YAESU
The radio

FT2DR

144/430 MHz
DIGITAL/ANALOG TRANSCEIVER
C4FM/FM

Instruction Manual

(GM Edition)

Thank you for purchasing this Yaesu product.
This instruction manual explains information related to the "GM Function".
For information on basic operation of the transceiver, please refer to the supplied
FT2DR Operating Manual.
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Table of Contents

The GM (Group Monitor) function is a convenient utility whereby frequently communicating stations may be registered into a group. When Group members operating in GM mode come within communication range, they automatically exchange their location and ID information and an alert may be sounded. Messages and images may be exchanged between GM members. In addition, location information received from other stations can be used for navigation.

Up to 16 groups can be created using the GM function.
Up to 24 members excluding your own station can be registered in each group.

Member lists and group lists can be exchanged with other members by saving the data to a microSD memory card.

Cautions
- The GM function does not operate in FM (analog) mode or on the B-band. Switch the A-Band communication mode to digital mode, before activating the GM function.
- To use the GM function, all of the group members must operate on the same frequency.

Inputting Text

The keyboard for inputting group names and member stations identification is displayed on the FT2DR LCD touch screen.
For details on how to enter letters, refer to "Entering Letters" on page 19 in the FT2DR Operating Manual.

Registering or Editing Groups or Group Members

Register/edit groups and group members for group operations using the GM function.

Registering Stations Within Communication Range as Group Members

Register a partner station within communication range as a group member.

1 Press [GM].

Displays the group list.
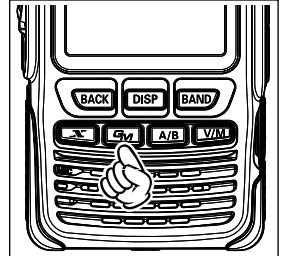
2 Touch **[ALL]**.

Displays stations operating in GM mode on the A-Band frequency within communication range.

3 Touch the station you want to register in a group.

The selected station blinks.

You can also select 2 or more stations simultaneously.

4 Touch **[GROUP]**.

Displays the group list.

4

5 Select the group where you want to register the station, then touch **[ENT]**.

Tips • The group name (GROUP 1) can be changed later.
   • A number is assigned to the group where you have registered members, and a new group (GROUP 02) appears where no member is registered yet.

The selected station is registered in the group and the station ID appears together with the other group members.

Registering Group Members Manually

After selecting the desired group, enter the call sign of the station you want to register and then add the station to the group.
Example: When adding a member to GROUP 01

1 Press 「Gм」.

Displays the group list.

2 Rotate the DIAL to select **[GROUP 01]**, then touch **[EDIT]**.

From the group list, select "01:GROUP 01" to register a new member.

3 Touch the empty member slot.

Touch the (----) part of the member display.

4 Touch **[EDIT]**.

Displays the member entry screen.

Tip • Alternatively, move the cursor to the empty member slot using the DIAL and then touch **[EDIT]** to display the member entry screen.

5 Input the member name.

Refer to "Entering Letters" on page 19 in the FT2DR Operating Manual to enter the member name using up to 10 letters.

5

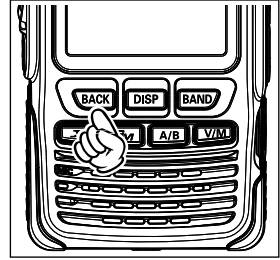**6** Press the [BACK] key to register the member name.

Registers the member name.

7 Repeat steps 3 to 6 to register other members.

After registration, press and hold the [BACK] key to return to the group select screen.

Press [GM] to disable the GM function and return to the frequency screen.

Creating a New Group

Create a new group and assign a name to the group.

1 Press [GM].

Displays the group list.

2 Use the DIAL to select the unused group (the group without a number on the left), then touch **[EDIT]**.

6

3 Touch the group name display.

4 Touch **[EDIT]**.

Displays the group name entry screen.

> **Tip** • Alternatively, move the cursor to the group name display using the DIAL and then touch **[EDIT]** to display the entry screen.

5 Input the group name.

Refer to "Entering Letters" on page 19 in the FT2DR Operating Manual to enter the group name using up to 16 letters.

6 Press the `BACK` key twice.

Registers the group name and displays the group list.

Changing the Group Name

Change the group name.

1 Press `GM`.

Displays the group list.

2 Rotate the DIAL to select the group name you want to change, then touch **[EDIT]**.

7

3 Touch the group name.

4 Touch **[EDIT]**.

Displays the group name edit screen.

 Tip • Alternatively, move the cursor to the group name using the DIAL and then touch **[EDIT]** to display the edit screen.
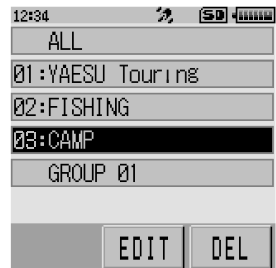
5 Change the group name.

Refer to "Entering Letters" on page 19 in the FT2DR Operating Manual to enter the group name using up to 16 letters.

6 Press the BACK key.

Registers the edited group name and displays the group list.
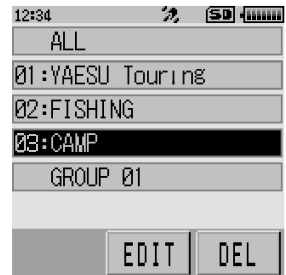
Tip

• After changing the name of the group (GROUP 01) where you have already registered members, a 2-digit number (01 to 16) appears on the left side of the group name, and the name of the next unused group is changed to GROUP 01.

8

Changing the Group Member Names (Call Signs)

Change the group member names (call signs).

1 Press 〔GM〕.

Displays the group list.

2 Rotate the DIAL to select the group where the member is registered, then touch **[EDIT]**.

Displays the member list.

3 Touch the group member name you want to edit.

4 Touch **[EDIT]**.

Displays the member name edit screen.

> Tip • Alternatively, move the cursor to the member name you want to edit using the DIAL and then touch **[EDIT]** to display the edit screen.

5 Edit the member name.

Refer to "Entering Letters" on page 19 in the FT2DR Operating Manual to enter the member name using up to 10 letters.

6 Press the 〔BACK〕 key.

Saves the edited member name and displays the member list.

Caution

• Even after changing the group member name (call sign), if the transceiver receives a signal with the same radio ID and the call sign is different from the registered one, the call sign is automatically updated.

Registering the Members Saved on the microSD Memory Card

Copy the group information saved on the microSD memory card using your partner transceiver to your transceiver, and register as your group information.

1 Remove the microSD memory card from your partner transceiver.

Caution ● Before removing the microSD memory card, turn off the transceiver.

2 Insert the microSD memory card into your transceiver.

3 Press and hold 🕙 for over one second.

The power turns on.

4 Press and hold the [DISP] key for over one second.

Switches to Set mode.
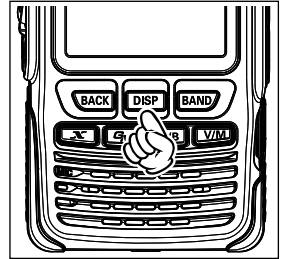
5 Touch **[SD CARD]**.

6 Touch **[3 GROUP ID]**.

7 Rotate the DIAL to select **[2 Read from SD]**, then press the [DISP] key.

Displays the group information saved on the microSD memory card.

8 Rotate the DIAL to select the group information you want to copy to your transceiver, then press the [DISP] key.

☒ appears on the right side of the selected group name.

9 Touch **[READ]**.

"READ ?" appears on the screen.

10 Select **[OK]**, then touch **[OK]**.

When copying completes, a beep sounds, then the transceiver restarts to apply the changes.

> **Tip** • You can also save the group information registered in your transceiver onto a microSD memory card. Refer to "Set Mode: SD CARD Menu Operations" in the FT2DR Operating Manual.

Deleting Groups

Delete a registered group.

1 Press ![Gm] .
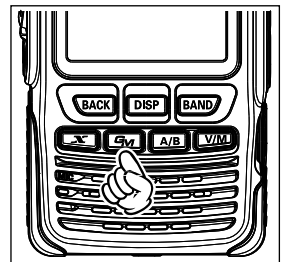
2 The group list appears.

3 Rotate the DIAL to select the group you want to delete, then touch **[DEL]**.

"DELETE ?" appears on the screen.

4 Select **[OK]**, then touch **[OK]**.

To cancel deletion, touch **[CANCEL]**.

Displays "COMPLETED" on the screen and deletes the selected group.

Deleting Group Members

Delete a group member registered in the group.

1 Press 🔘.
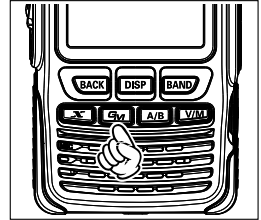
2 The group list appears.

3 Rotate the DIAL to select the group where the member you want to delete belong, then touch **[EDIT]**.

Displays the member list.

4 Touch the group member you want to delete.

5 Touch **[DEL]**.

"DELETE ?" appears on the screen.

6 Select **[OK]**, then touch **[OK]**.

To cancel deletion, touch **[CANCEL]**.
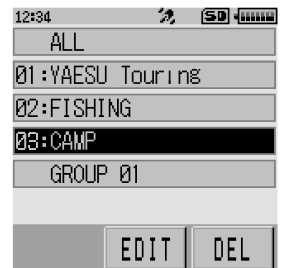
Displays "COMPLETED" on the screen and deletes the selected group member.

12

Checking Received Messages and Images

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

1 Press [GM].

Displays the group list.

2 Touch your desired group.

Displays the member list. Highlights group members available for communication and displays the direction and distance to each group member from your station.

3 Touch **[LOG]**.

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

13

Displays the LOG list.

12:34	〽	50
LOG MSG		1/1

Tip • The icons on the left side of the LOG list indicate the following.

NEW	Creating and sending a new message
🖳➡🖻	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 to select the data you want to check.

Displays the selected data.

Tips • Press the ⌨DISP key to display the location where the message was sent for MESSAGE data and the location where the image was taken for PICT data.

  • Touch **[FORWARD (or FWD)]** to forward the data to other group members. Refer to "Forwarding the Checked Message or Image Data" on page 19.

  • Touch "REPLY" to reply to the sender. Refer to "Replying to the Sender of the Checked MESSAGE or PICT Data" on page 18.

  • Touching **[DEL]** displays "DELETE ?". Select **[OK]**, then touch **[OK]** to delete the information.

6 Press the **[BACK]** key three times.

Returns the screen to the group member list display.

Sending MESSAGE and PICT (Image) Data

Send messages or images using the GM function.
There are the following 4 ways for sending messages or images.

(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 the image data you took

Creating and Sending a New Message

Create a new message and send it to the group members.

1 Press $\boxed{G_M}$.

Displays the group list.

2 Touch the desired group.

Displays the group member list. Highlights group members available for communication and displays the direction and distance to each group member from your station.

3 Touch **[LOG]**.

4 Rotate the DIAL, then touch **[MESSAGE]**.
Displays the LOG list.

5 Rotate the DIAL, then touch **[NEW]**.
Displays the message entry screen.

6 Touch **[EDIT]**.

7 Refer to "Entering Letters" on page 19 in the FT2DR Operating Manual to enter a message.

8 Press the [BACK] key.
Displays the entire message.

9 Touch **[SEND]**.
Displays the member list display.

   Tips • To cancel transmission, touch **[BACK]**.
   • To save the entered message as a standard message, touch **[SAVE]** (page 18).
   • To continue message entry, touch **[EDIT]**.

10 Touch **[ALL]**.
"SEND to ALL ?" appears.

To send the message to a specific group member, touch the group member that is within communication range.

   Caution • Messages cannot be sent to group members outside of communication range.

   Tip • 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 still read the message as long as they are within the communication range.

11 Select **[OK]**, then touch **[OK]**.
Sends the message.

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

1 Follow steps 1 to 6 in "Creating and Sending a New Message" on page 15 to display the message entry screen.

2 Touch MTXT.

Displays the standard message list.

Tip • For "M01" to "M10", you can register a message comprising up to 80 letters (page 18).

3 Rotate the DIAL to select the standard message you want to use.

4 Touch **[PASTE]**.

Displays the selected standard message in the message entry field.

5 Press the BACK key.

17

Displays the entire message.

```
12:34          🏃  SD ⯐
      🖹NEW

   QRM



  SEND    EDIT    SAVE
```

6 To add letters to the message, input letters following steps 6 to 7 in "Creating and Sending a New Message" on page 15.

Registering a standard message

Up to 10 texts containing a maximum of 16 characters each can be registered as standard messages.
Registered texts can be selected and used like the 19 standard messages that have been prepared in advance.

1 Follow steps 1 to 7 in "Creating and Sending a New Message" on page 15 to input a text message.

> **Tip** • Alphanumeric characters including symbols can be used.

2 Touch **[SAVE]**.

Displays the standard message list.

> **Tip** • Touch the MTXT icon to select the desired message from the registered 19 standard messages.

```
12:34          🏃  SD ⯐
      🖹NEW
   Let's go to the
   camp tomorrow!



                   👇

  SEND    EDIT    SAVE
```

3 Rotate the DIAL to select the number where you want to register the standard message.

> **Tip** • You can select a number from "M01" to "M10".

4 Touch **[SAVE]**.

Registers the text as a standard message and displays the message entry screen.

> **Tips** • If you register a new message to a number where a message already have registered, the old message is overwritten.
>
> • To cancel registration, press the ⟨BACK⟩ key.
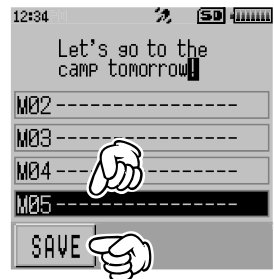
```
12:34          🏃  SD ⯐
   Let's go to the
   camp tomorrow█
 M02 --------------
 M03 --------------
 M04 --- 👇 --------
 M05 --------------
  SAVE 👉
```

18

Replying to the Sender of the Checked Message or Image Data

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

1 Press ⒼⱮ .

Displays the group list.

2 Touch your desired group.

Displays the group member list. Highlights group
members available for communication and displays the
direction and distance to each group member from your
station.

3 Touch **[LOG]**.

4 Rotate the DIAL, then **[MESSAGE]** or **[PICT]**.

Select the data type (MESSSAGE or PICT) you want to
send.

Displays the LOG list.

19

5 Touch the data to which you want to reply.
Displays the selected data.

6 Touch **[REPLY]**.

Displays the message entry screen.

Tip • When replying, the call sign of the MESSAGE/PICT data sender is automatically specified for "to:".

7 Touch **[EDIT]**.

8 Enter the reply message.

Refer to "Creating and Sending a New Message" on page 16 to enter the reply message.

9 Press the ⟨BACK⟩ key.

Displays the entire message.

10 Touch **[SEND]**.

Sends the message to the sender of the MESSAGE/PICT data.

20

Forwarding the Checked Message or Image Data

After checking the message or image data, forward the data to other group members.

1 Press ⌷⌷GM⌷.

Displays the group list.

2 Touch the desired group.

Displays the group member list. Highlights group members available for communication and displays the direction and distance to each group member from your station.

3 Touch **[LOG]**.

4 Rotate the DIAL, then touch **[MESSAGE]** or **[PICT]**.

Select the data type (MESSSAGE or PICT) you want to send.

Displays the LOG list.

21

5 Touch the data you want to forward to other group members.

Displays the selected data.
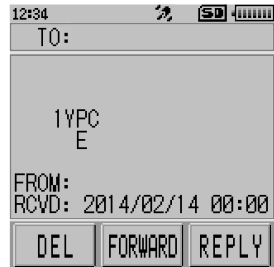
6 Touch **[FORWARD (or FWD)]**.

Displays the group member list.

7 Touch **[ALL]**.

"SEND to ALL ?" appears.

To send the message to a specific group member, touch the group member that is within communication range.

Caution • Messages cannot be sent to group members outside of communication range.

Tip • 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 still read the message as long as they are within the communication range.

8 Select **[OK]**, then touch **[OK]**.

Sends the message or image to other group members.

22

Sending Image Data You Took

Take still images using the optional speaker microphone with built-in snapshot camera (MH-85A11U) and send them to the group members.

Tip
- For details on how to send images you took using the optional speaker microphone with built-in snapshot camera (MH-85A11U), refer to "Taking Picture Using the Optional Camera-Mounted Speaker Microphone Snapshot Function" in FT2DR Operating Manual.

1 Press 🔲.

Displays the group list.

2 Touch the desired group.

Displays the group member list. Highlights group members available for communication and displays the direction and distance to each group member from your station.

3 Touch **[LOG]**.

4 Rotate the DIAL, then touch **[PICT]**.

Displays the list of image data saved on the microSD memory card.

23

5 Rotate the DIAL, then touch the image you want to send.
Displays the selected image.

```
12:34              SD
LOG PICT           1/1
⊕▣
⊕▣              00/00
⊕▣              00/00
⊕▣              00/00
⊕▣              00/00
DEL  TOP  ▲  ▼
```

6 Touch **[SEND]**.

Displays the group member list.

7 Touch **[ALL]**.

"SEND to ALL ?" appears.

To send the image to a specific group member, touch the group member within communication range.

Caution   ● Images cannot be sent to group members outside of communication range.

Tip   • 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 image data, other stations operating GM on the same frequency can still view the image data as long as they are within the communication range.

8 Select **[OK]**, then touch **[OK]**.

Sends the image.

24

Displaying Your Partner Station Locations Automatically

The compass on each group member slot displays the direction from your station. The location information of your partner station can also be saved.

Checking the Location of Your Partner Station

1 Press 󠀠Gm󠀠.

Displays the group list.

2 Touch the desired group.

Displays the group member list.

3 Rotate the DIAL to select the partner station of which you want to display the location information.

4 Press the 󠀠DISP󠀠 key.

The compass displays the direction and distance from the selected station to your station.

In heading-up mode, the compass circle indicates the direction (E, W, S and N) that you are heading. The compass arrow indicates the direction of your partner station.

Tips

- The location display can be changed from [DISPLAY]→[1 TARGET LOCATION].
- Press the [DISP] key again to return the screen to the member list screen.
- In Set mode, from [DISPLAY]→[2 COMPASS], the compass mode can be switched between [HEADING UP] and [NORTH UP] to indicate compass orientation of your station. However, when "YR", "★", "L1" or "L2" is selected, the compass mode is set to [HEADING UP], which cannot be switched to [NORTH UP], for indicating the direction of your partner station location.

  [HEADING UP]:   The compass circle indicates the direction (**E**, **W**, **S** and **N**) you are heading in. The arrow indicates the direction of your partner station.

  [NORTH UP]: Always displays the north on the top. The arrow indicates the direction you are heading in.

- You cannot update the location information of your partner stations outside of communication range.
- If your station or your partner stations do not set the location information manually or capture the GPS satellite signals, the compass display is not available.

Cautions

- When the GPS satellite signals cannot be acquired, the location of your partner station does not appear.
- A positioning error of several hundred meters may occur due to the environmental conditions.
- This function is a simplified function that makes use of GPS satellite data. Use this function as a reference for checking the location of your partner station.

Registering the Location Information of Your Partner Station

1 Press [GM].

Displays the group list.

2 Touch your desired group.

Displays the group member list.

3 Rotate the DIAL to select the partner station of which you want to display the location information.

4 Press the [DISP] key.

The compass displays the direction and distance of the selected station from your station.

In heading-up mode, the compass circle indicates the direction (**E**, **W**, **S** and **N**) you are heading in. The compass arrow indicates the direction of your partner station.

5 Touch **[YR]**.

The [YR] display is highlighted.

6 Touch **[MEM]**.

[★], [L1] and [L2] blink.

7 Touch [★], [L1] or [L2].

Registers the location information of your partner station.

Tip • Touch **[MEM]** to stop the display from blinking.

27

Using the SYNC Function

On the transceiver, you can synchronize the member information with your partner stations operating in GM mode.

Synchronizing From Your Station

1 Press $\boxed{G_M}$.

Displays the group list.

2 Touch your desired group.

Tip • When synchronizing by selecting "ALL", group member registration is required after the SYNC operation. For details on how to register group members, refer to "Registering Stations Within Communication Range as Group Members" on page 5.

3 Touch **[SYNC]**.

Starts the SYNC operation and displays the progress in the pop-up window.

After completing the SYNC operation, "COMPLETE" appears and the members registered in the partner station are added to your station member list.

Tips • Your station members are also added to the partner station you synchronize with.

• If you attempt to register more than 24 stations in the selected group, "NOT COMPLETED" appears on the screen and SYNC does not operate.

• If no station accepts the SYNC operation, "NOT COMPLETED" appears on the screen and SYNC does not operate.

28

Accepting the SYNC Operation from Other Stations

When you receive the SYNC start signal from other stations, follow the procedure below.

1 When the SYNC operation confirmation screen appears, touch **[YES]**.

> **Tip** • When you do not want to accept the SYNC operation, select [NO].
> SYNC does not start if you select [NO].

Starts the SYNC operation and displays the progress in the pop-up window.

"COMPLETE" appears on the screen and the members registered in the partner station are added to your station member list.

> **Tips** • If your station or any common station is not in the SYNC member list from the partner station, SYNC does not operate.
> • If you attempt to register more than 24 stations in the selected group, "NOT COMPLETED" appears on the screen and SYNC does not operate.

29

GM Set Mode List

Set mode item No./ item	Descriptions	Options (bold letters: default)
1 RADIO ID	Transceiver personal ID	—

GM Set Mode Function List

• **1 RADIO ID**
Display of RADIO ID
Explanation: In the GM function, each transceiver transmits its own ID besides 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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1506-A0