ADVANCED MANUAL

VHF/UHF DUAL BAND TRANSCEIVER

ID-5200A
ID-5200E

1 USING A microSD CARD
2 SCOPE OPERATION (ADVANCED)
3 D-STAR OPERATION (ADVANCED)
4 GPS OPERATION (ADVANCED)
5 VOICE TX FUNCTION
6 VOICE RECORDER FUNCTIONS
7 MEMORY OPERATION
8 SCAN OPERATION
9 REPEATER AND DUPLEX OPERATIONS
10 SET MODE
11 Bluetooth® OPERATION
12 OTHER FUNCTIONS
13 UPDATING THE FIRMWARE
14 OPTIONS

This manual describes instructions for advanced features and instructions.
See the BASIC MANUAL that comes with the transceiver for precautions and basic operations.

Icom Inc.

Thank you for choosing this Icom product. This product was designed and built with Icom's state of the art technology and craftsmanship. With proper care, this product should provide you with years of trouble-free operation.

This product combines traditional analog technologies with Digital Smart Technologies for Amateur Radio (D-STAR), for a balanced package.

ABOUT THE CONSTRUCTION OF THE MANUAL (As of August 2026)

You can use the following manuals to understand and operate this transceiver.
ⓘ If necessary, you can download a glossary of HAM radio terms from the Icom website.

TIP: You can download each manual and guide from the Icom website:
https://www.icomjapan.com/support/
Enter "ID-5200A" or "ID-5200E" into the Search box on the site.

Basic manual (Comes with the transceiver)

Instructions for the basic operations and precautions. **D-STAR GUIDE** that explains registering your call sign to a gateway repeater and D-STAR's basic operations is also included.

Connection guide (Leaflet, Comes with the transceiver)

Instructions for connecting and installing the controller and main unit.

Advanced manual (This manual)

- Using a microSD card
- Scope operation (ADVANCED)
- D-STAR operation (ADVANCED)
- GPS operation (ADVANCED)
- Voice TX operation
- Voice recorder operation
- Memory operation
- Scan operation
- Repeater and duplex operations
- Set mode
- Bluetooth® operation
- Other functions
- Firmware updating
- Options

CI-V Reference Guide (PDF type)

Describes the control commands used in remote control operation (serial communication using CI-V).

About the DV Gateway function (PDF type)

Instructions for the system requirements or operations to use the DV Gateway function for mobile transceivers.

Updating the repeater list (PDF type)

Instructions for the steps to update the repeater list.

Using the GPS Logger function (PDF type)

Instructions for operating the GPS Logger function that saves location data from a GPS receiver onto a microSD card as a log.

D-PRS Guide (PDF type)

Instructions for the system requirements or operations to use the D-PRS function.

About the Share Pictures function (PDF type)

Describes how to use the Share Pictures function.

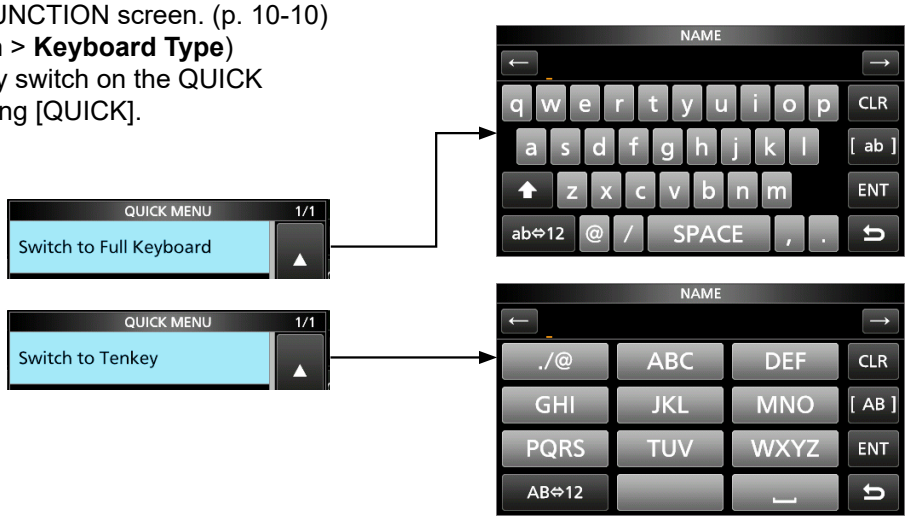
ⓘ The Advanced manual is based on using Microsoft Windows 11. The displays, indications, or operations may differ slightly, depending on your PC's system settings, type of OS, or Windows version.

KEYBOARD ENTERING AND EDITING

Keyboard types

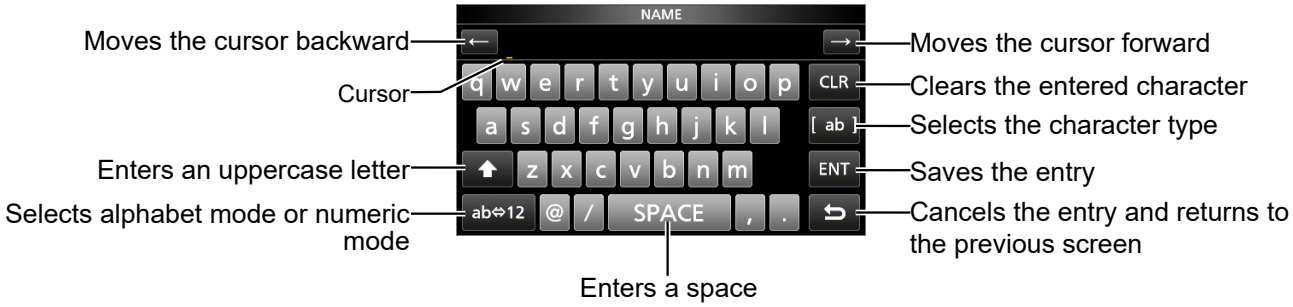
You can select the Full Keyboard or Tenkey pad in "Keyboard Type" on the FUNCTION screen. (p. 10-10)
([MENU] > SET > Function > **Keyboard Type**)

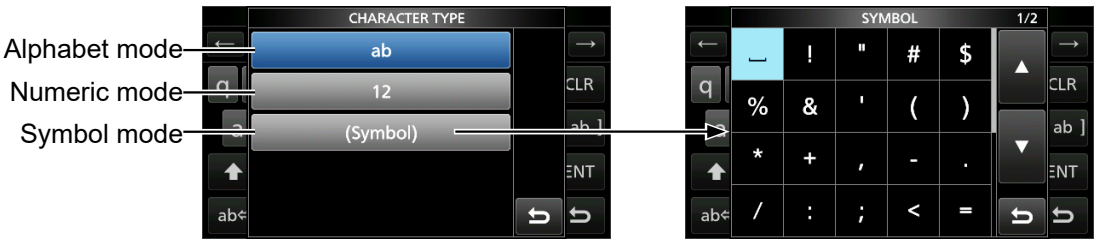
ⓘ You can also temporarily switch on the QUICK MENU window by pushing [QUICK].



ⓘ You can select the full keyboard layout in "Full Keyboard Layout" on the FUNCTION screen. (p. 10-10)
([MENU] > SET > Function > **Full Keyboard Layout**)

Entering and editing





USABLE CHARACTERS

You can enter and edit the items in the following table.

Menu	Category	Item	Selectable characters	Maximum characters
SET	Scan	Program Scan Edge	[AB] [ab] [12] [!"#]	16
		Program Link		
	My Station	My Call Sign	A to Z, 0 to 9, (space), /	8 + 4
		TX Message	[AB] [ab] [12] [!"#]	20
	Time Set	NTP Server Address	A to Z, a to z, 0 to 9, - .	64
	Bluetooth Set	Bluetooth Device Information (Edit Name)	[AB] [ab] [12] [!"#]	9*1
	Wi-Fi Set	SSID	[AB] [ab] [12] [!"#]	32
		Password	[AB] [ab] [12] [!"#]	64
		Network Name	A to Z, 0 to 9, _ -	15
	SD Card	Save Setting	[AB] [ab] [12] [!"#] Illegal characters: / : ; * < > \ |	23
		Export		
MEMORY		GROUP NAME, MEMORY NAME	[AB] [ab] [12] [!"#]	16
CS		UR, R1, R2	A to Z, 0 to 9, (space), /	8
DV MEMORY	Your Call Sign	NAME	[AB] [ab] [12] [!"#]	16
		CALL SIGN	A to Z, 0 to 9, (space), /	8
	Repeater List	GROUP NAME, NAME	[AB] [ab] [12] [!"#]	16
		SUB NAME	[AB] [ab] [12] [!"#]	8
		CALL SIGN, GW CALL SIGN	A to Z, 0 to 9, (space), /	8
DV GW	Internal Gateway Settings	Gateway Repeater (Server IP/Domain)	A to Z, a to z, 0 to 9, - .	64
		Terminal Call sign, Allowed Call Sign List	A to Z, 0 to 9, (space)	8
GPS	GPS TX Mode	Unproto Address	[AB] [ab] [12] [!"#]	56*2
		Object Name, Item Name	[AB] [ab] [12] [!"#]	9
		Comment	[AB] [ab] [12] [!"#]	43*3
		GPS Message	[AB] [ab] [12] [!"#]	20
	GPS Memory	GROUP NAME, NAME	[AB] [ab] [12] [!"#]	16
DTMF	DTMF MEMORY		0 to 9, A B C D * #	24
	SEND	Direct Input	0 to 9, A B C D * #	24
DR	TO SELECT	Direct input (UR)/(RPT)	A to Z, 0 to 9, (space), /	8
PICTURE	TX PICTURE SET	Receiver	A to Z, 0 to 9, (space)	8

[AB]: A to Z, (space)
[ab]: a to z, (space)
[12]: 0 to 9, (space)
[!"#]: ! " # $ % & ′ ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | } ˜ (space)

*1 Except for “ICOM BT”
*2 Normally 12 characters
*3 The maximum number of characters you can enter depends on the data extension and altitude settings.

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Section 1 USING A microSD CARD

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1 USING A microSD CARD

About data saved on a microSD card

The following data can be saved onto the card:

- The transceiver's settings
- Communication/receive log and contents
- Automatic answering voice audio in the DV mode
- Voice audio for the Voice TX function
- Captured screens
- Memory channel contents
- Your (UR) call sign memory
- Repeater List
- DV repeater IP address list
- GPS memory
- Position data from the GPS receiver
- Pictures for the Share Pictures function
- Transmitted and received log of Share Picture

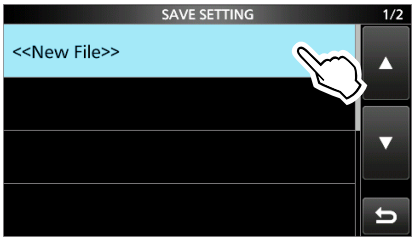
Saving settings onto a microSD card

The Memory channels, settings on the MENU screen, and the Repeater List can be saved on a microSD card.
Saving data on the card enables you to easily restore the transceiver to its previous configuration, even if you perform an All Reset.

You can save settings as a new file, or you can overwrite a current file.

◇Saving as a new file

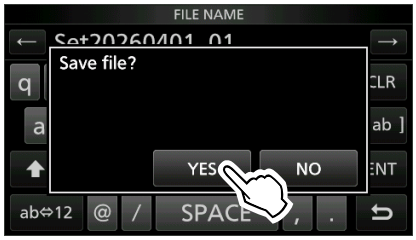
1. Open the SAVE SETTING screen.
   [MENU] > SET > SD Card > **Save Setting**
2. Touch "<<New File>>."



   - The file is named in the following format:
     SetYYYYMMDD_xx
     (YYYY: Year, MM: month, DD: day, xx: file number).
3. To save the file with the displayed name, touch [ENT].



   ⓘ If you want to change the name, delete the name and reenter it, and then touch [ENT].
4. Touch "YES."



   - Saves the data.
5. To close the SD CARD screen, push [EXIT] several times.

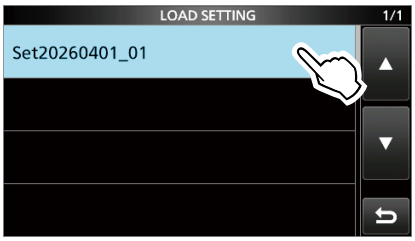
TIP: Data is saved in the "icf" file format. You can copy the icf data on a PC and edit it using the CS-5200 PROGRAMMING SOFTWARE.

Loading the saved files on the microSD card

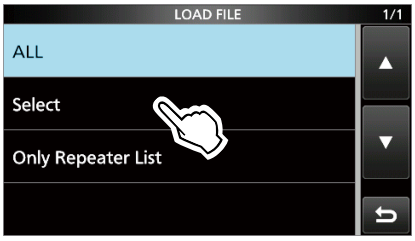
You can load the Memory channels and transceiver's settings from the microSD card to the transceiver.

NOTE: Saving the current data is recommended before loading other data into the transceiver.

1. Open the LOAD SETTING screen.
   [MENU] > SET > SD Card > **Load Setting**
2. Touch the file to load.

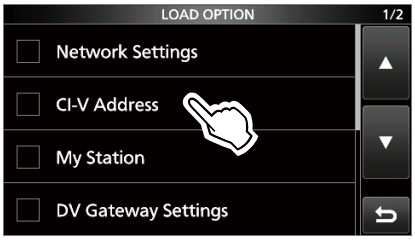


3. Touch "Select."



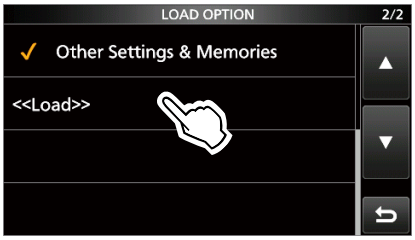
ⓘ If you want to load all the contents on the LOAD OPTION screen, touch "ALL" and go to step 6.
ⓘ If you want to load only the repeater list, touch "Only Repeater List" and go to step 6.

4. Touch the loading options.
   (Example: CI-V Address)

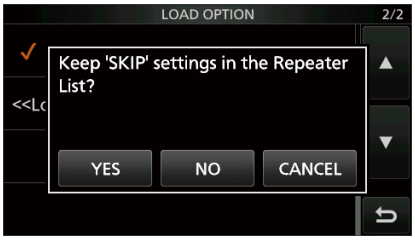


• "✓" is displayed on the left side of the selected option.
ⓘ The Set mode settings and Memory channel contents are always loaded.

5. Touch "<<Load>>."

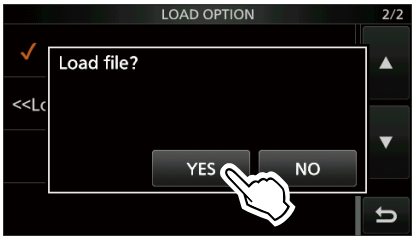


6. Touch [YES] or [NO].



ⓘ When you touch [YES], the skip settings of the repeater list are retained.
ⓘ When you touch [NO], the skip settings of the repeater list are cleared.

7. Touch [YES].



• After the loading ends, "COMPLETED! Restart the ID-5200." is displayed.

8. Turn OFF the transceiver power, then turn it ON again to restart the transceiver.

Deleting a data file

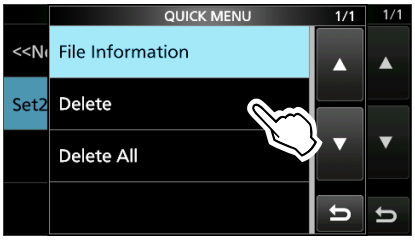
Follow the steps below to delete the files you no longer need on the microSD card.

NOTE: Deleted data from a card cannot be recalled. Before deleting any data, back up the card data onto another device.

1. Open the SAVE SETTING screen.
   [MENU] > SET > SD Card > **Save Setting**
2. Touch the file for 1 second to delete.



3. Touch “Delete.”



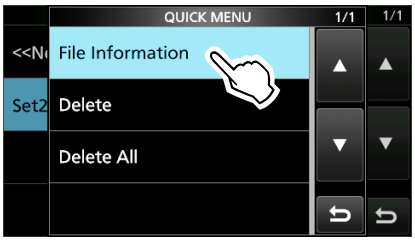
ⓘ To delete all files, touch “Delete All.”
ⓘ To cancel deleting, push [EXIT].

4. Touch [YES].



5. To close the SAVE SETTING screen, push [EXIT] several times.

TIP: Checking the file information
Touch “File Information” on the QUICK MENU window to display the file name, size, and the saved date.

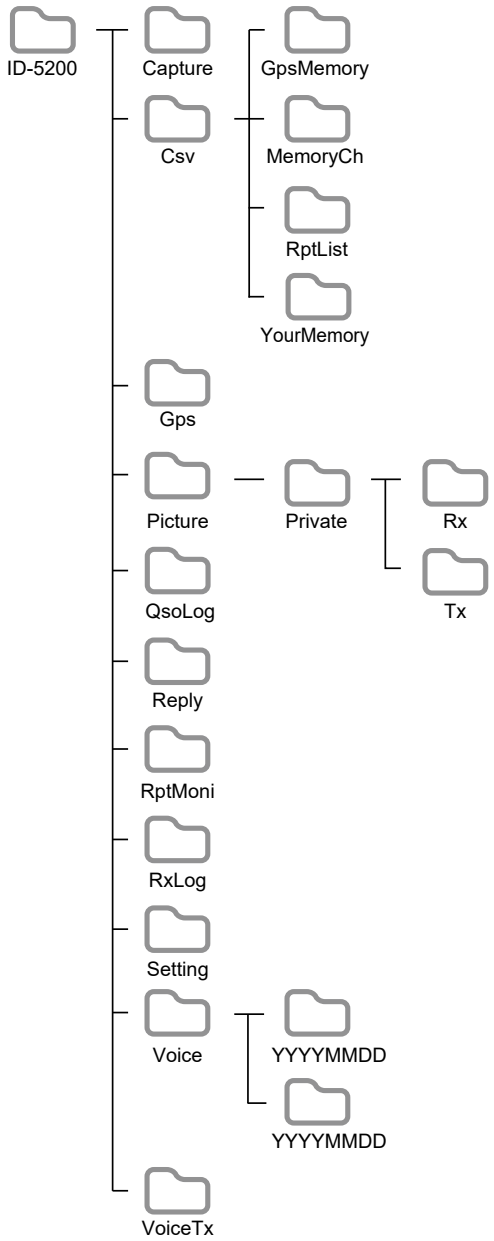


Backing up data saved on the microSD card onto a PC

A backup file enables easy restoration, even if the data on the microSD card is accidentally deleted.

◇About the microSD card's folder

The folder in the microSD card contains the following:



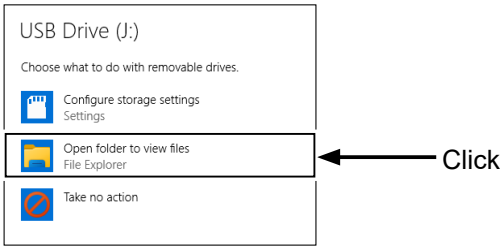
- **ID-5200 folder**
  The folders created in the transceiver are contained in this folder.
- **Capture folder**
  The captured screen data in the "png" or "bmp" format.
- **Csv folder**
  The Repeater List, Your (UR) call sign memory, GPS Memory folders, and so on.
- **GpsMemory folder**
  The GPS Memory in the "csv" format.
- **MemoryCh folder**
  The Memory channel contents in the "csv" format.
- **RptList folder**
  The Repeater List in the "csv" format.
- **YourMemory folder**
  The Your (UR) call sign memory in the "csv" format.
- **Gps folder**
  The GPS logging data in the "log" format.
- **Picture folder**
  The pictures in the "jpg" format that are used with the Share Pictures function.
- **Private folder**
  The RX Picture History and TX Picture History.
- **Rx folder**
  The RX Picture History in the "dat" format.
  ⓘ The RX Picture History contents are not displayed on the PC.
- **Tx folder**
  The TX Picture History in the "dat" format.
  ⓘ The TX Picture History contents are not displayed on the PC.
- **QsoLog folder**
  The QSO log data in the "csv" format.
- **Reply folder**
  The automatic reply data in the "wav" format.
- **RptMoni folder**
  The DV repeater IP address list in the "csv" format.
- **RxLog folder**
  The RX record log data in the "csv" format.
- **Setting folder**
  The transceiver's setting data in the "icf" format.
- **Voice folder**
  The recorded QSO audio data folders.
- **YYYYMMDD folder**
  The recorded QSO audio data in the "wav" format.
- **VoiceTx folder**
  The recorded voice audio data for the Voice TX function in the "wav" format.

Backing up data saved on the microSD card onto a PC

◇Making a backup file on your PC

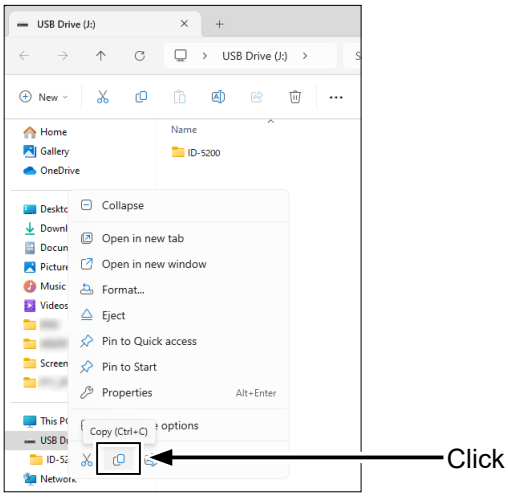
Windows 11 is used for these instructions.

1. Insert the microSD card into the microSD card drive or a memory card reader on your PC.
2. Click the “Open folder to view files” option to access the card.



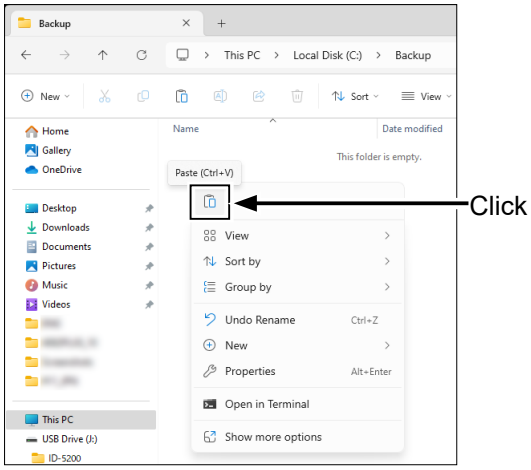
- ‘ID-5200’ folder is displayed.

3. Right-click “USB Drive.”
4. Click “ .”

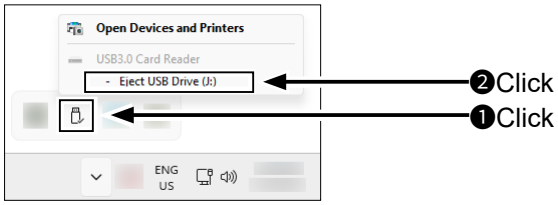


5. Open a folder to copy a backup file, then right-click, and then click “ .”
   - Copies the card data onto your PC.

   (**Example:** Copying into the “Backup” folder on the C drive)



6. To remove the card, click the remove media icon (“ ” in the screenshot shown below) in the taskbar. Then, click “Eject USB Drive.”



7. When “Safe To Remove Hardware” is displayed, remove the card.



TIP: When “USB Connect” is set to “SD Card Mode,” and the transceiver is connected to the PC through a USB data cable, you can directly access the microSD card that is set in the transceiver from the PC. ([MENU] > SET > Connectors > **USB Connect**)
ⓘ You can also set the SD Card Mode on the FUNCTION screen that opens when you push [FUNC].

Importing or exporting a CSV format file

Read this section before importing or exporting a Comma Separated Values (CSV) format file from the microSD card.
You can import or export the following data:

- Memory CH
- Your Call Sign
- Repeater List
- GPS Memory

◇Importing

NOTE:

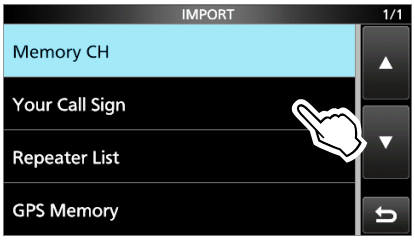
- Before importing, make a backup file of all the transceiver's data to the card in case of data loss.
- The transceiver cannot display files that have a file name with 24 or more characters. If necessary, rename them using 23 characters or less. When exporting CSV format files using the CS-5200, **BE SURE** the names are 23 characters or less.

Example: Importing the Your Call sign memory.

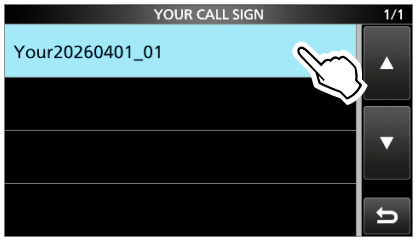
1. Open the IMPORT/EXPORT screen.
   [MENU] > SET > SD Card > **Import/Export**
2. Touch "Import."



3. Touch "Your Call Sign."

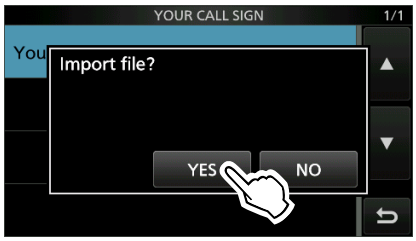


4. Touch the CSV file to import.



   - The confirmation dialog is displayed.

5. Touch "YES."



   - Starts importing.
   - After importing ends, "COMPLETED!" is displayed.

6. Turn OFF the transceiver power, then turn it ON again to restart the transceiver.

TIP: When importing a Repeater List, see "Updating the repeater list" that can be downloaded from the Icom website about how to update the repeater list using a microSD card.
https://www.icomjapan.com/support/

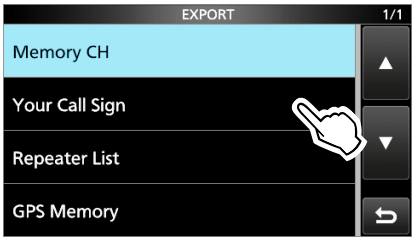
Importing or exporting a CSV format file

◇Exporting

1. Open the IMPORT/EXPORT screen.
   [MENU] > SET > SD Card > **Import/Export**
2. Touch “Export.”



3. Touch the data to export.
   (Example: Your Call Sign)



4. Touch “<<New File>>.”



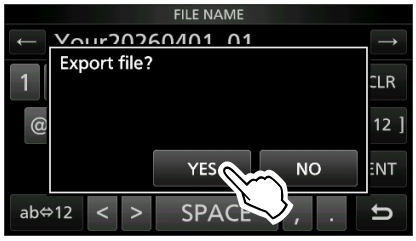
• The FILE NAME screen is displayed.
ⓘ The file is named in the following format:
Your*YYYYMMDD_xx
(YYYY: Year, MM: month, DD: day, xx: file number).
* When you select the other items, each file is named as shown below.
Memory CH: “Mch”
Your Call Sign: “Your”
Repeater List: “Rpt”
GPS Memory: “Gps”
ⓘ See page ii on how to enter characters.

5. Touch [ENT].



• The confirmation dialog is displayed.
ⓘ If you want to change the name, delete the name and reenter it, and then touch [ENT].

6. Touch [YES].



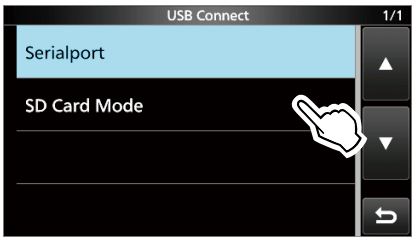
• Exports the setting data.

7. To close the EXPORT screen, push [EXIT] several times.

About the SD Card mode

When “USB connect” is set to “SD Card Mode,” and the transceiver is connected to a PC through a USB data cable, you can transfer the files between the microSD card set in the transceiver and the PC.
You can back up the setting data and recording data saved on the microSD card to a PC, and save the image data for the Share Pictures function and the firmware data to the microSD card without inserting or removing it.

1. Connect the transceiver to a PC using a USB cable.
2. Open the USB Connect screen.
   [MENU] > SET > Connectors > **USB Connect**
3. Touch “SD Card Mode.”

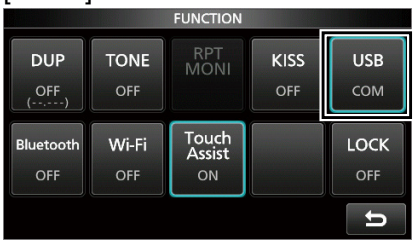


   • The confirmation dialog is displayed.
4. Touch [Yes].



NOTE: Before connecting the transceiver in the SD Card mode to a PC with a USB cable, a microSD card must be inserted.
ⓘ If the microSD card is not inserted, insert it with the transceiver turned OFF, and then reconnect the USB cable.

TIP:
• You can also set the SD Card Mode on the FUNCTION screen that opens when you push [FUNC].

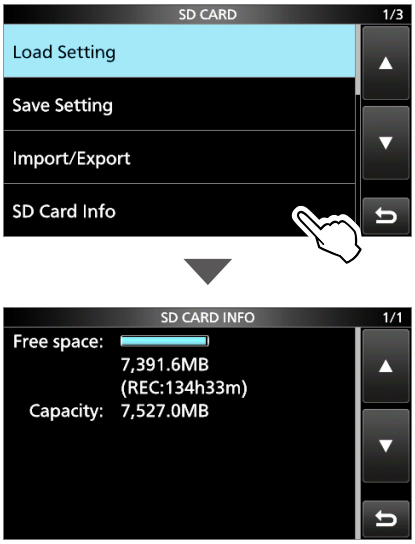


• In the SD Card mode, the transceiver works not as a transceiver but as a data storage device. It temporarily stops some functions as follows:
  - Stops recording
  - Pauses the GPS Logger function and the RX History Log function
  - Disconnects a Bluetooth device
  - Disables the Auto Power OFF function

To exit the SD Card mode
1. Click “ ” in the task tray.
2. Click “Eject Device.”
3. After “Safe To Remove Hardware” is displayed, remove the USB cable from the PC.

Displaying the microSD card information

1. Open the SD CARD INFO screen.
   [MENU] > SET > **SD Card**
2. Touch “SD Card Info.”



   - The free space and the recording time on the microSD card are displayed.
3. To close the SD CARD screen, push [EXIT] several times.

Section 2 SCOPE OPERATION (ADVANCED)

Scope function 2-2
◇ Band Scope 2-2
◇ Memory Scope 2-3
◇ Using the Scope function 2-4
◇ Using the Waterfall display 2-4

Scope function

Use the Scope function to visually search a specified range around the displayed frequency or channels. You can use this function to search for a signal, and see the relative received signal strength level.

The Scope function has 2 types.

- Band Scope: In the VFO mode or Call channel mode, displaying the scope enables you to see the frequency with signals.
- Memory Scope: In the Memory mode or the DR screen, displaying the scope enables you to see the channels with signals.

On the single band display, you can confirm the signal strengths over time by the waterfall function.

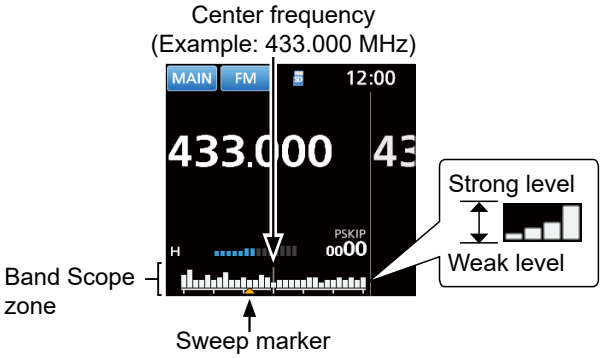
The Scope function has 2 sweep types.

- Single Sweep: Searches the specified frequency range only once. The Single Sweep starts from the lower frequency, and the sweep stops after reaching the upper frequency.
- Continuous Sweep: Repeatedly searches the specified frequency range.

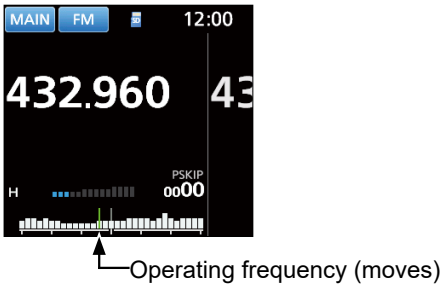
The transceiver's sweep bandwidth is ± 15* × the tuning step number, centered on the operating frequency.

* You can change the displayed steps to ± 20 steps.
([MENU] > SET > Scope > **Displayed Steps**)

During a sweep in the Center mode



While stopping a sweep

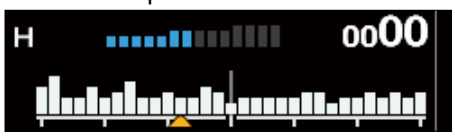


◇ Band Scope

You can select the Band Scope display mode from 3 modes, the Center mode, the FIX mode, and the Scroll (FIX) mode.

Center mode

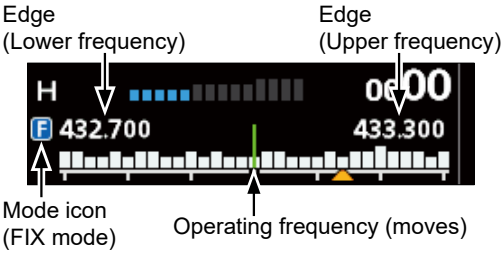
Displays signals around the operating frequency within the selected span.

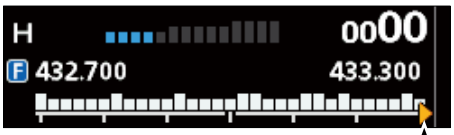


FIX mode

Displays signals within a specified frequency range.

ⓘ Set the displayed frequency range on the MENU screen. (p. 10-6)
([MENU] > SET > Scope > **FIX Mode Center Frequency**)



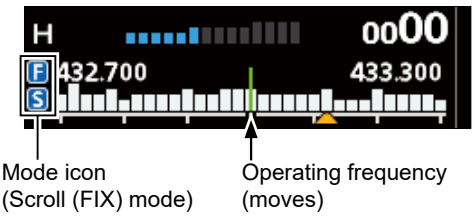


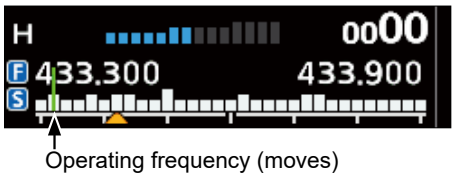
When the operating frequency moves outside the upper or lower Edge frequency, "▶" or "◀" is displayed in the side corners of the Band Scope screen.

Scroll (FIX) mode

Displays signals within a specified frequency range. When the operating frequency moves outside of the screen, the displayed frequency range is automatically shifted.

ⓘ Set the displayed frequency range on the MENU screen. (p. 10-6)
([MENU] > SET > Scope > **FIX Mode Center Frequency**)





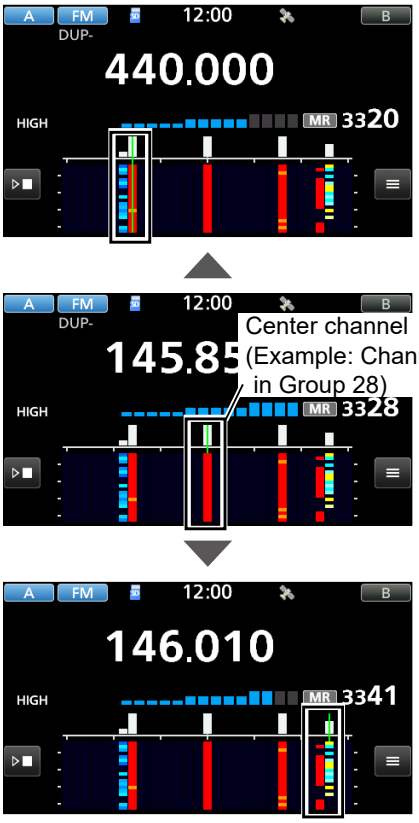
Scope function

◇ Memory Scope

The Scope display is usable only in the Center mode.

ⓘ When the number of the selectable channels is less than the number of display steps, selectable channels are not displayed in a loop.
([MENU] > SET > Scope > **Displayed Steps**)

ⓘ When the Access repeater is selected as “Near Repeater” on the DR screen, only the nearest repeater is displayed by using your and the repeater’s locations.



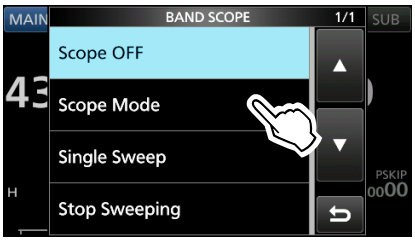
Scope function

NOTE: During the continuous sweep, the noise may occur if you bring your hand or body close to the screen.

◇ Using the Scope function

Example: Band Scope

1. Select the desired operating mode.
2. Open the Scope screen.
   [MENU] > **SCOPE**
   - Returns to the standby screen, and starts the continuous sweep.
3. Push [QUICK].
4. Touch “Band Scope.”
5. Touch “Scope Mode.”



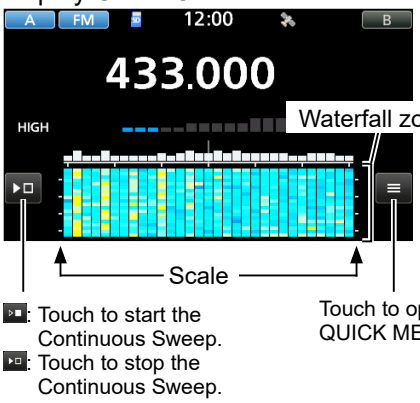
6. Touch the Scope display mode.
   - Displays the selected display mode, and starts the continuous sweep.
7. Touch the Scope zone.
   - Stops the sweep.
   ⓘ Touch Scope zone again to resume the sweep for the Continuous Sweep function.
8. When the sweeping stops, rotate [DIAL] to move the sweep marker to a detected signal.
   - You can hear the signal audio.
9. To turn OFF the Scope function, push [EXIT].

Scope screen operation:

- Rotate [DIAL]: Select an operating frequency or a Memory channel.
- Touch Scope zone: Stop or resume the sweep.
- Touch Scope zone for 1 second: Open the BAND SCOPE window.
- Push [QUICK]: Open the QUICK MENU window.
- Push [EXIT]: Stop the sweep. Turn OFF the Scope function when the sweep stops.

◇ Using the Waterfall display

On the single band display, you can turn the waterfall display ON or OFF.



ⓘ Information

- Higher signal levels are Red, Yellow, Green, Light-blue, Blue, and Black (no signal), in that order.
- During a sweep, the scales on both sides of the waterfall zone are moved with the waterfall. While stopping a sweep, the scales and the waterfall also freeze.
- You can select the Waterfall speed.
  ([MENU] > SET > Scope > **Waterfall Speed**)

TIP:

- If the tuning step is set too wide, the signals in the sweep range may not be displayed (they may be skipped), even if they are strong signals. Therefore, we recommend that you set the tuning step to 20 kHz or less to use the Band Scope function. See the Basic manual Section 2 for details on how to set the tuning step.
- When “AF Output (DUAL)” is set to ON, the received audio is momentarily output during a sweep, and you will know that a signal is received without looking at the display.
  - You can turn “AF Output (DUAL)” ON or OFF on the MENU screen. (p. 10-6)
  ([MENU] > SET > Scope > **AF Output (DUAL)**)

Section 3 D-STAR OPERATION (ADVANCED)

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Section 3 D-STAR OPERATION (ADVANCED)

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IMPORTANT!

- The repeater list, described in this manual, may differ from your transceiver's preloaded contents.
- Although Japanese repeaters are used in the setting examples, the Japanese repeater node (port) letters are different from other countrys'. **BE SURE** to add the repeater node letter in the 8th digit of the call sign, according to the frequency band shown below.
  1200 MHz: A (B in Japan)
  430 MHz: B (A in Japan)
  144 MHz: C (no repeaters in Japan)

To begin the Digital mode communication using other than the D-STAR Repeater (DR) function

To begin Digital mode communication using other than the DR function, you can use the VFO mode, Memory mode, or Call Channel mode.
This manual description focuses on the DR function operation, which can be easily set up. If you want to use other than the DR function, see the procedures as described to the right, or select the repeater in a Memory channel.

For a Local area call or Gateway call:

1. Set the access repeater's frequency. (p. 9-2)
2. Set the Duplex direction and frequency offset. (p. 9-5)
3. Set the call signs (UR/R1/R2). (p. 3-45)

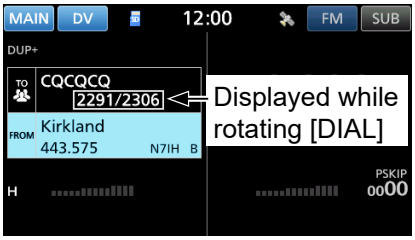
For a Simplex call:

1. Set the operating frequency.
2. Set the call signs (UR/R1/R2). (p. 3-45)

“FROM” (access repeater) setting

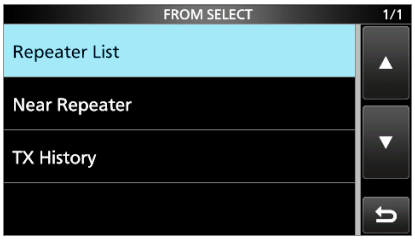
Your access repeater must be set to “FROM” when you make a call on the DR screen.
You have 4 ways to select the access repeater.

By rotating [DIAL]
Select the preset repeater on the DR screen by touching “FROM” and then rotating [DIAL].



- **When you know your access repeater**

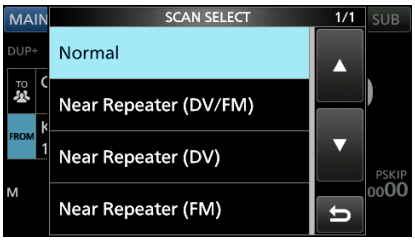
From the repeater list (p. 3-4)
When your access repeater is in your transceiver’s repeater list, you can select it by selecting the repeater area and name, if entered, or call sign.



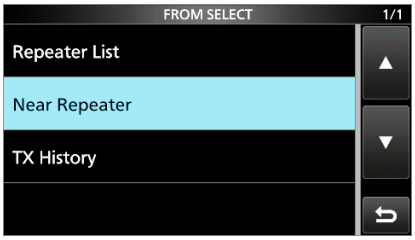
- **When you do not know which repeaters you can access**

Search for a repeater using the DR scan (p. 3-5)
The Normal DR scan searches for output repeater frequencies of nearby repeaters. The scan stops when a signal is detected. The scan also stops on Simplex signals.

The Near Repeater scan searches for output repeater frequencies of nearby repeaters by using your location and the repeater’s location, if it is entered in the Repeater List. The DR scan starts scanning and stops when a signal is detected.
You can also find only FM repeaters using the Near Repeater (FM) scan.

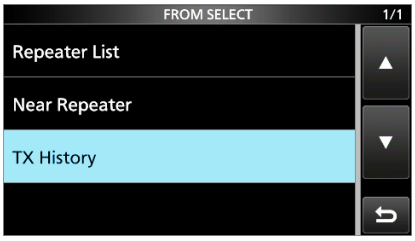


Search for near repeaters (p. 3-6)
The transceiver scan searches for near repeaters by using your location and the repeater’s location, if it is entered in the Repeater List.
The nearest repeaters in your transceiver’s repeater list are displayed as selectable options.
You can select the nearby DV or FM repeater type.



- **When “FROM” data is saved in the TX History.**

Select from the TX History (p. 3-7)
Select a repeater that you have accessed before, from the TX History record.



“FROM” (Access repeater) setting

◇ Using your transceiver’s repeater list

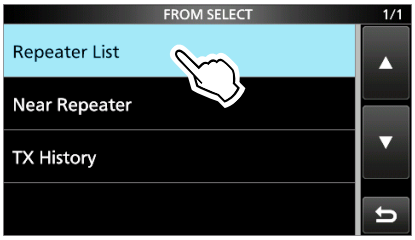
When your access repeater is in your transceiver’s repeater list, you can select it from the list. By just selecting the repeater from the list, the repeater call sign, its frequency, duplex setting, and frequency offset are automatically set for easy operation.

Example: Selecting the “Kirkland” repeater in Washington state in the USA from the repeater list.

1. Hold down [DR] for 1 second to display the DR screen.
2. Touch “FROM” to select, and then touch “FROM” again.

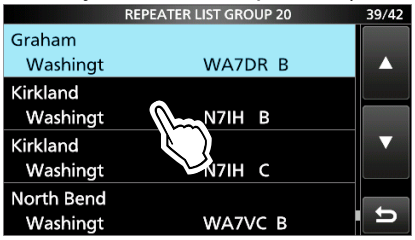


3. Touch “Repeater List.”



- Displays the REPEATER GROUP screen.

4. Touch the repeater group where your access repeater is listed.
5. Touch your access repeater. (Example: Kirkland)



- Returns to the DR screen, and the selected repeater name is displayed in “FROM.”

ⓘ By just selecting the repeater name, the repeater call sign, its frequency, duplex setting, and frequency offset are automatically set.

TIP:

When you select an FM repeater:

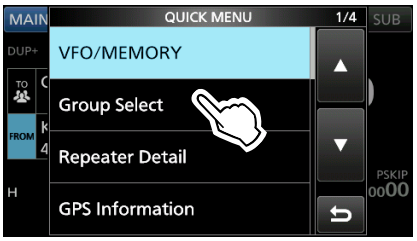
When an FM repeater is in your transceiver’s repeater list, you can select it from the list.
When selecting an FM repeater, the “TO” setting is not necessary, and “---” is displayed in “TO.”



When selecting an FM repeater.

How to change the repeater group:

To change the repeater group on the DR screen, push [QUICK], then touch “Group Select.”



"FROM" (access repeater) setting

◇ Using the DR scan

The DR scan scans frequencies to find a signal on a repeater, or on a simplex frequency.
You can use 2 kinds of DR scans, Normal scan and Near Repeater scan.

Normal scan:
To quickly find a repeater, the Normal scan skips repeaters that are not set as an access repeater.
ⓘ The "USE (FROM)" setting (p. 3-35) is set to "NO" on the repeater list.
([MENU] > DV MEMORY > **Repeater List**)

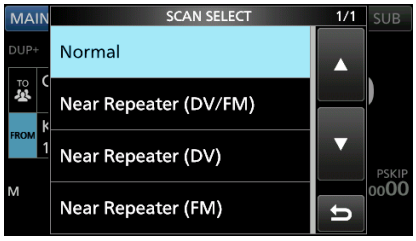
Near Repeater scan:
The Near Repeater scan searches for up to 20 nearby repeaters within 160 kilometers (100 miles) by using your location and the repeater's entered position data, and then lists the repeaters.
ⓘ The Near Repeater scan continues, even if you turn OFF the transceiver, and then turn it ON again during the scan.
ⓘ If your own position data is not being received from GPS satellites, the last received position data is used.

NOTE: Even if your transceiver receives a repeater signal, the repeater may not receive your signal, because the repeater's output power is higher than your transceiver's, and your signal does not reach the repeater.

TIP: The DR scan scans the simplex frequencies in the repeater list, in addition to D-STAR repeaters.

Example: Selecting an active repeater using the DR scan.

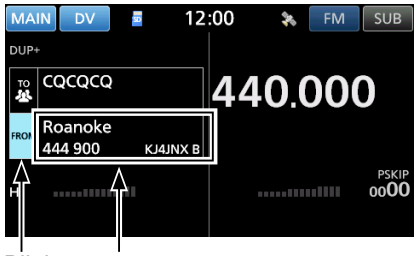
1. Hold down [DR] for 1 second to display the DR screen.
2. Touch "FROM" to select.
3. Push [SCAN].
   • Displays the SCAN SELECT screen.
4. Select the scan type.



- **Normal:**
  Searches for repeaters whose "USE (FROM)" setting is set to "YES."
- **Near Repeater (DV/FM):**
  Searches for up to 20 each of nearby DV or FM repeaters. (Total 40 repeaters)
- **Near Repeater (DV):**
  Searches for up to 20 nearby DV repeaters.
- **Near Repeater (FM):**
  Searches for up to 20 nearby FM repeaters.

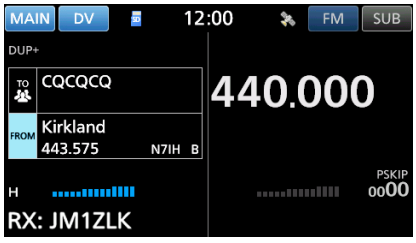
- The selected scan starts.
- In the DR scan, the repeaters are sequentially displayed by distance, in descending order.

ⓘ The scan resumes the same as other scans. (p. 10-4)



Blinks — The repeaters are sequentially displayed.

5. When the transceiver receives a signal from a repeater, the scan stops. Push [SCAN].



- The DR scan is canceled, and the repeater is set to "FROM."

"FROM" (access repeater) setting

◇ Using the Near Repeater Search function

The transceiver searches for the nearest repeaters by using your location and the repeater's entered position data.
The nearest repeaters in your transceiver's repeater list are displayed as selectable options.

NOTE:
- When using the Near Repeater Search function, **BE SURE** first to receive your own GPS position data, or manually enter your position data.
- If no repeater is found within a 160 kilometers (100 miles) range, "No Repeater Found" is displayed.
- If the last received position data can be used, "GPS is invalid. Search by last valid position" is displayed.

Example: Selecting a nearby repeater from the Near Repeater list.

Step 1: Receiving your own location from the GPS satellite

Confirm the GPS receiver is receiving the satellite signals.
- The GPS icon blinks when searching for satellites.
  → → → (no icon)
- The GPS icon stops blinking when the minimum needed number of satellites is found.

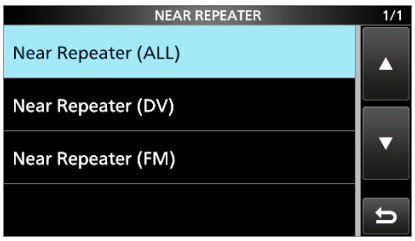
ⓘ It may take only a few seconds to receive, or it may take a few minutes, depending on your operating environment. If you have difficulties receiving, we recommend that you try a different location.
ⓘ When "GPS Select" is set to "Manual," the icon is not displayed. ([MENU] > GPS > GPS Set > **GPS Select**)
ⓘ If your own location is not being received, the last received position is used for your location.

Step 2: Selecting the access repeater from the Near Repeater list

1. Hold down [DR] for 1 second to display the DR screen.
2. Touch "FROM" to select, and then touch "FROM" again.

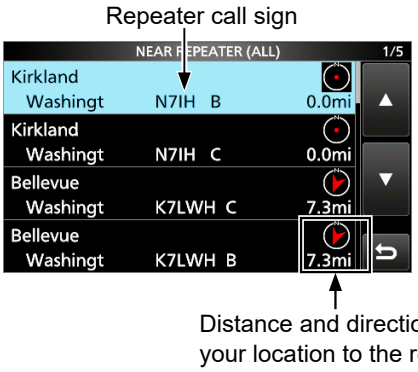


3. Touch "Near Repeater."
4. Touch the type of nearby repeater to display.



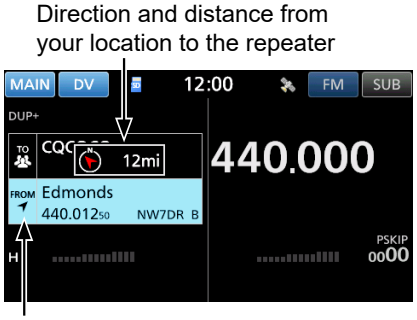
- **Near Repeater (ALL):**
  Displays up to 20 nearby DV and FM repeaters. (A total of 40 repeaters)
- **Near Repeater (DV):**
  Displays up to 20 nearby DV repeaters.
- **Near Repeater (FM):**
  Displays up to 20 nearby FM repeaters.

5. Select the repeater to use as your access repeater, considering the distance from your location to the repeater.



* When the "POSITION" (p. 3-36) is set to "Approximate" on the repeater list, the direction data is not displayed if the distance to the repeater is less than 5 kilometers.
([MENU] > DV MEMORY > **Repeater List**)

- Returns to the DR screen, and the selected repeater is set in "FROM."



ⓘ You can change only the near repeater by rotating [DIAL].

“FROM” (access repeater) setting

◇ Using TX History

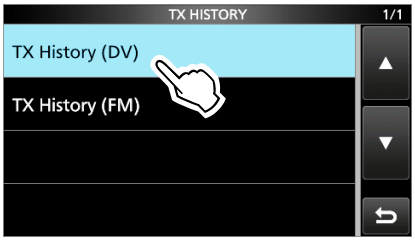
The TX History saves up to 10 of the latest access (From) repeaters you transmitted on. You can select a repeater from TX History as your access repeater.

Example: Selecting the “Hirano” repeater from TX History.

1. Hold down [DR] for 1 second to display the DR screen.
2. Touch “FROM” to select, and then touch “FROM” again.

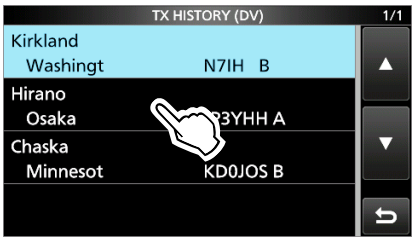


3. Touch “TX History.”
4. Touch the TX History (DV) or TX History (FM).



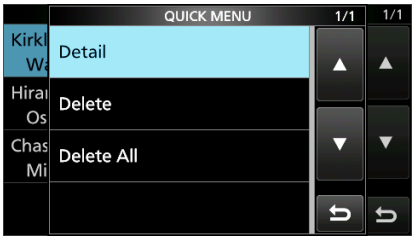
- **TX History (DV):** Displays the TX History of the DV repeaters.
- **TX History (FM):** Displays the TX History of the FM repeaters.

5. Touch the repeater to use it as your access repeater.



- Returns to the DR screen, and the selected repeater is set in “FROM.”

TIP: When you touch the repeater for 1 second in step 5, you can display the REPEATER DETAIL screen or delete the repeater information from the TX HISTORY screen.



“TO” (Destination) setting

“CQCQCQ,” the destination repeater, or station call sign must be set to “TO” when you make a DV mode call. You have 9 ways to set the destination.

TIP: After you receive the individual station or repeater’s signal, the call sign can be captured in the RX>CS screen by holding down the Call Sign Capture key ([RX→CS]) for 1 second.
In the RX>CS screen, you can quickly select the received station’s call sign and easily reply to the call.

By rotating [DIAL]
Rotate [DIAL] to select the repeater or Your Call Sign displayed on the DR screen. (This operation is disabled when “CQCQCQ” is set.)

To make a Local Area CQ call
Set “CQCQCQ” in “TO” (Destination). (p. 3-9)

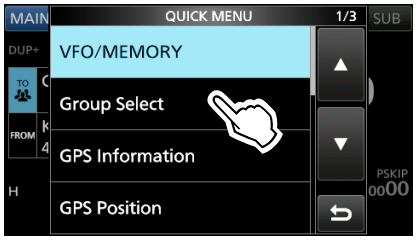
To make a Gateway CQ call
Select a repeater from the Repeater List if you want to make a Gateway call. (p. 3-9)

To make a call to a specific station
Select the station call sign in the Your Call Sign list. (p. 3-10)

To make a call through a Reflector
Select a reflector you want to call through. (p. 3-14)

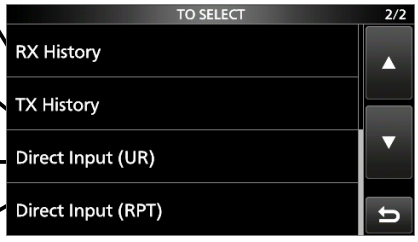


TIP: How to change the repeater group
When “Local CQ” or “Gateway CQ” is selected, you can change the repeater group.
To change the repeater group on the DR screen, push [QUICK], then touch “Group Select.”



To select from RX History
When you receive a call, repeater or caller station data is saved in RX History.
Select the destination from the record. (p. 3-10)

To select from TX History
When you make a call, the destination repeater or called station data is saved in TX History.
Select the destination from the record. (p. 3-11)



To directly enter the destination station call sign
Directly enter the destination station’s call sign. (p. 3-11)

To directly enter the destination repeater call sign
Directly enter the destination repeater’s call sign. (p. 3-12)

"TO" (Destination) setting

◇ Making the "Local CQ" (Local Area call)

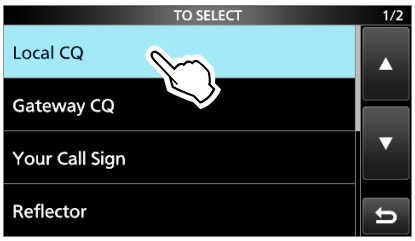
When "Local CQ" is selected on the TO SELECT screen, "CQCQCQ" is set in "TO."

Example: Making a Local area call by accessing the "Kirkland (IA)" repeater.

1. Touch "TO" to select, and then touch "TO" again.



2. Touch "Local CQ."



- Returns to the DR screen, and "CQCQCQ" is displayed in "TO."

◇ Making a "Gateway CQ" (Gateway call)

When "Gateway CQ" is selected on the TO SELECT screen, you can select the repeater to make a gateway call to.

Example: Making a Gateway CQ call to the "Hirano" repeater from the "Kirkland (IA)" repeater.

1. Touch "TO" to select, and then touch "TO" again.



2. Touch "Gateway CQ."
   - Displays the REPEATER GROUP screen.
3. Touch the repeater group where your destination repeater is listed.
4. Touch your destination repeater. (Example: Hirano)



- Returns to the DR screen, and the selected repeater name is displayed in "TO."

TIP: After selecting a destination repeater, you can select another repeater preset in your repeater List by rotating [DIAL].



“TO” (Destination) setting

◇ Using “Your Call Sign”

The “Your Call Sign” memory saves individual or repeater station call signs. When you select the call sign for the “TO” (Destination) setting, you can make a Gateway call. When you call an individual station through a gateway, the signal is automatically sent to the last repeater that the individual station accessed. Therefore, even if you do not know where the individual station is located, you can make a call.

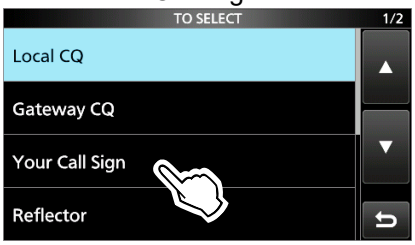
NOTE: If the repeater, set in “FROM” (access repeater), has no Gateway call sign, you cannot make a gateway call.

Example: Selecting “Rick” from “Your Call Sign.”

1. Touch “TO” to select, and then touch “TO” again.

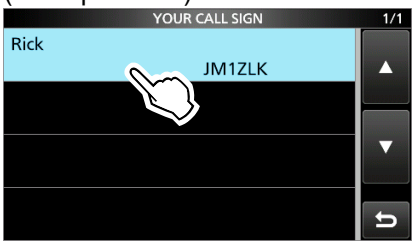


2. Touch “Your Call Sign.”



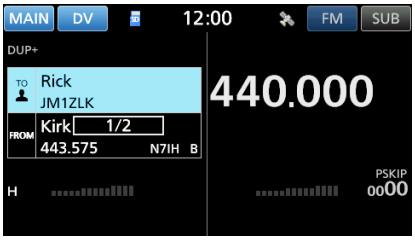
- Displays the YOUR CALL SIGN screen.

3. Touch your destination name or call sign. (Example: Rick)



- Returns to the DR screen, and the selected name is displayed in “TO.”

TIP: After selecting a destination, you can select another station preset in your transceiver by rotating [DIAL].



◇ Using RX History

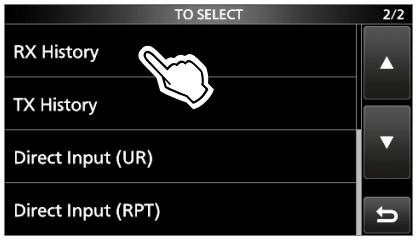
When a call is received in the DV mode, the call data is saved in the RX History.
Up to 50 callers and only the last called call signs can be saved, for a total of 51 histories.

Example: Selecting “Rick” in the RX History.

1. Touch “TO” to select, and then touch “TO” again.

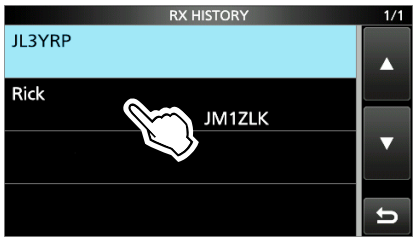


2. Touch “RX History.”



- Displays the RX HISTORY screen.

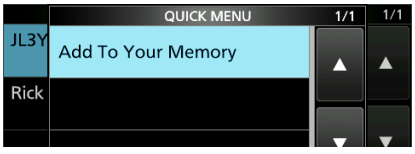
3. Touch a destination name or call sign. (Example: Rick)



- Returns to the DR screen, and the selected name is displayed in “TO.”

ⓘ The “*” (asterisk) is displayed at the beginning of the called station’s call sign. (p. 3-20)

TIP: To add an RX HISTORY data to the “Your Call Sign” memory, push [QUICK], then touch “Add To Your Memory.”



"TO" (Destination) setting

◇ Using TX History

TX History saves the repeater and station names and call signs for up to 20 "TO" (Destination) settings used when you made the calls.

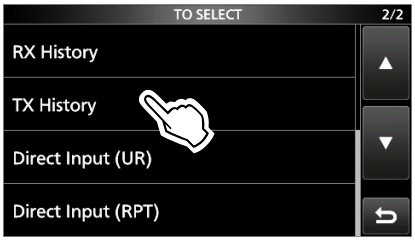
NOTE: Until you make a call in the DV mode, you cannot select "TO" (destination) from the TX History.

Example: Selecting the "Kirkland" repeater in the TX History.

1. Touch "TO" to select, and then touch "TO" again.

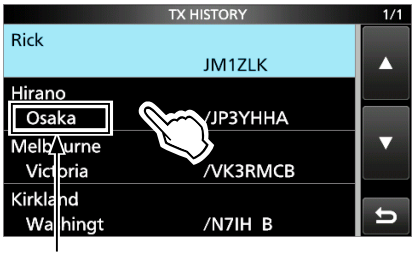


2. Touch "TX History."



- Displays the TX HISTORY screen.

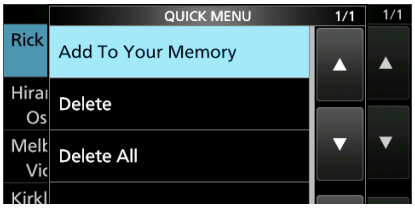
3. Touch a destination repeater.



The Sub name is displayed when a repeater is selected.

- Returns to the DR screen, and the selected repeater name is displayed in "TO."

TIP: You can add the TX HISTORY data to memory or delete it from the TX HISTORY screen.
Push [QUICK], then touch the option.



◇ Directly entering (UR)

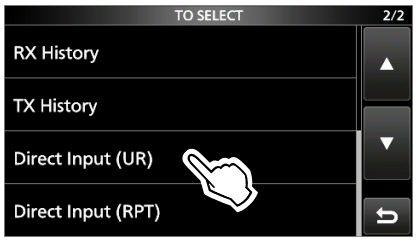
The destination station call sign can be directly entered.

Example: Directly entering the call sign "JM1ZLK."

1. Touch "TO" to select, and then touch "TO" again.



2. Touch "Direct Input (UR)."



- Displays the DIRECT INPUT (UR) screen.

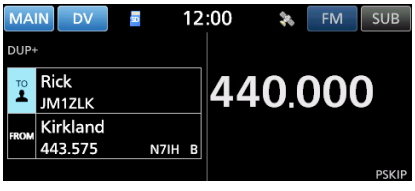
3. Enter a station's call sign of up to 8 characters, including spaces.



ⓘ See page ii on how to enter characters.

4. After entering, touch [ENT].
   - Returns to the DR screen, and the entered call sign is displayed in "TO."
   - ⓘ After entry, you can edit the call sign in the DIRECT INPUT (UR) screen.
   - ⓘ The entered call sign remains on the DIRECT INPUT (UR) screen until you enter a new call sign.

TIP: If the entered call sign is duplicated in the "Your Call Sign" memory, the name is displayed.
(Only when the name has been entered.)



"TO" (Destination) setting

◇ Directly entering (RPT)

The destination repeater call sign can be directly entered.

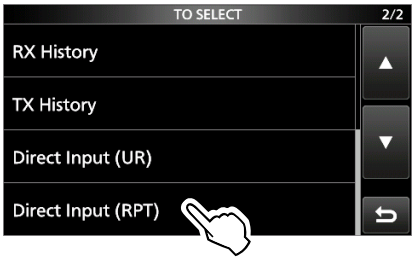
NOTE: BE SURE to include a node letter as the 8th digit. See page 3-2 "IMPORTANT!" about the node letters.

Example: Directly entering the call sign "JP3YDH A."

1. Touch "TO" to select, and then touch "TO" again.



2. Touch "Direct Input (RPT)."



- Displays the DIRECT INPUT (RPT) screen.

3. Enter a call sign of up to 8 characters, including spaces.



ⓘ See page ii on how to enter characters.

4. After entering, push [ENT].
   - Returns to the DR screen, and "JP3YDH A" is displayed in "TO."

   ⓘ After entry, you can edit the call sign in the DIRECT INPUT (RPT) screen.

   ⓘ The entered call sign remains on the DIRECT INPUT (RPT) screen until you enter a new call sign.

TIP:
- If the entered call sign is duplicated in the repeater list, the name is displayed in "TO" (Only when the name has been entered).
- When directly entering the repeater call sign, including a "/" at the beginning is also correct.

REPEATER DETAIL screen

Depending on the content, such as position data or UTC offset, the distance between your location and the repeater, or the repeater time can be displayed on the REPEATER DETAIL screen.
The detail screen can also be entered from the FROM SELECT screen.

Example: Displaying the “Hirano” repeater detail screen

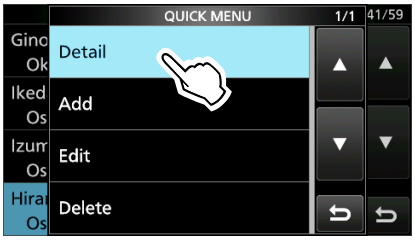
1. Touch “TO” to select, and then touch “TO” again.



2. Touch “Gateway CQ.”
3. Touch “12 Japan.”
4. Touch “Hirano” for 1 second.



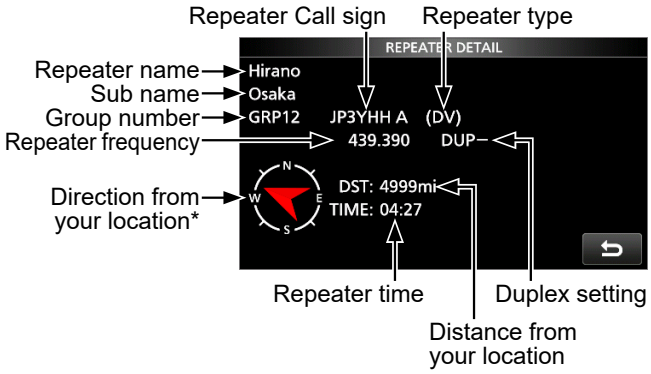
5. Touch “Detail.”



- Displays the REPEATER DETAIL screen.

6. To close the REPEATER DETAIL screen, push [EXIT].

The REPEATER DETAIL screen

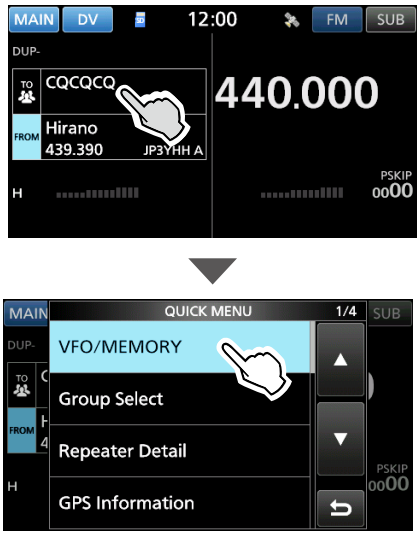


* When the “POSITION” setting (p. 3-36) is set to “Approximate” on the repeater list, the direction data is not displayed if the distance to the repeater is less than 5 kilometers.

ⓘ If there is no position data, the distance and direction from your location are not displayed. See page 4-3 to confirm your position.

ⓘ When selecting an FM repeater, the tone setting is displayed.

TIP: You can display the REPEATER DETAIL screen when the DR screen is displayed. When you set the repeater as shown below, touch the repeater for 1 second, and then touch “Repeater Detail.”

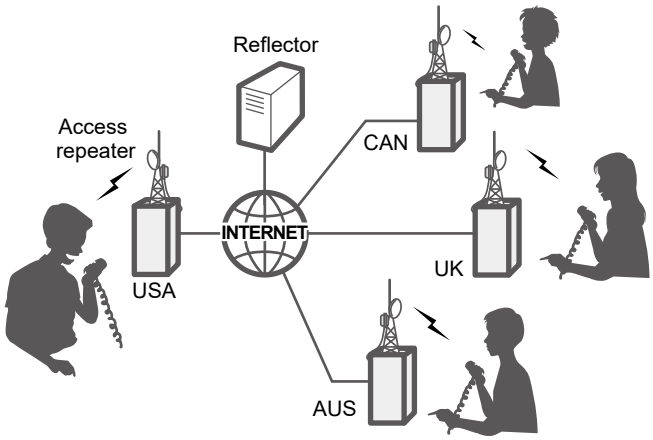


Connecting to a reflector

◇ What is a reflector?

A reflector is a special server connected to the Internet and running a version of the D-Plus software. If the D-Plus software is installed on your access repeater, it provides various functions, including gateway and reflector linking capabilities (It is known as the D-STAR reflector system). The D-STAR reflector system enables a number of D-STAR repeaters anywhere to link to a reflector. This means that when you transmit through a D-STAR repeater linked to a reflector, your voice can be heard on other repeaters linked to the reflector, and you can hear other stations that are connected to the reflector.

D-STAR reflector system:



◇ Unlinking a reflector

Before trying to link to another reflector, **BE SURE** to unlink the reflector that is currently connected to the repeater.

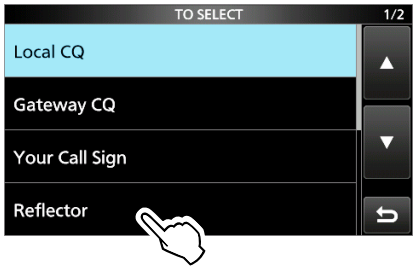
NOTE: If a reflector is already connected, ask on the air whether or not you can change reflectors and wait for responses. **BE SURE** to reconnect to the same reflector when you finish your conversation.

1. Touch “TO” to select, and then touch “TO” again.



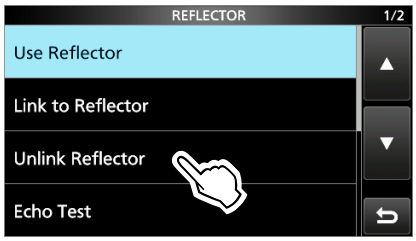
- Displays the TO SELECT screen.

2. Touch “Reflector.”



- Displays the REFLECTOR screen.

3. Touch “Unlink Reflector.”



- Returns to the DR screen, and “Unlink Reflector” and “U” are displayed in “TO.”



4. Hold down [PTT] to unlink the reflector.

Connecting to a reflector

◇ Linking to a reflector

If your repeater is not currently linked to a reflector, or if you want to change it to another reflector, follow the steps below. Before linking to another reflector, **BE SURE** to unlink the current reflector. (p. 3-14)

Directly inputting a reflector

Example: Directly enter “REF030CL.”

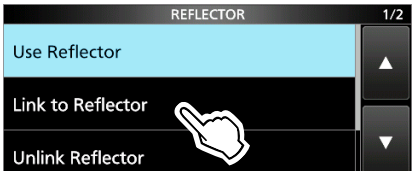
1. Touch “TO” to select, and then touch “TO” again.



2. Touch “Reflector.”



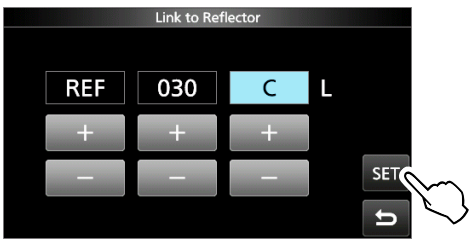
3. Touch “Link to Reflector.”



4. Touch “Direct Input.”



5. Touch [+] or [–] to select the reflector type, reflector number, and module letter, then touch [SET].



- Returns to the DR screen, and “Link to Reflector” and “REF030CL” are displayed in “TO.”

6. Hold down [PTT] to link to the Reflector.

Using TX History

TX History saves up to 5 reflectors that your access repeater is previously linked to.

Example: Select “REF030CL” in TX History.

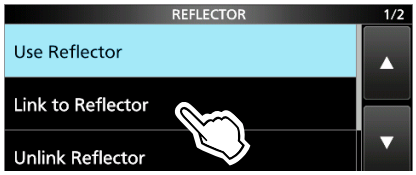
1. Touch “TO” to select, and then touch “TO” again.



2. Touch “Reflector.”



3. Touch “Link to Reflector.”



4. Touch the reflector that you want to link to.



- Returns to the DR screen, and “Link to Reflector” and “REF030CL” are displayed in “TO.”



5. Hold down [PTT] to link to the reflector.

Connecting to a reflector

◇ Using a reflector

1. Touch “TO” to select, and then touch “TO” again.



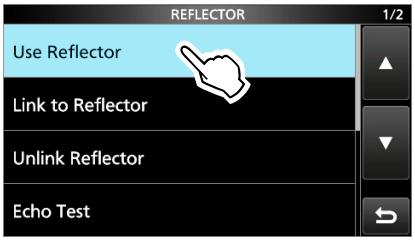
- Opens the TO SELECT screen.

2. Touch “Reflector.”



- The REFLETOR screen is displayed.

3. Touch “Use Reflector.”



- Returns to the DR screen, and “Use Reflector” and “CQCQCQ” are displayed in “TO.”



4. Hold down [PTT] to transmit.

◇ Reflector Echo testing

To confirm that your signal is correctly reaching the repeater, you can transmit a short message as a test. After releasing [PTT], your message will be played back.

1. Touch “TO” to select, and then touch “TO” again.



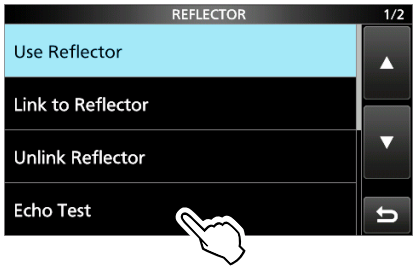
- The TO SELECT screen is displayed.

2. Select “Reflector.”

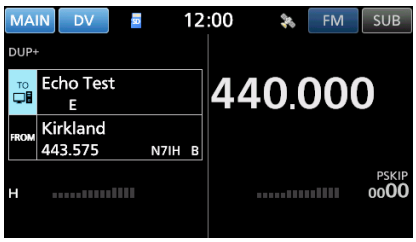


- The REFLECTOR screen is displayed.

3. Select “Echo Test.”



- Returns to the DR screen, and “Echo Test” and “E” are displayed in “TO.”



4. Hold down [PTT] and speak into the microphone.
5. Release [PTT] to hear your message.

Connecting to a reflector

◇ Requesting repeater information

When you send the repeater information command, an ID message is sent back.

1. Touch “TO” to select, and then touch “TO” again.



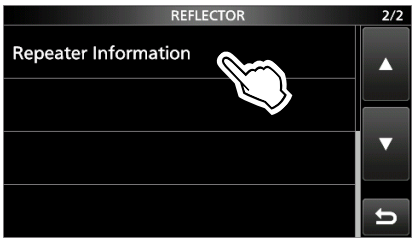
- Opens the TO SELECT screen.

2. Select “Reflector.”

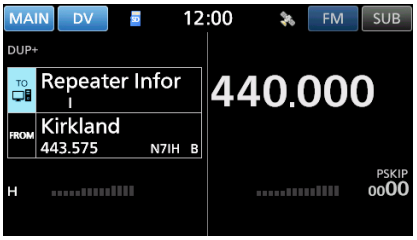


- The REFLECTOR screen is displayed.

3. Select “Repeater Information.”



- Returns to the DR screen, and “Repeater Information” and “I” are displayed in “TO.”



4. Hold down [PTT] to transmit the repeater Information command.
5. Release [PTT] to hear the repeater ID message.

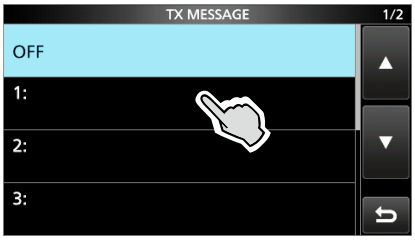
Message operation

You can save up to 5 short messages in the transceiver's memory to transmit in the DV mode. Each message can be up to 20 characters.

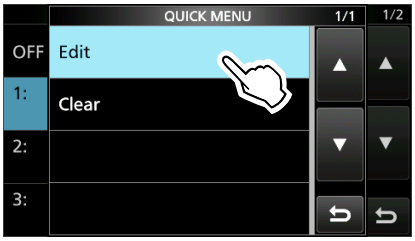
◇ Entering a TX message

Example: Entering "JAPAN TOM" into TX message memory number 1.

1. Open the TX MESSAGE screen.
   [MENU] > SET > My Station > **TX Message**
2. Touch a TX message memory number for 1 second.



3. Touch "Edit."



4. Enter a message of up to 20 characters, then touch [ENT].



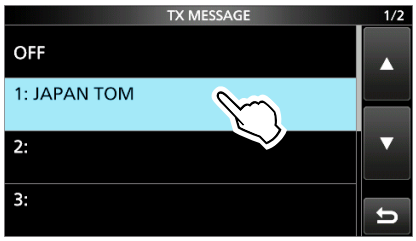
ⓘ See page ii on how to enter characters.

5. To close the TX MESSAGE screen, push [EXIT].

◇ Transmitting a message

You can transmit a preset TX message by pushing [PTT] in the DV mode. First, select a TX message which also turns ON the Message Transmission function.

1. Open the TX MESSAGE screen.
   [MENU] > SET > My Station > **TX Message**
2. Touch a TX Message memory number.



ⓘ To not transmit any message, touch "OFF."

3. To close the TX MESSAGE screen, push [EXIT].

ⓘ Information

- The message is transmitted with your voice signal.
- The message is transmitted each time you transmit.
- When continuously transmitting, the selected TX message is transmitted every 30 seconds.

TIP: RX call sign and message display
As the default, the received call sign and message are automatically displayed and scrolled.
To not display and scroll them, set RX Call Sign to "OFF."
([MENU] > SET > Display > **RX Call Sign Display**)

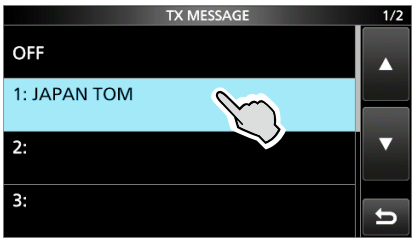
Message operation

◇ Deleting a TX message

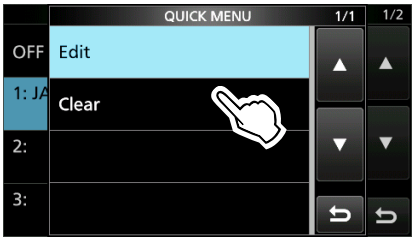
You can delete the TX messages.

Example: Deleting the entered TX message “JAPAN TOM” from TX message memory number 1.

1. Open the TX MESSAGE screen.
   [MENU] > SET > My Station > **TX Message**
2. Touch a TX message memory number for 1 second.

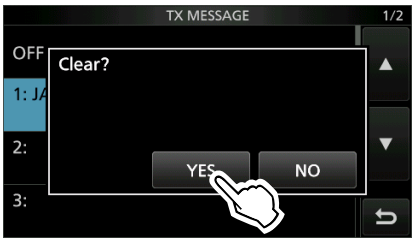


3. Touch “Clear.”



- The confirmation dialog is displayed.

4. Touch [YES].



- Clears the entered message.

5. To close the TX MESSAGE screen, push [EXIT].

Viewing received call signs

When you receive a DV call, the calling station and the repeater call signs are saved. Up to 50 calls can be saved.
When you receive the 51st call, the oldest call history is deleted.
ⓘ Even if the transceiver is turned OFF, the RX records are not deleted.

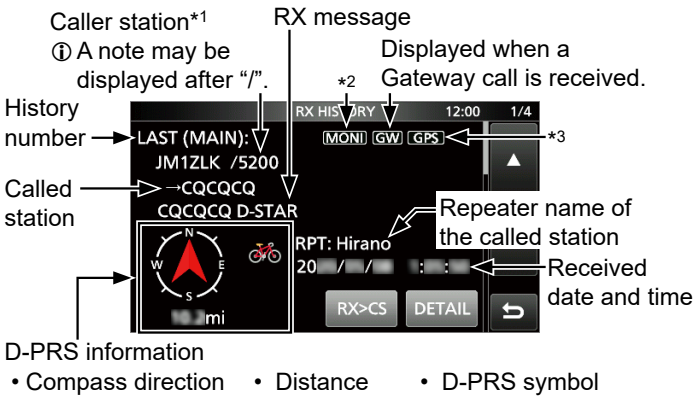
◇Viewing the call signs on the RX History screen

1. Push [CD] to open the RX HISTORY screen.
2. Touch an RX history memory to view the details.

ⓘ **Information**
- The first page of the "RX HISTORY" screen displays the latest RX record of the MAIN band. The second page or later displays the record according to the received date and time, regardless of the band it was received on.
- The RX history number, the caller's name (or call sign), destination, RX message, RX date and time, "GW," and "GPS" are displayed.
- "GW" is displayed when a Gateway call is received.
- "GPS" is displayed when the received call includes position data.
- "UP" is displayed when the repeater uplink signal is received.
- Touch [RX>CS] to temporarily enter the received call sign into "TO."
- In the QUICK MENU window, you can select the following options.

Call Sign Display:	The received data is displayed in the Call Sign Display mode.
Name Display:	The received data is displayed in the Name Display mode.
Add to RPT List:	Adds the repeater's call sign to the Repeater List.
Add To Your Memory:	Adds the caller station's call sign to Your Call Sign.
Delete:	Deletes the selected RX history.
Delete All:	Deletes all RX history.

RX HISTORY screen (MAIN)



*1 When a name is not entered in the DV Memory, the call sign is displayed.
*2 The icon differs, depending on how the signal is received.
- (No icon): The Normal mode (RF)
- TM: The Terminal mode
- MONI: The DV Repeater Monitor function

*3 The icon differs, depending on the D-PRS TX format.
- GPS: Position
- OBJ: Object
- ITEM: Item
- WX: Weather

3. Touch [DETAIL].
- Displays the RX history detail screen.

ⓘ Rotate [DIAL] to select the page.

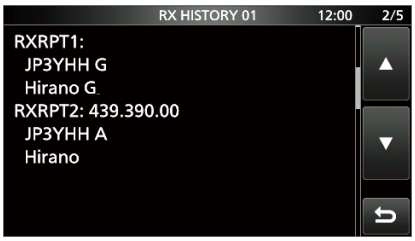
<1st page>
- **CALLER:** Displays the caller station's call sign and any note entered after the call sign.
- **CALLED:** Displays the called station's call sign.
  ⓘ "CQCQCQ" is displayed when receiving a Local Area call or Gateway call.

ⓘ When a name is entered in the DV Memory, the name is displayed.



<2nd page>
- **RXRPT1:** Displays the repeater's call sign that was accessed by the caller station. If the received call was a Gateway call, this item displays the gateway call sign of the repeater you received the call from.
- **RXRPT2:** Displays the repeater's call sign you received the call from.

ⓘ When a name is entered in the DV Memory, the repeater name is displayed.
ⓘ The operating frequency is displayed instead of the above items when the call was not through a repeater (Simplex call).

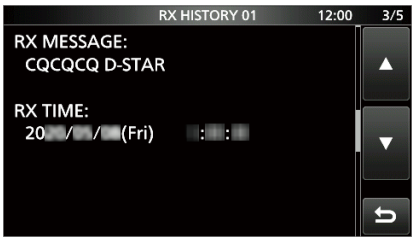


Viewing the received call signs

◇ View the call signs on the RX History screen

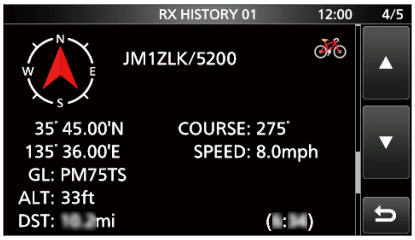
<3rd page>

- **RX MESSAGE:** Displays any message included in the received call if entered.
- **RX TIME:** Displays the date and time the call was received.



<4th, 5th page>

Displays the position data of the caller station. If a received signal has no data, then no position data is displayed.

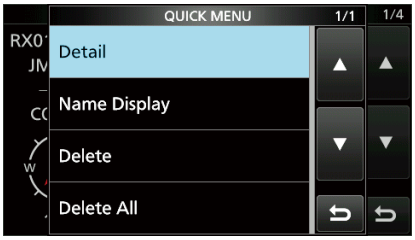




4. To close the RX HISTORY screen, push [EXIT].

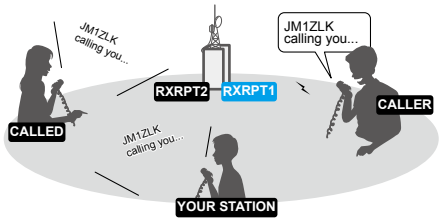
TIP: To delete RX HISTORY data

On the RX HISTORY or the detail screen, push [QUICK], then touch “Delete” or “Delete All.”

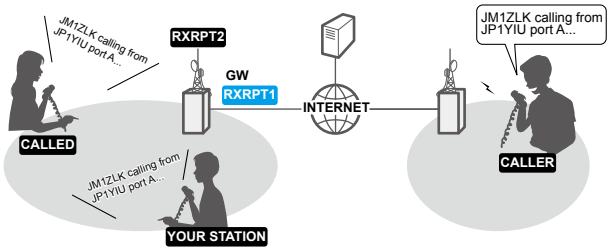


TIP: “RX RPT1” setting may differ, depending on the way the call was made.

Example 1: When a Local area call is received.



Example 2: When a Gateway call is received.

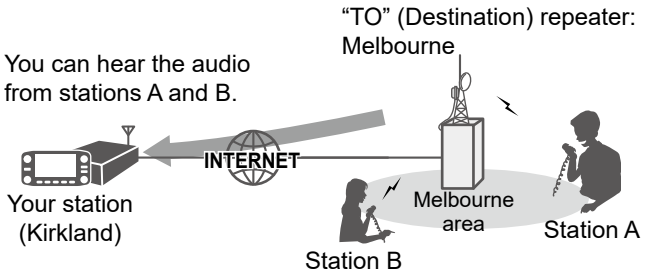


DV Repeater Monitor function

You can monitor a repeater that is selected in “TO” (Destination) through the Internet. While monitoring, you can receive a signal from an access repeater that is selected in “FROM.”

ⓘ You need a microSD card and an Internet connection to use the DV Repeater Monitor function.
ⓘ You can use this function while displaying the DR screen or in the Terminal mode.
ⓘ Some repeaters cannot be monitored.

Example: Station A and B are communicating through a repeater.

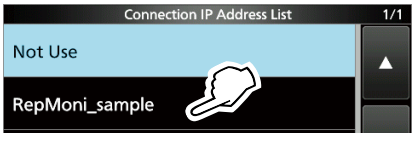


Step 1. Save the DV repeater’s IP address list file to the microSD card (PC)

1. Download the IP address list file (Example: RepMoni_sample.csv) from the Icom website. https://www.icomjapan.com/support/
2. Copy a file into the “ID-5200” > “RptMoni” folder on the microSD card.

Step 2. Select the IP address list file to use (Transceiver)

1. Insert the microSD card into the transceiver.
2. Open the “Connection IP Address List” screen.
   [MENU] > SET > DV Repeater Monitor Set > **Connection IP Address List**
3. Touch a file to use.



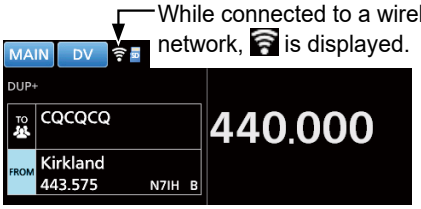
4. To close the DV REPEATER MONITOR SET screen, push [EXIT] several times.

Step 3. Connect to the Internet (Transceiver)

Connect the transceiver to a Wireless Access Point.

[MENU] > SET > Wi-Fi Set > **Wi-Fi**

ⓘ See page 12-8 for details.



Step 4. Set “TO” (Destination repeater) (Transceiver)

1. Hold down [DR] for 1 second to display the DR screen.
2. Touch “FROM” to set your access repeater.
3. Touch “TO” to set a repeater that you want to monitor.
4. Confirm the “MONI” icon is displayed.

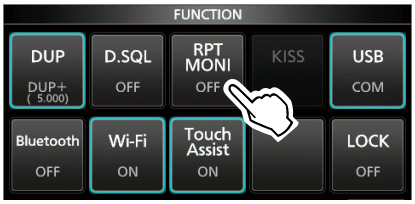


ⓘ The “MONI” icon is not displayed when:
- The transceiver is not connected to the Internet.
- The IP address list file is not selected.
- The selected repeater’s call sign and IP address (or domain name) are not included in the IP address list file.

TIP: When using the Terminal mode, open the DV GATEWAY screen, and then touch “<<Terminal Mode>>.” ([MENU] > **DV GW**)
ⓘ When using the External Gateway function, you cannot monitor the repeater.
ⓘ See the “About the DV Gateway function” that you can download on the Icom website.

Step 5. Turn ON the DV Repeater Monitor function (Transceiver)

1. Push [FUNC].
2. Touch [RPT MONI] to turn ON this function.



- Starts connecting to the destination repeater through the Internet.
- When using this function, the “MONI” icon displays the status.

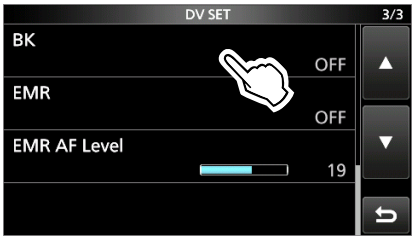
Icon	Status
MONI	The repeater can be monitored, but no connection
MONI	Connected to the repeater
M	Outputting the monitoring audio
M	Muting the monitoring audio (For example, while receiving a signal from your access repeater that is selected in “FROM.”)

ⓘ The Repeater Monitor function is activated for either the A band or the B band.
ⓘ This function is not turned OFF even if you change the destination repeater.
ⓘ The “MONI” icon may not change, depending on the repeater settings.

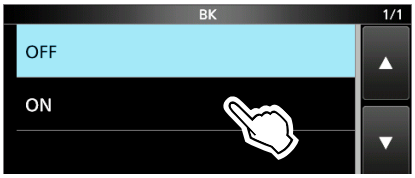
BK mode communication

The Break-in (BK) function enables you to break into a conversation, where the 2 stations are communicating with Digital Call Sign squelch (DSQL) enabled.
ⓘ The BK function is automatically turned OFF when you turn OFF the transceiver.

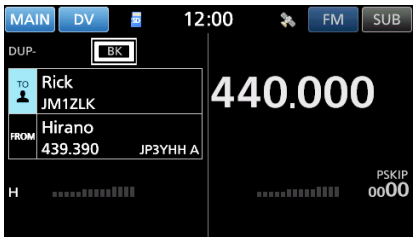
1. While 2 stations are communicating in the DV mode, touch [RX→CS] for 1 second.
   • Displays the RX>CS screen.
2. Touch the call sign.
   • The calling station's call sign or the repeater's call sign is set to "TO" (Destination).
   • Beeps sound, and the calling station's call sign is announced.
   ⓘ When a call sign is not received correctly, error beeps sound, and no call sign is set.
3. Open the BK screen.
   [MENU] > SET > DV Set > **BK**



4. Touch "ON."



5. To close the DV SET screen, push [EXIT] several times.

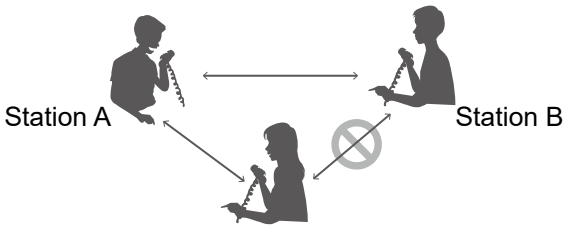


   • Returns to the Standby screen and "BK" is displayed.
6. When both stations are in standby, hold down [PTT] to transmit.
   ⓘ "BK" blinks when receiving a Break-in call.
   ⓘ To cancel the BK mode, select "OFF" in step 4, or turn OFF the transceiver.

How to use Break-in?

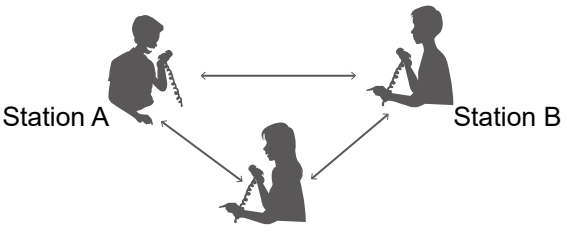
While using the Digital Call Sign squelch (DSQL), the squelch never opens (no audio is heard) even if a call is received, unless the call is addressed to your call sign.
However, when a call including the "BK ON" signal (break-in call) is received, the squelch opens, and audio is heard even if the call is addressed to another station.

Station C calling to Station A with "BK OFF"
Station A and B are communicating using the Digital Call Sign squelch.



Station C
Station B does not hear that Station C is calling Station A.

Station C calling to Station A with "BK ON"
Station A and B are communicating using the Digital Call Sign squelch.



Station C
Station B also hears that Station C is calling Station A.

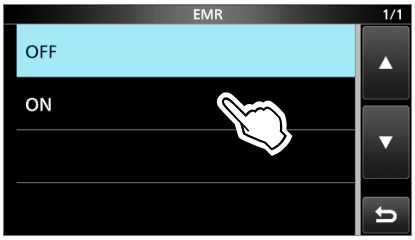
EMR communication

The Enhanced Monitor Request (EMR) communication function can be used only in the DV mode. Using the EMR function, no call sign setting is necessary.

ⓘ Information
- All transceivers that can receive an EMR signal automatically receive the signal. **DO NOT** use this function except in the case of an emergency.
- When an EMR signal is received, the audio (voice) is heard at the set level, even if the volume setting level is set to the minimum level.
- The EMR communication function is automatically turned OFF when you turn OFF the transceiver.

Example: Transmitting from the “Hirano” repeater using the EMR function.

1. Open the EMR screen.
   [MENU] > SET > DV Set > **EMR**
2. Touch “ON.”



3. To close the DV SET screen, push [EXIT] several times.
   - Returns to the Standby screen and “EMR” is displayed.

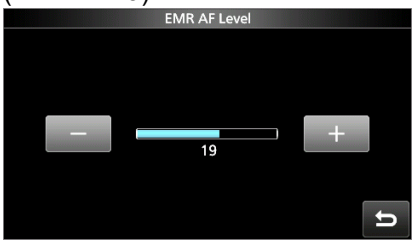


4. Hold down [PTT] to transmit.
   ⓘ “EMR” blinks on a station that receives the EMR signal. The audio (voice) is heard at the set level, or the [VOL] level, whichever is higher.
   ⓘ To cancel the EMR mode, select “OFF” in step 2, or turn OFF the transceiver.

◇ Adjusting the EMR AF level

The audio output level for an EMR signal is adjustable between 0 and 32.
When an EMR signal is received, the audio is heard at the preset level, or the [VOL] control level, whichever is higher.
To turn OFF the setting, set it to “0.”

1. Open the EMR AF Level screen.
   [MENU] > SET > DV Set > **EMR AF Level**
2. Touch [+] or [–] to adjust the EMR audio output level between 0 (OFF) and 32 (maximum). (Default: 19)



3. To close the EMR AF Level screen, push [EXIT].

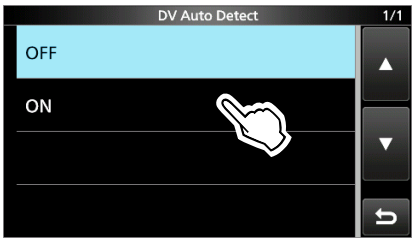
Automatic DV detection

If you receive an FM signal while in the DV mode, the “DV” and “FM” icons alternately blink to indicate that the received signal is FM.
When the DV Auto Detect function is ON, the transceiver automatically selects the FM mode to monitor it temporarily. (Default: OFF)

ⓘ Regardless of this setting, the “DV” and “FM” icons alternately blink if you receive an FM signal while in the DV mode.

NOTE: When Digital Call Sign squelch (DSQL), or Digital Code squelch (CSQL) is selected, the transceiver does not receive FM signals, even if this function is ON. You can silently wait for calls from others.

1. Open the “DV Auto Detect” screen.
   [MENU] > SET > DV Set > **DV Auto Detect**
2. Touch “ON.”



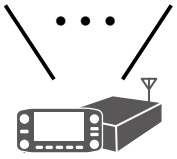
3. To close the DV SET screen, push [EXIT] several times.
   ⓘ When an FM signal is received while in the DV mode, the “DV” and “FM” icons sequentially blink, and the transceiver receives the signal in the FM mode.

When an FM signal is received while in the DV mode

DV Auto Detect function: OFF
The “DV” and “FM” icons alternately blink, but the audio cannot be heard.



The icons alternately blink.



You cannot hear the audio.



DV Auto Detect function: ON
The “DV” and “FM” icons alternately blink, and the audio can be heard.



The icons alternately blink.



You can hear the audio!



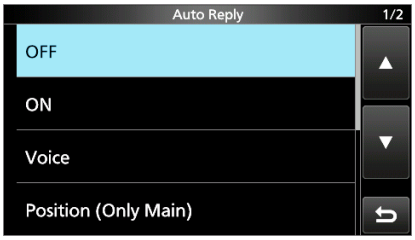
Automatic Reply function

When a call addressed to your call sign is received, the Automatic Reply function sounds beeps and automatically replies with your call sign.
(Default: OFF)
Depending on the setting, a recorded message may be transmitted with the call sign.

NOTE: The Automatic Reply function temporarily sets the received call sign to “TO” (destination).

TIP: To record the Auto Reply message
You can record the Auto Reply message.
See page 3-27 for details.
([MENU] > **DV A-RPLY**)

1. Open the “Auto Reply” screen.
   [MENU] > SET > DV Set > **Auto Reply**
2. Touch an option.



- **ON** *1**:** Automatically replies with your own call sign. (No audio reply is sent)
- **Voice** *1**:** Automatically replies with your own call sign and an Auto Reply message recorded on the microSD card (up to 10 seconds).
  ⓘ If no SD card is inserted, or no message is recorded, replies with only your own call sign (No audio reply is sent).
- **Position (Only Main)** *1, 2**:**
  When a signal designated to you is received, the internal GPS is momentarily turned ON, and your call sign and location are transmitted.
- **Position (Main/Sub)** *2**:**
  When a signal designated to you is received, the internal GPS is momentarily turned ON, and your call sign and location are transmitted.
  While dual watching, automatically replies when the signal is received in the MAIN or SUB Band.

3. To close the “Auto Reply” screen, push [EXIT] several times.
   - Returns to the Standby screen, and displays “A.”
   ⓘ When “ON” or “Voice” is selected, the Automatic Reply function is automatically turned OFF when you push [PTT].
   When “Position (Only Main)” or “Position (Main/Sub)” is selected, the Automatic Reply function remains ON, when you push [PTT].
   ⓘ When “ON” or “Voice” is selected, if the “GPS TX mode” is set to “D-PRS” or “NMEA,” data is transmitted according to that setting.

Example: After receiving a call from “JM1ZLK,” beeps sound, and the transceiver automatically sends a reply call.



The “TO” setting does not change, but “UR: JM1ZLK (Caller’s call sign)” is displayed.

*1 While dual watching, automatically replies when the signal is received in the MAIN Band.
*2 When “GPS Select” is set to “OFF” or “Manual,” the internal GPS receiver is temporarily turned ON.
(MENU > GPS > GPS Set > **GPS Select**)

When the “GPS Select” is set to “External GPS,” the transceiver transmits your position. But if the external GPS receiver is not connected, the internal GPS receiver is temporarily turned ON.

When “GPS TX Mode” is set to “D-PRS,” the position formats is automatically set “Position,” regardless of “TX Format” settings.
([MENU] > GPS > **GPS TX Mode**)
([MENU] > GPS > GPS TX Mode > D-PRS > **TX Format**)

Automatic Reply function

◇ Recording an Auto Reply message

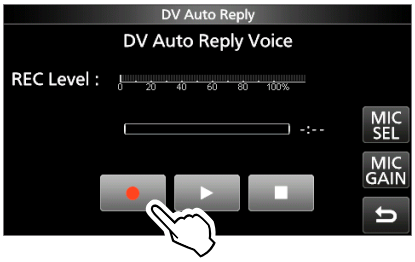
You can record the Auto Reply message that is saved on a microSD card to reply to the call with your voice.

NOTE: Confirm a microSD card is in the card slot.

1. Open the DV Auto Reply screen.
   [MENU] > **DV A-RPLY**



2. Touch ● to start recording.



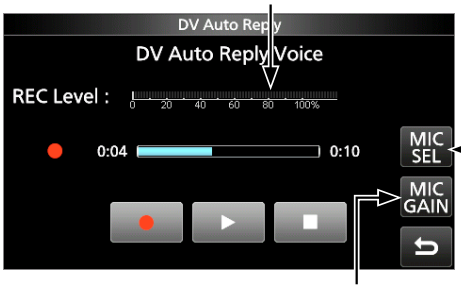
- Touch ■ to stop recording.
- Touch ▶ to play back the recorded message.

ⓘ Information
- The maximum recording time is 10 seconds.
- Hold the microphone 5 ~ 10 cm (2 ~ 4 inches) from your mouth, then speak at your normal voice level.
- Only 1 message can be recorded. The current contents are overwritten if you record again.

3. To close the DV Auto Reply screen, push [EXIT].

The DV Auto Reply screen

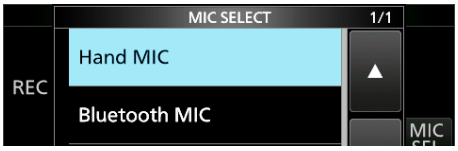
Adjust the Mic gain so that the “REC Level” meter reads less than 80%.



Touch to open the MIC GAIN adjustment window.



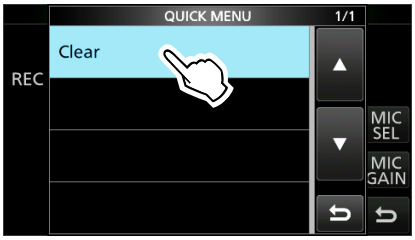
Touch to open the MIC SELECT window.



ⓘ When you select “Bluetooth MIC” without connecting a Bluetooth headset, “ ” is displayed.

TIP: How to clear the recorded content

Push [QUICK] on the DV Auto Reply screen, and then touch “Clear” in the QUICK MENU window.



Automatic Reply function

◇ Auto Position Reply function

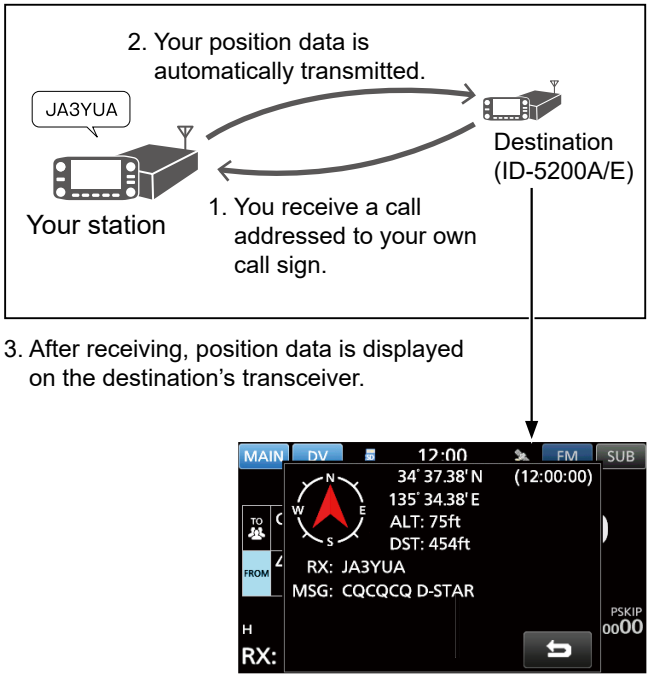
When you receive a call addressed to your call sign, but are in a situation that makes it difficult to operate the transceiver, this function sounds beeps and automatically replies with your own call sign and transmits your position data.

After receiving the Auto Position Reply call, the caller's position data is displayed in a window.

ⓘ Icom transceivers* display the position after receiving a call.

ⓘ You can turn OFF the caller's position display. (p. 10-25)
([MENU] > SET > Display > **Reply Position Display**)

* Except for the ID-31A/E, IC-9100, ID-880H/E880, IC-80AD/E80D, IC-92AD/E92D, IC-2820H/E2820, ID-800H, IC-91AD/E91, IC-V82, IC-U82



When no valid position data is received

After receiving a call addressed to your call sign, the internal GPS receiver is temporarily turned ON for approximately 5 minutes to receive your position data, even if "GPS Select" is set to "OFF," "External GPS (DATA)," or "Manual." Then, the transceiver automatically replies with a message, as described below.
([MENU] > GPS > GPS Set > **GPS Select**)

ⓘ When the internal GPS receiver is temporarily ON, and valid position data is received, the transceiver transmits your position data if a call addressed to your own call sign is received again.

TIP:
- The position data is transmitted according to the "GPS TX Mode." (p. 4-12)
- When the "GPS TX Mode" settings are incorrect for the Automatic Reply function, the transceiver automatically corrects them to reply to a call.
- When "GPS TX Mode" is set to "OFF," "D-PRS" is automatically selected.

Reply message list

Message	Status
No Position	When no position data is received.
Old Position	2 minutes or more has passed since receiving position data.
No Posi & GPS Start	The internal GPS receiver is temporarily turned ON but has not received your position data yet.
Old Posi & GPS Start	The internal GPS receiver is temporarily turned ON, and 2 minutes or more have passed since receiving position data.

Data communication

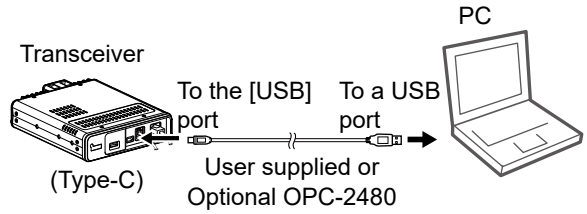
In addition to digital voice communication, you can send and receive data. Also, you can use the DV Fast Data function for data communication (p. 3-30)
To send and receive data, a USB cable (user supplied or optional) or an optional data cable, and a data communication software (user supplied) are required.

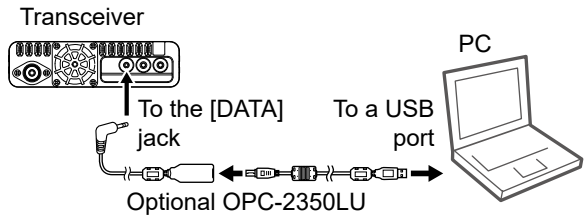
ⓘ Confirm your USB cable is usable for data transfer and not for charging only.
ⓘ Confirm that the USB cable's driver is installed on your PC.

NOTE: "DV Data TX" is set to "Auto" as the default setting. When you enter text data into your communication software, the transceiver may automatically transmit it, depending on the software and the software settings.

◇ Connection

Connect the transceiver to your PC using a USB cable, as shown below.





ⓘ Confirm your USB cable fits the transceiver's USB port (Type-C) and your PC's USB port.

NOTE: Before you start sending data, **BE SURE** to set the following items.

- ([MENU] > GPS > GPS Set > **GPS Select**)
  Set "GPS Select" to something other than "External GPS (DATA)."

When connecting to the [USB]

- ([MENU] > SET > Connectors > Serialport Function > **USB (B) Function**)
  Set "USB (B) Function" to "DV Data."
- ([MENU] > SET > Function > **USB Connect**)
  Set "USB Connect" to "Serialport."

When connecting to the [DATA]

- ([MENU] > SET > Connectors > Serialport Function > **DATA Function**)
  Set "DATA Function" to "DV Data."

◇ Data communication application setting

Set the communication software, as shown below.

- Port: The COM port number that is used by the ID-5200A/E*1
- Baud rate: [USB] port Your desired speed
  [DATA] jack 4800/9600 bps*2
- Data: 8 bit
- Parity: none
- Stop: 1 bit
- Flow control: Xon/Xoff

*1 Depending on the PC environment, the COM port number used by the ID-5200A/E may be higher than 5. In that case, use an application that can set it to higher than 5.
*2 Set the baud rate in Data Speed.
([MENU] > SET > Connectors > Serialport Function > **DV Data Baud Rate(DATA)**)

◇ Sending data

1. Set your call sign, the destination call sign, and the repeater call sign.
2. Follow the instructions of your data communication application software.
3. When you enter text data into your communication software, the transceiver may automatically transmit it, depending on the software and its settings.
   ⓘ When "DV Data TX" is set to "PTT," pushing [PTT] transmits the text data and a voice signal. (p. 10-17)
   ([MENU] > SET > DV Set > **DV Data TX**)
   ⓘ Before transmitting the data, the transceiver sends a carrier sense signal for approximately 500 milliseconds.

NOTE:

- Only ASCII code can be used for data communication.
- The transceiver also has the Message Transmission function that transmits up to 20 characters. (p. 3-18)
- Depending on the combination of your PC and your communication software, some data may be lost.
- While receiving voice or data through the Internet, some packets may be lost due to network errors (poor data throughput performance). In such a case, an "L" is displayed on the screen to indicate that packet loss has occurred.

Data communication

◇ DV Fast Data function

To send data using the DV Fast Data function, follow the instructions below.

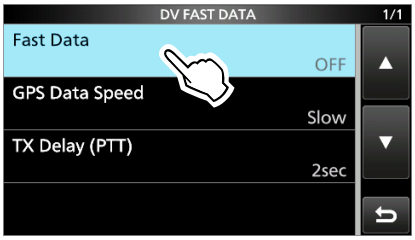
ⓘ DV Fast Data communication can be made by only the following Icom transceivers. (As of August 2026)

- IC-705
- IC-905
- IC-9700
- ID-31A/E PLUS
- ID-4100A/E
- ID-5100A/E*
- ID-5200A/E
- ID-50A/E
- ID-51A/E (PLUS, PLUS2, 50th Anniversary model)
- ID-52A/E
- ID-52A/E PLUS

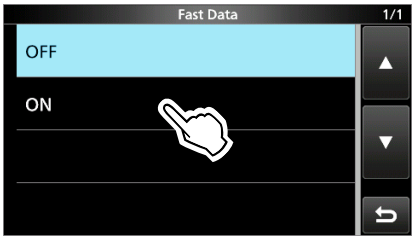
* Usable only when firmware versions CPU M 1.10, S 1.00, C 1.10, and DSP 1.10 or later are installed.

NOTE: If you want to send GPS data to other transceivers that can receive only slow-speed data, set “GPS Data Speed” to “Slow.” (p. 10-17)
([MENU] > SET > DV Set > DV Fast Data > **GPS Data Speed**)

1. Open the DV FAST DATA screen.
   [MENU] > SET > DV Set > **DV Fast Data**
2. Touch “Fast Data.”



3. Touch “ON.”



4. To close the DV FAST DATA screen, push [EXIT] several times.

About the display type

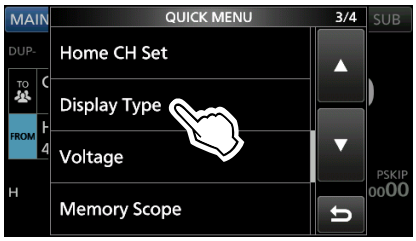
You can enlarge the characters, such as the repeater name displayed by the DR function.

ⓘ This setting can be used only when the Dual band display is selected.

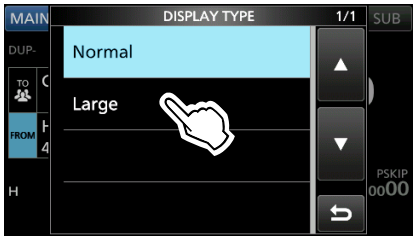
1. Select the Main band in the Dual band display that you want to change.



2. Push [QUICK].
3. Touch “Display Type.”



4. Touch “Large.”





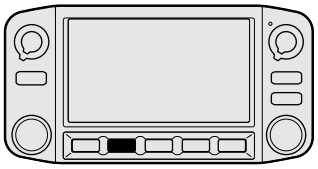
- The characters, such as the repeater name, are displayed larger.

Digital squelch functions

The digital squelch opens only when you receive a signal addressed to your own call sign or a signal that includes a matching digital code.
You can silently wait for calls from others.
You can independently set the Digital squelch function in the VFO mode, Memory mode, Call channel mode, or DR function.

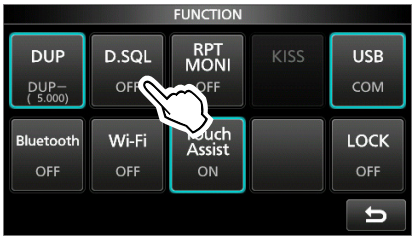
◇ The Digital Call Sign squelch setting

1. Push [FUNC].



[FUNC]

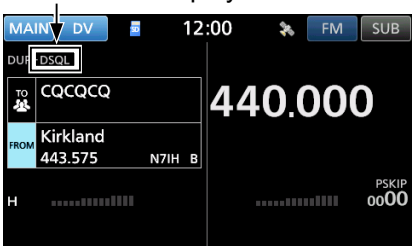
2. Touch [D.SQL] several times to select “DSQL.”



ⓘ Touching [D.SQL] selects “DSQL,” “CSQL,” or “OFF.”

3. To close the FUNCTION screen, push [EXIT].

“DSQL” is displayed.



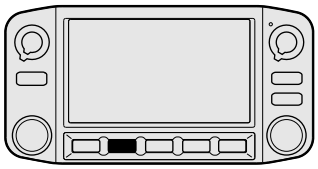
- When the received signal includes a matching call sign, the squelch opens, and you can hear the audio.

ⓘ When the received signal does not include a matching call sign, the digital call sign squelch does not open. However, the S/RF meter displays the received signal level.

NOTE:
- **DO NOT** use the Digital Call Sign Squelch function when communicating with 2 or more stations, because it opens only when receiving a signal addressed to your call sign. Therefore, the function can be used when communicating with only 1 station.
- Even if the squelch is closed by the Digital Call Sign Squelch function, you can receive data in the DV mode.

◇ The Digital Code Squelch setting

1. Push [FUNC].



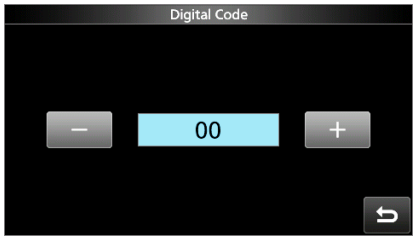
[FUNC]

2. Touch [D.SQL] several times to select “CSQL.”



ⓘ Touching [D.SQL] selects “DSQL,” “CSQL,” or “OFF.”

3. Touch [D.SQL] for 1 second.
4. Rotate [DIAL] to select a digital code.



- When the received signal includes a matching code, the squelch opens, and you can hear the audio.

ⓘ When the received signal does not include a matching code, the digital code squelch does not open. However, the S/RF meter displays the signal level.

5. To close the Digital Code screen, push [EXIT].

NOTE: Even if the squelch is closed by the Digital Code Squelch function, you can receive data in the DV mode.

Repeater list

You can save repeater information for quick, simple communication with up to 2500 repeaters (repeater list) across up to 50 groups.
Data must be in the repeater list to use the DR function.
You can add and edit repeater content and groups in the repeater list.
You can enter 4 types of frequencies into the repeater list, as shown below:

- DV Repeater
- DV Simplex
- FM Repeater
- FM Simplex

TIP:

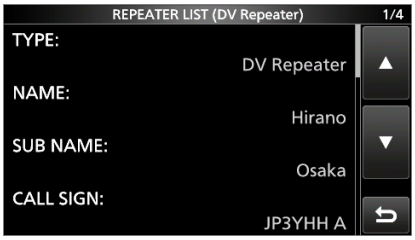
- For easy operation, the repeater list is preloaded into your transceiver. However, if you do an All Reset, the CPU deletes all setting data, the Memory channels, and the repeater list. We recommend that you back up the memory data to a microSD card or save it to a PC using the CS-5200 PROGRAMMING SOFTWARE.
- The repeater list can be downloaded from the Icom website. See "Updating the repeater list," which can be downloaded from the Icom website, about how to update the repeater list using a microSD card.
  https://www.icomjapan.com/support/

◇ Repeater list contents

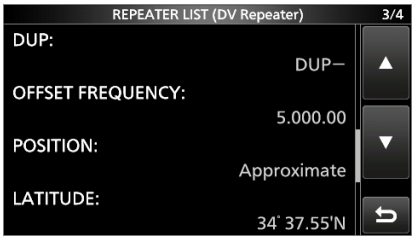
The following contents are included in the repeater list:

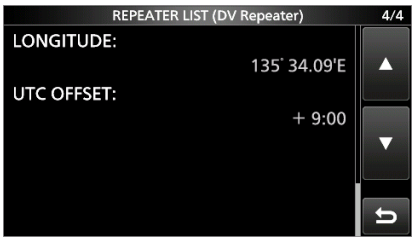
- TYPE: Communication type (p. 3-34)
- NAME: Repeater name (p. 3-34)
- SUB NAME: Repeater sub name (p. 3-34)
- CALL SIGN: Repeater call sign and port letter (p. 3-34)
- GW CALL SIGN: Gateway repeater's call sign and port "G" (p. 3-34)
- GROUP: Repeater group (p. 3-35)
- USE (FROM): access repeater use (p. 3-35)
- FREQUENCY: access repeater's frequency (p. 3-35)
- DUP: Duplex direction (p. 3-35)
- OFFSET FREQUENCY: Frequency offset (p. 3-35)
- MODE: Operating mode (p. 3-36)
- TONE: Tone setting (p. 3-36)
- REPEATER TONE: Repeater tone (p. 3-36)
- POSITION: Position data accuracy level (p. 3-36)
- LATITUDE: Latitude of the repeater (p. 3-36)
- LONGITUDE: Longitude of the repeater (p. 3-37)
- UTC OFFSET: UTC Offset (p. 3-37)

Example: "Hirano" repeater information









Entering new information into the repeater list

This section describes how to manually enter new repeater information into the repeater list.
The required settings differ depending on your communication usage. Confirm the required items, as shown below.

NOTE: To enter repeater information into the repeater list, the repeater's call sign must be entered first.



◇ Required items for the communication cases

Repeater list contents	Used as an access repeater	Used as a destination repeater	Used as an FM repeater	Simplex (FROM)	
TYPE	DV Repeater	DV Repeater	FM Repeater	DV Simplex	FM Simplex
NAME	○	○	○	○	○
SUB NAME	○	○	○	○	○
CALL SIGN	●	●	○	N/A	N/A
GW CALL SIGN	● (For a Gateway call)	●	N/A	N/A	N/A
GROUP	○	○	○	○	○
USE(FROM)	●	○	●	●	●
FREQUENCY	●	○	●	●	●
DUP	●	○	●	N/A	N/A
OFFSET FREQUENCY	●	○	●	N/A	N/A
MODE	N/A	N/A	○	N/A	○
TONE	N/A	N/A	○	N/A	○
REPEATER TONE	N/A	N/A	○	N/A	○
POSITION	○	○	○	○	○
LATITUDE	○	○	○	○	○
LONGITUDE	○	○	○	○	○
UTC OFFSET	○	○	○	○	○

●: Must be entered
○: Possible to enter
N/A: Not Applicable

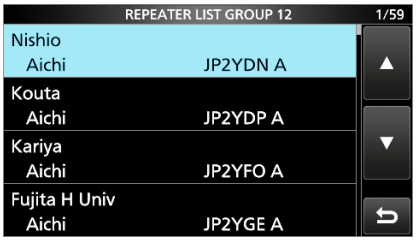
◇ Entering new information into the repeater list

Step 1. Selecting the repeater group

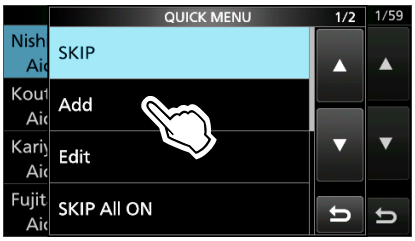
1. Open the Repeater List screen.
   [MENU] > DV MEMORY > **Repeater List**
2. Touch a repeater group to add a repeater to.



- Displays the repeater list of the selected repeater group.



3. Push [QUICK].
4. Touch “Add.”



- The REPEATER LIST EDIT screen is displayed.

Step 2. Selecting the communication type

1. Touch “TYPE.”
2. Touch the communication type.
   - **DV Repeater:** Repeater operation in the DV mode.
   - **DV Simplex:** Simplex operation in the DV mode.
   - **FM Repeater:** Repeater operation in the FM mode.
   - **FM Simplex:** Simplex operation in the FM mode.

Step 3. Entering the repeater name

1. Touch “NAME.”
2. Enter a name of up to 16 characters.
   ⓘ See page ii on how to enter characters.
3. After entering, touch [ENT].

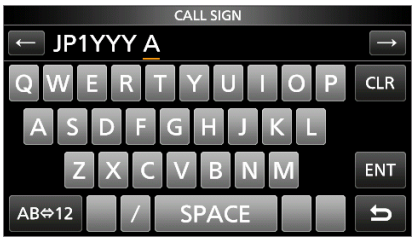
Step 4. Entering the repeater sub name

1. Touch “SUB NAME.”
2. Enter a sub name of up to 8 characters.
   ⓘ See page ii on how to enter characters.
3. After entering, touch [ENT].

Step 5. Entering the repeater call sign

ⓘ When **Step 2. Selecting the communication type** is set to “DV Simplex” or “FM Simplex,” go to **Step 7. Changing the repeater group**.

1. Touch “CALL SIGN.”
2. Enter the repeater call sign of up to 8 characters, including spaces and the node letter.



NOTE: BE SURE to add the repeater node letter in the 8th digit of the call sign, according to the frequency band shown below. Note that there are almost always different node letters between Japanese D-STAR repeaters and repeaters in other countries.
Cross band operation between different nodes at the same repeater site can be made.
- 1200 MHz: A (B in Japan)
- 430 MHz: B (A in Japan)
- 144 MHz: C (no repeaters in Japan)

3. After entering, touch [ENT].

Step 6. Entering the gateway repeater call sign

ⓘ This item is displayed when **Step 2. Selecting the communication type** is set to “DV Repeater.”
ⓘ The 8th digit in the call sign entered in **Step 5. Entering the repeater call sign** is automatically set to “G” as the gateway port, so you can skip this setting and go to the next item.

1. Touch “GW CALL SIGN.”
2. Enter a gateway repeater call sign of up to 8 characters, including spaces.
   ⓘ Only a space or “G” can be entered in the 8th digit.



3. After entering, touch [ENT].

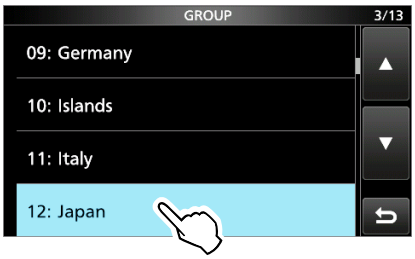
Entering new information into the repeater list

◇ Entering new information into the repeater list

Step 7. Changing the repeater group

ⓘ The repeater group that is selected in **Step 1. Selecting the repeater group** is displayed. You can skip this setting and go to the next item. To change the group, follow the steps described below.

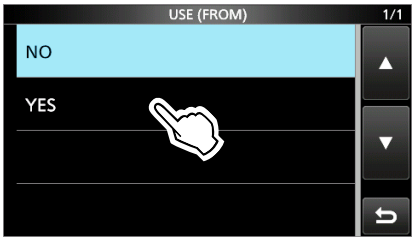
1. Touch “GROUP.”
2. Touch the repeater group. (01 ~ 50)



Step 8. Setting “USE(FROM)” to be used as an access repeater

ⓘ You can use the entered repeater as an access repeater when using the DR function. When not using as an access repeater, select “NO,” and go to **Step 15. Selecting the position data accuracy level**. In that case, the entered repeater is not displayed in “FROM” on the DR screen.

1. Touch “USE(FROM).”
2. Touch “YES” to use the repeater as an access repeater.



Step 9. Entering the access repeater frequency

1. Touch “FREQUENCY.”
2. Enter the repeater frequency.



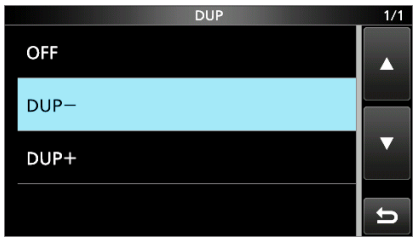
3. After entering, touch [ENT].

Step 10. Selecting the Duplex direction

ⓘ When **Step 2. Selecting the communication type** is set to “DV Simplex” or “FM Simplex,” this item is not displayed.

ⓘ “DUP–” is automatically set when the access repeater frequency is entered in **Step 9. Entering the access repeater frequency**. If necessary, you can change the Duplex direction.

1. Touch “DUP.”
2. Touch a Duplex direction.



- **OFF:** Turn the duplex function OFF.
- **DUP–:** The transmit frequency shifts down from the receive frequency by the offset amount.
- **DUP+:** The transmit frequency shifts up from the receive frequency by the offset amount.

Step 11. Entering the frequency offset

ⓘ When **Step 2. Selecting the communication type** is set to “DV Simplex” or “FM Simplex,” this item is not displayed.

ⓘ The offset value* is automatically set when the access repeater frequency is entered in **Step 9. Entering the access repeater frequency**. If necessary, you can change the frequency offset.

* The default value differs, depending on the transceiver version.

1. Touch “OFFSET FREQUENCY.”
2. Enter the frequency offset. (0.000.00 ~ 59.995.00 MHz).



3. After entering, touch [ENT].

Entering new information into the repeater list

◇ Entering new information into the repeater list

Step 12. Setting the FM mode

ⓘ When **Step 2. Selecting the communication type** is set to “DV Repeater” or “DV Simplex,” this item is not displayed.

1. Touch “MODE.”
2. Touch “FM” or “FM-N.”



Step 13. Setting the tone

ⓘ When **Step 2. Selecting the communication type** is set to “DV Repeater” or “DV Simplex,” this item is not displayed.

1. Touch “TONE.”
2. Touch an option.



- **OFF:** Turn OFF the Tone function.
- **TONE:** Select when the repeater requires an access tone.
- **TSQL:** Select when you want to use the tone squelch in simplex operation.

Step 14. Selecting the repeater tone frequency

ⓘ When **Step 2. Selecting the communication type** is set to “DV Repeater” or “DV Simplex,” this item is not displayed.

ⓘ This setting is required when **Step 13. Setting the tone** is set to “TONE” or “TSQL.”

1. Touch “REPEATER TONE.”
2. Set the repeater tone frequency.



3. Push [EXIT].

Step 15. Selecting the position data accuracy level

ⓘ When the Near Repeater Search function is not used, or the distance between your location and a repeater is not needed, select “OFF,” and go to **Step 18. Setting the UTC offset**.

1. Touch “POSITION.”
2. Touch the position data accuracy level.



- **None:** Select when the repeater has no position data.
- **Approximate:** Select when the entered position data is approximate.
- **Exact:** Select when the entered position data is exactly correct.

Step 16. Entering the latitude

ⓘ This item is displayed only when **Step 15. Selecting the position data accuracy level** is set to “Approximate” or “Exact.”

1. Touch “LATITUDE.”
2. Enter the latitude.



ⓘ Touching [N/S] selects a north latitude (N) or a south latitude (S).

3. After entering, touch [ENT].

Entering new information into the repeater list

◇ Entering new information into the repeater list

Step 17. Entering the longitude

ⓘ This item is displayed only when **Step 15. Selecting the position data accuracy level** is set to “Approximate” or “Exact.”

1. Touch “LONGITUDE.”
2. Enter the longitude.



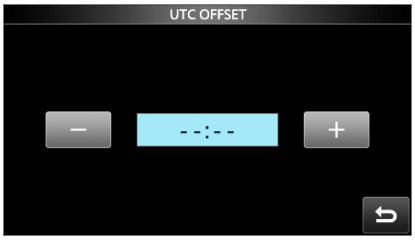
ⓘ Touching [E/W] selects an east longitude (E) or a west longitude (W).

3. After entering, touch [ENT].

Step 18. Setting the UTC offset

ⓘ Universal Time Coordinated (UTC) offset is the time difference between UTC and the repeater’s local time. This is a useful function to know the repeater’s local time before you make a call. (p. 3-13)

1. Touch “UTC OFFSET.”
2. Set the time difference between UTC and the local time.



3. Push [EXIT].

Step 19. Saving the repeater list

1. Touch “<<Add Write>>.”
   • The confirmation dialog is displayed.
2. Touch [YES].



• The entered contents are saved to the repeater list, and the display returns to the selected repeater group screen.

TIP: To cancel the entered data

1. Push [EXIT].
   • The confirmation dialog is displayed.
2. Touch [YES].



• Cancels the entry and returns to the selected repeater group screen.

Repeater list operation

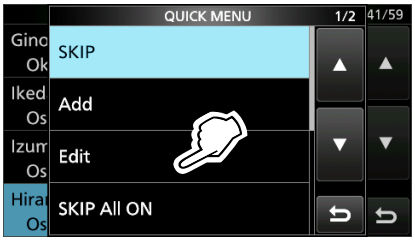
◇ Editing repeater data

You can edit repeater data. This is useful when already-entered data is incorrect, has changed, or some data needs to be added to the list.

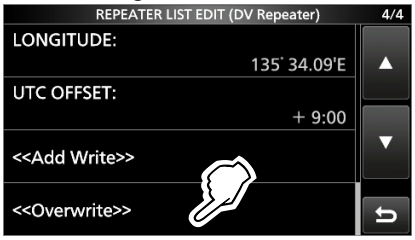
1. Open the REPEATER GROUP screen.
   [MENU] > DV MEMORY > **Repeater List**
2. Touch a repeater group where the repeater you want to edit is listed. (Example: 12: Japan)



3. Touch a repeater that you want to edit for 1 second. (Example: Hirano)
4. Touch “Edit.”

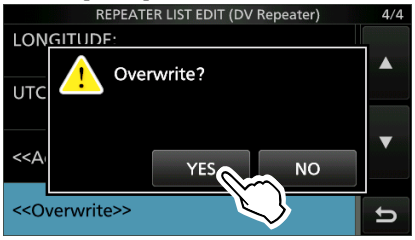


5. Touch an item, and then edit it.
   ⓘ See pages 3-34 ~ 3-37 for details.
6. After editing, touch “<<Overwrite>>.”



- The confirmation dialog is displayed.

7. Touch [YES].

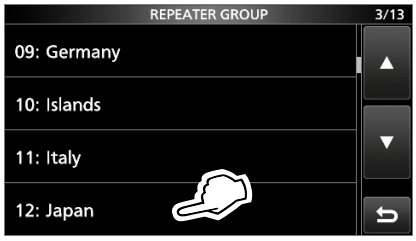


- The edited contents are saved to the repeater list and returned to the selected repeater group screen.

8. To close the Repeater List screen, push [EXIT] several times.

◇ Deleting repeater data

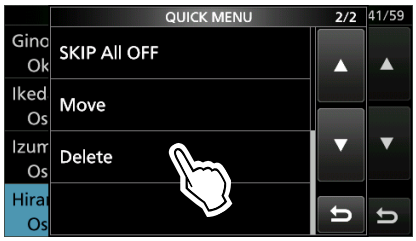
1. Open the REPEATER GROUP screen.
   [MENU] > DV MEMORY > **Repeater List**
2. Touch a repeater group that lists the repeater you want to delete. (Example: 12: Japan)



3. Touch a repeater that you want to delete for 1 second. (Example: Hirano)

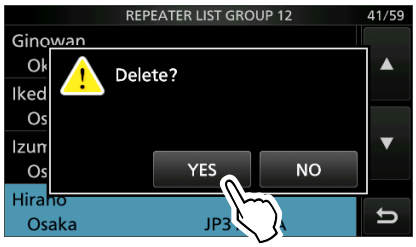


4. Touch “Delete.”



- The confirmation dialog is displayed.

5. Touch [YES].



- The selected repeater contents are deleted from the repeater list and return to the selected repeater group screen.

6. To close the Repeater List screen, push [EXIT] several times.

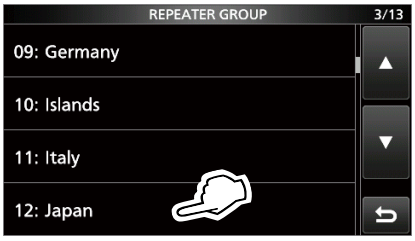
NOTE: The currently selected repeater on the DR screen cannot be edited or deleted. To edit or delete the repeater, select another repeater on the DR screen.

Repeater list operation

◇ Rearranging the display order of the repeaters

You can move the entered repeaters to rearrange their display order in the selected repeater group.

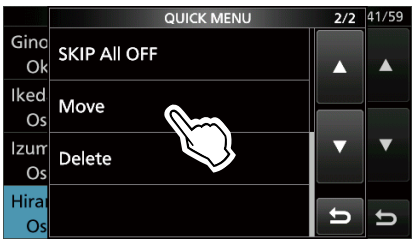
1. Open the REPEATER GROUP screen.
   [MENU] > DV MEMORY > **Repeater List**
2. Touch a repeater group where the repeater you want to move is listed. (Example: 12: Japan)



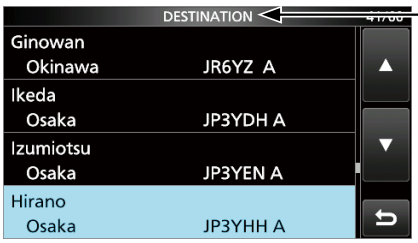
3. Touch a repeater that you want to move for 1 second. (Example: Hirano)



4. Touch “Move.”



5. Touch a repeater to insert the repeater you want to move above it.



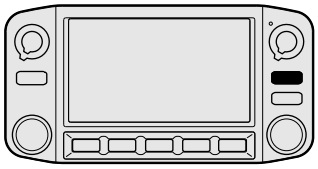
- The selected repeater is inserted above the destination repeater name.

ⓘ If you touch “<<Move End>>,” the repeater is moved to the bottom of the group.

6. To close the Repeater List screen, push [EXIT] several times.

◇ Adding new repeater information from RX History

1. Push [CD] to open the RX HISTORY screen.



2. Rotate to display the repeater you want to add to the repeater list.
3. Touch [DETAIL].
4. Rotate [DIAL] to display “RXRPT1” and “RXRPT2.”



5. Push [QUICK].
6. Touch “Add To Repeater List.”



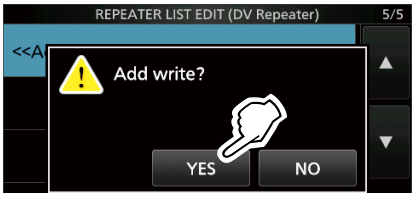
7. Touch the repeater call sign that you want to add to the repeater list.



- Displays the REPEATER LIST EDIT screen. The selected repeater call sign is automatically entered.

ⓘ See pages 3-34 ~ 3-37 to edit the contents.

8. Touch “<<Add Write>>.”
   - The confirmation dialog is displayed.
9. Touch [YES].



- The repeater contents are added to the repeater list, and the display returns to the RX HISTORY screen.

Repeater list operation

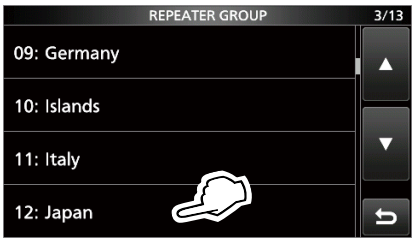
◇ Skip setting for the DR scan

You can set repeaters as scan skip repeaters. The selected repeaters are skipped for faster scanning. You can set the skip setting to all repeaters in the selected repeater group or individual repeaters.

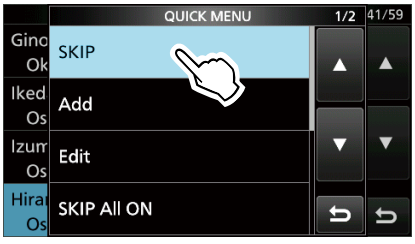
ⓘ When a repeater is set as a skip repeater, its “USE (FROM)” setting is automatically set to “NO.” In that case, the repeater cannot be selected in “FROM” (access repeater) on the DR screen.

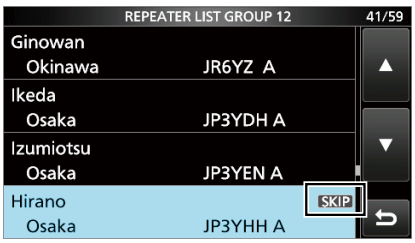
<Individual skip setting>

1. Open the REPEATER GROUP screen.
   [MENU] > DV MEMORY > **Repeater List**
2. Touch a repeater group where the repeater you set the skip setting for is listed.
   (Example: 12: Japan)



3. Touch a repeater that you want to skip for 1 second. (Example: Hirano)
4. Touch “SKIP.”





- Displays “SKIP” in the upper right corner.

ⓘ To cancel the skip setting, touch “SKIP” again.

ⓘ To set the skip setting to all repeaters in the group, touch “SKIP All ON.”

5. To close the Repeater List screen, push [EXIT] several times.

<Group skip setting>

6. On the REPEATER GROUP screen, push [QUICK], then touch “SKIP All ON” to skip the repeaters in the group during the DR scan.



ⓘ To cancel the skip settings in the group, touch “SKIP All OFF.”

TIP:

- When you select “Repeater List” on the FROM SELECT screen, you can set the skip setting as described to the left.
- When “FROM” is selected on the DR screen, push [QUICK], then touch “SKIP” to set the skip setting, as shown below.



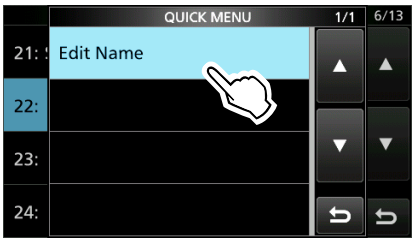


ⓘ Displays “SKIP” in the “FROM” field.

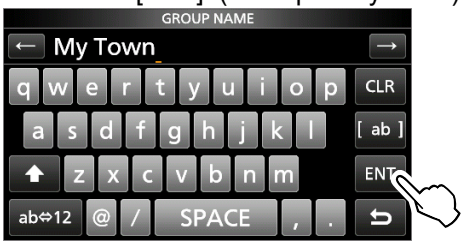
Repeater list operation

◇ Entering or editing a repeater group name

1. Open the REPEATER GROUP screen.
   [MENU] > DV MEMORY > **Repeater List**
2. Touch a repeater group for which you edit the name for 1 second.
3. Touch “Edit Name.”



4. Enter a group name of up to 16 characters, and then touch [ENT]. (Example: My Town)



5. To close the REPEATER GROUP screen, push [EXIT] several times.

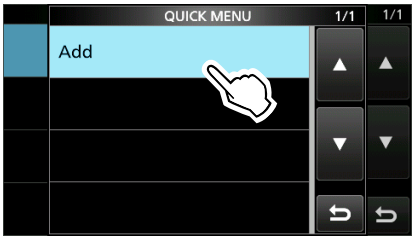
Your Call Sign

◇ Entering Your Call Sign

You can manually enter a Your (destination) Call Sign. When a Your Call Sign is entered into “TO,” you can make a call to the station, even if you do not know where the station is currently located.
Up to 300 “Your Call Signs” can be entered.

[MENU] > DV MEMORY > **Your Call Sign**

1. Open the YOUR CALL SIGN screen.
2. Push [QUICK].
3. Touch “Add.”



4. Touch “NAME:.”



5. Enter a station name of up to 16 characters, and then touch [ENT]. (Example: Rick)



ⓘ See page ii on how to enter characters.

6. Touch “CALL SIGN:.”



7. Enter a call sign of up to 8 characters, including spaces, and then touch [ENT]. (Example: JM1ZLK)



8. Touch “<<Add Write>>.”



- The confirmation dialog is displayed.

9. Touch [YES].



- “Rick JM1ZLK” is entered into the Your Call Sign memory.

10. To close the YOUR CALL SIGN screen, push [EXIT] several times.

Your Call Sign

◇ Entering Your Call Sign

TIP:

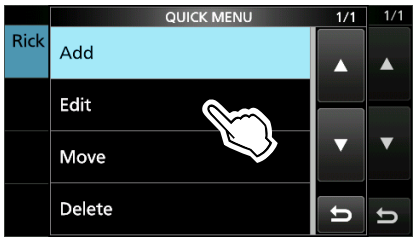
To cancel the entered call sign

1. Push [EXIT], then the “Cancel edit?” window is displayed.
2. Touch [YES] to cancel the entry and return to the YOUR CALL SIGN screen.



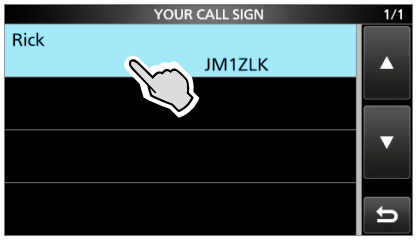
To edit the entered call sign

Touch “Edit” in step 3.

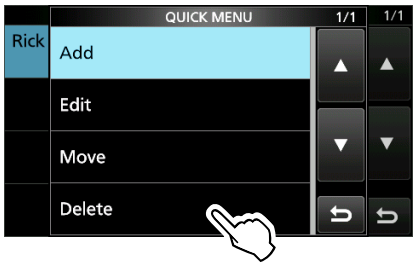


◇ Deleting Your Call Sign

1. Open the YOUR CALL SIGN screen.
   [MENU] > DV MEMORY > **Your Call Sign**
2. Touch a call sign that you want to delete for 1 second.

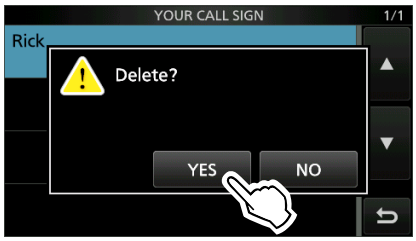


3. Touch “Delete.”



- A confirmation dialog is displayed.

4. Touch [YES].





- The selected call sign is deleted from the Your Call Sign list and returns to the YOUR CALL SIGN screen.

5. To close the YOUR CALL SIGN screen, push [EXIT] several times.

NOTE: The currently selected Your Call Sign on the DR screen cannot be edited or deleted. To edit or delete the Your Call Sign, select another Your Call Sign on the DR screen.

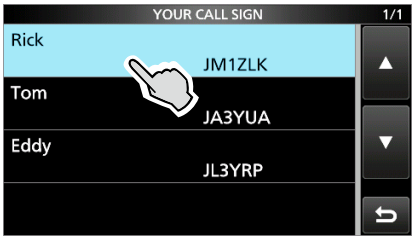
Your Call Sign

◇ Rearranging the display order of Your Call Signs

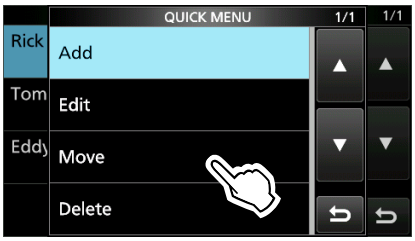
You can move Your Call Signs to rearrange their display order. If the stations you often communicate with are moved to the top of the list, they are easy to find them.

Example: Moving “Rick” above “Eddy.”

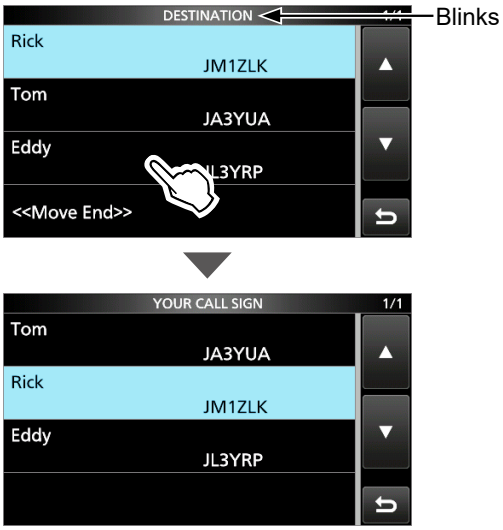
1. Open the YOUR CALL SIGN screen.
   [MENU] > DV MEMORY > **Your Call Sign**
2. Touch a call sign that you want to move for 1 second.



3. Touch “Move.”



4. Touch the position to insert the Your Call Sign you want to move the call sign above.



- While moving, “DESTINATION” blinks.
- The selected call sign is inserted above the destination call sign.

ⓘ If you touch “<<Move End>>,” the Your Call Sign is moved to the bottom of the group.

5. To close the YOUR CALL SIGN screen, push [EXIT] several times.

Manually setting Call Signs

Set or view the “UR,” “R1,” “R2,” and “MY” call signs to use in the DV mode.

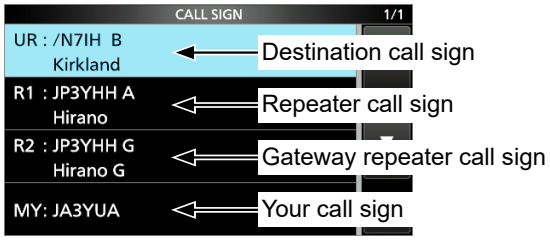
When not using the DR function, set the call signs on this screen.

For Simplex operation (DV mode)
You can set the “UR” and “MY” call signs.

For Duplex (repeater) operation (DV mode/DR function)
You can set only the “MY” call sign when the DR function is ON.

<To manually set the Duplex (repeater) operation>

Example: Making a gateway CQ call to Kirkland repeater (N71H B) from the Hirano repeater (JP3YHH A), in the DV mode.



ⓘ Before setting the call sign, set the frequency of your Access repeater and the duplex direction on the standby screen.

TIP: When the Digital Repeater Set function is ON, the repeater call sign is automatically set. ([MENU] > SET > DV Set > **Digital Repeater Set**)

Step 1. Setting the call sign “R1”

1. Touch “R1” for 1 second.
2. Touch “Edit.”
3. Enter the repeater call sign of up to 8 characters, including spaces. (Example: JP3YHH A)
4. Touch [ENT].
   • Sets the entered repeater call sign.

Step 2. Gateway “R2” setting

1. Touch “R2.”
   ⓘ To manually enter a call sign, touch “R2” for 1 second, then touch “Edit.”
2. Touch “GW.”

About the RPT2 SELECT screen

NOT USED*	For local area calls
GW	To select the gateway call sign from the repeater list.
Repeater name	To select the repeater that has the same gateway as the “R1” repeater.

Step 3. Destination “UR” setting

1. Touch “UR.”
   ⓘ To manually enter a call sign, touch “UR” for 1 second, then touch “Edit.”
2. Touch “Gateway CQ.”
3. Touch repeater group where your destination repeater is listed.
4. Touch a destination repeater.

About the YOUR SELECT screen

CQCQCQ	To select “CQCQCQ” to make a non-call sign specific call.
Gateway CQ*	To select “Gateway CQ” to make a call using the repeater list.
Your Call Sign	To select the destination “UR” call sign using the Your Call Sign memory.
RX History	To select the destination “UR” call sign using RX History.
TX History	To select the destination “UR” call sign using TX History.

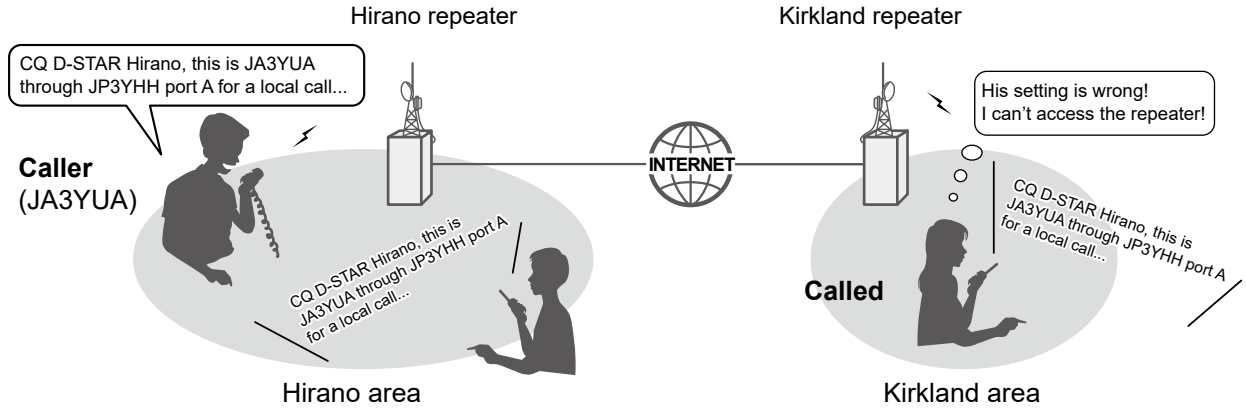
* Not displayed in the Simplex mode.

Are your settings correct?

If you make a Local Area call with a gateway repeater still selected in “TO,” the destination repeater will be busy while you transmit. The stations that want to use the repeater as their access repeater cannot access it, as shown below.

BE SURE to set CQCQCQ in “TO” on the DR screen when you intend to make a Local Area call or finish a Gateway call.

Example: JA3YUA wants to make a Local Area call.



JA3YUA’s setting



The destination (“TO”) setting is incorrect.

Correct setting



To make a Local Area call, set the destination (“TO”) to “CQCQCQ.” See page 3-9 for details.

NOTE: With this setting, you can make a Local Area call, but the destination Repeater, selected in “TO,” is also busy while you transmit.
The stations that want to use the repeater as their Access Repeater cannot access it.

Section 4 GPS OPERATION (ADVANCED)

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◇ Displaying Position Data 4-5
◇ GPS POSITION screens and their meanings 4-6
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◇ About the Course 4-8
◇ About the Grid Locator 4-8
◇ Changing the GPS Memory or Alarm 4-9
◇ Changing the Compass Direction 4-9
◇ Saving your own or a received station's position 4-10
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Transmitting GPS data (D-PRS and NMEA) 4-12
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◇ Application setting 4-12
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◇ Setting the GPS Alarm function to All Memories (all GPS Memories) 4-19
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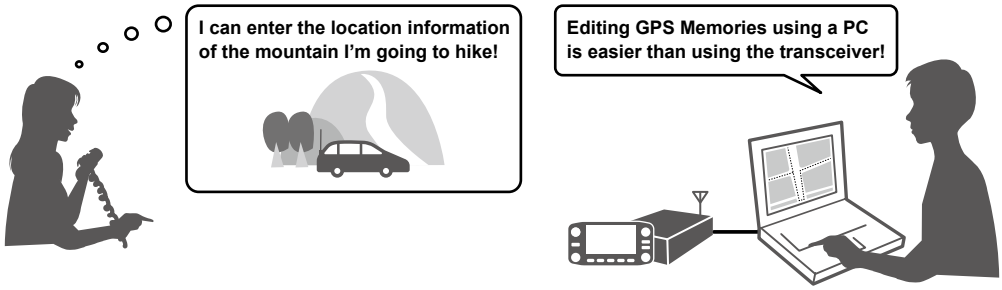
GPS operation features

D-PRS Extension function (p. 4-4)

The D-PRS Extension function enables you to transmit or receive Object, Item, and Weather information in addition to Position data. With this extension, you can simultaneously transmit or receive earthquake information, traffic accident information, emergency information, or weather information, and so on, along with voice audio in the DV mode.

GPS Memory (p. 4-13)

You can enter up to 300 GPS Memories in the transceiver. By adding destination position information in a GPS Memory, you can effectively use the GPS Alarm function. The position information that you acquired can also be entered in a GPS Memory.



GPS Alarm function (p. 4-18)

When a target station comes into the set alarm area, or when you approach an entered GPS Memory position, the function can sound an alarm. With this function, you can know that you are approaching the destination.



GPS Logger function

The GPS Logger function enables you to save the position data from a GPS receiver into a microSD card as a log. If you use this GPS Logger while driving, you can check your driving history on a mapping software program.



See "Using the GPS Logger function" and "D-PRS Guide" that can be downloaded from the Icom website about using the function.
https://www.icomjapan.com/support/

Before starting GPS operation

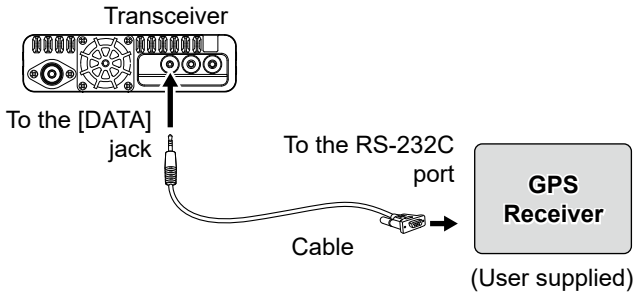
NOTE: Before using the GPS function, read “IMPORTANT NOTES” about the GPS receiver in the Basic manual.

The transceiver has a built-in internal GPS receiver. The GPS receiver’s position data can be received in any mode.
Also, an NMEA format compatible external GPS receiver can be connected to the transceiver through the [DATA] jack.
To receive signals from an external GPS source, connect an external NMEA format compatible receiver to the transceiver according to the instructions, shown to the right.

ⓘ You can also use an Android device with the ST-4002A installed, or an Icom transceiver that can output GPS data (Example: ID-31A/E PLUS) as the GPS receiver.

NOTE: Transmit or receive position data that can be transmitted in only the DV mode.

Connection



◇ Confirming the GPS signal receiving

Confirm the GPS receiver is receiving satellite signals.

The GPS icon blinks when searching for satellites.
 → → → (no icon)

The GPS icon stops blinking when the minimum number of satellites needed is found.


ⓘ Information

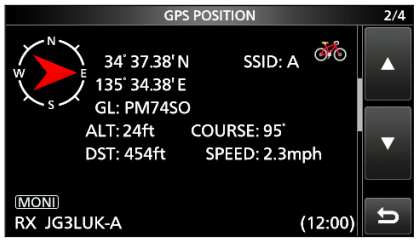
- It may take only a few seconds to receive, or it may take a few minutes, depending on your operating environment. If you have difficulties receiving, we recommend that you try a different position.
- When “GPS Select” is set to “Manual,” the icon is not displayed.
  ([MENU] > GPS > GPS Set > **GPS Select**)

NOTE: The built-in GPS receiver does not calculate its position if it cannot receive signals from the GPS satellites.

GPS TX mode and TX format types

GPS position data has 2 TX modes, D-PRS and NMEA. Moreover, with the D-PRS mode data, 5 position formats, Position (Mobile station/Base station), Object, Item, and Weather are selectable.

Example: When the caller's TX format is D-PRS Position (Mobile)
([MENU] > GPS > **GPS Position**)



D-PRS		D-PRS is a function that simultaneously sends position data received from the internal GPS receiver, using the slow speed data packet space, along with voice.
	Position (Mobile)	A station operating from a vehicle, or other position, away from its normal base position.
	Position (Base)	A station operating at home or in a building.
	Object	Transmitting Object data such as earthquake information, satellite tracking information, and so on. An Object contains a time stamp.
	Item	Transmitting Item data, such as a traffic accident, a lighthouse, an antenna, or a DV access point position, and so on. An Item does not contain a time stamp.
	Weather	A station transmitting weather information received from a weather device.
NMEA		A station transmitting position data (NMEA0183) received from the internal GPS receiver.

When a received signal contains position data

When a received signal contains position data, the caller's position data is displayed on the RX position screen.
See to the right for details.

Example: When the signal from JM1ZLK contains position data.



When you receive the signal, the RX position data is displayed in the RX position window.

After a few seconds, the window disappears.



When the received signal contains position data, the RX position icon is displayed, as shown above.

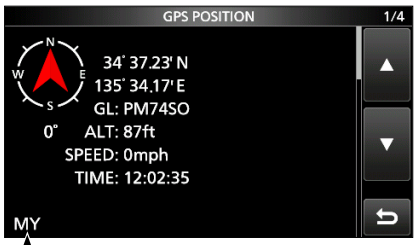
ⓘ You can turn OFF the caller's position data display.
([MENU] > SET > Display > **RX Position Display**)
ⓘ You can turn OFF the RX position icon indication.
([MENU] > SET > Display > **RX Position Indicator**)

Checking your location

You can check your current location.
This section is described using received position data.
ⓘ The screens are just examples.

◇ Displaying Position Data

1. Push [QUICK] in the standby mode.
2. Touch "GPS Position."
   • Opens the GPS POSITION screen.
3. Rotate [DIAL].
   • Changes between the MY (My position), RX (Received position), MEM (GPS Memory position), or ALM (GPS Alarm position) screen.



The displayed icon depends on the type of screen (MY, RX, MEM, or ALM).

4. To close the GPS POSITION screen, push [EXIT].

NOTE: Latitude, longitude, and altitude data may differ, depending on your received GPS signal.

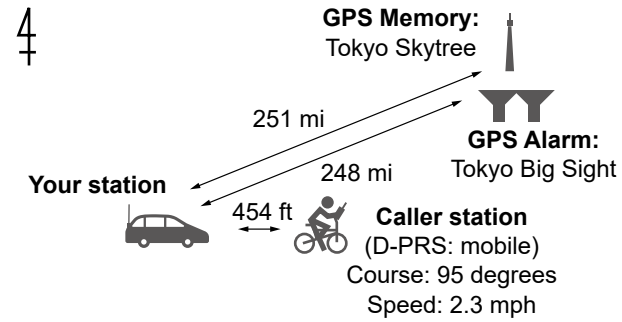
TIP:
- If you transmit with the GPS POSITION screen open, the screen closes. To check the location, push [QUICK], and then touch "GPS Position" while transmitting.
- On the MY screen or RX screen, you can enter the displayed position information in a GPS Memory by pushing [QUICK] and touching "GPS Memory."
- See page 4-18 about the GPS Memory function and see page 4-13 about the GPS Alarm function.

Checking your location

◇ GPS POSITION screens and their meanings

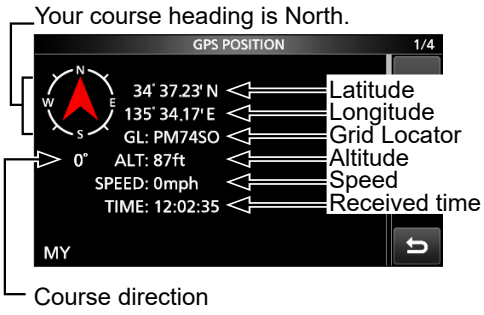
ⓘ Information
- Pushing [QUICK] to change the compass direction. (p. 4-9)
- About the Course (p. 4-8)
- About the Grid Locator (p. 4-8)

Example for the GPS POSITION screens:



MY screen (Your position information)

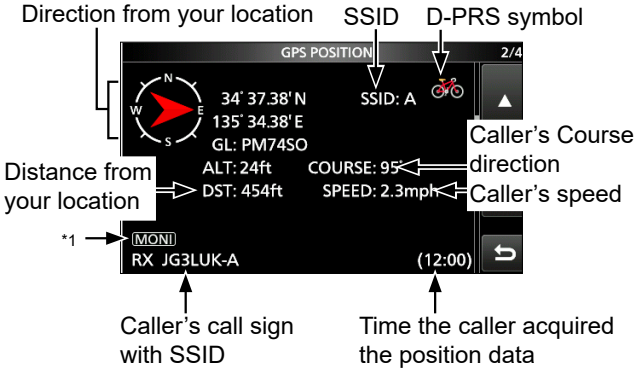
When “GPS Select” is set to “Manual,” the compass heading and course direction are not displayed. (p. 4-21)



RX screen (Caller’s position information)

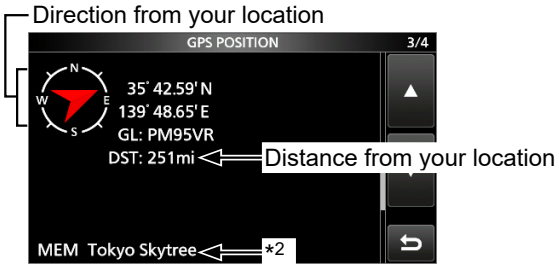
Depending on the caller’s GPS TX Mode and TX format, the displayed item’s meanings may differ, and some data may not be displayed. (p. 4-7)

Example: The caller station’s GPS TX Mode is “D-PRS,” and its TX format is “Position (Mobile).”

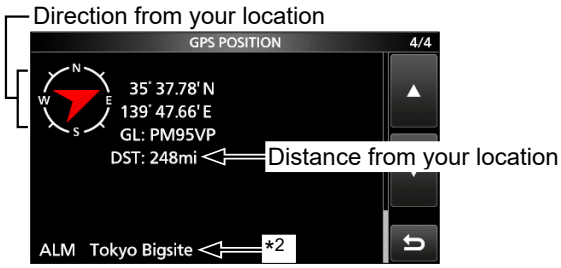


*1 The icon differs, depending on how the signal is received.
- (No icon): The Normal mode (RF)
- TM: The Terminal mode
- MONI: The DV Repeater Monitor function

MEM screen (GPS Memory’s information)



ALM screen (GPS Alarm’s information)

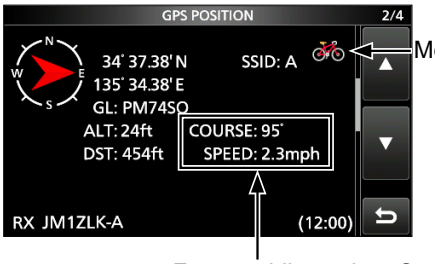


*2 When a name is not entered in the GPS Memory channel, date and time are displayed instead of the name. In the QUICK MENU window, you can change the GPS Memory or GPS Alarm in the GPS POSITION screen. (p. 4-9)

Checking your location

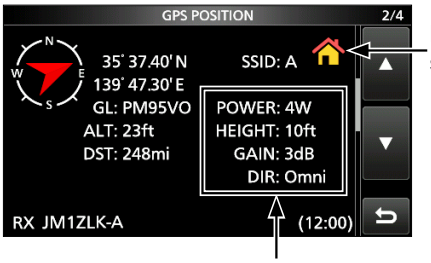
◇ About the RX screen

TX format:
D-PRS



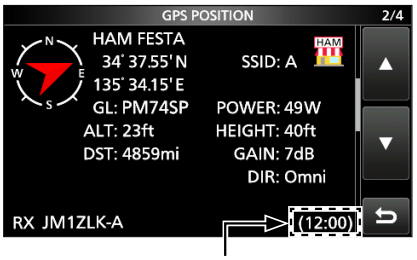
Moving symbol

For a mobile station, Course and Speed are displayed.

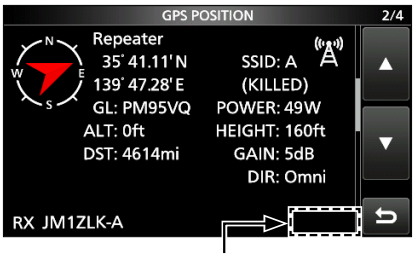


Base station symbol

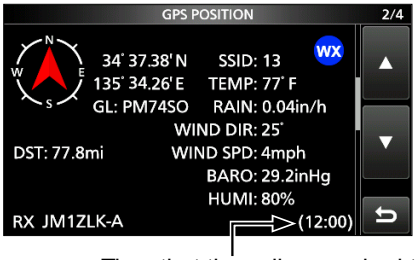
For a base station, Output power, Antenna height, Antenna gain, and Antenna direction are displayed.



Time that the caller sent the Object's data.



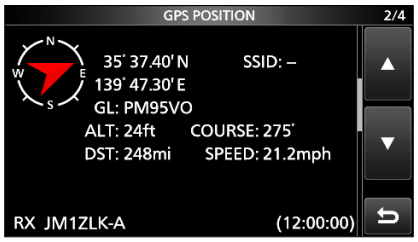
ⓘ For an Item station, time is not displayed.



Time that the caller acquired the weather data.

ⓘ Call sign is displayed with an SSID.
ⓘ When the Object or Item is disabled, "KILLED" is displayed.

TX format:
NMEA



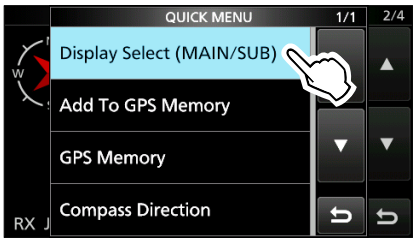
ⓘ A symbol or SSID is not displayed when the TX format is NMEA.

Checking your location

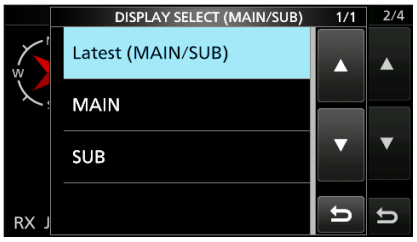
◇ Setting the display type (MAIN/SUB)

You can select the display type of the RX screen.

1. Push [QUICK] when the RX screen is displayed.
2. Touch “Display Select (MAIN/SUB).”



3. Touch the item you want to switch.

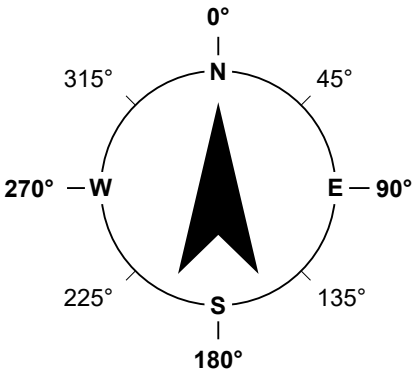


- Latest (MAIN/SUB): Displays the target station’s latest location information regardless of the MAIN band or the SUB band.
- MAIN: Displays only the latest location information of the target station received in the MAIN band.
- SUB: Displays only the latest location information of the target station received in the SUB band.

ⓘ When you select “MAIN” or “SUB”, “(MAIN)” or “(SUB)” is displayed next to “RX.”

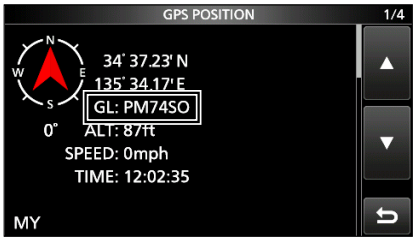
◇ About the Course

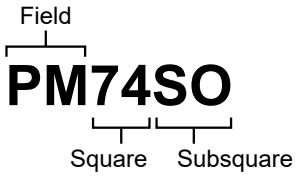
The course displayed on the GPS POSITION screens is indicated in degrees.



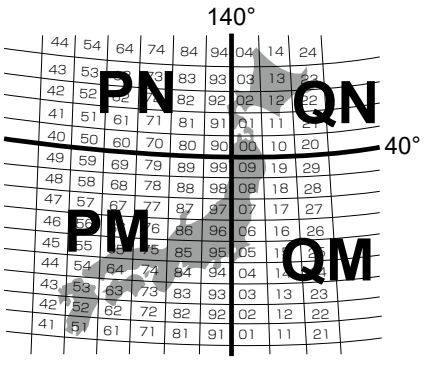
◇ About the Grid Locator

Grid Locator (GL) is a position compressed into a 6 character code, calculated by the longitude and the latitude.
The locator is simply calculated by dividing the earth’s surface into squares.
It is used to find the location of a transceiver station.





The grid locator map of Japan



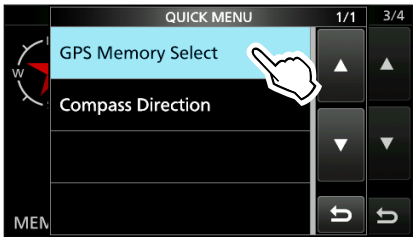
Checking your location

◇ Changing the GPS Memory or Alarm

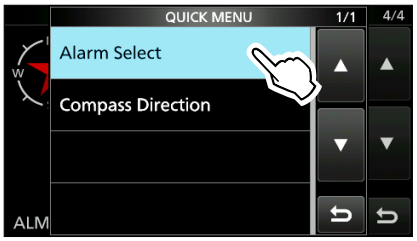
You can change the GPS Memory or GPS Alarm in the GPS POSITION screen.

1. While selecting the MEM screen or ALM screen, push [QUICK].
2. Touch “GPS Memory Select,” or touch “Alarm Select.”

MEM screen



ALM screen

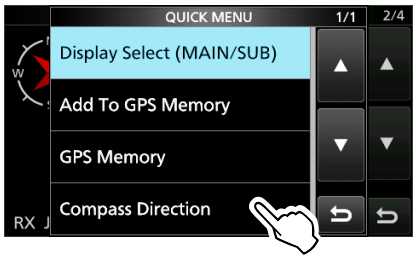


3. Select the GPS Memory or GPS Alarm to display on the GPS POSITION screen.
   ⓘ Adding or editing a GPS Memory: p. 4-13
   ⓘ Setting the GPS Alarm: p. 4-18

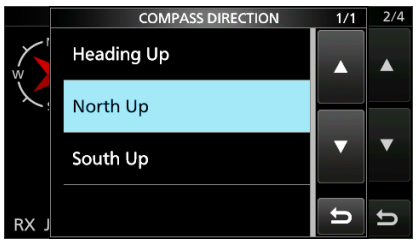
◇ Changing the Compass Direction

You can set the compass direction to Heading Up, North Up, or South Up.

1. While displaying the GPS POSITION screen, push [QUICK].
2. Touch “Compass Direction.”



3. Select the compass direction.



Heading Up



The top is always your course direction.

North Up



The top is always north.

South Up



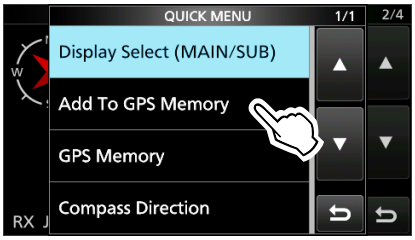
The top is always south.

Checking your location

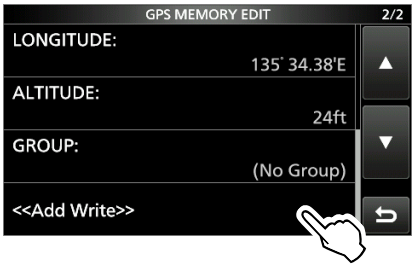
◇ Saving your own or a received station's position

You can save the position of your station or the position of the caller station.
The transceiver has a total of 300 GPS memories, and the memories can be assigned into one of 27 banks, A ~ Z, and (No Group).

1. Select the screen that you want to save.
   ⓘ To save your own position: MY screen
   ⓘ To save a received position: RX screen
2. Push [QUICK].
3. Touch "Add To GPS Memory."



   ⓘ See pages 4-13 ~ 4-15 for entering details.
4. Touch "<<Add Write>>."



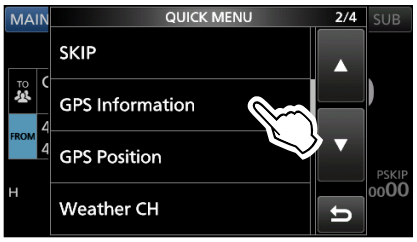
   ⓘ To select the destination group to be saved, touch "GROUP."
5. Touch [YES].
   • Saves the data in the GPS Memory, then returns to the GPS POSITION screen.
6. To close the GPS POSITION screen, push [EXIT].

TIP: The position is saved in the selected group in the GPS MEMORY EDIT screen. (Step 4)

Checking GPS information (Sky view screen)

This screen is used to view GPS satellite information when the GPS icon does not stop blinking for a long time.
The GPS Information displays the quantity, signal power, and position of the GPS satellites.
The sky view screen displays the position of GPS satellites. The screen also displays each satellite's direction, elevation angle, satellite numbers, and their receiving signal strength status.

1. Push [QUICK].
2. Touch "GPS Information."

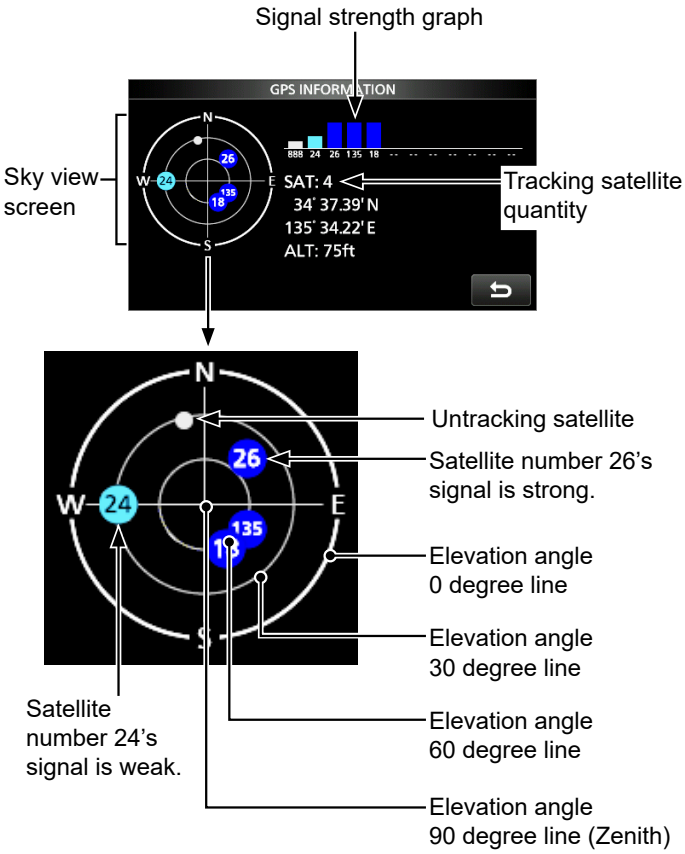


About the display

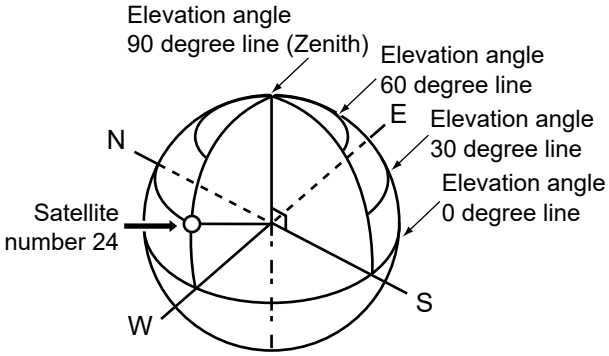
- : Untracking satellite.
- : Tracking satellite with a weak signal, shown by the satellite number.
- : Tracking satellite with a strong signal, shown by the satellite number.
- SAT: The quantity of tracking satellites.
- Altitude: The altitude of your station. The altitude is only displayed when 4 or more satellites are tracked. When 3 or less satellites are tracked, "------ft" is displayed.
- Longitude/Latitude: Longitude and Latitude of your station.
- Signal strength graph: Signal strength of the satellites
  : Untracking satellite
  : Tracking satellite with a weak signal
  : Tracking satellite with a strong signal

TIP: The following satellite number is assigned to the each satellite system.
- GPS: 01 ~ 32
- SBAS: 33 ~ 71
- GLONASS: 65 ~ 96
- QZSS: 193 ~ 202

3. To close the GPS INFORMATION screen, push [EXIT].



The image of satellite number 24



Transmitting GPS data (D-PRS and NMEA)

GPS position data has 2 types of TX mode, D-PRS and NMEA. You can also set the GPS Automatic Transmission function.

See “D-PRS Guide” that can be downloaded from the Icom website about how to transmit D-PRS and NMEA data and the GPS Automatic Transmission function.
https://www.icomjapan.com/support/

ⓘ When you transmit as a weather station, follow the instructions below.

◇ Weather station transmission

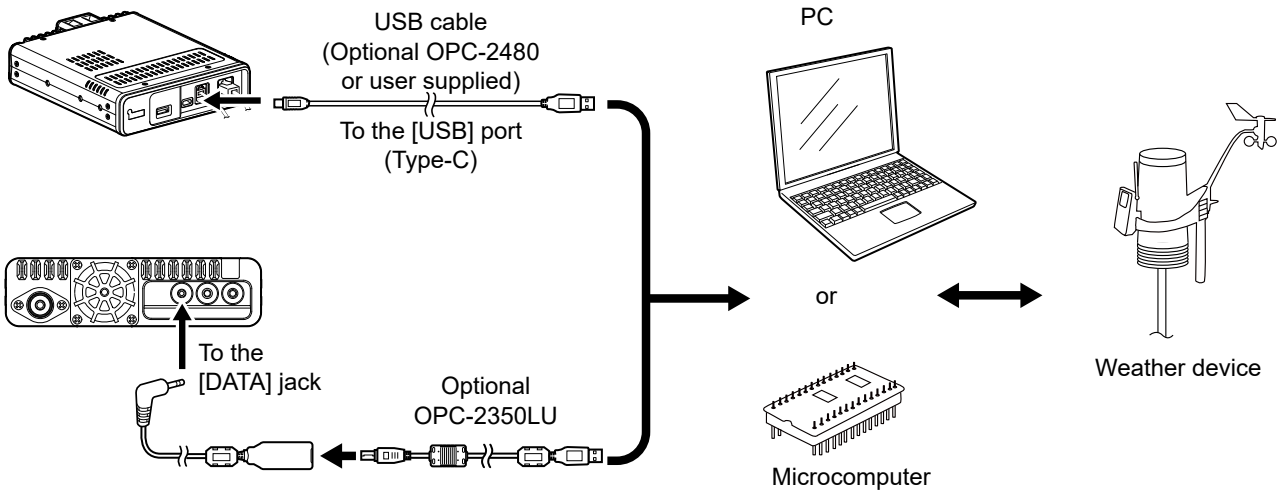
When you transmit as a weather station, you should set the weather station’s settings, and input the weather data into the [USB] port or [DATA] jack.
You can input the weather data from a third party’s weather device by converting it to the APRS weather format in your PC or microcomputer.

After completing the weather station’s settings, and inputting the weather data, you can transmit as a weather station.

NOTE: When inputting the Weather data, confirm the following items are set.
ⓘ If the weather data is not input, you cannot transmit as a weather station.

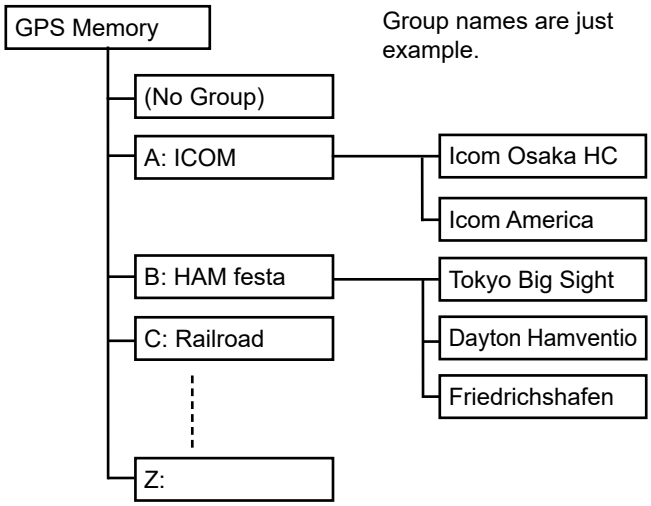
When inputting into the [USB] port
- ([MENU] > SET > Connectors > Serialport Function > **USB (B) Function**)
  Set “USB (B) Function” to “Weather.”
- ([MENU] > SET > Function > **USB Connect**)
  Set “USB Connect” to “Serialport.”

When inputting into the [DATA] jack
- ([MENU] > SET > Connectors > Serialport Function > **DATA Function**)
  Set “DATA Function” to “Weather.”
- ([MENU] > SET > Connectors > Serialport Function > **Weather Input Baud Rate (DATA)**)
  Set the PC’s settings to match the transceiver’s “Weather Input Baud Rate (DATA)” setting.



GPS Memory

You can add GPS data to the GPS Memory for your own location, other stations, or any location you enter manually.
You can save up to 300 GPS memories, and conveniently saved in up to 27 groups, from A ~ Z and "(No Group)." The A to Z groups can also be named.

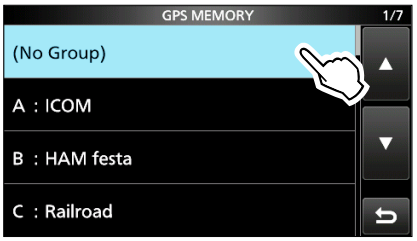


◇ Adding a GPS Memory

Example: Add "HOME" into (No Group).

1. Adding a GPS Memory and entering the edit mode

1. Open the GPS MEMORY screen.
   [MENU] > GPS > **GPS Memory**
2. Touch "(No Group)."



3. Push [QUICK].
4. Touch "Add."
   • Opens the GPS MEMORY EDIT screen.

TIP: To edit the previously saved GPS Memory, touch "Edit" in step 4. You can enter the content in the same way as described above.

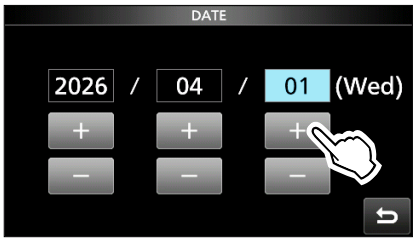
2. Entering a GPS Memory name

1. Touch "NAME."
2. Enter a GPS Memory name of up to 16 characters. (Example: HOME)
3. After entering, touch [ENT].



3. Entering the GPS Memory date

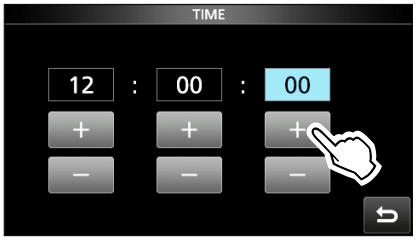
1. Touch "DATE."
2. Touch a digit to enter.
3. Touch [+] and [-].
   ⓘ Set to between 2000/01/02 and 2099/12/30.
4. Repeat steps 2 and 3 to enter the date.



5. After entering, push [EXIT].

4. Entering the GPS Memory time

1. Touch "TIME."
2. Touch a digit to enter.
3. Touch [+] and [-].
   ⓘ Set to between 00:00:00 and 23:59:59.
4. Repeat steps 2 and 3 to enter the time.



5. After entering, push [EXIT].

GPS Memory

◇ Adding a GPS Memory

5. Entering the GPS Memory latitude

1. Touch “LATITUDE.”
2. Touch a digit to enter.
3. Enter the latitude.
   ⓘ Set to between 0°00.00′ to 90°00.00′.
   ⓘ You can change the unit.
   ([MENU] > SET > Display > Display Unit > **Latitude/Longitude**)
4. Repeat steps 2 and 3 to enter the latitude.



5. Touch [N/S] to set to a north latitude (N) or a south latitude (S).
6. After entering, touch [ENT].

6. Entering the GPS Memory longitude

1. Touch “LONGITUDE.”
2. Touch a digit to enter.
3. Enter the longitude.
   ⓘ Set to between 0°00.00′ to 180°00.00′.
   ⓘ You can change the unit.
   ([MENU] > SET > Display > Display Unit > **Latitude/Longitude**)
4. Repeat steps 2 and 3 to enter the longitude.



5. Touch [E/W] to set to an east longitude (E) or a west longitude (W).
6. After entering, touch [ENT].

7. Entering the GPS Memory altitude

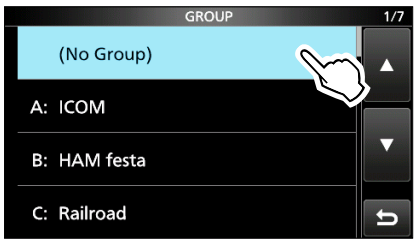
1. Touch “ALTITUDE.”
2. Touch [+/-] to set to plus or minus.
3. Enter the altitude.



   ⓘ Set to between –32808 and +32808 feet.
4. After entering, touch [ENT].

8. Selecting a GPS Memory group

1. Touch “GROUP.”
2. Touch the group between (No Group) and A ~ Z.



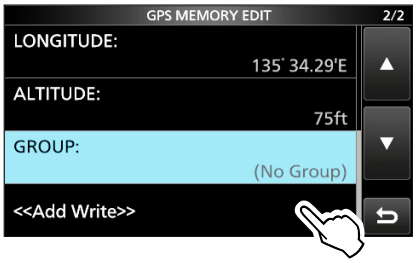
   ⓘ You can save up to 300 Memories in each group.

GPS Memory

◇ Adding a GPS Memory

9. Writing the GPS Memory

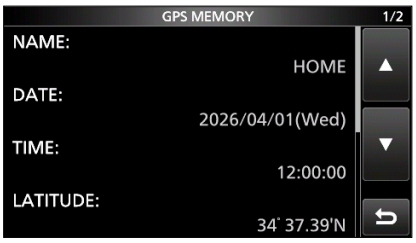
1. Touch “<<Add Write>>.”



ⓘ If you edit a previously added GPS Memory, touch “<<Overwrite>>.”

2. Touch [YES].
   - The data is added to the GPS memory, then returns the selected GPS Memory group screen.
3. To close the GPS Memory group screen, push [EXIT] several times.

TIP:
To view the entered content:
Touch the GPS Memory. Rotate [DIAL] to check the whole content.

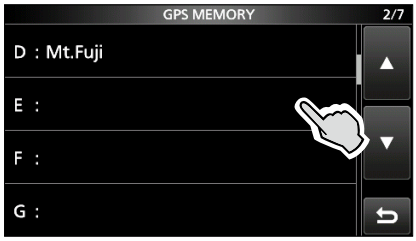


To cancel the entered data:
While entering or editing the GPS Memory, push [EXIT] to display the confirmation dialog.
Touch [YES] to cancel entering, then returns to the GPS Memory group screen.

◇ Entering the GPS Memory group name

You can enter a name for each GPS Memory group.

1. Open the GPS MEMORY screen.
   [MENU] > GPS > **GPS Memory**
2. Touch the group that the name to be entered for 1 second.



3. Touch “Edit Name.”



4. Enter a group name of up to 16 characters.
5. After entering, touch [ENT].



6. To close the GPS MEMORY screen, push [EXIT] several times.

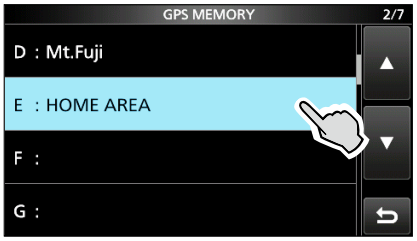
GPS Memory

◇ Deleting GPS Memory

You can delete the GPS Memories.
There are 2 ways to delete the Memories:
- Deletes all GPS Memory in a group.
- Deletes a specific GPS Memory.

NOTE: Deleted GPS Memories cannot be restored.

1. Open the GPS MEMORY screen.
   [MENU] > GPS > **GPS Memory**
2. Touch the group where the GPS Memory you want to delete is saved for 1 second.
   (Example: E: HOME AREA)



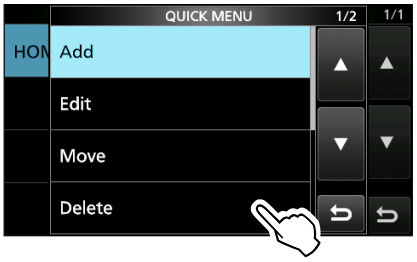
3. Touch “Delete All In Group.”



4. Touch [YES].
   - All GPS Memory in the selected group are deleted, then returns to the GPS MEMORY screen.

   ⓘ When selecting a blank group, “Blank” is displayed.
5. To close the GPS MEMORY screen, push [EXIT] several times.

TIP: Deleting a specific GPS Memory
You can delete a specific GPS Memory.
1. Touch the GPS Memory to delete.
2. Touch “Delete.”



3. Touch [YES].
   - The selected GPS Memory is deleted.

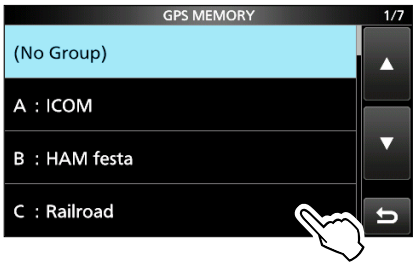
GPS Memory

◇ Rearranging the display order of the GPS data

You can move the entered GPS Memories to rearrange their display order in the selected GPS Memory group.

ⓘ To move the GPS Memory out of their assigned Memory group, select the Memory group in the GPS MEMORY EDIT screen, and then save.

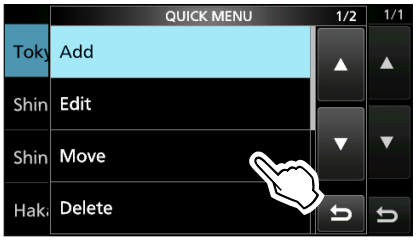
1. Open the GPS MEMORY screen.
   [MENU] > GPS > **GPS Memory**
2. Touch the group where the GPS Memory you want to move is saved. (Example: C: Railroad)

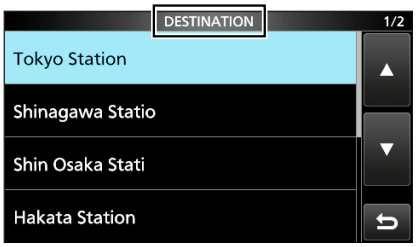


3. Touch the GPS Memory to move for 1 second.



4. Touch “Move.”





- While moving, “DESTINATION” blinks.

5. Touch the position to insert the Memory you want to move.
   - The selected Memory is inserted above the destination Memory name.

   ⓘ If you select “<<Move End>>,” the Memory is moved to the bottom of the group.

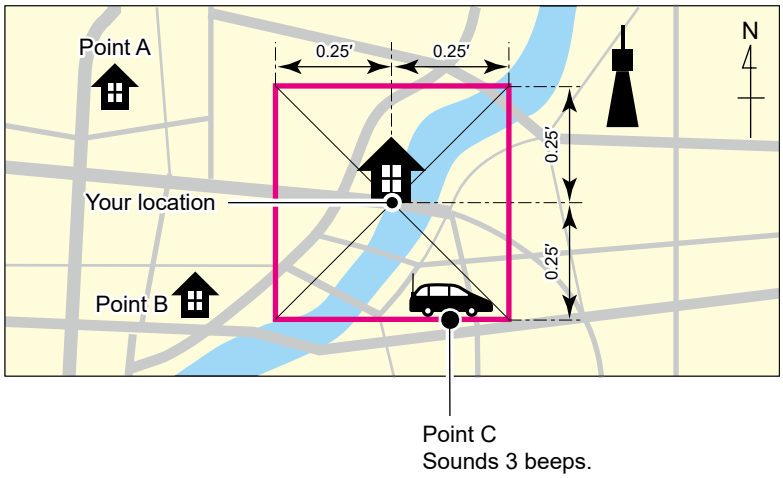


6. To close the GPS MEMORY screen, push [EXIT] several times.

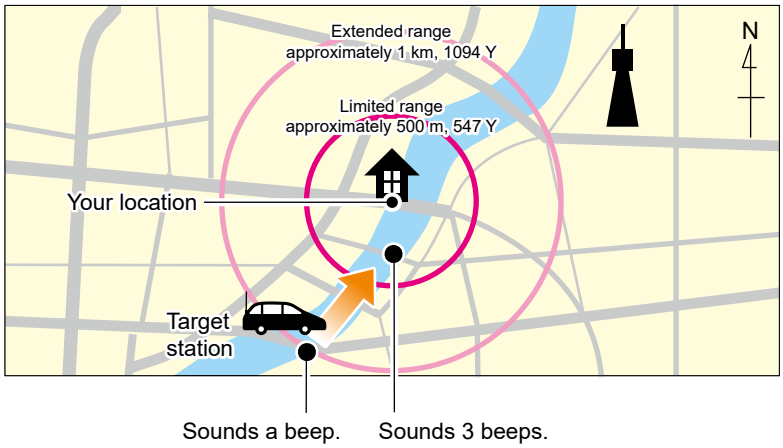
GPS Alarm

The transceiver can sound a GPS Alarm when a target station or position comes into the alarm area.
This function can be set to a caller station, all GPS Memories, a selected GPS Memory group, or a selected GPS Memory. (pp. 4-34, 4-35)

Alarm Area (Group) (Setting plural stations)
When “All Memories” or a GPS Memory group is selected:



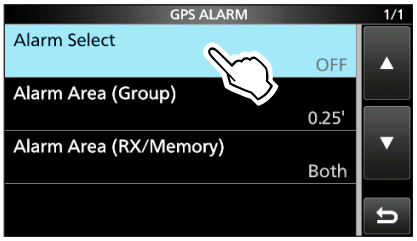
Alarm Area (RX/Memory) (Setting specific station)
When a specific GPS Memory is selected:



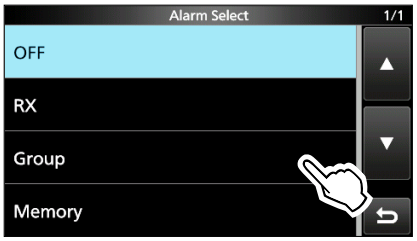
GPS Alarm

◇ Setting the GPS Alarm function to All Memories (all GPS Memories)

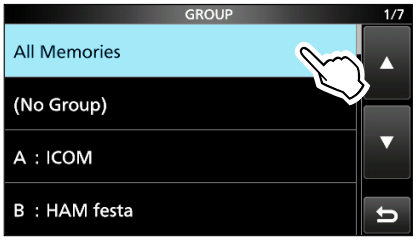
1. Open the GPS ALARM screen.
   [MENU] > GPS > **GPS Alarm**
2. Touch “Alarm Select.”

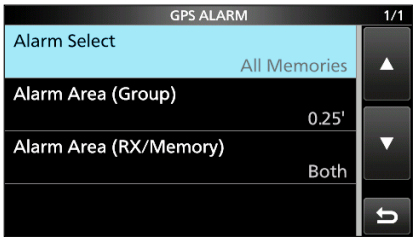


3. Touch “Group.”



4. Touch “All Memories.”





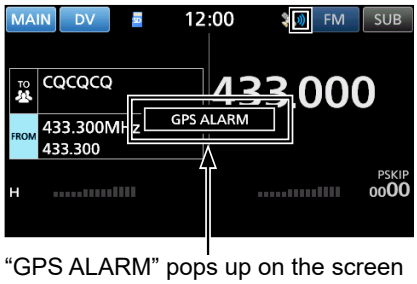
ⓘ If you want to set the alarm to a specific GPS Memory group, touch “(No Group)” or “A” to “Z.”

5. To close the GPS ALARM screen, push [EXIT] several times.

ⓘ Information

- When either one of the stations in the group enters the set range, the alarm sounds 3 times.
- When the transceiver sounds a GPS Alarm, “GPS ALARM” pops up on the screen, and “” blinks. See the illustration below.
- To cancel the GPS Alarm function, touch “OFF” in step 3 to the left.

Blinks



“GPS ALARM” pops up on the screen and the alarm sounds 3 times.

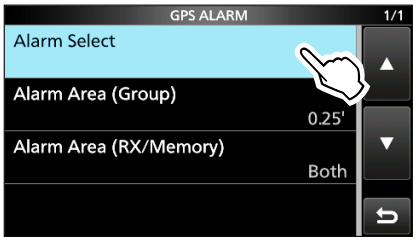
TIP: When selecting “All Memories,” “No Group,” or a GPS Memory group (A ~ Z) in step 4 to the left, you also have to set “Alarm Area (Group)” to use the GPS Alarm function.

[MENU] > GPS > GPS Alarm > **Alarm Area (Group)**

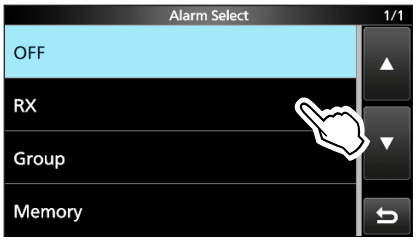
GPS Alarm

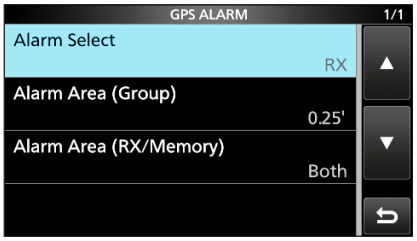
◇ Setting the GPS Alarm function to RX (a caller station)

1. Open the GPS ALARM screen.
   [MENU] > GPS > **GPS Alarm**
2. Touch “Alarm Select.”



3. Touch “RX.”





ⓘ If you want to set the alarm to a specific GPS Memory, touch “Memory” and then select a GPS Memory in a GPS Memory group.

4. To close the GPS ALARM screen, push [EXIT] several times.

ⓘ **Information**

- When a station with its GPS Alarm set enters within an approximate 1 kilometer (1094 yards) range, the alarm sounds once. When it enters within an approximate 500 meters (547 yards) range, the alarm sounds 3 times.
- When the transceiver sounds a GPS Alarm, “GPS ALARM” pops up on the screen, and “” blinks. See the illustration below.
- To cancel the GPS Alarm function, touch “OFF” in step 3 to the left.

Blinks



“GPS ALARM” pops up on the screen and the alarm sounds 3 times.

NOTE: Even if “RX” is selected in step 3, when the received signal has no position data, the GPS Alarm does not sound.

TIP: When selecting “RX” or a specific GPS Memory in step 3 to the left, you also have to set “Alarm Area (RX/Memory)” to use the GPS Alarm function.

[MENU] > GPS > GPS Alarm > **Alarm Area (RX/Memory)**

GPS items

NOTE: The default settings shown below are for the USA transceiver version. The default settings may differ, depending on your transceiver version. To return to your transceiver version's default settings, push [QUICK] and select "Default."

GPS Select (Default: ON)

[MENU] > GPS > GPS Set > **GPS Select**

Selects how to capture position data.

ⓘ When "GPS Time Correct" is set to "Auto," set this item to "Internal GPS" or "External GPS (DATA)" to automatically correct the time by a received GPS sentence. (p. 10-29)

- OFF: A GPS receiver is not used.
- Internal GPS: Position data from the internal GPS data is used for the GPS functions.
- External GPS (DATA): Position data from an external GPS receiver is used for the GPS functions.
- Manual: Manually enter the current Latitude, Longitude, and Altitude in "Manual Position."

NOTE: Data communication is disabled when "External GPS (DATA)" is selected.

SBAS (Default: OFF)

[MENU] > GPS > GPS Set > GPS Option > **SBAS**

Turns the SBAS (Satellite Based Augmentation System) function ON or OFF.

ⓘ When turning ON this function, the GPS position accuracy can be improved, but the transceiver's power consumption increases.

- OFF: Turns OFF the function.
- ON: Turns ON the function.

GLONASS (Default: OFF)

[MENU] > GPS > GPS Set > GPS Option > **GLONASS**

Selects whether or not to use the data from the GLONASS (GLObal'naya NAvigatsionnaya Sputnikovaya Sistema) satellites.

ⓘ When turning ON this function, the GPS position accuracy can be improved, but the transceiver's power consumption increases.

- OFF: Does not use the data from the GLONASS satellites.
- ON: Uses the data from the GLONASS satellites.

Satellite Information Out (Default: GPS/QZSS/GLONASS)

[MENU] > GPS > GPS Set > GPS Option > **Satellite Information Out**

Selects whether or not to output the data from the QZSS (Quasi-Zenith Satellite System) satellites and the GLONASS satellites.

- GPS/QZSS/GLONASS: Outputs the data from the GPS satellites, the QZSS satellites, and the GLONASS satellites.
- Only GPS: Outputs the data from only the GPS satellites.

External GPS Baud Rate (DATA) (Default: 9600)

[MENU] > GPS > GPS Set > **External GPS Baud Rate (DATA)**

Set the transfer speed of the GPS sentence inputting into the [DATA] jack.

- Set 4800, 9600, 115200.

Manual Position

(Default: LATITUDE: 0°00.00′N, LONGITUDE: 0°00.00′W, ALTITUDE: ------ft)

[MENU] > GPS > GPS Set > **Manual Position**

Manually enter the latitude, longitude, and altitude of your current position.

ⓘ You can capture position data from the GPS receiver if "Capture From GPS" is selected.

GPS TX Mode (Default: OFF)

[MENU] > GPS > **GPS TX Mode**

Selects a GPS transmission mode to send GPS position data while in the DV mode.

- OFF: Does not transmit GPS data.
- D-PRS: Transmits GPS data in the D-PRS format.
- NMEA: Transmits GPS data in the NMEA format.

ⓘ See "D-PRS Guide" that can be downloaded from the Icom website about how to transmit D-PRS and NMEA data and the GPS Automatic Transmission function.
https://www.icomjapan.com/support/

GPS items

Unproto Address (Default: API520,DSTAR*)

[MENU] > GPS > GPS TX Mode > D-PRS > **Unproto Address**

Displays an unproto address of up to 56 alphanumeric characters.

NOTE: You should use the default address, and editing is not recommended.

TX Format (Default: Position)

[MENU] > GPS > GPS TX Mode > D-PRS > **TX Format**

Selects the format to transmit the position data in the D-PRS mode.

- Position: The caller station is the mobile or base station.
- Object: Transmits a certain location's information, such as an event, earthquake, and so on. (The time stamp data is included.)
- Item: Transmits repeater or antenna information that needs no time information. (The time stamp data is not included.)
- Weather: Transmits weather information received from a weather device.

Symbol (Default: Car)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Position > **Symbol**

Selects the symbol that indicates your operating situation. The selected symbol channel's symbols (1 ~ 4) are transmitted with position data.

<Editing a symbol with a 2 character symbol code>

1. Touch the symbol channel for 1 second.
2. Touch "Edit Symbol."
3. Push [QUICK].
4. Touch "Direct Input."
5. Touch [+]/[−] to edit the first digit.
6. Touch [+]/[−] to edit the second digit.

Selectable characters and symbols
<For the first digit> /, \, 0 to 9, A to Z
<For the second digit> A to Z, a to z, 0 to 9, ! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | } ~

7. After editing, touch [SET].
   - Sets the Symbol into the channel selected in step 1.

<Selecting a preset symbol>

1. Touch the symbol channel for 1 second.
2. Touch "Edit Symbol."
3. Touch the symbol.
   - Sets the Symbol into the channel selected in step 1.

GPS items

SSID (Default: ---)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Position > **SSID**

Selects an SSID based on APRS to add to your call sign, to show your operating style to other stations.

ⓘ The SSID's additional methods differ, depending on whether the call sign includes a space or not.

- ---: The space in the call sign is converted to "-."
  ⓘ If no text is entered after a space, the space will be deleted, and the space is not converted to "-."
  Example: JA3YUA → JA3YUA
  JA3YUA **A** → JA3YUA**-A**
- (-0): No SSID is added.
  ⓘ If a call sign includes a space, any text or digit after the space will be deleted.
  Example: JA3YUA → JA3YUA
  JA3YUA **A** → JA3YUA
- -1~-15: Adds an SSID of -1 to -15 to your call sign.
  ⓘ **Example:** SSID is "-9."
  JA3YUA → JA3YUA**-9**
  JA3YUA **A** → JA3YUA**-9**
- -A~-Z: Adds an SSID of -A to -Z to your call sign.
  ⓘ **Example:** SSID is "-Z."
  JA3YUA → JA3YUA**-Z**
  JA3YUA **A** → JA3YUA**-Z**

TIP: About the SSID
According to a common guideline, to help identify a station's type, designated call sign SSIDs are used in D-PRS (or APRS).
The guideline may be changed when the infrastructure environment, such as a product or network, is changed. Check the latest guideline in the web site related to D-PRS and APRS and correctly set.
https://www.aprs.org/

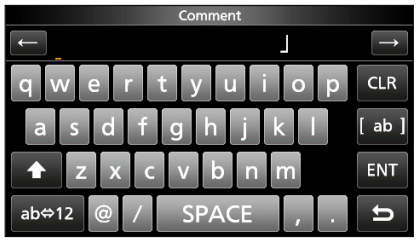
Comment

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Position > **Comment**

Enter a comment to transmit it with the D-PRS position data.
You can enter up to 4 comments.
The number of characters you can enter differs, depending on the Data Extension and Altitude settings.

Data Extension	Altitude	Characters entered (maximum)
OFF	OFF	43 (Default)
OFF	ON	35
Course/Speed	OFF	36
Course/Speed	ON	28
Power/Height/Gain/Directivity	OFF	36
Power/Height/Gain/Directivity	ON	28

The symbol "▮" displays the transmittable comment range. Please note that the characters that exceed the range will not be transmitted.



Transmittable comment range display
(Example: up to 28 characters)

Time Stamp (Default: OFF)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Position > **Time Stamp**

Selects the transmitting time stamp type.
The time stamp is transmitted with the position data in the D-PRS mode, and UTC (Universal Time Coordinated) time is used.

ⓘ When your position is manually set, time stamp data is not transmitted.

- OFF: Does not transmit the time information.
- DHM: Transmits the time stamp in the Day, Hour, and Minute format.
- HMS: Transmits the time stamp in the Hour, Minute, and Second format.

GPS items

Altitude (Default: OFF)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Position > **Altitude**

Selects whether or not to transmit altitude data with the position data in the D-PRS mode.

ⓘ The number of characters you can enter in “Comment” differs, depending on the “Altitude” and “Data Extension” settings.

- OFF: No altitude data is transmitted.
- ON: Transmits altitude data with position data.

Data Extension (Default: OFF)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Position > **Data Extension**

Selects whether or not to transmit the Course/Speed data or the Power/Height/Gain/Directivity data with the position data in the D-PRS mode.

ⓘ The number of characters you can enter in “Comment” differs, depending on the “Altitude” and “Data Extension” settings.

- OFF: Does not transmit any information.
- Course/Speed:
  Transmits the course and speed data with the position data.
  ⓘ The course and speed data are not transmitted when your location is manually set.
  ⓘ When transmitting with this setting, your station is regarded as a mobile station.
- Power/Height/Gain/Directivity:
  Transmits the TX power level, height, antenna gain, antenna direction, and position data.
  ⓘ The Power, Height, Gain, and Directivity data are transmitted even if your location is manually set.
  ⓘ When transmitting with this setting, your station is regarded as a base station.

Power (Default: 0W)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Position > **Power**

Selects the TX power level of the base station to transmit along with the position data.

ⓘ This item is displayed when “Data Extension” is set to “Power/Height/Gain/Directivity.”

- Select 0, 1, 4, 9, 16, 25, 36, 49, 64, or 81 W.

Height (Default: 10ft)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Position > **Height**

Selects the height of the base station’s antenna to transmit along with the position data.

ⓘ This item is displayed when “Data Extension” is set to “Power/Height/Gain/Directivity.”

- Select 10, 20, 40, 80, 160, 320, 640, 1280, 2560, or 5120 feet.*
  * If the Altitude/Distance unit is set to “m,” select 3, 6, 12, 24, 49, 98, 195, 390, 780, or 1561 meters.

Gain (Default: 0dB)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Position > **Gain**

Selects the gain of the base station’s antenna to transmit along with the position data.

ⓘ This item is displayed when “Data Extension” is set to “Power/Height/Gain/Directivity.”

- Select between 0 and 9 dB.

Directivity (Default: Omni)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Position > **Directivity**

Selects the direction the base station’s antenna was pointing to transmit, along with the position data.

ⓘ This item is displayed when “Data Extension” is set to “Power/Height/Gain/Directivity.”

- Select Omni, 45° NE, 90° E, 135° SE, 180°S, 225° SW, 270° W, 315° NW, or 360° N.

Object Name

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Object Name**

Sets an Object’s name of up to 9 characters.

Data Type (Default: Live Object)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Data Type**

Selects the Object’s status.

- Live Object: The Object station is valid.
- Killed Object: The Object station is invalid.

GPS items

Symbol (Default: Radio)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Symbol**

The symbol is an icon that indicates the Object's means of transportation or location. The saved symbol is transmitted along with the position data while in the D-PRS mode.

ⓘ See page 4-22 for details of editing a symbol.

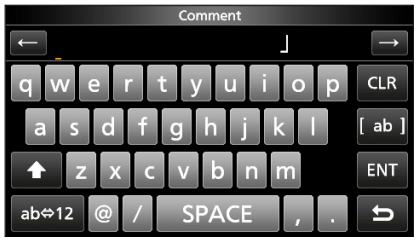
Comment

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Comment**

Enters a comment to transmit it with the D-PRS position data.
You can enter up to 4 comments.
The number of characters you can enter differs, depending on the Data Extension and Altitude settings.

Data Extension	Altitude	Characters entered (maximum)
OFF	—	43 (Default)
OFF	Entered	35
Course/Speed	—	36
Course/Speed	Entered	28
Power/Height/Gain/Directivity	—	36
Power/Height/Gain/Directivity	Entered	28

The symbol "▮" displays the transmittable comment range. Please note that the characters that exceed the range will not be transmitted.



Transmittable comment range display
(Example: up to 28 characters)

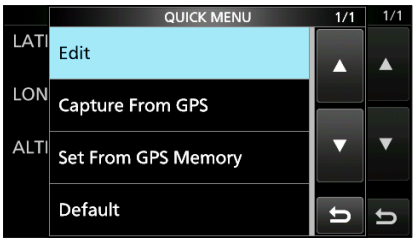
GPS items

Position

(Default: LATITUDE: 0°00.00′N,
LONGITUDE: 0°00.00′W, ALTITUDE: ------ft)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Position**

Displays the position information of the Object.
Push [QUICK] to open the QUICK MENU window shown below.



TIP: When you select “Capture From GPS” or “Set From GPS Memory,” you can capture the position from the GPS or set the Item’s position from the GPS memory.

Entering the position information manually

1. Touch “Edit” on the QUICK MENU window.
   • The POSITION EDIT screen is displayed.
2. Touch “LATITUDE.”
3. Enter a latitude.
   ⓘ Touch “N/S” to switch the north latitude and the south latitude.
4. Touch [ENT].
5. Touch “LONGITUDE.”
6. Enter a longitude.
   ⓘ Touch “E/W” to switch the east longitude and the west longitude.
7. Touch [ENT].
8. Touch “ALTITUDE.”
9. Enter an altitude.
   ⓘ After entering, touch [+/−] to switch “+” and “−.”
10. Touch [ENT].
11. Touch “<<Write>>.”
12. Touch [YES].
    • The position information is entered.

Data Extension (Default: OFF)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Data Extension**

Selects whether or not to transmit the Course/Speed data or the Power/Height/Gain/Directivity data with the position data in the D-PRS mode.

ⓘ The number of characters you can enter in “Comment” differs, depending on the “Altitude” and “Data Extension” settings.

- OFF: Does not transmit any information.
- Course/Speed:
  Transmits the course and speed data with the position data.
- Power/Height/Gain/Directivity:
  Transmits the TX power level, height, antenna gain, antenna direction, and position data.

Course (Default: 0°)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Course**

Sets the Object’s course to between 0° and 360°.

ⓘ This item is displayed when “Data Extension” is set to “Course/Speed.”

Speed (Default: 0mph)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Speed**

Sets the Object’s speed to between 0 and 1150 mph.*

* If the Speed unit is set to “km/h,” set to between 0 to 1850 km/h, or set to “knots,” set to between 0 and 999 knots.

ⓘ This item is displayed when “Data Extension” is set to “Course/Speed.”

Power (Default: 0W)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Power**

Selects the TX power level of Object to transmit along with the position data.

ⓘ This item is displayed when “Data Extension” is set to “Power/Height/Gain/Directivity.”

- Select 0, 1, 4, 9, 16, 25, 36, 49, 64, or 81 W.

GPS items

Height (Default: 10ft)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Height**

Selects the height of the Object's antenna to transmit along with the position data.

ⓘ This item is displayed when "Data Extension" is set to "Power/Height/Gain/Directivity."

- Select 10, 20, 40, 80, 160, 320, 640, 1280, 2560, or 5120 feet.*

  * If the Altitude/Distance unit is set to "m," select 3, 6, 12, 24, 49, 98, 195, 390, 780, or 1561 meters.

Gain (Default: 0dB)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Gain**

Selects the gain of the Object's antenna to transmit along with the position data.

ⓘ This item is displayed when "Data Extension" is set to "Power/Height/Gain/Directivity."

- Select between 0 and 9 dB.

Directivity (Default: Omni)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Directivity**

Selects the direction the Object's antenna was pointing to transmit along with the position data.

ⓘ This item is displayed when "Data Extension" is set to "Power/Height/Gain/Directivity."

- Select Omni, 45° NE, 90° E, 135° SE, 180°S, 225° SW, 270° W, 315° NW, or 360° N.

SSID (Default: ---)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **SSID**

Selects an SSID based on APRS to add to your call sign, to show your operating style to other stations.

ⓘ The SSID's additional methods differ, depending on whether the call sign includes a space or not.

ⓘ See page 4-23 for details of the SSID.

- ---: The space in the call sign is converted to "-."
- (-0): No SSID is added.
- -1 ~ -15: Adds an SSID of -1 to -15 to your call sign.
- -A ~ -Z: Adds an SSID of -A to -Z to your call sign.

Time Stamp (Default: DHM)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Object > **Time Stamp**

Selects the transmitting time stamp type.
The time stamp is transmitted with the position data in the D-PRS mode, and UTC (Universal Time Coordinated) time is used.

ⓘ When your position is manually set, time stamp data is not transmitted.

- DHM: Transmits the time stamp in the Day, Hour, and Minute format.
- HMS: Transmits the time stamp in the Hour, Minute, and Second format.

Item Name

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Item Name**

Sets the Item station's name to up to 9 characters.

Data Type (Default: Live Item)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Data Type**

Selects the Item station's status.

- Live Item: The Item station is valid.
- Killed Item: The Item station is invalid.

Symbol (Default: Radio)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Symbol**

Selects the symbol that indicates the Item's means of transportation or location. The selected symbol channel's symbols are transmitted with position data while in the D-PRS mode.

ⓘ See page 4-22 for details of editing a symbol.

GPS items

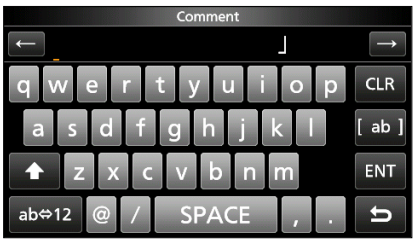
Comment

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Comment**

Enters a comment to transmit it with the D-PRS position data.
The number of characters you can enter differs, depending on the Data Extension and Altitude settings.

Data Extension	Altitude	Characters entered (maximum)
OFF	—	43 (Default)
OFF	Entered	35
Course/Speed	—	36
Course/Speed	Entered	28
Power/Height/Gain/Directivity	—	36
Power/Height/Gain/Directivity	Entered	28

The symbol "▮" displays the transmittable comment range. Please note that the characters that exceed the range will not be transmitted.



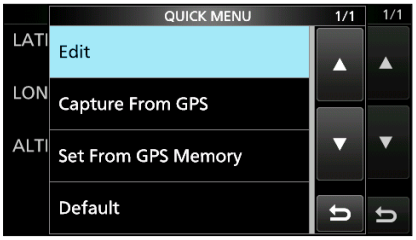
Transmittable comment range display
(Example: up to 28 characters)

Position

(Default: LATITUDE: 0°00.00′N,
LONGITUDE: 0°00.00′W, ALTITUDE: ------ft)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Position**

Displays the position information of the Item.
Push [QUICK] to open the QUICK MENU window shown below.



TIP: When you select "Capture From GPS" or "Set From GPS Memory," you can capture the position from the GPS or set the Item's position from the GPS memory.

ⓘ See page 4-26 when you want to enter the position information manually.

Data Extension (Default: OFF)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Data Extension**

Selects whether or not to transmit the Course/Speed data or the Power/Height/Gain/Directivity data with the position data in the D-PRS mode.

ⓘ The number of characters you can enter in "Comment" differs, depending on the settings.

- OFF: Does not transmit any information.
- Course/Speed:
  Transmits the course and speed data with the position data.
- Power/Height/Gain/Directivity:
  Transmits the TX power level, height, antenna gain, antenna direction, and position data.

Course (Default: 0°)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Course**

Sets the Item's course to between 0° and 360°.

ⓘ This item is displayed when "Data Extension" is set to "Course/Speed."

Speed (Default: 0°)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Speed**

Sets the Item's speed to between 0 and 1150 mph.*

* If the Speed unit is set to "km/h," set to between 0 to 1850 km/h, or set to "knots," set to between 0 and 999 knots.

ⓘ This item is displayed when "Data Extension" is set to "Course/Speed."

Power (Default: 0W)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Power**

Selects the TX power level of Item to transmit along with the position data.

ⓘ This item is displayed when "Data Extension" is set to "Power/Height/Gain/Directivity."

- Select 0, 1, 4, 9, 16, 25, 36, 49, 64, or 81 W.

GPS items

Height (Default: 10ft)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Height**

Selects the height of the Item's antenna to transmit along with the position data.

ⓘ This item is displayed when "Data Extension" is set to "Power/Height/Gain/Directivity."

- Select 10, 20, 40, 80, 160, 320, 640, 1280, 2560, or 5120 feet.*

  * If the Altitude/Distance unit is set to "m," select 3, 6, 12, 24, 49, 98, 195, 390, 780, or 1561 meters.

Gain (Default: 0dB)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Gain**

Selects the gain of the Item's antenna to transmit along with the position data.

ⓘ This item is displayed when "Data Extension" is set to "Power/Height/Gain/Directivity."

- Select between 0 and 9 dB.

Directivity (Default: Omni)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **Directivity**

Selects the direction the Item's antenna was pointing to transmit along with the position data.

ⓘ This item is displayed when "Data Extension" is set to "Power/Height/Gain/Directivity."

- Select Omni, 45° NE, 90° E, 135° SE, 180°S, 225° SW, 270° W, 315° NW, or 360° N.

SSID (Default: ---)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Item > **SSID**

Selects an SSID based on APRS to add to your call sign, to show your operating style to other stations.

ⓘ The SSID's additional methods differ, depending on whether the call sign includes a space or not.

ⓘ See page 4-23 for details of the SSID.

- ---: The space in the call sign is converted to "-."
- (-0): No SSID is added.
- -1 ~ -15: Adds an SSID of -1 to -15 to your call sign.
- -A ~ -Z: Adds an SSID of -A to -Z to your call sign.

Symbol (Default: WX Station)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Weather > **Symbol**

The symbol is an icon that indicates the weather station's means of transportation or location.
The saved symbol is transmitted along with the position data while in the D-PRS mode.

ⓘ See page 4-22 for details of editing a symbol.

SSID (Default: ---)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Weather > **SSID**

Selects an SSID based on APRS to add to your call sign, to show your operating style to other stations.

ⓘ The SSID's additional methods differ, depending on whether the call sign includes a space or not.

ⓘ See page 4-23 for details of the SSID.

- ---: The space in the call sign is converted to "-."
- (-0): No SSID is added.
- -1 ~ -15: Adds an SSID of -1 to -15 to your call sign.
- -A ~ -Z: Adds an SSID of -A to -Z to your call sign.

Comment

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Weather > **Comment**

Enter a comment to transmit it with the D-PRS position data, up to 43 characters.

Time Stamp (Default: OFF)

[MENU] > GPS > GPS TX Mode > D-PRS > TX Format > Weather > **Time Stamp**

Selects the transmitting time stamp type.
The time stamp is transmitted with the position data in the D-PRS mode, and UTC (Universal Time Coordinated) time is used.

- OFF: Does not transmit the time information.
- DHM: Transmits the time stamp in the Day, Hour, and Minute format.
- HMS: Transmits the time stamp in the Hour, Minute, and Second format.

GPS items

GPS Sentence (Default: GGA)

[MENU] > GPS > GPS TX Mode > NMEA > **GPS Sentence**

Selects sentences to be transmitted in the GPS mode to transmit position data. Set to between RMC, GGA, GLL, VTG, GSA, and GSV.

NOTE: Set the GSV sentence to OFF when sending the GPS message to conventional digital transceivers.
ⓘ See the "D-PRS Guide" that you can download on the Icom website.
https://www.icomjapan.com/support/
The GSV sentence is incompatible with them.

ⓘ **Information**
- Up to 4 GPS sentences can be set at a time.
- Displays "✔" when the sentence is set to ON.
- "VTG," "GSA," and "GSV" sentences are not transmitted when your position has been manually set.

GPS Message

[MENU] > GPS > GPS TX Mode > NMEA > **GPS Message**

Enter a GPS message of up to 20 alphanumeric characters.
ⓘ See the "D-PRS Guide" that you can download on the Icom website.
https://www.icomjapan.com/support/

NOTE: When you do not want to send a message, delete the entered message.

GPS Information

[MENU] > GPS > **GPS Information**

Displays the GPS satellite direction, elevation angle, satellite number, and receiving status. (p. 4-11)

TIP: Contents of GPS sentence
The Time Stamp is displayed based on the UTC (Universal Time Coordinated) time.

Sentence	Lon/Lat	Alt	GPS Time Stamp (UTC)	Date (UTC)	Status	2D/3D	COG (True)	SOG (knot)
RMC	✔		✔	✔	✔		✔	✔
GGA	✔	✔	✔		✔			
GLL	✔		✔		✔			
VTG							✔	✔
GSA					✔	✔		
GSV								

Sentence	Others
RMC	Magnetic variation, Mode Indicator
GGA	Number of satellites in use, HDOP, Geoidal separation, Age of Differential GPS data, Differential reference station ID
GLL	Mode Indicator
VTG	COG (Magnetic north), SOG (km/h), Mode Indicator
GSA	PRN number of satellites used in solution, PDOP, HDOP, VDOP
GSV	Total number of sentences, Sentence number, Total number of satellites in view, Satellite information (ID, Elevation, Azimuth, S/N)

GPS items

GPS Position

[MENU] > GPS > **GPS Position**

Your current position, received position, GPS Memory, or GPS Alarm position information is displayed.
(p. 4-6)
Rotating [DIAL] to select the MY, RX, MEM, and ALM screens.

MY screen (MY Position)

Compass*	Displays your direction.
Course	Displays your direction heading.
Latitude	Displays your latitude.
Longitude	Displays your longitude.
GL	Displays the grid locator based on the latitude and longitude of your location.
ALT	Displays your own altitude.
SPEED	Displays your speed over the ground.
TIME	Displays the current time received from the GPS.

ⓘ When “GPS Select” is set to “Manual,” the screen displays only latitude, longitude, altitude, GL (Grid locator), and time (internal clock).

RX screen (Received position data of the other station)
Depending on the caller’s TX mode or TX format, the displayed items and their meanings are different. The following lists describe the items for each category.
No data is displayed when no position data is received on your transceiver.

<1. When the caller’s TX mode is NMEA>

Compass*	Displays the caller’s direction from your location.
Latitude	Displays the caller’s latitude.
Longitude	Displays the caller’s longitude.
GL	Displays the grid locator based on the latitude and longitude of the caller’s location.
ALT	Displays the caller’s altitude.
DST	Displays the caller’s distance from your location.
Call sign	Displays the caller’s call sign.
COURSE	Displays the caller’s direction over the ground.
SPEED	Displays the caller’s speed.
GPS Time Stamp	Displays the time that the caller acquired the position data.

<2. When the caller’s TX format is D-PRS Position (Mobile station)>

Compass*	Displays the caller’s direction from your location.
Symbol	Displays the caller’s D-PRS symbol.
Latitude	Displays the caller’s latitude.
Longitude	Displays the caller’s longitude.
GL	Displays the grid locator based on the latitude and longitude of the caller’s location.
ALT	Displays the caller’s altitude.
DST	Displays the caller’s distance from your location.
Call sign	Displays the caller’s call sign (with SSID).
COURSE	Displays the caller’s direction over the ground.
SPEED	Displays the caller’s speed.
SSID	Displays the caller’s SSID.
GPS Time Stamp	Displays the time that the caller acquired the position data.

* You can change the display type in the QUICK MENU window.

GPS items

GPS Position

<3. When the caller's TX format is D-PRS Position (Base station)>

Compass*	Displays the caller's direction from your location.
Symbol	Displays the caller's D-PRS symbol.
Latitude	Displays the caller's latitude.
Longitude	Displays the caller's longitude.
GL	Displays the grid locator based on the latitude and longitude of the caller's location.
ALT	Displays the caller's altitude.
DST	Displays the caller's distance from your location.
Call sign	Displays the caller's call sign (with SSID).
SSID	Displays the caller's SSID.
POWER	Displays the caller's TX power level.
HEIGHT	Displays the caller's antenna height.
GAIN	Displays the caller's antenna gain.
DIRECT	Displays the direction of the caller's antenna.
GPS Time Stamp	Displays the time that the caller acquired the position data.

<4. When the caller's TX format is D-PRS Object/ Item>

Compass*	Displays the Object/Item's direction from your location.
Symbol	Displays the Object/Item's D-PRS symbol.
Latitude	Displays the Object/Item's latitude.
Longitude	Displays the Object/Item's longitude.
GL	Displays the grid locator based on the latitude and longitude of the Object/Item's location.
ALT	Displays the Object/Item's altitude.
DST	Displays the Object/Item's distance from your location.
Object/Item name	Displays the Object/Item's name.
Call sign	Displays the caller's call sign (with SSID).
SSID	Displays the caller's SSID.
COURSE	Displays the Object/Item's direction over the ground.
SPEED	Displays the Object/Item's speed.
POWER	Displays the Object/Item's TX power level.
HEIGHT	Displays the Object/Item's antenna height.
GAIN	Displays the Object/Item's antenna gain.
DIRECT	Displays the direction that the Object/Item's antenna was pointing.
GPS Time Stamp	Displays the time that the caller sent the Object's data.

ⓘ When the Object or Item is disabled, "KILLED" is displayed.

* You can change the display type in the QUICK MENU window.

GPS items

GPS Position

<5. When the caller's TX format is D-PRS Weather>

Compass*	Displays the caller's direction from your location.
Symbol	Displays the caller's D-PRS symbol.
Latitude	Displays the caller's latitude.
Longitude	Displays the caller's longitude.
GL	Displays the grid locator based on the latitude and longitude of the caller's location.
DST	Displays the caller's distance from your location.
Call sign	Displays the caller's call sign (with SSID).
SSID	Displays the caller's SSID.
TEMP	Displays the temperature of the caller station's area.
HUMI	Displays the humidity of the caller station's area.
RAIN	Displays the rainfall of the caller station's area.
WIND DIR	Displays the wind direction of the caller station's area.
WIND SPD	Displays the wind speed of the caller station's area.
BARO	Displays the barometric pressure of the caller station's area.
GPS Time Stamp	Displays the time that the caller acquired the position data.

MEM screen (GPS memory position)

Compass*	Displays GPS Memory channel's direction from your location.
Latitude	Displays GPS Memory channel's latitude.
Longitude	Displays GPS Memory channel's longitude.
GL	Displays the grid locator based on the latitude and longitude of the GPS Memory channel.
DST	Displays GPS Memory channel's distance from your location.
GPS memory name	Displays the caller's call sign (with SSID).

ⓘ You can change the GPS Memory in the QUICK MENU window.

ALM screen (GPS alarm position)

Compass*	Displays GPS Alarm area's direction from your location.
Latitude	Displays GPS Alarm area's latitude.
Longitude	Displays GPS Alarm area's longitude.
GL	Displays the grid locator based on the latitude and longitude of the GPS Alarm area.
DST	Displays the GPS Alarm area's distance from your location.
GPS Alarm	Displays "RX," GPS memory group name, or GPS memory name specified for the GPS Alarm function.

ⓘ You can change the GPS Alarm in the QUICK MENU window.

* You can change the display type in the QUICK MENU window.

GPS items

GPS Memory

[MENU] > GPS > **GPS Memory**

The transceiver has 300 GPS memories to save the received position data, or often-used position data, with an alphanumeric memory name.
The channels can be divided into the “(No Group)” group and each Memory group (A to Z) for easy Memory management.

The display of the GPS MEMORY screen

(No Group)	GPS Memories not assigned to any group
A ~ Z: Group Name	GPS Memories assigned to the selected group.

GPS Memory Groups (A ~ Z)

GROUP NAME	GPS Memory Group name (Up to 16 alphanumeric characters)

ⓘ You can edit the GPS Memory Group name. (p. 4-15)

GPS Memories

NAME	GPS memory name (Up to 16 alphanumeric characters)
DATE	Saved date
TIME	Saved time
LATITUDE	Saved position (latitude)
LONGITUDE	Saved position (longitude)
ALTITUDE	Saved altitude
GROUP	The group letter and the name of the group

ⓘ When you save the received position data on the GPS POSITION screen, the received station’s call sign is used as the GPS Memory name.
ⓘ In the QUICK MENU window, you can edit the GPS Memory contents, such as the GPS Memory name.

Alarm Select (Default: OFF)

[MENU] > GPS > GPS Alarm > **Alarm Select**

Selects the target positions for the GPS Alarm function.

- OFF: Turns OFF the function.
- RX: The GPS Alarm sounds when a target (the last received position) enters your active alarm range.
- Group: The GPS Alarm sounds when a target (positions in the GPS Memory, or the selected GPS Memory Group) enters your active alarm range.
- Memory: The GPS Alarm sounds when a target (the entered position in the GPS Memory) enters your active alarm range.

Alarm Area (Group) (Default: 0.25′)

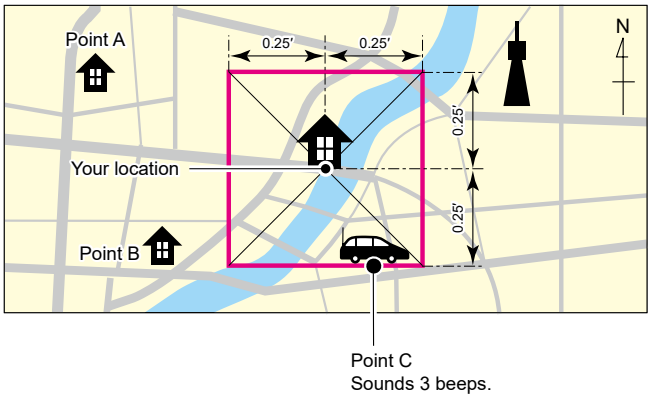
[MENU] > GPS > GPS Alarm > **Alarm Area (Group)**

Sets the GPS active alarm range.
When a target enters this set active alarm range, the GPS Alarm sounds, and the GPS Alarm icon blinks.
ⓘ When “Alarm Select” is set to “Group,” this setting is enabled.

Ranges differ, depending on the Latitude/Longitude unit setting.

- Latitude/Longitude = ddd°mm.mm′
  Ranges: 00.08′ to 59.99′ (0.01′ steps)
- Latitude/Longitude = ddd°mm′mm″
  Ranges: 00′05″ to 59′59″ (0′01″ steps)
- Latitude/Longitude = ddd.dddd°
  Ranges: 0.0014° to 0.9999° (0.0001° steps)

Example:
When a target enters the active alarm range, the GPS Alarm sounds, and the GPS alarm icon blinks.



GPS items

Alarm Area (RX/Memory) (Default: Both)

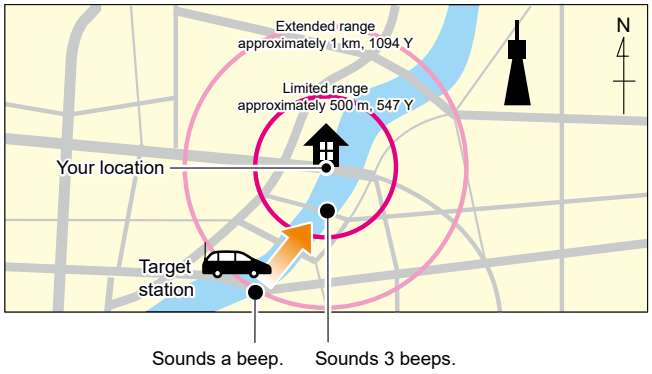
[MENU] > GPS > GPS Alarm > **Alarm Area (RX/Memory)**

Selects the GPS active alarm range.
When a target enters the active alarm range, the GPS Alarm sounds, and the GPS alarm icon blinks.

ⓘ When “Alarm Select” is set to “RX” or “Memory,” this setting is enabled. (p. 4-34)

- Limited: The transceiver sounds 3 beeps, and the GPS Alarm icon blinks when the target enters the 500 meters range.
- Extended: The transceiver sounds 3 beeps, and the GPS Alarm icon blinks when the target enters the 1-kilometer range.
- Both: The transceiver sounds a beep, and the GPS Alarm icon blinks when the target enters the 1-kilometer range and sounds 3 beeps, and the icon blinks when it enters the 500 meters range. When the target exits the 500 meters range but is still in the 1-kilometer range, the icon continues to blink, but no beeps sound.

Example:
When a target station enters the active alarm range (500 meters or 1 kilometer, depending on the setting), the GPS Alarm sounds, and the GPS Alarm icon blinks.



GPS Logger (Default: ON)

[MENU] > GPS > **GPS Logger**

Turns the GPS Logger function ON or OFF.
This function logs the position, altitude, course, speed, and the number of satellites in use.

- OFF: Turns OFF the function.
- ON: The transceiver automatically logs GPS data. Once this function is turned ON, the GPS data will be continuously logged until turning it OFF, even if the transceiver power is turned OFF, then ON again.

ⓘ This function requires a microSD card (User supplied).
ⓘ When “GPS select” is set to “OFF” or “Manual,” this function does not save the log.

TIP: The log data is saved on the microSD card. The file name is automatically created, as shown below:
- Log start date and time: 1st April 2026 15:30:00
- Filename: 20260401_153000.csv

Record Interval (Default: 5sec)

[MENU] > GPS > GPS Logger > **Record Interval**

Sets the GPS Logger function record interval to 1, 5, 10, or 30 seconds, or 1, 5, or 10 minutes.

Record Sentence (Default: ☑ RMC/ ☑ GGA/ ☑ VTG/ ☑ GSA)

[MENU] > GPS > GPS Logger > **Record Sentence**

Sets the GPS Logger function record sentence to RMC, GGA, VTG, or GSA.

- Displays “✔” when the sentence is set.

NOTE: Select at least one sentence, and an error beep will sound.

GPS Auto TX (Default: OFF)

[MENU] > GPS > **GPS Auto TX**

Selects an option for the GPS automatic transmission function. This function automatically transmits the current position data received from a GPS receiver and any entered GPS message at the set interval.

- OFF: Does not automatically transmit the position data. (When you push [PTT], the transceiver transmits the position data.)
- 30 sec to 30 min: Transmits the current position data at the selected interval (30 seconds, or 1, 3, 5, 10, or 30 minutes).

NOTE: When the GPS TX mode is “NMEA,” set the “GPS Select” to “Internal GPS” or “External GPS (DATA).” If you set it to “Manual” or “OFF,” the current position data will not be automatically transmitted.

Section 5 VOICE TX FUNCTION

Recording a Voice TX memory 5-2
◇ Recording 5-2
◇ Playing back 5-2
Entering a Voice TX memory name 5-3
Transmitting a Voice memory content 5-3
◇ Transmitting 5-3
◇ Repeatedly transmitting 5-4
VOICE TX SET screen 5-4

Recording a Voice TX memory

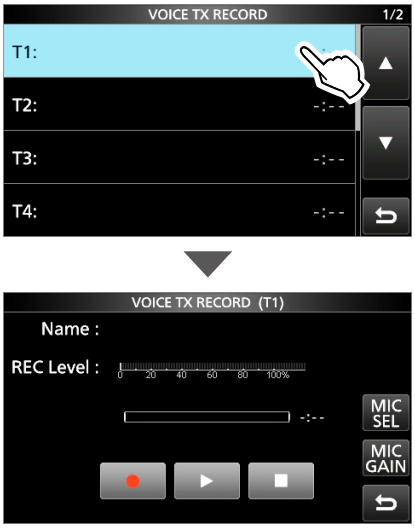
You can record up to 8 Voice transmit memories (T1 ~ T8), each up to 1.5 minutes, onto a microSD card. To transmit a recorded content using a Voice TX memory, first record the message, as described below.

ⓘ You can assign the [Voice TX] key function to an optional microphone key or a Bluetooth headset. (p. 10-10)

NOTE: To use the Voice TX memory function, a microSD card (user supplied) is required.

◇ Recording

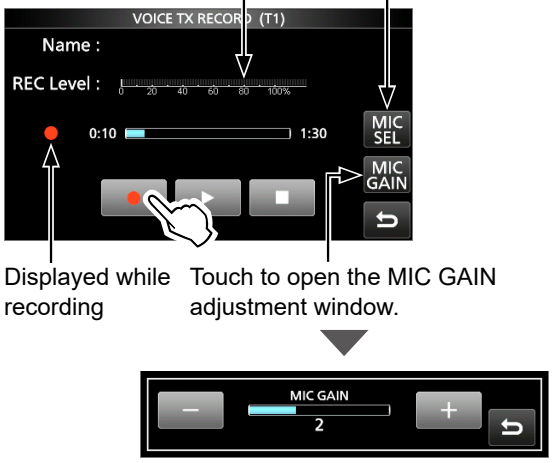
1. Display the VOICE TX screen.
   [MENU] > **VOICE**
2. Touch [REC].
   • Opens the VOICE TX RECORD screen.
3. Touch the desired Voice memory “T1” ~ “T8.” (Example: T1)



4. Touch ● to start recording.

Adjust the Mic gain so that the “REC Level” meter reads less than 80%.

Touch to select the microphone to use.



Displayed while recording

Touch to open the MIC GAIN adjustment window.

• Without holding down [PTT], speak into the microphone at your normal voice level.

ⓘ Previously recorded content is overwritten.

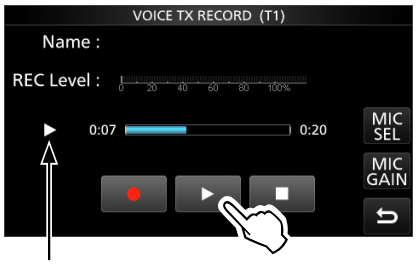
ⓘ When you select “Bluetooth MIC” without connecting a Bluetooth headset, “” is displayed.

5. Touch ■ to stop recording.
6. To close the VOICE TX RECORD screen, push [EXIT] several times.

TIP: How to clear the recorded content
Touch the Voice memory (T1 ~ T8) for 1 second in step 3, and then touch “Clear” in the QUICK MENU window.

◇ Playing back

1. On the selected memory’s recording screen, touch ▶ to start playing back without transmitting.



Displayed while playing

ⓘ To stop the playback, touch ■.

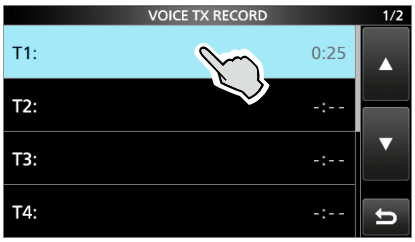
2. To close the VOICE TX RECORD screen, push [EXIT] several times.

Entering a Voice TX memory name

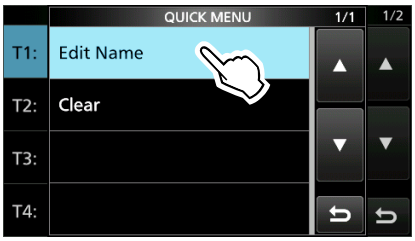
You can assign a name to recorded Voice memories.

Example: Entering “CQ CONTEST” in Memory T1

1. Display the VOICE TX RECORD screen.
   [MENU] > VOICE > **REC**
2. Touch the desired memory for 1 second.

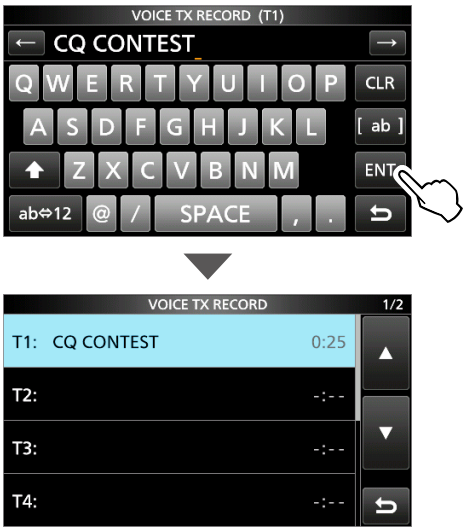


3. Touch “Edit Name.”



- Opens the Name editing screen.

4. Enter a name of up to 16 characters, and then touch [ENT] to save.



ⓘ See “Keyboard entering and editing.” (p. ii)

5. To close the VOICE TX RECORD screen, push [EXIT].

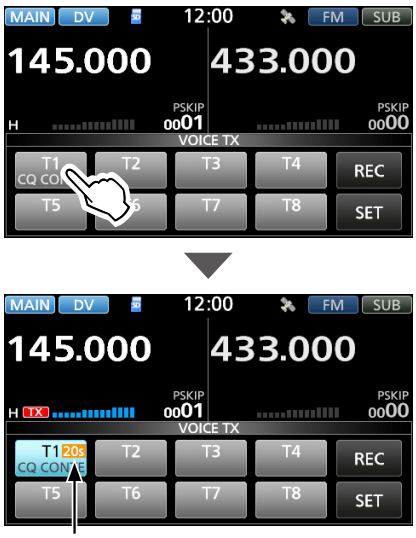
Transmitting a Voice memory content

You can transmit the Voice TX memory contents once or repeatedly. This is useful for transmitting your call sign, contest number or name in some contests, or repeatedly calling CQ.

◇ Transmitting

Transmits the prerecorded content. (p. 5-2)

1. Display the VOICE TX screen.
   [MENU] > **VOICE**
2. Touch the desired Voice memory key [T1] ~ [T8].



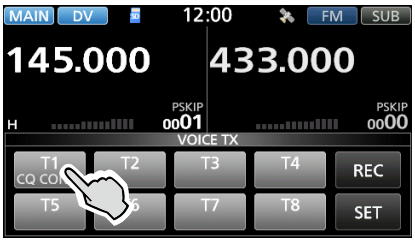
- Transmits the recorded content once.

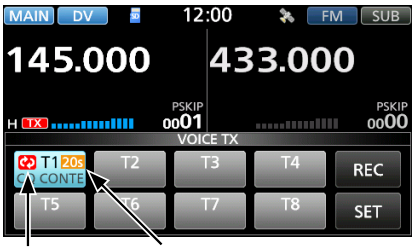
3. To close the VOICE TX screen, push [EXIT].

Transmitting a Voice memory content

◇ Repeatedly transmitting

1. Display the VOICE TX screen.
   [MENU] > **VOICE**
2. Touch the desired Voice memory key [T1] ~ [T8] for 1 second.





Repeat icon The transmission's remaining time

- Repeatedly transmits the recorded content.

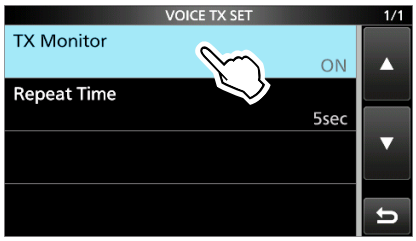
ⓘ Information
- The recorded content is repeatedly transmitted for 10 minutes unless you manually stop transmission by touching the selected memory.
- The Memory Timer counts down.
- is displayed while repeatedly transmitting.
- You can set the pause interval between the repeated transmissions in "Repeat Time" on the VOICE TX SET screen. During this interval, the transceiver returns to receive. See to the right for details.
- After 10 minutes have passed, and all of the recorded content in the memory is transmitted, the transceiver automatically returns to receive.
- When a signal is received in the interval between transmissions, the transceiver pauses the next transmission until the signal disappears. However, if the squelch is set to open, the transceiver repeatedly transmits after the repeat interval time expires, even if signals are received.

3. To close the VOICE TX screen, push [EXIT].

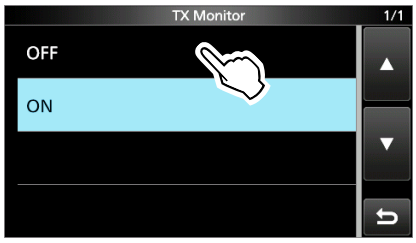
VOICE TX SET screen

You can set the Automatic Monitor function and the Transmit Repeat Interval on this screen.

1. Display the VOICE TX SET screen.
   [MENU] > VOICE > **SET**
2. Touch the item to set. (Example: TX Monitor)



3. Touch the option to set. (Example: OFF)



4. To close the VOICE TX SET screen, push [EXIT].

TIP: You can set each item to its default by touching the item for 1 second, and then touching "Default" on the QUICK MENU window.

TX Monitor (Default: ON)

Turn the TX Monitor function ON or OFF.
- ON: The TX voice audio is heard from the speaker.
- OFF: The TX voice audio is not heard from the speaker.

Repeat Time (Default: 5sec)

Sets the repeat interval to repeat the voice transmission. The transceiver repeatedly transmits the recorded content at this interval.
- Set to between 1 and 15 seconds.

ⓘ Repeatedly transmits the recorded content for up to 10 minutes.
ⓘ After 10 minutes have passed, and all of the recorded content in the memory is transmitted, the transceiver automatically returns to receive.

Section 6 VOICE RECORDER FUNCTIONS

Recording a QSO audio 6-2
◇ Quick recording 6-2
◇ Basic recording 6-2
Playing back a QSO audio 6-3
Checking the folder or file information 6-4
Deleting files 6-5
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Playing back audio on a PC 6-7

Recording a QSO audio

This transceiver is equipped with a QSO recorder not only for the receive audio but also for the transmit audio.
This function is useful to make a QSO record, or to confirm your QSO with a rare entity's station, or on a DX'pedition. You can also use the function to repeatedly transmit the same voice message.
The recorded content is saved to a microSD card.

There are 2 ways to start recording.

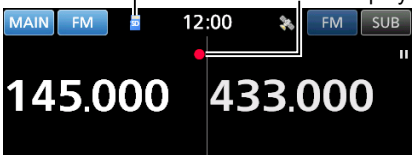
- Push [QUICK] and touch "<<REC Start>>."
- Push [MENU], and then touch "<<REC Start>> on the QSO RECORDER screen.

ⓘ The recorded audio is saved in the "Voice" folder on the microSD card. (p. 1-5)
ⓘ When "PTT Auto REC" is set to ON, the recording automatically starts when you start transmitting.
([MENU] > RECORD > Recorder Set > **PTT Auto REC)**

TIP: About the icons

- While recording, "●" is displayed and the microSD card icon blinks blue.

The microSD card icon blinks.
"●" is displayed.



- While pausing, "II" is displayed.

"II" is displayed.



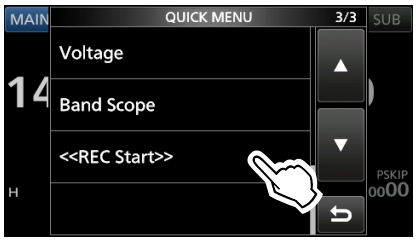
NOTE:

- To record a QSO, a microSD card (user supplied) is required.
- Do not remove the microSD card from the transceiver while recording. Otherwise, the recording stops, and the card data may be corrupted or deleted.
- Once the recording starts, it pauses and resumes if the transceiver is turned OFF and ON again.
- The recording continues until you touch <<REC Stop>>, or the free space on the microSD card has run out.
- When the recording file's content reaches 2 GB, the transceiver continues recording to a new file.

◇ Quick recording

You can quickly record the audio you receive.

1. Push [QUICK].
   - Opens the QUICK MENU window.
2. Touch "<<REC Start>>."



- Starts recording.
- "Recording started." is briefly displayed.

ⓘ To stop recording, open the QUICK MENU window again and touch "<<REC Stop>>."

◇ Basic recording

You can record both received and transmitted audio.

1. Open the QSO RECORDER screen.
   [MENU] > **RECORD**
2. Touch "<<REC Start>>."



- Starts recording.
- "Recording started." is briefly displayed.

ⓘ To stop recording, touch "<<REC Stop>>."

3. To close the QSO RECORDER screen, push [EXIT].

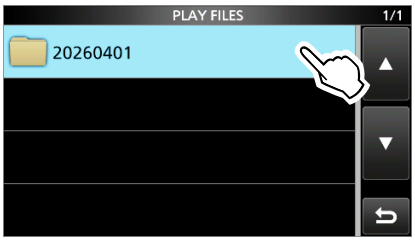
TIP:

- You can select to record the received audio from only the MAIN band or both the MAIN and SUB bands. (p. 6-6)
  ([MENU] > RECORD > Recorder Set > **REC Operation**)
- When "RX REC Condition" is set to "Always," the recording automatically starts when "<<REC Start>>" is selected. In that case, recording continues, even when no signal is received.* (p. 6-6)
  ([MENU] > RECORD > Recorder Set > **RX REC Condition**)
  * The recorded file contains no sound.

Playing back a QSO audio

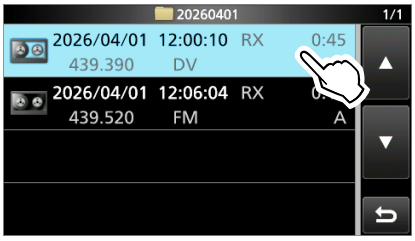
You can play back the recorded QSO audio.

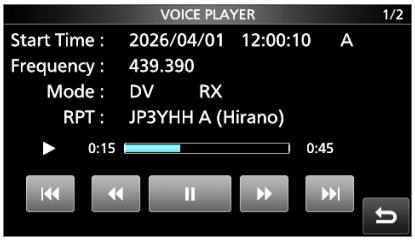
1. Insert the microSD card in which the recorded audio is saved.
2. Open the PLAY FILES screen.
   [MENU] > RECORD > **Play Files**
3. Touch the folder where the file you want to playback is saved.



ⓘ The folder is named in the following format: YYYYMMDD (YYYY: Year, MM: month, DD: day).

4. Touch the desired file.





- Starts a playback.

ⓘ The file is named in the following format: YYYY/MM/DD hh:mm:ss (YYYY: Year, MM: month, DD: day, hh: hour, mm: minute, ss: second).

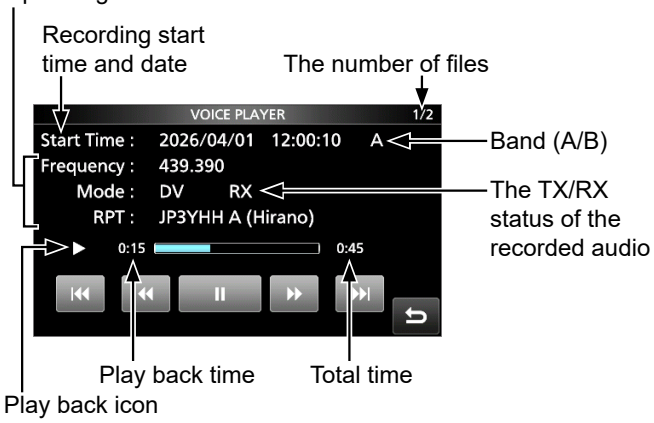
ⓘ Playback continues to the next file and stops when the last file in the folder is played back.

5. To close the PLAY FILES screen, push [EXIT] several times.

Key	Action
⏮	Plays the previous file. ⓘ While the oldest file is playing back, pushing ⏮ starts playing the beginning of the oldest file, even if there are other files in the folder.
⏭	Plays the next file. ⓘ While the most recent file is playing back, pushing ⏭ stops the playback, even if there are other files in the folder.
⏪	Rewinds to the skip time point. (Default: 10 seconds) ⓘ If you touch ⏪ within the first 1 second of the file, the end of the previously recorded file will play back.
⏩	Fast forward to the skip time point. (Default: 10 seconds)
⏸	Pauses while playing ⓘ ▶ is displayed while pausing.
▶	Plays the file. ⓘ ⏸ is displayed while playing.

ⓘ You can change the skip time in the following item. ([MENU] > RECORD > Player Set > **Skip Time**)

Operating information



ⓘ The icon that shows how the signal is received or transmitted is displayed.

- (No icon): The Normal mode (RF)
- TM: The Terminal mode
- MONI: The DV Repeater Monitor function

Checking the folder or file information

You can check the folder and recorded file information listed below.

Folder information
- Number of saved files
- Total size
- Created date

RX audio file information
- Operating frequency
- Operating mode
- Operating information (RX)
- Recorded date and time
- Your position data*
- Repeater call sign*
- Caller's call sign*
- S-meter
- Caller's Position data*

TX audio file information
- Operating frequency
- Operating mode
- Operating information (TX)
- RF Power
- Recorded date and time
- Your position data*
- Repeater call sign*
- Call sign of the called station*

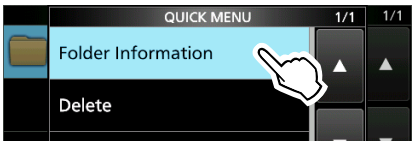
* Depending on the recording status, this item is not displayed.
ⓘ The icon that shows how the signal is received or transmitted is displayed.
- (No icon): The Normal mode (RF)
- TM: The Terminal mode
- MONI: The DV Repeater Monitor function

Checking the folder information

1. Open the PLAY FILES screen.
   [MENU] > RECORD > **Play Files**
2. Touch a folder for 1 second.



   • Opens the QUICK MENU window.
3. Touch "Folder Information."



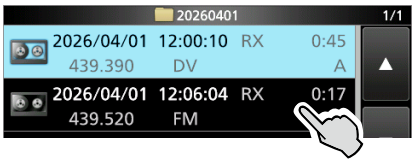
   • The FOLDER INFORMATION screen is displayed.
4. To close the PLAY FILES screen, push [EXIT] several times.

Checking the file information

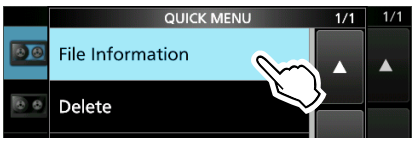
1. Open the PLAY FILES screen.
   [MENU] > RECORD > **Play Files**
2. Touch a folder.



3. Touch a file to check its information for 1 second.



   • Opens the QUICK MENU window.
4. Touch "File Information."



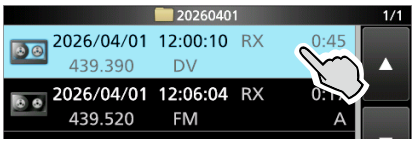
   • The FILE INFORMATION screen is displayed.
5. To close the PLAY FILES screen, push [EXIT] several times.

Deleting files

1. Open the PLAY FILES screen.
   [MENU] > RECORD > **Play Files**
2. Touch the folder where the file you want to delete is saved.

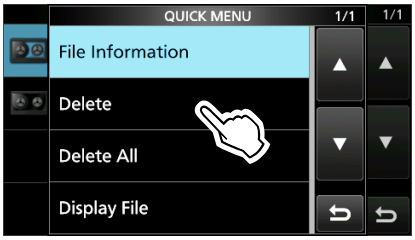


3. Touch the file that you want to delete for 1 second.



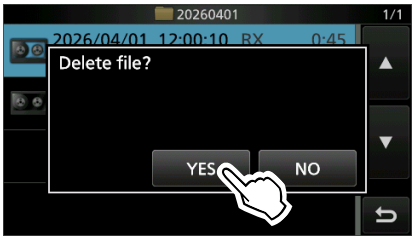
- Opens the QUICK MENU window.

4. Touch “Delete.”



ⓘ If you want to delete all files in the selected folder, touch “Delete All.”

5. Touch [YES].



- The file is deleted and returns to the previous screen.

6. To close the PLAY FILES screen, push [EXIT] several times.

Deleting folders

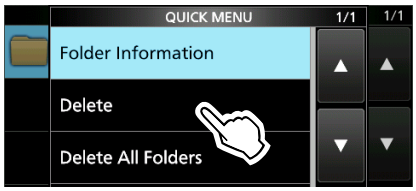
NOTE: All the files in the folder are also deleted.

1. Open the PLAY FILES screen.
   [MENU] > RECORD > **Play Files**
2. Touch the folder you want to delete for 1 second.



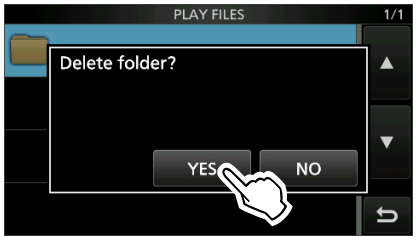
- Opens the QUICK MENU window.

3. Touch “Delete.”



ⓘ If you want to delete all folders, touch “Delete All Folders.”

4. Touch [YES].



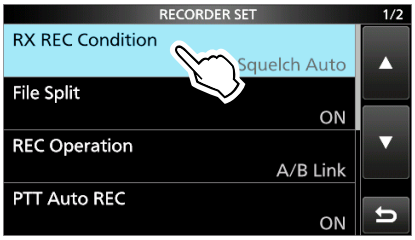
- The folder is deleted and returns to the previous screen.

5. To close the PLAY FILES screen, push [EXIT].

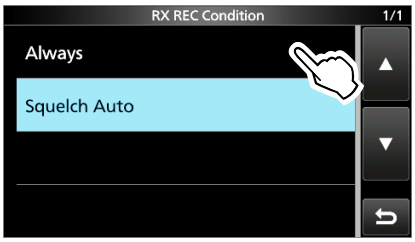
RECORDER SET screen

You can change the recorder settings on this screen.

1. Display the RECORDER SET screen.
   [MENU] > RECORD > **Recorder Set**
2. Touch the item to set. (Example: RX REC Condition)



3. Touch the option to set. (Example: Always)



4. To close the RECORDER SET screen, push [EXIT].

TIP: You can set each item to its default by touching the item for 1 second, and then touching "Default" on the QUICK MENU window.

RX REC Condition (Default: Squelch Auto)

[MENU] > RECORD > Recorder Set > **RX REC Condition**

Selects the recording setting for receive.
- Always: Records even if no signal is received.
- Squelch Auto: Records only when the squelch opens. (The recording will be paused when the squelch closes while recording.)

File Split (Default: ON)

[MENU] > RECORD > Recorder Set > **File Split**

Turns the File Split function ON or OFF.
- OFF: The audio is continuously recorded into the file, even if you switch between transmit and receive, or the squelch status changes between open and closed.
  When the recording file's size becomes 2 GB, the transceiver continues to record, but to a new file.
- ON: While recording, if you switch between transmit and receive, or the squelch status changes between open and closed, a new file is automatically created in the same folder, and the audio is saved into the new one.

REC Operation (Default: A/B Link)

[MENU] > RECORD > Recorder Set > **REC Operation**

Selects the recording operation on the dual band display.
- A/B Separate: The recording function is separately active/inactive on the selected band (MAIN band) when the function is started or stopped.
- A/B Link: The recording function is simultaneously active/inactive on both MAIN and SUB bands when the function is started or stopped.
  ⓘ On the single band display, only the displayed band (A or B) is recorded.

PTT Auto REC (Default: ON)

[MENU] > RECORD > Recorder Set > **PTT Auto REC**

Turns the PTT Automatic Recording function ON or OFF.
- OFF: The recording does not start, even when a signal is transmitted.
- ON: The recording automatically starts when a signal is transmitted.

The recording will stop when:
- 10 seconds have passed after the last transmission.
- 10 seconds have passed if no signal is received after the last transmission.
  - If you receive a signal within 10 seconds after the last transmission, the received audio is also recorded.
  - If you receive another signal within 10 seconds after the last reception, the received audio is also recorded.
- The frequency or operating mode is changed.

PRE-REC for PTT Auto REC (Default: 10sec)

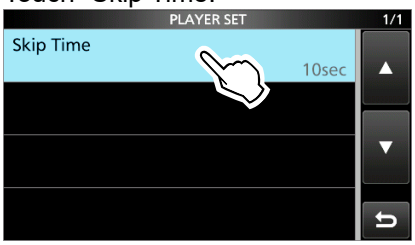
[MENU] > RECORD > Recorder Set > **PRE-REC for PTT Auto REC**

Selects whether or not to record the audio that is received before the PTT Automatic Recording function is activated.
- OFF: Does not record the audio.
- 5sec/10sec/15sec: Records the audio that was previously received in this set period of time.

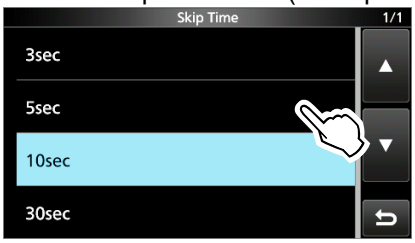
PLAYER SET screen

You can fast forward or rewind while playing back. You can change the skip time in the PLAYER SET screen.

1. Display the PLAYER SET screen.
   [MENU] > RECORD > **Player Set**
2. Touch “Skip Time.”



3. Touch the option to set. (Example: 5sec)



4. To close the PLAYER SET screen, push [EXIT].

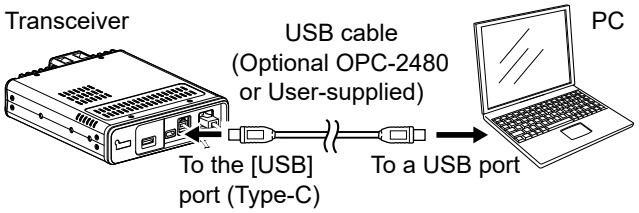
TIP: You can set the item to its default by touching the item for 1 second, and then touching “Default” on the QUICK MENU window.

Playing back audio on a PC

You can also play back the voice memory data on a PC.

ⓘ The recorded information (frequency, date, and so on) is not displayed.

1. Connect the transceiver and PC with a USB cable.



2. Open the USB Connect screen.
   [MENU] > SET > Connectors > **USB Connect**
3. Touch “SD Card Mode.”
   ⓘ You can also set the SD Card Mode on the FUNCTION screen that opens when you push [FUNC], and then touch “USB.”
   • The confirmation dialog is displayed.
4. Touch [Yes].
   • The transceiver is connected to the PC in the SD Card mode, and the SD card folder is displayed on the PC screen.
5. Open the “Voice” folder.
   ⓘ See page 1-5 for details.
6. Open the folder where the file you want to playback is saved.
   ⓘ The folders are titled based on the recorded date. (YYYYMMDD)
7. Open the file that you want to play back.
   • The audio starts playing back.
   ⓘ The files are named using the date and time format (YYYYMMDD_hhmmss.wav).

NOTE:
- The operations during playback may differ, depending on the application. Refer to the application’s instruction manual for details.
- When the file does not play back, even if you double click the file, download an appropriate software. (Example: Windows Media Player)

Section 7 MEMORY OPERATION

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◇ Memory channel content 7-2
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MEMORY screen 7-9

General description

The Memory mode enables you to quickly select often-used frequencies, modes, and other parameters. While operating in the Memory mode, you can temporarily change the operating frequency, mode, and so on, without overwriting the memory channel contents.

Group	Memory channel	Descriptions
00 to 99	00 to 99	Regular memory channels. Up to 1000 channels can be separately stored in the 100 memory channel groups.
CALL CH	144 C1/C2 430 C1/C2	Call channels for each of the 144 and 430 bands.

◇ Memory channel content

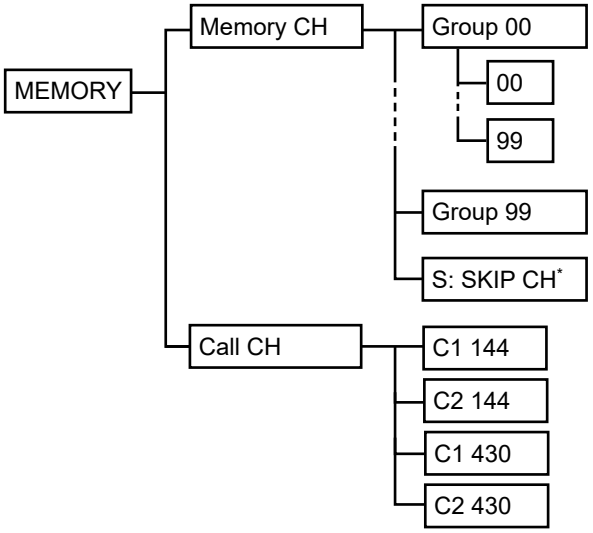
The following information can be entered into the Memory channels:

- Operating frequency
- Duplex ON/OFF
- Duplex direction (DUP+ or DUP–)
- Duplex frequency offset
- Memory name
- Scan skip setting
- Tuning step
- Operating mode
- Subaudible tone encoder, tone squelch, or DTCS squelch ON/OFF
- Subaudible tone frequency, tone squelch frequency, or DTCS code with polarity
- Digital code
- Digital Call sign squelch or Digital code squelch ON/OFF
- UR station call sign
- R1/R2 call signs

NOTE: Memory content may be accidentally cleared by static electricity, electric transients, and other causes. In addition, it may be cleared by a malfunction or during repairs. Therefore, we recommend that you back up the Memory content or save it onto a microSD card (User supplied) or a PC.
ⓘ The CS-5200 PROGRAMMING SOFTWARE can also be used to back up your memory content. See its instruction manual for details.

◇ Tree view of the MEMORY screen

On the MEMORY screen, you can easily manage content in the Memory or Call channel.

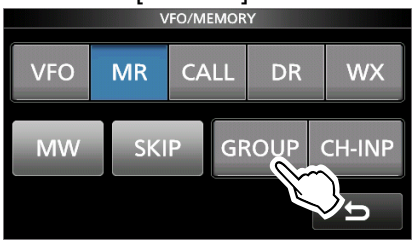


* Skips the set frequency during a scan.
(While a VFO scan is paused, and if you want to skip the frequency, push [QUICK] and touch “Adds to SKIP MR Group” to set the frequency as the Skip channel.)

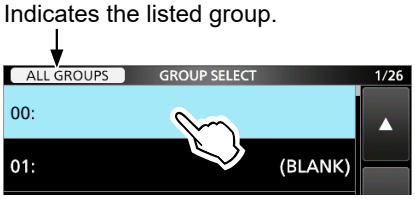
Selecting a memory group

◇ Selecting on the MEMORY screen

1. Select the Memory mode. (Basic Manual)
2. Touch the Memory channel number again, and then touch [GROUP].



3. Touch a memory group. (Example: 00)
   Indicates the listed group.

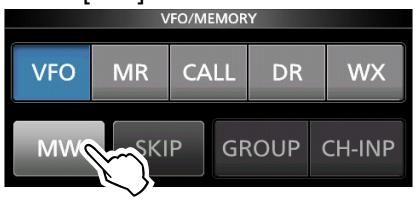


ⓘ You can toggle the listed group by touching the icon in the upper left corner of the screen.
- "ALL GROUPS" is displayed when all groups are listed.
- "ACTIVATE GROUPS" is displayed when only the groups that have one or more channels are listed.

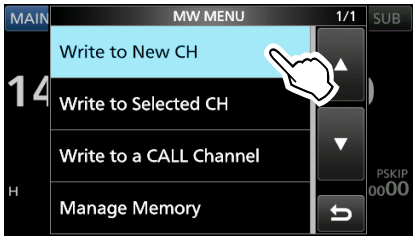
Entering Memory channel contents

NOTE: New content you enter will overwrite any content already in the selected memory.

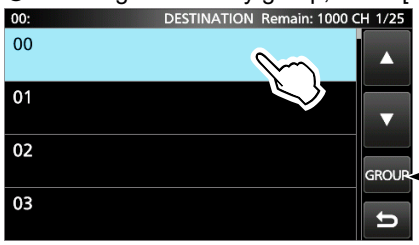
1. Select the VFO mode. (Basic Manual)
2. Set the frequency, operating mode, and other parameters.
3. Touch the VFO/MEMORY icon.
4. Touch [MW].



5. Touch "Write to New CH."



6. Touch the desired Memory channel. (Example: 00)
   ⓘ To change a memory group, touch [GROUP].



Touch to change a memory group.

7. Touch [YES].



- The contents are entered in the selected Memory channel.

TIP: Touching [MW] for 1 second in step 4 enters the contents into a blank channel in the selected group.



Selecting a Memory channel

There are 3 ways to select a Memory channel.
- Selecting with [DIAL]
- Selecting on the MEMORY screen
- Directly selecting a Memory channel

◇ Selecting with [DIAL]

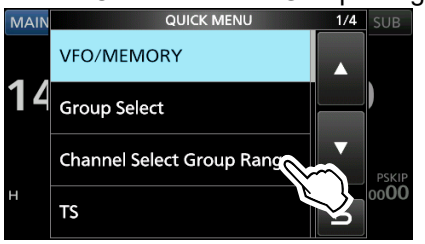
1. Select the Memory mode. (Basic Manual)
2. Rotate [DIAL] until you select the Memory channel you want to use.



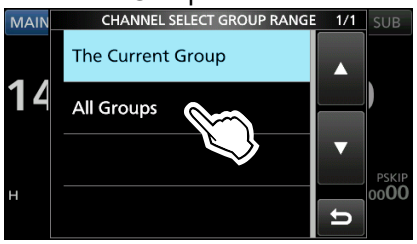
ⓘ Blank channels are not selected.
ⓘ To select a Memory Group, push [QUICK], and then touch “Group Select.”

TIP: To sequentially select a channel in a different group

1. Push [QUICK].
2. Touch “Channel Select Group Range.”

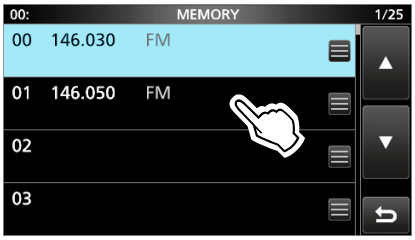


3. Touch “All Groups.”



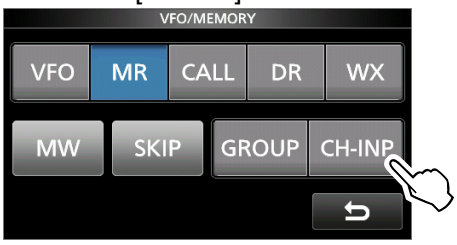
◇ Selecting on the MEMORY screen

1. Open the MEMORY CH screen.
   [MENU] > MEMORY > **Memory CH**
2. Touch a memory group.
3. Touch the Memory channel that you want to use.



◇ Directly selecting a Memory channel

1. Select the Memory mode. (Basic Manual)
2. Touch the Memory channel number again, and then touch [CH-INP].



3. Enter the Memory channel number, and then touch [ENT].



ⓘ To clear the entry, touch [CE].
ⓘ To clear the entry and return to the previous screen, push [EXIT].

4. Touch [ENT] to set the Memory channel.
   • Closes the CH-INP screen.
   ⓘ If you touch [ENT] when the digits over 10 are not entered, “0” will be automatically entered into the digits that are blank.

Selecting a Call channel

1. Push [CALL] to enter the Call Channel mode.
2. Rotate [DIAL] to select the Call channel that you want to use.



ⓘ In the Call Channel mode, “144 C1,” “144 C2,” “430 C1,” or “430 C2” is displayed.

Copying the Memory channel contents

You can copy Memory channel contents to the VFO or to another Memory channel.

◇ Copying to the VFO

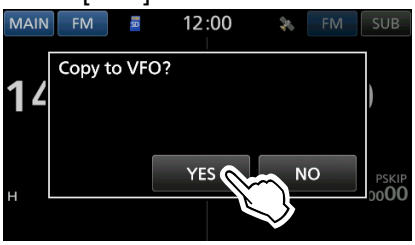
1. Select the Memory mode. (Basic Manual)
2. Rotate [DIAL] to select the channel to be copied. (Example: Channel 01 in group 00)
3. Touch the Memory channel number.
4. Touch [MW].



5. Touch “Copy to VFO.”



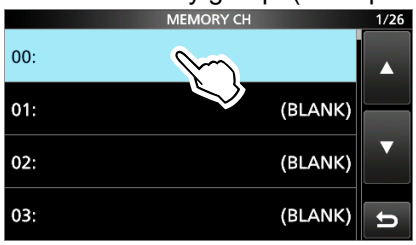
6. Touch [YES].



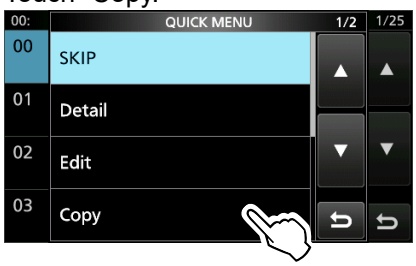
- A beep sounds, and the selected memory contents are copied to the VFO.

◇ Copying to another Memory channel

1. Open the MEMORY CH screen.
   [MENU] > MEMORY > **Memory CH**
2. Touch a memory group. (Example: 00)



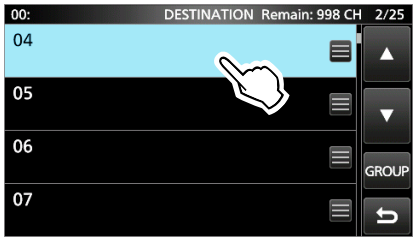
3. Rotate [DIAL] to select the channel to be copied. (Example: Channel 00 in group 00)
4. Push [QUICK].
5. Touch “Copy.”



- “DESTINATION” blinks at the top of the screen.

ⓘ To change a memory group, touch [GROUP].

6. Touch the destination channel. (Example: Channel 04)



- Beeps sound, and the contents are copied to the destination channel.

ⓘ If the selected channel is not blank, a confirmation dialog is displayed. When you touch [YES], the Memory contents are overwritten.

Moving the Memory contents

You can move the memory content to another Memory channel in a different group.

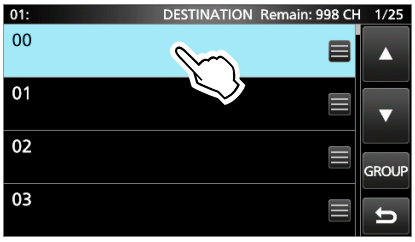
1. Open the MEMORY CH screen.
   [MENU] > MEMORY > **Memory CH**
2. Touch a memory group. (Example: 00)
3. Rotate [DIAL] to select the channel that you want to move. (Example: Group 00)
4. Push [QUICK].
5. Touch “Move.”

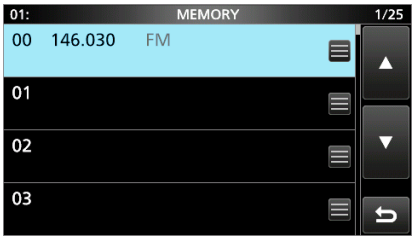


- DESTINATION” blinks at the top of the screen.

ⓘ To change a memory group, touch [GROUP].

6. Select the destination channel.
   (Example: Channel 00 in group 01)





- Beeps sound, and the contents are moved to the destination channel.

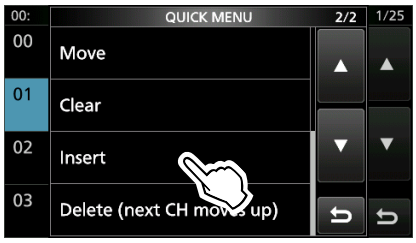
ⓘ Channels other than the one that you moved will move up.

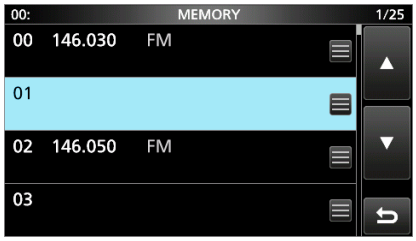
ⓘ To cancel moving, push [EXIT].

Inserting a blank channel

You can insert a blank channel between 2 Memory channels. This function is convenient for organizing your memory channels.

1. Open the MEMORY CH screen.
   [MENU] > MEMORY > **Memory CH**
2. Touch a memory group. (Example: 00)
3. Rotate [DIAL] to select the channel above the blank channel to be inserted.
   (Example: Channel 01 in group 00)
4. Push [QUICK].
5. Touch “Insert.”





- Beeps sound, a blank channel is inserted above the selected channel.

ⓘ If you select channel 99 in step 3, a confirmation dialog is displayed. When you touch [YES], channel 99 is deleted.

TIP: To insert a blank group

On the Memory CH screen, select a group and push [QUICK], then touch “Insert Group.”



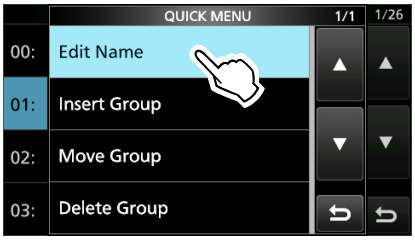
- A blank group is inserted above the selected group.

Entering a group/Memory name

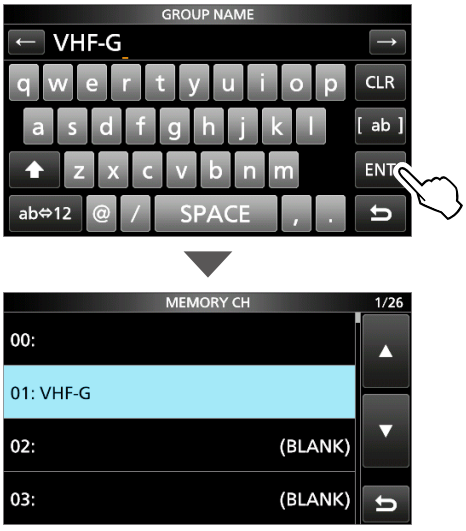
You can assign a name of up to 16 characters to each channel group (00 ~ 99) and Memory channel.

◇ Entering a group name

1. Open the MEMORY CH screen.
   [MENU] > MEMORY > **Memory CH**
2. Rotate [DIAL] to select the channel group that you want to enter a name for. (Example: 01)
3. Push [QUICK].
4. Touch “Edit Name.”



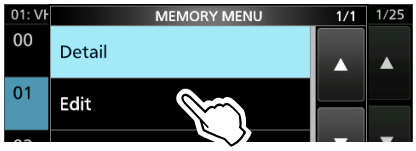
5. Enter a group name, then touch [ENT].



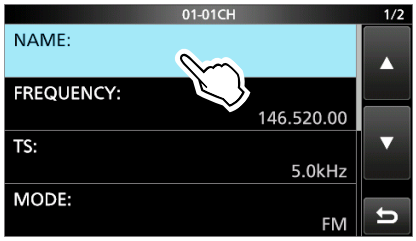
6. To close the MEMORY CH screen, push [EXIT].

◇ Entering a Memory name

1. Open the MEMORY CH screen.
   [MENU] > MEMORY > **Memory CH**
2. Touch the channel group. (Example: 01)
3. Rotate [DIAL] to select the channel on which you want to enter a name.
4. Touch ☰ of the channel. (Example: Channel 01)
5. Touch “Edit.”



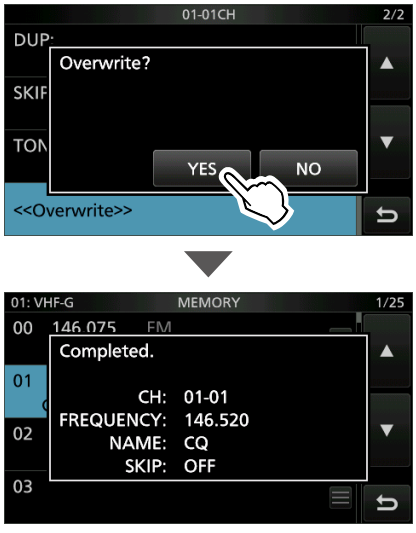
6. Touch “NAME:.”



7. Enter a name, then touch [ENT].



8. Touch “<<Overwrite>>.”
9. Touch [YES].



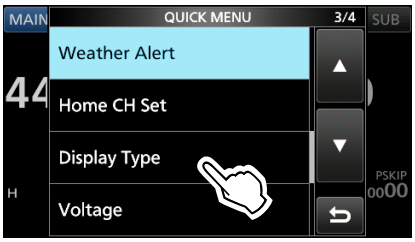
- A beep sounds, and then returns to the MEMORY screen.

10. To close the MEMORY CH screen, push [EXIT] several times.

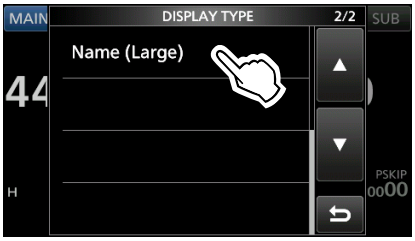
Selecting a memory name display

While in the memory mode, the entered memory name can be displayed in different styles. You can select a display type.

1. Select the Memory mode. (Basic Manual)
2. Push [QUICK].
3. Touch “Display Type.”



4. Touch a display type. (Example: Name (Large))





TIP: There are 5 types of Memory name displays.

- **Frequency (Name OFF):**
  Displays only the frequency.



- **Frequency (Normal Name):**
  Displays the large font sized frequency and small font sized Memory name.



- **Frequency (Large Name):**
  Displays the large font sized frequency and large font sized Memory name.



- **Name (Normal):**
  Displays the small font sized Memory name and small font sized frequency.



- **Name (Large):**
  Displays the large font sized Memory name and small font sized frequency.

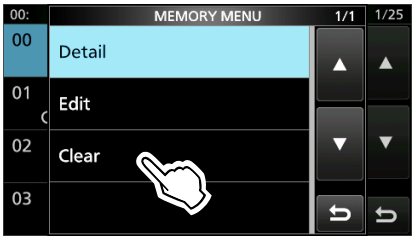


Clearing a Memory contents

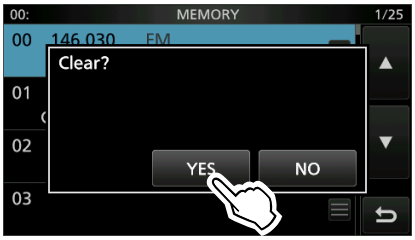
The contents of entered memories can be cleared (erased) if desired.

NOTE: Cleared memory channel contents cannot be restored.

1. Open the MEMORY CH screen.
   [MENU] > MEMORY > **Memory CH**
2. Touch a memory group. (Example: 00)
3. Rotate [DIAL] to select the channel that you want to clear. (Example: channel 01 in group 00)
4. Touch ☰ of the channel.
5. Touch “Clear.”



6. Touch [YES].



- Beeps sound, and the contents are cleared.

TIP: To delete a memory channel
In step 4, push [QUICK] and touch “Delete (next CH moves up)”.



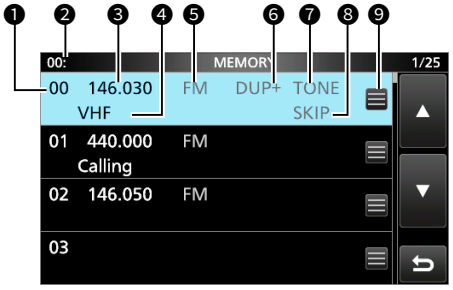
- The selected channel is deleted.

ⓘ You can also delete Memory groups.
Select a group, and then select “Delete Group.”

MEMORY screen

You can edit Memory channel contents on the MEMORY screen.

ⓘ You can edit the Call channel contents in the following menu. ([MENU] > MEMORY > **Call CH)**



❶ Memory channel number
Displays the memory channel number (00 ~ 99, C1, C2).
ⓘ C1 or C2 cannot be left blank.

❷ Group number: Group name
Displays the group number (00 ~ 99) and name, if entered.
ⓘ “CALL CH” is displayed in the Call channel contents.

❸ Frequency
Displays the entered frequency.

❹ Memory name
Displays the memory name, if entered.
ⓘ See page 7-7 for details.

❺ Operating mode
Displays the selected operating mode.

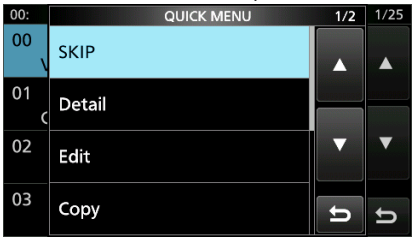
❻ Duplex icon
Displays the duplex direction (DUP+ or DUP–) if entered.

❼ Tone icon
Displays the tone squelch, or DTCS squelch if entered.

❽ Skip icon
Displays the Scan skip setting if entered.

❾ Memory menu
Touch to display the MEMORY MENU window.
ⓘ You can select “Detail,” “Edit,” or “Clear.”

TIP: About the QUICK MENU window
While selecting a memory channel with memory contents, push [QUICK] to open the QUICK MENU window. You can select SKIP, Detail, Edit, Copy, Move, Clear, Insert, or Delete (next CH moves up).



Section 8 SCAN OPERATION

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◇ [DIAL] operation during a scan....8-4
◇ Squelch setting for a scan....8-4
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◇ Scan Skip function....8-4
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◇ About a Program scan name....8-6
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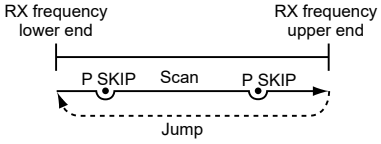
Scan Type

Scanning is a versatile function that can automatically search for signals. A scan makes it easier to locate stations to contact or listen to, or to skip unwanted channels or frequencies.

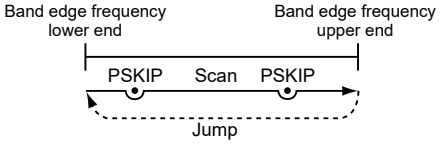
◇ VFO scan

The VFO scan searches for signals within the specified frequency range.

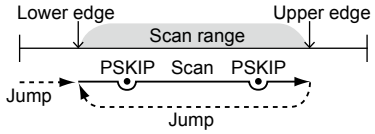
Full scan (ALL)
Repeatedly scans the entire band.



Band scan (BAND)
Repeatedly scans the selected band.

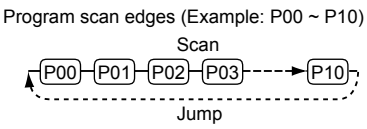


Program scan (P00 ~ P49)
Repeatedly scans the selected Program Scan range (Program Scan Edge 00 ~ 49).



ⓘ At least one Program Scan range must be entered to start a Program scan.
([MENU] > SET > Scan > **Program Scan Edge**)
See page 8-7 for more details.

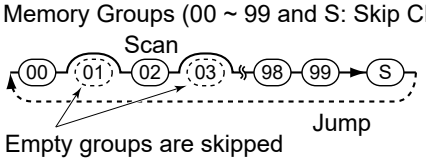
Program Link scan (P-LINK 0 ~ 9)
Sequentially scans the Program Scan ranges. The links are set on the MENU screen.
([MENU] > SET > Scan > **Program Link**)
ⓘ See page 8-7 for more details.



◇ Memory scan

The Memory scan searches signals on the preregistered memory channels.

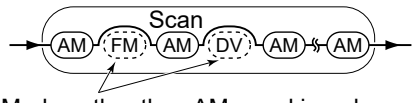
ALL scan (ALL)
Repeatedly scans all memory channels.



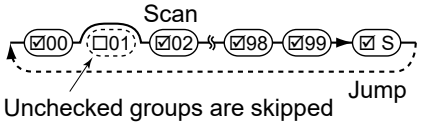
Selected band scan (BAND)
Scans all memory channels on the same frequency band as the selected channel.

Mode scan (MODE)
Scans memory channels that are entered with the same operating mode as the currently selected mode.
ⓘ The Mode scan scans all memory groups.
(Group 00 ~ 99, S: SKIP CH)

Example: Scanning AM mode
Memory group 02



Group link scan (GROUP LINK)
Sequentially scans the memory groups that are set to link on the MENU screen.



ⓘ At least 2 groups must be checked to start a Group Link scan. ([MENU] > SET > Scan > **Group Link**)
See page 8-10 for more details.

Group scan (GROUP 00 ~ 99, S: SKIP CH)
Scans the Memory channels in the selected group.

8 SCAN OPERATION

Scan Type

Duplex (DUP) scan
The Duplex scan searches for signals on both TX and RX frequencies used in duplex operation (p. 9-5).
- ⓘ "DUP–" or "DUP+" is displayed in the Duplex mode.
- ⓘ A Duplex scan does not start when the frequency offset is set to "0.000.00 MHz."

Tone scan
The Tone scan searches for signals with tone frequencies or DTCS codes from stations using the Tone Squelch function.
- ⓘ A Tone scan is usable in any VFO, Memory, or Call channel mode.
- ⓘ During a scan, rotate [DIAL] to change the scan direction.
- ⓘ See pages 12-6 and 12-7 about the Tone Squelch function and DTCS Code Squelch function.

About Scans

◇ [DIAL] operation during a scan

- Rotate [DIAL] to change the scan direction during a scan.
- When the scan is paused, rotate [DIAL] to resume the scan.

◇ Squelch setting for a scan

You can change the squelch level to suit your operating needs. Set the squelch level to open the squelch according to the received signal strength.

ⓘ During a scan, rotate [SQL] to adjust the squelch level.

◇ Tuning step for a VFO scan

The selected tuning step is applied to the scan.
For a Program scan or Program Link scan, set the tuning step in the Program Scan Edge ranges.

◇ Scan Skip function

The skip function speeds up scanning by not scanning those frequencies set as skip channels.

ⓘ These settings can be set separately for the A band and the B band.

In the VFO mode

The frequencies set to “PSKIP” are skipped during a scan. (p. 8-6)

In the Memory mode

The frequencies set as skip channels, “PSKIP” and “SKIP” are not scanned. (p. 8-11)

ⓘ You must enter 2 or more Memory channels to start a memory scan.

TIP: When “Program Skip” is set to “OFF”, you cannot use the Program Skip scan function. (p. 10-4)
([MENU] > SET > Scan > **Program Skip**)

◇ Operating mode during a scan

- The VFO scan uses the selected operating mode.
- During a Memory mode scan, the operating mode entered into the channel is used.

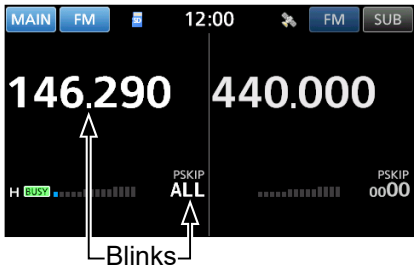
◇ When a signal is received

When a signal is received, the scan pauses for this set period of time. (p. 10-4)
When a received signal disappears, the scan resumes for this set period of time. (p. 10-4)

ⓘ These settings can be separately set to A band and the B band.

[MENU] > SET > Scan > **Pause Timer**

[MENU] > SET > Scan > **Resume Timer**



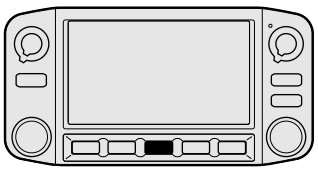
◇ Scan Stop Beep function

The Scan Stop Beep function sounds a beep when a signal is received.
This function can be turned ON or OFF on the MENU screen. (p. 10-28)

[MENU] > SET > Sounds > **Scan Stop Beep**

VFO Scan

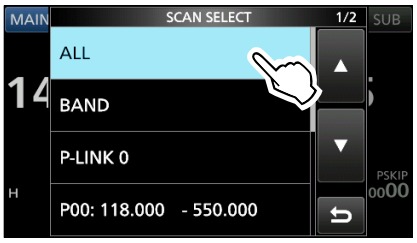
1. Select the VFO mode. (Basic Manual)
2. Touch the operating mode icon and select the desired operating mode.
3. Push [SCAN].

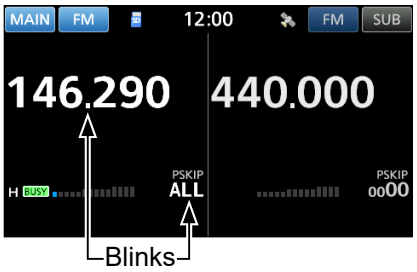


[SCAN]

- Opens the SCAN SELECT window.

4. Select a scan type. (Example: ALL)





- The scan starts.
- The decimal point and the selected Scan Type icon blink.

ⓘ When a signal is received, the S-meter displays the received signal strength.

5. Push [SCAN].
   - Cancels the scan.

◇ Scan Type

- ALL: Full scan
- BAND: Band scan
- DUP: Duplex scan
  (Displayed only when Duplex is set)
- P-LINK0 ~ 9: Program Link scan
- P00 ~ 49: Program scan
- TONE: Tone scan
  (For the Tone Squelch scanning)

ⓘ Information

- The frequencies that are set as a Skip channel (PSKIP) are skipped during a scan. (p. 8-6)
- When “Program Skip” is set to “OFF,” the Skip channel frequencies are not skipped. (p. 10-4)
  ([MENU] > SET > Scan > **Program Skip**)
- To set a Program Link scan, see page 8-8.
- To set a Program scan, see page 8-7.

TIP:

- During a scan, rotate [DIAL] to change the scanning direction.
- During a scan, touch the operating mode icon to switch modes.
- During a scan, push [FUNC] and touch [LOCK] to turn the Lock function ON.
- The scan continuously runs, even if you push [MENU] or [QUICK] during a scan.

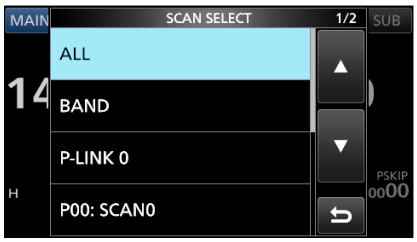
VFO Scan

◇ About a Program scan name

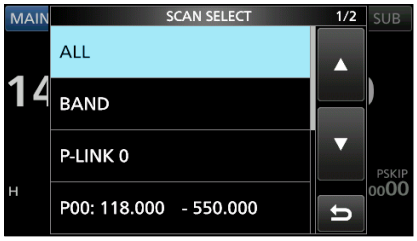
When a Scan name is entered into a Program scan, the name is displayed in the SCAN SELECT window. (p. 8-5)

ⓘ The name is not displayed during a scan.
ⓘ To enter the name, see page 8-7.

When the Scan name is entered



When the Scan name is not entered

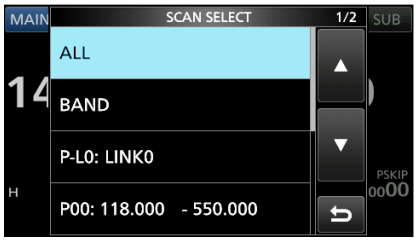


◇ About a Program Link name

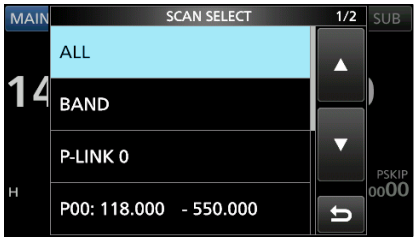
When a Program Link name is entered, it is displayed in the SCAN SELECT window. (p. 8-5)

ⓘ The name is not displayed during a scan.
ⓘ To enter the name, see page 8-8.

When a Program Link name is entered



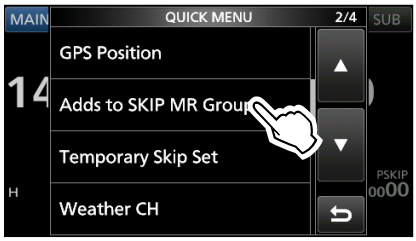
When a Program Linksa name is not entered



◇ Storing the skip frequencies

You can skip unnecessary frequencies during a scan. While a scan is paused, and if you want to skip the frequency, you can store it into the Skip channels group (00 ~ 99) as a Skip channel (PSKIP).
The Scan Skip function speeds up a scan.

1. While a VFO scan is paused, push [QUICK].
2. Touch “Adds to SKIP MR Group.”



- Two short beeps sound.
- The frequency is stored in the Skip channels group.
- After storing, the scan resumes.

ⓘ If there is no blank channel, an error beep sounds, and the frequency is not stored.

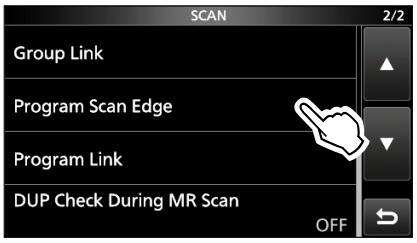
TIP: Once a frequency is set as a Skip channel, the frequency is skipped until you clear the skip setting. To clear the skip setting, see page 8-11.
ⓘ The skip setting is also cleared when the Memory channel set as a Skip channel is cleared.

VFO Scan

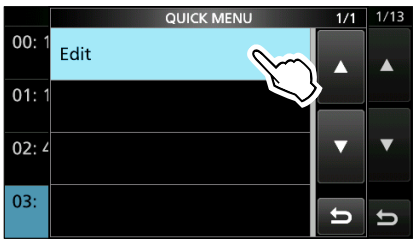
◇ Entering Program Scan Edges

You can enter the upper and lower frequency edges for a Program scan.
Each Program Scan range has its tuning step and operating mode setting.
You can enter up to 50 Program Scan ranges on the MENU screen.

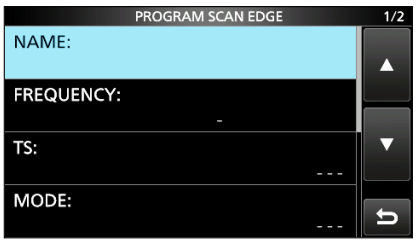
1. Open the SCAN screen.
   [MENU] > SET > **Scan**
2. Touch “Program Scan Edge.”



3. Rotate [DIAL] to select a blank Program scan range “00” ~ “49.”
4. Push [QUICK].
5. Touch “Edit.”

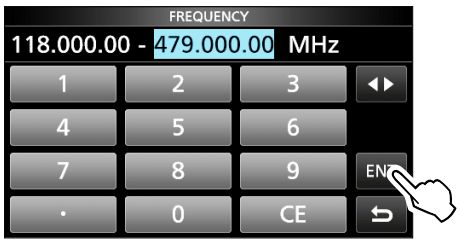


- The PROGRAM SCAN EDGE screen is displayed.

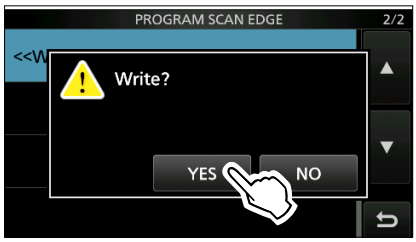


ⓘWhen the “NAME” is entered, it displays on the Scan Type Select window.
See page ii on how to enter characters.
ⓘWhen the “TS” (Tuning Step) and/or “MODE” is blanked, they use the current setting in the VFO mode.
The “TS” and “MODE” must be set to match your desired signals.

6. Touch “FREQUENCY:” and enter the lower edge and higher edge, and then touch [ENT].
   (Example: [1] [1] [8] [ENT] [4] [7] [9] [ENT])



7. After editing contents, touch “<<Write>>.”
   - The confirmation dialog is displayed.
8. Touch “Yes.”



9. To close the PROGRAM SCAN EDGE screen, push [EXIT].

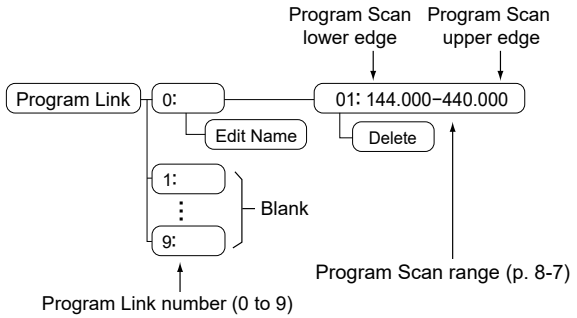
TIP:
- To clear the Program scan range, select “Clear” in step 5.
- When scanning a range where the “TS” or “MODE” set cannot be used, the preset “TS” or “MODE” setting for each band is applied.

VFO Scan

◇ About the Program Link Scan

This item sets the Link function for 2 or more Program Scan ranges to sequentially scan during a Program Link scan. The Program Link scan scans all frequencies in the scan ranges.

Example settings of the Program Link

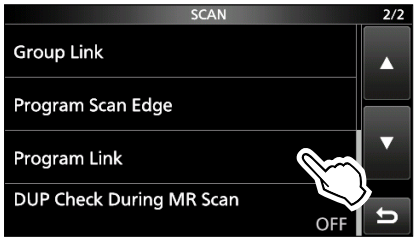


ⓘ Information

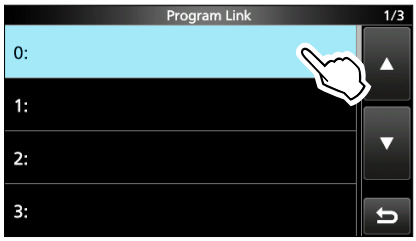
- The Program Link Number screen displays the frequency range.
- You can add a Link setting by pushing [QUICK] when 2 or more Program Scan ranges are entered.
- When there is no Program Scan range (P00 ~ P49) entered, “Add” is not displayed after pushing [QUICK].

◇ Setting the Program Link function

1. Open the SCAN screen.
   [MENU] > SET > **Scan**
2. Touch “Program Link.”



3. Touch a Program Link number “0” ~ “9.” (Example: 0)



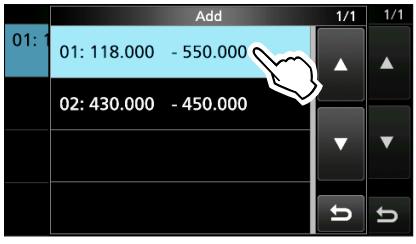
- The Program Link Number screen displays the preregistered Program Scan ranges.

ⓘ When no Program Scan range is selected, “– Blank –” is displayed.

4. Push [QUICK].
5. Touch “Add.”



6. Touch the Program Scan range that you want to add. (Example: 01: 118.000-550.000)



- The Program scan range is added on the Program Link Number screen.

7. To close the Program Link Number screen, push [EXIT].

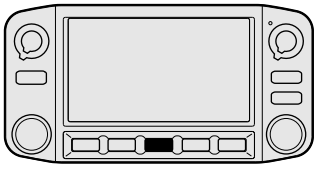
TIP:

- To edit the name of the Program Link, push [QUICK] and touch “Edit Name” at the above step 3.
- To delete the registered Program Scan range from the Program Link, touch “Delete” in step 5 above.

Memory Scan

NOTE: You must enter 2 or more Memory channels that are not set as Skip channels to start a Memory scan.

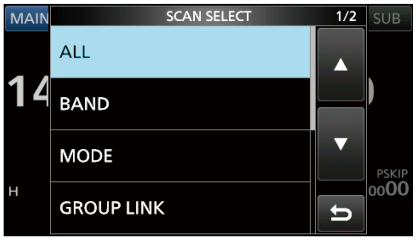
1. Select the Memory mode. (Basic Manual)
2. Push [SCAN].



[SCAN]

- Opens the SCAN SELECT window.

3. Select a scan type.





Blinks

- The scan starts.
- The decimal point and "MR" blink.

ⓘ When a signal is received, the S-meter displays the received signal strength.

4. Push [SCAN].
   - Cancels the scan.

◇ Scan Type

- ALL: Full scan
- BAND: Band scan
- MODE: MODE scan
- DUP: Duplex scan
  (Displayed only when Duplex is set)
- GROUP LINK: Group Link scan
- GROUP 00 ~ 99: Group scan
- TONE: Tone scan
  (For the Tone Squelch scanning)

ⓘ When 2 or more Memory channels that are not set as Skip channels are entered, the Memory scan is usable.

ⓘ The channel set as a Skip channel (PSKIP or SKIP) is skipped during a scan. (p. 8-11)

TIP:

- During a scan, rotate [DIAL] to change the scanning direction.
- During a scan, touch the operating mode icon to switch modes.
- During a scan, push [FUNC] and touch [LOCK] to turn the Lock function ON.
- The scan continuously runs, even if you push [MENU] or [QUICK] during a scan.

Memory Scan

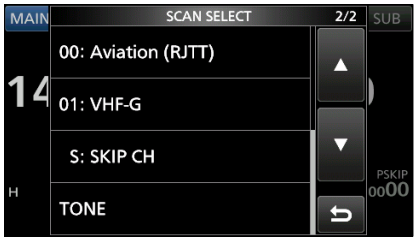
◇ About a Group scan name

When a group name is entered into a Memory channel group, the name is displayed in the Scan Type Select window. (p. 8-9)

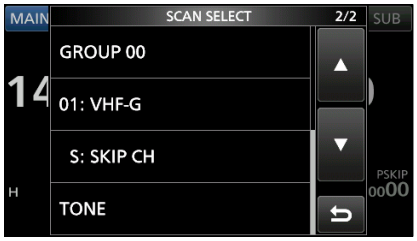
ⓘ The name is not displayed during a scan.

ⓘ To enter the name, see page 7-7.

When the Group name is entered



When the Group name is not entered

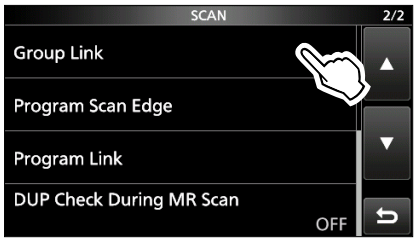


◇ Setting the Group Link

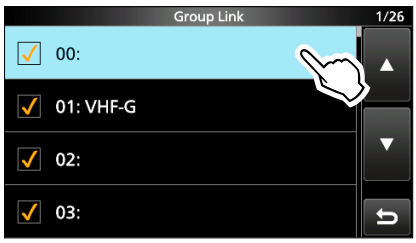
You can sequentially scan the memory groups that are set to link on the MENU screen.

ⓘ By default, all groups are set to link.

1. Open the SCAN screen.
   [MENU] > SET > **Scan**
2. Touch “Group Link.”

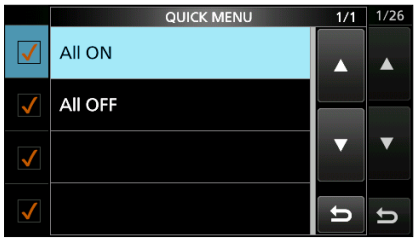


3. Touch a group, “00” ~ “99,” “S: SKIP CH.” to turn the Link function ON or OFF. (Example: 00)



• “☑” is displayed when the function is set to “ON.”

ⓘ Push [QUICK] and touch “All ON” or “All OFF” to quickly turn all the groups ON or OFF.



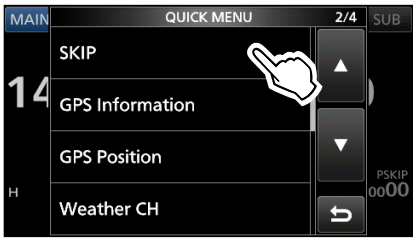
4. To exit the Group Link screen, push [EXIT].

Memory Scan

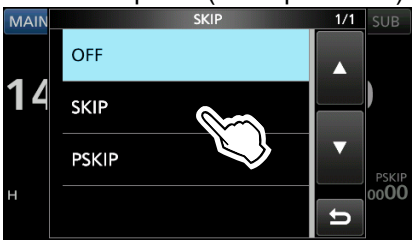
◇ Setting the skip channel

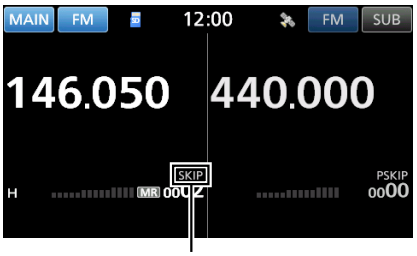
You can set or clear a Skip Channel setting.
Channels set as Skip channels are skipped during a scan.

1. Select the Memory mode. (Basic Manual)
2. Rotate [DIAL] to select the memory channel to be skipped.
3. Push [QUICK].
4. Touch “SKIP.”



5. Touch an option. (Example: SKIP)





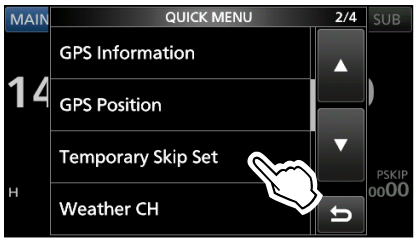
When a Skip channel is set,
“SKIP” or “PSKIP” is displayed.

- OFF: Cancels the Skip Channel setting.
- SKIP: Skipped during a Memory scan.
- PSKIP: Skipped during both VFO and Memory scans.

Temporary skip function

This function temporarily skips unwanted frequencies (or memory channels) during a scan for the specified period or condition, without changing the Skip Channel setting.

1. While a scan is paused, push [QUICK].
2. Touch “Temporary Skip Set.”



- Sets the frequency or Memory channel as a Skip Frequency or Channel.
- The scan automatically resumes.

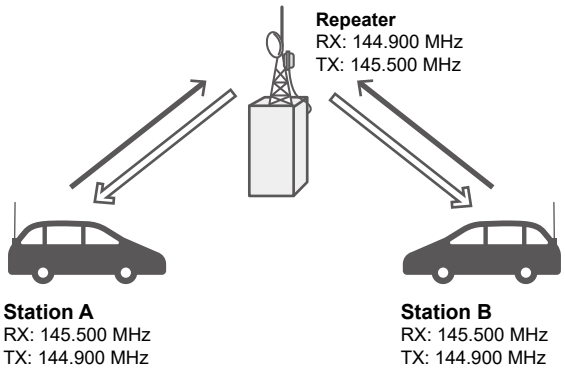
TIP:
- Up to 20 Temporary Skip frequencies or Memory channels can be set. When the 21st frequency or Memory channel is set, the oldest setting is automatically deleted.
- You can also set the Temporary Skip function in the QUICK MENU window.
- The Temporary Skip function is canceled when the Temporary Skip Timer (Default: 5 min) has passed, or when selecting “Temp Skip Cancel” in the QUICK MENU window.
  ([MENU] > SET > Scan > **Temporary Skip Timer**)

Section 9 REPEATER AND DUPLEX OPERATIONS

FM Repeater operation....9-2
◇ Setting the Repeater frequency....9-2
◇ Checking the Repeater input signal....9-4
◇ 1750 Hz tone burst....9-4
Duplex operation....9-5
◇ Setting the frequency offset....9-5
◇ Setting the duplex direction....9-5
◇ Duplex operation....9-5
Auto Repeater function....9-6
Off band indication....9-6

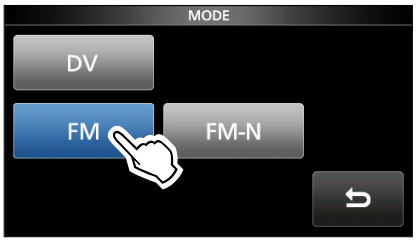
FM Repeater operation

A Repeater receives signals and on one frequency, and then retransmits them on a different frequency. When using a Repeater, the transmit frequency is shifted from the receive frequency by a frequency offset.
A Repeater can be accessed using the Duplex function by setting the transceiver's offset to the same value as the Repeater's offset.
See Section 3 for details on accessing a D-STAR Repeater.



◇ Setting the Repeater frequency

1. Select the VFO mode. (Basic Manual)
2. Touch the operating mode icon, and then touch "FM."



3. Rotate [DIAL] to set the frequency received from a repeater.



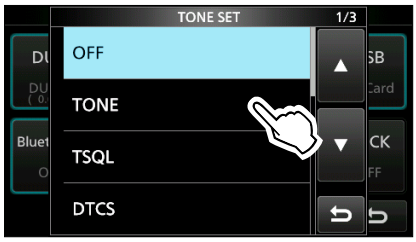
TIP: For only the USA version
The Auto Repeater function (p. 9-6) automatically sets the repeater settings (duplex ON/OFF, duplex direction, tone encoder ON/OFF). When the function is ON, steps 4 ~ 8 are not necessary.
ⓘ You can turn OFF the function and manually set the repeater settings.
([MENU] > SET > Function > **Auto Repeater**)

4. Set the offset frequency and the Duplex direction. (p. 9-5)

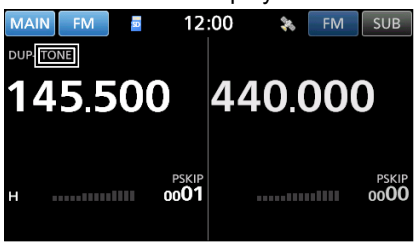


- The Duplex icon is displayed.

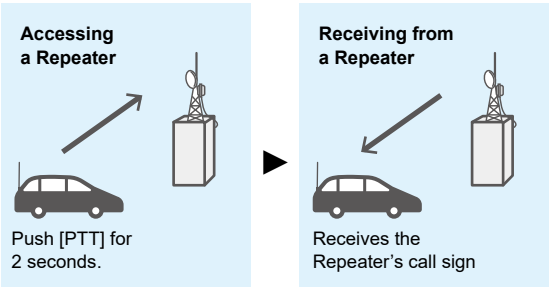
5. Set the Repeater tone. (Default: 88.5 Hz) ([MENU] > SET > DUP/TONE... > **Repeater Tone**) (p. 9-2)
6. Push [EXIT] several times to exit the MENU screen.
7. Push [FUNC].
8. Touch "TONE."
   - TONE SET window is displayed.
9. Touch "TONE" to turn ON the Repeater Tone.



- The TONE icon is displayed.



10. Hold down [PTT] for 2 seconds.
    - If your transmit signal reached the repeater, after releasing [PTT], you can hear the repeater's call sign in Morse codes or its announcement.



(Continue the steps on the next page.)

FM Repeater operation

◇ Setting the Repeater frequency

11. Operate in the same way as a simplex call, alternately transmitting and receiving.

Receive frequency





Shifts by the offset amount

Transmit frequency



TIP:

- When the repeater tone frequency or the frequency offset is changed, the tone or offset for the Auto Repeater function is also changed.
- If the offset value causes the transmit frequency to be out of the band, “OFF BAND” is displayed on the display when you push [PTT], and transmission is inhibited. (p. 9-6)

FM Repeater operation

◇ Checking the Repeater input signal

You can check whether or not another station's transmit signal can be received directly (not through a repeater), by listening to the repeater input frequency.

- Hold down [MONI] to listen on the repeater input frequency.

Display while monitoring



Blinks

ⓘ Information

- While monitoring, "BUSY" blinks.
- While monitoring, the displayed frequency automatically changes to the transceiver transmit frequency (repeater input frequency).
- When the other station's signal can be directly received, move to a non-repeater frequency and use simplex. (Duplex OFF)
- While monitoring, the Attenuator function is temporarily disabled to receive a weak signal.

◇ 1750 Hz tone burst

A 1750 Hz tone is required to access many European repeaters.

1. Assign "T-CALL" to the [CD/RX>CS] or [CALL/DR] on the FRONT KEY CUSTOMIZE screen.
   ([MENU] > SET > Function > Front Key Customize > **[CD/RX>CS], [CALL/DR]**)

   ⓘ When you use the optional hand microphone (remotecontrol or simple), or Bluetooth headset, you can assign "T-CALL" to the Custom key on them.
   ([MENU] > SET > Function > Remote MIC Key > **During RX/Standby, During TX**)
   ([MENU] > SET > Function > Up/Down MIC Key > **During RX/Standby, During TX**)
   ([MENU] >SET > Bluetooth Set > Headset Set > Icom Headset > **Custom Key**)
2. Set the operating mode to "FM."
3. While holding down [PTT] to transmit, push the key that "T-CALL" is assigned to.
   - Accesses the repeater with a short tone burst.
   - Displays "1750Hz TONE."
4. Operate in a normal way.

For the ID-5200E only

You can also send the 1750 Hz tone by holding [T-CALL] on the FUNCTION screen while holding down [PTT].



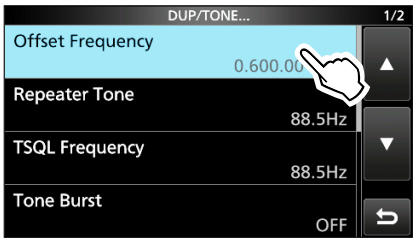
Duplex operation

The duplex operation shifts the transmit frequency up or down from the receive frequency by an offset amount.

◇ Setting the frequency offset

NOTE: The frequency offset cannot be changed when using the DR function.

1. Open the DUP/TONE... screen.
   [MENU] > SET > **DUP/TONE...**
2. Touch “Offset Frequency.”



3. Enter the frequency offset, and then touch [ENT]. (Example: 0.700.00 MHz)



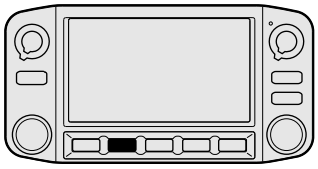
ⓘ **Information**
- Set to between 0.000.00 and 59.99500 MHz.
- The selected tuning step in the VFO mode is used to set the offset.
- Touching [DUP] changes between “DUP–,” “DUP+,” and OFF.

4. To close the DUP/TONE... screen, push [EXIT].

TIP:
- You can display the Offset Frequency screen by touching [DUP] for 1 second on the FUNCTION screen that opens when you push [FUNC].
- If the offset value causes the transmit frequency to be out of the band, “OFF BAND” is displayed when you push [PTT], and transmission will be inhibited. (p. 9-6)

◇ Setting the duplex direction

1. Push [FUNC].



[FUNC]

2. Touch “DUP” to select the duplex direction.



ⓘ Touching [DUP] changes between “DUP–,” “DUP+,” and OFF.
- **OFF:** For simplex operation (the receive and transmit frequencies are the same).
- **DUP–:** The transmit frequency shifts down from the receive frequency by the offset amount.
- **DUP+:** The transmit frequency shifts up from the receive frequency by the offset amount.

3. Push [EXIT].



- “DUP–” or “DUP+” is displayed.

◇ Duplex operation

1. Hold down [SQL] to listen to the transmit frequency to check whether another station is transmitting on it, or not.
   - The shifted transmit frequency is displayed.
2. Operate in a normal way.
   ⓘ In the same way as a simplex call, alternately transmit and receive.

NOTE for the USA version: When the Auto Repeater function is ON, and the operating frequency is set out of the repeater output frequency range, the Duplex mode is automatically canceled. ([MENU] > SET > Function > **Auto Repeater**)

Auto Repeater function

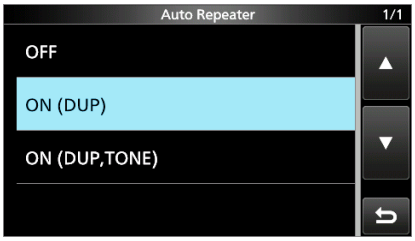
When the operating frequency falls within the Repeater output frequency range, the Auto Repeater function automatically sets the Repeater settings (Duplex ON/OFF, Duplex direction, Tone encoder ON/OFF). The Auto Repeater function uses the preset repeater tone frequency and frequency offset.

NOTE for the USA version transceiver:
When the Auto Repeater function is turned ON, it takes priority over the manual duplex setting. If the transmit frequency changes after setting, the Auto Repeater function may have changed the duplex setting.

1. Open the Function screen.
   [MENU] > SET > **Function**
2. Touch “Auto Repeater.”



3. Touch the option to turn ON the Auto Repeater function.



- **OFF:** Turns OFF the function.
- **ON (DUP):** Turns ON only the duplex operation. (Default)
- **ON (DUP, TONE):** Turns ON the duplex operation and Tone encoder.

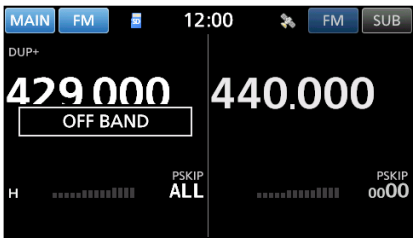
4. To close the Function screen, push [EXIT].

Frequency range and offset direction

Frequency range	Shift direction
145.200 ~ 145.495 MHz	“DUP–” is set
146.610 ~ 146.995 MHz	“DUP–” is set
147.000 ~ 147.395 MHz	“DUP+” is set
442.000 ~ 444.995 MHz	“DUP+” is set
447.000 ~ 449.995 MHz	“DUP–” is set

Off band indication

If the transmit frequency is out of the amateur band, the off band indication, “OFF BAND,” is displayed when you push [PTT]. Check the frequency offset or duplex direction in this case. (p. 9-5)



Section 10 SET MODE

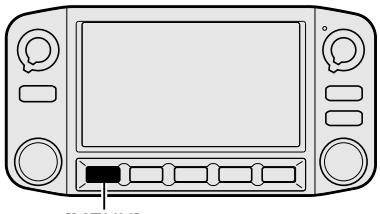
Set mode description 10-2
DUP/TONE... 10-3
Scan 10-4
Scope 10-6
Function 10-7
My Station 10-15
DV Set 10-16
DV Repeater Monitor Set 10-18
QSO/RX Log 10-19
Connectors 10-22
Display 10-24
Sounds 10-28
Time Set 10-29
Bluetooth Set 10-30
Wi-Fi Set 10-35
SD Card 10-36
Others 10-37

Set mode description

You can use the Set mode to set infrequently changed values or function settings.

TIP: The Set mode is constructed in a tree structure. You can go to the next tree level, or go back a level, depending on the selected item.

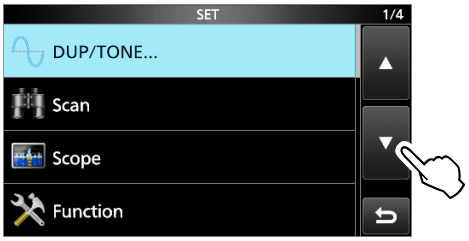
1. Push [MENU].



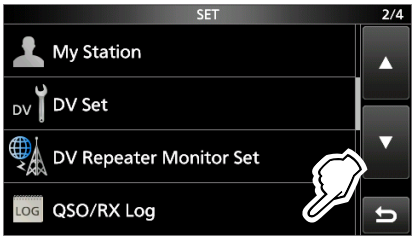
2. Touch [SET].



3. Touch [▲] or [▼] to scroll through the items.
   ⓘ You can also rotate [DIAL] to scroll through the items.

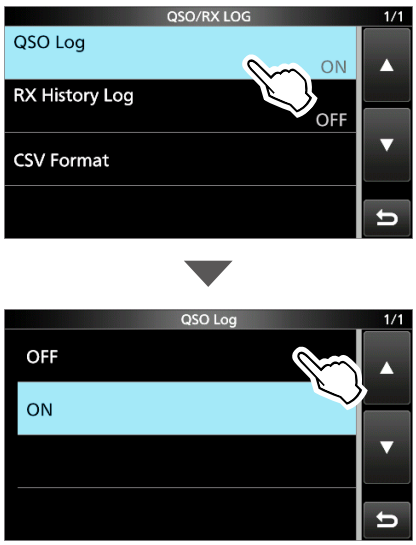


4. Touch the item to open its setting screen, or to open its next tree level. (Example: QSO/RX Log)



5. Repeat steps 3 and 4 to open the desired item's setting screen.
   ⓘ To go back a tree level, push [EXIT].

6. Touch to select or to set the option.
   (Example: QSO Log)

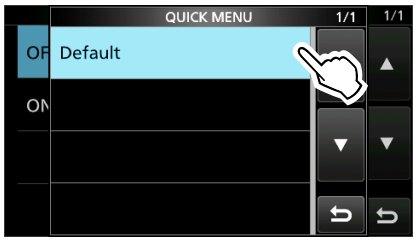


   • The selected option is saved, and returns to the previous screen.

7. To close the SET screen, push [EXIT] several times.

TIP: Resetting to the default setting

1. Push [QUICK] to display the QUICK MENU window.
   ⓘ You can also display the QUICK MENU window by touching the item for 1 second.
2. Touch "Default" to reset to the default setting.



NOTE: The default settings shown below are for the USA transceiver version. The default settings may differ, depending on your transceiver version.

DUP/TONE...

Offset Frequency (Default: 0.000.00* MHz)

[MENU] > SET > DUP/TONE... > **Offset Frequency**

Sets the frequency offset for Duplex (repeater) operation to between 0.000.00 and 59.995.00 MHz.

ⓘ Information
- Touch [DUP] to change the duplex shift direction (DUP–/DUP+) (p. 9-5).
- The tuning step is set in the FUNCTION Menu screen.
- When the DR function is ON, editing is disabled.

* The default value may differ, depending on the frequency band (selected as the MAIN band before entering the MENU screen) and the transceiver version.

Repeater Tone (Default: 88.5Hz)

[MENU] > SET > DUP/TONE... > **Repeater Tone**

Selects a repeater tone frequency for repeater access and other functions.
You can select 50 tone frequencies (67.0 ~ 254.1 Hz).

TSQL Frequency (Default: 88.5Hz)

[MENU] > SET > DUP/TONE... > **TSQL Frequency**

Selects a CTCSS tone frequency for the Tone Squelch function.
You can select 50 tone frequencies (67.0 ~ 254.1 Hz).

- **Selectable Repeater Tone/TSQL frequencies (Unit: Hz)**

67.0	88.5	114.8	151.4	177.3	203.5	250.3
69.3	91.5	118.8	156.7	179.9	206.5	254.1
71.9	94.8	123.0	159.8	183.5	210.7	
74.4	97.4	127.3	162.2	186.2	218.1	
77.0	100.0	131.8	165.5	189.9	225.7	
79.7	103.5	136.5	167.9	192.8	229.1	
82.5	107.2	141.3	171.3	196.6	233.6	
85.4	110.9	146.2	173.8	199.5	241.8	

Tone Burst (Default: OFF)

[MENU] > SET > DUP/TONE... > **Tone Burst**

Turns the Tone Burst function ON or OFF in the FM mode when using the Tone Squelch function.
- OFF: When you transmit a signal that superimposes the CTCSS tone, the other station may hear a short burst of noise from their receiver, just after you stop transmitting.
- ON: When you transmit a signal that superimposes the CTCSS tone, the function mutes the noise from being heard in the other station's receiver.

DTCS Code (Default: 023)

[MENU] > SET > DUP/TONE... > **DTCS Code**

Selects a DTCS (both encoder/decoder) code for the DTCS Squelch.
You can select a total of 104 codes (023 ~ 754).

- **Selectable DTCS codes**

023	072	152	244	311	412	466	631
025	073	155	245	315	413	503	632
026	074	156	246	325	423	506	654
031	114	162	251	331	431	516	662
032	115	165	252	332	432	523	664
036	116	172	255	343	445	526	703
043	122	174	261	346	446	532	712
047	125	205	263	351	452	546	723
051	131	212	265	356	454	565	731
053	132	223	266	364	455	606	732
054	134	225	271	365	462	612	734
065	143	226	274	371	464	624	743
071	145	243	306	411	465	627	754

DTCS Polarity (Default: Both N)

[MENU] > SET > DUP/TONE... > **DTCS Polarity**

Selects the DTCS polarity to use for transmitting (TX) and receiving (RX).
- Both N: Normal polarity is used for both TX and RX.
- TN-RR: Normal polarity is used for TX, Reverse polarity for RX.
- TR-RN: Reverse polarity is used for TX, Normal polarity for RX.
- Both R: Reverse polarity is used for both TX and RX.

Digital Code (Default: 00)

[MENU] > SET > DUP/TONE... > **Digital Code**

Selects the digital code for Digital Code Squelch.
You can select a total of 100 codes (00 ~ 99).

Scan

Pause Timer (Default: 10sec)

[MENU] > SET > Scan > **Pause Timer**

Selects the Scan Pause Timer. When receiving a signal, the scan pauses for this set period of time.
ⓘ Individually selectable for A band and B band.

- 2sec ~ 20sec: When a signal is received, the scan pauses for 2 ~ 20 seconds (in 2 second steps).
- HOLD: The scan pauses on a received signal until the signal disappears.

Resume Timer (Default: 2sec)

[MENU] > SET > Scan > **Resume Timer**

Selects the scan Resume Timer. When a received signal disappears, the scan resumes for this set period of time.
ⓘ Individually selectable for A band and B band.

- 0sec: The scan resumes immediately after the signal disappears.
- 1sec ~ 5sec: The scan resumes 1 ~ 5 seconds after the signal disappears.
- HOLD: The scan remains paused for the “Pause Timer” setting, even if the signal disappears.

NOTE: Rotate [DIAL] to resume the scan.

Temporary Skip Timer (Default: 5min)

[MENU] > SET > Scan > **Temporary Skip Timer**

Selects the effective time of the Temporary Skip function.
ⓘ Individually selectable for A band and B band.
ⓘ This timer is activated for the VFO scan, Memory scan, and DR scan.

- 5min/10min/15min: The Temporary Skip channels are skipped for the set period of time.
- While Scanning: The Temporary Skip channels are skipped until the Scan is stopped.
- While Powered ON: The Temporary Skip channels are skipped until the transceiver is turned OFF.

Program Skip (Default: ON)

[MENU] > SET > Scan > **Program Skip**

Turns the Program Skip Scan function ON or OFF for a VFO scan. This function enables the transceiver to skip the unwanted frequencies that are entered as a Memory channel and are set to “PSKIP.”
ⓘ Individually selectable for A band and B band.

- OFF: The transceiver scans all frequencies.
- ON: The transceiver does not scan frequencies set as “PSKIP” frequencies.

Group Link (Default: ☑ 00 ~ ☑ 99/☑ S: SKIP CH)

[MENU] > SET > Scan > **Group Link**

Selects groups to be scanned during a Group Link Scan. The Group Link function scans all channels in the selected groups.
Touch a desired group to turn the Link function ON or OFF.
ⓘ Displays “✔” when the function is set to ON.
ⓘ Individually selectable for A band and B band.

Program Scan Edge

[MENU] > SET > Scan > **Program Scan Edge**

You can delete, copy, or edit the upper and lower frequencies for programmed scans.
The transceiver has a total of up to 50 frequency ranges (00 ~ 49), and you can set the scan name, tuning step, and operating mode for each scan edge.
ⓘ The default setting may differ, depending on the transceiver version.

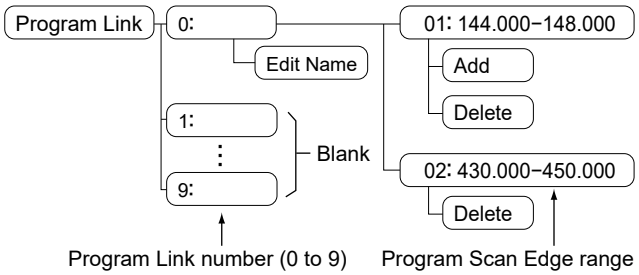
Scan

Program Link

[MENU] > SET > Scan > **Program Link**

Sets the link function for 2 or more Program Scan Edge ranges to be sequentially scanned during a Program Link Scan. The link function scans all frequencies in the scan range.

Default settings of the Program Link:



ⓘ The default setting may differ, depending on the transceiver version.
ⓘ When only one Program Scan Edge range is entered, or there is no Programmed Scan Edge is left, “Add” is not displayed after pushing [QUICK].

DUP Check During MR Scan (Default: OFF)

[MENU] > SET > Scan > **DUP Check During MR Scan**

During a Memory scan, selects whether or not to scan the offset frequency if Duplex is set on the channel.

- OFF: The offset frequency is not scanned.
- ON: The offset frequency is also scanned.

Scope

Scope Mode (VFO/CALL) (Default: Center)

[MENU] > SET > Scope > **Scope Mode (VFO/CALL)**

Selects the Band Scope display mode.

- Center: Displays signals around the operating frequency within the selected span. The operating frequency is always displayed in the center of the screen.
- FIX: Displays signals within a specified frequency range.
- Scroll (FIX): Displays signals within a specified frequency range. When the operating frequency moves outside of the screen, the displayed frequency range is automatically shifted.

Displayed Steps (Default: ±15 Steps)

[MENU] > SET > Scope > **Displayed Steps**

Selects the number of displayed steps around the center frequency in the Scope function.

ⓘ The tuning step depends on the TS setting in the band scope and the number of channels in the memory scope.

- ±15 Steps:



- ±20 Steps:



Waterfall Function (Default: ON)

[MENU] > SET > Scope > **Waterfall Function**

Selects whether or not to use the waterfall display in the single display when the Scope function is ON.

- OFF: Turns OFF the Waterfall display.
- ON: Turns ON the Waterfall display.

Waterfall Speed (Default: Fast)

[MENU] > SET > Scope > **Waterfall Speed**

Selects the waterfall speed.

- Slow: Sets the Waterfall speed to Slow.
- Fast: Sets the Waterfall speed to Fast.

FIX Mode Center Frequency

[MENU] > SET > Scope > **FIX Mode Center Frequency**

Sets the center frequency of the FIX mode Band Scope for each band.

ⓘ The selected tuning step in the VFO mode is used to set the center frequency. To select the tuning step, open the QUICK MENU window on the Standby screen.

ⓘ To return to the default setting, push [QUICK], and then touch “Default” on the “FIX Mode Center Frequency.”

ⓘ The default setting may differ, depending on the transceiver version.

AF Output (DUAL) (Default: OFF)

[MENU] > SET > Scope > **AF Output (DUAL)**

Selects whether or not to momentarily output the received audio during a sweep by the Scope function, when using the Dualwatch function.

- OFF: No audio is output during the sweep.
- ON: The received audio is momentarily output during the sweep.

Function

Auto Power OFF (Default: OFF)

[MENU] > SET > Function > **Auto Power OFF**

Selects whether or not to automatically turn OFF the transceiver after inactivity for this set period of time.

ⓘ "AUTO POWER OFF" is displayed and beeps sound 5 seconds before turning OFF the transceiver. If you operate the transceiver during this period of time, the Auto Power OFF timer is reset.

- OFF: Does not turn OFF the transceiver.
- 30min/1hour/1hour 30min/2hours/4hours/6hours/8hours: Turns OFF the transceiver after inactivity for this set period of time.

Squelch/ATT Select (Default: S-Meter Squelch)

[MENU] > SET > Function > **Squelch/ATT Select**

Selects the function that varies according to the [SQL] control position.

- OFF: Both the S-Meter Squelch and Attenuator are disabled.
- S-Meter Squelch: The S-Meter Squelch activates and adjusts the squelch level when [SQL] is set between 12 o'clock and the fully clockwise position.
- ATT: The Attenuator is enabled and adjusts the attenuation level when [SQL] is set between 12 o'clock and the fully clockwise position.

Squelch Delay (Default: Short)

[MENU] > SET > Function > **Squelch Delay**

Sets the squelch delay to short or long to prevent repeated opening and closing of the squelch when receiving the same signal.

- Short: Shortens the time until the squelch opens.
- Long: Lengthens the time until the squelch opens.

Fan Control (Default: Auto)

[MENU] > SET > Function > **Fan Control**

Selects the cooling fan control between Slow, Mid, Fast and Auto.

- Slow: The fan rotates slowly.
- Mid: The fan rotates at a medium speed.
- Fast: The fan rotates fast.
- Auto: The fan automatically turns ON during transmission or when the internal temperature of the transceiver exceeds the preset value. It remains ON until the temperature drops below the value.

Time-Out Timer (Default: OFF)

[MENU] > SET > Function > **Time-Out Timer**

To prevent an accidental prolonged transmission, the transceiver has the Time-Out Timer function. The function inhibits continuous transmissions longer than this set period of time.

- OFF: Turns OFF the function.
- 1 to 30 min: The transmission is cut OFF after the set period of time ends (1, 3, 5, 10, 15, or 30 minutes).

One-Touch PTT (Remote MIC) (Default: OFF)

[MENU] > SET > Function > **One-Touch PTT (Remote MIC)**

Sets the On-Touch PTT function for the HM-207 HAND MICROPHONE. The function enables you to transmit without holding down the [PTT].

- OFF: Push [PTT] to transmit and release to receive.
- ON: Push [PTT] to transmit, then push again to receive.

PTT Lock (Default: OFF)

[MENU] > SET > Function > **PTT Lock**

Turns the PTT Lock function ON or OFF. To prevent accidental transmissions, this function inhibits all transmissions.

- OFF: Turns OFF the function.
- ON: Turns ON the function.

Busy Lockout (Default: OFF)

[MENU] > SET > Function > **Busy Lockout**

Turns the Busy Lockout function ON or OFF.
This function inhibits a transmission while receiving a signal, or when the squelch is open.

- OFF: Turns OFF the function.
- ON: Turns ON the function.

MIC Gain (Default: 2)

[MENU] > SET > Function > **MIC Gain**

Sets the microphone gain to between 1 (minimum) and 4 (maximum), to suit your operation needs. Higher values make the microphone more sensitive to your voice.

Function

SPEECH Language (Default: English)

[MENU] > SET > Function > SPEECH > **SPEECH Language**

Sets the speech language to English or Japanese.

Alphabet (Default: Normal)

[MENU] > SET > Function > SPEECH > **Alphabet**

Selects the type of phonetic announcement.

- Normal: Normal code is used. (Example: A as eh, B as bee)
- Phonetic Code: The Phonetic code is used. (Example: A as Alfa, B as Bravo)

SPEECH Speed (Default: Fast)

[MENU] > SET > Function > SPEECH > **SPEECH Speed**

Sets the speech speed to Fast or Slow.

SPEECH Level (Default: 7)

[MENU] > SET > Function > SPEECH > **SPEECH Level**

Sets the Voice Synthesizer audio output level to between 0 and 9.

ⓘ The voice synthesizer audio output level is linked with the [VOL] setting from the minimum audio volume up to this set level.

RX Call Sign SPEECH (Default: ON (Kerchunk))

[MENU] > SET > Function > SPEECH > **RX Call Sign SPEECH**

Turns the RX Call Sign Speech function ON or OFF for calls received in the DV mode.

ⓘ Information

- When the Digital Squelch function is used, the calling station's call sign is not announced if the received signal is not addressed to your call sign, or does not include a matching digital code.
- When you receive a signal from a repeater ("UR?" or "RPT?"), the caller station's call sign is not announced.
- While scanning, the transceiver resumes the scan during an announcement.
- Even if a note is entered after the call sign, it is not announced.
- When you receive a signal during an announcement, the transceiver cancels the announcement, and you can hear the received audio.

- OFF: The caller station's call sign is not announced, even when a call is received.
- ON (Kerchunk): The caller station's call sign is announced only when they make a quick transmission.
- ON (All): The caller station's call sign is always announced.

RX>CS SPEECH (Default: ON)

[MENU] > SET > Function > SPEECH > **RX>CS SPEECH**

Turns the RX>CS Speech function ON or OFF.
The RX>CS Speech function announces the station call sign that is selected from a Received Call Record by pushing [RX→CS].

ⓘ If a call is received during an announcement, the received audio is muted, and the audio is not recorded onto the microSD card.

- OFF: The station call sign is not announced.
- ON: The station call sign is announced.

Function

DIAL SPEECH (Default: OFF)

[MENU] > SET > Function > SPEECH > **DIAL SPEECH**

Turns the Dial Speech function ON or OFF.
The Dial Speech function announces the frequency or repeater call sign that is selected by rotating [DIAL].

ⓘ When using the DR function, the frequency is announced if the Simplex mode is selected or the FM repeater does not have a call sign.
ⓘ When you receive a signal during an announcement, the transceiver cancels the announcement, and you can hear the received audio.

- OFF: The frequency or repeater call sign is not announced.
- ON: The frequency or repeater call sign is announced, 1 second after rotating [DIAL].
  In the VFO, Memory, or Call Channel mode, the frequency is announced.
  When using the DR function, the repeater call sign is announced.

MODE SPEECH (Default: OFF)

[MENU] > SET > Function > SPEECH > **MODE SPEECH**

Turns the operating mode announcement ON or OFF.

ⓘ During a VFO scan, the operating mode is announced when you change the mode.

- OFF: The selected operating mode is not announced.
- ON: The selected operating mode is announced.

Auto Repeater (Default: ON (DUP))

[MENU] > SET > Function > **Auto Repeater**

The Auto repeater function automatically turns the duplex operation and tone encoder ON or OFF.

ⓘ This item is displayed in only the USA version.

- OFF: Turns OFF the function.
- ON (DUP): Turns ON the duplex settings only.
- ON (DUP, TONE): Turns ON the duplex settings and the tone encoder function.

Active Band (Default: All)

[MENU] > SET > Function > **Active Band**

Selects whether or not to enable continuous frequency selection of the operating frequency across all bands using [DIAL].

- Single: When you rotate [DIAL] on the band edge, the displayed band's higher or lower frequency is selected.
- All: When you rotate [DIAL] on the band edge, the next band is selected.
  The selectable frequencies are set to all bands, for continuous selection.
- HAM: When you rotate [DIAL] on the band edge, the amateur band's higher or lower frequency is selected. You cannot select a frequency out of the amateur band.

ⓘ To select another band when "Single" is selected, push [QUICK], then touch "Band Select."
ⓘ This setting is for the [DIAL] operation, so all frequencies are scanned.

Dial Speed-UP (Default: ON)

[MENU] > SET > Function > **Dial Speed-UP**

Turns the Dial Speed Acceleration ON or OFF.
The acceleration automatically increases the tuning speed when you rapidly rotate [DIAL].

- OFF: Turns OFF the function.
- ON: Turns ON the function.

Touch Operation (Sub) (Default: Main Select)

[MENU] > SET > Function > **Touch Operation (Sub)**

Selects the transceiver's operation by touching on the SUB band screen.

- Main Select: Changes to the MAIN band.
- Function Select: Touch operation is activated on the SUB band.

Touch Assist (Default: ON)

[MENU] > SET > Function > **Touch Assist**

Selects whether or not to display the TOUCH ASSIST screen when you push [DIAL] on the MAIN band.

- OFF: Displays the TOUCH ASSIST screen.
- ON: Does not display the TOUCH ASSIST screen.

Function

[CD/RX>CS] (Default: CD/RX>CS)
[CALL/DR] (Default: CALL/DR)

[MENU] > SET > Function > Front Key Customize > **[CD/RX>CS], [CALL/DR]**

The function assignments for the [CD/RX→CS] and [CALL/DR] keys on the controller can be changed.
ⓘ See page 10-11 for the assignable key functions.

During RX/Standby (Default: [F-1]: BAND/GROUP [F-2]: Monitor)
During TX (Default: [F-1]: T-CALL [F-2]: ---)

[MENU] > SET > Function > Remote MIC Key > **During RX/Standby, During TX**

The function assignments for the [F-1] and [F-2] keys on the supplied HM-207 HAND MICROPHONE (remote control) can be changed.
ⓘ See pages 10-12 and 10-14 for the assignable key functions.

- During RX/Standby: The assigned key function is enabled while receiving or in standby.
- During TX: The assigned key function is enabled during transmission.

During RX/Standby (Default: [UP]: UP [DN]: DOWN)
During TX (Default: [UP]: --- [DN]: ---)

[MENU] > SET > Function > Up/Down MIC Key > **During RX/Standby, During TX**

The function assignments for the [UP] and [DN] keys on the optional HM-232 HAND MICROPHONE or optional HM-198 or HM-209 HAND MICROPHONE (simple) can be changed.
ⓘ See pages 10-12 and 10-14 for the assignable key functions.

- During RX/Standby: The assigned key function is enabled while receiving or in standby.
- During TX: The assigned key function is enabled during transmission.

Keyboard Type (Default: Full Keyboard)

[MENU] > SET > Function > **Keyboard Type**

Selects the keyboard entry type between Ten-Key and Full Keyboard to enter a call sign, memory name, and so on.
When the edit screen is displayed, you can select the keyboard type in the QUICK MENU window.

Full Keyboard Layout

[MENU] > SET > Function > **Full Keyboard Layout**

Selects the on-screen keyboard layout from English, German, or French.

Screen Capture [POWER] Switch (Default: OFF)

[MENU] > SET > Function > **Screen Capture [POWER] Switch**

Assigns the Screen Capture function to [POWER].
- OFF: [POWER] does not act as the Screen Capture key.
- ON: Pushing [POWER] captures the transceiver display and saves onto a microSD card.

Screen Capture File Type (Default: PNG)

[MENU] > SET > Function > **Screen Capture File Type**

Selects the file format for the Screen Capture function to PNG or BMP.

IF Exchange (Default: OFF)

[MENU] > SET > Function > **IF Exchange**

Selects whether or not to exchange the Intermediate Frequency to prevent interference.
- OFF: Does not exchange the Intermediate Frequency.
- ON: Exchanges to the higher or lower Intermediate Frequency.

Power OFF (With No Controller) (Default: ON)

[MENU] > SET > Function > **Power OFF (With No Controller)**

Selects whether or not to automatically turn OFF the transceiver when the controller is disconnected from the transceiver.
- OFF: The transceiver power is not turned OFF. To turn OFF the transceiver, turn OFF the DC supply, or disconnect the power cable. When you connect the controller again, the controller may perform incorrectly. This is not the controller's malfunction.
- ON: Exchanges to the higher or lower Intermediate Frequency.

Function

• **[CD/RX>CS], [CALL/DR]:**

●: Default setting ○: Available N/A: Not available

Function	Description	[CD/RX>CS]	[CALL/DR]
VFO/MR	Push to select between the VFO mode and the Memory mode.	○	○
CALL/DR	• Push to enter the Call Channel mode. • Hold down for 1 second to turn the DR function ON.	N/A	●
Adds to SKIP MR Group	Hold down for 1 second to store it into the Skip channels group as a Skip channel (PSKIP), while a scan is paused.	○	○
Temporary Skip	Push to set the frequency to be skipped during scanning. The selected frequencies are temporarily skipped for faster scanning.	○	○
CD/RX>CS	• Push to open the RX HISTORY screen. • Hold down for 1 second to open the RX>CS screen.	●	N/A
DUP	Push to turn the Duplex mode ON or OFF, and the shift direction to DUP+ or DUP–.	○	○
TONE/D.SQL	• Push to select between tone types. <<MODE>> FM/FM-N TONE: Repeater Tone TSQL: (Tone Squelch) DTCS: DTCS Code Squelch TSQL-R: Reverse Tone Squelch DTCS-R: Reverse DTCS Code Squelch DTCS (T) (“DTCS” blinks): TX:DTCS, RX:OFF TONE (T)/DTCS (R) (“T-DTCS” is displayed, “T” blinks.): TX:TONE, RX:DTCS DTCS (T)/TSQL (R) (“D-TSQL” is displayed, “D” blinks.): TX:DTCS, RX:CTCSS TONE (T)/TSQL (R) (“T-TSQL” is displayed, “T” blinks.): TX:TONE, RX:CTCSS <<MODE>> DV ⓘ You can set this setting on the DR screen. DSQL: Digital Call sign Squelch CSQL: Digital Code Squelch • Hold down for 1 second to set the repeater tone.	○	○
MW	Hold down to save the displayed frequency into a Memory blank channel.	○	○
REC	• Push to start recording. • Hold down for 1 second to stop recording.	○	
MUTE	Push to turn the Mute function ON or OFF.	○	○
Voice TX (T1)/(T2)/(T3)/(T4)	• Push to transmit the voice audio recorded on the microSD card once. • Hold down for 1 second to repeatedly transmit the voice audio. ⓘ This key function can also be used on the DR screen. ⓘ If the voice audio is not saved in the [T1] (Voice memory number for TX) on the Voice TX screen, this function is disabled.	○	○
DTMF DIRECT TX	Push to display the DTMF code direct entry mode screen.	○	○
T-CALL	Push to transmit a 1750 Hz tone.	○	○

Function

- **During RX/Standby:**

●: Default setting ○: Available N/A: Not available

Function	Description	Remote MIC Key		Up/Down MIC Key	
		[F-1]	[F-2]	[UP]	[DN]
---	No function.	○	○	○	○
UP	Push to increase the frequency, Memory channel, repeater, or station call sign.	N/A	N/A	●	○
DOWN	Push to decrease the frequency, Memory channel, repeater, or station call sign.	N/A	N/A	○	●
VOL UP	Push to increase the volume level.	N/A	N/A	○	○
VOL DOWN	Push to decrease the volume level.	N/A	N/A	○	○
SQL UP	Push to increase the squelch level.	N/A	N/A	○	○
SQL DOWN	Push to decrease the squelch level.	N/A	N/A	○	○
Monitor	Push to open or close the squelch.	○	●	○	○
CALL	Push to select a call channel.	N/A	N/A	○	○
MR (00-00 CH)	In the Memory mode, push to select Memory channel 00-00.	○	○	○	○
MR (00-01 CH)	In the Memory mode, push to select Memory channel 00-01.	○	○	○	○
VFO/MR	Push to select between the VFO mode and the Memory mode.	N/A	N/A	○	○
DR	Push to turn the DR function ON or OFF.	○	○	○	○
FROM/TO (DR)	On the DR screen, push to select between “FROM” and “TO.”	○	○	○	○
FROM (DR)	On the DR screen, push to select “FROM.”	○	○	○	○
TO (DR)	On the DR screen, push to select “TO.”	○	○	○	○
Home CH	Push to directly select the Home CH that is set to the selected mode (VFO/Memory) or DR screen. While in the CALL CH or Weather channel mode, or when no Home CH is set, an error beep sounds.	N/A	N/A	○	○
BAND/ GROUP	Push to select an operating band. In the VFO mode, push to change the operating band, and in the Memory mode, push to select a group. ⓘ Only the entered group is selectable.	○	○	○	○
SCAN	• Push to start a scan. • While scanning, push to stop the scan.	○	○	○	○
Adds to SKIP MR Group	Hold down for 1 second to store it into the Skip channels group as a Skip channel (PSKIP), while a scan is paused.	○	○	○	○
Temporary Skip	Push to set the frequency to be skipped during scanning. The selected frequencies are temporarily skipped for faster scanning.	○	○	○	○
RX>CS	Push to display the RX>CS screen.	○	○	○	○

10 SET MODE

Function

• During RX/Standby:

●: Default setting ○: Available N/A: Not available

Function	Description	Remote MIC Key		Up/Down MIC Key	
		[F-1]	[F-2]	[UP]	[DN]
SPEECH	• In the VFO, Memory, or Call Channel mode, push to announce the frequency and operating mode. • On the DR screen, push to announce the call sign. ⓘ If the Simplex mode is selected, the frequency is announced. ⓘ If the FM repeater is selected, the frequency and operating mode, or the call sign and operating mode are announced.	○	○	○	○
MAIN (A)	Push to change the A band to as the MAIN band.	○	○	○	○
MAIN (B)	Push to change the B band to as the MAIN band.	○	○	○	○
MODE	Push to change the operating mode.	●	○	○	○
LOW	Push to change the transmit power level.	○	○	○	○
DUP	Push to turn the Duplex mode ON or OFF, and the shift direction to DUP+ or DUP–.	○	○	○	○
TONE/ D.SQL	• Push to select between tone types. <<MODE>> FM/FM-N TONE: Repeater Tone TSQL: (Tone Squelch) DTCS: DTCS Code Squelch TSQL-R: Reverse Tone Squelch DTCS-R: Reverse DTCS Code Squelch DTCS (T) (“DTCS” blinks): TX:DTCS, RX:OFF TONE (T)/DTCS (R) (“T-DTCS” is displayed, “T” blinks.): TX:TONE, RX:DTCS DTCS (T)/TSQL (R) (“D-TSQL” is displayed, “D” blinks.): TX:DTCS, RX:CTCSS TONE (T)/TSQL (R) (“T-TSQL” is displayed, “T” blinks.): TX:TONE, RX:CTCSS <<MODE>> DV ⓘ You can set this setting on the DR screen. DSQL: Digital Call sign Squelch CSQL: Digital Code Squelch • Hold down for 1 second to set the repeater tone.	○	○	○	○
MW	Hold down to save the displayed frequency into a Memory blank channel.	○	○	○	○
REC	• Push to start recording. • Hold down for 1 second to stop recording.	○	○	○	○
MUTE	Push to turn the Mute function ON or OFF.	○	○	○	○
Voice TX (T1)/(T2)/ (T3)/(T4)	• Push to transmit the voice audio recorded on the microSD card once. • Hold down for 1 second to repeatedly transmit the voice audio. ⓘ This key function can also be used on the DR screen. ⓘ If the voice audio is not saved in the [T1] (Voice memory number for TX) on the Voice TX record screen, this function is disabled.	○	○	○	○
DTMF DIRECT TX	Push to display the DTMF code direct entry mode screen.	○	○	N/A	N/A
T-CALL	Push to transmit a 1750 Hz tone.	○	○	○	○

Function

- **During TX:**

●: Default setting ○: Available N/A: Not available

Function	Description	Remote MIC Key		Up/Down MIC Key	
		[F-1]	[F-2]	[UP]	[DN]
---	No function	○	●	●	●
LOW	Push to change the transmit power level.	○	○	○	○
Voice TX (T1)/(T2)/ (T3)/(T4)	• Push to transmit the voice audio recorded on the microSD card once. • Hold down for 1 second to repeatedly transmit the voice audio. ⓘ To make a repeat transmission, [PTT] must be released.	○	○	○	○
T-CALL	Push to transmit a 1750 Hz tone.	●	○	○	○

My Station

My Call Sign

[MENU] > SET > My Station > **My Call Sign**

The transceiver has a total of 6 memories to save your own call signs for use in the DV mode. You can enter a call sign of up to 8 digits.
Also, you can enter a note of up to 4 characters, for operating transceiver type, area, and so on.

- ⓘ See D-STAR GUIDE in the Basic manual for MY Call Sign entry.
- ⓘ To select another My Call Sign, touch the desired call sign on the MY CALL SIGN screen.

TX Message

[MENU] > SET > My Station > **TX Message**

The transceiver has a total of 5 memories to save short messages for transmission with your voice signal in the DV mode.
Enter a message of up to 20 alphanumeric characters for each memory.

- ⓘ See page 3-18 for TX message entry.
- ⓘ To select another TX message, touch the desired message on the TX MESSAGE screen.

TIP: To transmit no message, select “OFF.”

My Call Sign (TM)

[MENU] > SET > My Station > **My Call Sign (TM)**

The transceiver has a total of 6 memories to save your own call signs for use in the Terminal mode. You can enter a call sign of up to 8 digits.
Also, you can enter a note of up to 4 characters, for operating transceiver type, area, and so on.
As the default, “Same as Normal DV” is selected.

- ⓘ See D-STAR GUIDE in the Basic manual for MY Call Sign entry.
- ⓘ To select another My Call Sign, touch the desired your own call signs on the MY CALL SIGN (TM) screen.
- ⓘ If you edit My Call Sign (TM), your own call sign will also be changed.

DV Set

RX Bass (Default: Normal)

[MENU] > SET > DV Set > Tone Control > **RX Bass**

Selects the receive audio bass filter level.
- Cut: Reduces low frequencies.
- Normal: Normal tone balance.
- Boost: Increases low frequencies.

RX Treble (Default: Normal)

[MENU] > SET > DV Set > Tone Control > **RX Treble**

Selects the receive audio treble filter level.
- Cut: Reduces high frequencies.
- Normal: Normal tone balance.
- Boost: Increases high frequencies.

RX Bass Boost (Default: OFF)

[MENU] > SET > DV Set > Tone Control > **RX Bass Boost**

Turns the Receive Audio Bass Boost function ON or OFF.

ⓘ This function is different from the “Boost” setting of “RX Bass.”
- OFF: Turns OFF the function.
- ON: This function boosts the receive audio bass.

TX Bass (Default: Normal)

[MENU] > SET > DV Set > Tone Control > **TX Bass**

Selects the transmit audio bass filter level.
- Cut: Reduces low frequencies.
- Normal: Normal tone balance.
- Boost: Increases low frequencies.

TX Treble (Default: Normal)

[MENU] > SET > DV Set > Tone Control > **TX Treble**

Selects the transmit audio treble filter level.
- Cut: Reduces high frequencies.
- Normal: Normal tone balance.
- Boost: Increases high frequencies.

Auto Reply (Default: OFF)

[MENU] > SET > DV Set > **Auto Reply**

Selects an option for the Automatic Reply function in the DV mode. This function automatically replies to a call addressed to your own call sign (MY), even if you are away from the transceiver.
- OFF: Turns OFF the function.
- ON: Replies with your own call sign (MY). (No audio reply is sent)
- Voice: Replies with your call sign (MY) and any Auto Reply message recorded on the microSD card (up to 10 seconds).
  ⓘ The transmitted audio can be monitored.
  ⓘ If no microSD card is inserted, or no message is recorded, only your call sign is transmitted.
- Position (Only Main)*: Replies with your own call sign and transmits your position data using the internal GPS receiver. In the Dualwatch mode, automatically replies only when the signal is received on the MAIN band.
- Position (Main/Sub)*: Replies with your own call sign and transmits your position data using the internal GPS receiver. In the Dualwatch mode, automatically replies when the signal is received on either the MAIN or SUB band.

*When “GPS Select” is set to “OFF” or “Manual,” the internal GPS receiver is temporarily turned ON.
When the “GPS Select” is set to “External GPS,” the transceiver transmits your position. But if the external GPS receiver is not connected, the internal GPS receiver is temporarily turned ON.
([MENU] > GPS > GPS Set > **GPS Select**)

When “GPS TX Mode” is set to “D-PRS” or “NMEA,” the position formats is automatically set “Position,” regardless of “TX Format” settings.
([MENU] > GPS > **GPS TX Mode**)
([MENU] > GPS > GPS TX Mode > D-PRS > **TX Format**)

ⓘ When “ON” or “Voice” is selected, the Automatic Reply function is automatically turned OFF when you push [PTT]. When “Position (Only Main)” or “Position (Main/Sub)” is selected, the Automatic Reply function is not turned OFF, even if you push [PTT].

DV Set

DV Data TX (Default: Auto)

[MENU] > SET > DV Set > **DV Data TX**

Selects whether to manually or automatically transmit data in the DV mode.

- PTT: Push [PTT] to manually transmit data.
- Auto: When data is input from a PC through the [USB] port or the [DATA] jack, the transceiver automatically transmits it.

Fast Data (Default: OFF)

[MENU] > SET > DV Set > DV Fast Data > **Fast Data**

Selects whether or not to use the DV Fast Data function for data communication in the DV mode. The DV Fast Data function uses the data and the audio frames to send data approximately 3.5 times faster than the normal speed. So, no audio can be sent.

- OFF: Sends data at a slow speed (approximately 950 bps).
- ON: Sends data at a fast speed (approximately 3480 bps).

ⓘ Even if "ON" is selected, when you push [PTT], the data is sent at the slow speed, because the audio frame is used for the audio transmission.

ⓘ The GPS data speed is set in "GPS Data Speed."

GPS Data Speed (Default: Slow)

[MENU] > SET > DV Set > DV Fast Data > **GPS Data Speed**

Sets the GPS data speed when the data is sent using the DV Fast Data function.

- Slow: Sends GPS data at slow speed (approximately 950 bps).
- Fast: Sends GPS data at fast speed (approximately 3480 bps).

TX Delay (PTT) (Default: 2sec)

[MENU] > SET > DV Set > DV Fast Data > **TX Delay (PTT)**

Sets the time for when the transceiver returns to receive after sending DV data in the DV Fast Data mode using [PTT].

- OFF: After releasing [PTT], the transceiver returns to receive.
- 1 ~ 10sec: After releasing [PTT], the transceiver sends data using the DV Fast Data mode for this set period. When the TX data is completely sent within this set period, the transceiver automatically returns to receive.

NOTE: This function is usable only when "DV Data TX" is set to "PTT."

Digital Monitor (Default: Auto)

[MENU] > SET > DV Set > **Digital Monitor**

Selects a receive mode when pushing [MONI] in the DV mode.

- Auto: Receives in the DV mode or the FM mode, depending on the received signal.
- Digital: Receives in the DV mode.
- Analog: Receives in the FM mode.

Digital Repeater Set (Default: ON)

[MENU] > SET > DV Set > **Digital Repeater Set**

Turns the Digital Repeater Set function ON or OFF. When accessing a repeater that has a call sign that is different from the transceiver's setting, this function reads the repeater's transmit signal and automatically sets the repeater call sign.

- OFF: Turns OFF the function.
- ON: Automatically sets the repeater call sign.
- ON (GW): Automatically sets the repeater call sign.
  ⓘ The GW Call sign is unconditionally set to R2.

DV Auto Detect (Default: OFF)

[MENU] > SET > DV Set > **DV Auto Detect**

Turns the DV mode Automatic Detect function ON or OFF. When in the DV mode, if you receive a non-digital signal, this function automatically sets the operating mode to the FM mode.

- OFF: Turns the function OFF. The operating mode is fixed to the DV mode.
- ON: Automatically selects the FM mode for temporary operation.

DV Set

RX Record (RPT) (Default: ALL)

[MENU] > SET > DV Set > **RX Record (RPT)**

The transceiver can record the data of up to 50 individual calls. When the received signal includes a status message (“UR?” or “RPT?”) that is sent back from the access repeater, you can record up to 50 messages, or only the last call, in the Received Call Record.

- ALL: Records up to 50 calls.
- Only Latest: Records only the last call.

BK (Default: OFF)

[MENU] > SET > DV Set > **BK**

The Break-in (BK) function enables you to break into a conversation, where the 2 other stations are communicating with call sign squelch enabled.

- OFF: Turns OFF the function.
- ON: Turns ON the function.

ⓘ The BK function is automatically turned OFF when the transceiver is turned OFF.

EMR (Default: OFF)

[MENU] > SET > DV Set > **EMR**

The Enhanced Monitor Request (EMR) function enables all transceivers that receive an EMR signal in the DV mode automatically to open their squelch to receive the signal.

- OFF: Turns OFF the function.
- ON: Turns ON the function.

ⓘ The EMR function is automatically turned OFF when the transceiver is turned OFF.

EMR AF Level (Default: 19)

[MENU] > SET > DV Set > **EMR AF Level**

Sets the audio output level when an EMR communication mode signal is received. When an EMR signal is received, the audio will be heard at the programmed level, or the transceiver’s audio level, whichever is higher.
To disable the setting, set to “0.”

NOTE: After an EMR signal disappears, the audio level will remain at the EMR level. In this case, rotate [VOL] to adjust the audio level.

DV Repeater Monitor Set

Connection IP Address List (Default: Not Use)

[MENU] > SET > DV Repeater Monitor Set > **Connection IP Address List**

Selects the DV repeater’s IP address list file to use when the DV Repeater Monitor function is turned ON. The files that is saved into the “ID-5200” > “RptMoni” folder on the microSD card is displayed.

ⓘ If you do not use the file, select “Not Use.”
ⓘ After changing the file name, select again.

QSO/RX Log

QSO Log (Default: ON)

[MENU] > SET > QSO/RX Log > **QSO Log**

Selects whether or not to make a communication log on a microSD card. The communication log is made on the card, and saved in the “csv” format.

ⓘ This function requires a microSD card (User supplied).

- OFF: The QSO Log function is OFF.
- ON: The transceiver makes a log on the microSD card. The transceiver starts making a log when you begin talking.

TIP:
- The folder name is automatically created, as [ID-5200\QsoLog].
- The file name is automatically created, as shown in the example below:
  Log start date and time: 1st April 2026 15:30:00
  File name: 20260401_153000.csv
- The log contents are not displayed on the transceiver.
- You can display the log contents on a PC.

RX History Log (Default: OFF)

[MENU] > SET > QSO/RX Log > **RX History Log**

Selects whether or not to make a DV mode’s receive history log on a microSD card. The receive history log is made on a microSD card, and saved in the “csv” format.

ⓘ This function requires a microSD card (User supplied).

- OFF: The RX History Log function is OFF.
- ON: The transceiver makes a DV mode’s receive history log on the microSD card. The transceiver starts making a receive history log when you finish talking.

TIP:
- The folder name is automatically created, as [ID-5200\RxLog].
- The file name is automatically created, as shown in the example below:
  Log start date and time: 1st April 2026 15:30:00
  File name: 20260401_153000.csv
- The log contents are not displayed on the transceiver.
- You can display the log contents on a PC.

Separator/Decimal (Default: Sep[,] Dec[.])

[MENU] > SET > QSO/RX Log > CSV Format > **Separator/Decimal**

Selects the separator and the decimal character for the CSV format.

ⓘ The default value may differ, depending on the transceiver version.

- Sep [,] Dec [.]: Separator is “,” and Decimal is “.”
- Sep [;] Dec [.]: Separator is “;” and Decimal is “.”
- Sep [;] Dec [,]: Separator is “;” and Decimal is “,”

Date (Default: mm/dd/yyyy)

[MENU] > SET > QSO/RX Log > CSV Format > **Date**

Selects the date format between “yyyy/mm/dd,” “mm/dd/yyyy,” and “dd/mm/yyyy.”
(y: year, m: month, d: day)

ⓘ The default value may differ, depending on the transceiver version.

QSO/RX Log

The call log contents are shown below:

Contents	Example		Descriptions
Type	RF	RF	How the signal is transmitted or received (RF: The Normal mode (RF), TM: The Terminal mode, MONI: The DV Repeater Monitor function)
TX/RX	TX	RX	Transmission and reception
Date	04/01/2026 13:51:48	04/01/2026 13:51:48	Date and time the when call was started.
Frequency	438.010000	438.010000	Operating frequency
Mode	DV	DV	Operating mode (FM/FM-N/DV)
My Latitude	34.764667	34.764667	Your latitude (unit: degrees) (+: North latitude, –: South latitude)
My Longitude	135.375333	135.375333	Your longitude (unit: degrees) (+: East longitude, –: West longitude)
My Altitude	50.5	50.5	Your altitude (unit: meters) Records to one decimal place.
RF Power	LOW	(Blank)	TX output power level
S meter	(Blank)	S0	The relative signal strength of the receive signal (in 14 levels)
RPT Call Sign	JP3YHJ	JP3YHJ A	Repeater call sign (DV mode only)
TX Call Sign	CQCQCQ	(Blank)	TX Call sign (DV mode only)
RX Call Sign	(Blank)	JA3YUA A/5200	RX Call sign/Note (DV mode only)
RX Latitude	(Blank)	34.764667	Caller’s latitude, if sent. (unit: degrees) (+: North latitude, –: South latitude) Records only when you receive in the DV mode.
RX Longitude	(Blank)	135.375333	Caller’s longitude, if sent. (unit: degrees) (+: East longitude, –: West longitude) Records only when you receive in the DV mode.
RX Altitude	(Blank)	30.5	Caller’s altitude, if sent. (unit: meters) Records only when you receive in the DV mode.

QSO/RX Log

The RX log contents are shown below:

Contents	Example	Descriptions
Type	RF	How the signal is received (RF: The Normal mode (RF), TM: The Terminal mode, MONI: The DV Repeater Monitor function)
Frequency	438.010000	RX Frequency
Mode	DV	Operating mode (DV mode is fixed)
Caller	JA3YUA A	Call sign of the caller station (up to 8 characters)
/	5200	Note after the call sign (up to 4 characters)
Called	CQCQCQ	Call sign of the called station
Rx RPT1	JP3YHH G	Access repeater call sign of the caller station, or the gateway repeater call sign of your local area repeater.
Rx RPT2	JP3YHH A	Access repeater call sign of the called station
Message	Hello CQ D-STAR!	Message included in the received call (up to 20 characters)
Status	(Blank)	Normal: blank, Uplink: “RPT UP”, Access repeater reply: “UR?” or “RPT?”
Received date	04/01/2026 13:51:48	Date and time when the call was received The format may differ, depending on the setting.
BK	*	BK call: “*”, Normal call: Blank
EMR	*	EMR call: “*”, Normal call: Blank
Latitude	34.764667	Caller’s latitude, if sent. (unit: degrees) (+: North latitude, –: South latitude)
Longitude	135.375333	Caller’s longitude, if sent. (unit: degrees) (+: East longitude, –: West longitude)
Altitude	30.5	Caller’s altitude, if sent. (unit: meters) Records to one decimal place.
SSID	-A	Caller’s SSID, if sent. (0, -1 to -15, -A to -Z)
D-PRS Symbol	Car	Icon: Converts to text, None: Code
Course	123	Caller’s course (unit: degrees)
Speed	23.5	Caller’s speed (unit: km/h) Records to one decimal place.
Power	49	TX power (unit: watts)
Height	24	Antenna height (unit: meters)
Gain	6	Antenna gain (unit: dB)
Directivity	Omni	Antenna directivity (Omni, 45, 90, 135, 180, 225, 270, 315, or 360)
Object/Item Name	HAM FES	Object name or Item name (up to 9 characters)
Data Type	Live Object	Data type of Object or Item (Live or Kill)
Temperature	20.5	Temperature (unit: °C) Records to one decimal places.
Rainfall	253.7	Rainfall (unit: mm) Records to one decimal place.
Rainfall (24 Hours)	253.7	Rainfall (24 Hours) (unit: mm) Records to one decimal place.
Rainfall (Midnight)	253.7	Rainfall (Midnight) (unit: mm) Records to one decimal place.
Wind Direction	315	Wind Direction (unit: degrees)
Wind Speed	10.0	Wind Speed (unit: m/s) Records to one decimal place.
Gust Speed	10.0	Gust Speed (unit: m/s) Records to one decimal place.
Barometric	1013.0	Barometric (unit: hPa) Records to one decimal place.
Humidity	85	Humidity (unit: %)
GPS Time Stamp	12:00:00	Time data that the caller station acquires along with the position data
GPS Message	Osaka City/ID-5200	Caller is “NMEA”: Records the GPS message Caller is “D-PRS: Records the D-PRS comment

Connectors

CI-V Address (Default: B8h)

[MENU] > SET > Connectors > CI-V > **CI-V Address**

Sets the CI-V address in hexadecimal code.

ⓘ To distinguish devices, each CI-V transceiver has its own Icom standard address. “B8h” is the default address of the ID-5200A/E. When 2 or more transceivers are simultaneously controlled by a PC, set a different address for each transceiver between 02 and DFh (hexadecimal).

CI-V Transceive (Default: ON)

[MENU] > SET > Connectors > CI-V > **CI-V Transceive**

Turns the Transceive function ON or OFF.

ⓘ To use the RS-MS1A or RS-MS1I, set to “ON.”

- OFF: The status is not output.
- ON: The status is output. When you change a transceiver setting, the same change is automatically set on other connected transceivers or receivers, and vice versa.

CI-V USB Echo Back (Default: OFF)

[MENU] > SET > Connectors > CI-V > **CI-V USB Echo Back**

Turns the Data Echo Back function ON or OFF, when remotely controlling the ID-5200A/E through the [USB] port.

CI-V DATA Baud Rate (Default: 9600)

[MENU] > SET > Connectors > CI-V > **CI-V DATA Baud Rate**

Sets the CI-V data transfer speed when remotely controlling the transceiver through the [DATA] jack, to 4800, 9600, 19200 bps.

CI-V DATA Echo Back (Default: OFF)

[MENU] > SET > Connectors > CI-V > **CI-V DATA Echo Back**

Turns the Data Echo Back function ON or OFF, when remotely controlling the ID-5200A/E through the [DATA] jack.

USB Connect (Default: Serialport)

[MENU] > SET > Connectors > **USB Connect**

Selects the mode when connecting the transceiver to a PC with a USB cable.

- Serialport:
  You can program the transceiver, input/output D-STAR data, input weather data, and remotely control the transceiver using the CI-V commands.

  ⓘ Information
  - You need to install the USB driver.
  - When a PC is connected, the USB connection indicator USB COM is displayed on the transceiver.
  - Select the input/output data type in “USB (B) Function.”
    ([MENU] > SET > Connectors > Serialport Function > **USB (B) Function**)
- SD Card Mode:
  You can transfer the files between the inserted microSD card and a PC, using a USB cable.
  ⓘ A confirmation dialog is displayed. (p. 1-9)

NOTE:
- Use a data communication compatible USB cable when “Serialport” or “SD Card Mode” is selected.
- While in the SD Card Mode, the transceiver works not as a transceiver but as a data storage device. It temporarily stops recording and logging.

TIP: Download the USB driver and the installation guide from the Icom website.
https://www.icomjapan.com/support/

USB Serialport (Power OFF) (Default: OFF)

[MENU] > SET > Connectors > **USB Serialport (Power OFF)**

Select whether or not to recognize the serial port as a COM port when the transceiver is turned off and connected to a PC with a USB cable.

- OFF: Does not recognize the transceiver’s serial port as a COM port.
- ON: Recognizes the transceiver’s serial port as a COM port.

Connectors

USB (A) Function

[MENU] > SET > Connectors > Serialport function > **USB (A) Function**

The transceiver has 2 virtual COM ports, A and B. USB (A) is used for CI-V operation.

ⓘ This item is permanently set to “CI-V.”

ⓘ When connecting to a USB port on your PC with the USB driver installed, USB (A) is named as “ID-5200 Serial Port A (CI-V).”

- OFF: Does not assign the function to USB (B).
- DV Data: Inputs or outputs low speed data for the DV mode.
- Weather Input: Inputs the weather data entries.
- GPS Output: Outputs the position data from the GPS receiver.

USB (B) Function (Default: OFF)

[MENU] > SET > Connectors > Serialport function > **USB (B) Function**

The transceiver has 2 virtual COM ports, A and B. In this item, selects the function to be assigned to USB (B).

ⓘ To use the RS-MS1A or RS-MS1I, set to “DV Data.”

ⓘ When connecting to a USB port on your PC with the USB driver installed, USB (B) is named as “ID-5200 Serial Port B (CI-V).”

- OFF: Does not assign the function to USB (B).
- DV Data: Inputs or outputs low speed data for the DV mode.
- Weather Input: Inputs the weather data entries.
- GPS Output: Outputs the position data from the GPS receiver.

DATA Function (Default: DV Data)

[MENU] > SET > Connectors > Serialport function > **DATA Function**

Selects the function to be assigned to the [DATA] jack.

- OFF: Does not assign the function to the [DATA] jack.
- DV Data: Inputs or outputs low speed data for the DV mode.
- Weather Input: Inputs the weather data entries.
- GPS Output (115200bps): Outputs the position data from the GPS receiver.
- CI-V: Inputs or outputs the CI-V command.

DV Data Baud Rate (DATA) (Default: 9600)

[MENU] > SET > Connectors > Serialport function > **DV Data Baud Rate (DATA)**

Selects the transfer rate of either 4800 or 9600 bps for transmitting and receiving the DV data through the [DATA] jack.

Weather Input Baud Rate (DATA) (Default: 9600)

[MENU] > SET > Connectors > Serialport function > **Weather Input Baud Rate (DATA)**

Selects the transfer rate of either 4800 or 9600 bps for inputting the Weather data through the [DATA] jack.
4800 or 9600 bps.

Display

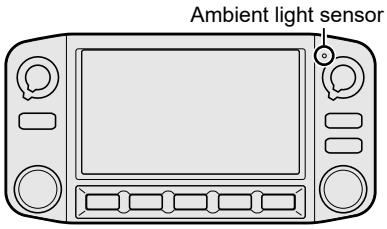
LCD Backlight

[MENU] > SET > Display > **LCD Backlight**

Sets the LCD backlight brightness.

ⓘ When "(Auto Adjusting)" is displayed to the right of the screen title, the backlight brightness is automatically adjusted using the ambient light sensor. Touching [Auto Adjust] turns this function ON or OFF.

ⓘ **DO NOT** cover the sensor.



Screen Saver (Default: OFF)

[MENU] > SET > Display > **Screen Saver**

Sets the Screen Saver function to ON (Timer: 15, 30, or 60 minutes) or OFF.

- OFF: The screen saver function is not activated.
- 15/30/60min:
  The Screen Saver function is activated after this set period of time.
  ⓘ When this function is activated, automatically turns OFF the screen, and [POWER] blinks when no operation is performed for the preset period of time.

Group Name Popup (Default: ON)

[MENU] > SET > Display > **Group Name Popup**

Selects whether or not to display the group name when you change the memory channel group.

- OFF: The group name is not displayed.
- ON: The group name is displayed.

RX Call Sign Display (Default: Normal)

[MENU] > SET > Display > **RX Call Sign Display**

In the DV mode, selects whether or not to display the call sign and the message of the caller station when a call is received.

- OFF: Does not display the caller station's call sign and message.
- Normal: The caller station's call sign and message automatically scroll once, and then disappear.
- RX Hold: The caller station's call sign and message automatically scroll once, and then the call sign is displayed on the transceiver's display until the signal disappears.
- Hold: The caller station's call sign and message automatically scroll once, and then the call sign is displayed on the transceiver's display until the signal disappears. When the signal disappears, the call sign and message are displayed alternately every 2 seconds.

ⓘ When "Normal," "RX Hold," or "Hold" is selected, and if the call sign and name of the caller station is entered in your memory, the name is displayed after displaying the call sign.

RX Position Indicator (Default: ON)

[MENU] > SET > Display > **RX Position Indicator**

Selects whether or not to display the indicator when position data is included in the signal received in the DV mode.

- OFF: No indicator is displayed, even though the position data is included in the received signal.
- ON: The indicator is displayed when the position data is included in the received signal.

ⓘ When "RX Call Sign Display" is set to "OFF," the indicator is not displayed, even though position data is included in the received signal.

Display

RX Position Display (Default: ON (Main/Sub))

[MENU] > SET > Display > **RX Position Display**

Selects whether or not to display position data in a dialog when the caller station's position data is included in the signal received in the DV mode.

- OFF: No data is displayed in a dialog.
- ON (Main/Sub):
  When the caller station's position data is included in the signal, its data is displayed in a dialog.
- ON (Only Main):
  When the caller station's position data is included in the signal received in the MAIN band, its data is displayed in a dialog.

ⓘ The time period to display the dialog depends on the "RX Position Display Timer" setting.

RX Position Display Timer (Default: 10sec)

[MENU] > SET > Display > **RX Position Display Timer**

Sets the RX position data's time period to display in a dialog.

- 5/10/15/30sec: Displays the caller's position for this set period of time.
- Hold: Displays the caller's position until you operate the transceiver.

Reply Position Display (Default: ON)

[MENU] > SET > Display > **Reply Position Display**

Selects whether or not to display the caller's position data when the data is included in the Auto Replay signal.

- OFF: Does not display the caller's position data.
- ON: Automatically displays the caller's position data.

RX Picture Indicator (Default: ON)

[MENU] > SET > Display > **RX Picture Indicator**

Selects whether or not to display the RX Picture Indicator when a picture is included in the received signal.

- OFF: No indicator is displayed, even if a picture is included in the received signal.
- ON: The indicator is displayed when a picture is included in the received signal.

ⓘ When "RX Call Sign Display" is set to "OFF," the indicator is not displayed, even if a picture is included in the received signal.

DV RX Backlight (Default: ON)

[MENU] > SET > Display > **DV RX Backlight**

Turns the DV RX Backlight function ON or OFF.
In the DV mode, this function turns ON the backlight while displaying the calling station's call sign or a received message.

- OFF: Turns OFF the function.
- ON: The backlight automatically lights when displaying the calling station's call sign or a received message. The backlight stays ON while the call sign or message is scrolling.

TX Call Sign Display (Default: Your Call Sign)

[MENU] > SET > Display > **TX Call Sign**

Selects whether or not to display the My or Your call sign while transmitting.

- OFF: Turns OFF the function.
- Your Call Sign: Displays and scrolls the call sign of the target station.
- My Call Sign: Displays and scrolls your own call sign.

ⓘ When "Your Call Sign" is selected, and if the call sign and name of the caller station is entered in your memory, the name is displayed after the call sign, in any DV mode except when using the DR function.

Scroll Speed (Default: Fast)

[MENU] > SET > Display > **Scroll Speed**

Sets the scrolling speed of the message, call sign, and other displayed text on the screen to "Slow" or "Fast."

Opening Message (Default: ON)

[MENU] > SET > Display > **Opening Message**

Selects whether or not to display the opening message at power ON.
When you set this item to "ON," Icom logo, MY call sign, and the model are displayed.

Voltage (Power ON) (Default: ON)

[MENU] > SET > Display > **Voltage (Power ON)**

Selects whether or not to display the voltage of the battery or external DC power source at power ON.

NOTE: When the external DC power source voltage is above 17.0 V, "Over Voltage" is displayed. In that case, immediately disconnect the DC power source.

Display

Clock/Voltage Display (Default: Clock)

[MENU] > SET >Display > **Clock/Voltage Display**

Selects whether to display the clock or voltage at the top of the LCD.

- Clock: Displays the current time.
- Voltage: Displays the voltage of the battery or external DC power source.

NOTE: When “Voltage” is selected, the LCD displays the transceiver’s internal voltage. Therefore, the displayed voltage is lower than the voltage of the connected battery.

Latitude/Longitude (Default: ddd° mm.mm′)

[MENU] > SET > Display > Display Unit > **Latitude/Longitude**

Selects the format to display the position data.

ⓘ The default value may differ, depending on the transceiver version.

Altitude/Distance (Default: ft/mi)

[MENU] > SET > Display > Display Unit > **Altitude/Distance**

Selects the format to display the distance and elevation.

ⓘ The default value may differ, depending on the transceiver version.

Speed (Default: mph)

[MENU] > SET > Display > Display Unit > **Speed**

Selects the format to display the speed.

ⓘ The default value may differ, depending on the transceiver version.

Temperature (Default: °F)

[MENU] > SET > Display > Display Unit > **Temperature**

Selects the format to display the temperature.

ⓘ The default value may differ, depending on the transceiver version.

Barometric (Default: inHg)

[MENU] > SET > Display > Display Unit > **Barometric**

Selects the format to display the barometric pressure.

ⓘ The default value may differ, depending on the transceiver version.

Rainfall (Default: inch)

[MENU] > SET > Display > Display Unit > **Rainfall**

Selects the format to display the amount of rainfall.

ⓘ The default value may differ, depending on the transceiver version.

Wind Speed (Default: mph)

[MENU] > SET > Display > Display Unit > **Wind Speed**

Selects the format to display the wind speed.

ⓘ The default value may differ, depending on the transceiver version.

Display

Display Language (Default: English)

[MENU] > SET > Display > **Display Language**

Sets the screen display language to English or Japanese.

ⓘ This item is displayed only when “System Language” is set to “Japanese.”

System Language (Default: English)

[MENU] > SET > Display > **System Language**

Sets the system language of the transceiver.

- English: The system language of the transceiver is English. Only alphabetical characters (A to Z, a to z, 0 to 9) and symbols (! “ # $ % & ‘ ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | } ~) can be displayed.
  If Japanese characters (Kanji, Hiragana, and Katakana) are included, the display shows “=” or “_” instead of that character. In that case, you can only delete “=” or “_” in the transceiver’s edit mode.
- Japanese: The system language of the transceiver is Japanese. Kanji, Hiragana, and Katakana characters, and the 2-bytes symbols can be displayed. To display such characters on the DR screen or in the Menu mode, set “Display Language” to “Japanese.”

ⓘ When this item is set to “English,” “Display Language” is not displayed.

When you set the system language of the transceiver to Japanese, the transceiver has the capability to display both English and Japanese characters. However, if you select Japanese, all menu items throughout the transceiver system will be displayed in only Japanese characters. There will be no English item names. Unless you are fluent in reading Japanese characters, use this feature with extreme caution.
If you have changed the transceiver’s language to Japanese and do not understand the menu system in the new setting, you will have to change the language back to English by doing a partial reset of the transceiver CPU. A partial reset will not clear your call sign databases.

To do a partial reset of the CPU, do the following steps:

1. Push [MENU].
2. Touch [SET].
3. Touch the item (with the “etc.” icon) shown below.



4. Touch the bottom item shown below.



5. Touch the upper item shown below.



ⓘ **DO NOT** select the lower item. The lower item is for the All reset function, and the All reset clears all entries and returns all settings to their factory defaults.

6. Touch the left item.



- The transceiver displays “PARTIAL RESET,” then the partial reset is completed.

Sounds

Beep Level (Default: 9)

[MENU] > SET > Sounds > **Beep Level**

Sets the beep output level to 0 (OFF) or between 1 (minimum) and 9 (maximum).

Key-Touch Beep (Default: ON)

[MENU] > SET > Sounds > **Key-Touch Beep**

Turns the confirmation beep ON or OFF.
- OFF: No beep sounds.
- ON: A beep sounds when you push a key.

Home CH Beep (Default: ON)

[MENU] > SET > Sounds > **Home CH Beep**

Turns the Home CH Beep ON or OFF.
- OFF: No beep sounds.
- ON: A beep sounds when you select the Home Channel.

ⓘ In the VFO or Memory mode, when the Home Channel frequency or the Home Channel Memory is selected, the Home CH Beep sounds.

ⓘ On the DR screen, when the Home Channel Access repeater is set in FROM, the Home CH Beep sounds.

Band Edge Beep (Default: OFF)

[MENU] > SET > Sounds > **Band Edge Beep**

Turns the Band Edge Beep ON or OFF.
- OFF: No beep sounds.
- ON: A beep sounds when you tune out of, or back into the AIR, VHF, and UHF band's frequency range.

Scan Stop Beep (Default: OFF)

[MENU] > SET > Sounds > **Scan Stop Beep**

Turns the Scan Stop Beep ON or OFF.
- OFF: No beep sounds.
- ON: A beep sounds when a scan stops by receiving a signal.

Standby Beep (Default: ON (to me:Alarm/High Tone))

[MENU] > SET > Sounds > **Standby Beep**

Turns the Standby Beep function ON or OFF.
This function sounds a beep after a received signal disappears, in the DV mode.
- OFF: Does not sound a beep after a received signal disappears.
- ON: Sounds a beep after a received signal disappears.
- ON (to me:High Tone): Sounds a high-pitched beep when a received signal addressed to your call sign (MY) disappears. When any other received signal disappears, a regular beep sounds.
- ON (to me:Alarm/High Tone): Sounds an alarm (PiRoPiRoPiRo) when a received signal addressed to your call sign (MY) disappears. When any other received signal disappears, a regular beep sounds.

ⓘ The standby beep sounds even when "Key-Touch Beep" is set to "OFF."

ⓘ The standby beep output level depends on the "Beep Level" setting.

Sub Band Mute (Main RX) (Default: OFF)

[MENU] > SET > Sounds > **Sub Band Mute (Main RX)**

Selects whether or not to mute the SUB band audio signal while receiving on the MAIN band, and/or sound a beep when a signal disappears on the SUB band.
- OFF: The SUB band audio can be heard.
- Mute: While receiving on the MAIN band, the SUB band audio signal is muted.
- Beep: When a signal disappears on the SUB band, a beep sounds.
- Mute & Beep: While receiving on the MAIN band, the SUB band audio signal is muted. When a signal disappears on the SUB band, a beep sounds.

ⓘ When this item is set to "Beep" or "Mute & Beep," a beep sounds, even if no signal is received on the MAIN band.

Sub Band Mute (TX) (Default: OFF)

[MENU] > SET > Sounds > **Sub Band Mute (TX)**

Select whether or not to mute the SUB band audio signal while transmitting in the Dualwatch mode.
- OFF: The SUB band audio can be heard.
- ON: While transmitting on the MAIN band, the SUB band audio signal is muted.

Time Set

Date

[MENU] > SET > Time Set > Date/Time > **Date**

Manually set the date to between 2020/01/01 and 2099/12/31.
ⓘ The day of the week is automatically set.

Time

[MENU] > SET > Time Set > Date/Time > **Time**

Manually set the time that is displayed at the top of the screen. The time is displayed in the 24 hour format. When “GPS Time Correct” is set to “Auto,” the GPS receiver automatically sets the time by calculating the received Universal Time of Coordinated (UTC) time and “UTC Offset.”

<<NTP TIME SYNC>>

[MENU] > SET > Time Set > Date/Time > **NTP TIME SYNC**

Synchronizes the internal clock with the time management server.
ⓘ To use this function, you need an Internet connection and default gateway settings.

NTP Function (Default: ON)

[MENU] > SET > Time Set > Date/Time > **NTP Function**

Automatically obtains the current time from the NTP server.

NTP Server Address (Default: time.nist.gov)

[MENU] > SET > Time Set > Date/Time > **NTP Server Address**

Sets NTP server address.

GPS Time Correct (Default: Auto)

[MENU] > SET > Time Set > Date/Time > **GPS Time Correct**

Selects whether or not the time data is automatically corrected by a received GPS sentence.
- OFF: Does not correct the time.
- Auto: Automatically corrects the time by calculating the received UTC time and the “UTC Offset” setting.

UTC Offset (Default: ±0:00)

[MENU] > SET > Time Set > **UTC Offset**

Sets the UTC offset time to between –14:00 and +14:00.

Bluetooth Set

Bluetooth (Default: OFF)

[MENU] > SET > Bluetooth Set > **Bluetooth**

Turns the Bluetooth function ON or OFF.

Auto Connect (Default: ON)

[MENU] > SET > Bluetooth Set > **Auto Connect**

Selects whether or not to automatically connect to the paired Bluetooth device when its power is turned ON.

- OFF: Does not connect to the paired device.
- ON: Automatically connects to the last connected device.

Pairing/Connect

[MENU] > SET > Bluetooth Set > **Pairing/Connect**

Searches for the Bluetooth device to connect, or displays the paired Bluetooth devices in the list.

ⓘ See page 11-3 and the Basic manual Section 6 for details.

<<Pairing Reception>>

[MENU] > SET > Bluetooth Set > **<<Pairing Reception>>**

Enters the pairing reception mode.

ⓘ See pages 14-7 and 14-9 for details.

AF Output (Default: Only Headset)

[MENU] > SET > Bluetooth Set > Headset Set > **AF Output**

Selects the AF Output device when a Bluetooth headset is connected.

- Only Headset: Outputs audio to only the connected Bluetooth headset.
- Headset & Speaker: Outputs audio to both the connected Bluetooth headset and the transceiver's speaker.

Headset Function Select (Default: Normal)

[MENU] > SET > Bluetooth Set > Headset Set > **Headset Function Select**

Selects the PTT and microphone combination when either the Bluetooth headset or the transceiver microphone are used.

- Normal: The audio from the device whose the [PTT] is pushed is transmitted.
- Microphone: The transmission is made by pushing either the [PTT] on the Bluetooth headset, or the connected microphone. The connected microphone is only used for the PTT control.
- PTT: The audio from the connected microphone is transmitted. The transmission is made by pushing either the [PTT] on the Bluetooth headset, or the connected microphone.

NOTE: DO NOT select "PTT" when you use only the Bluetooth headset.

ⓘ The Bluetooth headset operation for each option is shown in the table below.

Option	TX Control	TX Audio
Normal	Enabled	Enabled
Microphone	Enabled	Enabled
PTT	Enabled	Disabled (Audio from the microphone is transmitted)

Auto Disconnect (Default: OFF)

[MENU] > SET > Bluetooth Set > Headset Set > **Auto Disconnect**

Sets the Disconnect Timer between 0 and 10 seconds, or OFF.

If there is no audio output from the Bluetooth headset, and there is no key operation for this set period of time, the Synchronous Connection-Oriented (SCO) link* is automatically disconnected.

ⓘ The SCO link is connected when the signal is received, a beep sounds, or there is a key operation.

* A Bluetooth link for voice communication

Bluetooth Set

VOX (Default: OFF)

[MENU] > SET > Bluetooth Set > Headset Set > VOX > **VOX**

Turns the Voice Operated Transmission (VOX) function ON or OFF.
The VOX function starts transmission without pushing [PTT] when you speak into the microphone, and then, automatically returns to receive when you stop speaking.

ⓘ To use the VOX function, the optional Bluetooth headset is required.

- OFF: Turns OFF the function.
- ON: Starts transmission without pushing [PTT] when you speak into the microphone. Then automatically returns to receive when you stop speaking.

VOX Level (Default: 5)

[MENU] > SET > Bluetooth Set > Headset Set > VOX > **VOX Level**

Sets the VOX gain level to between 1 and 10, or OFF. Higher values make the VOX function more sensitive to your voice.

- OFF: Turns OFF the VOX function.
- 1 ~ 10: 1 (The minimum sensitivity)
  10 (The maximum sensitivity)

VOX Delay (Default: 0.5sec)

[MENU] > SET > Bluetooth Set > Headset Set > VOX > **VOX Delay**

Sets the VOX Delay time to 0.5, 1.0, 1.5, 2.0, 2.5 or 3.0 seconds. The VOX Delay is the amount of time the transmitter stays ON after you stop speaking, before the VOX switches to receive.

VOX Time-Out Timer (Default: 3min)

[MENU] > SET > Bluetooth Set > Headset Set > VOX > **VOX Time-Out Timer**

Sets the VOX Time-Out Timer to prevent an accidental prolonged transmission. To disable the function, set to “OFF.”

- OFF: Turns OFF the function.
- 1, 2, 3, 4, 5, 10, or 15min:
  If a continuous transmission exceeds the set period of time, the transmission is cut off.

Power Save (Default: OFF)

[MENU] > SET > Bluetooth Set > Headset Set > Icom Headset > **Power Save**

Selects whether or not to operate with the Power Save mode while the VS-3 headset is connected.

ⓘ When a headset (user supplied) or a data device is connected, the Power Save mode is automatically turned OFF, regardless of this setting.

- OFF: Turns OFF the function.
- ON: The Power Save mode is enabled when no communication or operation is performed for 120 seconds.

One-Touch PTT (Default: OFF)

[MENU] > SET > Bluetooth Set > Headset Set > Icom Headset > **One-Touch PTT**

Sets the One-Touch PTT function when the VS-3 headset is connected.
This function enables you to transmit without continuously holding down [PTT].

ⓘ When a headset (user supplied) is connected, this function is automatically turned ON, regardless of this setting.

- OFF: Transmits while holding down [PTT].
- ON: Pushing [PTT] toggles between transmit and receive.

PTT Beep (Default: OFF)

[MENU] > SET > Bluetooth Set > Headset Set > Icom Headset > **PTT Beep**

Sets the beep sound when you push [PTT] on the VS-3 headset.

- OFF: No beep sounds.
- ON: A beep sounds.

Bluetooth Set

Custom Key Beep (Default: OFF)

[MENU] > SET > Bluetooth Set > Headset Set > Icom Headset > **Custom Key Beep**

Sets the beep sound when you push the Custom Key ([PLAY]/[FWD]/[RWD]) on the VS-3 headset.
- OFF: No beep sounds.
- ON: A beep sounds.

Custom Key (Default: [PLAY]: ---, [FWD]: UP, [RWD]: DOWN)

[MENU] > SET > Bluetooth Set > Headset Set > Icom Headset > **Custom Key**

Assigns the functions to the Custom Key ([PLAY]/[FWD]/[RWD]) on the VS-3 headset.
ⓘ See page 10-33 about the functions.

Serialport Function (Default: CI-V (Echo Back OFF))

[MENU] > SET > Bluetooth Set > Data Device Set > **Serialport Function**

Sets the serial port function for the Bluetooth SPP (Serial Port Profile) connection to a data device, PC, and so on.
- CI-V (Echo Back OFF): Transmits or receives a CI-V command. Does not send back the serial data received from the SPP connection.
- CI-V (Echo Back ON): Transmits or receives a CI-V command. Sends back the serial data received from the SPP connection.
- DV Data: Transmits or receives data in the DV mode. Does not input the cloning or weather data entries, or output the GPS data.
- GPS Output: To transmit the GPS information from the GPS receiver.

ⓘ When the transceiver is in the Terminal Mode or Access Point Mode and “Gateway Select” is set to “External Gateway (Bluetooth),” the Bluetooth function is used for gateway connection regardless of this setting.

Bluetooth Device Information

[MENU] > SET > Bluetooth Set > **Bluetooth Device Information**

Displays the Bluetooth device information.

Initialize Bluetooth Device

[MENU] > SET > Bluetooth Set > **Initialize Bluetooth Device**

Initializes the installed Bluetooth unit. (p. 11-6)

Bluetooth Set

The assignable key functions

Function	Descriptions
---	No function
UP	Push to increase the frequency, Memory channel, repeater, or station call sign.
DOWN	Push to decrease the frequency, Memory channel, repeater, or station call sign.
VOL UP	Push to increase the volume level.
VOL DOWN	Push to decrease the volume level.
SQL UP	Push to increase the squelch level.
SQL DOWN	Push to decrease the squelch level.
Monitor	Hold down to open the squelch. Release to close the squelch.
CALL	Push to select a Call Channel mode.
MR (00-00 CH)	In the Memory mode, push to select Memory channel 00-00.
MR (00-01 CH)	In the Memory mode, push to select Memory channel 00-01.
VFO/MR	Push to select the VFO mode and the Memory mode.
DR	Push to turn the DR function ON or OFF.
FROM/TO (DR)	On the DR screen, push to select “FROM” and “TO.”
FROM (DR)	On the DR screen, push to select “FROM.”
TO (DR)	On the DR screen, push to select “TO.”
Home CH	Push to directly select the Home Channel that is set to the selected mode (VFO/Memory) or DR screen. ⓘ While in the Call Channel mode, or when no Home CH is set, an error beep sounds.
BAND/GROUP	• In the VFO mode, push to increase an operating band. • In the Memory mode, push to increase the Memory group.
SCAN	Push to start the previously selected scan. While scanning, push to stop the scan.
Adds to SKIP MR Group	Hold down for 1 second to set the paused frequency to be skipped.
Temporary Skip	Push to set the frequency to be skipped while scanning. The selected frequencies are temporarily skipped for faster scanning.
RX>CS	Push to open the RX>CS screen.
SPEECH	• In the VFO, Memory, or Call Channel mode, push to announce the frequency and operating mode. • On the DR screen, push to announce the call sign. ⓘ If the Simplex mode is selected, the frequency is announced. If the FM repeater is selected, the frequency and operating mode, or the call sign and operating mode are announced.
MAIN/DUAL	• Push to set the A or B band as the MAIN band. • Hold down for 1 second to turn the Dualwatch function ON or OFF.
MAIN(A)	Push to set the A band as the MAIN band.
MAIN(B)	Push to set the B band as the MAIN band.
MODE	Push to select the operating mode.
LOW	Push to select the transmit output power.
DUP	Push to turn the Duplex mode ON or OFF, and the shift direction to DUP+ or DUP–.
TONE/D.SQL	• In the FM/FM-N mode, push to select the tone type. • In the DV mode, push to select the digital squelch type.
MW	Hold down to save the displayed frequency into a Memory blank channel.
REC	• Push to start recording. • While recording, hold down for 1 second to stop recording.
MUTE	Push to turn the Mute function ON or OFF.

Bluetooth Set

The assignable key functions

Function	Descriptions
Voice TX (T1)/(T2)/(T3)/(T4)	• Push to transmit the voice audio recorded on the microSD card once. • Hold down for 1 second to repeatedly transmit the voice audio. ⓘ You can transmit the voice audio on the DR screen.
T-CALL	Push to transmit a 1750 Hz tone.

Wi-Fi Set

* Valid after Restart

Wi-Fi (Default: OFF)

[MENU] > SET > Wi-Fi Set > **Wi-Fi**

Turns the Wireless LAN function ON or OFF.

Access Point

[MENU] > SET > Wi-Fi Set > Connection Settings > **Access Point**

Displays the Access Point to connect.
ⓘ See page 12-8 for details.

SSID (Default: (blank))

[MENU] > SET > Wi-Fi Set > Connection Settings > Manual Connect > **SSID**

Enter the SSID that is programmed in the Access Point.

Security Type (Default: WPA/WPA2)

[MENU] > SET > Wi-Fi Set > Connection Settings > Manual Connect > **Security Type**

Sets the security type to connect to the Access Point to None or WPA/WPA2.
ⓘ Select the same security type as the Access Point, otherwise you cannot communicate with it.

Password (Default: (blank))

[MENU] > SET > Wi-Fi Set > Connection Settings > Manual Connect > **Password**

When “Security Type” is set to “WPA/WPA2,” enters the WEP key or PSK of the Access Point.

<<Connect>>

[MENU] > SET > Wi-Fi Set > Connection Settings > Manual Connect > **<<Connect>>**

After setting “SSID,” “Security Type,” and “Password,” touch to connect to the Access Point.

DHCP * (Default: ON)

[MENU] > SET > Wi-Fi Set > Connection Settings > **DHCP ***

Turns the DHCP function ON or OFF.
- OFF: Uses a static IP address.
- ON: Uses the DHCP function.
  If a DHCP server is in your network environment, the IP address is automatically obtained.

IP Address * (Default: 192.168.0.10)

[MENU] > SET > Wi-Fi Set > Connection Settings > **IP Address ***

Sets the static IP address.

Subnet Mask * (Default: 255.255.255.0(24 bit))

[MENU] > SET > Wi-Fi Set > Connection Settings > **Subnet Mask ***

Sets the subnet mask to connect to your PC or Local Area Network (LAN), through your Router.

Default Gateway * (Default: . . .)

[MENU] > SET > Wi-Fi Set > Connection Settings > **Default Gateway ***

Sets the Default Gateway of the ID-5200A/E.
When you use the NTP function or the Internal Gateway function, a Default Gateway setting is required.

Primary DNS Server * (Default: . . .)

[MENU] > SET > Wi-Fi Set > Connection Settings > **Primary DNS Server ***

Sets the Primary DNS Server address.

Secondary DNS Server * (Default: . . .)

[MENU] > SET > Wi-Fi Set > Connection Settings > **Secondary DNS Server ***

If there are 2 DNS server addresses, sets the secondary DNS server address.

Network Name

[MENU] > SET > Wi-Fi Set > Connection Settings > **Network Name**

If you are transferring a picture to the ID-5200A/E using the optional ST-4001W, enter a network name of up to 15 characters.

SD Card

Load Setting

[MENU] > SET > SD Card > **Load Setting**

Selects the saved data file to load.

Save Setting

[MENU] > SET > SD Card > **Save Setting**

Saves the setting data onto a microSD card.

Import

[MENU] > SET > SD Card > Import/Export > **Import**

Import the Memory channel contents, UR call sign, repeater list, or GPS memory data in the CSV format file.

Export

[MENU] > SET > SD Card > Import/Export > **Export**

Export the Memory channel contents, UR call sign, repeater list, or GPS memory data in the CSV format file.

Separator/Decimal (Default: Sep[,] Dec[.])

[MENU] > SET > SD Card > Import/Export > CSV Format > **Separator/Decimal**

Selects the separator and the decimal character for the CSV format.

ⓘ The default value may differ, depending on the transceiver version.

- Sep [,] Dec [.]: Separator is “,” and Decimal is “.”
- Sep [;] Dec [.]: Separator is “;” and Decimal is “.”
- Sep [;] Dec [,]: Separator is “;” and Decimal is “,”

Date (Default: mm/dd/yyyy)

[MENU] > SET > SD Card > Import/Export > CSV Format > **Date**

Selects the date format between “yyyy/mm/dd,” “mm/dd/yyyy,” and “dd/mm/yyyy.”
(y: year, m: month, d: day)

ⓘ The default value may differ, depending on the transceiver version.

SD Card Info

[MENU] > SET > SD Card > **SD Card Info**

Displays the microSD card capacity and the time remaining for voice recording.

Screen Capture View

[MENU] > SET > SD Card > **Screen Capture View**

Displays the selected screen capture.

TX/RX Picture View

[MENU] > SET > SD Card > **TX/RX Picture View**

Displays the pictures that are saved on the microSD card.

ⓘ The transceiver cannot display the picture while transmitting picture data.

ⓘ The transceiver can display up to 500 pictures.

Firmware Update

[MENU] > SET > SD Card > **Firmware Update**

Displays the Firmware Update mode.

ⓘ See Section 13 for details.

Format

[MENU] > SET > SD Card > **Format**

Formats the microSD card.
If you use a brand new microSD card, be sure to format it in the transceiver.

Unmount

[MENU] > SET > SD Card > **Unmount**

Unmounts the microSD card.
Before you remove a card when the transceiver is ON, be sure to electrically unmount it. Otherwise, the data may be corrupted or deleted.

Others

Voltage

[MENU] > SET > Others > Information > **Voltage**

Displays the voltage of the external power source.

Version

[MENU] > SET > Others > Information > **Version**

Displays the transceiver firmware's version number.

MAC Address

[MENU] > SET > Others > Information > **MAC Address**

Displays the transceiver's MAC address.

<<Repeater Mode>>

[MENU] > SET > Others > Repeater Mode > **<<Repeater Mode>>**

Selects to enter the Repeater mode.
In the Repeater mode, the transceiver receives the signals and automatically retransmits them on a different band frequency. (Cross-Band repeater operation)

ⓘ See page 12-10 for details.

ⓘ This item is displayed in only the USA version.

Hang Up Time (Default: OFF)

[MENU] > SET > Others > Repeater Mode > **Hang Up Time**

Select whether or not to set the hang up time in the Repeater mode.

- OFF: Cancels the transmission when the receive signal disappears.
- ON: Cancels the transmission approximately 0.25 seconds after the receive signal disappears.

ⓘ This item is displayed in only the USA version.

Subaudible Tone (Default: Through)

[MENU] > SET > Others > Repeater Mode > **Subaudible Tone**

Set the Subaudible Tone (a CTCSS tone or a DTCS code) setting when you receive a signal in the Repeater mode.

- Through: When you transmit, the received CTCSS tone or DTCS code is superimposed on your normal signal.
- Cut: When you transmit, the received CTCSS tone or DTCS code is not superimposed on your normal signal. Transmitted by superimposing only the tone set on the ID-5200A/E.

ⓘ This item is displayed in only the USA version.

Clone Mode

[MENU] > SET > Others > Clone > **Clone Mode**

Enters the clone mode to read or write the CS-5200 data from or to the PC.

ⓘ Restart the transceiver to cancel the clone mode.

Touch Screen Calibration

[MENU] > SET > Others > **Touch Screen Calibration**

Touch to adjust the touch screen.

ⓘ See page 12-18 for details.

Partial Reset

[MENU] > SET > Others > Reset > **Partial Reset**

Resets operating settings to their default values (VFO frequency, VFO settings, or menu contents).

ⓘ See page 12-19 for details.

All Reset

[MENU] > SET > Others > Reset > **All Reset**

Clears all data and returns all settings to their factory defaults.
Memory channel contents, Repeater list, and so on will all be cleared, so you will need to rewrite your operating settings.

ⓘ See page 12-19 for details.

Section 11 Bluetooth® OPERATION

Bluetooth® operations 11-2
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Initializing the Bluetooth® unit 11-6
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Bluetooth® operations

You can connect Bluetooth devices to the transceiver using the Bluetooth function.

ⓘ See the Basic manual to pair, disconnect, or delete devices.

Icom Headset

When you connect the Icom Bluetooth® headset to the transceiver, you can wirelessly transmit and receive.

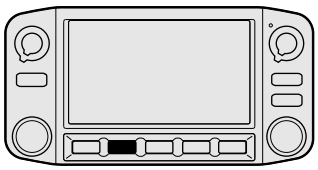
Android™/iOS device

When you connect a mobile device to the transceiver through Bluetooth and using the application, you can use the extended D-STAR functions such as data transmission and image transmission.

ⓘ See page 14-5 for the applications and how to pair the transceiver with a mobile device.

Turning ON the Bluetooth® function

1. Push [FUNC].



[FUNC]

- Opens the FUNCTION screen.

2. Touch “Bluetooth” to turn ON the Bluetooth function.



3. Push [EXIT] to close the FUNCTION screen.

IMPORTANT: The Bluetooth communication range may vary, depending on the environment in which the device operates. Microwave ovens or Wireless LAN may cause interference.
In that case, stop using those devices or increase the space between the Bluetooth device and the other devices.
All Bluetooth devices have a range of use. If the communication is unstable, use the device within the range.

Electromagnetic Interference

When you use a Bluetooth device, pay attention to the following:
Bluetooth devices operate in the 2.4 GHz band that is also used by other appliances, such as Wireless LAN products, microwave ovens, RFID systems, amateur radio stations, and so on.
When using a Bluetooth device near such devices, interference may occur, causing a decrease in communication speed, and an unstable connection.
In such a case, keep the Bluetooth devices away from the other appliances, or stop using those devices. Bringing the Bluetooth device and the transceiver closer together also improves communication.

Connecting to a Bluetooth® headset

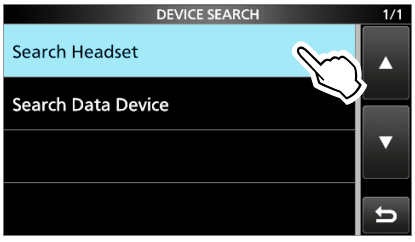
You can connect an optional Bluetooth headset to the transceiver.

Step 1. Selecting the pairing mode of the headset.

See the instruction manual of the headset to select the pairing mode.

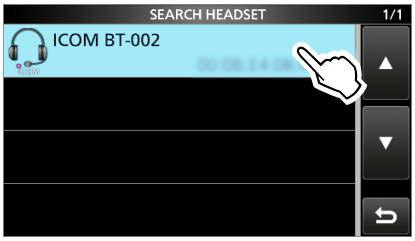
Step 2. Searching for the headset (Transceiver)

1. Open the PAIRING/CONNECT screen.
   [MENU] > SET > Bluetooth Set > **Pairing/Connect**
2. Touch “Device Search.”
3. Touch “Search Headset.”



- Displays the usable headsets in the pairing list.

4. Touch a headset to pair.



- The confirmation dialog is displayed.

5. Touch [YES].



- After connecting to the headset, “(Connect)” is displayed in the pairing list.

6. To close the PAIRING/CONNECT screen, push [EXIT].

ⓘ While connected to a Bluetooth device, the Bluetooth icon is displayed on the Standby screen.

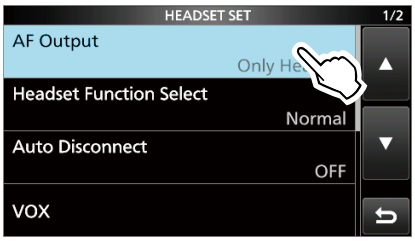
ⓘ When “AF Output” is set to “Only Headset” and the Bluetooth connection is accidentally disconnected, a dialog is displayed to select whether or not to output the audio from the transceiver’s speaker. (p. 11-4)

Headset Settings

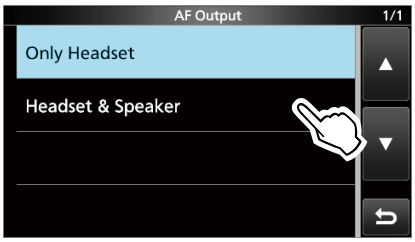
◇ AF Output

You can select the AF Output device.
If “AF Output” is set to “Headset & Speaker,” you can hear audio from both a connected Bluetooth headset and the transceiver’s speaker.
ⓘ See page 10-36 for details.

1. Open the HEADSET SET screen.
   [MENU] > SET > Bluetooth Set > **Headset Set**
2. Touch “AF Output.”



3. Touch “Headset & Speaker.”



4. To close the HEADSET SET screen, push [EXIT] several times.
   ⓘ Audio is heard from both the connected Bluetooth headset and the transceiver’s speaker.

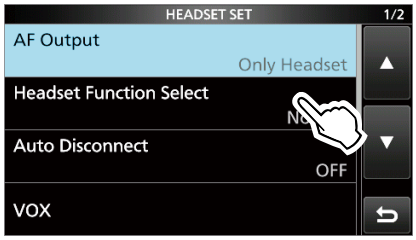
TIP: When “AF Output” is set to “Only Headset,” the following dialog is displayed if the Bluetooth connection is accidentally disconnected.

- [YES]: The audio is output from the transceiver’s speaker.
- [NO]: The transceiver’s volume level is automatically set to 0, and the audio is not output from the transceiver’s speaker.

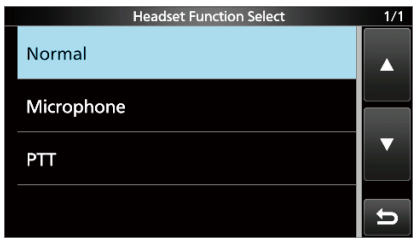
◇ Headset Function Select

You can select the PTT and microphone combination when either the Bluetooth headset or the transceiver microphone are used.
ⓘ See page 10-36 for details.

1. Open the HEADSET SET screen.
   [MENU] > SET > Bluetooth Set > **Headset Set**
2. Touch “Headset Function Select.”



3. Touch an option.



4. To close the HEADSET SET screen, push [EXIT] several times.

Headset Settings

◇ Auto Disconnect

You can set the disconnect timer between 0 and 10 seconds or OFF.
If there is no audio signal to the Bluetooth headset, or no operation is performed for a set period of time, the receiver automatically disconnects the Synchronous Connection-Oriented (SCO) link.

[MENU] > SET > Bluetooth Set > Headset Set > **Auto Disconnect**

ⓘ When a signal is received, or an operation is performed while the SCO link is disconnected, the receiver will automatically reconnect the SCO link.
ⓘ See page 10-36 for details.

◇ VOX function

The Voice Operated eXchange (VOX) function toggles the transceiver between transmit and receive by your voice. This function provides hands-free operation.
You can use the VOX function with the VS-3 or a third party's Bluetooth headset.

Depending on the headset, the VOX function may be disabled because of the differences in microphones.

NOTE:
- If the transceiver does not connect to a Bluetooth headset, you cannot use the VOX function through Bluetooth, even if "VOX" is set to ON.
  BE SURE to check the Bluetooth connection between the transceiver and the headset before using the VOX function.
- This setting is used when using the Bluetooth microphone.

ⓘ See page 10-37 for details on the setting items and their options.

[MENU] > SET > Bluetooth Set > Headset Set > **VOX**

VOX screen
You can turn the VOX function ON or OFF.

VOX Level screen
You can set the VOX gain level. Higher values make the VOX function more sensitive to your voice.

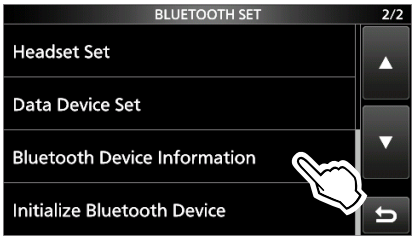
VOX Delay screen
You can set the VOX Delay. The VOX Delay is the amount of time the transmitter stays ON after you stop speaking, before the VOX switches to receive.

VOX Time-Out Timer screen
You can set the VOX Time-Out Timer to prevent an accidental prolonged transmission. To disable the function, set to "OFF."

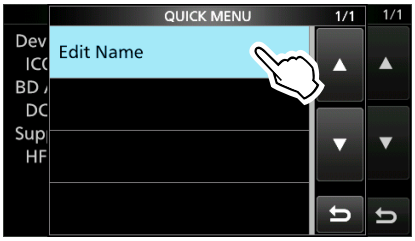
Editing the Bluetooth® unit name

You can edit the transceiver Bluetooth unit's name.
ⓘ After initializing the unit, the edited name remains.

1. Open the BLUETOOTH SET screen.
   [MENU] > SET > **Bluetooth Set**
2. Touch "Bluetooth Device Information."



3. Push [QUICK].
4. Touch "Edit Name."



5. Enter a name of up to 9 characters*, and then touch [ENT]. (Example: ICOM BT 5200 A)
   *After "ICOM BT."

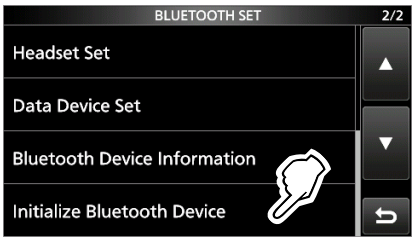


6. To close the BLUETOOTH DEVICE INFORMATION screen, push [EXIT].

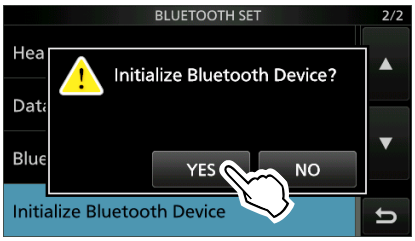
Initializing the Bluetooth® unit

You can initialize the transceiver's Bluetooth unit.
You should initialize the unit if you have trouble during Bluetooth operation.
ⓘ After initializing the unit, the pairing/connect list is deleted, but the Bluetooth settings and the unit name remain.
The Bluetooth settings return to their factory defaults only when you do a Partial Reset or an All Reset. (p. 12-19)

1. Open the BLUETOOTH SET screen.
   [MENU] > SET > **Bluetooth Set**
2. Touch "Initialize Bluetooth Device."



3. Touch [YES].



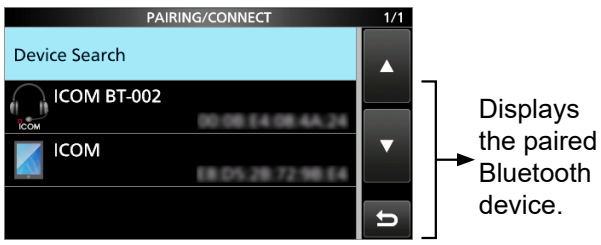
- The transceiver will automatically restart.

The maximum number of paired devices

You can pair 2 types of Bluetooth devices: a Headset and a Data device.

Number of maximum pairing devices

- Up to 5 Bluetooth headsets and data devices such as Android devices can be paired.
  (Headset 1~4, Data device 1~4)
- Up to 2 iOS devices (Bluetooth LE) can be paired.



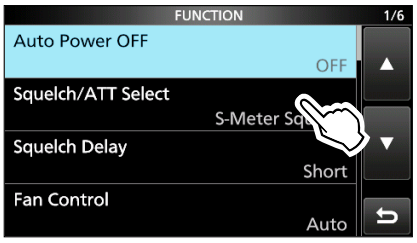
Section 12 OTHER FUNCTIONS

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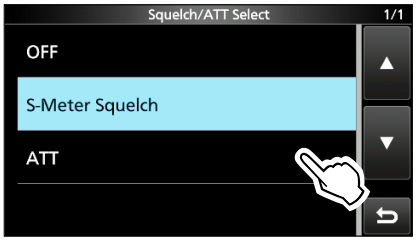
Attenuator function

The transceiver has an RF attenuator related to the squelch control setting. You can add up to approximately 20 dB of attenuation at its maximum setting.

1. Open the FUNCTION screen.
   [MENU] > SET > **FUNCTION**
2. Touch “Squelch/ATT Select.”



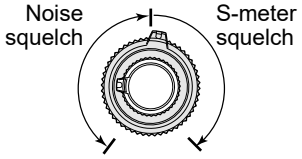
3. Touch “ATT.”



4. To close the FUNCTION screen, push [EXIT].

◇ Using the Attenuator function

● Rotate [SQL] clockwise beyond the center position.



- “ATT” is displayed.



Directly entering a frequency

You can set the frequency without rotating [DIAL] by directly entering it using the keypad.

1. Touch the MHz digits.
   - Opens the BAND screen.
2. Touch [F-INP].



   - Opens the F-INP screen.
3. Start entry with the most significant digit.



   - To clear the entry, touch [CE].
   - To clear the entry and return to the previous screen, push [EXIT].
4. Touch [ENT] to set the entered frequency.
   - Closes the F-INP screen.

   ⓘ If you touch [ENT] when the digits under 100 kHz are not entered, “0” will be automatically entered into the digits that are blank.

Entry examples:

- 145.025 MHz: [1], [4], [5], [•], [0], [2], [5], [ENT]
- 145.000 MHz: [1], [4], [5], [ENT]
- Change from 433.280 MHz to 433.245 MHz:
  [•], [2], [4], [5], [ENT]

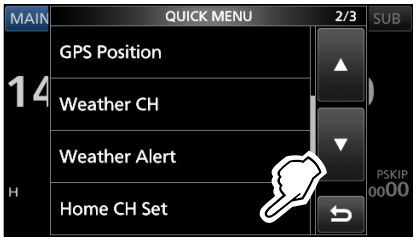
  ⓘ Touching [•] first enters the same MHz digits as the operating frequency.

Home Channel function

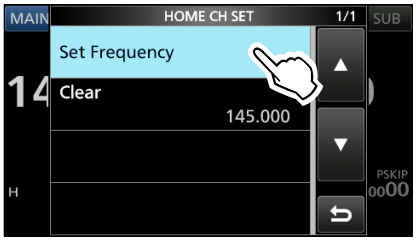
You can set an often-used frequency, Memory channel, or repeater as a Home Channel in VFO mode, Memory mode, and DR screen.

◇ Setting a Home Channel

1. Select the VFO or Memory mode, or the DR screen to set a Home Channel.
2. Select a frequency, Memory channel, or an access repeater to be set as a Home Channel.
3. Push [QUICK].
4. Touch “Home CH Set.”

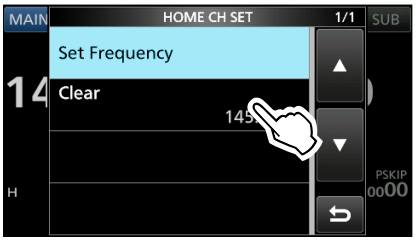


5. Touch “Set Frequency” (VFO mode), “Set Channel” (Memory mode), or “Set Repeater” (DR screen).



- Sets a Home Channel, then returns to the standby screen.

TIP: Selecting “Clear” in Step 5 clears the Home channel setting.



◇ Home CH Beep function

When a Home CH is selected by rotating [DIAL], a beep sounds. You will know the Home CH selection without looking at the display.
You can assign the [Home CH] key function to an optional microphone key or Bluetooth headset. (pp. 10-18, 10-39)

ⓘ You can turn OFF the Home CH Beep function on the MENU screen. (p. 10-34)
([MENU] > SET > Sounds > **Home CH Beep**)

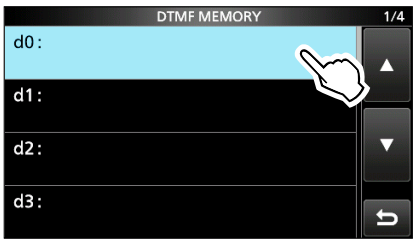
Entering DTMF code

The transceiver can save up to 16 memories of 24 digit DTMF code.

1. Display the DTMF screen.
   [MENU] > **DTMF**
2. Touch [EDIT].



3. Touch the DTMF channel where you want to save a DTMF code. (Example: d0)



4. Enter a DTMF code, then touch [ENT]. (Example: 123456A)

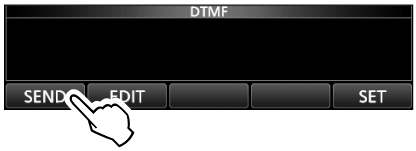


5. To close the DTMF MEMORY screen, push [EXIT].

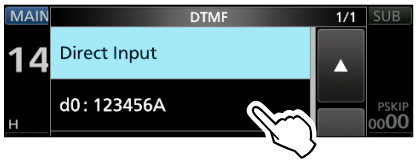
Transmitting a DTMF code

◇ Selecting a DTMF code from the list

1. Display the DTMF screen.
   [MENU] > **DTMF**
2. Touch [SEND].



3. Touch the DTMF code you want to transmit. (Example: d0: 123456A)

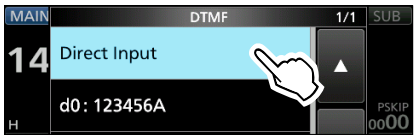


- Transmits the selected DTMF code.

4. To close the DTMF screen, push [EXIT].

◇ Directly entering a code (Direct Input)

1. Display the DTMF screen.
   [MENU] > **DTMF**
2. Touch [SEND].
3. Touch “Direct Input.”



4. Enter a DTMF code, then touch [TX]. (Example: 012345#)



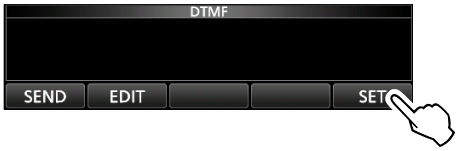
- Transmits the entered DTMF code.

5. To close the DTMF screen, push [EXIT].

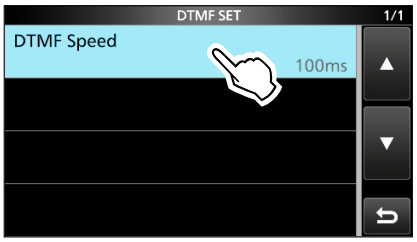
Transmitting the DTMF code

◇ Selecting the DTMF transmit speed

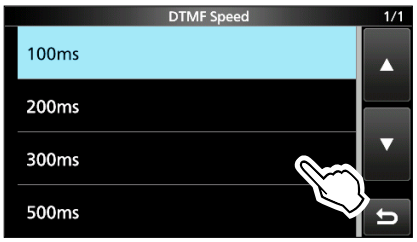
1. Display the DTMF screen.
   [MENU] > **DTMF**
2. Touch [SET].



3. Touch “DTMF Speed.”



4. Touch the option to set. (Example: 300ms)



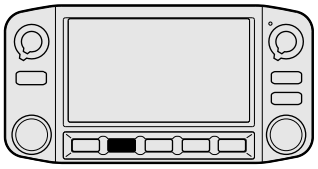
- 100ms: Transmits the DTMF tones at about 100 milliseconds per code (5 characters per second).
- 200ms: Transmits the DTMF tones at about 200 milliseconds per code (2.5 characters per second).
- 300ms: Transmits the DTMF tones at about 300 milliseconds per code (1.6 characters per second).
- 500ms: Transmits the DTMF tones at about 500 milliseconds per code (1 character per second).

5. To close the DTMF SET screen, push [EXIT].

Tone squelch operation

The tone squelch opens only when you receive a signal that includes a matching subaudible tone in the FM or FM narrow (FM-N) mode. You can silently wait for calls from other stations using the same tone. Also, the reversed tone squelch function mutes the squelch when a signal includes a matching subaudible tone.

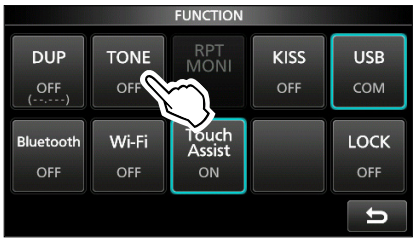
1. Select the VFO mode.
2. Touch the operating mode icon, and then touch "FM" or "FM-N".
3. Rotate [DIAL] to set an operating frequency.
4. Push [FUNC].



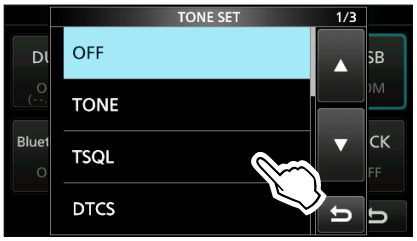
[FUNC]

- Opens the FUNCTION screen.

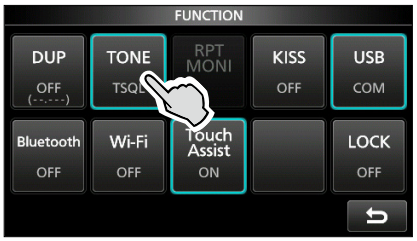
5. Touch [TONE].



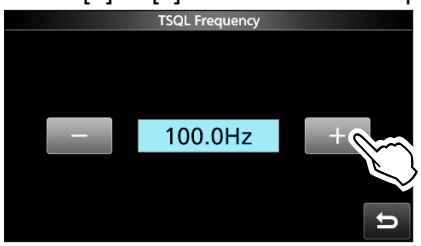
6. Touch the Tone squelch type. (Example: TSQL)



7. Touch [TONE] for 1 second.



8. Touch [+] or [–] to set the tone frequency.



9. To close the TSQL Frequency screen, push [EXIT].
10. Operate normally.
    - You will only hear the audio from stations that use the same Tone Squelch frequency. All other signals will be muted.

TIP: You can also set the tone frequency from the DUP/TONE... screen.
([MENU] > SET > DUP/TONE... > **TSQL Frequency**)
See page 10-9 for details.

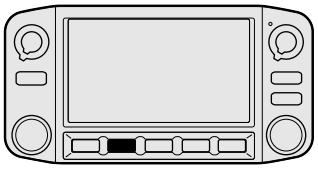
About the Tone squelch types indication

- TSQL: Enables the Tone Squelch function.
- TSQL-R: Enables the Reverse Tone Squelch function.
- TONE(T)/DTCS(R)
  ("T-DTCS" is displayed, "T" blinks.):
  When you transmit, the selected subaudible tone is superimposed on your normal signal. When you receive, the DTCS squelch opens only for a signal that includes a matching DTCS code and polarity. (Audio is heard)
- DTCS(T)/TSQL(R)
  ("D-TSQL" is displayed, "D" blinks.):
  When you transmit, the selected DTCS code is superimposed on your normal signal. When you receive, the tone squelch opens only for a signal that includes a matching tone frequency. (Audio is heard)
- TONE(T)/TSQL(R)
  ("T-TSQL" is displayed, "T" blinks.):
  When you transmit, the selected subaudible tone is superimposed on your normal signal. When you receive, the tone squelch opens only for a signal that includes a matching tone frequency. (Audio is heard)

DTCS code squelch operation

The tone squelch opens only when you receive a signal that includes a matching DTCS code in the FM or FM narrow (FM-N) mode. You can silently wait for calls from others using the same tone. Also, a reversed tone squelch function mutes the squelch when you receive a signal including a matching DTCS code.

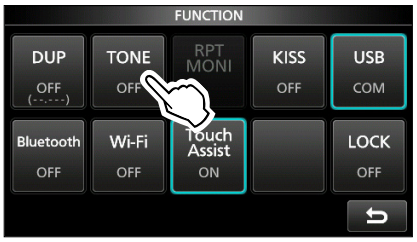
1. Select the VFO mode.
2. Touch the operating mode icon, and then touch "FM" or "FM-N".
3. Rotate [DIAL] to set an operating frequency.
4. Push [FUNC].



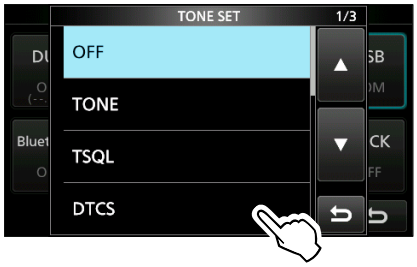
[FUNC]

- Opens the FUNCTION screen.

5. Touch [TONE].



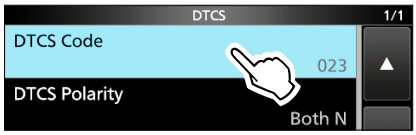
6. Touch the DTCS code type. (Example: DTCS)



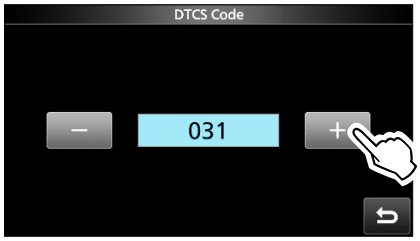
7. Touch [TONE] for 1 second.



8. Touch "DTCS Code."



9. Touch [+] or [–] to set the DTCS code.



10. To close the DTCS Code screen, push [EXIT].
11. Operate normally.
    - You will only hear the audio from stations that use the same DTCS code. All other signals will be muted.

TIP: You can also set the tone frequency from the DUP/TONE... screen.
([MENU] > SET > DUP/TONE... > **DTCS code**)
See page 10-9 for details.

About the DTCS code types indication

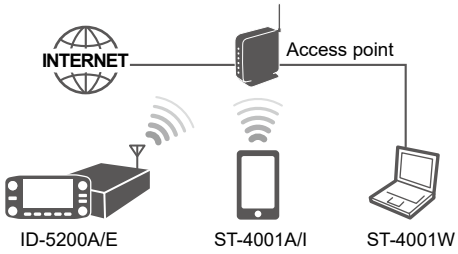
- DTCS: Enables the DTCS Squelch function.
- DTCS-R: Enables the Reverse DTCS Squelch function.
- DTCS(T) ("DTCS" blinks):
  When you transmit, the selected DTCS code is superimposed on your normal signal.
  When you receive, the function is OFF.
- TONE(T)/DTCS(R)
  ("T-DTCS" is displayed, "T" blinks.):
  When you transmit, the selected subaudible tone is superimposed on your normal signal.
  When you receive, the DTCS squelch opens only for a signal that includes a matching DTCS code and polarity. (Audio is heard)
- DTCS(T)/TSQL(R)
  ("D-TSQL" is displayed, "D" blinks.):
  When you transmit, the selected DTCS code is superimposed on your normal signal.
  When you receive, the tone squelch opens only for a signal that includes a matching tone frequency. (Audio is heard)

Wireless LAN operation

You can connect the transceiver to a network or your mobile device with the Wireless LAN (Wi-Fi) function below.

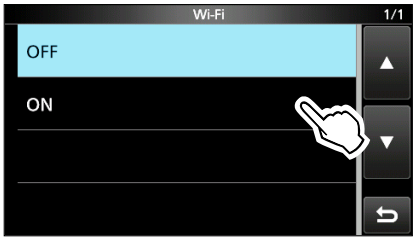
- Synchronizing the internal clock with a time management server. (p. 12-11)
- Gateway communication using the Internal Gateway function. (See the “About the DV Gateway function” that you can download on the Icom website.)
- Transferring pictures from a PC or a mobile device.
- Monitoring a DV repeater. (p. 3-22)

ⓘ ID-5200A/E supports 2.4 GHz and 5 GHz wireless LAN bands.

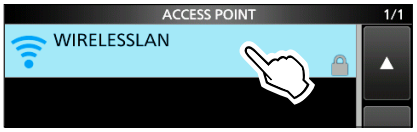


◇ Connecting the transceiver to a Wireless Access Point

1. Open the Wi-Fi Set screen.
   [MENU] > SET > **Wi-Fi Set**
2. Touch “Wi-Fi.”
3. Touch “ON.”



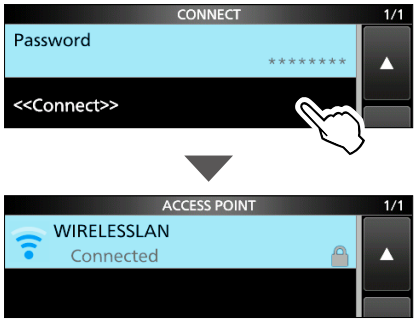
4. Touch “Connection Settings.”
5. Touch “Access Point.”
6. Touch a wireless access point (AP). (Example: WIRELESSLAN)



7. Touch “Password.”



8. Enter the password, and then touch [ENT].
9. Touch “<<Connect>>.”



- Connects to the network.
- While connected to the network, “Connected” is displayed in the ACCESS POINT list, and the WLAN icon ( ) is displayed on the Standby screen.

ⓘ If the connection fails, it returns to the CONNECT screen.

NOTE:

- Up to 7 access points that the transceiver has connected to before are saved. When you connect to the 8th AP, the oldest AP is deleted.
- It may take a longer time to turn OFF the transceiver while connected to the AP, depending on your network environment.

TIP:

- You can also set the Wi-Fi function ON or OFF on the FUNCTION screen that opens when you push [FUNC].



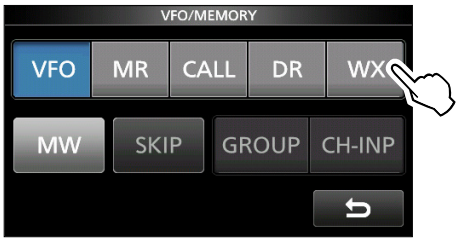
- You can manually connect to an Access Point device. ([MENU] > SET > Wi-Fi Set > Connection Settings > **Manual Connect**)

Weather channel operation (For only the USA version)

There are 10 weather channels for monitoring the National Oceanographic and Atmospheric Administration (NOAA) weather broadcasts.

◇ Selecting a Weather channel

1. Touch the Memory channel number.
2. Touch “WX.”



3. Rotate [DIAL] to select a weather channel.

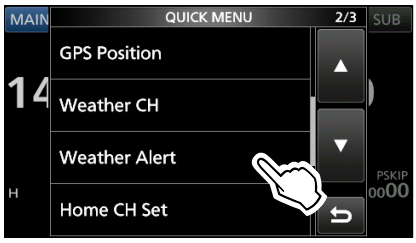


- Displays the selected weather channel number (“WX-01” ~ “WX-10”).

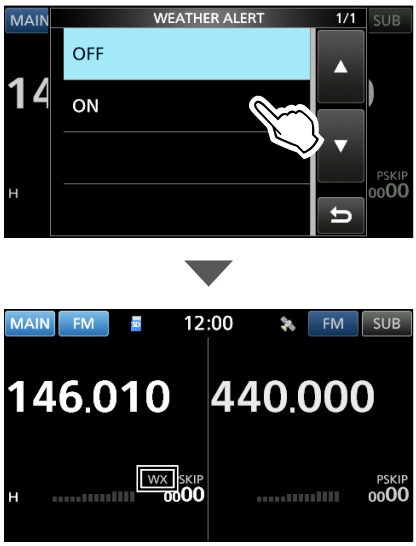
◇ Weather alert function

NOAA broadcast stations transmit weather alert tones before important weather announcements.
When the weather alert function is turned ON, the selected weather channel is monitored every 5 seconds for an announcement.
When an alert signal is detected, the “ALT” and the WX channel are alternately displayed, and a beep sounds until you change the mode or weather channel, turn OFF the Weather Alert function, or turn OFF the transceiver.
The previously selected (used) weather channel is checked periodically during standby or while scanning.

1. Push [QUICK].
2. Touch “Weather Alert.”



3. Touch “ON.”



- Turns ON the Weather Alert function, and “WX” is displayed.

Repeater mode operation (For only the USA version)

When you receive an FM (or FM-N) signal in the Repeater mode on one band, the transceiver automatically retransmits it on a different band. This is called Cross-Band repeater operation.

IMPORTANT! To use this function, **BE SURE** you comply with any local regulations.

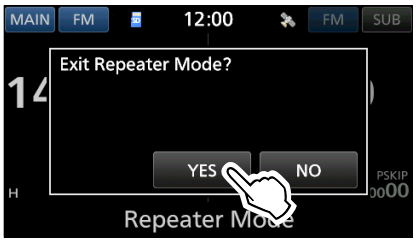
◇ Entering the Repeater mode

1. Open the REPEATER MODE screen.
   [MENU] > SET > Others > **Repeater Mode**
2. Touch "<<Repeater Mode>>."
3. Touch [YES].
   - "Repeater Mode" is displayed on the information display.



NOTE: You cannot enter the Repeater mode,
- When the AM, AM-N, or DV mode is set.
- In the Single watch mode.
- When the frequency is out of the Ham band.
- While transmitting.

4. To exit the Repeater mode, push [EXIT] and touch [YES].



◇ Cross-Band repeater operation

- "BUSY" is displayed, and the S-meter displays the received signal strength.
- The S/RF meter displays the output power level, and "TX" blinks on the transmitting band display.



ⓘ Transmission is automatically canceled according to the "Hang Up Time" setting. ([MENU] > SET > Others > Repeater Mode > **Hang Up Time**)

ⓘ You can select whether to superimpose the received Subaudible Tone onto your signal. ([MENU] > SET > Others > Repeater Mode > **Subaudible Tone**)

NOTE for the Repeater mode:
- When you hold down [PTT], the signal is transmitted on the MAIN band.
- You can use the monitor function and adjust audio volume and squelch level.
  ⓘ When the Monitor function is ON, "BUSY" blinks, and the squelch opens to receive signals on the MAIN band.
- Even if the transceiver is turned OFF, the Repeater mode is not canceled.
- The following functions are disabled during the repeater mode.
  - Weather alert
  - GPS Alarm
  - Sub Band Mute (Main RX)
  - QSO Log
  - CI-V
  - Clone
  - VOX
  - PTT Auto REC
  - Bluetooth
  - KISS TNC

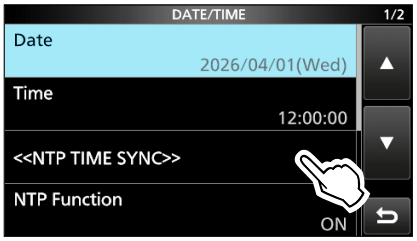
NTP function

The Network Time Protocol (NTP) function synchronizes the internal clock with a time management server.
ⓘ To use this function, an internet connection is necessary.

◇ Using the NTP Time Synchronize function

Using this function, you can manually synchronize the internal clock by accessing a time management server.

1. Open the DATE/TIME screen.
   [MENU] > SET > Time Set > **Date/Time**
2. Touch “<<NTP TIME SYNC>>.”

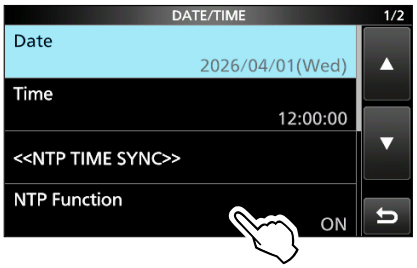


   • “NTP Time Sync. Please wait...” is displayed.
3. When “Time Sync completed.” is displayed, touch [OK].
4. To close the DATE/TIME screen, push [EXIT] several times.

◇ Using the NTP function

By turning ON the NTP function, the transceiver automatically synchronizes the internal clock with the time management server.
ⓘ This function is set to ON by default.

1. Open the DATE/TIME screen.
   [MENU] > SET > Time Set > **Date/Time**
2. Touch “NTP Function.”



3. Select ON or OFF.
   • When ON is selected, the transceiver starts accessing the NTP server address that is set in “NTP Server Address.”
4. To close the DATE/TIME screen, push [EXIT] several times.

Screen Capture function

You can capture the transceiver display onto a microSD card. Most of the screens used in this manual are captured using this function.
ⓘ Some displays cannot be captured.

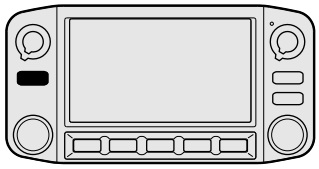
◇ Setting the Screen Capture function

1. Open the “Screen Capture [POWER] Switch” screen.
   [MENU] > SET > Function > **Screen Capture [POWER] Switch**
2. Touch “ON.”

◇ Capturing a screen

1. Display the desired screen to capture.
2. Push [POWER] to capture the screen.

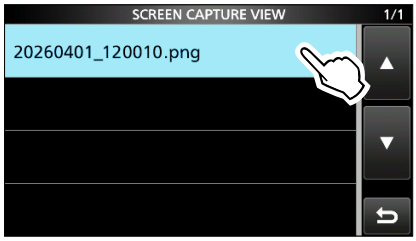
[POWER]



- The captured screen is saved onto the microSD card.

◇ Viewing the captured screen

1. Open the SCREEN CAPTURE VIEW screen.
   [MENU] > SET > SD Card > **Screen Capture View**
   - The capture list is displayed.
   ⓘ The latest screen capture is at the top of the list.
2. Touch the desired screen capture to display it.

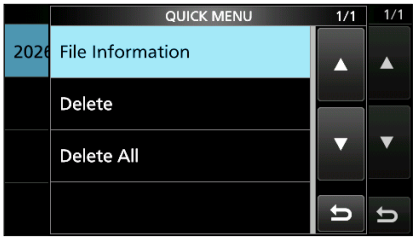


- The screen capture is displayed.

ⓘ While a screen capture is displayed, you can scroll through all the screen captures by rotating [DIAL].

Checking the file information and deleting a file

1. Touch the screen capture that you want to view or delete for 1 second.
2. Touch an item from “File Information,” “Delete,” and “Delete All.”



- File Information: Displays the file name, size, and date of the selected screen capture.
- Delete: Deletes the selected file.
- Delete All: Deletes all files.

KISS mode

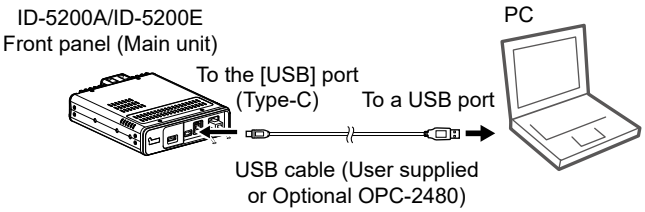
You can operate the APRS mode from a PC when KISS mode is set to ON.

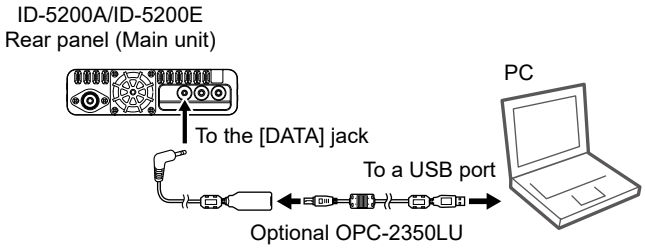
ⓘ APRS software, such as UI-View32, is required to operate.

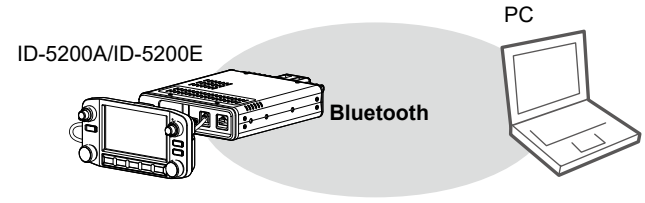
◇ Connecting to a PC

The ID-5200A/E can be connected to a PC with a USB cable, data cable, or the Bluetooth function.

ⓘ As for the Bluetooth connection, see section 11 for details.







NOTE: When operating the APRS mode, confirm the following items are set.

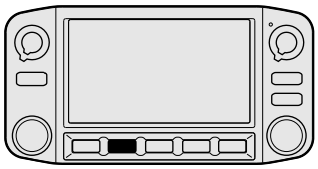
When connecting to the [USB]
- ([MENU] > SET > Connectors > Serialport Function > **USB (B) Function**)
  Set "USB (B) Function" to "DV Data."
- ([MENU] > SET > Function > **USB Connect**)
  Set "USB Connect" to "Serialport."

When connecting to the [DATA]
- ([MENU] > SET > Connectors > Serialport Function > **DATA Function**)
  Set "DATA Function" to "DV Data."

When connecting through Bluetooth
- ([MENU] > SET > Bluetooth > Data Device Set > **Serialport Function**)
  Set "Serialport Function" to "DV Data."

◇ Turning ON the KISS mode

1. Set the operating frequency.
2. Push [FUNC].



[FUNC]

- The FUNCTION screen is displayed.

3. Touch "KISS" to turn ON the KISS mode.



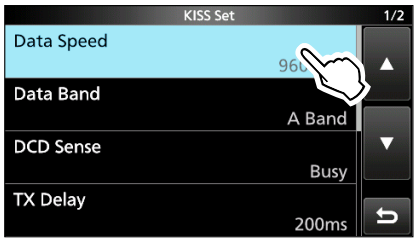
4. Push [EXIT].
   - Close the FUNCTION screen, and the KISS icon is displayed on the standby screen.
     KISS 96: Displayed when the KISS data speed is set to 9600 bps.
     KISS 12: Displayed when the KISS data speed is set to 1200 bps



KISS mode

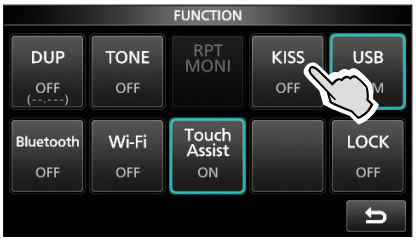
◇ KISS mode settings

1. Open the KISS SET screen.
   [MENU] > KISS > **KISS Set**
2. Touch the item to set.
   (Example: Data Speed)



3. Touch the option to set.
4. To close the KISS SET screen, push [EXIT].

TIP: You can display the KISS SET screen by touching [KISS] for 1 second on the FUNCTION screen that opens when you push [FUNC].



NOTE: KISS mode cannot be used with the following settings:

When connecting to the [USB]
- ([MENU] > DV GW > **Gateway Select**)
  Set “Gateway Select” to “External Gateway (USB (B)).”

When connecting to the [DATA]
- ([MENU] > GPS > GPS Set > **GPS Select**)
  Set “GPS Select” to “External GPS (DATA).”

When connecting through Bluetooth
- ([MENU] > DV GW > **Gateway Select**)
  Set “Gateway Select” to “External Gateway (Bluetooth).”

Data Speed (Default: 9600bps)

[MENU] > KISS > KISS Set > **Data Speed**

Select the data speed in the KISS mode, to 1200bps or 9600bps.

Data Band (Default: A band)

[MENU] > KISS > KISS Set > **Data Band**

Select the band to transmit the data in the KISS mode.

DCD Sense (Default: Busy)

[MENU] > KISS > KISS Set > **DCD Sense**

Select how to stand by to transmit the data in the KISS mode.
- Busy: Does not transmit the data when detecting a signal on the data band.
- Detect Data: Does not transmit the data when receiving data on the data band.
- OFF (Ignore): Does not transmit the data when receiving data on the data band.

TX Delay (Default: 200ms)

[MENU] > KISS > KISS Set > **TX Delay**

Set the time to start transmitting data when transmitting in KISS mode to 100ms, 150ms, 200ms, 300ms, 400ms, 500ms, 750ms, or 1000ms to prevent data loss.

KISS Interface (Default: USB(A))

[MENU] > KISS > KISS Set > **KISS Interface**

Selects the connector to input or output in the KISS mode to USB (A), USB (B), DATA, or Bluetooth.

KISS Interface Baud Rate (DATA) (Default: 9600)

[MENU] > KISS > KISS Set > **KISS Interface Baud Rate (DATA)**

Set the transfer rate to transmit and receive data through the [DATA] jack in KISS mode to 9600, 19200, 38400, or 57600 bps.

Cloning

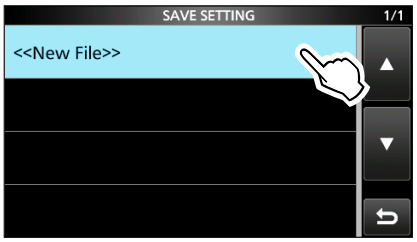
The ID-5200A/E has a data cloning capability. This function is useful when you want to copy all settings and entered content from one ID-5200A/E to another. This section describes the cloning method using a microSD card.

ⓘ Recorded voice memories are not included in the cloning data. To play back the master transceiver's voice memory, insert the microSD card into a sub transceiver, or make a copy onto the sub transceiver's microSD card using a PC.

ⓘ Assumes that the microSD card has already been inserted into the transceiver.

Step 1. Saving the master transceiver's setting data onto the microSD card.

1. Open the SAVE SETTING screen.
   [MENU] > SET > SD Card > **Save Setting**
2. Touch "<<New File>>."



   ⓘ The file name is automatically set in the following format: SetYYYYMMDD_xx (YYYY: Year, MM: month, DD: day, xx: serial number).
3. To save the file with the displayed name, touch [ENT].



   ⓘ To change the name, delete the name, reenter it, and then touch [ENT].
4. Touch [YES].

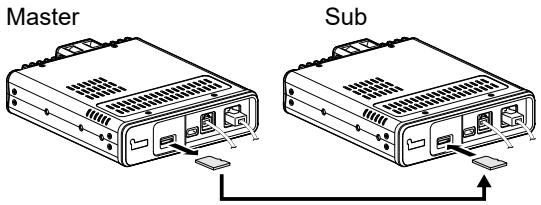


   • Saves the contents and settings.
5. To close the SD CARD screen, push [EXIT] several times.

Step 2. Remove the microSD card from the master transceiver, then insert it into the sub transceiver.

1. Turn OFF the master transceiver.
2. Remove the microSD card from the master transceiver.
3. Insert the card into the sub transceiver, then turn ON the sub transceiver.

NOTE:
- Turn OFF the transceiver before inserting or removing the microSD card.
- **DO NOT** turn OFF the transceiver while saving or loading the setting data. Otherwise, the data may be corrupted or deleted.



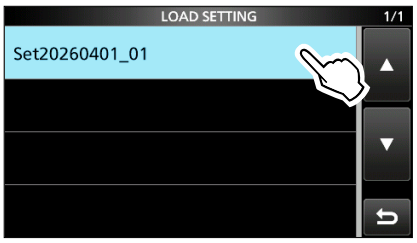
TIP: The setting data is saved in the "icf" file format used by the CS-5200 PROGRAMMING SOFTWARE. When the saved data on a card is copied to a PC, you can edit it with the programming software. For details, refer to the CS-5200 instructions that can be downloaded from the Icom website.

(Continue the steps on the next page.)

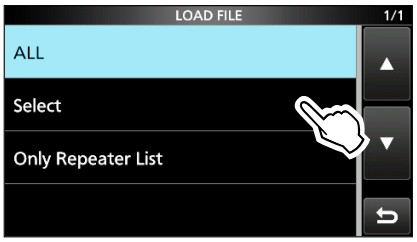
Cloning

Step 3. Loading the setting data into the sub transceiver.

1. Open the LOAD SETTING screen.
   [MENU] > SET > SD Card > **Load Setting**
2. Touch the file to load.

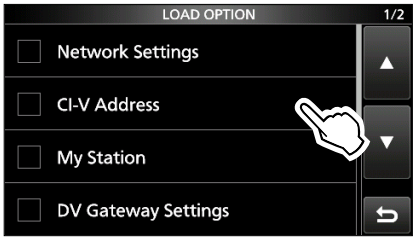


3. Touch “Select.”



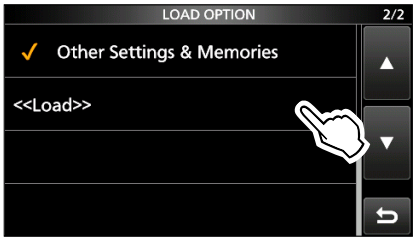
ⓘ If you want to load all the contents on the LOAD OPTION screen, touch “ALL,” then go to step 6.
ⓘ If you want to load only the repeater list, touch “Only Repeater List,” then go to step 6.

4. Touch the loading options.
   (Example: CI-V Address)

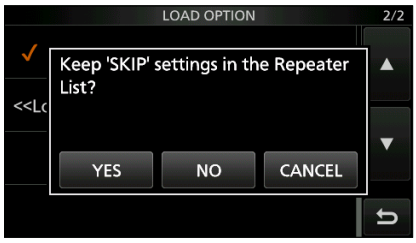


• “✓” is displayed on the left side of the selected option.
ⓘ The Set mode settings and Memory channel contents are always loaded.

5. Touch “<<Load>>.”

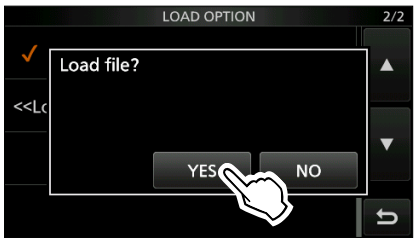


6. Touch [YES] or [NO].



ⓘ When you touch [YES], the Skip settings on the repeater list are retained.
ⓘ When you touch [NO], the Skip settings on the repeater list are cleared.

7. Touch [YES].



• After the loading ends, “COMPLETED! Restart the ID-5200.” is displayed.
ⓘ When you select “REF Adjust” in step 4, “The new “REF Adjust” setting will be saved” is displayed.

8. Turn the OFF transceiver, and then turn it ON again to restart the transceiver.

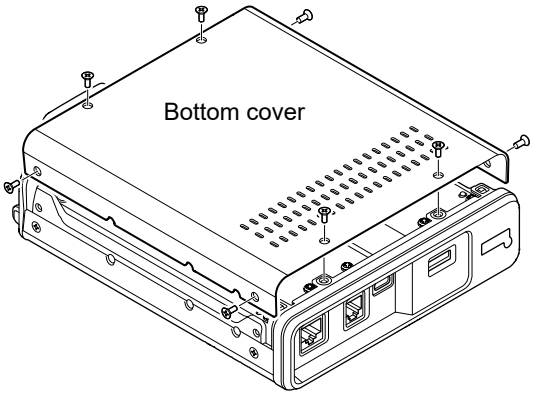
Replacing the clock coin cell battery

The ID-5200A/E's main unit has the coin cell battery (CR2032) for the internal clock and timer functions. When the coin cell battery is exhausted, the transceiver normally works but cannot retain the current time.

For Users in California (U.S.A.)
This CR2032 Lithium Battery contains Perchlorate Material—special handling may apply.
See https://dtsc.ca.gov/perchlorate/

⚠ **WARNING! DISCONNECT** the power adapter from the outlet before removing the main unit's cover.

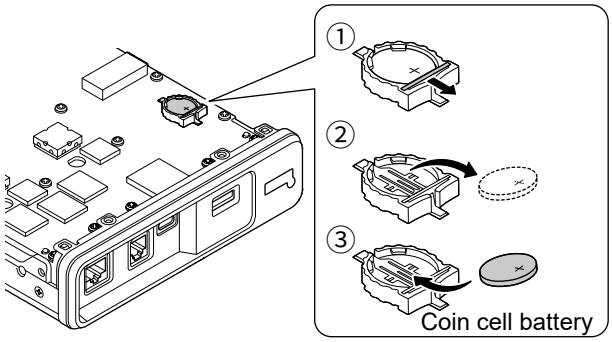
1. Disconnect the controller cable, microphone, and DC power cable from the main unit.
2. Turn the main unit upside down.
3. Remove the 8 screws, then remove the bottom cover.



4. While lightly lifting the metal fitting (+ terminal) of the battery holder in the direction of ①, remove the old battery in the direction of ②.
   ⓘ If you cannot remove the battery with your fingers, use a thin, non-metallic stick, such as a toothpick.

   CAUTION: DO NOT use metal objects, such as a tweezer. This could damage the transceiver.

5. While lightly placing the new battery in the direction of ③, push it into the battery holder.

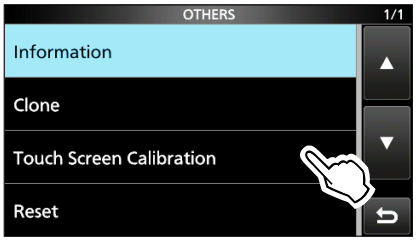


6. Replace the top cover and the 8 screws.
7. Connect the controller cable, microphone, and DC power cable.
   ⓘ When not using the internal GPS (Default setting) or the NTP server, set the date and time in the DATE/TIME screen.
   ([MENU] > SET > Time Set > **Date/Time**)

Touch screen calibration function

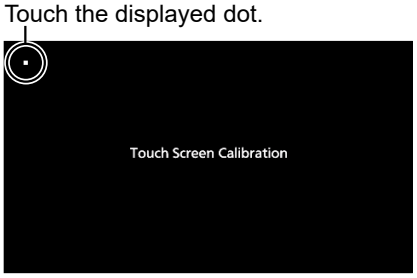
When the screen does not respond, or the transceiver does not work correctly after touching the screen, the touched point and the detected point may be different. In that case, the Touch screen calibration function helps to correct the touch screen sensing accuracy.

1. Open the OTHERS screen.
   [MENU] > SET > **Others**
2. Touch “Touch Screen Calibration.”



   • A dot appears on the screen.
3. Touch the dot that is displayed on the screen.

Touch the displayed dot.



   • A new dot appears in another location.
4. Repeat step 3.
   • When the calibration is complete, the transceiver returns to the OTHERS screen.

TIP: When the touch screen is not accurate, and you cannot access the OTHERS screen.
Do the following steps to display the “Touch Screen Calibration” screen.

1. Turn OFF the transceiver.
2. While holding down [MENU] and [EXIT], push [POWER] to display the Touch Screen Calibration screen.
3. Repeat steps 3 and 4 in the left column.
4. Touch the frequency readout or a key on the touch screen to confirm that the touch screen is working correctly.

Resetting

Occasionally, erroneous information may be displayed. This may be caused by static electricity or by other factors.
If this problem occurs, turn OFF the transceiver. After waiting a few seconds, turn ON the transceiver again.
If the problem still exists, perform a **Partial reset**.
If the problem still exists after performing a Partial reset, perform an **All reset**.

◇ Partial reset

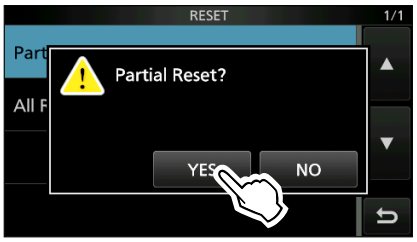
A Partial Reset resets the operating settings to their defaults without clearing the following:

- Memory Channel contents
- Call Channel contents
- Scan Edge contents
- Message data
- GPS memory contents
- Call sign memories
- DTMF memory contents
- Repeater list
- Bluetooth pairing list
- Allowed call sign list
- Wi-Fi settings

1. Open the RESET screen.
   [MENU] > SET > Others > **Reset**
2. Touch “Partial Reset.”



3. Touch [YES].



- “PARTIAL RESET” is displayed, and then the display automatically returns to the default screen.

NOTE: After performing an All reset, you cannot use the DR function because the Repeater List contents are also cleared. We recommend you save the setting data onto a microSD card, or to your PC using the CS-5200 PROGRAMMING SOFTWARE, before performing an All reset. After the All reset is finished, load or write the saved data into your transceiver.

◇ All reset

An All reset clears all data and returns all settings to their factory defaults. Memory channel contents, filter settings, and so on will all be cleared, so you will need to rewrite your operating settings unless you have a backup.
ⓘ The Bluetooth pairing list is not deleted.

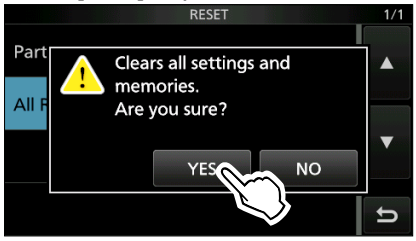
1. Open the RESET screen.
   [MENU] > SET > Others > **Reset**
2. Touch “All Reset.”



3. Touch [NEXT].



4. After carefully reading the displayed message, touch [YES] to perform the All reset.



- “ALL RESET” is displayed, and then the display automatically returns to the default screen.

When you cannot enter the Set mode
If a touch screen operation error or an unexpected operation occurs, you cannot enter the Set mode. In this case, perform an All reset, as described below:

1. Turn OFF the transceiver.
2. While holding down [CD] and [CALL], push [POWER].

ⓘ If you cannot turn the transceiver ON or OFF by using [POWER], perform an All reset by connecting an external power source while holding down [CD] and [CALL].

Section 13 UPDATING THE FIRMWARE

NOTE: See the Basic manual Section 4 for details on how to insert or remove a microSD card and precautions.

General 13-2
◇ About updating the firmware 13-2
◇ Checking the firmware version 13-2
◇ Preparation 13-3
Updating the firmware 13-4

General

◇ About updating the firmware

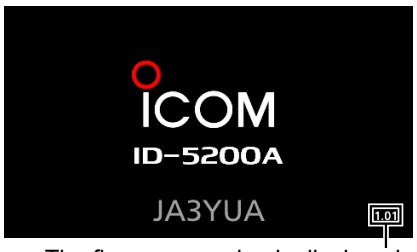
You can update the ID-5200A/E's firmware using a microSD card. Updating the firmware adds new functions and/or improves performance parameters. You can download the latest firmware from the Icom website.

https://www.icomjapan.com/support/

IMPORTANT: To update the firmware, first format your microSD card using the ID-5200A/E.
Then copy the downloaded firmware data from your PC into the "ID-5200" folder on the card.

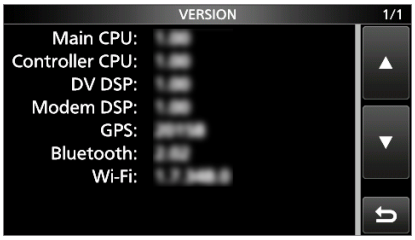
◇ Checking the firmware version

Check the firmware version when you turn ON the transceiver.



The firmware version is displayed.

TIP: You can also check the firmware version on the VERSION screen.
([MENU] > SET > Others > Information > **Version**)



General

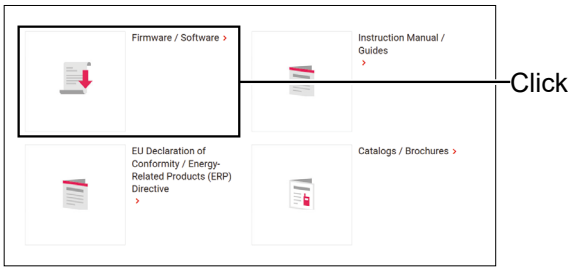
◇ Preparation

Access the following URL and download the firmware file.

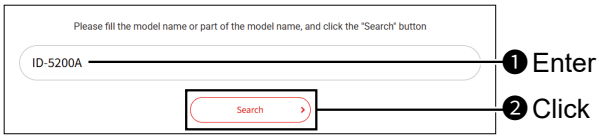
https://www.icomjapan.com/support/

ⓘ These instructions are based on Microsoft Windows 11.

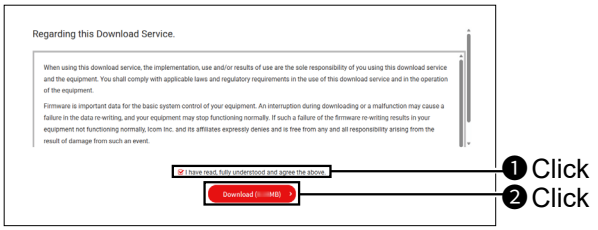
1. Click the “Firmware/Software” link.



2. Enter the model name (Example: ID-5200A) into the Search box, and then click [Search].

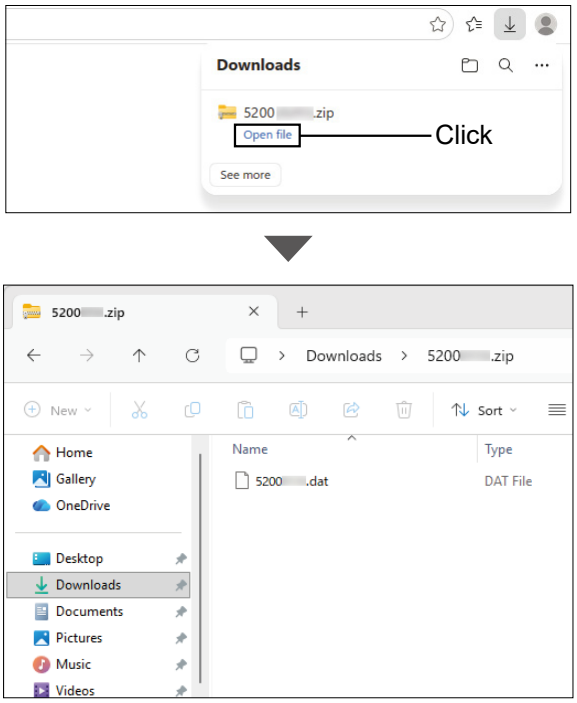


3. Click the desired firmware file link.
4. Carefully read “Regarding this Download Service.” Click “I have read, fully understood and agree the above.,” and then click [Download].



- The file starts downloading.

5. After the download is complete, click “Open file.”
   ⓘ Download steps may differ depending on the PC settings.

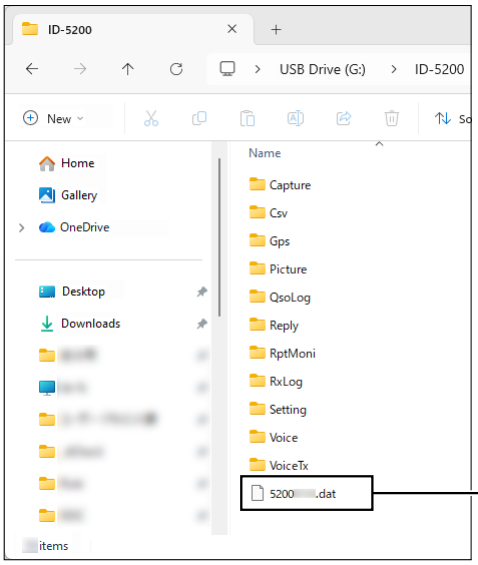


- In the “5200*” folder, “5200*.dat” is created.
  * Represents the release number.

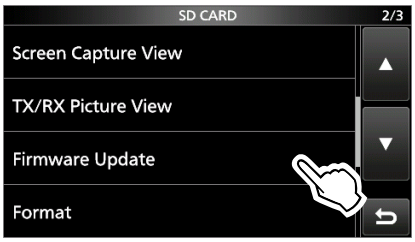
Updating the firmware

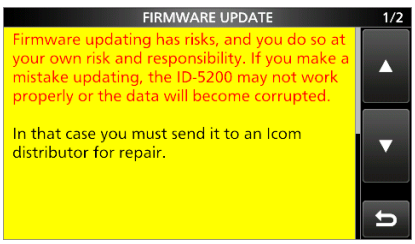
CAUTION: NEVER turn OFF the transceiver while updating the firmware. If you turn OFF the transceiver, or if a power failure occurs while updating, the transceiver firmware may be damaged, and, if so, you will have to send the transceiver back to the nearest Icom distributor for repair. This type of repair is out of warranty, even if the transceiver warranty period is still valid.

1. Copy the downloaded firmware data into the "ID-5200" folder onto a microSD card.

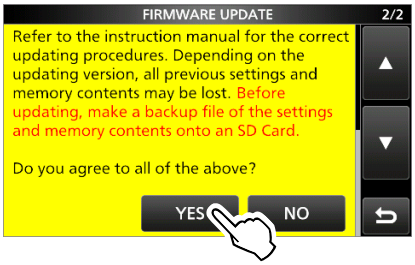


2. Insert the microSD card into the transceiver.
3. Open the SD CARD screen.
   [MENU] > SET > **SD Card**
4. Touch "Firmware Update."





5. After you read and agree with all the precautions, touch "YES."



- Scroll the screen and read all the precautions.
- The confirmation dialog is displayed.
  When you touch [YES], a backup file is created on the microSD card, and then the Firmware selection screen is displayed.

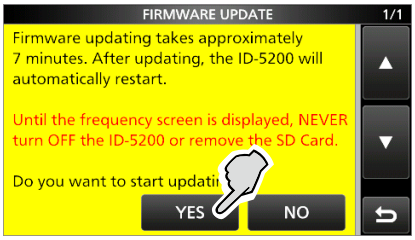
6. Touch the Firmware (Example: 5200*).
   * Represents the release number.



- The final confirmation screen is displayed.

ⓘ Carefully read all the displayed precautions.

7. After you read and agree with all the precautions, touch [YES] for 1 second.



- The updating starts.

8. When the update is completed, "Firmware updating has completed." is displayed in the dialog.
   - The transceiver will automatically restart.

   ⓘ After the updating finishes, the operating screen is displayed.

TIP: When "USB Connect" is set to "SD Card Mode," and the transceiver is connected to the PC through a USB data cable, you can directly access the microSD card that is set in the transceiver from the PC.
([MENU] > SET > Connectors > **USB Connect**)
ⓘ You can also switch to SD card mode by setting "USB" to "SD Card" on the FUNCTION screen that is displayed by pushing [FUNC].

Section 14 OPTIONS

Option list....14-2
Optional remote control speaker microphone....14-3
◇ Setting frequency and Memory channel....14-4
◇ Assigning a Remote Control function....14-4
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◇ About compatible applications....14-5
◇ Required items....14-5
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Connecting an Android™ device to the transceiver through Bluetooth®....14-7
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Connecting an iOS device to the transceiver through Bluetooth®....14-9
◇ Pairing with an iOS device....14-9
◇ Connection....14-10

Option list

You can find information for these options on the Icom website.
https://www.icomjapan.com/support/
ⓘ Some options may not be available, depending on the transceiver version.

Microphones

HM-198 HAND MICROPHONE

HM-207 REMOTE CONTROL SPEAKER MICROPHONE

HM-209 ACTIVE NOISE CANCELING MICROPHONE

HM-232 HAND MICROPHONE
The same as supplied.

HM-249 HANDS FREE MICROPHONES

Speakers

SP-30 EXTERNAL SPEAKER
Cable length: 2.8 m (9.1 ft)

SP-35/SP-35L EXTERNAL SPEAKER
Cable length
SP-35: 2 m (6.5 ft)
SP-35L: 6 m (19.7 ft)

Mounting Base/Controller Bracket

MBF-1 MOUNTING BASE
For installing the MBA-20

MBF-4 MOBILE BRACKET

MBF-11 CONTROLLER BRACKET
For docking to the main unit

MBA-19 CONTROLLER BRACKET
Stationary type
ⓘ **DO NOT** install it inside a vehicle.

MBA-20 CONTROLLER BRACKET

Cables

OPC-2500 EXTENSION CABLE
For the HM-249 between the PTT button and the Microphone/Remote PTT button
Cable length: 2.0 m (6.5 ft)

OPC-440 MIC EXTENSION CABLE
Cable length: 5.0 m (16.4 ft)

OPC-647 MIC EXTENSION CABLE
Cable length: 2.5 m (8.2 ft)

OPC-589 MIC ADAPTOR CABLE
Use with an 8-pin plug microphone.

OPC-2480 USB CABLE
Type-A to Type-C

OPC-2350LU DATA CABLE

About the free download software

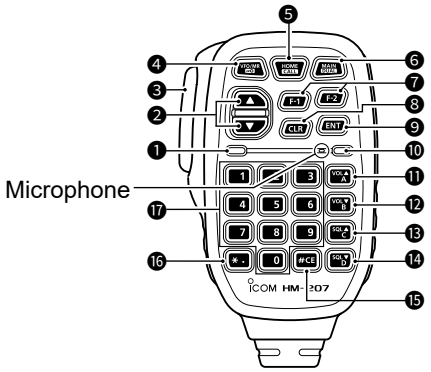
CS-5200	PROGRAMMING SOFTWARE
RS-MS1A (For Android devices)	Android APPLICATION
RS-MS1I (For iOS™ devices)	iOS™ APPLICATION
RS-MS3A (For Android devices)	TERMINAL MODE/ACCESS POINT MODE SOFTWARE
RS-MS3I (For iOS devices)	TERMINAL MODE/ACCESS POINT MODE SOFTWARE
RS-MS3W (For Windows)	TERMINAL MODE/ACCESS POINT MODE SOFTWARE
ST-4001A (For Android devices)	PICTURE UTILITY SOFTWARE
ST-4001I (For iOS devices)	PICTURE UTILITY SOFTWARE
ST-4001W (For Windows)	PICTURE UTILITY SOFTWARE
ST-4002A (For Android devices)	GPS SOFTWARE

You can download each manual and guide from the Icom website.
https://www.icomjapan.com/support/
ⓘ Before using, read each manual and guide, and use it according to the instructions.
To add or expand a function, or to improve the performance, the software version may be upgraded.
Before you update your software version, see the instructions and cautions described on the Icom website.

Optional remote control speaker microphone

The optional HM-207 enables you to enter numbers for frequency or Memory channel settings and other functions, and easily adjust the audio volume or squelch level.
You can assign some functions to the keys on the microphone for simple remote control operation.
(p. 10-16)

NOTE:
- **BE SURE** to turn OFF the transceiver when plugging or unplugging the microphone into or from the [MIC] jack.
- Firmly plug the microphone into the transceiver.



❶ LED 1
Lights red while transmitting with [PTT].

❷ [▲]/[▼] (UP/DOWN) KEYS
- Push to change the operating frequency or Memory channel.
- Hold down to continuously change the frequency or Memory channel.

❸ [PTT] SWITCH
Hold down to transmit, release to receive.

❹ [VFO/MR• ⊙] KEY
- Push to toggle between the VFO and Memory modes.
- Hold down for 1 second to turn the Lock function ON or OFF.

❺ [HOME/CALL] KEY
- Push to select the Home channel.
- Hold down for 1 second to turn the Call channel mode ON or OFF.

❻ [MAIN/DUAL] KEY
- In the Single watch mode, push to toggle between the A and B bands.
- In the Dualwatch mode, push to toggle between the MAIN and SUB bands.
- Hold down for 1 second to toggle between the Dualwatch and Single watch modes.

❼ [F-1] KEY
Push to activate the preprogrammed function of the [F-1] key.
(Default: During RX/Standby: [BAND/GROUP]
During TX: [T-CALL])

[F-2] KEY
Push to activate the preprogrammed function of the [F-2] key.
(Default: During RX/Standby: [Monitor]
During TX: [---])

ⓘ You can assign a desired function on the Menu screen.

❽ [CLR] KEY
On the MENU screen or in the QUICK MENU window, push to return to the standby screen.

❾ [ENT] KEY
- In the VFO mode, push to open the frequency entry screen.
- In the Memory mode, push to open the memory channel number entry window.
- After entering the number, push to set.

❿ LED 2
Lights green when the transceiver's power is ON.

⓫ [VOL▲/A] KEY
- Push to increase the audio output level.
- When entering a DTMF code, push to enter 'A.'

⓬ [VOL▼/B] KEY
- Push to decrease the audio output level.
- When entering a DTMF code, push to enter 'B.'

⓭ [SQL▲/C] KEY
- Push to increase the squelch level.
- When entering a DTMF code, push to enter 'C.'

⓮ [SQL▼/D] KEY
- Push to decrease the squelch level.
- When entering a DTMF code, push to enter 'D.'

⓯ [#/CE] KEY
- On the frequency entry screen, push to delete a number.
- When entering a DTMF code, push to enter '#.'

⓰ [*/.] KEY
- On the frequency entry screen, push to enter a '.' (decimal point).
- When entering a DTMF code, push to enter 'M.'

⓱ [0] to [9] KEYS
On the frequency entry screen or while entering a DTMF code, push to enter '0' through '9.'

Optional remote control speaker microphone

◇ Setting frequency and Memory channel

Example for frequency setting:
First, push [VFO/MR• ⊙] to select the VFO mode.

To enter the 435.680 MHz frequency:
● Push [4], [3], [5], [6], [8], [0], and then [ENT].

To change the 435.680 MHz to 435.540 MHz:
● Push [•], [5], [4], [0], and then [ENT].

To enter the 433.000 MHz frequency:
● Push [4], [3], [3], and then [ENT].

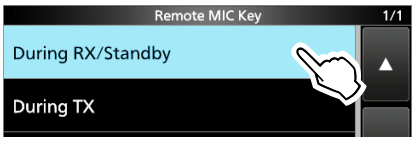
Example for Memory channel setting:
First, push [VFO/MR• ⊙] to select the Memory mode.

To select the Memory channel '5':
● Push [5], and then [ENT].

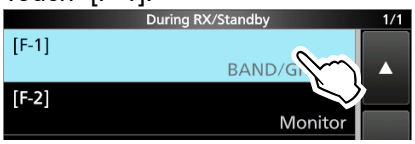
◇ Assigning a Remote Control function

Example: Assigning the "TO (DR)" function to the [F-1] key during the RX/Standby mode.

1. Open the Remote MIC Key screen.
   [MENU] > SET > Function > **Remote MIC Key**
2. Touch "During RX/Standby."



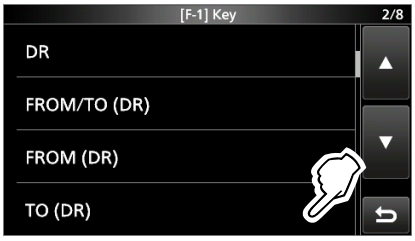
3. Touch "[F-1]."





• The Assignable function list is displayed.
ⓘ About the functions, see pages 10-18 and 10-19.

4. Touch "TO (DR)."





• The "TO (DR)" function is assigned.

5. To close the During RX/Standby screen, push [EXIT] several times.

TIP: To return to the default settings
On the "During RX/Standby" screen, "During TX" screen, or each key screen, touch the item for 1 second, and then touch "Default" on the QUICK MENU window.

When using an application

The following applications are compatible with Android or iOS devices.
See each application's manual for details.
Download the applications from your device.

◇ About compatible applications

The following applications are compatible with ID-5200A/E. (As of August 2026)

Android device

RS-MS1A: You can use the extended D-STAR functions to exchange pictures or messages or display the received D-PRS station data on a map application.
RS-MS3A: You can use the DV Gateway function.
ST-4001A: You can make an image to be used for the Share Picture function, and transfer it to the transceiver.
ST-4002A: You can use an Android device as an external GPS.

iOS device

RS-MS1I: You can use the extended D-STAR functions to exchange pictures or messages or display the received D-PRS station data on a map application.
RS-MS3I: You can use the DV Gateway function.
ST-4001I: You can make an image to be used for the Share Picture function, and transfer it to the transceiver.

◇ Required items

Android device

You can use the RS-MS1A/RS-MS3A/ST-4001A/ ST-4002A with devices that have Android 8.0 or later installed. (As of August 2026)

iOS device

To use the RS-MS1I/RS-MS3I/ST-4001I, an iOS device with one of the following iOS versions installed is required. (As of August 2026)

- RS-MS1I and ST-4001I: iOS version 12 or later, iPadOS version 13 or later
- RS-MS3I: iOS version 16 or later, iPadOS version 16 or later.

Disclaimer

- The application may not work properly, depending on the OS version, installed applications, or other reasons.
- The indications or items may differ, depending on the OS version or settings.

When using a USB cable

- **Android device**
  Android 8.0 or later with the USB host function.

- **USB cable (OPC-2480 or user supplied):**
  Confirm your USB cable meets the following conditions:
  - Fits the transceiver's USB port (Type-C) and your device's USB port (Micro-B/Type-C)
    ⓘ A shorter cable is preferable, as the longer one may be unable to transfer the data.
  - Compatible with the USB host function.

  ⓘ For the ST-4002A, use the OPC-2350LU.

TIP: The USB host function is needed to use a USB device with an Android device. To check whether or not your Android device has the USB host system, ask the Android device's manufacturer.

When using the Bluetooth function

- **Android device or iOS device**
  Android 8.0 or later with the Bluetooth function.
  or
  iOS version 12 or later, iPadOS version 13 or later with the Bluetooth function.

NOTE: Some functions may not work correctly,
- depending on other applications installed on the device.
- depending on the memory capacity.

When using an application

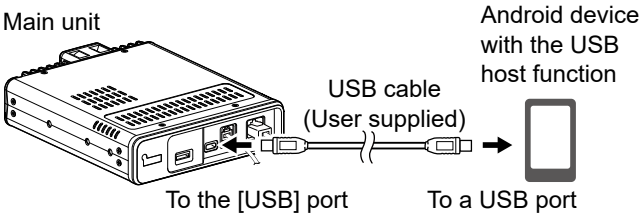
◇ Download procedures (Android device)

1. Turn ON your Android device.
2. Touch “Play Store.”
3. Enter the application’s name in the search field.
   ⓘ Enter the application’s full name to be sure to find it.
4. Touch “🔍.”
   • The application’s name will be displayed as the search result.
   ⓘ If your Android device does not support the application, its name may not appear in the search results.
5. Touch the application to install.
   • Displays the introduction screen of the application.
6. Touch <INSTALL>.
   • Installation starts.
   • After finishing the installation, the icon is displayed on the screen.

◇ Download procedures (iOS device)

1. Turn ON your iOS device.
2. Touch “App Store.”
3. Enter the application’s name in the search field.
   ⓘ Do not abbreviate the application name to be sure to find it.
4. Touch “🔍.”
   • The application’s name will be displayed as the search result.
   ⓘ If your iOS device does not support the application, its name may not appear on the search result.
5. Touch the application to install.
   • Displays the introduction screen of the application.
6. Touch <GET>.
   • Installation starts.
   • After finishing the installation, the icon is displayed on the screen.

◇ When using a USB cable



ⓘ Connect the USB Type-C connector to the transceiver and the other connector to an Android device.

NOTE:

- Turn OFF the transceiver before connecting or removing the cable.
- When an Android device is connected, the USB connection indicator (USB COM) is displayed on the transceiver. If the indicator is not displayed, enable your Android device to detect the USB device.
  ⓘ No operation is required on a mobile device that support automatic detection of the USB devices.
  ⓘ On the FUNCTION screen that opens when you push [FUNC], confirm that “COM” is selected for “USB”.
- When using the RS-MS1A, confirm the following items are set.
  ([MENU] > SET > Connectors > **CI-V**)
  Set “CI-V Address” to the value same as the RS-MS1A side. (Default: B8h)
  ⓘ RS-MS1A side: Application Settings → CI-V settings (Default: Transceiver[B8h])
  Set “CI-V Transceive” to “ON.”
  Set “CI-V USB Echo Back” to “OFF.”

  ([MENU] > SET > Function > **USB Connect**)
  Set “USB Connect” to “Serialport.”
- When using Access Point mode, the RS-MS1A cannot be used.

Connecting an Android™ device to the transceiver through Bluetooth®

Before connecting to an Android device, you must pair with it. See the next page about connecting to the transceiver with an Android device using the RS-MS1A application.

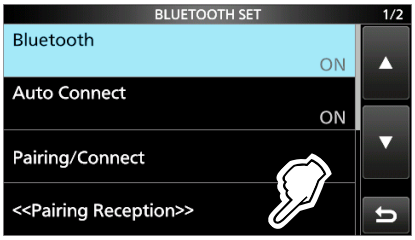
◇ Pairing with an Android device

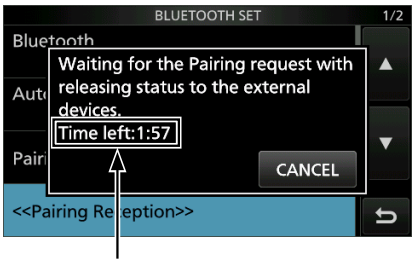
This section describes how to pair with an Android device.

NOTE: You may not be able to pair with it, depending on the Bluetooth device.

Step 1. Entering the Pairing Reception mode (Transceiver)

1. Open the BLUETOOTH SET screen.
   [MENU] > SET > **Bluetooth Set**
2. Touch "<<Pairing Reception>>."





Turn ON Bluetooth with your Android device within the displayed period.
When the time runs out, the transceiver exits the Pairing Reception mode.

Step 2. Turning ON Bluetooth (Android device)

Turn ON Bluetooth with your Android device.

- The Android device displays the transceiver Bluetooth unit's name.

ⓘ You can confirm the transceiver Bluetooth unit's name on the BLUETOOTH DEVICE INFORMATION screen. (Default: ICOM BT(ID-5200)) (p. 11-6)
([MENU] > SET > Bluetooth Set > **Bluetooth Device Information**)

ⓘ See the instruction manual of the Android device for details.

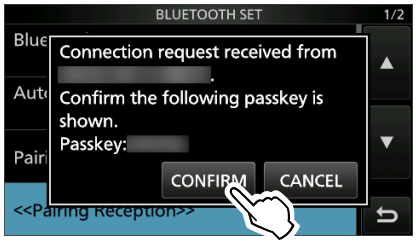
Step 3. Sending a pairing request to the transceiver (Android device)

Select the displayed transceiver Bluetooth unit's name to send a pairing request.

- The Android device starts to send a pairing request.
- The Android device displays, "To pair with: ICOM BT(ID-5200). Make sure it is showing this passkey: ＊＊＊＊＊."

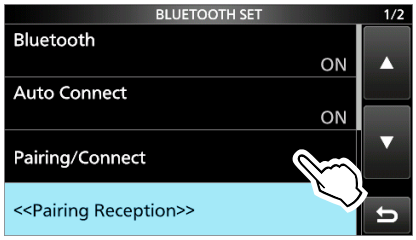
Step 4. Receiving a pairing request (Transceiver)

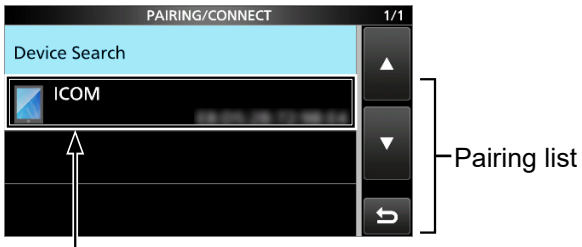
1. When the transceiver receives a pairing request, confirm the displayed passkey is the same as yours, and then touch [CONFIRM].



- Pairing starts.

2. Touch "Pairing/Connect."





After the pairing is complete, the Android device name is displayed on the pairing list.

NOTE: When you pair with a third party's data device, entering a PIN code or passkey may be required. See the instruction manual of the data device for details on how to enter a PIN code or passkey.

Connecting an Android™ device to the transceiver through Bluetooth®

◇ Connection

This section describes how to connect an Android device to the transceiver, using the RS-MS1A application.
Before connecting, pair the transceiver with the Android device. (p. 14-7)

ⓘ When using the ST-4001A application, the transceiver and Android device are automatically connected while transferring a picture.
ⓘ When using the RS-MS3A application, the transceiver and Android device are automatically connected after selecting “Bluetooth Connection Device” in the RS-MS3A “Connection,” and then “Start.”

Step 1. Preparing for the connection (Transceiver)

Set “CI-V Transceive” to “ON” to control the transceiver and the RS-MS1A with CI-V commands.

[MENU] > SET > Function > CI-V > **CI-V Transceive**

Step 2. Starting the RS-MS1A (Android device)

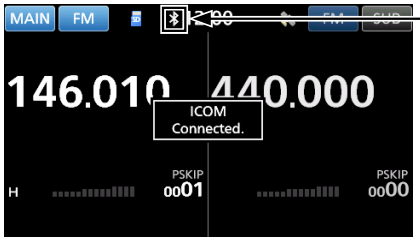
Touch the RS-MS1A to start.
ⓘ See page 14-6 for details on downloading the RS-MS1A.

Step 3. Connecting to the transceiver (Android device)

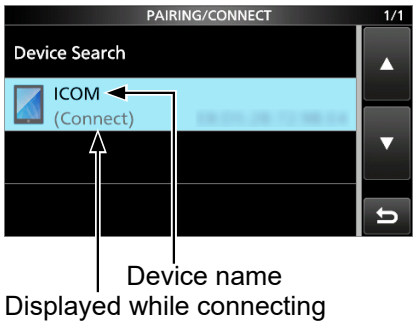
Touch the transceiver’s Bluetooth unit name displayed on the RS-MS1A.

- Starts to connect.

ⓘ When your call sign has not been entered in the transceiver, you should enter it before you connect.
ⓘ After the connection has been made, the transceiver displays “＊＊＊ Connected.,” and the Bluetooth icon is displayed.



ⓘ On the PAIRING/CONNECT screen, “(Connect)” is displayed under the Android device name.



TIP: To connect to the Android device from the transceiver

When the RS-MS1A is started on the Android device, you can connect to the device from the transceiver.

1. Open the BLUETOOTH SET screen.
   [MENU] > SET > **Bluetooth Set**
2. Touch “Pairing/Connect.”
3. Touch the Android device name displayed in the pairing list.
4. Touch “YES.”
   - Displays “＊＊＊ Connecting...”
     (“＊＊＊” is the Bluetooth name of the Android device.)
   ⓘ On the PAIRING/CONNECT screen, “(Connect)” is displayed on the data device icon.

NOTE: If you cannot connect, check that the same CI-V address is set in the transceiver and the RS-MS1A.
You can see the CI-V setting as described below:
Transceiver:
“CI-V Address” on the MENU screen.
([MENU] > SET > Connectors > CI-V > **CI-V Address**)
(Default: B8h)
RS-MS1A:
“Application Settings” → “CI-V settings”
(Default: Transceiver[B8])

Connecting an iOS device to the transceiver through Bluetooth®

Before connecting to an iOS device, you must pair with it.

◇ Pairing with an iOS device

This section describes how to pair with an iOS device.

NOTE:
- You cannot pair with an iOS device in its Settings app. To pair with an iOS device, use the Icom application.
- You may not be able to pair with it, depending on the Bluetooth device.

NOTE: When using the RS-MS1I

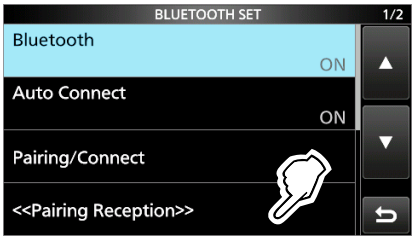
Before connecting, check that the following items are correctly set.
- Set "CI-V Transceive" to "ON" in the transceiver. ([MENU] > SET > Function > CI-V > **CI-V Transceive**)
- Set the same CI-V address in the transceiver and the RS-MS1I.
  Transceiver:
  "CI-V Address" on the MENU screen.
  ([MENU] > SET > Connectors > CI-V > CI-V Address)
  (Default: B8h)
  RS-MS1I:
  - "Application Settings" → "Select the default" (Default: Auto Select)
  - "Application Settings" → "CI-V address" (Default: Auto Setting)

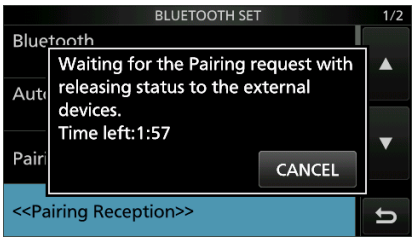
Step 1. Starting the application (iOS device)

1. Turn ON Bluetooth on your iOS device.
   ⓘ See the instruction manual of the iOS device for details.
2. Touch the application's icon to start.

Step 2. Entering the pairing reception mode (Transceiver)

1. Open the BLUETOOTH SET screen.
   [MENU] > SET > **Bluetooth Set**
2. Touch "<<Pairing Reception>>."





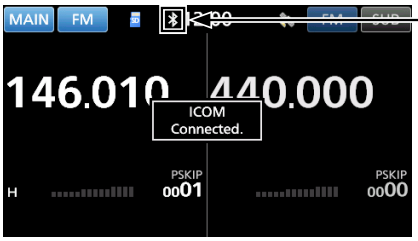
Step 3. Sending a pairing request to the transceiver (iOS device)

1. On the application, touch "Scan."
   - For the RS-MS1I, the item is displayed in "Other" > "Bluetooth Connection."
   - For the RS-MS3I, the item is displayed in "Connection Device."
   - For the ST-4001I, the item is displayed in "Transfer Device List."
     ("..." > Transfer Settings > Using Bluetooth > **Transfer Device List**)
   - The iOS device displays the transceiver Bluetooth unit's name.

   ⓘ You can confirm the transceiver Bluetooth unit's name on the BLUETOOTH DEVICE INFO screen. (Default: ICOM BT(ID-5200)) (p. 11-6)
   ([MENU] > SET > Bluetooth Set > **Bluetooth Device Information**)
2. Select the displayed transceiver Bluetooth unit's name to send a pairing request.
   - The iOS device starts to send a pairing request.
   - After the pairing has succeeded, "Pairing is complete." is displayed.

About the transceiver's display

After the connection has been made, the transceiver displays "∗∗∗ Connected." and the Bluetooth icon is displayed.
("∗∗∗" is the Bluetooth name of the iOS device.)



Connecting an iOS device to the transceiver through Bluetooth®

◇ Connection

This section describes how to connect to a paired transceiver from an iOS device.
Before connecting, pair the transceiver with the iOS device. (p. 14-9)

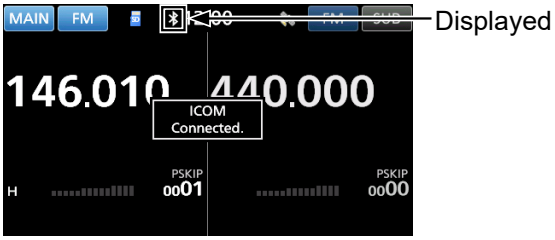
ⓘ When using the ST-4001I application, the transceiver and the iOS device are automatically connected while transferring a picture.
ⓘ When using the RS-MS3I application, touch “Start” on the application to connect the transceiver and the iOS device.

Step 1. Starting the RS-MS1I (iOS device)

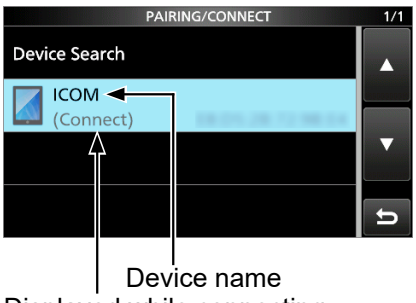
Touch the RS-MS1I to start.
ⓘ See page 14-6 for details on downloading the RS-MS1I.

Step 2. Connecting to the transceiver (iOS device)

1. Touch “Other.”
2. Touch “Bluetooth Connection.”
3. Touch the displayed transceiver Bluetooth unit’s name to connect.
   • Starts to connect.
   ⓘ When your call sign has not been entered in the transceiver, enter it before you connect.
   ⓘ If the connection has been made, the transceiver displays “∗ ∗ ∗ Connected.,” and the Bluetooth icon is displayed.



   ⓘ On the PAIRING/CONNECT screen, “(Connect)” is displayed under the iOS device name.



TIP: To connect to the iOS device from the transceiver

When the RS-MS1I is started on the iOS device, you can connect to the device from the transceiver.

1. Open the BLUETOOTH SET screen.
   [MENU] > SET > **Bluetooth Set**
2. Touch “Pairing/Connect.”
3. Touch the iOS device name displayed in the pairing list.
4. Touch “YES.”
   • Displays “∗ ∗ ∗ Connecting...”
   (“∗ ∗ ∗” is the Bluetooth name of the iOS device.)
   ⓘ On the PAIRING/CONNECT screen, “(Connect)” is displayed on the data device icon.



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A7870-6EX-0a
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