

VHF/UHF AMATEUR RADIO EQUIPMENT

- | C4FM Digital Transceivers
- | C4FM Digital Repeaters
- | FM Transceivers



System Fusion

System Fusion

The best solution for the Future

The YAESU System Fusion leads the way for the future of Ham Radio digital systems; it provides total integration and compatibility of both digital and conventional FM communications.

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

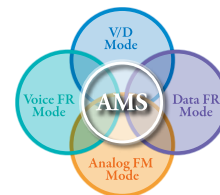


C4FM modulation has better BER (Bit Error Rate) characteristics when compared to other Digital modulation systems, and guarantees reliable long distance communication. The YAESU C4FM digital clear voice technology uses a 12.5 kHz bandwidth which permits high quality voice communication.

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.

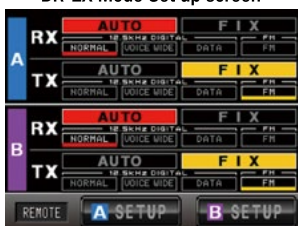


Repeater Set-up for conventional FM Transmit only

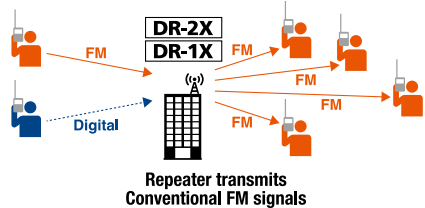
When replacing an existing conventional FM repeater, Set the AMS on the receiver side to AUTO mode, and set the repeater output transmitter side to FM FIX mode. If the DR-2X/DR-1X repeater receives C4FM Digital signals, it converts them to conventional FM automatically. ^{*1}

^{*1} C4FM digital signals are converted to FM signals in the repeater. Therefore, digital information such as GPS data included in the C4FM digital signals is not transmitted.

DR-2X Mode Set up screen



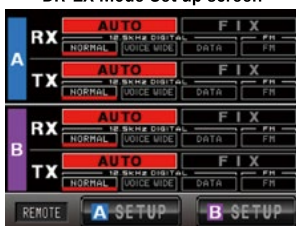
FM receive → FM transmit
C4FM receive → FM transmit



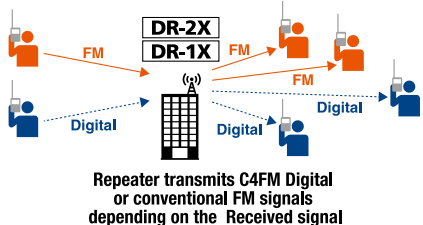
Repeater Set-up for C4FM Digital and conventional FM Transmit

AMS is set to AUTO mode on both the receiver and transmitter sides. DR-2X/DR-1X transmits received conventional FM signals unchanged as conventional-FM signals, and transmits received C4FM digital signals unchanged as C4FM digital signals.

DR-2X Mode Set up screen



FM receive → FM transmit
C4FM receive → C4FM transmit



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.

C4FM Digital Products Lineup

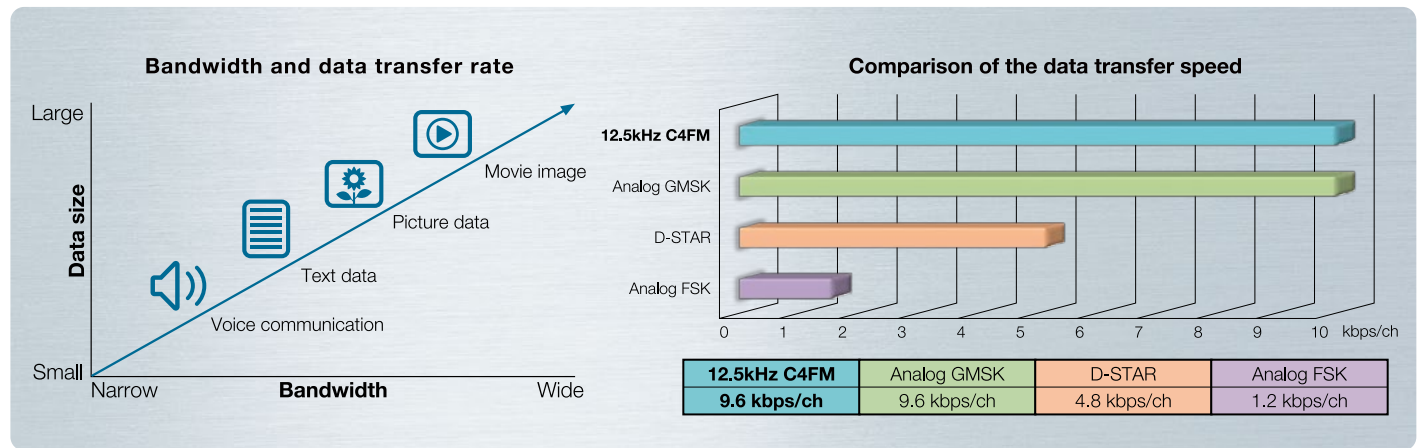


The advantages of C4FM digital

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.

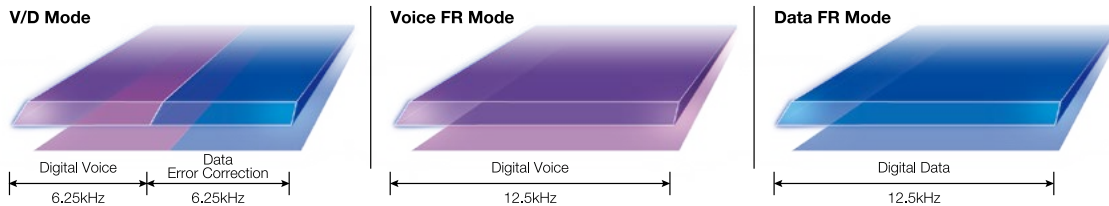
It achieves digital advantages, such as the data transmission of a snapshot, or high quality voice communication etc. 12.5 kHz C4FM modulation is excellent for digital communications, and provides for the expansion of amateur-radio communication without sacrificing other valued features.



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 TRANSCEIVER

FT2D

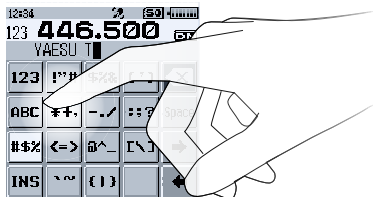
FT2DR:US, Asia and Australia
FT2DE:Europe

(2200 mAh Lithium Ion Battery SBR-14LI,
Battery charger PA-48 /SAD-18B(US version) /
SAD-16H(Australian version),
USB Cable and Belt clip SHB-13 included)



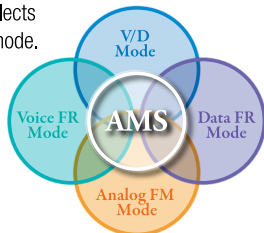
Easy Operation with Large Touch Panel Display

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.



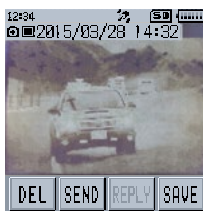
Support for Sophisticated C4FM Digital Functions

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

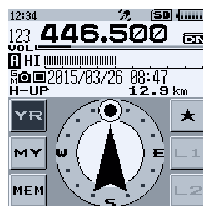
When the optional speaker microphone camera MH-85A11U is connected, you can easily take a snapshot. Captured images as well as received images can be viewed on the screen.



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/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										
FT2D	●	●	●	●	●	●	●	●	●	●	●
FT1XD	●	●	●	●	●	●	●	●	●	●	●

*1 US version only *2 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/BF 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-14LI,
Battery charger PA-48/SAD-18B(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.

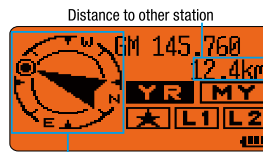
Digital Group ID Operation



Smart Navigation Function

Real Time Navigation

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



Displays direction

Backtrack Function

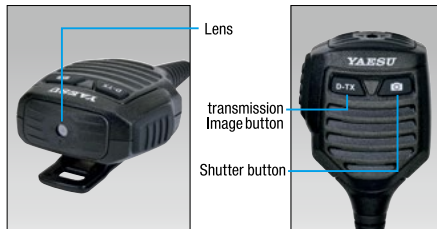
With the simple touch of a button you can start navigating to your departure point or any location previously saved in the memory.



Saved location (★, L1 or L2)

Snapshot Function (Image Data Transmission)

Simply connect an MH-85A11U (option) speaker microphone with camera. Press the microphone shutter button to easily take snapshots, and then send them to other C4FM digital transceivers.



Equipped with micro SD card slot

(micro SD card not included)



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



Battery Operating Time (Approximately)

Band+ Mode	FNB-101LI	SBR-14LI	Battery Tray FBA-39(0.8W)
144MHz	Analog Mode	5 hours	10 hours
	Digital Mode	4 hours	8 hours
430MHz	Analog Mode	4.5 hours	9 hours
	Digital Mode	3.6 hours	7.2 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										
FT2D	●	●	●	●	●	●	●	●	●	●	●
FT1XD	●	●	●	●	●	●	●	●	●	●	●



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



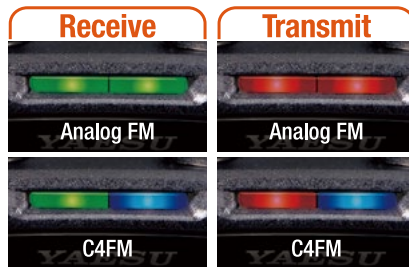
(7.4V 1800mAh Lithium Ion Battery SBR-24LI, Battery Charger
SAD-18B (US), SAD-11 (Europe, Asia, Australia), USB Cable and Belt Clip included)

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.



Multi-colored LED Mode-Indicator

Sophisticated Digital-Group-ID Operation

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.



Digital-Group-ID

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											
Speaker/ Microphone MH-34B4B	Cloning Cable CT-27	Microphone Adapter CT-44	Earpiece Microphone SSM-57A	VOX Headset SSM-63A	Battery Charger SAD-18B ^{*1} SAD-11C/U/H ^{*2}	Li-Ion Battery (1800mAh) SBR-24LI ^{*3}	Rapid Charger SBH-28	DC Cable E-DC-6	DC Cable with Cigarette Lighter Plug SDD-13	BNC-to-SMA Adapter CN-3	Soft Case SHC-27

*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



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

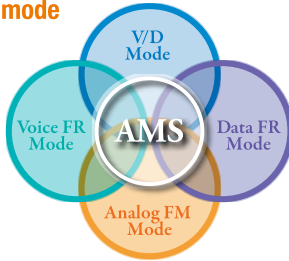
(DTMF Microphone MH-48A6JA, Mounting Bracket, Bracket for Controller, Control Cable 10 ft (3m), PC connection Cable SCU-20, PC connection Cable SCU-20, Stereo Monaural Plug and DC Power Cable included)



AMS (Automatic Mode Select)

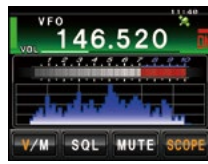
The Automatic Mode Select (AMS) function instantly detects the received signal mode.

- **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

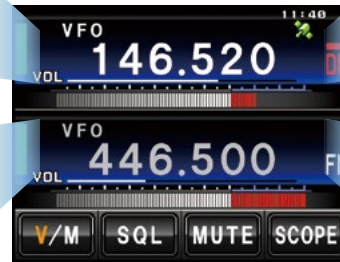
Icon symbols, multi-function key display and pop-up messages are all displayed in high-resolution color thanks to the full-color, high luminance TFT liquid crystal screen. The settings and status of the wireless devices are displayed in an easy-to-read format. You can perform various function operations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



Band Scope Screen



Digital Group Monitor Screen



Screen



Smart Navigation Screen



APRS® 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

(micro SD card not included)
Data communication Terminal micro SD card slot



Front side of the Radio Unit

Built-in GPS with antenna



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
							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	
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-11B/C/U/H*1		

*1 "B": for 120 VAC, "C": for 220-240 VAC, "U": for 220-240 VAC w/BF plug, "H": for 220-240 VAC w/Australian plug. *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



(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.



Memory Tag Screen



GPS Screen



Voice Memory Screen

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



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.



Digital Group Monitor Screen



Digital Group Monitor Message 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							
FTM-100D		●	●	●	●	●	●	●	●
FTM-3200D/3207D		●	●						
FTM-100D		●	●	●	●	●	●	●	●
FTM-3200D/3207D								●	

*1 "B": for 120 VAC, "C": for 220-240 VAC, "U": for 220-240 VAC w/UK plug, "H": for 220-240 VAC w/Australian plug. *2 US and Asian versions only *3 US version only

Heavy Duty C4FM/FM High Power Mobile

144MHz

65W High Power Mobile



C4FM/FM 144 MHz 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)

- 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.



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

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.



Mode Indicator

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)

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

WIRES-X



HRI-200 Features

- Available C4FM digital communication
- High quality voice communication by using C4FM digital
- Advanced features enabled by C4FM digital functions

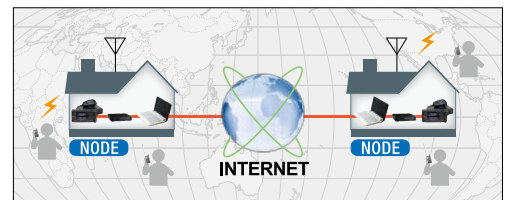
Convenient and easy-to-use digital functions, advanced VoIP wireless WIRES-X

AMATEUR RADIO INTERNET LINKING KIT

HRI-200



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



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.

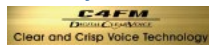
DR-2X Features

- **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

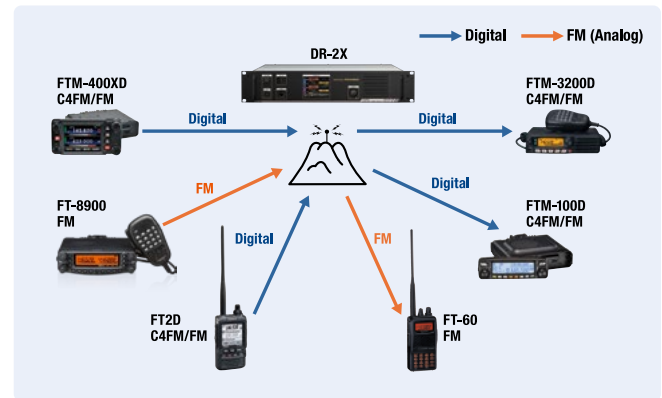


C4FM modulation has better BER (Bit Error Rate) characteristics when compared to other Digital modulation systems, and guarantees reliable Communication. The YAESU C4FM digital clear voice technology uses a 12.5 kHz bandwidth which permits high quality voice communication.



FM Friendly Digital with AMS (Automatic Mode Select)

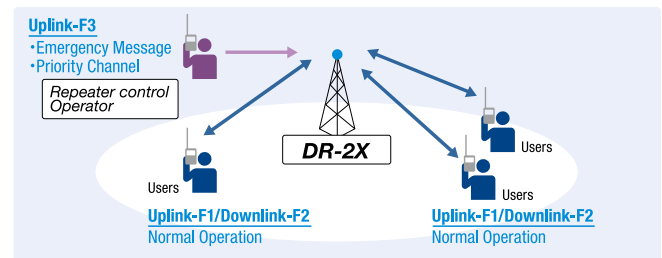
System Fusion enables interconnection between all users, even with different modes. This is made possible in System Fusion by AMS. The AMS function automatically recognizes the signal as a C4FM digital or a conventional FM signal, then the DR-2X retransmits the signal in the preset communication mode.



AMS Digital Repeater

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

Enhanced Digital Group ID Feature

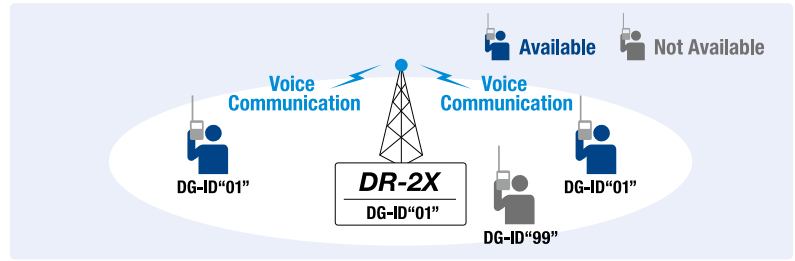
The revolutionary Digital Group ID feature allows tracking multiple communications resources quickly and efficiently by displaying the telemetry and signal strength information of the members that share the same Digital Group Identification number.

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.

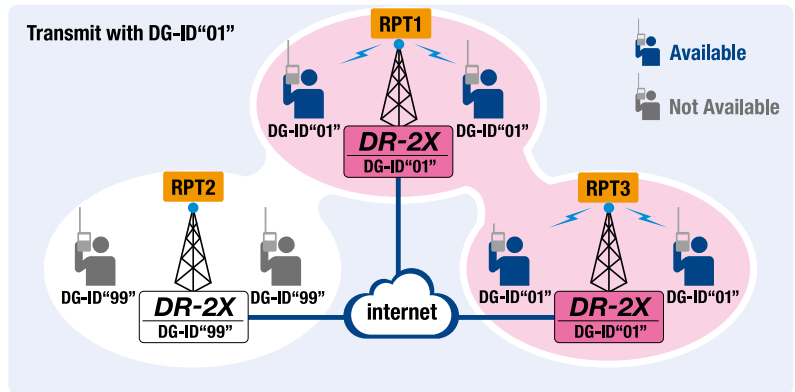


Digital Group ID Operation Image

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)

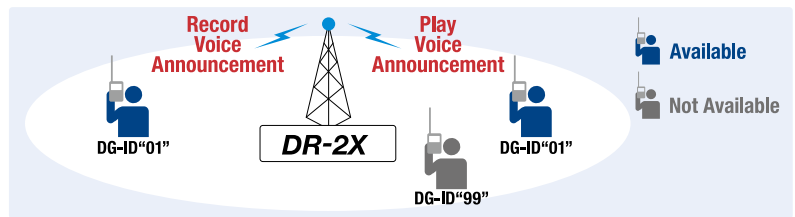


IMRS (Internet-linked Multi-site Repeater System) Image

Improved "News Station" Feature

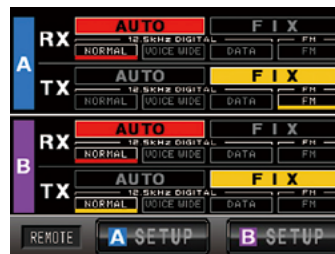
Groups or individuals can quickly store and retrieve digital audio. The users can then access the messages on demand, any time of the day.

* Requires optional LAN unit (LAN-01A)



News Station Image

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



Setup screen



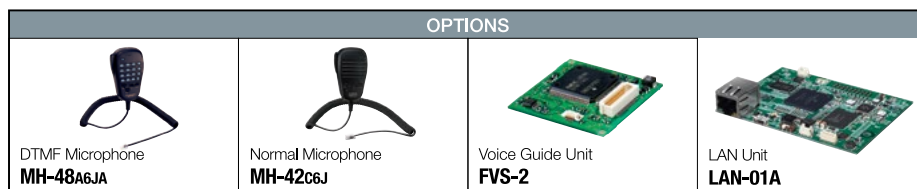
Frequency setting screen



CTCSS 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.



Other Features

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

144/430 MHz Dual Band C4FM/FM Digital Repeater



DR-1X

DR-1X:US and Asia
DR-1XE:Europe and Australia

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

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

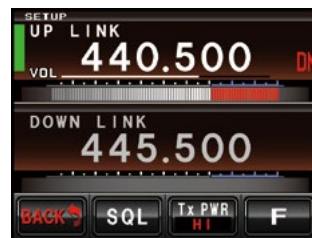
C4FM modulation has better BER (Bit Error Rate) characteristics when compared to other Digital modulation systems, and guarantees reliable Communication. The YAESU C4FM digital clear voice technology uses a 12.5 kHz bandwidth which permits high quality voice communication.

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

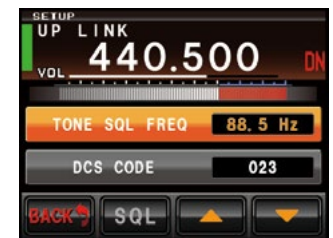
Settings and adjustments are all displayed in High-resolution on the full-color TFT liquid crystal screen. The settings and status are displayed in an easy-to-understand format. You can perform various operations simply and easily by touching on the screen.



Setup screen



Frequency setting screen



CTCSS setting screen

Other Features

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

OPTIONS		
<p>DTMF Microphone MH-48A6JA</p>	<p>Normal Microphone MH-42C6J</p>	<p>Voice Guide Unit FVS-2</p>



**GPS/APRS®
Handheld
Triple Band
Transceiver**

50/144/430 MHz (220MHz)
TRIPLE BAND 5W FM TRANSCEIVER
(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-48 / PA-44 (European version) / SAD-11 B(US 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.

Additional Features

- Real dual Ham Band Operation (V+V / U+U / V+U)
- Wide Band Receive Capability (504kHz - 999.9MHz)
- 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)
(VX-8DR/VX-8DE on one band with no optional items)

Operating Band	Battery Life (Approx.)		
	FNB-101LI	SBR-14LI*4	FBA-39
50 MHz	5.5 hours	11 hours	20 hours
144 MHz	5.0 hours	10 hours	17 hours
222 MHz (USA version)	6.0 hours	12 hours	20 hours
430 MHz	5.0 hours	10 hours	16 hours
Broadcast Band	13 hours	26 hours	20 hours

* Reference only. May vary depending on environmental temperature, humidity, etc.
*TX (5W) 6sec./RX 6sec., and squelched 48sec.



**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 B(US version) / SAD-16H(Australian 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.

		OPTIONS													
VX-8D				●				●	●	●		●	●		●
VX-6	●	●		●	●	●					●			●	
VX-8D			●	●	●	●		●	●	●	●	●	●		
VX-6	●			●	●	●	●	●	●	●	●	●	●		

*1 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/BF plug, "H": for 220-240 VAC w/Australian plug. *2 US only *3 Europe only

**High Performance
Commercial Grade Specifications**



**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)

- **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**

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

ULTRA Compact Design

Rugged construction in an ultra-compact body, measuring W 2.1" x H 4.1" x D 1.2" (52.5 x 104.5 x 31 mm)

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.

One Watt of Loud and Clear Audio

One Watt powerful audio output and clear audio from the 36 mm Front Speaker. Loud clear, crisp audio provides smooth communication even in the high noise environment.

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.



**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)

5 Watts of Reliable High Power Output

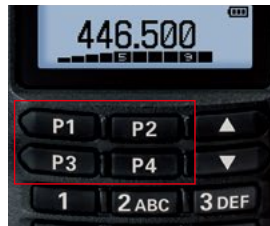
Reliable transmitter output; full 5 Watts of power on both the 144 and 430MHz bands (FT-25: 144MHz band only), from a compact Handheld transceiver. Selectable, reduced Tx power settings of 2.5 Watts and 0.5 Watt are provided.

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.

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 (BLCO)
- Automatic Power Off feature
- Transmitter Time Out Timer (TOT)



QRK (Quick Recall Key)

OPTIONS						
7.4 V, 1,950 mAh Li-Ion Battery SBR-25LI ^{*2}	7.4 V, 2,500 mAh Li-Ion Battery SBR-26LI	Rapid Charger SBH-22 ^{*2}	AC Adapter SAD-20B/C/U ^{*1,2}	Programming cable SCU-35	Cloning Cable SCU-36	VOX Earpiece Microphone SSM-512B

^{*1} B: for 120 VAC, C: for 220-240 VAC, U: for 220-240 VAC w/BF plug ^{*2} The same as the supplied accessory



**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.

Note: This EAI function shall only be used in case of emergency or accident to support performing direction finding and rescue. YAESU shall not be responsible for any direct or indirect loss or injury caused by using the EAI function.

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)

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, 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)



**Ultra-compact
Handheld FM Transceiver**

144/430 MHz DUAL BAND
FM TRANSCEIVER

VX-3R
Asian version only

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

	HIGH		LOW	
	FNB-82LI		FNB-82LI	
FNB-82LI	1.5 W (UHF 1 W)	0.1 W	1.5 W (UHF 1 W)	0.1 W
FBA-37 3 "AA" Alkalines	1.5 W (UHF 1 W)	0.1 W	3 W (UHF 2 W)	0.1 W
External DC (6 V)	1.5 W (UHF 1 W)	0.1 W	3 W (UHF 2 W)	0.1 W

		OPTIONS												
FT-60R		●				●	●		●					●
FT-270R			●		●			●						
VX-3R		●				●	●			●			●	
FT-60R		●		●		●	●		●	●		●		
FT-270R		●	●	●		●	●		●	●	●	●		
VX-3R					●			●	●	●		●		

*1 "B": for 120 VAC, "C": for 220-240 VAC, "F": 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.



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.



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.

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											
FT-8900R	●	●	●	●	●	●	●	●	●	●	●	●
FT-7900	●	●	●	●	●		●	●	●	●	●	●
FTM-3100	●	●	●					●	●			
FT-2980R	●	●	●					●	●			

*1 US and Asian versions only *2 US version only *3 "B": for 120 VAC, "C": for 220-240 VAC, "U": for 220-240 VAC w/BF plug, "H": 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)



FACC: Funnel Air-Convection Conductor

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 Repeater 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

		C4FM/FM Dual Band			FM Triple Band	FM Dual /Single Band				
		FT2D	FT1XD	FT-70D	VX-8D	VX-6	VX-3R	FT-65 FT-25	FT-60R	FT-270R
PROGRAMMING KIT										
ADMS	Windows™ PC Programming Kit	ADMS-8	ADMS-6	ADMS-10	ADMS-VX8	ADMS-VX6	ADMS-VX3		ADMS-1J	ADMS-270
SOFT CASE & BELT CLIP										
CSC	Soft Vinyl Case	SHC-24	CSC-97	SHC-27	CSC-93	CSC-91	CSC-92			
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					●				●
MH-74A7A	Waterproof 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						●			
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)	●	●	●	●	●			●	●
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-134	Cloning Cable				●					
CT-131	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-39(3xAA)		FBA-39(3xAA)	FBA-23(2xAA)	FBA-37(3xAA)		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-82LI	Lithium-ion Battery Pack (3.7 V, 1100 mAh)						●			
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)						●			
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-370B/C ²	Rapid Charger (1.5 hours)								●	
PA-44C/U ^{2,3}	AC Adapter				●					
PA-46B/C/U/H ²	AC Adapter						●			
PA-48B/C/F/U ²	AC Adapter	●	●		●	●			●	●
SAD-16H ²	AC Adapter	●			●	●			●	●
SAD-11B/C/U/H ²	AC Adapter			●	●	●				
SAD-18B ²	AC Adapter	●	●	●						
SAD-20B/C/U 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 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/BF plug, "H": for 220-240 VAC w/Australian plug.

³ European version only ⁴ US version only

Mobile Transceivers

		C4FM/FM Dual Band		C4FM/FM Single Band		FM Quad Band	FM Dual /Single Band		
		FTM-400XD	FTM-100D	FTM-3200D	FTM-3207D	FT-8900R	FT-7900	FTM-3100	FT-2980R
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			ADMS-2H	ADMS-7900		ADMS-2900
OTHERS									
FP-1030A*1	AC Power Supply (25 A)	●	●	●	●	●	●	●	●
FP-1023*2	AC Power Supply (23 A)	●	●	●	●	●	●	●	●
SMB-201	Desktop Cooling Fan	●	●			●	●		
SAD-11B/C/U/H*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 "B": for 120 VAC, "C": for 220-240 VAC, "U": for 220-240 VAC w/BF plug, "H": for 220-240 VAC w/Australian plug.

Mobile Transceivers & Digital Repeaters Specifications

Mobile Transceivers

	C4FM/FM Dual Band				C4FM/FM Single Band			
	FTM-400XDR	FTM-400XE	FTM-100DR	FTM-100DE	FTM-3200DR	FTM-3200DE	FTM-3207DR	FTM-3207DE
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: 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
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, 10, 12.5, 15, 20, 25, 50, 100 kHz		5, 6.25, 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 (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)	
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	
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)		0.5 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)	
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	
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)		Radio Unit / 6.1" x 1.7" x 6.1" (154 x 43 x 155 mm) (W/O Fan & knob)		Radio Unit / 6.1" x 1.7" x 6.1" (154 x 43 x 155 mm) (W/O Fan & knob)	
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 (1.3 kg)		2.86 lbs (1.3 kg)	
Transmitter								
RF Power Output	50 / 20 / 5 W		50 / 20 / 5 W		65 / 30 / 5 W		55 / 25 / 5 W	
Spurious Emission	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 At least 60 dB below	
Microphone Impedance	2 kΩ		2 kΩ		2 kΩ		2 kΩ	
Receiver								
Sensitivity	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		0.2 µV (FM Narrow) 0.22 µV (FM Wide) 0.22 µV (Digital)		0.2 µV (FM Narrow) 0.22 µV (FM Wide) 0.19 µV (Digital)	
Selectivity	NFM, AM 12 kHz / 30 kHz (-6 dB / -60 dB)		NFM, AM 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		3 W @ 4 Ω for 10 % THD (@ 13.8 V)		3 W @ 4 Ω for 10 % THD (@ 13.8 V)	

Mobile Transceivers

	FM Quad Band		FM Dual Band		FM Single Band		
	FT-8900R	FT-7900R	FT-7900E	FTM-3100R	FTM-3100E	FT-2980R	
General							
Frequency Ranges	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 - 148 MHz
Channel Steps	5, 10, 12.5, 15, 20, 25, 50 kHz	5, 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, 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 +140°F, -10°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)	±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	
Current Consumption	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) 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)	0.5 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	
Case Size (WxHxD)	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)	5.5" x 1.6" x 6.6" (140 x 41.5 x 168 mm) (W/O knob & connectors)	Radio Unit / 6.1" x 1.7" x 6.1" (154 x 43 x 155 mm) (W/O Fan & knob)	Radio Unit / 6.1" x 1.7" x 6.1" (154 x 43 x 155 mm) (W/O Fan & knob)	6.3" x 2.0" x 7.3" (160 x 50 x 185 mm) (W/O knob & connectors)	
Weight	2.2 lbs (1 kg)	2.2 lbs (1 kg)	2.2 lbs (1 kg)	2.86 lbs (1.3 kg)	2.86 lbs (1.3 kg)	4.2 lbs (1.9 kg)	
Transmitter							
RF Power Output	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)	50 / 20 / 10 / 5 W (144 MHz) 45 / 20 / 10 / 5 W (430 MHz)	65 / 30 / 5 W	65 / 30 / 5 W	80 / 30 / 10 / 5 W	
Spurious Emission	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 60 dB below At least 61.1 dB below (65 W)	At least 60 dB below	
Microphone Impedance	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%	0.2 μV (FM)	0.2 μV (FM)	0.2 μV (FM)	0.2 μV (FM Narrow) 0.22 μV (FM Wide)	0.2 μV (FM Narrow) 0.22 μV (FM Wide)	0.4 μV (FM)	
Selectivity	12 kHz / 30 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)	12 kHz / 28 kHz (-6 dB / -60 dB)	
AF Output	2 W @ 8 Ω for 5% 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)	3 W @ 4 Ω for 10% THD (@ 13.8 V)	

Digital Repeaters

	C4FM/FM Dual Band				C4FM/FM Dual Band			
	DR-2X	DR-2XE	DR-1X	DR-1XE	DR-2X	DR-2XE	DR-1X	DR-1XE
General					Transmitter			
Frequency Ranges	144 - 148 MHz 430 - 450 MHz	144 - 146 MHz 430 - 440 MHz	144 - 148 MHz 430 - 450 MHz	144 - 146 MHz 430 - 440 MHz	RF Power Output	50/20/5 W	50/20/5 W	50/20/5 W
Emission Type	F1D, F2D, F3E, F7W	F1D, F2D, F3E, F7W	F1D, F2D, F3E, F7W	F1D, F2D, F3E, F7W	Modulation Type	F1D, F2D, F3E: Variable Reactance Modulation F7W: 4FSK (C4FM)	F1D, F2D, F3E: Variable Reactance Modulation F7W: 4FSK (C4FM)	F1D, F2D, F3E: Variable Reactance Modulation F7W: 4FSK (C4FM)
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 (-4°F to +140°F, -20°C to +60°C)	Spurious Emission	At least 60 dB below	At least 60 dB below	At least 60 dB below
Antenna Impedance	50 Ω	50 Ω	50 Ω	50 Ω	Receiver			
Supply Voltage	AC 100 - 240 V DC 11.7 - 15.8 V, negative ground	DC 11.7 - 15.8 V, negative ground	AC 100 - 240 V DC 11.7 - 15.8 V, negative ground	DC 11.7 - 15.8 V, negative ground	Circuit Type	Double conversion super-heterodyne	Double conversion super-heterodyne	Double conversion super-heterodyne
Operating Temperature	-4°F to +140°F (-20°C to +60°C)	-4°F to +131°F (-20°C to +55°C)	-4°F to +140°F (-20°C to +60°C)	-4°F to +131°F (-20°C to +55°C)	Intermediate Frequencies	1st: 47.25 MHz, 2nd: 450 kHz	1st: 47.25 MHz, 2nd: 450 kHz	1st: 47.25 MHz, 2nd: 450 kHz
Dimensions (WxHxD)	19" x 3.5" x 15" (482 x 88 x 380 mm)	19" x 3.5" x 15" (482 x 88 x 380 mm)	19" x 3.5" x 15" (482 x 88 x 380 mm)	19" x 3.5" x 15" (482 x 88 x 380 mm)	Receiver Sensitivity	0.3 μV (Digital 2 m/70 cm) BER 1% 0.2 μV (FM 2 m/70 cm) 12 dB SINAD	0.3 μV (Digital 2 m/70 cm) BER 1% 0.2 μV (FM 2 m/70 cm) 12 dB SINAD	0.3 μV (Digital 2 m/70 cm) BER 1% 0.2 μV (FM 2 m/70 cm) 12 dB SINAD
Weight (approx.)	20.72 lbs (9.4 kg)	18.52 lbs (8.4 kg)	22.05 lbs (10 kg)	19.40 lbs (8.8 kg)	Adjacent Channel Selectivity	Better than 65 dB TYP (20 kHz offset)	Better than 65 dB TYP (20 kHz offset)	Better than 65 dB TYP (20 kHz offset)
					Selectivity	FM 12 kHz/35 kHz (-6 dB / -60 dB)	FM 12 kHz/35 kHz (-6 dB / -60 dB)	FM 12 kHz/35 kHz (-6 dB / -60 dB)
					Intermodulation	Better than 65 dB TYP (20/40 kHz offset)	Better than 65 dB TYP (20/40 kHz offset)	Better than 65 dB TYP (20/40 kHz offset)
					Audio Output	4 W @ 4 Ω for 10% THD (@ 13.8 V) Internal Speaker	4 W @ 4 Ω for 10% THD (@ 13.8 V) Internal Speaker	4 W @ 4 Ω for 10% THD (@ 13.8 V) Internal Speaker

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YAESU
The radio

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