operation (Option)

The IMRS (Internet-linked Multi-site Repeater System) allows the repeater operator to link multiple repeaters over a Wide-Area-Network (WAN), or a Local-area-network (LAN). Because of the reliability shortcomings inherent with WAN (Wide Area Network) connections, such as the Internet, the new DR-2X incorporates direct connectivity between repeaters, permitting a variety of networking environments, and providing high quality Digital communication, even when “All Else Fails”. The Repeater activation can be controlled by Digital Group Identification number (DG-ID/DP-ID).

* Requires optional LAN unit (LAN-01A)

Improved “News Station” Feature

Groups or Individuals can quickly store and retrieve digital audio. The users can then access the messages on demand, any time of the day.

* Requires optional LAN unit (LAN-01A)

User Friendly Set-up (3.5-inch Full Color Touch Panel Display)

Advanced Operation

The rear panel Control I/O port is connectable to the “S-COM 7330” repeater controller. This controller can manage up to three (3) DR-2X units, providing control of the programmable beep, the timer, access mode, and other features.

<table>
<thead>
<tr>
<th>OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTMF Microphone MH-4846sA</td>
</tr>
<tr>
<td>Normal Microphone MH-426sJ</td>
</tr>
<tr>
<td>Voice Guide Unit FVS-2</td>
</tr>
<tr>
<td>LAN Unit LAN-01A</td>
</tr>
</tbody>
</table>

Other Features

- Internal AC power supply (US, Asia)
- 19” Rack Mount Capable
- High Stability ±2.5ppm TCXO
- DSC (Digital Squeel Code) Signaling
- CTCSS and DCS Signaling
- ID announcement (Voice Mode: Requires FVS-2)
- Base Station Operation
- TOT (Time Out Timer)
- Firmware Updates
YAESU DR-1X is a C4FM digital/Conventional FM dual mode repeater covers the VHF and UHF amateur radio bands. Replacing your conventional FM repeater with the DR-1X will provide continued use of FM communication and enables intercommunication between members using the different modes through the unique AMS feature.

DR-1X Features

- Modulation Modes: Conventional FM, C4FM Digital
- AMS (Automatic Mode Select) function automatically recognizes the received signal as a C4FM digital or a conventional FM signal
- 3.5-inch Full Color Touch panel Operation
- Extremely reliable, high RF Output Power: 50W / 20W / 5W
- Emergency Operation: Supports auto-switched backup battery power operation (US and Asian versions)
- Front panel microphone connector is provided for repeater transmitter testing and to enable base station operation
- Advanced Operation: The rear panel Control I/O port permits connecting with the “S-COM 7330” repeater controller (Control up to three (3) DR-1X units)

C4FM provides Excellent Audio Quality and Reliable Communication

C4FM modulation has better BER (Bit Error Rate) characteristics when compared to other Digital modulation systems, and guarantees reliable Communication. The YAESU C4FM digital clear voice technology uses a 12.5 kHz bandwidth which permits high quality voice communication.

FM friendly Digital with AMS (Automatic Mode Select)

System Fusion enables interconnection between all users with different modes. This is made possible in System Fusion by AMS. The AMS function automatically recognizes the signal as a C4FM digital or a conventional FM signal, then the DR-1X retransmits the signal in the preset communication mode.

User Friendly Set-up

3.5-inch Full Color Touch Panel Display

Settings and adjustments are all displayed in high-resolution on the full-color TFT liquid crystal screen. The settings and status are displayed in an easy-to-understand format. You can perform various operations simply and easily by touching on the screen.

Other Features

- Internal AC power supply (US, Asia) • 19” Rack Mount capable
- High Stability ±2.5ppm TCXO
- DSO (Digital Squelch Code) Signaling
- CTCSS and DCS Signaling
- ID announcement (Voice Mode: Requires FVS-2)
- Base Station Operation • TOT (Time Out Timer)
- Firmware Updates

<table>
<thead>
<tr>
<th>OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>C4FM Microphone MH-48A4J</td>
</tr>
<tr>
<td>Normal Microphone MH-42A4J</td>
</tr>
<tr>
<td>Voice Guide Unit FVS-2</td>
</tr>
</tbody>
</table>
GPS/APRS® Handheld Triple Band Transceiver

50/144/430 MHz (220MHz)
TRIPLE BAND SW FM TRANSCIEVER
(50MHz AM: 1W, 220MHz FM: 1.5W (US version only))

VX-8D

VX-8DR:US, Asia and Australia
VX-8DE:Europe

(7.4V 1100mAh Lithium Ion battery FNB-101LI and battery charger PA-4B / PA-4A (European version) / SAD-11 BUS version) / SAD-16H (Australian version) included

Heavy Duty, Tough and Rugged, ready for outdoors field operation

Waterproof/Submersible IPX7 rated-3ft (1m) for 30 minutes. The tough compact case combines a rugged die-cast chassis with the clean and tough polycarbonate resin front panel. Its high shock proof versatility will allow operation of the radio in the toughest environments.

The large LCD display provides clear and easy-to-read Information

The large LCD Display shows everything needed for advanced operations, including the main and sub band frequencies, operating modes and s-meters.

Optional GPS Operation

The optional GPS Receiver Antenna Unit (FGPS-2) provides GPS data. Your exact current position, moving speed, altitude, etc. may be displayed and transmitted on APRS.

Outdoor-ready Features including Waterproof Rating!

Compact Polycarbonate Resin and Aluminum Die-Cast Case with Solid Waterproofing Seal

The VX-6 is rated to IPX7 specifications for submersion (up to 30 minutes at a depth of up to three feet).

One-Touch Stored Frequencies Access

The VX-6 adopts a one-touch DMR (Direct Memory Recall) system that operates just like your car stereo memory.

Wide Band Receiver Coverage

In addition to full operation on the 144 and 430MHz Amateur bands, the VX-6 provides a wide range of monitoring excitement, thanks to the incredible receiver frequency coverage of 504kHz to 998.99MHz.

Additional Features

- Real dual Ham Band Operation (V+V / U+U / V+U)
- Wide Band Receive Capability (604kHz - 999.99MHz)
- Bluetooth® Capabilities (Optional Bluetooth unit required)
- APRS® 1200/9600 bps data communication
- Huge 1,830 memory channel management capability
- Emergency Automatic ID system (EAI)
- Original Yaesu "Auto-Range Transponder System" (ARTS)

Battery Operating Time (Approximately)

<table>
<thead>
<tr>
<th>Operating Band</th>
<th>Battery Life (Approx)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 MHz</td>
<td>5.5 hours / 11 hours</td>
</tr>
<tr>
<td>144 MHz</td>
<td>5.0 hours / 10 hours</td>
</tr>
<tr>
<td>227 MHz (3kB version)</td>
<td>6.0 hours / 12 hours</td>
</tr>
<tr>
<td>430 MHz</td>
<td>5.0 hours / 10 hours</td>
</tr>
</tbody>
</table>

*Reference only. May vary depending on environmental temperature, humidity, etc. *1X (SW) Besc/FX Besc, and squelched 48sec.

Ultra-rugged, Submersible Dual Band Transceiver

144/430 MHz (220MHz) DUAL BAND SW FM TRANSCIEVER (220MHz FM: 1.5W (US version only))

VX-6

VX-6R:US, Asia and Australia
VX-6E:Europe

(7.4V 1100mAh Lithium Ion battery FNB-40LI and battery charger PA-4B / SAD-11 BUS version) / SAD-16H (Australian version) included

* Indicated Battery capacity based on EU DIRECTIVE 2009/95/EC

Additional Features

- Emergency Automatic ID system (EAI)
- Channel counter function
- Smart Search
- RF Squelch
- Automatic Repeater Shift (ARS)

Power Output/Power Source Chart (Approximately)

<table>
<thead>
<tr>
<th>HIGH</th>
<th>LOW3</th>
<th>LOW2</th>
<th>LOW1</th>
</tr>
</thead>
<tbody>
<tr>
<td>5W</td>
<td>2.5W</td>
<td>1.0W</td>
<td>0.6W</td>
</tr>
<tr>
<td>0.3W</td>
<td>0.05W</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Battery Operating Time (Approximately)

<table>
<thead>
<tr>
<th>Band</th>
<th>FNB-80LI</th>
<th>Battery Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>144 MHz</td>
<td>7 hours</td>
<td>6 hours</td>
</tr>
<tr>
<td>430 MHz</td>
<td>7 hours</td>
<td>6 hours</td>
</tr>
</tbody>
</table>

Receive Only 15 hours

Note: Operating times may vary depending on operating conditions, and are based on a duty cycle of 6 seconds of transmission at 5 Watts, 6 seconds of reception at 50% audio level, and 48 seconds of standby operation.

OPTIONS

<table>
<thead>
<tr>
<th>OPTION</th>
<th>VX-8D</th>
<th>VX-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact Speaker / Microphone MH-57Ae</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>Accessory Speaker / Microphone MH-73Ae</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>Wavelength Speaker / Microphone MH-74A7a</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>Earpiece / Microphone SSM-55A</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>Lightweight VOX Headset SSM-64A</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>Electronic Pressure Sensor SU-1</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>Bluetooth® Mobile Link BU-2</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>GPS Antenna Unit FGPS-2</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>GPS Antenna Master for FGPS-2 CT-136</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>Lithium Battery for 144/430MHz (1000mAh) FNB-101LI</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>Lithium Battery for 220MHz (1000mAh) SBR-14LI</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>DC-AUX Cable Battery Tray FBA-23</td>
<td>⬗</td>
<td>⬗</td>
</tr>
<tr>
<td>VXA/Battery Tray FBA-39</td>
<td>⬗</td>
<td>⬗</td>
</tr>
</tbody>
</table>

*1 "B" for 120 VAC, "C" for 220-240 VAC, *1 for 220V AC, "U" for 220-240 VAC w/86 plug, "H" for 220-240 VAC w/Australian plug *2 US only *3 Europe only
High Performance
Commercial Grade Specifications

- Commercial Grade Specifications: IP54/MIL-STD 810 C, D and E
- 1 Watt Loud and Clear Audio
- Ultra Compact Design: W 2.1" x H 4.1" x D 1.2" (52.5 x 104.5 x 31 mm)
- High Power 5 Watts Output and selectable setting 5W/2.5W/0.5W
- QRK (Quick Recall Key) for Easy Operation
- Newly designed large white LED Flashlight for Emergency Signaling

144/430 MHz
DUAL BAND 5W
FM TRANSCEIVER

FT-65
FT-65R:US and Asia, FT-65E:Europe
(7.4 V 1950mAh Li-ion battery SBR-25LI, Battery Charger SBH-22, AC Adapter SAD-20 and Belt Clip included)

144 MHz
SINGLE BAND 5W
FM TRANSCEIVER

FT-25
FT-25R:US and Asia, FT-25E:Europe
(7.4 V 1950mAh Li-ion battery SBR-25LI, Battery Charger SBH-22, AC Adapter SAD-20 and Belt Clip included)

Commercial Grade Specifications

FT-65 and FT-25 are ruggedly constructed to meet commercial grade specifications. (IP54 Rating for Dust and Water protection. MIL-STD 810C, D and E)
The tough compact case combines a rugged die-cast chassis with the polycarbonate front panel. Its high shock proof versatility will allow you to operate the radio in the toughest environments.

Includes High Capacity Li-ion Battery

Packaged with 1,950mAh Li-ion battery pack, provides over 9 hours* of operating time. Optional High-Capacity 2,500mAh Li-ion battery pack gives over 11.5 hours** of extended operating time. To ensure minimal down time the FT-65/FT-25 also comes packaged with a 3.5-Hour Rapid charger.

* (Tx) 6 sec.; (Rx) 6 sec.; (Standby) 48 sec. Duty Cycle
** 24 hours (Tx) 6 sec.; (Rx) 6 sec.

VERSATILE SCANNING CAPABILITIES

Programmable VFO Scan, scans all channels in the desired frequency range. Memory scan allows scanning of user selectable frequencies. Priority Channel Scan can be used to scan memory channels while activating one channel as a priority. Weather Alert scan alerts the user when severe weather is approaching.

5 Watts of Reliable High Power Output

Reliable transmitter output; full 5 Watts of power on both the 144 and 430MHz bands (FT-25: 144MHz band only), from a compact handheld transceiver. Selectable, reduced Tx power settings of 2.5 Watts and 0.5 Watt are provided.

QRK (Quick Recall Key)

Four Dedicated User Programmable Keys serve as short cut keys to favorite functions, or use the four dedicated recall keys to quickly and easily store and recall desired frequencies.

PC Programmable

The FT-65 and FT-25 are capable of being programmed with memory channels and all of the advanced setup features by using the PC software and optional SCU-35 programming cable.

Useful Features

- VOX operation is available with the optional Earpiece Microphone
- Emergency Signaling: Bright white LED Flashlight, Alarm and Quick HOME Channel Access
- WX Channels with “Severe Weather” Alert (US version)
- FM Broadcast Receiver
- Transceiver-to-Transceiver Cloning
- Automatic Range Transponder System (ARTS)
- CTCSS/DCS Operation
- Busy Channel Lockout (BLC0)
- Automatic Power Off feature
- Transmitter Time Out Timer (TOT)

OPTIONS

*2 The same as the supplied accessory

2.4V 1,950mAh Li-ion Battery SBR-25LI*
2.4V 2,500mAh Li-ion Battery SBR-26LI
Rapid Charger SBH-22*
AC Adapter SAD-20B/C/U**
Programming cable SCU-35
Cloning Cable SCU-36
VOX Earpiece Microphone SSM-512B

* B: for 120 VAC, C: for 220-240 VAC, U: for 220-240 VAC w/IEC plug

14
FM Dual Band Handheld

FM Single Band Handheld

Reliable Dual Band Handheld

144/430MHz DUAL BAND 5W
FM TRANSCEIVER

**FT-60R**
US, Asia and Australia

(7.2V 1400mAh Ni-MH battery FNB-83, Desktop Rapid Charger SBH-13(US) and battery charger PA-48 / SAD-16H(Australia) included)

- **Wide Band Receiver Coverage**
  144 / 430MHz Dual Band Handheld with wide band reception 108-520MHz / 700-999.990MHz

- **High Power Output: 5W**
  The powerful transmitter puts out a full five Watts of power on both the 144 and 430MHz bands. For longer battery life, reduced power settings of 2 Watts and 0.5 Watt are provided.

- **Emergency Automatic ID System**
  The Emergency Automatic ID (EAI) Feature can be used to search for persons who are incapacitated in disasters, especially search-and-rescue personnel who may need assistance.

- **One-Touch NOAA WX band**
  Access “US Version”
  The FT-60R provides a dedicated memory bank for reception of NOAA Weather broadcasts.

- **Useful features**
  - Over 1000 Memory Channels
  - Single-Band and Memory-only Operating Modes
  - Smart Search Automatic Memory Loading

**Battery Operating Time (Approximately):**

<table>
<thead>
<tr>
<th>Band</th>
<th>Battery</th>
<th>FNB-83 / FBA-25A</th>
</tr>
</thead>
<tbody>
<tr>
<td>144MHz</td>
<td>9 hours*1</td>
<td></td>
</tr>
<tr>
<td>430MHz</td>
<td>8 hours*1</td>
<td></td>
</tr>
<tr>
<td>Receiving</td>
<td>15 hours*2</td>
<td></td>
</tr>
</tbody>
</table>

*Note: *1 Duty Cycle based on 5W PC, 8sec. TX, 1sec. RX, and 48 sec. RX (no keying).
*2 Using FNB-83, Audio Volume set to 50%.

Commercial Grade Field Radio Submersible Construction

144 MHz SINGLE BAND 5W
FM TRANSCEIVER

**FT-270R**
US, Asia and Australia

(7.2V 1400mAh Ni-MH battery FNB-83, Desktop Rapid Charger SBH-13(US) and battery charger PA-48 / SAD-16H(Australia) included)

- Commercial Grade Performance
- Submersible Construction IPX7 (3ft/1m for 30 min)
- Large Backlit LCD Display for easy Operation
- 5Watts of Stable RF Power
- 800mW Loud Audio
- 200 Memory Channels
- Hands free VOX Operation with Optional SSM-64A

Ultra-compact Handheld FM Transceiver

144/430 MHz DUAL BAND
FM TRANSCEIVER

**VX-3R**
Asian version only

(3.7V 1100mAh Lithium Ion battery FNB-82LI and battery charger PA-46 included)

- Ultra Compact and Light Weight (W47 x H81 x D23 mm)
- Wide Band Receiver Coverage (504kHz - 999.9MHz)
- FM Broadcast Reception
- Internal Bar Antenna for AM Broadcast band
- Mechanical Dial Lock
- AF Dual function

**Power Output/Power Source Chart (Approximately):**

<table>
<thead>
<tr>
<th>Power Source</th>
<th>HIGH</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>FNB-82LI</td>
<td>1.5 W</td>
<td>0.1 W</td>
</tr>
<tr>
<td>FBA-37 3 &quot;AA&quot; Alkaline</td>
<td>1.5 W</td>
<td>0.1 W</td>
</tr>
<tr>
<td>External DC (6 V)</td>
<td>3 W</td>
<td>0.1 W</td>
</tr>
</tbody>
</table>

**OPTIONS:**

- **Compact Speaker Microphone**
- **Compact Speaker Microphone**
- **Compact Speaker Microphone**
- **Experianch Microphone**
- **Experianch Microphone**
- **Compact Lead with Experianch MH-73**
- **Vox Headset**
- **Vox Headset**
- **Lightweight Vox Headset SSM-63A**
- **Lightweight Vox Headset SSM-64A**
- **Digital FM Paging Unit FTD-7**
- **Waterproof Radio H81x330x10mm**
- **NH Battery Pack FNB-93**
- **2x AA Cell Battery Tray**
- **Battery Tray FBA-25A**
- **Battery Tray FBA-37**
- **Battery Tray FBA-37**
- **Rapid Charger (1.5 hours) VAC-370/BC**

**FT-60R**

- **Compact Speaker Microphone**
- **Compact Speaker Microphone**
- **Compact Speaker Microphone**
- **Experianch Microphone**
- **Experianch Microphone**
- **Compact Lead with Experianch MH-73**
- **Vox Headset**
- **Vox Headset**
- **Lightweight Vox Headset SSM-63A**
- **Lightweight Vox Headset SSM-64A**
- **Digital FM Paging Unit FTD-7**
- **Waterproof Radio H81x330x10mm**
- **NH Battery Pack FNB-93**
- **2x AA Cell Battery Tray**
- **Battery Tray FBA-25A**
- **Battery Tray FBA-37**
- **Battery Tray FBA-37**
- **Rapid Charger (1.5 hours) VAC-370/BC**

**FT-270R**

- **Compact Speaker Microphone**
- **Compact Speaker Microphone**
- **Compact Speaker Microphone**
- **Experianch Microphone**
- **Experianch Microphone**
- **Compact Lead with Experianch MH-73**
- **Vox Headset**
- **Vox Headset**
- **Lightweight Vox Headset SSM-63A**
- **Lightweight Vox Headset SSM-64A**
- **Digital FM Paging Unit FTD-7**
- **Waterproof Radio H81x330x10mm**
- **NH Battery Pack FNB-93**
- **2x AA Cell Battery Tray**
- **Battery Tray FBA-25A**
- **Battery Tray FBA-37**
- **Battery Tray FBA-37**
- **Rapid Charger (1.5 hours) VAC-370/BC**

**VX-3R**

- **Compact Speaker Microphone**
- **Compact Speaker Microphone**
- **Compact Speaker Microphone**
- **Experianch Microphone**
- **Experianch Microphone**
- **Compact Lead with Experianch MH-73**
- **Vox Headset**
- **Vox Headset**
- **Lightweight Vox Headset SSM-63A**
- **Lightweight Vox Headset SSM-64A**
- **Digital FM Paging Unit FTD-7**
- **Waterproof Radio H81x330x10mm**
- **NH Battery Pack FNB-93**
- **2x AA Cell Battery Tray**
- **Battery Tray FBA-25A**
- **Battery Tray FBA-37**
- **Battery Tray FBA-37**
- **Rapid Charger (1.5 hours) VAC-370/BC**

*1 "B" for 120 VAC, "C" for 220-240 VAC, "R" for 220 VAC, "H" for 220-240 VAC w/Australian plug.
Ruggedly-Built, High quality
29/50/144/430 MHz Quad Band
FM Transceiver

29/50/144/430MHz 50W/35W (430MHz)

**FT-8900R**

US, Asia, Australia and Europe

(DTMF Microphone MH-48A6JA, Mounting Bracket, Separation Kit YSK-8900 and DC Power Cable included)

---

**Independent Two-Channel, Dual Receive and Full Duplex Operation**

Operating as two radios in one, the FT-8900R may be configured in a number of ways. For example, it can be set up on the "left" side for operation on 29, 50, 144, or 430 MHz operation, while setting the "right" side to 430MHz. Or set up the left side on 29/50/144/430 MHz, and the right side on 144MHz. The FT-8900R may also be configured for 144-144 MHz or 430-430 MHz dual receive operation—so you never miss out on the action! The left and right sides have their own Volume and Squelch controls, as well as separate S-meters, so operating preferences are never compromised.

---

**Quad Band Operation**

The FT-8900R combines the “traditional” 144/430MHz local-communications concept with the exciting capability of Sporadic-E or F2 DX on the 29MHz and 50MHz bands, for nationwide or worldwide FM communications from your car! The first Amateur Radio FM mobile transceiver providing this capability, the FT-8900R, will make you wonder how you ever got by without this two-band transceiver until now.

---

**High Power Output**

The FT-8900R puts out a full 50 Watts of RF power on the 29/50/144MHz bands, and 35 Watts on the 430MHz band. To ensure thermal stability during long transmissions, a thermal sensor monitors heat sink temperature, engaging the rear panel cooling fan when needed.

<table>
<thead>
<tr>
<th>Power Level</th>
<th>HIGH</th>
<th>MID</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watts</td>
<td>50W</td>
<td>25W</td>
<td>10W</td>
</tr>
</tbody>
</table>

---

**Over 800 Memory Channels**

The FT-8900R provides a wide variety of memory resources, including 799 "regular" memories, six “Home” channels for favorite frequencies, five pairs of band-edge memories, and six “Hyper Memory” memories, which store complete transceiver operating status, for maximum operating efficiency and convenience.

---

**One-Touch Band-Pattern “HYPER MEMORY” Feature**

To save valuable time while operating a transceiver with the versatility of the FT-8900R, the “Hyper Memory” feature allows the storage of a complete set of configuration data for the two operating bands. Besides the usual storage of frequency and tone data, Hyper Memory will store such setup parameters as Automatic Repeater Shift status, Packet parameters, Scanning mode, and VFO tracking, avoiding the need to change each of these functions manually on a regular basis.

---

**Built-In Duplexer**

Utilizing a single antenna jack, the FT-8900R’s leading-edge design includes a high-performance duplexing system, with extensive filtering to allow cross-band full duplex operation.

---

**Cross-Band Repeat Capability**

For emergency work, or to extend the range of a hand-held unit, the FT-8900R includes Cross-Band Repeat capability.

---

**Additional Features**

- Convenient Remote-Head Mounting Capability (YSK-8900 : Supplied Accessory)
- 50-Tone CTCSS/104-Tone DCS(Digital Code Squelch) Tone Systems
- User-Programmable Microphone Keys
- Easy Setup for FM Satellite Operation
- 1200/9600bps Packet Capability: Connect your TNC using the optional CT-39A Packet Cable.
- RF Squelch: Opens the squelch at a user-defined S Meter level.
- Battery Voltage Meter
- DTMF: Auto-Dial Memory: 16 Memories of up to 16 tones each.
- Lock Feature for Front Panel Keys & PTT Switch: Prevents accidental transmission or frequency change.

---

**OPTIONS**

<table>
<thead>
<tr>
<th>Option</th>
<th>FT-8900R</th>
<th>FT-7900</th>
<th>FTM-3100</th>
<th>FT-2890R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand Microphone MH-42 GJ</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>DTMF Microphone MH-48A6JA</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>High-Power External Speaker MLS-100</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Quick Release Mobile Mounting Bracket MMB-60</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Separation Kit YSK-7800</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Separation Kit YSK-8900</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Mic Extension Cable MEK-2</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Packet Interface Cable CT-39A</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>AG Power Supply 220V/110V FP-1023</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>AG Power Supply 220V/110V FP-1030A</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Desktop Cooling Fan SMB-201</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>AG Adapter for 220V/110V 5AD-118/10A4</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

*1 US and Asian versions only  "2 US version only  "3 5B: for 120 VAC, "C": for 220-240 VAC, "U": for 220-240 VAC w/US plug, "A": for 220-240 VAC w/Australian plug."
Heavy-Duty FM Dual Band Mobile with Exceptionally Wide Receiver Coverage

144/430MHz 50W/45W (430MHz)

FT-7900
FT-7900R: US, Asia and Australia
FT-7900E: Europe
(DTMF Microphone MH-48A6JA, Mounting Bracket, Separation Kit YSK-7800 and DC Power Cable included)

- Large Backlit LCD Display for easy operation
- Stable RF Power (50 Watts VHF / 45 Watts UHF)
- Reliable performance in harsh environments
- 1000 memory channels with 20 Memory Groups
- Yaesu Unique Power Saving Circuit Design Minimizes Vehicle Battery Drain
- Remote Front Panel Design (Separation Kit YSK-7800 : Supplied Accessory)

Features
- One-Touch Hyper Memories Feature
- 4 power output levels: HIGH (50/45 watts), MID2 (20 watts), MID1 (10 watts), LOW (5 watts)
- Wide Frequency Coverage:
  TX: 144 - 146/148MHz and 430 - 440/450MHz  RX: 108 - 520MHz, 700 - 999.990MHz (Cellular Blocked)
- 50-Tone CTCSS / 104-Tone DCS Tone System
- 16 DTMF memories can store 16 digits each for quick playback of commonly used numbers.
- Scanning Function, VFO Scan, Memory Channel Scan, Programmable Memory Scan and Priority Scan.
- Smart Search Operation
- 1200 or 9600bps Packet Operation
- ARTS (Auto-Range Transponder System)
- Radio to Radio Cloning

Genuine 65W High Power 144MHz FM Mobile

144MHz 65W
FM SINGLE BAND TRANSCEIVER

FTM-3100
FTM-3100R: US, Asia and Australia
FTM-3100E: Europe
(DTMF Microphone MH-48A6JA, USB Cable, Mounting Bracket and DC Power Cable included)

- 65W Stable Output Power with FACC: Funnel Air-Convection Conductor (Wind Tunnel)
- Loud Audio output with 3W front speaker
- Large LED Mode indicator for easy operation
- 220 Memory channels with 8 alpha-numeric characters
- User-Programmable Microphone Keys (4 keys)

Features
- Memory-Only Mode
- CTCSS (50 tones) and DCS (104 codes) Encode/Decode, with split Tone and DCS Encode-only capability
- Scan feature: Preferential Memory Scan, Programmable memory scan, VFO scan, Priority Channel Scanning (Dual Watch), and Weather Alert Scan (US only)
- Separate Transmit Offset Frequency Memories ("Odd Splits")
- RF-squelch (only passes signals exceeding the programmed squelch level)
- DTMF Auto dialer (10 channel) Operation
- Expanded receiver coverage: 136-174MHz
- Automatic Repeatier Shift

The King of Mobile, 144MHz Mobile with 80W High Power Output

144MHz 80W
FM SINGLE BAND TRANSCEIVER

FT-2980R
US, Asia and Australia
(DTMF Microphone MH-48A6JA, Mounting Bracket and DC Power Cable included)

- Massive Heatsink guarantees 80 Watts of RF Power with No Cooling Fan Needed (Four selectable power output levels are provided: 80/30/10/5 Watts)
- Loud 3 Watts of Audio Output for noisy environments
- Large 6 Digit Backlit LCD ensure excellent visibility
- Excellent Receiver Performance
- Alpha-Numeric Channel Display
- 200 Memory Channels for serious users

Features
- CTCSS and DCS Encode/Decode Built In
- Versatile Scanning Capability
- WX Channels with "Severe Weather" Alert (US Version)
- Smart Search Operation
- DTMF Direct Access Microphone Included
- Excellent Receiver Performance
- Wide/Narrow Deviation Selection
- RF-Squelch
- Interactive Programming Menu
- Supply Voltage Display
- 4-level Display Dimmer
- Dual Watch
## Handheld Transceivers

<table>
<thead>
<tr>
<th>ACCESSORIES &amp; OPTIONS</th>
<th>C4FM/FM Dual Band</th>
<th>FM Single Band</th>
<th>FM Dual /Single Band</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT2D</td>
<td>FT1XD</td>
<td>FT-70D</td>
</tr>
<tr>
<td></td>
<td>VX-8D</td>
<td>VX-6</td>
<td>VX-2R</td>
</tr>
<tr>
<td></td>
<td>FT-65</td>
<td>FT-25</td>
<td>FT-60R</td>
</tr>
<tr>
<td></td>
<td>FT-270R</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Programming Kit

- ADMS-4: Windows™ PC Programming Kit
- ADMS-6
- ADMS-10
- ADMS-XX8
- ADMS-XX6
- ADMS-XX3
- ADMS-A1
- ADMS-270

### Soft Case & Belt Clip

- CSC: Soft Vinyl Case
- SH-24: SCG-27
- CSC-97: CSC-93
- CSC-91: CSC-92
- SHB-13: Belt Clip
- CLIP-17D: Swivel Belt Clip

### Microphone/Headset

- MH-3464B: Compact Speaker / Microphone
- MH-9264B: Compact Speaker / Microphone
- MH-7344B: Waterproof Speaker / Microphone
- MH-76A11U: Speaker Microphone with Snapshot camera
- SSM-44A: Lightweight VOX (Voice-Operated) Headset
- SSM-63A: Lightweight VOX (Voice-Operated) Headset
- SSM-55A: Earphone / Microphone
- SSM-5120: VOX Earphone Microphone

### Bluetooth® Options

- BU-2: Bluetooth® Adapter Unit

### GPS Options

- FGPS-2: GPS Antenna Unit
- CT-136: GPS Antenna Adapter for FGPS-2

### Cables & Adapters

- E-DC-21: DC Cable with Voltage Regulator and Cigarette-Lighter Plug
- E-DC-6: DC Cable/Plug and Wire Only
- SSD-18: DC Cable with Cigarette-Lighter Plug
- CN-3: Adapter for use with BNC Connector
- CT-27: Clamping Cable
- CT-64: Microphone Adapter
- CT-91: Microphone Adapter
- CT-134: Clamping Cable
- CT-191: Microphone Adapter
- CT-168: Clamping Cable
- CT-169: PC Connection Cable (Double)
- CT-170: Data Cable (2.5 g)
- CT-176: Data Cable (2.5 g)
- SCU-19: PC Connection Cable (USB)
- SCU-35: Programming Cable
- SCU-36: Clamping Cable

### Battery Pack & Battery Tray

#### Battery Tray

<table>
<thead>
<tr>
<th>Alkaline Cells Battery Tray</th>
<th>FBA-39(3xAA)</th>
<th>FBA-39(3xAA)</th>
<th>FBA-39(3xAA)</th>
<th>FBA-39(3xAA)</th>
<th>FBA-25A(8xAA)</th>
<th>FBA-25A(8xAA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-MH Battery Pack (2.4, 1400 mAh)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lithium-Ion Battery Pack (7.4 V, 1300 mAh)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lithium-Ion Battery Pack (7.4 V, 1500 mAh)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lithium-Ion Battery Pack (7.4 V, 1000 mAh)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lithium-Ion Battery Pack (7.2 V, 2200 mAh)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lithium-Ion Battery Pack (7.4 V, 1800 mAh)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lithium-Ion Battery Pack (7.4 V, 1900 mAh)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Lithium-Ion Battery Pack (7.4 V, 2500 mAh)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

### Battery Chargers

- CO-15A: Rapid Charger (2.5 hours)
- CO-26: Charger Cradle
- CO-41: Rapid Charger
- SBRH-13: Desktop Rapid Charger (4 hours) Requires PA-18
- SBRH-22: Rapid Charger
- SBRH-24: Rapid Charger
- VAC-926/BC*: Rapid Charger (5 hours)
- PA-44C/CF/A*: AC Adapter
- PA-44C/C: AC Adapter
- PA-16&26/AC: AC Adapter
- SAD-16H*: AC Adapter
- SAD-11&0/C/A* IC Adapter
- SAD-16&26/AC: AC Adapter

### Others

- SU-1: Barometric Pressure Sensor
- FTO-7: OTM® Pipling Unit


*1 European version only. ** US version only.
# Mobile Transceivers

<table>
<thead>
<tr>
<th></th>
<th>C4FM/FM Dual Band</th>
<th>C4FM/FM Single Band</th>
<th>FM Quad Band</th>
<th>FM Dual /Single Band</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FTM-400XD</td>
<td>FTM-100D</td>
<td>FTM-3200D</td>
<td>FTM-3207D</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FTM-8900R</td>
<td>FT-7900</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FT-3100</td>
<td>FT-2980R</td>
</tr>
</tbody>
</table>

### Microphones/Speakers

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>FTM-400XD</th>
<th>FTM-100D</th>
<th>FTM-3200D</th>
<th>FTM-3207D</th>
<th>FTM-8900R</th>
<th>FT-7900</th>
<th>FT-3100</th>
<th>FT-2980R</th>
</tr>
</thead>
<tbody>
<tr>
<td>MH-4206J</td>
<td>Hand Microphone</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MH-4806JA</td>
<td>DTMF Microphone</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MH-85A11U</td>
<td>Microphone with Spotlighit</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MLS-100</td>
<td>High-Power External Speaker</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MLS-200-M10</td>
<td>High-Power External Speaker</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Bracket

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>FTM-400XD</th>
<th>FTM-100D</th>
<th>FTM-3200D</th>
<th>FTM-3207D</th>
<th>FTM-8900R</th>
<th>FT-7900</th>
<th>FT-3100</th>
<th>FT-2980R</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMB-40</td>
<td>Quick Release Mobile Mounting Bracket</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMB-98</td>
<td>Vacuum Cup Mount Bracket for Controller</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Cables

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>FTM-400XD</th>
<th>FTM-100D</th>
<th>FTM-3200D</th>
<th>FTM-3207D</th>
<th>FTM-8900R</th>
<th>FT-7900</th>
<th>FT-3100</th>
<th>FT-2980R</th>
</tr>
</thead>
<tbody>
<tr>
<td>YSK-9000</td>
<td>Separation Kit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YSK-7800</td>
<td>Separation Kit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEK-2</td>
<td>Mic Extension Kit</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT-39A</td>
<td>Packet Interface Cable</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT-162</td>
<td>Separation Cable 201 (km)</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT-163</td>
<td>Data Cable (MEVI10 pin to MINH pin + DaulK)</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT-164</td>
<td>Data Cable (MEVI10 pin to MINH pin)</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT-165</td>
<td>Data Cable (MEVI10 pin to DualK)</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT-166</td>
<td>Cleaning Cable</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT-167</td>
<td>Data Cable (MINH10 pin to Open)</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCU-20</td>
<td>PC Connection Cable</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCU-23</td>
<td>Microphone Extension Cable for MH-85A11U</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Programming Kit

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>FTM-400XD</th>
<th>FTM-100D</th>
<th>FTM-3200D</th>
<th>FTM-3207D</th>
<th>FTM-8900R</th>
<th>FT-7900</th>
<th>FT-3100</th>
<th>FT-2980R</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMS</td>
<td>Windows™ PC Programming Kit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADMS-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADMS-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADMS-2H</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADMS-7900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADMS-2900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Others

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>FTM-400XD</th>
<th>FTM-100D</th>
<th>FTM-3200D</th>
<th>FTM-3207D</th>
<th>FTM-8900R</th>
<th>FT-7900</th>
<th>FT-3100</th>
<th>FT-2980R</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP-103OA</td>
<td>AC Power Supply (25 A)</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FP-102X2</td>
<td>AC Power Supply (23 A)</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMB-201</td>
<td>Desktop Cooling Fan</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAD-11B/C/AHT</td>
<td>AC Adapter for SMB-201</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BU-2</td>
<td>Bluetooth™ Adapter Unit</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FVS-2</td>
<td>Voice Guide Unit</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1 US and Asian versions only  *2 US version only  *3 & 4: for 120 VAC, "C": for 220-240 VAC, "U": for 220-240 VAC w/80 plug, "H": for 220-240 VAC w/Australian plug.
### Handheld Transceivers

#### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>FT2DE</th>
<th>FT10DE</th>
<th>FT100DE</th>
<th>FT-700DE</th>
<th>FT-700DE-VX</th>
<th>VX-40R</th>
<th>VX-45E</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency Ranges</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A-Multiband RX</td>
<td>0.3 - 50 MHz (AM Band)</td>
<td>0.3 - 50 MHz (AM Band)</td>
<td>0.3 - 50 MHz (AM Band)</td>
<td>0.3 - 50 MHz (AM Band)</td>
<td>0.3 - 50 MHz (AM Band)</td>
<td>0.3 - 50 MHz (AM Band)</td>
<td>0.3 - 50 MHz (AM Band)</td>
</tr>
<tr>
<td>VHF/USB/LSB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency Stabil.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Channel Sines</td>
<td>5, 6.25, 8.33, 10, 12.5, 16, 20, 25, 30 MHz</td>
<td>5, 6.25, 8.33, 10, 12.5, 16, 20, 25, 30 MHz</td>
<td>5, 6.25, 8.33, 10, 12.5, 16, 20, 25, 30 MHz</td>
<td>5, 6.25, 8.33, 10, 12.5, 16, 20, 25, 30 MHz</td>
<td>5, 6.25, 8.33, 10, 12.5, 16, 20, 25, 30 MHz</td>
<td>5, 6.25, 8.33, 10, 12.5, 16, 20, 25, 30 MHz</td>
<td>5, 6.25, 8.33, 10, 12.5, 16, 20, 25, 30 MHz</td>
</tr>
<tr>
<td><strong>Supply Voltage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal 12 V DC: Rechargeable GR-12L14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal 12 V DC: Rechargeable GR-12L14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current Consumption</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 mA (Single Band Receiver)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>180 mA (Dual Band Receiver)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-25°C to +70°C</td>
<td>-25°C to +70°C</td>
<td>-25°C to +70°C</td>
<td>-25°C to +70°C</td>
<td>-25°C to +70°C</td>
<td>-25°C to +70°C</td>
<td>-25°C to +70°C</td>
<td>-25°C to +70°C</td>
</tr>
<tr>
<td>Case Size (WxHxD, mm) &amp; Weight (g)</td>
<td>16.4 x 4.3 x 3.13 (62 x 110 x 32.5) &amp; 503</td>
<td>16.4 x 4.3 x 3.13 (62 x 110 x 32.5) &amp; 503</td>
<td>16.4 x 4.3 x 3.13 (62 x 110 x 32.5) &amp; 503</td>
<td>16.4 x 4.3 x 3.13 (62 x 110 x 32.5) &amp; 503</td>
<td>16.4 x 4.3 x 3.13 (62 x 110 x 32.5) &amp; 503</td>
<td>16.4 x 4.3 x 3.13 (62 x 110 x 32.5) &amp; 503</td>
<td>16.4 x 4.3 x 3.13 (62 x 110 x 32.5) &amp; 503</td>
</tr>
<tr>
<td><strong>Transmitter</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
</tr>
<tr>
<td><strong>RF Power Output</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
<td>0.8 W @ 5.5 V</td>
</tr>
<tr>
<td><strong>Sporadic Emission</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All 60 dB below</td>
<td>All 60 dB below</td>
<td>All 60 dB below</td>
<td>All 60 dB below</td>
<td>All 60 dB below</td>
<td>All 60 dB below</td>
<td>All 60 dB below</td>
<td>All 60 dB below</td>
</tr>
<tr>
<td>All (TX Power)</td>
<td>All 60 dB below (TX Power)</td>
<td>All 60 dB below (TX Power)</td>
<td>All 60 dB below (TX Power)</td>
<td>All 60 dB below (TX Power)</td>
<td>All 60 dB below (TX Power)</td>
<td>All 60 dB below (TX Power)</td>
<td>All 60 dB below (TX Power)</td>
</tr>
<tr>
<td><strong>Microphone Impedance</strong></td>
<td>2KΩ</td>
<td>2KΩ</td>
<td>2KΩ</td>
<td>2KΩ</td>
<td>2KΩ</td>
<td>2KΩ</td>
<td>2KΩ</td>
</tr>
<tr>
<td><strong>Receiver</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circuit Type</td>
<td>NFM / AM - Double Conversion</td>
<td>NFM / AM - Double Conversion</td>
<td>NFM / AM - Double Conversion</td>
<td>NFM / AM - Double Conversion</td>
<td>NFM / AM - Double Conversion</td>
<td>NFM / AM - Double Conversion</td>
<td>NFM / AM - Double Conversion</td>
</tr>
<tr>
<td><strong>Intermediate Frequencies</strong></td>
<td>10 kHz: 47.25 MHz (NFM, AM, A Band); 46.4 kHz (NFM, AM, A Band); 46.4 kHz (NFM, AM)</td>
<td>10 kHz: 47.25 MHz (NFM, AM, A Band); 46.4 kHz (NFM, AM, A Band); 46.4 kHz (NFM, AM)</td>
<td>10 kHz: 47.25 MHz (NFM, AM, A Band); 46.4 kHz (NFM, AM, A Band); 46.4 kHz (NFM, AM)</td>
<td>10 kHz: 47.25 MHz (NFM, AM, A Band); 46.4 kHz (NFM, AM, A Band); 46.4 kHz (NFM, AM)</td>
<td>10 kHz: 47.25 MHz (NFM, AM, A Band); 46.4 kHz (NFM, AM, A Band); 46.4 kHz (NFM, AM)</td>
<td>10 kHz: 47.25 MHz (NFM, AM, A Band); 46.4 kHz (NFM, AM, A Band); 46.4 kHz (NFM, AM)</td>
<td>10 kHz: 47.25 MHz (NFM, AM, A Band); 46.4 kHz (NFM, AM, A Band); 46.4 kHz (NFM, AM)</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0.3 μV (0.5 - 30 MHz)</td>
<td>0.3 μV (0.5 - 30 MHz)</td>
<td>0.3 μV (0.5 - 30 MHz)</td>
<td>0.3 μV (0.5 - 30 MHz)</td>
<td>0.3 μV (0.5 - 30 MHz)</td>
<td>0.3 μV (0.5 - 30 MHz)</td>
<td>0.3 μV (0.5 - 30 MHz)</td>
</tr>
<tr>
<td><strong>Selectivity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WM / AM: 15 kHz / 35 kHz (40 dB / 60 dB)</td>
<td>WM / AM: 15 kHz / 35 kHz (40 dB / 60 dB)</td>
<td>WM / AM: 15 kHz / 35 kHz (40 dB / 60 dB)</td>
<td>WM / AM: 15 kHz / 35 kHz (40 dB / 60 dB)</td>
<td>WM / AM: 15 kHz / 35 kHz (40 dB / 60 dB)</td>
<td>WM / AM: 15 kHz / 35 kHz (40 dB / 60 dB)</td>
<td>WM / AM: 15 kHz / 35 kHz (40 dB / 60 dB)</td>
<td></td>
</tr>
<tr>
<td>AF Output</td>
<td>200 mW @ 10% THD</td>
<td>200 mW @ 10% THD</td>
<td>200 mW @ 10% THD</td>
<td>200 mW @ 10% THD</td>
<td>200 mW @ 10% THD</td>
<td>200 mW @ 10% THD</td>
<td>200 mW @ 10% THD</td>
</tr>
<tr>
<td><strong>AF Output Impedance</strong></td>
<td>8 Ω</td>
<td>8 Ω</td>
<td>8 Ω</td>
<td>8 Ω</td>
<td>8 Ω</td>
<td>8 Ω</td>
<td>8 Ω</td>
</tr>
</tbody>
</table>
## Handheld Transceivers

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RX: 0.5–24.0 MHz (AM Band)</td>
<td>0.5–24.0 MHz (AM Band)</td>
<td>0.5–24.0 MHz (AM Band)</td>
<td>0.5–24.0 MHz (AM Band)</td>
<td>0.5–24.0 MHz (AM Band)</td>
<td>0.5–24.0 MHz (AM Band)</td>
<td>0.5–24.0 MHz (AM Band)</td>
<td>0.5–24.0 MHz (AM Band)</td>
<td>0.5–24.0 MHz (AM Band)</td>
<td>0.5–24.0 MHz (AM Band)</td>
<td>0.5–24.0 MHz (AM Band)</td>
</tr>
<tr>
<td>TX: 144.1–146.0 MHz</td>
<td>144.1–146.0 MHz</td>
<td>144.1–146.0 MHz</td>
<td>144.1–146.0 MHz</td>
<td>144.1–146.0 MHz</td>
<td>144.1–146.0 MHz</td>
<td>144.1–146.0 MHz</td>
<td>144.1–146.0 MHz</td>
<td>144.1–146.0 MHz</td>
<td>144.1–146.0 MHz</td>
<td>144.1–146.0 MHz</td>
</tr>
<tr>
<td>222–225 MHz</td>
<td>222–225 MHz</td>
<td>222–225 MHz</td>
<td>222–225 MHz</td>
<td>222–225 MHz</td>
<td>222–225 MHz</td>
<td>222–225 MHz</td>
<td>222–225 MHz</td>
<td>222–225 MHz</td>
<td>222–225 MHz</td>
<td>222–225 MHz</td>
</tr>
<tr>
<td>430–450 MHz</td>
<td>430–450 MHz</td>
<td>430–450 MHz</td>
<td>430–450 MHz</td>
<td>430–450 MHz</td>
<td>430–450 MHz</td>
<td>430–450 MHz</td>
<td>430–450 MHz</td>
<td>430–450 MHz</td>
<td>430–450 MHz</td>
<td>430–450 MHz</td>
</tr>
</tbody>
</table>

### Transmitter

<table>
<thead>
<tr>
<th>Power (Watts)</th>
<th>Nominal 250 mW</th>
<th>Nominal 500 mW</th>
<th>Nominal 1000 mW</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 W</td>
<td>0.01 W</td>
<td>0.01 W</td>
<td></td>
</tr>
<tr>
<td>0.2 W</td>
<td>0.02 W</td>
<td>0.02 W</td>
<td></td>
</tr>
<tr>
<td>0.3 W</td>
<td>0.03 W</td>
<td>0.03 W</td>
<td></td>
</tr>
<tr>
<td>0.5 W</td>
<td>0.05 W</td>
<td>0.05 W</td>
<td></td>
</tr>
<tr>
<td>1.0 W</td>
<td>0.1 W</td>
<td>0.1 W</td>
<td></td>
</tr>
<tr>
<td>2.0 W</td>
<td>0.2 W</td>
<td>0.2 W</td>
<td></td>
</tr>
<tr>
<td>3.0 W</td>
<td>0.3 W</td>
<td>0.3 W</td>
<td></td>
</tr>
<tr>
<td>5.0 W</td>
<td>0.5 W</td>
<td>0.5 W</td>
<td></td>
</tr>
<tr>
<td>10 W</td>
<td>1.0 W</td>
<td>1.0 W</td>
<td></td>
</tr>
</tbody>
</table>

### Receiver

<table>
<thead>
<tr>
<th>Power (Watts)</th>
<th>Nominal 250 mW</th>
<th>Nominal 500 mW</th>
<th>Nominal 1000 mW</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 W</td>
<td>0.01 W</td>
<td>0.01 W</td>
<td></td>
</tr>
<tr>
<td>0.2 W</td>
<td>0.02 W</td>
<td>0.02 W</td>
<td></td>
</tr>
<tr>
<td>0.3 W</td>
<td>0.03 W</td>
<td>0.03 W</td>
<td></td>
</tr>
<tr>
<td>0.5 W</td>
<td>0.05 W</td>
<td>0.05 W</td>
<td></td>
</tr>
<tr>
<td>1.0 W</td>
<td>0.1 W</td>
<td>0.1 W</td>
<td></td>
</tr>
<tr>
<td>2.0 W</td>
<td>0.2 W</td>
<td>0.2 W</td>
<td></td>
</tr>
<tr>
<td>3.0 W</td>
<td>0.3 W</td>
<td>0.3 W</td>
<td></td>
</tr>
<tr>
<td>5.0 W</td>
<td>0.5 W</td>
<td>0.5 W</td>
<td></td>
</tr>
<tr>
<td>10 W</td>
<td>1.0 W</td>
<td>1.0 W</td>
<td></td>
</tr>
</tbody>
</table>

### FM Single Band

<table>
<thead>
<tr>
<th>Frequency</th>
<th>105.7–110.0 MHz</th>
<th>108.0–108.5 MHz</th>
<th>102.0–102.5 MHz</th>
<th>105.0–105.5 MHz</th>
<th>108.0–108.5 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (Watts)</td>
<td>250 mW</td>
<td>500 mW</td>
<td>1000 mW</td>
<td>250 mW</td>
<td>500 mW</td>
</tr>
<tr>
<td>105.7–110.0 MHz</td>
<td>0.25 W</td>
<td>0.5 W</td>
<td>1.0 W</td>
<td>0.25 W</td>
<td>0.5 W</td>
</tr>
<tr>
<td>108.0–108.5 MHz</td>
<td>0.25 W</td>
<td>0.5 W</td>
<td>1.0 W</td>
<td>0.25 W</td>
<td>0.5 W</td>
</tr>
<tr>
<td>102.0–102.5 MHz</td>
<td>0.25 W</td>
<td>0.5 W</td>
<td>1.0 W</td>
<td>0.25 W</td>
<td>0.5 W</td>
</tr>
<tr>
<td>105.0–105.5 MHz</td>
<td>0.25 W</td>
<td>0.5 W</td>
<td>1.0 W</td>
<td>0.25 W</td>
<td>0.5 W</td>
</tr>
<tr>
<td>108.0–108.5 MHz</td>
<td>0.25 W</td>
<td>0.5 W</td>
<td>1.0 W</td>
<td>0.25 W</td>
<td>0.5 W</td>
</tr>
</tbody>
</table>

### FM Dual Band

<table>
<thead>
<tr>
<th>Frequency</th>
<th>50–76 MHz (AM Band)</th>
<th>156.0–174 MHz (FM Band)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (Watts)</td>
<td>250 mW</td>
<td>500 mW</td>
</tr>
<tr>
<td>50–76 MHz (AM Band)</td>
<td>0.25 W</td>
<td>0.5 W</td>
</tr>
<tr>
<td>156.0–174 MHz (FM Band)</td>
<td>0.25 W</td>
<td>0.5 W</td>
</tr>
</tbody>
</table>

### FM Single Band (US Version)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>162.2–162.5 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (Watts)</td>
<td>100 mW</td>
</tr>
<tr>
<td>162.2–162.5 MHz</td>
<td>0.1 W</td>
</tr>
</tbody>
</table>

### FM Single Band (Cellular Blocked)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>171.0–171.5 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (Watts)</td>
<td>250 mW</td>
</tr>
<tr>
<td>171.0–171.5 MHz</td>
<td>0.25 W</td>
</tr>
</tbody>
</table>

Note: The table above provides a summary of the technical specifications for various models of handheld transceivers, including their frequency ranges, power outputs, and operational features. Each model offers distinct capabilities tailored to specific user needs and environments.
## Mobile Transceivers

### C4FM/FM Dual Band

<table>
<thead>
<tr>
<th>Feature</th>
<th>FTM-400XDR</th>
<th>FTM-400XDE</th>
<th>FTM-100DR</th>
<th>FTM-100DE</th>
<th>FTM-3200DR</th>
<th>FTM-3200DE</th>
<th>FTM-3207DR</th>
<th>FTM-3207DE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Frequency Ranges</strong></td>
<td>RX: 106 - 174 MHz</td>
<td>RX: 106 - 174 MHz</td>
<td>RX: 106 - 174 MHz</td>
<td>RX: 106 - 174 MHz</td>
<td>RX: 106 - 174 MHz</td>
<td>RX: 106 - 174 MHz</td>
<td>RX: 405 - 470 MHz</td>
<td>RX: 405 - 470 MHz</td>
</tr>
<tr>
<td></td>
<td>574 - 400 MHz</td>
<td>574 - 400 MHz</td>
<td>574 - 400 MHz</td>
<td>574 - 400 MHz</td>
<td>574 - 400 MHz</td>
<td>574 - 400 MHz</td>
<td>405 - 470 MHz</td>
<td>405 - 470 MHz</td>
</tr>
<tr>
<td></td>
<td>480 - 999.99 MHz</td>
<td>480 - 999.99 MHz</td>
<td>480 - 999.99 MHz</td>
<td>480 - 999.99 MHz</td>
<td>480 - 999.99 MHz</td>
<td>480 - 999.99 MHz</td>
<td>480 - 999.99 MHz</td>
<td>480 - 999.99 MHz</td>
</tr>
<tr>
<td><strong>Channel Steps</strong></td>
<td>RX: 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz</td>
<td>RX: 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz</td>
<td>RX: 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz</td>
<td>RX: 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz</td>
<td>RX: 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz</td>
<td>RX: 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz</td>
<td>RX: 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz</td>
<td>RX: 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz</td>
</tr>
<tr>
<td><strong>Frequency Stability</strong></td>
<td>±0.5 ppm (500 kHz)</td>
<td>±0.5 ppm (500 kHz)</td>
<td>±0.5 ppm (500 kHz)</td>
<td>±0.5 ppm (500 kHz)</td>
<td>±0.5 ppm (500 kHz)</td>
<td>±0.5 ppm (500 kHz)</td>
<td>±0.5 ppm (500 kHz)</td>
<td>±0.5 ppm (500 kHz)</td>
</tr>
<tr>
<td><strong>Supply Voltage</strong></td>
<td>Nominal 13.8 V DC, Negative Ground</td>
<td>Nominal 13.8 V DC, Negative Ground</td>
<td>Nominal 13.8 V DC, Negative Ground</td>
<td>Nominal 13.8 V DC, Negative Ground</td>
<td>Nominal 13.8 V DC, Negative Ground</td>
<td>Nominal 13.8 V DC, Negative Ground</td>
<td>Nominal 13.8 V DC, Negative Ground</td>
<td>Nominal 13.8 V DC, Negative Ground</td>
</tr>
<tr>
<td><strong>Current Consumption</strong></td>
<td>0.5 A (Receive) 11 A (TX, 544 MHz 50 W) 12 A (TX, 460 MHz 50 W)</td>
<td>0.5 A (Receive) 11 A (TX, 544 MHz 50 W) 12 A (TX, 460 MHz 50 W)</td>
<td>0.5 A (Receive) 11 A (TX, 544 MHz 50 W) 12 A (TX, 460 MHz 50 W)</td>
<td>0.5 A (Receive) 11 A (TX, 544 MHz 50 W) 12 A (TX, 460 MHz 50 W)</td>
<td>0.5 A (Receive) 11 A (TX, 544 MHz 50 W) 12 A (TX, 460 MHz 50 W)</td>
<td>0.5 A (Receive) 11 A (TX, 544 MHz 50 W) 12 A (TX, 460 MHz 50 W)</td>
<td>0.5 A (Receive) 11 A (TX, 544 MHz 50 W) 12 A (TX, 460 MHz 50 W)</td>
<td>0.5 A (Receive) 11 A (TX, 544 MHz 50 W) 12 A (TX, 460 MHz 50 W)</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>-40°C to +60°C</td>
<td>-40°C to +60°C</td>
<td>-40°C to +60°C</td>
<td>-40°C to +60°C</td>
<td>-40°C to +60°C</td>
<td>-40°C to +60°C</td>
<td>-40°C to +60°C</td>
<td>-40°C to +60°C</td>
</tr>
<tr>
<td><strong>Case Size (WxHxD)</strong></td>
<td>5.5 x 1.8 x 4.5 (140 x 40 x 115 mm)</td>
<td>5.5 x 1.8 x 4.5 (140 x 40 x 115 mm)</td>
<td>5.5 x 1.8 x 4.5 (140 x 40 x 115 mm)</td>
<td>5.5 x 1.8 x 4.5 (140 x 40 x 115 mm)</td>
<td>5.5 x 1.8 x 4.5 (140 x 40 x 115 mm)</td>
<td>5.5 x 1.8 x 4.5 (140 x 40 x 115 mm)</td>
<td>5.5 x 1.8 x 4.5 (140 x 40 x 115 mm)</td>
<td>5.5 x 1.8 x 4.5 (140 x 40 x 115 mm)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>2.64 lbs (1.2 kg)</td>
<td>2.64 lbs (1.2 kg)</td>
<td>2.64 lbs (1.2 kg)</td>
<td>2.64 lbs (1.2 kg)</td>
<td>2.64 lbs (1.2 kg)</td>
<td>2.64 lbs (1.2 kg)</td>
<td>2.64 lbs (1.2 kg)</td>
<td>2.64 lbs (1.2 kg)</td>
</tr>
</tbody>
</table>

### Transmitter

<table>
<thead>
<tr>
<th><strong>RF Power Output</strong></th>
<th>50 / 20 / 5 W</th>
<th>50 / 20 / 5 W</th>
<th>85 / 30 / 5 W</th>
<th>85 / 30 / 5 W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sporadic Emission</strong></td>
<td>At least 60 dB below</td>
<td>At least 60 dB below</td>
<td>At least 60 dB below</td>
<td>At least 60 dB below</td>
</tr>
<tr>
<td><strong>Microphone Impedance</strong></td>
<td>2 x 2</td>
<td>2 x 2</td>
<td>2 x 2</td>
<td>2 x 2</td>
</tr>
</tbody>
</table>

### Receiver

<table>
<thead>
<tr>
<th><strong>Sensitivity</strong></th>
<th>0.4 μV (104 - 137 MHz, AM)</th>
<th>0.2 μV (137 - 140 MHz, FM)</th>
<th>0.2 μV (140 - 150 MHz, FM)</th>
<th>0.3 μV (150 - 160 MHz, FM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measurement Method</strong></td>
<td>AM: 10 MHz</td>
<td>FM: 10 kHz</td>
<td>AM: 10 MHz</td>
<td>FM: 10 kHz</td>
</tr>
<tr>
<td><strong>Selectivity</strong></td>
<td>NF, AM 12 kHz / 30 kHz (-6 dB)</td>
<td>NF, AM 12 kHz / 30 kHz (-6 dB)</td>
<td>12 kHz / 28 kHz (-6 dB)</td>
<td>12 kHz / 28 kHz (-6 dB)</td>
</tr>
<tr>
<td><strong>Noise Floor</strong></td>
<td>3 W + 0 dB for 10% THD (38.8 V) Internal Speaker</td>
<td>3 W + 0 dB for 10% THD (38.8 V) Internal Speaker</td>
<td>3 W + 0 dB for 10% THD (38.8 V) Internal Speaker</td>
<td>3 W + 0 dB for 10% THD (38.8 V) Internal Speaker</td>
</tr>
</tbody>
</table>
## Mobile Transceivers

<table>
<thead>
<tr>
<th>FM Quad Band</th>
<th>FM Dual Band</th>
<th>FM Single Band</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RX</strong></td>
<td><strong>TX</strong></td>
<td><strong>RX</strong></td>
</tr>
<tr>
<td>29 - 29.75 MHz</td>
<td>443 - 455 MHz</td>
<td>29 - 29.75 MHz</td>
</tr>
<tr>
<td>30 - 50 MHz</td>
<td>450 - 470 MHz</td>
<td>30 - 50 MHz</td>
</tr>
<tr>
<td>50 - 50 MHz</td>
<td>450 - 470 MHz</td>
<td>50 - 50 MHz</td>
</tr>
<tr>
<td>31.9 - 33.4 MHz</td>
<td>443 - 455 MHz</td>
<td>31.9 - 33.4 MHz</td>
</tr>
<tr>
<td>32.5 - 33.4 MHz</td>
<td>443 - 455 MHz</td>
<td>32.5 - 33.4 MHz</td>
</tr>
<tr>
<td>340 - 400 MHz</td>
<td>443 - 455 MHz</td>
<td>340 - 400 MHz</td>
</tr>
</tbody>
</table>

### General
- **Frequency Ranges:**
  - RX: 29 - 29.75 MHz, 30 - 50 MHz, 31.9 - 33.4 MHz, 32.5 - 33.4 MHz, 340 - 400 MHz
  - TX: 443 - 455 MHz
- **Channel Spacing:** 5, 10, 12.5, 15, 20, 25, 30, 50 kHz
- **Frequency Stability:** ±0.05 ppm (+19°C to +24°C, -20°C to +60°C)
- **Supply Voltage:** Nominal: 13.8 V DC, Negative Ground
- **Current Consumption:**
  - 0.8 A (Receive) 0.5 A (Transmit)
  - 0.5 A (Receive) 0.3 A (Transmit)
- **Operating Temperature:** -4°C to +60°C
- **Case Size (WxHxD):** 65 x 16 x 45.5 mm (WxHxD)
- **Weight:** 22.6 g (8 oz)

### Transmitter
- **RF Power Output:**
  - 50 W (10/10 W) 50 W (10/10 W)
  - 45 W (5/5 W) 45 W (5/5 W)
  - 40 W (10/10 W) 40 W (10/10 W)
  - 12 kOhm / 2.2 kOhm
- **SPurious Emission:** At least 60 dB below (10kHz)
- **Microphone Impedance:** 2.2 kOhm (1 kOhm)

### Receiver
- **Sensitivity:**
  - 0.01 μV (Sensitivity to 1 dB SINAD, Dynamic Mode: 30 dB)
- **Selectivity:**
  - 12 kHz / 50 kHz (-10 dB / -60 dB)
- **AF Output:**
  - 2 W or 2 Ω for 5 % THD (15.3 V)
  - 3 W or 4 Ω for 10 % THD (13.8 V)

## Digital Repeaters

<table>
<thead>
<tr>
<th>C4FM/FM Dual Band</th>
<th>C4FM/FM Dual Band</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td><strong>Transmitter</strong></td>
</tr>
<tr>
<td><strong>Frequency Ranges:</strong></td>
<td><strong>Modulation Type:</strong></td>
</tr>
<tr>
<td>164 - 166 MHz</td>
<td>P1D, P2D, P2E, P3W</td>
</tr>
<tr>
<td>430 - 455 MHz</td>
<td>430 - 455 MHz</td>
</tr>
<tr>
<td><strong>Emission Type:</strong></td>
<td><strong>RF Power Output:</strong></td>
</tr>
<tr>
<td>P1D, P2D, P2E, P3W</td>
<td>50/50/50 W</td>
</tr>
<tr>
<td><strong>Dimensions (WxHxD):</strong></td>
<td><strong>Circuit Type:</strong></td>
</tr>
<tr>
<td>19.5 x 9.5 x 171 mm</td>
<td>Double conversion super-heterodyne</td>
</tr>
<tr>
<td><strong>Weight (approx.)</strong></td>
<td><strong>Intermediate Frequencies:</strong></td>
</tr>
<tr>
<td>2.22 lbs (1.0 kg)</td>
<td>1.0 kHz ± 250 Hz (25°C ± 10°C)</td>
</tr>
</tbody>
</table>

- **Audio Output:** 4 W @ 4 Ω, 10 % THD (13.8 V) Internal Speaker