

YAESU
The radio

C4FM/FM 144/430MHz
DUAL BAND DIGITAL TRANSCEIVER

FT3DR
FT3DE

Instruction Manual (GM Edition)



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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 Locating) 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 micro-SD Memory Cards



This transceiver only supports the following capacity of micro-SD and micro-SDHC memory cards.

- 2GB • 4GB • 8GB • 16GB • 32GB

Not all micro-SD and micro-SDHC cards sold commercially are guaranteed to work with this product. In addition, micro-SDXC memory cards are not supported.

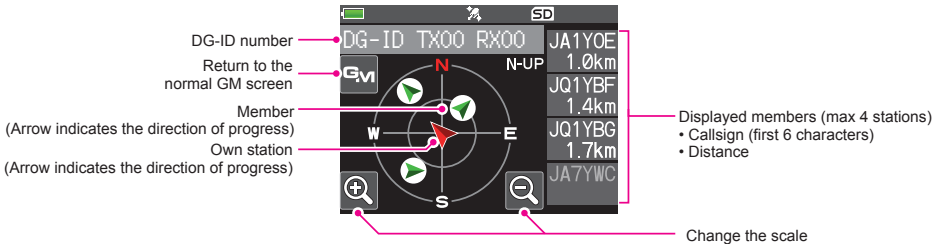
GM Operation

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, distance, and direction of all stations (up to 24) within the communication range operating with the GM function on the designated frequency in DN (V/D) mode are displayed.
 - The call sign of the member who can communicate is displayed in white characters, and the distance and direction of the member from your own station are displayed.
 - Stations outside the sphere of communications callsigns are displayed in grey.
 - You can communicate in DN mode of C4FM digital by pressing the PTT switch.



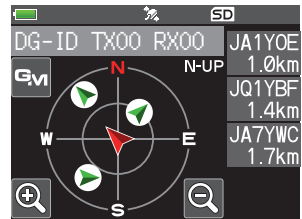
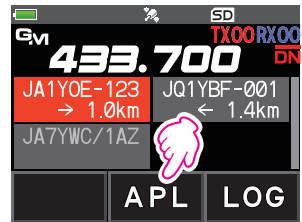
Display the APL (Automatic Position Locating) screen

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.



1. Touch [APL] 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 right side of the screen with the first six characters of the callsign and the distance from your own station.
- Display additional members by turning the **DIAL** knob.
- The direction and distance 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. Touch [⊕] or [⊖] 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 km.



● Disable the APL screen display

1. Touch [GM] on the display or press the [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

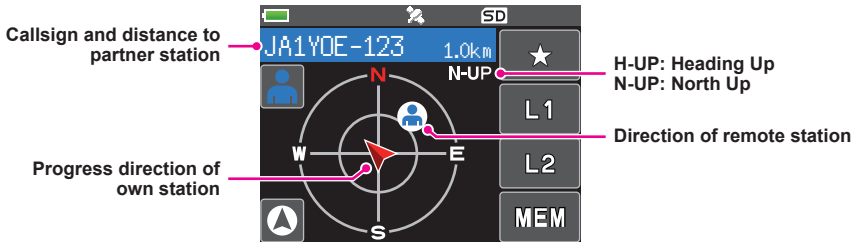
1. Press the **[GM]** key.
2. Touch the station for which you want to display location information.



3. Press the **[DISP]** key.

If the GPS information screen is displayed, touch the compass display to switch to the navigation display screen.

The call sign and direction, distance, and heading of the selected partner station are displayed.



● Switch the compass screen display method

Press and hold the **[DISP]** key → touch **[DISPLAY]** → **[2 COMPASS]**, 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 **[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.

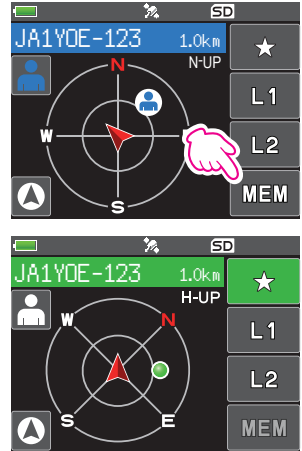


- GPS location information may have an error of several hundred meters depending on the surrounding environment and so on.
- This function is a simple function using GPS satellite data. Use this as a guide for the position of your own station or partner station.

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. Touch **[MEM]** in step 3 of “Display the position of the partner station on the compass screen” (page 5).
[★], **[L1]** and **[L2]** will start blinking.
2. Touch **[★]**, **[L1]** or **[L2]**.
 - The Callsign and location information of your partner station is registered, and the Navigation starts.
 - To cancel the registration, touch **[MEM]** again.
 - The registered location information can be recalled later to allow navigation to that point.



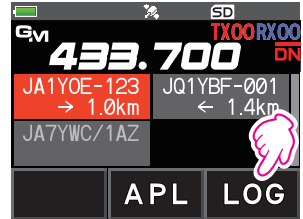
Checking Received Messages and Images

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. Touch **[LOG]**.

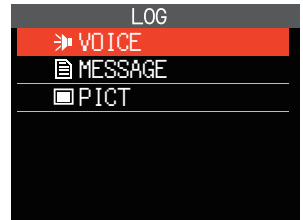


3. Touch **[MESSAGE]** or **[PICT]**.

VOICE: Audio recorded (Only playback of recorded content is possible.)

MESSAGE: Text Message

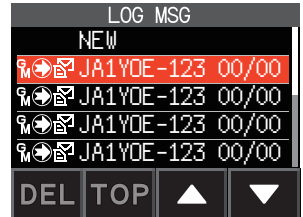
PICT: Image



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



4. Touch the message or image to be displayed.
 - The selected message or image will be displayed.
 - When the message list is displayed, press the **[DISP]** key to display the location information of the sending station on the compass screen.
 - When the picture is displayed, press the **[DISP]** key to display the location where the picture was taken on the compass screen.
 - Touch **[FWD]**, to forward the checked message or image data. Refer to “Forwarding

the Checked Message or Image Data” (page 12).

- Touch **[REPLY]**, 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).
 - Touch **[DEL]** to display “DELETE?”. Touch **[OK]**, then touch **[OK]** to delete the information.
5. Press the **[BACK]** key three times.
Returns to the previously viewed screen.

Sending messages or images

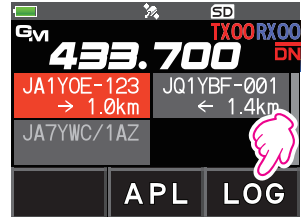
There are 4 ways to send messages or images using the GM function:

- (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. Touch **[LOG]**.



3. Touch **[MESSAGE]**.
Displays the LOG list.



4. Touch **[NEW]**.



5. Touch **[EDIT]**.
Displays the message entry screen.



6. Refer to “Text input screen” in the FT3DR/DE Operating Manual to enter a message.
 - Touch **[MTXT]** to easily input a message using a standard form.
 - In the message input screen, one line is displayed for every 20 characters. Touch **[←]**/**[→]** to move the cursor and display other lines.
7. When input is complete, press the **[BACK]** key.
The entire message is displayed.
8. Touch **[SEND]**.
 - To cancel transmission, touch **[BACK]**.
 - To save the entered message as a standard message, touch **[SAVE]** (page 11).
 - To continue message entry, touch **[EDIT]**.
9. Touch **[ALL]**.
 - “**SEND to ALL ?**” appears.
 - To send the message to a specific member that is within communication range, touch the member call sign.



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- 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.
-

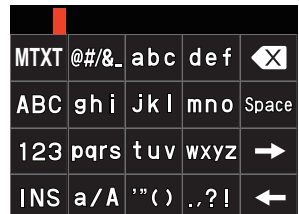
10. Touch **[OK]**.

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.

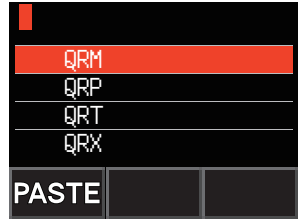
1	QRM	8	Good job	15	wait for you
2	QRP	9	Good day	16	Pick me up
3	QRT	10	Good evening	17	Thank you
4	QRX	11	Good night	18	OK
5	QRZ	12	Send messages	19	urgent
6	QSY	13	Send pictures	-	-
7	Good morning	14	on my way	-	-

1. Follow steps 1 to 5 in “Creating and sending a new message” on page 9 to display the message entry screen.
2. Touch **[MTXT]**.
 - Displays the standard message list.
 - For “M01” to “M10”, 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. Touch [**PASTE**].
 - The selected standard message is displayed in the message entry field.
5. Press the [**BACK**] key.
6. The entire message is displayed.

To add letters to the message, input letters following steps 5 to 6 in “Creating and sending a new message” on page 9.



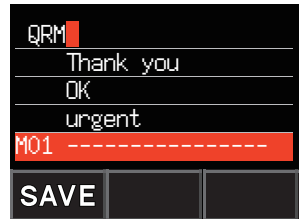
Registering a standard message

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

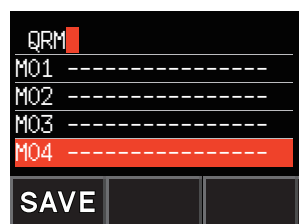
Registered texts can be selected and used like the 19 standard messages that have been saved as default.

1. Follow steps 1 to 6 in “Creating and sending a new message” on page 9 to display the message entry screen.
2. Touch [**SAVE**].

The standard message list is displayed.



3. Rotate the **DIAL** to select the number (M01 to M10) where you want to register the standard message.
4. Touch [**SAVE**].
 - 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 [**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. Touch **[REPLY]**.
The call sign of the station that sent MESSAGE or PICT to the destination is set automatically.
3. Touch **[EDIT]**.
Displays the message entry screen.
4. Follow steps 1 to 6 in “Creating and sending a new message” on page 9 to display the message entry screen.
5. Press the **[BACK]** key.
Displays the entire message.
6. Touch **[SEND]**.
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).
The selected data is displayed.
2. Touch **[FWD]**.
3. Touch **[ALL]**.
 - “**SEND to ALL ?**” appears.
 - 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.

4. Touch **[OK]**.
Messages and images will be transferred.

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.

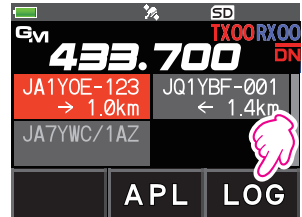


For details on how to send images taken with the optional speaker microphone built-in snapshot camera (MH-85A11U), refer to “Taking Picture (Snapshot Function)” in FT3DR/DE Operating Manual.

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. Touch **[LOG]**.



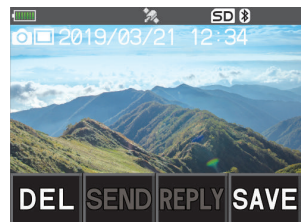
3. Touch **[PICT]**.

Displays the list of images saved on the micro-SD memory card



4. Touch the image you want to send.

Displays the selected image.



5. Touch **[SEND]**.

6. Touch **[ALL]**.

- “**SEND to ALL ?**” appears.
- 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.

7. Touch **[OK]**.

Sends the image.

GM Set Mode List

Set mode item No./item	Descriptions
1 DP-ID LIST	Displays the DP-ID list screen
2 RADIO ID CHECK	Transceiver specific number (ID) appears. (This cannot be edited)

GM Set Mode Function List

● 1 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 FT3DR/DE operating Manual.

● 2 RADIO ID CHECK

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.



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