

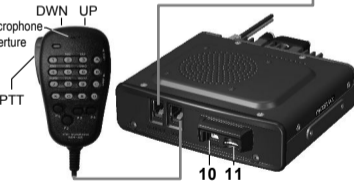
# FTM-400XDR/DE

Quick Guide

C4FM/FM

Volume knobs Dial knobs for frequency, memory channel and squelch setting

Transmit band; white characters Sub-band; gray characters Band A (digital/analog) Band B (analog)



- Panel key**
- Power switch / Lock key
  - DISP switch / SET mode key
  - Function key / MW key
  - GM operation key
  - Band A communication mode switch / WIRES-X key
  - VFO / memory mode switch-over key Memory edit key
  - SQL key (touch the key then adjust using the DIAL knob)
  - Mute key
  - Band scope key
  - DATA terminal
  - microSD memory card slot

## Input / change call sign or name

Enter a call sign or name when using the FTM-400XDR/DE for the first time after purchase, or after a factory reset is carried out.



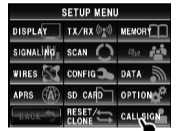
Touch the blinking [CALLSIGN] on the screen to begin inputting the call sign (the display will switch to the character input screen automatically if there are no operations for about 3 seconds).



After entering the call sign or name, by touching the characters on the screen, or turning and pressing the [DIAL] knob at the top right of the screen, touch [ENT] on the screen to confirm and enter the call sign.

The call sign or name entered can be changed any time.

Press the [DISP] key for one second or longer and then touch [CALLSIGN] in the SETUP MENU screen.



Touch [CHANGE] on the screen and follow the same process as the input procedure to change the call sign or name (moving the cursor to the left end using [←] and [→] and touching [DISP] will return the display to the previous screen without the change being reflected). Press the [DISP] key to return to the frequency screen.

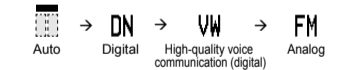
## Automatic mode operation using the AMS function

Digital communication between fellow C4FM digital amateur transceivers and also communication with FM amateur transceivers are possible.

Using the AMS (Automatic Mode Select) function, the transceiver can switch its communication mode automatically to match the received signal. This is very convenient because there is no need to pay attention to the communication mode of the partner. Turn on the AMS function during normal operation. When the AMS function is active, a bar will be displayed on top of the mode (Example: DN). In the AMS mode, transmission and reception is carried out using the normal DN mode. However, when transmitting after receiving in other modes, the mode last received will be used. To transmit using the normal DN mode, touch the [P] key and set the AMS function again. When operating using the digital fixed mode (DN/VW), try to be aware of the FM signal status and do not transmit when there is a possibility of interfering with the FM signals on the channel.

## Selecting the communication mode

Normally use the auto mode (AMS). Switch the Band A mode manually by pressing the [P] key.



- DN : C4FM FDMA Digital basic mode.
- VW : High-quality voice communication mode using the full 12.5 kHz bandwidth.
- DW : High-speed data communication mode that uses the full 12.5 kHz bandwidth for data communication. The mode automatically switches to this mode for picture communication.
- FM : Conventional FM mode that uses the 25 kHz FM mode.

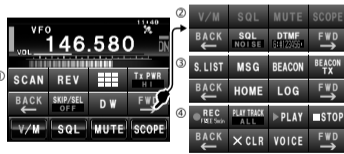
## Switching the operating band

Switch to the operating band by touching the frequency display on the screen, or pressing the [DIAL] knob on the right side of the operating band.



## Displaying the function keys

Press the [F] key on the frequency display screen. The function keys will be displayed under the operating band. Touch [BACK] or [FWD] on the screen to switch the display and select the desired function.



These keys can be substituted by the four operation keys normally displayed at the lower part of the frequency display screen (refer to the operating manual for details). \*④ is displayed on when the optional voice unit FVS-2 is installed. The function key will disappear and the display returns to the previous screen when [F] key is pressed again.

## Frequency operations

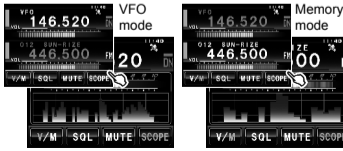
Press the [DIAL] knob or touch the frequency display on the screen on the operating side and the MHz digits will blink. The frequency can then be adjusted in 1 MHz steps for a few seconds. Press the [DIAL] knob for one second or longer to display only the MHz digits. The frequency can then be adjusted in 5 MHz steps for a few seconds.



Reception frequency bands of Bands A & B	RX COVERAGE settings	
	NORMAL(Default)	WIDE
108 to 137MHz (air band)	-	○
137 to 174MHz (144MHz band)	○	○
174 to 400MHz	-	○
400 to 480MHz (430MHz band)	○	○
480 to 999.99MHz	-	○

## Using the band scope

The band scope switches on or off each time [SCOPE] is touched on the screen. The display bandwidth of the band scope is either ±25 frequency steps (for wideband) or ±12 frequency steps (for narrowband).



## Saving to a memory channel

Tune in the frequency to be saved in the memory and press the [F] key for one second or longer on the frequency display screen.

An empty memory channel will be selected and displayed automatically.

To write the desired frequency to the selected memory channel number, press the [DIAL] knob at the top right of the screen or touch the screen directly to select the memory channel.

When the [F] key is pressed, memory writing will end and the memory channel and frequency will appear in the display.



## Assign a name to the memory

Touch [V/M] on the screen for one second or longer to display the memory list.



Touch the screen, or turn the [DIAL] knob at the top right of the screen to select the memory channel. After entering the name on the character input screen, press the [F] key for one second or longer, and touch [ENT] to return to the memory list. Press the [F] key again to return to the previous screen.

## Finding the call sign and position of a partner station

The call sign and position information of a partner station can be displayed when receiving a C4FM digital signal.

## Displaying the direction and distance of a partner station on the compass screen

Press the **DISP** key to display the compass screen. When the received signal contains position information, the "station name and time of receipt", and the "direction" and "distance" to the transmitter location will be displayed.



During transmissions, movements of the partner station or your own station will be updated in real time in the display.

## Other positions may be viewed using **YR**

Message sending position, picture taking position, APRS beacon position information

\*The display can be switched between "Heading Up" and "North Up" by touching the screen close to the compass center.

## Returning to the frequency display screen

Press the **DISP** key to return to the frequency display screen.

## Registering the departure point and returning to that position

### Registering the departure point

Press the **DISP** key to display the compass screen. Touch **MEMORY** on the screen to display your current location.



Touch **MEMORY** on the screen. Touch one of the blinking keys **▲**, **▶** or **▼** that you want to register. The current location will be registered in the touched key.

### Returning to the departure point

Press the **DISP** key to display the compass screen. Touch **▲**, **▶** or **▼** where the return point was registered.

The distance and a triangular arrow showing the direction from the current location to the registration point will be displayed.

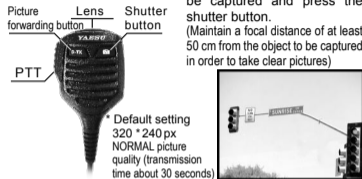


Upon arrival at the registered point, the triangular arrow will turn into a green aiming mark.

## Taking pictures with the microphone camera and sending and receiving pictures

### Taking snapshots with the optional camera attached to the speaker mike MH-85A11U

Point the lens at the object to be captured and press the shutter button. (Maintain a focal distance of at least 50 cm from the object to be captured in order to take clear pictures)



\* Default setting 320 \* 240 px  
NORMAL picture quality (transmission time about 30 seconds)

After appearing for 10 seconds, the picture taken will be saved on the micro-SD card in JPEG format. You can check and retake the picture as many times as you want.

### Sending pictures

Press the [D-TX] key on the microphone with the built-in camera to send the latest picture taken. Press [PTT] to stop the transmission (it may take a while for the transmission to stop).

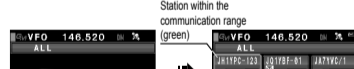
### Receiving pictures

When picture reception starts with the AMS function active, "DATA RX" will appear and then ">>>" representing the progress status will appear. The received picture will be shown for 10 seconds on the screen, after which the display returns to the previous screen. To view a received picture, press the **F** key followed by **LOG** on the screen. Touch **VIEW** to display the picture list and then select the desired picture from the list.

## Using the GM (Group Monitor) function

Group members within and outside the sphere of communication can be shown in different colors. Information such as the distance and position can be displayed.

Messages and pictures can also be sent and received. The member from which new messages are received is also displayed in "✉". Tune Band A to the GM operating frequency and press the **GM** key to display "ALL" and commence GM operation. The frequency cannot be changed when GM is active. To change the frequency, press the **GM** key to cancel GM operation. The GM function can also be used among friends only (refer to the GM operating manual for details).



Touch the partner station and press the **DISP** key to display the compass screen and position information of the partner station. Press the **DISP** key again to return to the screen in the figure on the right.

## When operating the sub-band with the GM function active



The GM function will be temporarily stopped and operation will be on Band B. Upon pressing the [DIAL] knob of Band A after the sub-band operation, the GM function will resume operation.

## Changing the transmit power

Touch the function key **TX PWR** to change the transmit power

	Tx PWR LO	Tx PWR MD	Tx PWR HI
FTM-400XDR/DE	5W	20W	50W

## Locking the dial and keys

Press the **LOCK** key and **LOCK** will appear temporarily on the display, indicating the keys and dial are locked. Press the **LOCK** key again and **UNLOCK** will appear temporarily on the display indicating the keys and dial are unlocked.

## When in doubt during operation set-up

To return to the frequency display during setting, press the **DISP** key for one second or longer, or press the microphone [PTT] while in the set-up menu. \*Touch [RESET/CLONE] in the set-up menu, and then run [1 FACTORY RESET] in the next screen to return to the default factory settings. The settings registered at a certain point in time under [2 PRESET] can be recalled using [3 RECALL PRESET].

## Displaying the "LOG" (MSG / PICT list)

Press the **F** key and touch **LOG** on the screen to display the message and picture list (the micro-SD card must be inserted). Touch **VIEW** to switch between the lists. The contents can be checked and new messages can be created, sent, replied to and forwarded.

## Sending and receiving messages

### Creating and sending new messages



### Replying to messages received

\*Show whether there is any ACK (acknowledgement) from the destination station in the transmission results when the address is specified.



### Checking messages received



### Forwarding messages received

