YAESU
The radio

VHF/UHF AMATEUR RADIO EQUIPMENT

- C4FM Digital Transceivers
- C4FM Digital Repeater
- FM Transceivers

System Fusion II

Innovation for the Future

The YAESU System Fusion-II leads the way for the Ham Radio digital systems;
It provides total integration and compatibility of Digital and Conventional FM communications.

Fusion of C4FM Digital and Conventional FM

System Fusion-II joins C4FM digital and conventional FM communication into a single, multi-functional integrated system.

With the revolutionary System Fusion-II, users no longer need to choose between the Digital Mode or conventional FM; Use the system best suited for the operations. Also, users can communicate freely between Digital and conventional FM stations.

AMS (Automatic Mode Select)

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

AMS
Automatic Mode Select

Advantages of C4FM digital

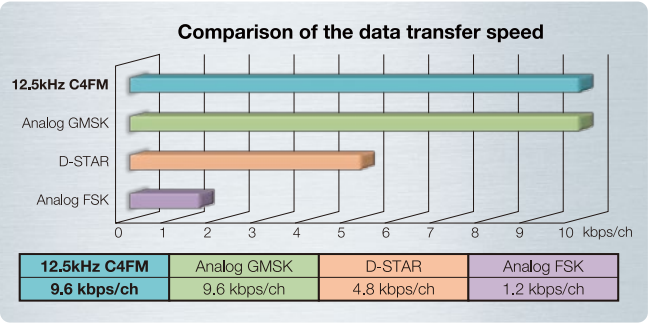
C4FM
DIGITAL CLEAR VOICE
Clear and Crisp Voice Technology

Excellent Audio Quality and Reliable Communications

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

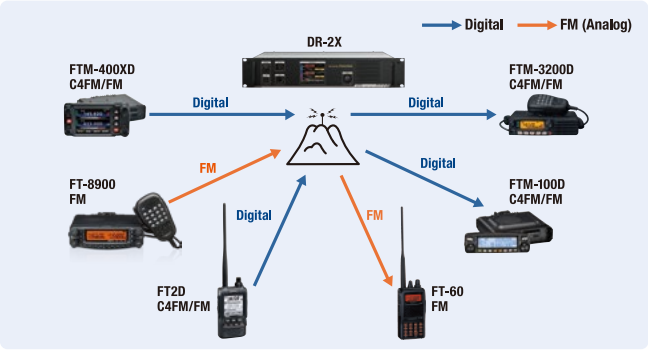
9600 bps high speed data using 12.5kHz bandwidth

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 12.5kHz frequency bandwidth. It achieves digital advantages, such as the data transmission of a snapshot, or high-quality voice communication etc. 12.5kHz C4FM modulation is excellent for digital communications, and provides for continued development of amateur-radio communications without sacrificing other valued features.



FM Friendly Digital Functions Enable Cross-Mode communication

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. System Fusion-II enables interconnection between all users, even with different modes. This is made possible in System Fusion-II 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.



AMS Digital Repeater

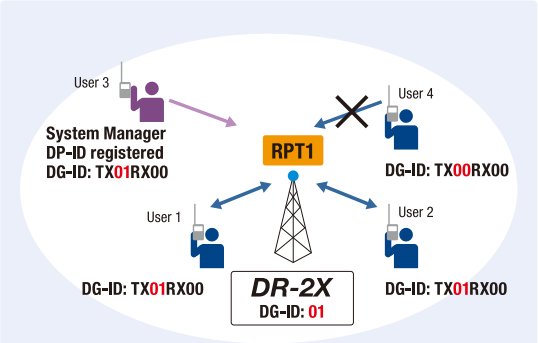
Enhanced Digital Group ID (DG-ID) and Digital Personal ID (DP-ID) Features

DG-ID Feature (Digital Group-ID)

Setting matching two-digit DG-ID numbers ("00" to "99") separately for Transmit and Receive, enables communications through designated linked DR-2X System Fusion-II digital repeaters. Setting the DG-ID of the DR-2X repeater to "00", permits the repeater to accept C4FM signals with any DG-ID setting and function as an Open Repeater.

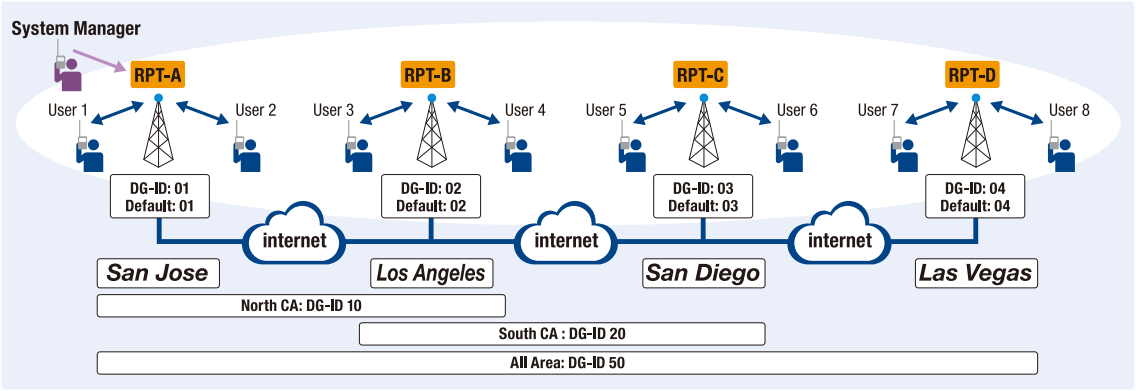
DP-ID Feature (Digital Personal-ID)

The DP-ID permits secure on-air control of the DR-2X Repeater settings. Changes may be limited to controlling stations that are preregistered in the DR-2X Repeater. Also, the DR-2X Digital Repeater may be accessed for emergency operation using an alternate uplink frequency. Consequently, the DR-2X repeater can give precedence to an uplink signal containing a preregistered DP-ID.



Advanced IMRS (Internet-linked Multi-site Repeater System) Operation

When the optional LAN units (LAN-01A) are installed, an IMRS (Internet-linked Multi-site Repeater System) network with multiple DR-2X Digital Repeaters may be configured. Up to 99 repeaters may be linked together via the Internet. Access and control of the linked repeaters, and groups of linked repeaters can be managed using the Digital Group ID (DG-ID) Feature.

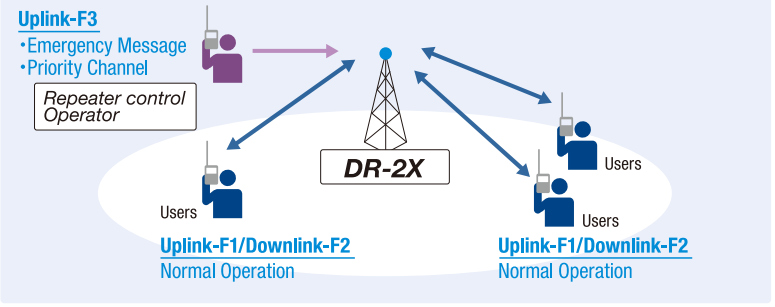


			RPT-A	RPT-B	RPT-C	RPT-D
LOCAL Name			San Jose	Los Angeles	San Diego	Las Vegas
LOCAL DG-ID			01	02	03	04
Default DG-ID			01	02	03	04
Group	Group Name	North CA				
	Group DG-ID	10				
	Group Name	South CA				
	Group DG-ID	20				
	Group Name	All Area				
	Group DG-ID	50				

IMRS (Internet-linked Multi-site Repeater System) Operating Illustration

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.



Dual Receive Image

WIRES-X Portable Digital Node Function

A WIRES-X portable digital node station may be easily established by setting the C4FM digital transceiver to "HRI mode" and connecting it with a PC. With this function, and an available Internet connection, WIRES-X access via the Internet is possible, even from a location where a fixed WIRES-X node station is not available. A C4FM digital transceiver can be used as a node station transceiver without setting up an Ethernet port. This feature enables easy setup and WIRES-X operation from any location, such as a Hotel room, Airport, in a Vehicle or a Free Wi-Fi space, etc.

* WIRES-X operation in the digital transceiver's HRI mode is only available in C4FM digital mode.
* Optional PC connection cable (SCU-19) is required for the FT2D PC connection.
* Supplied PC connection cable (SCU-20) is required for the FTM-400XD/FTM-100D PC connection.
* Digital transceivers that can operate in the HRI mode are the FT2D, FTM-400XD and the FTM-100D.

Connection of WIRES-X Node or Room

In the digital transceiver HRI mode, a digital WIRES-X node station can be easily created to provide access to other node stations via the Internet. Also, a WIRES-X room may be joined for group communication.

Connection of Club Repeater Network with DG-ID

By establishing the WIRES-X portable node station, you can easily connect to a DG-ID controlled IMRS Club Repeater network using the WIRES-X Node Station.

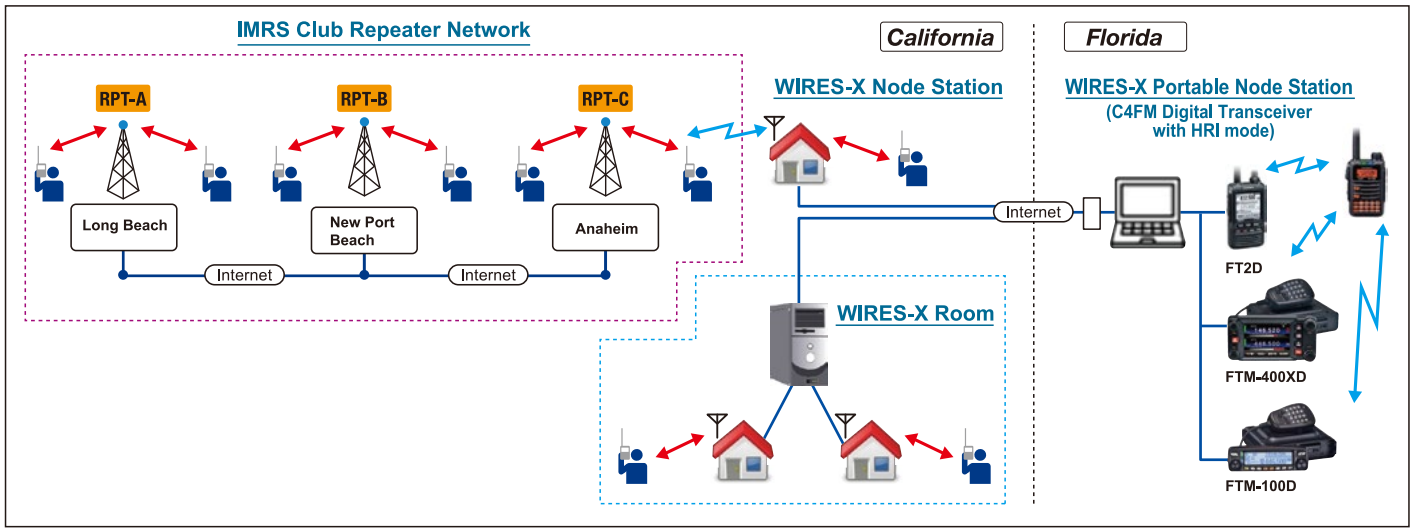
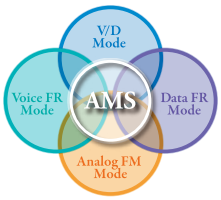


Illustration of WIRES-X operation via Portable digital Node Stations

Three C4FM Digital Modes and the conventional FM Mode



Three System Fusion-II Digital Modes and the analog FM mode can be selected. In digital, effective utilization of the 12.5kHz bandwidth, makes possible combined high-quality voice communication and image data transmission and reception. Many new and unique information and communication functions are made possible.

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 12.5kHz 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 12.5kHz 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.

144/430MHz Dual Band Dual Receive Heavy Duty C4FM/FM Digital Repeater

DR-2X

DR-2X:US and Asia
DR-2XE:Europe and Australia

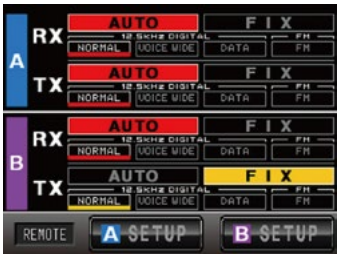
Supplied Accessories: AC cable (US, Asia only), DC cable, PC connection cable SCU-20, Rubber Feet (4)

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 Advanced Features

- **Modulation Modes: C4FM Digital and Conventional FM**
- **AMS (Automatic Mode Select) function, permits automatic detection of the received C4FM digital or conventional FM signal**
- **Dual Receive Operation**
- **Optional IMRS (Internet-linked Multi-site Repeater System) enables expanded area coverage via the Internet**
- **Digital Group ID Feature supports convenient set-up of Groups and uncomplicated Group Operation**
- **User Friendly 3.5-inch Full Color Touch Panel Display**
- **Extremely reliable, high RF Output Power: 50W / 20W / 5W**
- **Stable High-Power Output with Large Heat sink**
- **Commercial grade components for long-term reliable operation**
- **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**

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



Setup screen

Frequency setting screen

DG-ID setting screen

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.

OPTIONS			
			
DTMF Microphone **MH-48A6JA**	Normal Microphone **MH-42C6J**	Voice Guide Unit **FVS-2**	LAN Unit **LAN-01A**

Other Features

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

Advanced C4FM Technology Opens up New Vistas for Amateur Radio
The New Style Handheld Transceiver

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

FT2D

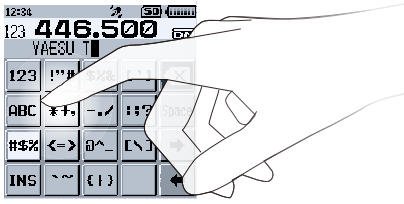
FT2DR:US, Asia and Australia
FT2DE:Europe

(2200 mAh Lithium Ion Battery SBR-14LI,
Battery charger PA-48/SAD-18/SAD-16
(Depending on the transceiver version),
USB Cable and Belt clip SHB-13 included)

C4FM Clear and Crisp Voice Technology
AMS Automatic Mode Select
WIRES-X

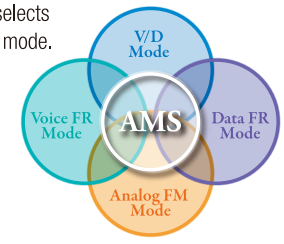
Easy Operation with Large Touch Panel Display

A major highlight of the transceiver's sleek design is the large display measuring 1.7 × 1.7 inch (43.2 × 43.2mm). With 160 × 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.



Sophisticated C4FM Digital Functions are Supported

Expanded Digital Group ID Features

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

* The DG-ID group operation has compatibility only between the C4FM digital transceivers that have the DG-ID feature. If your C4FM portables or mobiles have not yet updated for DG-ID, please update the firmware for the transceivers before using the DG-ID feature.

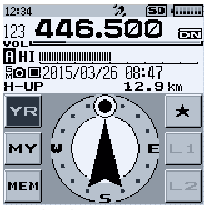
Snapshot function

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/C4FM 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)

Band・Mode		FNB-101LI	SBR-14LI	Battery Tray FBA-39(0.8W)
144MHz	Analog Mode	6 hours	12 hours	14 hours
	Digital Mode	5 hours	10 hours	12 hours
430MHz	Analog Mode	5.5 hours	11 hours	13 hours
	Digital Mode	4.5 hours	9 hours	11 hours

* Duty Cycle based on Tx 6 sec., Rx 6 sec., Standby 48 sec.
(Tx Power 5 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 Snapshot camera **MH-85A11U**	Speaker / Microphone **MH-34B4B**	Earpiece Microphone **SSM-57A**	VOX Headset **SSM-63A**	Microphone Adapter **CT-44**	Li-ion Battery Pack (1100 mAh) **FNB-101LI**	Li-ion Battery Pack (2200 mAh) **SBR-14LI**	Li-ion Battery (1800mAh) **SBR-24LI**	Battery Charger **SAD-18*1/PA-48*1 SAD-16*1**	Battery Charger **SAD-18*1 SAD-11*1**	Rapid Charger **CD-41**	Rapid Charger **SBH-28**	3x"AA"Cell Battery Tray **FBA-39**
FT2D	●	●	●	●	●	●	●		●		●		●
FT-70D		●	●	●	●			●		●		●	

*1 Depending on the transceiver version

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-24LI,
Battery Charger SAD-18/SAD-11
(Depending on the transceiver version),
USB Cable and Belt Clip included)

C4FM Digital Clear and Crisp Voice Technology

AMS Automatic Mode Select

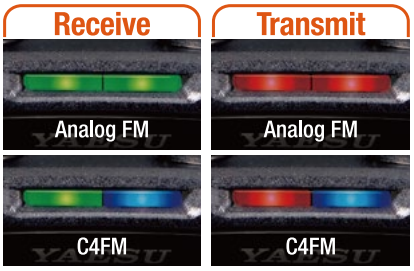
WIRES-X

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.



Multi-colored LED Mode-Indicator

Sophisticated Digital-Group-ID Operation

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

Digital-Group-ID

* The DG-ID group operation has compatibility only between the C4FM digital transceivers that have the DG-ID feature. If your C4FM portables or mobiles have not yet updated for DG-ID, please update the firmware for the transceivers before using the DG-ID feature.

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 900 "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 - 579.995MHz
- 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-24LI) 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)

Band	Operating Time (SBR-24LI)
144 MHz	8 hours
430 MHz	7 hours

* 5W/ Tx 6 sec. : Rx 6 sec. : Standby 48 sec. Duty cycle
(Operating time may vary depending on operating conditions)

OPTIONS

	PC Connection Cable (USB) **SCU-19**	PC Connection Cable (Dsub9) **CT-169**	Data Cable **CT-170**	Data Cable (2.5Φ) **CT-176**	Cloning Cable **CT-168**	Cloning Cable **CT-27**	DC Cable **E-DC-6**	DC Cable with Cigarette Lighter Plug **SDD-13**	BNC-to-SMA Adapter **CN-3**	Soft Case **SHC-24**	Soft Case **SHC-27**	Belt Clip **SHB-13**
FT2D	●	●	●	●	●		●	●	●	●		●
FT-70D						●	●	●	●		●	

Equipped with advanced touch panel operation and full-color TFT large-scale display

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

FTM-400XD

FTM-400XDR:US, Asia and Australia
FTM-400XDE:Europe

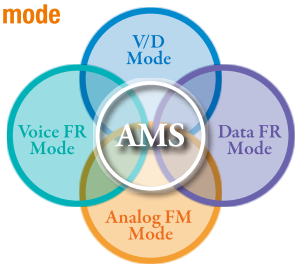
(DTMF Microphone MH-48A6JA, Mounting Bracket, Bracket for Controller, Control Cable 10 ft (3m), PC connection Cable SCU-20, Stereo Monaural Plug and DC Power Cable included)

C4FM Clear and Crisp Voice Technology
AMS Automatic Mode Select
WIRES-X

AMS (Automatic Mode Select)

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

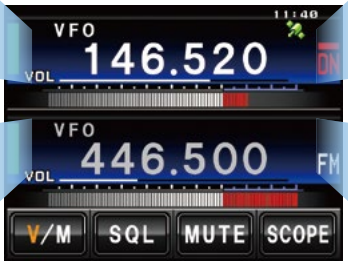
- **V/D mode**
  (Voice/Data Simultaneous Communication Mode)
- **Voice FR mode**
  (Voice Full Rate Mode)
- **Data FR mode**
  (High Speed Data Communication Mode)
- **Analog FM mode**



3.5-inch full color touch panel operation

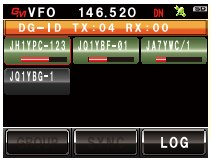
Icon symbols, multi-function key display and pop-up messages are all displayed in high-resolution color thanks to the full-color, high luminance TFT liquid crystal screen. The settings and status of the wireless devices are displayed in an easy-to-read format. You can perform various function operations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

Band Scope Screen



Screen

Smart Navigation Screen



Digital Group Monitor Screen

APRS® Screen

* The DG-ID group operation has compatibility only between the C4FM digital transceivers that have the DG-ID feature. If your C4FM portables or mobiles have not yet updated for DG-ID, please update the firmware for the transceivers before you use DG-ID feature.

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

(micro SD card not included)

Front side of the Radio Unit

Rear side of the Controller

OPTIONS

 Microphone with Snapshot camera **MH-85A11U**	 DTMF Microphone **MH-48A6JA**	 Normal Microphone **MH-42C6J**	 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**	 Separation Cable 20 ft (6m) **CT-162**

 Mic Extension Kit **MEK-2**	 Mic Extension Cable for MH-85A11U **SCU-23**	 Cloning Cable **CT-166**	 AC Power Supply (25 A) **FP-1030A***2	 AC Power Supply(23 A) **FP-1023***3	 Desktop Cooling Fan **SMB-201**	 AC Adapter for SMB-201 **SAD-11***1	Data Cable **CT-163** MDIN10 pin to MDIN6 pin + Dsub9 **CT-164** MDIN10 pin to MDIN6 pin **CT-165** MDIN10 pin to Dsub9 **CT-167** MDIN10 pin to Open

*1 Depending on the transceiver version *2 US and Asian versions only *3 US version only

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-100DR:US, Asia and Australia
FTM-100DE:Europe

C4FM Clear and Crisp Voice Technology

AMS Automatic Mode Select

WIRES-X

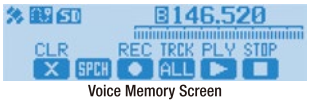
(DTMF Microphone MH-48A6JA,
Mounting Bracket, Bracket for Front panel,
Control Cable 10 ft (3m), PC connection Cable SCU-20,
Stereo Monaural Plug and DC Power Cable included)

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

The full160 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.

Memory Tag Screen

GPS Screen



Voice Memory Screen

A large BUSY/TX indicator that provides communication modes in different colors

Sophisticated C4FM Digital Functions are Supported

Expanded Digital Group ID Features

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

* The DG-ID group operation has compatibility only between the C4FM digital transceivers that have the DG-ID feature. If your C4FM portables or mobiles have not yet updated for DG-ID, please update the firmware for the transceivers before using the DG-ID feature.

DG-ID Set up Screen

Digital Group Monitor 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 optional MH-85A11U Camera Speaker Microphone cannot be connected.

Smart Navigation Function

Real-time navigation

Digital mode transmits the location and station information data simultaneously with the digitized audio signal. You can view the distance, direction and call sign of received signals in real time while communicating in the Yaesu C4FM digital mode.

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 HRI-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.

WIRES-X Connection Screen

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

 DTMF Microphone **MH-48A6JA**	 Normal Microphone **MH-42C6J**	 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**	 Separation Cable 20 ft (6m) **CT-162**
 Mic Extension Kit **MEK-2**	 Cloning Cable **CT-166**	 AC Power Supply (25 A) **FP-1030A*2**	 AC Power Supply(23 A) **FP-1023*3**	 Desktop Cooling Fan **SMB-201**	 AC Adapter for SMB-201 **SAD-11*1**	Data Cable **CT-163** MDIN10 pin to MDIN6 pin + Dsub9 **CT-164** MDIN10 pin to MDIN6 pin **CT-165** MDIN10 pin to Dsub9 **CT-167** MDIN10 pin to Open	

*1 Depending on the transceiver version *2 US and Asian versions only *3 US version only

High-Performance C4FM/FM Dual-Band Mobile

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

FTM-7250D

C4FM Clear and Crisp Voice Technology

AMS Automatic Mode Select

WIRES-X

FTM-7250DR: US, Asia and Australia
FTM-7250DE: Europe

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

Operates C4FM Digital and Conventional FM modes

Both conventional FM operation, and the advanced C4FM Digital mode are available. C4FM has better BER (Bit Error Rate) characteristics compared to other Digital modulation systems and permits stable long-distance communications. The C4FM digital modulation provides exceptional audio quality.

Effortless AMS, FM and C4FM Operation with Multi-colored LED Mode-Indicator

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 MODE indicator shows the Transmit/Receive mode and status at a glance.

Mode Indicator

Sophisticated Digital-Group-ID Operation

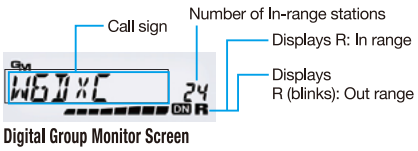
Digital-Group-ID (DG-ID) Feature

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

DG-ID Memory feature

DG-ID memories can store up to 10 DG-ID pairs with alpha tags. The registered DG-ID numbers in the memory can be quickly recalled using the P1/P2 key buttons on the DTMF microphone.

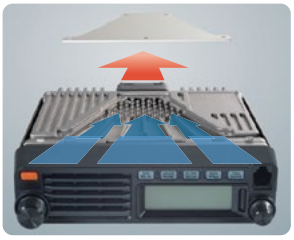
DG-ID Set up and Memory



Digital Group Monitor Screen

50 Watts (VHF and UHF) Stable High-Power Output with FACC

The FTM-7250D offers the Yaesu legendary mechanical toughness and stable high output power. The FACC (Wind Tunnel) gathers cool air through the wide open front air intake and directs it to the final amplifier area and out the rear cooling fan. This efficient cooling system ensures stable output power for continuous long-distance communications.



FACC: Funnel Air-Convection Conductor

3W Loud Front Speaker

The front facing speaker provides 3 watts of loud audio, The FTM-7250D speaker audio has been tuned for improved sound quality. The optional Yaesu MLS-100 external speaker supports noisy field operation.

3W 35x58mm Front Speaker

User-Programmable Microphone Keys

Four Programmable key buttons (P1-P4) on the microphone allow one-touch access to favorite command functions. The microphone function commands replicate the corresponding front panel functions. Available Key button functions:

Available Key functions:

- Recall HOME channel • Select communication Mode (D/A) • Scan operation
- Activate the Group Monitor function • Set the TX Power • DG-ID registration and Recall*1
- Open the Squelch • WIRES-X Node access • WX channel access*2
- Quick access for Setup Menu

*1 Fixed the functions as P1/P2 key *2 Only for US version

Useful Features

- 225 Memory Channels with 8-character alpha-numeric tags
- Versatile Scan features: Preferential Memory Scan, Programmable memory scan, VFO scan, Priority Channel Scanning (Dual watch), and Weather Alert Scan: (USA version only)
- Supports WIRES-X features (Does not support operation as the WIRES-X Node Station)
- Memory Only Operating Mode
- CTCSS & DCS Encode/Decode Operation, with split Tone and DCS Encode-only apability

	OPTIONS				
	 DTMF Microphone **MH-48A6JA**	 Normal Microphone **MH-42C6J**	 AC Power Supply (25 A) **FP-1030A*1**	 AC Power Supply (23 A) **FP-1023*2**	 High-Power External Speaker **MLS-100**
FTM-7250D	●	●	●	●	●
FTM-3200D	●	●	●	●	●
FTM-3207D	●	●	●	●	●

*1 US and Asian versions only *2 US version only

C4FM/FM High Power Mobile

144MHz
65W High Power Mobile

C4FM/FM 144MHz SINGLE BAND
65W DIGITAL TRANSCEIVER

FTM-3200D

FTM-3200DR: US, Asia and Australia
FTM-3200DE: Europe

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

C4FM Clear and Crisp Voice Technology
AMS Automatic Mode Select
WIRES-X

- **Operate C4FM Digital and Conventional FM modes**
- **Effortless AMS, FM and C4FM Operation with Multi-colored LED Mode-Indicator**
- **Enhanced Digital Group ID Feature**
- **DG-ID Memory Feature**
- **65W (55W) Stable High-Power Output with FACC**
- **3W powerful Front Speaker**
- **User Programmable Microphone Key buttons**
- **220 Memory Channels with 8-character alpha-numeric tags**

Effortless AMS, FM and C4FM Operation with Multi-colored LED Mode-Indicator

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.

Mode Indicator

Sophisticated Digital-Group-ID Operation

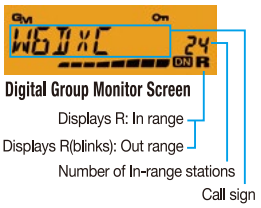
Digital-Group-ID (DG-ID) Feature

Digital-Group-ID (DG-ID), in the C4FM Digital Mode, can be set separately for each group member to facilitate communications between the specific group participants.

DG-ID Memory feature

DG-ID memory can store up to 10 DG-ID pairs with alpha tags. The registered DG-ID numbers in the memory can quickly be recalled, using the DTMF microphone


DG-ID Set up and Memory



Digital Group Monitor Screen

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)

C4FM Clear and Crisp Voice Technology
AMS Automatic Mode Select
WIRES-X

Dependable High-Power Output with FACC

The FTM-3200D/FTM-3207D provides reliable and true high output power with FACC (Funnel Air-Convection Conductor) Wind Tunnel cooling system. The efficient cooling system ensures stable high performance for continuous long-distance communications.


FACC: Funnel Air-Convection Conductor

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.


3W 35x58mm Front Speaker

Useful Features

- Versatile Scanning features: Preferential Memory Scan, Programmable memory scan, VFO scan, Priority Channel Scanning (Dual watch), and Weather Alert Scan: (USA version only)
- Supports WIRES-X features (does not support operation as the WIRES-X Node Station)

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

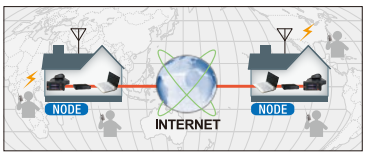
AMATEUR RADIO INTERNET LINKING KIT

HRI-200

C4FM Clear and Crisp Voice Technology

USB Cable CT-174 (MDIN 10 pin to MDIN 10 pin), and Data Cable CT-175 (MDIN 10 pin to MDIN 6 pin) included

WIRES-X



Features

- **High quality voice communication using C4FM digital**
- **Advanced features made possible by C4FM digital functions**
- **Digital/Analog mutual communication**
- **Easy Set-up of HRI-200 with USB connection**

High Performance Commercial Grade Specifications

144/430 MHz
DUAL BAND 5W
FM TRANSCEIVER

FT-65

FT-65R: US and Asia
FT-65E: Europe

144 MHz
SINGLE BAND 5W
FM TRANSCEIVER

FT-25

FT-25R: US and Asia
FT-25E: Europe

FT-65/FT-25 Supplied Accessories
(7.4V 1950mAh Li-ion battery SBR-25LI, Battery Charger SBH-22, AC Adapter SAD-20 and Belt Clip included)

- **Commercial Grade Specifications: IP54/MIL-STD 810 C, D and E**
- **1 Watt of Powerful, Clear Audio**
- **High Power 5 Watts Output and selectable setting 5W / 2.5W / 0.5W**
- **QRK (Four Quick Recall Key buttons: P1-P4) for Easy Operation**
- **Emergency Signaling, Bright white LED Flashlight, One-touch Alarm, and Quick HOME Channel Access**
- **Included 1950mAh Li-ion Battery Pack capable of over 17 hours of operation**
- **FM Broadcast Receiver Equipped**

VALUABLE FEATURES FT-65/FT-25

- 223 Memory Channels with 8-character alpha tags (222 Memory Channels for FT-25)
- Versatile Scanning Capabilities: VFO Scan, Memory Scan, Programmable memory scan (PMS), Memory bank scan, and Dual receive
- WX Channels with "Severe Weather" Alert (only available in NOAA weather service areas)
- VOX Operation with Optional VOX Earpiece Microphone (SSM-512B)
- 3.5-Hour Rapid Charger (SBH-22) Included
- PC Programmable with Optional Programming Cable (SCU-35)
- Transceiver-to-Transceiver Cloning with Optional Cloning Cable (SCU-36)
- ARTS (Automatic Range Transponder System) function
- DTMF Operation • CTCSS / DCS Operation
- Busy Channel Lock Out (BCLO)
- Battery Saver function • Automatic Power Off (APO)
- Transmitter Time Out Timer (TOT)

QRK (Quick Recall Key)

Battery Operating Time (Approximately)*1

Band	SBR-25LI	SBR-26LI
144 MHz	17 hours	22 hours
430 MHz*2	16 hours	20 hours
FM Broadcast	11.5 hours	15 hours

Note: *1 : (TX) 5: (RX) 5: Standby 90 Duty Cycle based on 5W TX Power
*2 : Only FT-65

Ultimate Compact High Performance FM Handheld

144/430MHz
DUAL BAND 5W
FM TRANSCEIVER

FT-4X

FT-4XR: US and Asia
FT-4XE: Europe

144MHz
SINGLE BAND 5W
FM TRANSCEIVER

FT-4V

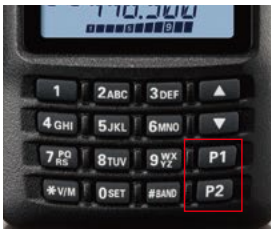
FT-4VR: US and Asia
FT-4VE: Europe

FT-4X/FT-4V Supplied Accessories
(7.4V 1750mAh Li-ion battery SBR-28LI, Battery Charger SBH-22, AC Adapter SAD-20 and Belt Clip included)

- **Ultimate Compact Design: W 2.1" x H 3.5" x D 1.2" (52 x 90 x 30 mm)**
- **1 Watt of Powerful, Clear Audio**
- **High Power 5 Watts Output and selectable setting 5W / 2.5W / 0.5W**
- **QRK (Two Quick Recall Keys: P1-P2) for Easy Operation**
- **Emergency Signaling, One-touch Alarm, and Quick HOME Channel Access**
- **Included 1750mAh Li-ion Battery Pack capable of over 15 hours of operation**
- **FM Broadcast Receiver Equipped**

VALUABLE FEATURES FT-4X/FT-4V

- 223 Memory Channels with 6-character alpha tags (222 Memory Channels for FT-4V)
- Versatile Scanning Capabilities: VFO Scan, Memory Scan, Programmable memory scan (PMS), Memory bank scan, and Dual receive
- WX Channels with "Severe Weather" Alert (only available in NOAA weather service areas)
- VOX Operation with Optional VOX Earpiece Microphone (SSM-512B)
- 3.5-Hour Rapid Charger (SBH-22) Included
- PC Programmable with Optional Programming Cable (SCU-35)
- Transceiver-to-Transceiver Cloning with Optional Cloning Cable (SCU-36)
- FM Broadcast Receiver Equipped
- ARTS (Automatic Range Transponder System) function
- DTMF Operation • CTCSS / DCS Operation
- Busy Channel Lock Out (BCLO)
- Battery Saver function • Automatic Power Off (APO)
- Transmitter Time Out Timer (TOT)



QRK (Quick Recall Key)

Battery Operating Time (Approximately)*1

Band	SBR-28LI
144 MHz	15 hours
430 MHz*2	14 hours
FM Broadcast	12 hours

Note: *1 : (TX) 5: (RX) 5: Standby 90 Duty Cycle based on 5W TX Power
*2 : Only FT-4X

	OPTIONS								
	Speaker Microphone **SSM-16B**	VOX Earpiece Microphone **SSM-512B**	7.4 V, 1,950 mAh Li-ion Battery **SBR-25LI**	7.4 V, 2,500 mAh Li-ion Battery **SBR-26LI**	7.4V 1,750mAh Li-ion Battery **SBR-28LI**	Rapid Charger **SBH-22**	AC Adapter **SAD-20**[*1]	Programming cable **SCU-35**	Cloning Cable **SCU-36**
FT-65/FT-25	●	●	●	●		●	●	●	●
FT-4X/FT-4V	●	●			●	●	●	●	●

*1 Depending on the transceiver version

Ultra-rugged, Submersible Dual Band Transceiver

144/430 MHz (220MHz) DUAL BAND 5W
FM TRANSCEIVER (220MHz FM: 1.5W (US version Only))

VX-6

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

(7.4V 1250mAh* Lithium Ion battery FNB-80LI and battery charger PA-48/SAD-11/SAD-16(Depending on the transceiver version) included)
* Indicated Battery capacity based on EU DIRECTIVE 2006/66/EC

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

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

Power Output/Power Source Chart (Approximately)

	HIGH	LOW3	LOW2	LOW1
FNB-80LI or EXT DC ()220 MHz/USA Version	5W (1.5W)	2.5 W (1.0 W)	1.0 W (0.5 W)	0.05 W (0.2 W)
FBA-23 2 "AA" Alkalines	0.3W	0.05W		

Battery Operating Time (Approximately)

Band	FNB-80LI	Battery Case
144 MHz	7 hours	6.5 hours
430 MHz	6 hours	
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.

Reliable Dual Band Handheld Transceiver

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-16(Depending on the transceiver version) included)

- **Wide Band Receiver Coverage (108-520MHz / 700-999.99MHz)**
- **5 Watts of stable RF Power**
- **Emergency Automatic ID System**
- **One-Touch NOAA WX band Access (US version)**
- **Over 1000 Memory Channels**
- **Single-band and Memory-only Operating Modes**
- **Smart Search Automatic Memory Loading**

Battery Operating Time(Approximately)

Band \ Battery	FNB-83 / FBA-25A
144 MHz	9 hours*1
430 MHz	8 hours*1
Receiving	15 hours*2

Note: *1 Duty Cycle based on 5W PO, 6sec. TX, 6sec. RX w/audio, and 48 sec. Rx squelched.
*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, and Australia

(7.2V 1400mAh Ni-MH battery FNB-83, Desktop Rapid Charger SBH-13(US) and battery charger PA-48/SAD-16 (Depending on the transceiver version) 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**

OPTIONS

	Compact Speaker / Microphone MH-34B4B	Compact Speaker / Microphone MH-57A4B	Waterproof Speaker / Microphone MH-73A4B	Earpiece / Microphone SSM-55A	Compact Lapel Mic with Earpiece SSM-57A	Lightweight VOX Headset SSM-63A	Lightweight VOX Headset SSM-64A	DTFM Paging Unit FTD-7	Barometric Pressure Sensor SU-1	Lithium-ion Battery Pack (7.4 V,1250 mAh) FNB-80LI	Ni-MH Battery Pack (7.2 V, 1400 mAh) FNB-83	2x"AA"Cell Battery Tray FBA-23	6x"AA"Cell Battery Tray FBA-25A
VX-6		●	●	●			●		●	●		●	
FT-60R	●				●	●					●		●
FT-270R		●	●	●			●	●			●		●

	Rapid Charger (1.5 hours) VAC-370*1	Desktop Rapid Charger (4 hours) Requires PA-48 SBH-13	Rapid Charger CD-15A	Charger Cradle CD-26	AC Adapter PA-48*1 SAD-18*1 SAD-16*1	DC Cable with Cigarette-Lighter Plug SDD-13	DC Cable (Plug and Wire Only) E-DC-6	Cloning Cable CT-27	Microphone Adapter CT-44	Microphone Adapter CT-91	Adapter for use with BNC Connector CN-3	Soft Vinyl Case CSC-91	
VX-6			●		●	●	●			●	●	●	
FT-60R	●	●			●	●	●	●	●		●		
FT-270R		●		●	●	●	●			●	●		

*1 Depending on the transceiver version

Ruggedly-Built, High quality 29/50/144/430 MHz Quad Band FM Transceiver

29/50/144/430MHz 50W/35W (430MHz)
FM QUAD BAND TRANSCEIVER

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

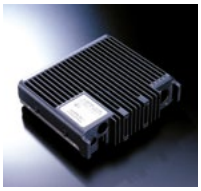
Operating as two radios in one, the FT-8900R may be configured in a number of ways. For example, it can be set up on the "left" side for operation on 29, 50, 144, or 430 MHz operation, while setting the "right" side to 430MHz. Or set up the left side on 29/50/144/430 MHz, and the right side on 144MHz. 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.



HIGH	MID1	MID2	LOW
50W/35W(430MHz)	20W	10W	5W

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

 Hand Microphone **MH-42C6J**	 DTMF Microphone **MH-48A6JA**	 High-Power External Speaker **MLS-100**	 Quick Release Mobile Mounting Bracket **MMB-60**	 Separation Kit **YSK-8900**	 Mic Extension Kit **MEK-2**	 Packet Interface Cable **CT-39A**	 AC Power Supply (23 A) **FP-1023***2	 AC Power Supply (25 A) **FP-1030A***1	 Desktop Cooling Fan **SMB-201**	 AC Adapter for SMB-201 **SAD-11***3

*1 US and Asian versions only *2 US version only *3 Depending on the transceiver version

Heavy-Duty FM Dual band Mobile with Wide-Receiver Coverage

- **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**
- **Remote Front Panel Design (Separation Kit YSK-7800 : Supplied Accessory)**

144/430MHz 50W/45W (430MHz)
FM DUAL BAND TRANSCEIVER

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)

Advanced Features

- One-Touch Hyper Memories Feature • 4 Power output levels: 50,45W/20W/10W/5W
- Wide RX Frequency Coverage: 108 - 520MHz, 700 - 999.990MHz (Cellular Blocked)
- 50-Tone CTCSS/104-Tone DCS Tone System • 16 DTMF memories
- Versatile Scanning Capability • Smart Search Operation
- 1200 or 9600bps Packet Operation • ARTS (Auto-Range Transponder System)
- Radio to Radio Cloning

Genuine 65W High Power 144MHz FM Mobile

- **65W Stable Output Power with FACC**
- **Loud Audio output with 3W front speaker**
- **Expanded receiver coverage: 136-174MHz**
- **220 Memory channels with 8 alpha-numeric characters**
- **User-Programmable Microphone Keys (4 keys)**

FACC: Funnel Air-Convection Conductor

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)

Advanced Features

- Memory-Only Mode • 50-Tone CTCSS/104-Tone DCS Tone System
- Versatile Scanning Capability • TX/RX Split frequency memory
- RF squelch (only passes signals exceeding the programmed squelch level)
- DTMF Auto dialer (10 channel) Operation
- Large LED Mode indicator for easy operation

The King of Mobile, 80W High Power Output

- **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**
- **Expanded receiver coverage: 136-174MHz**
- **200 Memory Channels for serious users**

144MHz 80W
FM SINGLE BAND TRANSCEIVER

FT-2980

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

Advanced Features

- CTCSS and DCS Encode/Decode Built In • Versatile Scanning Capability
- Dual Receive • WX Channels with "Severe Weather" Alert (US Version)
- Smart Search Operation • DTMF Direct Access Microphone Included
- Alpha-Numeric Channel Display • RF-Squelch
- Interactive Programming Menu

	OPTIONS										
	Hand Microphone **MH-42C6J**	DTMF Microphone **MH-48A6JA**	High-Power External Speaker **MLS-100**	Quick Release Mobile Mounting Bracket **MMB-60**	Separation Kit **YSK-7800**	Mic Extension Kit **MEK-2**	Packet Interface Cable **CT-39A**	AC Power Supply (23 A) **FP-1023*2**	AC Power Supply (25 A) **FP-1030A*1**	Desktop Cooling Fan **SMB-201**	AC Adapter for SMB-201 **SAD-11*3**
FT-7900	●	●	●	●	●	●	●	●	●	●	●
FTM-3100	●	●	●					●	●		
FT-2980	●	●	●					●	●		

*1 US and Asian versions only *2 US version only *3 Depending on the transceiver

Handheld Transceivers

		C4FM/FM Dual Band		FM Dual /Single Band				
		FT2D	FT-70D	VX-6	FT-65 FT-25	FT-4X FT-4V	FT-60R	FT-270R
PROGRAMMING KIT								
ADMS	Windows™ PC Programming Kit	ADMS-8	ADMS-10	ADMS-VX6	Memory Programmer		ADMS-1J	ADMS-270
SOFT CASE & BELT CLIP								
CSC/SHC	Soft Vinyl Case	SHC-24	SHC-27	CSC-91				
SHB-13	Belt Clip	●						
CLIP-17D	Swivel Belt Clip			●				
MICROPHONE/HEADSET								
MH-34B4B	Compact Speaker / Microphone	●	●				●	
SSM-57A	Compact Lapel Mic with Earpiece	●	●				●	
MH-57A4B	Compact Speaker / Microphone			●				●
MH-73A4B	Waterproof Speaker / Microphone			●				●
SSM-16B	Speaker / Microphone				●	●		
MH-85A11U	Speaker Microphone with Snapshot camera	●						
SSM-64A	Lightweight VOX (Voice-Operated) Headset			●				●
SSM-63A	Lightweight VOX (Voice-Operated) Headset	●	●				●	
SSM-55A	Earpiece / Microphone			●				●
SSM-512B	VOX Earpiece Microphone				●	●		
CABLES & ADAPTERS								
E-DC-6	DC Cable (Plug and Wire Only)	●	●	●			●	●
SDD-13	DC Cable with Cigarette-Lighter Plug	●	●	●			●	●
CN-3	Adapter for use with BNC Connector	●	●	●			●	●
CT-27	Cloning Cable		●				●	
CT-44	Microphone Adapter	●	●				●	
CT-91	Microphone Adapter			●				●
CT-168	Cloning Cable	●						
CT-169	PC Connection Cable (Dsub9)	●						
CT-170	Data Cable	●						
CT-176	Data Cable(2.5φ)	●						
SCU-19	PC Connection Cable (USB)	●						
SCU-35	Programming Cable				●	●		
SCU-36	Cloning Cable				●	●		
BATTERY PACK & BATTERY TRAY								
Battery TRAY	Alkaline Cells Battery Tray	FBA-39(3xAA)		FBA-23(2xAA)			FBA-25A(6xAA)	FBA-25A(6xAA)
FNB-83	Ni-MH Battery Pack (7.2 V, 1400 mAh)						●	●
FNB-80LI	Lithium-ion Battery Pack (7.4 V, 1250 mAh)*1			●				
FNB-101LI	Lithium-ion Battery Pack (7.4 V, 1100 mAh)	●						
SBR-14LI	Lithium-ion Battery Pack (7.2 V, 2200 mAh)	●						
SBR-24LI	Lithium-ion Battery Pack (7.4 V, 1800 mAh)		●					
SBR-25LI	Lithium-ion Battery Pack (7.4 V, 1950 mAh)				●			
SBR-26LI	Lithium-ion Battery Pack (7.4 V, 2500 mAh)				●			
SBR-28LI	Lithium-ion Battery Pack (7.4V, 1750mAh)					●		
BATTERY CHARGERS								
CD-15A	Rapid Charger (2.5 hours)			●				
CD-26	Charger Cradle							●
CD-41	Rapid Charger	●						
SBH-13	Desktop Rapid Charger (4 hours) Requires PA-48						●	●
SBH-22	Rapid Charger				●	●		
SBH-28	Rapid Charger		●					
VAC-370*2	Rapid Charger (1.5 hours)						●	
PA-48*2	AC Adapter	●		●			●	●
SAD-16*2	AC Adapter	●		●			●	●
SAD-11*2	AC Adapter		●					
SAD-18*2	AC Adapter	●	●	●				
SAD-20*2	AC Adapter				●	●		
OTHERS								
SU-1	Barometric Pressure Sensor			●				
FTD-7	DTMF Paging Unit							●

*1 Indicated Battery Capacity based on EU DIRECTIVE 2006/66/EC.
*2 Depending on the transceiver version

Mobile Transceivers

		C4FM/FM Dual	
		FTM-400XD	FTM-100D
MICROPHONES/SPEAKER			
MH-42C6J	Hand Microphone	●	●
MH-48A6JA	DTMF Microphone	●	●
MH-85A11U	Microphone with Snapshot camera	●	
MLS-100	High-Power External Speaker		
MLS-200-M10	High-Power External Speaker	●	●
BRACKET			
MMB-60	Quick Release Mobile Mounting Bracket		
MMB-98	Vacuum Cup Mount Bracket for Controller / Front panel	●	●
CABLES			
YSK-8900	Separation Kit		
YSK-7800	Separation Kit		
MEK-2	Mic Extension Kit	●	●
CT-39A	Packet Interface Cable		
CT-162	Separation Cable 20ft (6m)	●	●
CT-163	Data Cable (MDIN10 pin to MDIN6 pin + Dsub9)	●	●
CT-164	Data Cable (MDIN10 pin to MDIN6 pin)	●	●
CT-165	Data Cable (MDIN10 pin to Dsub9)	●	●
CT-166	Cloning Cable	●	●
CT-167	Data Cable (MDIN10 pin to Open)	●	●
SCU-20	PC Connection Cable	●	●
SCU-23	Microphone Extension Cable for MH-85A11U	●	
PROGRAMMING KIT			
ADMS	Windows™ PC Programming Kit	ADMS-7	ADMS-9
OTHERS			
FP-1030A*1	AC Power Supply (25 A)	●	●
FP-1023*2	AC Power Supply (23 A)	●	●
SMB-201	Desktop Cooling Fan	●	●
SAD-11*3	AC Adapter for SMB-201	●	●
BU-2	Bluetooth® Adapter Unit	●	●
FVS-2	Voice Guide Unit	●	●

*1 US and Asian versions only *2 US version only
*3 Depending on the transceiver version

Band	C4FM/FM Single Band		FM Quad Band	FM Dual /Single Band		
FTM-7250D	FTM-3200D	FTM-3207D	FT-8900R	FT-7900	FTM-3100	FT-2980
●	●	●	●	●	●	●
●	●	●	●	●	●	●
●	●	●	●	●	●	●
			●	●		
			●			
				●		
			●	●		
			●	●		
			ADMS-2H	ADMS-7900		ADMS-2900
●	●	●	●	●	●	●
●	●	●	●	●	●	●
			●	●		
			●	●		

Handheld Transceivers

	C4FM/FM Dual Band			
	FT2DR	FT2DE	FT-70DR	FT-70DE
General				
Frequency Ranges	A (Main) Band RX: 0.5 -1.8 MHz (AM Radio) 1.8 - 30 MHz (SW Radio) 30 - 76 MHz (50 MHz HAM) 76 - 108 MHz (FM Radio) 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF) 222 - 420 MHz (General 1) 420 - 470 MHz (430 MHz HAM) 470 - 800 MHz (UHF) 800 - 999.99 MHz (General 2, US version Cellular Blocked) B(Sub) Band RX: 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF) 222 - 420 MHz (General 1) 420 - 470 MHz (430 MHz HAM) 470 - 579.99 MHz (UHF) TX: 144 - 148 MHz 430 - 450 MHz	A (Main) Band RX: 0.5 -1.8 MHz (AM Radio) 1.8 - 30 MHz (SW Radio) 30 - 88 MHz (50 MHz HAM) 88 - 108 MHz (FM Radio) 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF) 222 - 420 MHz (General 1) 420 - 470 MHz (430 MHz HAM) 470 - 800 MHz (UHF) 800 - 999.99 MHz (General 2) B(Sub) Band RX: 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF) 222 - 420 MHz (General 1) 420 - 470 MHz (430 MHz HAM) 470 - 579.99 MHz (UHF) TX: 144 - 146 MHz 430 - 440 MHz	RX: 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF1) 222 - 420 MHz (VHF2) 420 - 470 MHz (430 MHz HAM) 470 - 579.995 MHz (UHF) TX: 144 - 148 MHz 430 - 450 MHz	RX: 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF1) 222 - 420 MHz (VHF2) 420 - 470 MHz (430 MHz HAM) 470 - 579.995 MHz (UHF) TX: 144 - 146 MHz 430 - 440 MHz
Channel Steps	5, 6.25, 8.33, 9, 10, 12.5, 15, 20, 25, 50, 100 kHz		5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz	
Frequency Stability	±2.5 ppm (-4°F to + 140°F, -20°C to + 60°C)		±2.5 ppm (-4 F to +140F , –20 °C to +60 °C)	
Emission Type	F1D, F2D, F3E, F7W		F2D, F3E, F7W	
Supply Voltage	Norminal 7.2 V DC (Negative Ground SBR-14LI) Norminal 7.4 V DC (Negative Ground FNB-101LI) Operating 4 - 14 V DC (Negative Ground EXT DC jack) 11- 16 V DC (Negative Ground EXT DC jack with SDD-13)		Nominal 7.4 V DC (SBR-24LI) Operating 6 - 14 V Negative Ground 11 - 16 V Negative Ground (EXT DC Jack)	
Current Consumption	120 mA (Single Band Receive) 180 mA (Dual Band Receive) 80 mA (Single Band, Standby, Saver Off) 110 mA (Dual Band, Standby, Saver Off) 50 mA (Single Band, Standby, Saver On "Save Ratio 1: 5") 50 mA (Dual Band, Standby, Saver On "Save Ratio 1: 5") +20 mA (GPS On) +20 mA (Digital) 400 µA (Auto Power Off) 1.6 A (TX, 144 MHz 5 W) 1.8 A (TX, 430 MHz 5 W)		180 mA (Receive: Vol.16) 120 mA (Standby, Saver Off) 1.6 A (TX 144 MHz 5 W) 1.9 A (TX 430 MHz 5 W)	
Operating Temperature	-4°F to + 140°F, -20°C to + 60°C		– 4 °F to +14 °F , – 20 °C to + 60 °C	
Case Size (WxHxD) w/o knob & antenna & belt clip	2.4" x 4.3" x 1.3" (62 x 110 x 32.5 mm)		2.36" x 3.86" x 1.30" (60 x 98 x 33 mm)	
Weight	10.93 oz (310 g) with SBR-14LI & antenna		8.99 oz (255 g) with SBR-24LI & antenna	
Transmitter				
RF Power Output	0.8 W @4.5 V: AA x 3 5.0 W @Battery Pack or EXT DC L3: 2.5W, L2: 1W, L1: 0.1W @7.2 V		5.0 W (High) @ 7.4 V:SBR-24LI 2 W (Middle) @ 7.4 V: SBR-24LI 0.5 W (Low) @ 7.4 V: SBR-24LI	
Spurious Emission	At least 60 dB below (@ TX power HI/L3) At least 50 dB below (@ TX power L2/L1)		At least 60 dB down (@ TX power High/Middle) At least 40 dB down (@ TX power Low)	
Microphone Impedance	2 kΩ		2 kΩ	
Receiver				
Circuit Type	NFM / AM: Double-Conversion FM / AM Radio: Direct -Conversion		Double-Conversion Superheterodyne	
Intermediate Frequencies	1st: 47.25 MHz (NFM, AM, A Band), 46.35 MHz (NFM, AM, B Band), 2nd: 450 kHz (NFM, AM)		1st: 47.25 MHz 2nd: 450 kHz	
Sensitivity ※ Measurement Method AM Mode : 10 dB SN NFM/WFM Mode : 12 dB SINAD Digital Mode : BER 1%	3.0 µV (0.5 - 30 MHz, AM) 0.35 µV TYP (30 - 54 MHz, NFM) 1.0 µV TYP (54 - 76 (88) MHz, NFM) 1.5 µV TYP (76 (88) - 108 MHz, WFM) 1.5 µV TYP (108 - 137 MHz, AM) 0.2 µV (137 - 140 MHz, NFM) 0.16 µV (140 - 150 MHz, NFM) 0.2 µV (150 - 174 MHz, NFM) 1.0 µV (174 - 222 MHz, NFM) 0.5 µV (300 - 350 MHz, NFM) 0.2 µV (350 - 400 MHz, NFM) 0.18 µV (400 - 470 MHz, NFM) 1.5 µV (470 - 540 MHz, NFM) 3.0 µV TYP (540 - 800 MHz, NFM) 1.5 µV TYP (800 - 999.99 MHz, NFM) US version Cellular Blocked 0.19 µV TYP (Digital Mode)		1.5 µV TYP for 10 dB SN (108 - 137 MHz, AM) 0.16 µV for 12 dB SINAD (137 - 174 MHz, NFM) 1µV for 12 dB SINAD (174 - 222 MHz, NFM) 0.5 µV for 12 dB SINAD (300 - 350 MHz, NFM) 0.2 µV for 12 dB SINAD (350 - 400 MHz, NFM) 0.18 µV for 12 dB SINAD (400 - 470 MHz, NFM) 0.35 µV for 12 dB SINAD (470 - 579.995 MHz, NFM) 0.19 µV TYP for BER 1% (Digital mode @Ham Band)	
Selectivity	NFM, AM 12 kHz / 35 kHz (-6 dB / -60 dB)		12 kHz / 35 kHz (–6 dB /–60 dB)	
AF Output	700 mW @ 10 % THD Internal SP 300 mW @ 10 % THD EXT SP jack		700 mW @ 10 % THD : Internal speaker 300 mW @ 10 % THD : External speaker	
AF Output Impedance	8 Ω		8 Ω	

Handheld Transceivers

	FM Dual Band							FM Single Band				
	VX-6R	VX-6E	FT-65R	FT-65E	FT-4XR	FT-4XE	FT-60R	FT-25R	FT-25E	FT-4VR	FT-4VE	FT-270R
General												
Frequency Ranges	RX: 0.5-1.8 MHz (AM Radio) 1.8 - 30 MHz (SW Radio) 30 - 59 MHz (50 MHz HAM: US version) 30 - 76 MHz (50 MHz HAM) 59 - 108 MHz (FM Radio: US Version) 76 - 108 MHz (FM Radio) 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF) 222 - 420 MHz (ACT1) 420 - 470 MHz (430 MHz HAM) 470 - 729 MHz (UHF-TV: US version) 470 - 800 MHz (UHF) 800 - 998.990 MHz (ACT2, US version Cellular Blocked) TX: 144 - 148 MHz 222 - 225 MHz (US version only) 430 - 450 MHz	RX: 0.5-1.8 MHz (AM Radio) 1.8 - 30 MHz (SW Radio) 30 - 76 MHz (50 MHz HAM) 76 - 108 MHz (FM Radio) 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF) 222 - 420 MHz (ACT1) 420 - 470 MHz (430 MHz HAM) 470 - 800 MHz (UHF) 800 - 998.990 MHz (ACT2) TX: 144 - 146 MHz 430 - 440 MHz	RX: 136 - 174 MHz 400 - 480 MHz TX: 144 - 148 MHz (US) 136 - 174 MHz (Asia) 430 - 450 MHz (US) 400 - 480 Mhz (Asia)	RX: 136 - 174 MHz 400 - 480 MHz TX: 144 - 146 MHz 430 - 440 MHz	RX: 136 - 174 MHz 400 - 480 MHz TX: 144 - 148 MHz (US) 136 - 174 MHz (Asia) 430 - 450 MHz (US) 400 - 480 Mhz (Asia)	RX: 136 - 174 MHz 400 - 480 MHz TX: 144 - 146 MHz 430 - 440 MHz	RX: 108 - 137 MHz (Air Band) 137 - 520 MHz (AM/FM) 700 - 999 MHz (FM, US version Cellular Blocked) TX: 144 - 148 MHz 430 - 450 MHz	RX: 136 - 174 MHz TX: 144 - 148 MHz (US) 136 - 174 MHz (Asia)	RX: 136 - 174 MHz TX: 144 - 146 MHz	RX: 136 - 174 MHz TX: 144 - 148 MHz (US) 136 - 174 MHz (Asia)	RX: 136 - 174 MHz TX: 144 - 146 MHz	RX: 136-174 MHz TX: 144 - 148 MHz
Channel Steps	5, 9, 10, 12.5, 15, 20, 25, 50, 100 kHz		5, 6.25, 10, 12.5, 15, 20, 25, 50, 100 kHz		5/6.25/10/12.5/15/20/25/50/100 kHz		5, 10, 12.5, 15, 20, 25, 50, 100 kHz	5, 6.25, 10, 12.5, 15, 20, 25, 50, 100 kHz		5/6.25/10/12.5/15/20/25/50/100 kHz		5, 10, 12.5, 15, 20, 25, 50, 100 kHz
Frequency Stability	±5 ppm (+14°F to + 122°F, -10°C to + 50°C)		±2.5 ppm (+14 °F to +140 °F , –10 °C to +60 °C)		±2.5 ppm (+14 °F to +140 °F , –10 °C to +60 °C)		±2.5 ppm (+14°F to + 140°F, -10°C to + 60°C)	±2.5ppm (+14 °F to +140 °F , –10 °C to +60 °C)		±2.5 ppm (+14 °F to +140 °F , –10 °C to +60 °C)		±5 ppm (+14°F to + 140°F, -10°C to + 60°C)
Emission Type	F2D, F3E		F2D, F3E, F2A		F2D, F3E, F2A		F2D, F3E	F2D, F3E, F2A		F2D, F3E, F2A		F2D, F3E
Supply Voltage	Nominal 7.4 V DC (Negative Ground) Operating 5 - 16 V DC (EXT DC jack) 11.0 - 16.0 V DC (EXT DC jack while Charging)		Nominal: 7.4 V DC, Negative Ground		Nominal: 7.4 V DC, Negative Ground		Nominal 7.2 V DC (Negative Ground) Operating 6.0 - 16 V DC (EXT DC jack) 11- 16 V DC (EXT DC jack while Charging)	Nominal: 7.4 V DC, Negative Ground		Nominal: 7.4 V DC, Negative Ground		Nominal 7.2 V DC (Negative Ground) Operating 6.0 - 16 V DC (EXT DC jack)
Current Consumption	150 mA (Receive) 60 mA (Standby, Saver Off) 20 mA (Standby, Saver On) 1 mA (ON Timer Activated) 200 µA (Auto Power Off) 1.6 A (TX, 144 MHz 5 W) 1.5 A (TX, 222 MHz 1.5 W US version) 1.8 A (TX, 430 MHz 5 W)		205 mA (Receive) 200 mW Output 100 mA (Standby, Saver Off) 18 mA (Standby, Saver On) 4 mA (Auto Power Off) 1.5 A (TX 144 MHz 5 W) 1.7 A (TX 430 MHz 5 W)		190 mA (Receive) 200 mW Output 95 mA (Standby, Saver Off) 23 mA (Standby, Saver On) 5 mA (Auto Power Off) 1.5 A (TX 144 MHz 5 W) 1.7 A (TX 430 MHz 5 W)		125 mA (Receive) 45 mA (Standby, Saver Off: 144MHz) 47 mA (Standby, Saver Off: 430MHz) 19 mA (Standby, Saver On) 0.8 mA (Auto Power Off) 1.5 A (TX, 144 MHz 5.0 W) @7.2 V DC 1.6 A (TX, 430 MHz 5.0 W) @7.2 V DC	205 mA (Receive) 200 mW Output 100 mA (Standby, Saver Off) 18 mA (Standby, Saver On) 4 mA (Auto Power Off) 1.5 A (TX 144 MHz 5 W)		190 mA (Receive) 200 mW Output 95 mA (Standby, Saver Off) 23 mA (Standby, Saver On) 5 mA (Auto Power Off) 1.5 A (TX 144 MHz 5 W)		165 mA (Receive) 200mW Output 45 mA (Standby, Saver Off) 20.5 mA (Standby, Saver On) 8 mA (Auto Power Off) 1.5 A (TX, 5.0 W) @7.2 V DC
Operating Temperature	-4°F to + 140°F, -20°C to + 60°C		– 4 °F to +14 °F , – 20 °C to + 60 °C		– 4 °F to +14 °F , – 20 °C to + 60 °C		-4°F to + 140°F, -20°C to + 60°C	– 4 °F to +14 °F , – 20 °C to + 60 °C		– 4 °F to +14 °F , – 20 °C to + 60 °C		-4°F to + 140°F, -20°C to + 60°C
Case Size (WxHxD) w/o knob & antenna & belt clip	2.3" x 3.5" x 1.1" (58 x 89 x 28.5 mm)		2.1" x 4.1" x 1.2" (52 x 104.5 x 30 mm)		2.1" x 3.5" x 1.2" (52 x 90 x 30 mm)		2.3" x 4.3" x 1.2" (58 x 109 x 30 mm)	2.1" x 4.1" x 1.2" (52 x 104.5 x 30 mm)		2.1" x 3.5" x 1.2" (52 x 90 x 30 mm)		2.4" x 4.7" x 1.3" (60 x 120 x 32 mm)
Weight	9.5 oz (270 g) with FNB-80LI & antenna		9.17 oz (260 g) with SBR-25LI and antenna		8.82 oz (250 g) with SBR-28LI and antenna		13.05 oz (370 g) with FNB-83 & antenna	9.17 oz (260 g) with SBR-25LI and antenna		8.82 oz (250 g) with SBR-28LI and antenna		13.8 oz (390 g) with FNB-83 & antenna
Transmitter												
RF Power Output	5.0 W (144/430 MHz) 2.5 W (L3: 144/430 MHz) 1.0 W (L2: 144/430 MHz) 0.3 W (L1: 144/430 MHz) 1.5 W (222 MHz: US version) 1.0 W (L3: 222 MHz: US version) 0.5 W (L2: 222 MHz: US version) 0.2 W (L1: 222 MHz: US version)		5 W (High) @ 7.4 V: SBR-25LI 2.5 W (Middle) @ 7.4 V: SBR-25LI 0.5 W (Low) @ 7.4 V: SBR-25LI		5 W (High) @ 7.4 V: SBR-28LI 2.5 W (Middle) @ 7.4 V: SBR-28LI 0.5 W (Low) @ 7.4 V: SBR-28LI		High 5.0 W @7.2 V: FNB-83 Mid 2.0 W @7.2 V: FNB-83 Low 0.5 W @7.2 V: FNB-83	5 W (High) @ 7.4 V: SBR-25LI 2.5 W (Middle) @ 7.4 V: SBR-25LI 0.5 W (Low) @ 7.4 V: SBR-25LI		5 W (High) @ 7.4 V: SBR-28LI 2.5 W (Middle) @ 7.4 V: SBR-28LI 0.5 W (Low) @ 7.4 V: SBR-28LI		High 5.0 W @7.2 V: FNB-83 Mid 2.0 W @7.2 V: FNB-83 Low 0.5 W @7.2 V: FNB-83
Spurious Emission	At least 60 dB below (@ TX power HI/L3) At least 50 dB below (@ TX power L2/L1)		At least 60 dB down (@ TX Power High/Middle) At least 40 dB down (@ TX Power Low)		At least 60 dB down (@ TX Power High/Middle) At least 40 dB down (@ TX Power Low)		At least 60 dB down (@ TX power : High/Mid) At least 40 dB below (@ TX power : Low)	At least 60 dB down (@ TX Power High/Middle) At least 40 dB down (@ TX Power Low)		At least 60 dB down (@ TX Power High/Middle) At least 40 dB down (@ TX Power Low)		At least 60 dB below (@ TX power : High/Mid) At least 40 dB below (@ TX power : Low)
Microphone Impedance	2 kΩ		2 kΩ		2 kΩ		2 kΩ	2 kΩ		2 kΩ		2 kΩ
Receiver												
Circuit Type	NFM / AM: Double-Conversion WFM: Triple-Conversion		Direct-Conversion		Direct-Conversion		Double-Conversion	Direct-Conversion		Direct-Conversion		Double-Conversion
Intermediate Frequencies	1st: 47.25 MHz (NFM, AM, WFM) 2nd: 450 kHz (NFM, AM), 10.7 MHz (WFM) 3rd: 1 MHz (WFM)		-		-		1st: 47.25 MHz 2nd: 450 kHz					1st: 21.7 MHz 2nd: 450 kHz
Sensitivity ※ Measurement Method AM Mode : 10 dB SN NFM/WFM Mode : 12 dB SINAD Digital Mode : BER 1%	1.0 µV TYP (1.8 - 30 MHz, AM) 0.35 µV TYP (30 - 54 MHz, NFM) 0.5 µV TYP (54 - 76 MHz, NFM) 0.5 µV TYP (54 - 59 MHz, NFM, US version) 1.0 µV TYP (76 - 108 MHz, WFM) 1.0 µV TYP (59 - 108 MHz, WFM, US version) 1.5 µV TYP (108 - 137 MHz, AM) 0.2 µV (137 - 140 MHz, NFM) 0.16 µV (140 - 150 MHz, NFM) 0.2 µV (150 - 174 MHz, NFM) 0.5 µV TYP (174 - 250 MHz, WFM) 0.5 µV (300 - 350 MHz, NFM) 0.2 µV (350 - 420 MHz, NFM) 0.18 µV (420 - 470 MHz, NFM) 1.0 µV (470 - 540 MHz, WFM) 1.0 µV TYP (580 - 800 MHz, WFM) 0.5 µV TYP (800 - 999.990 MHz, NFM) US version Cellular Blocked		0.2 µV for 12 dB SINAD (140 - 150 MHz, NFM) 0.2 µV for 12 dB SINAD (420 - 470 MHz, NFM)		0.2 µV for 12 dB SINAD (140 - 150 MHz, NFM) 0.2 µV for 12 dB SINAD (420 - 470 MHz, NFM)		0.8 µV (108 - 137 MHz, AM) 0.2 µV (137 - 140 MHz, NFM) 0.16 µV (140 - 150 MHz, NFM) 0.2 µV TYP (150 - 174 MHz, NFM) 0.3 µV TYP (174 - 300 MHz, NFM) 0.8 µV TYP (300 - 336 MHz, AM) 0.25 µV TYP (336 - 420 MHz, NFM) 0.2 µV (420 - 470 MHz, NFM) 0.25 µV (470 - 540 MHz, WFM) 0.5 µV TYP (800 - 900 MHz, NFM) 0.8 µV TYP (900 - 999.99 MHz, NFM) US version Cellular Blocked	0.2 µV for 12 dB SINAD (140 - 150 MHz, NFM)		0.2 µV for 12 dB SINAD (140 - 150 MHz, NFM)		0.2 µV (136 - 140 MHz, NFM) 0.16 µV (140 - 150 MHz, NFM) 0.2 µV TYP (150 - 174 MHz, NFM)
Selectivity	NFM, AM 12 kHz / 35 kHz (-6 dB / -60 dB) WFM 200 kHz / 300 kHz (-6 dB / -20 dB)		12 kHz / 35 kHz (–6 dB /–60 dB)		12 kHz / 35 kHz (–6 dB /–60 dB)		NFM, AM 12 kHz / 35 kHz (-6 dB / -60 dB)	12 kHz / 35 kHz (–6 dB /–60 dB)		12 kHz / 35 kHz (–6 dB /–60 dB)		12 kHz / 35 kHz (-6 dB / -60 dB)
AF Output	200 mW @ 10 % THD (@ 7.4 V) 400 mW @ 10 % THD (@ 13.8V)		1 W : MAX Power , 0.8 W @ 10 % THD		1 W : MAX Power , 0.8 W @ 10 % THD		400 mW @ 10 % THD (@ 7.5 V)	1 W : MAX Power , 0.8 W @ 10 % THD		1 W : MAX Power , 0.8 W @ 10 % THD		800 mW @ 16 Ω 10 % THD (@ 7.4 V) Internal SP 450 mW @ 8 Ω10 % THD (@ 7.4V) EXT SP jack
AF Output Impedance	8 Ω		16 Ω		16 Ω		8 Ω	16 Ω		16 Ω		8 Ω/16 Ω

Mobile Transceivers

	C4FM/FM Dual Band						C4FM/FM Single Band				FM Quad Band	FM Dual Band		FM Single Band			
	FTM-400XDR	FTM-400XDE	FTM-100DR	FTM-100DE	FTM-7250DR	FTM-7250DE	FTM-3200DR	FTM-3200DE	FTM-3207DR	FTM-3207DE	FT-8900R	FT-7900R	FT-7900E	FTM-3100R	FTM-3100E	FT-2980R	FT-2980E
General																	
Frequency Ranges	RX: 108 - 137 MHz 137 - 174 MHz 174 - 400 MHz 400 - 480 MHz 480 - 999.99 MHz US Version Cellular Blocked TX: 144 - 148 MHz 430 - 450 MHz	RX: 108 - 137 MHz 137 - 174 MHz 174 - 400 MHz 400 - 480 MHz 480 - 999.99 MHz TX: 144 - 146 MHz 430 - 440 MHz	RX: 108 - 137 MHz 137 - 174 MHz 174 - 400 MHz 400 - 480 MHz 480 - 999.99 MHz US Version Cellular Blocked TX: 144 - 148 MHz 430 - 450 MHz	RX: 108 - 137 MHz 137 - 174 MHz 174 - 400 MHz 400 - 480 MHz 480 - 999.99 MHz TX: 144 - 146 MHz 430 - 440 MHz	RX: 108 - 579.995 MHz TX: 144 - 148 MHz 430 - 450 MHz	RX: 108 - 579.995 MHz TX: 144 - 146 MHz 430 - 440 MHz	RX: 136 - 174 MHz TX: 144 - 148 MHz	RX: 136 - 174 MHz TX: 144 - 146 MHz	RX: 420 - 470 MHz TX: 430 - 450 MHz	RX: 420 - 470 MHz TX: 430 - 440 MHz	RX: 28 - 29.7 MHz 50 - 54 MHz 108 - 180 MHz 320 - 480 MHz 700 - 985 MHz US Version Cellular Blocked TX: 28 - 29.7 MHz 50 - 54 MHz 144 - 148 MHz or 144 - 146 MHz 430 - 450 MHz or 430 - 440 MHz	RX: 108 - 520 MHz 700 - 999 MHz US Version Cellular Blocked TX: 144 - 148 MHz 430 - 450 MHz	RX: 108 - 520 MHz 700 - 999 MHz TX: 144 - 146 MHz 430 - 440 MHz	RX: 136 - 174 MHz TX: 144 - 148 MHz	RX: 136 - 174 MHz TX: 144 - 146 MHz	RX: 136 - 174 MHz TX: 144 - 148 MHz	RX: 136 - 174 MHz TX: 144 - 146 MHz
Channel Steps	5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz (8.33 kHz : Only for Air band)		5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz (8.33 kHz : Only for Air band)		5, 6.25, 8.33,10, 12.5, 15, 20, 25, 50, 100kHz (8.33kHz : Only for Air band)		5, 6.25, 10, 12.5, 15, 20, 25, 50, 100 kHz		5, 6.25, 10, 12.5, 15, 20, 25, 50, 100 kHz		5, 10, 12.5, 15, 20, 25, 50 kHz	5, 10, 12.5, 15, 20, 25, 50, 100 kHz		5, 6.25, 10, 12.5, 15, 20, 25, 50, 100 kHz		5, 10, 12.5, 15, 20, 25, 50, 100 kHz	
Frequency Stability	±2.5 ppm (-4°F to + 140°F, -20°C to + 60°C)		±2.5 ppm (-4°F to + 140°F, -20°C to + 60°C)		±2.5 ppm (-4°F to + 140°F, -20°C to + 60°C)		±2.5 ppm (Digital), ±10 ppm (Analog) (-4°F to + 140°F, -20°C to + 60°C)		±2.5 ppm (Digital), ±5 ppm (Analog) (-4°F to + 140°F, -20°C to + 60°C)		±5 ppm (+14°F to + 140°F, -10°C to + 60°C)	±5 ppm (+14°F to + 140°F, -10°C to + 60°C)		±10 ppm (-4°F to + 140°F, -20°C to + 60°C)		±10 ppm (-4°F to + 140°F, -20°C to + 60°C)	
Supply Voltage	Nominal 13.8 V DC, Negative Ground Operating 11.7 - 15.8 V DC, Negative Ground		Nominal 13.8 V DC, Negative Ground Operating 11.7 - 15.8 V DC, Negative Ground		Nominal 13.8 V DC, Negative Ground Operating 11.7 - 15.8 V DC, Negative Ground		Nominal 13.8 V DC, Negative Ground Operating 11.7 - 15.8 V DC, Negative Ground		Nominal 13.8 V DC, Negative Ground Operating 11.7 - 15.8 V DC, Negative Ground		Nominal 13.8 V DC, Negative Ground Operating 11.7 - 15.8 V DC, Negative Ground	Nominal 13.8 V DC, Negative Ground Operating 11.7 - 15.8 V DC, Negative Ground		Nominal 13.8 V DC, Negative Ground Operating 11.7 - 15.8 V DC, Negative Ground		Nominal 13.8 V DC, Negative Ground Operating 11.7 - 15.8 V DC, Negative Ground	
Current Consumption	0.5 A (Receive) 11 A (TX, 144 MHz 50 W), 12 A (TX, 430 MHz 50 W)		0.5 A (Receive) 11 A (TX, 144 MHz 50 W), 12 A (TX, 430 MHz 50 W)		0.5A (Receive), 10A (TX, 50W), 6A (TX, 25W), 4A (TX, 5W)		0.5 A (Receive), 15 A (TX, 65 W), 10 A (30 W), 5 A (5 W)		0.5 A (Receive), 12 A (TX, 55 W), 6 A (25 W), 4 A (5 W)		0.8 A (Receive) 8.5 A (TX, 29/ 144 MHz 50W) 8 A (TX, 50 MHz 50W/430 MHz 35W)	0.5 A (Receive) 8.5 A (TX, 144 MHz 50 W) 9 A (TX,430 MHz 45 W)		0.5 A (Receive) 15 A (TX, 65 W), 10 A (30 W), 5 A (5 W)		0.7 A (Receive) 15 A (80W) / 9 A (30 W) / 5 A (10 W) / 4 A (5 W)	
Operating Temperature	-4°F to + 140°F, -20°C to + 60°C		-4°F to + 140°F, -20°C to + 60°C		-4°F to + 140°F, (-20°C to + 60°C)		-4°F to + 140°F, -20°C to + 60°C		-4°F to + 140°F, -20°C to + 60°C		-4°F to + 140°F, -20°C to + 60°C	-4°F to + 140°F, -20°C to + 60°C		-4°F to + 140°F, -20°C to + 60°C		-4°F to + 140°F, -20°C to + 60°C	
Case Size (WxHxD)	Radio Unit / 5.5" x 1.6" x 4.9" (140 x 40 x 125 mm) (W/O Fan & connectors) Controller / 5.5" x 2.8" x 0.8" (140 x 72 x 20 mm) (W/O knob & connectors)		5.5" x 1.8" x 6.5" (140 x 45 x 164 mm) (with Front Panel, W/O Fan, knob & connectors) Front Panel / 5.5" x 1.8" x 1.2" (140 x 45 x 29 mm) (W/O knob)		6.1" x 1.7" x 5.7" (155 x 42 x 145.5mm) w/o knobs and FAN		6.1" x 1.7" x 5.7" (155 x 42 x 145.5mm) w/o knobs and FAN		6.1" x 1.7" x 5.7" (155 x 42 x 145.5mm) w/o knobs and FAN		5.5" x 1.6" x 6.6" (140 x 41.5 x 168 mm) (W/O knob & connectors)	5.5" x 1.6" x 6.6" (140 x 41.5 x 168 mm) (W/O knob & connectors)		6.1" x 1.7" x 5.7" (155 x 42 x 145.5mm) w/o knobs and FAN		6.3" x 2.0" x 7.3" (160 x 50 x 185 mm) (W/O knob & connectors)	
Weight	2.64 lbs (1.2 kg) with Radio Unit, Controller, Control Cable		2.43 lbs (1.1 kg) with Radio Unit, Front panel		2.86 lbs (1.3kg)		2.86 lbs (1.3 kg)		2.86 lbs (1.3 kg)		2.2 lbs (1 kg)	2.2 lbs (1 kg)		2.86 lbs (1.3 kg)		4.2 lbs (1.9 kg)	
Transmitter																	
RF Power Output	50 / 20 / 5 W		50 / 20 / 5 W		50 / 25 / 5 W		65 / 30 / 5 W		55 / 25 / 5 W		50 / 20 / 10 / 5 W (29/50/144 MHz) 35 / 20 / 10 / 5 W (430 MHz)	50 / 20 / 10 / 5 W (144 MHz) 45 / 20 / 10 / 5 W (430 MHz)		65 / 30 / 5 W		80 / 30 / 10 / 5 W	
Spurious Emission	At least 60 dB below		At least 60 dB below		At least 60dB below		At least 60 dB below	At least 60 dB below At least 61.1 dB below (65 W)	At least 60 dB below	At least 60 dB below	At least 60 dB below (29MHz : At least 50 dB below)	At least 60 dB below		At least 60 dB below	At least 60 dB below At least 61.1 dB below (65 W)	At least 60 dB below	
Microphone Impedance	2 kΩ		2 kΩ		2kΩ		2 kΩ		2 kΩ		2 kΩ	2 kΩ		2 kΩ		2 kΩ	
Receiver																	
Sensitivity ※ Measurement Method AM Mode : 10 dB SN FM Mode : 12 dB SINAD Digital Mode : BER 1%	0.8 µV TYP(108 - 137 MHz, AM) 0.2 µV(137 - 140 MHz, FM) 0.2 µV(140 - 150 MHz, FM) 0.19 µV TYP(140 - 150 MHz, Digital Mode) 0.25 µV(150 - 174 MHz, FM) 0.3 µV TYP(174 - 222 MHz, FM) 0.25 µV TYP(222 - 300 MHz, FM) 0.8 µV TYP(300 - 336 MHz, AM) 0.25 µV(336 - 420 MHz, FM) 0.2 µV(420 - 470 MHz, FM) 0.19 µV TYP(420 - 470 MHz, Digital Mode) 0.2 µV(470 - 520 MHz, FM) 0.4 µV TYP(800 - 900 MHz, FM) 0.8 µV TYP(900 - 999.99 MHz, FM) US Version Cellular Blocked		0.8 µV TYP(108 - 137 MHz, AM) 0.2 µV(137 - 140 MHz, FM) 0.2 µV(140 - 150 MHz, FM) 0.19 µV TYP(140 - 150 MHz, Digital Mode) 0.25 µV(150 - 174 MHz, FM) 0.3 µV TYP(174 - 222 MHz, FM) 0.25 µV TYP(222 - 300 MHz, FM) 0.8 µV TYP(300 - 336 MHz, AM) 0.25 µV(336 - 420 MHz, FM) 0.2 µV(420 - 470 MHz, FM) 0.19 µV TYP(420 - 470 MHz, Digital Mode) 0.2 µV(470 - 520 MHz, FM) 0.4 µV TYP(800 - 900 MHz, FM) 0.8 µV TYP(900 - 999.99 MHz, FM) US Version Cellular Blocked		1.5µV TYP for 10dB SN(108 - 137MHz, AM) 0.16µV for 12dB SINAD(137 - 174MHz, FM) 1µV for 12dB SINAD(174 - 222MHz, FM) (0.5µV for 12dB SINAD(300 - 350MHz, FM) 0.2µV for 12dB SINAD(350 - 400MHz, FM) 0.18µV for 12dB SINAD(400 - 470 MHz, FM) 0.35µV for 12dB SINAD(470-580 MHz, FM) 0.19µV TYP for BER 1% Digital mode		0.2 µV (FM Narow) 0.22 µV (FM Wide) 0.22 µV (Digital)		0.2 µV (FM Narow) 0.22 µV (FM Wide) 0.19 µV (Digital)		0.2 µV (FM)	0.2 µV (FM)		0.2 µV (FM Narow) 0.22 µV (FM Wide)		0.4 µV (FM)	
Selectivity	NFM, AM 12 kHz / 30 kHz (-6 dB / -60 dB)		NFM, AM 12 kHz / 30 kHz (-6 dB / -60 dB)		12kHz / 28kHz (—6dB /— 60dB)		12 kHz / 28 kHz (-6 dB /-60 dB)		12 kHz / 28 kHz (-6 dB /-60 dB)		12 kHz / 30 kHz (-6 dB / -60 dB)	12 kHz / 30 kHz (-6 dB / -60 dB)		12 kHz / 28 kHz (-6 dB /-60 dB)		12 kHz / 28 kHz (-6 dB /-60 dB)	
AF Output	3 W @ 8 Ω for 10 % THD (@ 13.8 V) Internal Speaker 8 W @ 4 Ω for 10 % THD (@ 13.8 V) External Speaker		3 W @ 8 Ω for 10 % THD (@ 13.8 V) Internal Speaker 8 W @ 4 Ω for 10 % THD (@ 13.8 V) External Speaker		3W (4Ω, THD10 %, 13,8V)		3 W @ 4 Ω for 10 % THD (@ 13.8 V)		3 W @ 4 Ω for 10 % THD (@ 13.8 V)		2 W @ 8 Ω for 5 % THD (@ 13.8 V)	2 W @ 8 Ω for 5 % THD (@ 13.8 V)		3 W @ 4 Ω for 10 % THD (@ 13.8 V)		3 W @ 4 Ω for 10 % THD (@ 13.8 V)	

Digital Repeaters

	C4FM/FM Dual Band	
	DR-2X	DR-2XE
General		
Frequency Ranges	144 - 148 MHz 430 - 450 MHz	144 - 146 MHz 430 - 440 MHz
Emission Type	F1D, F2D, F3E, F7W	
Frequency Stability	±2.5 ppm (-4°F to + 140°F, -20°C to + 60°C)	
Antenna Impedance	50 Ω	
Supply Voltage	AC 100 - 240 V DC 11.7 - 15.8 V, negative ground	DC 11.7 - 15.8 V, negative ground
Operating Temperature	-4°F to + 140°F (-20°C to + 60°C)	-4°F to + 131°F(-20°C to + 55°C)
Dimensions (WxHxD)	19" x 3.5" x 15" (482 x 88 x 380 mm)	
Weight (approx.)	20.72 lbs (9.4 kg)	18.52 lbs (8.4 kg)

	C4FM/FM Dual Band	
	DR-2X	DR-2XE
Transmitter		
RF Power Output	50/20/5 W	
Modulation Type	F1D, F2D, F3E: Variable Reactance Modulation F7W: 4FSK (C4FM)	
Spurious Emission	At least 60 dB below	
Receiver		
Circuit Type	Double conversion super-heterodyne	
Intermediate Frequencies	1st: 47.25 MHz, 2nd: 450 kHz	
Receiver Sensitivity	0.3 µV (Digital 2 m/70 cm) BER 1% 0.2 µV (FM 2 m/70 cm) 12 dB SINAD	
Adjacent Channel Selectivity	Better than 65 dB TYP (20 kHz offset)	
Selectivity	FM 12 kHz/35 kHz (-6 dB / -60 dB)	
Intermodulation	Better than 65 dB TYP (20/40 kHz offset)	
Audio Output	4 W @4 Ω for 10 % THD (@ 13.8 V) Internal Speaker	

http://www.yaesu.com

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