



CI-V REFERENCE GUIDE

COMMUNICATIONS RECEIVER

IC-R15

TABLE OF CONTENTS

REMOTE CONTROL	2
Remote control (CI-V) information	2
◇ CI-V data setting.....	2
◇ Connecting to a PC	2
◇ Data format.....	3
◇ Command table	4
◇ Command formats.....	5
• Operating frequency	5
• Operating mode	5
• Offset frequency setting.....	5
• AF gain level setting	5
• Squelch level setting.....	5
• Tone squelch frequency setting	6
• DTCS code and polarity setting.....	6

REMOTE CONTROL

Remote control (CI-V) information

◇ CI-V data setting

To control the receiver, first set the following items on the MENU screen.

① Refer to the Advanced manual for each menu item's details.

[MENU] > SET > Function > **CI-V**

The Icom Communications Interface V (CI-V) is used for remote control.

Set its CI-V address, CI-V Baud Rate (SP Jack)*, and CI-V transceive function*.

* You need to select the baud rate in "CI-V Baud Rate (SP Jack)," when you remotely control the receiver through the [↻] jack.

When "CI-V Transceive" is set to "ON," the same change as your receiver is automatically set on other connected transceivers or receivers, and vice versa.

[MENU] > SET > Function > **USB Connect**

Before connecting the USB cable to the PC, set "USB Connect" to "Serialport" (default).

[MENU] > SET > Function > CI-V > **CI-V Echo Back (USB Jack)**

Before connecting the USB cable to the PC, set "CI-V Echo Back (USB Jack)" to "ON" or "OFF."

◇ Connecting to a PC

The receiver's operating frequency and mode can be remotely controlled using a PC.

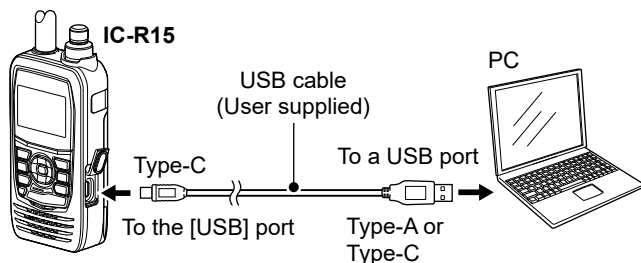
The Icom Communications Interface V (CI-V) controls the receiver.

Connect the receiver to a PC with a USB cable (User supplied).

① Use a proper cable according to your PC's USB port and make the connection as short as possible.

The receiver may not be recognized by the controller, depending on the length of the USB cable.

① When connecting to a USB port on your PC with the USB driver installed, the USB is named "IC-R15 Serial Port."



To use the USB cable between the receiver and a PC, you must first install a USB driver. The latest USB driver and installation guide can be downloaded from the Icom website.

Carefully read the guide, before installing the driver.
<https://www.icomjapan.com/support/>

NOTE:

When you remotely control the receiver, use a CT-17 CI-V LEVEL CONVERTER (discontinued product) or cable (User supplied) to connect the PC.

The receiver can be connected through an optional CT-17 to a PC equipped with an RS-232C port.

① Remote operation through the [↻] jack is not guaranteed.

Ask your nearest Icom Dealer or Service Center.

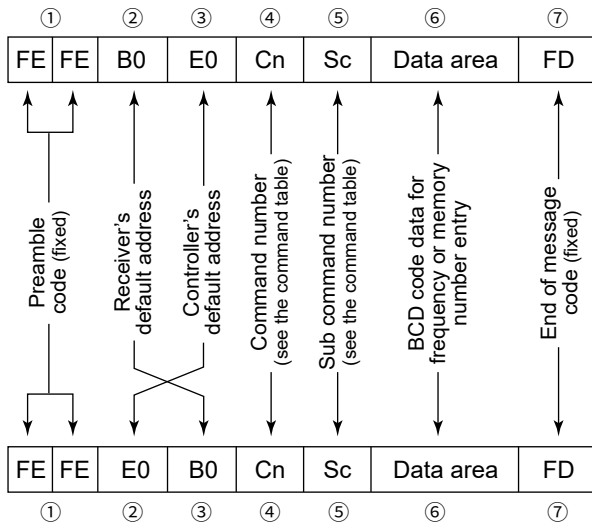
REMOTE CONTROL

Remote control (CI-V) information

◇ Data format

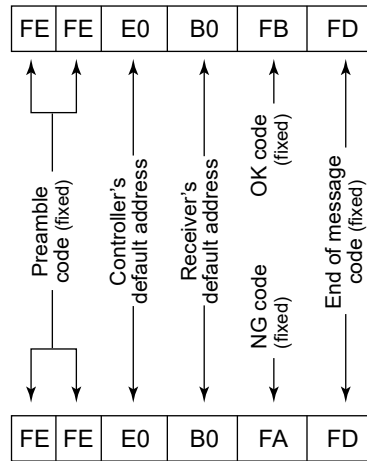
The CI-V system can be written using the following data formats. Data formats differ according to command numbers. A data area or sub command is added for some commands.

Controller to IC-R15



IC-R15 to controller

OK message to controller



NG message to controller

REMOTE CONTROL

Remote control (CI-V) information

◇ Command table

Command	Sub	Data	Description
00		See p. 5	Send operating frequency for transceiver
01		See p. 5	Send operating mode for transceiver
03		See p. 5	Read operating frequency
04		See p. 5	Read operating mode
05		See p. 5	Send operating frequency
06		See p. 5	Send operating mode
07			Select the VFO mode ① Exit the FM Radio mode.
	D0		Select the A band Dualwatch: Set the A band as the MAIN band Single watch: Select the A band
	D1		Select the B band Dualwatch: Set the B band as the MAIN band Single watch: Select the B band
0C* ^{1,3}			Read offset frequency
0D* ³		See p. 5	Set offset frequency
0F* ³		10/11/12	Read duplex setting (10=OFF, 11=DUP-, 12=DUP+)
	10		Set Simplex
	11		Set Duplex -
	12		Set Duplex +
11*		00/05/10/ 15/20	Send/read Attenuator (00=OFF, 05= 5 dB ATT1, 10=10 dB ATT2, 15=15 dB ATT3, 20=20 dB ATT4)
14*	01	See p. 5	Send/read the audio level
	03	See p. 5	Send/read the squelch level
15	01	00/01	Read noise or S-meter squelch status (00=Close, 01=Open)
	02	0000 ~ 0255	Read S-meter level (0000=S0, 0170=S9)
	05	00/01	Read various squelch function's (including the tone squelch) status (00=Close, 01=Open)
16*	43* ³	00 ~ 02	Send/read the Tone squelch (00=OFF, 01=TSQL, 02=TSQL-R)
	4B* ³	00 ~ 02	Send/read the DTCS function (00=OFF, 01=DTCS, 02=DTCS-R)
	4C* ³	00/01	Send/read the VSC function (00=OFF, 01=ON)
	59	00/01	Send/read the display type (00=Single band display, 01=Dual band display)
18	00		Turn OFF the receiver
	01* ²		Turn ON the receiver
19	00		Read the receiver ID

Command	Sub	Data	Description
1A*	00* ³	00/01	Send/read the AF filter function (00=OFF, 01=ON)
	01* ³	00/01	Send/read the Automatic Noise Limiter function (ANL) (00=OFF, 01=ON)
	02	00/01	Send/read the Earphone Mode (00=OFF, 01=ON)
	03	00/01	Send/read the FM Radio Attenuator (00=OFF, 01=ON)
1B*	01* ³	See p. 6	Send/read the TSQL tone frequency
	02* ³	See p. 6	Send/read the DTCS code

*(Asterisk) Send/read data

*¹ Less than 100 Hz is omitted.

*² When sending the power ON command (18 01) using the [] jack, the command "FE" must be sent before the basic format.

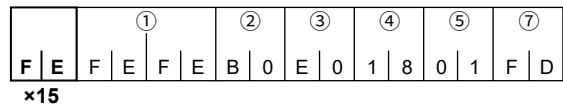
The following is the approximate number of needed repetitions.

•4800bps: 15 "FE"s

•9600bps: 30 "FE"s

•19200bps: 60 "FE"s

Example: When operating with 4800 bps



① Preamble code (fixed)

② Receiver's default address

③ Controller's default address

④ Command number

⑤ Sub command number

⑦ End of message code (fixed)

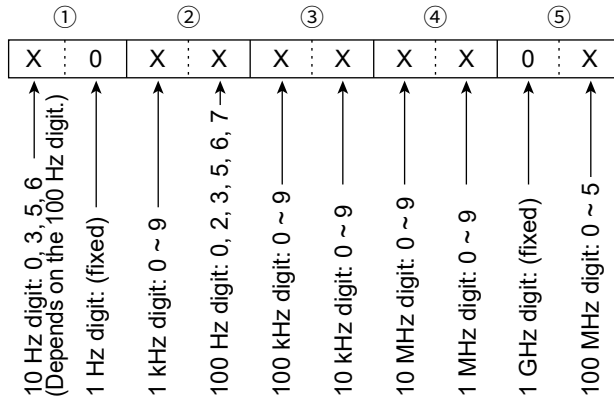
*³ Cannot be set in the FM Radio mode.

Remote control (CI-V) information

◇ Command formats

• Operating frequency

Command: 00, 03, 05



① The 10Hz digit is set as shown below, depending on the 100Hz digit.

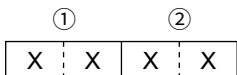
When the 100Hz digit is: The 10Hz digit is:

- 2 or 7: 5
- 3: 3
- 6: 6

When the 100Hz digit is 0, 1, 4, 5, 8, or 9, the 10Hz digit is 0.

• Operating mode

Command: 01, 04, 06



Receive mode	① Operating mode	② Filter setting
AM	02	01
AM-N	02	02*1
FM	05	01
FM-N	05	02*2
WFM*3	06	01

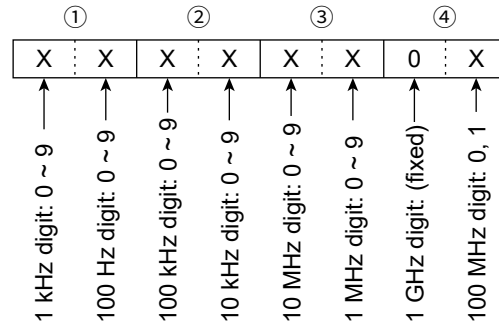
*1 If ② is omitted, AM is set.

*2 If ② is omitted, FM is set.

*3 The FM Radio mode only.

• Offset frequency setting

Command: 0D



① When the 100 Hz digit is 0, the 10 Hz digit is 0~9.

① When the 100 Hz digit is 1, the 10 Hz digit is 0~5.

• AF gain level setting

Command: 14 01

VOL0	VOL1	VOL2	VOL3
0000 ~ 0005	0006 ~ 0012	0013 ~ 0018	0019 ~ 0025
VOL4	VOL5	VOL6	VOL7
0026 ~ 0031	0032 ~ 0037	0038 ~ 0044	0045 ~ 0050
VOL8	VOL9	VOL10	VOL11
0051 ~ 0057	0058 ~ 0063	0064 ~ 0069	0070 ~ 0076
VOL12	VOL13	VOL14	VOL15
0077 ~ 0082	0083 ~ 0089	0090 ~ 0095	0096 ~ 0101
VOL16	VOL17	VOL18	VOL19
0102 ~ 0108	0109 ~ 0114	0115 ~ 0121	0122 ~ 0127
VOL20	VOL21	VOL22	VOL23
0128 ~ 0133	0134 ~ 0140	0141 ~ 0146	0147 ~ 0153
VOL24	VOL25	VOL26	VOL27
0154 ~ 0159	0160 ~ 0165	0166 ~ 0172	0173 ~ 0178
VOL28	VOL29	VOL30	VOL31
0179 ~ 0185	0186 ~ 0191	0192 ~ 0197	0198 ~ 0204
VOL32	VOL33	VOL34	VOL35
0205 ~ 0210	0211 ~ 0217	0218 ~ 0223	0224 ~ 0229
VOL36	VOL37	VOL38	VOL39
0230 ~ 0236	0237 ~ 0242	0243 ~ 0249	0250 ~ 0255

• Squelch level setting

Command: 14 03

OPEN	AUTO	LEVEL1	LEVEL2
0000 ~ 0022	0023 ~ 0046	0047 ~ 0069	0070 ~ 0092
LEVEL3	LEVEL4	LEVEL5	LEVEL6
0093 ~ 0115	0116 ~ 0139	0140 ~ 0162	0163 ~ 0185
LEVEL7	LEVEL8	LEVEL9	
0186 ~ 0208	0209 ~ 0232	0233 ~ 0255	

Squelch level setting in the FM Radio mode

OPEN	AUTO	LEVEL1	LEVEL2
0000 ~ 0050	0051 ~ 0101	0102 ~ 0153	0154 ~ 0204
LEVEL3			
0205 ~ 0255			

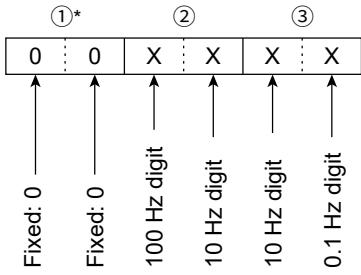
REMOTE CONTROL

Remote control (CI-V) information

◇ Command formats

• Tone squelch frequency setting

Command: 1B 01

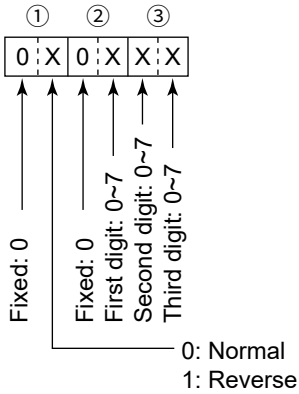


*No input is required when setting the frequency.

Refer to the Advanced manual for the tone frequency list.

• DTCS code and polarity setting

Command: 1B 02



Refer to the Advanced manual for the DTCS code list.

