

# IC-7600

## Firmware information— Ver. 2.00

Thank you for using the Icom Download Service.

The Version 2.00 firmware update will provide the following additional functions or changes to your transceiver. The first time you update, thoroughly read the Section 14 (UPDATING THE FIRMWARE) of the IC-7600's instruction manual.

### IMPORTANT!

**We strongly recommend you to backup all the transceiver's data and settings to a USB-Memory before starting the firmware update.**

**When the firmware is updated, memory and data contents will be deleted or settings will be returned to their default value.**

## ■ Additions and changes

- Adds new features in the Scope set mode.
  - Waveform Type (p. 2)
  - Waveform Color (Line) (p. 2)
  - Waterfall Display (p. 2)
  - Waterfall Peak Color Level (p. 2)
- Adds the Wide screen option for the Spectrum scope screen. (p. 3)
- Adds USB mouse operation on the Spectrum scope screen. (p. 4)
- Adds a new feature in the Level set mode.
  - APF AF Level (p. 5)
- Adds new features in the Others set mode.
  - TX Delay (HF) (p. 5)
  - TX Delay (50M) (p. 5)
  - Shutdown function (p. 6)
  - CI-V Output (for ANT) (p. 6)
- Adds a new option in the SAVE Form item in the Save option set mode. (p. 7)
- Changes the default value of SEND Relay Type in the ACC set mode. (p. 7)
- Adds some CI-V commands. (p. 8)
- Changes the description of some CI-V commands. (p. 9)

## ■ Additional features in the Scope set mode

Adds the following items in the Scope set mode.

### ◇ Waveform Type

Select the outline waveform display type for the Spectrum scope.

- Fill: The waveform is drawn only in color. (default)
- Fill + Line: The waveform is drawn in color with an outline.



### ◇ Waveform Color (Line)

Set the waveform outline color for the currently received signals.

- The color is set in RGB format.
- Push [◀ ▶] (F-3) to select R (Red), G (Green) and B (Blue), and rotate the main dial to adjust the ratio from 0 to 255.
- The color is displayed in the box beside the RGB scale.



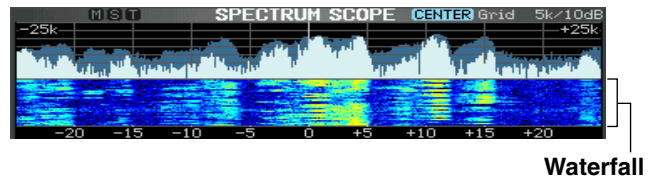
### ◇ Waterfall Display

Turn the Waterfall display ON or OFF for the normal scope or mini scope screen. In the Wide screen, the waterfall is always displayed, regardless of this setting.

- OFF: Turns OFF the Waterfall display.
- ON: Turns ON the Waterfall display. (default)



When the Waterfall display is ON.



See page 3 for details of the Waterfall display.

### ◇ Waterfall Peak Color Level

Select the signal level that the Waterfall displays a peak color from Grid 1 to Grid 7. (default: Grid 7) Higher signal levels are Red, Yellow, Green, Light-blue, Blue and Black in order.

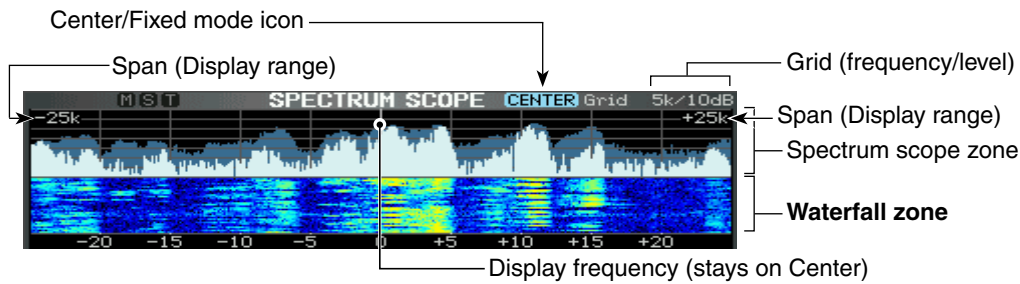


■ Additional features in the Scope set mode (Continued)

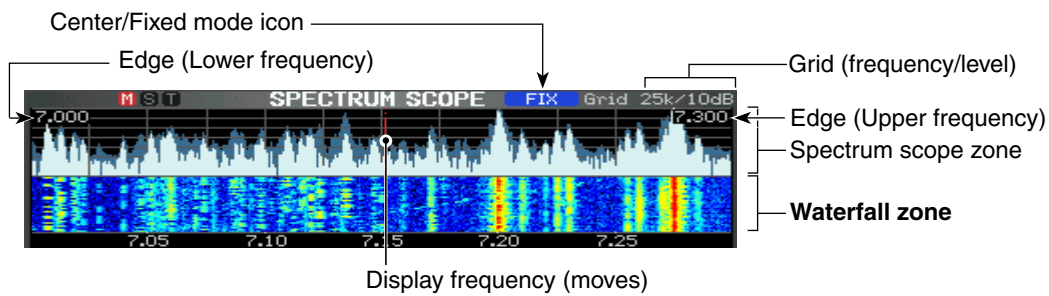
◇ **Waterfall display**

You can display the Waterfall in the Spectrum scope mode (Center or Fixed mode).

• **In the Center mode screen**



• **In the Fixed mode screen**

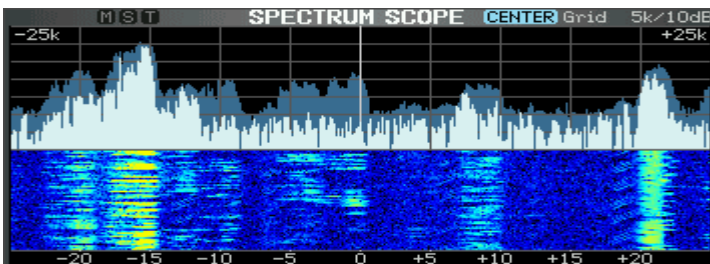


■ **Wide screen for the Spectrum scope screen**

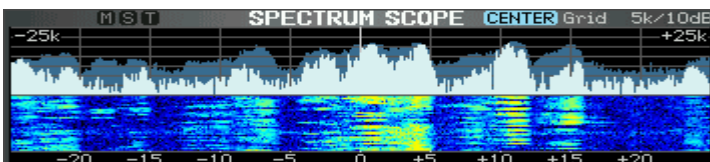
You can toggle the Wide or Normal screen by pushing [WIDE/SET](F6) for your convenience.

In the Wide screen, the Waterfall is always displayed even if the Waterfall display item is set to OFF. (p. 2)

• **Wide screen**



• **Normal screen**



## ■ USB mouse operation

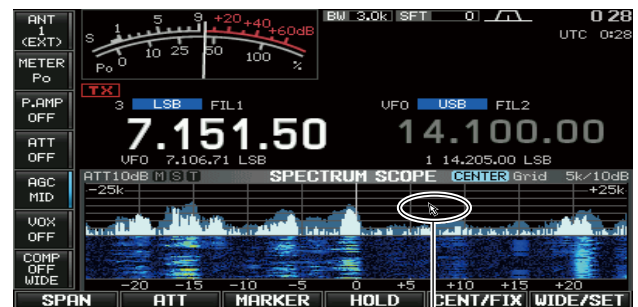
If you connect a USB mouse to the transceiver, a mouse pointer appears on the spectrum scope screen.

Now, you can change the frequency by using the mouse.

/// Clicking while holding down [XFC] changes the transmit frequency.

### • Mouse operation on the Center mode screen

Button	Operation	Description
Left	Click	The frequency changes to the clicked point and the mouse pointer moves to the center of the screen.
	Drag	The frequency changes to the clicked point and the mouse pointer moves 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 pointer

### • Mouse operation on the Fixed mode screen

Button	Operation	Description
Left	Click	The frequency and marker change to the clicked point
	Drag	The frequency and marker change to the clicked 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.

/// Changing frequencies in the drag operation differ depending on the tuning step settings.

## ■ Additional feature in the Level set mode

Adds the APF AF Level item in the Level set mode.

### ◇ APF AF Level

Sets the audio level for the audio peak filter in the CW mode from 0 to +6 dB in 1 dB steps. (default: 0 dB)



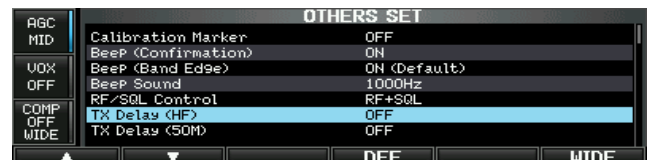
## ■ Additional features in the Others set mode

Adds the following items in the Others set mode.

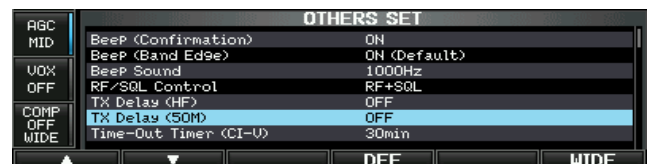
### ◇ TX Delay (HF)/TX Delay (50M)

If the transceiver transmits power before the external device, such as a linear amplifier, is ready to operate, the transmitted power will be reflected back and can damage the transceiver. Therefore a time delay can be set to delay the transceiver output until the external device is ready.

Set the TX delay time on the HF bands or 50 MHz band to 10, 15, 20, 25, or 30 milliseconds, or select "OFF" for no delay time, depending on the needs of your external device. (default: OFF)



TX Delay (HF)



TX Delay (50M)

■ Additional features in the Others set mode (Continued)

◇ **Shutdown function**

Selects the shutdown option.

- **Shutdown:** Shuts down right after **[POWER]** has been held down for 1 second. (default)
- **Standby/Shutdown:**  
Enters the remote standby mode.  
If the remote standby mode is selected, the IC-7600 can be remotely turned ON later using the optional RS-BA1.



○ **When “Standby/Shutdown” is selected**

- ① Hold down **[POWER]** for approximately for 1 second to turn OFF the power.
  - The shutdown option dialogue appears.
- ② Rotate the main dial to select the shutdown option.
  - If you want to turn OFF the power immediately, select “Shutdown.”
  - If you want to remotely turn ON the power later, select “Standby (for Remote Control).”
    - The power indicator, which is located on the right above **[POWER]**, slowly blinks Orange.
    - When the transceiver is remote standby mode, the transceiver accepts the power ON command only from the [REMOTE] jack.
- ③ Push **[POWER]**.

◇ **CI-V Output (for ANT)**

Enables to output the antenna controller status (frequency and so on) from the [REMOTE] jack.

- **OFF:** Turns OFF the function. (default)
- **ON:** Outputs the status.



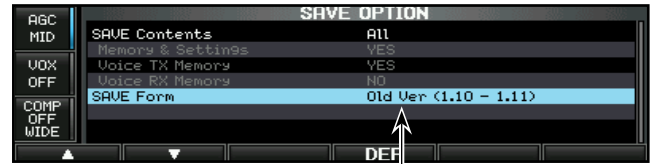
## ■ New option for the SAVE Form item

Adds a new option, “Old Ver (1.10–1.11),” for the SAVE Form item in the Save option set mode.

- The firmware versions are shown in brackets, and you can select the desired version by rotating the main dial. The file will be saved in the selected version.
- Now Ver: Saves the file in the current firmware version format.
- Old Ver (1.10–1.11): Saves the file in the firmware version 1.10 to 1.11 format.
- Old Ver (1.00–1.03): Saves the file in the firmware version 1.00 to 1.03 format.

### NOTE:

- You cannot write the setting file that is saved in the current version format to an older firmware version IC-7600.
- If the settings are saved in an older version format, the items added in version 2.00 or later are not saved.



Added

## ■ Default value of the SEND Relay Type item

The default value of the SEND Relay Type item in the ACC Set mode is changed to “MOS-FET.”



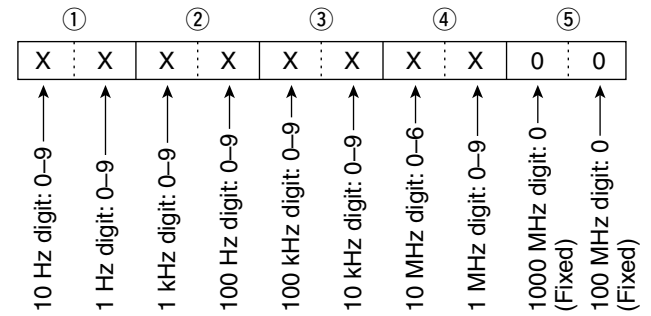
## ■ Additional CI-V commands

The following commands are added to the command table.

Cmd.	Sub Cmd.	Data	Description
07	C2	00	Send/read the dualwatch OFF
		01	Send/read the dualwatch ON
	D2	00	Send/read Main band selection
		01	Send/read Sub band selection
15	05	00	Read various squelch (tone squelch, and so on) status (squelch close)
		01	Read various squelch (tone squelch, and so on) status (squelch open)
18	00		Turn OFF the transceiver
	01		Turn ON the transceiver* *The power ON command (18 01) is available only when the transceiver is standby mode. The transceiver accepts the control command only from the [REMOTE] jack.
1A	0174	00 to 06	Send/read audio output level at APF ON (00=0 dB, 06=+6 dB)
	0175	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)
	0176	00 to 05	Send/read the TX Delay setting (50 M) (00=OFF, 01=10 ms, 02=15 ms, 03=20 ms, 04=25 ms, 05=30 ms)
	0177	00	Send/read the Shutdown function is Shutdown
		01	Send/read the Shutdown function is Standby/Shutdown
	0178	00	Send/read command to disable to output the antenna controller status (frequency and so on) from [REMOTE]
		01	Send/read command to enable to output the antenna controller status (frequency and so on) from [REMOTE]
	0179	00	Send/read the spectrum display type is Fill
		01	Send/read the spectrum display type is Fill+Line
	0180	See to the right	Send/read spectrum line color
	0181	00	Send/read waterfall set for spectrum scope OFF
01		Send/read waterfall set for spectrum scope ON	
0182	00 to 06	Send/read peak color level set for waterfall of the spectrum scope (00=Grid 1, 01=Grid 2, 02=Grid 3, 03=Grid 4, 04=Grid 5, 05=Grid 6, 06=Grid 7)	
1C	03	See to the right	Read transmit frequency *When "CI-V Output (for ANT)" (Command: 1C 04) is set to "ON," automatically outputs when changed.
		00	Send/read command to disable to output the antenna controller status (frequency and so on) from [REMOTE]
		01	Send/read command to enable to output the antenna controller status (frequency and so on) from [REMOTE]
21	00	See to the right	Send/read RIT frequency
		00	Send/read RIT setting is OFF
	01	00	Send/read RIT setting is ON
		01	Send/read RIT setting is ON
25	See to the right	00	Send/read ΔTX setting is OFF
		01	Send/read ΔTX setting is ON
26		See p. 9	Send/read the Main or Sub band operating mode and filter

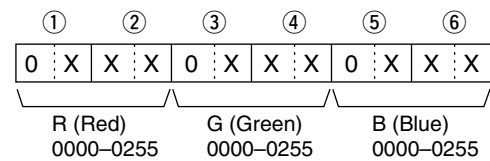
### • Operating frequency

Command: 1C 03



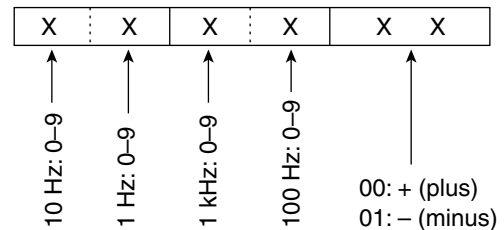
### • Color setting

Command: 1A 05 0180



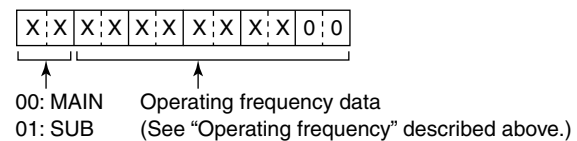
### • RIT frequency settings

Command: 21 00



### • Main or Sub band's frequency settings

Command: 25



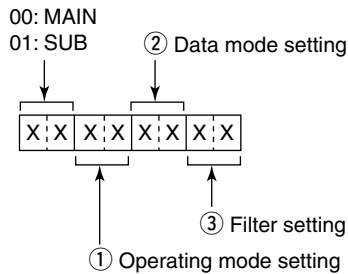


■ Additional CI-V commands (Continued)

• Main or Sub band's operating mode and filter settings

Command: 26

Both data and filter settings can be skipped. In that case, "DATA OFF" and the default filter setting of the operating mode is automatically selected.



① Operating mode		② Data mode setting	③ Filter setting
00: LSB	05: FM	00: Data mode OFF	01: FIL1
01: USB	07: CW-R	01: Data mode 1 (D1)	02: FIL2
02: AM	08: RTTY-R	02: Data mode 2 (D2)	03: FIL3
03: CW	12: PSK	03: Data mode 3 (D3)	
04: RTTY	13: PSK-R		

■ Changed CI-V commands

The description of following commands are changed.

Cmd.	Sub Cmd.	Data	Description
1C	00	00	Send/read transceiver's status (RX) *When "CI-V Output (for ANT)" (Command: 1C 04) is set to "ON," automatically outputs when changed.
		01	Send/read transceiver's status (TX) *When "CI-V Output (for ANT)" (Command: 1C 04) is set to "ON," automatically outputs when changed.