ICOM

ADVANCED MANUAL

HF/50 MHz TRANSCEIVER

IC-7300MK2

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.

INTRODUCTION

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.

ABOUT THE MANUALS

You can use the following manuals to understand and operate this transceiver.   (As of October 2025)

> **TIP:** You can download each manual and guide from the Icom website.
> https://www.icomjapan.com/support/
> Enter "IC-7300MK2" into the Search box in the site.

• **Basic manual (Comes with the transceiver)**
  Instructions for basic operations in multiple languages.

• **Advanced manual (This manual)**
  Instructions for advanced operations in English.

• **CI-V Reference guide (PDF type)**
  Describes the control commands used in remote control operation (serial communication with CI-V) in English.

For Reference
• **HAM Radio Terms (PDF type)**
  A glossary of HAM radio terms in English.

TRADEMARKS

FUNCTIONS AND FEATURES OF ADOBE® ACROBAT® READER®

The following functions and features can be used with Adobe Acrobat Reader.
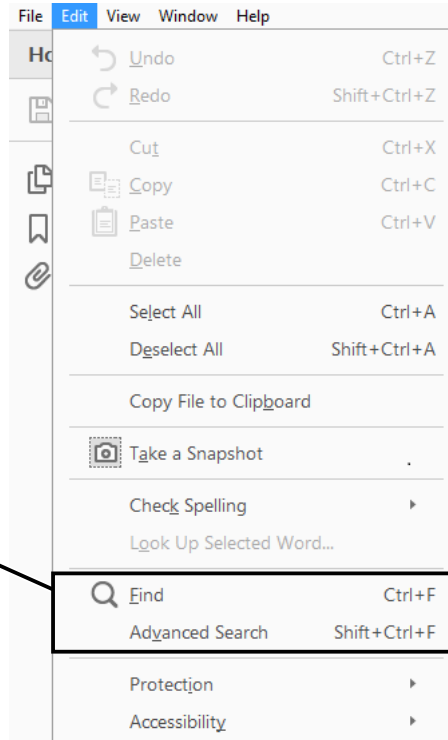
- **Keyword search**
  Click "Find" (Ctrl+F)
  or "Advanced Search"
  (Shift+Ctrl+F) in the Edit menu
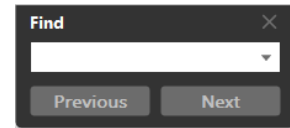 to open the search screen.
  This is convenient when
  searching for a particular word
  or phrase in this manual.
  ⓘ The Menu screen may differ,
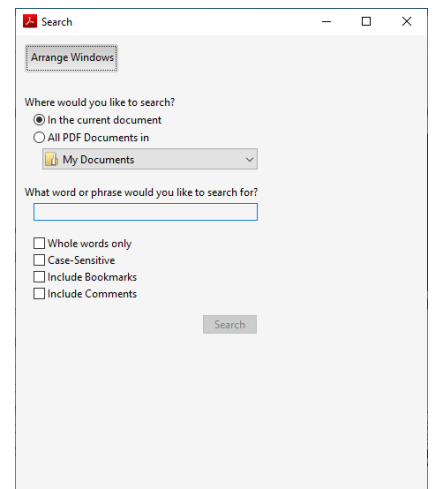 depending on the Adobe Acrobat
  Reader version.

Click to open the Find screen or
Advanced Search screen.

- Find screen
- Advanced Search screen

- **Printing out the desired pages.**
  Click "Print" in the File menu, and then select the
  paper size and page numbers you want to print.
  ⓘ The printing setup may differ, depending on the printer.
  Refer to your printer's instruction manual for details.
  ⓘ Select the "A4" size to print out the page in the original
  manual size.
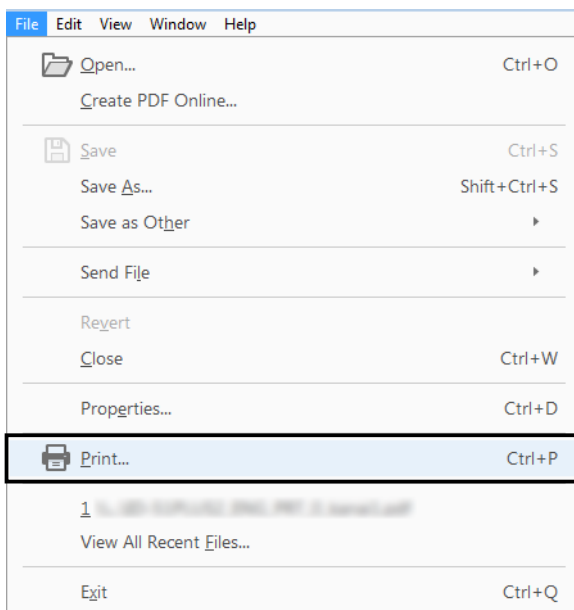
- **Read Out Loud feature.**
  The Read Out Loud feature reads aloud the text in
  this PDF. Refer to the Adobe Acrobat Reader Help
  for the details. This feature may not be usable,
  depending on your PC environment, including the
  operating system.
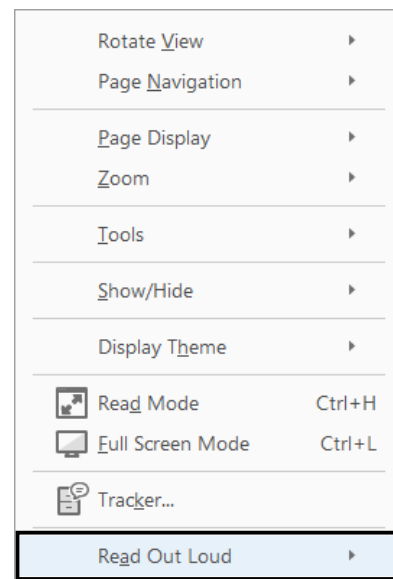
ⓘ The screen may differ, depending on the Adobe Acrobat Reader version.

KEYBOARD ENTERING AND EDITING

Keyboard types:
You can select the Full Keyboard or the Tenkey pad in "Keyboard Type" in the FUNCTION set screen.

MENU » SET > Function > **Keyboard Type**

ⓘ You can also temporarily switch the type in the QUICK MENU screen by pushing **QUICK**.
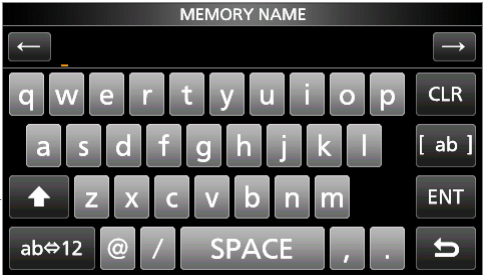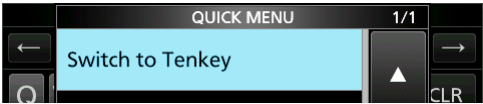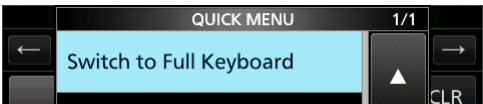
ⓘ You can select the full keyboard layout in "Full Keyboard Layout" in the FUNCTION set screen.

MENU » SET > Function > **Full Keyboard Layout**

Moves the cursor backward

Cursor

Enables entering an uppercase letter

Selects alphabet mode or numeric mode

Enters a space

Moves the cursor forward

Clears the entered character

Selects the character type

Saves the entry

Cancels the entry and returns to the previous screen

Alphabet mode

Numeric mode

Symbol mode
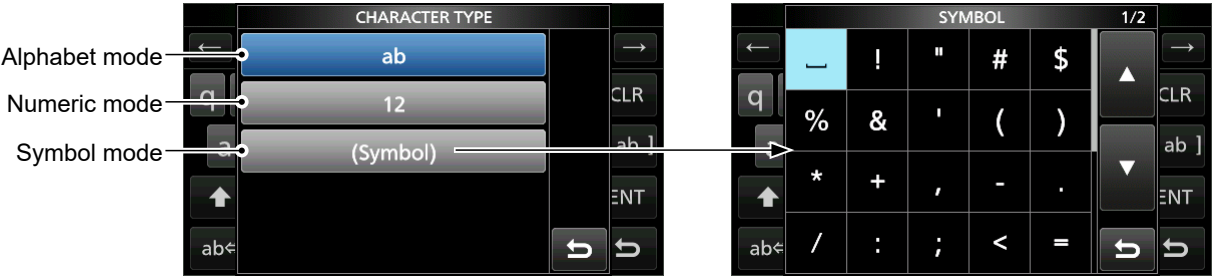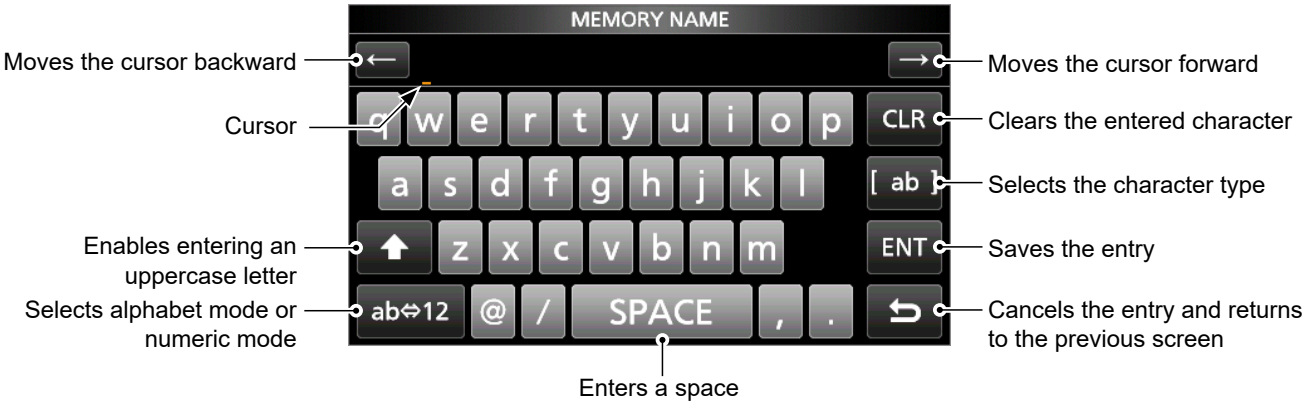
USABLE CHARACTERS

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

Menu	Category	Item	Selectable characters	Maximum characters
SET	Network	Network Name	A to Z, 0 to 9, - _	15
		Network User 1/2 ID	[AB] [ab] [12] [!"#]	16
		Network User 1/2 Password	ⓘ Illegal characters: \ (space)	16*
		Network Radio Name	[AB] [ab] [12] [!"#] ⓘ Illegal character: \	16
	Display	My Call	A to Z, 0 to 9, / @ - . (space)	10
	Time Set	NTP Server Address	A to Z, a to z, 0 to 9, - .	64
	SD Card	Save Setting	[AB] [ab] [12] [!"#] ⓘ Illegal characters: / : ; * < > \ |	15
KEYER		KEYER MEMORY	A to Z, 0 to 9, / ? ^ . , @ (space) ⓘ "*" (asterisk) has its unique use.	70
RTTY DECODE		RTTY MEMORY	A to Z, 0 to 9, ! $ & ? " ' - / . , : ; ( ) ↵ ⓘ "*" (asterisk) has its unique use.	70
VOICE		VOICE TX RECORD	[AB] [ab] [12] [!"#]	16
MEMORY		MEMORY NAME	[AB] [ab] [12] [!"#]	16
PRESET		Preset Name	[AB] [ab] [12] [!"#]	16

* Minimum of 8 characters

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

Section 1 ADVANCED CONNECTIONS

FSK and AFSK connections

The transceiver has a mode key for RTTY. You can use a PC and an application software to operate SSTV, RTTY, AFSK, PSK31, JT65B, or FT8 using a USB cable (User supplied). However, if you want to operate RTTY or other digital modes, you can also use the ACC socket on the rear panel through an interface unit.
Refer to the software application's instruction manual for setup details.
ⓘ Icom does not guarantee the performance of the application software, PC, network device, or network settings.

When using the USB port

USB cable

To a USB port
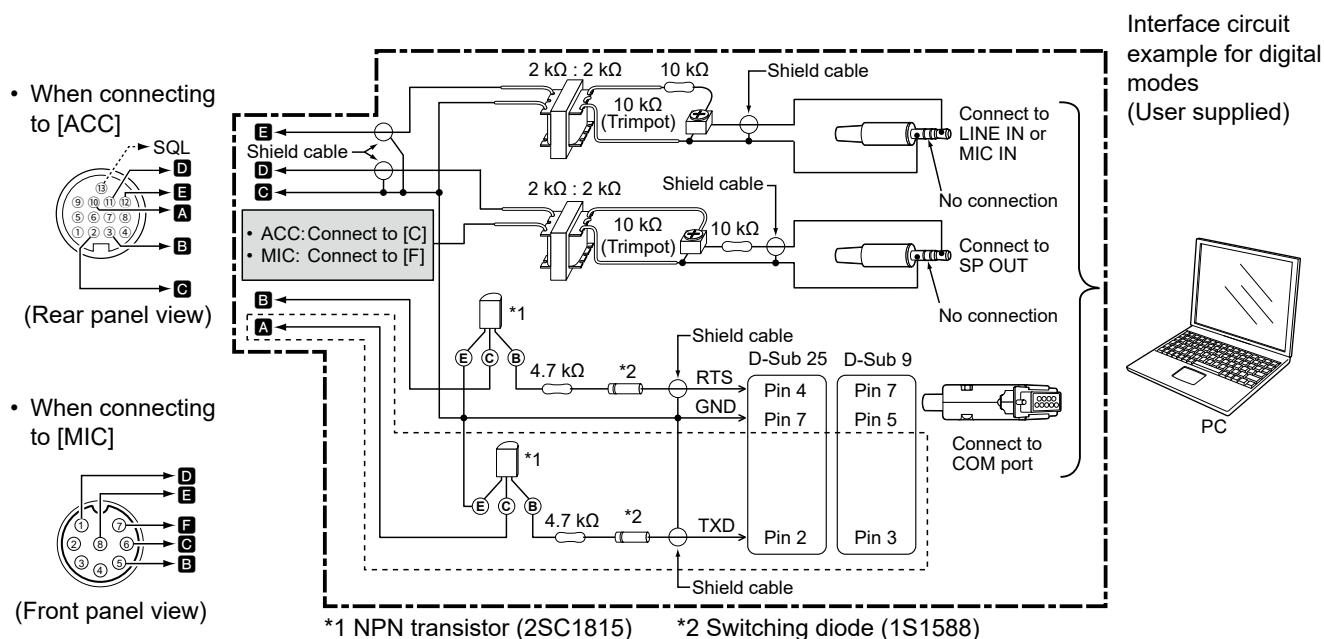
PC

To the [USB] port (Type-C)

IC-7300MK2
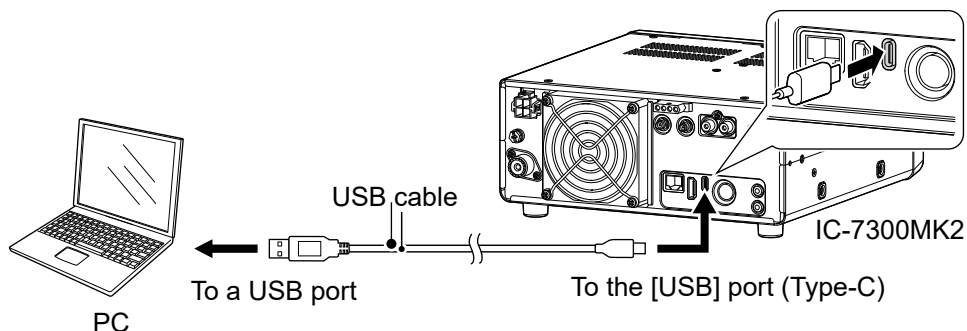
TIP:
• If you set the "USB (B) Function" item to "RTTY Decode," the decoded RTTY signals are output from the USB port.

MENU » SET > Connectors > **USB (B) Function**

• Download the USB driver and the installation guide from the Icom website.
https://www.icomjapan.com/support/

When using the ACC socket or the microphone connector

Interface circuit example for digital modes (User supplied)

• When connecting to [ACC]
(Rear panel view)

• ACC: Connect to [C]
• MIC: Connect to [F]

2 kΩ : 2 kΩ   10 kΩ
10 kΩ (Trimpot)
Shield cable
Connect to LINE IN or MIC IN
No connection
2 kΩ : 2 kΩ   Shield cable
10 kΩ (Trimpot)   10 kΩ
Connect to SP OUT
No connection

*1
4.7 kΩ   *2   RTS   D-Sub 25   D-Sub 9
GND   Pin 4   Pin 7
Pin 7   Pin 5
Connect to COM port
*1
4.7 kΩ   *2   TXD   Pin 2   Pin 3
Shield cable

PC

• When connecting to [MIC]
(Front panel view)

NOTE: You can operate ONLY AFSK RTTY when you connect the circuit to the microphone connector.

*1 NPN transistor (2SC1815)   *2 Switching diode (1S1588)

⌐‾ ‾ ⌐ The sections shown in short dashes are required only when Baudot RTTY is used in the FSK (RTTY) mode.
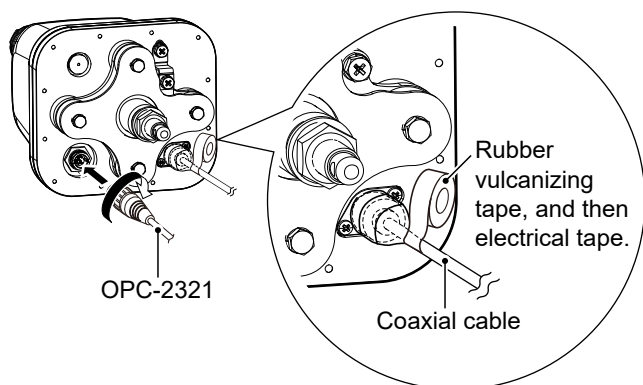(Not required for other digital modes, such as SSTY or PSK)

Connecting the AH-740

The optional AH-740 covers the 2.5 to 30 MHz range with a supplied whip antenna.
When using with the optional NVIS kit, it covers the 2.2 to 30 MHz range.
ⓘ See the AH-740 instruction manual for installation and connection details.

The optional OPC-2321 CONTROL CABLE

[TUNER]

[GND]

GND

IC-7300MK2

[ANT]

AH-740

GND

Coaxial cable comes with the AH-740.
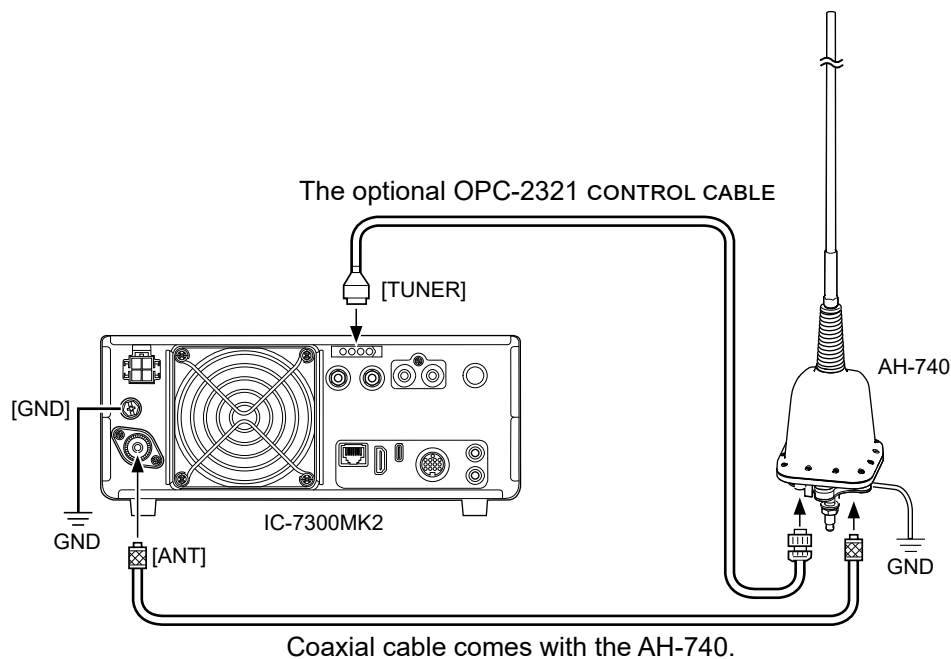
• **Coaxial cable and control cable connections**

OPC-2321

Rubber
vulcanizing
tape, and then
electrical tape.

Coaxial cable

• **About the ground strap connection**

Ground
strap

Vehicle chassis or body
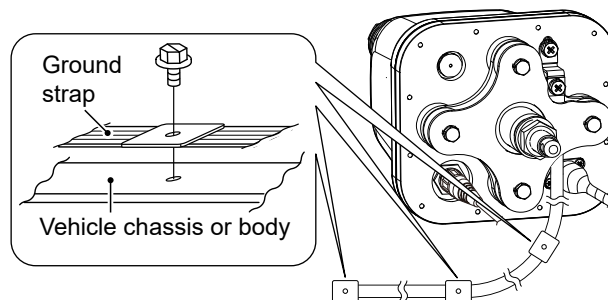
Section 2   ADVANCED OPERATIONS

Band Edge Beep

◇ Band Edge Beep

You will hear a Band Edge Beep and **TX** (with a dotted line) will be displayed when you tune into or out of an amateur band's frequency range.

ⓘ You can change the Band Edge Beep settings in the following menu.

MENU » SET > Function > **Band Edge Beep**

ⓘ If "Beep Level" is set to "0%," no beep sounds.

MENU » SET > Function > **Beep Level**

◇ Entering a Band Edge

When "ON (User)" or "ON (User) & TX Limit" is selected on the "Band Edge Beep" screen, you can enter a total of 30 Band edge frequency pairs.

ⓘ **Information**
- Initially, all Ham band frequencies are entered. Therefore, you must first edit or delete them, and then insert a new line to enter a new Band Edge.
- You cannot enter an overlapping frequency, or a frequency that is out of the preset Ham band frequencies.
- The default setting may differ, depending on the transceiver version.
- Band Edges are entered from the lower frequency first.

1. Open the "Band Edge Beep" screen.
   MENU » SET > Function > **Band Edge Beep**

2. Touch "ON (User)" or "ON (User) & TX Limit."
   (Example: ON (User))
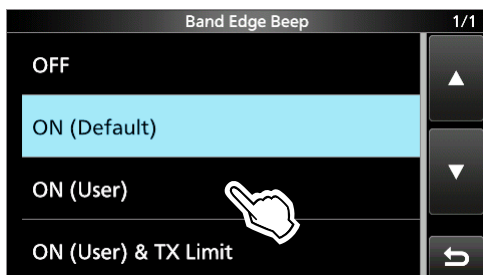
   ⓘ If you set "ON (User) & TX Limit," you can limit transmitting to within the entered frequency range.
3. Touch "User Band Edge."
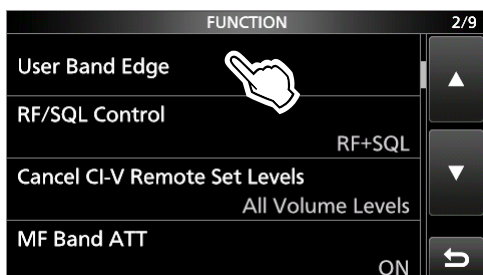
   - The User Band Edge screen is displayed.

Editing a Band Edge

You can edit a Band Edge entered as a default, or change the Band Edge frequencies.

1. Open the "User Band Edge" screen.
2. Touch the Band Edge you want to edit.
   (Example: 6: 14.000.000 – 14.350.000 MHz)
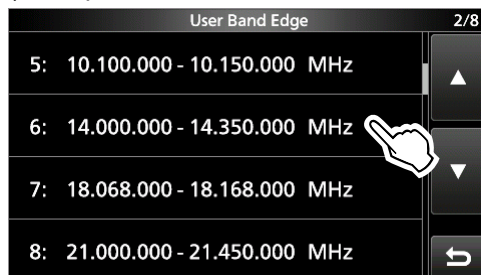
3. Edit the lower Band Edge frequency, then touch [ENT]. (Example: 14.1)
   Entry example: [•] [1] [ENT]

4. Edit the upper Band Edge frequency, then touch [ENT]. (Example: 14.25)
   Entry example: [•] [2] [5] [ENT]
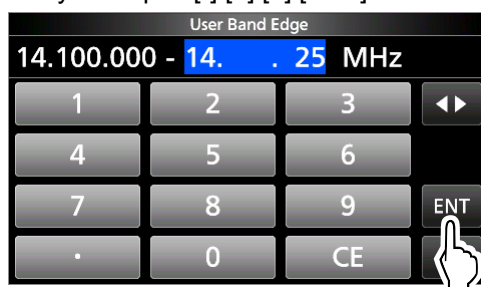
   - The edited Band Edge is saved, and returns to the previous screen.

TIP: You can also edit the frequency by rotating (MAIN DIAL) or (◉MULTI).

Band Edge Beep

◇ Band Edge Beep

Deleting a Band Edge

You can delete Band Edges you no longer need.

1. Open the "User Band Edge" screen.
2. Touch the desired Band Edge to delete for
   1 second.
   (Example: 11: 50.000.000 – 54.000.000 MHz)
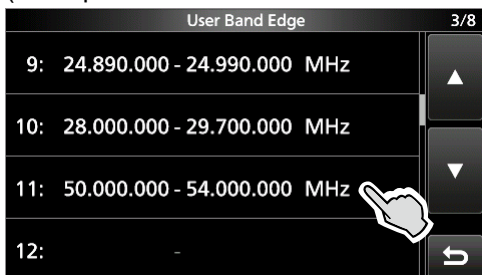
3. Touch "Delete."

• The selected Band Edge is deleted, and returns to the previous screen.

Entering a new Band Edge

You can enter new Band Edge frequencies into a blank Band Edge line.

1. Open the "User Band Edge" screen.
2. Touch a blank band. (Example: 11)
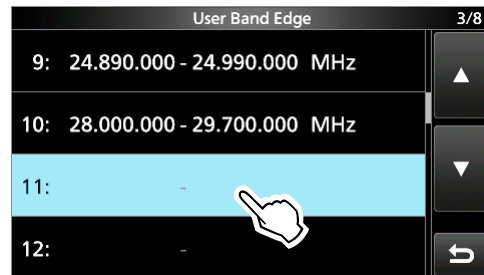
3. Enter the lower Band Edge frequency, then touch [ENT]. (Example: 51.15)
   Entry example: [5] [1] [•] [1] [5] [ENT]

4. Enter the upper Band Edge frequency, then touch [ENT]. (Example: 51.75)
   Entry example: [•] [7] [5] [ENT]

• The entered Band Edge is saved, and returns to the previous screen.

Band Edge Beep

◇ **Band Edge Beep**

Inserting a Band Edge

You can insert a new Band Edge line, and enter new band frequencies, between two entered Band Edges.

1. Open the "User Band Edge" screen.
2. Touch the band edge you want to insert a new Band Edge above, for 1 second.
   (Example: 1: 3.500.000 – 3.999.999 MHz)

User Band Edge		1/8
1:	3.500.000 - 3.999.999 MHz	▲
2:	5.255.000 - 5.405.000 MHz	
3:	7.000.000 - 7.300.000 MHz	▼
4:	10.100.000 - 10.150.000 MHz	↩

3. Touch "Insert."

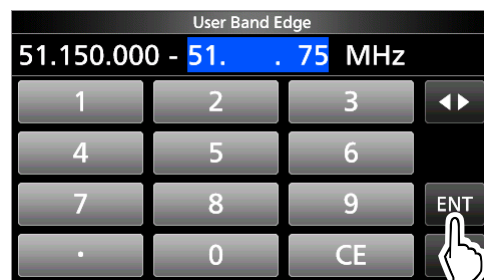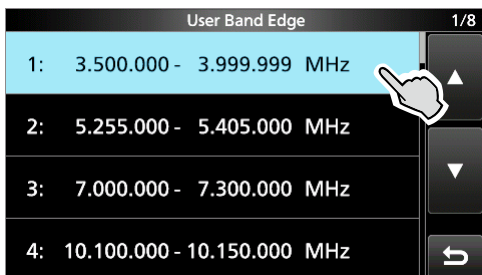 | QUICK MENU | 1/1 | 1/8 |
   | --- | --- | --- |
   | 1: Insert | ▲ | ▲ |
   | 2: Delete | | |
   | 3: Default | ▼ | ▼ |
   | 4: | ↩ | ↩ |

   • The new Band Edge will be inserted above the selected Band Edge.

4. Enter the lower Band Edge frequency then touch [ENT]. (Example: 1.85)
   Entry example: [1] [•] [8] [5] [ENT]

User Band Edge		
1. . 85 - . .		MHz
1	2	3	◀▶
4	5	6	
7	8	9	ENT
•	0	CE	

5. Enter the upper Band Edge frequency, then touch [ENT]. (Example: 1.95)
   Entry example: [•] [9] [5] [ENT]

User Band Edge		
1.850.000 - 1. . 95 MHz		
1	2	3	◀▶
4	5	6	
7	8	9	ENT
•	0	CE	
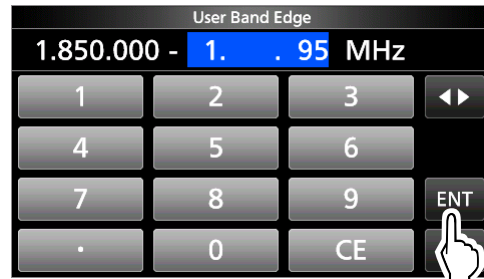
   • The entered Band Edge is saved, and returns to the previous screen.

Resetting all band edges to their defaults

The steps below will reset all the Band Edges to their initial settings. All entered settings will be deleted.

1. Open the "User Band Edge" screen.
2. Touch any Band Edge for 1 second.

User Band Edge		1/8
1:	1.850.000 - 1.950.000 MHz	▲
2:	3.500.000 - 3.999.999 MHz	
3:	5.255.000 - 5.405.000 MHz	▼
4:	7.000.000 - 7.300.000 MHz	↩

3. Touch "Default."

QUICK MENU	1/1	1/8
1: Insert	▲	▲
2: Delete		
3: Default	▼	▼
4:	↩	↩

4. Touch [YES].

User Band Edge		1/8
1:		▲
2:	⚠ Reset All Edges?	
3:	YES NO	▼
4:	7.000.000 - 7.300.000 MHz	↩

   • All the Band Edges reset to the initial settings.

VOX function

SSB, AM, and FM modes

The Voice-Operated Transmission (VOX) function switches between transmit and receive with your voice. This function enables hands-free operation.

● Push `VOX/BK-IN` to turn the VOX function ON or OFF.
  • The "VOX" icon is displayed.
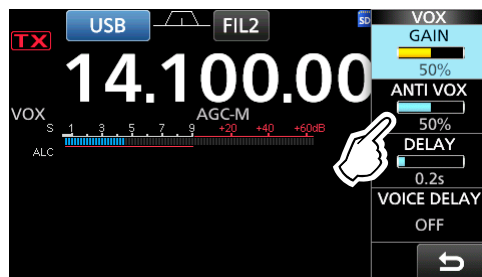ⓘ You can also turn the VOX function ON or OFF on the FUNCTION screen.

`VOX/BK-IN`
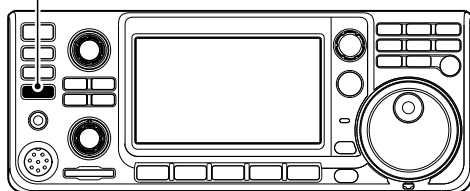
The VOX function is ON.

◇ Adjusting the VOX function

Before using the VOX function, adjust the following items.
  • VOX GAIN
  • ANTI VOX
  • DELAY
  • VOICE DELAY

1. Hold down `VOX/BK-IN` for 1 second.
2. Touch the item to adjust. (Example: ANTI VOX)

3. Rotate `◉MULTI` to adjust the item.
    ⓘ Touching VOICE DELAY selects "SHORT," "MID," "LONG," or "OFF."
4. To close the VOX menu, push `◉MULTI`.

VOX GAIN (Default: 50%)

Adjusts the transmit/receive switching threshold level to between 0% and 100% for VOX operation. Higher values make the VOX function more sensitive to your voice.

ANTI VOX (Default: 50%)

Adjusts the ANTI VOX level to between 0% and 100% to prevent unwanted VOX activation from the speaker or other sounds. Higher values make the VOX function less sensitive.

DELAY (Default: 0.2s)

Adjusts the DELAY to between 0 and 2.0 seconds. Set for a convenient interval for normal pauses in a speech before returning to receive.

VOICE DELAY (Default: OFF)

Sets the VOICE DELAY to prevent cutting off your voice when switching to transmit.
  • Select "SHORT," "MID," "LONG," or "OFF."

⊿TX function

The ⊿TX function shifts your transmit frequency up to ±9.99 kHz without shifting the displayed receive frequency.

1. Push ⊿TX.
   - The ⊿TX function turns ON.
   ⓘ While using the Fine Tuning function (See the Basic manual), the ⊿TX frequency is displayed in 4 digits, instead of 3.
   ⓘ Pushing ⊿TX again turns OFF the ⊿TX function.
2. Rotate ⊙MULTI to set the ⊿TX frequency to match the received station's frequency, up to ±9.99 kHz.
   ⓘ You can reset the ⊿TX frequency to "0.00" by holding down ⊙MULTI or CLEAR for 1 second.
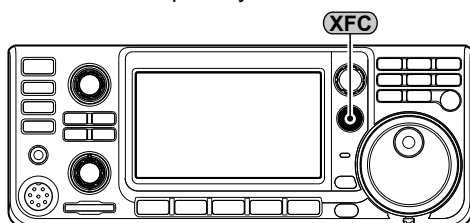3. After communicating, push ⊿TX to turn OFF the ⊿TX function.
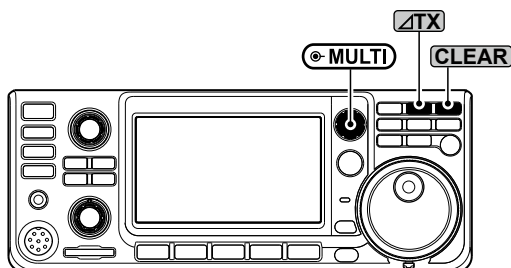
ⓘ You can change the CLEAR operation.

MENU » SET > Function > **Quick RIT/⊿TX Clear**

◇ ⊿TX monitor function

When the ⊿TX function is ON, you can directly monitor the operating frequency by holding down XFC.
ⓘ While monitoring, the Noise Reduction, Notch filter, and Twin PBT are temporarily turned OFF.

Operating CW (ADVANCED)

◇ About the CW Reverse mode

The CW-R (CW Reverse) mode reverses the receive Beat Frequency Oscillator (BFO) to receive CW signals.
Use this when interfering signals are near the desired signal, and you want to use the CW-R to reduce interference.

CW mode (LSB side)   CW-R mode (USB side)

Interference Desired   Interference Desired
              signal   signal
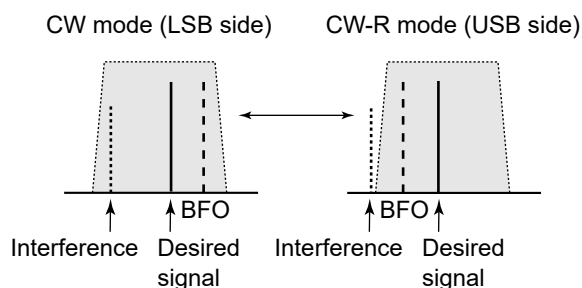
TIP: Reversing the carrier point
The carrier point of the CW mode is LSB by default. You can change it to USB in the following menu.

MENU » SET > Function > **CW Normal Side**

ⓘ When this setting is set to "USB," the CW and CW-R modes are reversed.

Operating CW (ADVANCED)

◇ Using the Memory Keyer function (KEYER)

You can send preset characters using the Memory Keyer function.

Transmitting

1. Open the KEYER SEND screen.

   MENU » KEYER/DECODE > **KEYER**

   ⓘ The [KEYER/DECODE] key is displayed only in the CW mode.

2. Push **TRANSMIT**.
   • The TX/RX indicator lights red, and **TX** is displayed.
   ⓘ If you want to automatically switch between transmit and receive, turn ON the Break-in function. (See the Basic manual.)

3. Touch a Memory Keyer key between [M1] and [M8]. (Example: [M1])

   Transmitting memory contents

   • The touched memory contents are sent.

4. To repeatedly send the memory contents, touch the Memory Keyer key for 1 second.

   Repeat icon

   ⓘ The memory contents will be repeatedly sent, according to the setting in "Keyer Repeat Time."
   ⓘ To stop transmitting, touch the Memory Keyer key again.

Key	Action	
M1 ~ M8	Touch	Sends the memory contents.
	Touch for 1 second	🔁 is displayed and repeatedly sends the memory contents. You can change the repeat interval setting in "Keyer Repeat Time" in the CW-KEY SET menu. (See the Basic manual.)
−1 001	Reduces the contest number counter by 1 (001). • You can change or reset the number in "Present Number" in the KEYER 001 menu. (p. 2-10)	
EDIT/SET	Displays the EDIT/SET screen.	

TIP: How to open the KEYER screen
You can change how to open the KEYER screen by touching 🔲 in the MENU screen.
When "CW [KEYER/DECODE] Key" is set to "KEYER (Hold Down: Select Screen)," the KEYER screen is displayed by touching [KEYER/DECODE], and the Select screen is displayed by touching it for 1 second.
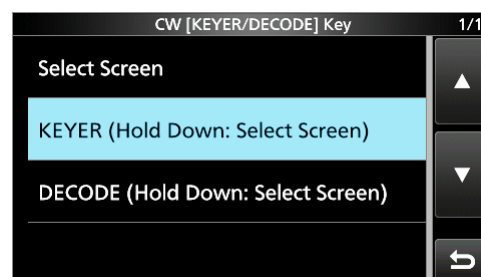
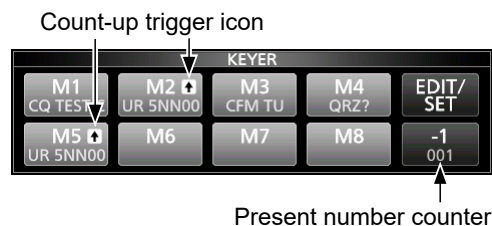(Example: KEYER (Hold Down: Select Screen))

2 ADVANCED OPERATIONS

Operating CW (ADVANCED)

◇ Using the Memory Keyer function (KEYER)

Count-up trigger

The Count-up trigger enables the serial number to be automatically increased after each complete serial number exchange is sent. (Default: M2, M5)

Count-up trigger icon

Present number counter

ⓘ 🔼 is displayed on the Memory Keyer set to the Count-up trigger.
ⓘ You can change the Count-up trigger setting in the KEYER 001 menu. (p. 2-10)

Preset Keyer memory contents

Keyer memory	Contents
M1	CQ TEST CQ TEST DE ICOM ICOM TEST
M2	UR 5NN *001* BK
M3	CFM TU
M4	QRZ?
M5	UR 5NN *001 001* BK

ⓘ "001" is the CW contest number. You can insert or remove it by entering or deleting the "*" (asterisk) on the KEYER MEMORY screen. (p. 2-9)

When an external keypad is connected:
You can transmit the preset contents in the Keyer memory (M1 ~ M4) from an external device by setting "External Keypad," and then connecting an external keypad to [MIC] on the IC-7300MK2.
ⓘ Memory "M5 ~ M8" cannot be sent from the external keypad.

MENU » SET > Connectors > **External Keypad**

Operating CW (ADVANCED)

◇ Keyer memory edit menu (EDIT)
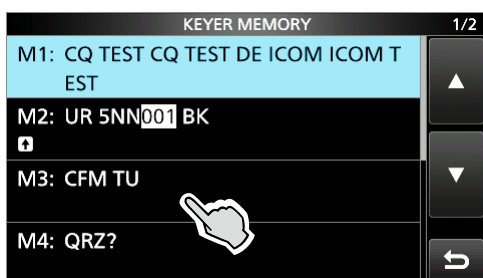
You can edit the Keyer memory contents.
ⓘ You can use up to a total of 8 Memory Keyers (M1 to M8), and you can enter up to 70 characters in each memory.

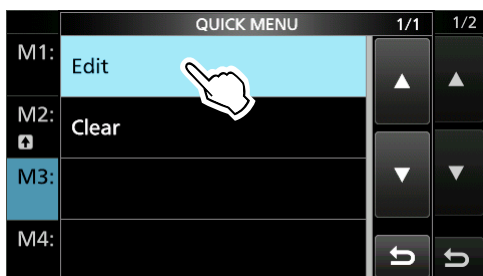**Example:** Entering "QSL TU DE JA3YUA TEST" into M3

1. Open the KEYER MEMORY screen in the CW mode.

   MENU » | KEYER/DECODE > KEYER > EDIT/SET > **EDIT**

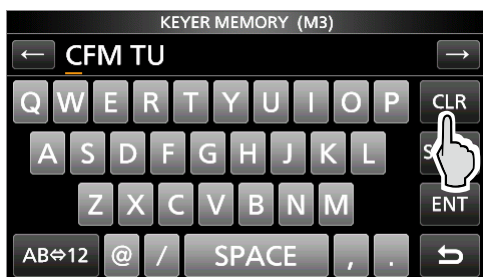2. Touch "CFM TU" for 1 second.

3. Touch "Edit."

   • The Keyer Memory editing screen is displayed.
   ⓘ To clear the Keyer memory contents, touch "Clear."

4. Touch [CLR] on the Keyer Memory keyboard until the preset contents are cleared.

5. Enter "QSL TU DE JA3YUA TEST," and then touch [ENT] to save.
   ⓘ See page iii on how to enter characters.
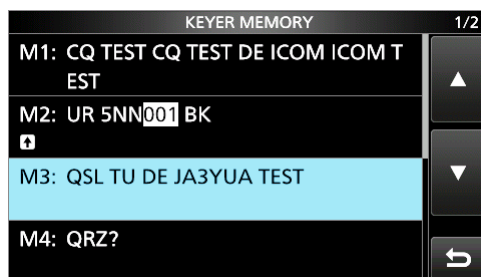
6. To close the KEYER MEMORY screen, push EXIT.

About the symbols
 • Enter the "^" to send a string of characters with no intercharacter space. Enter "^" before a text string, such as ^AR, and the string "ar" is sent with no space.
 • Enter the "*" (asterisk) to insert the CW contest number. The number automatically advances by 1. You can use this for multiple Memory keyers at a time. The "*" is used in Memory Keyer M2 and M5 by default.

Operating CW (ADVANCED)

◇ Contest number menu (001 SET)

You can set the number style, Count-up trigger, and preset number.
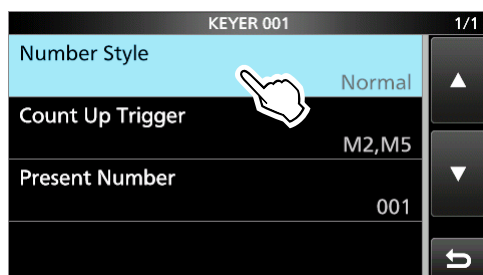
1. Open the KEYER 001 screen in the CW mode.

   [MENU] » | KEYER/DECODE > KEYER > EDIT/SET > **001 SET**

2. Touch the item to set. (Example: Number Style)

KEYER 001	1/1
Number Style	Normal
Count Up Trigger	M2,M5
Present Number	001

3. Touch the option to set. (Example: 190→ANO)

Number Style	1/2
Normal	
190→ANO	
190→ANT	
90→NO	

   • Returns to the KEYER 001 screen.
4. To close the KEYER 001 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 screen.

Number Style   (Default: Normal)

Sets the numbering system used for contest (serial) numbers— normal or short Morse numbers.
• Select Normal, 190→ANO, 190→ANT, 90→NO, or 90→NT.

Count Up Trigger   (Default: M2, M5)

Selects the memories that set the Count-up trigger. The Count-up trigger enables the serial number to be automatically increased after each complete serial number exchange is sent.
Touch the check box to turn the Count-up trigger ON or OFF.

Present Number   (Default: 001)

Sets the current number for the Count-up trigger.
• Set to between 001 ~ 9999.

Operating CW (ADVANCED)

◇ Keyer Set menu (CW-KEY SET)

In this screen, you can set the memory keyer repeat time, dash weight, paddle specifications, key type, and so on.
ⓘ You can also set the same items in the Set mode.

MENU » SET > **CW-KEY Set**

See the Basic manual for details about each item.

1. Open the CW-KEY SET screen in the CW mode.

MENU » KEYER/DECODE > KEYER > EDIT/SET > **CW-KEY SET**

2. Touch the item to set. (Example: Side Tone Level)

3. Touch the option to set. (Example: 80%)

4. To close the CW-KEY 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 screen.
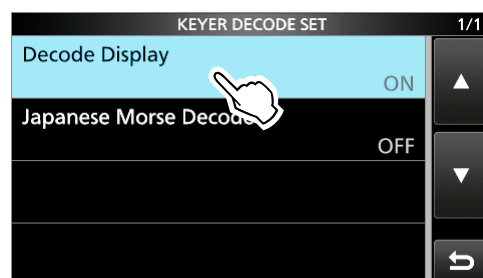
◇ Keyer Decode Set menu (KEYER DECODE SET)

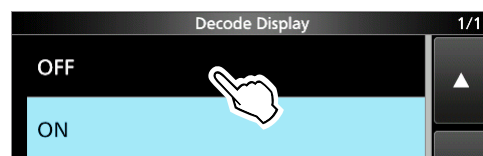In this screen, you can set the decode display setting.

1. Open the KEYER DECODE SET screen in the CW mode.

MENU » KEYER/DECODE > KEYER > EDIT/SET > **KEYER DECODE SET**

2. Touch the item to set. (Example: Decode Display)

3. Touch the option to set. (Example: OFF)

• Returns to the KEYER DECODE SET screen.
4. To close the KEYER DECODE 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 screen.

Decode Display (Default: ON)

Selects whether or not to display the decoded characters on the KEYER screen.

When "ON" is selected, the decoded characters are displayed.

Japanese Morse Decode (Default: OFF)

Selects whether or not to display the decoded Japanese characters on the KEYER screen.
ⓘ Displayed only when the "System Language" item is set to "Japanese."

MENU » SET > Display > **System Language**

ⓘ This item is the same as [和文] in the CW DECODE screen. (p. 2-12)

When "ON" is selected, 和文 is displayed.

CW DECODE function

This function displays the decoded characters (English or Japanese) in the CW mode.
The following are displayed in the CW DECODE screen.
- The decoded result of the received code, or the code transmitted by a paddle or an electronic keyer
- The characters transmitted by the Memory Keyer function

To display the CW DECODE screen:

MENU » KEYER/DECODE > **CW DECODE**

ⓘ "CW DECODE" can be selected only in the CW mode.

Key speed for decoding
Decoded characters
Amplitude waveform

MENU
Waterfall zone
FFT Scope zone
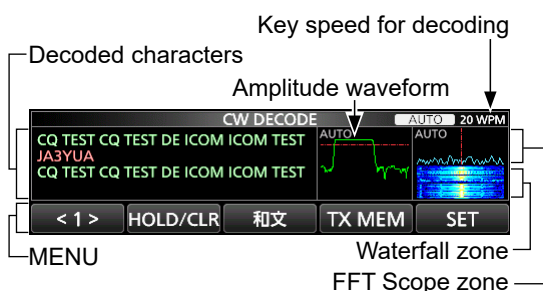
TIP: How to open the CW DECODE screen
You can change how to open the CW DECODE screen by touching ⚙ in the MENU screen.
When "CW [KEYER/DECODE] Key" is set to "DECODE (Hold Down: Select Screen)," the CW DECODE screen is displayed by touching [KEYER/DECODE], and the Select screen is displayed by touching it for 1 second.
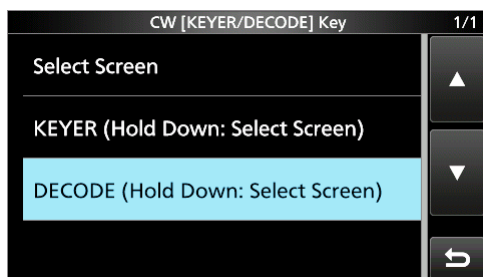
(Example: DECODE (Hold Down: Select Screen))

Function menu (MENU 1)

Function menu (MENU 2)

Key	Action	
< 1 >/< 2 >	Selects the Function menus.	
HOLD/CLR	Touch	Turns the Hold function ON or OFF. • HOLD is displayed, and the CW DECODE screen stops.
	Touch for 1 second	Clears the displayed characters. • While the Hold function is ON, this clears the characters and cancels the Hold function.
和文		Turn the decoding of Japanese Morse code ON or OFF. • When "ON" is selected, 和文 is displayed. ⓘ Displayed only when the "System Language" item is set to "Japanese." MENU » SET > Display > **System Language** ⓘ This item is the same as the "Japanese Morse Decode" in the KEYER screen. (p. 2-12)
TX MEM	Displays the CW DECODE screen. • Transmitting the KEYER MEMORY M1 ~ M8.	
SET	Displays the CW DECODE SET screen. • You can set the waveform and font color.	
ADJ	Displays the THRESH, FILTER, and SPEED keys.	

CW DECODE function

◇ Using the Memory Keyer function (CW DECODE)

You can send preset characters using the Memory Keyer function on the CW DECODE screen.
ⓘ The preset characters can be edited in the KEYER MEMORY or CW DECODE screen.

1. Open the CW DECODE screen.
   MENU » KEYER/DECODE > **CW DECODE**

   ⓘ "CW DECODE" can be selected only in the CW mode.
2. Touch [TX MEM].
   • The Keyer Memory is displayed in the CW DECODE screen.

   CW DECODE screen

3. Push TRANSMIT to transmit.
   • The TX/RX indicator lights red, and TX is displayed.
   ⓘ If you want to automatically switch between transmit and receive, turn ON the Break-in function. (See the Basic manual.)
4. Touch a Memory Keyer key between [M1] and [M8]. (Example: [M1])
   • The TX status indicator lights red and the Po meter swings.
   ⓘ To cancel the transmitting and return to the CW DECODE screen, push EXIT.

   Transmitting

   Transmitting contents are displayed.

Key	Action	
M1 ~ M8	Touch	Sends the memory contents.
	Touch for 1 second	M1 is displayed and repeatedly sends the memory contents. You can change the repeat interval setting in "Keyer Repeat Time" in the CW-KEY SET menu. (See the Basic manual.)
–1 001	Reduces the contest number counter by 1 (001). • You can change or reset the number in "Present Number" in the KEYER 001 menu. (p. 2-10)	
EDIT/SET	Displays the EDIT/SET screen.	

Preset Keyer memory contents

Keyer memory	Contents
M1	CQ TEST CQ TEST DE ICOM ICOM TEST
M2	UR 5NN *001* BK
M3	CFM TU
M4	QRZ?
M5	UR 5NN *001 001* BK

ⓘ "001" is the CW contest number. You can insert or remove it by entering or deleting the "*" (asterisk) on the KEYER MEMORY screen. (p. 2-9)

When an external keypad is connected:
You can transmit the preset contents in the Keyer memory (M1 ~ M4) from an external device by setting "External Keypad," and then connecting an external keypad to [MIC] on the IC-7300MK2.
ⓘ Memory "M5 ~ M8" cannot be sent from the external keypad.

MENU » SET > Connectors > **External Keypad**

CW DECODE function

◇ The ADJ screen

The ADJ screen is used to set the threshold, decode filter, and decode key speed.
If decoding does not work properly due to the reception environment, change the settings for better decoding.
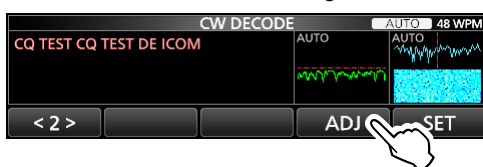
1. Open the CW DECODE screen.

   MENU » KEYER/DECODE > **CW DECODE**

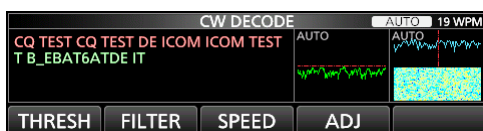   ⓘ "CW DECODE" can be selected only in the CW mode.

2. Touch [< 1 >].
   • The Function menu 2 is displayed.

3. Touch [ADJ].
   • The Function menu is changed to the ADJ screen.
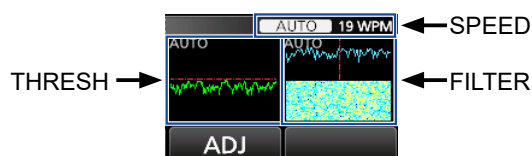

4. Touch the item to set.

TIP:
• To display the THRESH setting screen, touch the area of the Amplitude waveform.
• To change the FILTER setting, touch the area of the Waterfall zone or FFT Scope zone.
• To change the SPEED setting, touch the area of the Key speed.
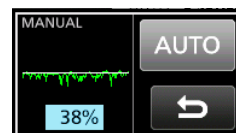

THRESH

Set the position of the threshold level for keying detection.
Touch [AUTO] to switch between AUTO and MANUAL.
• AUTO: Automatically adjust the threshold level.
• MANUAL: Rotate (**MAIN DIAL**) to adjust the threshold level (the white line).
            Set the line to where the noise and signal can be separated.
            ⓘ For best sensitivity, set the line slightly below the maximum amplitude.


When "MANUAL" is selected

FILTER

Set the filter for decoding.
• AUTO: The filter automatically follows the frequency of receiving the biggest signal.
• FIX: The filter is fixed to the center of the receive frequency (the white line). While checking the FFT Scope or Waterfall zone, rotate (**MAIN DIAL**) to set the frequency to where the signal you want to receive is at the white line.
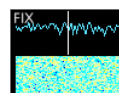
When "FIX" is selected

SPEED

Set the key speed for decoding.
• AUTO: Automatically adjust the key speed for decoding to the received signal.
• LOCK: When the received signal is at a constant speed and correctly decoded while "AUTO" is selected, selecting this option improves the decoding rate.
• MANUAL: If the transceiver cannot follow the key speed of the received signal you want to decode while "AUTO" is selected, select this option and manually set the key speed of the internal electronic keyer (See the Basic manual) to improve the decoding rate.

CW DECODE function

◇ CW DECODE setting

In this screen, you can set the waveform color and font color.

1. Open the CW DECODE screen.
   MENU » KEYER/DECODE > **CW DECODE**

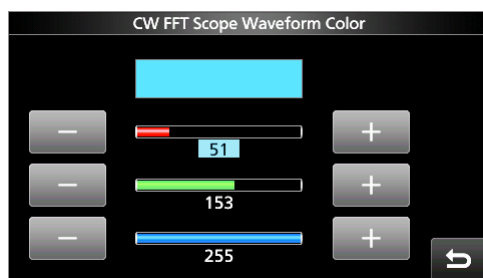   ⓘ "CW DECODE" can be selected only in the CW mode.
2. Touch [SET].
   • The CW DECODE SET screen is displayed.

3. Select the item.

4. Touch the item to set.

FFT Scope Waveform Color
(Default: R: 51, G: 153, B: 255)

Sets the waveform color for the FFT scope.

Signal Level Waveform Color
(Default: R: 0, G: 255, B: 0)

Sets the waveform color for the signal level.

Font Color (Receive)
(Default: R: 128, G: 255, B: 128)
Font Color (Transmit)
(Default: R: 255, G: 106, B: 106)

Sets the text font color for received and transmitted characters.

TIP:
• Touch and select the R (Red), G (Green), or B (Blue) scale, and then rotate (⦿MULTI) to adjust the level from 0 to 255.
• The color is displayed in the box above the RGB scale.

Operating RTTY (FSK)

The IC-7300MK2 has a built-in RTTY decoder and encoder. Using contents set in the RTTY TX memory, you can do basic RTTY operations without using an external device or software.
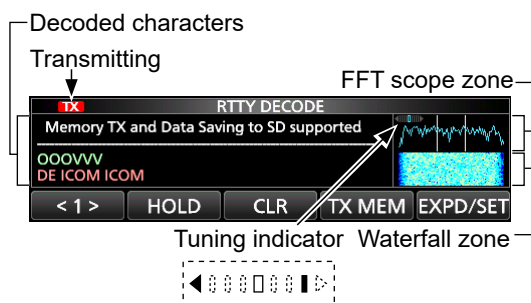ⓘ If you are using RTTY software, refer to the software manual.
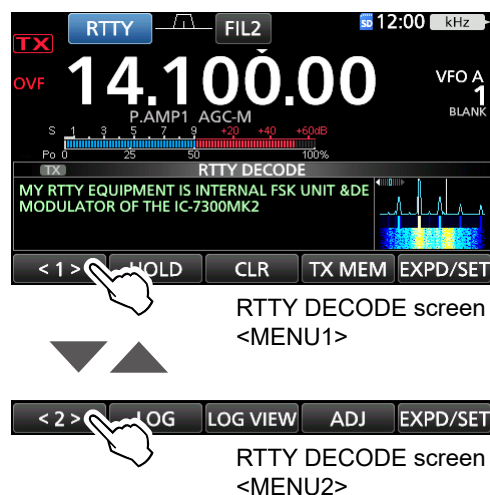
◇ Displaying the RTTY DECODE screen

With the built-in demodulator and decoder, received RTTY characters are displayed on the RTTY DECODE screen.

MENU » **RTTY DECODE**

RTTY DECODE screen

◇ Using the RTTY DECODE screen

RTTY DECODE screen
<MENU1>

RTTY DECODE screen
<MENU2>

Key	Action	
< 1 >/< 2 >	Selects the Function menus.	
HOLD	Turns the Hold function ON or OFF. • HOLD is displayed, and the RTTY DECODE screen stops.	
CLR	Touch for 1 second	Clears the displayed characters. • While the Hold function is ON, this clears the characters and cancels the Hold function.
TX MEM	Displays the RTTY MEMORY screen. • Transmitting the RTTY MEMORY RT1 ~ RT8.	
LOG	Displays the RTTY DECODE LOG screen. • You can start or stop logging, and select the file type.	
LOG VIEW	Displays the RTTY DECODE LOG VIEW screen. • You can check the saved RTTY log files.	
ADJ	Enters the threshold level adjustment mode. • Checking the RTTY DECODE, rotate **MAIN DIAL** to adjust the threshold level to where the characters are not displayed by noise.	
DEF	Touch for 1 second	Resets the Threshold level to the default. ⓘ The [DEF] key is displayed after touching [ADJ].
EXPD/SET	Touch	Selects the Expanded or Normal screen.
	Touch for 1 second	Displays the RTTY DECODE SET screen.

2 ADVANCED OPERATIONS

Operating RTTY (FSK)

◇ RTTY decoding

Rotate (MAIN DIAL) to tune a signal.

ⓘ Information

- Aim for a symmetrical waveform, and be sure the peak points align with the mark (2125 Hz) and shift (170 Hz) frequency lines in the FFT scope.
- Tune to where both "◄" and "►" are displayed in the tuning indicator.
- The S-meter displays the signal strength, when a signal is received.
- If you are receiving an RTTY signal but cannot decode correctly, try the RTTY-R (reverse) mode.
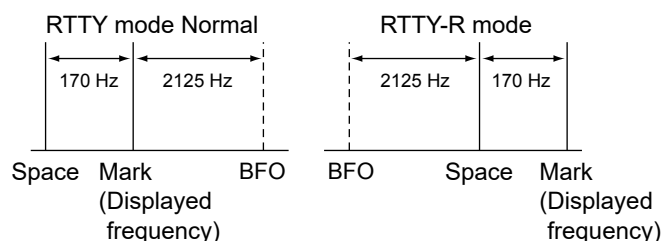
**TIP:** If you cannot receive, change the following settings.

MENU » SET > Function > **RTTY Mark Frequency**

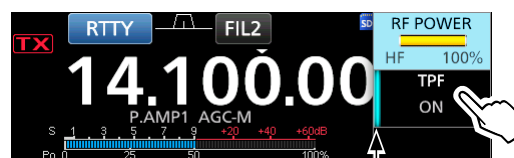MENU » SET > Function > **RTTY Shift Width**

◇ Twin Peak Filter (TPF)

The Twin Peak Filter (TPF) changes the audio frequency response by boosting the mark and space frequencies for better reception of RTTY signals, or for decoding the AF output signal on a PC.

1. While in the RTTY mode, push (⊙MULTI) to display the Multi-function menu.
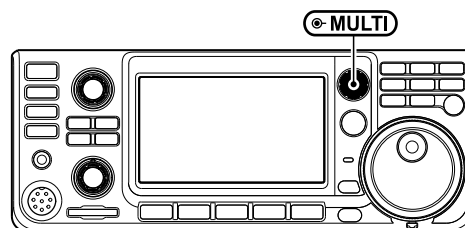
2. Touch [TPF].
   ⓘ Touching [TPF] turns the function ON or OFF.

Lights while the TPF is ON.

3. To close the Multi-function screen, push EXIT.

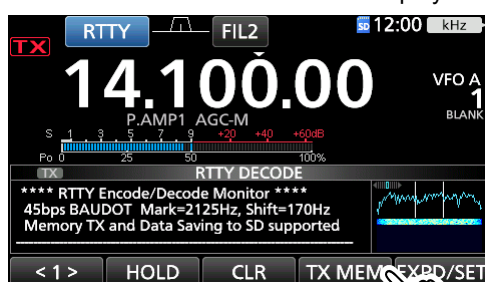**NOTE:** When you are using the Twin Peak Filter, the received audio output may increase. This is not a malfunction.

◇ Using the RTTY Memory function

You can transmit preset characters on the RTTY MEMORY screen.

Transmitting

1. Open the RTTY DECODE screen.
   MENU » **RTTY DECODE**

   ⓘ "RTTY DECODE" can be selected only in the RTTY mode.
2. Touch [TX MEM].
   • The RTTY MEMORY screen is displayed.

RTTY DECODE screen

3. Touch an RTTY memory between [RT1] and [RT8] to transmit. (Example: RT1)
   • The TX status indicator lights red and the Po meter swings.
   ⓘ To cancel the transmission and return to the RTTY DECODE screen, push EXIT.
   ⓘ After transmitting, automatically returns to receive.
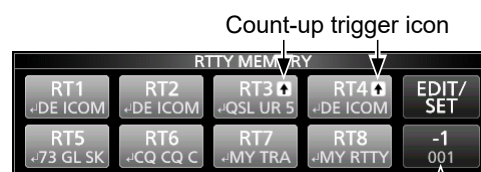

RTTY MEMORY screen

Lights red

Transmitted contents are displayed.
(Example: RT1)

Key	Action	
RT1 ~ RT8	Touch	Sends the memory contents.
−1 001		Reduces the contest number counter by 1 (001). • You can change or reset the number in "Present Number" in the RTTY 001 menu. (p. 2-20)
EDIT/SET	Displays the EDIT/SET screen.	

Count-up trigger

The Count-up trigger enables the serial number to be automatically increased after each complete serial number exchange is sent. (Default: RT3, RT4)

Count-up trigger icon

Present number counter

ⓘ ⬆ is displayed on the RTTY memory set to the Count-up trigger.
ⓘ You can change the Count-up trigger setting in the RTTY 001 menu. (p. 2-20)

Memory	Preset characters by default
RT1	↵ DE ICOM ICOM K ↵
RT2	↵ DE ICOM ICOM ICOM K ↵
RT3	↵ QSL UR 599 *001 001* BK ↵
RT4	↵ DE ICOM ICOM UR 599 *001 001* BK ↵
RT5	↵ 73 GL SK ↵
RT6	↵ CQ CQ CQ DE ICOM ICOM ICOM K ↵
RT7	↵ MY TRANSCEIVER IS IC-7300MK2 & ANTENNA IS A 3-ELEMENT TRIBAND YAGI. ↵
RT8	↵ MY RTTY EQUIPMENT IS INTERNAL FSK UNIT & DEMODULATOR OF IC-7300MK2. ↵

ⓘ "001" is the contest number. You can insert or remove it by entering or deleting the "*" (asterisk) on the RTTY MEMORY screen. (p. 2-19)

When an external keypad is connected:
You can transmit the preset contents in the RTTY memory (RT1 ~ RT4) from an external device by setting "External Keypad," and then connecting an external keypad to [MIC] on the transceiver.
ⓘ Memory "RT5 ~ RT8" cannot be sent from the external keypad.

MENU » SET > Connectors > **External Keypad**

2 ADVANCED OPERATIONS

◇ Editing an RTTY memory

You can edit the characters in the RTTY memories.
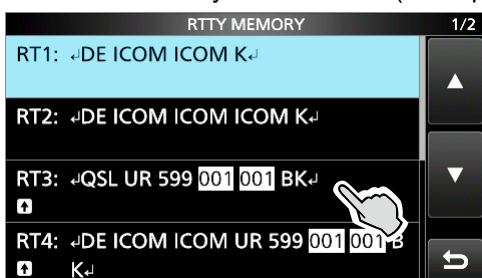You can save and transmit 8 RTTY memories for often-used RTTY messages.
Each RTTY memory can contain up to 70 characters.
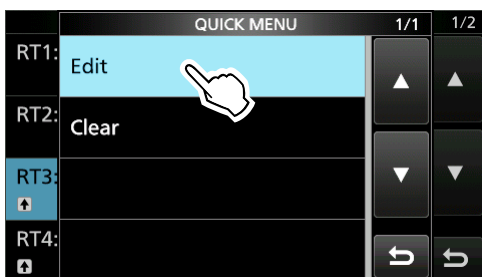
1. Open the RTTY MEMORY screen.

   MENU » | RTTY DECODE > TX MEM > **EDIT** |

   ⓘ "RTTY DECODE" can be selected only in the RTTY mode.

2. Touch the memory for 1 second. (Example: RT3)
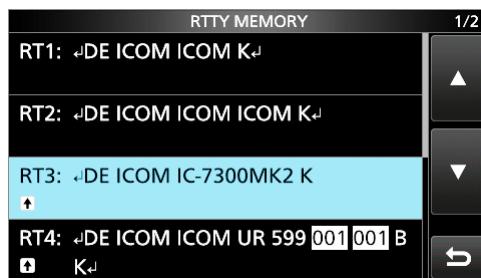

3. Touch "Edit."

4. Touch [CLR] until the characters are cleared.

5. Enter the desired characters, and then touch [ENT] to save.

   ⓘ See page iii on how to enter characters.

6. To close the RTTY DECODE screen, push **EXIT** several times.

About the symbols
Enter the "*" (asterisk) to insert the contest number. The number automatically advances by 1. You can use this for multiple memories at a time. The "*" is used in RTTY Memory RT3 and RT4 by default.
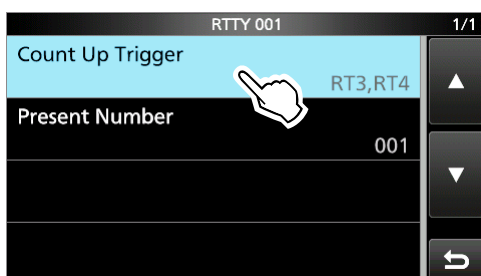
◇ Contest number menu (001 SET)

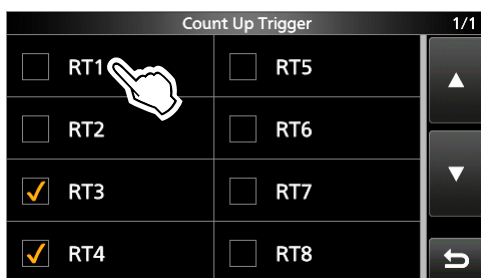You can set the Number Style, Count-up trigger, and preset number.

1. Open the RTTY 001 screen in the RTTY mode.

   MENU » RTTY DECODE > TX MEM > EDIT/SET > **001 SET**

2. Touch the item to set. (Example: Count Up Trigger)

RTTY 001	1/1
Count Up Trigger	RT3,RT4
Present Number	001

3. Touch the option to set. (Example: RT1)

Count Up Trigger		1/1
☐ RT1	☐ RT5	
☐ RT2	☐ RT6	
☑ RT3	☐ RT7	
☑ RT4	☐ RT8	

   • Returns to the RTTY 001 screen.
4. To close the RTTY 001 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 screen.

Count Up Trigger (Default: RT3, RT4)

Selects the memories that set the Count-up trigger.
The Count-up trigger enables the serial number to be automatically increased after each complete serial number exchange is sent.
Touch the check box to turn the Count-up trigger ON or OFF.

Present Number (Default: 001)

Sets the current number for the Count-up trigger.
 • Set to between 001 ~ 9999.

Operating RTTY (FSK)

◇ Turning ON the RTTY log

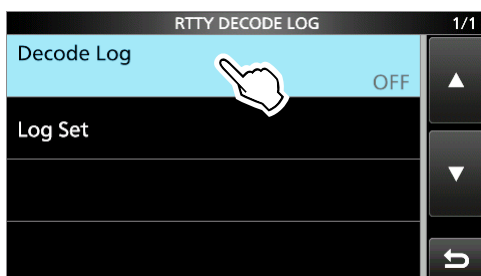Turn ON the RTTY log to save your TX and RX RTTY operating record onto an SD card.
ⓘ You can select the data format type in "Log Set" on the RTTY DECODE LOG screen.
ⓘ The log is saved even while "HOLD" is ON.

1. Insert an SD card into the IC-7300MK2.
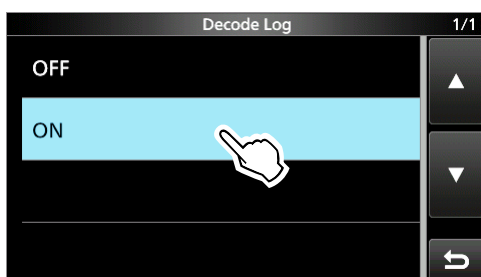2. Open the RTTY DECODE LOG screen in the RTTY mode.

   MENU » RTTY DECODE > <1> > **LOG**

   ⓘ "RTTY DECODE" can be selected only in the RTTY mode.

3. Select "Decode Log."

4. Select "ON."

5. Push **EXIT**.
   • "●" is displayed on the RTTY DECODE screen when the RTTY log is ON.

6. To turn OFF the RTTY log, select "OFF" in step 4.

TIP: How to reset to the default setting
Touching the item or its option for 1 second displays the Quick menu, and then touch "Default" to reset to the default setting.

◇ Viewing the RTTY log contents
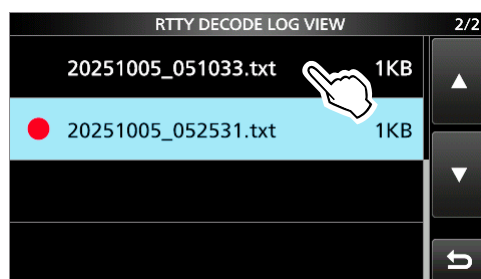
You can check the RTTY log contents.

1. Insert an SD card into the IC-7300MK2.
2. Open the RTTY DECODE LOG VIEW screen in the RTTY mode.
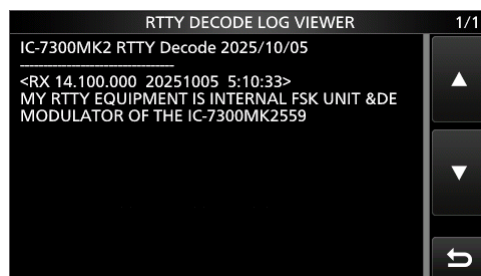
   MENU » RTTY DECODE > <1> > **LOG VIEW**

   ⓘ "RTTY DECODE" can be selected only in the RTTY mode.

3. Touch the log file to view.
   ⓘ The file with "●" is logging. You cannot check this log's contents.
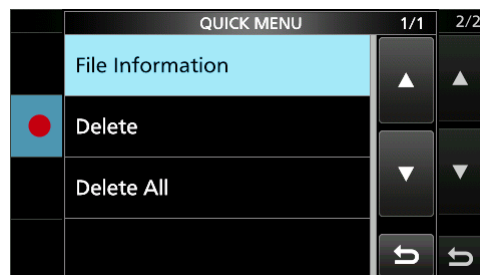

RTTY DECODE LOG VIEW screen

Example of a log saved in the text format.

4. To close the RTTY DECODE LOG VIEW screen, push **EXIT** several times.

Checking the file information and deleting a file
1. Touch the log file 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 logged date.
   • Delete: Deletes the selected log file.
   • Delete All: Deletes all log files.
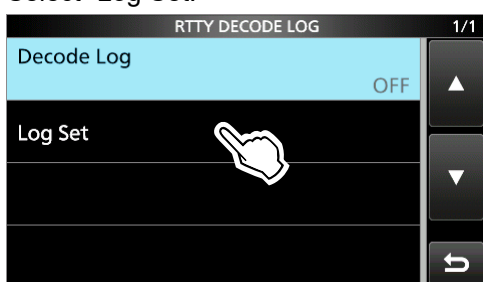

◇ RTTY DECODE LOG SET screen

This mode is for the log file type, time stamp setting, and other RTTY settings.
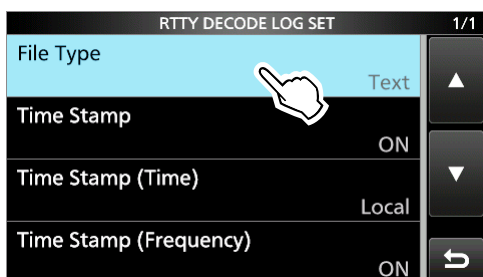
1. Open the RTTY DECODE LOG screen in the RTTY mode.

   MENU » RTTY DECODE > <1> > **LOG**

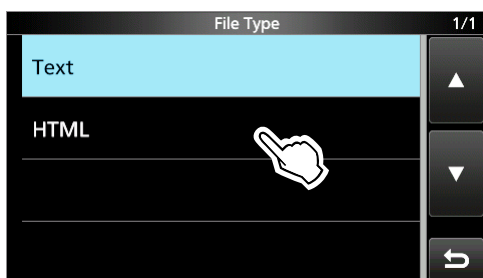   ⓘ "RTTY DECODE" can be selected only in the RTTY mode.

2. Select "Log Set."

RTTY DECODE LOG	1/1
Decode Log	OFF
Log Set	

3. Select the desired item. (Example: File Type)

RTTY DECODE LOG SET	1/1
File Type	Text
Time Stamp	ON
Time Stamp (Time)	Local
Time Stamp (Frequency)	ON

4. Select the desired setting, item or value. (Example: HTML)

File Type	1/1
Text	
HTML	

5. To close the RTTY DECODE LOG screen, push **EXIT** several times.

TIP: How to reset to the default setting
Touching the item or its option for 1 second displays the Quick menu, and then touch "Default" to reset to the default setting.

File Type   (Default: Text)
Select the file type to save a log onto an SD card as Text or HTML.
ⓘ You cannot change the file type while logging.

Time Stamp   (Default: ON)
Select whether or not to display the time stamp (date, transmission time, and reception time) on the RTTY DECODE screen and to add it in the log.
 • OFF: Does not display and add the time stamp.
 • ON: Displays and adds the time stamp in the log.

Time Stamp (Time)   (Default: Local)
Select whether to save the log with the local time or with the UTC time.

Time Stamp (Frequency)   (Default: ON)
Select whether or not to add the frequency to the log.
 • OFF: Does not display and add the frequency.
 • ON: Displays and adds the frequency in the log.
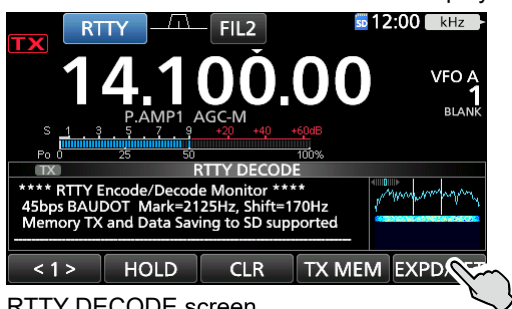
Operating RTTY (FSK)

◇ RTTY DECODE SET screen

This set mode is for the FFT scope setting, USOS function, and so on.
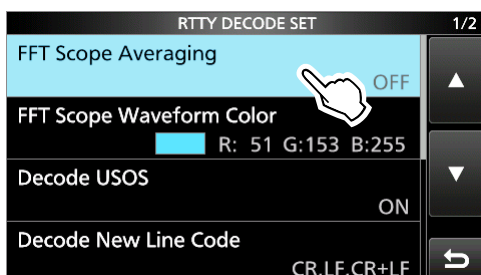
1. Open the RTTY DECODE screen in the RTTY mode.
   MENU » RTTY DECODE

2. Touch [EXPD/SET] for 1 second.
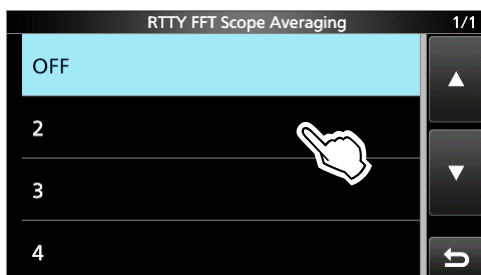   • The RTTY DECODE SET screen is displayed.

RTTY DECODE screen

3. Select the desired item to set.
   (Example: FFT Scope Averaging)

4. Select the desired option or setting.
   (Example: 2)

5. To close the RTTY DECODE screen, push EXIT several times.

TIP: How to reset to the default setting
Touching the item or its option for 1 second displays the Quick menu, and then touch "Default" to reset to the default setting.

FFT Scope Averaging (Default: OFF)
Set the FFT scope waveform averaging function to between 2 and 4 or to OFF.
ⓘ Use the default or smaller FFT scope waveform number for tuning.

FFT Scope Waveform Color
(Default: R: 51, G: 153, B: 255)
Set the color of the FFT scope waveform.
ⓘ Touch and select the R (Red), G (Green), or B (Blue) scale, and then rotate (◉MULTI) to adjust the level from 0 to 255.
ⓘ The color is displayed in the box above the RGB scale.

Decode USOS (Default: ON)
Turn the letter code decoding capability ON or OFF after receiving a "space."
ⓘ USOS stands for UnShift On Space function.
 • OFF: Decodes as a character code.
 • ON: Decodes as a letter code.

Decode New Line Code (Default: CR, LF, CR+LF)
Select the internal RTTY decoder new line code.
ⓘ CR stands for Carriage Return, and LF stands for Line Feed.
 • CR,LF,CR+LF: Makes a new line with any codes.
 • CR+LF: Makes a new line with only CR+LF code.

TX USOS (Default: ON)
Explicitly inserts the FIGS character, even though it is not required by the receiving station.
 • OFF: Does not insert FIGS.
 • ON: Inserts FIGS.

Font Color (Receive)
(Default: R: 128, G: 255, B: 128)
**Font Color (Transmit)**
(Default: R: 255, G: 106, B: 106)
Sets the text font color for received and transmitted characters.
ⓘ Touch and select the R (Red), G (Green), or B (Blue) scale, and then rotate (◉MULTI) to adjust the level from 0 to 255.
ⓘ The color is displayed in the box above the RGB scale.

FM repeater operation

A repeater receives your transceiver's signals and simultaneously retransmits them on a different frequency to provide a greater communication range. When using a repeater, the transmit frequency shifts from the receive frequency by an offset amount. You can access a repeater using the split function.

1. Select the VFO mode.
2. Set the operating frequency in the FM mode.
   (Example: 29.650.00 MHz)
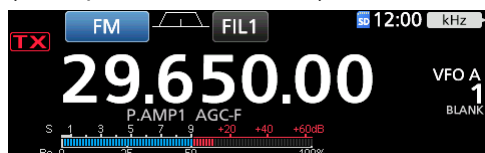
3. Hold down **SPLIT** for 1 second.
   - Turns ON the Quick Split function.
   - Turns the Tone function ON and "TONE" is displayed.
   - Displays the transmit frequency.

   Repeater Tone ON   Split function ON

   Transmit frequency
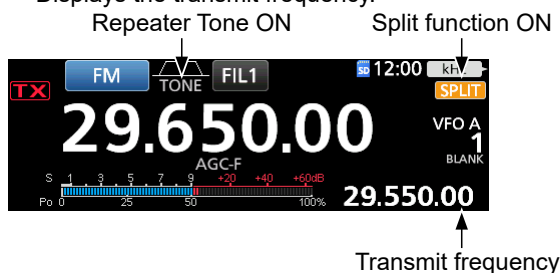
   ⓘ You can set the frequency offset for the HF band.

   MENU » | SET > Function > SPLIT > **FM SPLIT Offset (HF)** |

   ⓘ You can set the frequency offset for the 50 MHz band.

   MENU » | SET > Function > SPLIT > **FM SPLIT Offset (50M)** |

◇ Checking the repeater input signal

You can check whether or not you can directly receive another station's transmit signal, by listening to the repeater input frequency.

ⓘ While listening, the TX/RX indicator lights green, and then the Noise Reduction and Notch Filter settings are canceled.
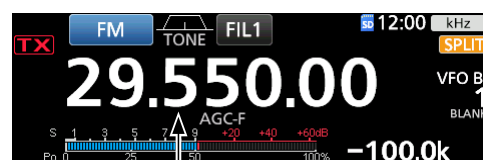
● While receiving, hold down **XFC** to listen to the repeater input frequency.
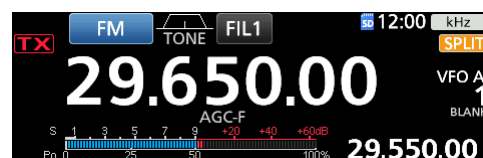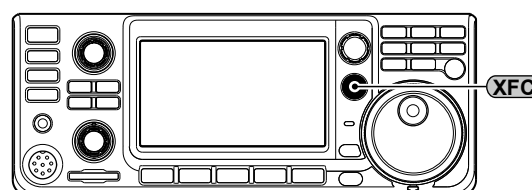
Split function ON

While holding down **XFC**.   Release **XFC**.

Another station's transmit frequency

The offset between transmit and receive

2 ADVANCED OPERATIONS

◇ Setting the repeater tone frequency

Most repeaters require a subaudible tone to be accessed. Subaudible tones are superimposed on your signal, and must be set in advance.
Do the following steps to set the tone frequency.

1. Set the operating frequency in the FM mode.
2. Push `FUNCTION`.
    • The FUNCTION screen is displayed.
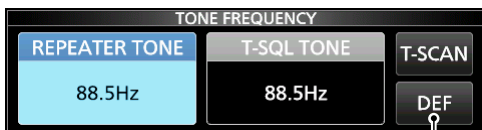3. Touch [TONE] several times to select the Tone squelch mode.
    • "TSQL" is displayed.
    ⓘ Touching [TONE] selects "TONE," "TSQL" or OFF.

4. Touch [TONE] for 1 second.
    • The TONE FREQUENCY screen is displayed.

5. Rotate `MAIN DIAL` to set the desired subaudible tone frequency.

You can reset to the default setting by touching this key for 1 second.

Selectable tone frequencies

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	

Checking the repeater tone frequency

You can check the tone frequency by receiving the repeater's input frequency using the Tone Scan. To receive the input signals, the transceiver detects the subaudible tone frequency using the Tone Scan function.

1. Touch [T-SCAN].
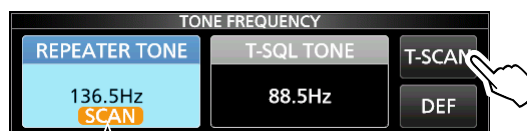
Blinks while scanning

• The scan starts, and then stops when the matching tone frequency from the repeater is received.
2. To close the TONE FREQUENCY screen, push `EXIT`.

Tone squelch operation

FM mode

The Tone squelch opens only when you receive a signal that includes a matching subaudible tone in the FM mode. You can silently wait for calls from other stations using the same tone.

When you transmit, the tone frequency is superimposed on your own signal.
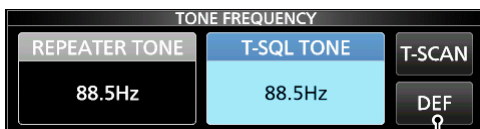
1. Set the operating frequency in the FM mode.
2. Push **FUNCTION**.
   • The FUNCTION screen is displayed.
3. Touch [TONE] several times to select the Tone Squelch mode.
   • "TSQL" is displayed.
   ⓘ Touching [TONE] selects "TONE," "TSQL" or OFF.

4. Touch [TONE] for 1 second.
   • The TONE FREQUENCY screen is displayed.

5. Rotate **MAIN DIAL** to set the tone frequency.

You can reset to the default setting by touching this key for 1 second.

Selectable tone frequencies

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	

Checking another station's tone frequency

You can check another station's tone frequency by tone scanning while the station is transmitting.

1. Touch [T-SCAN].
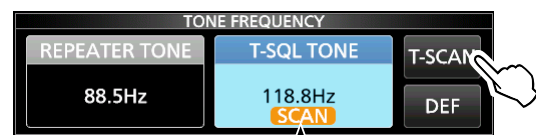
Blinks while scanning

   • The scan starts, and then stops when the matching tone frequency from the other station is received.
2. To close the TONE FREQUENCY screen, push **EXIT**.

Data communication

SSB-DATA, AM-DATA, and FM-DATA modes
You can operate in the Data mode using AFSK (Audio Frequency Shift Keying).
ⓘ When operating PSK31, SSTV, JT65B, or FT8 with a PC application software, refer to the software's instruction manual.

1. Connect a PC or other device to the transceiver.
   ⓘ See page 1-2 for details.
2. Set the operating frequency and mode.
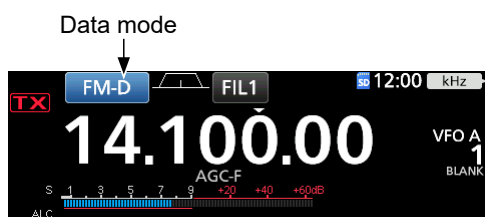
Data mode

3. Refer to the application software for communication details.
   ⓘ When operating in the SSB Data mode, adjust the device's output level within the ALC zone.
   The following are automatically changed:
   - Changes the TBW setting from the SSB set to the SSB-D.
   - Changes the filter selection from the SSB filter set to the SSB-D. (However, you can still adjust the set receive IF filter bandwidths by touching the filter icon for 1 second.)
   - Enables the 1/4 Tuning function setting on the FUNCTION screen.
   - Disables the RX Tone Control settings, the Speech Compressor function, and the Drive Gain adjust level.

TIP: The carrier point is displayed when operating AFSK in the SSB Data mode.
See the illustration below for a tone-pair example in the LSB mode.
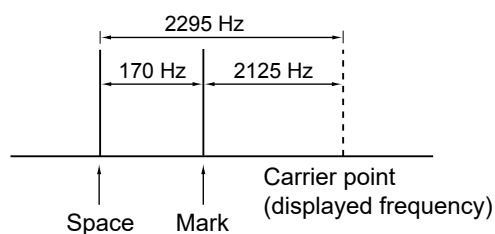
About the 5 MHz frequency band operation

Depending on the country and/or region, operation on the 5 MHz frequency band may be prohibited, operating frequencies, allocated frequency range, and permissible output power may vary, or specific modes may be required.
Be sure to check your local regulations and laws before transmitting to ensure you are operating within the authorized frequencies and not exceeding the maximum permitted output power.

The description below is for operating in the United States, as an example.

Operation on the 5 MHz frequency band is allowed on 5 discrete frequencies, and you must adhere to the following:
- The USB, USB Data, PSK, and CW modes
- Maximum of 100 watts ERP (Effective Radiated Power)
- Maximum 2.8 kHz bandwidth

It is your responsibility to set all controls so that transmission in this frequency band meets the stringent conditions under which amateur operations may use these frequencies.

TIP: We recommend that you save these frequencies, modes, and filter settings into memory channels, for easy recall.

NOTE: To assist you in operating within the rules specified by the FCC, transmission is illegal on any frequencies other than the five shown in the tables to the right.

For the USB and USB data modes:
The FCC specifies center frequencies on the 5 MHz frequency band. However, the transceiver displays the carrier frequency. Therefore, tune the transceiver to 1.5 kHz below the specified FCC channel center frequency.

Transceiver displayed frequency	FCC channel center frequency
5.33050 MHz	5.33200 MHz
5.34650 MHz	5.34800 MHz
5.35700 MHz	5.35850 MHz
5.37150 MHz	5.37300 MHz
5.40350 MHz	5.40500 MHz

For the CW mode:
The transceiver displays the center frequency. Therefore, tune the transceiver to the specified FCC channel frequency when you operate in the CW mode.

Transceiver displayed frequency	FCC channel center frequency
5.33200 MHz	5.33200 MHz
5.34800 MHz	5.34800 MHz
5.35850 MHz	5.35850 MHz
5.37300 MHz	5.37300 MHz
5.40500 MHz	5.40500 MHz

Section 3   SCOPE OPERATION (ADVANCED)

Spectrum scope screen

◇ Adjusting the sweep speed

Select the sweep speed to change the FFT scope refresh speed and the waterfall speed.
ⓘ To change only the waterfall speed, select "Slow," "Mid," or "Fast" in the Waterfall Speed menu.

1. Open the SPECTRUM SCOPE screen.
   MENU » **SCOPE**

2. Touch [< 1 >] to display MENU 2.
3. Touch [SPEED] several times until the desired sweep speed is selected.
   • Selectable speeds: FAST, MID, or SLOW
   ⓘ "▶▶▶," "▶▶," or "▶" indicates FAST, MID, or SLOW.
   ⓘ A popup window is displayed in the center of the SPECTRUM SCOPE screen and displays the selected sweep speed for 1 second.

"▶▶▶," "▶▶," or "▶" is displayed.

Displayed
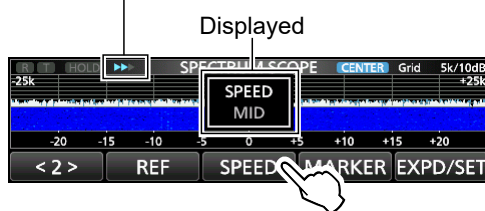
◇ Adjusting the Reference level

When monitoring a weak signal that is buried in the noise floor, or monitoring a strong signal but some stronger signals are nearby, adjusting the Reference level of the screen helps you to see these signals.
   • Even if this setting is changed, it does not affect the input signal level.
   • When you adjust the Reference level, the signal strength for the waterfall also appears to change.
ⓘ Each band memorizes the setting.

1. Open the SPECTRUM SCOPE screen.
   MENU » **SCOPE**

2. Touch [< 1 >] to display MENU 2.
3. Touch [REF].

Displayed
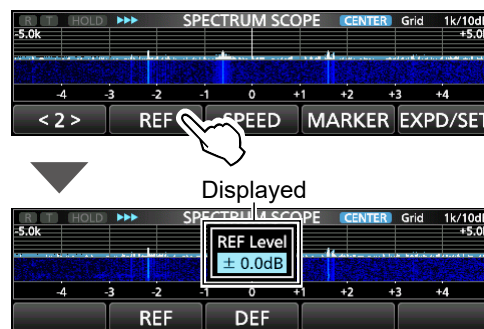
4. Rotate (**MAIN DIAL**) to adjust the level.
   • Adjustable range: –20.0 dB ~ +20.0 dB
   ⓘ You can reset to the ±0.0 dB default value by touching [DEF] for 1 second.
5. To close the REF Level window, touch [REF].

The difference in the spectrum

Reference level (+20.0 dB)   Reference level (–20.0 dB)
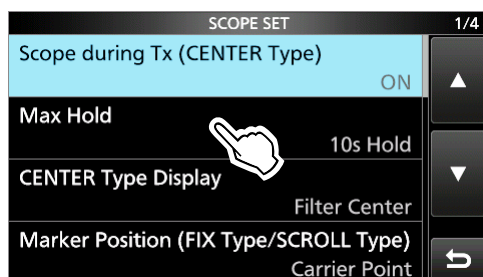

+20.0 dB
±0.0 dB
–20.0 dB
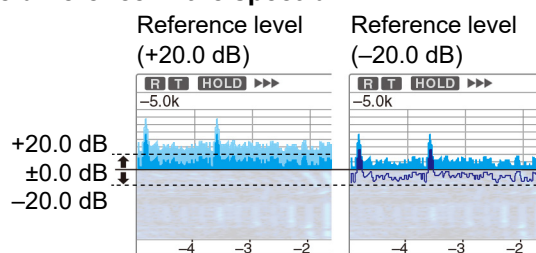
ⓘ If you adjust this setting to a positive level, all signal levels appear stronger. Or, if you adjust to a negative level, all signal levels appear weaker.
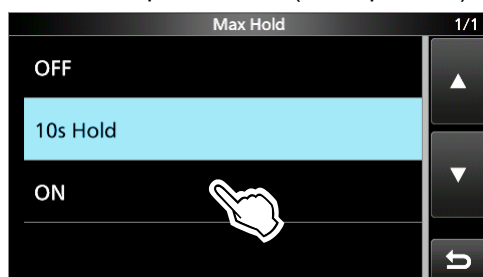

SCOPE SET screen

This screen is used to set the waveform color, the Scope range for the Fixed and Scroll-F modes, and other settings.

1. Open the SPECTRUM SCOPE screen.
   MENU » SCOPE

2. Touch [EXPD/SET] for 1 second.
3. Touch the item to set. (Example: Max Hold)

SCOPE SET	1/4
Scope during Tx (CENTER Type) ON	▲
Max Hold 10s Hold	
CENTER Type Display Filter Center	▼
Marker Position (FIX Type/SCROLL Type) Carrier Point	↰

4. Touch the option to set. (Example: ON)

Max Hold	1/1
OFF	▲
10s Hold	
ON	▼
	↰

ⓘ See to the right for details on the setting items and their options.

5. To close the SCOPE SET screen, push EXIT.

TIP: You can set each item to its default by touching it for 1 second, and then touching "Default" on the QUICK MENU screen.

Scope during Tx (CENTER Type)   (Default: ON)

Turns the TX signal display ON or OFF.

Max Hold   (Default: 10s Hold)

Selects the Peak Level Holding function.
• OFF: Turns OFF the Peak Level Holding function.
• 10s Hold: Holds the peak spectrum for 10 seconds.
• ON: Continuously holds the peak spectrum.

CENTER Type Display   (Default: Filter Center)

Selects the center frequency of the SPECTRUM SCOPE screen. (Only in the Center mode)
• Filter Center:
    Displays the selected filter's center frequency in the center of the SPECTRUM SCOPE screen.
• Carrier Point Center:
    Displays the carrier point frequency of the selected operating mode in the center of the SPECTRUM SCOPE screen.
• Carrier Point Center (Abs. Freq.):
    In addition to the carrier point center setting above, the actual frequency is displayed at the bottom of the scope.
    ⓘ Abs. Freq. : Absolute Frequency

Marker Position (FIX Type/SCROLL Type)
                              (Default: Carrier Point)

Selects the marker position on the SPECTRUM SCOPE screen. (Only in the Fixed or Scroll mode)
• Filter Center: Displays the Marker on the selected filter's center frequency.
• Carrier Point: Displays the Marker on the carrier point frequency of the selected operating mode.

VBW   (Default: Narrow)

Select the Video Band Width (VBW).
• Narrow: Sets the VBW to narrow.
• Wide: Sets the VBW to wide.
ⓘ When "Wide" is selected, the line drawn on the receive spectrum becomes wide. However, the small edge cannot be drawn.

Averaging   (Default: OFF)

Set the FFT Scope Waveform Averaging function to between 2 and 4, or OFF.
• OFF: The FFT scope screen refreshes at each sweep time. This setting displays the critical spectrum view.
• 2, 3, 4:   The FFT scope screen averages 2 to 4 sweeps to smoothly display the spectrum.

SCOPE SET screen

Waveform Color (Current)
(Default: (R) 172 (G) 191 (B) 191)

Sets the waveform color for the currently received signals.
ⓘ Touch and select the R (Red), G (Green), or B (Blue) scale, and then rotate ⊙MULTI to adjust the level from 0 to 255.
ⓘ The color is displayed in the box above the RGB scale.

Waveform Color (Line)   (Default: (R) 56 (G) 24 (B) 0)

Sets the waveform outline color for the currently received signals.
ⓘ Touch and select the R (Red), G (Green), or B (Blue) scale, and then rotate ⊙MULTI to adjust the level from 0 to 255.
ⓘ The color is displayed in the box above the RGB scale.

Waveform Color (Max Hold)
(Default: (R) 45 (G) 86 (B) 115)

Sets the waveform color for the received signals' maximum level.
ⓘ Touch and select the R (Red), G (Green), or B (Blue) scale, and then rotate ⊙MULTI to adjust the level from 0 to 255.
ⓘ The color is displayed in the box above the RGB scale.

Waveform Display   (Default: ON)

Turns the Waterfall display ON or OFF for the Normal scope and the Mini scope screens.
ⓘ On the Expanded scope screen, the Waterfall is always displayed.
 • OFF: Turns OFF the Waterfall display.
 • ON: Turns ON the Waterfall display.

Waterfall Speed   (Default: Mid)

Selects the Waterfall speed.
 • Slow: Sets the Waterfall speed to Slow.
 • Mid: Sets the Waterfall speed to Mid.
 • Fast: Sets the Waterfall speed to Fast.

Waterfall Size (Expand Screen)   (Default: Mid)

Selects the Waterfall height in the Expand scope screen.
 • Small: The same height as the Normal scope screen, only the FFT scope expands.
 • Mid: The Waterfall height expands at the same ratio as the FFT scope.
 • Large: Only the Waterfall height expands.

Waterfall Peak Color Level   (Default: Grid 8)

Selects the signal level that the Waterfall displays a peak color.
Higher signal levels are Red, Yellow, Green, Light-blue, Blue, and Black, in that order.
 • Select between Grid 1 and Grid 10.

Waterfall Marker Auto-hide   (Default: ON)

Turns the Waterfall Marker Auto-hide function ON or OFF.
 • OFF: The marker in the Waterfall zone stays ON.
 • ON: The marker in the Waterfall zone is hidden 2 seconds after it stops in place.

SCOPE SET screen

Fixed Edges

0.03 – 1.60
(Default: No.1 0.500–1.500 MHz)
(Default: No.2 0.500–1.500 MHz)
(Default: No.3 0.500–1.500 MHz)
(Default: No.4 0.500–0.550 MHz)

Sets the Upper and Lower Edge frequencies in the Fixed and the Scroll-F modes. Four edges are assigned to each band.

NOTE:
- First set the lower Edge frequency.
- Set the upper Edge frequency within 1 MHz of the lower frequency.

- Settable range: 0.030 ~ 1.600 MHz

Fixed Edges (0.03 - 1.60) No.1
0.500 - 1.500 MHz

ⓘ Touch ◄► to select the upper and lower edge frequency, and then rotate ⊙MULTI or touch the keypad to edit the frequency.

1.60 – 2.00
(Default: No.1 1.800–2.000 MHz)
(Default: No.2 1.800–1.830 MHz)
(Default: No.3 1.900–1.930 MHz)
(Default: No.4 1.800–1.850 MHz)

- Settable range: 1.600 ~ 2.000 MHz

2.00 – 6.00
(Default: No.1 3.500–4.000 MHz)
(Default: No.2 3.500–3.575 MHz)
(Default: No.3 3.750–3.850 MHz)
(Default: No.4 3.500–3.550 MHz)

- Settable range: 2.000 ~ 6.000 MHz

6.00 – 8.00
(Default: No.1 7.000–7.300 MHz)
(Default: No.2 7.000–7.030 MHz)
(Default: No.3 7.030–7.200 MHz)
(Default: No.4 7.000–7.050 MHz)

- Settable range: 6.000 ~ 8.000 MHz

8.00 – 11.00
(Default: No.1 10.100–10.150 MHz)
(Default: No.2 10.100–10.130 MHz)
(Default: No.3 10.130–10.150 MHz)
(Default: No.4 10.100–10.150 MHz)

- Settable range: 8.000 ~ 11.000 MHz

11.00 – 15.00
(Default: No.1 14.000–14.350 MHz)
(Default: No.2 14.000–14.100 MHz)
(Default: No.3 14.100–14.350 MHz)
(Default: No.4 14.000–14.050 MHz)

- Settable range: 11.000 ~ 15.000 MHz

15.00 – 20.00
(Default: No.1 18.068–18.168 MHz)
(Default: No.2 18.068–18.110 MHz)
(Default: No.3 18.110–18.168 MHz)
(Default: No.4 18.000–18.050 MHz)

- Settable range: 15.000 ~ 20.000 MHz

20.00 – 22.00
(Default: No.1 21.000–21.450 MHz)
(Default: No.2 21.000–21.150 MHz)
(Default: No.3 21.150–21.450 MHz)
(Default: No.4 21.000–21.050 MHz)

- Settable range: 20.000 ~ 22.000 MHz

22.00 – 26.00
(Default: No.1 24.890–24.990 MHz)
(Default: No.2 24.890–24.930 MHz)
(Default: No.3 24.930–24.990 MHz)
(Default: No.4 24.900–24.950 MHz)

- Settable range: 22.000 ~ 26.000 MHz

26.00 – 30.00
(Default: No.1 28.000–29.000 MHz)
(Default: No.2 28.000–28.200 MHz)
(Default: No.3 28.200–29.000 MHz)
(Default: No.4 28.000–28.100 MHz)

- Settable range: 26.000 ~ 30.000 MHz

30.00 – 45.00
(Default: No.1 30.000–31.000 MHz)
(Default: No.2 30.000–31.000 MHz)
(Default: No.3 30.000–31.000 MHz)
(Default: No.4 30.000–30.100 MHz)

- Settable range: 30.000 ~ 45.000 MHz

45.00 – 60.00
(Default: No.1 50.000–51.000 MHz)
(Default: No.2 50.000–50.100 MHz)
(Default: No.3 50.100–50.300 MHz)
(Default: No.4 50.000–50.100 MHz)

- Settable range: 45.000 ~ 60.000 MHz

60.00 – 74.80
(Default: No.1 70.000–70.500 MHz)
(Default: No.2 70.000–70.250 MHz)
(Default: No.3 70.250–70.500 MHz)
(Default: No.4 70.000–70.100 MHz)

- Settable range: 60.000 ~ 74.800 MHz

Audio scope screen

This audio scope enables you to display the received signal's frequency component on the FFT scope, and its waveform components on the Oscilloscope. The FFT scope also has a waterfall.
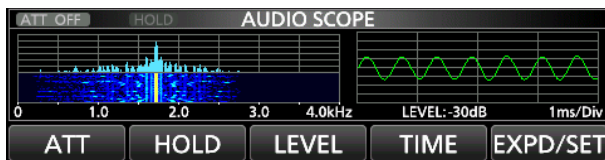
• AUDIO SCOPE screen

FFT scope zone

Waterfall zone   Oscilloscope
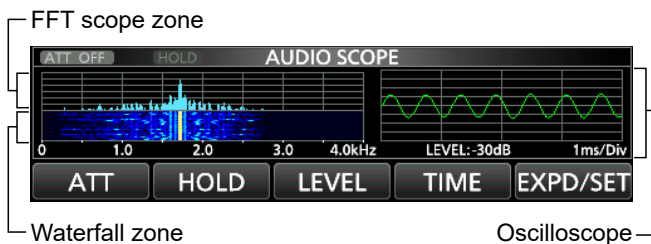
◇ Using the Audio Scope

Open the AUDIO SCOPE screen.

MENU » **AUDIO**

Key		Action
ATT	Touch	Selects the attenuator for the FFT scope. • 0 (OFF), 10, 20, or 30 dB
	Touch for 1 second	Turns OFF the attenuator. (0 dB)
HOLD		Turns the Hold function ON or OFF. • HOLD is displayed and freezes the current audio spectrum.
LEVEL		Selects the Oscilloscope level. • 0, –10, –20, or –30 dB
TIME		Selects the Oscilloscope sweep time. • 1, 3, 10, 30, 100, or 300 ms/Div
EXPD/SET	Touch	Selects the Expanded or Normal screen.
	Touch for 1 second	Displays the AUDIO SCOPE SET screen.

◇ AUDIO SCOPE SET screen

This screen is used to set the FFT scope waveform type, color, Waterfall display, and oscilloscope waveform color.

1. Open the AUDIO SCOPE screen.
   MENU » **AUDIO**

2. Touch [EXPD/SET] for 1 second.
3. Touch the item to set.
   (Example: FFT Scope Waveform Type)
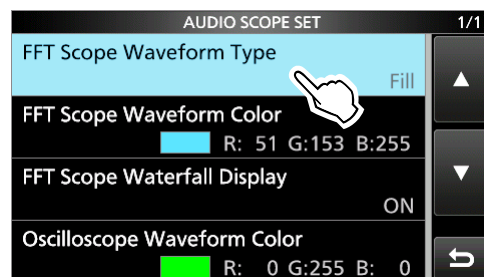
4. Touch the option to set.
   ⓘ See below for details on the setting items and their options.
5. To close the AUDIO SCOPE SET screen, push **EXIT**.

> **TIP:** You can set each item to its default by touching the item for 1 second, and then touching "Default" on the QUICK MENU screen.

FFT Scope Waveform Type   (Default: Fill)

Selects the type of waveform for the FFT scope.
 • Line: Only the waveform outline is drawn.
 • Fill: The full waveform is drawn in color.

FFT Scope Waveform Color
                    (Default: (R) 51 (G) 153 (B) 255)

Sets the waveform color for the FFT scope.
ⓘ Touch and select the R (Red), G (Green), or B (Blue) scale, and then rotate **◉MULTI** to adjust the level from 0 to 255.
ⓘ The color is displayed in the box above the RGB scale.

FFT Scope Waterfall Display   (Default: ON)

Turns the Waterfall display ON or OFF.
 • OFF: Turns OFF the Waterfall display.
 • ON: Turns ON the Waterfall display.

Oscilloscope Waveform Color
                    (Default: (R) 0 (G) 255 (B) 0)

Sets the waveform color for the Oscilloscope.
ⓘ Touch and select the R (Red), G (Green), or B (Blue) scale, and then rotate **◉MULTI** to adjust the level from 0 to 255.
ⓘ The color is displayed in the box above the RGB scale.

Section 4 SD CARD (ADVANCED)

Saving the setting data onto an SD card

The Memory channels and the transceiver's settings can be saved onto an SD card.

1. Open the SAVE SETTING screen.

    MENU » SET > SD Card > **Save Setting**
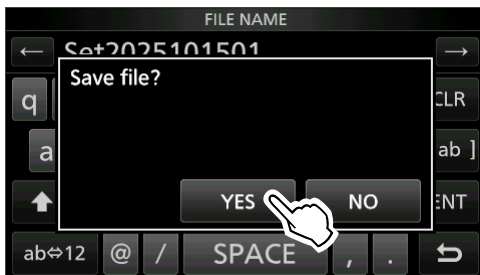
2. Touch "<<New File>>."

    ⓘ 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].

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

4. Touch [YES].

    • Saves the data settings.

5. To close the SD CARD screen, push **EXIT** several times.

Loading the saved data files into a transceiver

You can load the Memory channels and transceiver's settings from the SD card into the transceiver.
ⓘ The transceiver has "ALL" and "Select" loading options.

TIP: Saving the current data is recommended before loading other data into the transceiver. (p. 4-2)

1. Open the LOAD SETTING screen.
   MENU » SET > SD Card > **Load Setting**

2. Touch the file to load.
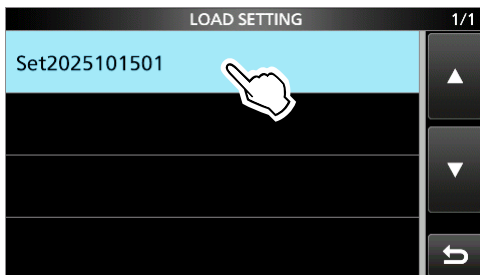
3. Touch "Select."
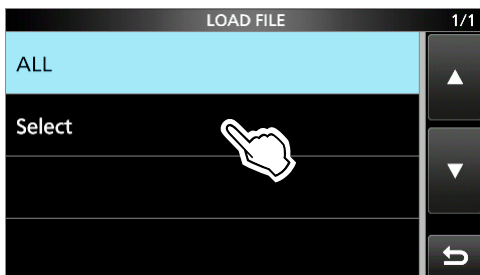
   ⓘ To load all the contents on the LOAD OPTION
      screen, touch "ALL" and go to step 6.

4. Touch the loading options.
   (Example: CI-V Address)
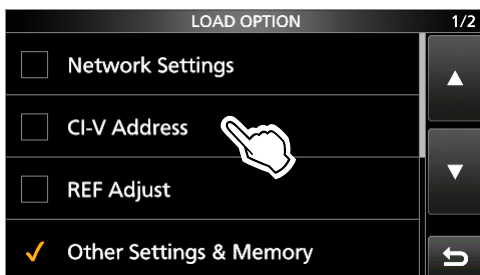
   • "✓" is displayed on the left side of the selected
     option.
   ⓘ The Set mode settings and Memory channel contents
      are always loaded.

5. Touch "<<Load>>."
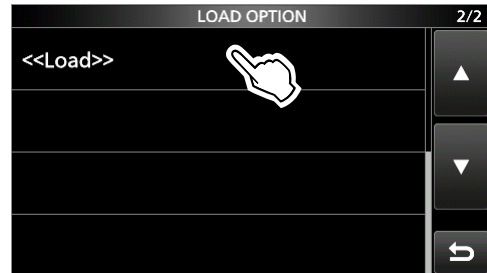
6. Touch [YES].
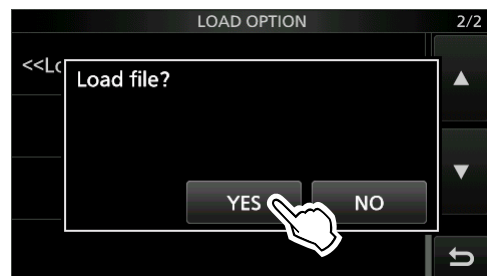
   ⓘ After the loading ends, "COMPLETED! Restart the
      IC-7300MK2." is displayed.
   ⓘ When you select "REF Adjust" in step 4, the
      confirmation dialog is displayed.

7. Turn OFF the transceiver, 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 SD 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 you want to delete for 1 second.
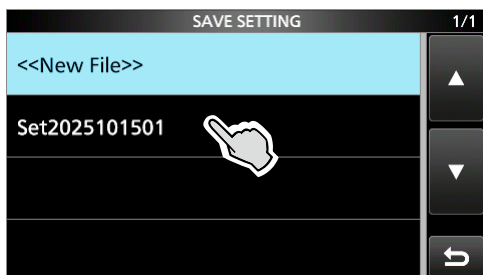
3. Touch "Delete."
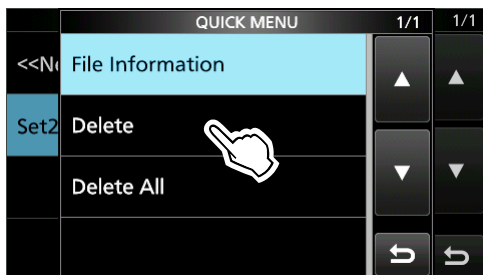
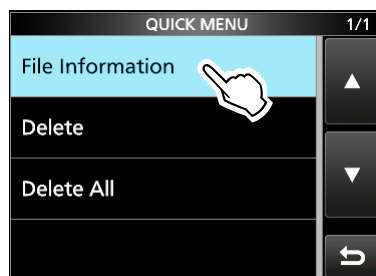   ⓘ To delete all files, touch "Delete All."
   ⓘ To cancel deleting, push EXIT.

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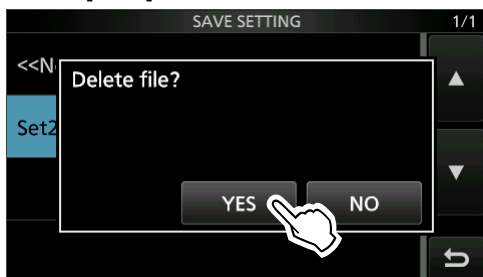
5. To close the SAVE SETTING screen, push EXIT several times.

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

Displaying the SD card information

You can display the SD card capacity, and the time remaining for voice recording.

1. Open the SD CARD screen.
    MENU » | SET > **SD Card** |

2. Touch "SD Card Info."
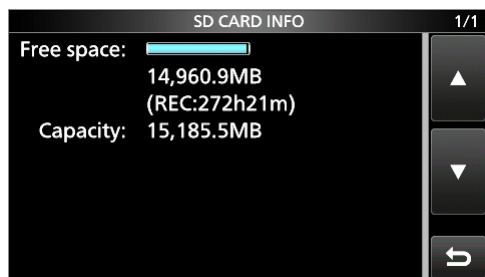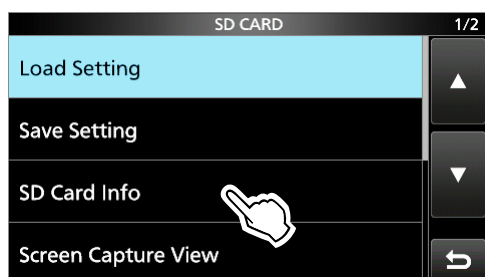
• Displays the card's free space and capacity.

3. To close the SD CARD screen, push EXIT several times.

About the SD card folders
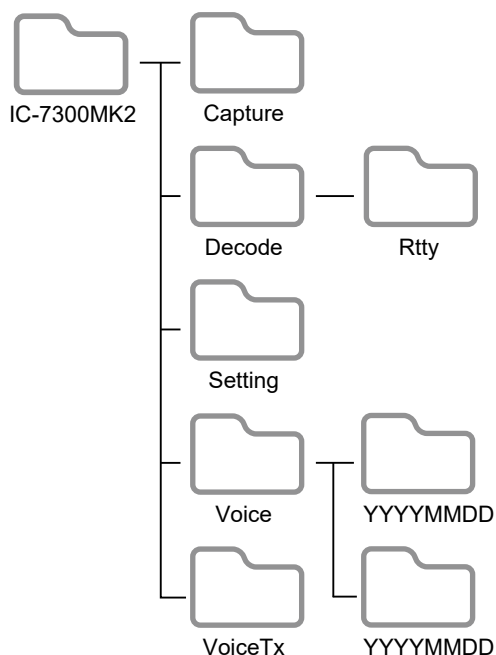
The folder in the SD card contains the following:

- **IC-7300MK2 folder**
The folders created in the IC-7300MK2 are contained in this folder.

- **Capture folder**
The captured screen data in the "png" or "bmp" format.

- **Decode folder**
The RTTY decode log folder.

- **Rtty folder**
The transmitted or received RTTY decode log data in the "txt" or "html" format.

- **Setting folder**
The transceiver's setting data in the "dot" format.

- **Voice folder**
The recorded QSO audio date folders.

- **YYYYMMDD folders**
The recorded audio file in the "wav" format.
The folder name is automatically created in the following format: YYYYMMDD (YYYY: Year, MM: month, DD: day)

- **VoiceTx folder**
The recorded voice audio data for the Voice TX function in the "wav" format.

IC-7300MK2
Capture
Decode — Rtty
Setting
Voice — YYYYMMDD
VoiceTx — YYYYMMDD

# Section 5   VOICE RECORDER FUNCTIONS

Recording a QSO audio

This transceiver is equipped with a QSO recorder not only for the received audio, but also for the transmitted 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 contents are saved onto an SD card.

There are 2 ways to start recording.

● Push QUICK and touch "<<REC Start>>."
● Push MENU and touch [RECORD].


```
          MENU      QUICK
```
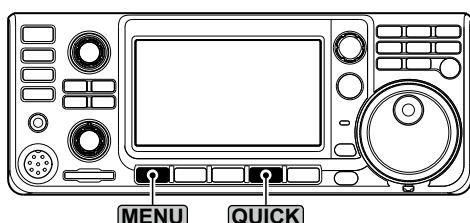
ⓘ The recorded audio is saved in the "Voice" folder on the SD card.

ⓘ 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 under the clock readout, and the SD card indicator next to the SD card slot blinks blue.

"●" is displayed. ┐ ┌ The SD card icon blinks.
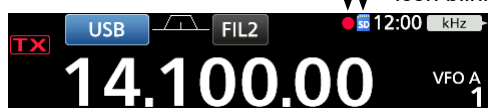
• While pausing, "❚❚" is displayed.

"❚❚" is displayed. ┐ ┌ The SD card icon is displayed.


NOTE:

• To record a QSO, an SD card (User supplied) is required.
• **DO NOT** remove the SD 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 SD card has run out.
• When the recording file's size becomes 2 GB, the transceiver continues to record, but to a new file.

◇ Using the QUICK MENU screen

1. Push QUICK.
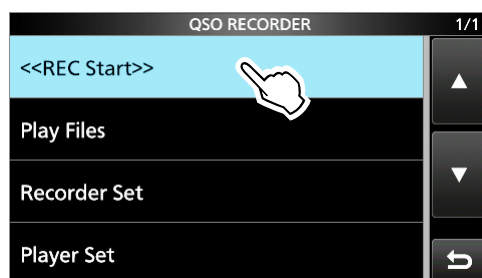   • The QUICK MENU screen is displayed.
2. Touch "<<REC Start>>."
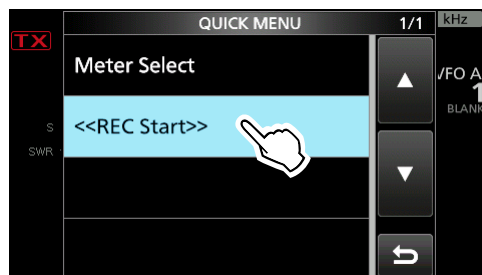
• Starts recording.
• "Recording started." is briefly displayed.
ⓘ To stop recording, open the QUICK MENU screen again and touch "<<REC Stop>>."

◇ Using the MENU screen

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>>."
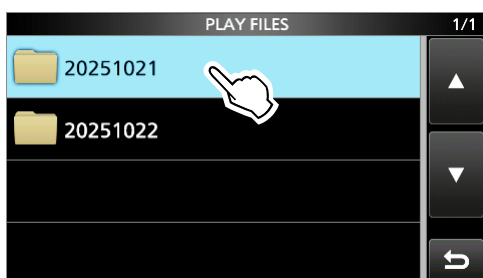3. To close the QSO RECORDER screen, push EXIT.

Playing back a QSO audio

You can play back the recorded QSO audio.

1. Insert the SD card on which the recorded audio is saved.
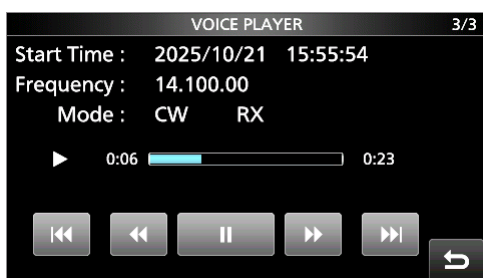2. Open the PLAY FILES screen.
   MENU » RECORD > **Play Files**
3. Touch the folder where the file you want to play back is saved.

ⓘ 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 forwards to the skip time point. (Default: 10 seconds)
⏸	Pauses the file. ⓘ ▶ 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**
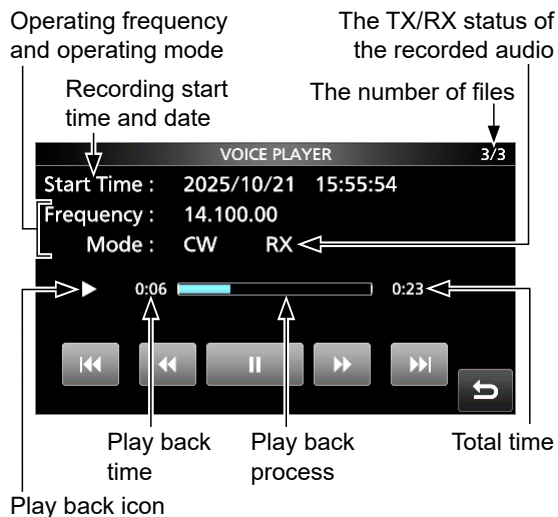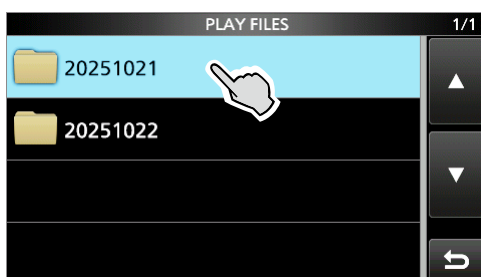
Checking the folder or file information

You can check the folder name, size, saved date or recorded file's operating frequency, operating mode, date, and so on.

Checking the folder information
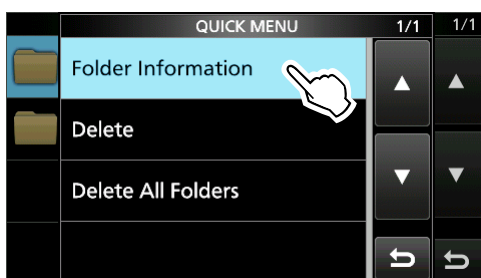
1. Open the PLAY FILES screen.
   MENU » RECORD > **Play Files**

2. Touch a folder for 1 second.

   • The QUICK MENU screen is displayed.
3. Touch "Folder Information."

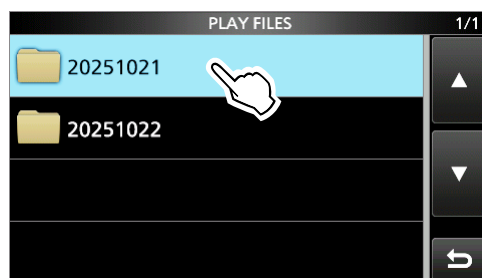   • The FOLDER INFORMATION screen is displayed.
4. To close the PLAY FILES screen, push EXIT several times.

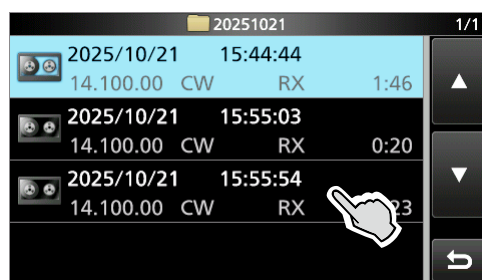## Checking the file information

1. Open the PLAY FILES screen.
   MENU » RECORD > **Play Files**

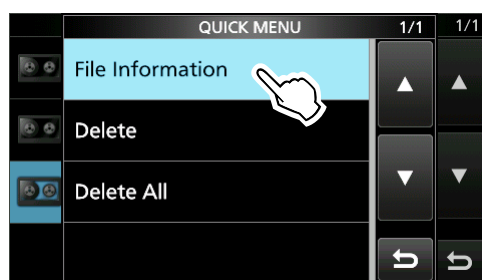2. Touch a folder.

3. Touch a file to check its information for 1 second.

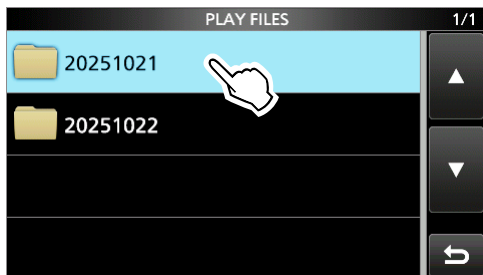   • The QUICK MENU screen is displayed.
4. Touch "File Information."

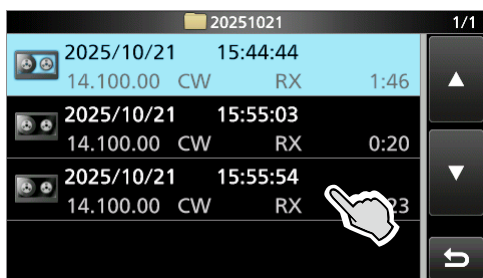   • The FILE INFORMATION screen is displayed.
5. To close the PLAY FILES screen, push EXIT several times.

Deleting files

1. Open the PLAY FILES screen.
   MENU » RECORD > **Play Files**

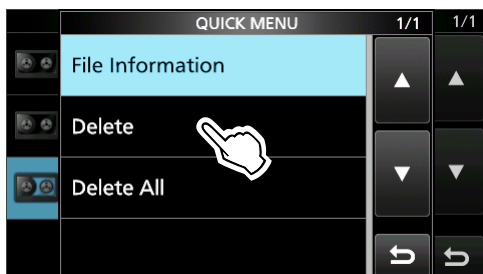2. Touch the folder where the file you want to delete is saved.

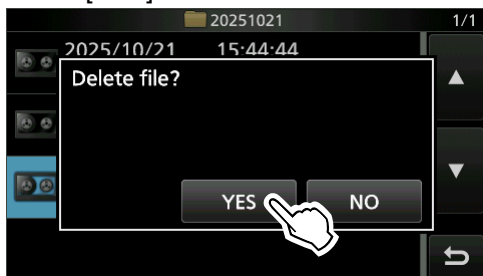3. Touch the file you want to delete for 1 second.

   • The QUICK MENU screen displayed.
4. Touch "Delete."

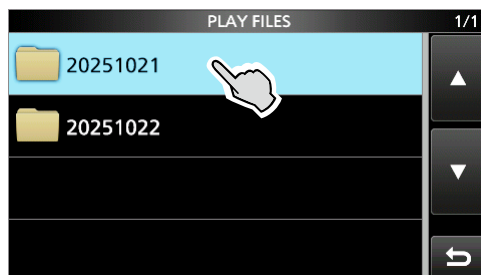   ⓘ If you want to delete all files in the selected folder, touch "Delete All."
5. Touch [YES].

   • The file is deleted and returns to the previous screen.
6. To close the PLAY FILES screen, push EXIT several times.
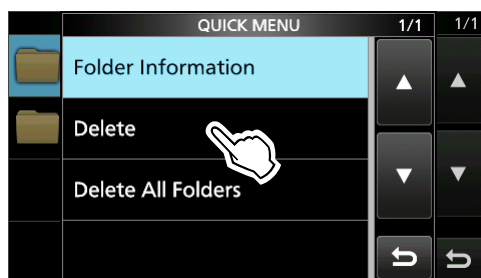
Deleting folders

NOTE: All the files in the folder are also deleted.

1. Open the PLAY FILES screen.
   MENU » RECORD > **Play Files**

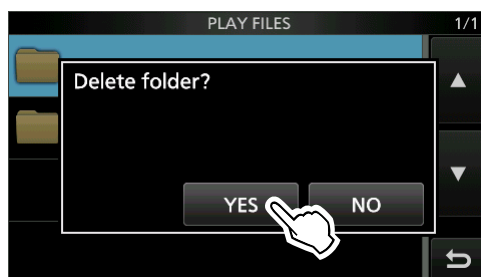2. Touch the folder you want to delete for 1 second.

   • The QUICK MENU screen is displayed.
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.
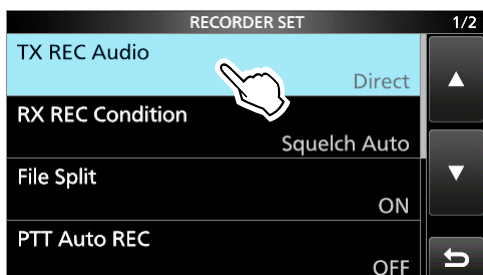5. To close the PLAY FILES screen, push EXIT several times.

RECORDER SET screen
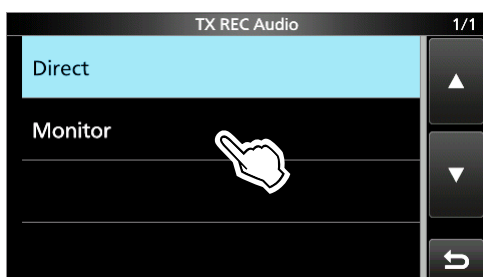
You can change the recorder settings on this screen.

1. Open the RECORDER SET screen.
   MENU » RECORD > **Recorder Set**

2. Touch the item to set. (Example: TX REC Audio)

RECORDER SET	1/2
TX REC Audio	Direct
RX REC Condition	Squelch Auto
File Split	ON
PTT Auto REC	OFF

3. Touch the option to set. (Example: Monitor)

TX REC Audio	1/1
Direct	
Monitor	

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 screen.

TX REC Audio (Default: Direct)

Selects the transmit audio to record.
- Direct: Records the microphone audio.
- Monitor: Records the TX monitor audio.

RX REC Condition (Default: Squelch Auto)

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)

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.

PTT Auto REC (Default: OFF)

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 since 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.
- 10 minutes have passed while operating with the squelch open in the SSB, CW, RTTY, or AM mode.
- The frequency or operating mode is changed.

PRE-REC for PTT Auto REC (Default: 10sec)

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 is previously received in this set period of time.
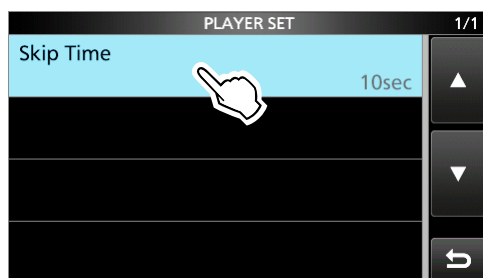
PLAYER SET screen

You can fast forward or rewind while playing back. You can change the skip time in the PLAYER SET screen.

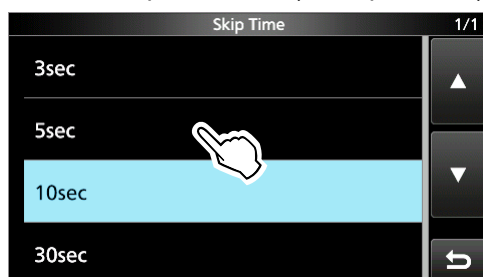1. Open the PLAYER SET screen.
   MENU » RECORD > **Player Set**

2. Touch "Skip Time."

PLAYER SET	1/1
Skip Time	
	10sec
	▲
	▼
	↩

3. Touch the option to set. (Example: 5sec)

Skip Time	1/1
3sec	
5sec	▲
10sec	
	▼
30sec	↩

4. To close the PLAYER SET screen, push **EXIT** several times.


   TIP: You can set each item to its default by touching the item for 1 second, and then touching "Default" on the QUICK MENU screen.

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. Insert the SD card into the memory card slot or memory card reader (User supplied) on your PC.

   IC-7300MK2

   SD card

   Into the card reader   PC
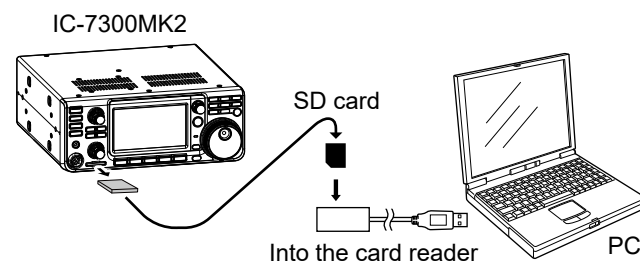
2. Open the "Voice" folder.
   ⓘ See page 4-6 for details.
   • The QUICK MENU screen is displayed.
3. Open the folder where the file you want to play back is saved.
   ⓘ The folders are titled based on the recorded date. (YYYYMMDD)
4. Open the file you want to play back.
   • The audio starts playing back.
   ⓘ The files are titled based on the date and time. (YYYYMMDD_hhmmss.wav)

NOTE:
 • The operations while playing back 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 application software.

Section 6   VOICE TX MEMORY FUNCTION

Recording a Voice TX memory

SSB, AM, and FM modes

You can record up to 8 Voice transmit (TX) memories (T1 ~ T8) onto an SD card. To transmit a recorded content using a Voice TX memory, first record the message, as described below.

ⓘ You can record up to 1 and a half minutes in each memory.

ⓘ You can also transmit the recorded content using an external keypad.

NOTE: To use the Voice TX memory function, an SD card (User supplied) is required.
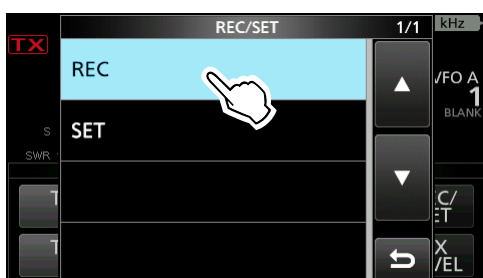
◇ Recording

1. Open the VOICE TX screen.
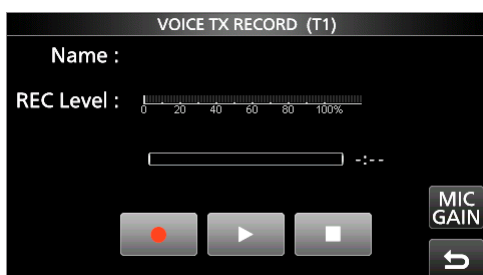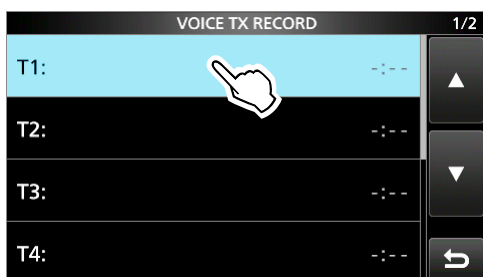   MENU » VOICE

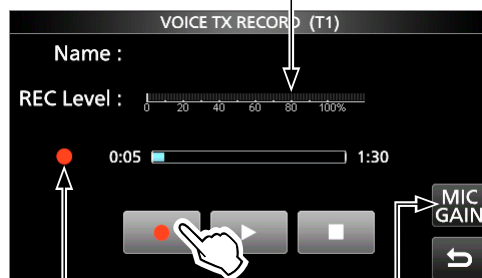2. Touch [REC/SET].

3. Touch "REC."

   • The VOICE TX RECORD screen is displayed.

4. Select the desired Voice memory "T1" ~ "T8." (Example: T1)
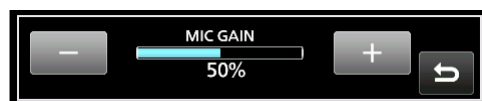
5. Touch ● to start recording.
   Adjust the Mic gain so that the "REC Level" meter reads less than 80%.

   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.

6. Touch ■ to stop recording.

7. To close the VOICE TX RECORD screen, push EXIT several times.

TIP: How to clear the recorded content
Touch the Voice TX memory for 1 second in step 4, and then touch "Clear" in the QUICK MENU screen.

◇ Playing back

1. On the selected memory's recording screen, touch ► to start playing back without transmitting.
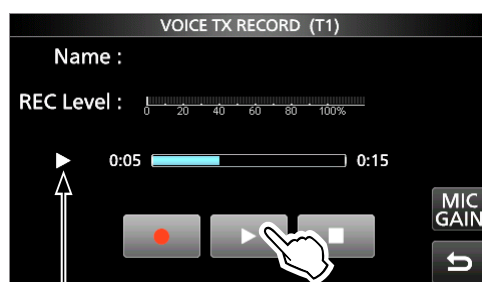
   Displayed while playing.

   ⓘ To stop the playback, touch ■.

2. To close the VOICE TX RECORD screen, push EXIT several times.
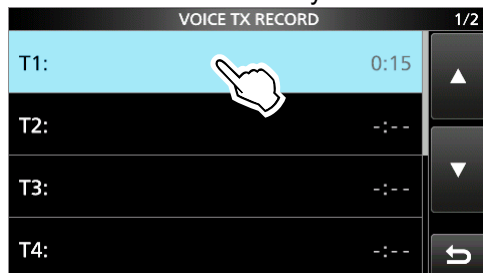
Entering a Voice TX memory name

You can assign a name to recorded Voice TX memories.

Example: Entering "Contest" in Memory T1 (T1 ~ T8)
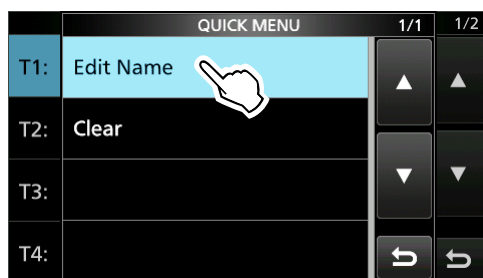
1. Open the VOICE TX RECORD screen.
   MENU » VOICE > REC/SET > **REC**

2. Touch the desired memory for 1 second.

VOICE TX RECORD		1/2
T1:	0:15	▲
T2:	-:--	
T3:	-:--	▼
T4:	-:--	↰

   ⓘ The selected memory needs to contain a recording.

3. Touch "Edit Name."

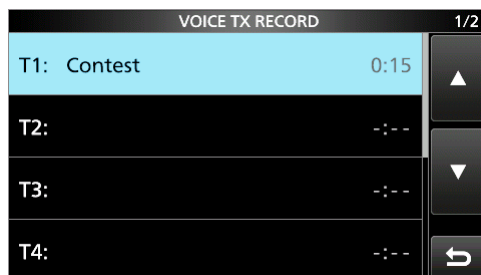 | QUICK MENU | 1/1 | 1/2 |
   | --- | --- | --- |
   | T1: Edit Name | ▲ | ▲ |
   | T2: Clear | | |
   | T3: | ▼ | ▼ |
   | T4: | ↰ | ↰ |

   • The Name editing screen is displayed.

4. Enter a name of up to 16 characters, and then touch [ENT] to save.
   ⓘ See page iii on how to enter characters.

   VOICE TX RECORD (T1)
   ← Contest →
   q w e r t y u i o p   CLR
   a s d f g h j k l   [ab]
   ⬆ z x c v b n m   ENT
   ab⇔12 @ / SPACE , .

   ▼

VOICE TX RECORD		1/2
T1: Contest	0:15	▲
T2:	-:--	
T3:	-:--	▼
T4:	-:--	↰
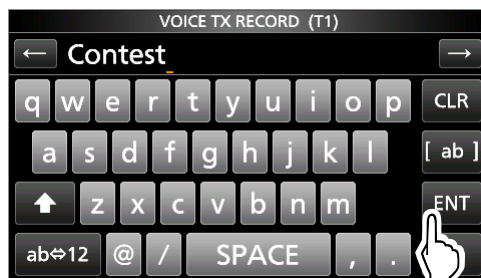
5. To close the VOICE TX RECORD screen, push **EXIT** several times.

Transmitting a Voice TX memory content

You can transmit the Voice TX memory contents once, or repeatedly. This is useful for transmitting your call sign or name in some contests, or repeatedly calling CQ.

◇ Transmitting

Transmits the prerecorded content. (p. 6-2)

1. Open the VOICE TX screen.
   MENU » **VOICE**

2. Touch the desired Voice memory key [T1] ~ [T8].

The transmission's remaining time

   • Transmits the recorded content once.

3. To close the VOICE TX screen, push **EXIT**.

TIP: How to cancel a Voice TX memory transmission
   • Touch any key other than [TX LEVEL] on the VOICE TX screen
   • Push **EXIT**, **V/M**, **▲**, or **▼**
   • Touch the frequency's MHz digits or the Memory channel number
   • Turn OFF the transceiver
   ⓘ When "PTT Port Function" is set to "PTT Input," you can cancel transmitting the recorded audio by pushing [PTT] on the microphone.

When an external keypad is connected:
You can transmit the preset contents in the Voice TX memory (T1 ~ T4) from an external device by setting the "External Keypad," and then connecting an external keypad to [MIC] on the IC-7300MK2.
ⓘ Memory "T5 ~ T8" cannot be sent from the external keypad.

   MENU » SET > Connectors > External Keypad > **VOICE**

◇ Repeatedly transmitting

1. Open the VOICE TX screen in a Voice mode.
   ⓘ Voice modes: SSB, AM, and FM.
   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. (p. 6-5)
   • 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 when signals are received.

3. To close the VOICE TX screen, push **EXIT**.

TIP:
   • If the "DATA OFF MOD" is set to "USB," "ACC," or "LAN," Voice TX memories can not be transmitted.
   MENU » SET > Connectors > MOD Input > **DATA OFF MOD**

   • To cancel transmitting the recorded audio by pushing [PTT] on the microphone, set "PTT Port Function" to "PTT Input."
   MENU » SET > Connectors > **PTT Port Function**

◇ Adjusting the output level

Adjust the Voice TX memory level.

1. Open the VOICE TX screen.
   MENU » VOICE

2. Touch [TX LEVEL].

3. Touch any Voice memory key other than [T4] or
   [T8]. ([T1] ~ [T3], [T5] ~ [T7])

   • The transceiver automatically transmits.
   ⓘ To adjust the Transmit voice level using [T4] or [T8],
      reverse steps 2 and 3.
4. While transmitting, rotate MAIN DIAL to adjust the
   transmit voice level.
   ⓘ Pushing [DEF] for 1 second returns the value to the
      default.
   ⓘ Adjusting TX LEVEL too high may result in over
      modulation and transmit signal distortion.
5. To save and close the VOICE TX screen, push
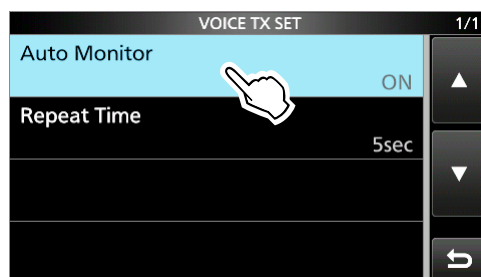   EXIT several times.

VOICE TX SET screen

You can set the Automatic Monitor function and the
Transmit Repeat Interval on this screen.

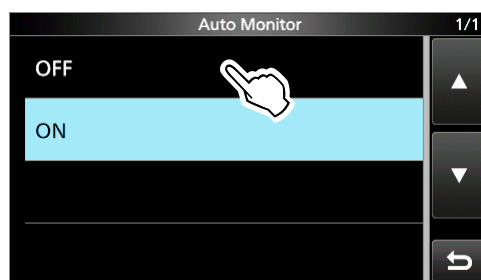1. Open the VOICE TX SET screen.
   MENU » VOICE > REC/SET > SET

2. Touch the item to set. (Example: Auto 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 screen.

Auto Monitor (Default: ON)

Turns the Automatic Monitor function for recorded
audio content transmission, ON or OFF.
 • OFF: Monitors the transmission of audio only
          when the Monitor function is ON.
 • ON: Automatically monitors the transmission
          of audio when sending recorded audio.

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 has been transmitted, the
   transceiver automatically returns to receive.

Section 7   MEMORY OPERATION

Memory channels

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.
ⓘ To save the changed value, overwrite the Memory channel contents, or copy to another Memory channel. (p. 7-4)

Memory channel	Displayed
1 to 99	Regular Memory channels. One frequency, one mode, one filter, memory channel name, tone settings (including tone frequencies for repeater and tone squelch), and select memory scan setting in each memory channel.
P1/P2	Scan Edge Memory channels. One frequency, one mode, and one filter in each memory channel as Scan Edges for Programmed Scans. ⓘ They cannot be left blank.

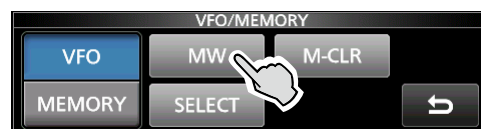## Entering Memory channel contents

The operating frequency, operating mode, IF filter bandwidth, and so on can be entered to each memory channel.

NOTE: New content you enter will overwrite any content already in the selected memory.

1. Push [V/M] to select the VFO mode.
   • "VFO A" or "VFO B" is displayed.
2. Set the frequency, operating mode, and filter.
3. Push [▲] or [▼] to select the channel to enter.
   • "BLANK" is displayed if the selected channel has no contents.
   ⓘ If the selected channel was previously entered, the contents will be overwritten.
4. Touch the channel number.

   • The VFO/MEMORY screen is displayed.
   ⓘ You cannot touch the channel number when the Mini scope screen or expanded screen is displayed.
5. Touch [MW] for 1 second to save the entered contents into the selected channel.

   • "BLANK" disappears, or the selected channel's contents are overwritten.
6. To close the VFO/MEMORY screen, push [EXIT].

To edit the Memory channel contents:
1. Select the Memory channel to edit.
2. Change the frequency and other parameters in the Memory mode.
3. Open the VFO/MEMORY screen.
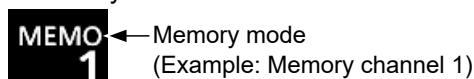4. Touch [MW] for 1 second to overwrite onto the selected Memory channel.

Selecting a memory channel

There are 3 ways to select a Memory channel.
• Select with (⊙•MULTI)
• Select on the MEMORY screen
• Select using the keypad (See the Basic manual)

◇ Selecting with (⊙•MULTI)

1. Push [V/M] to select the Memory mode.
2. Rotate (⊙•MULTI) until you select the memory channel you want to use.

MEMO
1
←— Memory mode
(Example: Memory channel 1)

ⓘ You can also select the memory channel with:
- [▲] and [▼] on the transceiver.
- The microphone [UP] and [DN] keys.

◇ Selecting on the MEMORY screen

1. Push [V/M] to select the Memory mode.
2. Open the MEMORY screen.
    MENU » **MEMORY**
3. Touch the Memory channel that you want to use.

• The channel is selected and automatically closes the MEMORY screen.

Copying the Memory channel contents

You can copy the Memory channel contents to the VFO or another memory channel.

◇ Copying to the VFO

1. Push V/M to select the Memory mode.
2. Push ▲ or ▼ to select the channel to be copied.
   (Example: Memory channel 2)

3. Hold down V/M for 1 second.
   • A beep sounds, and the selected memory contents are copied to the VFO.
4. Push V/M to select the VFO mode.

◇ Copying to another Memory channel

1. Push V/M to select the Memory mode.
2. Push ▲ or ▼ to select the channel to be copied.
   (Example: Memory channel 2)
3. Open the MEMORY screen.
   MENU » MEMORY

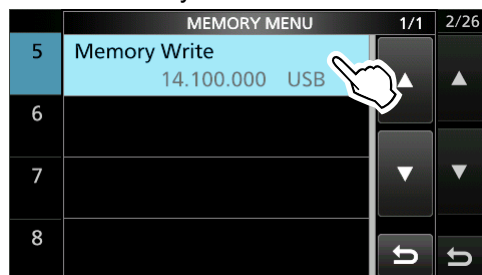

4. Rotate (MAIN DIAL) to select the channel to write the copied contents to.
   (Example: Memory channel 5)
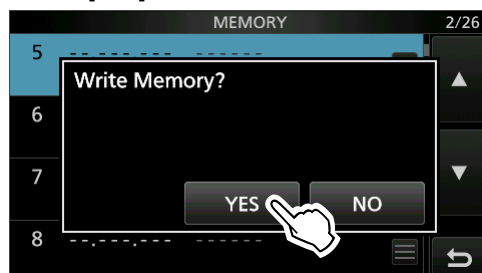   ⓘ DO NOT rotate (MULTI). Select the channel by rotating (MAIN DIAL).
5. Touch ☰ of the selected channel.

6. Touch "Memory Write."


7. Touch [Yes].

   • A beep sounds, and the selected memory contents are copied.
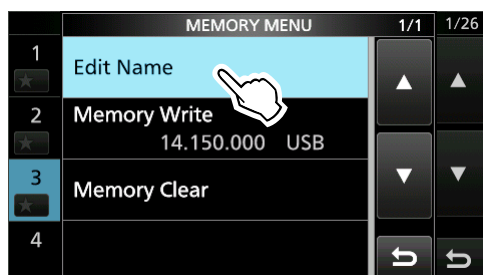8. To close the MEMORY screen, push EXIT.

7-4

Entering a Memory name

Except for the blank channels, you can assign a name to all memory channels, including Scan Edges.
The names will be displayed along with the frequency, mode, and filter number.

1. Open the MEMORY screen.
   MENU » MEMORY

2. Rotate ◎MULTI to select the channel to enter a name. (Example: Memory channel 3)
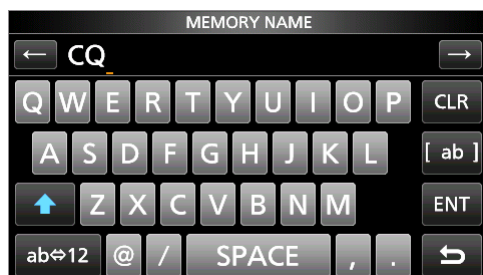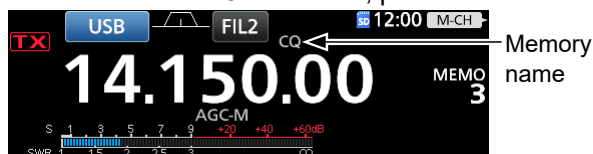3. Touch ▤ of the selected channel.
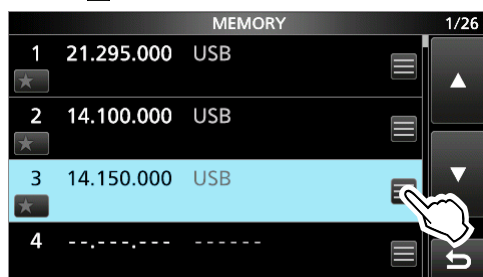
4. Touch "Edit Name."

   ⓘ Touch "Memory Clear" to clear any memory contents and name.

5. Enter a name, and then touch [ENT]. (Example: CQ)

   ⓘ See page iii on how to enter characters.
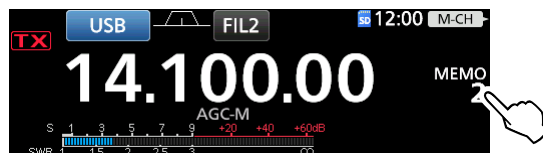
6. To close the MEMORY screen, push EXIT.

   ⓘ The Memory name is not displayed when the Mini scope screen (See the Basic manual) or expanded screen is displayed.
   ⓘ You can also select not to display the Memory name on the standby screen.

   MENU » SET > Display > Memory Name

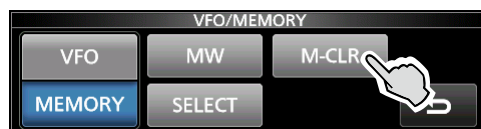## Clearing a Memory channel

You can clear a no-longer-used Memory channel and reset it as a blank channel.

1. Push V/M to select the Memory mode.
2. Rotate ◎MULTI to select the channel to clear. (Example: Memory channel 2)
3. Touch the channel number.

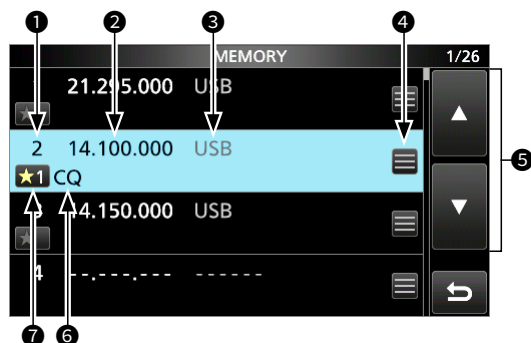
4. Touch [M-CLR] for 1 second to clear the Memory channel.

   • "BLANK" is displayed.
5. To close the VFO/MEMORY screen, push EXIT.

MEMORY screen

MENU » MEMORY

You can edit Memory channel contents on the MEMORY screen.

❶ **Memory channel number**
Displays the Memory channel number.
ⓘ "P1" or "P2" is displayed for the Scan Edge memory channels.

❷ **Frequency**
Displays the entered frequency.

❸ **Operating mode**
Displays the selected operating mode.

❹ **Memory menu**
Displays the Memory channel number.
ⓘ "P1" or "P2" is displayed for the Scan Edge memory channels.

❺ **[▲] and [▼]**
Touch to scroll through the Memory channels, 4 channels at a time.

❻ **Memory name**
Displays the Memory name, if entered.
ⓘ See the previous page for details.

❼ **Select memory icon (1 ~ 99)**
Touch this icon to set the Select number "★1," "★2," "★3" or OFF. See page 8-5 for the Select Memory scan.
ⓘ You can also touch the icon for 1 second to display the SELECT ALL CLEAR screen, and then select the desired item to reset the Select number.

ⓘ **About the QUICK MENU**
While selecting a memory channel with memory contents, push QUICK to display the QUICK MENU, where you can select "SELECT," "Edit Name," "Memory Write," "Memory Clear," or "SELECT ALL CLEAR."

Memo Pad

There are 5 Memo Pads as the default to save frequencies and operating modes for easy writing and recall. You can increase the Memo Pads to 10 in "Memo Pad Quantity."

`MENU` » `SET > Display > Memo Pad Quantity`

ⓘ The Memo Pads are separate from memory channels.

Memo Pads are convenient when you want to temporarily memorize a frequency and operating mode, such as when you find a DX station in a pile-up, or when the desired station is busy for a long time and you want to temporarily search for other stations.

◇ Saving the contents into a Memo Pad

1. Select the VFO mode. (See the Basic manual)
2. Set the frequency and operating mode, then push `MPAD` for 1 second.
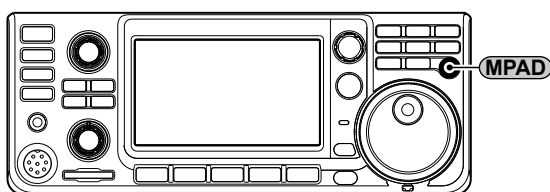
- A beep sounds.
ⓘ When you save up to the set number of Memo Pads in "Memo Pad Quantity," the oldest Memo Pad is automatically cleared for the new Memo Pad.

NOTE: Each Memo Pad must have its own unique contents. The Memo Pads with identical content cannot be saved.

◇ Calling up the Memo Pads

1. Select the VFO mode. (See the Basic manual)
2. Push `MPAD` several times until the desired Memo Pad is displayed.
ⓘ Pushing `MPAD` selects the Memo Pads.
ⓘ The most recently saved Memo Pad is selected first.

◇ MEMO PAD screen

The MEMO PAD screen displays the saved contents in a list, in which you can select or delete the saved contents.

`MENU` » `MPAD`

Temporary Pad

TIP: If you change the frequency or operating mode called up from Memo Pads, the contents are automatically updated in a temporary Pad.

Key	Action	
▲/▼	Scrolls through the list.	
DEL	Touch for 1 second	Deletes the selected Memo Pad.
DEL ALL	Touch for 1 second	Deletes all the Memo Pads.
EXPAND	Selects the Expanded or Normal screen.	

Section 8   SCANS

Scan types

VFO SCAN
Used to detect signals by automatically changing the frequency in the VFO mode.

> **Programmed scan**   (p. 8-4)
> Repeatedly scans between two Scan Edge frequencies.
> The Edge frequencies are programmable, and preset in P1 and P2 as the default.
>
> > **Fine Programmed scan**
> > If the squelch opens while scanning, the tuning step changes to 10 Hz. This reduces the scan speed, but the transceiver keeps scanning.

MEMORY SCAN
Used to detect signals by automatically scanning the memories in the Memory mode.

> **Memory scan**   (p. 8-5)
> Repeatedly scans all entered Memory channels.

> **Select Memory scan**   (p. 8-6)
> Repeatedly scans Select Memory channels.

⊿F SCAN   (p. 8-7)
Repeatedly scans within the ⊿F span area.
The scan starts from the center frequency.

> **Fine ⊿F scan**
> If the squelch opens while ⊿F scanning, the tuning step changes to 10 Hz. This reduces the scan speed, but the transceiver keeps scanning.

Preparation

◇ Squelch status

The scan works with the selected band's squelch status.
Be sure to adjust the squelch level according to your operating environment.
ⓘ Normally, set (AF⊙**RF/SQL**) to the point where noise just disappears, and the TX/RX indicator goes OFF.
ⓘ When (AF⊙**RF/SQL**) operates as only an RF gain control, you cannot adjust the squelch level.

MENU » | SET > Function > **RF/SQL Control** |

When the scan starts with the squelch open:
 • When the tuning step is 1 kHz or less, the scan continues until it is manually stopped— it does not pause, even if signals are detected.
 • When the tuning step is 5 kHz or more, the scan pauses on each step when the Scan Resume function is ON. It does not pause when the function is OFF.
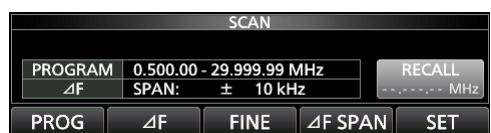
When the scan starts with the squelch closed:
The scan stops when a signal is detected, regardless of the tuning step.
ⓘ When the Scan Resume function is ON, the scan pauses for 10 seconds after detecting a signal, then resumes 2 seconds after the signal disappears.
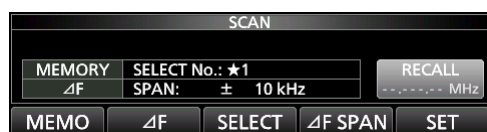
SCAN screen

To display the SCAN screen, push MENU, and then touch [SCAN].

SCAN

PROGRAM	0.500.00 - 29.999.99 MHz	RECALL
⊿F	SPAN: ± 10 kHz	--.---.-- MHz
PROG	⊿F	FINE	⊿F SPAN	SET

VFO mode

▼ ▲ Push V/M.

SCAN

MEMORY	SELECT No.: ★1	RECALL
⊿F	SPAN: ± 10 kHz	--.---.-- MHz
MEMO	⊿F	SELECT	⊿F SPAN	SET

Memory mode

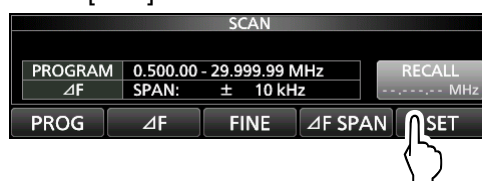| Key	Action
PROG	Starts or cancels a Programmed scan.
MEMO	Starts or cancels a Memory scan.
⊿F	Starts or cancels the ⊿F scan.
FINE	While Programmed scanning, touch to switch to the Fine Programmed scan. While ⊿F scanning, touch to switch to the Fine ⊿F scan. ⓘ In the Memory mode, this key is displayed when a ⊿F scan is started.
⊿F SPAN	Selects a ⊿F span. • ±5 kHz, ±10 kHz, ±20 kHz, ±50 kHz, ±100 kHz, ±500 kHz, or ±1 MHz.
SELECT	Touch: Selects a Memory channel to set as a Select Memory channel. • "★1," "★2," "★3," and "(no icon)"
	Touch for 1 second: Displays the SELECT ALL CLEAR screen.
SEL No.	Selects the Select scan number for the Select Memory scan. • "★1," "★2," "★3," or "★1,2,3"
RECALL	Touch for 1 second: Sets the operating frequency to the frequency that was set before starting the scan in the VFO mode.
SET	Displays the SCAN SET screen.

SCAN SET screen
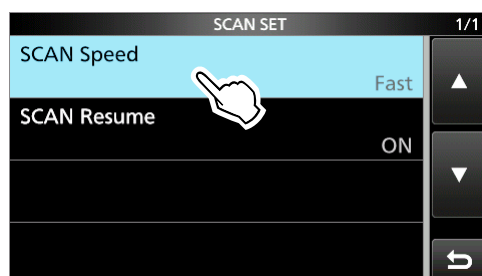
You can change the scan settings on this screen.
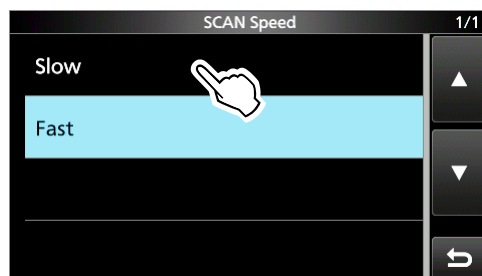
1. Display the SCAN screen.
   MENU » SCAN

2. Touch [SET].

SCAN

PROGRAM	0.500.00 - 29.999.99 MHz	RECALL
⊿F	SPAN: ± 10 kHz	--.---.-- MHz
PROG	⊿F	FINE	⊿F SPAN	SET

3. Touch the item to set. (Example: SCAN Speed)

SCAN SET 1/1
SCAN Speed   Fast
SCAN Resume   ON

4. Touch the option to set. (Example: Slow)

SCAN Speed 1/1
Slow
Fast

5. To close the SCAN 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 screen.

**SCAN Speed** (Default: Fast)

Sets the desired scan speed to slow or fast.
• Slow: Scan speed is slow.
• Fast: Scan speed is fast.

SCAN Resume (Default: ON)

Sets the Scan Resume function to ON or OFF.
• OFF: When a signal is detected, the scan is canceled.
• ON: When a signal is detected, the scan pauses for 10 seconds, and then resumes. Two seconds after the signal disappears, the scan resumes.

Programmed scan and Fine Programmed scan

Scan edge
P1 or P2

Scan edge
P2 or P1

Scan

Lower
frequency

Jump

Higher
frequency
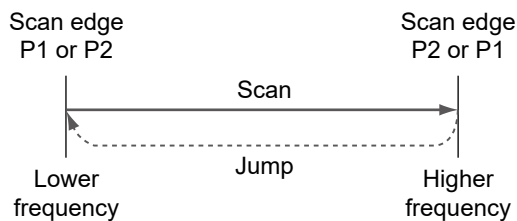
Repeatedly scans between two Scan Edge frequencies.

The edge frequencies are preset in P1 and P2 as the default. (P1: 0.500000 MHz / P2: 29.999999 MHz)

ⓘ To change the P1 and P2 Scan Edge Memory channels, see page 7-2 for details.

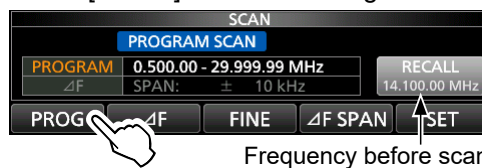ⓘ If the same frequencies are entered into P1 and P2, the Programmed scan does not start.

ⓘ The Fine Programmed scan is most effective in the SSB, CW, and RTTY modes.

◇ Programmed scan operation

1. Select the VFO mode in the Main band.
2. Select the operating mode and tuning step. (Example: USB, 1 kHz)
3. Open the SCAN screen.
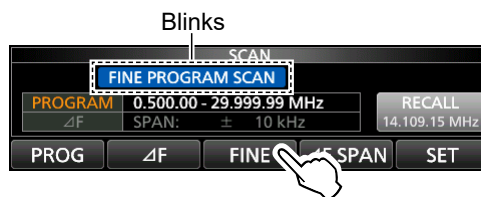   MENU » SCAN
4. Touch [PROG] to start the Programmed scan.

Frequency before scan

ⓘ When a signal is detected, the scan pauses according to the "SCAN Resume" setting, and then resumes.

ⓘ You can change the operating mode and the tuning step while scanning.

ⓘ To cancel the scan, touch [PROG].

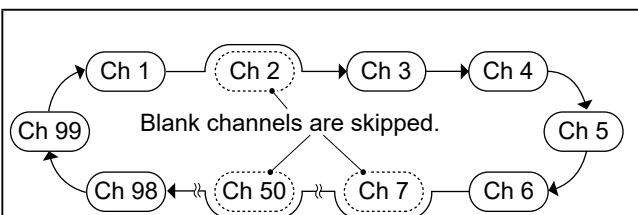5. To switch to the Fine Programmed scan, touch [FINE].

Blinks

• The tuning step changes to 50 Hz steps.

ⓘ When a signal is detected, the tuning step changes to 10 Hz.

ⓘ To return to the Programmed scan, touch [FINE] again.

6. To close the SCAN screen, push EXIT.
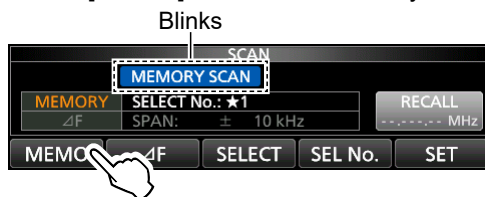
Memory scan

Blank channels are skipped.

Repeatedly scans all entered Memory channels (except P1 and P2).
Blank (not entered) Memory channels are skipped.

ⓘ If 2 or more Memory channels are not entered, the Memory scan does not start.

◇ Memory scan operation

1. Select the Memory mode.
2. Open the SCAN screen.
   MENU » **SCAN**

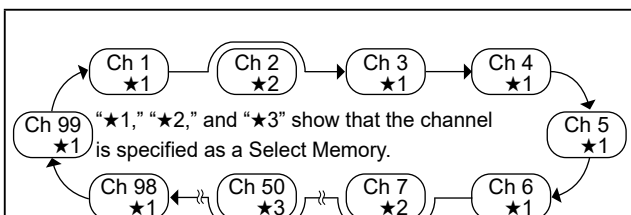3. Touch [MEMO] to start the Memory scan.

   Blinks

   ⓘ When a signal is detected, the scan pauses according to the "SCAN Resume" setting, and then resumes.
   ⓘ To cancel the scan, touch [MEMO].

4. To close the SCAN screen, push **EXIT**.

Select Memory scan

"★1," "★2," and "★3" show that the channel is specified as a Select Memory.

Repeatedly scans Select Memory channels (★1, ★2, ★3).
Blank (not entered) Memory channels are skipped.

ⓘ If 2 or more Memory channels are not designated as Select Memory channels, the Select Memory scan does not start.

## ◇ Setting the Select Memory channels

1. Select the Memory mode.
2. Open the SCAN screen.
   MENU » **SCAN**

3. Rotate **⊙MULTI** to select memory channels to set as Select Memory channels.
4. Touch [SELECT] to set the selected number.
   ⓘ Each touch selects "★1," "★2," "★3," and "(no icon)."

   Selected number

5. Repeat steps 3 and 4 to set more than 2 Select Memory channels.

**TIP: Setting Select Memory channels on the MEMORY screen**

1. Display the MEMORY screen.
   MENU » **MEMORY**

2. Touch the SELECT icon to set the channel as the Select Memory channel. (Example: ★1)
   ⓘ Each touch selects "★1," "★2," "★3," and "(no icon)."
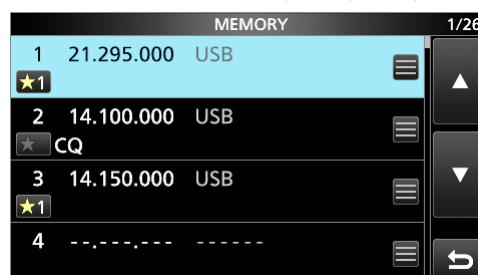
Select Memory scan

◇ Select Memory scan operation

1. Start the Memory scan.
   ⓘ See steps 1 ~ 3 in "Memory scan operation" (p. 8-5) for details.
2. While scanning, touch [SEL No.] to select the Select scan number.
   ⓘ Touching [SEL No.] changes between "★1," "★2," "★3," and "★1,2,3."
   - ★1: Channels specified as ★1 are scanned.
   - ★2: Channels specified as ★2 are scanned.
   - ★3: Channels specified as ★3 are scanned.
   - ★1,2,3: Channels specified as ★1, ★2, or ★3 are scanned.
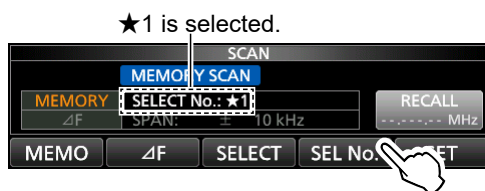
★1 is selected.

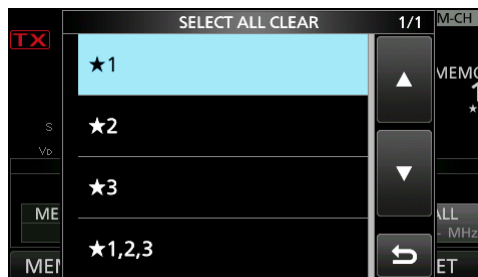3. Touch [SELECT] to switch to the Select Memory scan.

Blinks
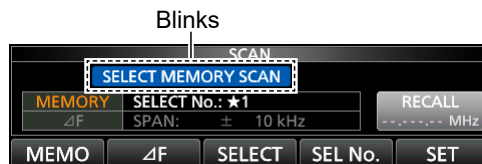
ⓘ **Information**
- When a signal is detected, the scan pauses according to the "SCAN Resume" setting, and then resumes.
- To return to the regular Memory scan, touch [SELECT].
- While scanning, touch [SEL No.] to select the Select Memory scan number.
- To cancel the scan, touch [MEMO].

4. To close the SCAN screen, push **EXIT**.

Clearing all Select Memory channels
1. Touch [SELECT] for 1 second on the SCAN screen.
   - The SELECT ALL CLEAR screen is displayed.
2. Touch the Select Memory channel number to clear.

⊿F scan and Fine ⊿F scan

14.17 MHz   14.18 MHz   14.19 MHz

Scan   Scan

Start   Jump

Scan edge   Center   Scan edge
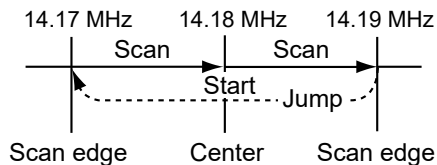
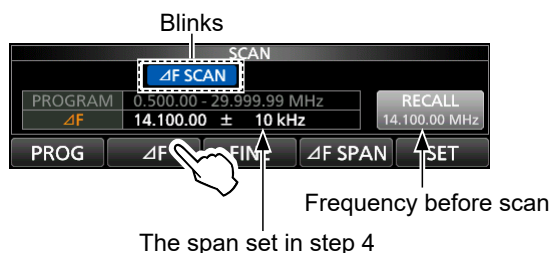(Example: Span: ±10 kHz)

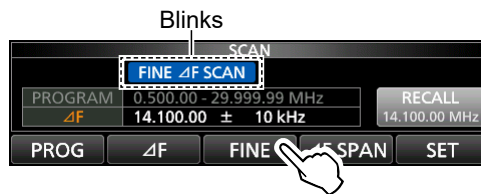Repeatedly scans within the ⊿F span area. The scan starts from the center frequency.

ⓘ In a Fine scan (Programmed or ⊿F), the scan speed decreases when the squelch opens, but the transceiver keeps scanning. The scan tuning step changes to 10 Hz when the squelch opens.

◇ ⊿F scan operation

1. Set the center frequency.
2. Set the operating mode and tuning step. (Example: USB, 10 kHz)
   ⓘ You can also change these settings while scanning.
3. Open the SCAN screen.
   MENU » SCAN

4. Touch [⊿F SPAN] several times to select the span.
   • Each touch changes the span.
5. Touch [⊿F] to start the ⊿F scan.

Blinks

⊿F SCAN

PROGRAM   0.500.00 - 29.999.99 MHz   RECALL
⊿F   14.100.00 ±   10 kHz   14.100.00 MHz

PROG   ⊿F   FINE   ⊿F SPAN   SET

Frequency before scan

The span set in step 4

ⓘ When a signal is detected, the scan pauses according to the "SCAN Resume" setting, and then resumes.
ⓘ To turn the TS function to scan by the frequency step setting, touch the 100 kHz digit on the frequency readout.
ⓘ To cancel the scan, touch [⊿F] again.

6. To switch to the Fine ⊿F scan, touch [FINE].

Blinks

FINE ⊿F SCAN

PROGRAM   0.500.00 - 29.999.99 MHz   RECALL
⊿F   14.100.00 ±   10 kHz   14.100.00 MHz

PROG   ⊿F   FINE   ⊿F SPAN   SET

• The scan frequency step changes to 50 Hz.
ⓘ To return to the ⊿F scan, touch [FINE] again.
7. To close the SCAN screen, push EXIT.

Section **9**   **OTHER FUNCTIONS**

Measuring SWR

The transceiver has an SWR meter. There are 2 ways to measure SWR. One way is a spot measurement, and the other is a plot measurement.

◇ Spot measurement

1. Turn OFF any antenna tuner.
   ⓘ Perform this step if you want to measure the SWR of the antenna itself.
2. Set the desired frequency band and a frequency in the portion of the band that you want to measure.
3. Select the RTTY or RTTY-R mode.
4. Set the RF power to 30 W or more in the Multi-function menu.
   ⓘ 70 MHz: 20 W
   (70 MHz band transmission may be possible, depending on the transceiver version.)
5. Touch the meter, and then touch [SWR] to display the SWR meter.

NOTE: Before transmitting, monitor the operating frequency to make sure you will not cause interference to other stations on the same frequency.

6. Push **TRANSMIT** or hold down [PTT] to transmit, and then read the SWR on the meter.

SWR meter
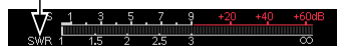
The best match is within this range. (1.5 or less)

   ⓘ If the SWR meter indicates 1.5 or less, the antenna is matched.
   ⓘ If the SWR is a high value, adjust your antenna.
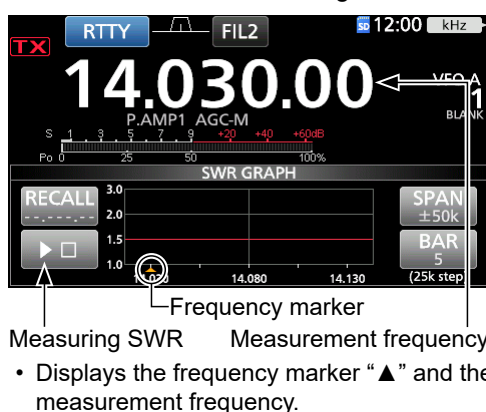7. Push **TRANSMIT** or release [PTT] to stop transmitting.

Measuring SWR

◇ Plot measurement

You can measure the SWR over the entire set frequency range.

1. Set the desired frequency band.
2. Set the RF power to 30 W or more in the Multi-function menu.
   ⓘ 70 MHz: 20 W
   (70 MHz band transmission may be possible, depending on the transceiver version.)
3. Open the SWR GRAPH screen.
   MENU » **SWR**
4. Set the center frequency for the SWR to measure. (Example: 14.080.00)
5. Touch [SPAN] several times to set the measuring span, or touch [BAR] several times to set the number of graph bars.


Center frequency   Number of graph bars
                    Measuring span
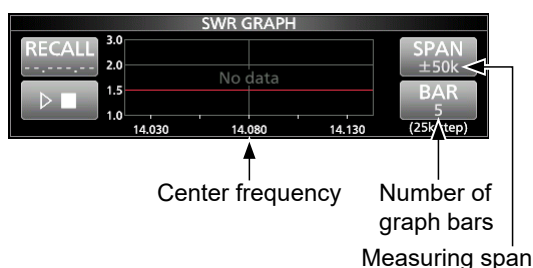
   ⓘ You can select between ±20 kHz, ±50 kHz, ±100 kHz, ±200 kHz, ±500 kHz, ±1 MHz, and ±2 MHz measuring spans.
   ⓘ You can select between 3, 5, 7, 9, 11, and 13 graph bars.
6. Touch ▶■ to start measuring.

                    Frequency marker
Measuring SWR   Measurement frequency
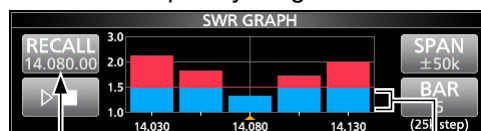   • Displays the frequency marker "▲" and the measurement frequency.

NOTE: Before transmitting, monitor the operating frequency to make sure you will not cause interference to other stations on the same frequency.

7. Push **TRANSMIT** or hold down [PTT] to transmit.
   • The bar graph displays the SWR.
   ⓘ When the Break-in function is ON in the CW mode, you can use a straight key or paddle to transmit.
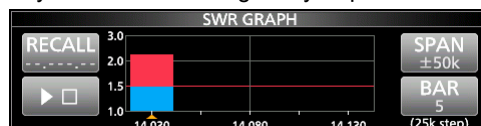
8. Push **TRANSMIT** or release [PTT] to stop transmitting.
   ⓘ When using a straight key or paddle, stop keying.
9. Repeat steps 7 and 8 to measure the SWR over the entire frequency range.

The center frequency is displayed after the measurement.

The best match is within this range. (1.5 or less)

TIP:
• Rotate **MAIN DIAL** to move the frequency marker "▲" to the current transmit frequency.
• "<<" (low) or ">>" (high) is displayed when the transmitted frequency is out of the displayed range.
• Touch [RECALL] for 1 second to move the frequency marker "▲" back to the center frequency.
• Touch the bar graph to delete the measured SWR.

Displaying my call sign

You can set to display your own call sign at power ON. (Example: displaying the call sign JA3YUA)

1. Open the MY CALL screen.
   MENU » SET > Display > **My Call**

2. Enter "JA3YUA," and touch [ENT] to save.
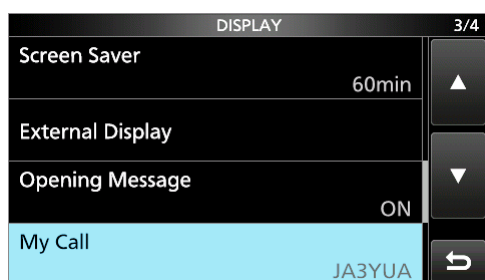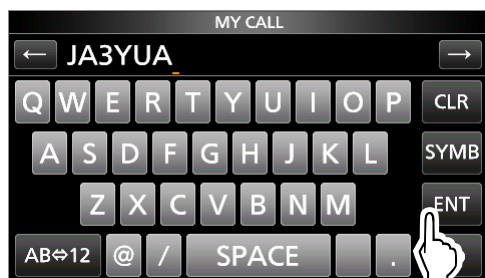
3. To close the DISPLAY screen, push EXIT several times.

Protection function

The transceiver has a 2 step protection function to protect the final power amplifiers.
The function detects the power amplifier temperature and activates when the temperature becomes too high.

Power down transmission
Reduces the transmit output power.
• **LMT** is displayed while transmitting.

TX inhibit
Disables the transmitter.
• **TX** (Grayed out) is displayed instead of **TX** while the transmitter is disabled.

NOTE: If the function is activated, wait until the power amplifier cools down by using the transceiver only to receive.
While waiting until the power amplifier cools down, **DO NOT** turn OFF the transceiver. Otherwise, the cooling fan will stop and take time to cool down.
• You can check the power amplifier temperature with the TEMP gauge in the Multi-function meter.

NTP function

The Network Time Protocol (NTP) function synchronizes the internal clock of the IC-7300MK2 with a time management server.
ⓘ To use this function, an Internet connection and default gateway settings are necessary.
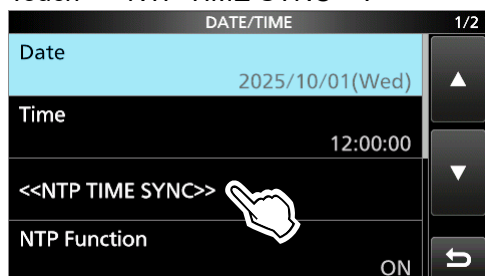
◇ Manually synchronizing the internal clock

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>>."

DATE/TIME	1/2
Date	2025/10/01(Wed) ▲
Time	12:00:00
<<NTP TIME SYNC>>	▼
NTP Function	ON ↩

   • "NTP Time Sync. Please wait..." is displayed.
   • The transceiver starts accessing the NTP server address that is set in "NTP Server Address."
3. When "Time Sync completed." is displayed, touch [OK].
4. To close the DATE/TIME screen, push EXIT several times.
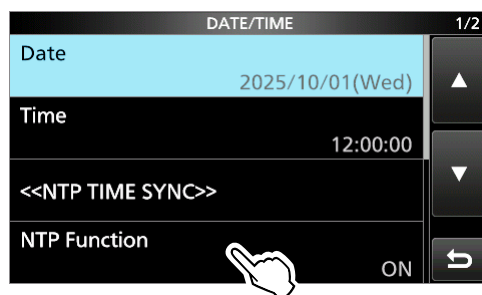
◇ Using the NTP function

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."

DATE/TIME	1/2
Date	2025/10/01(Wed) ▲
Time	12:00:00
<<NTP TIME SYNC>>	▼
NTP Function	ON ↩

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.

PRESET menu

You can save the combination of the following settings for the data mode to quickly change the settings, depending on your operating needs.
ⓘ The transceiver has a total of 5 memories.

Preset Name	SSB-D TX Bandwidth
Mode	DATA OFF MOD
Filter	COMP
Filter BW	SSB TBW
Filter Type (HF)	SSB TX Bandwidth
Filter Type (50M -)*	USB SEND
USB Output Select	USB Keying (CW)
USB AF Output Level	USB Keying (RTTY)
USB AF SQL	CI-V Baud Rate
USB IF Output Level	CI-V Address
USB MOD Level	CI-V Transceive
DATA MOD	CI-V USB Echo Back

* The settings saved in "Filter Type (50M -)" are also applied to reception above 50 MHz.

◇ Loading the preset memory

1. Push **MENU**.
   • The MENU screen is displayed.
2. Touching [②] at the bottom of the screen to select the MENU screen 2.
3. Touch [PRESET].

4. Touch the preset memory to load. (Example: 2: FT8)

5. Touch [YES].
   • The selected preset memory is loaded, and "In Use" is displayed on the PRESET screen. If you change the transceiver settings, and they do not match the contents of the preset memory, "In Use" disappears.
   ⓘ Touching [UNLOAD] returns the transceiver settings to those set before loading the preset memory.

NOTE:
• You cannot load the preset memory content when you select a blank memory channel in the Memory mode.
• You cannot load a preset memory that is displayed as "(BLANK)."

◇ Editing the memory contents

NOTE: You cannot edit the preset memory that is in use. To edit it, first touch [UNLOAD], and then edit the memory.

1. Touch a preset memory to edit for 1 second.
   • The QUICK MENU screen is displayed.
2. Touch "Edit the Preset Memory."
   ⓘ When touching "Save to the Preset Memory," all of the contents are set to the current settings before editing.
3. Touch the check box to select whether or not to load the item.
   • "✓" is displayed on the left side of the loading item.
4. Touch the item name, and then touch the option to set.
5. Repeat steps 3 and 4 to edit the preset memory.
6. Touch "<<Write>>."
7. Touch [YES].

TIP: Depending on your software, you may need to change the "CI-V Address" setting.
For example, if you use a software that is not compatible with the IC-7300MK2, you may be able to use the software by setting "CI-V Address" to another transceiver's address.

Screen Capture function

You can capture the transceiver display (Main and Sub screen) onto an SD card. Most of the screens used in this manual are captured using this function. However, some displays cannot be captured.

NOTE: To use the Screen Capture function, an SD card (User supplied) is required.

◇ Setting the Screen Capture function

1. Open the "Screen Capture [POWER] Switch" screen.

   MENU » | SET > Function >
   Screen Capture [POWER] Switch

2. Touch "ON" to turn ON the Screen Capture function.
3. Select the screen capture file type in "Screen Capture File Type."

   MENU » | SET > Function >
   Screen Capture File Type

4. To close the FUNCTION screen, push EXIT several times.

◇ Capturing a screen

1. Open the desired screen to capture.
2. Push POWER to capture the screen.
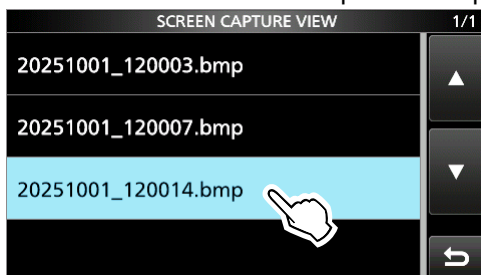   • The captured screen is saved onto the SD card.

◇ 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.
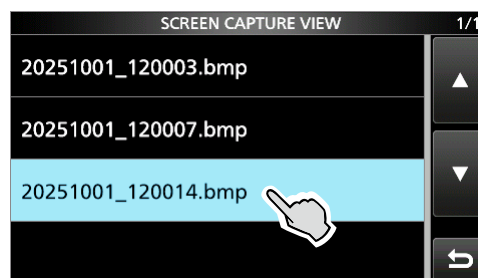2. Touch the desired screen capture to display it.

   SCREEN CAPTURE VIEW | 1/1
   20251001_120003.bmp
   20251001_120007.bmp
   20251001_120014.bmp

   • The screen capture is displayed, and the indicator on POWER blinks blue.
   ⓘ While a screen capture is displayed, you can scroll through all the screen captures by rotating ⦿MULTI.
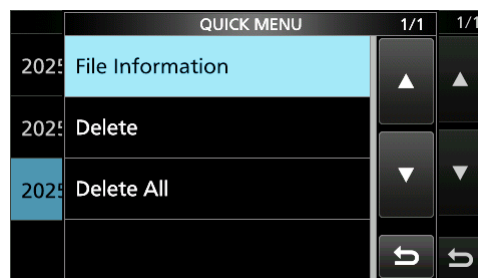3. To close the SCREEN CAPTURE VIEW screen, push EXIT several times.

Checking the file information and deleting a file

1. Touch the screen capture that you want to view or delete for 1 second.

   SCREEN CAPTURE VIEW | 1/1
   20251001_120003.bmp
   20251001_120007.bmp
   20251001_120014.bmp

2. Touch an item from "File Information," "Delete," and "Delete All."

   QUICK MENU | 1/1 | 1/1
   2025 | File Information
   2025 | Delete
   2025 | 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.

REF adjustment

You can perform a rough frequency calibration by receiving the radio station WWV, WWVH, or other frequency signals.

NOTE:
- The transceiver has been adjusted and tested at the factory before being shipped. You should not have to manually recalibrate it.
- Before performing a frequency calibration, you have to set "Calibration Marker" to ON.
- Spurious signal waveforms may be displayed while the Calibration Marker is ON.

ⓘ Before performing a frequency calibration, set the following items as described in the table below.

Operating mode	USB
(AF◦RF/SQL)	Decent audibility
(AF◦RF/SQL)	Maximum RF gain
(TWIN PBT CLR)	Reset by holding down for 1 second.
(RIT), (⊿TX)	OFF (No icon)

1. Set the frequency to the standard frequency station minus 1 kHz.
   ⓘ If receiving WWV or WWVH (at 15.00000 MHz) as your standard frequency, set the operating frequency to 14.99900 MHz.
2. Set "Calibration Marker" to ON.
   (MENU) » SET > Function > **Calibration Marker**
3. Set "REF Adjust" to ON.
   (MENU) » SET > Function > **REF Adjust**
4. Rotate (◦MULTI) to adjust for a zero beat with the received standard signal.
   ⓘ "Zero beat" means that the exact same frequencies are set to 2 signals, resulting in a single tone being heard.
5. Set "Calibration Marker" to OFF.
6. To close the FUNCTION screen, push (EXIT) several times.

Selecting the display type and font

You can select between 2 display backgrounds and 2 frequency readout fonts.

◇ Selecting the display background

1. Select the "Display Type" screen.
   (MENU) » SET > Display > **Display Type**
2. Set the background A or B by rotating and then pushing (◦MULTI).
   - A: Black background (default)
   - B: Blue background
3. Set "Calibration Marker" to OFF.
4. To close the DISPLAY screen, push (EXIT) several times.

◇ Selecting the display font

1. Select the "Display Font" screen.
   (MENU) » SET > Display > **Display Font**
2. Set the desired display font to "Square" or "Round" by rotating, and then pushing (◦MULTI).
   - Square:

   **14.100.00**

   - Round (Default):

   14.100.00

3. To close the DISPLAY screen, push (EXIT) several times.

Transmitter Lockout function

When 2 Icom exciters that support the Transmitter Lockout function, including the IC-7300MK2, are connected to the IC-PW2 to Single Operator Two Radios (SO2R) operation, the function prevents the simultaneous transmission from the exciters.

ⓘ When the TX inhibit command (16 66) is sent to the exciter connected to the IC-PW2's RF input connector set to the RX side (INPUT indicator lights green) or OFF (INPUT indicator is OFF), is displayed on the exciter's screen.
When the exciter tries to transmit, "TX Inhibit" is displayed and cannot transmit.
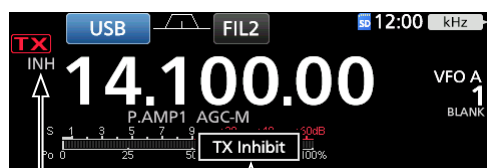
INH icon   "TX Inhibit" is displayed.

Section **10** **MAINTENANCE (ADVANCED)**

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.
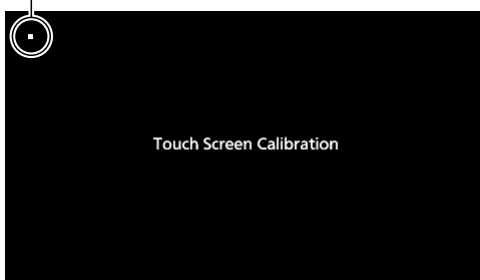
1. Open the OTHERS screen.
   MENU » SET > **Others**

2. Touch "Touch Screen Calibration."
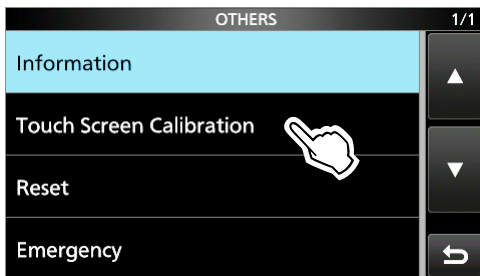
   • A dot appears on the screen.
3. Touch the dot that is displayed on the screen.

   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 correct the touch screen sensing accuracy.

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.

Section 11   UPDATING THE FIRMWARE

General

◇ About updating the firmware

You can update the IC-7300MK2's firmware using an SD 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/
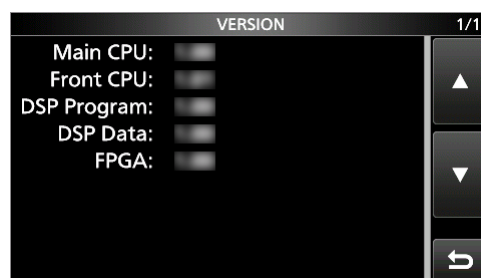
◇ Checking the firmware version

Check the IC-7300MK2's 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**

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11 UPDATING THE FIRMWARE

◇ 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.

Click

2. Enter "IC-7300MK2" into the Search box, and then click [Search].

❶ Enter
❷ Click
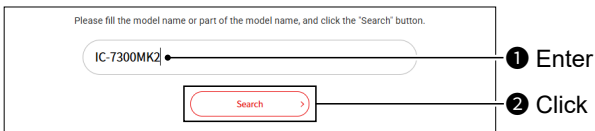
3. Click the desired firmware file link.
4. Carefully read "Regarding this Download Service." Click "I have read, fully understood and agree the above.," and then click [Download].
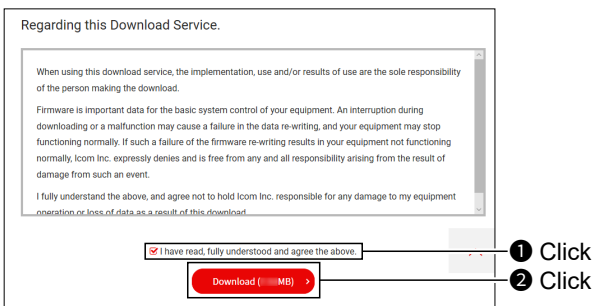
❶ Click
❷ Click

• The file starts downloading.

5. After the download is complete, click "Open file."
ⓘ Download steps may differ, depending on the PC settings.

Click
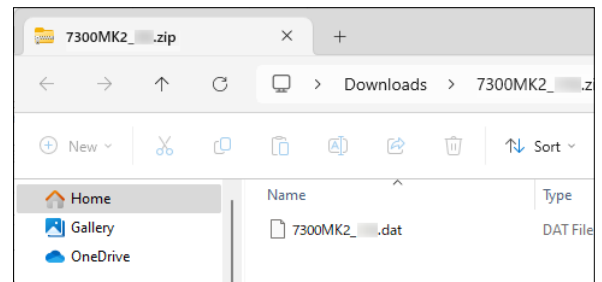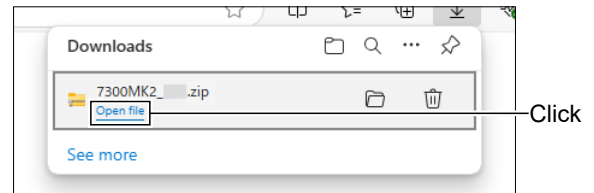
ⓘ In the "7300MK2_*" folder, "7300MK2_*.dat" is created.
  * Represents the release number.

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 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.
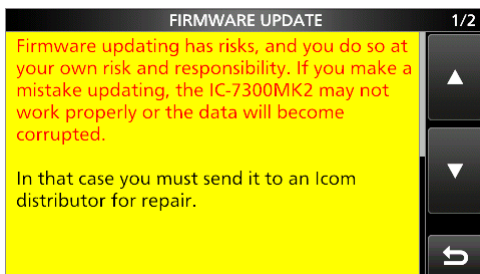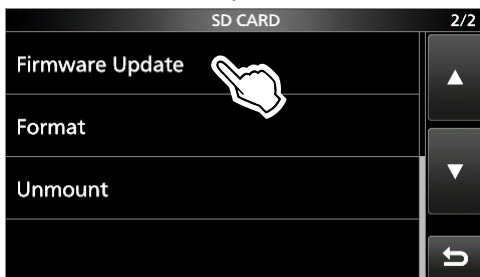
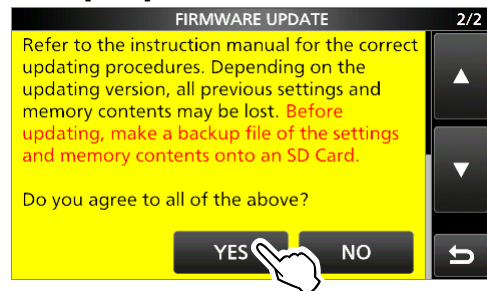1. Copy the downloaded firmware data into the "IC-7300MK2" folder on an SD card.
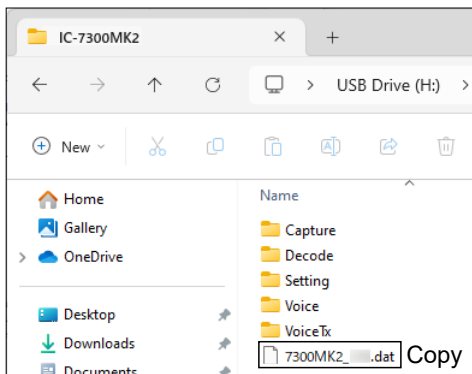
2. Insert the SD card into the transceiver.
3. Open the SD CARD screen.
   MENU » SET > **SD Card**
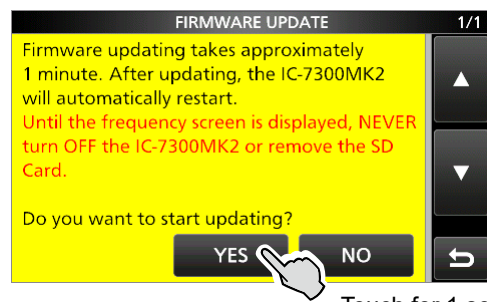4. Touch "Firmware Update."

5. Touch [▼] to scroll the screen and read all the precautions.
6. After you read and agree with all the precautions, touch [YES].

   • The confirmation dialog is displayed.
     When you touch [YES], the backup file is made on the SD card, and then the Firmware selection screen is displayed.
7. Touch the Firmware (Example: 7300MK2_*).
   * Represents the release number.

   • The final confirmation screen is displayed.
   ⓘ Carefully read all the displayed precautions.
8. After you read and agree with all the precautions, touch [YES] for 1 second.

   Touch for 1 second

   • The updating starts.
9. When the update is completed, "Firmware updating has completed." is displayed in the dialog.
   • The transceiver will automatically restart.
   ⓘ After the update finishes, the operating screen is displayed.

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