

iCOM

INSTRUCTION MANUAL

COMMUNICATIONS RECEIVER
IC-PCR1500



Icom Inc.

FOREWORD

Thank you for purchasing this Icom radio. The IC-PCR1500 COMMUNICATIONS RECEIVER is designed and built with Icom's state of the art technology and craftsmanship. With proper care, this product should provide you with years of trouble-free operation.

◇ FEATURES

- *Wide frequency coverage with all mode receive*
- *Real-time bandscope function*
- *IF shift function*
- *ANF and NR functions are available*
(Only when the DSP unit is installed.)

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IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before using the receiver.

SAVE THIS INSTRUCTION MANUAL— This instruction manual contains important operating instructions for the IC-PCR1500.

EXPLICIT DEFINITIONS

WORD	DEFINITION
⚠ WARNING!	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	Recommended for optimum use. No risk of personal injury, fire or electric shock.

MOUSE PROPERTY SETTING

Depending on the 'Mouse Property' setting in the control panel, main and sub mouse button functions are swapped.

▨ In this instruction manual, the operation is described with the default setting.

SYSTEM REQUIREMENTS

PC

- Microsoft® Windows® XP/2000/Me/98SE installed
- USB 2.0 or 1.1
- Intel Pentium® III 450 MHz or faster (Pentium® 4 recommended)
- At least 128 MB of memory or higher (256 MB or more recommended)
- At least 50 MB or higher hard disk space
- At least 1024 × 768 pixel resolution, high color display

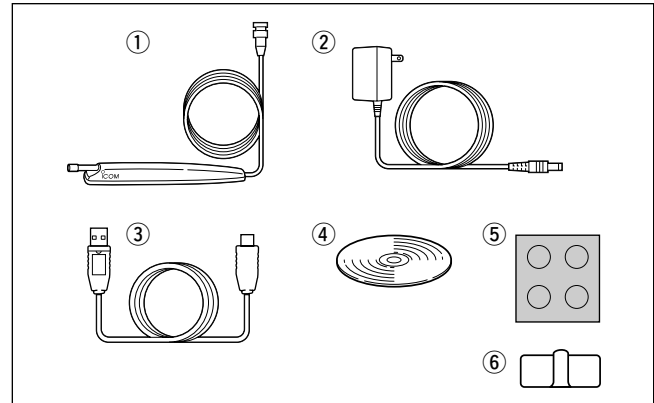
- CD-ROM or DVD drive is required for software installation.
- Mouse or other compatible pointing device is required.
- USB audio dropouts or gaps may occur, because of a lack of PC power.
- Additional hard disk space is required for;
 - Recording sound (at high quality): max 300 MB (approx.)
 - Storing scope data
 - Frequency mode : max 5 MB (approx.)
 - Time mode : max 1.5 MB (approx.)
 - Memory channel data : max 500 kB (approx.)

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SUPPLIED ACCESSORIES



① Antenna	1
② AC adapter*	1
③ USB cable	1
④ CD	1
⑤ Foot pad sheet.....	1
⑥ Cable hanger	1

*Not supplied with some versions.

PRECAUTIONS

⚠ WARNING! NEVER connect the OPC-254L to an AC outlet. This may pose a fire hazard or result in an electric shock.

NEVER expose the receiver to rain, snow or any liquids. The receiver may be damaged.

NEVER operate or touch the receiver with wet hands. This may result in an electric shock or damage the receiver.

AVOID using or placing the receiver in direct sunlight or in areas with temperatures below 0°C (+32°F) or above +60°C (+140°F).

AVOID the use of chemical agents such as benzine or alcohol when cleaning, as they can damage the receiver's surfaces.

DO NOT use the supplied CD for any other devices. The CD is for the IC-PCR1500 only.

DO NOT turn the IC-PCR1500 main unit OFF or disconnect the AC adapter while IC-PCR1500 program is running. This may result in the computer hang up.

DO NOT disconnect the USB cable while the IC-PCR1500 main unit or IC-PCR1500 program is running. This may result in the computer hang up.

DO NOT start vehicle engine while the IC-PCR1500 program is running when optional CP-12L is connected to a cigarette lighter socket. This may result in the computer hang up.

For DC power operation

(while connecting an OPC-254L or CP-12L)

NEVER connect the receiver to a power source of more than 13.9 V DC. This will damage the receiver.

NEVER connect the receiver to a power source using reverse polarity. This will damage the receiver.

NEVER cut the DC power cable between the DC plug and fuse holder. If an incorrect connection is made after cutting, the receiver may be damaged.

If a connection cable is disconnected or has a loose connection during operation, an error may occur. Connect the connectors correctly, and **DO NOT** touch the connectors during operation.

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

This device may cause signal interference when used in a domestic setting. When interference occurs, move this unit as far as possible away from the affected device.

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Unauthorized reproduction or transmission of this manual, or any part thereof, is prohibited.

The content of this manual, the hardware and software associated with the IC-PCR1500, and the appearance of the IC-PCR1500 are all subject to change without notice.

For U.S.A. only

CAUTION: Changes or modifications to this device, not expressly approved by Icom Inc., could void your authority to operate this device under FCC regulations.

TABLE OF CONTENTS

FOREWORD	i	■ Receiving	43
IMPORTANT	i	■ Setting a frequency	44
EXPLICIT DEFINITIONS	i	■ Setting a tuning step	45
MOUSE PROPERTY SETTING	i	■ Squelch level setting	47
SYSTEM REQUIREMENTS	ii	■ Receive mode selection	48
SUPPLIED ACCESSORIES	ii	■ Automatic mode selection	49
PRECAUTIONS	iii	■ Monitor function	50
TABLE OF CONTENTS	iv	■ Mute function	50
1 INSTALLATION	1–3	6 OTHER FUNCTIONS	51–57
■ Hardware installation	1	■ Duplex operation	51
■ TNC connection	2	■ IF filter selection	52
■ DC power supply connection	2	■ Attenuator function	53
■ Accessory attachments	3	■ AFC function	53
2 DRIVER INSTALLATION	4–24	■ NB function	54
■ Microsoft® Windows® XP	4	■ AGC function	54
■ Microsoft® Windows® 2000	9	■ VSC function	55
■ Microsoft® Windows® 98SE	15	■ IF shift function	55
■ Microsoft® Windows® Me	20	■ Weather channel operation (USA and CANADA versions only)	56
3 APPLICATION INSTALLATION	25–28	■ Squelch delay setting	57
■ Installation	25	7 MEMORY CHANNELS	58–67
■ Launching the IC-PCR1500	26	■ General	58
■ Uninstall	27	■ Memory channel selection	58
4 PANEL DESCRIPTION	29–40	■ Memory channel programming	60
■ Application screens (on PC screen)	29	■ Editing the memory list	61
■ Main unit	40	■ Memory channel clearing	65
5 BASIC OPERATION	41–50	■ Saving memory channel data	66
■ Starting the IC-PCR1500	41	■ Opening memory channel data	66
■ Changing the screen	41	■ Creating new memory channel data file	66
■ Closing the IC-PCR1500	42		
■ Quitting the IC-PCR1500	42		

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

TABLE OF CONTENTS (Continued)

■ Printing a memory channel	66	12 DTMF OPERATION	88
■ Importing a CSV file	67	■ Operation	88
■ Exporting a CSV file	67	13 AUDIO SETTING SCREEN	89–91
8 SCAN OPERATION		■ Operation	89
(Multi function receiver/Component screens only)	68–76	14 SHORTCUT KEY OPERATION	92
■ Scan types	68	■ Operation	92
■ Programmed scan	69	15 MULTI CHANNEL MONITOR	93–94
■ Auto memory write scan	71	■ Multi channel programming	93
■ Memory/bank scan	73	■ Multi channel monitor operation	94
■ Versatile memory scan	74	16 RECORDING OPERATION	95–96
■ Scan resume condition	75	■ Recording a receiving signal	95
■ Scan speed setting	76	■ Sampling Rate setting	96
9 PRIORITY SCAN		■ Remote recording function	96
(Multi function receiver/Component screens only)	77–78	17 INTERNAL AUDIO SWITCH	97
■ Priority scan type	77	18 DSP OPERATION	98–100
■ Priority scan operation	77	■ UT-106 installation	98
10 TONE SQUELCH OPERATION		■ ANF function (Available only when the UT-106 is installed.) ...	99
(Multi function receiver/Component screens only)	79–82	■ NR function (Available only when the UT-106 is installed.) ...	100
■ Tone/DTCS operation	79	19 USB PORT SETTING	101
■ DTCS polarity setting	81	20 USB AUDIO SETTING	102
■ Pocket beep operation	81	21 CLONING OPERATION	
■ Tone scan operation	82	(Available only when the IC-R1500 is connected)	103
11 BAND SCOPE		22 TROUBLESHOOTING	104
(Multi function receiver/Component screens only)	83–87	23 SPECIFICATIONS AND OPTIONS	105–106
■ Operation	83	■ Specifications	105
■ Pick up signal function	85	■ Options	106
■ Saving the sweep data	85	DOC	107
■ Changing the automatic sweep step limit	86		
■ Wide band scope function	87		
■ Band scope options	87		

In this instruction manual, the screen shot contents may be different from the actual one.

■ Hardware installation

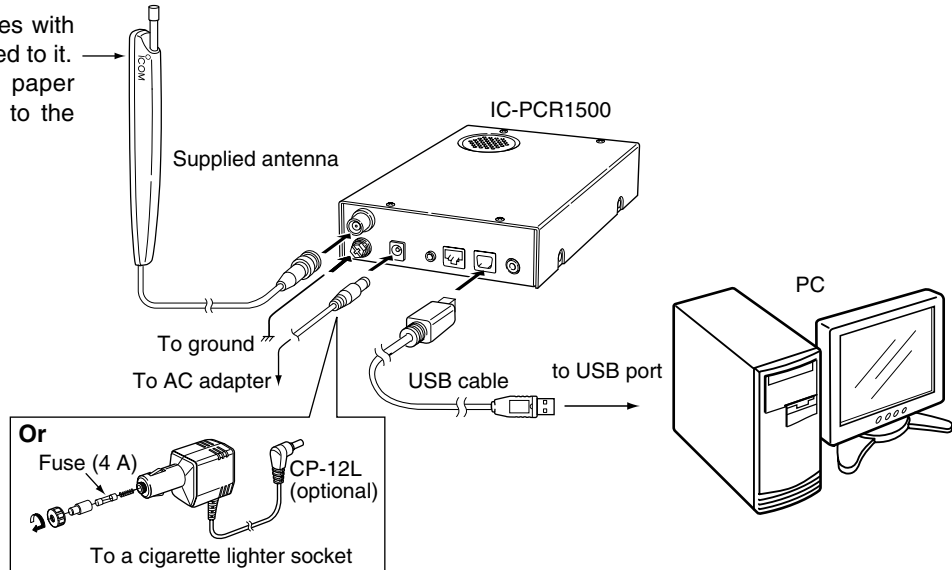
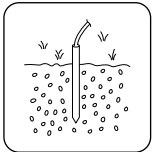
Refer to the diagram below for connections.

CAUTION: Icom Inc. assumes no responsibility for the receiver's operation resulting from the use of any other USB cable other than the one supplied by Icom in the original IC-PCR1500 package.

NOTE: The antenna's double sided tape may not adhere to all items. Additionally, the tape is not intended for multiple uses. Lastly, some items may be damaged by trying to remove the antenna holder once it has been taped into place. Icom Inc cannot accept any responsibility for any damage to any item caused by the supplied tape.

The antenna holder comes with double sided tape attached to it. Remove the protective paper and adhere the antenna to the location you desire.

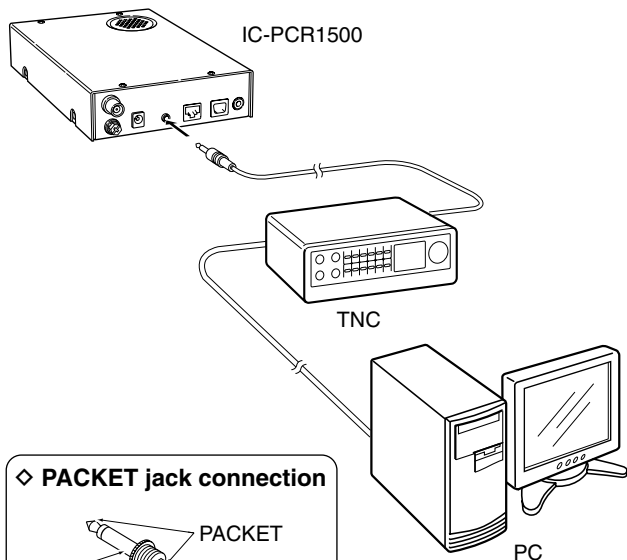
⚠ WARNING!: NEVER use a gas pipe or electrical conduit pipe for grounding.



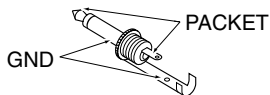
1 INSTALLATION

■ TNC connection

The IC-PCR1500 can receive 9600 bps packet communication (AFSK) with the use of a TNC (not supplied). Connect the TNC (Terminal Node Controller) as illustrated below. (Other connections are same as page 1.)



◇ PACKET jack connection

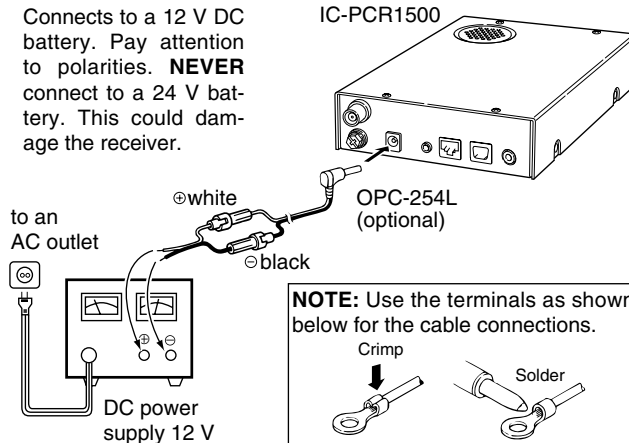


2-conductor 3.5 (d) mm
(1/8")/100 k Ω

■ DC power supply connection

Use a 12 V DC power supply with at least 1.2 A capacity. Make sure the ground terminal of the DC power supply is grounded.

Connects to a 12 V DC battery. Pay attention to polarities. **NEVER** connect to a 24 V battery. This could damage the receiver.



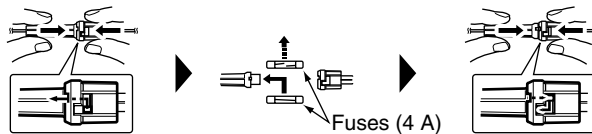
NOTE: Use the terminals as shown below for the cable connections.

Crimp



⚠ CAUTION! NEVER remove the fuse-holders from the DC power cable.

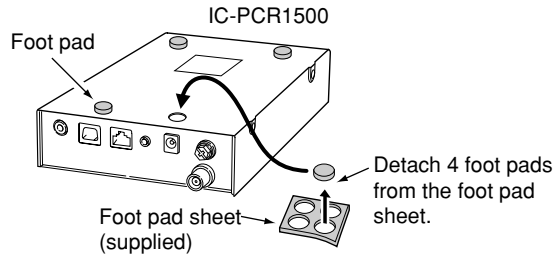
◇ Fuse replacement



■ Accessory attachments

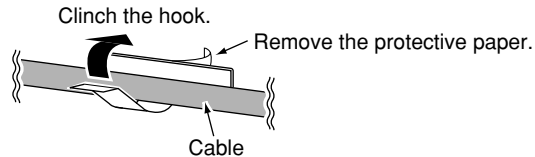
◇ Foot pad

Attach 4 foot pads to the bottom of the IC-PCR1500 as below.



◇ Cable hanger

The cable hanger is convenient for fixing a cable to the wall, etc.



The displayed dialog boxes or indications may differ slightly from the following instructions according to your system conditions, or environment.

Microsoft® Windows® XP

NOTE: Driver installation with CD is required when an additional IC-PCR1500 is connected to the PC (i.e. 2 or more IC-PCR1500s are connected to the PC). In such a case, install the driver as shown below.

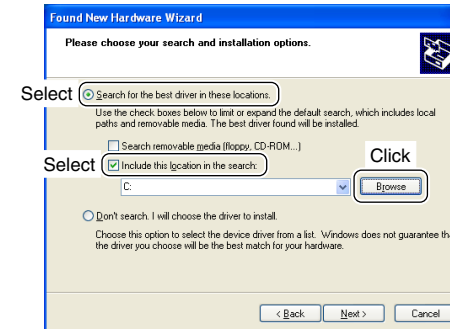
- ① Quit all applications when Windows is running.
- ② Connect the IC-PCR1500 to the desired PC's USB port with the supplied USB cable.
 - CAUTION:** Icom Inc. assumes no responsibility for the receiver's operation resulting from the use of any other USB cable other than the one supplied by Icom in the original IC-PCR1500 package.
- ③ Insert the CD into the appropriate CD drive.
- ④ Turn the IC-PCR1500 power ON.
 - The power indicator lights.
 - "Found New Hardware" appears as below.



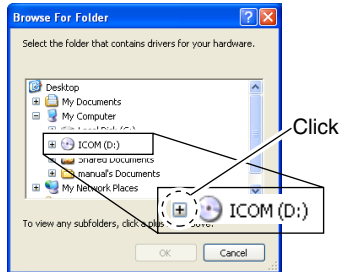
- ⑤ The CP2101 USB device is detected automatically, and the "Found New Hardware Wizard" will come up as below. Select "Install from a list or specific location (Advanced)," then click [Next>].



- ⑥ Select "Search for the best driver in these locations." then select "Include this location in the search," click [Browse].



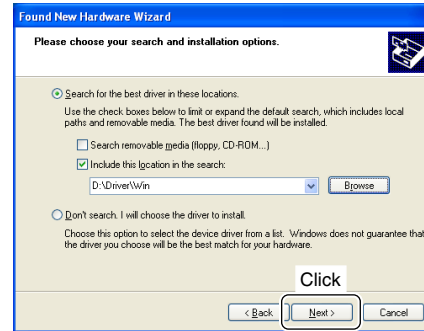
- ⑦ Click “+” of the CD drive folder in “My Computer.”
 • The CD drive folder name (e.g. “D”) is depending on a PC.



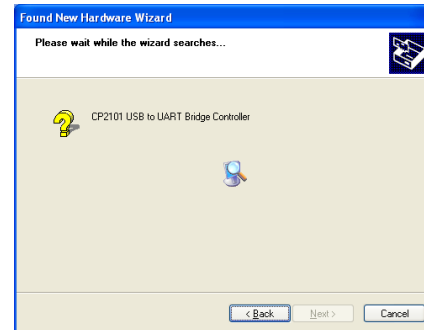
- ⑧ Click “+” of the “Driver” folder in the CD drive folder, then select “Win” folder. Click [OK].



- ⑨ Click [Next>].



- ⑩ The Wizard starts searching for the driver and shows the dialog below during search.

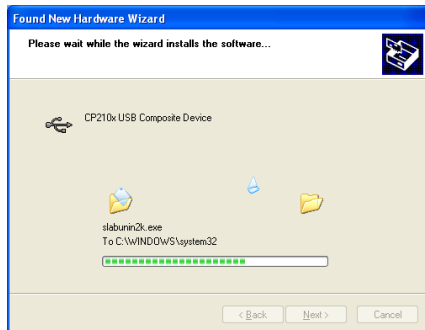


2 DRIVER INSTALLATION

- ⑪ After the driver is found, the “Hardware Installation” dialog box appears as below. Click [Continue Anyway] to start the installation.



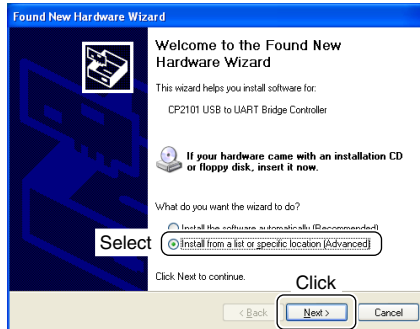
- ⑫ Windows starts installing the USB driver.



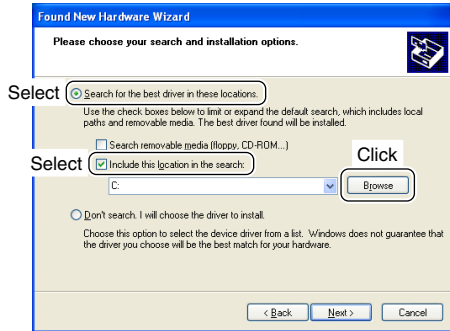
- ⑬ After the installation is completed, click [Finish].



- ⑭ The “Found New Hardware Wizard” will come up again to install the USB serial port driver. Select “Install from a list or specific location (Advanced),” then click [Next>].



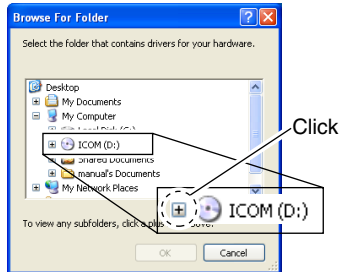
15 Select "Search for the best driver in these locations." then select "Include this location in the search.," click [Browse].



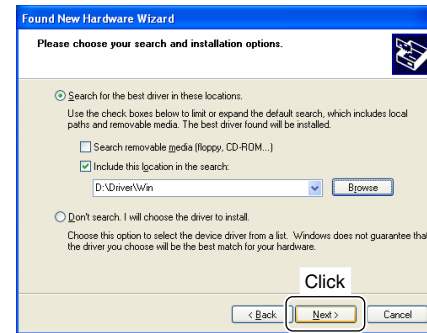
17 Click "+" of the "Driver" folder in the CD drive folder, then select "Win" folder. Click [OK].



16 Click "+" of the CD drive folder in "My Computer."
 • The CD drive folder name (e.g. "D") is depending on a PC.

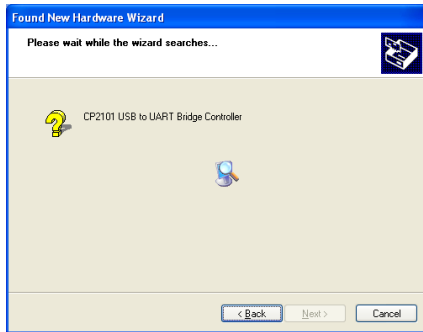


18 Click [Next>].

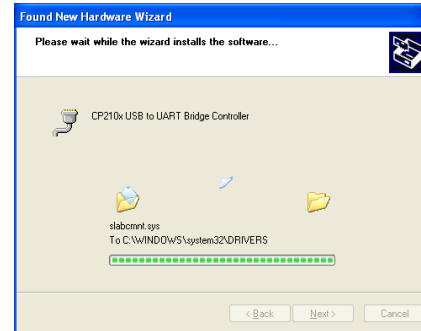


2 DRIVER INSTALLATION

- ⑰ The Wizard starts searching for the driver and shows the dialog below during search.



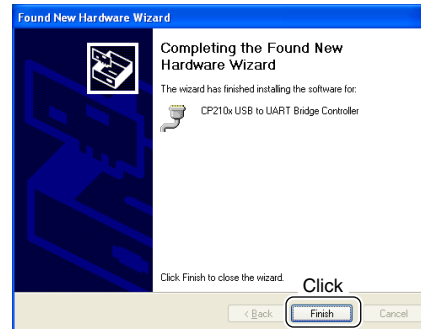
- ⑱ Windows starts installing the USB driver.



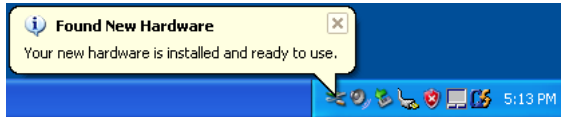
- ⑳ After the driver is found, the “Hardware Installation” dialog box appears as below. Click [Continue Anyway] to start the installation.



- ㉑ After the installation is completed, click [Finish].



②③ After clicking [Finish], the dialog appears as below.



②④ Eject the CD.

- Restarting the PC is recommended.

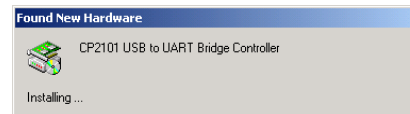
■ Microsoft® Windows® 2000

NOTE: Driver installation with CD is required when an additional IC-PCR1500 is connected to the PC (i.e. 2 or more IC-PCR1500s are connected to the PC). In such a case, install the driver as shown below.

- ① Quit all applications when Windows is running.
- ② Connect the IC-PCR1500 to the desired PC's USB port with the supplied USB cable.

CAUTION: Icom Inc. assumes no responsibility for the receiver's operation resulting from the use of any other USB cable other than the one supplied by Icom in the original IC-PCR1500 package.

- ③ Insert the CD into the appropriate CD drive.
- ④ Turn the IC-PCR1500 power ON.
 - The power indicator lights.
 - "Found New Hardware" appears as below.



2 DRIVER INSTALLATION

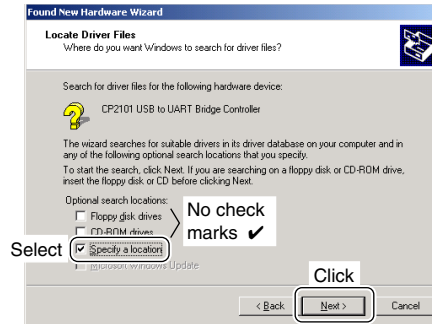
- ⑤ The CP2101 USB device is detected automatically, and the “Found New Hardware Wizard” will come up as below. Click [Next>].



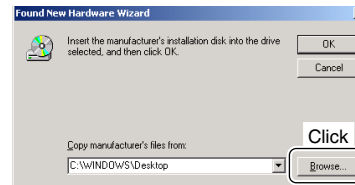
- ⑥ Select “Search for a suitable driver for my device (recommended),” then click [Next>].



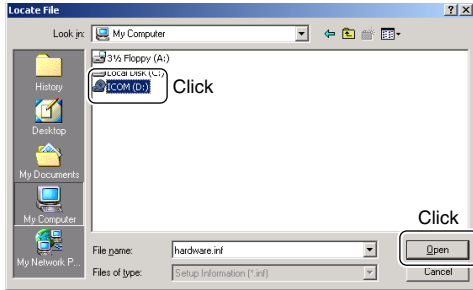
- ⑦ Select “Specify a location,” then click [Next>].



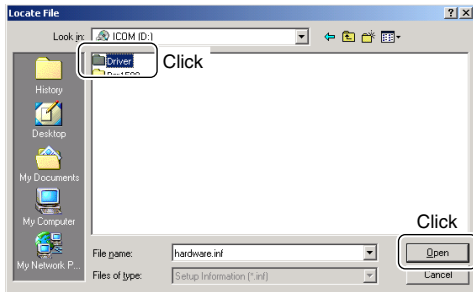
- ⑧ Click [Browse...].



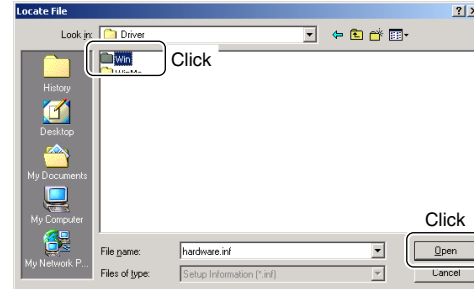
- ⑨ Select the CD drive in “My Computer,” then click [Open].
 • The CD drive folder name (e.g. “D”) is depending on a PC.



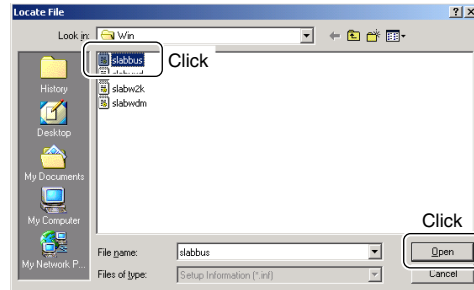
- ⑩ Select the “Driver” folder in the CD drive, then click [Open].



- ⑪ Select “Win” in the “Driver” folder, then click [Open].



- ⑫ Select “Slabbus” in the “Win” folder, then click [Open].

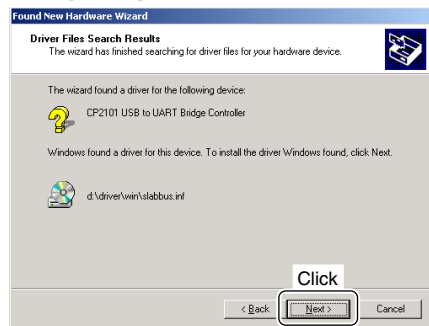


2 DRIVER INSTALLATION

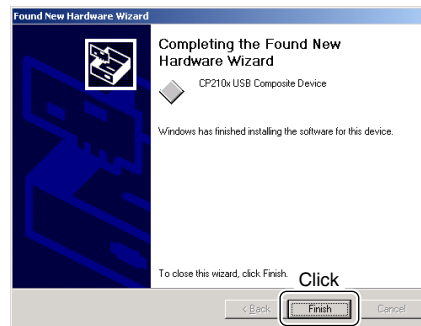
⑬ Click [OK].



⑭ When the driver is found, the following dialog is displayed. Click [Next>] to start the installation.



⑮ After the installation is completed, click [Finish].



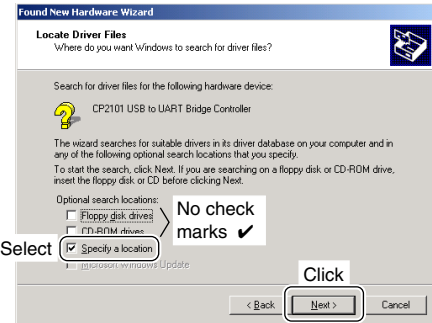
⑯ The “Found New Hardware Wizard” appears again. Click [Next>].



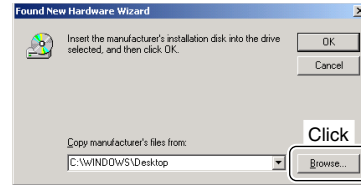
- 17 Select “Search for a suitable driver for my device (recommended),” then click [Next>].



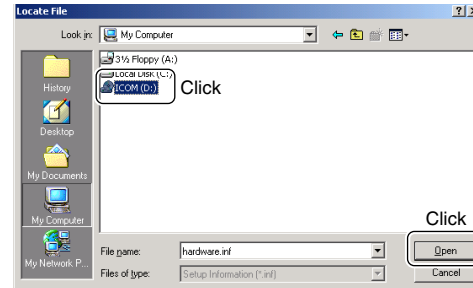
- 18 Select “Specify a location,” then click [Next>].



- 19 Click [Browse...].

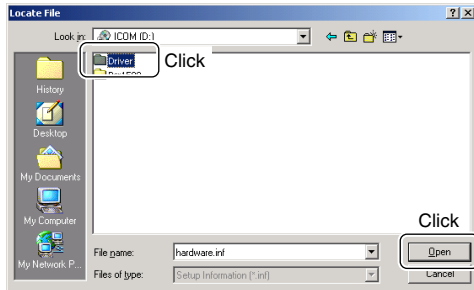


- 20 Select the CD drive in “My Computer,” then click [Open].
- The CD drive folder name (e.g. “D”) is depending on a PC.

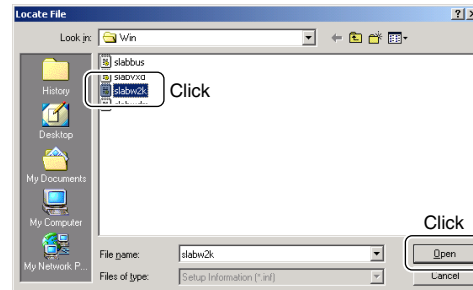


2 DRIVER INSTALLATION

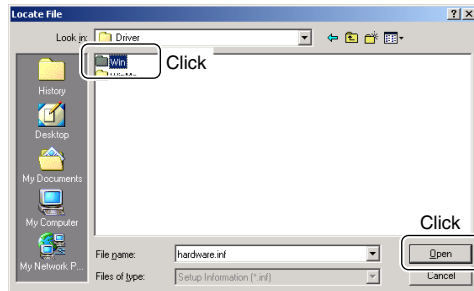
⑲ Select the "Driver" folder in the CD drive, then click [Open].



⑳ Select "Slabw2k" in the "Win" folder, then click [Open].



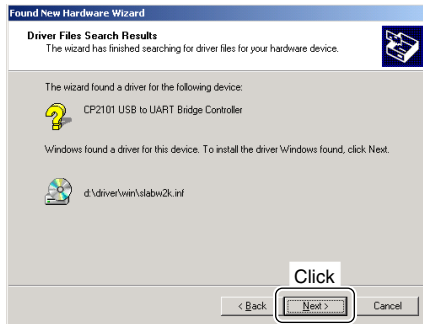
㉑ Select "Win" in the "Driver" folder, then click [Open].



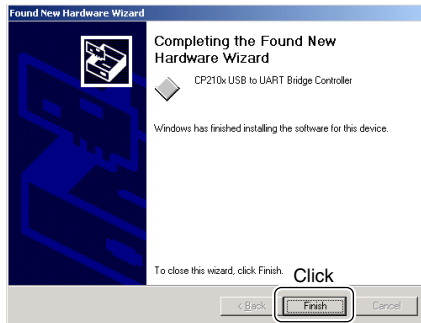
㉒ Click [OK].



- ②⑤ When the driver is found, the following dialog is displayed.
Click [Next>] to start the installation.



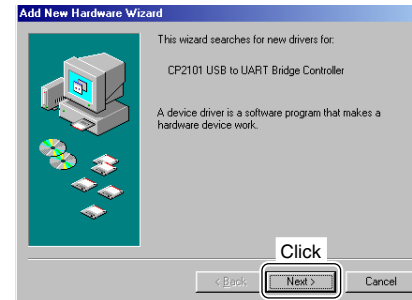
- ②⑥ After the installation is completed, click [Finish].



- ②⑦ Eject the CD.
• Restarting the PC is recommended.

■ Microsoft® Windows® 98SE

- ① Quit all applications when Windows is running.
- ② Connect the IC-PCR1500 to the desired PC's USB port with the supplied USB cable.
 - ⚠ **CAUTION:** Icom Inc. assumes no responsibility for the receiver's operation resulting from the use of any other USB cable other than the one supplied by Icom in the original IC-PCR1500 package.
- ③ Insert the CD into the appropriate CD drive.
- ④ Turn the IC-PCR1500 power ON.
 - The power indicator lights.
- ⑤ The CP2101 USB device is detected automatically, and the "Add New Hardware Wizard" will come up as below. Click [Next>].

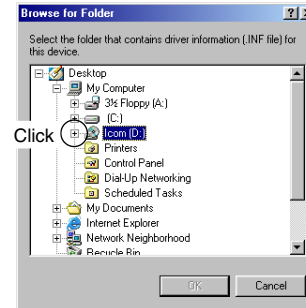


2 DRIVER INSTALLATION

- ⑥ Select “Search for the best driver for your device. (Recommended),” then click [Next>].



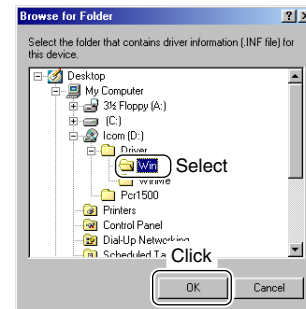
- ⑧ Click “+” of the CD drive folder in “My Computer”.
• The CD drive folder name (e.g. “D”) is depending on a PC.



- ⑦ Select “Specify a location:”, click [Browse...].



- ⑨ Select “Win” in the “Driver” folder, click [OK.]



⑩ Click [Next>].



⑪ After the installation is completed, click [Finish].



⑫ When the driver is found, the following dialog is displayed. Click [Next>] to start the installation.



⑬ The “Add New Hardware Wizard” appears again. Click [Next>].

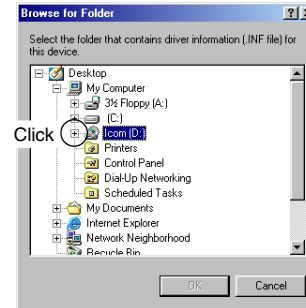


2 DRIVER INSTALLATION

- ⑭ Select “Search for the best driver for your device. (Recommended),” then click [Next>].



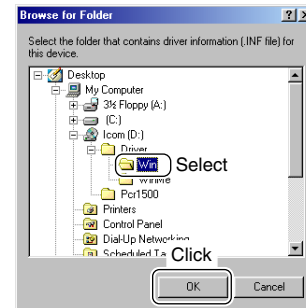
- ⑮ Click “+” of the CD drive folder in “My Computer.”
• The CD drive folder name (e.g. “D”) is depending on a PC.



- ⑯ Select “Specify a location:”, click [Browse...].



- ⑰ Select “Win” in the “Driver” folder, click [OK].



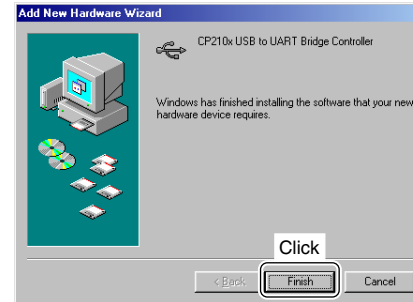
18 Click [Next>].



19 When the driver is found, the following dialog is displayed. Click [Next>] to start the installation.



20 After the installation is completed, click [Finish].



21 Eject the CD.
• Restarting the PC is recommended.

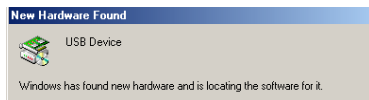
2 DRIVER INSTALLATION

■ Microsoft® Windows® Me

- ① Quit all applications when Windows is running.
- ② Connect the IC-PCR1500 to the desired PC's USB port with the supplied USB cable.

CAUTION: Icom Inc. assumes no responsibility for the receiver's operation resulting from the use of any other USB cable other than the one supplied by Icom in the original IC-PCR1500 package.

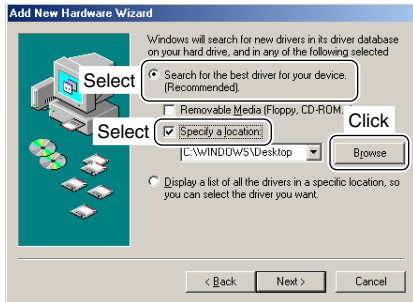
- ③ Insert the CD into the appropriate CD drive.
- ④ Turn the IC-PCR1500 power ON.
 - The power indicator lights.
 - "New Hardware Found" appears as below.



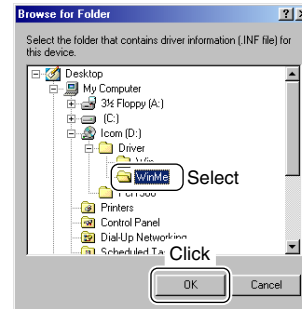
- ⑤ The CP2101 USB device is detected automatically, and the "Add New Hardware Wizard" will come up as below. Select "Specify the location of the driver (Advanced)," then click [Next>].



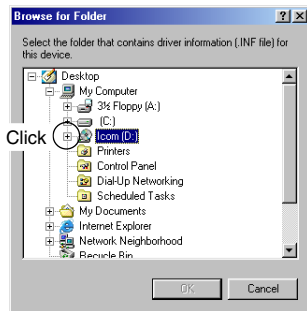
- ⑥ Select “Search for the best driver for your device. (Recommended),” then select “Specify a location:”, click [Browse].



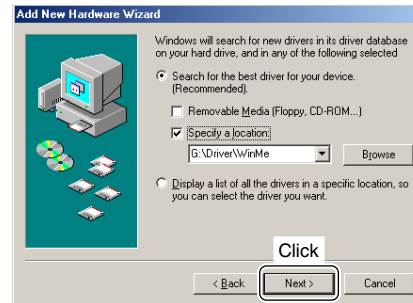
- ⑧ Select “WinMe” in the “Driver” folder, click [OK].



- ⑦ Click “+” of the CD drive folder in “My Computer.”
 • The CD drive folder name (e.g. “D”) is depending on a PC.



- ⑨ Click [Next>].



2 DRIVER INSTALLATION

- ⑩ When the driver is found, the following dialog is displayed. Click [Next>] to start the installation.



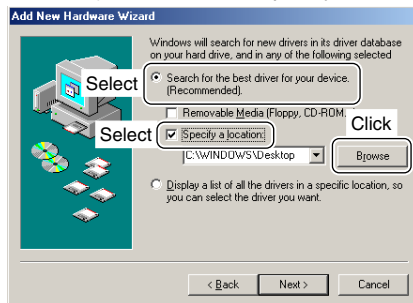
- ⑪ After the installation is completed, click [Finish].



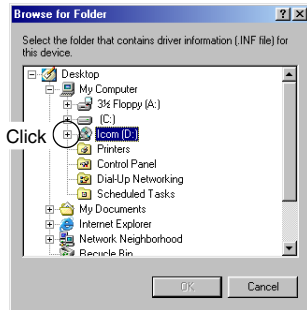
- ⑫ The “Add New Hardware Wizard” appears again. Select “Specify the location of the driver (Advanced),” then click [Next>].



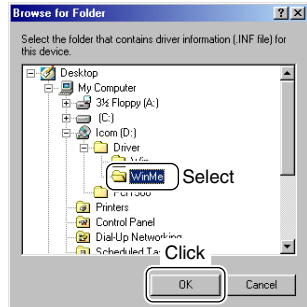
- ⑬ Select “Search for the best driver for your device. (Recommended),” then select “Specify a location:”, click [Browse].



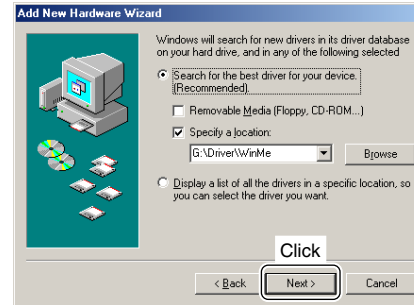
- 14 Click “+” of the CD drive folder in “My Computer.”
- The CD drive folder name (e.g. “D”) is depending on a PC.



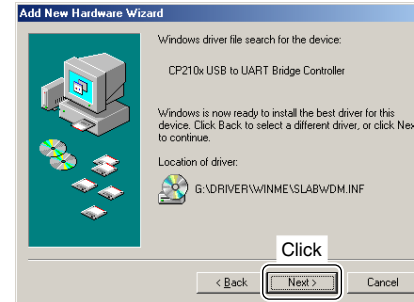
- 15 Select “WinMe” in the “Driver” folder, click [OK].



- 16 Click [Next>].



- 17 When the driver is found, the following dialog is displayed. Click [Next>] to start the installation.



2 DRIVER INSTALLATION

⑱ After the installation is completed, click [Finish].

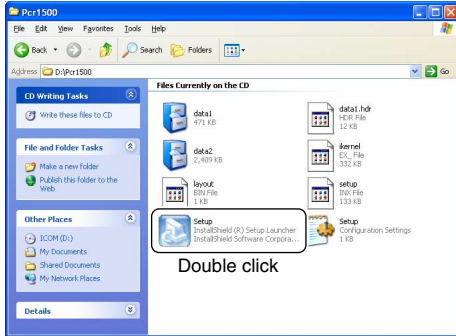


⑲ Eject the CD.

- Restarting the PC is recommended.

■ Installation

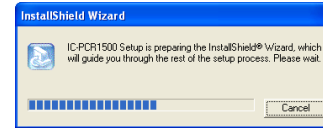
- ① Quit all applications when Windows is running.
- ② Insert the CD into the CD drive.
- ③ Open the CD drive contents via “My computer” or “Windows Explorer.”
 - “Driver” and “Pcr1500” folders are included.
- ④ Double click “Setup.exe” file in “Pcr1500” folder.



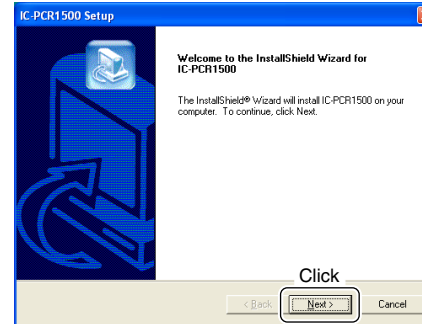
- ⑤ Select the display language type from “English” or “Japanese.” Click [OK].



- The “InstallShield® Wizard” starts preparing the installation.

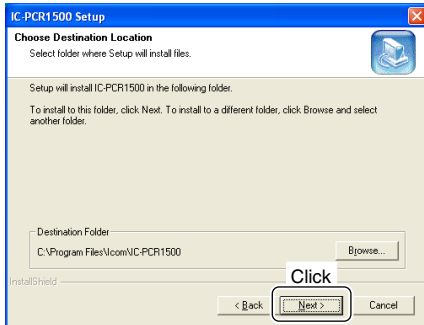


- ⑥ After the preparation, the following dialog is displayed. Click [Next>].

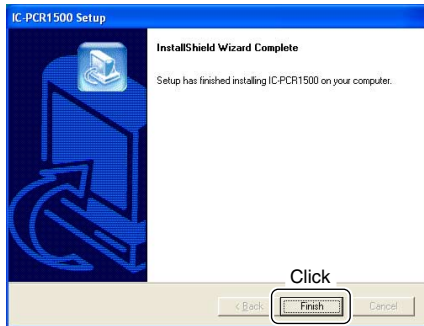


3 APPLICATION INSTALLATION

- ⑦ Confirm the location, then click [Next>] to start the installation.
- Click [Browse...] then type the desired location if you specifying the installation location.



- ⑧ After the installation is completed, click [Finish].

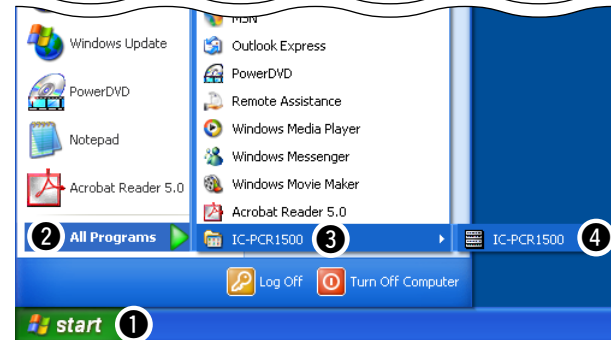


- ⑨ Eject the CD.
- The IC-PCR1500 shortcut icon is created on the desktop.
 - Restarting the PC is recommended.

■ Launching the IC-PCR1500

◇ Microsoft® Windows® XP

- ① Before launching the program, please be sure the IC-PCR1500 is turned ON.
 - The power indicator lights green.
- ② Click the [Start] button and point to [All Programs].
- ③ Point to the “IC-PCR1500” folder.
- ④ Click the “IC-PCR1500” program.
(or simply double click the desktop short cut icon as below, which was automatically created during application installation.)



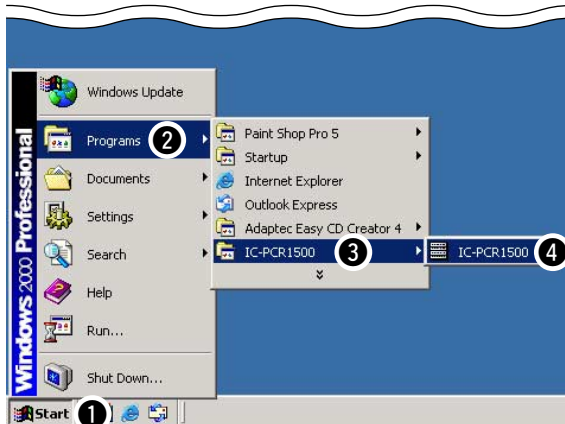
Short cut icon



NOTE: Launch the program after approx. 20 sec. has passed when the “Communication error” occurs.

◇ Microsoft® Windows® 98SE/Me/2000

- ① Before launching the program, please be sure the IC-PCR1500 is turned ON.
 - The power indicator lights green.
- ② Click the [Start] button and point to [Programs].
- ③ Point to the “IC-PCR1500” folder.
- ④ Click the “IC-PCR1500” program.
(or simply double click the desktop short cut icon as below, which was automatically created during application installation.)



Short cut icon

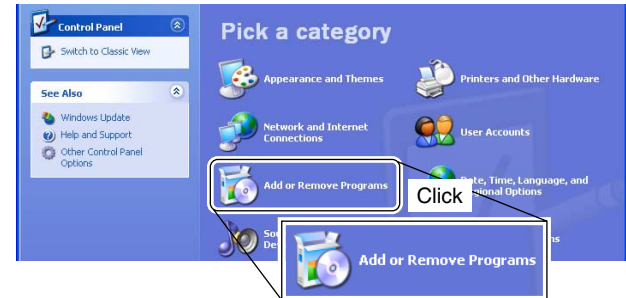


/// **NOTE:** Launch the program after approx. 20 sec. has passed when the “Communication error” occurs.

■ Uninstall

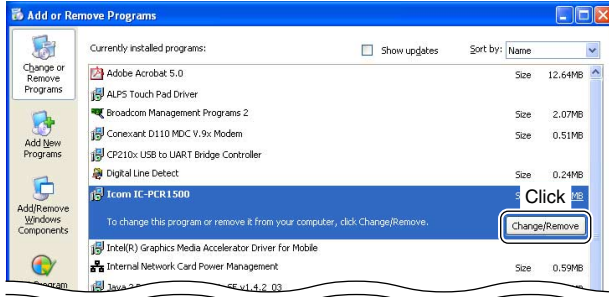
In this section, screen shots of Windows XP are used for the instruction example. However, the instructions are similar to the other operating systems, Windows 98SE, Me and 2000.

- ① Start up Windows.
- ② Select the “Control Panel” in the Start menu.
 - The control panel appears as shown in the next step below.
- ③ Click the “Add or Remove Programs.”
 - The “Add or Remove Programs” menu appears.

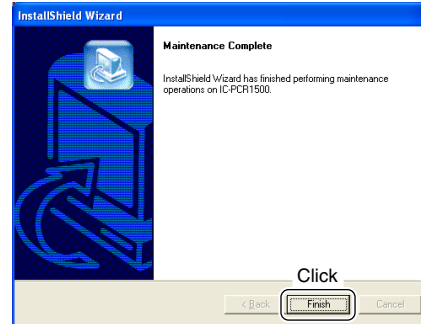


3 APPLICATION INSTALLATION

④ Click the “Icom IC-PCR1500,” then click [Change/Remove].



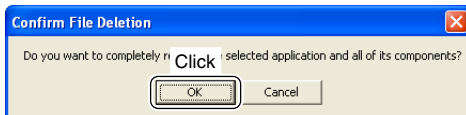
⑦ After the uninstall is completed, click [Finish].



⑤ Select the display language type from “English” or “Japanese,” click [OK].



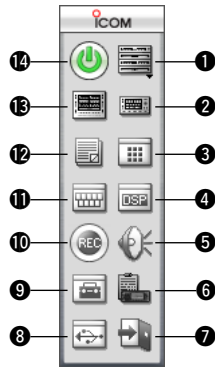
⑥ “Confirm File Deletion” appears, click [OK] to remove the program from the PC.



■ Application screens (on PC screen)

◇ Tool bar

The application screen can be seen after the application installation. See page 25 for details.

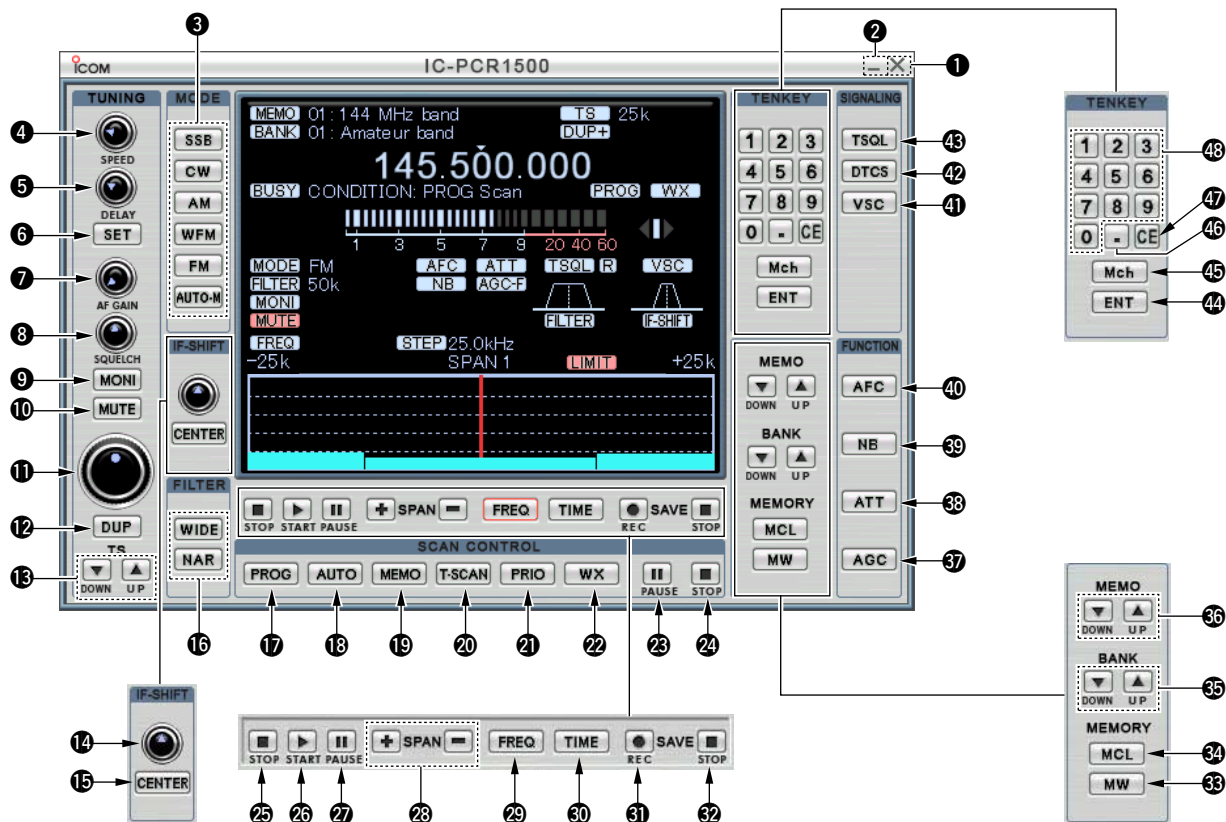


- 1 COMPONENT BUTTON** (pgs. 35, 42)
Click to display the Component screen.
- 2 SIMPLE BUTTON** (pgs. 34, 41)
Click to display the Simple screen.
- 3 MULTI CHANNEL MONITOR BUTTON** (p. 93)
Click to make the multi channel monitor screen appear/disappear.
- 4 DSP DIGITAL FILTER BUTTON** (pgs. 99, 100)
Click to make the DSP digital filter screen appear/disappear.
- 5 AUDIO SETTING BUTTON** (p. 89)
Click to make the audio setting screen appear/disappear.

- 6 CLONE BUTTON** (p. 103)
Click to make the cloning screen appear/disappear.
- 7 EXIT BUTTON**
Click to quit the IC-PCR1500 program.
- 8 USB PORT SETTING BUTTON**
Click to make the USB setting screen appear.
- 9 AUTO MODE SETTING/
SHORT CUT KEY SETTING BUTTON** (pgs. 49, 92)
Click to make the auto mode setting list and short cut key list screen appear/disappear.
- 10 RECORDING BUTTON** (p. 95)
Click to make the recording screen appear/disappear.
- 11 DTMF REMOTE COMMANDER BUTTON** (p. 88)
Click to make the DTMF remote commander screen appear/disappear.
- 12 MEMORY CHANNEL BUTTON** (pgs. 59, 61)
Click to make the memory channel screen appear/disappear.
- 13 MULTI-FUNCTION RECEIVER BUTTON** (pgs. 30, 41)
Click to display the Multi-function receiver screen.
- 14 POWER BUTTON** (p. 41)
Click to make the IC-PCR1500 interface unit receiving circuit and program ON or OFF.

4 PANEL DESCRIPTION

◇ Multi-function receiver screen



1 CLOSE BUTTON

Click to quit and exit the application screen.

2 MINIMIZE BUTTON

Click to minimize the application screen.

3 RECEIVE MODE BUTTONS ([SSB], [CW], [AM], [WFM], [FM] and [AUTO-M]) (pgs. 48, 49)

Click to select a receive mode.

- When using [AUTO-M] (automatic mode), a receive mode, IF filter passband width, tuning step, etc., are selected automatically after inputting a frequency.

4 SCAN SPEED CONTROL [SPEED] (p. 76)

Click to set the scan speed at which channels or frequencies are searched during scan operation.

- Right-click to increase the speed level. (Scan is faster)
- Left-click to decrease the speed level. (Scan is slower)

5 SCAN DELAY TIME CONTROL [DELAY]

Click to set the period in which a scan pauses after receiving a signal.

- Right-click to increase the period.
- Left-click to decrease the period.

6 SET BUTTON [SET] (p. 75)

Click to show the [Scan Delay] screen.

This screen is used for the settings of the scan delay details.

7 AUDIO FREQUENCY GAIN CONTROL [AF GAIN] (p. 43)

Click to adjust the audio output level.

- Right-click to increase the audio output level.
- Left-click to decrease the audio output level.

8 SQUELCH CONTROL [SQUELCH] (pgs. 43, 47)

Click to adjust the squelch threshold level.

The squelch removes noise output from the speaker (closed condition) when no signal is received.

- Right-click to close the squelch.
- Left-click to open the squelch.

9 MONITOR BUTTON [MONI] (p. 50)

Click to turn the monitor function ON or OFF.

The monitor function is used to temporarily open the squelch to listen for a weak signal.

10 MUTE BUTTON [MUTE] (p. 50)

Click to turn the mute function ON or OFF.

This function is used to temporarily mute the audio output.

11 TUNING DIAL (p. 44)

Click to set the receive frequency with the selected tuning step.

- Right-click to increase the frequency.
- Left-click to decrease the frequency.

12 DUPLEX BUTTON [DUP] (p. 51)

➔ Right-click to display the offset frequency setting screen.

➔ Left-click to set the duplex direction from OFF (no indication), DUP -, and DUP +.

13 TUNING STEP UP/DOWN BUTTONS [▲]/[▼] (p. 46)

➔ Right-click to display the tuning step setting screen.

➔ Left-click to select the tuning steps in order.

4 PANEL DESCRIPTION

14 IF-SHIFT CONTROL (p. 55)

Click to set a signal passband position.

- Right-click to increase the signal passband position.
- Left-click to decrease the signal passband position.

15 CENTER KEY [CENTER] (p. 55)

After setting a signal passband position with clicking the IF-shift control, click to return to the center position.

16 IF FILTER BUTTONS [WIDE]/[NAR] (p. 52)

Click to change the IF filter in use.

- Click [WIDE] to select a wide filter.
- Click [NAR] to select a narrow filter.

*Usable IF filter is according to the receive mode.

17 PROGRAMMED SCAN BUTTON [PROG] (p. 69)

Click to start/stop a programmed scan.

- “PROG Scan” blinks during scanning.

18 AUTO MEMORY WRITE SCAN BUTTON [AUTO] (p. 71)

Click to start/stop an auto memory write scan.

- “AUTO MW Scan” blinks during scanning.

19 MEMORY SCAN BUTTON [MEMO] (pgs. 73, 74)

Click to start/stop a memory scan.

- “MEMO Scan” blinks during scanning.

20 TONE SCAN BUTTON [T-SCAN] (p. 82)

Click to start/stop a tone scan.

- “TONE Scan” blinks during scanning.

21 PRIORITY SCAN BUTTON [PRIO] (p. 77)

Click to start/stop a priority scan.

- “PRIO Scan” blinks during scanning.

22 WEATHER ALERT BUTTON [WX] (p. 56)

Push to start the weather alert function. (USA and CANADA version only)

- “WX” appears.

23 SCAN PAUSE BUTTON [II] (p. 83)

Push to pause/resume a scan.

- “Pause” blinks during scan is pausing.

24 SCAN STOP BUTTON [■] (p. 83)

Push to cancel a scan operation.

25 SWEEP STOP BUTTON [■] (p. 83)


Click to cancel a band scope operation.

26 SWEEP START BUTTON [▶] (p. 83)

Click to start the band scope operation which is used to observe signal conditions around the receive frequency.

27 SWEEP PAUSE BUTTON [II] (p. 83)

Click to pause/resume a band scope sweeping.

 **NOTE:** While using the band scope function, audio is disabled in SSB and CW modes. To monitor the frequency, push [II] to pause the function, or push [■] to cancel the function.

28 SPAN (TIME) UP/DOWN BUTTON [+]/[-] (p. 83)

When “FREQUENCY” mode is displayed;

Click to select the band scope edge frequency. (p. 83)

When “TIME” mode is displayed;

Click to select the time interval to show the receiving signal. (p. 84)

- 29 FREQUENCY BUTTON [FREQ]** (p. 83)
 Click to show the receiving signal relative to signal strength while sweeping..
- 30 TIME BUTTON [TIME]** (p. 84)
 Click to show the received signal strength in the specified time period while sweeping.
- 31 REC BUTTON [●]** (p. 85)
 Click to start recording of the received signal.
- 32 STOP BUTTON [■]** (p. 85)
 Click to stop recording.
- 33 MEMORY WRITE BUTTON [MW]** (p. 60)
 Click to write the current receive frequency into the selected memory channel.
- 34 MEMORY CLEAR BUTTON [MCL]** (p. 65)
 Click to clear the displayed memory channel contents.
- 35 BANK UP/DOWN BUTTONS [▲]/[▼]** (p. 58)
 Click to change the memory bank.
- 36 MEMORY CHANNEL UP/DOWN BUTTONS [▲]/[▼]**
 (p. 58)
 Click to change a memory channel.
- 37 AUTOMATIC GAIN CONTROL BUTTON [AGC]** (p. 54)
 Click to toggle the AGC (Automatic Gain Control) time constant between slow and fast.
 • “AGC-F” appears when the AGC fast is selected.

- 38 ATTENUATOR BUTTON [ATT]** (p. 53)
 Click to turn the ATT (Attenuator) function ON or OFF.
 • “ATT” appears when the ATT function is turned ON.
- 39 NOISE BLANKER BUTTON [NB]** (p. 54)
 Click to turn the NB (Noise Blanker) function ON or OFF.
 • “NB” appears when the NB function is turned ON.
- 40 AUTOMATIC FREQUENCY CONTROL BUTTON [AFC]**
 (p. 53)
 Click to turn the AFC (Automatic Frequency Control) function ON or OFF.
 • “AFC” appears when the AFC function is turned ON.
- 41 VOICE SQUELCH CONTROL BUTTON [VSC]** (p. 55)
 Click to turn the VSC (Voice Squelch Control) function ON or OFF.
 • “VSC” appears when the VSC function is turned ON.
- 42 DTCS SETTING BUTTON [DTCS]** (p. 80)
 ➤ Click to turn the DTCS squelch ON or OFF.
 • “DTCS” appears when the DTCS squelch is turned ON.
 • Available only when FM mode is selected.
 ➤ When the DTCS squelch is turned ON, right-click to display the [DTCS] screen.
- 43 TSQL SETTING BUTTON [TSQL]** (p. 79)
 ➤ Click to turn the tone squelch ON or OFF.
 • “TSQL” appears when the tone squelch is turned ON.
 • Available only when FM mode is selected.
 ➤ When the tone squelch is turned ON, right-click to display the [TSQL] screen.

4 PANEL DESCRIPTION

44 ENTER KEY [ENT]

Click to enter the frequency when the desired receive frequency is input via the 10-keypad (48) or PC keyboard.

45 MEMORY CHANNEL KEY [Mch]

Click to call the memory channel when the desired channel number is input via the 10-keypad (48) or PC keyboard.

46 TENKEY— DECIMAL BUTTON [.]

Click to set the MHz digit when inputting a frequency via the 10-keypad.

47 TENKEY— CLEAR BUTTON [CE]

Click to clear the mistake while inputting a receive frequency or memory channel number via the 10-keypad (48) or PC keyboard.

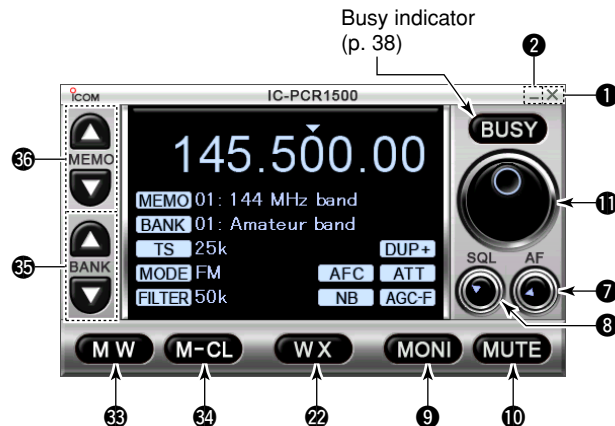
48 TENKEY— 10-KEYPAD [1] to [0]

The 10-keypad can be used for several functions as below:

- Direct receive frequency input.
- Memory channel input.

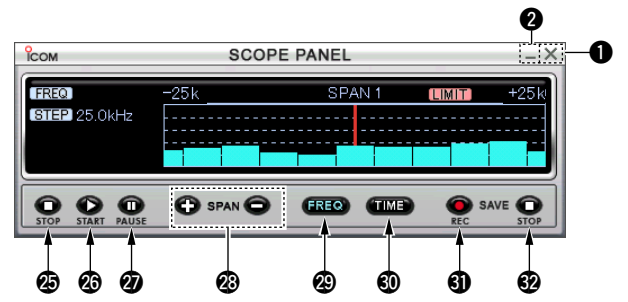
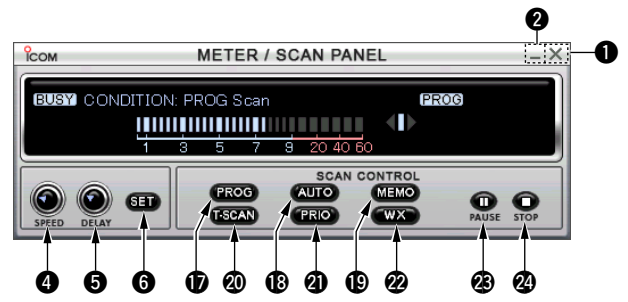
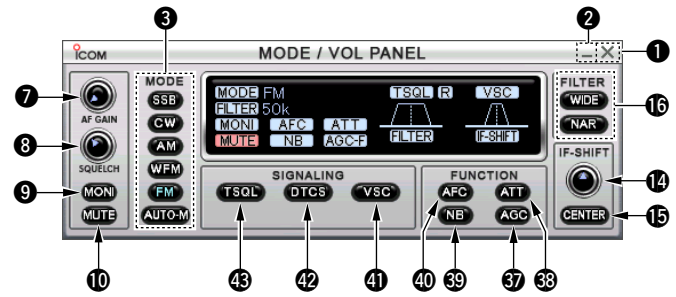
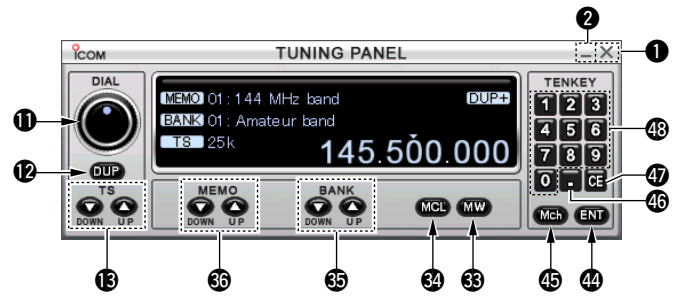
◇ Simple screen

The Simple screen buttons, controls, etc. operate the same as the Multi-function receiver screens. Please refer to the explanations on pages 30 to 34.



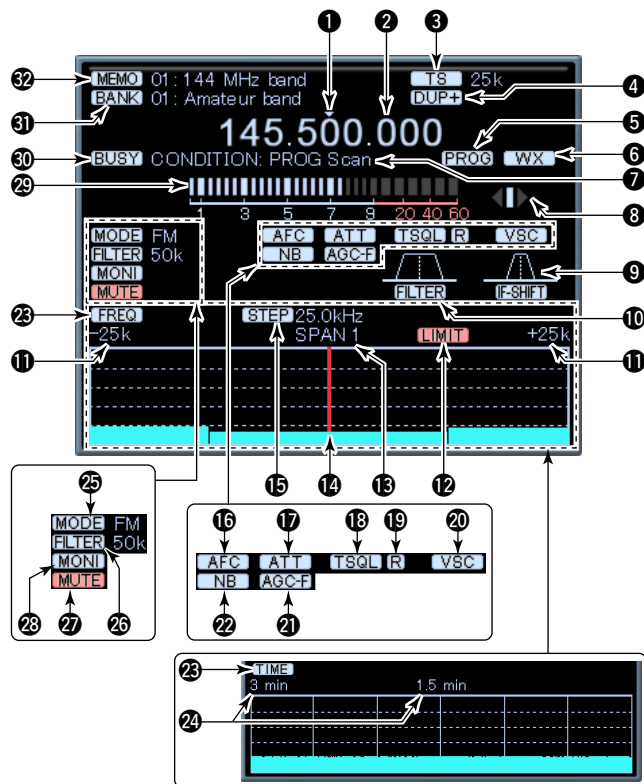
◇ Component screen

The Component screen buttons, controls, etc. operate the same as the Multi-function receiver screens. Please refer to the explanations on pages 30 to 34.



4 PANEL DESCRIPTION

◇ Function display (on Multi-function receiver screen)



1 TUNING STEP INDICATOR

Indicates the tuning step digit.

2 FREQUENCY READOUT

Indicates the receive frequency and data as it is being input such as memory channel numbers, etc.

3 TUNING STEP INDICATOR (p. 46)

This is the frequency increment used when selecting a frequency using the tuning dial and when searching for signals using a scan function.

4 DUPLEX INDICATOR (p. 51)

“DUP+” appears when plus duplex, “DUP-” appears when minus duplex operation is selected.

5 SCAN INDICATOR (pgs. 69–74, 78, 82)

“PROG,” “AUTO,” “MEMO,” “T-SCAN” or “PRIO” appears during scanning.

6 WEATHER INDICATOR (pgs. 56, 57)

Appears when weather function is turned ON. (USA and CANADA version only)

7 CONDITION INDICATOR

Indicates the receiver's condition.


8 FM CENTER INDICATORS


- “◀” or “▶” appears when the received signal is not tuned to its center frequency; or the squelch is closed.
- “■” appears when the received signal is tuned to its center frequency.

- 9 IF-SHIFT INDICATOR** (p. 55)
Indicates the received signal passband position.
- 10 IF-FILTER PASSBAND WIDTH INDICATOR** (p. 52)
Indicates the current signal passband width.
- 11 MAXIMUM FREQUENCY SPAN INDICATORS** (p. 84)

 - ➔ Indicates the upper and lower observable frequency limits around a receive frequency.
 - ➔ In the diagram, the upper and lower limits are ± 500 kHz.
- 12 LIMIT/PAUSE INDICATOR** (p. 84)

 - ➔ “LIMIT” appears when the tuning step (9) is larger than the automatic sweep step (13) setting.
 - The limit indicator is not indicated when the tuning step and the sweep step width are the same.
 - ➔ “PAUSE” appears while the band scope is pausing.
- 13 FREQUENCY SPAN INDICATOR** (p. 84)
Indicates the frequency span selected with the [SPAN +] or [SPAN -] button.
- 14 CENTER FREQUENCY INDICATOR** (p. 84)
Indicates the center frequency of the frequency span; this is for the currently received frequency.
- 15 SWEEP STEP INDICATOR** (p. 84)
Indicates band scope sweep step.
- 16 AFC INDICATOR [AFC]** (p. 53)
Appears when the AFC (Automatic Frequency Control) function is ON.
- 17 ATTENUATOR INDICATOR [ATT]** (p. 53)
Appears when the ATT (Attenuator) function is ON.
- 18 TSQ/L/DTCS INDICATOR [TSQ/L]/[DTCS]**

 - ➔ “TSQ/L” appears when the tone squelch frequency is set. (p. 79)
 - ➔ “DTCS” appears when DTCS code and the polarity are set. (p. 80)
- 19 REVERSE/POCKET BEEP INDICATOR [R]/**

 - ➔ “[R]” appears when the reverse action is set. (pgs. 79, 80)
 - ➔ “” appears when the pocket beep function is set. (p. 81)
- 20 VSC INDICATOR [VSC]** (p. 55)
Appears when the VSC (Voice Squelch Control) function is ON.
- 21 AGC INDICATOR [AGC-F]** (p. 54)
“AGC-F” appears when the AGC fast is selected.
- 22 NB INDICATOR [NB]** (p. 54)
Appears when the NB (Noise Blanker) function is ON.
- 23 FREQUENCY/TIME INDICATOR [FREQ]/[TIME]**

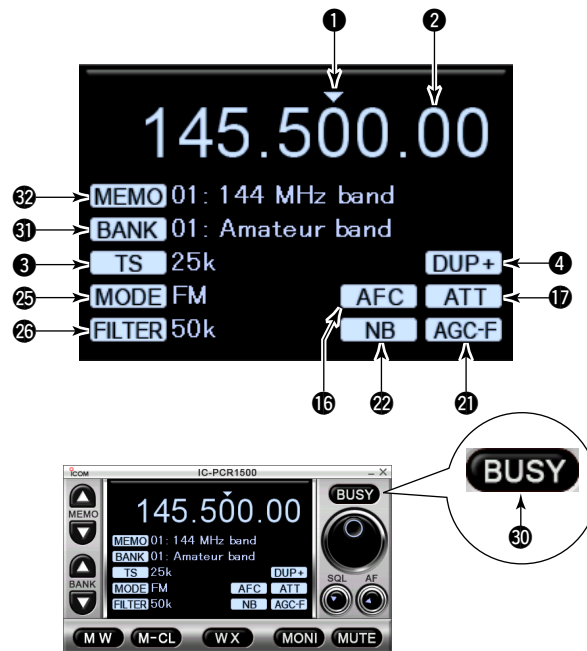
 - ➔ “FREQ” appears when Frequency mode is selected in the band scope operation. (p. 83)
 - ➔ “TIME” appears when Time mode is selected in the band scope operation. (p. 84)
- 24 TIME INTERVAL INDICATORS** (p. 84)
Indicates the time interval to sweep the receiving signal.

4 PANEL DESCRIPTION

- 25 RECEIVE MODE INDICATORS** (p. 48)
Indicate the current receive mode.
- 26 IF FILTER INDICATOR** (p. 52)
Indicates the selected IF filter.
- 27 MUTE INDICATOR** (p. 50)
Appears when the squelch circuit mutes the received audio signal.
- 28 MONI INDICATOR** (p. 50)
Appears during monitoring the operating frequency.
- 29 S (SIGNAL) METER** (pgs. 43, 47)
➔ Indicates the receive signal strength.
➔ Indicates the S-meter squelch receive level set via the [SQUELCH] control.
- 30 BUSY INDICATOR [BUSY]**
Appears when receiving a signal or when signal noise opens the squelch.
- 31 MEMORY BANK INDICATOR** (p. 58)
Indicates the memory bank number (and name if it is set) being received.
- 32 MEMORY CHANNEL INDICATOR** (p. 58)
Indicates the memory channel number (and name if it is set) being received.

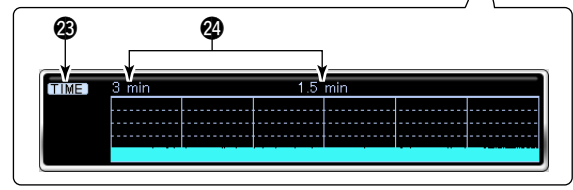
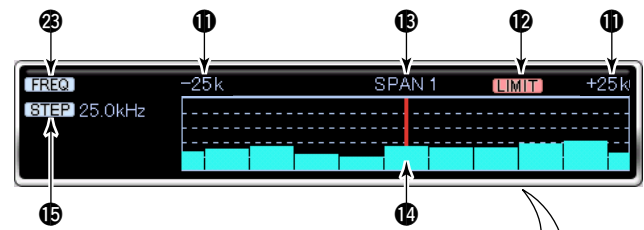
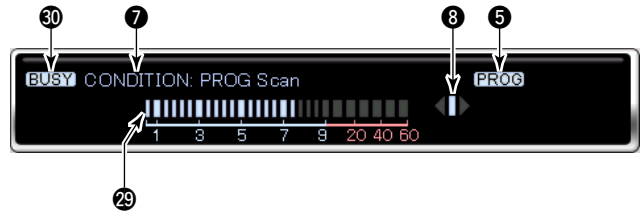
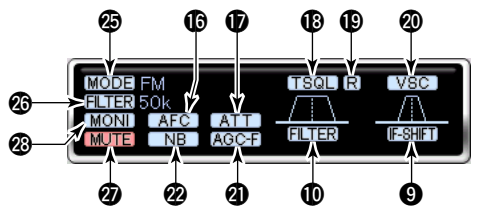
◇ Function display (on Simple screen)

The function display indicators on the Simple screen operate the same as on the Multi-function receiver screens. Please refer to the explanations on pages. 36 to 38.



◇ **Function display (on Component screen)**

The function display indicators on the Component screen operate the same as on the Multi-function receiver screens. Please refer to the explanations on pages. 36 to 38.



4 PANEL DESCRIPTION

■ Main unit

◇ Front panel



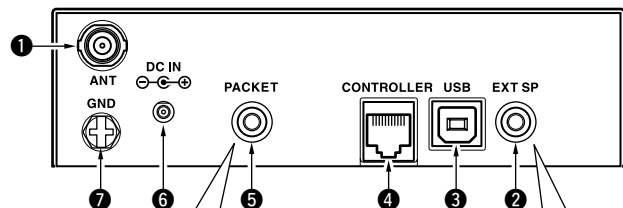
❶ POWER SWITCH [POWER]

Turn the IC-PCR1500 main unit power ON and OFF.

❷ POWER INDICATOR

Lights when the IC-PCR1500 main unit is turned ON.

◇ Rear panel



❷ EXTERNAL SPEAKER JACK [EXT SP]

Connects an 8 Ω external speaker (not supplied).
• Audio output power is more than 0.5 W.

❸ USB CONNECTOR [USB]

Connects to a PC via the supplied USB cable.

❹ CONTROLLER [CONTROLLER] (IC-R1500 only)

Connects to a controller via an extension cable.

❺ DATA JACK [PACKET]

Connects a TNC (Terminal Node Controller), etc. for data communications.

- The receiver can receive 9600 bps packet communication (AFSK.)
- See p. 2 for connection information.

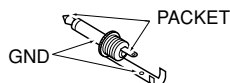
❻ POWER JACK [DC IN]

Accepts 12 V DC $\pm 15\%$ with the supplied DC power cable.

❼ GROUND TERMINAL [GND]

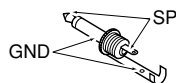
Connect this terminal to a ground.

PACKET jack connection



2-conductor 3.5 (d) mm (1/8) inch 100 k Ω

EXT SP jack connection



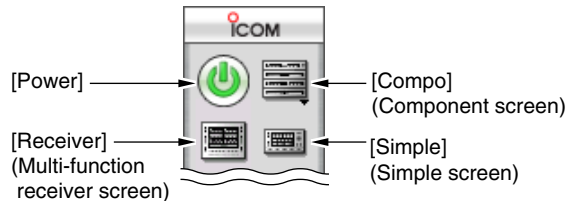
2-conductor 3.5 (d) mm (1/8) inch 8 Ω

❶ ANTENNA CONNECTOR [ANT]

Connects a 50 Ω antenna with a BNC connector and a 50 Ω coaxial cable.

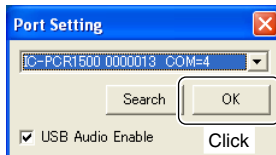
■ Starting the IC-PCR1500

- ① Before launching the program, please make sure the IC-PCR1500 is powered ON.
 - The power indicator lights green.
- ② Launch the IC-PCR1500 program. (p. 26)
- ③ Click the [Power] icon on the tool bar to turn the IC-PCR1500 ON.
- ④ Click the desired icon, [Receiver], [Compo] or [Simple] on the tool bar to select the receiver screen that you want to use.



◇ USB port confirmation

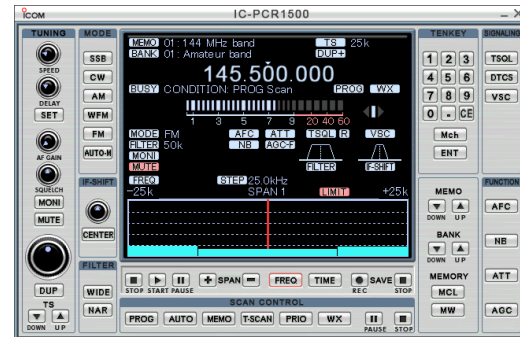
After the IC-PCR1500 is turned ON (step ③ as above), the following dialog box appears at first time only. Please confirm the connected PC's USB port number and serial number of your IC-PCR1500, then click [OK].



■ Changing the screen

Click the desired tool bar icon that you want to use.

- Click the [Receiver] icon for the Multi-function receiver screen.

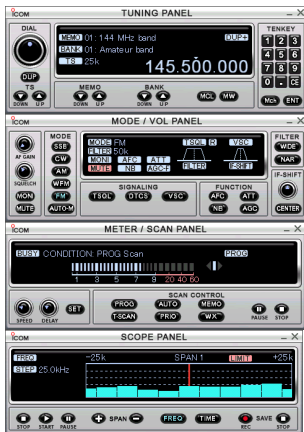


- Click the [Simple] icon for the Simple screen.



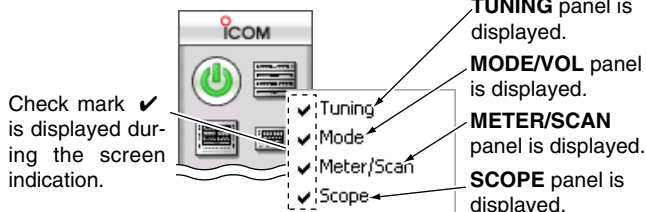
5 BASIC OPERATION

➔ Click the [Compo] icon for the Component screen.



◇ Component screen selection

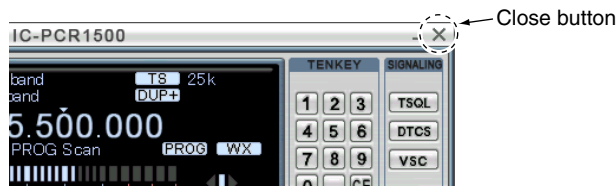
Click the [Compo] icon to display the Component screen, then click again to display the Component screen menu. Select each panel indication ON or OFF.



■ Closing the IC-PCR1500

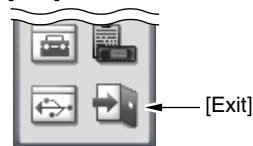
Click the close button (X) to close the IC-PCR1500 program.

- Click the close button (X) in each [TUNING PANEL], [MODE/VOL PANEL], [METER/SCAN PANEL] and [SCOPE PANEL] when the Component screen is displayed.



■ Quitting the IC-PCR1500

Click the [Exit] icon on the tool bar to quit the IC-PCR1500.

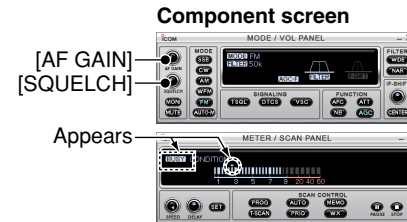
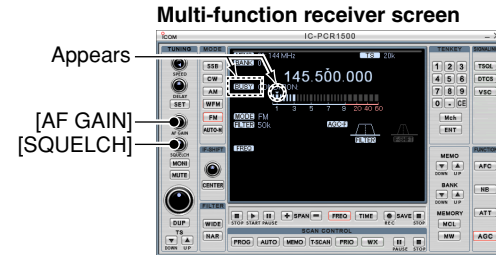


■ Receiving

Make sure the hardware installation is finished. (p. 1)

- ① Click the [Power] icon on the tool bar to turn power ON.
- ② Click the desired icon, [Receiver], [Compo] or [Simple] on the tool bar to select the displayed receiver screen type that you want to use.
- ③ Click [AF GAIN] ([AF])* to set the audio level.
 - Right-click to increase the audio level.
 - Left-click to decrease the audio level.
 - When clicking and holding [AF GAIN] ([AF)*, the audio level scrolls up or down.
 - Push the PC's [↑] (UP) or [↓] (DOWN) key also sets the audio level.
- ④ Click [SQUELCH] ([SQL])* to set the squelch level.
 - Right-click to increase the squelch level (tight squelch).
 - Left-click to decrease the squelch level (loose squelch).
 - When clicking and holding [SQUELCH] ([SQL)*, the squelch level scrolls up or down.
- ⑤ Set the receive frequency and mode. (pgs. 44, 45, 48)
- ⑥ When receiving a signal on the set frequency, squelch opens and the receiver emits audio.
 - For Multi-function receiver/Component screen
 - “BUSY” appears and the S-meter indicator shows the relative signal strength for the received signal.
 - For Simple screen
 - “BUSY” indicator lights green.

*Available only when Simple screen is displayed.



5 BASIC OPERATION

■ Setting a frequency

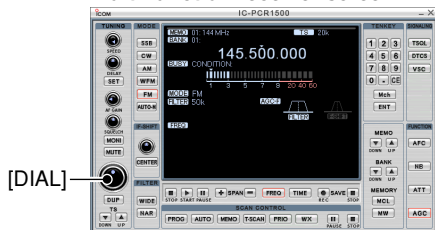
Depending on the situation, the receive frequency can be set using the following methods. Frequencies can be set from 0.010 to 3299.9999 MHz.

◇ Using the tuning dial

➔ Click [DIAL] to set the receive frequency with the selected tuning step.

- Right-click to increase the frequency.
- Left-click to decrease the frequency.
- When clicking and holding [DIAL], the frequency scrolls up or down.
- The frequency changes according to the preset tuning steps. See pgs. 45 and 46 for selecting the tuning step.

Multi-function receiver screen



Component screen



Simple screen



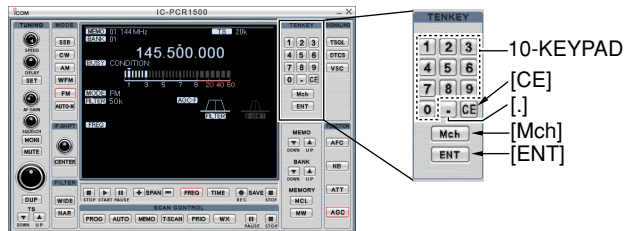
◇ Using the 10-keypad

Using Multi-function receiver/Component screen

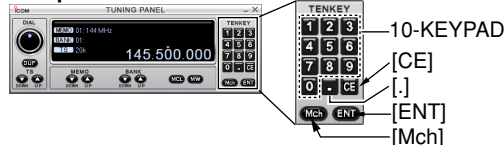
➔ Click the desired 10-keypad, then click [ENT] to set the frequency.

- If you make a mistake while inputting a frequency, click [CE] to clear the input and return to the previous frequency.
- When you want to change the 100 kHz digit and below, click [.] first, then the 10-keypad and then [ENT].
- When you want to set the 100 kHz digit and below to 0, input the MHz digits and then click [ENT].
- When inputting a frequency outside of the allowed receive frequency range, the previously selected frequency is automatically selected after clicking [ENT].

Multi-function receiver screen



Component screen



◇ Using the PC keyboard

- Enter the desired frequency using the 10-keypad on the PC keyboard, then push [Enter] to set the frequency.
 - When inputting from the keyboard, click anywhere in the receiver screen first, then begin inputting the frequency.
 - If you make a mistake while inputting a frequency, click [CE] on the receiver screen to clear the input and return to the previous frequency.
 - When you want to change the 100 kHz digit and below, push [•] first, then the 10-keypad and then [Enter].
 - When you want to set the 100 kHz digit and below to 0, input the MHz digits and then push [Enter].
 - When inputting a frequency outside of the allowed receive frequency range, the previously selected frequency is automatically selected after clicking [Enter].

■ Setting a tuning step

When using the tuning dial to change the frequency, or when a scan function is activated, the frequency changes in increments determined by the set tuning step. The tuning step is adjustable.

The following tuning step are available:

- | | | | | |
|------------|-----------|-----------|------------|------------|
| • 1 Hz | • 10 Hz | • 20 Hz | • 50 Hz | • 100 Hz |
| • 500Hz | • 1 kHz | • 2.5 kHz | • 5 kHz | • 6.25 kHz |
| • 8.33 kHz | • 9 kHz | • 10 kHz | • 12.5 kHz | • 15 kHz |
| • 20 kHz | • 25 kHz | • 30 kHz | • 50 kHz | • 100 kHz |
| • 125 kHz | • 150 kHz | • 200 kHz | • 500 kHz | • 1 MHz |
| • 10 MHz | • USER* | | | |

*When "USER" is selected, the user programmed tuning step (default: 5 kHz) in "User TS" screen is selected. (p. 46)

➤ Continued to the next page.

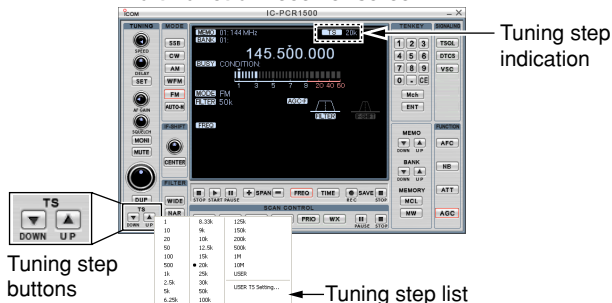
5 BASIC OPERATION

◇ Tuning step selection

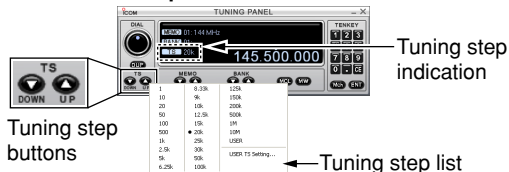
Using Multi-function receiver/Component screen

- Right-click [TS ▲] or [TS ▼] to display a tuning step list, then select the desired tuning step.
- Left-click [TS ▲] or [TS ▼] to set the desired tuning step in order.
 - The selected tuning step is displayed in the function display.

Multi-function receiver screen



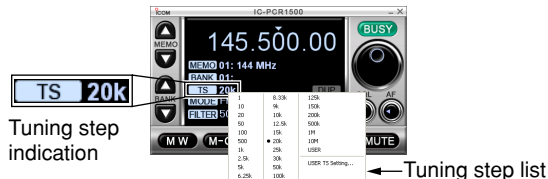
Component screen



Using Simple screen

Click the tuning step indication to display a tuning step list, then select the desired tuning step.

Simple screen



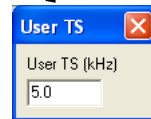
◇ Setting the user tuning step

Right-click [TS ▲] or [TS ▼] (or click tuning step indication)* to display a tuning step list, then select "USER TS Setting...". You can edit the desired tuning step from 0.001–9999.999 kHz (in 0.001 step) directly.

*Available only when Simple screen is displayed.

1	8.33k	125k
10	9k	150k
20	10k	200k
50	12.5k	500k
100	15k	1M
500	20k	10M
1k	25k	USER
2.5k	30k	
5k	50k	
6.25k	100k	

Click



User tuning step setting screen

■ Squelch level setting

The squelch function sets a minimum receive signal level below which no audio is sent to the speaker. This prevents static or hiss from being heard through the speaker between transmissions.

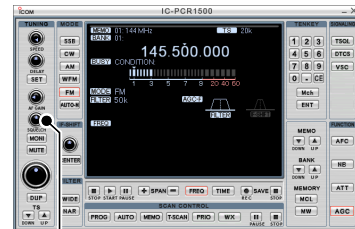
A higher squelch setting removes weak signals. The remove level is displayed on the S-meter (S-meter squelch). The squelch does not open if a signal below the set S-meter level is received.

Using Multi-function receiver/Component screen

Click [SQUELCH] to set the squelch level.

- Right-click to increase the squelch level (tight squelch).
- Left-click to decrease the squelch level (loose squelch).
- When clicking and holding [SQUELCH], the audio level scrolls up or down.
- The S-meter squelch level is displayed in the function display.

Multi-function receiver screen



[SQUELCH]

Component screen



[SQUELCH]

Using Simple screen

Click [SQL] to set the squelch level.

- Right-click to increase the squelch level (tight squelch).
- Left-click to decrease the squelch level (loose squelch).
- When clicking and holding [SQL], the audio level scrolls up or down.

Simple screen



5 BASIC OPERATION

Receive mode selection

Receive modes are determined by the physical properties of the radio signals. The receiver has 6 receive modes: USB, LSB, CW, AM, WFM and FM modes. The mode selection is stored independently in each memory channel.

Typically, AM mode is used for the AM broadcast stations (0.495–1.620 MHz), air band (118–135.995 MHz), and short-wave broadcasts. WFM is used for FM broadcast stations (76–107.9 MHz).

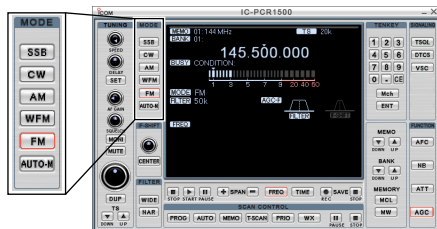
When using [AUTO-M] (automatic mode), a receive mode, IF filter passband width, tuning step, etc., are selected automatically after inputting a frequency. (p. 49)

Using Multi-function receiver/Component screen

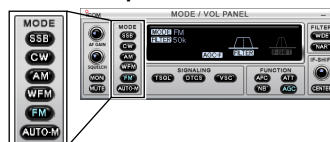
Click [SSB], [CW], [AM], [WFM], [FM] or [AUTO-M] to select the desired receive mode.

- Clicking [SSB] toggles between the USB and LSB mode.

Multi-function receiver screen



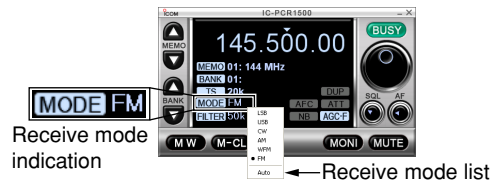
Component screen



Using Simple screen

Click [MODE] to display a mode list, then select the desired receive mode.

Simple screen



■ Automatic mode selection

An automatic mode function is available to automatically set the receive mode, IF filter passband width, tuning step, etc. after inputting a frequency.

Using Multi-function receiver/Component screen

Each click of [AUTO-M] toggles the automatic mode function ON and OFF.

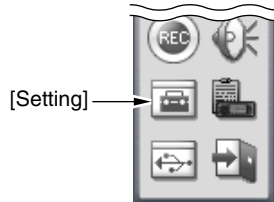
Using Simple screen

Click [MODE] to display a receive mode list, then select [Auto] to turn the automatic mode function ON.

◇ Setting the automatic mode function

The default setting for the automatic mode function can be added to, changed or deleted. Up to 100 ranges can be memorized into the automatic mode function settings.

- 1 Click the [Setting] icon on the tool bar to call up the [Setting] screen if it is not displayed.



- 2 Click the [Auto Mode] tab to display the automatic mode list.



Edit the desired memory name (up to 32 characters)

Click [MENU], then point to [Auto Mode]. Select the desired item from the list.

Default: Return the Auto Mode setting list contents to default.

Import : Import the CSV file.

Export : Export the CSV file.

- 3 Click a cell in the [Freq Low] column and the desired line.
- 4 Input the lower frequency of the frequency range from the keyboard, then push [Enter].
 - When nothing is input into the [Freq Low] or [Freq High] column, settings for other columns cannot be made.
 - When inputting a new frequency, other data automatically appears in the other column.
 - To delete a frequency range setting, enter [0] or [Space] into the [Freq Low] column from the keyboard.
- 5 Input the higher frequency of the frequency range into the [Freq High] column, push the [Enter] key.
- 6 Set other data such as mode, tuning step, etc., if desired.
 - Double-click the desired cell, select the desired item and double-click the selection.
- 7 Click the close button ([X]) to close the setting screen.

5 BASIC OPERATION

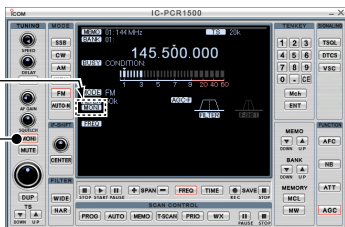
■ Monitor function

This function is used to listen to weak signals without disturbing the squelch setting or to open the squelch manually even when mute functions such as the tone squelch are in use.

Click [MONI] to monitor the operating frequency.

- “MONI” appears when Multi-function receiver/Component screen is displayed.
- “MONI” button lights green when Simple screen is displayed.

Multi-function receiver screen



Appears

[MONI]

Component screen



Appears

[MONI]

Simple screen



[MONI]

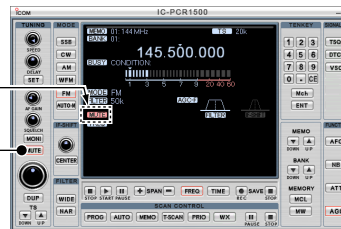
■ Mute function

This function is used to mute the received audio signal.

Click [MUTE] to temporarily mute audio output.

- “MUTE” appears when Multi-function receiver/Component screen is displayed.
- “MUTE” button lights green when Simple screen is displayed.

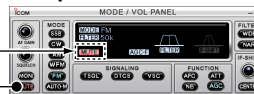
Multi-function receiver screen



Appears

[MUTE]

Component screen



Appears

[MUTE]

Simple screen



[MUTE]

■ Duplex operation

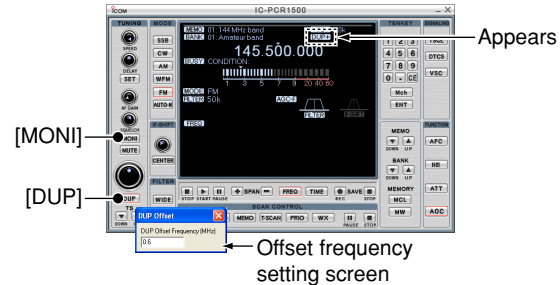
Duplex communication uses one frequency for transmit, and a different frequency for receive. Generally, duplex is used in communication through a repeater, some utility communications, etc.

During duplex operation, the transmit station frequency is shifted from the receive station frequency by the offset frequency. Repeater information (offset frequency and shift direction) can be programmed into memory channels. (p. 58)

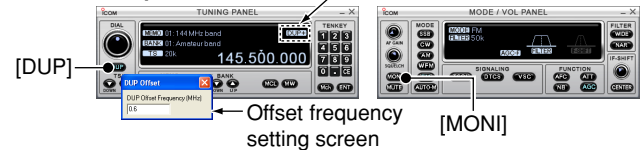
- ① Set the receive frequency (repeater output frequency). (pgs. 44, 45)
- ② Right click [DUP] to display the [DUP Offset] screen.
- ③ Set the desired offset frequency within 0.000000–1000.000000 MHz range, then click the close button ([X]) to close the setting screen.
- ④ Left click [DUP] to toggle the duplex direction from OFF (simplex), DUP–, or DUP+.
- ⑤ Click [MONI] to monitor the transmit station frequency (repeater input frequency).

The displayed frequency shifts the offset frequency when monitor function is in use.

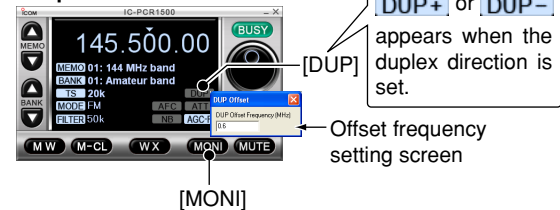
Multi-function receiver screen



Component screen



Simple screen



6 OTHER FUNCTIONS

IF filter selection

Increasing or decreasing the width of incoming signals can help eliminate interference. Available filters vary according to the receive mode. See the table below.

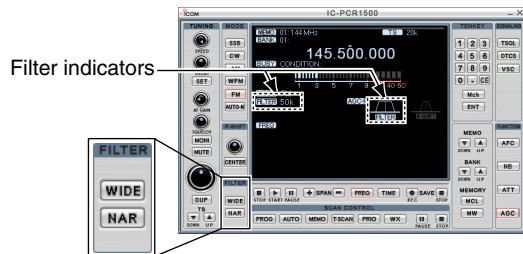
IF filter	2.8 kHz	6 kHz	15 kHz	50 kHz	230 kHz
USB/LSB	○	○	—	—	—
CW	○	○	—	—	—
WFM	—	—	—	○	○
AM	○	○	○	○	—
FM	—	○	○	○	—

○: Available —: Not available

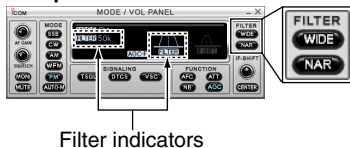
Using Multi-function receiver/Component screen

Click [WIDE] or [NAR] to select the desired IF filter widths.

Multi-function receiver screen

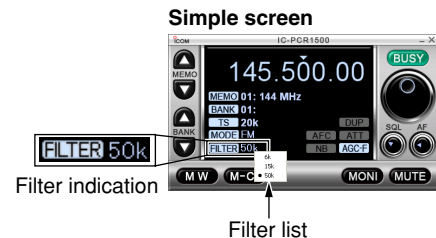


Component screen



Using Simple screen screen

Click [FILTER] to display a filter list, then select the desired filter widths.

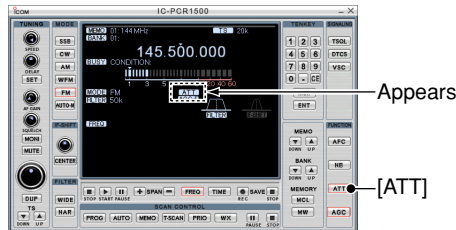


■ Attenuator function

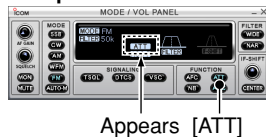
Strong signals (such as from broadcast stations, pocket beepers, nearby amateur radio stations, etc.) can cause distortion of receive signals. The attenuator function can reduce signal strength of interfering signals by approximately 20 dB. This function cannot be used in 1300.000001 MHz or above.

Click [ATT] to turn the ATT (Attenuator) function ON or OFF.
 • “ATT” appears when the ATT function is turned ON.

Multi-function receiver screen



Component screen



Appears [ATT]

Simple screen



[ATT]

■ AFC function

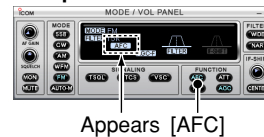
The AFC (Automatic Frequency Control) function tunes the displayed frequency automatically when an off-center frequency is received. It activates in FM mode and IF filter setting is 6 or 15 kHz only.

Click [AFC] to turn the AFC (Automatic Frequency Control) function ON or OFF.
 • “AFC” appears when the AFC function is turned ON

Multi-function receiver screen



Component screen



Appears [AFC]

Simple screen



[AFC]

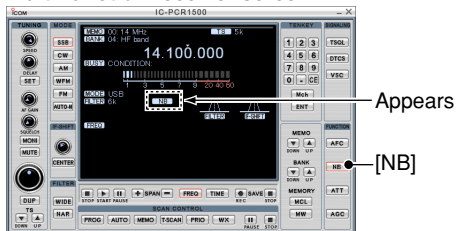
6 OTHER FUNCTIONS

■ NB function

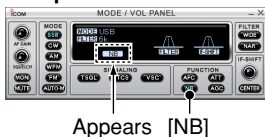
The NB (Noise Blanker) function removes pulse-type noise when USB, LSB, CW or AM mode is selected. Note that the noise blanker is not effective against natural noise such as atmospheric static.

Click [NB] to turn the NB (Noise Blanker) function ON or OFF.
 • “NB” appears when the NB function is turned ON.

Multi-function receiver screen



Component screen



Simple screen

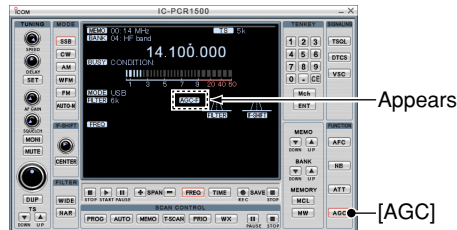


■ AGC function

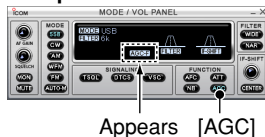
The AGC (Automatic Gain Control) function controls receiver gain to produce a constant audio output level even when the received signal strength is varied by fading, etc. The AGC fast is always selected in FM or WFM mode.

Click [AGC] ([AGC-F])* to toggle the time constant of the AGC circuit between slow and fast.
 • “AGC-F” appears when fast is selected.
 *Available only when Simple screen is displayed.

Multi-function receiver screen



Component screen



Simple screen



■ VSC function

The VSC (Voice Squelch Control) function opens the squelch only when receiving a modulated voice signal.

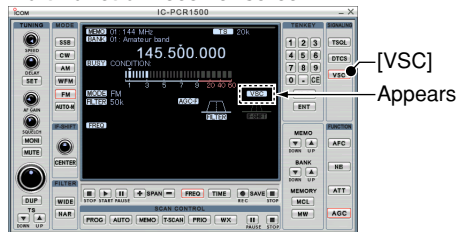
- Not modulated signal (contain no voice or music, etc. components) are muted.

Using Multi-function receiver/Component screen

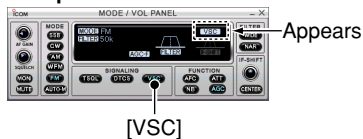
Click [VSC] to turn the VSC (Voice Squelch Control) function ON or OFF.

- “VSC” appears when the VSC function is turned ON.

Multi-function receiver screen



Component screen

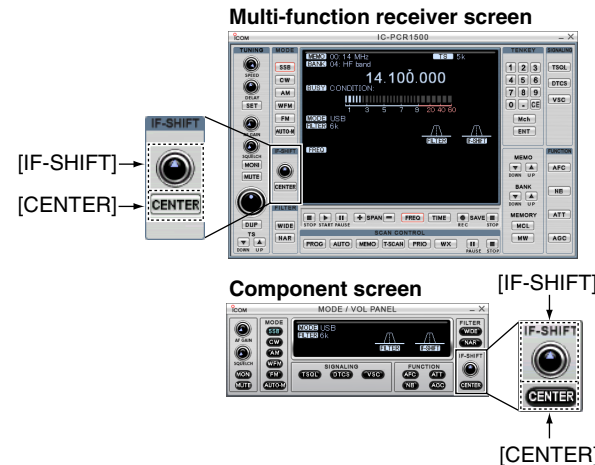


■ IF shift function

The IF shift function electronically changes the center of the IF (intermediate frequency) passband frequency to reject interference. It activates in SSB/CW modes only.

Using Multi-function receiver/Component screen

- ① Adjust the [IF-SHIFT] control for a minimum interference signal level.
 - The audio tone may be changed while the IF shift is in use.
- ② Click [CENTER] to set the shift control to its center position when there is no interference.



6 OTHER FUNCTIONS

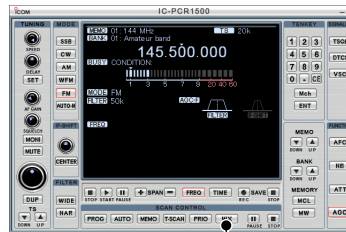
■ Weather channel operation (USA and CANADA versions only)

NOAA broadcast stations transmit weather alert tones before important weather announcements. When the weather alert function is turned ON, the selected weather channel is monitored each 5 sec. for the announcement. When the alert signal is detected, the “WX Alert” blinks and the WX channel is displayed, and sounds a beep tone until a change is made within the IC-PCR1500 program window, or the [WX] button is clicked. The previously selected (used) weather channel is checked periodically during standby or while scanning.

- ① Right-click the [WX] button to call up the [WX Alert] setting screen if it is not displayed.
- ② Select the desired weather channel in [WX Alert Channel].
 - Click [CHECK] to monitor the selected weather channel.
- ③ Click the close ([X]) button to close the setting screen.
- ④ Click the [WX] button to turn the weather alert function ON.
- ⑤ When the alert is detected, a beep sounds and the indication will be displayed as at right.
- ⑥ Click the [WX] button to turn the weather alert function OFF.

NOTE: While receiving a signal (on a frequency other than the weather alert ON frequency), the receiving signal or audio will be interrupted momentarily every 5 sec. (approx.) in case the alert function is turned ON. This symptom is caused by the WX alert function. To cancel these symptoms, set the weather alert item to OFF in set mode.

Multi-function receiver screen

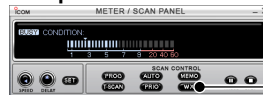


Simple screen



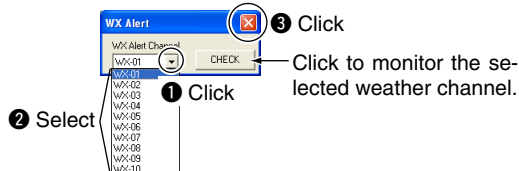
[WX]

Component screen



[WX]

[WX]

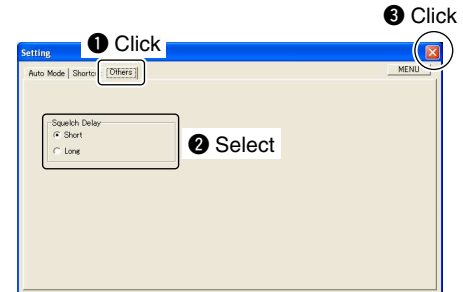
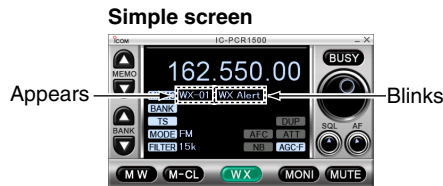
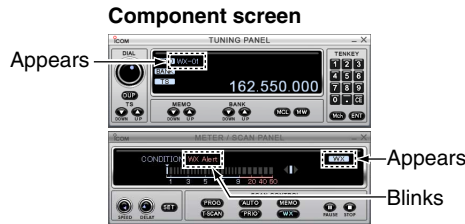
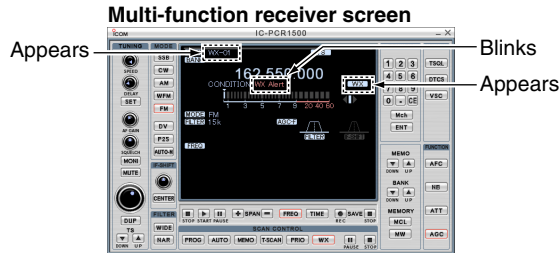


■ Squelch delay setting

Select squelch delay from short and long to prevent repeated opening and closing of the squelch during reception of the same signal.

- Short : Short squelch delay.
- Long : Long squelch delay.

- ① Click the [Setting] icon on the tool bar to call up the [Setting] screen if it is not displayed.
- ② Click the [Others] tab to display the squelch delay setting.
- ③ Click the [Short] or [Long] radio button to set the squelch delay.
- ④ Click the close button ([X]) to close the [Setting] list screen.



■ General

The receiver has 2600 memory channels for storage of often-used frequencies. Total of 26 memory banks are available for usage by group, etc., and 100 channels are assigned into a bank.

◇ Memory channel contents

The following information can be programmed into memory channels:

- Memory channel name (p. 62)
- Sub name (p. 62)
- Operating frequency (p. 44)
- Duplex direction (p. 51)
- Offset frequency (p. 51)
- Receive mode (p. 48)
- IF filter selection (p. 52)
- Attenuator ON/OFF (p. 53)
- Tuning step (p. 45)
- Select memory scan setting (p. 74)
- Memory skip scan setting (p. 74)
- Squelch control system ON/OFF and its frequency or code (p. 79)
- Remark (memory channel comment) (p. 62)

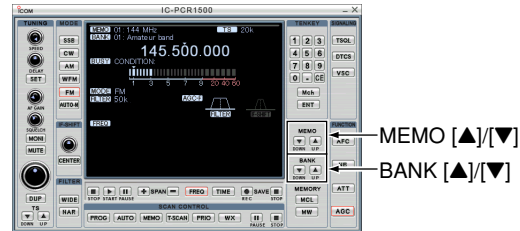
■ Memory channel selection

◇ Selecting with the receiver screen

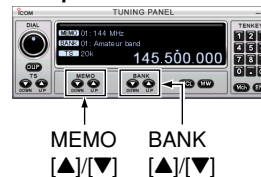
• Using [▲]/[▼] buttons

- ① Click [BANK ▲] or [BANK ▼] to select the desired memory bank.
- ② Click [MEMO ▲] or [MEMO ▼] to select the desired memory channel.

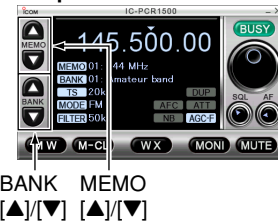
Multi-function receiver screen



Component screen



Simple screen

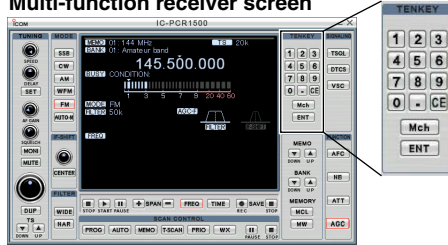


• **Direct channel number input on the Multi-function receiver/Component screen**

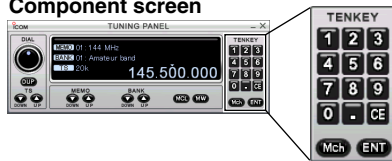
Use the 10-keypad to input the desired memory channel number, then click [Mch] to select the memory channel.

- If a mistake is made when inputting a memory channel, click [CE] to clear the input and return to the previous frequency indication.

Multi-function receiver screen



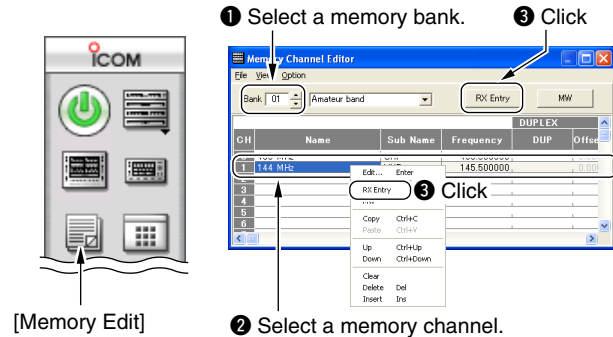
Component screen



◆ **Selecting with the memory channel screen**

- ① Click the [Memory Edit] icon on the tool bar to call up the [Memory Channel Editor] screen if it is not displayed.
- ② Click [▲] or [▼] to select a memory bank.
- ③ Select the desired memory channel.
- ④ Click [RX Entry], or right-click a cell then click [RX Entry] in the edit menu.

• The selected channel data is displayed on the receiver screen.



7 MEMORY CHANNELS

Memory channel programming

100 memory channels are assigned into a memory bank. There are 26 memory banks. Any of the following information can be stored.

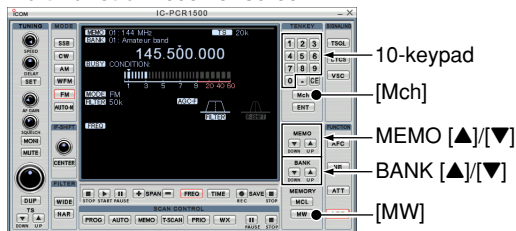
- Bank name, memory name, frequency, duplex direction, offset frequency, mode, filter, attenuator, tuning step, select memory scan, skip channel, tone squelch and remark.

◇ Programming from the receiver screen

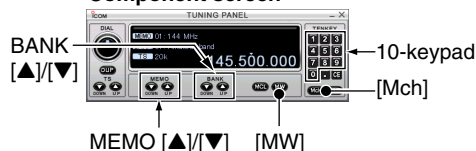
• Using Multi-function receiver/Component screen

- ① Click [BANK ▲] or [BANK ▼] to select a memory bank to be programmed.
- ② Click [MEMO ▲] or [MEMO ▼], or use the 10-keypad to input the desired memory channel number, then click [Mch] to select a memory channel to be programmed.
- ③ Set a frequency, mode, etc. that you want to memorize.
- ④ Click [MW] for 1 sec. to program the setting information into the selected memory channel.

Multi-function receiver screen



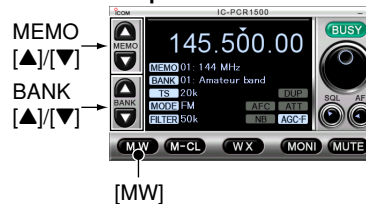
Component screen



• Using Simple screen

- ① Click [BANK ▲] or [BANK ▼] to select a memory bank to be programmed.
- ② Click [MEMO ▲] or [MEMO ▼] to select a pre-programmed memory channel to be programmed.
⚡NOTE: You cannot program a blank channel.
- ③ Set a frequency, mode, etc. that you want memorized.
- ④ Click [MW] for 1 sec. to program the setting information into the selected memory channel.

Simple screen



■ Editing the memory list

- ① Click the [Memory Edit] icon on the tool bar to call up the [Memory Channel Editor] screen if it is not displayed.
- ② Click [▲] or [▼] to select the desired memory bank.
- ③ Click the [Frequency] cell of the desired memory channel, then input the receive frequency from the keyboard. After inputting, push [Enter].
 ▨ Program the receive frequency first, otherwise no setting can be made except for the name.
- ④ Double-click the desired cell directory, or right-click the cell then click [Edit... Enter] from the displayed menu to set other items such as duplex direction, mode, tuning step, etc., if desired.
 - Click the desired setting item in the pull down menu to select or change the channel setting, or edit it directly depends on the item.
- ⑤ Click the [RX Entry] to write the edited memory contents to the receiver.
- ⑥ Click the close button ([X]) to close the [Memory Channel Editor] screen.

◇ Initializing the memory channel contents

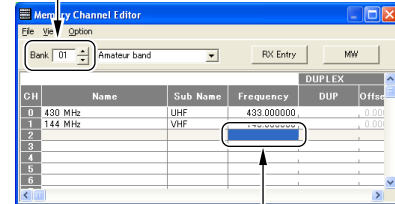
The memory channel contents can be initialized using the “preset_e.mch” file (which is saved in mch format).

Click [Open...] in the [File] menu, then select “preset_e.mch” that is contained in the “IC-PCR1500” folder to load.

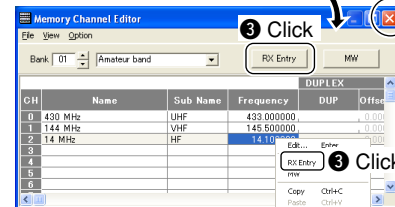
- If the “preset_e.mch” file is overwritten or lose, copy it from the supplied CD into the “IC-PCR1500” folder.
- Right-click the copied file and select [Properties]. Then click [Read-only] check box (no check mark) to cancel the read protection.



① Select a memory bank.



② Input the receive frequency, then set other items.



④ Click

③ Click

Edit menu

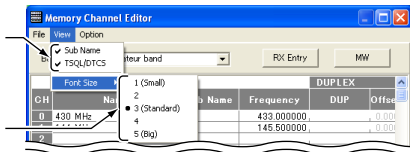
7 MEMORY CHANNELS

◆ About the [View] menu

The indicated character size, sub name and TSQL/DTCS setting indication can be set in [View] menu.

Click to turn the Sub Name and TSQL/DTCS indication ON and OFF.

Click to select the indicated character size.

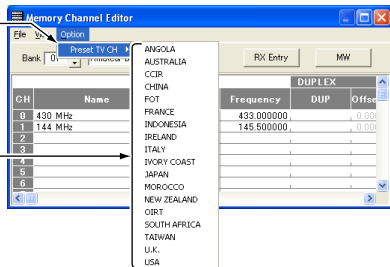


◆ About the [Option] menu

Click [Preset TV CH] in [Option] menu to display the preset TV channel group. Then select the desired channel group. All available TV frequencies and channel numbers in the selected group are listed in the memory channel screen automatically.

Click to display the preset TV channel group.

Click to select the desired channel group.



◆ Editing the memory name

- 1 Click the [Memory Edit] icon on the tool bar to call up the [Memory Channel Editor] screen if it is not displayed.
- 2 Click [▲] or [▼] to select the desired bank.

- 3 Select the desired channel, then double-click the [Name] or [Sub Name] cell.
 - A cursor starts blinking.
 - [Name] (up to 64 characters) is used for the memory name of the IC-PCR1500.
 - [Sub Name] (up to 6 characters) is used for the memory name of the IC-R1500.
- 4 Edit the desired memory name from the PC keyboard, then push [Enter] to input.

◆ Editing the channel remark (channel comment)

- 1 Click the [Memory Edit] icon on the tool bar to call up the [Memory Channel Editor] screen if it is not displayed.
- 2 Click [▲] or [▼] to select the desired memory bank.
- 3 Select the desired channel, then double-click [Remark] cell.
 - A cursor starts blinking.
- 4 Edit the channel comment (up to 64 characters) from the PC keyboard, then push [Enter] to input.

◆ Calling up the memory channel data from the receiver

- 1 Click the [Memory Edit] icon on the tool bar to call up the [Memory Channel Editor] screen if it is not displayed.
- 2 Click [▲] or [▼] to select the desired memory bank.
- 3 Select the desired memory channel to call up the operating channel data on the Multi-function receiver screen or Component screen.
- 4 Click [MW], or right-click a cell then click [MW] in the edit menu.
 - The operating channel data is called up to the [Memory Channel Editor] screen.

◇ Copying a memory contents

- ① Click the [Memory Edit] icon on the tool bar to call up the [Memory Channel Editor] screen if it is not displayed.
- ② Click [▲] or [▼] to select the desired memory bank.
- ③ Right click any cell of the desired memory channel to be copied, then select [Copy (Ctrl+C)] from the displayed menu.
 - After selecting a cell of the desired memory channel, push [C] key while pushing and holding the [Ctrl] key— these key actions are the same as the mouse operation above.
- ④ Right click any cell of the desired memory channel to be copied to, then select [Paste (Ctrl+V)].
 - After selecting a cell of the desired memory channel, push the [V] key while pushing and holding the [Ctrl] key— these key actions are the same as the mouse operation above.

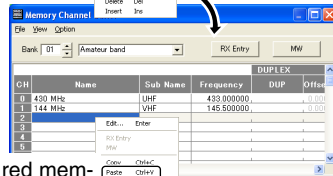


[Memory Edit]

① Select a memory bank.



② Click



③ Select the desired memory channel to be copied to, then click [Paste].

◇ Memory channel insert/delete

Insert:

New blank channels can be inserted into the channel list. Channels below the cursor are shifted down automatically.

Delete:

Unnecessary channels can be deleted from the list. Channels below the cursor are shifted up automatically.

- ① Click the [Memory Edit] icon on the tool bar to call up the [Memory Channel Editor] screen if it is not displayed.
- ② Click [▲] or [▼] to select a memory bank.
- ③ Right-click a cell on the desired channel that you want to insert/delete, then click [Insert] or [Delete] from the list to insert/delete the channel at the selected position.

◇ Memory channel up/down

Up:

The selected channel contents moves up one step.

Down:

The selected channel contents moves down one step.

- ① Click the [Memory Edit] icon on the tool bar to call up the [Memory Channel Editor] screen if it is not displayed.
- ② Click [▲] or [▼] to select a memory bank.
- ③ Right-click a cell on the desired channel that you want to up/down, then click [Up] or [Down] from the list to move up/down the channel to one step.

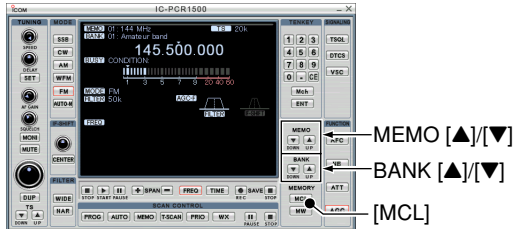
Memory channel clearing

Clearing from the receiver screen

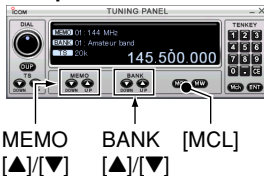
- 1 Click [BANK ▲] or [BANK ▼] to select the memory bank, including the unneeded memory channel.
- 2 Click [MEMO ▲] or [MEMO ▼] to select the unneeded memory channel to be cleared.
- 3 Click [MCL] ([M-CL])* for 1 sec. to clear the memory channel contents.

*Available only when Simple screen is displayed.

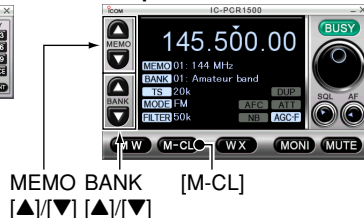
Multi-function receiver screen



Component screen



Simple screen

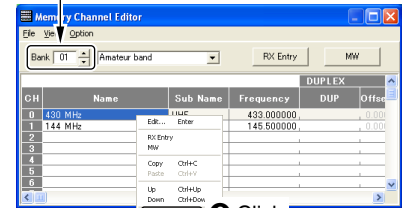


Clearing from the memory list

- 1 Click the [Memory Edit] icon on the tool bar to call up the [Memory Channel Editor] screen if it is not displayed.
- 2 Click [▲] or [▼] to select a memory bank.
- 3 Right click the cell of the unneeded memory channel to be cleared, then click [Clear] from the displayed menu.
- 4 Click [OK] in the displayed dialog box to clear the selected memory channel contents.



- 1 Select a memory bank.



- 2 Click



- 3 Click

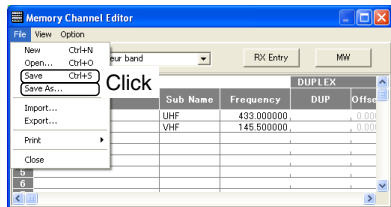
7 MEMORY CHANNELS

■ Saving memory channel data

The memory channels can be stored as a PC file.

Click [Save] or [Save As...] in the [File] menu to back up memory channel data.

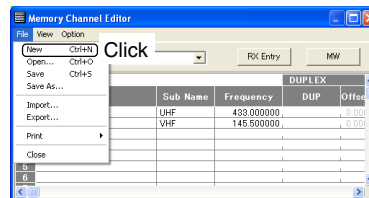
- Save : Saves current project as a PC file. Overwritten if previously saved file of the same name exist.
- Save As... : Saves with a different file name.



■ Creating new memory channel data file

The new memory channel data file can be created.

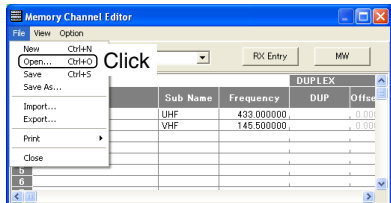
Click [New] in the [File] menu to make a new memory channel data file.



■ Opening memory channel data

The stored memory channel data in the PC can be loaded.

Click [Open...] in the [File] menu, then select the desired memory channel data file that is saved previously.

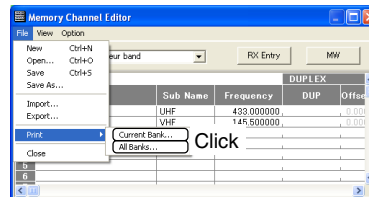


■ Printing a memory channel

A memory channel screen can be printed out.

Click [Print] in the [File] menu to print the displayed memory channel screen.

- Current Bank... : Print a currently displayed bank settings.
- All Banks... : Print all banks settings.

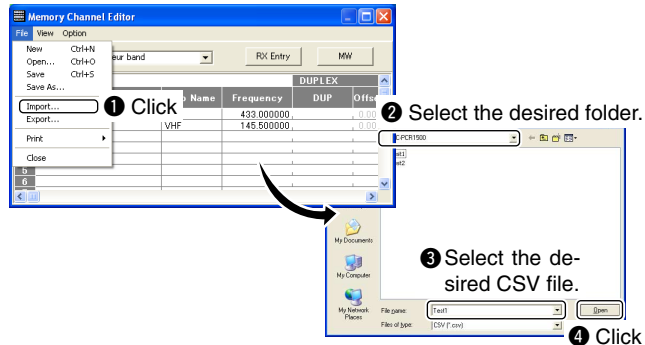


■ Importing a CSV file

The CSV (Comma Separated Values) format file (which is saved in CSV format) can be imported and overwrite to the selected bank contents.

NOTE: Save the current contents as a PC file (p. 66) before importing a CSV file. Once the imported CSV file is overwritten, previously set contents are no longer available.

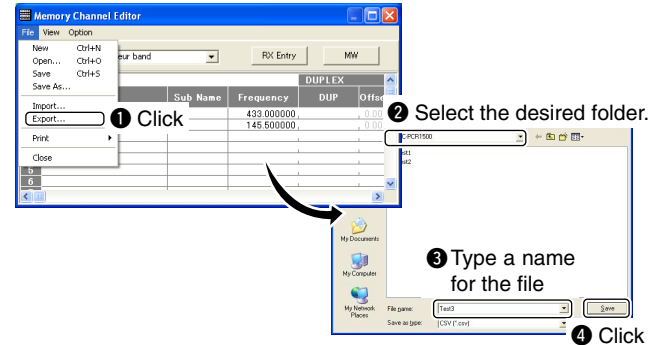
- ① Click [Import...] in the [File] menu.
- ② Select the desired drive that the CSV file is saved in, then click [Open].
- ③ Select the desired folder in which the CSV file is saved, then click [Open].
- ④ Select the desired CSV file that you want to import, then click [Open].
 - The selected CSV file is imported.



■ Exporting a CSV file

The selected bank contents are exportable in CSV (Comma Separated Values) file format.

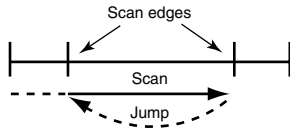
- ① Click [Export...] in the [File] menu.
- ② Select the desired drive to which the CSV file is saved, then click [Open].
- ③ Select the desired folder in which the CSV file is saved, then click [Open].
- ④ Type a name for the file in the [File name] box, then push [Save] to save the selected bank contents in CSV format.



Scan types

PROGRAMMED SCAN

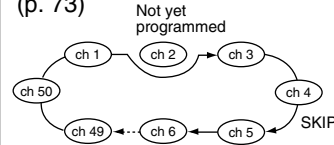
(p. 69)



Repeatedly scans between two user-programmed frequencies. Used for checking for frequencies within a specified range such as repeater output frequencies, etc.

MEMORY SCAN

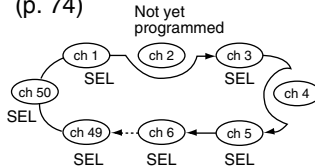
(p. 73)



Repeatedly scans memory channels within a memory bank (0–25).

SELECT MEMORY SCAN

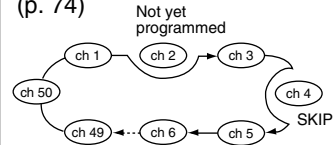
(p. 74)



Repeatedly scans only select memory channels within a memory bank. This function can be turned ON/OFF in the [Memory Scan] screen. Select channels can be set in the memory list screen.

MEMORY SKIP SCAN

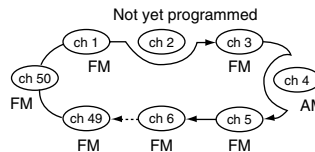
(p. 74)



Skips unwanted memory channels that inconveniently stop scanning. This function can be turned ON/OFF in the [Memory Scan] screen. Skip channels can be set in the memory list screen.

MODE SELECT MEMORY SCAN

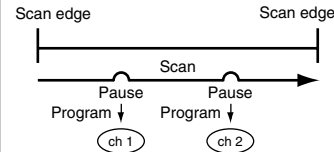
(p. 74)



Repeatedly scans only selected mode channels within a memory bank. This function can be set in the [Memory Scan] screen.

AUTO MEMORY WRITE SCAN

(p. 71)



The frequencies that the programmed scan stops on are automatically programmed into a selected memory bank.

■ Programmed scan

Programmed scan automatically searches for signals within a specified frequency range.

For programmed scan, scan edges must be programmed in advance.

◇ Programming scan edge channels

Set the scan edge channel name, frequency range and ATT in advance. Up to 50 settings can be programmed.

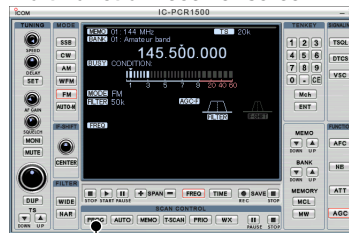
- ① Right-click the [PROG] button to call up the [Program Scan] setting screen if it is not displayed.
- ② Click the [Program Scan] tab to show the program list.
- ③ Input the start frequency into the [Freq Low] cell from the keyboard, then push [Enter].
 - Set other data (e.g. name, end frequency into [Freq High] or attenuator) if desired.
- Program the start frequency first, otherwise no setting can be done except for the name.
- ④ Enter the desired scan edge channel number, then click the close ([X]) button to close the setting screen.

◇ Edit menu details

Editing the memory list with the edit menu is the same as the memory channels. See the following pages for details.

- Copying a memory contents (p. 63)
- Memory channel insert/delete (p. 63)
- Memory channel up/down (p. 63)
- Clearing from the memory list (p. 65)

Multi-function receiver screen



[PROG]

Component screen



[PROG]

[Program Scan] setting screen



- ② Input the start frequency first, then set other data.

Edit...	Enter
Copy	Ctrl+C
Paste	Ctrl+V
Up	Ctrl+Up
Down	Ctrl+Down
Clear	
Delete	Del
Insert	Ins

Edit menu

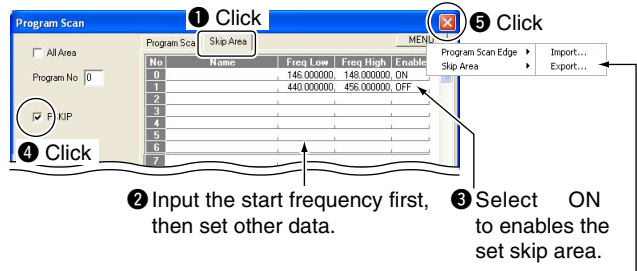
Click [MENU], and point to [Program Scan Edge]. Then, select the desired item from the list.
Import : Import the CSV file.
Export : Export the CSV file.

8 SCAN OPERATION (Multi-function receiver/Component screens only)

◆ Skip area setting

The skip area setting is available for skipping unwanted frequencies that inconveniently stop scanning.

- ① Right-click the [PROG] button to call up the [Program Scan] setting screen if it is not displayed.
 - ② Click the [Skip Area] tab to show the skip area list.
 - ③ Input the skip start frequency into the [Freq Low] cell from the keyboard, then push [Enter].
 - Set other data (e.g. name or skip end frequency into [Freq High]) if desired.
- ▨ Program the start frequency first, otherwise no setting can be done except for the name.
- ④ Select "ON" in [Enable] to enable the set skip area.
 - ⑤ Click [PSKIP] to turn the skip area function ON, then click the close ([X]) button to close the setting screen.

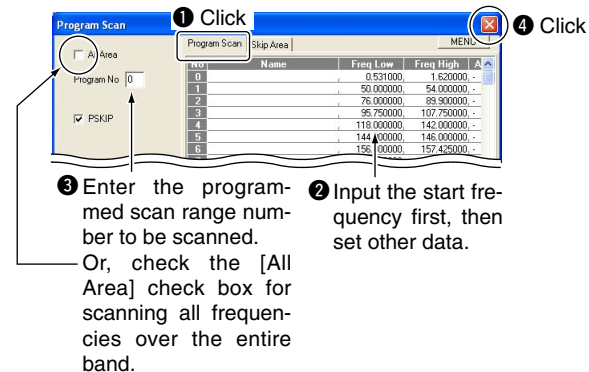


Click [MENU], and point to [Skip Area]. Then, select the desired item from the list.

Import : Import the CSV file.
Export : Export the CSV file.

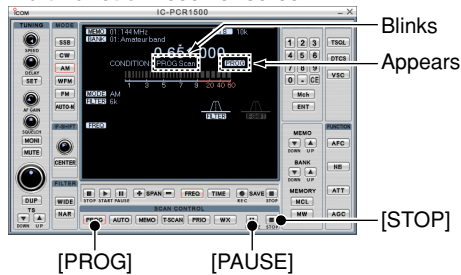
◆ Starting a programmed scan

- ① Make sure the squelch is set to the threshold point (closed condition).
- ② Right-click the [PROG] button to call up the [Program Scan] setting screen if it is not displayed.
- ③ Click the [Program Scan] tab to show the program list.
- ④ Enter the programmed scan range number to be scanned in [Program No], then click the close ([X]) button to close the setting screen.

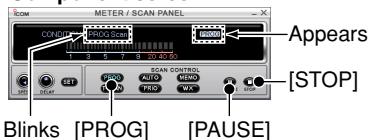


- ⑤ Click the [PROG] button to start programmed scan.
 - "PROG Scan" blinks and [PROG] appears while scanning.
- ⑥ To stop the scan, click [STOP] or [PROG].
 - When the frequency is changed after cancelling a scan and a new scan is activated, scanning starts from the starting frequency of the specified frequency range. When the frequency is not changed, scan starts from the previously stopped frequency.

Multi-function receiver screen



Component screen



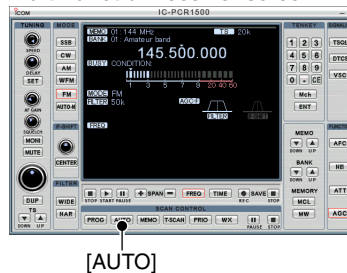
Auto memory write scan

The auto memory write scan does the same as the programmed scan and then writes paused signal frequencies into memory channels of a specified memory bank. Scan edges must be programmed in advance. (p. 69)

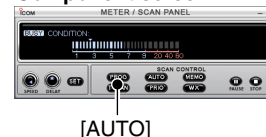
Starting an auto memory write scan

- ① Make sure the squelch is set to the threshold point (closed condition).
- ② Right-click [AUTO] to call up the [Auto MW Scan] setting screen if it is not displayed.

Multi-function receiver screen



Component screen

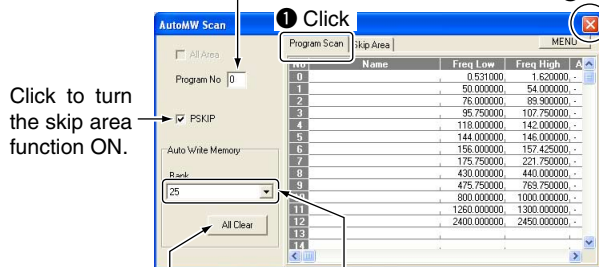


8 SCAN OPERATION (Multi-function receiver/Component screens only)

- ③ Enter the programmed scan range number to be scanned in [Program No].
- ④ Select a memory bank to be written, then click the close ([X]) button to close the setting screen.
 - To clear the selected memory bank contents, click [All Clear].

- ② Enter the programmed scan range number to be scanned.

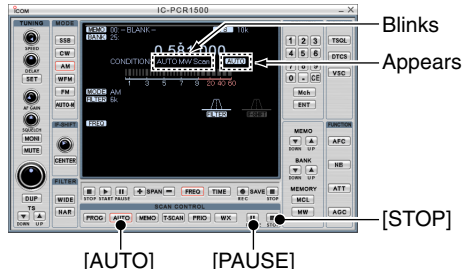
- ③ Click



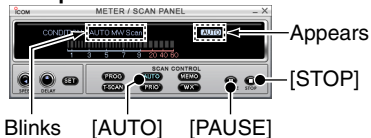
- ④ Select a memory bank to be written.
- Click to clear the selected memory bank contents.

- ⑤ Click [AUTO] to start auto memory write scan.
 - “AUTO Scan” blinks and [AUTO] appears while scanning.
- ⑥ To stop the scan, click [STOP] or [AUTO].

Multi-function receiver screen



Component screen



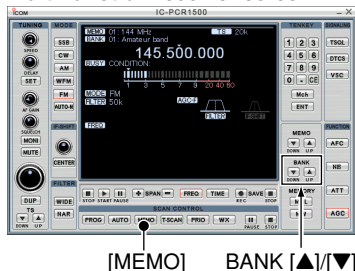
Memory/bank scan

This function searches all memory channels in a selected memory bank.

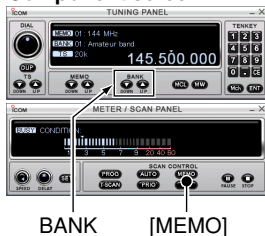
Starting a memory/bank scan

- ① Make sure the squelch is set to the threshold point (closed condition).
- ② Click [BANK ▲] or [BANK ▼] to select the desired memory bank.
- ③ Right-click the [MEMO] button to call up the Memory Scan setting screen if it is not displayed.

Multi-function receiver screen



Component screen



- ④ Select the bank scan condition from 'Current Bank', 'Select Bank' or 'All Bank.'

(a) 'Current Bank'

Scans memory channels within the current bank.

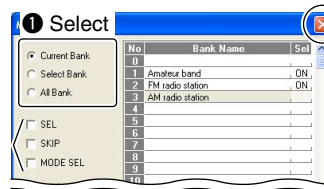
(b) 'Select Bank'

Scans memory channels within the selected bank ("Sel" setting is turned ON).

(c) 'All Bank'

Scans memory channels within all banks.

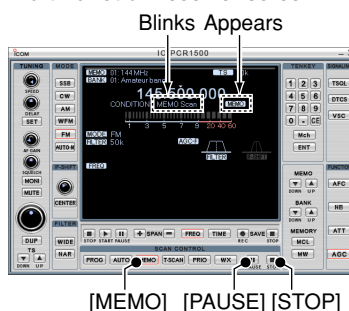
- ⑤ Make sure the check boxes are not checked (✓), then click the close ([X]) button to close the setting screen.



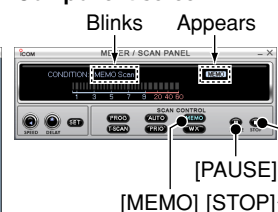
No check marks ✓

- ⑥ Click the [MEMO] button to start memory scan.
 - "MEMO Scan" blinks and [MEMO] appears while scanning.
- ⑦ To stop the scan, click [STOP] or [MEMO].

Multi-function receiver screen



Component screen



8 SCAN OPERATION (Multi-function receiver/Component screens only)

■ Versatile memory scan

You can set the memory scan conditions using the [Memory Scan] setting screen.

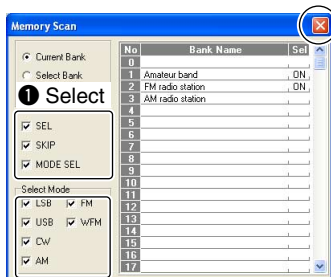
① Right-click the [MEMO] button to call up the Memory Scan setting screen if it is not displayed.

② Check the desired check boxes, then click the close ([X]) button to close the setting screen.

- When selecting the [SEL] box (select memory scan), repeatedly scans memory channels these “SEL” settings are turned ON in memory channel list screen.

- When selecting the [SKIP] box (memory skip scan), repeatedly scans memory channels except “SKIP” setting is turned ON in memory channel list screen.

- When selecting the [MODE SEL] box (mode select memory scan), repeatedly scans all memory channels with the selected operating mode (in [Select Mode] as below).



② Select

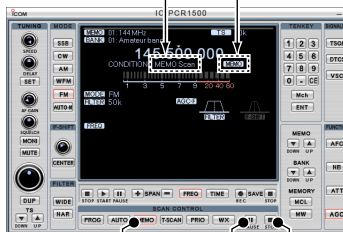
③ Click the [MEMO] button to start the desired memory scan.

- “MEMO Scan” blinks and [MEMO] appears while scanning.

④ To stop the scan, click [STOP] or [MEMO].

Multi-function receiver screen

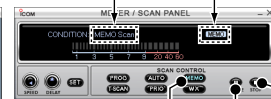
Blinks Appears



[MEMO] [PAUSE] [STOP]

Component screen

Blinks Appears



[PAUSE]
[MEMO] [STOP]

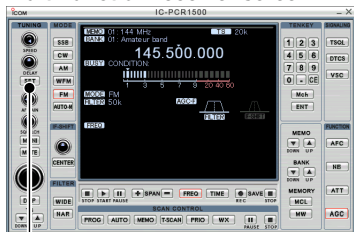
- All settings can be used simultaneously.
- SEL, SKIP and receive mode can be set in the memory list screen.
- At least 2 memory channels must be programmed with the desired condition for scan to proceed.

■ Scan resume condition

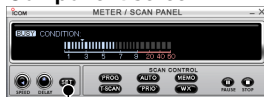
When receiving a signal, scanning automatically pauses on that signal. The scan resume condition sets the time that the scan pauses before resuming or whether scan stops instead of pausing.

- ① Click the [SET] button to call up the [Scan Delay] screen if it is not displayed.
- ② Select the scan delay condition from 'Pause until Signal Disappears,' 'Delay Volume' or 'Scan Stop.'

Multi-function receiver screen



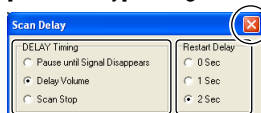
Component screen



[SET]

[SET]

[Scan Delay] setting screen



③ Click

① Select

② Select

(a) 'Pause until Signal Disappears'

Scan pauses when receiving a signal and remains paused until the signal disappears.

(b) 'Delay Volume'

When setting a delay time using the [DELAY] control (on Multi-function receiver screen or Component screen), scan pauses when receiving a signal and then resumes after the specified delay.

(c) 'Scan Stop'

When a signal is received during scan, scan stops and does not resume.

- ③ Select a restart delay time in [Restart Delay]. This setting is valid when (a) or (b) is selected in step ②.
 - **0 Sec.** : Scan resumes immediately after the signal disappears.
 - **1 Sec.** : Scan resumes 1 sec. after the signal disappears.
 - **2 Sec.** : Scan resumes 2 sec. after the signal disappears.
- ④ Click the close ([X]) button to close the setting screen.

8 SCAN OPERATION (Multi-function receiver/Component screens only)

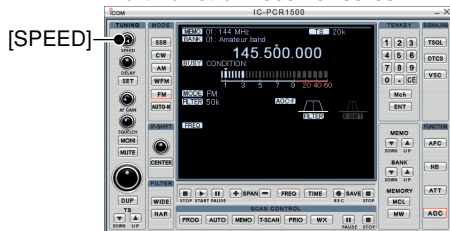
■ Scan speed setting

The searching speed of frequencies or memory channels is variable.

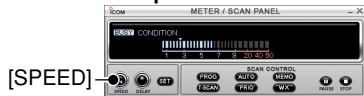
Click the [SPEED] control to set the speed at which scans search through frequencies/memories for signals.

- Right-click to increase the speed level.
- Left-click to decrease the speed level.
- When clicking and holding [SPEED], the scan speed scrolls up or down.

Multi-function receiver screen



Component screen



■ Priority scan type

The priority scan checks for signals on the frequency every 5 sec. while operating on a scanning memory channel or scanning.

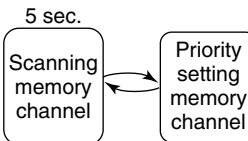
The scan resumes according to the selected scan resume condition. See p. 75 for details.

NOTE: If the pocket beep function is activated, the receiver automatically selects the tone squelch function when priority scan starts.

MEMORY CHANNEL SCAN

While operating on a frequency, priority scan checks for a signal on the selected memory channel every 2 to 60 sec.

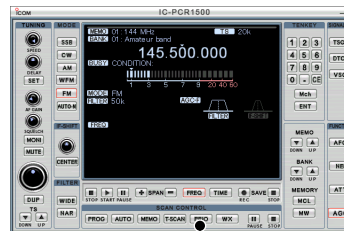
- A memory channel with skip information can be scanned.



■ Priority scan operation

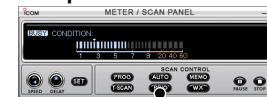
- ① Set the receive frequency. (pgs. 44, 45)
- ② Right-click the [PRIO] button to call up the [Priority Scan] setting screen if it is not displayed.
- ③ Set the scanning channel and bank in [Scan Channel].
- ④ Set the scanning interval from 2 to 60 sec in [Priority Interval], then click the close ([X]) button to close the setting screen.
 - Click [CHECK] to start priority scan.

Multi-function receiver screen



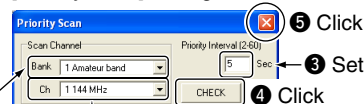
[PRIO]

Component screen



[PRIO]

[Priority Scan] setting screen

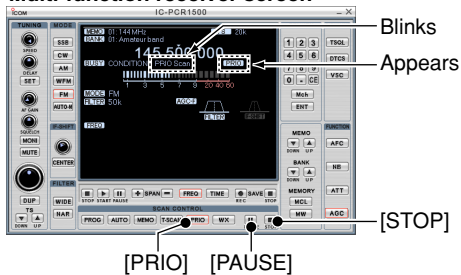


- ① Select a memory bank.
- ② Select a memory channel.
- ③ Set the scanning interval
- ④ Click
- ⑤ Click

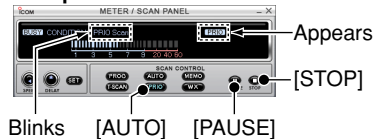
9 PRIORITY SCAN (Multi-function receiver/Component screens only)

- ⑤ Click [PRIO] button to start priority scan.
 - “PRIO Scan” blinks and [PRIO] appears while scanning.
 - The receiver checks the memory channel according to the setting interval.
 - The scan resumes according to the selected scan resume condition. (p. 75)
 - While the scan is pausing, pushing the pause button ([||]) resumes the scan manually.
- ⑥ To stop the scan, click [STOP] or [PRIO].
 - Click [OFF] to stop the scan when [CHECK] is clicked to start priority scan in step ④.

Multi-function receiver screen



Component screen



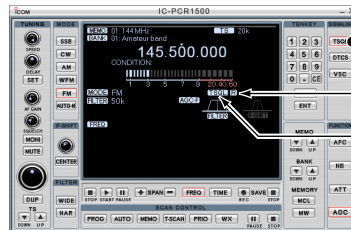
■ Tone/DTCS operation

The tone or DTCS opens only when receiving a signal with the same pre-programmed subaudible tone or DTCS code, respectively in FM mode. You can silently wait for the specified signal using the same tone.

◇ Tone squelch frequency setting

- ① Click [FM] to select FM mode.
- ② Click [TSQL] to turn the tone squelch ON.
 - “TSQL” appears in the function display.
- ③ Right-click [TSQL] to display the [TSQL] setting screen.
- ④ Click [▼] to select the desired tone squelch frequency.
 - 51 tone frequencies from 67.0 to 254.1 Hz are available.
- ⑤ Check the [Reverse Action] check box to mute the received audio signal when the received signal's tone is matched.
 - [R] appears in the function display.
- ⑥ Click the close button ([X]) to close the [TSQL] setting screen.
- ⑦ When the received signal includes a matched tone, squelch opens and the signal can be heard.
 - When the [Reverse Action] check box is checked in step ⑤, the received audio signal is muted.
 - When the received signal's tone is not matched, tone squelch does not open, however, the S-indicator shows signal strength.
- ⑧ Click [TSQL] again to cancel the tone squelch.
 - “TSQL” disappears.

Multi-function receiver screen



- [TSQL]
- Appears when [Reverse Action] is turned ON.
- Appears

Component screen



- Appears when [Reverse Action] is turned ON.

[TSQL] Appears

[TSQL] setting screen



- ① Select the desired tone squelch frequency.
- ② Check the check box to turn [Reverse Action] ON.
- ③ Click

• Available tone squelch frequencies list (Hz)

67.0	79.7	97.4	118.8	146.2	167.9	186.2	206.5	241.8
69.3	82.5	100.0	123.0	151.4	171.3	189.9	210.7	250.3
71.0	85.4	103.5	127.3	156.7	173.8	192.8	218.1	254.1
71.9	88.5	107.2	131.8	159.8	177.3	196.6	225.7	
74.4	91.5	110.9	136.5	162.2	179.9	199.5	229.1	
77.0	94.8	114.8	141.3	165.5	183.5	203.5	233.6	

10 TONE SQUELCH OPERATION (Multi-function receiver/Component screens only)

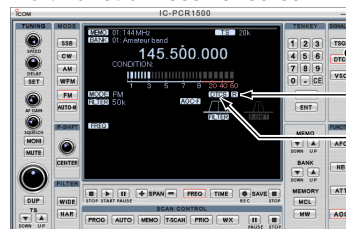
◇ DTCS code setting

- ① Click [FM] to select FM mode.
- ② Click [DTCS] to turn the DTCS squelch ON.
 - "DTCS" appears in the function display.
- ③ Right-click [DTCS] to display the [DTCS] setting screen.
- ④ Click [▼] to select the desired DTCS code.
 - 104 DTCS code from 023 to 754 are available.
- ⑤ Check the [Reverse Action] check box to mute the received audio signal when the received signal's tone is matched.
 - [R] appears in the function display.
- ⑥ Click the close button ([X]) to close the [DTCS] setting screen.
- ⑦ When the received signal includes a matched code, squelch opens and the signal can be heard.
 - When the [Reverse Action] check box is checked in step ⑤, the received audio signal is muted.
 - When the received signal's code does not match, tone squelch does not open, however, the S-indicator shows signal strength.
- ⑧ Click [DTCS] again to cancel the DTCS squelch.
 - "DTCS" disappears.

• Available DTCS code list

023	054	125	165	245	274	356	445	506	627	732
025	065	131	172	246	306	364	446	516	631	734
026	071	132	174	251	311	365	452	523	632	743
031	072	134	205	252	315	371	454	526	654	754
032	073	143	212	255	325	411	455	532	662	
036	074	145	223	261	331	412	462	546	664	
043	114	152	225	263	332	413	464	565	703	
047	115	155	226	265	343	423	465	606	712	
051	116	156	243	266	346	431	466	612	723	
053	122	162	244	271	351	432	503	624	731	

Multi-function receiver screen



- ← [DTCS]
- ← Appears when [Reverse Action] is turned ON.
- ← Appears

Component screen



- ← Appears when [Reverse Action] is turned ON.

[DTCS] Appears

[DTCS] setting screen

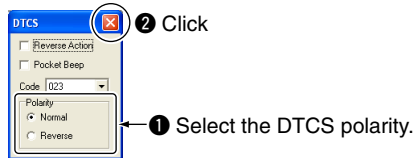


- ③ Click
- ② Check the check box to turn [Reverse Action] ON.
- ① Select the desired DTCS code.

■ DTCS polarity setting


As well as a code setting, the polarity setting is also available for the DTCS operation. When a different polarity is set, the DTCS never releases audio mute even when a signal with a matching code number is received.

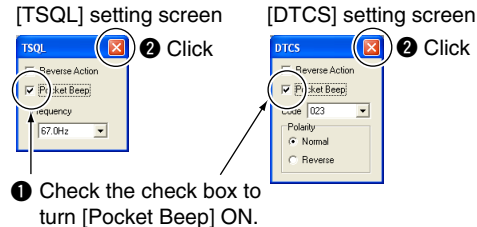
- ① Click [FM] to select FM mode.
- ② Click [DTCS] to turn the DTCS squelch ON.
 - “DTCS” appears in the function display.
- ③ Right-click [DTCS] to display the [DTCS] setting screen.
- ④ Select the DTCS polarity from “Normal” and “Reverse” in [Polarity].
- ⑤ Click the close button ([X]) to close the [DTCS] setting screen.



■ Pocket beep operation

This function uses subaudible tones for calling and can be used as a “common pager” to inform you that someone has called while you were away from the receiver. Pocket beep emission type can be set in the [Audio Setting] screen. (p. 89)

- ① Click [FM] to select FM mode.
- ② Click [TSQL]/[DTCS] to turn the tone/DTCS squelch ON.
 - “TSQL”/“DTCS” appears in the function display.
- ③ Right-click [TSQL]/[DTCS] to display the [TSQL]/[DTCS] setting screen.
- ④ Check the [Pocket Beep] check box to turn the pocket beep function ON.
 - “” appears in the function display.
- ⑤ Click the close button ([X]) to close the [TSQL]/[DTCS] setting screen.



10 TONE SQUELCH OPERATION (Multi-function receiver/Component screens only)

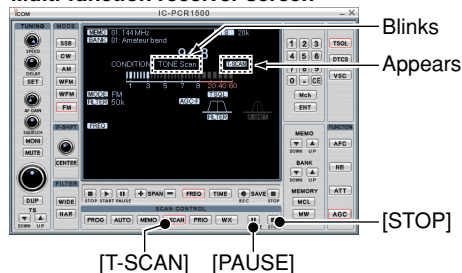
■ Tone scan operation

By monitoring a signal that is being operated with pocket beep, tone or DTCS squelch function, you can determine the tone frequency or DTCS code necessary to open a squelch.

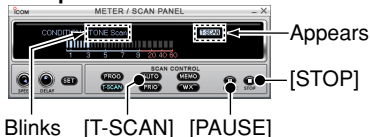
- ① Click [FM] to select FM mode.
- ② Select the tone type, tone squelch, or DTCS to be scanned, then set the desired tone squelch frequency or DTCS code. (pgs. 79, 80)
- ③ Click [T-SCAN] to start the tone scan.
 - "AUTO Scan" blinks and [AUTO] appears while scanning.
- ④ When the TSQL tone frequency or 3-digit DTCS code is matched, the squelch opens and the tone frequency is temporarily programmed into the selected memory channel.
 - The tone scan pauses when a TSQL tone frequency or 3-digit DTCS code is detected.
 - The decoded TSQL tone frequency or 3-digit DTCS code is used for the tone encoder or tone encoder/decoder depending on the selected tone condition or type in step ②.
- ⑤ To stop the scan, click [STOP] or [T-SCAN].

NOTE: The decoded tone frequency is programmed temporarily when a memory or call channel is selected. However, this will be cleared when the memory/call channel is re-selected.

Multi-function receiver screen



Component screen



■ Operation

The band scope function has 2 modes, Frequency and Time modes.

When Frequency mode is selected, the band scope function sweeps in the specified span from the displayed frequency and allows you to visually check the received signal strength on the function display.

When Time mode is selected, the band scope function displays the received signal strength in the specified time period on the function display while sweeping.

▨ When SSB or CW mode is selected, receive audio is muted while monitoring the band scope.

◇ Using Frequency mode

- ① Click [FREQ] to select Frequency mode.
 - Time mode is selected when [TIME] is clicked.
- ② Click the sweep start button (▶) to begin a sweep; signal conditions appear starting from the center of the range.
 - Conditions over the entire set frequency span can be observed around the center frequency of the currently received frequency.
 - When a strong signal is received, the waveform is indicated small.
- ③ Click [SPAN +] or [SPAN -] to select the sweep width through SPAN1 (± 25.0 kHz) to SPAN5 (± 500 kHz)*.
 - Choose SPAN1 when band conditions are crowded (many signals are present); choose SPAN5* when few signals are present.

*When the wide band scope function is selected, sweep width expands to SPAN8 (± 5 MHz). (p. 87)

- ④ Click [TS ▲] or [TS ▼] to select the sweep tuning step.
 - "LIMIT" appears when a selected sweep tuning step is outside the automatic sweep step setting. (p. 86)
- ⑤ Click the waveform to select the frequency of the signal.
 - Click [P] to pause a sweep and monitor the frequency. Repeat to resume the sweep. ([PAUSE] is displayed.)
 - While pausing the band scope, you can also select the displayed signal frequency by clicking the waveform.
In this case, the selected frequency does not move, and the previously received frequency is kept to center. So you can select the previously received frequency simply by clicking a center.
- ⑥ Click the sweep stop button (■) to stop a sweep.

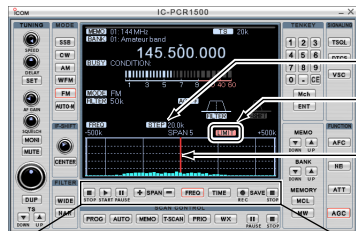
▨ According to the setting combination of the sweep width and sweep tuning step, some signals may not be displayed on the function display during sweeping.

◇ About the limit indicator

When a selected sweep tuning step is outside the automatic sweep step setting (p. 86), "LIMIT" appears in the band scope display during the band scope operation.

11 BAND SCOPE (Multi-function receiver/Component screens only)

Multi-function receiver screen

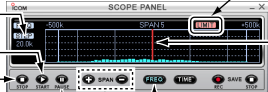


Sweep step indicator
LIMIT indicator
Center frequency

[STOP] [START] [PAUSE] [SPAN] [FREQ] [TIME] [SAVE] [STOP]

[PAUSE] [FREQ]
[START] SPAN [+]/[-]

Component screen



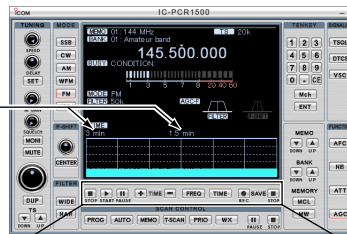
LIMIT indicator
Center frequency

[START] [STOP]
[PAUSE] [FREQ]
SPAN [+]/[-]

◇ Using Time mode

- ① Click [TIME] to select Time mode.
 - Frequency mode is selected when [FREQ] is clicked.
- ② Click the sweep start button (▶) to begin a sweep; the received signal strength is displayed.
- ③ Click [TIME +] or [TIME -] to select the time scale for indication through 100 min, 30 min, 10 min and 3 min.
- ④ Click the sweep stop button (■) to stop a sweep.

Multi-function receiver screen

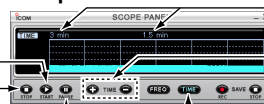


Time interval

[STOP] [START] [PAUSE] [SPAN] [FREQ] [TIME] [SAVE] [STOP]

[PAUSE] [TIME]
[START] TIME [+]/[-]

Component screen



Time interval
TIME [+]/[-]

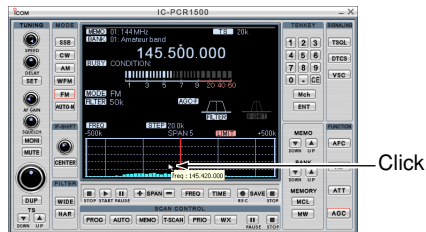
[START] [STOP]
[PAUSE] [TIME]

■ Pick up signal function

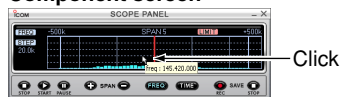
The pick up signal function provides quick frequency setting during the band scope operation. By clicking the desired waveform, the clicked point frequency is set to the receive frequency.

While pausing the band scope, you can also select the displayed signal frequency by clicking the waveform. In this case, the selected frequency does not move, and the previously received frequency is kept to center. So you can select the previously received frequency simply by clicking a center.

Multi-function receiver screen



Component screen



■ Saving the sweeping data

The band scope sweep data can be saved in CSV (Comma Separated Values) file format.

- ① Click the sweep start button ([▶]) to begin a sweep. (pgs. 83, 84)
 - Frequency mode is selected when [FREQ] is clicked, and Time mode is selected when [TIME] is clicked.
- ② Click the recording start button ([●]) to start saving the receiving signal contents while sweeping.
 - When Time mode is selected in step ①, the save time interval can be selected— right click the [TIME] button to indicate the [Scope (TIME)] setting screen, then select the desired save time interval. (e.g. when “1.0 Sec” is selected, time scope data is saved every 1 sec.)
 - You can save the sweeping contents with the desired file name in the [File Name] box.
 - The following data are saved.
 - Recording start day and time
 - Center frequency
 - Sweeping frequency
 - Sweeping time
 - Electrolytic strength
- ③ Click the recording stop button ([■]) to stop recording.

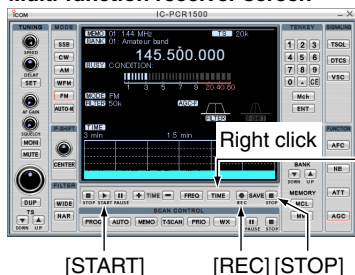
11 BAND SCOPE (Multi-function receiver/Component screens only)

■ Changing the automatic sweep step limit

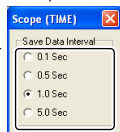
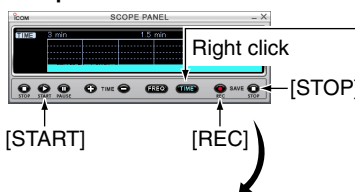
The frequency steps used while sweeping are automatically set according to the tuning step. However, these steps can be defined using the [Scope (FREQ)] setting screen on the setting screen.

- ① Right-click the [FREQ] button to call up the [Scope (FREQ)] setting screen if it is not displayed.
- ② Click the desired frequency step range in the [Automatic Sweep Step Limit].
 - The sweep step range can be selected from one of 1–100 kHz, 1–50 kHz or 1–25 kHz.
- ③ Click the close (X) button to close the setting screen.

Multi-function receiver screen



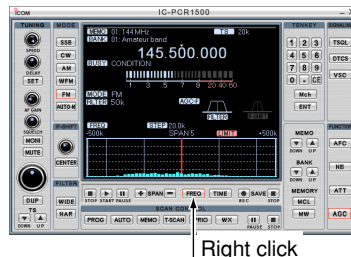
Component screen



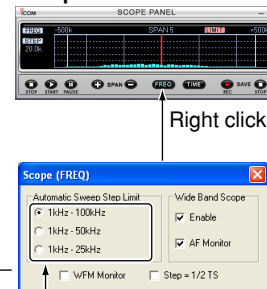
Click to select the desired save time interval.

- ① Select the desired folder.
- ② Type a name for the file
- ③ Click

Multi-function receiver screen



Component screen



Click to the desired sweep step.

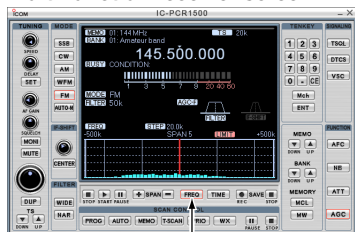
Wide band scope function

The wide band scope function is available to sweep a wide band scope ($\pm 1, 2$ or 5 MHz.)

While sweeping the band scope, AF monitor function is also available.

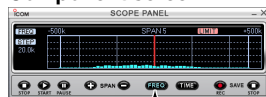
- 1 Right-click the [FREQ] button to call up the [Scope (FREQ)] setting screen if it is not displayed.
- 2 Check the [Enable] check box in [Wide Band Scope] to enable the wide band scope function.
 - Check the [AF Monitor] check box to monitor the receiving frequency.
- 3 Click the close ([X]) button to close the setting screen.

Multi-function receiver screen

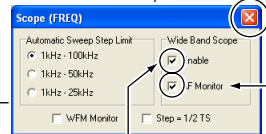


Right click

Component screen



Right click
3 Click



- 1 Check the check box to turn [Wide Band Scope] ON.
- 2 Check the check box to turn [AF Monitor] ON.

Band scope options

The following optional functions are available for the band scope function. These settings can be defined using the [Scope (FREQ)] screen.

WFM Monitor function

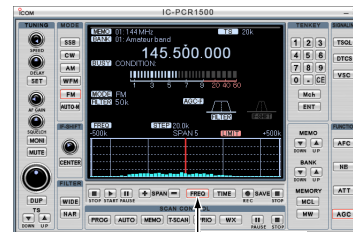
The band scope function is normally used in AM and FM modes only. This function allows it to be used as waveform monitor in WFM mode.

1/2 sweep step function

This function sets the sweep step in half of the tuning step, doubling the sweep resolution.

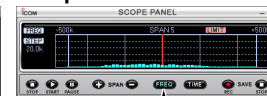
- 1 Right-click the [FREQ] button to call up the [Scope (FREQ)] setting screen if it is not displayed.
- 2 Check the desired check boxes in [Option], then click the close ([X]) button to close the setting screen.

Multi-function receiver screen

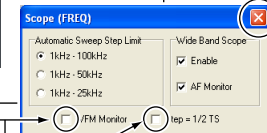


Right click

Component screen



Right click
2 Click



- 1 Check the check boxes.

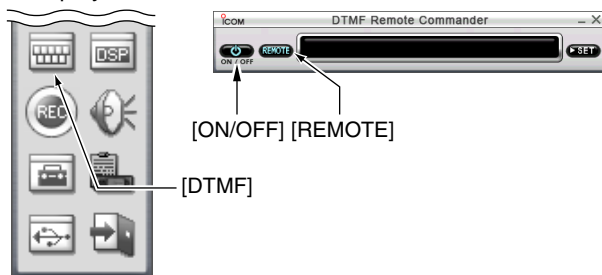
12 DTMF OPERATION

■ Operation

The computer can be remotely controlled using DTMF codes in FM mode. When receiving a programmed DTMF code, the IC-PCR1500 displays a message, activates a program/screen saver or plays a Windows sound file.

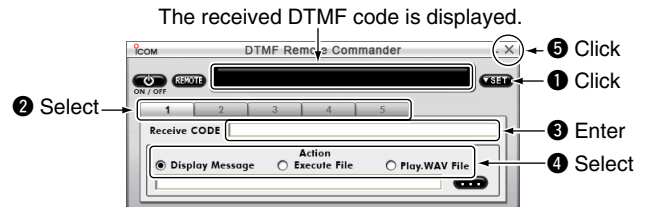
- ① Click [FM] to select FM mode.
- ② Click the [DTMF] icon on the tool bar to call up the [DTMF Remote Commander] screen if it is not displayed.
- ③ Click [ON/OFF] on the [DTMF Remote Commander] screen to toggle the DTMF decoder circuit ON and OFF.
 - The LED lights when the function is ON.
- ④ Click the [REMOTE] button to toggle the DTMF remote function ON and OFF.
 - The LED lights when the function is ON.

NOTE: When receiving a signal including a DTMF code, the received code is displayed in the DTMF indicator window. Up to 24 digits of the latest received DTMF code are displayed.



◇ Setting the DTMF receive code

- ① Click the [DTMF] icon on the tool bar to call up the [DTMF Remote Commander] screen if it is not displayed.
- ② Click [SET] to call up the receive code setting screen.
- ③ Click the desired tab from [1] to [5] for the receive code setting, then enter the desired key code in the [Receive CODE] field using the keyboard.
 - 0 to 9, A, B, C, D, E (*) and F (#) can be used.
- ④ Select the desired action from 'Display Message', 'Action Execute File' or 'Play.WAV File' when the received code is matched to the [Receive CODE] setting.
 - (a) 'Display Message'
To display a entered message in the text box.
 - (b) 'Action Execute File'
To execute a file, enter the file name, including full path name, or select a desired file after pushing the [...] button.
 - (c) 'Play.WAV File'
To play a file, enter the file name, including full path name, or select a desired file after pushing the [...] button.
- ⑤ Click the close button ([X]) to close the [DTMF Remote Commander] screen.



■ Operation

The Audio Setting screen adjusts the audio level and mute condition of the IC-PCR1500 and the connected PC, and also, the confirmation beep ON/OFF, the pocket beep emission type and the pocket beep repeating times can be set.

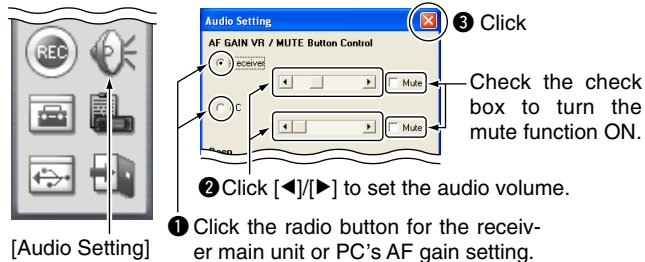
◇ The AF gain/mute setting

- ① Click the [Audio Setting] icon on the tool bar to call up the [Audio Setting] screen if it is not displayed.
- ② Click the [Receiver] or [PC] radio button to select the AF gain setting for the receiver main unit or PC.
- ③ Click [◀]/[▶] to adjust the AF gain level.
- ④ Check the [Mute] check box to turn the mute function ON or OFF.

When this function is turned ON, the received audio signal is muted.

- “MUTE” appears.

- ⑤ Click the close button ([X]) to close the Audio Setting screen.



◇ Beep settings

● Confirmation Beep

This function sets the confirmation beep ON or OFF.

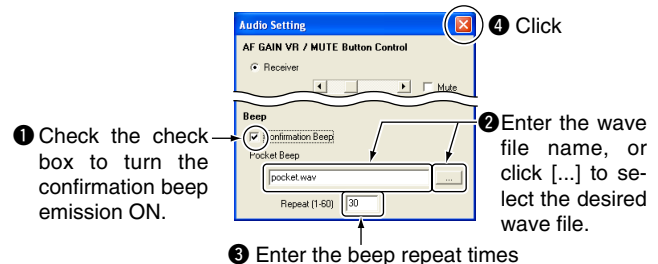
● Pocket Beep

This function sets the pocket beep emission type.

● Repeat (1-60)

This function sets the number of times for pocket beep repeating.

- ① Call up the [Audio Setting] screen if it is not displayed as at left.
- ② Check the [Confirmation Beep] check box to turn the confirmation beep emission ON.
- ③ Enter the wave file name in the [Pocket Beep] text box directly, or click [...] to select the desired wave file to set the pocket beep emission type.
- ④ Enter the beep repeat times from 1 to 60 in [Repeat (1-60)].
- ⑤ Click the close button ([X]) to close the [Audio Setting] screen.



13 AUDIO SETTING SCREEN

◆ When playing through the computer's speaker

The [Audio Device] setting is necessary when the audio is emitted via the built-in or connected PC speaker whenever the USB cable is connected.

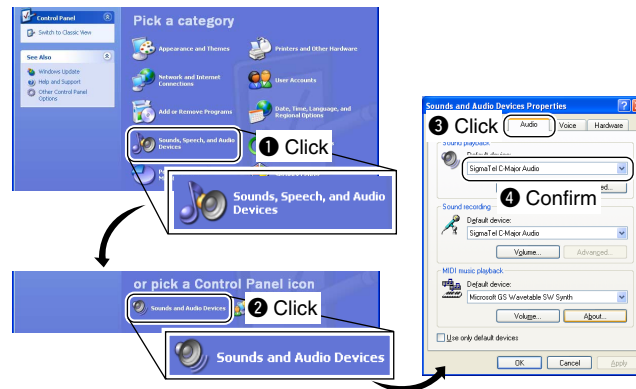
NOTE: The sound board should be installed into the PC to hear sound via the PC speaker. Please refer to your PC's instruction manual for details.

- 1 Click the [Power] icon on the tool bar to quit the IC-PCR1500, then turn the receiver's main unit OFF.
 - The power indicator of the main unit is turned OFF.

● Microsoft® Windows® XP

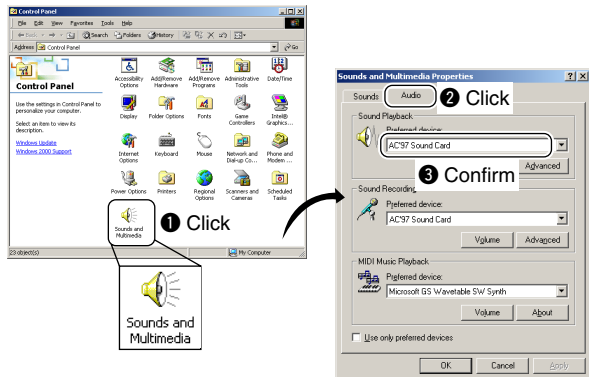
- 2 Click the [Start] button and click [Control Panel] in [My computer].
- 3 Click [Sounds, Speech, and Audio Devices], then click [Sounds and Audio Devices].
- 4 Click the [Audio] tab, and confirm the "Default device" in [Sound playback].
 - Making a note is recommended.
- 5 Click the close button ([X]) to close the [Sounds and Audio Devices Properties] screen.

➤ Continued to step ⑥ (p. 91)



● Microsoft® Windows® 2000/Me

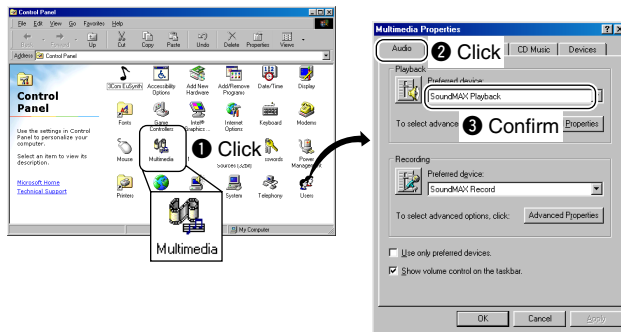
- ② Click the [Start] button and click [Control Panel] in [Settings].
- ③ Double click on [Sounds and Multimedia], then click the [Audio] tab.
- ④ Confirm the “Preferred device” in [Sound Playback].
 - Making a note is recommended.
- ⑤ Click the close button ([X]) to close the [Sounds and Multimedia Properties] screen.



➤ Continued to step ⑥ (as below right)

● Microsoft® Windows® 98SE

- ② Click the [Start] button and click [Control Panel] in [Settings].
- ③ Double click on [Multimedia], then click the [Audio] tab.
- ④ Confirm the “Preferred device” in [Sound Playback].
 - Making a note is recommended.
- ⑤ Click close button ([X]) to close the [Sounds and Multimedia Properties] screen.



➤ Continued to step ⑥ (as below)

- ⑥ Turn the receiver’s main unit ON, then click the [Power] icon on the tool bar to turn the IC-PCR1500 ON.
 - The power indicator of the main unit lights green.
- ⑦ Repeat steps ② to ③ according to your PC’s OS.
- ⑧ Select the confirmed device, click [OK].

⚡ **NOTE:** The folder, item names may differ depending on the PC. Please refer to your PC’s instruction manual for details.

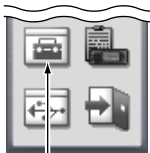
14 SHORTCUT KEY OPERATION

■ Operation

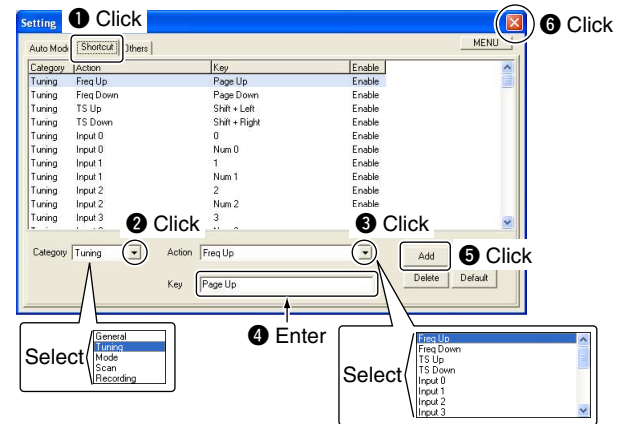
Shortcut keys give you faster and easier operation from a PC key board.

◇ A shortcut key assignment

- 1 Click the [Setting] icon on the tool bar to call up the [Setting] screen if it is not displayed.
- 2 Click the [Shortcut] tab to display the shortcut key list.
- 3 Select the category from 'General,' 'Tuning,' 'Mode,' 'Scan' and 'Recording' in [Category].
- 4 Select the desired action in [Action].
 - Selectable items are differ according to [Category] setting.
- 5 Enter the desired shortcut key or combination of keys that executes a specific function in [Key].
 - [Ctrl], [Shift] and [Alt] keys act as shortcut keys with another key combination.
 - Some keys cannot be set as shortcut key.
- 6 Click [Add] to add the shortcut key or combination of keys to the list.
- 7 Click close button ([X]) to close the [Setting] screen.



[Setting]



[Example]: Assign “AM mode selection” to [Ctrl] + [A] key

- 1 Select 'Mode' in [Category].
- 2 Select 'AM' in [Action].
- 3 Click [KEY] text box, then push [Ctrl] and [A] key.
 - “Ctrl + A” is indicated in the [Key] text box.
- 4 Click [Add] to add the shortcut combination keys to the list.

- [Add] : Add the assigned shortcut key to the list.
- [Set] : Set the changing of the shortcut key content.
- [Delete] : Delete the shortcut key from the list.
- [Default] : Reset the shortcut list to the default setting.

The receiver has 250 multi channels. A total of 10 memory banks are available for usage by group, etc., and 25 channels are assigned into a bank.

The multi channel monitor function scans the programmed multi channels, and makes you to check the received signal strength level on the channels visually.

■ Multi channel programming

- ① Click the [Multi CH Monitor] icon on the tool bar to call up the [Multi CH Monitor] screen if it is not displayed.
- ② Click [SET] to display the [Multi CH Monitor] list screen, then program the desired items.
- ③ Click the close button ([X]) to close the [Multi CH Monitor] list screen.
 - The channel name and frequency are displayed on the programmed channel.
- ④ Click the close button ([X]) to close the [Multi CH Monitor] screen.

◇ Multi channel programming details

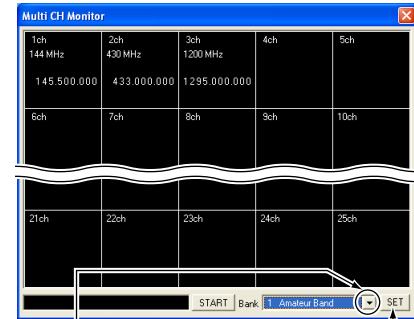
The multi channel programming is the same as the memory channel programming. See the following pages for the multi channel programming details.

- Bank name programming (p. 64)
- Editing the memory list (p. 61)
- Saving memory channel data (p. 66)
- Opening memory channel data (p. 66)
- Creating a new memory channel data file (p. 66)
- Printing a memory channel (p. 66)
- Importing/Exporting a CSV file (p. 67)



[Multi CH Monitor]

[Multi CH Monitor] screen



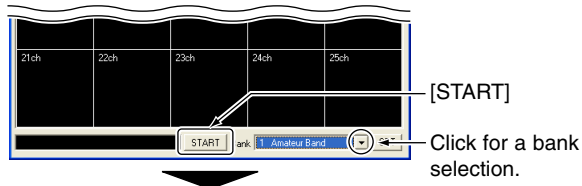
Click for a bank selection. Click to display the [Multi CH Monitor] list screen.

[Multi CH Monitor] list screen

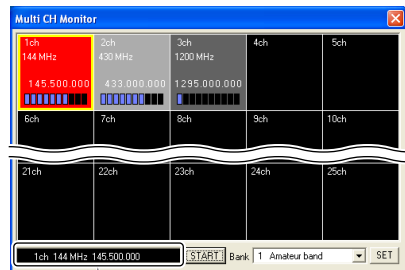
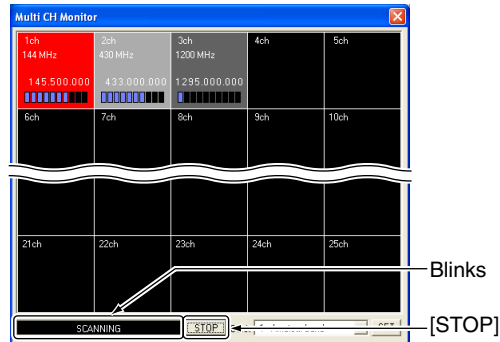
CH	Name	Frequency	DUPLEX	Offset	Mode	Filter	AT
1	144 MHz	145.500000	OFF	0.000000	FM	15k	
2	430 MHz	433.000000	OFF	0.000000	FM	15k	
3	1200 MHz	1295.000000	OFF	0.000000	FM	15k	
4							
5							
6							
7							

Multi channel monitor operation

- ① Click the [Multi CH Monitor] icon on the tool bar to call up the [Multi CH Monitor] screen if it is not displayed.
 - The channel name and frequency are displayed on the programmed channel.
- ② Click [▼] to select the desired bank to monitor.
- ③ Click the [START] button to start scan.
 - ▨ While scanning, the receive audio is muted.
 - “SCANNING” blinks in the information box.
 - The [START] button changes to the [STOP] button while scanning.
 - The background color changes according to the receiving signal strength level.
 - Black : Non programmed or no signal channel.
 - Dark gray : S-meter level is below S3.
 - Pale gray : S-meter level is above S3/below S9.
 - Red : S-meter level is above S9.
- ④ Click the desired channel screen to monitor.
 - Scan is cancelled.
- ⑤ Click the [STOP] button to stop the scan.



During scanning



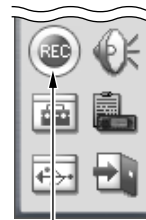
The receiver has a recorder function that enables you to record a signal. The recording data can be saved into the PC.

■ Recording a receiving signal

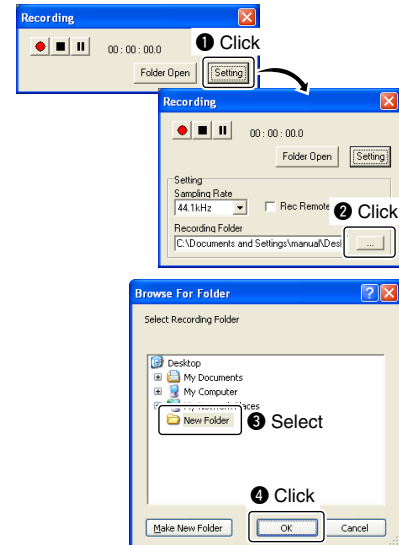
- ① Receive a signal. (p. 43)
- ② Click the [Recording] icon on the tool bar to call up the [Recording] screen if it is not displayed.
- ③ Click [Setting] to display the setting menu.
- ④ Click [...], then select the desired folder in which the recording data is saved.
 - After the folder selection, click [OK].
- ⑤ Click the recording start button ([●]) to start recording the receiving signal.
 - While recording, the recording counter and a file name are displayed.
 - Click [||] to pause a recording. Repeat to resume recording.
 - The recording data is saved in WAVE format.
- ⑥ Click the recording stop button ([■]) to stop recording.

◇ Playing the recording data

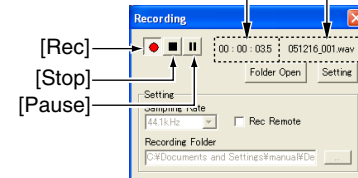
You can play back the recorded signal with the installed media player (e.g. Windows Media® Player, etc.) in the PC. Please refer to the media player's instruction manual for details.



[Recording]



Recording counter File name



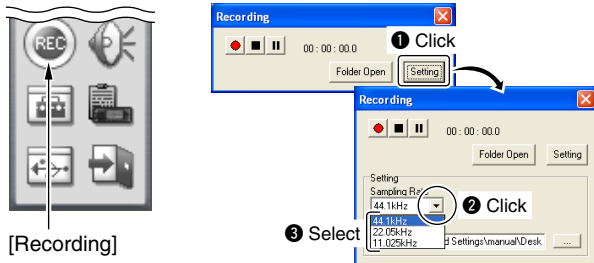
(While recording)

■ Sampling Rate setting

Sampling Rate setting is expressed in samples per second, and determines the sound quality.

Although a higher sampling rate provides a better quality sound than a lower sampling rate, the file size becomes larger.

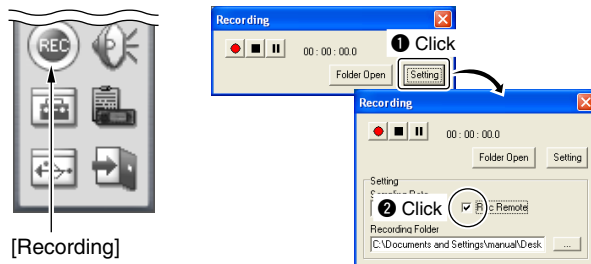
- ① Receive a signal. (p. 43)
- ② Click [Recording] icon on the tool bar to call up the [Recording] screen if it is not displayed.
- ③ Click [Setting] to display the setting menu.
- ④ Click [▼] in [Sampling Rate], then select the desired rate from the displayed menu.
 - The higher rate setting enables High-quality sound.



■ Remote recording function

The remote recording function pauses recording automatically when no signal is received, and resumes after the signal appears.

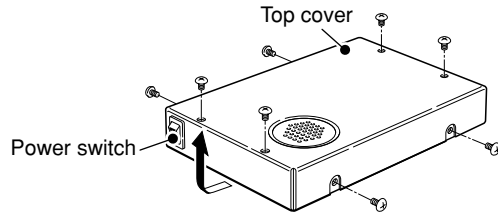
- ① Receive a signal. (p. 43)
- ② Click the [Recording] icon on the tool bar to call up the [Recording] screen if it is not displayed.
- ③ Click [Setting] to display the setting menu.
- ④ Click the [Rec Remote] check box to turn the remote recording function ON and OFF.
 - “✓” appears when the remote recording function is turned ON.



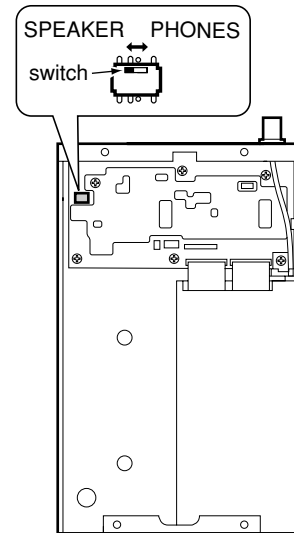
The internal switch must be toggled when using an external speaker, headphones or earphone.

/// Before removing the top cover, turn the receiver power OFF, then disconnect the DC power cable.

- ① Turn the power OFF, then disconnect the DC power cable.
- ② Unscrew the 8 screws and disconnect the connected cables, then remove the top cover.
 - Be careful not to lose the screws.



- ③ Toggle the switch as desired (shown at right).
 - Toggles the switch to [SPEAKER] when an external speaker is connected to the receiver. (default)
 - Toggles the switch to [PHONES] when headphones or earphone are/is connected to the receiver.
- ④ Return the top cover, cables and screws to the original position.



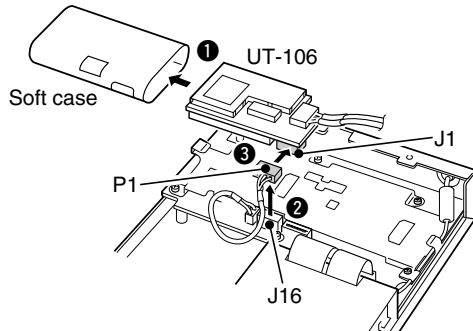
18 DSP OPERATION

The optional UT-106 DSP RECEIVE UNIT provides AF DSP (Digital Signal Processor) functions such as ANF (Auto Notch Filter) and NR (Noise Reduction).

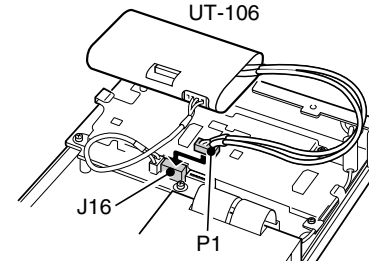
■ UT-106 installation

Before removing the top cover, turn the receiver power OFF, then disconnect the DC power cable.

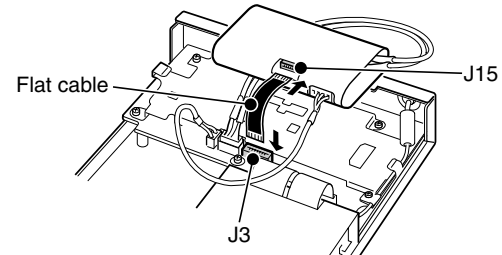
- ① Turn the power OFF, then disconnect the DC power cable.
- ② Unscrew the 8 screws and disconnect the connected cables, then remove the top cover. (See p. 97)
 - Be careful not to lose the screws.
- ③ Insert the UT-106 to the supplied soft case. (①)
- ④ Disconnect P1 (4 pin) from J16 of the LOGIC unit (②), then connect to J1 of the UT-106 (③).



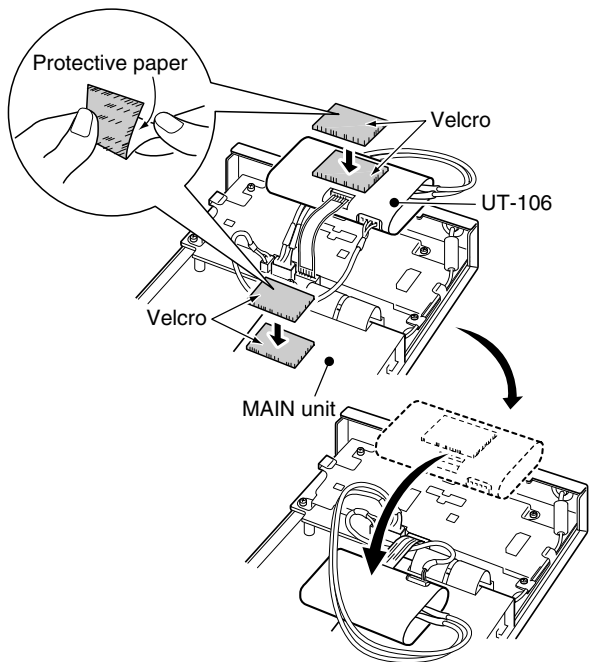
- ⑤ Connect P1 (4 pin) of the UT-106 to J16 of the LOGIC unit.



- ⑥ Connect the supplied flat cable between J15 of the UT-106 and J3 of the LOGIC unit.
 - Be sure not upside down.



- ⑦ Remove the protective paper from the supplied velcro®, then attach it to the UT-106 and IC-PCR1500 MAIN unit.



- ⑧ Return the top cover, cables and screws to the original position.

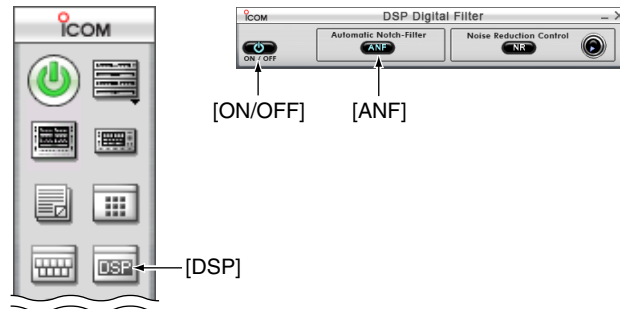
Velcro® is a registered trademark of Velcro Industries B.V.

■ ANF function

(Available only when the UT-106 is installed.)

Turns ANF (Automatic Notch Filter) function ON and OFF. The ANF function automatically attenuates up to 3 beat tones, tuning signals, etc. even if they are moving. The ANF function can be used in USB, LSB, AM, FM and WFM modes.

- ① Click the [DSP] icon on the tool bar to call up the [DSP Digital Filter] screen if it is not displayed.
- ② Click [ON/OFF] to turn the DSP (Digital Signal Processor) function ON.
 - [ON/OFF] indicator lights.
- ③ Click [ANF] to turn the ANF function ON.
 - ANF indicator lights.



18 DSP OPERATION

■ NR function

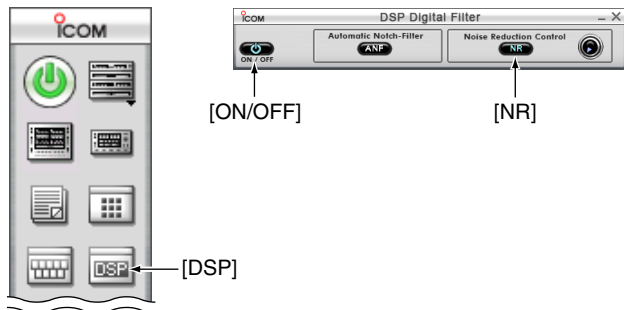
(Available only when UT-106 is installed.)

Selects NR (Noise Reduction) levels run from 1 to 15, or the function may be turned OFF.

The NR function enhances desired signals in the presence of noise by using the DSP circuit. The amount of enhancement is adjustable.

The NR level can result in audio signal masking. Set the noise reduction level for maximum readability.

- ① Click the [DSP] icon on the tool bar to call up the [DSP Digital Filter] screen if it is not displayed.
- ② Click [ON/OFF] to turn the DSP (Digital Signal Processor) function ON.
 - [ON/OFF] indicator lights.
- ③ Click [NR] to turn the NR function ON.
 - NR indicator lights.

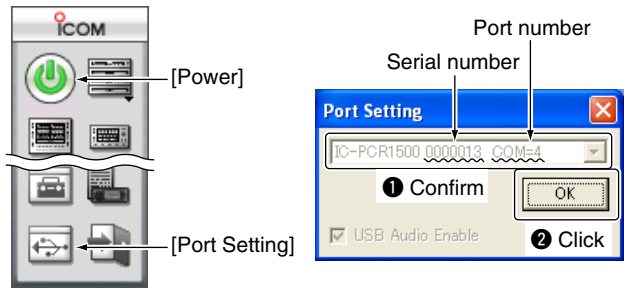


The connected PC's USB port number and the serial number of the IC-PCR1500 can be selected/confirmed in [Port Setting] screen.

If some receiver's main units are connected to your PC, select the desired USB port and serial number when the IC-PCR1500 power is OFF. The only one IC-PCR1500 main unit can be operated. 2 or more IC-PCR1500s cannot be operated simultaneously.

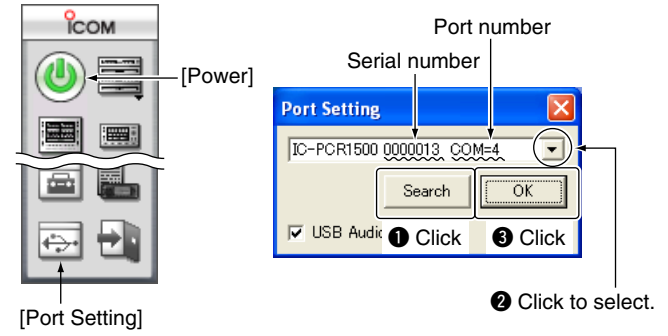
◆ USB port confirmation

- ① Click [Port Setting] icon on the tool bar to call up the [Port Setting] screen.
 - The connected PC's USB port number and serial number of the IC-PCR1500 are displayed.
 - During the IC-PCR1500 is ON, USB port selection is inhibited.
- ② Confirm the connected USB port and serial number, click [OK].



◆ USB port selection

- ① Click [Power] icon on the tool bar to turn the IC-PCR1500 OFF.
- ② Click [Port Setting] icon on the tool bar to call up the [Port Setting] screen.
- ③ Click [Search] to display the connected PC's USB port and serial number of the IC-PCR1500, if it is not displayed.
- ④ Click [▼] to select the desired USB port and serial number of the IC-PCR1500 to be controlled.
- ⑤ After selection, click [OK].

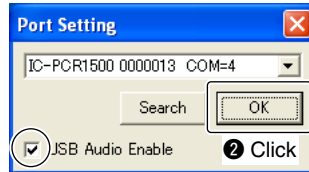
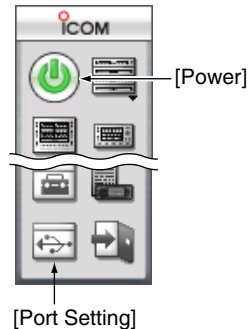


20 USB AUDIO SETTING

USB audio output function can be turned ON or OFF in [Port Setting] screen when the IC-PCR1500 power is OFF.

When the USB audio output function is OFF, the recording function, audio/mute setting for PC (pgs. 89, 95) are disabled, but the computer running speed will be faster than when the USB audio output function is ON.

- ① Click [Power] icon on the tool bar to turn the IC-PCR1500 OFF.
- ② Click [Port Setting] icon on the tool bar to call up the [Port Setting] screen.
- ③ Check the [USB Audio Enable] check box to turn the USB audio output function ON.
- ④ Click [OK].

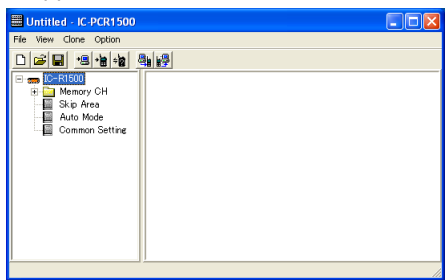
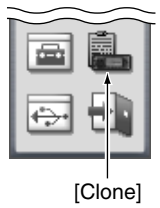


① Click

CLONING OPERATION (Available only when the IC-R1500 is connected.)

When the IC-R1500 is connected, data cloning is available. Cloning allows you to quickly and easily transfer the programmed contents from a personal computer to a receiver using the IC-PCR1500 program. See the cloning instruction manual, supplied with the IC-R1500, for details.

- ➔ Click [Clone] icon on the tool bar to make the [Cloning] screen appear/disappear.



(Cloning screen)

22 TROUBLESHOOTING

If your receiver seems to be malfunctioning, please check the following points before sending it to a service center.

PROBLEM	POSSIBLE CAUSE	SOLUTION	REF.
Does not turn on.	<ul style="list-style-type: none"> • An AC adapter is not connected to the IC-PCR1500. • An AC adapter is connected to the same AC outlet with a PC, printer, etc. 	<ul style="list-style-type: none"> • Check the connection. • Check the connection. 	<p>p. 1</p> <p>p. 1</p>
No sound comes from the speaker.	<ul style="list-style-type: none"> • Volume is too low. • The audio mute function is activated. • Squelch is set too high. • Band scope function is activated in SSB or CW mode. 	<ul style="list-style-type: none"> • Right click [AF GAIN]. • Push [MUTE] to turn the mute function OFF. • Set the squelch level to the threshold. • Pause or cancel the band scope function in SSB or CW mode. 	<p>p. 43</p> <p>p. 50</p> <p>p. 47</p> <p>p. 83</p>
Sensitivity is low and only strong signals are audible.	<ul style="list-style-type: none"> • Antenna feedline or the antenna connector has a poor contact or is short circuited. • Squelch attenuator function is activated. 	<ul style="list-style-type: none"> • Check, and if necessary, replace the feedline or solder the antenna connector again. • Push [ATT] to turn the Attenuator function OFF. 	<p>p. 1</p> <p>p. 53</p>
Frequency cannot be set via the PC key board.	<ul style="list-style-type: none"> • The receiver screen is not selected. 	<ul style="list-style-type: none"> • Click anywhere in the receiver screen first, then input the frequency. 	<p>p. 45</p>
Program scan does not operate.	<ul style="list-style-type: none"> • The squelch is open. • The start and end frequencies are the same. 	<ul style="list-style-type: none"> • Set the squelch to the threshold point. • Set the different frequencies. 	<p>p. 47</p> <p>p. 69</p>
Memory scan does not operate.	<ul style="list-style-type: none"> • The squelch is open. • Only 1 memory channel is programmed or other channels are set as skip channel. 	<ul style="list-style-type: none"> • Set the squelch to the threshold point. • Program other memory channels or cancel the memory skip function in the desired channels. 	<p>p. 47</p> <p>p. 73</p>
The Communication error occurs after launching the IC-PCR1500 program.	<ul style="list-style-type: none"> • The computer does not recognize the IC-PCR1500. • The protector circuit of the power supply is activated. 	<ul style="list-style-type: none"> • Launch the program after approx. 20 sec. has passed. • Use the supplied AC adapter, or a stabilized power supply with large capacity. 	<p>pgs. 26, 27</p> <p>pgs. 1, 2</p>

■ Specifications

◇ GENERAL

• Frequency coverage		(MHz)
U.S.A.	: 0.010000–809.999999	
	: 851.000–866.999999	
	: 896.000–1300.000000	
	: 1300.000001–1810.999999	
	: 1852.000–1867.999999	
	: 1897.000–2305.899999	
	: 2357.000–2811.999999	
	: 2853.000–2868.999999	
	: 2898.000–3109.799999	
	: 3136.000–3154.799999	
	: 3181.000–3299.999999	
France	: 0.010000–29.999999	
	: 50.200–51.200000	
	: 87.500–108.00000	
	: 144.000–146.00000	
	: 430.000–440.00000	
	: 1240.000–1300.00000	
Other than above	: 0.010–3299.999999	
	*Guaranteed: 0.495–3000.000 MHz range only	
• Type of emission	: FM, AM, WFM, USB, LSB, CW	
• Number of memory channels		
Main unit	: 2600	
Controller (IC-R1500)	: 1100 (incl. 100 scan edges)	
• Frequency resolution	: 1 Hz*, 10 Hz, 20 Hz, 50 Hz, 100 Hz, 500 Hz, 1 kHz, 2.5 kHz, 5 kHz, 6.25 kHz, 8.33 kHz, 9 kHz, 10 kHz, 12.5 kHz, 15 kHz, 20 kHz, 25 kHz, 30 kHz, 50 kHz, 100 kHz, 125 kHz, 150 kHz, 200 kHz, 500 kHz, 1 MHz, 10 MHz*, USER TS*	
	*IC-PCR1500 only	
• Operating temperature range		
Main unit	: 0°C to +60°C; +32°F to +140°F	
Controller (IC-R1500)	: –10°C to +60°C; +14°F to +140°F	
• Frequency stability	: ±3 ppm (–10°C to +60°C)	

• Power supply requirement	: 12.0 V DC ±15%
• Current drain	
(at 12.0 V DC: approx.)	: standby 0.65 A (typical) max. audio 1.2 A
• Antenna connector	: BNC (50 Ω)
• Dimensions (proj. not included)	
Main unit	: 146(W) × 41(H) × 206(D) mm 5¼(W) × 1½(H) × 8½(D) in
Controller (IC-R1500)	: 111(W) × 40(H) × 26.5(D) mm 4¾(W) × 1½(H) × 1½(D) in
• Weight (approx.)	
Main unit	: 1.2 kg; 2 lb 10 oz
Controller (IC-R1500)	: 0.2 kg; 7½ oz

◇ RECEIVER

• Receive system	: Triple-conversion superheterodyne and down converter
• Intermediate frequencies	: 1st: 266.700 MHz, 2nd: 10.700 MHz 3rd: 450 kHz (except for WFM mode)
• Sensitivity:	
FM (1 kHz/3.5 kHz Dev.; 12 dB SINAD)	
28.000–29.999 MHz	: Less than 0.63 μV
30.000–49.999 MHz	: Less than 0.63 μV
50.000–239.999 MHz	: Less than 0.5 μV
240.000–279.999 MHz	: Less than 0.5 μV
280.000–299.999 MHz	: Less than 0.5 μV
300.000–699.999 MHz	: Less than 0.5 μV
700.000–1300.000 MHz	: Less than 0.63 μV
1300.000001–2299.999 MHz	: Less than 5.6 μV
2300.000–3000.000 MHz	: Less than 18 μV
WFM (1 kHz/52.5 kHz Dev.; 12 dB SINAD)	
50.000–699.999 MHz	: Less than 1.4 μV
700.000–1300.000 MHz	: Less than 1.8 μV
1300.000001–2299.999 MHz	: Less than 18 μV
2300.000–3000.000 MHz	: Less than 56 μV

23 SPECIFICATIONS AND OPTIONS

AM (1 kHz/30% MOD.; 10 dB S/N)

0.495–1.799 MHz	: Less than 25 μV
1.800–14.999 MHz	: Less than 2.5 μV
15.000–49.999 MHz	: Less than 2.5 μV
50.000–299.999 MHz	: Less than 2 μV
300.000–699.999 MHz	: Less than 2 μV
700.000–1300.000 MHz	: Less than 2.5 μV

SSB/CW (10 dB S/N)

0.495–1.799 MHz	: Less than 5 μV
1.800–14.999 MHz	: Less than 0.5 μV
15.000–49.999 MHz	: Less than 0.5 μV
50.000–699.999 MHz	: Less than 0.4 μV
700.000–1300.000 MHz	: Less than 0.5 μV

• Squelch sensitivity (threshold) :

FM (1 kHz/3.5 kHz Dev.)

28.000–29.999 MHz	: Less than 0.63 μV
30.000–49.999 MHz	: Less than 0.63 μV
50.000–239.999 MHz	: Less than 0.5 μV
240.000–279.999 MHz	: Less than 0.5 μV
280.000–299.999 MHz	: Less than 0.5 μV
300.000–699.999 MHz	: Less than 0.5 μV
700.000–1300.000 MHz	: Less than 0.63 μV
1300.000001–2299.999 MHz	: Less than 5.6 μV
2300.000–3000.000 MHz	: Less than 18 μV

WFM (1 kHz/52.5 kHz Dev.)

50.000–699.999 MHz	: Less than 5.6 μV
700.000–1300.000 MHz	: Less than 7.1 μV
1300.000001–2299.999 MHz	: Less than 71 μV
2300.000–3000.000 MHz	: Less than 224 μV

AM (1 kHz/30% MOD.)

0.495–1.799 MHz	: Less than 18 μV
1.800–14.999 MHz	: Less than 0.89 μV
15.000–49.999 MHz	: Less than 0.89 μV
50.000–299.999 MHz	: Less than 0.71 μV
300.000–699.999 MHz	: Less than 0.71 μV
700.000–1300.000 MHz	: Less than 0.89 μV

SSB/CW

0.495–1.799 MHz	: Less than 71 μV
1.800–14.999 MHz	: Less than 7.1 μV
15.000–49.999 MHz	: Less than 7.1 μV
50.000–699.999 MHz	: Less than 5.6 μV
700.000–1300.000 MHz	: Less than 7.1 μV

• Selectivity

SSB/CW/AM	More than 2.8 kHz/–6 dB (typical)
SSB/CW/AM/FM	More than 6.0 kHz/–6 dB (typical)
AM/FM	More than 15 kHz/–6 dB (typical)
AM/FM/WFM	More than 50 kHz/–6 dB (typical)
WFM	More than 230 kHz/–6 dB (typical)

- AF output power (at 12.0 V DC) : More than 0.5 W at 10% distortion with an 8 Ω load
- Ext. speaker connector : 2-conductor 3.5 (d) mm ($1/8$ ")/8 Ω
- Packet connector : 2-conductor 3.5 (d) mm ($1/8$ ")/100 k Ω
- IF shift variable range : More than ± 1.2 kHz

■ Options

UT-106 DSP RECEIVE UNIT

Provides AF DSP functions such as noise reduction and auto notch.

CP-12L CIGARETTE LIGHTER CABLES

For operation via a 12 V cigarette lighter socket.

OPC-254L DC POWER CABLES

For operation via an external power supply.

SP-10 EXTERNAL SPEAKER

For mobile or base operation. Cable length: 1.5 m; 4.9 ft



We Icom Inc. Japan
 1-1-32, Kamiminami, Hirano-ku
 Osaka 547-0003, Japan

Declare on our sole responsibility that this equipment complies with the essential requirements of the Radio and Telecommunications Terminal Equipment Directive, 1999/5/EC, and that any applicable Essential Test Suite measurements have been performed.

Kind of equipment: COMMUNICATIONS RECEIVER

Type-designation: IC-PCR1500/R1500

Version (where applicable): _____

This compliance is based on conformity with the following harmonised standards, specifications or documents:

- i) Article 3.1a EN 60950-1 (2001):A11:2004
- ii) Article 3.1b EN 301489-1 and EN 301489-15
- iii) Article 3.2 EN 301 783-2
- iv) _____
- v) _____

**DECLARATION
 OF CONFORMITY**



Düsseldorf 5th Dec.2005
 Place and date of issue

Icom (Europe) GmbH
Himmelgeister straÙe 100
D-40225 Düsseldorf

Authorized representative name
H. Ikegami
General Manager

Signature
Icom Inc.

Count on us!

#22 Europe

<Intended Country of Use>			
<input checked="" type="checkbox"/> GER	<input type="checkbox"/> FRA	<input checked="" type="checkbox"/> ESP	<input checked="" type="checkbox"/> SWE
<input checked="" type="checkbox"/> AUT	<input checked="" type="checkbox"/> NED	<input checked="" type="checkbox"/> POR	<input checked="" type="checkbox"/> DEN
<input type="checkbox"/> GBR	<input checked="" type="checkbox"/> BEL	<input checked="" type="checkbox"/> ITA	<input checked="" type="checkbox"/> FIN
<input checked="" type="checkbox"/> IRL	<input checked="" type="checkbox"/> LUX	<input checked="" type="checkbox"/> GRE	<input checked="" type="checkbox"/> SUI
<input checked="" type="checkbox"/> NOR			

#23 U.K.

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<input type="checkbox"/> NOR			

#26 France

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<input type="checkbox"/> NOR			