

IC-7850/IC-7851

Firmware update information— Ver. 1.30

Thank you for using the Icom Download Service.

Version 1.30 of the firmware will provide the following additional functions or changes to your IC-7850/IC-7851.

- ➔ The default settings of the IF filter and Roofing filter are changed.
- ➔ A SSB-D TBW item is added on the Level set screen.
- ➔ A USB SEND/Keying Inhibit at Connection item is added on the Others set screen.
- ➔ CI-V commands are added (pp. 2, 3).

Before updating, see Section 17 'UPDATING THE FIRMWARE' in the IC-7850/IC-7851 instruction manual, for details.

IMPORTANT!

Make a backup file of the transceiver's settings, such as stored memory channels, filter settings, to the SD card or USB flash drive before updating the firmware.

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

■ Changed default settings

The default settings of the IF filters (FIL1 ~ FIL3) and Roofing filter in the SSB-D mode are changed. (The changed items are shown in bold in the table below.)

◇ IF filter

Mode	IF filter (default)	Selectable range (steps)
SSB-D	FIL 1 (3.0 kHz)	50 Hz to 500 Hz (50 Hz)/ 600 Hz to 3.6 kHz (100 Hz)
	FIL 2 (1.2 kHz)	
	FIL 3 (500 Hz)	

◇ Roofing filter

Mode	IF filter (default)
SSB-D	FIL 1 (15 kHz)
	FIL 2 (6 kHz)
	FIL 3 (6 kHz)

■ Additional set items

The SSB-D TBW item is added on the Level set screen and the USB SEND/Keying Inhibit at Connection item is added on the Others set screen.

SSB-D TBW (Default: 300 – 2700)

Sets the transmission pass bandwidth to the SSB-D mode, by changing the lower and higher cut-off frequencies.

- Lower frequency: 100, 200, 300 and 500 Hz
- Higher frequency: 2500, 2700, 2800 and 2900 Hz.



Added item

USB SEND/Keying Inhibit at Connection

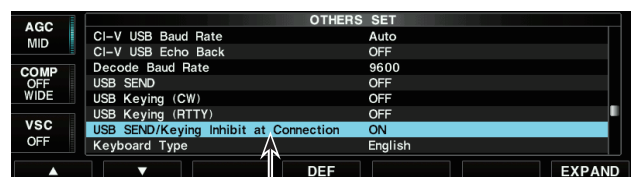
(Default: ON)

Turn ON the timer to prevent unintentional SEND or Keying signal transmission if the USB driver version is not the latest one, under the following conditions.

- When connecting a PC to the IC-7850/IC-7851 using a USB cable.
- When a virtual serial port communication has been established.
- While the IC-7850/IC-7851 and a PC are connected using a USB cable, or when starting up the PC or connecting or disconnecting a USB device to or from the PC.

- OFF: The IC-7850/IC-7851 transmits the SEND or Keying signal right after a PC or USB device is connected.
- ON: The IC-7850/IC-7851 transmits after a few seconds have passed, to prevent unintentional transmission.

① If you change this setting to "OFF," update the transceiver's USB driver and make sure the SEND or Keying signal will not be unintentionally transmitted.



Added item

■ Additional CI-V commands

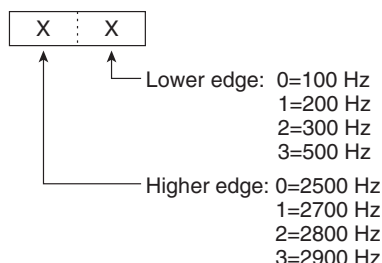
The following commands are added to the conventional Command table.

Cmd.	Sub Cmd.	Data	Description
1A*	05	0320	see below
		0321 00/01	Send/read the timer setting of the USB SEND/Keying Inhibit at Connection. 00=OFF, 01=ON
29*		00/01 + Supported commands see below	Regardless of active/inactive the Main or Sub band, you can directly specify the Main or Sub band, and send/read the supported command settings. 00=MAIN, 01=SUB

* Send/read data

• SSB-D transmission passband width settings

Command: 1A 050320

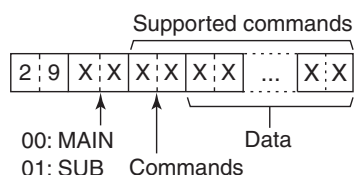


• Setting after directly specify the Main/Sub band

Command : 29

Specify the Main or Sub band before entering the supported commands.

When you receive the OK code (FB), or the NG code (FA), the Command 29 and Main/Sub specify (00/01) is omitted.



The supported commands are listed to the right column.

• Supported command table

Cmd.	Sub Cmd.	Data	Description
07			Select VFO mode
11*		00	Send/read attenuator OFF
		03	Send/read 3 dB attenuator
		06	Send/read 6 dB attenuator
		09	Send/read 9 dB attenuator
		12	Send/read 12 dB attenuator
		15	Send/read 15 dB attenuator
		18	Send/read 18 dB attenuator
12*		21	Send/read 21 dB attenuator
	00	00 or 01	Select/read ANT1 selection (00=RX ANT OFF; 01=RX ANT ON)
	01	00 or 01	Select/read ANT2 selection (00=RX ANT OFF; 01=RX ANT ON)
	02	00 or 01	Select/read ANT3 selection (00=RX ANT OFF; 01=RX ANT ON)
14*	03	00	Select/read ANT4 selection (00=RX ANT OFF; fix)
	01	0000 to 0255	Send/read [AF] level (0000=max. CCW, 0255=max. CW)
	02	0000 to 0255	Send/read [RF] level (0000=max. CCW, 0255=max. CW)
	03	0000 to 0255	Send/read [SQL] level (0000=max. CCW, 0255=max. CW)
	05	0000 to 0255	Send/read [APF] position (0000=Pitch-550 Hz, 0128=Pitch, 0255=Pitch+550 Hz; 10 Hz steps)
	06	0000 to 0255	Send/read [NR] level (0000=0%, 0255=100%)
	07	0000 to 0255	Send/read inner [TWIN PBT] position (0000=max. CCW, 0128=center, 0255=max. CW)
	08	0000 to 0255	Send/read outer [TWIN PBT] position (0000=max. CCW, 0128=center, 0255=max. CW)
	0D	0000 to 0255	Send/read [NOTCH] position (0000=max. CCW, 0128=center, 0255=max. CW)
	11	0000 to 0255	Send/read [AGC] level (0000=max. CCW to 0255=max. CW)
	12	0000 to 0255	Send/read NB level (0000=0%, 0255=100%)
	13	0000 to 0255	Send/read [DIGI-SEL] position (0000=max. CCW to 0255=max. CW)
15	01	00	Read noise or S-meter squelch status (squelch close)
		01	Read noise or S-meter squelch status (squelch open)
	02	0000 to 0255	Read S-meter level (0000=S0, 0120=S9, 0241=S9+60 dB)
	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)

* Send/read data

► Continue on the next page

• Supported command table (Continued)

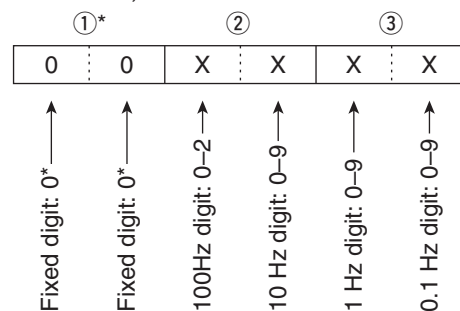
Cmd.	Sub Cmd.	Data	Description
16*	02	00	Preamplifier OFF
		01	Preamplifier 1 ON
		02	Preamplifier 2 ON
	12	00	AGC OFF selection
		01	AGC FAST selection
		02	AGC MID selection
		03	AGC SLOW selection
	22	00	Noise blanker OFF
		01	Noise blanker ON
	32	00	Audio peak filter OFF
		01	Audio peak filter WIDE ON (320 Hz is selected when SHARP APF is set)
		02	Audio peak filter MID ON (160 Hz is selected when SHARP APF is set)
		03	Audio peak filter NAR ON (80 Hz is selected when SHARP APF is set)
	40	00	Noise reduction OFF
		01	Noise reduction ON
	41	00	Auto notch function OFF
		01	Auto notch function ON
	42	00	Repeater tone OFF
		01	Repeater tone ON
	43	00	Tone squelch OFF
		01	Tone squelch ON
	48	00	Manual notch function OFF
		01	Manual notch function ON
	4C	00	VSC function OFF
		01	VSC function ON
	4D	00	AGC VR function OFF
		01	AGC VR function ON
	4E	00	DIGI-SEL function OFF
		01	DIGI-SEL function ON
	4F	00	Twin peak filter OFF
		01	Twin peak filter ON (Can be turned ON only when Mark and Shift are set to 2125 Hz and 170 Hz, respectively)

Cmd.	Sub Cmd.	Data	Description
16*	50	00	Dial lock function OFF
		01	Dial lock function ON
	53	00	ANT-RX I/O setting OFF
		01	ANT-RX I/O setting "A"
		02	ANT-RX I/O setting "B"
	55	00	15 kHz roofing filter selection
		01	6 kHz roofing filter selection
		02	3 kHz roofing filter selection
		03	1.2 kHz roofing filter selection
	56	00	SHARP selection for DSP filter type
		01	SOFT selection for DSP filter type
	57	00	WIDE selection for manual notch width
		01	MID selection for manual notch width
		02	NAR selection for manual notch width
1A*	03	00 to 49	Send/read the selected filter width (AM: 00=200 Hz to 49=10 kHz; Other than AM: 00=50 Hz to 31=2700 Hz/ 40=3600 Hz)
		04	Send/read the selected AGC time constant (00=OFF, AM: 01=0.1 sec. to 13=6.0 sec., SSB, CW, RTTY, PSK: 01=0.3 sec. to 13=6.0/8.0 sec.)
	07	00 or 01	Send/read 1.2 kHz filter calibration (00=Stop, 01=Start)
	08	00 to 02	Read 1.2 kHz filter calibration result (00=Calibrating, or has not been calibrated after Power ON, 01=Succeeded, 02=Failed)
		09	0000 to 0440 Send/read 1.2 kHz filter calibration adjusted value (0000=0% to 0440=100%)
1B*	00	see below	Send/read repeater tone frequency
	01	see below	Send/read TSQL tone frequency

* Send/read data

• Repeater tone/tone squelch frequency settings

Command: 1B 00, 1B 01



*Not necessary when setting a frequency.