

IC-7800

Firmware update information— Ver. 3.00

Thank you for using the Icom Download Service.

Version 3.00 of the firmware will provide the following additional functions or changes to your IC-7800.

- ➡ A new feature, another procedure is added to the IF filter passband width setting. (p. 2)
- ➡ New features, the waveform outline, water fall, wide screen size displays and USB mouse operation are added to the spectrum scope screen. (pp. 3 to 7)
- ➡ A new feature, the audio scope function is added. (pp. 8, 9)
- ➡ A new feature, the operation of the USB type devices, that are mouse hub and memory, is added. (Before connecting the USB devices, see 'About the [KEY BOARD] connector' below.)
- ➡ A new feature, the QSO voice recording function is added and the Voice recorder function is changed. (pp. 10 to 23)
- ➡ A new feature, the repeat transmit function is added to the Voice transmission. (p. 19)
- ➡ A new feature, the audio adjustment for audio peak filter for CW operation, is added. (p. 24)
- ➡ A new feature, adjustment of the transmission's timing for HF and 50 MHz bands is added to prevent damage to the external devices. (p. 26, Other set mode: TX delay (HF), TX Delay (50M))
- ➡ A new feature, the Server function for remote control stations with the optional RS-BA1, is added. (pp. 26 to 29, Other set mode)
- ➡ New features, memory devices selection, format type selection and unmount operation are added to the CF card set menu. (Now, CF/USB-Memory set menu) (p. 30)
- ➡ Some CI-V commands are added, as described on pages 31 and 32.

Before updating, see Section 16 'UPDATING THE FIRMWARE' in the IC-7800 instruction manual, for details.

IMPORTANT!

Make a backup file of the transceiver's settings, such as stored memory channels, filter settings, to the CF (Compact Flash) memory card before updating the firmware.

The CPU will be automatically reset when the firmware update is performed; the transceiver's memory contents will be cleared and ALL settings will be returned to their default settings.

See Section 12 '■ File saving' in the IC-7800 instruction manual, for details.

About the [KEY BOARD] connector:

- Supported only USB flash drive, keyboard, mouse or hub.
- **KEEP** the transceiver power OFF when connecting or disconnecting a USB keyboard, mouse or hub.
- **DO NOT** connect the following devices:
 - Two or more the same kind of USB devices.
(Example: Two USB hubs or two USB mice)
 - Multimedia adapter
 - USB HDD
 - Larger than 32 GB USB flash drives
 - Bluetooth® keyboard or mouse.

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■ Filter passband width setting (except FM mode)



- During the passband width setting



Mode	IF filter	Adjustable range (steps)
SSB	FIL1 (3.0 kHz)	50 to 500 Hz (50 Hz) 600 Hz to 3.6 kHz (100 Hz)
	FIL2 (2.4 kHz)	
	FIL3 (1.8 kHz)	
SSB-D CW PSK	FIL1 (1.2 kHz)	50 to 500 Hz (50 Hz) 600 Hz to 3.6 kHz (100 Hz)
	FIL2 (500 Hz)	
	FIL3 (250 Hz)	
RTTY	FIL1 (2.4 kHz)	50 to 500 Hz (50 Hz) 600 Hz to 2.7 kHz (100 Hz)
	FIL2 (500 Hz)	
	FIL3 (250 Hz)	
AM AM-D	FIL1 (9.0 kHz)	200 Hz to 10 kHz (200 Hz)
	FIL2 (6.0 kHz)	
	FIL3 (3.0 kHz)	
FM FM-D	FIL1 (15 kHz)	Fixed
	FIL2 (10 kHz)	
	FIL3 (7.0 kHz)	

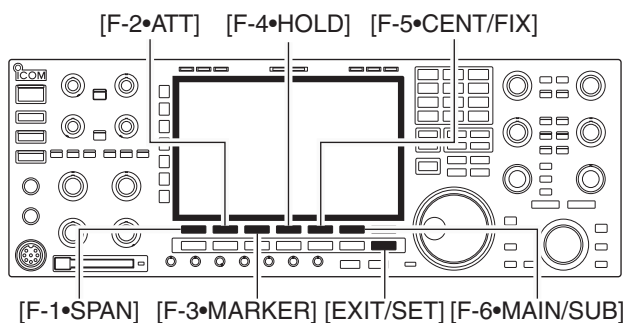
- ① Hold down [FILTER] for 1 second to enter filter set screen.
- ② Select any mode except FM.
 - Passband widths for FM modes are fixed, and cannot be adjusted.
- ③ Push [FILTER] several times to select the desired IF filter.
- ④ Push [F-1•BW], then rotate the main dial to adjust the desired passband width. Then push [F-1•BW] again.
 - While holding down [F-1•BW], rotating the main dial also adjusts the passband width. After adjustment, release [F-1•BW] to set. (Usual operation is still available.)
- ⑤ If desired, repeat steps ② to ④.
 - Hold down [F-4•DEF] for 1 second to select the default value.
- ⑥ Push [EXIT/SET] to exit filter set screen.

/// The PBT shift frequencies are cleared when the passband width is changed.

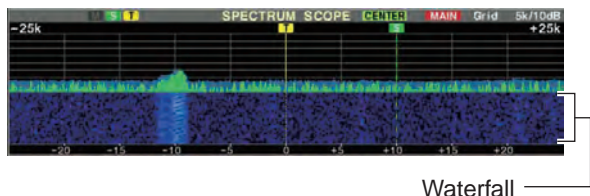
/// This filter set screen graphically displays the PBT shift frequencies and CW pitch operations.

■ Spectrum scope screen

◇ Center mode



• Spectrum scope



The spectrum scope screen has been changed that the waveform outline, water fall, wide screen size displays and USB mouse operation are added. Some spectrum set mode items are added, as described on page 6.

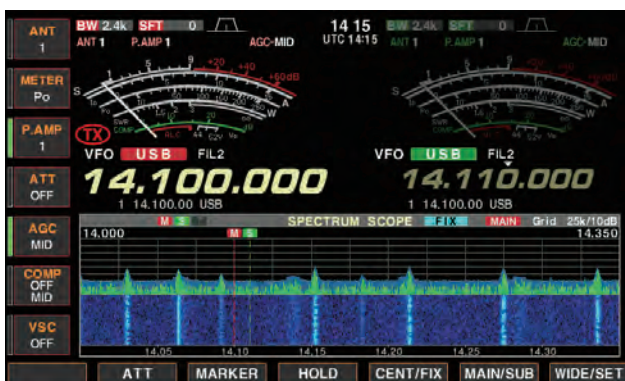
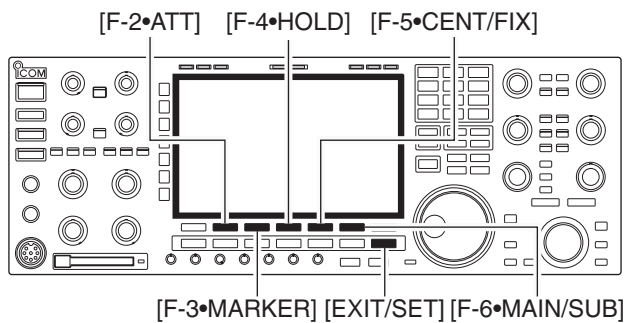
Displays signals around the set frequency within the selected span. The set frequency is always displayed at the center of the screen.

- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [F-1•SCOPE] to select the scope screen.
 - Push [F-7•WIDE/SET] to toggle the screen size between normal and wide.
- ③ Push [F-5•CENT/FIX] to select the center mode.
 - "CENTER" is displayed when center mode is selected.
- ④ Push [F-1•SPAN] several times to select the scope span.
 - ± 2.5 , ± 5.0 , ± 10 , ± 25 , ± 50 , ± 100 and ± 250 kHz are selectable.
 - Sweeping speed is independently selectable for each span in scope set mode.
- ⑤ Push [F-2•ATT] several times to activate an attenuator or turn the attenuator OFF.
 - 10, 20 and 30 dB attenuators are selectable.
- ⑥ Push [F-6•MAIN/SUB] to select main band.
 - The spectrum scope with sub band selection is activated during dualwatch or split frequency operation only.
- ⑦ Push [F-3•MARKER] several times to select the marker (sub readout or transmit frequency) or turn the marker OFF.
 - "T" displays the marker at the transmit frequency.
 - "S" displays the marker at the sub readout frequency.
 - "<<" or ">>" appears when the marker is out of range.
 - The spectrum scope shows the transmit signal waveform while transmitting. This can be deactivated in scope set mode.
 - The spectrum scope shows the peak level holding function. Peak levels are displayed in the background of the current spectrum in a different color until the receive frequency changes. This can be deactivated and the waveform color can be set in scope set mode.
- ⑧ Push [F-4•HOLD] to freeze the current spectrum waveform.
 - "HOLD" appears while the function is in use.
 - The peak hold function can be deactivated in scope set mode.
- ⑨ Push [EXIT/SET] to exit the scope screen.

NOTE: If a strong signal is received, a ghost waveform may appear. Push [F-2•ATT] several times to activate the spectrum scope attenuator in this case. Spurious signal waveforms may be displayed. They are generated in the internal scope circuit and do not indicate a transceiver malfunction.

■ Spectrum scope screen (continued)

◇ Fix mode



Displays signals within the specified frequency range. The selected frequency band conditions can be observed at a glance when using this mode.

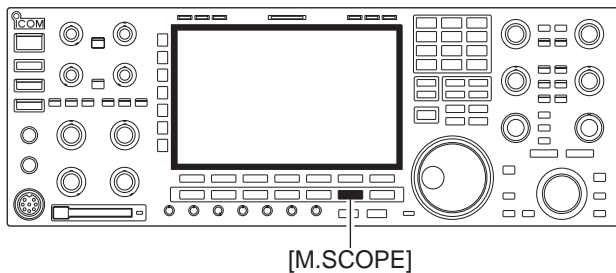
- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [F-1•SCOPE] to select the scope screen.
 - Push [F-7•WIDE/SET] to toggle the screen size between normal and wide.
- ③ Push [F-5•CENT/FIX] to select the fix mode.
 - “**FIX**” is displayed when fix mode is selected.
- ④ Push [F-2•ATT] several times to activate an attenuator or turn the attenuator OFF.
 - 10, 20 and 30 dB attenuators are selectable.
- ⑤ Push [F-6•MAIN/SUB] to select main band.
 - The spectrum scope with sub band selection is activated during dualwatch or split frequency operation only.
- ⑥ Push [F-3•MARKER] several times to select the marker (sub readout or transmit frequency) or turn the marker OFF.
 - “**M**” displays the marker at the main readout frequency. (always displayed)
 - “**T**” displays the marker at the transmit frequency.
 - “**S**” displays the marker at the sub readout frequency.
 - “<<” or “>>” appears when the marker is out of range.
 - The spectrum scope shows the transmit signal waveform while transmitting.
 - The spectrum scope shows the peak level holding function. Peak levels are displayed in the background of the current spectrum in a different color until the receive frequency changes. This can be deactivated and the waveform color can be set in scope set mode.
- ⑦ Push [F-4•HOLD] to freeze the current spectrum waveform.
 - “**HOLD**” appears while the function is in use.
 - The peak hold function can be deactivated in scope set mode.
- ⑧ Push [EXIT/SET] to exit the scope screen.

/// **NOTE:** If a strong signal is received, a ghost waveform may appear. Push [F-2•ATT] several times to activate the spectrum scope attenuator in this case.

/// The scope bandwidth can be specified for each operating frequency band independently in scope set mode.

■ Spectrum scope screen (continued)

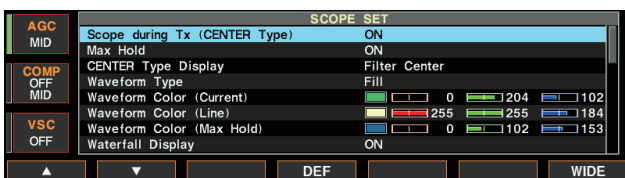
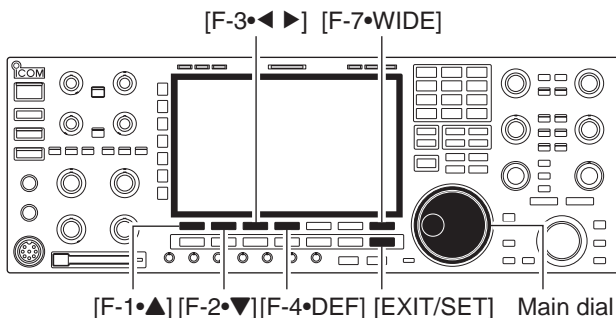
◇ Mini scope screen indication



The mini scope screen can be displayed with another screen display, such as set mode menu, decoder screen, memory list screen, etc. simultaneously.

- ① Set the scope mode (center or fix), marker, attenuator, span, etc. in advance. (pp. 3, 4)
- ② Push [M.SCOPE] to toggle the mini scope indication ON or OFF.
 - The S/RF meter type during mini scope indication can be selected in display set mode (Meter Type (Wide Screen) item). (IC-7800 instruction manual Section 12)

◇ Scope set mode




This set mode is used to set the waveform color, sweeping speed, scope range for fix mode, etc.

- ① During spectrum scope display ON, hold down [F-7•WIDE/SET] to select scope set mode screen.
 - Push [F-7•WIDE] to toggle the screen size between normal and wide.
- ② Push [F-1•▲] or [F-2•▼] to select the desired set item.
- ③ Set the desired condition using the main dial.
 - Hold down [F-4•DEF] for 1 second to select the default condition or value.
 - Push [F-3•◀▶] to select the set contents for some items.
- ④ Push [EXIT/SET] to exit from set mode.

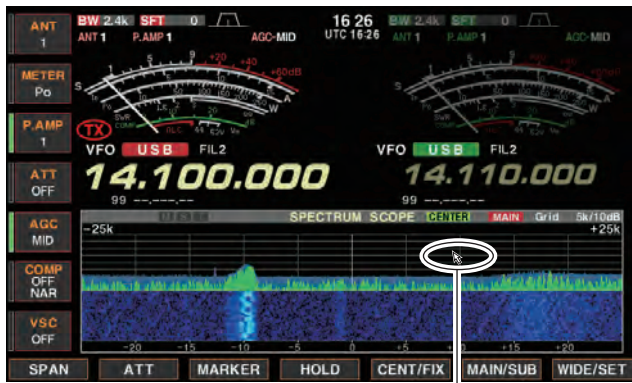
■ Spectrum scope screen

◇ Scope set mode (continued)

Waveform Type	Fill
Select the outline indication of the waveform for the spectrum scope.	<ul style="list-style-type: none">• Fill : The waveform is described by only the color.• Fill + Line : The waveform is described by the color and outline.
Waveform Color (Line)	
Set the waveform outline color for the currently received signals.	<ul style="list-style-type: none">• The color is set in RGB format.• Push [F-3•◀ ▶] to select R (Red), G (Green) and B (Blue), and rotate the ratio from 0 to 255 range.• The set color is indicated in the box beside the RGB scale.
Waterfall Display	ON
Set the waterfall display to ON or OFF.	<ul style="list-style-type: none">• ON : Displays the waterfall of the spectrum scope.• OFF : Does not display the waterfall.
Waterfall Peak Color Level	Grid 8
<p>The signal level that reaches a peak color is set to Grid 1 to Grid 8 for the waterfall display.</p> <p>Higher signal levels are Red, Yellow, Green, Light-blue, Blue and Black in order.</p>	

■ Spectrum scope screen (continued)

◇ USB mouse operation



Mouse pointer

If you connect a USB mouse to the transceiver, a mouse pointer appears on the spectrum scope screen. Now, you can change the frequency by using the mouse.

/// The mouse changes the frequency that the scope is selected in either the Main or Sub band. Or while holding down [XFC], it changes the transmit frequency.

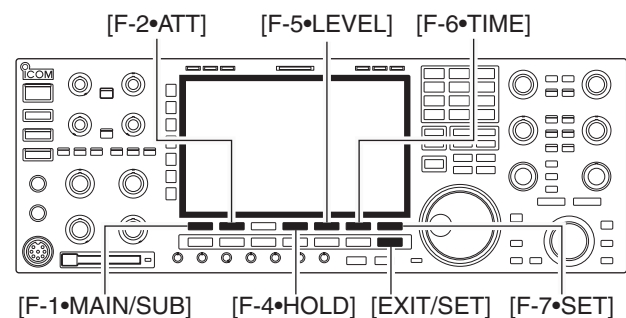
• Mouse operation on the Center mode

Button	Operation	Description
Left	Click	The frequency changes to the clicking point and mouse pointer move to the center of the screen.
	Drag	The frequency changes to the clicking point and mouse pointer move to the center of the screen, and then the frequency increases or decreases.
Right	Click/Drag	The Right button temporarily changes the frequency. While holding the button, same action as the Left button, but release it to return to the original frequency.

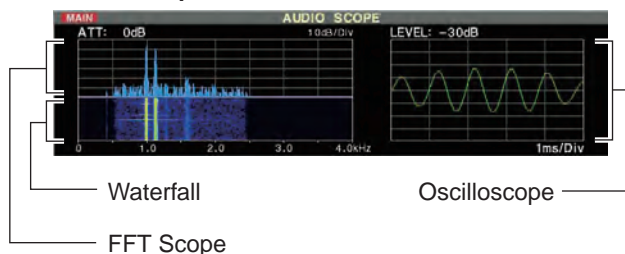
• Mouse operation on the Fix mode

Button	Operation	Description
Left	Click	The frequency and marker change to the clicking point.
	Drag	The frequency and marker change to the clicking point, and then the frequency increases or decreases.
Right	Click/Drag	The Right button temporarily changes the frequency. While holding the button, same action as the Left button, but release it to return to the original frequency.

■ Audio scope screen



• Audio scope



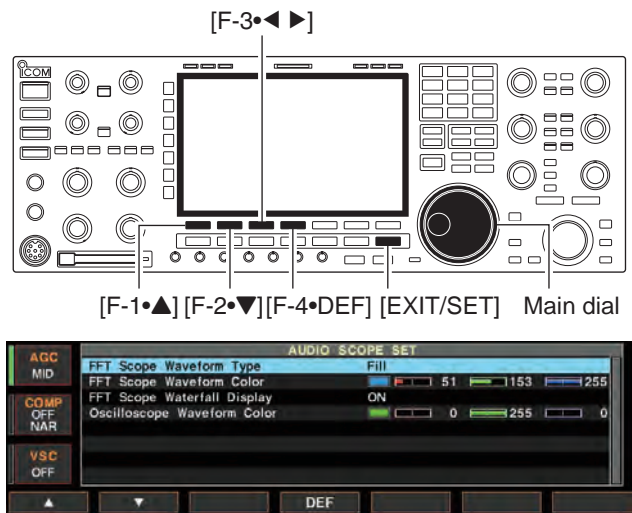
This audio scope allows you to display the received signal's frequency component to the FFT scope, and its waveform component to the Oscilloscope. The FFT scope has an waterfall.

- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [F-6•AUDIO] to select the scope screen.
- ③ Push [F-1•MAIN/SUB] to select the band.
 - “**MAIN**” is displayed when the main band is selected.
 - “**SUB**” is displayed when the sub band is selected.
- ④ Push [F-2•ATT] several times to activate an attenuator or turn OFF the attenuator for the FFT scope.
 - 0 (OFF), 10, 20 and 30 dB attenuators are selectable.
 - Holding down [F-2•ATT] for 1 second to turn the attenuator OFF.
- ⑤ Push [F-5•LEVEL] to select the level setting for the Oscilloscope.
 - 0, -10, -20 and -30 dB are selectable.
- ⑥ Push [F-6•TIME] several times to select the time setting for the Oscilloscope.
 - 1, 3, 10, 30, 100 and 300 ms/Div are selectable.
- ⑦ Push [F-4•HOLD] to freeze the current audio waveform.
 - “**HOLD**” appears while the function is in use.
- ⑧ Push [EXIT/SET] to exit the scope screen.

⚡ When the Monitor function is ON, you can see the TX audio on the Audio scope.

■ Audio scope screen (continued)

◇ Audio scope set mode



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

- ① During audio scope display is ON, push [F-7•SET] to select the Audio scope set mode screen.
- ② Push [F-1•▲] or [F-2•▼] to select the desired set item.
- ③ Set the desired condition using the main dial.
 - Hold down [F-4•DEF] for 1 second to select the default condition or value.
 - Push [F-3◀▶] to select the set contents for some items.
- ④ Push [EXIT/SET] to exit from set mode.

FFT Scope Waveform Type		Fill
Select the waveform type for the FFT scope.		<ul style="list-style-type: none">• Fill : The waveform is represented by the color.• Line : The waveform is represented by outline.
FFT Scope Waveform Color		51 153 255
Set the waveform color for the FFT scope.		<ul style="list-style-type: none">• The color is set in RGB format.• Push [F-3◀▶] to select R (Red), G (Green) and B (Blue), and rotate the ratio from 0 to 255 range.• The set color is indicated in the box beside the RGB scale.
FFT Scope Waterfall Display		ON
Select the waterfall display ON or OFF.		<ul style="list-style-type: none">• ON : Displays the waterfall on the FFT scope.• OFF : Does not display the waterfall.
Oscilloscope Waveform Color		0 255 0
Set the waveform color for the Oscilloscope.		<ul style="list-style-type: none">• The color is set in RGB format.• Push [F-3◀▶] to select R (Red), G (Green) and B (Blue), and rotate the ratio from 0 to 255 range.• The set color is indicated in the box beside the RGB scale.

'Section 7 VOICE RECORDER FUNCTIONS' in the IC-7800 instruction manual has been changed, and a lot of operations are different. So all instructions in Section 7 are described on pages 10 to 23.

■ Recording a QSO audio

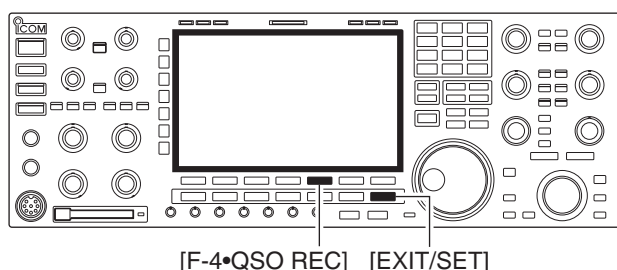
NOTE:

- Be sure to insert a CF memory card into the transceiver or connect a USB flash drive before recording a QSO audio.
- DO NOT insert or connect a memory device while recording a QSO audio to another memory device. Otherwise the recording may interrupt.
- Once recording starts, it continues, even if the transceiver is turned OFF and then ON again.

The Voice recorder function records a QSO (communication) audio onto a memory device.

This function enables you to record both received and transmitted audio, a QSO with a DX'pedition, and playback the recorded audio after the QSO.

◇ To start or stop recording



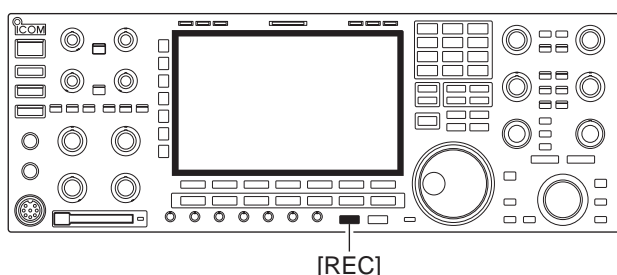
- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [F-2•VOICE] to display the Voice Recorder menu.
- ③ Hold down [F-4•QSO REC] for 1 second to start voice recording.
 - The "■" indicator appears and either the "CF" or "USB" indicator blinks.
 - Recording is continuous until you manually stop recording, or the memory device becomes full.
 - If the recording file's content reaches 2GB, the transceiver automatically creates a new file, and continues recording.
 - The "III" indicator appears instead of the "■" indicator while recording is paused.
- ④ Hold down [F-4•QSO REC] for 1 second to stop recording.
 - The "■" indicator disappears and the "CF" or "USB" indicator stops blinking.
- ⑤ Push [EXIT/SET] to exit the Voice Recorder screen.

✓ Convenient!

When the PTT Automatic Recording function is set to ON in the Voice set mode, the recording automatically starts when you push [PTT]. (p. 22)

■ Recording quick operation

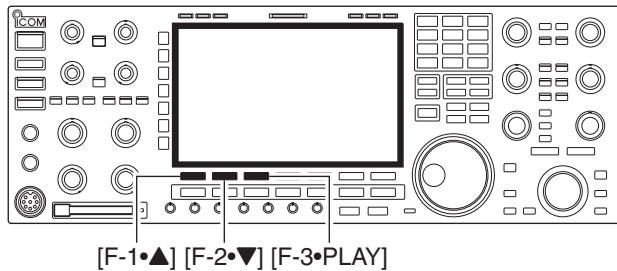
◇ To start or stop recording



- ① Hold down [REC] for 1 second to start voice recording.
 - The "■" indicator appears and either the "CF" or "USB" indicator blinks.
- ② Hold down [REC] for 1 second again to stop recording.

■ Playing back the recorded audio (QSO)

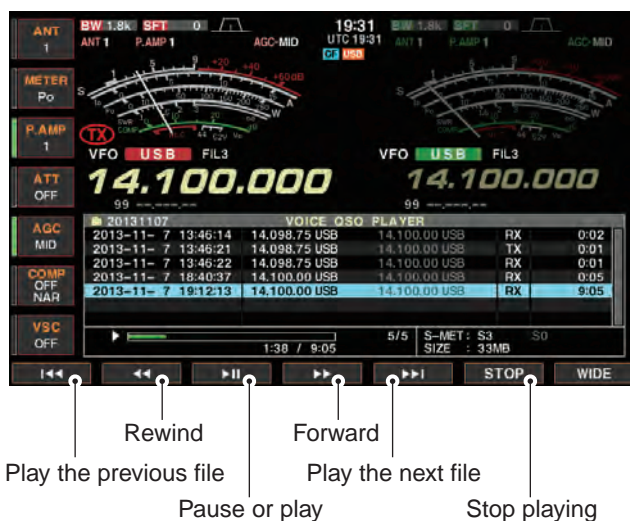
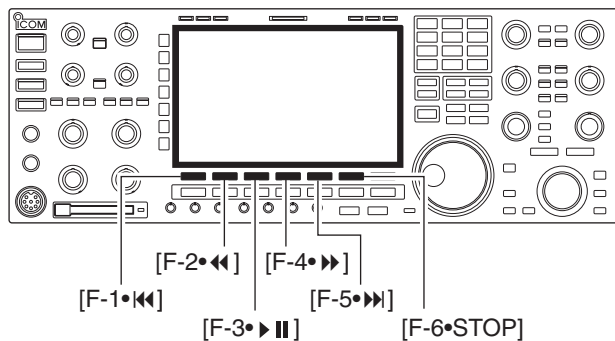
◇ Basic playing



- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [F-2•VOICE] to display the Voice Recorder menu.
- ③ Push [F-5•QSO PLAY] to call up the voice QSO player screen.
 - The folder list is displayed.
 - The folder name is formatted yyyy-mm-dd (yyyy: year, mm: month, dd: day).
- ④ Push [F-1•▲] or [F-2•▼] to select the folder that contains the file you want to play.
 - Rotating the main dial also selects the folder.
- ⑤ Push [F-3•FILE] to open the folder.
 - The file list is displayed.
 - The file name is formatted yyyy-mm-dd hh:mm:ss (yyyy: year, mm: month, dd: day, hh: hour, mm: minute, ss: second).
- ⑥ Push [F-1•▲] or [F-2•▼] to select the file that you want to play.
 - Rotating the main dial also selects the file.
- ⑦ Push [F-3•PLAY] to start playback.
 - The "CF" or "USB" indicator blinks.
 - Playback continues to next file, and it is terminated when the bottom file in the folder is played.
- ⑧ Push [EXIT/SET] several times to exit the QSO player screen.

■ Playing back the recorded audio (continued)

◇ Operating while playing back



✓ Convenient!

You can fast forward or rewind the file that is playing by rotating the main dial.

The fast forward/rewind time is one twentieth of the total file time, regardless of the skip time setting.

Holding down the switch repeats the action until it is released (other than the [F-3•▶▶] switch).

Example: Hold down [F-4•▶▶] to repeat skipping 10 seconds until you release the [F-4•▶▶] switch.
(Default: 10 seconds)

You can fast forward or rewind while playing back.

• Fast forward while playing

Push [F-4•▶▶] to fast forward to the skip time point.
(Default: 10 seconds)

You can change the skip time in the voice set mode.
(p. 22)

• Rewind while playing

Push [F-2•◀◀] to rewind to the skip time point.
(Default: 10 seconds)

You can change the skip time in the voice set mode.
(p. 22)

- If you push [F-2•◀◀] within the first second of the file, the skip time at the end of the previously recorded file will playback.

• Pause while playing

Push [F-3•▶▶] to pause.

- Touch [F-3•▶▶] again to resume.

• Playing the previous file

Push [F-1•◀◀] to play the previous file.

- In case there are other files in the folder, while the oldest file is playing back, Push [F-1•◀◀] to start playing the beginning of the file.

• Playing the next file

Push [F-5•▶▶] to play the next file.

- In case there are other files in the folder, while the most recent file is playing back, Push [F-5•▶▶] to stop the playback.

• Moving to the beginning of the previous file

When the playback is paused anywhere within the file, Push [F-2•◀◀] one or more times to return to the beginning of the file, and pause.

- Push [F-3•▶▶] to play it back.

When the playback is paused at beginning of a file, Push [F-1•◀◀] to move to the beginning of the previous file, and pause.

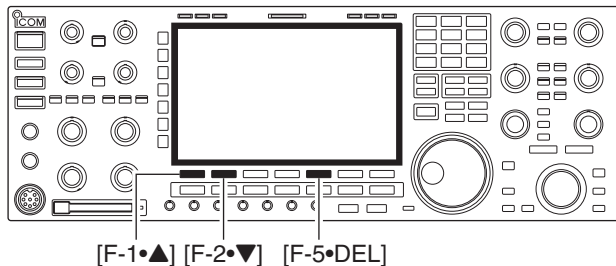
- Push [F-3•▶▶] to play it back.

• Moving to the beginning of the next file

When the playback is paused, Push [F-5•▶▶] to move to the beginning of the next file, and pause.

- Push [F-3•▶▶] to play it back.

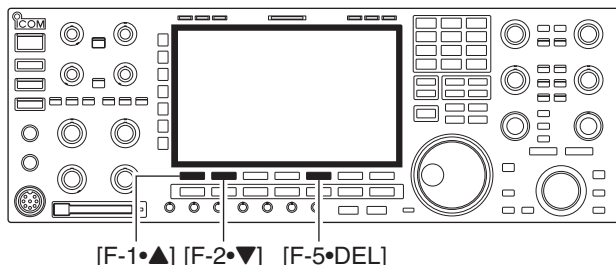
■ Deleting recorded audio file



VOICE QSO PLAYER									
2013-11-16	2:34:59	14.100.00 RTTY	14.119.00 USB	RX	0:04				
2013-11-16	2:41:24	14.100.00 RTTY	14.119.00 USB	RX	0:02				
2013-11-16	2:42:45	14.100.00 RTTY	14.119.00 USB	RX	0:02				
2013-11-16	2:49:27	14.100.00 RTTY	14.119.00 USB	RX	0:03				
2013-11-16	3:24:35	14.100.00 RTTY	14.119.00 USB	RX	0:12				
2013-11-16	4:56:44	7.007.13 LSB	14.119.00 USB	RX	0:20				
2013-11-16	4:57:23	7.007.13 LSB	14.119.00 USB	RX	0:05				
					0:00 / 0:04	1/7	S-MET: SO	SO	
							SIZE : 284KB		

- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [F-2•VOICE] to display the Voice Recorder menu.
- ③ Push [F-5•QSO PLAY] to call up the voice QSO player screen.
 - The folder list is displayed.
 - The folder name is formatted yyyyymmdd (yyyy: year, mm: month, dd: day).
- ④ Push [F-1•▲] or [F-2•▼] to select the folder that contains the file you want to delete.
 - Rotating the main dial also selects the folder.
- ⑤ Push [F-3•FILE] to open the folder.
 - The file list is displayed.
 - The file name is formatted yyyy-mm-dd hh:mm:ss (yyyy: year, mm: month, dd: day, hh: hour, mm: minute, ss: second).
- ⑥ Push [F-1•▲] or [F-2•▼] to select the file that you want to delete.
 - Rotating the main dial also selects the file.
- ⑦ Hold down [F-5•DEL] for 1 second to delete the file.
 - The confirmation window "Are you sure?" appears.
- ⑧ Push [F-6•OK] to delete the file.
 - The selected file is deleted.
 - Push [EXIT/SET] to cancel deleting.
- ⑨ Push [EXIT/SET] several times to exit the QSO player screen.

■ Deleting recorded audio folder



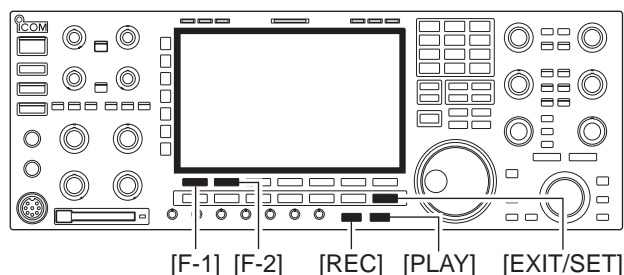
VOICE QSO PLAYER									
20131116									
FREE	157.1MB								
	(Remain 0:31:11)								
					DATE: 2013-11-16	2:34:58			
					FILE: 7	(3.2MB)			

- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [F-2•VOICE] to display the Voice Recorder menu.
- ③ Push [F-5•QSO PLAY] to call up the voice QSO player screen.
 - The folder list is displayed.
 - The folder name is formatted yyyyymmdd (yyyy: year, mm: month, dd: day).
- ④ Push [F-1•▲] or [F-2•▼] to select the folder that you want to delete.
 - Rotating the main dial also selects the folder.
- ⑤ Hold down [F-5•DEL] for 1 second to delete the folder.
 - The confirmation window "Are you sure?" appears.
- ⑥ Push [F-6•OK] to delete the folder.
 - The selected folder is deleted.
 - Push [EXIT/SET] to cancel deleting.
- ⑦ Push [EXIT/SET] several times to exit the QSO player screen.

■ About digital Voice Recorder

The IC-7800 has digital voice memories, up to 4 channels for transmit, and up to 20 channels for receive. A maximum message length of 30 seconds can be recorded into a receive channel (total message length for all channels of up to 209 seconds) and a total message length of up to 99 seconds can be recorded in transmit channels.

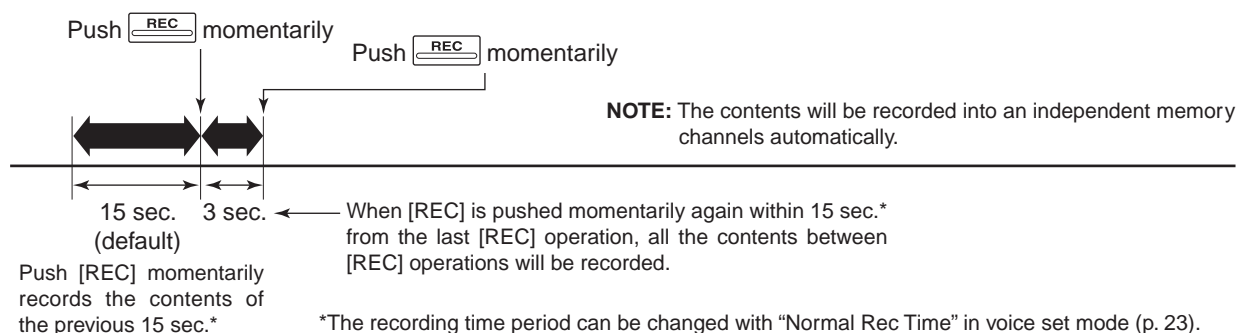
The transmit memory is very convenient for repeated CQ and number transmissions in contests, as well as when making consecutive calls during DX'peditions.



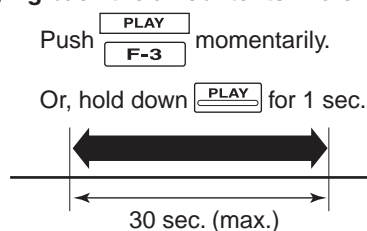
- ① Select any mode.
- ② Push [F-2•VOICE] to display Voice Recorder menu.
- ③ Push [F-1•PLAY] or [F-2•MIC REC] to select the desired memory channel screen, then record audio or playback the contents as described below.
- ④ Push [EXIT/SET] twice to exit Voice Recorder screen.

• About recording received audio and playing back the contents

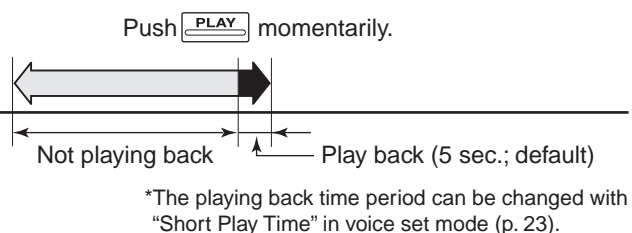
• Example— When [REC] is pushed momentarily



• Playing back the all contents in a channel



• Playing back the end of 5 sec.* in a channel



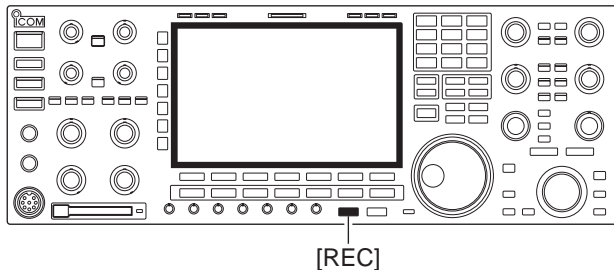
The operation of 'Holding down [REC] 1 second' is changed to start or stop the QSO audio recording. See the page 10 for operation details.

■ Recording a received audio (Short REC)

Up to 20 channels of receive voice memories are available in the IC-7800. And the total audio length of up to 209 seconds can be recorded in receive channels. However, the maximum recordable length into a single channel is 30 seconds.

This Voice Recorder records not only the received audio, but also the information such as set operating frequency, mode, and the recording time for your future reference.

◇ One-touch recording



➡ Push [REC] momentarily to records the previous 15 seconds audio.

- The recordable time period can be set in voice set mode. (p. 21)
- The operating frequency, mode and current time are automatically programmed as the memory names.

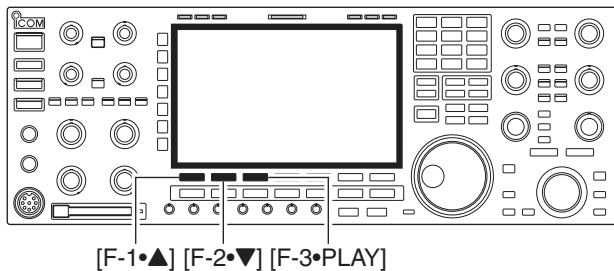
NOTE: When transmit (or [PTT]) is pushed) within the set period, no audio will be recorded.

IMPORTANT!

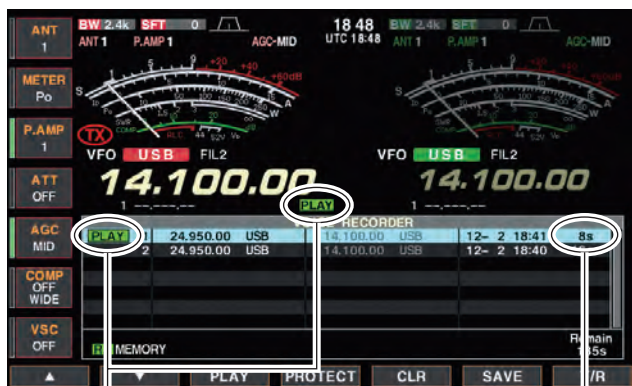
When you record the 21st audio segment, or when the total audio length exceeds 209 seconds, the oldest recorded audio is automatically erased to make room for the new audio.

■ Playing back the recorded audio (Short REC)

◇ Basic playing



- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [F-2•VOICE] to display the Voice Recorder menu.
- ③ Push [F-1•PLAY] to call up the Voice Recorder screen.
 - Previously selected screen, TX or RX memory, is displayed. If the TX memory channel (T1–T4) appears, push [F-7•T/R] to select RX memory channel.
- ④ Push [F-1•▲] or [F-2•▼] to select the desired voice memory to playback.
- ⑤ Push [F-3•PLAY] to start playback.
 - “PLAY” indicators appear and the timer counts down.
- ⑥ Push [F-3•PLAY] again to stop playback if desired.
 - Playback is terminated automatically when all of the recorded contents in the channel are played.
- ⑦ Push [EXIT/SET] twice to exit the Voice Recorder screen.

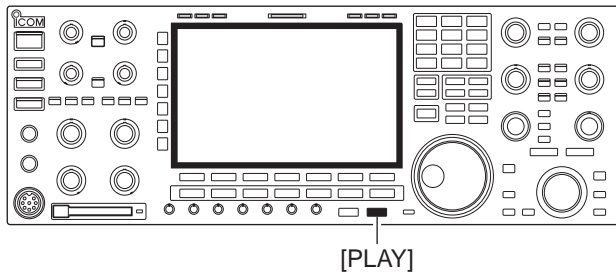


Appear

Counts down

■ Playing back the recorded audio (Short REC) (continued)

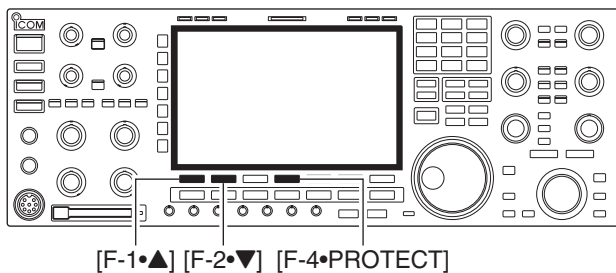
◇ One-touch playing




The previously recorded audio in channel 1 can be playback without selecting Voice Recorder screen.

- Push [PLAY] momentarily to playback the last 5 seconds of the previously recorded audio.
 - “PLAY” indicator appears.
 - Playback is terminated automatically after 5 seconds.
 - The playback time period can be set in voice set mode. (p. 21)
- Hold down [PLAY] for 1 second to playback all of the previously recorded audio.
 - “PLAY” indicator appears.
 - Playback is terminated automatically when all of the recorded contents in the channel are played.

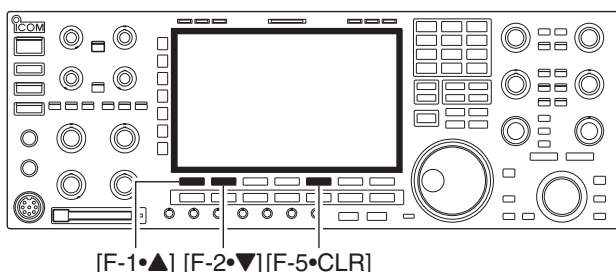
■ Protect the recorded contents



The protect function is available to protect the important recorded contents from accidental erasing, such as over-record, etc.

- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [F-2•VOICE] to display the Voice Recorder menu.
- ③ Push [F-1•PLAY] to call up the Voice Recorder screen.
 - Previously selected screen, TX or RX memory, is displayed. If the TX memory channel (T1–T4) appears, push [F-7•T/R] to select RX memory channel.
- ④ Push [F-1•▲] or [F-2•▼] to select the desired voice memory.
- ⑤ Push [F-4•PROTECT] to turn the protect function ON or OFF.
 - “” indicator appears when the contents is protected.
- ⑥ Push [EXIT/SET] twice to exit the Voice Recorder menu.

■ Erasing the recorded contents



The recorded contents can be erased independently by channel.

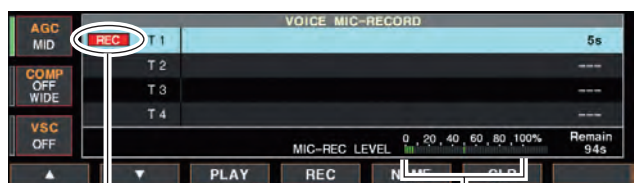
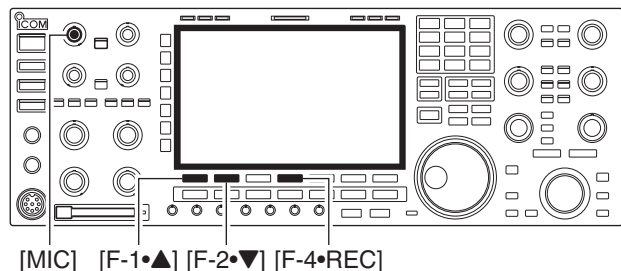
- ① Perform the steps ① to ③ as “■ Protect the recorded contents” above.
- ② Push [F-1•▲] or [F-2•▼] to select the desired voice memory to be erased.
- ③ Hold down [F-5•CLR] for 1 second to erase the contents.
 - Push [F-4•PROTECT] to release the protection in advance if necessary.
- ④ Push [EXIT/SET] twice to exit the Voice Recorder menu.

■ Recording a message for transmit

To transmit a message using the Voice Recorder , record the desired message in advance as described below.

The IC-7800 has digital voice memories for transmission, up to 4 memories and you can record message in length of up to 99 seconds.

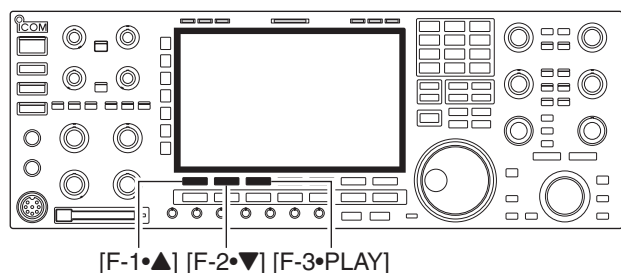
◇ Recording



Adjust [MIC] control so that this indicator reads within 100%.

- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [F-2•VOICE] to display the Voice Recorder menu.
- ③ Push [F-2•MIC REC] to select the voice mic. record screen.
- ④ Push [F-1•▲] or [F-2•▼] to select the desired memory channel.
- ⑤ Hold down [F-4•REC] for 1 second to start recording.
 - “**REC**” indicator appears.
 - Speak into the microphone without holding down [PTT].
 - Previously recorded contents are cleared.
 - Audio output from the internal speaker is automatically muted.
- ⑥ While speaking into the microphone with your normal voice level, adjust the [MIC] control so that the [MIC-REC LEVEL] indicator reads within 100%.
- ⑦ Push [F-4•REC] momentarily to stop recording.
 - The recording is terminated automatically when the remaining time becomes 0 second.
- ⑧ Push [EXIT/SET] twice to exit the Voice Recorder screen.

◇ Confirming a message for transmit

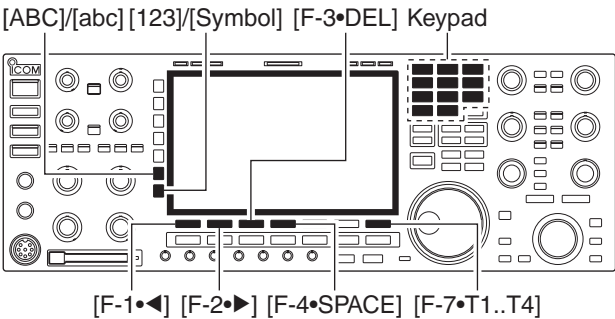


- ① Perform the steps ① to ③ as “◇ Recording” above.
- ② Push [F-1•▲] or [F-2•▼] to select the desired memory channel.
- ③ Push [F-3•PLAY] to playback the recorded contents.
 - “**PLAY**” indicator appears.
- ④ Push [F-3•PLAY] again to stop playback.
 - Playback is terminated automatically when all of the recorded contents in the channel are played.
- ⑤ Push [EXIT/SET] twice to exit the Voice Recorder screen.

■ Programming a memory name

Memory channels can be tagged with alphanumeric names of up to 20 characters each.

You can use capital letters, small letters, numerals, some symbols (! # \$ % & ¥ ? “ ‘ ` ^ + - * / . , ; : = < > () [] { } | _ ~ @) and spaces. (See the table below.)



• Voice memory name editing example



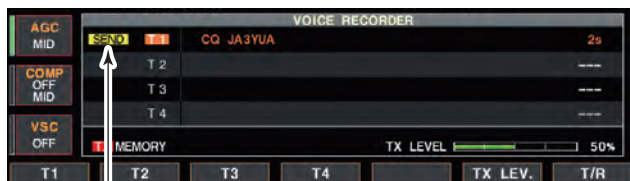
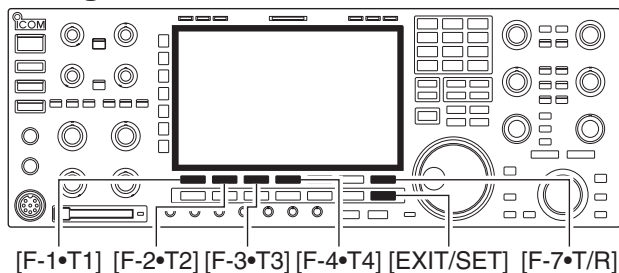
- ① Record a message as described in page 17.
- ② During the voice mic. record screen indication, push [F-5•NAME] to enter memory name edit condition.
 - A cursor appears and blinks.
- ③ Push [F-7•T1..T4] several times to select the desired voice memory.
- ④ Input the desired character by rotating the main dial or by pushing the band key for number input.
 - Push [ABC] or [abc] to toggle capital and small letters.
 - Push [123] or [Symbol] to toggle numerals and symbols.
 - Push [F-1•◀] or [F-2•▶] for cursor movement.
 - Push [F-3•DEL] to delete the selected character.
 - Push [F-4•SPACE] to input a space.
 - Pushing the transceiver's keypad, [0]–[9], can also enter numerals.
- ⑤ Push [EXIT/SET] to input and set the name.
 - The cursor disappears.
- ⑥ Repeat steps ③ to ⑤ to program another voice memory's name, if desired.
- ⑦ Push [EXIT/SET] twice to exit the Voice Recorder screen.

• Usable characters

Key selection	Editable characters
	A to Z (capital letters)
	a to z (small letters)
	0 to 9 (numbers)
	! # \$ % & ¥ ? “ ‘ ` ^ + - * / . , ; : = < > () [] { } _ ~ @

■ Sending a recorded message

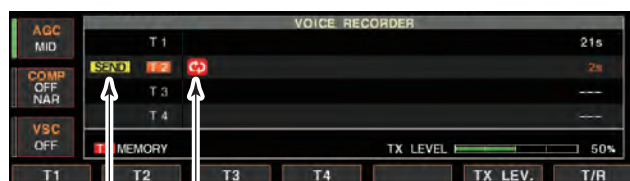
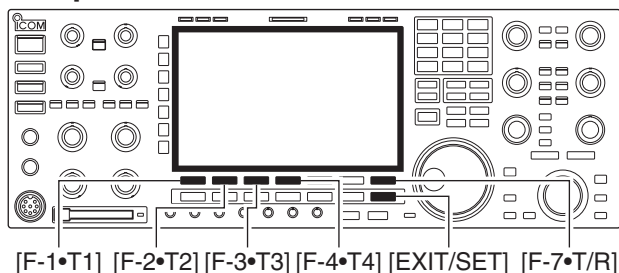
◇ Single TX



Appears

- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [SSB] or [AM/FM] to select a phone mode.
- ③ Push [F-2•VOICE] to enter the Voice Recorder menu.
- ④ Push [F-1•PLAY] to call up the Voice Recorder screen.
 - If the receive voice memory channel appears, push [F-7•T/R] to select TX memory channel (T1–T4).
- ⑤ Push a desired memory channel switch, [F-1•T1] to [F-4•T4], to transmit the recorded voice audio.
 - The transceiver transmits automatically.
 - “SEND” indicator appears and the memory timer counts down.
 - You hear the transmitted message from the speaker as the default setting. This can be turned OFF in voice set mode. (p. 21)
- ⑥ Push the selected memory channel switch, [F-1•T1] to [F-4•T4], again to stop, if desired.
 - The transceiver returns to receive automatically when all of the recorded contents in the channel are transmitted.
- ⑦ Push [EXIT/SET] twice to exit the voice memory screen.

◇ Repeat TX



Appears

Repeat indicator

- ① Perform the steps ① to ④ above.
- ② Hold down a desired memory channel switch, [F-1•T1] to [F-4•T4], for 1 second to repeatedly transmit the recorded voice audio for up to 10 minutes at the interval specified in “Repeat Time.”
 - Even if 10 minutes pass while transmitting, the voice audio is completely transmitted.
 - One of the following steps will cancel the transmission.
 - Push the memory again.
 - Push another memory (except for [TX LEV.]).
 - Exit the TX Voice memory screen.
 - Turn OFF the power, then turn it ON again.
 - Activate the transmission.
 - The repeat transmission is cancelled. But while transmitting, the voice audio is completely transmitted.
 - Once the Repeat TX is made, the transceiver pauses until the end of the “Repeat Time,” then transmits again. After the second transmission, the Repeat TX continues pausing, if receiving a signal. But if the squelch is manually opened, the voice audio is repeatedly transmitted, according to the repeat time setting.

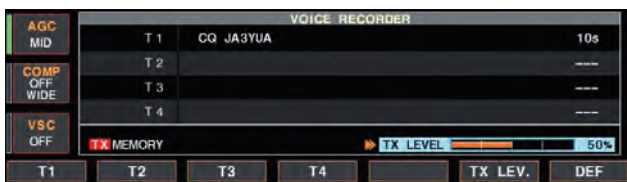
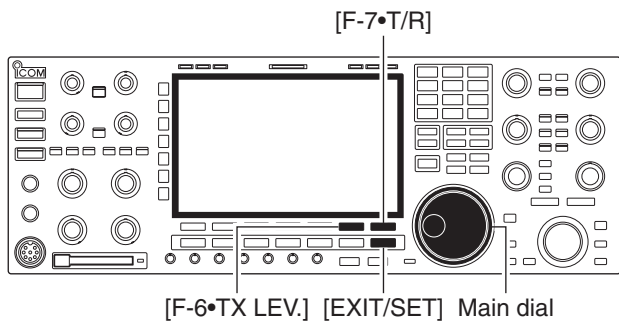
✓ For your convenience

When an external keypad or PC keyboard is connected, the recorded message, T1 to T4, can be transmitted without opening the Voice Recorder screen. See the IC-7800 instruction manual's Section 2 and Section 12 for details.

- The recorded message, T1 to T4 is transmitted once when pushing one of four switches on the external keypad; the recorded message is repeatedly transmitted when holding down a switch.
- The recorded message, T1 to T4 is transmitted once when pushing one of [F1] to [F4] key on the PC keyboard; the recorded message is repeatedly transmitted when pushing a key while holding down [SHIFT] key.

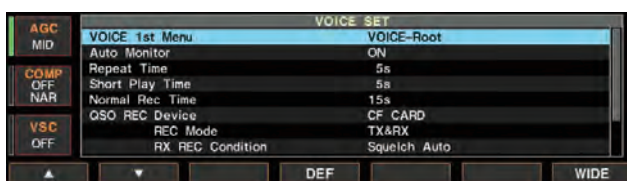
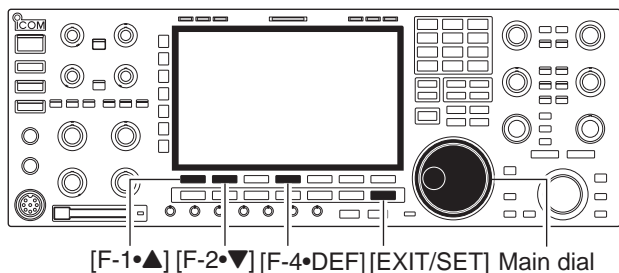
■ Sending a recorded message (continued)

◇ Transmit level setting



- ① Call up the Voice Recorder screen as described as above.
- ② Push [F-6•TX LEV.] to select the voice memory transmit level set condition.
- ③ Push the desired memory channel switch, [F-1•T1] to [F-4•T4], momentarily to transmit the contents.
 - The transceiver automatically transmits.
 - “SEND” indicator appears and the memory timer counts down.
- ④ Rotate the main dial to adjust the transmit voice level.
 - Hold down [F-7•DEF] for 1 second to select the default condition.
- ⑤ Push [EXIT/SET] to return to the Voice Recorder screen.

■ Voice set mode



Sets the automatic monitor function, short play and normal recording times for Voice Recorder.

- ① Push [EXIT/SET] several times to close a multi-function screen, if necessary.
- ② Push [F-2•VOICE] to display the Voice Recorder menu.
- ③ Push [F-7•SET] to select voice set mode screen.
- ④ Push [F-1•▲] or [F-2•▼] to select the desired item.
- ⑤ Rotate main dial to set the desired condition or value.
 - Hold down [F-4•DEF] for 1 second to select the default condition or value.
- ⑥ Push [EXIT/SET] to exit the voice set mode screen.

■ Voice set mode (continued)

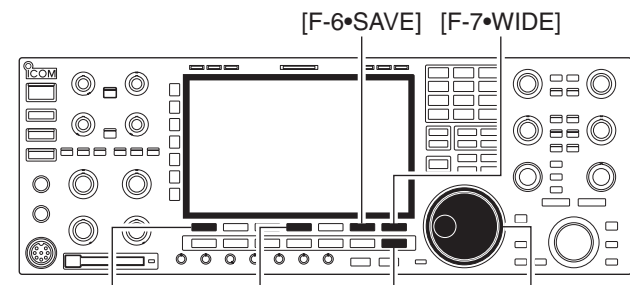
VOICE 1st Menu	VOICE-Root
Select VOICE-Root or VOICE-PLAY as the menu that appears first after pushing [F-2•VOICE].	<ul style="list-style-type: none"> • VOICE-Root : The voice menu appears first. • VOICE-PLAY : Either the RX or TX voice Recorder screen appears first.
Auto Monitor	ON
Turn the automatic monitor function for recorded audio contents transmission.	<ul style="list-style-type: none"> • ON : Monitors transmitting audio automatically when sending a recorded audio. • OFF : Monitors transmitting audio only when the monitor function is in use.
Repeat Time	5s
Set the repeat interval for the voice repeat transmission to between 1 and 15 seconds (in 1 second steps). The transceiver repeatedly transmits the recorded voice audio at this interval.	
Short Play Time	5s
Set the desired time period for the one-touch playing (when [PLAY] is pushed).	<ul style="list-style-type: none"> • Set between 3 and 10 seconds (in 1 second steps). (default: 5 seconds)
Normal Rec Time	15s
Set the desired time period for the for one-touch recording (when [REC] is pushed).	<ul style="list-style-type: none"> • Set between 5 to 30 seconds (in 1 second steps). (default: 15 seconds) -The longest set period was changed from 15 seconds to 30 seconds.
QSO REC Device	CF CARD
Select a memory device for recording a QSO audio.	<ul style="list-style-type: none"> • CF CARD : Records the QSO audio onto the CF card. • USB-Memory : Records the QSO audio onto the USB flash drive.
REC Mode	TX&RX
Select the recording mode for recording a QSO audio.	<ul style="list-style-type: none"> • TX&RX : Records both the transmitted and received audio. • RX only : Records only the received audio.
RX REC Condition	Squelch Auto
Select whether or not the squelch status affects the RX voice audio recording.	<ul style="list-style-type: none"> • Always: The transceiver always records the RX audio, regardless of the squelch status. • Squelch Auto: The transceiver records the RX audio only when a signal is received (the squelch is opened). When the squelch closes while recording, the recording will continue for 2 seconds, and then pause.

■ Voice set mode (continued)

File Split ON	
Turn the File Split function ON or OFF.	<ul style="list-style-type: none">• 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.• ON: While recording, and 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 OFF	
Turn the PTT Automatic Recording function ON or OFF.	<ul style="list-style-type: none">• OFF: The recording does not start even if a signal is transmitted.• ON: The recording automatically starts when a signal is transmitted. The recording will continue when:<ul style="list-style-type: none">• A signal is transmitted again within 10 seconds after the last transmission.• A signal is received within 10 seconds after the last transmission, the received audio is also recorded.<ul style="list-style-type: none">- A signal is received within 10 seconds after the last reception.• The squelch is open in the FM modes.The recording will stop when:<ul style="list-style-type: none">• The frequency or operating mode is changed.• The operating method (V/M, M-CH, Band Stacking Register, and so on) is changed.• 10 minutes has past after the last transmission while the squelch is open in the SSB, CW, RTTY, PSK or AM modes.
QSO PLAY Skip Time 10s	
Set the Skip time for forwarding or rewinding while playing back the QSO audio. 3, 5, 10 and 30 seconds are selectable.	

■ Saving a voice memory into the memory device

◇ Saving the received audio memory



[F-1•DIR/FILE] [F-4•EDIT] [EXIT/SET] Main dial

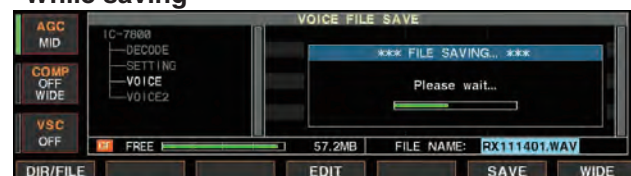
• Voice recorder RX memory screen



• Voice file save screen— file name edit



• While saving



The recorded RX memory contents can be saved into the CF (Compact Flash) memory card or USB flash drive.

- ① During Voice Recorder RX memory screen display, push [F-6•SAVE] to select voice file save screen.
 - Previously selected screen, TX or RX memory, is displayed. If the TX memory channel (T1–T4) appears, push [F-7•T/R] to select RX memory channel.
- ② Change the following conditions, if desired.

• File name:

- ① Push [F-4•EDIT] to select file name edit condition.
 - Push [F-1•DIR/FILE] several times to select the file name, if necessary.
- ② Push [ABC], [123] or [Symbol] to select the character group, then rotate the main dial to select the character.
 - [ABC] : A to Z (capital letters); [123]: 0 to 9 (numerals); [Symbol]: ! # \$ % & ' ^ + - = () [] { } _ ~ @ can be selected.
 - Push [F-1•◀] to move the cursor left, push [F-2•▶] to move the cursor right, push [F-3•DEL] to delete a character and push [F-4•SPACE] to insert a space.
- ③ Push [EXIT/SET] to set the file name.

• Saving location

- ① Hold down [F-1•DIR/FILE] for 1 second to select the CF memory card or USB flash drive.
 - ② Push [F-1•DIR/FILE] to select tree view screen.
 - ③ Select the desired directory or folder in the CF memory card.
 - Push [F-4•◀ ▶] to select the upper directory.
 - Push [F-2•▲] or [F-3•▼] to select folder in the same directory.
 - Hold down [F-4•◀ ▶] for 1 second to select a folder in the directory.
 - Push [F-5•REN/DEL] to rename the folder.
 - Hold down [F-5•REN/DEL] for 1 second to delete the folder.
 - Hold down [F-6•MAKE] for 1 second to making a new folder. (Edit the name with the same manner as the “• File name” above.)
 - ④ Push [F-1•DIR/FILE] twice to select the file name.
- ③ Push [F-6•SAVE].
 - After the saving is completed, return to Voice Recorder RX memory screen automatically.

◇ Saving the TX memory

The TX memory contents can also be saved into the Memory device. However, the contents are saved with the memory channel list, set mode conditions, etc. at the same time.

See the IC-7800 instruction manual's Section 12 for details.

■ Level set mode

You can adjust the audio level for the audio peak filter in the CW mode.

APF AF Level

0dB

Sets the audio level that the audio peak filter is ON in the CW mode, from 0 to +6 dB in 1dB step. (default: 0dB)

■ ACC set mode

You can adjust the input level for the Ethernet connector [LAN], and also can select it for each operating modes.

LAN MOD Level

50%

Sets the desired input level for modulation from [LAN], within 0 to 100% in 1% steps. (default: 50%)

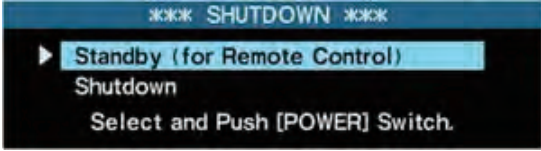
DATA OFF MOD	MIC,ACC-A,ACC-B
Selects the desired connector(s) for modulation input when data mode is not in use.	• MIC : Use the signals from [MIC].
	• ACC-A : Use the signals from [ACC1-A] (pin 4).
	• ACC-B : Use the signals from [ACC1-B] (pin 4).
	• MIC,ACC-A : Use the signals from [MIC] and [ACC1-A] (pin 4).
	• MIC,ACC-B : Use the signals from [MIC] and [ACC1-B] (pin 4).
	• ACC-A,ACC-B : Use the signals from [ACC1-A] and [ACC1-B] (pin 4).
	• MIC,ACC-A,ACC-B : Use the signals from [MIC], [ACC1-A] and [ACC1-B] (pin 4). (default)
	• S/P DIF : Use the signals from [S/P DIF].
	• LAN : Use the signals from [LAN].

DATA1 MOD	ACC-A
Selects the desired connector(s) for modulation input when data 1 mode (D1) is in use.	• MIC : Use the signals from [MIC].
	• ACC-A : Use the signals from [ACC1-A] (pin 4). (default
	• ACC-B : Use the signals from [ACC1-B] (pin 4).)
	• MIC,ACC-A : Use the signals from [MIC] and [ACC1-A] (pin 4).
	• MIC,ACC-B : Use the signals from [MIC] and [ACC1-B] (pin 4).
	• ACC-A,ACC-B : Use the signals from [ACC1-A] and [ACC1-B] (pin 4).
	• MIC,ACC-A,ACC-B : Use the signals from [MIC], [ACC1-A] and [ACC1-B] (pin 4).
	• S/P DIF : Use the signals from [S/P DIF].
	• LAN : Use the signals from [LAN].

■ ACC set mode (continued)

DATA2 MOD	ACC-B
Selects the desired connector(s) for modulation input when data 2 mode (D2) is in use.	<ul style="list-style-type: none"> • MIC : Use the signals from [MIC]. • ACC-A : Use the signals from [ACC1-A] (pin 4). • ACC-B : Use the signals from [ACC1-B] (pin 4). (default) • MIC,ACC-A : Use the signals from [MIC] and [ACC1-A] (pin 4). • MIC,ACC-B : Use the signals from [MIC] and [ACC1-B] (pin 4). • ACC-A,ACC-B : Use the signals from [ACC1-A] and [ACC1-B] (pin 4). • MIC,ACC-A,ACC-B : Use the signals from [MIC], [ACC1-A] and [ACC1-B] (pin 4). • S/P DIF : Use the signals from [S/P DIF]. • LAN : Use the signals from [LAN].
DATA3 MOD	ACC-A,ACC-B
Selects the desired connector(s) for modulation input when data 3 mode (D3) is in use.	<ul style="list-style-type: none"> • MIC : Use the signals from [MIC]. • ACC-A : Use the signals from [ACC1-A] (pin 4). • ACC-B : Use the signals from [ACC1-B] (pin 4). • MIC,ACC-A : Use the signals from [MIC] and [ACC1-A] (pin 4). • MIC,ACC-B : Use the signals from [MIC] and [ACC1-B] (pin 4). • ACC-A,ACC-B : Use the signals from [ACC1-A] and [ACC1-B] (pin 4). (default) • MIC,ACC-A,ACC-B : Use the signals from [MIC], [ACC1-A] and [ACC1-B] (pin 4). • S/P DIF : Use the signals from [S/P DIF]. • LAN : Use the signals from [LAN].

Others set mode

<p>TX Delay (HF)</p> <p>Sets the transmission's timing for the HF bands. When an external device, such as a vacuum tube linear amplifier or a receiver preamplifier, is connected to the transceiver and you use the SEND line, a problem could possibly occur. If the device's transmit/receive switching time is slower than the time for the Icom transceiver, the device may not yet ready for a transmitted signal, and could be damaged by the transceivers RF power. If necessary to prevent damage to the external device, set an appropriate TX delay.</p>	<p>OFF</p> <ul style="list-style-type: none"> • OFF : The transmission delay is disabled. (default) • 10 to 30ms: After transmit operation, the TX output is delayed for the set period of time (10, 15, 20, 25 or 30 milliseconds).
<p>TX Delay (50M)</p> <p>Sets the transmission's timing for the 50 MHz band. See above TX Delay (HF) for more details.</p>	<p>OFF</p>
<p>Shutdown Function</p> <p>Selects the shutdown option between Standby/Shutdown and Shutdown, for turning ON the transceiver by Remote stations. (default: Shutdown)</p> <p>When this item is set to "Standby/Shutdown:</p> <p>1 Holding down [POWER] for 1 second displays the dialog box below.</p>  <p>2 Push [POWER] to turn OFF the power with the Standby mode.</p> <ul style="list-style-type: none"> • If you want to select "Shutdown," rotate the main dial or push [F-1•▲] or [F-2•▼], then push [POWER]. 	<p>Shutdown</p> <p>Standby/Shutdown: You can turn ON the transceiver's power using external equipment such as a PC with RS-BA1.</p> <p>Shutdown: Only the [POWER] switch turns ON the transceiver.</p> <div data-bbox="842 1137 1455 1339"> <p>NOTE while in the standby mode:</p> <ul style="list-style-type: none"> • The internal cooling fan is active, this is normal; not malfunction. • For the remote control, only the [LAN] port or [REMOTE] connector are active. Thus the [RS-232C] port is not accessible. </div>
<p>CI-V LAN→REMOTE Transceive Address</p> <p>Sets the CI-V address for sending the transceive data from [LAN] to [REMOTE] or [RS-232C]. The [REMOTE] or [RS-232C] connectors output the transceive data with this setting Address.</p> <p>When your system are configured with any other transceivers or receivers, and you do not want to change their frequency or operating mode by operating the RS-BA1, sets this address different with 00h.</p>	<p>00h</p> <p>Only when you configure the remote control system using an optional RS-BA1, you need this setting.</p> <p>The IC-PW1 can receive the transceive data from other than 00h, so you can still operate the IC-PW1 by operating RS-BA1. In that case you must reset the IC-PW1 and set the CI-V settings again. See the IC-PW1's instruction manual for details.</p>
<p>Default Gateway (Valid after Reboot)</p> <p>Sets the default gateway of the router that you want to connect the IC-7800 to.</p> <p>Only when you configure the remote control system using an optional RS-BA1 through the Internet, you need this setting.</p>	<p>Turn the transceiver power OFF then ON to make the setting effective.</p>

■ Others set mode (continued)

Network Control (Valid after Reboot) OFF	
<p>Selects the remote control capability ON or OFF. (default : OFF)</p> <p>Only when you configure the remote control system using an optional RS-BA1, you need this setting.</p>	<p>Turn the transceiver power OFF then ON to make the setting effective.</p>
Control Port (UDP) (Valid after Reboot) 50001	
<p>Sets the Control port of the IC-7800 by accessing from the remote station.</p> <p>Only when you configure the remote control system using an optional RS-BA1, you need this setting.</p>	<p>Turn the transceiver power OFF then ON to make the setting effective.</p>
Serial Port (UDP) (Valid after Reboot) 50002	
<p>Sets the Serial port of the IC-7800 by accessing from the remote station.</p> <p>Only when you configure the remote control system using an optional RS-BA1, you need this setting.</p>	<p>Turn the transceiver power OFF then ON to make the setting effective.</p>
Audio Port (UDP) (Valid after Reboot) 50003	
<p>Sets the Audio port of the IC-7800 by accessing from the remote station.</p> <p>Only when you configure the remote control system using an optional RS-BA1, you need this setting.</p>	<p>Turn the transceiver power OFF then ON to make the setting effective.</p>
Internet Access Line (Valid after Reboot) FTTH	
<p>Selects the your internet access line type.</p> <p>Only when you configure the remote control system using an optional RS-BA1 through the Internet, you need this setting.</p>	<ul style="list-style-type: none"> • FTTH : Fiber To The Home • ADSL/CATV : ADSL or Cable television <p>Turn the transceiver power OFF then ON to make the setting effective.</p>
Network User1 ID	
<p>Register the Users ID to allow them to remotely access the IC-7800. The IC-7800 can register three users to Network User1 ID to Network User3 ID.</p> <p>Only when you configure the remote control system using an optional RS-BA1, you need this registration.</p> <p>The IC-7800 verifies the User ID and password when Remote stations attempt to access the transceiver. If the User ID or password is incorrect, the Remote station cannot access the transceiver.</p>	<ol style="list-style-type: none"> 1 Push [F-5•EDIT] to enter the User ID Edit mode. 2 Rotate the main dial to input a User ID of up to 16 characters. <ul style="list-style-type: none"> • Push [ABC] or [abc] to toggle upper and lower case letters. • Push [123] or [Symbol] to toggle between numerals and symbols. • You cannot register the same ID with User2 or User3, if the ID is already registered. • Push [F-1•◀] or [F-2•▶] for cursor movement. • Push [F-3•DEL] to delete the selected character. 3 Push [F-5•SET] to set.

■ Others set mode (continued)

Password	
Register the password for the Network User1 ID.	<ol style="list-style-type: none"> 1 Push [F-5•EDIT] to enter the Password Edit mode. 2 Rotate the main dial to input a Password of 8 to 16 characters, case-sensitive. <ul style="list-style-type: none"> • At least two different characters must be used. • Push [ABC] or [abc] to toggle upper and lower case letters. • Push [123] or [Symbol] to toggle between numerals and symbols. • Push [F-1•◀] or [F-2•▶] for cursor movement. • Push [F-3•DEL] to delete the selected character. 3 Push [F-5•SET] to set.
Administrator	NO
Selects the administrator setting YES or NO for Network User1 ID. (default: NO)	When this item is set to "YES," the Remote station can terminate a connection between another Remote station and the IC-7800.
Network User2 ID	
<p>Register the Users ID to allow them to remotely access the IC-7800. The IC-7800 can register three users to Network User1 ID to Network User3 ID.</p> <p>/// Only when you configure the remote control system using an optional RS-BA1, you need this registration.</p>	<p>See the Network User1 ID on the previous page for setting details.</p> <ul style="list-style-type: none"> • You cannot register the same ID with User1 or User3, if the ID is already registered.
Password	
Register the password for the Network User2 ID.	See the Password of Network User1 ID above for setting details.
Administrator	NO
Selects the administrator setting YES or NO for Network User2 ID. (default: NO)	When this item is set to "YES," the Remote station can terminate a connection between another Remote station and the IC-7800.
Network User3 ID	
<p>Register the Users ID to allow them to remotely access the IC-7800. The IC-7800 can register three users to Network User1 ID to Network User3 ID.</p> <p>/// Only when you configure the remote control system using an optional RS-BA1, you need this registration.</p>	<p>See the Network User1 ID on the previous page for setting details.</p> <ul style="list-style-type: none"> • You cannot register the same ID with User1 or User2, if the ID is already registered.
Password	
Register the password for the Network User3 ID.	See the Password of Network User1 ID above for setting details.
Administrator	NO
Selects the administrator setting YES or NO for Network User3 ID. (default: NO)	When this item is set to "YES," the Remote station can terminate a connection between another Remote station and the IC-7800.

■ Others set mode (continued)

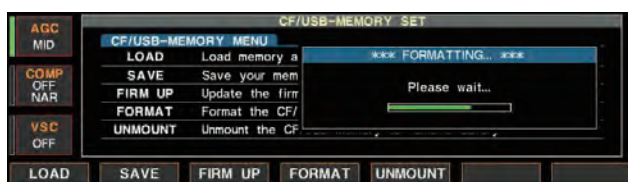
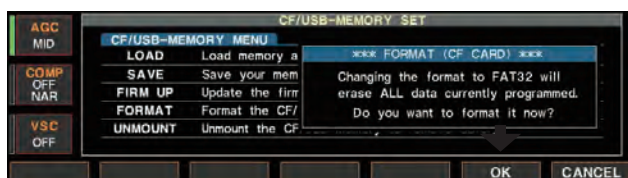
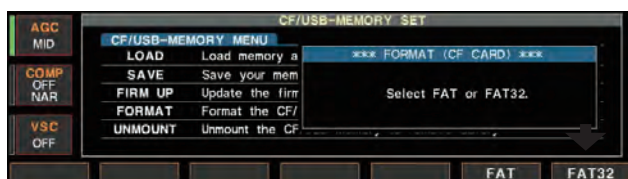
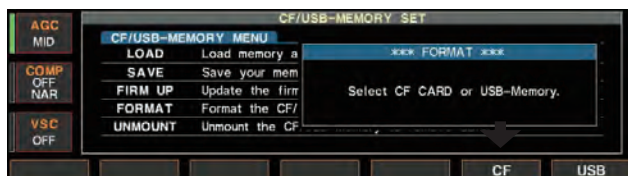
<p>Network Radio Name</p> <p>Enters the Network Radio name of up to 16 characters. The name displays on an RS-BA1's Remote Utility. DO NOT use the duplicated name on your network.</p> <p>Only when you configure the remote control system using an optional RS-BA1, you need this registration.</p>	<p>IC-7800</p> <ol style="list-style-type: none"> Push [F-5•EDIT] to enter the Network Radio Name Edit mode. Rotate the main dial to input a Network Radio Name of up to 16 characters. <ul style="list-style-type: none"> Push [ABC] or [abc] to toggle upper and lower case letters. Push [123] or [Symbol] to toggle between numerals and symbols. Push [F-1•◀] or [F-2•▶] for cursor movement. Push [F-3•DEL] to delete the selected character. Push [F-5•SET] to set.
<p>Network AF Sample Rates</p> <p>Selects the limitation of the received audio sampling rate that Remote stations can adjust. 8 kHz, 12 kHz, 16 kHz, 24 kHz and 48 kHz are selectable. (default: 16 kHz)</p>	<p>8kHz, 12kHz, 16kHz</p> <p>Higher sampling rates will improve the audio quality. However, they also increase the amount of data, which can cause voice delay or jumpiness, depending on the network condition. Lower sampling rates will decrease the audio quality. However, they also decrease the amount of data.</p>
<p>Codecs</p> <p>Sets the received audio codecs that Remote stations can adjust.</p>	<p>LPCM 8bit, u-law 8bit, LPCM 16bit</p> <p>LPCM 8 bit, u-law 8 bit and LPCM 16 bit are selectable. (default: LPCM 8bit, u-law 8bit, LPCM 16bit)</p>
<p>Channels</p> <p>Selects whether or not to allow Remote stations to select stereo sound. (default : 1ch)</p>	<p>1ch</p> <p>When you select "1ch" (monaural), Remote stations cannot program "2ch" (stereo). If the Remote station selects "2ch," stereo output (L=Main band; R=Sub band).</p>
<p>Network MOD Use</p> <p>Selects whether or not to allow Remote stations to send the modulation audio. (default : ON)</p>	<p>ON</p> <ul style="list-style-type: none"> ON: The Remote stations send the modulation audio. OFF: The Remote stations do not send the modulation audio.
<p>Sample Rates</p> <p>Selects the limitation of the modulation audio sampling rate that Remote stations can adjust. 8 kHz, 12 kHz, 16 kHz, 24 kHz and 48 kHz are selectable. (default: 8 kHz)</p>	<p>8kHz</p> <p>Higher sampling rates will improve the audio quality. However, they also increase the amount of data, which can cause voice delay or jumpiness, depending on the network condition. Lower sampling rates will decrease the audio quality. However, they also decrease the amount of data.</p>
<p>Codecs</p> <p>Sets the transmit audio codecs that Remote stations can select.</p>	<p>LPCM 8bit, u-law 8bit, LPCM 16bit</p> <p>LPCM 8 bit, u-law 8 bit and LPCM 16 bit are selectable. (default: LPCM 8bit, u-law 8bit, LPCM 16bit)</p>

■ Formatting the memory device

You can format the CF memory card and USB flash drive. And you can select the format type FAT16 or FAT32.

IMPORTANT! Formatting erases all saved data in the memory device. Making a backup file on your PC is recommended.

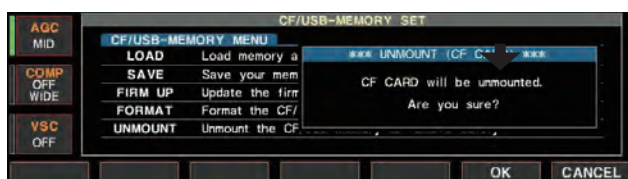
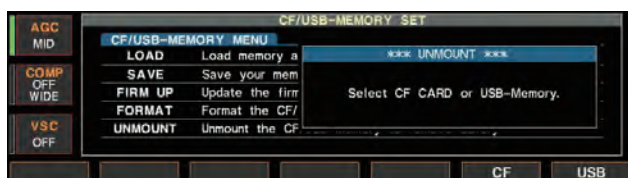
- ① During CF/USB-Memory set menu screen, hold down [F-4•FORMAT] for 1 second.
- ② Push [F-6•CF] or [F-7•USB] to select the memory device.
- ③ Push [F-6•FAT] or [F-7•FAT32] to select the format type.
 - Confirmation screen appears.
- ④ Push [F-6•OK] to format.
 - Push [F-7•CANCEL] to cancel.
- ⑤ Automatically returns to the CF/USB-Memory set menu screen.



■ Unmounting the memory device

CAUTION: When removing the memory device, unmount operation is recommended. If you do not unmount the memory in this case, data in the memory device may be corrupted.

- ① During CF/USB-Memory set menu screen, hold down [F-6•UNMOUNT] for 1 second.
- ② Push [F-6•CF] or [F-7•USB] to select the memory device.
 - Confirmation screen appears.
- ③ Push [F-6•OK] to unmount the memory device.
 - Push [F-7•CANCEL] to cancel.
- ④ Automatically returns to the CF/USB-Memory set menu screen. Then remove the memory device.



■ Remote jack (CI-V) information

◇ Command table

Cmd.	Sub Cmd.	Data	Description
18	00		Turn OFF the transceiver.
	01		Turn ON the transceiver. • This command is available only when the transceiver is standby mode.
1A	050031	00 to 08	Send/read MOD input connector during DATA OFF (00=MIC; 01=ACC-A; 02=ACC-B; 03=MIC/ACC-A; 04=MIC/ACC-B; 05=ACC-A/ACC-B; 06=MIC/ACCA/ACC-B; 07=S/P DIF, 08=LAN)
	050032	00 to 08	Send/read MOD input connector during DATA1 (00=MIC; 01=ACC-A; 02=ACC-B; 03=MIC/ACC-A; 04=MIC/ACC-B; 05=ACC-A/ACC-B; 06=MIC/ACCA/ACC-B; 07=S/P DIF, 08=LAN)
	050033	00 to 08	Send/read MOD input connector during DATA2 (00=MIC; 01=ACC-A; 02=ACC-B; 03=MIC/ACC-A; 04=MIC/ACC-B; 05=ACC-A/ACC-B; 06=MIC/ACCA/ACC-B; 07=S/P DIF, 08=LAN)
	050034	00 to 08	Send/read MOD input connector during DATA3 (00=MIC; 01=ACC-A; 02=ACC-B; 03=MIC/ACC-A; 04=MIC/ACC-B; 05=ACC-A/ACC-B; 06=MIC/ACCA/ACC-B; 07=S/P DIF, 08=LAN)
	050135	00 to 05	Send/read voice memory normal record time (05= 5 sec. to 30=30 sec.)
	050201	00 to 06	Send/read APF AF level. (00=0 dB to 06=+6dB)
	050202	0000 to 0255	Send/read LAN MOD output level (0000=0% to 0255=100%)
	050203	00 to 05	Send/read the TX Delay setting (HF) (00=OFF, 01=10 ms, 02=15 ms, 03=20 ms, 04=25 ms, 05=30 ms)
	050204	00 to 05	Send/read the TX Delay setting (50M) (00=OFF, 01=10 ms, 02=15 ms, 03=20 ms, 04=25 ms, 05=30 ms)
	050205	00, 01	Send/read the Shutdown function. (00=Shutdown, 01=Standby/Shutdown)
	050206	0000 to 0223	Send/read the transceive CI-V Address for LAN to REMOTE in hexadecimal code. (0000=00h to 0223=DFh)
	050207		Send/read the default gateway set (0000000000000001=0.0.0.1 to 0255 025502550254=255.255.255.254, or FF=Blank)
	050208	00, 01	Send/read the remote control capability. (00=OFF, 01=ON)
	050209	000001 to 065535	Send/read the control port setting by accessing from internet. (000001=1 to 065535=65535)
	050210	000001 to 065535	Send/read the serial port setting by accessing from internet. (000001=1 to 065535=65535)
	050211	000001 to 065535	Send/read the audio port setting by accessing from internet. (000001=1 to 065535=65535)

Cmd.	Sub Cmd.	Data	Description
1A	050212	00, 01	Send/read the internet access line setting. (00=FTTH (Fiber To The Home), 01=ADSL/CATV)
	050213	see p. 32	Send/read Network radio name (up to 16-character)
	050214	00 to 04	Send/read the maximum AF sample rates for remote stations. (00=8 kHz, 01=12 kHz, 02=16 kHz, 03=24 kHz, 04=48 kHz)
	050215	00 to 02	Send/read the AF codecs for remote stations. (00=LPCM 8bit, 01=LPCM 8bit, u-law 8bit, 02=LPCM 8bit, u-law 8bit, LPCM 16bit)
	050216	00, 01	Send/read the stereo operation capability for remote stations. (00=1ch, 01=2ch)
	050217	00, 01	Send/read the network TX audio setting for remote stations. (00=OFF, 01=ON)
	050218	00 to 04	Send/read the maximum modulation sample rates for remote stations. (00=8 kHz, 01=12 kHz, 02=16 kHz, 03=24 kHz, 04=48 kHz)
	050219	00 to 02	Send/read the modulation codecs for remote stations. (00=LPCM 8bit, 01=LPCM 8bit, u-law 8bit, 02=LPCM 8bit, u-law 8bit, LPCM 16bit)
	050220	00, 01	Send/read the waveform outline indication on the spectrum scope. (00=Fill, 01=Fill+Line)
	050221	see p. 32	Send/read the waveform outline color for receiving signal.
	050222	00, 01	Send/read the waterfall display on the Spectrum scope. (00=OFF, 01=ON)
	050223	00 to 07	Send/read the peak color level for displaying the waterfall. 00=Grid 1, 01=Grid 2, 02=Grid 3, 03=Grid 4, 04=Grid 5, 05=Grid 6, 06=Grid 7, 07=Grid 8
	050224	00, 01	Send/read waveform type on the Audio FFT scope. (00=Fill, 01=Line)
	050225	see p. 32	Send/read waveform color for Audio FFT scope.
	050226	00, 01	Send/read the waterfall display on the Audio FFT scope. (00=OFF, 01=ON)
	050227	see p. 32	Send/read waveform color for Audio Oscilloscope scope.
	050228	00, 01	Send/read the voice 1st menu. (00=VOICE-Root, 01=VOICE-PLAY)
	050229	01 to 15	Send/read the repeat interval to transmit the recorded voice audio. (01=1 sec. to 15=15 sec.)
	050230	00, 01	Send/read the QSO recording device setting. (00=CF memory card, 01=USB flash drive)
	050231	00, 01	Send/read the recording mode. (00=TX&RX, 01=RX Only)

■ Remote jack (CI-V) information

◇ Command table (continued)

Cmd.	Sub Cmd.	Data	Description
1A	050232	00, 01	Send/read the squelch status for the RX voice audio recording (00=Always, 01=Squelch Auto)
	050233	00, 01	Send/read the QSO audio record file Split function setting. (00=OFF, 01=ON)
	050234	00, 01	Send/read the PTT Automatic Recording function setting. (00=OFF, 01=ON)
	050235	00 to 03	Send/read QSO PLAY Skip time. (00=3 sec., 01=5 sec., 02=10 sec., 03=30 sec.)
21	00	see below	Send/read RIT frequency.
	01	00, 01	Send/read RIT setting. (00=OFF, 01=ON)
	02	00, 01	Send/read ΔTX setting. (00=OFF, 01=ON)

• Color setting

Command : 1A 050221, 050225, 050227

①	②	③	④	⑤	⑥
0	X	X	X	0	X
X	X	X	X	0	X
X	X	X	X	0	X
X	X	X	X	0	X
R (Red)		G (Green)		B (Blue)	
0000–0255		0000–0255		0000–0255	

• RIT frequency setting

Command : 21 00

X	X	X	X	X	X
↑	↑	↑	↑	↑	
10 Hz: 0–9	1 Hz: 0–9	1 kHz: 0–9	100 Hz: 0–9	00: + (plus) 01: – (minus)	

• Codes for Network Radio name contents

Command : 1A 050213

- Character's code— Number

Character	ASCII code	Character	ASCII code
0–9	30–39		

- Character's code— Alphabetical characters

Character	ASCII code	Character	ASCII code
A–Z	41–5A	a–z	61–7A

- Character's code— Symbols

Character	ASCII code	Character	ASCII code
!	21	#	23
\$	24	%	25
&	26	?	3F
"	22	'	27
`	60	^	5E
+	2B	–	2D
*	2A	/	2F
.	2E	,	2C
:	3A	;	3B
=	3D	<	3C
>	3E	(28
)	29	[5B
]	5D	{	7B
}	7D		7C
_	5F	-	7E
@	40		