YAESU
The radio

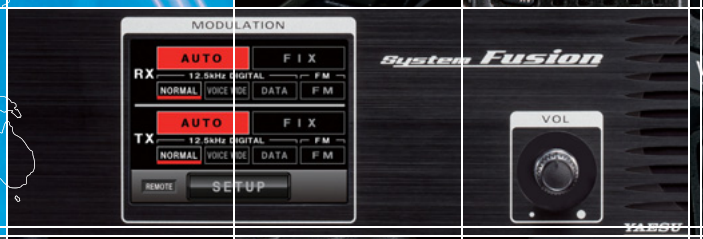
C4FM Digital Transceivers
FM Conventional Transceivers
Wide Band Receivers

Amateur Radio Equipment

C4FM Digital

Single band

Dual band



Repeater & WIRES

Quad band

Receiver

Triple band

AM•SSB•CW•PSK•FSK•AFSK•RTTY•FM•C4FM
"C4FM" is the digital mode most suitable for
Amateur radio communications.

The Choice of "C4FM Digital"

We need to be wise in choosing the optimal transmission method
to best accomplish the purpose of our communications.

In Amateur radio, we can use AM, SSB, CW, PSK, FSK, AFSK, RTTY, FM, C4FM, etc. to facilitate our communications. However, our choices are limited by the frequency range, and by the characteristics of the radio wave and modulation method.
We think it is important to take advantage of the best ideas and utilize the available technology of the respective communications systems.

System Fusion

The best solution for the Future

The new 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.

The advantages of Digital communication

Digital modulation provides a number of advantages by enabling the exchange of complex information, resistance to radio interference, and better audio quality. You can discover a completely new aspect of amateur radio that was never before possible with conventional FM systems.

The advantages of Analog communication

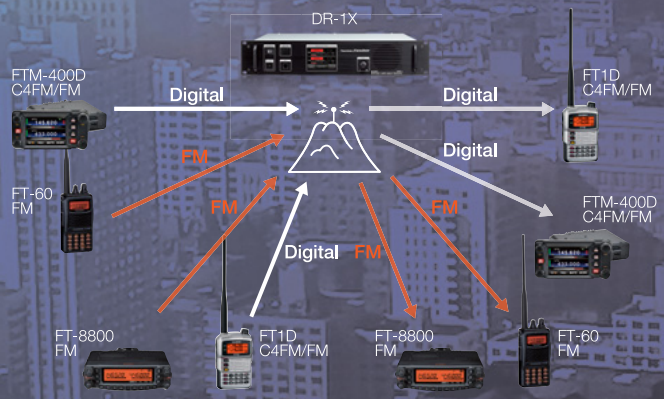
Conventional FM has a number of excellent features that continue to provide substantial advantages over digital modulation methods, such as low battery consumption and greater distance capability. Conventional FM communications will continue to be the mainstream communication method on the VHF and UHF bands for Ham Radio in the future.

Fusion of Conventional FM and Digital

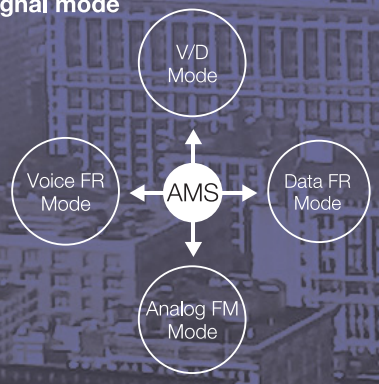
System Fusion joins digital and conventional FM communication into a single, multi-function system.

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.

AMS Digital Repeater → Digital → FM (Analog)



The Automatic Mode Select (AMS) function detects the receive signal mode



Features C4FM

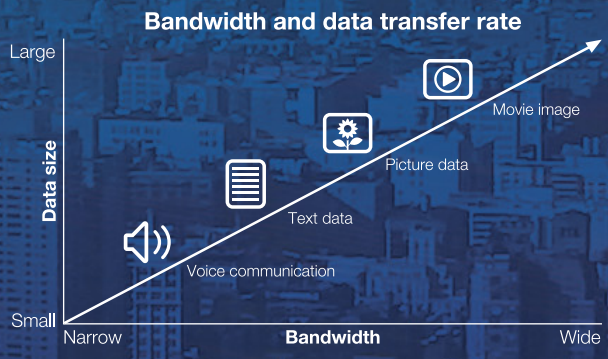
The Choice of C4FM Digital

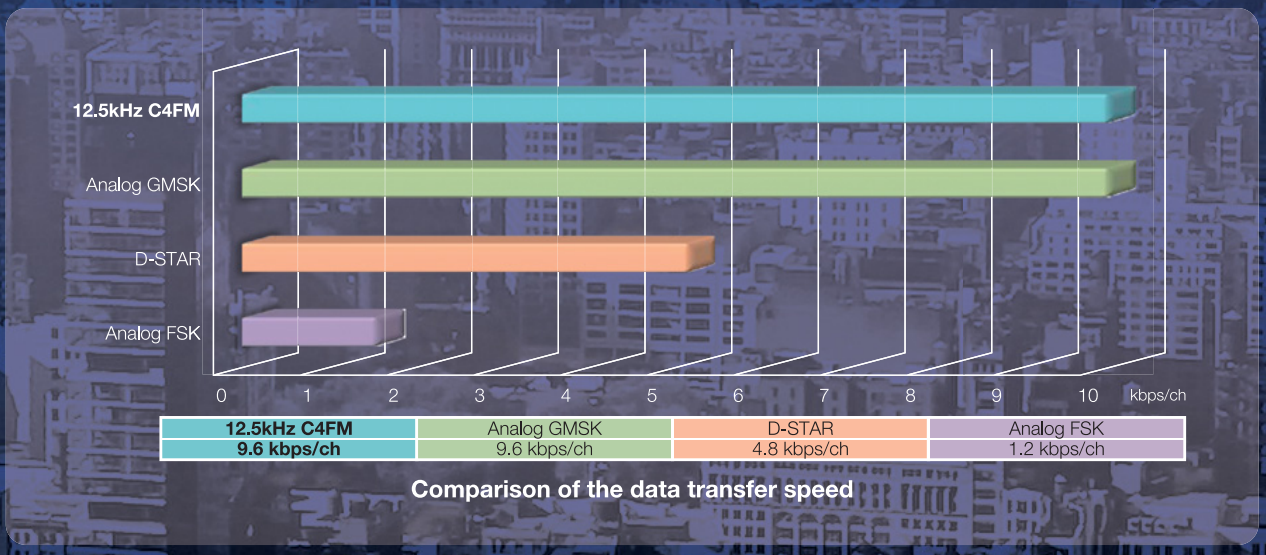
Compared to other FDMA digital modulation schemes, C4FM has excellent communication quality (BER: Bit Error Rate characteristics). C4FM is the standard method used by professional FDMA communication devices, and is therefore expected to be the main stream digital communication method for the future.

12.5 kHz C4FM Digital: Makes possible 9600 bps data speed using 12.5 kHz bandwidth.

12.5 kHz C4FM digital will achieve the advantages of digital communication utilizing a bandwidth of 12.5 kHz, and a data transmission speed of 9600 bps.

The big advantage of digital communication methods is the ability to convey large amounts of data. However, if the bandwidth is narrowed, the data transferring speed is rapidly diminished. C4FM FDMA 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.



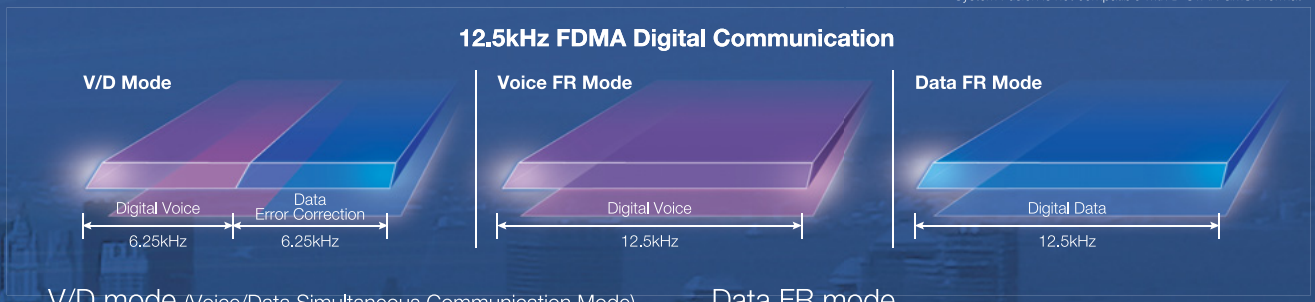


Comparison of the data transfer speed

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.

* System Fusion is not compatible with D-STAR GMSK format



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.
By incorporating powerful error correction technology developed for professional communication devices, effective error correction codes insure the advantage of fewer interruptions to conversations. The standard C4FM FDMA 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)

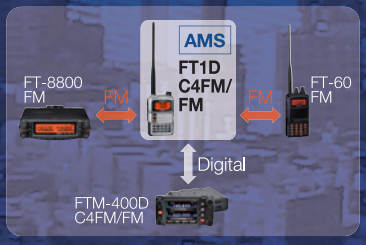
This high-speed data communication mode uses the full 12.5 kHz bandwidth for data communication. The transceiver automatically switches to Data FR mode when transmitting Snapshot pictures, and can be used to transmit large quantities of data at high speed.

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.

AMS (Automatic Mode Select)

This function instantly recognizes whether the received signal is C4FM digital or conventional FM. The communication mode automatically switches to match the received mode. Even if a digital signal is being used, you can switch to FM communication if radio signals are received from an FM station. This function enables hassle-free operation by removing the need to manually switch between the communication modes.



FM Friendly Digital

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

Digital GM Function (Digital Group Monitor Function)

The digital GM function automatically makes known when members registered to a group are within communication range, and displays the distance and direction with each call sign on the screen. This useful function enables you to see which friends are within communication range, it also enables you to see at a glance where all group members are located. Additionally, The GM function can be used to send data messages and images between group members.

* Only when using C4FM digital direct communication (not through a repeater)

Snapshot Function (Image Data Transmission)

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

Smart Navigation Function

•Real-time navigation function enables location checking at any time

In digital V/D mode, position data information is transmitted together with the voice signals so the distance and direction to the other stations can be displayed in real-time while communicating with them.

•Backtrack function initiates navigation to a pre-registered starting point

The backtrack function enables navigation to a registered location at the touch of a button. When hiking or camping, simply register your starting point or campsite before departure, and the distance and orientation from the current location is displayed on the screen.

C4FM Digital / FM
Exciting Amateur Digital Transceiver

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

FT1DR Heavy Duty Package
American and Asian versions

FT1DE Heavy Duty Package
European version

C4FM Digital Clear and Crisp Voice Technology

AMS Automatic Mode Select

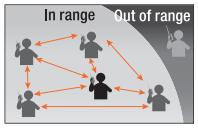
(7.4V 1800 mAh Lithium Ion Battery FNB-102LI, Battery charger PA-48 / SAD-11B(USA version), and PC connection Cable included)

* SILVER : USA version only

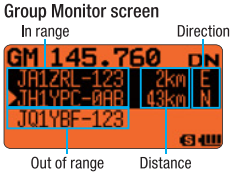
Digital Group Monitor (GM) Function

The digital GM function automatically makes known when members registered to a group are within communication range, and displays their distance and direction on the screen. This useful function enables you to see which friends are within communication range, it also enables you to see at a glance where all group members are located.

Group Monitor Function

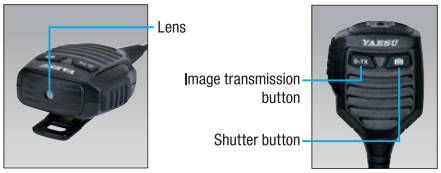


Group Monitor screen



Snapshot Function
(Image Data Transmission)

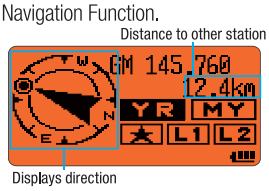
Simply connect an MH-85A11U (option) speaker microphone with camera. Press the microphone shutter button to easily take snapshots, and then send them to other C4FM FDMA digital transceivers.



Smart Navigation Function

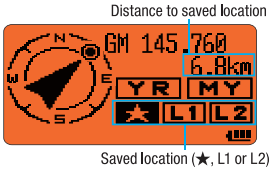
Real Time Navigation

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



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.



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 GPS with antenna in the top section of the unit

Battery Operating Time
(Approximately)

Band・Mode		FNB-101LI	FNB-102LI	SBR-14LI*1	Battery Tray FBA-39(0.8W)
144MHz	Analog Mode	5 hours	8 hours	10 hours	15.5 hours
	Digital Mode	4 hours	6.5 hours	8 hours	11 hours
430MHz	Analog Mode	4.5 hours	7.5 hours	9 hours	15 hours
	Digital Mode	3.6 hours	6 hours	7.2 hours	10.5 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 very depending on operating conditions.

OPTIONS

 Speaker Microphone with Snapshot camera **MH-85A11U**	 Speaker / Microphone **MH-34B4B**	 Earpiece Microphone **SSM-57A**	 VOX Headset **VC-25**	 Microphone Adapter **CT-44**	 Lithium Ion Battery Pack (1100 mAh) **FNB-101LI**	 Lithium Ion Battery Pack (1800 mAh) **FNB-102LI**	 Lithium Ion Battery Pack (2200 mAh) **SBR-14LI*1**	 AC Adapter **SAD-11B*2** **PA-48B/C/F/U*3**	 Rapid Charger **CD-41**
 3x"AA"Cell Battery Tray **FBA-39**	 PC Connection Cable **SCU-18*2/SCU-19*1**	 Data Cable **CT-170**	 Data Cable (2.5φ) **CT-176**	 Clone Cable **CT-168**	 DC Cable **E-DC-6**	 DC Cable with Cigarette-Lighter Plug **SDD-13**	 BNC-to-SMA Adapter **CN-3**	 Soft Case **CSC-97**	

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

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

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

FTM-400DR

American and Asian versions

FTM-400DE

European version

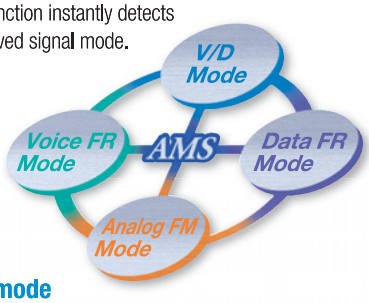
C4FM Clear and Crisp Voice Technology

AMS Automatic Mode Select

(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)

AMS (Automatic Mode Select)

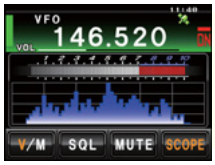
The Automatic Mode Select (AMS) function instantly detects the received signal mode.



- **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**

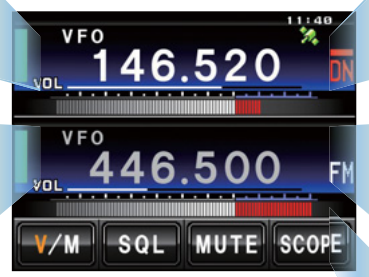
3.5-inch full color touch panel operation

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

Frequency Direct Input Screen

APRS® Screen

Equipped with micro SD Card Slot/ Data communication Terminal

(micro SD card not included)

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**	 Bluetooth® Headset **BH-2A**	 Charger Cradle (3 hours) for BH-2A Bluetooth® Headset **CD-40**	 AC Adapter for CD-40 **PA-46B/C/U**[*1]	 High-Power External Speaker **MLS-200-M10**	 Voice Guide Unit **FVS-2**
 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]	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 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/UK plug. *2 American and Asian versions only *3 USA version only

YAESU DR-1X/DR-1XE is a digital/conventional FM dual mode repeater that covers the VHF and UHF amateur radio bands. It was developed for use with System Fusion. Replacing your conventional analog FM repeater with the DR-1X/DR-1XE will provide continued use of conventional FM communication while integrating the use of digital communication functions through its unique AMS capability.

144/430 MHz Dual Band C4FM/FM Digital Repeater

C4FM Clear and Crisp Voice Technology

AMS Automatic Mode Select

DR-1X

American and Asian versions

DR-1XE

European version

(DC Cable, AC Power Cable (American and Asian versions only) and PC Connection Cable SCU-20 included)

DR-1X/DR-1XE Features

- **Modulation Modes: Conventional FM, C4FM Digital (V/D Mode, VFR Mode, DFR Mode)*1**
- **AMS (Automatic Mode Select) function automatically recognizes the signal as C4FM digital or conventional FM, and then the DR-1X/DR-1XE repeater retransmits the signal using the preset communications mode**
- **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 (American and Asian versions only)**
- **Front panel microphone connector is provided for use in repeater transmitter testing, and enables use as a base station**
- **Built-in large-size monitor speaker with front panel volume control**

*1 System Fusion is not compatible with the D-STAR GMSK digital format.

User Friendly Set-up

The large front panel, color touch-screen permits convenient configuration of the transmitter and receiver frequencies, transmit power output and AMS functions. When the settings are complete the display can be switched off to prevent accidental operation. Simply turn the display switch ON to use the touch panel screen and confirm or change settings. The transmit and receive frequencies, CTCSS tones, squelch, AMS, and other functions are configured by the touch panel screen.

Easy Migration

The repeater controller, receiver and transmitter are all packaged into a 19" standard cabinet rack mount panel unit for simple replacement of an existing repeater. Other peripheral devices such as the duplexer and amplifier, etc., can continue to be used as-is.

Advanced Operation

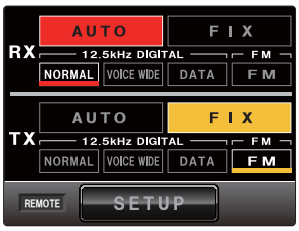
The rear panel Control I/O port is connectable with the "S-COM 7330" repeater controller. This controller can manage a maximum of three (3) DR-1X/DR-1XE units providing control of the programmable beep, timer, access mode and other features.

Installation Examples of Repeater Set-up

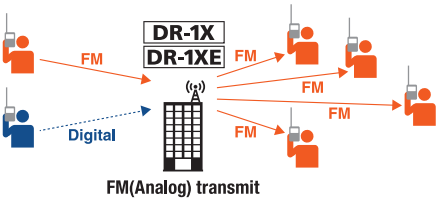
Replacing Existing Analog FM Repeater

When replacing an existing conventional FM repeater, AMS on the receiver side is set to AUTO mode and AMS on the transmitter side is set to FM FIX mode. If the DR-1X/DR-1XE repeater receives C4FM Digital signals, it converts them, and retransmits them in conventional FM automatically.*2 When receiving conventional FM signals it retransmits them unchanged as the FM repeater.

*2 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 by the repeater.



AMS receive → FM transmit

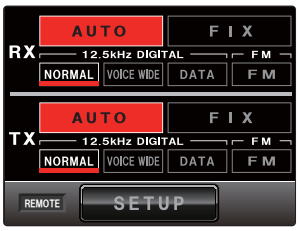


FM(Analog) transmit

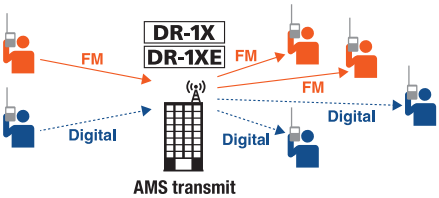
New Repeater set-up for C4FM Digital and conventional FM

AMS is set to AUTO mode on both the receiver and transmitter sides. DR-1X/DR-1XE transmits received conventional FM signals unchanged as conventional FM signals, and transmits received C4FM digital signals unchanged as C4FM digital signals.*3

*3 When this setting is used, members using transceivers that are not equipped with the C4FM and AMS function cannot receive digital transmitted signals.



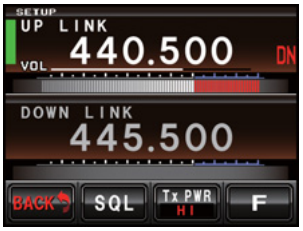
AMS receive → AMS transmit



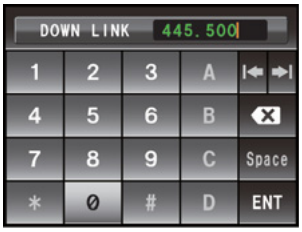
AMS transmit

3.5-inch Full Color Touch Panel Operation

Settings and adjustments are all displayed in high-resolution on the full-color TFT liquid crystal screen. The settings and status of the DR-1X/DR-1XE are displayed in an easy-to-understand format. You can perform various operations simply and easily by touching the screen.



Setup screen



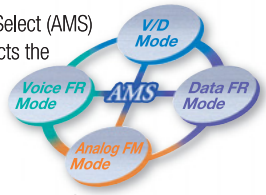
Frequency setting screen

CTCSS setting screen

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**

Other Features

- Internal AC power supply
  (American and Asian versions only)
- 19" Rack Mount Available
- High Stability ±2.5ppm TCXO Included
- DSQ (Digital Squelch Code) Signaling Feature
- CTCSS and DCS Signaling Feature
- ID announcement Feature
  (Voice Mode : Requires FVS-2)
- Base Station Operation
- TOT (Time Out Timer)
- Firmware Updates

OPTIONS


DTMF Microphone
MH-48A6JA


Normal Microphone
MH-42C6J


Voice Guide Unit
FVS-2

■DR-1X/DR-1XE Specifications

• General

Frequency range	144 to 148 MHz (American and Asian versions) 144 to 146 MHz (European version) 430 to 450 MHz (American and Asian versions) 430 to 440 MHz (European version)
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 to 240 V (American and Asian versions) DC 11.7 to 15.8 V, negative ground
Operating temperature	–4°F to +140°F (–20°C to +60°C)
Dimensions	19"(W) × 3.5"(H) × 15"(D) (482 × 88 × 380 mm)
Weight (approx.)	22.05 lbs (10 kg) 8.8kg (European version)

• 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) 12dB SINARD
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, THD 10%, 13.8 V; internal speaker)

WIRES-X

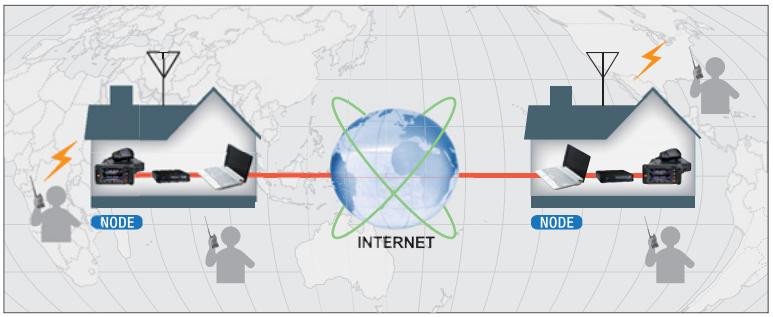
Convenient and easy-to-use digital function, advanced VoIP wireless WIRES-X

AMATEUR RADIO INTERNET LINKING KIT

HRI-200

C4FM Clear and Crisp Voice Technology

(USB Cable and Data Cable CT-174 (MDIN10 pin to MDIN10 pin)/CT-175 (MDIN10 pin to MDIN6 pin) included)



HRI-200 Features

- **Available C4FM digital communication.**
- **High quality voice communication by using C4FM digital.**
- **Valued features enabled by C4FM digital functions.**

GPS/APRS® Handheld Triple Band Transceiver

50/144/430 MHz (220 MHz) TRIPLE BAND 5W FM TRANSCEIVER
(50 MHz AM: 1 W, 220 MHz FM: 1.5 W (USA version only))

VX-8DR
American and Asian versions

VX-8DE
European version

(7.4 V 1100 mAh Lithium Ion battery FNB-101LI and battery charger PA-48 / PA-44(European version) / SAD-11B(USA version) included)

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

Waterproof/Submersible IPX 7 rated-3 ft (1m) for 30 minutes

Ultra-Rugged Polycarbonate Resin Front panel with Aluminum die-cast chassis

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 you to operate the radio in the toughest environments!

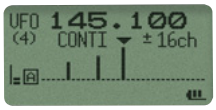
Wide Band Receive* Capability

504 kHz-999.9 MHz (A Band) Continuous reception for short-wave, FM/AM broadcasts, analog TV station audio, aircraft, public service channels, etc.
*(USA Cellular blocked)

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

The large LCD Display shows everything needed for advanced operations, including the main and sub band frequencies, operating modes and S-meters. A high resolution Spectrum Analyzer with ±50 channels indication. The received signal modulation wave may also be monitored with the Audio Scope!

• Audio Scope



• Spectrum Analyzer

Optional GPS Operation

The optional 12 channel GPS Receiver Antenna Unit (FGPS-2) provides GPS data. Your exact current position, moving speed, altitude, etc. may be displayed and transmitted on APRS. The FGPS-2 GPS antenna can be attached directly to the radio microphone input jack; or alternately it can be attached to the optional MH-74 A7A speaker/microphone.

APRS® 1200/9600 bps data communication [B band only] using the worldwide standard AX25 Data TNC Modem

The built-in AX25 Data TNC Modem permits uncomplicated APRS® (Automatic Packet/Position Reporting System) operation. You may communicate your location to other APRS stations with the position, speed and heading displayed on your radio!

Many additional features

- Real dual Ham Band Operation (V+V / U+U / V+U)
- Bluetooth® Capabilities [Optional Bluetooth unit required]
- Huge 1,830 memory channel management capability
- Emergency Automatic ID system (EAI)
- Yaesu's original "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	FNB-102LI	SBR-14LI*4	FBA-39
50 MHz	5.5 hours	9.0 hours	11 hours	20 hours
144 MHz	5.0 hours	8.5 hours	10 hours	17 hours
222 MHz (USA version)	6.0 hours	11 hours	12 hours	20 hours
430 MHz	5.0 hours	8.0 hours	10 hours	16 hours
Broadcast Band	13 hours	20 hours	26 hours	20 hours

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

OPTIONS

 Waterproof Speaker / Microphone **MH-74A7A**	 Bluetooth® Headset **BH-2A**	 Bluetooth® Adapter Unit **BU-2**	 GPS Antenna Unit **FGPS-2**	 GPS Antenna Adapter for FGPS-2 **CT-136**	 Charger Cradle (3 hours) for BH-2A Bluetooth® Headset **CD-40**	 AC Adapter **PA-46B/C/U*1**	 Rapid Charger **CD-41**	 AC Adapter **PA-48B/C/F/U*1 SAD-11B*2**	 AC Adapter **PA-44B/C/U*1*3**
 Lithium-ion Battery Pack (1100 mAh) **FNB-101LI**	 Lithium-ion Battery Pack (1800 mAh) **FNB-102LI**	 Lithium-ion Battery Pack (2200 mAh) **SBR-14LI*4**	 3x"AA"Cell Battery Tray **FBA-39**	 Cloning Cable **CT-134**	 Microphone Adapter **CT-131**	 DC Cable with Cigarette-Lighter Plug **SDD-13**	 DC Cable (Plug and Wire Only) **E-DC-6**	 Adapter for use with BNC Connector **CN-3**	 Soft Vinyl Case **CSC-93**

*1 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/UK plug. *2 USA version only *3 European version only *4 European and Asian versions only

Ultra-rugged, Submersible Dual Band Handie

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

VX-6R

American and Asian versions

VX-6E

European version

(7.4 V 1250 mAh* Lithium Ion battery FNB-80LI and battery charger PA-48 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-6R/VX-6E is rated to IPX7 specifications for submersion (up to 30 minutes at a depth of up to three feet).

Direct Memory Recall feature provides One-Touch Stored Frequencies Access

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

Wide Band Receiver Coverage for Catching All the Action!

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

Many 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

Waterproof Speaker / Microphone	Compact Speaker / Microphone	Lightweight VOX Headset	Earpiece / Microphone	Barometric Pressure Sensor	Rapid Charger	AC Adapter	Lithium-ion Battery Pack (7.4 V, 1250 mAh)	2x"AA"Cell Battery Tray	DC Cable with Cigarette-Lighter Plug	DC Cable (Plug and Wire Only)	Microphone Adapter	Adapter for use with BNC Connector	Soft Vinyl Case
MH-73A4B	**MH-57A4B**	**VC-24**	**SSM-55A**	**SU-1**	**CD-15A**	**PA-48B/C/F/U*1**	**FNB-80LI**	**FBA-23**	**SDD-13**	**E-DC-6**	**CT-91**	**CN-3**	**CSC-91**

*1 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/UK plug.

Ultra-compact Handheld FM Transceiver

144/430 MHz DUAL BAND
FM TRANSCEIVER

VX-3R

American and Asian versions

VX-3E

European version

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

Ultra-Compact and Light Weight !!

Only 1.9" x 3.2" x 0.9". The high capacity FNB-82LI Lithium-Ion battery provides 1.5 watts (70cm: 1 W) output power! Use convenient replaceable AA batteries with the optional FBA-37 Battery Tray.

Wide Band Receiver Coverage

The VX-3R/VX-3E has incredible frequency coverage of 504 kHz-999.9 MHz*, in addition, it has a totally separate and independent AM / FM Stereo Broadcast receiver inside.

(*Cellular coverage is blocked and not restorable)

Separate Earphone Jack for FM Stereo Broadcast Reception

The connected headset/ earphone cable works as an antenna to receive FM broadcast signals.

Internal Bar Antenna for AM Broadcast Band

The VX-3R/VX-3E has an internal bar antenna to provide good reception on the AM broadcast band.

(Not actual : Cut-out image photo)

Mechanical Dial Lock function

The Mechanical Dial Lock makes it very easy, and secure, to lock or unlock the main dial.

AF Dual function

Sub RX (AF-Dual) Function allows you to listen to your favorite AM / FM stereo broadcast stations and monitor the Amateur Band at the same time

Note : Sub RX (AF Dual) function works only on the AM and FM broadcast bands.

Power Output/Power Source Chart (Approximately)

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

Battery Operating Time (Approximately)

Band		FNB-82LI	"AA" Battery operation
Amateur Band	144 MHz	6.0 hours	7.0 hours
	430 MHz	6.5 hours	7.5 hours
AM Broadcast/Short-wave Broadcast/ FM Stereo Broadcast reception (Receive Only)		20 hours	25 hours

Note: Operating times may vary depending on operating conditions, and are based on a duty cycle of 6 seconds of transmission at 1.5 watts, 6 seconds of reception at 50% audio level, and 48 sec of stand by operation.

OPTIONS

Compact Speaker / Microphone	Lightweight VOX Headset	Compact Lapel Mic with Earpiece	Lithium-ion Battery Pack (3.7 V, 1100 mAh)	3x"AA"Cell Battery Tray	AC Adapter	DC Cable with Voltage Regulator and Cigarette-Lighter Plug	Cloning Cable	Microphone Adapter	Adapter for use with BNC Connector	Soft Vinyl Case
MH-34B4B	**VC-25**	**SSM-57A**	**FNB-82LI**	**FBA-37**	**PA-46B/C/U*1**	**E-DC-21**	**CT-27**	**CT-44**	**CN-3**	**CSC-92**

*1 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/UK plug.

Reliable Basic Dual Band Handheld

144/430 MHz DUAL BAND 5W FM TRANSCEIVER

FT-60R
American and Asian versions

FT-60E
European version

(7.2 V 1400 mAh Ni-MH battery FNB-83, Desktop Rapid Charger SBH-13(USA version) and battery charger PA-48 / PA-44(European version) included)

144/430 MHz Dual Band Handheld with Wideband Receiver Coverage

The FT-60R/FT-60E's small size allows you to take it anywhere-hiking, skiing, or walking around town. Its operating flexibility will provide the user many avenues of operating enjoyment. The FNB-83 Rechargeable Nickel-Metal Hydride Battery Pack provides up to 5 Watts of transmit power on the 144 MHz and 430 MHz Amateur Bands.

High Power Output: 5 W

The FT-60R/FT-60E's powerful transmitter puts out a full five Watts of power on both the 144 and 430 MHz bands. For longer battery life, Reduced power settings of 2 Watts and 0.5 Watt are provided, along with a Transmit Battery Saver (TBS) that automatically lowers power when you access a strong local repeater. The FBA-25A Alkaline Battery Tray is available as an option for the FT-60R/FT-60E, and allows use of "AA" Alkaline cells to power your FT-60R / FT-60E to a full 5 Watts of TX power.

Emergency Automatic ID System

The Emergency Automatic ID (EAI) Feature can be used to search for persons who are incapacitated in disasters like earthquakes, especially search-and-rescue personnel who may need assistance. An EAI-equipped searcher sends out a unique command (CTCSS tone pair), and the radio of the incapacitated party, who may not be able to speak or even press the PTT, will automatically be placed in the transmit mode, so others may perform direction finding and effect a rescue. The callsign of the incapacitated person will also be transmitted, to assist the rescue team.

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 results caused by using the EAI function.

Wide Band Receiver Coverage

144 / 430 MHz Dual Band Handheld with wide band reception
108-520 MHz / 700-999.990 MHz (Cellular Blocked*) US Version
(*Cellular coverage is blocked and not restorable)

One-Touch NOAA WX Band Access *US Version

The FT-60R/FT-60E provides a dedicated memory bank for reception of NOAA Weather broadcasts. Pressing the PTT switch activates scanning of the Weather memories, and another press of PTT will halt the scan.

NOAA SEVERE WEATHER ALERT WITH ALERT SCAN
You can also program the FT-60R/FT-60E to scan for an incoming "Severe Weather" alert tone from NOAA, to advise you of an impending severe storm.

Many additional 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, 6 sec. TX, 6 sec. RX w/audio, and 48 sec. Rx squelched.
*2 Using FNB-83, Audio Volume set to 50%.

OPTIONS

 Compact Speaker / Microphone **MH-34B4B**	 Lightweight VOX Headset **VC-25**	 Compact Lapel Mic with Earpiece **SSM-57A**	 Ear-phone **FEP-10**	 Ni-MH Battery Pack (7.2 V, 1400 mAh) **FNB-83**	 6x"AA"Cell Battery Tray **FBA-25A**	 Rapid Charger (1.5 hours) **VAC-370B/C*3**	 Desktop Rapid Charger (4 hours) Requires PA-48 **SBH-13*4**
 AC Adapter **PA-48B/C/F/U*3**	 AC Adapter **PA-44B/C/U*3 *5**	 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**	 Adapter for use with BNC Connector **CN-3**	

*3 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/UK plug. *4 USA version only *5 European version only

Commercial Grade Field Radio Submersible Construction

- **Large Backlit LCD Display for easy operation**
- **5 Watts of Stable RF Power**
- **800 mW of Loud Audio for noisy field operations**
- **200 Memory Channels for serious users**
- **Commercial Grade Performance**
- **Submersible Construction IPX7 (3 ft./1 meter for 30 min)**
- **Yaesu's Exclusive Power Saving Circuit Design Guarantees Longer Operating time**
- **Hands Free Operation with Optional VC-24 VOX Headset**

144 MHz SINGLE BAND 5W FM TRANSCEIVER

FT-270R

American and Asian versions

FT-270E

European version

(7.2 V 1400 mAh Ni-MH battery FNB-83, Desktop Rapid Charger SBH-13(USA version) and battery charger PA-48 / PA-44(European version) included)

Features

• Ten Memory banks for Channel allocation • High Power Output: 5 Watts (FNB-83 or FBA-25A with dry batteries) • Long life FNB-83 (7.2 V/ 1400 mAh) and Overnight Charger included • Emergency Automatic ID (EAI) function • Enhanced Paging and Code Squelch (EPCS) • Password Protection • CTCSS and DCS Encode/Decode, with split Tone and DCS Encode-only capability • Scanning Mode: VFO / Memory / PMS / Dual Watch • Nine DTMF Auto-dialer memories • Two front panel programmable keys • RF squelch • Memory-only operating mode available for easy operation • Smart Search to easily select active channels • Battery Voltage Display • ARTS (Auto-range Transponding System)

OPTIONS

 Waterproof Speaker / Microphone **MH-73A4B**	 Compact Speaker / Microphone **MH-57A4B**	 Lightweight VOX Headset **VC-24**	 Earpiece / Microphone **SSM-55A**	 DTMF Paging Unit **FTD-7**	 Ni-MH Battery Pack (7.2 V, 1400 mAh) **FNB-83**	 6x"AA"Cell Battery Tray **FBA-25A**	 Desktop Rapid Charger Requires PA-43 **CD-47**	 AC Adapter for CD-47 **PA-43B/C/F/U*2**
 Desktop Rapid Charger (4 hours) Requires PA-48 **SBH-13*3**	 AC Adapter **PA-48B/C/F/U*2**	 AC Adapter **PA-44B/C/U*2*4**	 Charger Cradle **CD-26**	 DC Cable with Cigarette-Lighter Plug **SDD-13**	 DC Cable (Plug and Wire Only) **E-DC-6**	 Microphone Adapter **CT-91**	 Adapter for use with BNC Connector **CN-3**	

*1 European and Asian versions only *2 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/UK plug. *3 USA version only *4 European version only

Compact and High Performance

- **New Ergonomic design and Large Backlit LCD Display for better operation**
- **5 Watts of Stable RF Power**
- **800 mW of Loud Audio for noisy field operations**
- **ATS (Automatic Transponder System) "beeps" when moving out of communication range**
- **200 Memory Channels for Serious users**
- **Water Protection-IPX5 Rating**

144 MHz SINGLE BAND 5W FM TRANSCEIVER

FT-252

American and Asian versions

FT-252E

European version

430 MHz SINGLE BAND 5W FM TRANSCEIVER

FT-257

American and Asian versions only

(7.4 V 1030 mAh Lithium Ion Battery FNB-124LI and battery charger PA-48 / SAD-11B (USA version) included)

Features

• 10 Memory banks for Channel allocation • Emergency Operation (Alarm, Flash, Morse Code Message) • NOAA Weather channels and Weather Alert (FT-252 only) • Password Protection • CTCSS (50 tones) and DCS (104 codes) Encode/Decode, with split Tone and DCS Encode-only capability • Nine DTMF Auto-dialer memories • RF squelch • Memory-only operating mode available for easy operation • Smart Search to easily select active channels • Battery Voltage Display

OPTIONS

 Lithium-ion Battery Pack (7.4 V, 1030 mAh) **FNB-124LI**	 Charger Cradle **CD-57**	 AC Adapter **PA-48B/C/F/U*1 SAD-11B*2**	 DC Cable with Cigarette-Lighter Adapter **SDD-11**	 DC Cable (Plug and Wire Only) **E-DC-6**	 Adapter for use with BNC Connector **CN-3**

*1 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/UK plug. *2 USA version only

Miniature Communications Receiver

AM/FM/WFM 100 kHz-1299.99 MHz
WIDE BAND RECIEVER

VR-160

European and Asian versions only

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

Features

- Wide frequency coverage 100 kHz to 1299.99 MHz
- The Sub RX function (AF-Dual) allows you to listen to your favorite FM/AM broadcast and monitor other communications simultaneously.
- Huge 1821 Memory Channels Capacity. Also 10 weather broadcast frequencies, 57 VHF Marine frequencies and 89 popular shortwave broadcast stations are pre-programmed at factory.
- Internal ferrite bar antenna provides good reception on the AM broadcast band
- The earphone connector allows you to enjoy FM broadcasts in stereo. Also your connected headset/earphone cable works as an FM aerial.
- New mechanical Dial lock makes it very easy and secure to lock or unlock the main dial. Just pull up to use, and push down to lock the dial; no more accidental frequency change.

Battery Operating Time (Approximately)

Band	FNB-82LI	"AA" Battery Operation
Amateur Band	23 hours	28 hours
AM/FM Broad cast, short-wave TV	20 hours	25 hours

Note: Operating times may vary depending on operating conditions, and are based on a duty cycle of
[Amateur Band] 1:3 (Receive: Standby)
[Other Band] Continuous reception at VOL 10 position (factory default position)

OPTIONS

 Lithium-ion Battery Pack (3.7 V, 1100 mAh) **FNB-82LI**	 AC Adapter **PA-46B/C/U*1**	 DC Cable with Voltage Regulator and Cigarette-Lighter Plug **E-DC-21**	 Adapter for use with BNC Connector **CN-3**	 3x"AA"Cell Battery Tray **FBA-37**	 Soft Vinyl Case **CSC-92**

*1 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/UK plug.

Rugged Professional Communications Receiver

AM/FM/WFM 100 kHz-1299.99 MHz
WIDE BAND RECIEVER

VR-120D

European and Asian versions only

Features

• WIDEBAND FREQUENCY COVERAGE WITH EASY ACCESS

The VR-120D provides continuous coverage in the frequency range 100 kHz to 1299.99 MHz (cellular frequencies are blocked and non-restorable).

• ULTRA-LONG BATTERY LIFE AND EXT.DC INPUT

When you're out in the field, and can't afford to miss the weather information, long battery life in your receiver is essential. The VR-120D is especially designed for low current consumption, it can provide up to 20 hours of operation on a pair of "AA" alkaline cells (at 40 mW audio output), and the Battery Saver feature cuts battery consumption dramatically when no signals are being received.

• VERSATILE 640-CHANNEL MEMORY SYSTEM

The VR-120D includes a versatile 640-channel Memory system, which allows partitioning of the channels into ten "Banks" of 64 channels each.

• STRAIGHTFORWARD 4-BUTTON OPERATION

The no-nonsense front panel of the VR-120D contains four large keys which are used for command of the receiver's many operating functions.

• WIDE SELECTION OF SCANNING MODES

Efficient scanning is the key to receiver performance, and the VR-120D is a champion when it comes to scanning! The Memory Scan features are: Full Memory Scan, Memory Bank Scan, Selected Memory Channel ("Preferential") Scan, Programmable Band-Limit Memory Scan (PMS), Smart Search (Automatic Memory Loading), Priority Channel Watch and Dual Watch.

OPTIONS

 Ni-MH Battery Pack (2.4 V, 1200 mAh) **FNB-79MH**	 Charger Stand for CA-34 **NC-82**	 Charger Sleeve for NC-82 **CA-34**	 AC Adapter **PA-46B/C/U*1**	 DC Cable with Voltage Regulator and Cigarette-Lighter Plug **E-DC-21**	 Cloning Cable **CT-35**	 Soft Vinyl Case **CSC-76**

*1 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/UK plug.

Handheld Transceivers & Receivers		FT1DR FT1DE	VX-8DR VX-8DE	VX-6R VX-6E	VX-3R VX-3E	FT-60R FT-60E	FT-270R FT-270E	FT-252 FT-252E FT-257	VR-160	VR-120D
PROGRAMMING KIT										
ADMS	Windows™ PC Programming Kit	ADMS-6	ADMS-VX8	ADMS-VX6	ADMS-VX3	ADMS-1J	ADMS-270		ADMS-5	
SOFT CASE & BELT CLIP										
CSC	Soft Vinyl Case	CSC-97	CSC-93	CSC-91	CSC-92				CSC-92	CSC-76
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	●								
VC-24	Lightweight VOX (Voice-Operated) Headset			●			●			
VC-25	Lightweight VOX (Voice-Operated) Headset	●			●	●				
FEP-10	Ear-phone					●				
SSM-55A	Earpiece / Microphone			●			●			
Bluetooth® OPTIONS										
BH-2A	Bluetooth® Headset		●							
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-11	DC Cable with Cigarette-Lighter Adapter							●		
SDD-13	DC Cable with Cigarette-Lighter Plug	●	●	●		●	●			
CN-3	Adapter for use with BNC Connector	●	●	●	●	●	●	●	●	
CT-27	Cloning Cable				●	●				
CT-35	Cloning Cable									●
CT-44	Microphone Adapter	●			●	●				
CT-91	Microphone Adapter			●			●			
CT-134	Cloning Cable		●							
CT-131	Microphone Adapter		●							
CT-168	Clone Cable	●								
CT-170	Data Cable	●								
CT-176	Data Cable(2.5φ)	●								
SCU-18*1	PC Connection Cable	●								
SCU-19*2	PC Connection Cable	●								
BATTERY PACK & BATTERY TRAY										
Battery TRAY	Alkaline Cells Battery Tray	FBA-39(3xAA)	FBA-39(3xAA)	FBA-23(2xAA)	FBA-37(3xAA)	FBA-25A(6xAA)	FBA-25A(6xAA)		FBA-37(3xAA)	
FNB-79MH	Ni-MH Battery Pack (2.4 V, 1200 mAh)									●
FNB-83	Ni-MH Battery Pack (7.2 V, 1400 mAh)					●	●			
FNB-80LI	Lithium-ion Battery Pack (7.4 V, 1250 mAh)*3			●						
FNB-82LI	Lithium-ion Battery Pack (3.7 V, 1100 mAh)				●				●	
FNB-101LI	Lithium-ion Battery Pack (7.4 V, 1100 mAh)	●	●							
FNB-102LI	Lithium-ion Battery Pack (7.4 V, 1800 mAh)	●	●							
SBR-14LI*2	Lithium-ion Battery Pack (7.2 V, 2200 mAh)	●	●							
FNB-124LI	Lithium-ion Battery Pack (7.4 V, 1030 mAh)							●		
BATTERY CHARGERS										
CD-15A	Rapid Charger (2.5 hours)			●						
CD-26	Charger Cradle						●			
CD-40	Charger Cradle (3 hours) for BH-2A Bluetooth® Headset		●							
CD-41	Rapid Charger	●	●							
CD-47	Desktop Rapid Charger (4 hours) Requires PA-43						●			
CD-57	Charger Cradle							●		
SBH-13*1	Desktop Rapid Charger (4 hours) Requires PA-48					●	●			
NC-82	Charger Stand for CA-34									●
CA-34	Charger Sleeve for NC-82									●
VAC-370B/C*4	Rapid Charger (1.5 hours)					●				
PA-43B/C/F/U*4	AC Adapter for CD-47						●			
PA-44B/C/U*4*5	AC Adapter		●			●	●			
PA-46B/C/U*4	AC Adapter		●		●				●	●
PA-48B/C/F/U*4	AC Adapter	●	●	●		●	●	●		
SAD-11B*1	AC Adapter	●	●					●		
OTHERS										
SU-1	Barometric Pressure Sensor			●						
FTD-7	DTMF Paging Unit						●			

*1 USA version only *2 European and Asian versions only *3 Indicated Battery Capacity based on EU DIRECTIVE 2006/66/EC. *4 "B": for 120 VAC, "C": for 220-240 VAC, "F": for 220 VAC, "U": for 220-240 VAC w/UK plug. *5 European version only

Handheld Transceivers & Receivers Specifications

	FT1DR	FT1DE	VX-8DR	VX-8DE	VX-6R	VX-6E	VX-3R	VX-3E
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, 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 - 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) 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	A (Main) Band RX: 0.5 -1.8 MHz (AM Radio) 1.8 - 30 MHz (SW Radio) 30 - 59 MHz (50 MHz HAM: USA version) 30 - 76 MHz (50 MHz HAM) 59 - 108 MHz (FM Radio: USA Version) 76 - 108 MHz (FM Radio) 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF-TV) 222 - 420 MHz (General 1) 420 - 470 MHz (430 MHz HAM) 470 - 774 MHz (UHF-TV) 774 - 999.90 MHz (General 2, Cellular Blocked) B(Sub) Band RX: 30 - 76 MHz (50 MHz HAM) 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF-TV) 222 - 420 MHz (General 1) 420 - 470 MHz (430 MHz HAM) 470 - 579.99 MHz (UHF) TX: 50 - 54 MHz 144 - 148 MHz 222 - 225 MHz (USA version only) 430 - 450 MHz	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-TV) 222 - 420 MHz (General 1) 420 - 470 MHz (430 MHz HAM) 470 - 774 MHz (UHF-TV) 774 - 999.90 MHz (General 2) B(Sub) Band RX: 30 - 76 MHz (50 MHz HAM) 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF-TV) 222 - 420 MHz (General 1) 420 - 470 MHz (430 MHz HAM) 470 - 579.99 MHz (UHF) TX: 50 - 52 MHz 144 - 146 MHz 430 - 440 MHz	RX: 0.5 -1.8 MHz (AM Radio) 1.8 - 30 MHz (SW Radio) 30 - 59 MHz (50 MHz HAM: USA version) 30 - 76 MHz (50 MHz HAM) 59 - 108 MHz (FM Radio: USA Version) 76 - 108 MHz (FM Radio) 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF-TV) 222 - 420 MHz (ACT1) 420 - 470 MHz (430 MHz HAM) 470 - 729 MHz (UHF-TV: USA version) 470 - 800 MHz (UHF-TV) 800 - 998.990 MHz (ACT2, Cellular Blocked) TX: 144 - 148 MHz 222 - 225 MHz (USA version only) 430 - 450 MHz	RX: 0.5 -1.8 MHz (AM Radio) 1.8 - 30 MHz (SW Radio) 30 - 59 MHz (50 MHz HAM: USA version) 30 - 76 MHz (50 MHz HAM) 59 - 108 MHz (FM Radio: USA Version) 76 - 108 MHz (FM Radio) 108 - 137 MHz (Air Band) 137 - 174 MHz (144 MHz HAM) 174 - 222 MHz (VHF-TV) 222 - 420 MHz (ACT1) 420 - 470 MHz (430 MHz HAM) 470 - 774 MHz (UHF-TV: USA version) 470 - 800 MHz (UHF-TV) 800 - 998.990 MHz (ACT2)	RX: 0.5 -1.8 MHz (AM Radio) 1.8 - 30 MHz (SW Radio) 30 - 59 MHz (50 MHz HAM: USA version) 30 - 76 MHz (50 MHz HAM) 59 - 108 MHz (FM Radio: USA 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 - 774 MHz (UHF-TV: USA version) 470 - 800 MHz (UHF-TV) 800 - 999 MHz (GEN2, Cellular Blocked) TX: 144 - 148 MHz 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-TV) 222 - 420 MHz (ACT1) 420 - 470 MHz (430 MHz HAM) 470 - 800 MHz (UHF-TV) 800 - 999 MHz (GEN2) 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, 9, 10, 12.5, 15, 20, 25, 50, 100 kHz		5, 9, 10, 12.5, 15, 20, 25, 50, 100 kHz		5, 8.33, 9, 10, 12.5, 15, 20, 25, 50, 100 kHz	
Frequency Stability	±2.5 ppm (-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 + 122°F, -10°C to + 50°C)		±5 ppm (+14°F to + 140°F, -10°C to + 60°C)	
Emission Type	F1D, F2D, F3E, F7W		F1D, F2A, F2D, F3E, A3E		F2D, F3E		F2D, F3E, F2A	
Supply Voltage	Norminal 7.4 V DC (Negative Ground FNB-101LI, FNB-102LI) Norminal 7.2 V DC (Negative Ground SBR-14LI) Operating 4 - 14 V DC (Negative Ground EXT DC jack) 11- 16 V DC (Negative Ground EXT DC jack with SDD-13) 7.4 V DC (Negative Ground)		Norminal 7.4 V DC (Negative Ground FNB-101LI, FNB-102LI) Norminal 7.2 V DC (Negative Ground SBR-14LI) Operating 4 - 14 V DC (Negative Ground EXT DC jack)		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 3.7 V DC (Negative Ground) Operating 3.6 - 7 V DC (EXT DC jack) 5.0 - 7 V DC (EXT DC jack while Charging)	
Current Consumption	150 mA (Single Band Receive) 220 mA (Dual Band Receive) 100 mA (Single Band Receive, Standby, Saver Off) 150 mA (Dual Band Receive, Standby, Saver Off) 45 mA (Single Band Receive, Standby, Saver On "Save Ratio 1: 5") 45 mA (Dual Band Receive, Standby, Saver On "Save Ratio 1: 5") +30 mA (GPS On) +65 mA (Digital) 600 µA (Auto Power Off) 1.7 A (TX, 144 MHz 5 W) 2.0 A (TX, 430 MHz 5 W)		200 mA (Single Band Receive) 240 mA (Dual Band Receive) 85 mA (Single Band Receive, Standby, Saver Off) 120 mA (Dual Band Receive, Standby, Saver Off) 35 mA (Single Band Receive, Standby, Saver On "Save Ratio 1:5") 42 mA (Dual Band Receive, Standby, Saver On "Save Ratio 1:5") 300 µA (Auto Power off) 1.6 A (TX, 50 MHz 5 W) 1.7 A (TX, 144 MHz 5 W) 1.2 A (TX, 222 MHz 1.5 W) 1.9 A (TX, 430 MHz 5 W)		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 USA version) 1.8 A (TX, 430 MHz 5 W)		120 mA (Receive) 60 mA (Standby, Saver Off) 30 mA (Standby, Saver On, Save Ratio 1:2) 50 mA (Radio Band Receive) 100 µA (Auto Power Off) 1.3 A (TX, 144 MHz 1.5 W) @3.7 V DC 1.6 A (TX, 144 MHz 3.0 W) @6 V DC 1.2 A (TX, 430 MHz 1.0 W) @3.7 V DC 1.8 A (TX, 430 MHz 2.0 W) @6 V DC	
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)	2.4" x 3.7" x 1.28" (60 x 95 x 32.5 mm) (w/o knob & antenna)		2.4" x 3.7" x 0.9" (60 x 95 x 24.2 mm) (w/o knob & antenna)		2.3" x 3.5" x 1.1" (58 x 89 x 28.5 mm) (w/o knob & antenna)		1.9" x 3.2" x 0.9" (47 x 81 x 23 mm) (w/o knob & antenna)	
Weight	10.23 oz (290 g) with FNB-102LI & antenna		8.5 oz (240 g) with FNB-101LI & antenna		9.5 oz (270 g) with FNB-80LI & antenna		4.6 oz (130 g) with FNB-82LI & 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 @7.4 V		1.0 W (50/144/430 MHz) @4.5 V: AA x 3 5.0 W (50/144/430 MHz) @7.4 V or EXT DC 1.0 W (50 MHz AM) Fixed 0.5 W (222 MHz : USA only) @4.5 V: AA x 3 1.5 W (222 MHz : USA only) @7.4 V or EXT DC L3: 2.5W, L2: 1W, L1: 0.05W (50/144/430 MHz) @7.4 V L3: 1W, L2: 0.5W, L1: 0.05W (222 MHz) @7.4 V		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: USA version) 1.0 W (L3: 222 MHz: USA version) 0.5 W (L2: 222 MHz: USA version) 0.2 W (L1: 222 MHz: USA version)		1.5 W (144 MHz) @4.5 V: AA x 3 or 3.7 V FNB-82LI 3.0 W (144 MHz) @6 V or EXT DC 1.0 W (430 MHz) @4.5 V: AA x 3 or 3.7 V FNB-82LI 2.0 W (430 MHz) @6 V or EXT DC Low 0.1 W: @4.5 V: AA x 3 or 3.7 V FNB-82LI Low 0.3 W: @6 V or EXT DC	
Spurious Emission	At least 60 dB below (@ TX power HI/L3/L2) At least 50 dB below (@ TX power L1)		At least 60 dB below (@ TX power HI/L3) At least 50 dB below (@ TX power L2/L1)		At least 60 dB below (@ TX power HI/L3) At least 50 dB below (@ TX power L2/L1)		At least 60 dB below (@ TX power : HIGH) At least 50 dB below (@ TX power : LOW or less than 1 W)	
Microphone Impedance	2 kΩ		2 kΩ		2 kΩ		2 kΩ	
Receiver								
Circuit Type	NFM / AM: Double-Conversion Superheterodyne FM / AM Radio: Single-Conversion Superheterodyne		NFM / AM: Double-Conversion Superheterodyne WFM: Triple-Conversion Superheterodyne FM / AM Radio: Single-Conversion Superheterodyne		NFM / AM: Double-Conversion Superheterodyne WFM: Triple-Conversion Superheterodyne		NFM / AM: Double-Conversion Superheterodyne WFM: Triple-Conversion Superheterodyne AM / FM Radio: Single-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: 130 kHz (AM/FM Radio)		NFM, AM 1st: 47.25 MHz (A Band), 46.35 MHz (B Band) 2nd: 450 kHz (A Band), 450 kHz (B Band) WFM 1st: 45.8 MHz 2nd: 10.7 MHz 3rd: 1 MHz AM/FM Radio: 130 kHz		1st: 47.25 MHz (NFM, AM, WFM) 2nd: 450 kHz (NFM, AM), 10.7 MHz (WFM) 3rd: 1 MHz (WFM)		1st: 47.25 MHz (NFM, AM), 45.80 MHz (WFM), 130 kHz (AM/FM Radio) 2nd: 450 kHz (NFM, AM), 10.7 MHz (WFM) 3rd: 1 MHz (WFM)	
Sensitivity	3.0 µV for 10 dB SN (0.5 - 30 MHz, AM) 0.35 µV TYP for 12 dB SINAD (30 - 54 MHz, NFM) 1.0 µV TYP for 12 dB SINAD (54 - 76 MHz, NFM) 1.5 µV TYP for 12 dB SINAD (76 - 108 MHz, WFM) 1.5 µV TYP for 10 dB SN (108 - 137 MHz, AM) 0.2 µV for 12 dB SINAD (137 - 140 MHz, NFM) 0.16 µV for 12 dB SINAD (140 - 150 MHz, NFM) 0.2 µV for 12 dB SINAD (150 - 174 MHz, NFM) 1.0 µV 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) 0.16 µV for 12 dB SINAD (400 - 470 MHz, NFM) 1.5 µV for 12 dB SINAD (470 - 540 MHz, NFM) 3.0 µV TYP for 12 dB SINAD (540 - 800 MHz, NFM) 1.5 µV TYP for 12 dB SINAD (800 - 999.90 MHz, NFM) Cellular Blocked 0.19 µV TYP for BER 1% (Digital Mode)		A(Main) Band 3.0 µV for 10 dB SN (0.5 - 30 MHz, AM) 0.35 µV TYP for 12 dB SINAD (30 - 54 MHz, NFM) 1.0 µV TYP for 12 dB SINAD (54 - 76 MHz, NFM) 1.0 µV TYP for 12 dB SINAD (54 - 59 MHz, NFM, USA Version) 1.5 µV TYP for 12 dB SINAD (76 - 108 MHz, WFM) 1.5 µV TYP for 12 dB SINAD (59 - 108 MHz, WFM) 1.5 µV TYP for 10 dB SN (108 - 137 MHz, AM) 0.2 µV for 12 dB SINAD (137 - 140 MHz, NFM) 0.16 µV for 12 dB SINAD (140 - 150 MHz, NFM) 0.2 µV for 12 dB SINAD (150 - 174 MHz, NFM) 1.0 µV for 12 dB SINAD (174 - 222 MHz, WFM) 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) 1.5 µV for 12 dB SINAD (470 - 540 MHz, WFM) 3.0 µV TYP for 12 dB SINAD (540 - 800 MHz, WFM) 1.5 µV TYP for 12 dB SINAD (800 - 999.90 MHz, NFM) Cellular Blocked B(Sub) Band 0.18 µV TYP for 12 dB SINAD (50 - 54 MHz, NFM) 0.18 µV for 12 dB SINAD (144 - 148 MHz, NFM) 0.2 µV for 12 dB SINAD (430 - 450 MHz, NFM)		1.0 µV TYP for 10 dB SN (1.8 - 30 MHz, AM) 0.35 µV TYP for 12 dB SINAD (30 - 54 MHz, NFM) 0.5 µV TYP for 12 dB SINAD (54 - 76 MHz, NFM) 0.5 µV TYP for 12 dB SINAD (54 - 59 MHz, NFM, USA version) 1.0 µV TYP for 12 dB SINAD (76 - 108 MHz, WFM) 1.0 µV TYP for 12 dB SINAD (59 - 108 MHz, WFM, USA version) 1.5 µV TYP for 10 dB SN (108 - 137 MHz, AM) 0.2 µV for 12 dB SINAD (137 - 140 MHz, NFM) 0.16 µV for 12 dB SINAD (140 - 150 MHz, NFM) 0.2 µV for 12 dB SINAD (150 - 174 MHz, NFM) 0.5 µV TYP for 12 dB SINAD (174 - 250 MHz, WFM) 0.5 µV for 12 dB SINAD (300 - 350 MHz, NFM) 0.2 µV for 12 dB SINAD (350 - 420 MHz, NFM) 0.18 µV for 12 dB SINAD (420 - 470 MHz, NFM) 1.0 µV for 12 dB SINAD (470 - 540 MHz, WFM) 1.0 µV TYP for 12 dB SINAD (580 - 800 MHz, WFM) 0.5 µV TYP for 12 dB SINAD (800 - 999.990 MHz, NFM)		3.0 µV for 10 dB SN (0.5 - 1.8 MHz, AM) 3.0 µV for 10 dB SN (0.5 - 30 MHz, AM) 0.35 µV TYP for 12 dB SINAD (30 - 54 MHz, NFM) 1.0 µV TYP for 12 dB SINAD (54 - 76 MHz, NFM) 3.0 µV TYP for 12 dB SINAD (76 - 108 MHz, FM Radio) 1.5 µV TYP for 10 dB SN (108 - 137 MHz, AM) 0.2 µV for 12 dB SINAD (137 - 140 MHz, NFM) 0.16 µV for 12 dB SINAD (140 - 150 MHz, NFM) 0.2 µV for 12 dB SINAD (150 - 174 MHz, NFM) 1.0 µV TYP for 12 dB SINAD (174 - 225 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) 1.5 µV for 12 dB SINAD (470 - 540 MHz, WFM) 3.0 µV TYP for 12 dB SINAD (540 - 800 MHz, WFM) 1.5 µV TYP for 12 dB SINAD (800 - 999 MHz, NFM) USA version Cellular Blocked	
Selectivity	NFM, AM 12 kHz / 35 kHz (-6 dB / -60 dB)		NFM, AM 12 kHz / 35 kHz (-6 dB / -60 dB)		NFM, AM 12 kHz / 35 kHz (-6 dB / -60 dB) WFM 200 kHz / 300 kHz (-6 dB / -20 dB)		NFM, AM 12 kHz / 35 kHz (-6 dB / -60 dB) WFM 200 kHz / 300 kHz (-6 dB / -20 dB)	
AF Output	200 mW @ 10 % THD (@ 7.4 V) 400 mW @ 10 % THD (@ 13.8V)		200 mW @ 10 % THD (@ 7.4 V) 400 mW @ 10 % THD (@ 13.8V)		200 mW @ 10 % THD (@ 7.4 V) 400 mW @ 10 % THD (@ 13.8V)		50 mW @ 10 % THD (@ 3.7 V) 100 mW @ 10 % THD (@ 6.0V)	
AF Output Impedance	8 Ω		8 Ω		8 Ω		8 Ω	

FT-60R	FT-60E	FT-270R	FT-270E	FT-252	FT-252E	FT-257	VR-160	VR-120D
General								
RX: 108 - 137 MHz (Air Band) 137 - 520 MHz (AM/FM) 700 - 999 MHz (FM, Cellular Blocked) TX: 144 - 148 MHz 430 - 450 MHz	RX: 108 - 137 MHz (Air Band) 137 - 520 MHz (AM/FM) 700 - 999 MHz (FM) 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	RX: 400 - 480 MHz TX: 430 - 450 MHz	Normal Band 100 kHz - 1.8 MHz (BC Bamd) 1.8 MHz - 30 MHz (SW Band) 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-TV) 222 - 420 MHz (General 1) 420 - 470 MHz (430 MHz HAM) 470 - 800 MHz (UHF-TV) 800 - 1000 MHz (General 2) 1000 - 1299.975 MHz (1.2 GHz HAM) Radio Band 504 kHz - 1.795 MHz (AM Broadcast) 76 - 107.95 MHz (WFM Broadcast)	100 kHz - 1299.99 MHz Cellular / Image / restricted frequencies Blocked
5, 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, 100 kHz		5, 10, 12.5, 15, 20, 25, 100 kHz	5, 8.33, 9, 10, 12.5, 15, 20, 25, 50, 100 kHz	5, 6.25, 9, 10, 12.5, 15, 20, 25, 50, 100 kHz
±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)		±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)
F2D, F3E		F2D, F3E		F2D, F3E		F2D, F3E	–	–
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 7.2 V DC (Negative Ground) Operating 6.0 - 16 V DC (EXT DC jack)		Nominal 7.4 V DC (Negative Ground) Operating 5.0 - 10 V DC (EXT DC jack)		Nominal 7.4 V DC (Negative Ground) Operating 5.0 - 10 V DC (EXT DC jack)	Nominal 3.7 V DC, FNB-82LI Battery Operation 6.0 V DC, PA-46CU AC Adapter Operation Operating 3.5 - 7.0 V, Negative Ground (EXT DC Jack)	Nominal 3.0 V DC 2.2 - 3.5 V DC: Internal Battery 5.5 - 10.0 V DC: EXT DC
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		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		200 mA (Receive, 200 mW Output) 70 mA (Standby, Saver Off) 25 mA (Standby, Saver On) 0.5 mA (Auto Power Off) 1.6 A (TX, 5.0 W) @7.4 V DC		200 mA (Receive, 200 mW Output) 70 mA (Standby, Saver Off) 25 mA (Standby, Saver On) 0.5 mA (Auto Power Off) 1.8 A (TX, 5.0 W) @7.4 V DC	Maximum Current: 800 mA (3.5 - 7 VDC) with Charging 140 mA (Receive, Normal Band, VOL level: 20) 100 mA (Receive, Radio Band, VOL level: 20) 58 mA (Standby, Saver Off) 20 mA (Standby, Saver On) 300 µA (Auto Power Off)	95 mA (Receive, 50mW Output) 55 mA (Standby, Saver Off) 15 mA (Standby, Saver On, Save Ratio 1:4)
-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	+14°F to + 122°F, -10°C to + 50°C
2.3" x 4.3" x 1.2" (58 x 109 x 30 mm) (w/o knob & antenna)		2.4" x 4.7" x 1.3" (60 x 120 x 32 mm) (w/o knob & antenna)		2.45" x 4.74" x 1.52" (62 x 120.5 x 38.5 mm) (w/o knob, antenna & belt clip)		2.45" x 4.74" x 1.52" (62 x 120.5 x 38.5 mm) (w/o knob, antenna & belt clip)	47 x 81 x 23 mm (w/ FNB-82LI, w/o knob & antenna) 47 x 81 x 31 mm (w/ FBA-37, w/o knob & antenna)	59 x 85 x 26 mm (w/o knob & antenna)
13.05 oz (370 g) with FNB-83 & antenna		13.8 oz (390 g) with FNB-83 & antenna		9.9 oz (280 g) with FNB-124LI, antenna & belt clip		9.9 oz (280 g) with FNB-124LI, antenna & belt clip	130 g (w/ FNB-82LI & antenna) 185 g (w/ FBA-37 & antenna)	195 g with Battery & antenna
Transmitter								
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		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		High 5.0 W @7.4 V: FNB-124LI Mid 2.0 W @7.4 V: FNB-124LI Low 0.5 W @7.4 V: FNB-124LI		High 5.0 W @7.4 V: FNB-124LI Mid 2.0 W @7.4 V: FNB-124LI Low 0.5 W @7.4 V: FNB-124LI	–	–
At least 60 dB below (@ TX power : High/Mid) At least 40 dB below (@ TX power : Low)		At least 60 dB below (@ TX power : High/Mid) At least 40 dB below (@ TX power : Low)		FT-252 At least 60 dB below (@ TX power : High/Mid) At least 40 dB below (@ TX power : Low) FT-252E At least 60 dB below (@ TX power : High/Mid/Low)		At least 60 dB below (@ TX power : High/Mid) At least 40 dB below (@ TX power : Low)	–	–
2 kΩ		2 kΩ		2 kΩ		2 kΩ	–	–
Receiver								
Double-Conversion Super heterodyne.		Double-Conversion Super heterodyne		Direct-Conversion		Direct-Conversion	NFM / AM: Double-Conversion Superheterodyne WFM: Triple-Conversion Superheterodyne FM / AM Radio: Single-Conversion Superheterodyne	Triple-Conversion Superheterodyne
1st: 47.25 MHz 2nd: 450 kHz		1st: 21.7 MHz 2nd: 450 kHz		–		–	NFM, AM 1st: 47.25 MHz 2nd: 450 kHz WFM 1st: 45.8 MHz 2nd: 10.7 MHz 3rd: 1 MHz AM/FM Radio 1st: 30 kHz	1st: 248.45 MHz 2nd: 15 MHz 3rd: 450 kHz
0.8 µV for 10 dB SN (108 - 137 MHz, AM) 0.2 µV for 12 dB SINAD (137 - 140 MHz, NFM) 0.16 µV for 12 dB SINAD (140 - 150 MHz, NFM) 0.2 µV TYP for 12 dB SINAD (150 - 174 MHz, NFM) 0.3 µV TYP for 12 dB SINAD (174 - 300 MHz, NFM) 0.8 µV TYP for 12 dB SINAD (300 - 336 MHz, AM) 0.25 µV TYP for 12 dB SINAD (336 - 420 MHz, NFM) 0.2 µV for 12 dB SINAD (420 - 470 MHz, NFM) 0.25 µV for 12 dB SINAD (470 - 540 MHz, WFM) 0.5 µV TYP for 12 dB SINAD (800 - 900 MHz, NFM) 0.8 µV TYP for 12 dB SINAD (900 - 999.99 MHz, NFM)		0.2 µV for 12 dB SINAD (136 - 140 MHz, NFM) 0.16 µV for 12 dB SINAD (140 - 150 MHz, NFM) 0.2 µV TYP for 12 dB SINAD (150 - 174 MHz, NFM)		0.2 µV for 12 dB SINAD (144 - 148 MHz)		0.2 µV for 12 dB SINAD (430 - 450 MHz)	1.0 µV for 12 dB SINAD (0.1 - 0.5 MHz, NFM) 1.0 µV for 10 dB SN (0.5 - 1.8 MHz, AM Radio) 1.0 µV for 10 dB SN (1.8 - 30 MHz, AM) 0.35 µV TYP for 12 dB SINAD (30 - 54 MHz, NFM) 0.5 µV TYP for 12 dB SINAD (54 - 76 MHz, NFM) 1.0 µV TYP for 12 dB SINAD (76 - 108 MHz, FM Radio) 0.5 µV TYP for 10 dB SN (108 - 137 MHz, AM) 0.2 µV for 12 dB SINAD (137 - 140 MHz, NFM) 0.16 µV for 12 dB SINAD (140 - 150 MHz, NFM) 0.2 µV for 12 dB SINAD (150 - 174 MHz, NFM) 1.0 µV TYP for 12 dB SINAD (174 - 222 MHz, WFM) 1.0 µV TYP for 10 dB SN (222 - 250.4 MHz, AM) 0.35 µV TYP for 12 dB SINAD (250.4 - 300 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) 1.0 µV for 12 dB SINAD (470 - 540 MHz, WFM) 1.5 µV TYP for 12 dB SINAD (540 - 800 MHz, WFM) 0.5 µV TYP for 12 dB SINAD (800 - 1000 MHz, NFM) 0.7 µV TYP for 12 dB SINAD (1000 - 1300 MHz, NFM)	1.5 µV TYP for 10 dB SN (200 kHz - 5 MHz AM) 0.6 µV TYP for 10 dB SN (5 MHz - 160 MHz AM) 0.3 µV TYP for 12 dB SINAD (5 MHz - 160 MHz FM) 0.9 µV TYP for 12 dB SINAD (5 MHz - 160 MHz WFM) 0.6 µV TYP for 10 dB SN (160 MHz - 370 MHz AM) 0.3 µV TYP for 12 dB SINAD (160 MHz - 370 MHz FM) 0.6 µV TYP for 12 dB SINAD (160 MHz - 370 MHz WFM) 0.3 µV TYP for 12 dB SINAD (370 MHz - 520 MHz FM) 1.0 µV TYP for 12 dB SINAD (370 MHz - 520 MHz WFM) 0.7 µV TYP for 12 dB SINAD (520 MHz - 1300 MHz FM) 3.0 µV TYP for 12 dB SINAD (520 MHz - 1300 MHz WFM)
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)	NFM, AM 12 kHz / 35 kHz (-6 dB / -60 dB) WFM 200 kHz / 300 kHz (-6 dB / -60 dB)	NFM, AM 16 kHz (-6 dB) WFM 200 kHz (-6 dB)
400 mW @ 10 % THD (@ 7.5 V)		800 mW @ 16 Ω 10 % THD (@ 7.4 V) Internal SP 450 mW @ 8 Ω10 % THD (@ 7.4V) EXT SP jack		800 mW @ 16 Ω 10 % THD (@ 7.4 V) Internal SP		800 mW @ 16 Ω 10 % THD (@ 7.4 V) Internal SP	50 mW @ 10 % THD (@ 4.5 V) 100 mW @ 10 % THD (@ 6 V)	80 mW @ 8 % THD
8 Ω		8 Ω/16 Ω		16 Ω		16 Ω	8 Ω	8 Ω

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

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

FT-8900R

American, Asian and European versions

Independent Two-Channel, Dual Receive and Full Duplex Operation

Basically operating as two radios in one, the FT-8900R may be configured in a number of ways. For example, you can set up the "left" side of the rig for operation on 29, 50, 144, or 430 MHz operation, while setting the "right" side to 430 MHz. Or set up the left side on 29/50/144/430 MHz, and the right side on 144 MHz. And, if you like, you can configure your FT-8900R 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 S-meters, so your operating preferences are never compromised.

Quad Band Operation

The FT-8900R combines the "traditional" 144/430 MHz local-communications concept with the exciting capability of Sporadic-E or F2 DX on the 29 MHz and 50 MHz 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 got by with a two-band transceiver until now.

High Power Output

The FT-8900R puts out a full 50 Watts of power on the 29/50/144 MHz bands, and 35 Watts on the 430 MHz band.

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 sets 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 you to store a complete set of configuration data for the two bands on which you're operating. 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.

Many 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
- 1200/9600 bps 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 with 1750 Hz Burst Button **MH-42B6JS**[*1]	DTMF Microphone **MH-48A6JA**[*2]	High-Power External Speaker **MLS-100**	Quick Release Mobile Mounting Bracket **MMB-60**	Separation Kit **YSK-8900**[*2]	Mic Extension Kit **MEK-2**	Packet Interface Cable **CT-39A**	AC Power Supply (25 A) **FP-1030A**[*1]	AC Power Supply (23 A) **FP-1023**[*3]

*1 American and Asian versions only *2 (Included) American , European and Asian versions *3 USA version only

Easy Operation with the Ultimate Dual Band Mobile

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

FT-8800R
American and Asian versions

FT-8800E
European version

- **Independent Two-Channel Operation**
- **High Power Output (50 Watts VHF / 35 Watts UHF)**
- **Over 1000 Memory Channels**
- **Hyper Memories Feature :One-touch store a complete set of configuration data**
- **Versatile Scanning Capability: Dual-Frequency "Priority Cannel", "Programmable Memory Scan"**
- **Cross-Band Repeat Capability**

Features

- Wide Frequency Coverage
  TX: 144-148 (146) MHz, 430-450 (440) MHz
  RX: 108-520 MHz, 700-999.990 MHz (Cellular Blocked)
- Convenient Remote-Head Mounting Capability (YSK-8900 : Supplied Accessory)
- User-Programmable Microphone Keys
- 50-tone CTCSS / 104-tone DCS signaling system
- 1200/9600 bps Packet Capability
- Automatic Repeater Shift
- RF Squelch: Open the squelch at user defined S-Meter level
- Built in Duplexer
- Battery Voltage Meter
- DTMF Auto-dial Memory
- Lock feature for front panel keys, PTT switch

OPTIONS

 Hand Microphone with 1750 Hz Burst Button **MH-42B6JS***1	 DTMF Microphone **MH-48A6JA***2	 High-Power External Speaker **MLS-100**	 Quick Release Mobile Mounting Bracket **MMB-60**	 Separation Kit **YSK-8900***2	 Mic Extension Kit **MEK-2**	 Packet Interface Cable **CT-39A**	 AC Power Supply (25 A) **FP-1030A***1	 AC Power Supply (23 A) **FP-1023***3

*1 American and Asian versions only *2 (Included) American , European and Asian versions *3 USA version only

Heavy-Duty FM Dual Band Mobile with Exceptionally Wide Receiver Coverage

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

FT-7900R
American and Asian versions

FT-7900E
European version

- **Large Backlit LCD Display for easy operation**
- **Stable RF Power (50 Watts VHF / 45 Watts UHF)**
- **Reliable performance in harsh environments**
- **5 ppm Frequency Stability (+14° F to +140° F/ -10° C to +60° C)**
- **1000 Memory Channels with 20 Memory Groups**
- **Yaesu Unique Power Saving Circuit Design Minimizes Vehicle Battery Drain**

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: 144-148 (146) MHz and 430-450 (440) MHz
  RX: 108-520 MHz, 700-999.990 MHz (Cellular Blocked)
- Convenient Remote-Head Mounting Capability (YSK-7800 : Supplied Accessory)
- 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 9600 bps Packet Operation
- ARTS (Auto-Range Transponder System)
- Radio to Radio Cloning

OPTIONS

 Hand Microphone with 1750 Hz Burst Button **MH-42B6JS***1	 DTMF Microphone **MH-48A6JA***2	 High-Power External Speaker **MLS-100**	 Quick Release Mobile Mounting Bracket **MMB-60**	 Separation Kit **YSK-7800***2	 Mic Extension Kit **MEK-2**	 Packet Interface Cable **CT-39A**	 AC Power Supply (25 A) **FP-1030A***1	 AC Power Supply (23 A) **FP-1023***3

*1 American and Asian versions only *2 (Included) American , European and Asian versions *3 USA version only

The King of Mobile

144 MHz 75 W FM TRANSCEIVER

FT-2900R

American and Asian versions

FT-2900E

European version

- **Massive Heatsink guarantees 75 Watts of Solid RF Power with No Cooling Fan Needed**
- **Loud 3 Watts of Audio Output for noisy environments**
- **Large 6 Digit Backlit LCD for excellent visibility**
- **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
- Excellent Receiver Performance
- Wide/Narrow Deviation Selection
- RF Squelch
- Interactive Programming Menu
- Supply Voltage Display
- 4-level Display Dimmer
- Dual Watch

OPTIONS				
				
Hand Microphone with 1750 Hz Burst Button **MH-42B6JS**[*1]	DTMF Microphone **MH-48A6JA**[*2]	High-Power External Speaker **MLS-100**	AC Power Supply (25 A) **FP-1030A**[*1]	AC Power Supply (23 A) **FP-1023**[*3]

*1 American and Asian versions only *2 (Included) American , European and Asian versions *3 USA version only

Best Selling, Reliable Mobile

144MHz 55 W FM TRANSCEIVER

FT-1900R

American and Asian versions

FT-1900E

European version

430MHz 55 W FM TRANSCEIVER

FT-1907R

Asian version only

- **55 Watts of Solid RF Power within a compact footprint**
- **Loud 3 Watts of Audio Output Power for noisy environments**
- **Large 6 Digit Backlit LCD for excellent visibility**
- **Alpha-Numeric Channel Display**
- **200 Memory Channels for serious users**

Features

- Eight Memory banks for Channel allocation (You can assign a name to each bank)
- CTCSS (50 tones) and DCS (104 codes) Encode/Decode, with split Tone and DCS Encode-only capability
- RF Squelch
- Separate Transmit Frequency Memories ("Odd Splits")
- Tone Search Scanning
- EPCS (Enhanced Paging & Code Squelch) Operation
- Split Tone Operation
- DTMF Auto dialer (10 channel) Operation
- DC Voltage indication feature
- Memory-Only Mode
- Password function
- Versatile Scanning Capability
- Programmable Key Assignments (4 keys)
- Weather Broadcast Reception (USA version only)
- Severe Weather Alert Feature (USA version only)
- ARTS
- Smart Search Operation
- Adjustable TX Deviation Level
- Cloning

OPTIONS				
				
Hand Microphone with 1750 Hz Burst Button **MH-42B6JS**[*1]	DTMF Microphone **MH-48A6JA**[*2]	High-Power External Speaker **MLS-100**	AC Power Supply (25 A) **FP-1030A**[*1]	AC Power Supply (23 A) **FP-1023**[*3]

*1 American and Asian versions only *2 (Included) American , European and Asian versions *3 USA version only

Mobile Transceivers		FTM-400DR FTM-400DE	FT-8900R	FT-8800R FT-8800E	FT-7900R FT-7900E	FT-2900R FT-2900E	FT-1900R FT-1900E	FT-1907R
MICROPHONES/SPEAKER								
MH-42B6JS*1	Hand Microphone with 1750 Hz Burst Button		●	●	●	●	●	●
MH-42C6J	Microphone	●						
MH-48A6JA*2	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	●						
CABLES								
YSK-8900*2	Separation Kit		●	●				
YSK-7800*2	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*2	PC Connection Cable	●						
SCU-23	Microphone Extension Cable	●						
PROGRAMMING KIT								
ADMS	Windows™ PC Programming Kit		ADMS-2H	ADMS-2I	ADMS-7900	ADMS-2900	ADMS-1900	ADMS-1907
OTHERS								
FP-1030A*1	AC Power Supply (25 A)	●	●	●	●	●	●	●
FP-1023*3	AC Power Supply (23 A) : USA version only	●	●	●	●	●	●	●
BH-2A	Bluetooth® Headset	●						
BU-2	Bluetooth® Adapter Unit	●						
CD-40	Charger Cradle (3 hours) for BH-2A Bluetooth® Headset	●						
PA-46B/C/U*4	AC Adapter for CD-40	●						
FVS-2	Voice Guide Unit	●						

*1 American and Asian versions only *2 (Included) American , European and Asian versions *3 USA version only *4 "B" for USA version / "C" for 220 - 240 VAC / "U" for 230 VAC w/ UK Plug

	FTM-400DR	FTM-400DE	FT-8900R	FT-8800R	FT-8800E
General					
Frequency Ranges	RX: 108 - 137 MHz 137 - 174 MHz 174 - 400 MHz 400 - 480 MHz 480 - 999.99 MHz USA 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: 28 - 29.7 MHz 50 - 54 MHz 108 - 180 MHz 320 - 480 MHz 700 - 985 MHz USA 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 USA Version Cellular Blocked TX: 144 - 148 MHz 430 - 450 MHz	RX: 108 - 520 MHz 700 - 999 MHz TX: 144 - 146 MHz 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, 10, 12.5, 15, 20, 25, 50 kHz	5, 10, 12.5, 15, 20, 25, 50 kHz	
Frequency Stability	±2.5 ppm (-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)	
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	
Current Consumption	0.5 A (Receive) 11 A (TX, 144 MHz 50 W) 12 A (TX, 430 MHz 50 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) 8 A (TX,430 MHz 35 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	
Case Size (WxHxD)	Radio Unit / 5.5" x 1.6" x 4.9" (140 x 40 x 125 mm) (W/O Fan) Controller / 5.5" x 2.8" x 0.8" (140 x 72 x 20 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)	
Weight	2.64 lbs (1.2 kg) with Radio Unit, Controller, Control Cable		2.2 lbs (1 kg)	2.2 lbs (1 kg)	
Transmitter					
RF Power Output	50 / 20 / 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) 35 / 20 / 10 / 5 W (430 MHz)	
Spurious Emission	At least 60 dB below		At least 60 dB below (29MHz : At least 50 dB below)	At least 60 dB below	
Microphone Impedance	2 kΩ		2 kΩ	2 kΩ	
Receiver					
Sensitivity	0.8 µV TYP for 10 dB SN (108 - 137 MHz, AM) 0.2 µV for 12 dB SINAD (137 - 140 MHz, FM) 0.2 µV for 12 dB SINAD (140 - 150 MHz, FM) 0.19 µV TYP for BER1% (140 - 150 MHz, Digital) 0.25 µV for 12 dB SINAD (150 - 174 MHz, FM) 0.3 µV TYP for 12 dB SINAD (174 - 222 MHz, FM) 0.25 µV TYP for 12 dB SINAD (222 - 300 MHz, FM) 0.8 µV TYP for 10 dB SN (300 - 336 MHz, AM) 0.25 µV for 12 dB SINAD (336 - 420 MHz, FM) 0.2 µV for 12 dB SINAD (420 - 470 MHz, FM) 0.19 µV TYP for BER1% (420 - 470 MHz, Digital) 0.2 µV for 12 dB SINAD (470 - 520 MHz, FM) 0.4 µV TYP for 12 dB SINAD (800 - 900 MHz, FM) 0.8 µV TYP for 12 dB SINAD (900 - 999.99 MHz, FM) USA Version Cellular Blocked		0.2 µV for 12 dB SINAD	0.2 µV for 12 dB SINAD	
Selectivity	NFM, AM 12 kHz / 30 kHz (-6 dB / -60 dB)		12 kHz / 30 kHz (-6 dB / -60 dB)	12 kHz / 30 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		2 W @ 8 Ω for 5 % THD (@ 13.8 V)	2 W @ 8 Ω for 5 % THD (@ 13.8 V)	

FT-7900R	FT-7900E	FT-2900R	FT-2900E	FT-1900R	FT-1900E	FT-1907R
General						
RX: 108 - 520 MHz 700 - 999 MHz USA 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	RX: 400 - 470 MHz TX: 400 - 470 MHz
5, 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		
±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)		
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		
0.5 A (Receive) 8.5 A (TX, 144 MHz 50 W) 9 A (TX,430 MHz 45 W)		0.7 A (Receive) 15 A (75W) / 9 A (30 W) / 5 A (10 W) / 4 A (5 W)		0.7 A (Receive) 11 A (55W) / 7 A (25 W) / 5 A (10 W) / 4 A (5 W)		
-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		
5.5" x 1.6" x 6.6" (140 x 41.5 x 168 mm) (W/O knob & connectors)		6.3" x 2.0" x 7.3" (160 x 50 x 185 mm) (W/O knob & connectors)		5.6" x 1.6" x 5.8" (140 x 40 x 146 mm) (W/O knob & connectors)		
2.2 lbs (1 kg)		4.2 lbs (1.9 kg)		2.6 lbs (1.2 kg)		
Transmitter						
50 / 20 / 10 / 5 W (144 MHz) 45 / 20 / 10 / 5 W (430 MHz)		75 / 30 / 10 / 5 W		55 / 25 / 10 / 5 W		
At least 60 dB below		At least 60 dB below		At least 60 dB below		
2 kΩ		2 kΩ		2 kΩ		
Receiver						
0.2 µV for 12 dB SINAD		0.4 µV for 12 dB SINAD		0.2 µV for 12 dB SINAD		
12 kHz / 30 kHz (-6 dB / -60 dB)		12 kHz / 28 kHz(-6 dB /-60 dB)		12 kHz / 28 kHz(-6 dB /-60 dB)		
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)		

YAESU
The radio

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VEGETABLE OIL INK

2014.0420CC(U/E/EXP) B9200665 Printed in Japan