A Digital Mobile Transceiver for a New Age, with a Wide Variety of Mobile Operations Made Possible Through Advanced C4FM Technology

The full dot-matrix display provides magnificent image reproduction. The various screens and icons permit rapid access to operating parameters, menu setting, GPS, APRS location and message functions.

The white-LED backlight provides ample brightness and contrast, for improved visibility. The display screens guide you in using the advanced features and changing operating settings.

An easy-to-read graphical interface and user-friendly operation via a full dot-matrix display

FM friendly digital operation made possible by AMS (Automatic Mode Select)

You have the choice between of three digital modes using the C4FM protocol, as well as an analog FM mode. The digital modes make effective use of the 12.5 kHz bandwidth for high-quality voice communication, image transmission, messages and data exchange features to accommodate many new operating features.

AMS (Automatic Mode Select)

C4FM Digital products from Yaesu, feature integrated support for C4FM Digital modes, for analog communication, Internet communication, and more. Thanks to the combination of FM friendly design and the AMS function which automatically selects the best mode in any given situation, the user can enjoy optimal performance without worrying about digital vs. analog FM selection.

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 the audio signal and the accompanying data. The V/D Digital mode provides the ideal balance of error correction and audio 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 audio data permits high quality voice communication.

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 switches to Data FR mode when transmitting Snapshot pictures, and can be used to transmit large quantities of data at high speed.

Analog 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.
The FTM-100D supports WIRES-X, an Internet communication system for amateur radio

Connect the FTM-100D to a WIRES-X node station and enjoy worldwide long-distance communications on VHF/UHF bands via the Internet. WIRES-X is an Internet communication system for Amateur radio. In addition to high quality voice communication based on C4FM digital technology, WIRES-X incorporates user-friendly internet linking features, such as the node ID display and the room activity monitor display. Advanced features include Internet News Station and image data transmission. The FTM-100D may be connected to the optional HRI-200 WIRES-X Internet Linking Kit to easily establish a WIRES-X node station. The FTM-100D is ideally suited for use in a node station; also the display backlight can be turned off.

Support for Sophisticated C4FM Digital Functions

Digital GM Function (Digital Group Monitor Function)
The digital GM function automatically makes known when members registered to a GM are within communication range. The distance, direction and call sign are shown on the screen. The GM function facilitates the exchange of location data, messages and images between active GM group members.

Image Data Transmission
Snapshots received from other stations or images downloaded from the WIRES-X News Station are stored on a microSD card. Image data can be viewed and edited using a personal computer.

Smart Navigation Function
Real-time navigation function enables location checking at any time
Digital V/D Mode communicates the location data simultaneously with the digitized voice signal, allowing you to view the distance, direction, and call sign of the received station in real time while communicating. This makes it possible to confirm your position and the other station in situations while hiking and driving, where the positions are constantly changing, providing an easy way to meet or join routes.

A variety of features that ensures ease of use

Large front panel LED indicator
The FTM-100D has a large BUSY/TX indicator that shows the Transmit/Receive status and the communication mode at the same time. You can see the current communication mode at a glance.

50 W high power output
Yaesu’s unique transmitter circuit design supports the high performance operation. Powerful 50 W RF output (VHF/UHF Amateur bands) ensures stable long-distance communications.

Front panel separation
The front panel can be separated from the main body for custom installation. You can also join the front panel to the main unit.

High sensitivity GPS antenna
A high sensitivity 66 channel GPS antenna is provided as a standard feature.

GPS logging capability
With the built-in GPS antenna, your own location information can be recorded on a microSD card and plotted later by map software on a PC.

Powerful audio output
The built-in speaker supports 3 W of output and the optional MLS-200-M10 external speaker supports 8 W of audio output.

Frequency announcement and message recording/playback functions
The optional FVS-2 Voice Guide Unit is supported. The FVS-2 announces the operating frequency. You can record and play back a received message.

The optional SMB-201 Desktop Cooling Fan can be installed on the FTM-100D
The SMB-201 efficiently cools the heat generated from the FTM-100D when transmission continues for long periods of time. For instance: when the transceiver is used as a WIRES-X node station, or when operating packet communications.

*Simultaneous reception on A bands and B bands is not supported.
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.

<table>
<thead>
<tr>
<th>MH-48A6JA multi-functional microphone with a DTMF that provides the user with quick access to major functions (Supplied accessory)</th>
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<td><em>Functions to be assigned to [P1] through [P4] can be selected from among 16 functions.</em></td>
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### SPECIFICATIONS

**General**

- **Frequency Range:**
  - Band RX: 108 - 137 MHz (Air Band)
  - 137 - 174 MHz (144 MHz HAM)
  - 174 - 400 MHz (GEN1)
  - 400 - 480 MHz (430 MHz HAM)
  - 480 - 999.99 MHz (GEN2) Cellular Blocked (USA only)
- **Emission Type:** F1D, F2D, F3E, F7W
- **Frequency Stability:** ±2.5 ppm (8.33 kHz: Only for Air band)
- **Channel Steps:** 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz
- **Weight (Appro):** 2.43 lbs (1.1 kg) with Radio Unit, Front panel
- **Case Size:** 5.5” x 1.8” x 6.5” (140 x 45 x 164mm) with Front panel, w/o Fan, knob & connectors
- **Operating Temperature:** 12 A (50 W TX, 430 MHz)
  - 11 A (50 W TX, 144 MHz)
- **Current Consumption:** 0.5 A (Receive)
- **Operating Voltage:** 11.7 - 15.8 V DC, Negative Ground
- **Supply Voltage:** Nominal 13.8 V DC, Negative Ground
- **Emission Type:** F1D, F2D, F3E, F7W
- **Frequency Stability:** ±2.5 ppm
- **Channel Steps:** 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 50, 100 kHz
- **Weight (Appro):** 2.43 lbs (1.1 kg) with Radio Unit, Front panel

**Transmitter**

- **RF Power Output:** 50 W / 20 W / 5 W
- **Modulation Type:** F1D, F2D, F3E: Variable Reactance Modulation
- **F7W:** 4FSK (C4FM)
- **Spurious Emission:** At least 60 dB below
- **Selectivity:** AM, 12 kHz / 30 kHz (137 - 140 MHz, FM)
- **AF Output:** 3 W (6C), THD10 %, 13.8 V (Internal Speaker)
- **Power Consumption:** 0.4 μV TYP for 12 dB SINAD (800 - 900 MHz, FM)
- **AF Output:** 0.8 μV TYP for 12 dB SINAD (900 - 999.99 MHz, FM)
- **Cellular Blocked (USA only)**
- **Operating Temperature:** 140°F to 60°F (60°C to 137°C)
- **Temperature Coefficient:** ±2°F (−2°C to +60°C)

**Receiver**

- **Intermediate Frequencies:**
  - 1st: 47.25 MHz
  - 2nd: 450 kHz
- **Selectivity:** AM, 12 kHz / 30 kHz
- **AF Output:** 0.4 μV TYP for 12 dB SINAD (470 - 520 MHz, FM)
- **Selectivity:** AM, 12 kHz / 30 kHz (420 - 470 MHz, FM)
- **Selectivity:** AM, 12 kHz / 30 kHz (336 - 420 MHz, FM)
- **Selectivity:** AM, 12 kHz / 30 kHz (150 - 174 MHz, FM)
- **Selectivity:** AM, 12 kHz / 30 kHz (137 - 140 MHz, FM)
- **Selectivity:** AM, 12 kHz / 30 kHz (140 - 150 MHz, FM)
- **Selectivity:** AM, 12 kHz / 30 kHz (160 - 174 MHz, FM)

**OPTIONS**

- **DTMF Microphone MH-48A6JA**
- **Normal Microphone MH-42GU**
- **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-468/C/U/H**
- **AC Power Supply (25 A) FP-1030A**
- **AC Power Supply (23 A) FP-1023**
- **High-Power External Speaker MLS-200-M10**
- **Data Cable CT-163 MDIN10 pin to MDIN6 pin + Dsub9**
- **CT-164 MDIN0 pin to MDIN6 pin**
- **CT-165 MDIN10 pin to Dsub9**
- **CT-167 MDIN10 pin to Open**

*“B”: for 120 VAC, “C”: for 220-240 VAC, “U”: for 220-240 VAC w/UK plug, “T”: for 220-240 VAC w/Australian plug, “*2 American and Asian versions only” “*3 USA version only”

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