

144/430 MHz DUAL BAND FM TRANSCEIVER

# FT-7800R/E

E for European Version

Get "Back to Basics" with YAESU's New FM Dual Band Mobile  
One-Touch Operation / Wide Receiver Coverage Included

**High Power Output**  
(50 W VHF/40 W UHF)

**Wide Receiver Coverage**  
including AM Aircraft Reception,  
NOAA Weather Alert Broadcasting\* \*USA Version

**Five One-Touch "Hyper Memory"**  
Transceiver Configuration Keys

**Over 1000 Memory Channels**  
with Alpha-Numeric Labels,  
Twenty Memory Groups

**WiRES™ Internet Linking**  
Compatibility

**144/430 MHz**  
**DUAL BAND**



ACTUAL SIZE  
\*Simulated LCD display

**DUAL BAND**

**FT-7800R**  
144/430 MHz DUAL BAND  
FM TRANSCEIVER

 **YAESU**  
Choice of the World's top DX'ers™

**OUTSTANDING, NO-NONSENSE DUAL-BAND PERFORMANCE**

**One-Touch Hyper Memories**

Five front panel keys allow complete transceiver configuration status to be stored for convenient one-touch recall. So you can set up favorite frequencies in each operating band, including the receive-only bands, then recall them with a single touch of a button!



**High Power Output**

Boasting a big 50 Watts of power output on 144 MHz, and 40 Watts on 430 MHz, the FT-7800R/E also includes provision for three lower power levels, so you never have to use more power than you really need. The power level is stored in regular and Hyper Memory registers, too!



Rugged Design with Cooling Fan

**Leading-Edge Tone Control Systems**

Full-featured CTCSS (50 tones) and DCS (104 codes) Encode/Decode systems are built into every FT-7800R/E, to ensure compatibility with modern repeater systems. And Yaesu's exclusive ARTS™ Auto-Range Transponder System uses DCS signaling to confirm when two stations are within communications range ideal for emergency communications work!

**WiRES™ Internet Linking Compatibility**

The FT-7800R/E's DTMF signaling capability includes provision for easy access to Yaesu's WiRES™ (Wide-coverage Internet Repeater Enhancement System) Internet linking nodes, as well as other linking systems that require a DTMF string for access.



**1200/9600 bps Packet Jack**

The rear panel of the FT-7800R/E includes an industry-standard Packet Interface Jack, for plug-and-play compatibility with most TNCs configured for interconnection to this standard mini-DIN jack.

**VERSATILE RECEIVER FEATURES**

**Wide Receiver Coverage**

The FT-7800R/E provides receiver coverage from 108 to 520 MHz, and 700 to 999.99 MHz (cellular blocked), so you have available a wide range of monitoring excitement, including AM Aircraft, Public Safety, Government, Business, and, of course, Amateur communications. The synthesizer steps appropriate for the operating band are automatically selected, too!

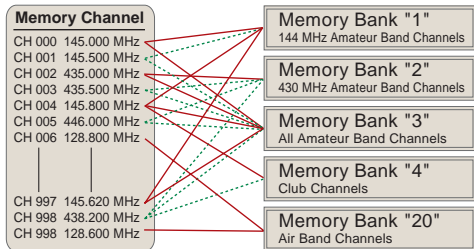
**NOAA Weather Alert (U.S. Version Only)**

A special memory bank on the FT-7800R/E allows instant recall of the ten NOAA Weather frequencies. What's more, you can enable a special "Severe Weather Alert" feature that will sound an alarm when a NOAA station transmits the special alert tone during a severe weather alert broadcast.

**YAESU LEADS THE WAY IN OPERATING CONVENIENCE**

**Large, Easy-to-Read Liquid Crystal Display**  
Affording easy viewing from a wide variety of viewing angles, the LCD of the FT-7800R/E features Yaesu's renowned Omni-Glow™ display illumination with four illumination levels available for different operating environments. The front panel's keys are also illuminated, for ease of operation at night.

**1000 Memory Channels with 20 Memory Groups**  
The FT-7800R/E's incredible memory channel capacity includes registers for over 1000 channels, each capable of storing a 6-character Alpha-Numeric label. And the memories may be stored in any of the 20 available memory groups; a particular memory channel may also be stored in multiple groups, if desired.



**Programmable Microphone Keys**

Four keys on the microphone may be custom-programmed by you, so you can have your favorite operating functions quickly available on the microphone.



**Direct Keypad Frequency Entry**

When using the MH-48ABJ DTMF Microphone (supplied in U.S. version), you may enter VFO frequencies or memory channel numbers directly from the microphone's keypad. On transmit, the MH-48ABJ serves as a full-featured 16-key DTMF pad, and the FT-7800R/E also provides a 16-channel DTMF Autodialer that may be used for Autopatch or Internet Linking access.

**Versatile Scanning Capability**

You can scan the band, a portion of the band, the memories, or two channels on a "priority" basis, so you'll always be able to keep up with the action! And with the Yaesu-exclusive Smart Search™ system, you can command the FT-7800R/E to sweep the band, searching for busy channels that will automatically be loaded into a special Smart Search memory bank.

**BUILT FOR MAXIMUM CONVENIENCE**

**Convenient Separation Kit for Remote Mounting (option)**

Using the optional YSK-7800 Separation Kit, which contains both cabling and a bracket for the remote front panel, you can mount the FT-7800R/E's front panel on the vehicle's dash board, then stow the radio's body under the seat or in some other convenient, out-of-the-way location. The cables are approximately 20 feet (6 m) in length.

**Automatic Power-Off (APO) Battery Saver**  
To prevent depletion of your vehicle's battery if you forget to turn off your radio, the FT-7800R/E includes an Automatic Power-Off (APO) feature, which will automatically turn the radio off after an operator-defined period of 1 - 12 hours.

**Time-Out Timer (TOT)**

The time-Out Timer prevents an accidentally "stuck microphone" condition from causing interference to other users. If the transmitter is keyed beyond the TOT cutoff time, the transmitter will be disengaged automatically. The TOT feature's cutoff interval is adjustable, in one-minute increments, up to a maximum of 30 minutes.

**And Much, Much More. . .**

- Front panel's [ACC] key may also be custom-programmed
- Cloning and computer programming capability (optional ADMS software required)
- Wide/ Narrow Deviation settings
- Automatic Repeater Shift (ARS)
- RF Squelch feature sets squelch level according to incoming signal strength

**SPECIFICATIONS**

**General**

Frequency Range: RX: 108.000 - 520.000 MHz  
700.000 - 999.990 MHz (Cellular Blocked)  
TX: 144.000 - 148.000 MHz or 144.000 - 146.000 MHz  
430.000 - 450.000 MHz or 430.000 - 440.000 MHz  
Channel Steps: 5/10/12.5/15/20/25/50 kHz  
Modes of Emission: F3E, F2D, F2A  
Antenna Impedance: 50 Ω, unbalanced (Antenna Duplexer built-in)  
Frequency Stability: ±5 ppm @ 14° F ~ +140° F (-10 °C ~ +60 °C)  
Operating Temperature Range: -4° F ~ +140° F (-20 °C ~ +60 °C)  
Supply Voltage: 13.8 VDC (±15%), negative ground  
Current Consumption (Approx.): RX: 0.5 A (Squelched)  
TX: 8.5 A

Case Size (W x H x D): 5.5" x 1.6" x 6.6" (140 x 41.5 x 168 mm)  
(w/o knobs & connectors)  
Weight (Approx.): 2.2 lb (1 kg)

**Transmitter**

Output Power: 50/20/10/5 W (144 MHz),  
40/20/10/5 W (430 MHz)  
Modulation Type: Variable Reactance  
Maximum Deviation: ±5 kHz, ±2.5 kHz  
Spurious Radiation: At least -60 dB below  
Modulation Distortion: Less than 3%  
Microphone Impedance: 2 kΩ  
DATA Jack Impedance: 10 kΩ

**Receiver**

Circuit Type: Double-conversion superheterodyne  
Intermediate Frequencies: 45.05 MHz/450 kHz  
Sensitivity : 0.8 μV (TYP) for 10 dB SN (108 - 137 MHz, AM)  
0.2 μV for 12 dB SINAD (137 - 150 MHz, FM)  
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 - 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)

Squelch Sensitivity: Better than 0.16 μV  
Selectivity (-6dB/-60dB): 12 kHz/30 kHz  
Maximum AF Output: 2 W @ 8 Ω for 10 % THD  
AF Output Impedance: 4-16 Ω

Specifications are subject to change without notice, and are guaranteed within the 144, and 430 MHz amateur bands only. Frequency ranges will vary according to transceiver version; check with your dealer.

**OPTIONS**

 <b>MH-42B6JS</b> Hand Microphone	 <b>MLS-100</b> High-Power External Speaker	 <b>YSK-7800</b> Separation Kit	 <b>MEK-2</b> Microphone Extension Kit (for use with Yaesu 8-pin Microphones)	 <b>MMB-60</b> Quick Release Mobile Mounting Bracket	 <b>CT-39A</b> Packet Interface Cable	 <b>FP-1023</b> (U.S.A. only) AC Power Supply (25 A)	 <b>FP-1030A</b> AC Power Supply (30 A)
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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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