

YAESU
The radio

C4FM FDMA

144/430 MHz DUAL BAND DIGITAL TRANSCEIVER

FT1DR/FT1DE



ACTUAL SIZE

<http://www.yaesu.com/>

Digital C4FM

Exciting new amateur digital transceiver

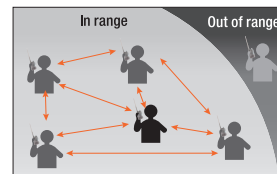
144/430 MHz DUAL BAND DIGITAL TRANSCEIVER

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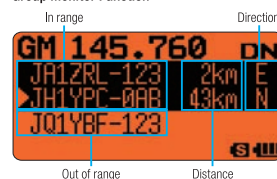


Digital Group Monitor (GM) Function

The digital GM function automatically checks whether members registered in a group are within communication range, and displays information such as distance and direction for each call sign on the screen. This convenient function makes it possible not only to see whether any friends are in communication range, but also to instantaneously determine the location and relationship between all members of the group. This function can also be used to send messages and data such as images between members of a group, permitting convenient and fun communication between friends when out for a drive or hike. Sent and received messages and images can be checked on the LOG List screen, with icons making them easy to distinguish.



Group Monitor Function



Group Monitor screen



Icon display
LOG list screen

Snapshot Function

When using the handy speaker microphone camera (optional MH-85A11U), press the shutter button to capture a snapshot, then press the image transmit button to easily transmit the image data. The snapshot image or received data is stored in a high capacity micro SD card that is installed in the radio. You can recall and send that image data from the SD card anytime. The image data size is 320 x 240 dots or 160 x 120 dots. Image quality can set from 3 types, and you can choose a format that is suitable for the image and purpose. This image data also retains a time record and the GPS location data of the snapshot. It is easy to view and edit the data file after taking the pictures by using a personal computer. A snapshot aids in navigating and returning to the pictured location, other various uses are possible.



Lens

Image transmission
button



Shutter button



BLACK

SILVER

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

FT1DR

FT1DE

American and Asian versions

European version

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

Many additional features

•Large-capacity 1266 ch memory and twenty-four 100ch memory banks •Fully illuminated keyboard that will permit easy operation in dark environments. •High resolution band-scope with ± 50 channels •Three types of Vibrate Alert function •High-Intensity White LED and illumination function •Internal Bar Antenna for AM broadcast band reception •Memory TAG up to 16 characters •Built-in CTCSS, DCS, new Pager function encode/decode enables Selective call features •DTMF Encode •DTMF Memory •Built-in highly accurate 24-hour Clock by GPS receiver •Built-in On/Off Timer, Automatic Power Off (APO) and Time-out Timer (TOT) •Versatile Scanning for the Monitoring Enthusiasts. •Built-in Temperature Sensor •GPS data transmission feature •External DC input •Useful Battery saving features •Password Lock function

FT1DR/FT1DE SPECIFICATIONS

General

Frequency Range 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 Band)
222 - 420 MHz (GEN1)
420 - 470 MHz (430 MHz HAM)
470 - 800 MHz (UHF Band)
800 - 999 MHz (GEN2, Cellular Blocked)
B (Sub) Band RX: 108 - 137 MHz (Air Band)
137 - 174 MHz (144 MHz HAM)
174 - 222 MHz (VHF Band)
222 - 420 MHz (GEN1)
420 - 470 MHz (430 MHz HAM)
470 - 580 MHz (UHF Band)
TX: 144 - 146 MHz or 144 - 148 MHz
430 - 440 MHz or 430 - 450 MHz
Channel Steps: 5, 6.25, 8.33, 9, 10, 12.5, 15, 20, 25, 50, 100 kHz
(8.33 kHz : only for Air band, 9 kHz : only for AM Radio)
Frequency Stability: ± 2.5 ppm -4°F to $+140^{\circ}\text{F}$ (-20°C to $+60^{\circ}\text{C}$)
Emission Type: F1D, F2D, F3E, F7W
Supply Voltage: Nominal: 7.4 V DC, Negative Ground
Operating: 4 - 14 V, Negative Ground (EXT DC JACK)
11 - 16 V, Negative Ground (EXT DC JACK with E-DC-5B)
7.4 V DC (Negative Ground)

Current Consumption: 150 mA (Mono band Receive)
220 mA (Dual band Receive)
100 mA (Mono band Receive, Standby)
150 mA (Dual band Receive, Standby)
45mA (Mono band Receive, Standby, Saver On "Save Ratio 1:5")
45mA (Dual band Receive, Standby, Saver On "Save Ratio 1:5")
+30mA (GPS On)
+65mA (Digital)
600 μA (Auto Power Off)
1.7 A (5 W TX, 144 MHz 7.4 V DC)
2.0 A (5 W TX, 430 MHz 7.4 V DC)

Operating Temperature: -4°F to $+140^{\circ}\text{F}$ (-20°C to $+60^{\circ}\text{C}$)
Case Size: 2.4"(W) $\times$ 3.7"(H) $\times$ 1.1"(D) (60 $\times$ 95 $\times$ 28 mm)
(w/o knob, antenna, & belt clip)
Weight (Approx.): 9.35 oz (265 g) with FNB-101LI & Antenna

Transmitter

RF Power Output: 5 W (@ 7.4 V or EXT DC)
Modulation Type: F1D, F2D, F3E: Variable Reactance modulation
F7W: 4 FSK (C4FM)
Spurious Emission: At least 60 dB below (@TX Power Hi, L3, L2)
At least 50 dB below (@TX Power L1)

Receiver

Circuit Type: AM, NFM: Double-Conversion Super-heterodyne
AM/FM Radio: Single-Conversion Super heterodyne
Intermediate Frequencies: 1st: 47.25MHz (AM, NFM A Band)
1st: 46.35MHz (AM, NFM B Band)
2nd: 450 kHz (AM, NFM)
1st: 130 kHz (AM/FM Radio)
Sensitivity: 3 μV for 10 dB SN (0.5 - 30 MHz, @AM)
0.35 μV TYP for 12 dB SINAD (30 - 54 MHz, @NFM)
1 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 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 μV TYP for 12 dB SINAD (540 - 800 MHz, @NFM)
1.5 μV TYP for 12 dB SINAD (800 - 999 MHz, @NFM, Cellular Blocked)
0.19 μV TYP for BER 1% (Digital Mode)
Selectivity: NFM, AM 12 kHz / 35 kHz (-6 dB / -60 dB)
AF Output: 200 mW (8 Ω for 10 % THD 7.4 V)
400 mW (8 Ω for 10 % THD 13.8 V)

*APRS® is a registered trademark of Bob Bruninga, WB4APR. SmartBeaconing™ from HamHUDD Nicetronics.

OPTIONS

 Speaker Microphone with Snapshot camera MH-85A11U	 Speaker / Microphone MH-34B4B	 Earpiece Microphone MH-37A4B	 VOX Headset VC-25	 Microphone Adapter CT-44	 Lithium Ion Battery Packs(7.4V 1100 mAh) FNB-101LI¹
 Lithium Ion Battery Packs(7.4V 1800 mAh) FNB-102LI	 Battery Charger ¹ SAD-11B, PA-48B/C/U²	 Rapid Charger CD-41	 3x"AA"Cell Battery Case FBA-39	 PC Connection Cable SCU-18¹	 Data Cable CT-170
 Data Cable (2.5 ϕ) CT-176	 Clone Cable CT-168	 DC Cable E-DC-6	 DC Cable w / Noise Filter E-DC-5B	 BNC-to-SMA Adapter CN-3	 Soft Case CSC-97

¹The same as the supplied accessory ²SAD-11B for USA version / PA-48B for 120VAC / PA-48C for 220-240 VAC / PA-48U for 230 VAC-UK Plug

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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