

144/(220)* / 430 MHz 50 W FM Dual Band Transceiver

FTM-350AR/AE*

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



Actual Size

The Premium Yaesu FTM-350R/E FM dual band mobile radio has been updated. Yaesu announces the new FTM-350AR/AE!

The FTM-350AR/AE provides improved versatility with new multi-display screen capability. The APRS® communications have been upgraded! The APRS® functions have been refined. The newly designed front panel, mounting bracket will make your mobile ham life more convenient and comfortable! Separate Front panel (with 3 m cable) and Rugged Aluminum Die-Cast Chassis

Large LCD display for comfortable viewing night and day. (5.2" x 1.6") (130 mm x 40 mm) dot matrix (264 x 64 dots) Choose your favorite LCD display from 8 vibrant color options

Huge memory channel management capability!
500 Independent Memory channels
+ 9 Programmable Band Limit Memory Scan channels
+ 1 Rewritable Preferred channel for each Land R Band

The Display Control Head is designed for easy separation from the main RF power unit and is built of tough die-cast aluminum: 10 ft control cable included (Optional 20 ft control cable available)

Dual Band AF Monitor for listening to FM/AM broadcasts while monitoring the ham bands as well

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)

3 Speaker System (Includes Built-in Dual Speakers on the rear of the Control Head for FM Broadcasts in Stereo!)

NEW

Compatible with the APRS®, and SmartBeaconing™ worldwide standard data-communications system, Includes NAVI function for mobile stations, external GPS antenna connection, and WAYPOINT output

One-touch Vacuum-Cup, Front Panel Mounting Bracket may be adjusted to the most appropriate viewing angle when installed in your vehicle

NEW

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

 **YAESU**

APRS® Standard Functions are built in!

Now the New FTM-350AR/AE advanced high-end FM dual band mobile radio with many new features and improvements

The new versatility of the large dot matrix multi-display screen will bring greater enjoyment to your ham radio operating!



144/(220)*430 MHz
50 W FM Dual Band Transceiver
FTM-350AR/AE*

* 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!

The Bands and Memory Channels, Band Scope, Function Icons, Timer Functions, etc., etc....., all of your needed 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 easier operation and positive control. The detachable front panel, with microphone and speakers, provides full separation capability. The front panel may be placed in the desired location with the angular adjustable, vacuum-cup mounting system.



■ **SET MENU:** Easier set up.

■ **Easy Operation**

You will find your TX band at a glance with the large icons on the LCD screen. Just push the desired VFO button to change the band and QSY!



■ **Choose your favorite LCD backlight color. Adjust the contrast and the brightness. Coordinate eight screen colors for comfortable mobile operation.**



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 really sophisticated operation!



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

You need not worry about cabling the GPS antenna in your cockpit! The optional FGPS-1 GPS Receiver and Antenna can be placed on the back of the Control Head unit. Or, the Optional FGPS-2 External GPS Receiver and Antenna, with the CT-136 adapter and CT-133 base & cable, are available for separate external GPS antenna operation.) Your current position (With heading direction, current speed, and compass display), the distance and direction to your destination (determined by the auxiliary navigation function), the various APRS® messages, and the GPS functions and data, will be displayed on the LCD screen. You can choose North-Up or Heading-Up display to support the vehicle GPS navigation system!



FGPS-1 on the backside of the Control Head unit



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



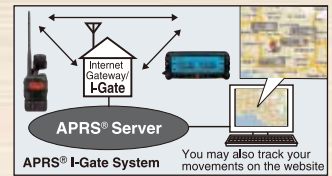
Current position and directions



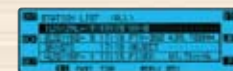
Navigation display

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

The built-in TNC is compliant with AX.25 protocol and lets you enjoy the most advanced APRS® communications with the optional GPS Receiver and Antenna. (Received APRS® stations may be displayed without the optional GPS receiver and Antenna.) The SmartBeaconing™ system allows transmitting your position/ movement information at automatic intervals, adjusted in accordance with your preset speed and direction parameters. Unnecessary APRS® data beacons are reduced by applying a Decay Algorithm to adjust beacon transmissions when your vehicle is not in motion or is slowed in a traffic jam.



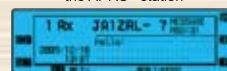
Position/direction/distance of the APRS® station



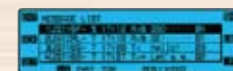
Station List - APRS® station



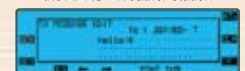
Weather Display - WX info from the APRS® Weather station



RX Display - APRS® message reception and automatic replay



Message List - Messages from APRS® stations at a glance

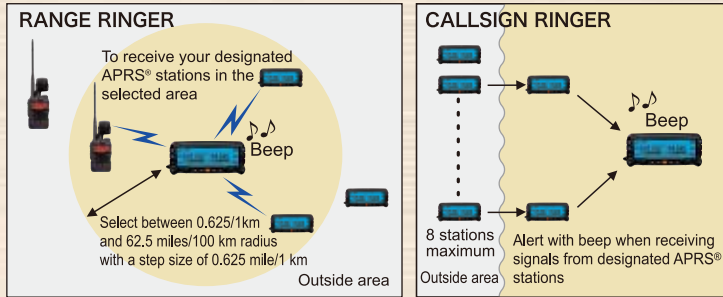


TX Message Edit Display - For editing APRS® message (67 total characters maximum)

NEW

Function settings have been augmented, and APRS® Operations updated!

The RANGE RINGER function will let you know with a beep when receiving designated APRS® stations that are within a selected radius (0.625/1 km -62.5 miles/100 km radius, with a step size of 0.625 mile/1 km). The CALLSIGN RINGER function will alert you when any of up to 8 designated APRS® stations are received. Notice the following Upgraded APRS® functionality.



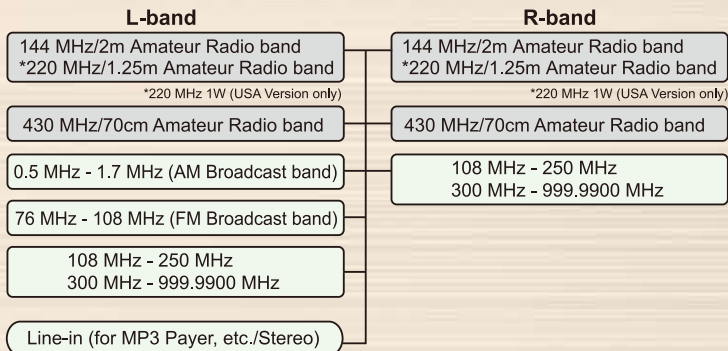
Upgraded APRS® functionality

- NAVI function shows direction to a moving APRS® station
- WAY POINT output connection
- External GPS equipment connection capability
- APRS® Beacon information is shown with additional detail
- Pop-UP screen helps for easier operation
- Improved TX message edit screen
- APRS® Pop-UP screen functions are expanded
- APRS® Ringer settings are expanded
- Additional Voice Alert functions
- Assign an APRS® function to a Programmable key on the DTMF microphone
- APRS® will operate in the background on a single band

Huge 1038 channel total memory management capability, and wide band receive for both the right and left bands

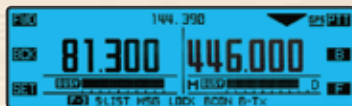
■ Covers from 500 kHz to 999.990 MHz, continuous reception for short-wave, FM/AM broadcasts, analog TV station audio, aircraft, public service channels, etc. (cellular blocked)

■ 500 independent memory channels for each, Right and Left band, 1000 channels of normal memory. You may designate up to 9 sets of 18 channels for the programmable memory scan function, a total memory capacity of 1038 channels. Enter 8-character Alpha Name tags for each memory channel.



Dual band AF Monitor - Listen to FM/AM broadcasts while monitoring the Ham bands.

Yaesu's original AF Dual operation - The FTM-350AR/AE 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 an amateur band signal is received, the audio is heard automatically, and the AM or FM broadcast is muted.



Three speakers (built-in dual speakers on the rear of the Control Head. Listen to FM broadcasts in stereo)

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



NEW

One-touch vacuum cup mounting bracket

The new MMB-98 Mounting bracket allows easy installation of the radio control display to your Dashboard by placing the vacuum mount in the desired location and pressing a lever. You may then adjust the display to the optimum viewing angle.

MMB-98



Versatile options for more enjoyable mobile operation

■ Optional Voice Guide Unit FVS-2 announces your current operating frequency, band change and APRS® messages. You can record up to 5 minutes of received signals, or continuously record the last 30 seconds of received audio.

FVS-2



■ The optional Bluetooth Unit (BU-1) provides hands free radio operation when used with the optional Bluetooth headset BH-1A (stereo) or BH-2A (monaural). You can also use the VOX function for total hands free operation! Headsets can be charged on the backside of the Control Head unit, using the optional Headset Charger Sleeve CAB-1.

Bluetooth® is a registered Trademark of Bluetooth Special Group (SIG), Inc. Vertex Standard Co., Ltd. is an Adopter Member of Bluetooth® SIG.

■ Let others hear your transmissions with the optional FPR-1 Monitor Unit! One or two optional FPR-1 Monitor Units can be mounted on the backside of the Control Head unit. When docked to the Control Head, the FPR-1 will be charged and synchronized with the UHF frequency. It will be ready to go and receive your UHF transmissions. The very small (1.2" x 1.8" x 0.6" / 30 x 45 x 15 mm, 0.8 oz / 23 g) FPR-1 is ideal for outdoor events or during emergencies, etc.

FPR-1

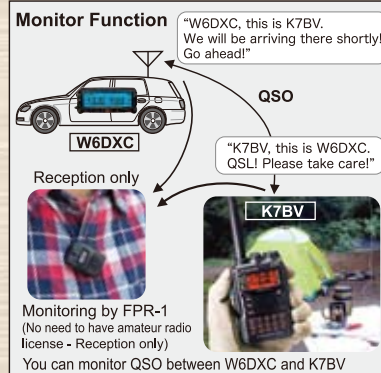


*Optional Headset Charger Sleeve CAB-1 will be required when optional FPR-1 Monitor Unit is deployed. If you use 2 sets of optional FPR-1 simultaneously, then you will need 2 sets of optional CAB-1.

*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 or 10 hours when fully charged (Power saving mode - MAX)



Operation Example - charging BH-1A (left) and FPR-1 (right) using 2 CAB-1s on the back of the Control Head unit.

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

■ Timer function - Clock and event timer with count up or down, functions etc.



■ Built-in Barometric Pressure Sensor can monitor and display your atmospheric pressure.



■ The front panel Built-in Microphone activates on PTT transmission

■ 8-pin mini DIN 1200/9600bps data jack

■ Cloning function to clone one transceiver to another

■ "Tone Squelch" and "Pager function"

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* SmartBeaconing TM from HamHUD Nichetronix

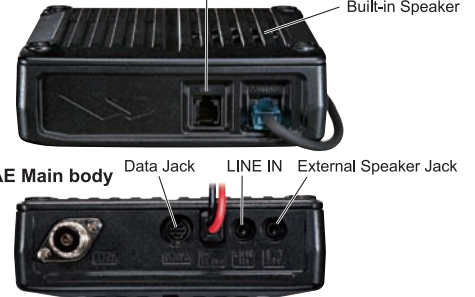
Specifications

General		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) 5.6" x 1.8" x 6.0" (140 x 46 x 150 mm) (Rear chassis W/O 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	4.6 lbs (2.1 kg)	Sensitivity Radio Band	5 μ V TYP for 10 dB SN (0.5-1.7 MHz, AM) 2 μ V TYP for 12 dB SINAD (76-108 MHz, WFM) L & R Band 0.8 μ V TYP for 10 dB SN (108-137 MHz, AM) 0.2 μ V for 12 dB SINAD (137-140 MHz, FM) 0.2 μ V for 12 dB SINAD (140-150 MHz, FM) EXP 0.25 μ V for 12 dB SINAD (150-174 MHz, FM) 1 μ V TYP for 12 dB SINAD (174-222 MHz, WFM) 0.8 μ V for 12 dB SINAD (300-336 MHz, AM) 0.25 μ V TYP for 12 dB SINAD (336-420 MHz, FM) 0.2 μ V for 12 dB SINAD (420-470 MHz, FM) EXP 5 μ V TYP for 12 dB SINAD (470-540 MHz, WFM) 0.2 μ V for 12 dB SINAD (540-800 MHz, WFM) 0.4 μ V TYP for 12 dB SINAD (800-899.99 MHz, FM) 0.8 μ V TYP for 12 dB SINAD (900-999.99 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	50 / 20 / 5 W Variable Reactance F1D, F2D, F3E	Squelch Sensitivity	0.16 μ V (144 / 430 MHz Band)
Channel Steps	5, 6.25, 8.33, (9)*, 10, 12.5, 15, 20, 25, 50, 100, 200 kHz *AM Radio Only	Modulation Type	\pm 5 kHz	Selectivity	NFM, AM 12 kHz / 30 kHz (-6 dB / -60 dB)
Frequency Stability	\pm 5 ppm (14° F to +140° F [-10° C to +60° C])	Maximum Deviation	At least 60 dB below	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
Repeater Shift	\pm 600 kHz (144 MHz) \pm 1.6 / 5.0 / 7.6 MHz (430 MHz)	Spurious Emission	2 k Ω	AF Output Impedance	4-16 Ω
Emission Type	F1D, F2D, F3E,	Microphone Impedance			
Antenna Impedance	50 Ω	Receiver	FM / AM Double-Conversion Super heterodyne		
Supply Voltage	Nominal 13.8 V DC, Negative Ground Operating 11.7-15.8 V, Negative Ground	Circuit Type	WFM		
Current Consumption	0.5 A (Receive) 10 A (TX, 144 MHz 50W) 10 A (TX, 430 MHz 50W)	Intermediate Frequencies	1st: 47.25 MHz (A Band) 2nd: 450 kHz (A Band) 1st: 44.85 MHz (B Band) 2nd: 450 kHz (B Band)		
			Triple-Conversion Super heterodyne 1st: 45.8 MHz (A Band) 1st: 44.0 MHz (B Band) 2nd: 10.7MHz 3rd: 1 MHz (A Band) 3rd: 400 kHz (B Band)		

Control Head



FT-350AR/AE Main body



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

Supplied Accessories

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

Charger Sleeve

CAB-1

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

Hand Microphone

MH-48A6JA • DTMF Microphone (Supplied)

MH-42C6J • Standard Microphone (Optional)

Mounting Bracket

MMB-98

Vacuum cup mounting bracket for FTM-350AR/AE, FTM-350R/E (FTM-350AR/AE supplied)

High-Power 8 W External Speaker

MLS-200-M10

High-Power External Speaker

Optional 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)

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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