

144/(220)\* / 440 MHz 50W FM Dual Band Transceiver

# FTM-350R/E\*

\* E for European Version  
\* 220 MHz 1W (US Version only)



Actual Size

## Totally New - Advanced Dual Band Mobile Radio Large dot matrix LCD display Compatible with various APRS® information and functions

- NEW** Large LCD display for comfortable viewing night and day. (5.2" x 1.6")(130mm x 40mm) dot matrix (264 x 64 dots)  
Choose your favorite LCD display from 8 vibrant color options
- NEW** Multi-purpose Global Positioning System display (with optional FGPS-1 GPS Receiver and Antenna. Optional FGPS-2 External GPS Receiver and Antenna is also available)
- NEW** Huge memory channel management capability!  
500 Independent Memory channels  
+ 9 Programmable Band Limit Memory Scan channels  
+ 1 Rewritable Preferred channel for each L and R Band
- Exclusive** Dual Band AF Monitor for listening to FM/AM broadcasts while monitoring the ham bands as well
- The Display Control Head is designed for easy separation from the main RF power unit and is built of tough die-cast aluminum: 10ft control cable included (Optional 20ft control cable available)
- NEW** Compatible with the worldwide standard data-communications system, APRS®, and SmartBeaconing™ capabilities
- NEW** 3 Speaker System (Includes Built-in Dual Speakers on the rear of the Control Head for FM Broadcasts in Stereo!)
- Exclusive** Built-in Barometric Pressure Sensor

\* APRS® is a registered trademark of Bob Bruninga WB4APR.  
\* SmartBeaconing™ from HamHUD Nichetronix

 **YAESU**

# Compatible with various GPS and APRS® information and functions, High-speed Band Scope, Bluetooth® Features, Wideband RX... The Ultimate Mobile Communications Radio FTM-350R/E\*



144/(220)\* /430 MHz  
50 W FM Dual-Band Transceiver  
**FTM-350R/E\***

\* E for European Version  
\*220 MHz 1W (US Version only)

**Large (5.2" x 1.6"/130 x 40 mm) dot matrix (264 x 64 dots) LCD display for comfortable and clear viewing!**

Bands and memory channels, Band Scope, Function Icons, Timer Functions, etc., etc....., your numerous useful operation information will appear on the large dot matrix LCD of the Display Control Head! Large function keys are arranged around the LCD screen for your easier and firm operation, and "FWD" and "BCK" keys lead you to flip immediately between its functional screens. A new suction mount for the Display Control Head (included with a 10 ft control cable) needs no adhesive to mount. (Optional 20ft control cable available)



A new suction mount for the Display Control Head

## Easy Operation

You will find your TX band very easy with the large icon on the LCD screen. Just push your desired VFO button to the change band and QSY!

## Multi-functional Full Duplex Advanced Data Communications Mobile Radio with Solid and Stable RF Power

50 Watts of Solid RF power on both VHF and UHF within a compact foot print. The huge and precisely designed 540 cc aluminum die-cast body made no cooling fan needed. Enjoy reliable high power full duplex, dual receive and real sophisticated operation!



## High-speed Band Scope

Push your desired VFO button to scan the band with High-speed Band Scope for rapidly checking band activity. You will, then, immediately be able to QSY to the pinpoint target frequency when you push the VFO button again after turning the VFO button to the exact frequency position.



Band Scope display - Dual band



Band Scope display - Dingle band

**High spec multi-purpose Global Positioning System - The Optional GPS antenna can be placed on the back side of the Display Control Head unit**

No need to worry cabling your GPS antenna at your cockpit! The optional FGPS-1 GPS Receiver and Antenna can be placed on the back of the Control Head unit. (Optional FGPS-2 External GPS Receiver and Antenna (requires CT-136 adapter and CT-133 base+cable) is also available for separate and external GPS antenna operation.) Your current position (heading direction/current speed/compass display), distance and direction to your destination by the auxiliary navigation function and various APRS® information utilizing full of the GPS functions will be appearing on the LCD screen. You can enjoy choosing your North-Up or Heading-Up display to support your vehicle GPS navigation system!



FGPS-1 on the back side of the Control Head unit

OR

CT-136 adapter + FGPS-2 External GPS Receiver and Antenna

CT-133 base+cable  
(\* CT-133 and CT-136 are not included in the FGPS-2 package)



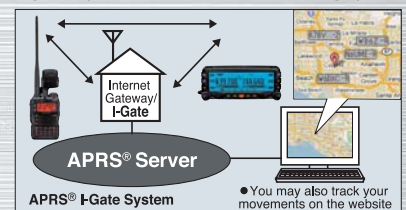
Current position and directions



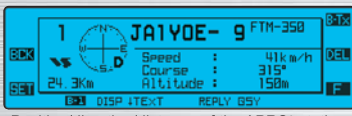
Navigation display

## Built-in 1200/9600bps TNC compliant with AX.25 protocol Compatible with APRS® (Automatic Packet Reporting System)

The built-in TNC compliant with AX.25 protocol lets you to enjoy the most advanced APRS® communications with the optional GPS Receiver and Antenna. (You can display other APRS® stations without optional GPS receiver and Antenna.) The SmartBeaconing™ system allows transmitting your position/ movement info intervals in accordance with your various parameters, such as your speed, direction, etc., not to transmit unnecessary APRS® data, applying the Decay Algorithm to adjust beacon transmission when not in motion in a traffic jam.



• You may also track your movements on the website



Position/direction/distance of the APRS® station



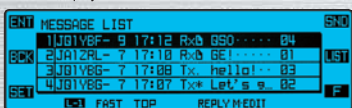
Station List – APRS® station



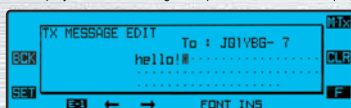
Weather Display – WX info from the APRS® Weather station



RX Display – APRS® message reception and automatic replay



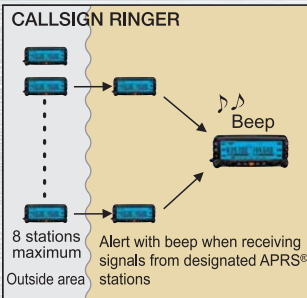
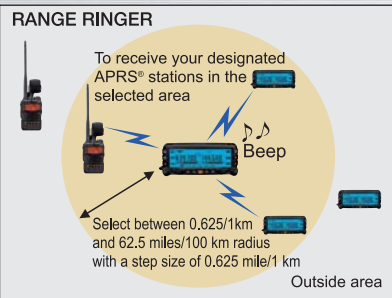
Message List – Messages from APRS® stations at a glance



TX Message Edit Display – For editing APRS® message (67 total characters maximum)

### APRS® Ringer function - Page with beep sound when receiving designated stations (8 stations maximum) in your designated area

The RANGE RINGER function will let you know with beep when receiving your designated APRS® stations are within your selected area (0.625/1 km – 62.5 miles/100 km radius with a step size of 0.625 mile/1 km). And the CALLSIGN RINGER function picks up your designated APRS® stations (up to 8 stations) to alert with when receiving their signals. Use the radio on your own way to enjoy with your friend Field, Mobile or Base APRS® stations!



### Wideband Receive for 500 kHz-999.990 MHz

Covers from 500 kHz to 999.990 MHz, continuous reception for short-wave, FM/AM broadcasts, analog TV station audio, aircraft, public service channels, etc. (cellular blocked)

L-band	R-band
144 MHz/2m Amateur Radio band *220 MHz/1.25m Amateur Radio band <small>*220 MHz 1W (USA Version only)</small>	144 MHz/2m Amateur Radio band *220 MHz/1.25m Amateur Radio band <small>*220 MHz 1W (USA Version only)</small>
430 MHz/70cm Amateur Radio band	430 MHz/70cm Amateur Radio band
0.5 MHz - 1.7 MHz (AM Broadcast band)	108 MHz - 250 MHz 300 MHz - 999.9900 MHz
76 MHz - 108 MHz (FM Broadcast band)	
108 MHz - 250 MHz 300 MHz - 999.9900 MHz	
Line-in (for MP3 Payer, etc./Stereo)	

### Dual Band AF Dual Monitor - Listen to AM or FM radio stations while monitoring two HAM frequency channels!

Yaesu's original AF Dual operation – The FTM-350R/E has a completely independent AM/FM broadcast receiver that allows you to monitor two desired amateur band frequencies while also receiving an AM or FM broadcast station. When a signal is received in the amateur band, the amateur band audio comes out automatically and mute the AM or FM broadcast station audio.



### Built-in dual speakers on the backside of Control Unit in addition to 1 speaker in the main body RF unit

Built-in dual speakers for each band independently make you clearly hear which band the radio is currently receiving signals. You can also enjoy FM broadcast in stereo, or "Line In" input permits playing your favorite stereo music from other devices.



### Optional Voice Guide Unit FVS-2 speaks your operating frequency and records received signals

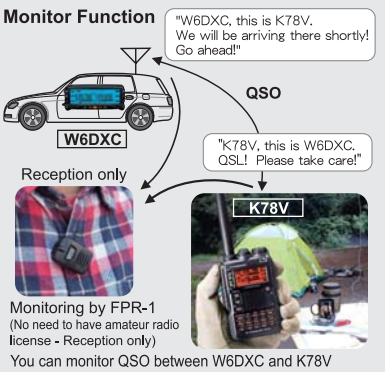
Optional Voice Guide Unit FVS-2 speaks your current operating frequency, band change and APRS® messages. You can record received signals up to 5 minutes, or use the last 30 seconds automatic recording function.



### A tiny keychain size optional FPR-1 Monitor Unit for group monitoring

Let others hear your transmission with optional FPR-1 Monitor Unit! Up to 2 sets of optional FPR-1 Monitor Unit can be mounted on the back side of Control Head unit. FPR-1 will be ready to go when placed on the back of Control Head unit, as it will be charged and synchronized to tune the frequency to receive. The very small (1.2"x1.8"x0.6"/30 x 45 x 15 mm, 0.8 oz/ 23 g) FPR-1 is ideal for outdoor events or during emergencies, etc.

- \* Optional Headset Charger Sleeve CAB-1 will be required when optional FPR-1 Monitor Unit is deployed. If you use 2 sets of optional FPR-1 simultaneously, then you will need 2 sets of optional CAB-1.
- \* Optional Bluetooth headset BH-1A (or BH-2A) uses the same charger sleeve as FPR-1, so that 2 sets of FPR-1 will not be deployed simultaneously if one of the sleeves is occupied by BH-1A (or BH-2A).
- \* The covering area may vary depending on transmit power of the mobile radio and other conditions.
- \* FPR-1 will run for up to about 8 hours when fully charged (Power saving mode – MAX).



### Bluetooth® Capabilities

The optional Bluetooth Unit (BU-1) provides hands free radio operation with optional Bluetooth headset BH-1A (stereo) or BH-2 (monaural). You can also enjoy VOX operation for total hands free operation! Headsets can be charged on the back side of the Control Head unit using optional Headset Charger Sleeve CAB-1. \* Bluetooth® is a registered trademark of Bluetooth® Special Interest Group (SIG), Inc. Vertex Standard Co., Ltd. is an Adopter Member of Bluetooth® SIG.

### For your easier, faster, convenient and advanced mobile operation .....

- Choose your favorite LCD backlight color
 

BLUE WHITE	MARINE BLUE	SKY BLUE	YELLOW GREEN
GREEN	ORANGE	AMBER	WHITE
- Timer function - Clock with event timer function to count up or down, etc.
 

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- Huge memory channel management capability
 

Independent 500 memory channels with memory name tag function (up to 8 characters) for each L and R band (in 1000 channels total) + 9 PMS (Programmable Band Limit Memory Scan) channels for each L and R band (18 channels in total) + 1 Rewritable preferred channel for each L and R band + 31 channels specially allocated for the Smart Search function. 16 digits x 9 DTMF memories are also available.
- Built-in Barometric Pressure Sensor The radio can monitor and display your altitude and pressure.
- The front panel Built-in Microphone activates PTT transmission
- MH-48A6JA/Conventional hand microphone with DTMF included
- Easier Menu setup
- 8-pin mini DIN 1200/9600bps data jack
- Cloning function to clone one transceiver to another



\*1 APRS® is a registered trademark of Bob Bruninga, WB4APR  
\*2 As of January, 2010 as a dual band mobile radio for amateur radio operation  
\*3 SmartBeaconing™ from HamHUD Nichetronics

## Specifications

<b>General</b>		Operating Temperature	-4°F to +140°F (-20°C to +60°C)	Circuit Type	Radio Single-Conversion Super heterodyne
Frequency Ranges	Radio 0.5-1.8 MHz (AM Radio) 76-108 MHz (FM Radio)	Case Size (WxHxD)	6.3" x 2.6" x 1.3" (157 x 66 x 33.5 mm) (Panel W/O knob & connectors)	Intermediate Frequencies	1st: 130 kHz FM Radio 1st: 50 kHz AM Radio
A / B Band RX	108-137 MHz (Air Band) 137-174 MHz (144 MHz HAM) 174-250 MHz (GR1 VHF TV) 300-420 MHz (GR2) 420-470 MHz (430 MHz HAM) 470-800 MHz (GR1 UHF TV) 800-1000 MHz (GR2 USA Cellular Blocked)	Weight	5.6" x 1.8" x 6.0" (140 x 46 x 150 mm) (Rear chassis W/O connectors)	Sensitivity	Radio Band 5 µV TYP for 10 dB SN (0.5-1.7 MHz, AM) 2 µV TYP for 12 dB SINAD (76-108 MHz, WFM) L & R Band 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) EXP 0.25 µV for 12 dB SINAD (174-222 MHz, WFM) 1 µV TYP for 12 dB SINAD (420-470 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) EXP 5 µV TYP for 12 dB SINAD (470-540 MHz, WFM) 5 µV TYP for 12 dB SINAD (540-800 MHz, WFM) 0.4 µV TYP for 12 dB SINAD (800-899.99 MHz, FM) 0.8 µV TYP for 12 dB SINAD (800-899.99 MHz, FM) USA Version Cellular Blocked
TX	144-146 (148) MHz (Ham Band) 222-225 MHz (Type USA) 430-440 (450) MHz (Ham Band)	Transmitter	RF Power Output 50 / 20 / 5 W Modulation Type Variable Reactance F1D, F2D, F3E Maximum Deviation ±5 kHz Spurious Emission At least 60 dB below Microphone Impedance 2 kΩ	Receiver	Circuit Type FM / AM Double-Conversion Super heterodyne Intermediate Frequencies 1st: 47.25 MHz (A Band) 2nd: 450 kHz (A Band) 1st: 44.85 MHz (B Band) 2nd: 450 kHz (B Band)
Channel Steps	5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100, 200 kHz	Receiver	Circuit Type WFM Triple-Conversion Super heterodyne 1st: 45.8 MHz (A Band) 2nd: 44.0 MHz (B Band) 1st: 10.7 MHz 3rd: 1 MHz (A Band) 3rd: 400 kHz (B Band)	Squelch Sensitivity	0.16 µV (144 / 430 MHz Band)
Frequency Stability	±5 ppm (14°F to +140°F [-10°C to +60°C])			Selectivity	NFM, AM 12 kHz / 30 kHz (-6 dB / -60 dB)
Repeater Shift	±1.6 / 5.0 / 7.6 MHz (430 MHz)			AF Output	8 W @ 4 Ω for 10 % THD (@ 13.8 V) BTL EXP SP 4 W @ 4 Ω for 10 % THD (@ 13.8 V) Normal EXP SP / CH
Emission Type	F1D, F2D, F3E,			AF Output Impedance	4-16 Ω
Antenna Impedance	50 Ω				
Supply Voltage	Nominal 13.8 V DC, Negative Ground Operating 11.7-15.8 V, Negative Ground				
Current Consumption	0.5 A (Receive) 10 A (TX, 144 MHz 50W) 10 A (TX, 430 MHz 50W)				

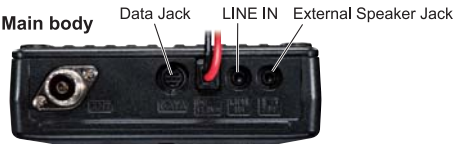
### Control Head



### FT-350R/E Main body



### FT-350R/E Main body (backside)



### Options and Accessories

**Monitor Unit**

**FPR-1**

Requires CAB-1 for charging

**Internal GPS Receiver/Antenna Unit**

**FGPS-1**

The optional GPS antenna can be conveniently mounted on the back of the Control Head.

**External GPS Antenna System**

**CT-136** External GPS adapter for FGPS-2

**CT-133** GPS Extension Cable + Base Adapter (for FGPS-2)

**FGPS-2** External GPS Antenna Unit (requires CT-136 and CT-133).

**For your Bluetooth® operation**

**BH-1A (Stereo Type)** Bluetooth® Headset with stereo earphone jack (requires BU-1)

**BH-2A (Monaural Type)** Bluetooth® Headset (requires BU-1)

**FEP-4** Earphone (Stereo) for BH-1A Bluetooth® Headset

**BU-1** Bluetooth Adapter Unit (Built-in Control head)

Requires Charger sleeve CAB-1 when BH-1A or BH-2A chargers

**Charger Sleeve**

**CAB-1**

• Charger Sleeve for BH-1A, BH-2A or FPR-1

**High-Power 8 W External Speaker**

**MLS-200-M10**

High-Power External Speaker

**Hand Microphone**

**MH-48A6JA** • DTMF Microphone (Supplied)

**MH-42C6J** • Standard Microphone (Optional)

**Long Cables**

- **CT-132** Separation Cable (20 ft / 6 m)
- **CT-135** Clone Cable
- **CT-140** Packet Cable (DIN8 to Din6+D-sub9)
- **CT-141** Packet Cable (DIN8 to Din6)
- **CT-142** Packet Cable (DIN8 to D-sub9)

**Voice Guide Unit**

**FVS-2**

**Supplied Accessories**

- DC Power Cable w/Fuse
- DTMF Microphone MH-48A6JA
- Mounting Bracket for Front Panel (Suction Cup Type)
- 10 ft (3 m) Control Cable
- Speaker Cable
- Mounting Bracket
- Spare Fuse x2
- Operating Manual
- Warranty Card

About this brochure: we have made this brochure as comprehensive and factual as possible. We reserve the right, however, to make changes at any time in equipment, optional accessories, specifications, model numbers, and availability. Precise frequency range may be different in some countries. Some accessories shown herein may not be available in some countries. Some information may have been updated since the time of printing; please check with your Authorized Yaesu Dealer for complete details.

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