RS-BA1

Installation guide A

This guide contains instructions on how to configure the remote control system, and how to remotely control a radio.

If you are using one of the following radios and connecting to the network directly, see the Installation guide B (For radios with the Network function). (As of August 2017)

- IC-7851
- IC-7850
- IC-7800 (Firmware version 3.00 or later)

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- IC-7700 (Firmware version 2.00 or later)
- IC-7610

Before reading this guide, please finish the installation, using the RS-BA1 Preparations. See the RS-BA1 Instruction Manual for detailed instructions.

Example of the remote control system

This guide explains the minimum required settings to configure a remote control system, taking the following illustration as an example. In this example, a radio is connected to the Base station's PC with the supplied USB cable, and a remote station remotely controls the radio through the network.

- We recommend that you place the Remote station's PC near to the Base station's PC and a radio, to check that the settings are correct, and that you can correctly control the radio.
- You need to register the ID and password to the Base station to enable the Remote station to access the Base station and the radio. **BE CAREFUL** in managing IDs and passwords.
- See the Instruction Manual, for detailed instructions on the RS-BA1. You can also refer to each software's help file, for assistance with the functions and settings. While the software is open, push the [F1] key of the PC's keyboard to open the help file.



NOTE:

The password, and other settings in this illustration are only an example. Please configure the system using your own settings.

For your convenience:

If you connect an RC-28 REMOTE ENCODER to the Remote station, you can use the RS-BA1 and feel like you are operating the actual transceiver's main dial, [TRANSMIT] key and so on.

Step1. 2. 3. 4.

Step1. Connect the radio to the Base station's PC

Before connecting the radio to the PC, please finish the installation for the Base station's PC and the Remote station's PC, using the RS-BA1 Preparations.

Select the connection pattern

Check the connector type on your radio and see the following chart to connect your radio to the Base station's PC.

To connect an Icom CI-V command capable radio to the Base station's PC, you have to make connections for control command and audio communication.

RS-BA1 operation with the Base station's PC connected to the radio's ACC socket, MIC connector, or S/P DIF jack for audio communication cannot be guaranteed.

 This guide explains the USB connection as example. See the RS-BA1 Instruction Manual ("2. WHEN CONNECTING TO THE NETWORK THROUGH A PC" section) when connecting to the radio's [REMOTE] jack or [RS-232C] port.

Dedicle compositor		Outline	Madal	Def
Radio s connector	Control command	Audio	wodei	Ref.
When connecting to the radio's [USB] port	Through a USB cable		IC-7100/IC-7200/ IC-7300/IC-7410/ IC-7600*1/IC-7610/ IC-7850/IC-7851/ IC-9100	p. A-3
When connecting to the radio's [REMOTE] jack	Through the CT-17 ci-v LEVEL CONVERTER	Through an audio cable connected between the PC's audio terminal and the radio's [ACC] socket or [MIC] connector	All	RS-BA1 Instruction Manual
When connecting to the radio's [RS-232C] port	Through an RS-232C cable	Through an audio cable connected between the PC's audio terminal and the radio's [ACC] socket, [MIC] connector or [S/P DIF] jack	IC-7700/IC-7800*2	RS-BA1 Instruction Manual

*1 When you turn your radio ON or OFF from the Remote Controller, connect to the radio's [Remote] jack.

*2 When you turn your radio ON or OFF from the Remote Controller, connect to the radio's [Remote] jack or to the network directly.

The Network function enables the radio to directly connect to the network. With this function, the base station PC is not necessary. See the Installation guide B (For radios with the Network function).



Step1. 2. 3. 4. 5. 6.

Step1. Connect the radio to the Base station's PC (Continued)

♦ When connecting to the radio's [USB] port

For IC-7600 users

When you turn your radio ON or OFF from the Remote Controller, connect to the radio's [Remote] jack.

1. System requirements

- A PC that has a USB 1.1, 2.0 or 3.0 port
- Icom CI-V command capable radio that has a [USB] port (Type B/Mini-B)
- The USB cable (supplied to the RS-BA1 or a radio)

2. Install a USB driver

CAUTION:

- **NEVER** connect the radio to the PC with the USB cable until the USB driver installation has been completed.
- The driver is not supported by the Windows® automatic recognition system.

To use the USB cable between the radio and the PC, you must first install a USB driver.

 The USB driver comes with the RS-BA1. Or download from the Icom website.

NOTE: When a PC with USB 3.0 port is used for operating the radio, confirm the driver name. If the name "Silicon Laboratories CP210x USB to UART Bridge (Driver Removal)" is displayed on the Control Panel screen, uninstall it and then install the latest driver.

The latest driver and installation guide can be downloaded from here:

http://www.icom.co.jp/world/index.html

Read the installation guide before installing the driver.

3. Connect the radio to the Base station's PC

Connect the radio to the Base station's PC using the USB cable.

• This guide is based on using a Type B USB cable.



NOTE: If you connect a new USB audio device to your PC, the device selected as the default on your PC can be changed. Moreover, never connect another radio using a USB cable while the Remote Utility is open.

1. Step2. 3. 4. 5. 6.

Step2. Radio's presettings

The RS-BA1 remotely controls Icom radios using CI-V (Icom Communication Interface) commands. See the CI-V command table in the radio's instruction manual for details of the functions that can be controlled.

1. The following manual settings are required when operating the RS-BA1

Properly preset the items in below table for functions that cannot be controlled by CI-V commands or the item may cause unwanted actions. See the radio's instruction manual for details of the settings or operation. **NOTE:**

- Remove the transverter from the radio, if it is connected.
- To prevent an accidental transmission, we recommend you remove any keyer, keypad or other external equipment connected to the radio.
- Set the radio to a normal operating mode. The radio cannot receive CI-V commands while in special modes, such as the firmware update mode or cloning mode.
- If the radio has a Time-Out Timer function, we recommend you enable it to prevent the radio from continuously transmitting.

Genre	Item	Model	Setting
Function	RIT function	All	Set to OFF.
	A TX function	All	Set to OFF.
	Simple band scope	IC-746PRO*/IC-7000*/IC-7100/IC-7400*/IC-9100	Set to OFF.
	SWR Measurement function	IC-746PRO*/IC-7000*/IC-7100/IC-7400*/IC-9100	Set to OFF.
	Timer/Sleep Timer function	Radios with the timer function	Set the timer to OFF or to your schedule.
	Weather Alert function	IC-7100	Set to OFF.
Display	RTTY decode screen	IC-746PRO*/IC-756PROIII*/IC-7400*	Exit the screen.
Volume	Volume for the RX audio	All	Set the volume to a suitable level.
CI-V	CI-V address	All	Set an appropriate CI-V address.
	CI-V baud rate	All	Set to 19200 bps (or Auto).
	CI-V USB Port	IC-7300/IC-7610/ IC-7850 (Firmware version 1.10 or later)/ IC-7851 (Firmware version 1.10 or later)	To use the Scope function when connecting to the USB port, set to Unlink from [REMOTE].
	CI-V USB Baud Rate	IC-7300/IC-7610/ IC-7850 (Firmware version 1.10 or later)/ IC-7851 (Firmware version 1.10 or later)	To use the Scope function when connecting to the USB port, set to 115200 (or Auto).
Set mode	USB Serial Function	Radios with a USB (B type) port	Set to "CI-V" for the selected connection type.
	RS-232C Function	Radios with an RS-232C port	Set to "CI-V" for the selected connection type.

* Operation on models without a USB connection cannot be guaranteed.

If you are using the IC-PW1 with the transceiver, be sure to set the CI-V baud rate to 19200 bps. After changing the transceiver's CI-V settings, be sure to reset the CPU of the IC-PW1 and set the transceiver's CI-V settings on the IC-PW1. See the IC-PW1 instruction manual for details.

1. Step2. 3. 4. 5. 6.

Step2. Radio's presettings (Continued)

2. The following settings are automatically set to the radio

When the RS-BA1's Remote Controller connects to the radio, and you select the model name on the Connect Setting screen, the following may be automatically set, depending on the model. When you manually operate the radio, set these items as desired.

Genre	Item	Model	Action
Function	MAIN/SUB Tranking function	IC-7610/IC-7850 (Firmware version 1.10 or later)/ IC-7851 (Firmware version 1.10 or later)	Automatically set to OFF.
	RIT function	Radios with the Network function/ IC-7100 (Firmware version 1.10 or later)/ IC-7600 (Firmware version 2.00 or later)	Automatically set to OFF.
	⊿TX function	Radios with the Network function/ IC-7600 (Firmware version 2.00 or later)	Automatically set to OFF.
	SSB/CW Synchronous Tuning	All	Automatically set to OFF.
	Calibration Marker	Radios with Calibration Marker function	Automatically set to OFF.
	VOX function	All	Automatically set to OFF.
	Scan function	All	Automatically cancel the scan.
	RTTY filter	IC-746PRO*/IC-756PROIII*/IC-7400*	Automatically set to OFF.
	Twin Peak Filter	IC-746PRO*/IC-756PROIII*/IC-7400*	Automatically set to OFF.
Display	Dualwatch function	Radios with the Dualwatch function	Automatically set to OFF.
	SUB band	IC-9100	Automatically set to OFF.
	Memory channel/Call channel	All	Automatically set to the VFO mode.
Operating mode	DR (D-STAR [®] REPEATER) mode	Radios with the DV mode	Automatically set to OFF.
	Satellite mode	Radios with the Satellite mode	Automatically set to OFF.
CI-V	CI-V transceive	All	Automatically set to ON.
	CI-V 731 Mode	IC-746PRO*/IC-756PROIII*/IC-7400*	Automatically set to OFF.

* Operation on models without a USB connection cannot be guaranteed.

1. 2. Step3. 4. 5. 5

Step3. Before configuration

To configure the remote control system, the following settings are required.

♦ Firewall setting (RS-BA1 Instruction Manual p. 1)

To let the Remote Utility work properly, it must be added as an exception in the Firewall. See the RS-BA1 Instruction Manual for details.

♦ Volume adjustment for your audio devices (RS-BA1 Instruction Manual p. 6)

Before you start communicating using the RS-BA1, the PC's audio volume must be set to a proper level. When your PC is used as a Base station, adjust the audio level of the device that is connected to your radio. When your PC is used as a Remote station, adjust the audio level of the device that your microphone, speaker, or headset is connected to.

♦ To allow access from the Internet (RS-BA1 Instruction Manual p. 12)

If you configure the remote control system through the Internet, you need to configure your Base station and Remote station routers to allow access from the Internet.

Configure the port forwarding settings, and IP filter settings on your router, for port numbers 50001, 50002, and 50003 which are used for the Remote Utility.

See your router's manual for details of how to configure the settings.

See the RS-BA1 Instruction Manual ("1. BEFORE USING REMOTE CONTROL SYSTEM" section) for details.

Step4. Settings on the Base station's PC

This section describes how to setup the Base station (Server) PC. Before configuring the settings, turn on the radio.

See the RS-BA1 Instruction Manual ("2. WHEN CONNECTING TO THE NETWORK THROUGH A PC" section) for details.



Click the Setup that you want to do.
 If no Servers and no radios are registered, this screen is displayed.

1. 2. 3. Step4. 5.



4 Start the Setup Wizard.

Start the Setup Wizard	
Setup a Server PC.	
Register a Radio that is directly connected to the PC to use remote operation from other	r PCs.
To continue, click <next>.</next>	

5 Select a Radio for the Remote operation.

Select a Radio that is accessible from other PCs. Select [new] if you want to registar a new radio that is a Or select from [Registered radios]. After selecting, click <next>.</next>	accessible from other	r PCs.	
Select [new] if you want to registar a new radio that is a Or select from [Registered radios]. After selecting, click <next>.</next>	accessible from other	r PCs.	
Or select from [Registered radios]. After selecting, click <next>.</next>			
After selecting, click <next>.</next>			
C Registered radios Select a radio		Ψ	
			-
	c De di	1 1000	
Registered radios	< Back	 Next >]@



Step4. Settings on the Base station's PC (Continued)

6 Select a Radio.

Selecti	ing a Radio						
Selec	ct a Radio tha	it you want to add.					
lf the	e radio is conn	ected to the PC using a USB ca	able, select the ra	adio from the	e [USB] drop-d	lown list. The	en click
<nex the P</nex 	d>. If the radio PC recognizes	is not listed, comfirm the radio the device, and then click the	is ON and the ca <search> button.</search>	ble is fimly o	connected. W	ait for a while	e until
If the	e radio is conn	ected to the PC using other that	n a USB cable, s	elect from th	ne radio from the	he [Manual]	
If the drop-	e radio is conn -down list. The	ected to the PC using other tha en click <next>.</next>	n a USB cable, s	elect from th	ne radio from t	he (Manual)	
If the drop-	e radio is conn -down list. The	ected to the PC using other tha en click <next>. IC-7300 COM=9</next>	n a USB cable, s	elect from the	1)Sel	he (Manual) ect	
If the drop-	e radio is conn -down list. The O <u>USB</u>	IC-7300 COM=9	n a USB cable, s	select from th	1 Sel	he [Manual] ect	
If the drop-	radio is conn down list. The USB Manual	ected to the PC using other tha an click <next>. IC-7300 COM=9 Other transceivers</next>	n a USB cable, s	select from th	1 Sel	he [Manual] ect	
If the drop-	radio is conn down list. The USB Manual	ected to the PC using other than n click (Next>. IC-7300 COM=9 Other transceivers	n a USB cable, s	see (1 Sel	ect	

- ① If the radio is not listed, click the <Search> button.
- ① If the radio is connected to the PC using other than a USB cable, select from the Manual drop-down list.

7 Set the CI-V/COM port settings.



If the radio is connected to the PC using other than a USB cable, the Audio Settings screen is displayed.

Select the devices that input a received audio from the radio and output a modulation to the radio, and then click <Next>>.

Audio Settings Set the audio of the Ra	dio.					
Select the devices that	input a receive	ed audio from the	radio and output	a modulati	on to the ra	adio.
And soluting, click th				-25		
AF Input Device	Not used		•	48kHz	Ŧ	
MOD Output Device	Not used		•	48kHz	-	
		- Device Opt	ons			
Search		Displa	ys Detected Radi	o's Device		
		Displa	ys Virtual Device			
			< <u>B</u> ack	: <u>N</u>	ext >	Cancel

8 Register a User to accept connection.

Register a Radio		? ×
Register a User to allow a conne Register a User to allow a connection	ction In to IC-7300.	
Register a User to allow a connectio can change this setting later.	m. If no user is registered, click <	Add> to register the Add User screen. You
Registered Users	Acces	ssible Users
	Add>>	
	< <delete< th=""><th></th></delete<>	
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2 Entor	Lunes :	
	USER1	adaria d
3 Enter		Admin
(Example:		
USER0001)	4 Click	To set the user a
	-	an administrator,
		click to make a
		check mark.
Register a Radio		? ×
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Register a User to allow a connection	n. If no user is registered, click <	Add> to register the Add User screen. You
5Click	6 Click	
		R1 (Admin)
USER1 (Admin)		
USER1 (Admin)		
USER1 (Admin)	Add>> USE	
USER1 (Admin)	Add>>> USE	
USER1 (Admin)	Add>>>	

To prevent unauthorized access:

Set a long and strong password so that no one can possibly guess it.

Mix upper and lower case letters, numbers or characters.



Step4. Settings on the Base station's PC (Continued)

9 Enter the radio name.

gister a naulo				
Radio Name				
Enter a radio n This name is di	ame. solaved on the Radio list :	screen of this PC and the R	emote PC	
Click <next>to</next>	pregister to the Radio.		enote r.c.	
Radio Name	IC-7300			
			Pad Novt >	

The radio's model name and the last 5 figures of the serial number is entered by default. 10 The registration of the Radio is completed.

Add Completed				
The registraion of the Radio i	is completed. To connec	t to the Radio, using th	e Radio List screen.	
Attention:				
By connecting the Radio to a the Radio's Speaker and Mic In that case, no sound come confirm the settings, click the	a USB port, the default se rophone. s from the original speake s <sound settings=""> butto</sound>	ttings on the REC/PL/ er, or you cannot input n below.	AY device window ma audio from the microp	ay change to ihone. To
Sound Settings				
		< <u>B</u> ack	Finish	Click

By connecting the Radio to a USB port, the default settings on the REC/PLAY device window may change to the Radio's Speaker and Microphone. To confirm the settings, click <Sound Settings>.

layback 👔	ecording Sounds Communications
Select a pl	ayback device below to modify its settings:
0	Speakers S- USB Audio CODEC Default Device
	High Definition Audio Device Ready
Sound	
laybad F	Recording ounds Communications
Calact a re	cordina device below to modify its settinas:
Select a re	

Step5. Settings on the Remote station's PC

This section describes how to setup the Remote station (Client) PC. Before configuring the settings, connect a speaker and microphone, or headset to the Remote station's PC. See the RS-BA1 Instruction Manual ("4. SETTINGS FOR A REMOTE STATION PC" section) for details.

2. 3. 4. Step5.

< Back

Next >

⁽²⁾Click



1. 2. 3. 4. Step5. 6.

8

Step5. Settings on the Remote station's PC (Continued)

6 Enter the User ID and Password.

After clicking <Next>>, connects to the Server.

NOTE:

If you cannot connect to the Server, the error screen is displayed.

Click <<Back>, and confirm the settings.







icom Remote Utility Setup Wizard O	ptions Help	×
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	Audio Device Speaker Default Device	
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IC-7300 (Ba	sePC)	
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OK

OClick

Step6. Remote control operation

This section describes how to connect and remotely control a radio from a Remote station, using the Remote Controller.

See the RS-BA1 Instruction Manual ("5. REMOTE CONTROLLER'S BASIC OPERATION" section) for details. • Since cannot turn the radio ON or OFF with remote control operation, the radio must be turned ON.

- The description in this section is based on the assumption that the connection to the radio using the Remote Utility has succeeded ("<<Connected>>" is displayed under the radio name).
- **1** Connect setting using the Remote Controller
 - 1. Double-click the "RS-BA1 Remote Control" icon on your desktop to open the Remote Controller.



. 2. 3. 4. Step5.

- Click the icon to the right in the toolbar, or click "Connect Setting..." in the "Option" menu.
 The Connect Setting screen is displayed.
- 3. Configure the connect settings as described below.
 - Select a radio that you want to control in the "Model" menu. (Example: IC-7300)
 - Select the connection between the transceiver and Base station in the "Connection" item. (Example: USB)
 - When the "MOD Select has also been changed." dialog is displayed, click <OK>.
 - The confirmation dialog for the connection setting may be displayed, depending on the transceiver. If connected correctly, click <OK>.
 - Select a radio that you are accessing using the Remote Utility, in the "Remote Utility" menu. (Example: IC-7300 XXXXX)
 - The CI-V settings are automatically loaded from the Remote Utility to the CI-V field. The settings include the virtual COM Port number, radio's CI-V address and baud rate and the virtual audio device for the Voice Memory function.
 - ① If the desired radio is not displayed in the "Remote Utility" menu, click <Search> to load the radios' information from the Remote Utility.
 - Olick <OK> to save the settings and close the screen.



Step6. Remote control operation (Continued)

2 Connecting to the radio using the Remote Controller

Click the icon to the right in the toolbar, or click "Connect ON" in the "File" menu, to connect to the radio.

- When the connection has succeeded, the radio's current data will be displayed on the main panel.
- The modulation input is automatically selected, depending on the setting in the "Connection" item. However, if you select other than "USB," or you want to use other connector than USB port, see "Selecting a modulation input connector" described below for details.

3 Remote control operation

See the RS-BA1 Remote Controller's help file for remote operation details, such as how to change the frequency, or turn ON each function.

To display the help file, click "Contents" in the Help menu on the Remote Controller, or push the [F1] key on your PC's keyboard.

NOTE: DO NOT allow the PC to go into the sleep or standby mode while using the RS-BA1. Otherwise, it might not work properly after the PC resumes normal activity.

Importing the repeater list: You can easily program the DV mode repeater information by importing the repeater list preprogrammed for each radio. See the RS-BA1 Remote Controller's Help file for importing details.

Selecting a modulation input connector

- 1. Click [MIC SET] on the Remote Controller.
- The MIC SET screen appears. Select an appropriate connector in the "MOD Select (Remote ON)" menu (ex. USB), to input transmit audio from the PC to the radio. Then, click the close button to close the screen.



When not using the radio:

- Disconnect the radio from both the Remote Controller and Remote Utility.
- Even if you disconnect from the radio, it does not turn OFF the radio.
- When using a radio that can be turned ON or OFF with the CI-V Power ON/OFF command:
- If you check the "Software closing turns OFF the Radio." box, when you close the Remote Controller, the radio's power is also turned OFF.
- If you do not check the "Software closing turns OFF the Radio." box, be sure to disconnect the radio from Remote Controller, first. And close the Remote Controller, and then close the Remote Utility.
- When you manually select the transmit audio input connector(s) to be used after finishing the Remote mode, right-click the icon to the right in the toolbar, or click "Remote Setting..." in the "File" menu to select.

- Regularly, it automatically returns to the original setting before you start the Remote mode.



Step5.

2. 3. 4.

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RS-BA1 For radio with the Network function

Installation guide ${\mathbb B}$

This guide contains instructions on how to configure the remote control system, and how to remotely control a radio with the Network function*.

Before reading this guide, please finish the installation, using the RS-BA1 Preparations.

See the RS-BA1 Instruction Manual for detailed instructions.

*Radios with the Network function

- IC-7851
- IC-7850
- IC-7800 (Firmware version 3.00 or later)
- IC-7700 (Firmware version 2.00 or later)
- IC-7610

If you use other Icom radio, see the Installation guide \boxed{A} .

Example of the remote control system

This guide explains the minimum required settings to configure a remote control system, taking the following illustration as an example. In this example, a Remote station remotely controls a Base station radio through the network.

- We recommend that you place the Remote station's PC near the Base station to check that the settings are correct, and that you can correctly control the radio.
- Only users whose ID and password are registered on the Base station can access the Base station radio. BE CAREFUL in managing IDs and passwords.
- See the Instruction Manual for detailed instructions on the RS-BA1. You can also refer to each software's help file for assistance with the functions and settings. While the software is open, push the [F1] key of the PC's keyboard to open the help file.

These instructions are based on using the IC-7851.



NOTE:

The user ID, password, and other settings in this illustration are only an example. Please configure the system using your own settings.

For your convenience:

If you use an RC-28 REMOTE ENCODER at the Remote station, you can use the RS-BA1 and feel like you are operating the actual radio's main dial, [TRANSMIT] key and so on.

(As of August 2017)

Step1. 2. 3. 4. 5.

Step1. Radio's presettings

The RS-BA1 remotely controls the radios with the Network function using CI-V (Icom Communication Interface) commands.

See the CI-V command table in the radio's instruction manual for details of the functions that can be controlled.

1. The following manual settings are required when operating the RS-BA1

Properly preset the items in the table below for functions that cannot be controlled by CI-V commands, or for items that may cause unintended actions. See the radio's instruction manual for details of the settings or operation.

NOTE:

- Remove any transverter that is connected to the radio.
- To prevent accidental transmission, remove any keyer, keypad or other external input equipment connected to the radio.
- We recommend you enable the Time-Out Timer function to prevent the radio from continuously transmitting.

Genre	Item	Setting
Function	Timer/Sleep Timer function	Set the timer to OFF or to your schedule
Volume	Volume for the RX audio	Set the volume to a suitable level
CI-V	CI-V address	IC-7851/IC-7850: 8Eh, IC-7800: 6Ah, IC-7700: 74h, IC-7610: 98h (When another device is connected to the system, make sure you do not to set a duplicate address.)
	CI-V baud rate	Set to 19200 bps (or Auto)

If you are using the IC-PW1 with the transceiver, be sure to set the CI-V baud rate to 19200 bps. After changing the transceiver's CI-V settings, be sure to reset the CPU of the IC-PW1 and set the transceiver's CI-V settings on the IC-PW1. See the IC-PW1 instruction manual for details.

2. The following settings are automatically set to the radio

When the RS-BA1's Remote Controller connects to the radio, and you select the model name on the Connect Setting screen, the following items are automatically set. When you manually operate the radio, set these items as desired.

Genre	Item	Action
Function	MAIN/SUB Tranking function (For only the IC-7851, IC-7850, IC-7610)	Automatically set to OFF
	RIT function	Automatically set to OFF
	∠ TX function	Automatically set to OFF
	SSB/CW Synchronous Tuning	Automatically set to OFF
	Calibration Marker	Automatically set to OFF
	VOX function	Automatically set to OFF
	Scan function	Automatically cancel the scan
Display	Dualwatch function (For only the IC-7851, IC-7850, IC-7800, IC-7610)	Automatically set to OFF
	Memory channel	Automatically set to the VFO mode
CI-V	CI-V transceive	Automatically set to ON

Step2. Before configuration

To configure the remote control system, the following settings are required.

♦ Firewall setting (RS-BA1 Instruction Manual p. 1)

To let the Remote Utility work properly, it must be added as an exception in the Firewall. See the RS-BA1 Instruction Manual for details.

. Step2. 3. 4.

♦ To allow access from the Internet (RS-BA1 Instruction Manual p. 12)

If you configure the remote control system through the Internet, you need to configure the Base station and Remote station routers to allow Internet access.

Configure the port forwarding settings and IP filter settings on your router for port numbers 50001, 50002, and 50003 which are used for the Remote Utility.

See your router's manual for details of how to configure the settings.

♦ Volume adjustment for your audio devices (RS-BA1 Instruction Manual p. 6)

Before you start communicating using the RS-BA1, the PC's audio volume must be set to a proper level. Adjust the audio level of the device that your microphone, speaker, or headset is connected to. If you connect the microphone, speaker, or headset after setting the audio level, confirm the level has not changed.

See the RS-BA1 Instruction Manual ("1. BEFORE USING REMOTE CONTROL SYSTEM" section) for details.



Step3. Setting the Network function on the radio

In this guide, explains how to set the radio for operating the remote control system through the LAN. When using the remote control system using the Internet, read the RS-BA1 Instruction Manual ("3. WHEN CONNECTING TO THE NETWORK DIRECTLY" section).

This section describes how to setup the Base station. Before configuring the settings, turn ON the radio.

• Except for the IC-7610

- 1. Hold down [EXIT/SET] for 1 second to select the Set mode menu screen.
- 2. Push [OTHERS](F-5) to enter the Others set mode.
- 3. Push [▲](F-1) or [▼](F-2) to select the desired item.
 - See page B-5 for the setting items.
- 4. Adjust/select or enter the needed contents.
 - See page B-5 for the setting contents.
 - Hold down [DEF](F-4) for 1 second to return them to their defaults.
 - See the RS-BA1 Instruction Manual for details.
- 5. Push [EXIT/SET] to exit the Set mode.

NOTE: When you change the setting that shows "(Valid after Reboot)," you have to reboot the radio after setting, so they will take effect.

• After the reboot, keep the radio's power ON, or remain in the remote standby mode.

To prevent unauthorized access:

Set a long and strong password so that no one can possibly guess it. Mix upper and lower case letters, numbers or characters.

• For the IC-7610

- 1. Push [MENU] to display the MENU screen.
- 2. Touch [SET] to enter the Set mode.
- 3. Touch the category that you want to select.
- 4. Touch the item to open the item's setting screen, or open its next tree level.
 - See page B-5 for the setting items.
- 5. Touch to select or set the option.
 - See page B-5 for the setting contents.
 - Push [QUICK] and touch "Default" to return them to their defaults.
 - See the RS-BA1 Instruction Manual for details.
- 6. Push [MENU] to exit the Set mode.

NOTE: When you change the setting that shows "(Valid after Restart)," you have to restart the radio after setting, so they will take effect.

• After the restart, keep the radio's power ON, or remain in the remote standby mode.

1. 2. Step3. 4. 5.

Step3. Setting the Network function on the radio (Continued)

[Setting items and contents] • Network setting

(Except for the IC-7851, IC-7850, and IC-7610)

Items	Contents
Network Control	OFF (Default) → ON
IP Address	IP address that is not assigned to any other device. Example: 192.168.0.10 (Default)
Default Gateway	IP address of the LAN side on the router Example: 192.168.0.1
Control Port (UDP)	50001 (Default)
Serial Port (UDP)	50002 (Default)
Audio Port (UDP)	50003 (Default)
Internet Access Line	Your internet access line type Example: FTTH (Default)

Network setting (For the IC-7851, IC-7850, and IC-7610)

Items	Contents
Network Control	OFF (Default) → ON
DHCP*	ON (Default)
Network Name*	Desired Network Name Example: IC-7851
Control Port (UDP)	50001 (Default)
Serial Port (UDP)	50002 (Default)
Audio Port (UDP)	50003 (Default)
Internet Access Line	Your internet access line type Example: FTTH (Default)

*If you are setting the IP address instead of the network radio name, set the DHCP item to OFF. For the other settings, see "Network setting (Except for the IC-7851, IC-7850, and IC-7610)."

Radio registration

Items	Contents
Network Radio Name	Desired Network Radio Name • Up to 16 characters Example: IC-7851abc
CI-V Address	Desired CI-V Address Example: the radios' default setting. IC-7851/IC-7850: 8Eh IC-7800: 6Ah IC-7700: 74h IC-7610: 98h
CI-V Baud Rate	Desired Baud Rate Example: Auto (Default)

User registration

Items	Contents
Network User1/2/3* ID	Desired User ID • Up to 16 characters Example: USER1
Network User1/2/3* Password	 Desired Password 8 to 16 characters At least two different characters must be used. Example: USER0001
Network User1/2/3* Administrator	 NO (Default) → YES In case the user is set as an administrator.

* When using IC-7610, Network User3 is not used.

• Transmitting audio setting (For the IC-7800 and IC-7700)

Items	Contents
Network MOD Use	ON (Default)

Step4. Settings on the Remote station's PC

This section describes how to setup the Remote station (Client) PC.

Before configuring the settings, connect a speaker and microphone, or a headset to the Remote station's PC. Before configuring the settings, turn ON the radio.

See the RS-BA1 Instruction Manual ("4. SETTINGS FOR A REMOTE STATION PC" section) for details.





Click <OK>, and then restart the Remote Utility.

- **3** Click the Setup that you want to do.
 - If no Servers and no radios are registered, this screen is displayed.

. 2. 3. Step4.



4 Start the Setup Wizard.

up for a Remote PC		8
Start the Setup Wizard		
Setup for a Remote PC.		
Register a Radio with the Server function that is conn	ected to a LAN.	
To continue, click <next>.</next>		
	z Park I	

5 Enter the Server Information.

Inter the Server Address or Network Name and Control port. Inter the Server Address or Network Name, and then click <next>. Inter Charlos port of the Server's changed, enter the number. Server Address or Network Name [][-785] Control proft (putr) [50001</next>			
ter the Server Address or Network Name, and then click (Next). the Cortrol pot of the Server is changed, enter the number. Server Address or Network Name [IZ-785] Control root (UAP) [50001]	Enter the Server Address or Network Name and C	Control port.	
Server Address or Network Name IC-7851 Conror Fort (ULP) 50001	Enter the Server Address or Network Name, and t	then click <next>.</next>	
Server Address or Network Name IC-7851 Control (ULPr) 50001	If the Control port of the Server is changed, enter	the number.	
Server Address or Network Name [7:7851 Conress rors (ULPr) [50001]		_	
	Server Address or Network Name		
50001	IC-7851	UEnter	
50001	CONTROL PORT (UDP)	_	
	50001		
< Back Next > 200			



8

Step4. Settings on the Remote station's PC (Continued)

6 Enter the User ID and Password.

After clicking <Next>>, connects to the Server.



NOTE:

If you cannot connect to the Server, the error screen is displayed.

Click <<Back>, and confirm the settings.





Connect the radio. Icom Remote Utility File Setup Wizard Options Help ? Radio List Server List IC-7851abc **1**Click Settings 2 Click AF MOD Manitor Delete IC-7851abc (IC-7851) ? <mark>×</mark> Network Setting AF Transmission MOD Transn ▼ 8kHz Sample Rates 16kHz • Codecs LPCM 1ch 16bit LPCM 1ch 16bit • --+ Prebuffer (ms) 80 100 Retransmission Audio Data Recommended **3**Select Virtual COM Port Number Speaker Default Device • **4**Select Mic Default Device Virtual Audio Sample Rates (change effective after the application restarts.) 48kHz 💌 **5**Click OK Icom Remote Utility X <u>File</u> Setup Wizard Options <u>H</u>elp Radio List Server List IC-7851abc CI-V Address 8E (Port Number 2 6 Click MOD Monitor Delete Connect Settings

Remote Utility

Virtual serial port number is (2).

OK 7Click

Step5. Remote control operation

This section describes how to connect and remotely control a radio from a Remote station using the Remote Controller.

2. 3. 4.

Step5.

See the RS-BA1 Instruction Manual ("5. REMOTE CONTROLLER'S BASIC OPERATION" section) for details.

 The description in this section is based on the assumption that the connection to the radio using the Remote Utility has succeeded ("<<Connected>>" is displayed under the radio name).

1 Connect setting using the Remote Controller

- 1. Double-click the "RS-BA1 Remote Control" icon on your desktop to open the Remote Controller.
- 2. Click the icon to the right in the toolbar, or click "Connect Setting..." in the [Option] menu.
- 3. The Connect Setting screen appears.

4C

- Configure the connect settings as described below.
- Select the connecting radio in the "Model" menu.
- (Example: IC-7850/IC-7851 (Ver1.10-))
- **2** Select "LAN" for the "Connection" item.
 - When the "MOD Select has also been changed." dialog is displayed, click <OK>.
 - The confirmation dialog for the connection setting may be displayed, depending on the transceiver. If connected correctly, click <OK>.
- Select a radio that you are accessing using the Remote Utility, in the "Remote Utility" menu. (Example: IC-7851abc)
 - The CI-V settings are automatically loaded from the Remote Utility to the CI-V field. The settings include the virtual COM Port number, radio's CI-V address and baud rate and the virtual audio device for the Voice Memory function.
 - ① If the desired radio is not displayed in the "Remote Utility" menu, click <Search> to load the radios' information from the Remote Utility.
- Check the "Software closing turns OFF the Radio." box to turn OFF the radio when the Remote Controller is closed by clicking the < < > button or [Exit] on the File menu.
 - When the PC is shut down while the Remote Controller is still running, the transceiver's power may not be turned OFF.
- S Click <OK> to save the settings and close the screen.

	Connect Setting	
	Model (IC-7850/7851 (Ver 1.10 -)	Select
	Connection	2 Select
	IC-7851abc	Select
	COM Port Baud rate(bps) 2 19200	
	CL-V address (Radio) (RS-BA1) 8E E0 💌	
	Audio Device (Voice Memory)	
	□ IC-PW1 is connected.	
heck	Controlled by older commands.	
	ОК	Click

1. 2. 3. 4. Step5.

Step5. Remote control operation (Continued)

- 2 Connecting to the radio using the Remote Controller Click the icon to the right in the toolbar, or click "Connect ON" in the [File] menu, to connect to the radio.
 - When the connection has succeeded, the radio's current data will be displayed on the main panel.
- **3** Selecting a modulation input connector In order to transmit audio when remotely controlling the radio from the Remote Controller, configure the following settings, depending on the radio's connector.
 - 1. Click [MIC SET] on the Remote Controller.
 - The MIC SET screen appears. Select an appropriate connector in the "MOD Select (Remote ON)" menu (Example: LAN), to input transmit audio from the PC to the radio. Then, click the close button to close the screen.



A Remote control operation

See the RS-BA1 Remote Controller's help file for remote operation details, such as how to change the frequency, or turn ON each function.

To display the help file, click "Contents" in the Help menu on the Remote Controller, or push the [F1] key on your PC's keyboard.

When not using the radio:

- · Disconnect the radio from both the Remote Controller and Remote Utility.
- If you check the "Software closing turns OFF the Radio." box, when you close the Remote Controller, the radio's power is also turned OFF.

If you do not check the "Software closing turns OFF the Radio." box, be sure to disconnect the radio from Remote Controller, first. And close the Remote Controller, and then close the Remote Utility.

When you manually select the transmit audio input connector(s) to be used after finishing the Remote mode, right-click the icon in the toolbar, or click "Remote Setting..." in the [File] menu to select.
 Regularly, it automatically returns to the original setting before you start the Remote mode.

NOTE: DO NOT allow the PC to go into the sleep or standby mode while using the RS-BA1. Otherwise, it might not work properly after the PC resumes normal activity.

<u>(</u>)

o ICOM

INSTRUCTION MANUAL

IP REMOTE CONTROL SOFTWARE

PREFACE

OVERVIEW OF THE RS-BA1

ABOUT THE COMMUNICATION IN THE REMOTE CONTROL SYSTEM

1. BEFORE USING REMOTE CONTROL SYSTEM

SETTING ON THE BASE STATION'S PC

2. WHEN CONNECTING TO THE NETWORK THROUGH A PC

- 3. WHEN CONNECTING TO THE NETWORK DIRECTLY
- 4. SETTING FOR A REMOTE STATION PC
- 5. REMOTE CONTROLLER'S BASIC OPERATION
- 6. TROUBLESHOOTING

Icom Inc.

PREFACE

Thank you for purchasing the RS-BA1. The RS-BA1 is designed to remotely control an Icom radio through a network.

This instruction manual contains detailed instructions on how to configure your own remote control system. Before reading this manual, please read the RS-BA1 Preparations that come with the RS-BA1, for details on how to install the software.

ABOUT THE SUPPLIED GUIDES

The titles of the supplied guides described in this manual differ, depending on the version of your RS-BA1. *If the "Flow chart" is supplied*, refer to the table below to read the guides in order.

Guides in this manual	Guides supplied
Preparations	Installation Guide ①

IMPORTANT

READ THIS INSTRUCTION MANUAL

CAREFULLY before attempting to configure the software.

SAVE THIS INSTRUCTION MANUAL. This

instruction manual contains important safety and operating instructions for the RS-BA1.

NOTE:

- This instruction manual is based on Icom Remote Utility Version 2.00 and RS-BA1 Version 1.94.
- In this manual, Microsoft[®] Windows[®] 10 Home and Microsoft[®] Windows[®] 10 Pro are described as "Windows 10."

Microsoft[®] Windows[®] 8.1 and Microsoft[®] Windows[®] 8.1 Pro are described as "Windows 8.1."

Microsoft[®] Windows[®] 7 Home Premium, Microsoft[®] Windows[®] 7 Professional, and Microsoft[®] Windows[®] 7 Ultimate are described as "Windows

 $\mathsf{Windows}^{\texttt{®}}$ 7 Ultimate are described as "Windows 7."

The software cannot be used with "RT" versions of Microsoft[®] Windows[®] 8.1.

PRECAUTIONS

IMPORTANT! To remotely control radios using the RS-BA1, **BE SURE** that you comply with your local regulations.

The RS-BA1 is designed to remotely control radios that have a USB port (Type B/Mini-B) or LAN port*. Proper audio communication cannot be guaranteed when you connect the Base station's PC to the radio's ACC socket, MIC connector, or S/P DIF jack.

*Only when using:

- IC-7851
- IC-7850
- IC-7800 (firmware version 3.00 or later)
- IC-7700 (firmware version 2.00 or later)
- IC-7610

Depending on your radio, a few functions or modes cannot be used, or you will need to update the radio's firmware to operate a CW keyer, using the RS-BA1.

Depending on the PC performance (OS, environment, etc.), the USB audio may be interrupted, or a control by the PC software may get delayed.

If the CPU has a heavy load, the USB audio is easily interrupted.

The settings of the installed audio player application may be changed after connecting a radio to the PC.

For the operation of your PC and peripheral devices, follow the instructions provided in the manuals that come with the PC and peripheral devices.

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ABOUT THIS INSTRUCTION MANUAL

To start using the RS-BA1, read this instruction manual in the following order.



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3 WHEN CONNECTING TO THE NETWORK DIRECTLY45 The settings in this section are necessary only when (As of August 2017) using: • IC-7851 IC-7850 · IC-7800 (firmware version 3.00 or later) IC-7700 (firmware version 2.00 or later) • IC-7610 Radio's presetting46 ♦The following manual settings are required when operating the RS-BA1.....46 ♦The following settings are automatically set to the radio46 ♦To register a user49 ♦When configuring the remote control system through a LAN54 ♦When configuring the remote control system through the Internet......56 4 SETTINGS FOR A REMOTE STATION PC58 ♦To change a server properties62 ♦To delete a server62 Connecting to the Server63 Connecting to the Server63 ♦Disconnecting from the Server......63 ♦Device setting65 Connecting to a radio......66 ♦Disconnecting from a radio66 Audio adjustment using the Remote Utility67 Received audio volume adjustment......67 ♦Transmit audio volume adjustment68 Recording received audio69 ♦Playing back/transmitting an audio file.....70 5 REMOTE CONTROLLER'S BASIC OPERATION71 Connecting to a radio with the Remote Controller71 ♦To use transmit audio input from the PC.....74 To exit the Remote Controller75 Operating guide75 6 TROUBLESHOOTING77

OVERVIEW OF THE RS-BA1

- The RS-BA1 consists of the Remote Utility, used to configure a remote control system, and the Remote Controller, used to send CI-V commands to a radio to remotely operate it.
- O With the RS-BA1, you can configure a remote control system through the Internet, or a LAN.
- The RS-BA1 provides highly qualified audio communication between your PC and an Icom amateur radio through a USB port (Type B/Mini-B) or LAN port*.
 - You can also control Icom radios with an RS-232C interface.
 - * If you use the IC-7700, firmware version 2.00 or later installed, is required. If you use the IC-7800, firmware version 3.00 or later installed, is required.

About the remote control system

An RS-BA1 remote control system basically consists of following three components:

- Base station (Radio and Server)
- Network (Internet or LAN)
- Remote station (PC)

The Remote station controls the Base station radio through the network (internet or LAN).

To control the Base station radio, the radio should be connected to the network through a PC or directly.

Most Icom radios need a PC, and use the PC as the Server to exchange CI-V commands, control command and audio with the Remote station through either the internet or LAN. (Fig. 1)

The radio has a built-in Network function that can be directly connected to the network. With this function, a Base station PC is not necessary. (Fig. 2)

The radio is remotely controlled by the Remote station PC using the Remote Controller.

See the "5. REMOTE CONTROLLER'S BASIC OPERATION" section for more details. (p. 71)

When connecting to the network through a PC (Fig. 1)



When connecting to the network directly (Fig. 2)



Routers or other devices are not shown.

ABOUT THE AUDIO COMMUNICATION IN THE REMOTE CONTROL SYSTEM

In the remote control system, audio is exchanged between a Base station radio and the Remote station's PC, through Remote Utilities, as illustrated below. The audio settings needed are described below.

When connecting to the network through a PC



When connecting to the network directly



♦ Base station settings for audio communication

When connecting to the network through a PC

- · Audio level adjustment for an audio device
- (pp. 6 to 11)
- Audio device selection (p. 29)

When connecting to the network directly

Audio sampling rate or audio codec setting (p. 52)

♦ Remote station settings for audio communication

- · Audio level adjustment for an audio device (pp. 6 to 11)
- Audio device selection (p. 65)
- Network audio quality adjustment (p. 65)
- · AF or Modulation audio volume level adjustment (p. 67)
- Modulation output connector setting (p. 74)
- Modulation level adjustment (p. 74)

BEFORE USING REMOTE CONTROL SYSTEM

Before using the remote control system, the following settings are needed.

- Firewall setting (p. 1)
- · Volume adjustment for your audio devices (p. 6)
- To allow access from the Internet

(The setting is necessary only when you configure the remote control system through the Internet.) (p. 12)

Firewall setting

The Windows operating system includes a Firewall setting standard. This is a security function that can prevent improper access to your PC from the Internet.

To let Remote Utility work properly, add it as an exception to the Firewall.

Windows 10

 Right-click the Windows icon on the taskbar, then click "Control Panel."



2. Click "System and Security."



3. Click "Allow an app through Windows Firewall."



- The "Allowed applications" screen is displayed.
- 4. Click <Change settings>.



Firewall setting

Windows 10 (Continued)

5. Click <Allow another app...>.



- The "Add an app" screen is displayed.
- 6. Click "Remote Utility" and then click <Add>.



• Returns to the "Allowed applications" screen.

7. In the "Allowed apps and features" list, confirm that "Remote Utility" is displayed and a check mark is in the box, and then click <OK>.

← → ~ 1	Windows Firewall > Allowed applications	5 V	Search Co	ontrol Panel	
	Allow apps to communicate through Windows Firewall				
	To add, change or remove allowed apps and ports, click Change settings.				
	What are the risks of allowing an app to communicate?	•	Change se	ttings	
	Allowed apps and features:				
	Name	Pri	vate Pub	lic ^	
	Remote Event Log Management			1	
	Remote Event Monitor			1	
	B O a suf a sigement			1	
	Conform			1	
				1	
	Remote Utility Software for Icom Radios			1	
	E Remote volume inianagement			1	
	Counting and Remote Access			1	
	Secure Socket Tuppeling Protocol			1	
	SNMP Trap			1	
	TPM Virtual Smart Card Management			j ~	
		Details.	. Re <u>n</u>	ove	
		All	ow anothe <u>r</u>	app	

Firewall setting (Continued)

Windows 8.1

1. Place the mouse pointer in the bottom right corner of the screen.

• The charms is displayed on the right of the screen.



2. Click the "Settings" charm.



3. Click "Control Panel."



• The "Adjust your computer's settings" screen is displayed.

4. Click "System and Security."



5. Click "Allow an app through Windows Firewall."



- The "Allowed applications" screen is displayed.
- 6. Click <Change settings>.

@	Allowed applications		×		
€ ∋	↑ Image: Mindows Firewall → Allowed applications v C	Search Control Panel	P		
Al To	Allow apps to communicate through Windows Firewall				
W	at are the risks of allowing an app to communicate?	Phange settings			
E	llowed apps and features:				
	Name	Private Public ^			
	CheckPoint.VPN				
	Connect to a Network Projector				

7. Click <Allow another app...>.



• The "Add an app" screen is displayed.

Firewall setting

Windows 8.1 (Continued)

8. Click "Remote Utility" and then click <Add>.

	Add an app
Select the a listed and t	app that you want to add or click Browse to find one that is not hen click OK.
Remot	te Utility Software for Icom Radios
P <u>a</u> th:	C:\Program Files (x86)\Icom\RS-BA1\Remotel Browse
What are th	erisks of unblocking an app?
<u>N</u> etw	ork types Add Cancel

- Returns to the "Allowed applications" screen.
- 9. In the "Allowed apps and features" list, confirm that "Remote Utility" is displayed and a check mark is in the box, and then click <OK>.

Allowed application	5113		1		
	¥	C	Search Contro	ol Panel	
Allow apps to communicate through Windows Fir	ewall				
To add, change or remove allowed apps and ports, click Change	settings				
What are the risks of allowing an app to communicate?			😗 Cha	nge setti	ngs
Allowed apps and features:					
Name			Private	Public	^
☑ OneNote			2		
Performance Logs and Alerts					
Play To functionality					
Proximity Sharing			¥		
Remote Assistance			V		
Remote Event Log Management					
Remote Event Monitor					
: Management					
Remote Utility Software for Icom Radios					v
				•	
			Detaijs	Kemov	e
			Allow an	nothe <u>r</u> ap	p
		((
			ОК	Can	cel
			A		

Firewall setting (Continued)

Windows 7

- Click "Control Panel" in the Start menu.
 The "Adjust your computer's settings" screen is displayed.
- 2. Click "System and Security."



3. Click "Allow a program through Windows Firewall."



- The "Allowed Programs" screen is displayed.
- 4. Click <Change settings>.



5. Click < Allow another program ... >.



• The "Add a Program" screen is displayed.

6. Click "Remote Utility" and then click <Add>.



- Returns to the "Allowed Programs" screen.
- In the "Allowed programs and features" list, confirm that "Remote Utility" is displayed and a check mark is in the box, and then click <OK>.

	Allowed Programs	Search Control Panel Search Control Panel	
o add, change, or remove allow	ed programs and ports, click Chan	nge settings.	
/hat are the risks of allowing a p	program to communicate?	Change settings]
Allowed programs and feature	s:		1
Name	\sim	(Private) Publi	4
cogs and	\leq		
TID-day and Ale	rtr.		
Remote Utility	rts		
Remote Utility	rts		
Remote Utility	rts	Details Remove	
	rts	Details Remove	

■ Volume adjustment for your audio devices

- When connecting to the network through a PC, the audio volume adjustment is needed for both the Remote and Base station PCs.
- · When connecting to the network directly, the audio volume adjustment is needed for only the Remote station PC.

Before you start using the RS-BA1, the PC's audio volume must be set to a proper level.When several audio devices are used, you must set each one individually.Configurable items, displayed screens and terms that are used may differ, depending on your PC.

When setting for the Base station PC

Adjust the audio volume input or output level from or to your radio. In the "Playback devices" menu, you can adjust the modulation level sent to the radio. In the "Recording devices" menu, you can adjust the audio input level from the radio. Before adjusting, connect the radio and your PC, and turn ON the radio. (See page 16.)

When setting for the Remote station PC

Adjust the volume level of the audio device that is connected to the PC. In the "Playback devices" menu, you can adjust the output level of the speaker or headset. In the "Recording devices" menu, you can adjust the modulation level sent to the radio.

Windows 10

1. Right-click the speaker icon on the taskbar, then click "Playback devices" or "Recording devices."



2. The "Sound" screen appears, then click the <Playback> tab.

In the list that appears, select the audio device that you will use, then click <Properties>.



3. The "Speaker Properties" screen appears, then confirm "Use this device (enable)" is displayed in the **Device Usage** menu on the <General> tab.

Speakers Prope	rties	×
General Le /e	Click ts Advanced	
	Speakers Change Icon	
Device usage:	Use this device (enable) \sim	
	Confirm	
	OK Cancel Apply	i

- Click the <Levels> tab. Adjust the speaker's audio level by moving the slide control to the right or left.
 - If the mute setting is turned ON in "Speakers" (6), click the icon to turn OFF.

■ Volume adjustment for your audio devices

Windows 10 (Continued)

5. After adjusting, click <OK> to close "Speaker Properties."



 Click the <Recording> tab on "Sound." In the list that appears, select the audio device that you will use, and then click <Properties>.

Sound	×
Playbac Recording	Click cations
Select a recording device belo	w to modify its settings:
Microphone VIA HD Audio(Wi Default Device	n 10)
Select DAudio(Wi Not plugged in	n 10)
Configure	Set Default
	OK Cancel S Click

 The "Microphone Properties" screen appears, then confirm "Use this device (enable)" is displayed in the **Device Usage** menu on the <General> tab.

🔍 Microphone Properties 🛛 🗙	
General Lie Click ancements Advanced	
Microphone	
Change <u>I</u> con	
2 Confirm	
Device usage: Use this device (enable)	
OK Cancel Apply	

Click the <Listen> tab.
 If a check mark is inserted in "Listen to this device," click to remove it.

A Microphone Properties	\times
Gene J Listen Le Click ts Advanced	
You can listen to a portable music player or other device through this Microphone jack. If you connect a microphone, you may hear feedback.	
🛿 Confirm 🔦 🔿 🧻	
Listen to this device	
Playback through this device:	
Default Playback Device V	
Power Management	
Continue running when on battery power	
 Disable automatically to save power 	
OK Cancel Apply	,

- Click the <Levels> tab. Adjust the microphone's audio level by moving the slide control to the right or left.
 - If the mute setting is turned ON in "Microphone" (6), click the icon to turn OFF.
- 10. After adjusting, click <OK> to close "Microphone Properties."

A Microphone Properties	×
General List n Levels E Click ranced	
Microphone 82	
2 Adjust	-
Microphone Boost	
OK Cancel Apply	

■ Volume adjustment for your audio devices (Continued)

Windows 8.1

1. Right-click the speaker icon on the taskbar, then click "Playback devices" or "Recording devices."

	Open Volume Mixer
	Playback devices
² Click	Recording devices
	Sounds
	Volume control options
Right-click	●

2. The "Sound" screen appears, then click the <Playback> tab.

In the list that appears, select the audio device that you will use, then click <Properties>.

Click	Sound	×
Playback R cording	Sounds Communications	
Select a playback d	evice below to 2 Select	
Speak High E Defaul	ers Definition Audio Device It Device	
niaita	Audio (S/PDUE)	
<u>C</u> onfigure	Set Default	Properties
	OK Cancel	Click

3. The "Speaker Properties" screen appears, then confirm "Use this device (enable)" is displayed in the **Device Usage** menu on the <General> tab.

Click	Speakers Properties	×
General Le els	Enhancements Advanced	_
	Speakers Change Icon	
Device usage:	Use this device (enable)	
🛛 Confi	rm ОК Cancel Apply	,

- Click the <Levels> tab. Adjust the speaker's audio level by moving the slide control to the right or left.
 - If the mute setting is turned ON in "Speakers" (6), click the icon to turn OFF.
- 5. After adjusting, click <OK> to close "Speaker Properties."

Click Speakers Properties	×
Gental Levels Er ancements Advanced 2 Adjust	
Speakers/Headphone	
	$\overline{\neg}$
	у
1 BEFORE USING REMOTE CONTROL SYSTEM

Volume adjustment for your audio devices

Windows 8.1 (Continued)

 Click the <Recording> tab on "Sound." In the list that appears, select the audio device that you will use, and then click <Properties>.

Sound X
Playba Recording Jounds Communications
Select a recording device below to mor Select
Microphone High Definition Audio Device Default Device
<u>Configure</u>
Ок Сапсеі 🕄 СІІСК

7. The "Microphone Properties" screen appears, then confirm "Use this device (enable)" is displayed in the **Device Usage** menu on the <General> tab.

Click	Microphone Properties	×
General Liten	Levels Advanced	
	Microphone Change [con	
Device usage:	Use this device (enable)	
🛛 Co	nfirm OK Cancel Apply	

Click the <Listen> tab.
 If a check mark is inserted in "Listen to this device," click to remove it.

Click Microphone Properties	×
Gene al Listen Le els Advanced	
You can listen to a portable music player or other device through this Microphone jack. If you connect a microphone, you may hear feedback.	
🛿 Confirm 💃 🔿 🔳	
Listen to this device	
Playback through this device:	
Default Playback Device	$ \rightarrow $
OK Cancel Apply	

- Click the <Levels> tab. Adjust the microphone's audio level by moving the slide control to the right or left.
 - If the mute setting is turned ON in "Microphone" ((), click the icon to turn OFF.
- 10. After adjusting, click <OK> to close "Microphone Properties."

Click phone Properties
General List Levels Acranced 2 Adjust
96 ()
OK 3 Click Apply

■ Volume adjustment for your audio devices (Continued)

Windows 7

1. Right-click the speaker icon on the taskbar, and click "Playback devices" or "Recording devices."

Open Vo	olume Mixe	er
Playbac	k devices	
Recordi	ng devices	Click
Sounds		
Volume	control op	tions
- 13	TL D	Right-cli

2. The "Sound" screen appears, then click <Playback>.

In the list that appears, select the audio device that you will use, and then click <Properties>.

2 Sele	ect ck device below to modify its settings:
0	Speakers S- USB Audio CODEC Default Device
	Digital Audio (S/PDIF) High Definition Audio Device
\leq	

3. The "Speaker Properties" screen appears, then confirm "Use this device (enable)" is displayed in the **Device Usage** menu on the <General> tab.

aneral 👍 🛈 Cl	ick ments Advanced
	Speakers
	Change Icon
Controller Inform	nation
Controller Inform	nation

- Click the <Levels> tab. Adjust the speaker's audio level by moving the slide control to the right or left.
 - If the mute setting is turned ON in "Speakers" (), click the icon to turn OFF.
- 5. After adjusting, click <OK> to close "Speaker Properties."

Speake	s Properties		2	
Genera	evels int 100	lick tvance	4	
Speake	rs			
Ċ.	Û		50 🚺 📃	Balance
3				
2 A	ljust			
\geq	\sim	\leq	\leq	\sim
		3 Click		
	()	ОК	Cancel	Apply

■ Volume adjustment for your audio devices

Windows 7 (Continued)

 Click the <Recording> tab on "Sound." In the list that appears, select an audio device that you will use, then click <Properties>.

2 Se	elect ing device below to modify its settings:
1	Microphone S- USB Audio CODEC Default Device
	Digital Audio (5/PDIF) High Definition Audio Device Ready
Confi	gure Set Default

 The "Microphone Properties" screen appears, then confirm "Use this device (enable)" is displayed in the **Device Usage** menu on the <General> tab.

General is O C	lick Advanced
7	Microphone Change Icon
Device usage:	Use this device (enable)
prop de calendario en con	

8. Click the <Listen> tab.

Confirm that a check mark is not inserted in "Listen to this device."

Genera	isten	Click d]		
You can this Mice	listen to a po ophone jack.	ortable music . If you conn	player or o lect a micro	ther device phone, you	through may hear
- CCODUC		2	-		
2 Cor	firm				
Playback	through this	s device:			
$\overline{}$	\frown				

- Click the <Levels> tab. Adjust the microphone's audio level by moving the slide control to the right or left. After adjusting, click <OK> to close "Microphone Properties."
 - When the mute setting is turned ON in "Microphone" ((), click the icon to turn OFF.

🖕 Microph	one Properties	X
General	isten Levels A O Click	
Microph	hone	
	2	
2 Adj	ust	
\geq	\sim	\leq
	3 Click Cancel	Apply

NOTE:

If you use "USB Audio CODEC" as the audio device, set the audio level to 2. Setting the level to 3 or higher can distort the audio.

■ To allow access from the Internet

① Only when you configure the remote control system through the Internet, you need the following settings on your router.

If you configure the remote control system through the Internet, whether you are operating as a Base station or a Remote station, you need to configure your router to allow access from the Internet. To allow the access, configure the 3 port numbers used with the Remote Utility (Example: 50001 to 50003). Ask the router's manufacturer about how to forward the port.

When connecting to the network through a PC



■ To allow access from the Internet (Continued)

When connecting to the network through a PC

PC (Remote Utility) setting

- 1. Enter the fixed IP address, if you use DHCP.
- 2. Enter the default gateway and DNS server address of the router.
- 3. After setting, start the WWW browser to confirm you can access the internet.

Router setting

Please refer to your router's manual for details of how to configure the settings.

When connecting to the network directly

Radio setting

- Except for the IC-7610
- 1. Hold down [EXIT/SET] for 1 second to select the Set mode menu screen.
- 2. Push [OTHERS](F-5) to enter the Miscellaneous (Others) set mode.
- For the IC-7800 and IC-7700, go to step 5.
- 3. Push [▲](F-1) or [▼](F-2) to select "DHCP."
- 4. Rotate the main dial to select "OFF."

AGC		OTHERS SET	
MID	Keyboard Type	Japanese	
	Keyboard Repeat Dela	y 250ms	
4/4	Keyboard Repeat Rate	10.9cps	
1/4	Mouse Pointer Speed	MID	
OFF	Maura Daintan Assala		
	DHCP (Val	id after Reboot) OFF	
vsc v	II Address (Val	iu arter neboot/ 192.100. 0. 10	-
OFF	Soloct (Va	id after Reboot) 255.255.255.0	(24bit)
	Select		
			EXPAND

- 5. Push [▲](F-1) or [▼](F-2) to select "IP Address."
- Push [◀▶](F-3) to select the desired part, then rotate the main dial to set the fixed IP address. (Example: 192.168.0.10)

AGC	OTI	HERS SET
MID	Keyboard Type	Japanese
INID	Keyboard Repeat Delay	250ms
414	Keyboard Repeat Rate	10.9cps
1/4	Mouse Pointer Speed	MID
OFF	Mouse Pointer Acceleration	ON
	DUOD (Visite State	
vsc	IP Address (Valid after Reboot	t) 192.168. 0. 10
OFF	Subhet Wask (Vallu alter Rebool	() 233.233.235. 0 (24bit)
	Set 🔹 DEF	EXPAND

- 7. Push [▲](F-1) or [▼](F-2) to select "Default Gateway."
- 8. Push [◀▶](F-3) to select the desired part, then rotate the main dial to set the default gateway of the router. (Example: 192.168.0.1)



9. Reboot the radio.

The settings will take effect after rebooting.

■ To allow access from the Internet

When connecting to the network directly Radio setting (Continued)

• For the IC-7610

- 1. Push [MENU] to display the MENU screen.
- 2. Touch [SET] to enter the Set mode.
- 3. Touch [Network].
- 4. Touch "DHCP."
- 5. Touch "OFF."



- 6. Touch "IP Address."
- 7. Enter the fixed IP address. (Example: 192.168.0.10)

	IP Address (Valid afte	er Restart)	
·	192.168.	0. 10	\rightarrow
1	Enter	3	
4	5	6	
7	8	9	ENT
	0	CE	C D

- 8. Touch "Default Gateway."
- 9. Set the default gateway of the router. (Example: 192.168.0.1)



10. Reboot the radio.

The settings will take effect after rebooting.

Router setting

Please refer to your router's manual for details of how to configure the settings.

2 WHEN CONNECTING TO THE NETWORK THROUGH A PC

If you are using one of the following radios, skip this section and go to section 3. (p. 45)

- IC-7851
- IC-7850
- IC-7800 (Firmware version 3.00 or later)
- IC-7700 (Firmware version 2.00 or later)
- IC-7610

(As of August 2017)

This section describes about the Base staion's settings when connecting to the network through a PC.

 Select the connection pattern When connecting to the radio's [USB] port. When connecting to the radio's [REMOTE] jack. When connecting to the radio's [RS-232C] port. Radio's presetting. The following manual settings are required when operating the RS-BA1. The following settings are automatically set to the radio. Setting your PC's environment. Radio registration. To register a radio To change a radio properties. To delete a radio. To allow a user to use a radio. To inhibit a user to use a radio. To change a user properties. To change a user properties. To delete a user. To monitor, or disconnect a Remote station To monitor, or disconnect a Remote station To monitor the received or transmitted audio. To terminate a connection. Connecting to a radio. Disconnecting tradio. Disconnecting the server. Connecting the received or transmitted audio. Disconnecting the received system through a LAN. When configuring the remote control system through a LAN. When configuring the remote control system through the Internet. 	Connecting the radio to the Base station's PC	
 When connecting to the radio's [USB] port	Select the connection pattern	
 When connecting to the radio's [REMOTE] jack	♦When connecting to the radio's [USB] port	
 When connecting to the radio's [RS-232C] port	♦When connecting to the radio's [REMOTE] jack	
 Radio's presetting	♦When connecting to the radio's [RS-232C] port	
 The following manual settings are required when operating the RS-BA1	Radio's presetting	
 The following settings are automatically set to the radio Setting your PC's environment Radio registration To register a radio To register a radio To change a radio properties To delete a radio User registration. To add a user To adlo a user to use a radio To allow a user to use a radio To inhibit a user to use a radio To change a user properties To delete a user To monitor, or disconnect a Remote station. To terminate a connection Connecting to a radio from the Server. Connecting to a radio. Disconnecting from a radio. When configuring the remote control system through the Internet 	♦The following manual settings are required when operating the RS-BA1	
 Setting your PC's environment Radio registration To register a radio To change a radio properties To delete a radio User registration To add a user To add a user To allow a user to use a radio To inhibit a user to use a radio To change a user properties To change a user properties To change a user properties To change a user of use a radio To change a user properties To change a user properties To change a user properties To change a user of use a radio To monitor, or disconnect a Remote station To monitor the received or transmitted audio To terminate a connection Connecting to a radio from the Server Connecting to a radio Disconnecting from a radio Obisconnecting from a radio Configuring the remote control system through a LAN When configuring the remote control system through the Internet 	♦The following settings are automatically set to the radio	
 Radio registration To register a radio To change a radio properties To delete a radio User registration To add a user To adlow a user to use a radio To inhibit a user to use a radio To change a user properties To change a user properties To delete a user To delete a user To delete a user To monitor, or disconnect a Remote station. To monitor the received or transmitted audio To terminate a connection. Connecting to a radio from the Server Connecting to a radio. Disconnecting from a radio. When configuring the remote control system through a LAN. When configuring the remote control system through the Internet 	Setting your PC's environment	
 To register a radio To change a radio properties To delete a radio User registration To add a user To add a user To allow a user to use a radio To inhibit a user to use a radio To change a user properties To change a user properties To delete a user To monitor, or disconnect a Remote station To monitor the received or transmitted audio To terminate a connection Connecting to a radio Disconnecting from a radio Confirming Server Address or Network Name When configuring the remote control system through a LAN When configuring the remote control system through the Internet 	Radio registration	24
 To change a radio properties To delete a radio User registration	♦To register a radio	
 To delete a radio User registration	♦To change a radio properties	
 User registration	♦To delete a radio	
 To add a user To allow a user to use a radio. To inhibit a user to use a radio. To change a user properties To delete a user To monitor, or disconnect a Remote station. To monitor the received or transmitted audio. To terminate a connection. Connecting to a radio from the Server. Connecting to a radio. Disconnecting from a radio. Confirming Server Address or Network Name. When configuring the remote control system through the Internet 	User registration	
 To allow a user to use a radio	♦To add a user	
 To inhibit a user to use a radio To change a user properties To delete a user	♦To allow a user to use a radio	
 To change a user properties To delete a user To monitor, or disconnect a Remote station. To monitor the received or transmitted audio. To terminate a connection. Connecting to a radio from the Server. Connecting to a radio. Disconnecting from a radio. Confirming Server Address or Network Name. When configuring the remote control system through a LAN. When configuring the remote control system through the Internet. 	♦To inhibit a user to use a radio	
 To delete a user To monitor, or disconnect a Remote station	♦To change a user properties	
 To monitor, or disconnect a Remote station	♦To delete a user	
 To monitor the received or transmitted audio	To monitor, or disconnect a Remote station	
 To terminate a connection	♦To monitor the received or transmitted audio	
 Connecting to a radio from the Server	♦To terminate a connection	
 ♦ Connecting to a radio ♦ Disconnecting from a radio ■ Confirming Server Address or Network Name ♦ When configuring the remote control system through a LAN	Connecting to a radio from the Server	
 ◇Disconnecting from a radio Confirming Server Address or Network Name ◇When configuring the remote control system through a LAN ◇When configuring the remote control system through the Internet 	♦Connecting to a radio	
 Confirming Server Address or Network Name	♦Disconnecting from a radio	
♦When configuring the remote control system through a LAN	Confirming Server Address or Network Name	
♦When configuring the remote control system through the Internet	♦When configuring the remote control system through a LAN	
	♦When configuring the remote control system through the Internet	

Connecting the radio to the Base station's PC

Before connecting the radio to the PC, please finish the installation for the Base station's PC and the Remote station's PC, using the RS-BA1 Preparations.

♦ Select the connection pattern

Check the connector type on your radio and see the following chart to connect your radio to the Base station's PC.

To connect an Icom CI-V command capable radio to the Base station's PC, you have to make connections for control command and audio communication.

RS-BA1 operation with the Base station's PC connected to the radio's ACC socket, MIC connector, or S/P DIF jack for audio communication cannot be guaranteed.

Dediele commenter		Outline	Medel	Def
Radio's connector	Control command	Audio	Model	Ret.
When connecting to the radio's [USB] port	Т	Through a USB cable		p. 17
When connecting to the radio's [REMOTE] jack	Through the CT-17 CI-V LEVEL CONVERTER	Through an audio cable connected between the PC's audio terminal and the radio's [ACC] socket or [MIC] connector	All	p. 18
When connecting to the radio's [RS- 232C] port	Through an RS- 232C cable	Through an audio cable connected between the PC's audio terminal and the radio's [ACC] socket, [MIC] connector or [S/P DIF] jack	IC-7700/IC-7800*2	p. 19

*1 When you turn your radio ON or OFF from the Remote Controller, connect to the radio's [Remote] jack.

*2 When you turn your radio ON or OFF from the Remote Controller, connect to the radio's [Remote] jack or to the network directly.

Conncting the radio to the Base station's PC (Continued)

♦ When connecting to the radio's [USB] port

For IC-7600 users

When you turn your radio ON or OFF from the Remote Controller, connect to the radio's [Remote] jack.

1. System requirements

- A PC that has a USB 1.1, 2.0, or 3.0 port
- Icom CI-V command capable radio that has a [USB] port (Type B/Mini-B)
- The USB cable (supplied to the RS-BA1 or a radio)

2. Install a USB driver

CAUTION:

- NEVER connect the radio to the PC with the USB
- cable until the USB driver installation has been completed.
- The driver is not supported by the Windows® auto-
- matic recognition system.

To use the USB cable between the radio and the PC, you must first install a USB driver.

• The USB driver comes with the RS-BA1. Or download from the Icom website.

NOTE: When a PC with USB 3.0 port is used for operating the radio, confirm the driver name. If the name "Silicon Laboratories CP210x USB to UART Bridge (Driver Removal)" is displayed on the Control Panel screen, uninstall it and then install the latest driver.

The latest driver and installation guide can be downloaded from here:

http://www.icom.co.jp/world/index.html

Read the installation guide before installing the driver.

3. Connect the radio to the Base station's PC

Connect the radio to the Base station's PC using the USB cable.

• This guide is based on using a Type B USB cable.



NOTE: If you connect a new USB audio device to your PC, the device selected as the default on your PC can be changed. Moreover, never connect another radio using a USB cable while the NOTE: If you connect a new USB audio device to Remote Utility is open.

Conncting the radio to the Base station's PC (Continued)

♦ When connecting to the radio's [REMOTE] jack

1. System requirements

- A PC that has an RS-232C port
- Icom CI-V command capable radio that has a [REMOTE] jack
- The optional CT-17 CI-V LEVEL CONVERTER (Two mini-plug cables are included.)
- An RS-232C cable (purchase separately)
- Stereo audio cables (purchase separately)

2. Connect a remote control system

Connect the CT-17 to the base station's PC, which enables the CI-V communication between them.





*CT-17 accepts only an RS-232C cable. The use of an RS-232C-USB converter is not guaranteed.

3. Connect an audio system

Connect an audio cable between the PC's audio port and the radio's [ACC] socket or [MIC] connector to enable audio communication between them. See the radio's instruction manual for details on the connector.



- When using the [MIC] connector, NEVER directly connect an audio cable between the radio's Microphone input and PC. It can cause a malfunction without adding the Electrolytic capacitor, as illustrated above.
- NEVER connect a monaural plug to the PC's LINE OUT. It can cause a malfunction.

Conncting the radio to the Base station's PC (Continued)

♦ When connecting to the radio's [RS-232C] port

For IC-7800 users

When you turn your radio ON or OFF from the Remote Controller, connect to the radio's [Remote] jack or to the network directly.

1. System requirements

- A PC that has an RS-232C port
- Icom CI-V command capable radio that has an [RS-232C] port
- An RS-232C cable (purchase separately)
- Two S/P DIF digital cables or stereo audio cables (purchase separately)

2. Connect a remote control system

Connect an RS-232C cable between the radio and the base station's PC.

Radio (Rear panel)



Conncting the radio to the Base station's PC

When connecting to the radio's [RS-232C] port (Continued)

3. Connect an audio system

Connect an audio cable between the PC's audio port and the radio's [S/P DIF] jack, [ACC] socket or [MIC] connector to enables audio communication between them.

See the radio's instruction manual for details on the radio's connector.

PC

S/P DIF IN (Input)

S/P DIF OUT (Output)

• Using the [S/P DIF] jack

Radio S/P DIF OUT (Output) → S/P DIF IN (Input) ←





• Using other than the [S/P DIF] jack Radio PC AF (Output) → LINE IN/MIC IN (Inpu

AF (Output)		LINE IN/MIC IN (Input)
MOD (Input)	÷	LINE OUT (Output)



- When using the [MIC] connector, NEVER directly connect an audio cable between the radio's Microphone input and PC. It can a cause malfunction without adding the Electrolytic capacitor, as illustrated above.
- NEVER connect a monaural plug to the PC's LINE OUT. It can cause a malfunction.

Radio's presetting

The RS-BA1 remotely controls Icom radios using CI-V (Icom Communication Interface) commands. See the CI-V command table in the radio's instruction manual for details of the functions that can be controlled.

♦ The following manual settings are required when operating the RS-BA1

Properly preset the items in below table for functions that cannot be controlled by CI-V commands or the item may cause unwanted actions. See the radio's instruction manual for details of the settings or operation. **NOTE:**

- Remove the transverter from the radio, if it is connected.
- To prevent an accidental transmission, we recommend you remove any keyer, keypad or other external equipment connected to the radio.
- Set the radio to a normal operating mode. The radio cannot receive CI-V commands while in special modes, such as the firmware update mode or cloning mode.
- If the radio has a Time-Out Timer function, we recommend you enable it to prevent the radio from continuously transmitting.

Genre	Item	Model	Setting
Function	RIT function	All	Set to OFF.
	A TX function	All	Set to OFF.
	Simple band scope	IC-746PRO*/IC-7000*/IC-7100/	Set to OFF.
	SWR Measurement function	IC-746PRO*/IC-7000*/IC-7100/ IC-7400*/IC-9100	Set to OFF.
	Timer/Sleep Timer function	Radios with the timer function	Set the timer to OFF or to your schedule.
	Weather Alert function	IC-7100	Set to OFF.
Display	RTTY decode screen	IC-746PRO*/IC-756PROIII*/IC-7400*	Exit the screen.
Volume	Volume for the RX audio	All	Set the volume to a suitable level.
CI-V	CI-V address	All	Set an appropriate CI-V address.
	CI-V baud rate	All	Set to 19200 bps (or Auto).
	CI-V USB Port	IC-7300/IC-7610/ IC-7850 (Firmware version 1.10 or later)/ IC-7851 (Firmware version 1.10 or later)	To use the Scope function when connecting to the USB port, set to Unlink from [REMOTE].
	CI-V USB Baud Rate	IC-7300/IC-7610/ IC-7850 (Firmware version 1.10 or later)/ IC-7851 (Firmware version 1.10 or later)	To use the Scope function when connecting to the USB port, set to 115200 (or Auto).
Set mode	USB Serial Function	Radios with a USB (B type) port	Set to "CI-V" for the selected connection type.
	RS-232C Function	Radios with an RS-232C port	Set to "CI-V" for the selected connection type.

* Operation on models without a USB connection cannot be guaranteed.

If you are using the IC-PW1 with the transceiver, be sure to set the CI-V baud rate to 19200 bps. After changing the transceiver's CI-V settings, be sure to reset the CPU of the IC-PW1 and set the transceiver's CI-V settings on the IC-PW1. See the IC-PW1 instruction manual for details.

Radio's presettings (Continued)

♦ The following settings are automatically set to the radio

When the RS-BA1's Remote Controller connects to the radio, and you select the model name on the Connect Setting screen, the following may be automatically set, depending on the model. When you manually operate the radio, set these items as desired.

Genre	Item	Model	Action
Function	MAIN/SUB Tranking function	IC-7610/ IC-7850 (Firmware version 1.10 or later)/ IC-7851 (Firmware version 1.10 or later)	Automatically set to OFF.
	RIT function	Radios with the Network function/ IC-7100 (Firmware version 1.10 or later)/ IC-7600 (Firmware version 2.00 or later)	Automatically set to OFF.
	⊿ TX function	Radios with the Network function/ IC-7600 (Firmware version 2.00 or later)	Automatically set to OFF.
	SSB/CW Synchronous Tuning	All	Automatically set to OFF.
	Calibration Marker	Radios with Calibration Marker function	Automatically set to OFF.
	VOX function	All	Automatically set to OFF.
	Scan function	All	Automatically cancel the scan.
	RTTY filter	IC-746PRO*/IC-756PROIII*/IC-7400*	Automatically set to OFF.
	Twin Peak Filter	IC-746PRO*/IC-756PROIII*/IC-7400*	Automatically set to OFF.
Display	Dualwatch function	Radios with the Dualwatch function	Automatically set to OFF.
	SUB band	IC-9100	Automatically set to OFF.
	Memory channel/Call channel	All	Automatically set to the VFO mode.
Operating mode	DR (D-STAR® REPEATER) mode	Radios with the DV mode	Automatically set to OFF.
	Satellite mode	Radios with the Satellite mode	Automatically set to OFF.
CI-V	CI-V transceive	All	Automatically set to ON.
	CI-V 731 Mode	IC-746PRO*/IC-756PROIII*/IC-7400*	Automatically set to OFF.

* Operation on models without a USB connection cannot be guaranteed.

Setting your PC's environment

Configure your PC's environment in the Base station's Remote Utility. The settings will take effect after rebooting the Remote Utility. When you first open the Remote Utility, the Settings screen appears. After configuring the settings, you can display other setting screens.

- 1. Click "Options."
- 2. Click "Settings."
- The "Settings" screen is displayed.
- 3. Configure the settings.
- 4. Click <OK> to save the settings.
 - The "Take effect after restarting the application" screen is displayed.
- Click <OK>. The settings will take effect after rebooting the Remote Utility.



PC Name

Enter a name for your PC of up to 16 characters. **DO NOT** use the same name for more than one PC on your network.

Port numbers

Enter the port numbers of the Control, Serial, and Audio port. You should use the default port numbers for these ports.

Internet Access Line

Select your internet access line type.

4 Language

Select the software display language. The selected language will be used as the Help file language.

NOTE:

If you configure the remote control system through the Internet, and change the port number of the Control, Serial or Audio port, you should configure the port forwarding settings and the IP filter settings on your router once again. (p. 12)

In the Base station's Remote Utility, register the radios that are physically connected to your PC. See page 16 to connect a radio to your PC.

Registered Radio List screen

- 1. Click "Options."
- 2. Click "Local/Server Settings."



♦ To register a radio Procedure

Step 1: Open the Register a Radio screen. Registered Radio List screen → <add></add>	Step 5: Set the audio of the radio.
Step 2:	Step 6:
Select the purpose of use of the radio.	Register a User to accept connection.
Step 3:	Step 7:
Select a radio.	Enter the radio name.
Step 4:	Step 8:
Set the CI-V/COM port settings.	The registration of the radio is completed.

NOTE:

When you register a radio from the Setup Wizard screen, click **Setup for a Server PC (The radio is accessible by Remote PC(s).)**. (Installtion guide A Step4.) ① To display the Setup Wizard screen, click **Setup Wizard** on the top menu.

2 WHEN CONNECTING TO THE NETWORK THROUGH A PC

Radio registration

♦ To register a radio (Continued)

1 Open the Register a Radio screen. Click <Add> to display the Register a Radio screen.



Register a Radio	? ×
Purpose of use Select the purpose of use of the radio.	
Select the purpose of use of the radio below, and then click <next>.</next>	
Accessible from other PCs	
< Back	2Click

Second Contractor					B	×
electing a Rad Select a Radio	o hat vou want to add.					
If the radio is co <next>. If the ra</next>	nnected to the PC usin dio is not listed, comfin	ng a USB cable, s m the radio is ON	elect the radio and the cable i	from the [USB] dro s firmly connected.	o-down list. Then o Wait for a while u	slick ntil
the PC recogniz	es the device, and the	n click the <sear< td=""><td>ch> button.</td><td>-</td><td></td><td></td></sear<>	ch> button.	-		
If the radio i	DSelect	other than a U	5B cable, selec	t from the radio from	n the [Manual]	
© USB	IC-7300	COM=9	-	Search		
© USB	IC-7300	COM=9	_	Search		

- Select the purpose of use of the radio.
 If you register a radio by the Setup Wizard screen, this screen is not displayed.
 - Select "Accessible from other PCs.
 If you select "Only accessible from this PC," the radio is not accessible from other PCs.
 - 2. Click <Next>>.

Select a Radio.

- 1. Select a Radio that you want to add.
- USB

3

Select if the radio is connected to the PC using a USB cable.

Select the connected radio from the drop-down list.

①If the radio is not listed, click the <Search> button.

Manual

Select if the radio is connected to the PC using other than a USB cable.

Select the connected radio from the drop-down list.

2. Click <Next>>.

♦ To register a radio (Continued)

Set the CI-V/COM port settings. Set the CI-V address, Baud rate, and COM Port Number. If you select "USB" in Step.3, they are no necessary changes. Click <Next>>. Set the audio of the Radio. This screen is displayed if you select "Manual" in Step.3. Select an audio device that input a received audio from the radio from the AF Input Device drop-down list.

- 2. Select an audio device that output a modulation to the radio from the MOD Output Device drop-down list.
- 3. Click <Next>>.

If you want to change the The Radio has the Spect rate must be set to 11520 [REMOTE]".	CI-V address and/or B rum scope function, if y 00 bps. At this time, also	ud rate, change from the lists below. u use the function on the Remote Cor comfirm the setting of the CI-V USB Po	troller, the USB Baud rt item is "Unlink to
The COM port number is	automatically set. If they	are no necessary changes, click <ne< th=""><th>t>.</th></ne<>	t>.
Address	94		
Baud Rate	115200 💌	1)Set	
COM Port Number	COM9 👻	0.111	
		< Back	

? X

Audio Settings	
Set the audio of the Radio.	
Select the devices that input a rece	eived audio from the radio and output a modulation to the radio.
After selecting, click <next>.</next>	
AF Input Device Not used	1)Select
MOD Output Device Not used	2 Select
Search	Device Options
	Displays Virtual Device
	< <u>B</u> ac <u>N</u> ext > (3) C

♦ To register a radio (Continued)

6 Register a User to accept connection.

- 1. Click <Add>.
- 2. Enter a user ID of up to 16 characters, casesensitive.
- You cannot register an already registered ID.
 Enter a password, of 8 to 16 characters,
- case-sensitive.
- At least two different characters must be used.
 Click <OK>.
- 5. Select the user.
- 6. Click <Add>>>.
- 7. Click <Next>>.

Register a Radio	? ×
Register a User to allow a connection Register a User to allow a connection to IC-7300.	
Register a User to allow a connection. If no user is registered, click or can change this setting later.	Add> to register the Add User screen. You
Registered Users Acce	ssible Users
Add>>	
< <delete< th=""><th></th></delete<>	
I Click	
<	Back Next > Cancel
Add User	5 ×
(2) Enter User ID USER1	
3 Enter	Admin
ОК	Cancel
(4)Click	To set the user as
	an administrator,
	click to make a
	check mark.
•	
egister a Radio	5 ×
Register a User to allow a connection	
rregister a user to allow a connection to romoto.	
Register a User to allow a connection. If no user is registered, click <	Add> to register the Add User screen. You
5Click	
USER1 (Admin)	ssible Users ER1 (Admin)
Add>>	
Add	
<1	

To prevent unauthorized access:

Set a long and strong password so that no one can possibly guess it.

Mix upper and lower case letters, numbers or characters.

♦ To register a radio (Continued)

7 Enter the radio name.

- Enter the radio name.
 The radio's model name and the last 5 figures of the serial number is entered by default.
- 2. Click <Next>>.

Radio Name				
Enter the radio	name of the IC-7300.			
Enter a radio n	ame.			
This name is d	splayed on the Radio list s	creen of this PC and	the Remote PC.	
Click <next>to</next>	register to the Radio.			
Radio Name	IC-7300		Enter	

8 The registration of the Radio is completed. Click <Finish>.

gister a Radio	2 ×
Add Completed	
The registraion of the Radio is completed. To	connect to the Radio, using the Radio List screen.
Attention:	
By connecting the Radio to a USB port, the di- the Radio'S speeker and Microphone. In that case, no sound comes from the original confirm the settings, click the <sound settings<br="">Sound Settings</sound>	efault settings on the REC/PLAY device window may change to I speaker, or you cannot input audio from the microphone. To >> button below.

By connecting the Radio to a USB port, the default settings on the REC/PLAY device window may change to the Radio's Speaker and Microphone. To confirm the settings, click the <Sound Settings> button.

a jouch	ecording Sounds Communications
Select a pl	ayback device below to modify its settings:
0,	Speakers 5- USB Audio CODEC Default Device
	High Definition Audio Device Ready
Sound	
aybac F	Recording ounds Communications
	cordina device below to modify its settinas:
Select a re	
Select a re	Microphone
Select a re	Microphone 5- USB Audio CODEC

Radio registration (Continued)

♦ To change a radio properties

Options > Local/Server Settings > Registered Radio List

- 1. Select a radio.
- 2. Click <Properties>.
- 3. Change the settings, and then click <OK>.



♦ To delete a radio

Options > Local/Server Settings > Registered Radio List

- 1. Select a radio.
- 2. Click <Delete>.



■ User registration

In the Base station's Remote Utility, register users (Remote Stations) to allow them to access the Server. The Server verifies the user ID and password when users attempt to access the Server. If the User ID or password is incorrect, the Remote station cannot access the Server.

User Management screen

- 1. Click "Options."
- 2. Click "Local/Server Settings."
- 3. Click the <User Management> tab.

1 Click	
🔤 Icom Remote Utility	
File Setup Wizard Options Help	
Radio List Server Local/Server Settings	Click ?
Settings	
	*
•	
	9 ×
Local/server settings	
Registered Radio Lis User Management	ICK
	10 7000
Dedictored Licere	Accessible Lisses
USER1 (Admin)	USER1 (Admin)
Add>>	
< <delete< th=""><th></th></delete<>	
Add Properties	
Delete	
	,

■ User registration (Continued)

♦ To add a user

Options > Local/Server Settings > User Management List

- 1. Click <Add>.
- 2. Enter a user ID of up to 16 characters, casesensitive.
 - ① You cannot register an already registered ID.
- 3. Enter a password, of 8 to 16 characters, casesensitive.
- ① At least two different characters must be used.
- 4. Click <OK>.



To prevent unauthorized access:

Set a long and strong password so that no one can possibly guess it.

Mix upper and lower case letters, numbers or characters.



		IC-7300	•
Registered Users		Accessible Users	
USER1 (Admin) USER2 (Admin)		USER1 (Admin)	
	Add>>	1	
	< <delete< td=""><td>1</td><td></td></delete<>	1	
Add Properties			
Delete			

■ User registration (Continued)

♦ To allow a user to use a radio

- Options > Local/Server Settings > User Management List
- 1. Select a radio that you allow the user to use.
- 2. Select the user.
- 3. Click <Add>>>.



♦ To inhibit a user to use a radio

Options > Local/Server Settings > User Management List

- 1. Select a radio that you inhibit the user to use.
- 2. Select the user.
- 3. Click <<<Delete>.

ocal/Server Settings	5 ×
Registered Radio List User Management	1)Select
	IC-7300 V
Registered Users	Accessible Users
USER1 (Admin) USER2 (Admin)	USER2 (Admin) 2Select
Add>	>
< <dele< td=""><td>ete 3Click</td></dele<>	ete 3Click
Add Properties	
Delete	

■ User registration (Continued)

♦ To change a user properties

Options > Local/Server Settings > User Management List

- 1. Select a user.
- 2. Click <Properties>.
- 3. Change the settings, and then click <OK>.



lser Proper	ties	? ×
User ID	USER 2	
Password	*******	Admin

♦ To delete a user

Options > Local/Server Settings > User Management List

- 1. Select a user.
- 2. Click <Delete>.

Registered Radio List User Management	
	IC-7300 Accessible Users USER1 (Admin)
Add> 	>>>dete
Add Properties Delete 2Click	

To monitor, or disconnect a Remote station

When you are operating as a Base station, and a Remote station is accessing a radio that is physically connected to your PC, you can monitor the received and transmitted audio.

① To monitor, you should connect a speaker to your PC.

Moreover, you can terminate the connection between the Remote station and the radio.

Besides Base stations, administrator Remote stations can also terminate a connection between another Remote station and a radio.

♦ To monitor the received or transmitted audio

- 1. In the Base station's Remote Utility, click the <Radio List> tab.
- Select a radio with "Busy" under its name. The operating user's name (**PC Name** that the Remote station set in the Network Setting screen), and its IP address are displayed under "Busy."
- 3. Click <Monitor> to display the Monitor screen.
- 4. Click <TX Monitor> to turn the Transmit Monitor function ON or OFF.

Click <RX Monitor> to turn the Receive Monitor function ON or OFF.

Slide the adjustment bar on the **Volume** field up or down to adjust the monitoring audio volume level.

5. Click <Close> to close the screen.



To monitor, or disconnect a Remote station (Continued)

♦ To terminate a connection

- In the Base station's or in the administrator Remote station's Remote Utility, click the <Radio List> tab.
- 2. Select a radio with "Busy" under its name. The operating user's name (**PC Name** that the Remote station set in the Network Setting screen), and its IP address are displayed under "Busy."
- 3. Click < Disconnect>.
 - "The radio is in use by a Remote PC. Do you want to disconnect?" is displayed.
- Click <Yes> to terminate the connection.

 When you terminate a connection, no dialog appears on the disconnected Remote station's Remote Utility.

Eile Setun Wizard Ontions Help	
Radio List] ①Click	2
IC-7300 Local Serial Data 115200pp CIV Address 94 Busy COM Port Number 9 User PC Audo Device (152:168:68:100) Speaker Def Device Speaker Visuel Audo ICOM_VAUDIO-1 [I=4:0=3]	AF MOD
2)Select	
Settings Connect Disconnect 3Click 10 Monitor	Delete
Remote Utility	×
The radio is in use by a remote PC. Do you want to disconne	ct?
<u>Yes</u> (4	Click

Connecting to a radio from the Server

When you are operating as a Base station, you can access a radio which is physically connected to your PC (Server).

① For audio communication, you should connect a speaker and microphone, or headset to your PC.

① To control the radio, connect to it using a control software.

♦ Connecting to a radio

- 1. In the Base station's Remote Utility, click the <Radio List> tab.
- 2. Select a radio which is physically connected to your PC (Server).
- 3. Click <Connect>.
 - A dialog showing a port number, which is used to exchange CI-V commands between your PC and a radio, is dispalyed.
- 4. Click <OK> to access the radio.
 - "<<Connected>>" is displayed under the radio name when the connection has succeeded.
 - When you connect to the radio using a control software, you have to set the port number shown above.





TIP: When you change the radio settings,

- In the Base station's Remote Utility, click the <Radio List> tab.
- 2. Select a radio which is physically connected to your PC (Server).
- 3. Click <Settings>.
 - ① Radios that are connected with the Remote Utility of the Server PC, the Connection Setting cannot be changed.
- 4. Select an audio device in the **Speaker** menu to which your speaker is connected.
 - Radio's received audio will be heard from the device.
- 5. Select the audio device in the **Mic** menu to which your microphone is connected.
 - You can input transmit audio in the device to send to the radio.
- 6. Click <OK> to save the settings.



Connecting to a radio from the Server (Continued)

♦ Disconnecting from a radio

- 1. In the Base station's Remote Utility, click the <Radio List> tab.
- 2. Select a radio with "<<Connected>>" under its name.
- Click <Disconnect>.
 "Do you want to disconnect the radio?" is displayed
- 4. Click <Yes> to disconnect the radio.

NOTE:

Be sure to disconnect from the radio when not using it. Otherwise, other Remote stations cannot connect to it.

Eile Setun Wizard Ontin	nns Help	
Radio List	ick	?
IC-7300 << Connected >>	(Local) Serial Data 1152005ps: CI-V Address 94 COM Post Number 9 Audio Denice Speaker: Default Denice Mic: Default Denice Vetual Audio ICOM_VAL(DIO-1] [I=4 D=3]	AF MOD
	②Select	
		- 1 1
Settings Connect		Delete

•	
Remote Utility	ſ
Do you want to disconnect the radio?	
	ick

Confirming Server Address or Network Name

When you configure the remote system, Remote stations can access the Server using its IP address, computer name, network name, or domain name.

◇ When configuring the remote control system through a LAN

If you configure the remote control system through a LAN, Remote stations can access the Server using its computer name or IP address.

The example below describes how to find out the PC (Server)'s computer name, or IP address, to be requested by Remote stations.



To let Remote stations access the Server using its computer name

A computer name is used on networks to identify a particular workstation on the network. Find out your PC's computer name to let Remote stations access the Server using it.

Windows 10

1. Click the folder icon on the taskbar.



2. Right-click "This PC," and then click "Properties."



3. The "System" screen appears, then confirm the name that is displayed in the **Computer name** field.



- Confirming Server Address or Network Name
- ♦ When configuring the remote control system through a LAN

To let Remote stations access the Server using its computer name (continued)

Windows 8.1

1. Click the folder icon on the taskbar.



2. Right-click "PC," and then click "Properties."



3. The "System" screen appears, then confirm the name that is displayed in the **Computer name** field.



Windows 7

1. Right-click [Computer] in the <Start> menu, and then click [Properties].



2. The "System" screen appears, then confirm the name that is displayed in the **Computer name** field.



- Confirming Server Address or Network Name
- When configuring the remote control system through a LAN (continued)

To let Remote stations access the Server using its IP address

An IP address is a numerical label that is assigned to devices participating in a computer network. Find out your PC's IP address to let Remote stations access the Server using it.

Windows 10

1. Right-click the Network icon on the taskbar, and then click [Open Network and Sharing Center].

	Troubleshoot problems	
2 Click	Open Network and Sharing Centre	
0	Right-click	1 5

2. The "Network and Sharing Center" screen appears, then click [Ethernet].

→ · ↑ ½ → Control	Panel > All Control Panel Items > Network	k and Sharing Center
Control Panel Home	View your basic network infor	rmation and set up connections
	View your active networks	
Change adapter settings		Assess to max and a laternet
Change advanced sharing settings	Network Private network	HomeGroup Post-to-coste Connectio : U Ethernet
	Change your networking settings	Click
	Set up a new connection or r	network
	Set up a broadband, dial-up	or VPN connection, or set up a router or access point.
	Troubleshoot problems	
	Diagnose and repair network	problems or get troubleshooting information.

3. The "Ethernet Status" screen appears, then click <Details...>.

Ethernet Status			×
General			
Connection			_
IPv4 Connectiv	ity:	Internet	
IPv6 Connectiv	ity:	No network access	
Media State:		Enabled	
Duration:		00:40:16	
Speed:	_	1.0 Gbps	
Details			
Click			_
	Sent —	Received	
Bytes:	160,855,161	2,573,483,566	
Properties	Disable	Diagnose	
		Close	

 The "Network Connection Details" screen appears, then confirm the IP address that is displayed in the **Address** field. Click <Close> to close the window.

Network Connection Details > Property Value Connection-specific DN • • O Confirm • • I Pv4 Address • • I Pv4 DHCP Server • • Pv4 DHCP Servers • • Pv4 WINS Servers • • Ve6 Address • • Ve6 Address •			
Network Connection Details: Property Value Connection-specific DN PV4 Address 192.168.0.10 IV4 Address 192.168.0.10 IV4 Address 192.168.0.10 IV4 Address 192.168.0.10 IV4 Default Gateway IP44 DHCP Server IP44 WINS Servers IP44 WINS Servers NetBIOS over Topip En Link-local IP46 Address	Network Connection Detai	ils	×
Property Value Connection-specific DN Confirm IPV4 Address 192.168.0.10 IV+ Solume Meak Lease Obtained Lease Expires IPV4 Default Gateway IPV4 DWIS Servers IPv4 WINS Servers IPv4 Pv4 Pv4 Pv4 Pv4 Pv4 Pv4 Pv4 Pv4 Pv4	Network Connection Details:		
Connection-specific DN Prove Address IPv4 Address IPv4 Address IPv4 Default Gateway IPv4 DVIS Servers IPv4 DNS Servers IPv4 WINS Servers NetBIOS over Tcpip En Link-local IPv6 Address	Property	Value	^
IPv4 Address 192 168 0.10 IPv4 Address 192 168 0.10 IPv4 Address IPv4 Default Gateway IPv4 DbC Server IPv4 DNS Servers IPv4 WINS Servers IPv4 WINS Servers NetBIOS over Topip En Link-local IPv6 Address	Connection-specific DN		
IPv4 Address 192.168.0.10 IPv4 Address 192.203.203.0 Lease Obtained 205.203.00 Lease Expires IPv4 DHCP Server IPv4 DHCP Servers IPv4 WINS Servers NetBIOS over Tcpip En Invicocal IPv6 Address	[
IPv4 Address 192.168.0.10 IVv4 Address 192.168.0.10 IVv4 Datates Meak 205205.00 Lease Obtained Lease Expires IPv4 DHCP Server IPv4 DHCP Server IPv4 WINS Servers NetBIOS over Topip En Link-local IPv6 Address	Confirm		
Lease Obtained Lease Obtained Lease Expires IPv4 DHCP Server IPv4 DHCP Servers IPv4 WINS Servers NetBIOS over Topip En Link-local IPv6 Address	IPv4 Address	192.168.0.10)
Lease Dotained Lease Expires IPv4 Default Gateway IPv4 DHCP Server IPv4 UNIS Servers IPv4 WINS Servers NetBIOS over Topip En Link-local IPv6 Address	II V4 JUDIICLIMDAN	233.233.233.0	
IPv4 Default Gateway IPv4 DHCP Server IPv4 DNS Servers IPv4 WINS Servers NetBIOS over Tcpip En Link-local IPv6 Address	Lease Oblained		
IPv4 DHCP Servers IPv4 WINS Servers IPv4 WINS Servers IPv4 WINS Servers Link-local IPv6 Address	IPv/ Default Gateway		
IPv4 DNS Servers IPv4 WINS Servers NetBIOS over Topip En Link-local IPv6 Address	IPv4 DHCP Server		
IPv4 WINS Servers NetBIOS over Topip En Link-local IPv6 Address	IPv4 DNS Servers		
IPv4 WINS Servers NetBIOS over Topip En Link-local IPv6 Address		10 Mar 10	
NetBIOS over Tcpip En Link-local IPv6 Address	IPv4 WINS Servers		
NetBIOS over Topip En Link-local IPv6 Address			
Link-local IPv6 Address	NetBIOS over Tcpip En		
	Link-local IPv6 Address		5
	<	>	
2 Click		2 Click	

When the **DHCP Enabled** field is set to "Yes" in the "Network Connection Details" screen, the DHCP server assigns a dynamic IP address to your PC.

Because of this, Remote stations will have to match the IP address each time to access the Server.

If the **DHCP Enabled** field is set to "Yes," we recommend that you let Remote stations access the Server using its computer name. (p. 38)

- Confirming Server Address or Network Name
- When configuring the remote control system through a LAN

To let Remote stations access the Server using its IP address (continued)

Windows 8.1

1. Right-click the Network icon on the taskbar, and then click [Open Network and Sharing Center].

2 Click	Troubleshoo Open Netwo	t problems rk and Sharing Ce	enter
	Right-click	문 🕨 ENG	1:13 PM 5/10/2017

2. The "Network and Sharing Center" screen appears, then click [Ethernet].



3. The "Ethernet Status" screen appears, then click <Details...>.

Q	Ethernet Sta	itus	×
General			
Connection			_
IPv4 Connect	vity:	Internet	
IPv6 Connect	vity:	No Internet access	
Media State:		Enabled	
Duration:		00:15:06	
Speed:	_	1.0 Gbps	
Details			
Click			
Activity			-
	Sent — 📕	— Received	
Bytes:	33,747,638	209,738,247	
Properties	Oisable	Diagnose	
		<u>C</u> lose	

 The "Network Connection Details" screen appears, then confirm the IP address that is displayed in the Address field. Click <Close> to close the window.

Property	Value	^
Connection encode DN	Value	
Connection-specific DN		_
Confirm	1000	_
IPv4 Address	192.168.68.10	
Longo Obtained	255.255.255.0	
Lease Expires		_
IPv4 Default Gateway	-	
IPv4 DHCP Server	100 (100 (100)	
IPv4 DNS Servers	10.000	
IPv4 WINS Servers		
NetBIOS over Topip En	-	
Link-local IPv6 Address		~
<		>

When the **DHCP Enabled** field is set to "Yes" in the "Network Connection Details" screen, the DHCP server assigns a dynamic IP address to your PC.

Because of this, Remote stations will have to match the IP address each time to access the Server.

If the **DHCP Enabled** field is set to "Yes," we recommend that you let Remote stations access the Server using its computer name. (p. 38)

- Confirming Server Address or Network Name
- When configuring the remote control system through a LAN

To let Remote stations access the Server using its IP address (continued)

Windows 7

1. Right-click the Network icon on the taskbar, and then click [Open Network and Sharing Center].

2 Click uble	eshoot problems
Open N	letwork and Sharing Center
	▲ (9:52 AM 9/15/2010
	Right-click

2. The "Network and Sharing Center" screen appears, then click [Local Area Connection].



3. The "Local Area Connection Status" screen appears, then click <Details...>.



 The "Network Connection Details" screen appears, then confirm the IP address that is displayed in the Address field. Click <Close> to close the window.

Property	Value		
Connection-specific DN Description		6	Joi
Comm	Vas		_
ease Obtain	Vednesday	-15	2010 9:5
ateway			۲.

When the **DHCP Enabled** field is set to "Yes" in the "Network Connection Details" window, the DHCP server assigns a dynamic IP address to your PC.

Because of this, Remote stations will have to match the IP address each time to access the Server.

If the **DHCP Enabled** field is set to "Yes," we recommend that you let Remote stations access the Server using its computer name. (p. 38)

Confirming Server Address or Network Name (Continued)

♦ When configuring the remote control system through the Internet

If you configure the remote control system through the Internet, Remote stations can access the Server using its public IP address. If you utilize a Dynamic DNS service, Remote stations can access the Server by not only its public IP address, but also by its domain name.

To let Remote stations access the Server using its public IP address

A public IP address is an address that is accessible over the global Internet. If you use a dynamic public IP address, it is chosen from a pool of available addresses and changes each time you connect to the Internet. Because of this, Remote stations will have to match the IP address each time to access the Server. If you use a dynamic public IP address, we recommend that you utilize the Dynamic DNS service to allow the Remote stations to access the Server using its domain name, or use a static public IP address. Ask the router's manufacturer about how to configure your router to set the public IP address.



- Confirming Server Address or Network Name
- When configuring the remote control system through the Internet (continued)

To let Remote stations access the Server by its domain name

If you set up an account for a Dynamic DNS server, you can configure your router to update the Dynamic DNS server with your dynamic IP address. Even if you don't have a static public IP address, you can allow Remote stations to access the Server through the Internet, using its domain name.

Ask the router's manufacturer about how to configure your router to use the Dynamic DNS services.


WHEN CONNECTING TO THE NETWORK DIRECTLY

The settings in this section are necessary only when using one of the following rate • IC-7851 • IC-7850 • IC-7800 (Firmware version 3.00 or later) • IC-7700 (Firmware version 2.00 or later) • IC-7610	Idios.
If you use other Icom radio, skip this section and go to section 4. (p. 33)	(As of August 2017)

This section describes about the Base staion's settings when connecting to the network directly.

З

Radio's presetting	
♦ The following manual settings are required when operating the RS-BA1	
♦The following settings are automatically set to the radio	
Network setting	
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Radio's presetting

The RS-BA1 remotely controls the radios with the Network function using CI-V (Icom Communication Interface) commands.

See the CI-V command table in the radio's instruction manual for details of the functions that can be controlled.

♦ The following manual settings are required when operating the RS-BA1

Properly preset the items in the table below for functions that cannot be controlled by CI-V commands, or for items that may cause unintended actions. See the radio's instruction manual for details of the settings or operation.

NOTE:

- Remove any transverter that is connected to the radio.
- To prevent accidental transmission, remove any keyer, keypad or other external input equipment connected to the radio.
- We recommend you enable the Time-Out Timer function to prevent the radio from continuously transmitting.

Genre	Item	Setting	
Function	Timer/Sleep Timer function	Set the timer to OFF or to your schedule	
Volume	Volume for the RX audio	Set the volume to a suitable level	
CI-V	CI-V address	Desired CI-V Address Example: the radios' default setting. IC-7851/IC-7850: 8Eh, IC-7800: 6Ah, IC-7700: 74h, IC-7610: 98h (When another device is connected to the system, make sure you do not to set a duplicate address.)	
	CI-V baud rate	Set to 19200 bps (or Auto)	

If you are using the IC-PW1 with the transceiver, be sure to set the CI-V baud rate to 19200 bps. After changing the transceiver's CI-V settings, be sure to reset the CPU of the IC-PW1 and set the transceiver's CI-V settings on the IC-PW1. See the IC-PW1 instruction manual for details.

♦ The following settings are automatically set to the radio

When the RS-BA1's Remote Controller connects to the radio, and you select the model name on the Connect Setting screen, the following items are automatically set. When you manually operate the radio, set these items as desired.

Genre	Item	Action
Function	MAIN/SUB Tranking function	Automatically set to OFF
	(For only the IC-7851, IC-7850, IC-7610)	
	RIT function	Automatically set to OFF
	∠TX function	Automatically set to OFF
	SSB/CW Synchronous Tuning	Automatically set to OFF
	Calibration Marker	Automatically set to OFF
	VOX function	Automatically set to OFF
	Scan function	Automatically cancel the scan
Display	Dualwatch function	Automatically set to OFF
	(For only the IC-7851, IC-7850, IC-7800, IC-7610)	
	Memory channel	Automatically set to the VFO mode
CI-V	CI-V transceive	Automatically set to ON

Network setting

Configure the network environment of your radio (IC-7610, IC-7700 with firmware version 2.00 or later, IC-7800 with firmware version 3.00 or later, IC-7850, or IC-7851) in the Others set mode. The settings will take effect after rebooting the radio.

Except for the IC-7610

1. "Network Control" setting

- 1. Hold down [EXIT/SET] for 1 second to select the Set mode menu screen.
- 2. Push [OTHERS](F-5) to enter the Others set mode.
- Push [▲](F-1) or [▼](F-2) to select "Network Control."
- 4. Rotate the main dial to select "ON."



NOTE:

If you select "OFF," the Remote station cannot access the radio.

2. "Default Gateway" setting

NOTE:

This setting is necessary when the remote control system is configured through the Internet.

- 5. Push [▲](F-1) or [▼](F-2) to select "Default Gateway."
- Push [◀▶](F-3) to select the desired address part, then rotate the main dial to set the IP address of the LAN side on the router. (Example: 192.168.0.1)



3. "Control Port (UDP)" "Serial Port (UDP)" "Audio Port (UDP)" confirmation

- 7. Push [▲](F-1) or [▼](F-2) to show "Control Port (UDP)," "Serial Port (UDP)" or "Audio Port (UDP)."
- Confirm the port numbers of the Control, Serial and Audio ports. You should use the default port numbers for these ports.

100	OTHERS	S SET
MID	Primary DNS Server (Valid after Reboot)	
IVIID	2nd DNS Server (Valid after Reboot)	
4/4	6 Confirm	IC-7851
1/4	lid after Behoot)	
OFF	Control Port (UDP) (Valid after Reboot)	50001
	Serial Port (UDP) (Valid after Reboot)	50002
vsc	Audio Port (UDP) (Valid after Reboot)	50003
OFF	Internet Access Line (Valid after Heboot)	FTIH
	▼ DEF	EXPAND

NOTE:

If you configure the remote control system through the Internet, and change the port number of the Control, Serial or Audio port, you should configure the port forwarding settings and the IP filter settings on your router once again. (p. 12) If you change the port number, you can hold down [DEF](F-4) for 1 second to return them to their default value.

4. "Internet Access Line" setting

- 9. Push [▲](F-1) or [▼](F-2) to select "Internet Access Line."
- 10. Rotate the main dial to select your internet access line type in the **Internet Access Line** item.
 - FTTH: Fiber To The Home
 - ADSL/CATV: ADSL or Cable television

AGC	OTHERS	SET
MID	2nd DNS Server (Valid after Reboot)	
	Network Name	IC-7851
1/4	Network Control (Valid after Reboot)	ON
1/4	(Valid after Reboot)	50001
OFF	4 Select (Valid after Reboot)	50002
vsc	Internet Access Line (Valid after Reboot)	FTTH
OFF	Network useri id	USERT
		EXPAND
	DEF	EAPAND

5. Saving the settings

11. Reboot the radio.

The settings will take effect after rebooting.

Network setting (Continued)

• For the IC-7610

1. "Network Control" setting

- 1. Push [MENU] to display the MENU screen.
- 2. Touch [SET] to enter the Set mode.
- 3. Touch [Network].
- 4. Touch "Network Control."
- 5. Touch "ON."



NOTE:

If you select "OFF," the Remote station cannot access the radio.

2. "Default Gateway" setting

NOTE:

This setting is necessary when the remote control system is configured through the Internet.

- 6. Touch "Default Gateway."
- 7. Enter the IP address of the LAN side on the router.

(Example: 192.168.0.1)

Default Gateway (Valid after Restart)				
←	192.168.	0. 1	\rightarrow	
1	Enter 2	3		
4	5	6		
7	8	9	ENT	
	0	CE	U	

3. "Control Port (UDP)" "Serial Port (UDP)" "Audio Port (UDP)" confirmation

- Touch [▲] or [▼] to display "Control Port (UDP)," "Serial Port (UDP)" or "Audio Port (UDP)."
- Confirm the port numbers of the Control, Serial and Audio ports. You should use the default port numbers for these ports.



NOTE:

If you configure the remote control system through the Internet, and change the port number of the Control, Serial or Audio port, you should configure the port forwarding settings and the IP filter settings on your router once again. (p. 12) If you change the port number, push [QUICK] and touch "Default" to return them to their defaults.

4. "Internet Access Line" setting

- 10. Touch "Internet Access Line."
- 11. Touch your internet access line type. • FTTH: Fiber To The Home
 - ADSL/CATV: ADSL or Cable television



5. Saving the settings

12. Reboot the radio.

The settings will take effect after rebooting.

User registration

In the set mode menu screen, register users (Remote station) to allow them to access the Server. The Server verifies the user ID and password when Remote stations attempt to access the Server. If the User ID or password is incorrect, the Remote station cannot access the Server.

To register a user Except for the IC-7610

1. "User ID" setting

- 1. Hold down [EXIT/SET] for 1 second to select the set mode menu screen.
- 2. Push [OTHERS](F-5) to enter the Others set mode.
- Push [▲](F-1) or [▼](F-2) to select "Network User 1 ID."

AGC	OTHERS SET	
MID	Control Port (UDP) (Valid after Reboot) 50001	
INID	Serial Port (UDP) (Valid after Reboot) 50002	
1/4	Audio Port (UDP) (Valid after Reboot) 50003	
055	Internet Access Line (Malid Stars Debast) CTTU	
	Network User1 ID	
1/00	rassworu	
vsc	Administrator NO	
OFF	Network User2 ID	
		EXDAND
		EXPAND

- 4. Push [EDIT](F-5) to enter the User ID Edit mode.
- 5. Rotate the main dial to input a user ID of up to 16 characters.
 - Push [ABC] or [abc] to toggle between upper and lower case letters.
 - Push [123] or [Symbol] to toggle between numerals and symbols.
 - You cannot register an already registered ID.
 - Push [◀](F-1) or [▶](F-2) for cursor movement.
 - Push [DEL](F-3) to delete the selected character.
 - You can input an ID using a keyboard, connected to the radio.

	ABC OTHERS SET	
	Control Port (UDP) (Valid after Reboot) 50001	
	Seri Changet IId after Reboot) 50002	
	Aud O III OUL lid after Reboot) 50003	
ABC 6		
	Network User1 ID DEFR	
	Fassworu	
123	Administrator NO	
	Network User2 ID	
	▶ DEL SET	

6. Push [SET](F-5) to set the User ID.

To prevent unauthorized access:

Set a long and strong password so that no one can possibly guess it. Mix upper and lower case letters, numbers or characters.

2. "Password" setting

- 7. Push [▲](F-1) or [▼](F-2) to select "Password."
- 8. Push [EDIT](F-5) to enter the Password Edit mode.
- 9. Rotate the main dial to input a Password of 8 to 16 characters, case-sensitive.
 - At least two different characters must be used.

	ABC		OTHERS	SET	
	Control Port (L	JDP) (Valid after	Reboot)	50001	
	Serial Port (L	JDP) (Valid after	Reboot)	50002	
	Aud O In	lid after	Reboot)	50003	
ABC	Inte 🖌 🚺	JUL lid after	Reboot)	FTTH	
	- NI - N	-15		10004	
		Password		USER0001	
123		Administrator		NO	
1111	Network User2	ID			•
				057	

10. Push [SET](F-5) to set the Password.

3. Setting the user as an administrator

- Push [▲](F-1) or [▼](F-2) to select "Administrator."
- Rotate the main dial to select "YES" to set the user as an administrator. Administrator Remote stations can terminate a connection between another Remote station and a radio.

ACC	UTIEN.	
AGC	Control Port (UDP) (Valid after Reboot)	50001
	Serial Port (UDP) (Valid after Reboot)	50002
1/4	Audio Port (UDP) (Valid after Reboot)	50003
1/4	Inte O Soloct lid after Reboot)	FTTH
OFF	Net O Select	USER1
	B	
vsc	Administrator	YES
VSC OFF	Administrator	YES
VSC OFF	Administrator	YES

- ① If necessary, repeat steps 3 through 12 to register other users.
- 13. Push [EXIT/SET] twice to exit the Set mode.

NOTE:

To remove a Remote station from the User List, select "Network User1 ID," "Network User2 ID" or "Network User3 ID," and then push [DEL](F-3) on the edit mode to delete the User ID. The deleted Remote station will not be able to access the Server.

- User registration
- ♦ To register a user (Continued)

• For the IC-7610

- 1. "User ID" setting
- 1. Push [MENU] to display the MENU screen.
- 2. Touch [SET] to enter the Set mode.
- 3. Touch [Network].
- 4. Touch "Network User 1."



- 5. Touch "Network User 1 ID."
- 6. Enter a user ID of up to 16 characters.
 - You cannot register an already registered ID.
 - Touch [←] or [→] for cursor movement.
 - Touch [CLR] to delete the selected character.
 - You can input an ID using a keyboard, connected to the radio.



7. Touch [ENT] to set the User ID.

2. "Password" setting

- 8. Touch "Network User1 Password."
- 9. Enter a Password of 8 to 16 characters, casesensitive.

At least two different characters must be used.



10. Touch [ENT] to set the Password.

3. Setting the user as an administrator

- 11. Touch "Network User1 Administrator."
- 12. Touch "YES" to set the user as an administrator. Administrator Remote stations can terminate a connection between another Remote station and a radio.



- ① If necessary, repeat steps 3 through 12 to register the other user.
- 13. Push [MENU] to exit the Set mode.

NOTE:

To remove a Remote station from the User List, touch "Network User1 ID" or "Network User2 ID," and then touch [CLR] to delete the User ID. The deleted Remote station will not be able to access the Server.

Radio registration

In the set mode menu screen, register the radios to be used with the Server.

Radio's basic information setting

Except for the IC-7610

- 1. Hold down [EXIT/SET] for 1 second to select the set mode menu screen.
- Push [OTHERS](F-5) to enter the Others set mode.
- Push [▲](F-1) or [▼](F-2) to select "Network Radio Name."
- 4. Push [EDIT](F-5) to enter the Network Radio Name Edit mode.



- 5. Rotate the main dial to input a Network Radio Name of up to 16 characters.
 - 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 [DEL](F-3) to delete the selected character.
 - You can input an ID using a keyboard connected to the radio.
- 6. Push [SET](F-5) to set.
- Push [▲](F-1) or [▼](F-2) to select "CI-V Address."



- 8. Rotate the main dial to input a CI-V address.
- 9. Push [▲](F-1) or [▼](F-2) to select "CI-V Baud Rate."

AGC	OTHERS	S SET
MID	CI-V Baud Rate	Auto
1/4 OFF		ON ON
	CI-V Output (for ANT)	OFF
VSC OFF	CI-V USB Port CI-V USB Baud Rate	Unlink from [REMOTE] Auto
	DEF	EXPAND

- 10. Rotate the main dial to select the baud rate.
- 11. Push [EXIT/SET] twice to exit the Set mode.

• For the IC-7610

- 1. Push [MENU] to display the MENU screen.
- 2. Touch [SET] to enter the Set mode.
- 3. Touch [Network].
- 4. Touch "Network Radio Name."
- 5. Enter a Network Radio Name of up to 16 characters.
 - Touch [←] or [→] for cursor movement.
 - Touch [CLR] to delete the selected character.
 - You can input an ID using a keyboard connected to the radio.



- 6. Touch [ENT], and then push [EXIT].
- 7. Touch [Connectors].
- 8. Touch "CI-V."
- 9. Touch "CI-V Address."
- 10. Set a CI-V address, and then push [EXIT].



- 11. Touch "CI-V Baud Rate."
- 12. Touch the baud rate.



13. Push [MENU] to exit the Set mode.

Radio registration (Continued)

♦ Adjust limitation setting

Remote stations can adjust the sound quality or audio codec. Higher audio qualities will increase the amount of data, which can cause voice delay or jumpiness, depending on the network condition. The Server can limit the maximum level of the sound quality or audio codec.

Remote stations cannot program higher values than the values programmed here.

- The following settings are not included with the IC-7851, IC-7850, and IC-7610. However, the settings are originally fixed in those transceivers.
- 1. Hold down [EXIT/SET] for 1 second to select the Set mode menu screen.
- 2. Push [OTHERS](F-5) to enter the Others set mode.
- Push [▲](F-1) or [▼](F-2) to select "Network AF Sample Rate."



- 4. Rotate the main dial to limit the received audio sampling rate that Remote stations can adjust. 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.
 - For the IC-7851, IC-7850, and IC-7610, the rates are fixed to:
 - 8kHz, 12kHz, 16kHz, 24kHz, 48kHz.
- Push [▲](F-1) or [▼](F-2) to select "Network AF Codecs."
- 6. Rotate the main dial to limit the received audio codec that Remote stations can adjust.
 - For the IC-7851, IC-7850, and IC-7610, the codecs are fixed to:
 - LPCM 8bit, u-law 8bit, LPCM 16bit.
- 7. Push [▲](F-1) or [▼](F-2) to select "Network AF Channels."
- Rotate the main dial to select whether or not to allow Remote stations to select stereo sound. 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).
 - For the IC-7851, IC-7850, and IC-7610, the channel is fixed to "2ch."

9. Push [▲](F-1) or [▼](F-2) to select "Network MOD Use."



- 10. Confirm that "ON" is selected in "Network MOD Use."
 - For the IC-7851, IC-7850, and IC-7610, the function is fixed to "ON."
- Push [▲](F-1) or [▼](F-2) to select "Network MOD Sample Rate."
- 12. Rotate the main dial to limit the modulation audio sampling rate that Remote stations can adjust. 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.
 - For the IC-7851, IC-7850, and IC-7610, the rates are fixed to:
 - 8kHz, 12kHz, 16kHz, 24kHz, 48kHz
- Push [▲](F-1) or [▼](F-2) to select "Network MOD Codecs."
- 14. Rotate the main dial to limit the modulation audio codec that Remote stations can adjust.
 - For the IC-7851, IC-7850, and IC-7610, the codecs are fixed to:
 - LPCM 8bit, u-law 8bit, LPCM 16bit.
- 15. Push [EXIT/SET] twice to exit the Set mode.

Radio registration

Adjust limitation setting (continued)

Standby mode setting

To remotely control the transceiver using the RS-BA1, the transceiver's power must be either turned ON or set in the standby mode.

Follow the steps described below to set the transceiver in the standby mode.

• Except for the IC-7610

- 1. Hold down [EXIT/SET] for 1 second to select the set mode menu screen.
- Push [OTHERS](F-5) to enter the Others set mode.
- Push [▲](F-1) or [▼](F-2) to select "Shutdown Function."



- 4. Rotate the main dial to select "Standby/ Shutdown."
- 5. Push [EXIT/SET] twice to exit the Set mode.
- 6. Hold down [POWER] for 1 second.
- 7. Make sure that "Standby (for Remote Control)" is selected, and then push [POWER].



• The transceiver is set to the standby mode and the LED above [POWER] blinks orange.

Information:

While "Standby (for Remote Control)" is selected in step 7, and [POWER] is pushed on the Others set mode after setting the radio network, the transceiver will be turned OFF instead of being in the standby mode.

Follow the steps below to set the standby mode.

- 1. Push [POWER] to turn ON the transceiver.
- 2. Push [POWER] again.
- 3. When the screen in step 7 is displayed, make sure "Standby (for Remote Control)" is selected, and then push [POWER].
 - The transceiver is set in the standby mode, and the LED above [POWER] blinks orange.

• For the IC-7610

- 1. Push [MENU] to display the MENU screen.
- 2. Touch [SET] to enter the Set mode.
- 3. Touch [Network].
- 4. Touch "Power OFF Setting (for Remote Control)."
- 5. Touch "Standby/Shutdown."

NETWORK	2/3
Network Name	
Power OFF Setting (for Remote Control) 1/1 510	
Network (Shutdown only	
Power OF Standby/Shutdown	
Control Pc	
Serial Port	
Audio Port (UDP) (Valid after Restart) 50003	U

- 6. Push [MENU] to exit the Set mode.
- 7. Hold down [POWER] for 1 second.
- 8. Touch "Standby (for Remote Control)."



• The transceiver is set to the standby mode and the LED above [POWER] blinks orange.

Information:

After setting the radio network, the transceiver will be turned OFF instead of being in the standby mode.

Follow the steps below to set the standby mode.

- 1. Push [POWER] to turn ON the transceiver.
- 2. Push [POWER] again.
- 3. When the screen in step 7 is displayed, touch "Standby (for Remote Control)."
 - The transceiver is set in the standby mode, and the LED above [POWER] blinks orange.

Confirming Server Address or Network Name

When you configure the remote system, Remote stations can access the Server using its IP address, computer name, network name, or domain name.

◇ When configuring the remote control system through a LAN

If you configure the remote control system through a LAN, Remote stations can access the Server using its IP address.

The example below describes how to find out the Base station's IP address, to be requested by Remote stations.



For the IC-7851, IC-7850, and IC-7610 users:

The DHCP function is set to ON as default. We recommend that you assign the server using the network name. If you want to assign the server using an IP address, set the "DHCP" item OFF in the Others set mode.

To let Remote stations access the Server using its IP address

An IP address is a numerical label that is assigned to devices participating in a computer network. Check your radio's IP address to let Remote stations access the Server.

• Except for the IC-7610

- 1. Hold down [EXIT/SET] for 1 second to select the Set mode menu screen.
- Push [OTHERS](F-5) to enter the Others set mode.
- 3. Push [▲](F-1) or [▼](F-2) to select "IP Address."
- 4. Check the IP address that is displayed in the IP Address field. (Example: 192.168.0.10)

AGC			OTHERS	SET			
MID	Keyboard Type			English			
	Keyboard Repeat	Delay		250ms			
1/4	Keyboard Repeat	Rate		10.9cps			
1/4		ed		MID			
OFF	Check	eleration		ON			
		·····	<u></u>	A			
vsc	IP Address	(Valid after	Reboot)	192.168.	0.	10	
OFF	Subhet Wask	(vanu arter	Hebool)	200.200.2	55.	0 (24bit)	
		▲ ►	DEF				EXPAND

5. Push [EXIT/SET] twice to exit the Set mode.

• For the IC-7610

- 1. Push [MENU] to display the MENU screen.
- 2. Touch [SET] to enter the Set mode.
- 3. Touch [Network].
- 4. Touch [▲] or [▼] to display "IP Address."
- 5. Check the IP address that is displayed in the IP Address field. (Example: 192.168.0.10)

NETWORK	_ 1/3
Check OFF	
IP Address (Valid after Restart)	
192.168. 0. 10	
Subnet Mask (Valid after Restart)	Í
255.255.255. 0 (24bit)	
Default Gateway (Valid after Restart)	
192.168. 0. 1	
Primary DNS Server (Valid after Restart)	
2nd DNS Server (Valid after Restart)	
	5

6. Push [MENU] to exit the Set mode.

- Confirming Server Address or Network Name
- When configuring the remote control system through a LAN (continued)

To let Remote stations access the Server using its network name

A network name is an identification information assigned to each device participating in a computer network. Check your radio's network name to let Remote stations access the Server.

• This function is only for the IC-7851, IC-7850, and IC-7610 transceivers.

• Except for the IC-7610

- 1. Hold down [EXIT/SET] for 1 second to select the Set mode menu screen.
- 2. Push [OTHERS](F-5) to enter the Others set mode.
- Push [▲](F-1) or [▼](F-2) to select "Network Name."
- 4. Check the network name that is displayed in the Network Name field. (Example: IC-7851)



5. Push [EXIT/SET] twice to exit the Set mode.

• For the IC-7610

- 1. Push [MENU] to display the MENU screen.
- 2. Touch [SET] to enter the Set mode.
- 3. Touch [Network].
- 4. Touch [▲] or [▼] to display "Network Name."
- 5. Check the network name that is displayed in the Network Name field. (Example: IC-7610)

NETWORK	2/3
Network Name IC-7610	
Check trol (Valid after Restart)	
Power OFF Setting (for Remote Control)	
Standby/Shutdown	_
Control Port (UDP) (Valid after Restart)	
50001	
Serial Port (UDP) (Valid after Restart)	
50002	
Audio Port (UDP) (Valid after Restart)	
50003	ŋ

6. Push [MENU] to exit the Set mode.

Confirming Server Address or Network Name (Continued)

♦ When configuring the remote control system through the Internet

If you configure the remote control system through the Internet, Remote stations can access the Server using its public IP address. If you utilize a Dynamic DNS service, Remote stations can access the Server by not only its public IP address, but also by its domain name.

To let Remote stations access the Server using its public IP address

A public IP address is an address that is accessible over the global Internet. If you use a dynamic public IP address, it is chosen from a pool of available addresses and changes each time you connect to the Internet. Because of this, Remote stations will have to match the IP address each time to access the Server. If you use a dynamic public IP address, we recommend that you utilize the Dynamic DNS service to allow the Remote stations to access the Server using its domain name, or use a static public IP address. Ask the router's manufacturer about how to configure your router to set the public IP address.



- Confirming Server Address or Network Name
- ♦ When configuring the remote control system through the Internet (continued)

To let Remote stations access the Server by its domain name

If you set up an account for a Dynamic DNS server, you can configure your router to update the Dynamic DNS server with your dynamic IP address. Even if you don't have a static public IP address, you can allow Remote stations to access the Server through the Internet, using its domain name.

Ask the router's manufacturer about how to configure your router to use the Dynamic DNS services.



4 SETTINGS FOR A REMOTE STATION PC

Setting your PC's environment

Configure your PC's environment in the Base station's Remote Utility. The settings will take effect after rebooting the Remote Utility. When you first open the Remote Utility, the Settings screen appears. After configuring the settings, you can display other setting screens.

- 1. Click "Options."
- 2. Click "Settings."
- The "Settings" screen is displayed.
- 3. Configure the settings.
- 4. Click <OK> to save the settings.
 - The "Take effect after restarting the application" screen is displayed.
- Click <OK>. The settings will take effect after rebooting the Remote Utility.



PC Name

Enter a name for your PC of up to 16 characters. **DO NOT** use the same name for more than one PC on your network.

Port numbers

Enter the port numbers of the Control, Serial, and Audio port. You should use the default port numbers for these ports.

Internet Access Line

Select your internet access line type.

4 Language

Select the software display language. The selected language will be used as the Help file language.

NOTE:

If you configure the remote control system through the Internet, and change the port number of the Control, Serial or Audio port, you should configure the port forwarding settings and the IP filter settings on your router once again. (p. 12)

Server Registration

To connect to a radio through the network, Remote stations should first connect to a Server using the Remote Utility. Before connecting, register the Server information.

♦ To add a Server Procedure



NOTE:

When you add a server from the Setup Wizard screen:

- When connecting to the network throught a PC, click **Setup for a Remote PC (Connect through a Server PC)**. (Installtion guide A Step5.)
- When connecting to the network directly, click **Setup for a Remote PC (A radio with the Server function)**. (Installtion guide B Step4.)

① To display the Setup Wizard screen, click Setup Wizard on the top menu.

4 SETTINGS FOR A REMOTE STATION PC

Server registration

♦ To add a Server (Continued)

1 Open the Add a Server screen.

- 1. Click the <Server List> tab.
- 2. Click <Add>.



Add a Server Server Information Enter the Server Address or Network Name and Control port. Friter the Server Address or Network Name, and then cloic <Next>. Friter Control port of the Server is changed, enter the number. Server Address or Network Name BasePC Control Port (LCP) S0001 (Read Next>) Collick

About Server Address or Network name

When connecting to the network through a PC

- When configuring the remote control system through a LAN, enter IP address or computer name of the Base station's PC. (pp. 38 to 44)
- When configuring the remote control system through the Internet, enter domain name or public IP address of the Base station's PC. (pp. 43 to 44)

When connecting to the network directly

- When configuring the remote control system through a LAN, enter IP address of the radio or network name*. (pp. 54 to 55)
- When configuring the remote control system through the Internet, enter domain name or public IP address of the Base station. (pp. 56 to 57)
- * For only the IC-7851, IC-7850, and IC-7610.

2 Enter the Server Information.

- 1. Enter the Server Address or Network Name.
- 2. Confirm the Control port number.
 ① You should use the default port number for this port.
- 3. Click <Next>>.

Server registration

♦ To add a Server (Continued)

3 Enter the User ID and Password.

- 1. Enter the user ID and password that are registered in the server.
 - When connecting to the network through a PC, enter the user ID and password that are registered in the Base station's Remote Utility.
 - When connecting to the network directly, enter the user ID and password that are registered in the radio.
- 2. Click <Next>>.
 - After clicking <Next>>, connects to the Server.

Ent	erthe UserID kk <next>toco</next>	and Password that ar nnect to the Server.	re registered to the	Server.	
	User ID Password	USER 1		Enter	

NOTE:

If you cannot connect to the Server, the error screen is displayed.

he Server Connection faile	d		
The Server is not found. Cann	ot connect to the Serv	er.	
Click <back> and confirm the</back>	Server address or Netv	work name.	
Or click <next> to save the S</next>	erver.		

Add completed	
Adding the Server has completed. Enter the Server description. Click <printin>, if there is nothing to change. Server Description The following radius that are registered to the Server are added to the Radiu to correct to the radio, using the Radio List screen. - 1C-7300</printin>	o Liet
< Back	Finish (2)Cli

4

Adding the Server has completed.

- Enter the Server Description.
 The Server Address or Network Name is entered by default.
- 2. Click <Finish>.

Server registration (Continued)

♦ To change a server properties

- 1. Click the <Server List> tab.
- 2. Select a server.
- 3. Click < Properties>.
- 4. Change the settings, and then click <OK>.



Server Description	
-Network Settings	
Server Address or Network Name	Control Port (UDP)
BasePC	50001
User ID	Password
USER 1	*******
Disable the Server	

♦ To delete a server

- 1. Click the <Server List> tab.
- 2. Select a server.
- 3. Click <Remove>.

BasePC	Address BasePC (192.168.68. Control Port (UDP) 50001 User ID USER1	10)
	Internet Access Line FTTH	
	2Sel	ect

Connecting to the Server

\diamond Connecting to the Server

- 1. Click the <Server List> tab.
- 2. Select a server.
- 3. Click <Connect>.
 - "Connected" is displayed under the Server name when the connection has succeeded.
 - If the connection fails, and an error screen is displayed, solve the problem using the "6. TROUBLESHOOTING" section. (p. 77)



♦ Disconnecting from the Server

- 1. If you remotely control the radio, disconnect the radio in the Remote station's Remote Controller.
- 2. In the Remote station's Remote Utility, click the <Server List> tab.
- 3. Select the connecting server.
- 4. Click <Disconnect>.



Connection setting

When the connection to the Server has succeeded, the radios that are physically connected to the Server are displayed on the Radio List screen of the Remote station's Remote Utility.

Select a radio from the list, then connect it to the network using the Remote Utility.

You have to configure the network audio quality and devices to connect.

To control the radio, connect to the radio using the Control software.

NOTE:

If the connection setting is finished, you can simply connect to the radio by selecting it in the Radio List screen and then clicking <Connect>.

- 1. Click the <Radio List> tab.
- 2. Select a radio.
- 3. Click <Settings>.
 - ① Radios that are "<<Connected>>" or "Offline," the Connection Setting cannot be changed.



		Tennemiasian					
	IV AI	- mansmission		IV MOD Trai	SHISSION		1000
Sample Rates	16kH	z	-	8kHz			•
Codecs	LPCM	1 1ch 16bit	-	LPCM 1ch 16	bit		-
Prebuffer (ms)	ŀ		0	-]		— 1	00
	IV NO	etransmission Audio Data	8		Rec	ommend	Jeu
Device Settings	14 14	etransmission Audio Data				ommend	Jeu
Device Settings Virtual COM Port	Number	COM2				ommeni	Jeu
Device Settings Virtual COM Port	Number	COM2 Default Device				48kHz	Jeu
Device Settings Virtual COM Port	Number Speaker Mic	COM2 Default Device Default Device			•	48kHz 48kHz	-

Connection Setting (Continued)

♦ Network audio quality setting

Radio List > <Settings>

- 1. Click <Recommended>.
 - The Select Network screen appears.
- 2. Select the connection to a radio either through a LAN, or the Internet.
- 3. Click <Next>.
 - The recommended values for your network are displayed.
- 4. Click <Yes> to automatically set the displayed values in each field of the Network Setting, then close the Select Network screen.

NOTE: To use the IF signal for receiving, set "Sample Rates" to 48 kHz.



♦ Device setting

Radio List > <Settings>

- 1. Select a COM port number in the Virtual COM Port Number menu.
 - The selected COM port number is used for CI-V operation with the radio.
 - When you connect to the radio with a control software, you have to set the COM port number.
- 2. Select an audio device in the **Speaker** menu to which your speaker is connected, to output the received audio from the network.
- 3. Select an audio device in the **Mic** menu to which your microphone is connected, to transmit the input audio to the network.



Connecting to a radio

If the connection setting is finished, you can simply connect to the radio by selecting it in the Radio List screen and then clicking <Connect>.

♦ Connecting to a radio

- 1. Click the <Radio List> tab.
- 2. Select a radio.
- 3. Click <Connect>.
- 4. Click <OK>.
 - "<<Connected>>" is displayed under the radio name when the connection has succeeded.
 - If the connection fails, and an error screen is displayed, solve the problem using the "6. TROUBLESHOOTING" section. (p. 77)





♦ Disconnecting from a radio

- 1. In the Remote station's Remote Utility, open the Radio List screen.
- 2. Select a radio with "<<Connected>>" under its name.
- 3. Click <Disconnect>.
 - "Do you want to disconnect the radio?" is displayed.
- 4. Click <Yes> to disconnect the radio.

NOTE:

- Be sure to disconnect when not using the radio. Otherwise, other Remote stations cannot connect to it.
- The Server or administrator Remote stations can terminate a connection between another Remote station and a radio. If "<<Connected>>" disappears while connecting to a radio, the Server or authorized Remote station may terminate the connection.



Do you want to disconnect the radio

Yes 4 Click

Audio adjustment using the Remote Utility

While connected to a radio, you can adjust the received and transmit audio volume through the network using the Remote station's Remote Utility.

The description in this section is based on the assumption that the connection to the radio has succeeded ("<<Connected>>" is displayed under the radio name).

Received audio volume adjustment

- In the Remote station's Remote Utility, open the Radio List screen.
- Select a radio with "<<Connected>>" under its name.
- 3. Click <AF>.
- 4. Slide the adjustment bar on the Volume field up or down to adjust the received audio volume level.
 - ① Click <Mute> to mute the audio, and click once again to hear the audio.
- 5. Click <Close> to close the screen.

NOTE:

- The AF adjustment bar on the Volume field moves together with the [AF] control of the Remote Controller. However, if you use another control software, the audio volume level on the network can only be adjusted with the Remote Utility.
- You cannot adjust the received audio volume level of the radio's speaker, with the Remote Utility. Use the [AF] control on the radio to adjust it.



Audio adjustment using the Remote Utility (Continued)

♦ Transmit audio volume adjustment

- 1. In the Remote station's Remote Utility, open the Radio List screen.
- 2. Select a radio with "<<Connected>>" under its name.
- 3. Click <MOD>.
- 4. Select "Mic" on the **MOD Select** field.
- 5. Slide the adjustment bar on the Volume field up or down to adjust the transmit audio volume level.
- 6. Click <Close> to close the screen.

NOTE:

You cannot adjust the modulation input level of the radio with the Remote Utility. Adjust the modulation input level of the radio in the radio's Set mode, or using the Remote Controller. (p. 74)



Recording and playback functions

While connected to a radio, you can record the received audio and save it into the PC's hard disk using the Remote station's Remote Utility.

Also, you can transmit an audio file to the radio using the Remote Utility.

The description in this section is based on the assumption that the connection to the radio has succeeded ("<<Connected>>" is displayed under the radio name).

♦ Recording received audio

- 1. In the Remote station's Remote Utility, open the Radio List screen.
- Select a radio with "<<Connected>>" under its name.
- 3. Click <AF>.
- 4. Click < > to start recording.
 ① While recording, click < > to pause.
- 5. Click $< \blacksquare >$ to stop recording.

NOTE:

- When you click <Open Folder>, the folder in which the recording file is stored will be displayed.
- If you want to change the recording folder, click the < ____ > button, then select a folder in the Browse For Folder screen.
- Adjust the sample rate frequency and codec to record the audio according to the recording purpose. When you record the audio received from the network, we recommend that you set the same sample rate frequency and codec that are programmed in the Connection Setting screen.



Recording folder name

Folder browse button

Recording and playback functions (Continued)

Playing back/transmitting an audio file

- 1. In the Remote station's Remote Utility, open the Radio List screen.
- Select a radio with "<<Connected>>" under its name.
- 3. Click <MOD>.
- 4. Select "File" on the **MOD Select** field.
- Click <Open> to select an audio file* to play or transmit.
 - * Only uncompressed, linear, PCM WAV files are supported.
- 6. Click < ▶ > to start playing/transmitting.
 ① While playing/transmitting, click < Ⅲ > to pause.
- 7. Click < < >> to stop playing/transmitting.

NOTE:

You can also use the Remote Controller's Voice Memory function to play back or transmit an audio file.

See the Remote Controller's help file for details. To display the help file, click "Contents" in the Help menu on the Remote Controller, or push the [F1] key on your PC's keyboard.



5 REMOTE CONTROLLER'S BASIC OPERATION

■ Connecting to a radio with the Remote Controller

This section describes how to connect to a radio and remotely control it using the Remote Controller.

- There are two ways to connect to the radio with the Remote Controller:
- 1. Connecting to the radio through a network using the Remote Utility (p. 72)
- 2. Directly connecting to the radio that is physically connected to your PC, instead of using the Remote Utility (p. 73)
- When using the Network function of the radio (IC-7610, IC-7700 with firmware version 2.00 or later, IC-7800 with firmware version 3.00 or later, IC-7850, or IC-7851), connect to the radio through the network.

Connects to the radio (pp. 72, 73)	
About the Remote mode (p. 74)	
Displays the Connec	ct Setting screen (pp. 72, 73)
RS BA1 Rem te Control	
Eile View Option Help	
Connect Remote Connect Set Mode Exit	
TRANCAUT	FILTER
TRANSMIT Image: Constraint of the second secon	FILTER TWIN-PBT PBT-CLR NOTCH 1-22 NOTCH NOTCH1 NOTCH2 APF
NB RF POWER CW PITCH MEMORY GENE NR A MP-W MP-R GENE	DIGI-SEL
TBW AF-#-SQL ST ST AF-#-SQL AF-#	\bigcirc

To use transmit audio input from the PC (p. 74)

NOTE:

See the RS-BA1 Remote Controller's help file for remote operation details, such as how to change the frequency, or turn ON each function.

To display the help file, click "Contents" in the Help menu on the Remote Controller, or push the [F1] key on your PC's keyboard.

Connecting to a radio with the Remote Controller (Continued)

♦ Connecting to a radio through a network

To connect to a radio through a network using the Remote Controller, first you have to access the radio using the Remote Utility.

To connect the radio using the Remote Utility, see page 36 when you are operating as the Server, or see page 66 when you are operating as a Remote station.

- 1. Double-click the "RS-BA1 Remote Control" icon on your desktop to open the Remote Controller.
- 2. Click the icon in the toolbar as shown to the right, or click "Connect Setting ... " in the [Option] menu, to display the Connect Setting screen.



- · The Connect Setting cannot be set while the radio is connected.
- 3. Select a radio that you want to control in the Model menu.
 - The items that cannot be used in the selected model will be grayed out.
- 4. Select how to connect to the transceiver between REMOTE, REMOTE/RS-232C, RS-232C, LAN, and USB.
 - · The selectable device differs, depending on the transceiver.
 - · When the "MOD Select has also been changed." dialog is displayed, click <OK>.
 - The confirmation dialog for the connection setting may be displayed, depending on the transceiver. If connected correctly, click <OK>.
- 5. Select a radio that you are accessing with the Remote Utility, in the **Remote Utility** menu.
 - The CI-V settings are automatically loaded from the Remote Utility to the CI-V field. The settings include the virtual COM Port number, the radio's CI-V address and baud rate and the virtual audio device for the Voice Memory function.
 - ① If the desired radio is not displayed in the **Remote** Utility menu, click <Search> to load the radios' information from the Remote Utility.
- 6. Click the Software closing turns OFF the Radio, box to make a check mark to turn OFF the radio when the Remote Controller is closed by clicking < < > or [Exit] on the File menu.
 - · Only for transceivers that can be turned ON or OFF with the CI-V Power ON/OFF command.
 - When the PC is shut down while the Remote Controller is still running, the transceiver's power may not be turned OFF.
- 7. Click <OK> to save the settings, and close the Connect Setting screen.

8. Click the icon in the toolbar as shown to the right, or click "Connect ON" in the [File] menu, to connect to the radio.



- When the connection has succeeded, the radio's current data will be displayed on the main panel.
- · If the connection fails, and an error screen is displayed, solve the problem using the "6. TROUBLESHOOTING" section. (p. 77)
- To disconnect from the radio, click the icon as shown to the right, or click "Connect OFF" in the [File] menu.



- The radio will be turned OFF if it can be turned ON or OFF with the CI-V Power ON/OFF command.

		C	onnect Setting		×)	
		Model					
		[IC-7850/7851 (Ver1.10 -)					
		Connection					
		LAN 2 Select					
		ſ	Remote Utility				
		Select					
					Search		
		Г	CI-V				
			COM Port	Baud rate	e(bps)		
				19200	_		
			CI-V address (Badio)	CI-V add (RS-BA1	lress		
			8E	E1	· •		
				1			
		Г	Audio Device (Voice	Memory)-			
			ICOM_VAUDIO-1 (Icom Virtua	I Aud 🔻		
			,				
		Г	IC-PW1 is connect	ed.			
		Г	Controlled by older	commands			
4 Cli	i ck	(Software closing tu	urns OFF th	e Radio.		
_				(ок	G Click	
	If v		l Linsort a chock n	nork tho	radio powo	r	
	l turi	turns OFF when closing the software. See the Help file for the Remote Control					
	Se						
	sof	ftware for more details.					

Connecting to a radio with the Remote Controller (Continued)

♦ Directly connecting to a radio

If a radio is physically connected to your PC, you can directly access the radio using the Remote Controller, instead of using the Remote Utility.

- When you are operating a radio on the remote control system with the Remote Controller, without having used the Remote Utility to connect, let other users know that the radio is being used.
- 1. Double-click the "RS-BA1 Remote Control" icon on your desktop to open the Remote Controller.
- Click the icon in the toolbar as shown to the right, or click "Connect Setting..." in [Option] menu, to display the Connect Setting screen.



- 3. Select a radio that you want to control in the **Model** menu.
 - The items that cannot be used in the selected model will be grayed out.
- 4. Select how to directly connect to the radio in the **Connection** menu.
 - When the "MOD Select has also been changed." dialog is displayed, click <OK>.
 - The confirmation dialog for the connection setting may be displayed, depending on the transceiver. If connected correctly, click <OK>.
- 5. Select "Not Use" in the Remote Utility menu.
- 6. Select the COM port number to which the radio is connected, in the **COM Port** menu.
- Enter the radio's CI-V address in the CI-V address (Radio) field, and select the radio's baud rate in the Baud rate (bps) menu. If the radio's baud rate is set to "Auto," select "19200" in the Baud Rate (bps) menu. If you are using the Spectrum Scope function

with the IC-7851, IC-7850, IC-7610, or IC-7300 using a USB for the connection, select "115200" in the **Baud Rate** menu.

- See page 21 for details of radio's presetting.
- To check or change the radio's CI-V address and baud rate settings, see the instruction manual that comes with the radio.
- Click the Software closing turns OFF the Radio. box to make a check mark to turn OFF the radio when the Remote Controller is closed by clicking <
 or [Exit] on the File menu.
 - Only for transceivers that can be turned ON or OFF with the CI-V Power ON/OFF command.
 - When the PC is shut down while the Remote Controller is still running, the transceiver's power may not be turned OFF.

 Click <OK> to save the settings, and close the Connect Setting screen.



- 10. Click the icon in the toolbar as shown to the right, or click "Connect ON" in the [File] menu, and connect to the radio.
 - When the connection has succeeded, the radio's current data will be displayed on the main panel.
 - If the connection fails, and an error screen is displayed, solve the problem using the "6. TROUBLESHOOTING" section.(p. 77)
 - To disconnect from the radio, click the icon as shown to the right, or click "Connect OFF" in the [File] menu.



- The radio will be turned OFF if it can be turned ON or OFF with the CI-V Power ON/OFF command.

ſ	Connect Setting			
	Model			
	IC-7100 (Ver1.10 -)	τ		
	Connection			
		τ		
	Remote Utility			
	Not Use 3 Selec	t		
	Search			
	CI-V			
	COM Port Baud rate(bps)			
	1 • 19200 • 4 Ente	er		
	CI-V address CI-V address			
	(Radio) (RS-BA1)			
	Audio Device (Voice Memory) Realtek Digital Output (Realtek 💌			
	□ IC-PW1 is connected.			
	Controlled by older commands.			
ick	Software closing turns OEE the Badio			
		ick		
lf y	ou insert a check mark, the radio power			
turr	ns OFF when closing the software.			
See	e the Help file for the Remote Control			
sof	ftware for more details.			

Connecting to a radio with the Remote Controller (Continued)

♦ To use transmit audio input from the PC

In order to use the transmit audio input from the PC when remotely controlling the radio using the Remote Controller, configure the following settings, according to the connection between the radio and the Base PC.

If you operate in the Remote station side, confirm the radio's connector that is connected to the Base PC.

- 1. Connect to a radio with the Remote Controller. (pp. 72, 73)
- 2. Click [MIC SET] to open the MIC SET screen.
- Select an appropriate connector in the MOD Select (Remote ON) menu, to input transmit audio from the PC to the radio. The options differ, depending on the radio selected in the Model menu in the Connect Setting screen.
 - Right click <MOD LEVEL> to rotate clockwise, or left click it to rotate counterclockwise, to adjust the input level from the connector.
- 4. Click < ____> to close the screen.



♦ About the Remote mode

When connected to the radio, the Remote Controller automatically turns ON the Remote mode. While the Remote mode is ON, the Remote Controller transmits CI-V commands not only to check the radio's current state, but also to remotely control it. When you want the Remote Controller to only check the radio's current state, or when you want to inhibit the Remote Controller from transmitting CI-V commands, while you manually operate the radio, turn OFF the Remote mode.

To turn OFF the Remote mode

Click the right icon on the toolbar, or click "Remote OFF" in the [File] menu.

To turn ON the Remote mode

Click the right icon on the toolbar, or click "Remote ON" in the [File] menu.



Information

You can select the desired connector(s) for transmit audio input when the Remote mode is OFF.

• See the Remote Controller's help file for "Remote Setting" details.

NOTE: DO NOT allow the PC to go into the sleep or standby mode while using the RS-BA1. Otherwise, it might not work properly after the PC resumes normal activity.

■ To exit the Remote Controller

Follow the steps below to close and exit the remote control operation.

- Disconnect the radio by clicking < > in the Remote Controller.
- 2. Close the Remote Controller.
- 3. Disconnect the radio connected to the Remote Utility on the Remote Station.
- 4. Close the Remote Station on the Remote Utility.
- 5. If you are connecting the radio through the PC, close the Remote Utility on the Base Station.
- 6. Turn OFF the Radio and the PC.
 - If you are using a radio that can be turned ON or OFF with the CI-V Power ON/OFF command, the radio is turned OFF when the radio is disconnected using the Remote Controller.

Operating guide

The following windows are displayed by 'right-clicking' on each button on the Remote Controller. • The windows that are displayed by 'left-clicking,' the buttons are marked in white (Example: MIC SET).



Operating guide (Continued)



- 2 This setting window is displayed when the Tone function is used.
- The setting window differs, depending on the used Tone function.
- ③ This setting window is displayed when the Duplex operation is used.

NOTE:

- There are items you cannot set, depending on the connected radio.
- RS-BA1 is for the single band operation.
- Knobs can be changed to sliders on the Set Mode screen for the volume, squelch settings and so on.

TROUBLESHOOTING

The following descriptions are possible causes and solutions for the problem you are experiencing. If you cannot solve the problem after trying these solutions, please contact your nearest Icom Dealer or Service Center.

Problem: Cannot access a Server from a Remote station with the Remote Utility

(1) You can configure the Server information in the Server Propreties screen (Server List screen \rightarrow <Properties>).

O "Connection Failed" is displayed under the Server name



An incorrect IP address, domain name, computer name* or network name is entered to request a connection to the Server.

"Connection Failed"

① If the Remote Utility cannot get the Base station's IP address using the domain

Possible cause 1

- name, computer name or network name that you entered, "Cannot resolve the name" is displayed next to the name. Solution
- (1) Check the Base station's IP address, domain name, computer name*, or network name. (pp. 38 to 44, pp. 54 to 57)
- (2) Enter the Base station's correct IP address, domain name, computer name*, or network name in the Server Address or Network Name field in the Server Properties screen.

*Only When connecting to the network through a PC

Remote Utility
Connection failed.
ОК

Possible cause 2

The control port number is different than that of the Base station.

Solution

① Check the Base station's control port number*. (p. 23)

② Enter the correct port number in the Control Port (UDP) field in the Sever Properties screen.

The default number is "50001."

The connection error message

Possible cause 3

The virtual driver is not installed in the Remote station's PC.

Solution

Install the virtual driver in the Remote station's PC. (See the RS-BA1 Preparations for details.)

O "Logon Failed" is displayed under the Server name

° _•9••			
IC-7851	Possible cause The user ID or password is different than that in the Base station's Remote Utility.		
Logon Failed	Solution ① Check the Remote station information registered in the Remote Utility. (p. 30)		
"Logon Failed"	2) Enter the correct user ID and password into the User ID and Password fields in the Sever Properties screen.		
O "Disabled	is displayed under the Server name		
IC-7851	Possible cause The Server is set to "Disable," to inhibit connecting to it.		
Disabled	Solution Enable the Server by removing a check mark from the Disable box in the Sever		
"Disabled"	Properties screen.		

NOTE: If you could not solve the problem after trying the above solutions, check the following on the Base station side. When connecting to the network through a PC: When connecting to the network directly:

- Is the Remote Utility activated?
- · Is the Remote Utility added as an exception in the Firewall? (pp. 1 to 5)
- · Is the radio turned ON?
- · Is the "Network Control" item set to "ON" in the Others set mode? (p. 47)
- · Is your Remote station information registered in the Remote Utility's User List screen? (p. 30)
- · Is your Remote station information registered in the Others set mode? (p. 49)

Problem: Cannot access a radio with the Remote Utility

The description in this part is based on the assumption that the connection to the Server has succeeded. ("Connected" is displayed under the Server name.)

O "Busy" is displayed under the radio name

IC-7300
Busy
Base PC (192.168.68.10)
"Busy"

Possible cause

Another user is currently operating the radio. **Solution**

Wait for "Busy" to disappear.

① If you are operating as the Base station, or as an administrator Remote station, you can terminate a connection between another Remote station and a radio. (p. 34)

O "Connect Error" is displayed under the radio name



Possible cause 1

Access to the selected radio is inhibited by the Server.

Solution

Allow the Remote station to access the radio with the Base station's Remote Utility. (p. 66)

Possible cause 2

The serial port number (default: 50002) or the audio port number (default: 50003) is not connected.

Solution

Check the Firewall settings for both the Base station and Remote station.

When using the internet, also check the router's port forwarding settings. (p. 12)

Remote Utility	
User ID or password is incorrect.	
ОК	



Remote Utility
Virtual audio device error.
ОК

Problem: Cannot access a radio with the Remote Utility (Continued)

The description in this part is based on the assumption that the connection to the Server has succeeded. ("Connected" is displayed under the Server name.)

O "COM/Audio Error" is displayed under the radio name

The following messages are displayed for all possible causes described below.

IC-7300	Remote Utility	Remote Utility
COM/Audio Error	IC-9100 COM port is invalid.	IC-9100 Invalid input audio device.
'COM/Audio Error"	ОК	ОК

Possible cause 1

An audio device or COM port has been added to the PC, or removed from the PC. For the USB device, the USB port number has been changed.

Solution

The COM port number or the audio device name may have been changed. Reregister the radio in the Registered Radio List screen. (p. 24)

Possible cause 2

The audio or serial wiring is disconnected.

Solution

If you are using the USB serial conversion cable or a USB audio, make sure the USB cable is firmly connected. Make sure the 3.5 (d) mm (1/8") audio cable is firmly connected.

Possible cause 3

Other applications are using the COM port.

Solution

If other applications are running at the same time, close them.

Possible cause 4

Started the Remote Utility right after the PC has booted.

Solution

Wait for a while after the PC has booted, and then start the Remote Utility.

NOTE: If you could not solve the problem after trying the above solutions, check the following on the Base station side.

When connecting to the network through a PC:

Is the radio turned ON?

- Are the correct COM port number and audio device to which the radio is connected selected in the Radio Properties screen (Option → Local/Server Settings → Registered Radio List screen → <Properties>)?
- Is the Server not directly accessing the radio using the Remote Controller, without having used the Remote Utility to connect to the radio?

When connecting to the network directly:

- Is the radio turned ON?
- Is the radio in the remote standby mode?

Problem: Cannot access a radio with the Remote Controller



${\rm O}$ When connecting to the radio through the network using the Remote Utility

Possible cause 1

Connecting to the radio is unsuccessful using the Remote Utility.

Solution

Try again to connect to the radio in the Radio List screen. (pp. 36, 66)

• "<<Connected>>" is displayed under the radio name when the connection is successful.

Possible cause 2

In the **CI-V** field of the Remote Controller's Connect Setting screen, the CI-V settings are different than that in the Remote Utility.

Solution

In the Connect Setting screen, click <Search>, and then select the correct radio in the **Remote Utility** menu. • The CI-V settings are automatically loaded from the Remote Utility.

Possible cause 3

Other applications are using the COM port.

Solution

If other applications are running at the same time, close them.

NOTE:

If you could not solve the problem after trying the above solutions, check the following on the Base station side.

When connecting to the network through a PC

- Are the same CI-V address and baud rate that are programmed into the radio set in the Radio Properties screen (Option → Local/Server Settings → Registered Radio List screen → <Properties>)?
- When connecting to the network directly

- Is the radio turned ON?
- Is the radio in the remote standby mode?

O When directly accessing the radio without using the Remote Utility

Possible cause 1

An incorrect COM port number is selected in the Remote Controller's Connect Setting screen.

Solution

- ① Check the COM port to which the radio is connected, on your PC's Device Manager.
- ② Select the correct COM port number in the **COM Port** menu in the Remote Controller's Connect Setting screen.

Possible cause 2

The CI-V address or baud rate is different than that are programmed into the radio.

Solution

① Check the radio's CI-V address and baud rate.

See the radio's instruction manual to confirm them.

② Enter the radio's correct CI-V address in the CI-V address (Radio) field, and select the radio's correct baud rate in the Baud rate (bps) menu, in the Remote Controller's Connect Setting screen. If the radio's baud rate is set to "Auto," select "19200" in the Baud rate (bps) menu.

If you are using the Spectrum Scope function with the IC-7851, IC-7850, IC-7610, or IC-7300 using a USB for the connection, select "115200" in the **Baud Rate** menu.

Possible cause 3

Other applications are using the COM port.

Solution

If other applications are running at the same time, close them.
Problem: Cannot properly control the radio with the Remote Controller

Possible cause 1

The same CI-V address is being used by a control software other than the Remote Controller.

Solution

Select an address other than "E0" in the **CI-V Address (RS-BA1)** menu in the Remote Controller's Connect Setting screen. However, this solution does not always solve the problem.

Possible cause 2

In the Remote Controller's Connect Setting screen, a different model name is selected for the radio that you attempt to control.

Solution

Select the proper model name in the **Model** menu in the Connect Setting screen.

NOTE:

If you could not solve the problem after trying the solutions described on the previous page and above, check the following on the Base station side.

· Is there any radio that has the same CI-V address in the system?

Problem: The received audio cannot be heard

The description in this part is based on the assumption that the connection to the radio has succeeded. ("<<Connected>>" is displayed under the radio name.)

Possible cause 1

The speaker is not turned ON, or the volume level is too low.

Solution

Turn ON the speaker, or adjust the volume level.

Possible cause 2

An earphone or other device is connected to the computer in place of the speaker.

Solution

Disconnect the device.

Possible cause 3

The appropriate audio device is not selected in the Remote Utility.

Solution

Select the appropriate audio device in the **Speaker** menu in the Connection Setting screen. (Radio List screen \rightarrow <Settings>) (pp. 36, 65)

① If you connect a new USB audio device to your PC, the audio device which is selected as a default device in your PC can be changed. If you select "Default Device" in the **Speaker** menu, please keep that in mind.

Possible cause 4

The volume level of the audio device is set to too low on your PC.

Solution

Adjust the volume level of the audio device. (pp. 6 to 11)

The PC has the Volume Mixer function that can adjust each application's audio level. Please check that the Remote Utility or the control software is not muted, or set to an appropriate volume level.

Possible cause 5

Audio output is disabled in the Remote Utility.

Solution

Insert a check mark in the **AF Transmission** box in the Connection Setting screen. (Radio List screen \rightarrow <Settings>)

Possible cause 6

The volume level is too low, or the mute is turned ON in the Remote Utility.

Solution

Adjust the volume level in the Received Audio Adjustment screen. (Radio List screen \rightarrow <AF>) (p. 69)

NOTE:

If you could not solve the problem after trying the solutions described on the previous page, check the following on the Base station side.

When connecting to the network through a PC

• Is the volume level of the audio device to which the radio is connected set to an appropriate level?

When connecting to the network directly

• Is the "Network AF" items set to an appropriate level in the Others set mode?

Problem: The transmit audio cannot be output

- The description in this part is based on the assumption that the connection to the radio has succeeded.
- ("<<Connected>>" is displayed under the radio name).
- To check the Remote station's transmit IF signals, use the Transmit Monitor function with the Base station's Remote Utility, or place a receiver near the Remote station's or Base station's PC.

Possible cause 1

The microphone is not turned ON, or the input level is too low.

Solution

Turn the microphone ON and adjust the input level.

Possible cause 2

The appropriate audio device is not selected in the Remote Utility.

Solution

Select the appropriate audio device in the Mic menu in the Connection Setting screen.

(Radio List screen → <Settings>) (pp. 36, 65)

If you connect a new USB audio device to your PC, the audio device which is selected as a default device in your PC can be changed. If you select "Default Device" in the **Mic** menu, please keep that in mind.

Possible cause 3

The input level of the audio device is set to too low on your PC.

Solution

Adjust the input level of the audio device. (pp. 6 to 11)

Possible cause 4

Audio input is disabled in the Remote Utility.

Solution

Insert a check mark in the **MOD Transmission** box in the Connection Setting screen. (Radio List screen \rightarrow <Settings>)

Possible cause 5 The input level is too low in the Remote Utility.

Solution

Adjust the input level in the Transmit Audio Adjustment screen.

(Radio List screen → <MOD>) (p. 67)

Possible cause 6

An incorrect connector is selected in the Remote Controller.

Solution

Select the proper radio's connector which is connected to the Base station's PC, in the **MOD Select** (Remote ON) menu in the Remote Controller's MIC SET screen. (p. 74)

NOTE:

If you could not solve the problem after trying the above solutions, check the following on the Base station side. When connecting to the network through a PC

• Is the input level of the audio device to which the radio is connected set to an appropriate level?

When connecting to the network directly

• Is the "Network MOD" items set to an appropriate level in the Others set mode?

Problem: The received audio is interrupted

Possible cause 1

The network data transfer is excessive.

Solution

Select a lower sampling rate value in the **Sample Rates** menu, or a different codec in the **Codecs** menu, in the Connect Settings screen. (Radio List screen \rightarrow <Settings>)

First, select the lowest value. If the received audio is not interrupted with the setting, try a higher value, and adjust to an appropriate value.

Possible cause 2

The capacity of the prebuffer is not enough.

Solution

Select a longer value in the **Prebuffer (ms)** field in the Connection Setting screen.

(Radio List screen \rightarrow <Settings>)

Select as short a value as possible, because longer prebuffers can cause a delay, and make it difficult to adjust the audio level.

Possible cause 3

Your PC is overloaded.

Solution 1

Shutdown other applications, if running.

Solution 2

Reduce the number of radios you are accessing with the Remote Utility.

NOTE:

- If you are accessing the radio through a network, removing a check mark from the Retransmission box in the Connection Setting screen (Radio List screen → <Settings>) can solve the problem.
- You can check the simplified packet round trip time, and the average packet loss in the Remote Utility's Server List screen.

BasePC				
Connected	Address Control Port (UDP) User ID	BasePC (192.168.68.10) 50001 USER1		
	Internet Access Line	FTTH Round-trip 5msec Packet	Loss 0%	
	F	Packet round trip time	 Average pack	et loss

Problem: The connect settings cannot be changed

IC-7851abc Offline	Possible cause 1 The radio is "Offline."
	Solution Click <connect> on the Server List screen to connect to the server.</connect>
"Offline"	
IC-7300 << Connected >>	Possible cause 2 "< <connected>>" is displayed.</connected>
	Solution Click <disconnect> on the Server List screen to disconnect from the radio.</disconnect>
< <connected>></connected>	>"

Problem: The connect settings cannot be changed using the Remote Controller

Possible cause 1

The Remote Controller is connected to the radio.

Solution

Click $< \bigcirc >$ to disconnect from the radio.

Count on us!