YAESU
The radio

C4FM/FM 144/430MHz
DUAL BAND DIGITAL TRANSCEIVER

FTM-200DR
FTM-200DE

Instruction Manual
(GM Edition)

Contents

What is the GM Function?

The GM (Group Monitor) function automatically monitors on the same frequency for any other stations with the GM function in operation, or stations operating in DN mode, within communication range. The GM function then displays the acquired direction and distance information for each detected call sign on the screen.

If the DG-ID number is other than "00", the GM function will check for partner stations set to the same DG-ID number, with the GM function turned ON, that are within communication range.

In addition to knowing who is in the service area, the APL (Automatic Position Locat ing) screen indicates the positions of the group members, centered on your own station (up to four are simultaneously displayed). The direction and progress of each station is displayed, and you can check each other's position, distance, and moving direction.

You can also use GM functions to send data such as messages and images with your friends.

> • When the GM function is activated, the operating band is automatically switched to the A band, and the communication mode is switched to the C4FM digital (DN) mode.
> • To use the GM function, all of the members must operate on the same frequency.
> • Note that when the receive DG-ID number of your transceiver is set to a DG-ID number other than "00", received signals that do not have the same DG-ID number may not be heard.

> Insert a commercially available micro-SD card into this unit to send and receive messages and images.
> **Usable microSD Memory Cards**
> This transceiver only supports the following capacity of microSD and microSDHD memory cards.
> • 2GB • 4GB • 8GB • 16GB • 32GB
>
> Not all microSD and microSDHC cards sold commercially are guaranteed to work with this product. In addition, microSDXC memory cards are not supported.
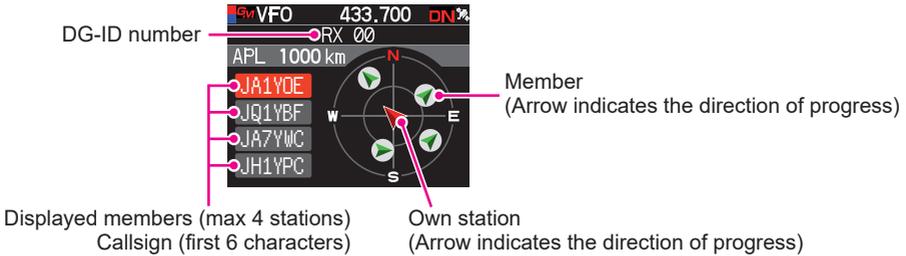
GM Operation

1. Tune to the frequency used by the group that you would like to communicate with.
   - If you only want to check your group location information, press and hold the [GM] key and set the send and receive DG-ID numbers to the same numbers except "00" at all the partner stations.
   - The frequency cannot be changed while the GM function is operating.
2. Press the [**GM**] key.
   - The callsign and signal strength of stations (up to 24) operating in the DN mode and those with their GM function in operation, that are within communications range, will be displayed.
   - Stations within the sphere of communications callsigns are displayed in white and are displayed in descending order of signal strength.
   - Each time you press the [**BAND GRP**] key, turn ON/OFF the functions displayed in order of signal strength (the display of signal strength is also turned OFF).
   - Stations outside the sphere of communications callsigns are displayed in gray.
   - You can communicate in DN mode of C4FM digital by pressing the PTT switch.

Selected member — JA1YOE-123

In range — JQ1YBF-OAB

Signal strength — JA7YWC-022

JH1YPC-FGH

JA1ZRL-CDE

Out of range — JA2YSO-78

Display the APL (Automatic Position Locating) screen

The positions of up to four group stations are displayed on the APL (Automatic Position Locating) screen, centered on your own station. The direction and progress of each station is displayed, and you can check each other's position, distance, and moving direction.

DG-ID number

Member
(Arrow indicates the direction of progress)

Displayed members (max 4 stations)
Callsign (first 6 characters)

Own station
(Arrow indicates the direction of progress)

1. Press the [**F MENU**] key, then press the **DIAL** knob while the GM function is active:
   - The last four stations received by the GM function are displayed on the APL screen. The displayed stations are listed on the left side of the screen with the first six characters of the callsign and the direction from your own station.
   - The direction of members will be displayed on the compass screen, centered on your own station. The traveling direction of your own and member stations is indicated on the compass screen.
   - The scale of the compass screen is automatically set according to the distance of the selected member station when the APL screen is displayed. Rotate the **DIAL** knob to change the scale.
   - The maximum distance at which a member's position can be displayed on the compass screen is a radius of 1,000 mi (or 1,000 km).

● **Disable the APL screen display**

1. Press the [**SQL BACK**] key.
   Return to the normal GM screen.

Confirm the location of a Group Member station in real time

The position of the selected member can be confirmed in real time on the compass screen.

The member's current position may be registered as the navigation destination.
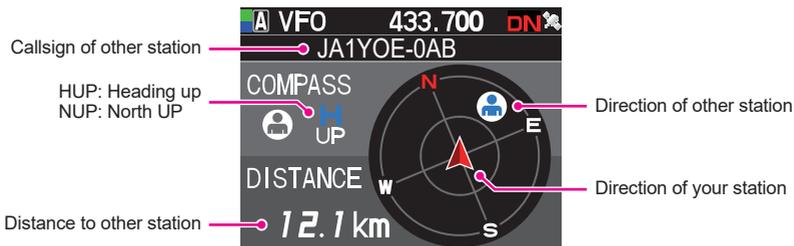
Display the position of the member station on the compass screen

1. Press the [**GM**] key.
2. Rotate the **DIAL** knob to select the station for which you want to display location information.

3. Press the **DIAL** knob or [**DISP**] key.
   The call sign and direction, distance, and heading of the selected partner station are displayed.

Callsign of other station — JA1YOE-0AB

HUP: Heading up
NUP: North UP

Distance to other station — 12.1 km

Direction of other station

Direction of your station

● **Switch the compass screen display method**
   Press and hold the [**F MENU**] key → [**DISPLAY**] → [**6 COMPASS**]. Press the **DIAL** knob then rotate the **DIAL** knob to select the screen display method (direction toward the top of the screen) from "**HEADING UP**" or "**NORTH UP**". The default setting is "**HEADING UP**".

   HEADING UP: The compass circle indicates the direction (N, S, E and W) you are heading. The arrow indicates the direction toward your partner station.
   NORTH UP: Always displays the north (N) on the top. The arrow indicates the direction you are heading.

● **Disable the Compass screen display**

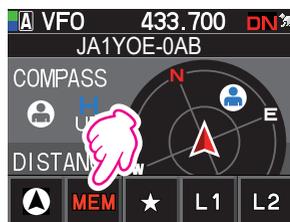1. Press the [**SQL BACK**] or [**DISP**] key.

   - You cannot update the location information of the partner stations outside of communication range.
   - If your station or your partner stations do not set the location information manually or capture it from the GPS satellite signals, the compass display is not available.
   - GPS location information may have an error of several hundred meters depending on the surrounding environment and so on.
   - This function is a simple function using GPS satellite data. Use this as a guide for the position of your own station or partner station.

Registering the Location Information of a Partner Station

You can register the current position of the selected member, and then navigate toward that station.

1. Press the [**GM**] key.
2. Rotate the **DIAL** knob to select the station for which you want to registering location information.
3. Press the **DIAL** knob or [**DISP**] key.
4. Press the [**F MENU**], then rotate the **DIAL** knob to select [**MEM**], then press the **DIAL** knob.
   [★], [**L1**] and [**L2**] will start blinking.
5. Rotate the **DIAL** knob to select the [★], [L1] or [L2], then press the **DIAL** knob.
6. Press the [**BACK**] key.
   • The Callsign and location information of your partner station is registered, and the Navigation starts.
   • To cancel the registration, rotate the **DIAL** knob to select [**MEM**], then press the **DIAL** knob.
   • The registered location information can be recalled later to allow navigation to that point.

Checking Received Messages and Images

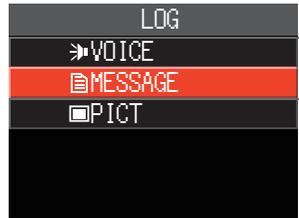Use the GM function to check the messages and images on the LOG list.

!	When using a GM function, a beep sounds when a new message or image is received, and the "LOG MSG" or "LOG PICT" list screen (see step 3 below) appears automatically.

1. Press the [**GM**] key.
2. Press the [**F MENU**] key, then rotate the **DIAL** knob to select [**LOG**], then press the **DIAL** knob.
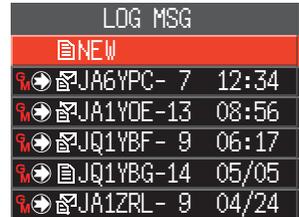
3. Rotate the **DIAL** knob to select [**MESSAGE**] or [**PICT**].
   VOICE: Audio recorded (Only playback of record-ed content is possible.)
   MESSAGE: Text Message
   PICT: Image
4. Press the **DIAL** knob.

   Select "**MESSAGE**" or "**PICT**" to display the LOG MSG list or LOG PICT list.
   The icons on the left side of the LOG list indicate the following:

⏚➡🖾	Message received (unread)
⏚➡🗎	Message received (read)
⏚⬅🗎	Message sent
⏚✖🗎	Message failed to send
⏚➡🖾	Image received (unread)
⏚➡🔳	Image received (read)
⏚⬅🔳	Image sent
⏚✖🔳	Image failed to send
📷🔳	Image taken with the camera built in the optional microphone

5. Rotate the **DIAL** knob to select to the message or image to be displayed, then press the **DIAL** knob.
   • The selected message or image will be displayed.
   • Press the [**F MENU**] key, then rotate the **DIAL** knob to select [**FWD**], then press the **DIAL** knob to forward the checked message or image data. Refer to "Forwarding the Checked Message or Image Data (page 12).

- Press the [**F menu**] key, then rotate the **DIAL** knob to select [**REPLY**], then press the **DIAL** knob to reply to the sender of the downloaded message or image data. Refer to "Replying to the Sender of the Checked Message or Image Data" (page 12).
- Press the [**F menu**] key, then rotate the **DIAL** knob to select [**DEL**], then press the **DIAL** knob to display "**DELETE?**". Rotate the **DIAL** knob to select [**OK**], then press the **DIAL** knob to delete the information.

6. Press the [**SQL back**] key, then press the [**DISP**] key.
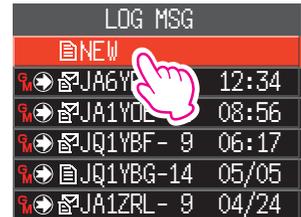   Returns to the previously viewed screen.

Sending massages or images

There are 4 ways to send messages or images using the GM function:

(1) Creating and sending a new message
(2) Replying to the sender of the checked message or image data
(3) Forwarding the checked message or image data
(4) Sending your snapshot images

Creating and sending a new message

Create and send a new message:

1. Press the [**GM**] key.
2. Press the [**F MENU**] key, then rotate the **DIAL** knob to select [**LOG**], then press the **DIAL** knob.

3. Rotate the **DIAL** knob to select [**MESSAGE**], then press the **DIAL** knob.
   Displays the LOG list.

4. Rotate the **DIAL** knob to select [**NEW**], then press the **DIAL** knob.

5. Press the [**F MENU**] key, then rotate the **DIAL** knob to select [**EDIT**], then press the **DIAL** knob.
   Displays the message entry screen.

6. Refer to "Text input screen" in the FTM-200DR/DE Operating Manual to enter a message.
   - Rotate the **DIAL** knob to select [**MTXT**], then press the **DIAL** knob to easily input a message using a standard form.
   - In the message input screen, one line is displayed for every 20 characters.
7. When input is complete, press and hold the **DIAL** knob.
   The entire message is displayed.
8. Press the [**F MENU**] key, then rotate the **DIAL** knob to select [**SEND**], then press the **DIAL** knob.
   - To cancel transmission, press the [**BACK**] key.
   - To save the entered message as a standard message, rotate the **DIAL** knob to select [**SAVE**], then press the **DIAL** knob (page 11).
   - To continue message entry, rotate the **DIAL** knob to select [**EDIT**], then press the **DIAL** knob.
9. Rotate the **DIAL** knob to select [**ALL**], then press the **DIAL** knob.
   - To send the message to a specific member that is within communication range, select the member callsign.
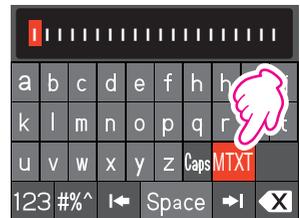
> ⚠️ • Messages cannot be sent to members outside of communication range.
> • The address designation "to:" is merely for displaying "ALL" or the call sign of a specific station. In other words, even if you specify a call sign for "to:" to send a message, other stations operating GM on the same frequency can also read the message if they are within the communication range.
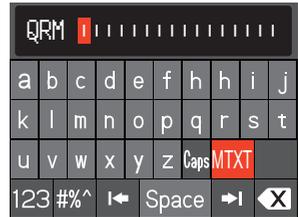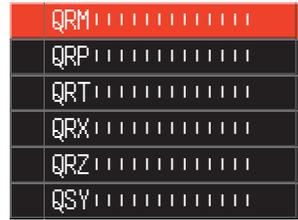
Using Standard Messages

The following 19 standard messages have been saved in the radio's memory as default to help save time and effort in text input.

QRM	Good job	wait for you
QRP	Good day	Pick me up
QRT	Good evening	Thank you
QRX	Good night	OK
QRZ	Send messages	urgent
QSY	Send pictures	-
Good morning	on my way	-

1. Follow steps 1 to 5 in "Creating and sending a new message" on page 9 to display the message entry screen.
2. Rotate the **DIAL** knob to select [**MTXT**], then press the **DIAL** knob.
   - Displays the standard message list.
   - For "1" to "10", you can register a message comprised of up to 80 letters

3. Rotate the **DIAL** to select the standard message you want to use.
4. Press the **DIAL** knob.

5. The entire message is displayed.
   To add letters to the message, input letters following steps 6 in "Creating and sending a new message" on page 9.
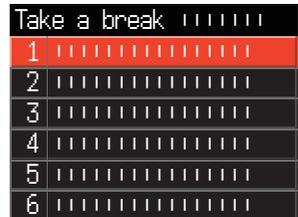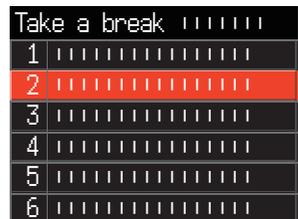
Registering a standard message

Up to 10 texts containing a maximum of 80 characters each can be registered as standard messages.

Registered texts can be selected and used like the 19 standard messages that have been saved as default.

1. Follow steps 1 to 7 in "Creating and sending a new message" on page 9 to display the message entry screen.
2. Press the [**F MENU**] key, then rotate the **DIAL** knob to select [**SAVE**], then press the **DIAL** knob.
   The standard message list is displayed.

3. Rotate the **DIAL** to select the number (1 to 10) where you want to register the standard message.
4. Press the **DIAL** knob.
   • Registers the text as a standard message and displays the message entry screen.
   • If you register a new message to a number where a message is already registered, the old message is overwritten.
   • To cancel registration, press the [**SQL BACK**] key.

Replying to the Sender of the Checked Message or Image Data

After checking the message or image data, you may reply to the sender.

1. Select the information (MESSAGE or PICT) to review according to steps 1 to 4 of "Checking Received Messages and Images" (page 7).
   Displays the selected data.
2. Press the [**F MENU**] key, then rotate the **DIAL** knob to select [**REPLY**], then press the **DIAL** knob.
   The call sign of the station that sent MESSAGE or PICT to the destination is set automatically.
3. Rotate the **DIAL** knob to select [**EDIT**], thenpress the **DIAL** knob.
   Displays the message entry screen.
4. Follow steps 1 to 7 in "Creating and sending a new message" on page 9 to display the message entry screen.
   Displays the entire message.
5. Press the [**F MENU**] key, then rotate the **DIAL** knob to select [**SEND**], then press the **DIAL** knob.
   Sends the reply message to the sender of the MESSAGE/PICT data.

Forwarding the Checked Message or Image Data

After reviewing the message or image data, you may forward the data to other members.

1. Select the information (MESSAGE or PICT) to check according to steps 1 to 4 of "Checking Received Messages and Images" (page 7).
   Displays the selected data.
2. Press the [**F MENU**] key, then rotate the **DIAL** knob to select [**FWD**], then press the **DIAL** knob.
3. Rotate the **DIAL** knob to select [**ALL**], the press the **DIAL** knob.
   Messages and images will be transferred.
   • To send the message to a specific member that is within communication range, touch the member callsign.

!	• Messages cannot be sent to members outside of communication range.
	• The address designation "to:" is merely for displaying "ALL" or the call sign of a specific station. In other words, even if you specify a call sign for "to:" to send a message, other stations operating GM on the same frequency can also read the message if they are within the communication range.

Sending Your Snapshot Images

Take still images using the optional speaker microphone with built-in snapshot camera (MH-85A11U) and send them to the group members.
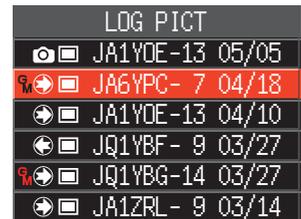
> ⚠️ For details on how to send images taken with the optional speaker microphone built-in snapshot camera (MH-85A11U), refer to "Taking Picture (Snapshot Function)" in FTM-200DR/DE Operating Manual.

1. Press the [**GM**] key.
   The GM function activates and displays stations using the GM mode on the same frequency, or stations operating in DN mode, within the communication range.

2. Press the [**F MENU**] key, then rotate the **DIAL** knob to select [**LOG**], then press the **DIAL** knob.

3. Rotate the **DIAL** knob to select [**PICT**], then press the **DIAL** knob.
   Displays the list of images saved on the microSD memory card.

4. Rotate the **DIAL** knob to select the image you want to send, then press the **DIAL** knob.

5. Press the [**F MENU**] key, the rotate the **DIAL** knob to select [**SEND**], the press the **DIAL** knob.

6. Rotate the **DIAL** knob to select [**ALL**], then press the **DIAL** knob.
   Sends the image.
   • To send the message to a specific member, touch the member that is within communication range.

> ⚠️ • Messages cannot be sent to members outside of communication range.
> • The address designation "to:" is merely for displaying "ALL" or the call sign of a specific station. In other words, even if you specify a call sign for "to:" to send a message, other stations operating GM on the same frequency can also read the message if they are within the communication range.

GM Set Mode List

Set mode item No. /item	Descriptions	Selectable Items (Bold letters: Default)
57 DP-ID LIST	Displays the DP-ID list screen.	-
58 RANGE RINGER	Set the bell sound when checking for stations within sphere of communications.	ON / **OFF**
59 RADIO ID	Specific transceiver ID is displayed.	- (cannot be edited)
60 LOG LIST	Display a list of recorded voices, received messages and images.	-

GM Set Mode Function List

● **57 DP-ID LIST**

Display of the DP-ID list screen

Explanation: Every C4FM digital transmit communication contains the individual ID information (Radio ID) of each transceiver. The DP-ID function uses this individual ID information.

When communicating with another transceiver, if the DP-IDs of the stations are registered in both transceivers, they can communicate even though the DG-ID numbers are different.

For details, refer to the FTM-200DR/DE operating Manual.

● **58 RANGE RINGER**

Explanation: Activates/deactivates the alert sound when detecting stations within communication range. Select "ON" to activate the alert sound when detecting any stations within communication range.

● **59 RADIO ID**

Display of RADIO ID

Explanation: In the GM function, each transceiver transmits its own ID along with the call sign.

RADIO ID is a 5-digit code consisting of alphanumeric characters that are written into the transceiver during factory production.

The RADIO ID cannot be edited.

● **60 LOG LIST**

Display a list of recorded voices, received messages and images.

Explanation: Displays a list of messages and images sent or received, as well as recorded audio.

            VOICE: Display the list of recorded audio.

            MESSAGE: Displays the list of messages sent and received.

            PICT: Displays the list of images sent and received.

Select a file with the **DIAL** knob and press the **DIAL** knob to play or display.

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