

SONY[®]

COMMUNICATION SYSTEM

PCS-1
PCS-1P

SYSTEM INTEGRATION MANUAL
1st Edition (Version 2.2 and later)

⚠ 警告

このマニュアルは、サービス専用です。
お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながる可能性があります。
危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

⚠ WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠ WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠ AVERTISSEMENT

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

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Section 1 Installation

1-1. Caution on Installation

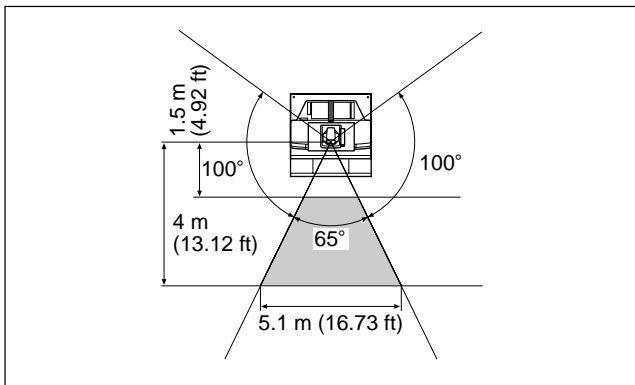
1-1-1. Lay Out the Videoconferencing Room

Arrange it in consideration of the space of a camera and microphone when laying out the videoconferencing room.

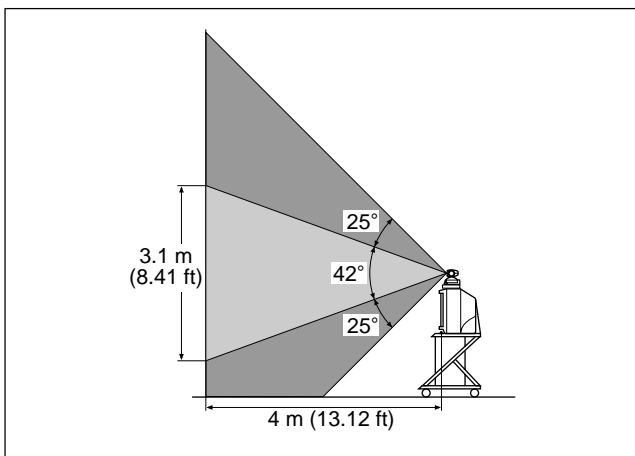
Camera Range

■ represents the shooting area of the camera when the zoom has been extended fully. ■ indicates the shooting area of the camera when the left/right angling function is fully utilized. Use the measurements below as a guide for the layout of your videoconference room.

Top view (horizontal range at maximum zoom-out)



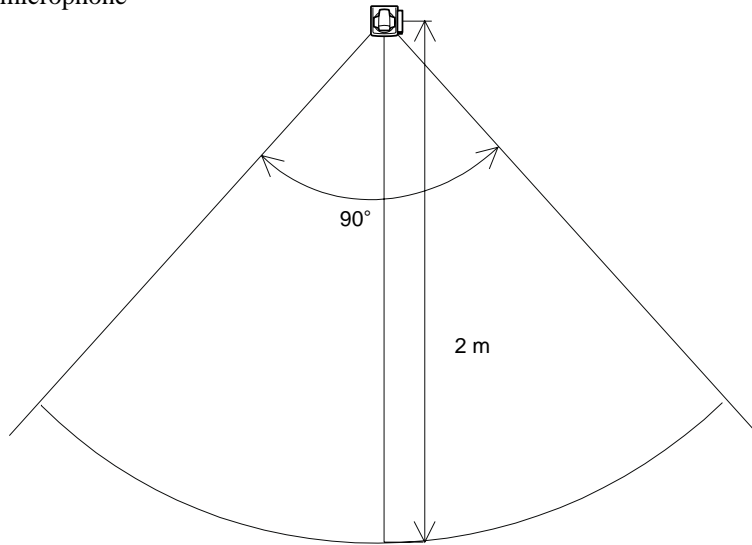
Side view (vertical range at maximum zoom-out)



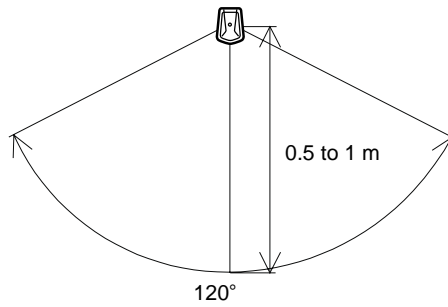
Highly directional range of microphone

The ideal directional range of a microphone is shown below. The numeric value is a rough standard. Use the value as the reference of the videoconferencing room used.

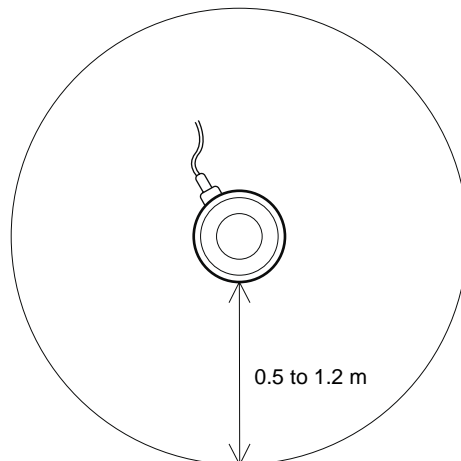
1: For internal microphone



2: For extension microphone (PCS-A300)

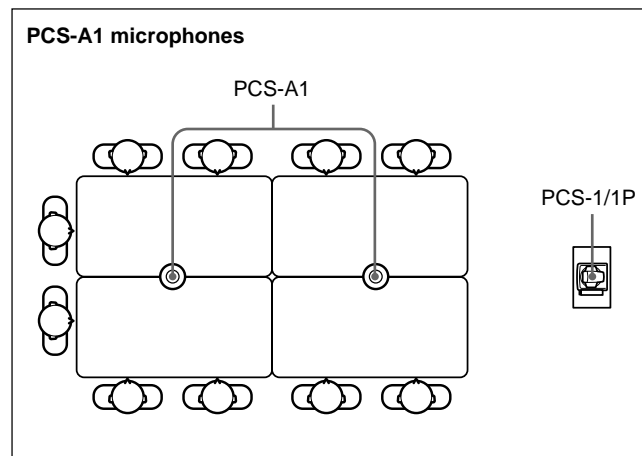
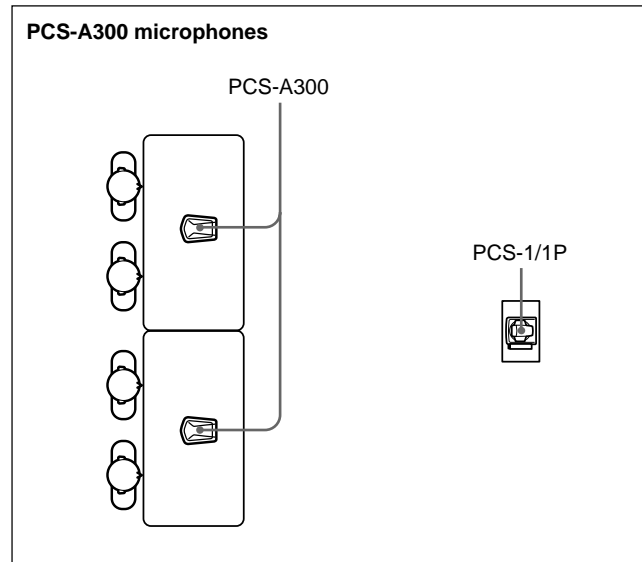
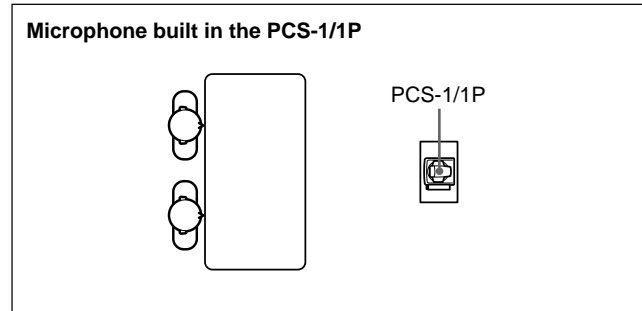


3: For extension microphone (PCS-A1)



The microphone built in the PCS-C1/C1P Camera Unit is assumed to be used to conduct a conference among about three participants. You can connect the optional PCS-A1 or PCS-A300 microphone to the System, allowing more persons to participate in the conference.

Microphone layout examples



Notes on installation of the microphones

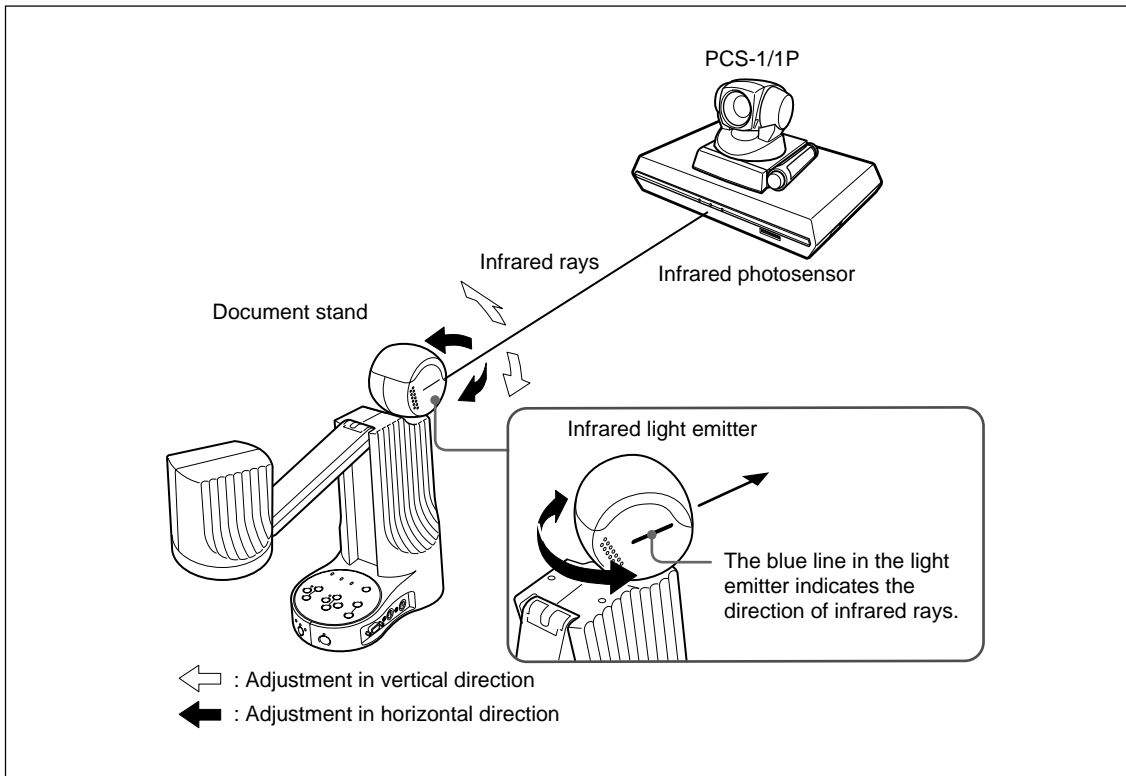
- Install microphone about 50 cm away from the participants.
- Install the speakers behind the microphones.
- Place the microphone in a quiet, echo-free location.
- Install microphones away from equipment that may cause noise.
- Avoid covering a microphone with paper, etc., or moving it. If you do either, extreme noise and echo may be heard temporarily by the remote party. In this case, wait until the echo disappears.

Installation of document stand

- a. Adjust the direction of an infrared light emitter.

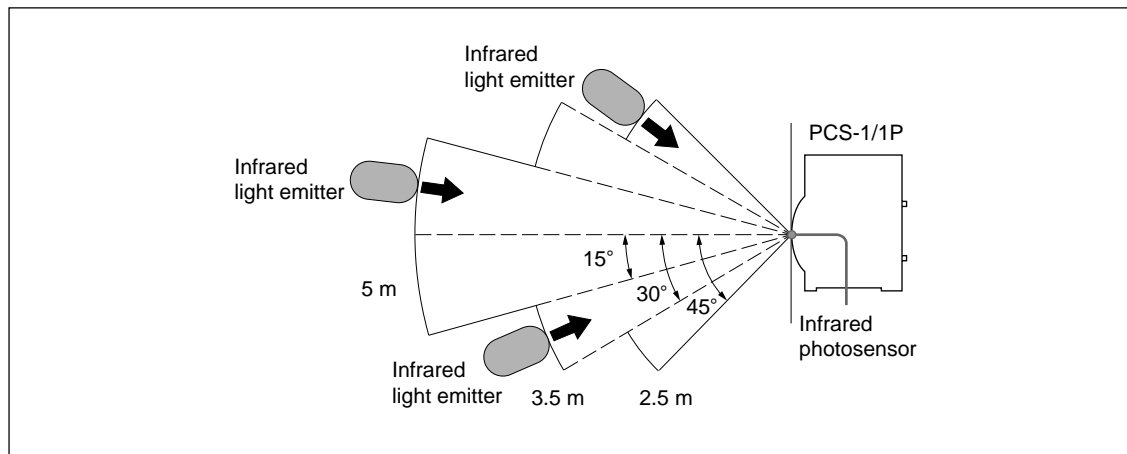
Install so that the infrared light emitter of the document stand is linear in direction with the infrared photosensor of PCS-1/1P when the video signal input to a document stand is transmitted to PCS-1/1P using an infrared video transmission function. The range in which infrared rays reach is a maximum of about 5 m.

Connect it with PCS-1/1P using a MONITOR OUT terminal when the infrared light emitter is used in excess of about 5 m.



b. Installation range (Reference)

If an image is disturbed in the range shown below, bring it near PCS-1/1P with the infrared light emitter of a documents stand turned toward PCS-1/1P.



Notes

- Install so that the infrared light emitter of a document stand is linear in direction with the infrared photosensor of PCS-1/1P. Do not put an object that interrupts transmission. When the direction of the infrared light emitter is shifted by five degrees or more, normal reception cannot be carried out, that is, an image is disturbed or stands still.
- Multiple document stands cannot be used at the same time. Infrared rays interfere and any signal cannot be received.
- The resolution of an image deteriorates when a video signal is transmitted using an infrared video transmission function. Connect the infrared light emitter with PCS-1/1P using a MONITOR OUT terminal when you do not want to deteriorate the resolution.
- Connect the infrared light emitter with PCS-1/1P using a MONITOR OUT terminal when an infrared video transmission function cannot be used due to the situation of a videoconferencing room.
- An image may be disturbed when other infrared light emitters are used or when a remote controller is used near the photosensor. Stop the use of other infrared light emitters or connect them with PCS-1/1P using a MONITOR OUT terminal.

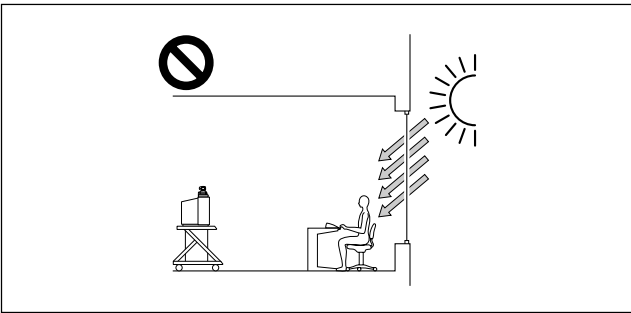
1-1-2. Operating Environment

Layout Considerations

- Avoid having large, moving objects, especially people, behind the participants, as the quality of the picture transmitted to the remote party will deteriorate.
- Do not seat participants in front of a wall with fine stripe patterns.
- Choose a room where echo will not occur.
- Do not install the system near noise sources such as air conditioners or copy machines.
- Avoid placing the system in a room where there are the speakers used for an in-house broadcasting system.

Lighting Considerations

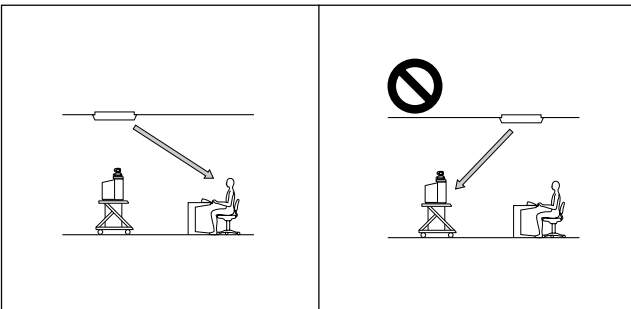
Do not point the camera toward a window where sunlight comes in as back lighting may decrease the contrast. If it is necessary, cover the window with a thick curtain.



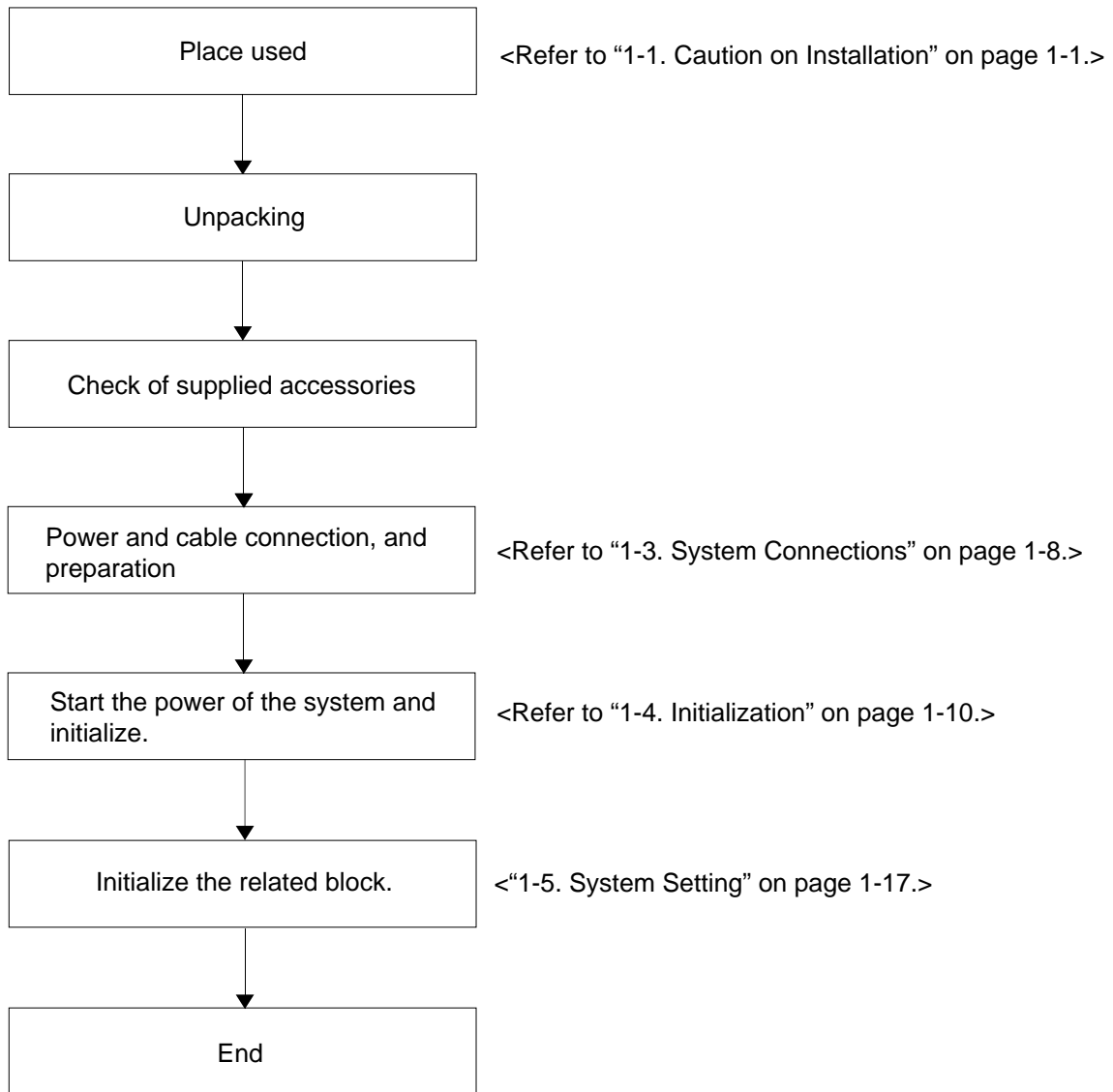
Adjust room lighting so that it falls on the participants. Avoid direct light on the TV monitor. Light intensity on faces should be about 300 lux or more.

If an inverter type or brightness-adjustable type of fluorescent lamp is used, the sensitivity of the Remote Commander may deteriorate.

Installing the Communication Terminal and Camera



1-2. Flowchart of Installation



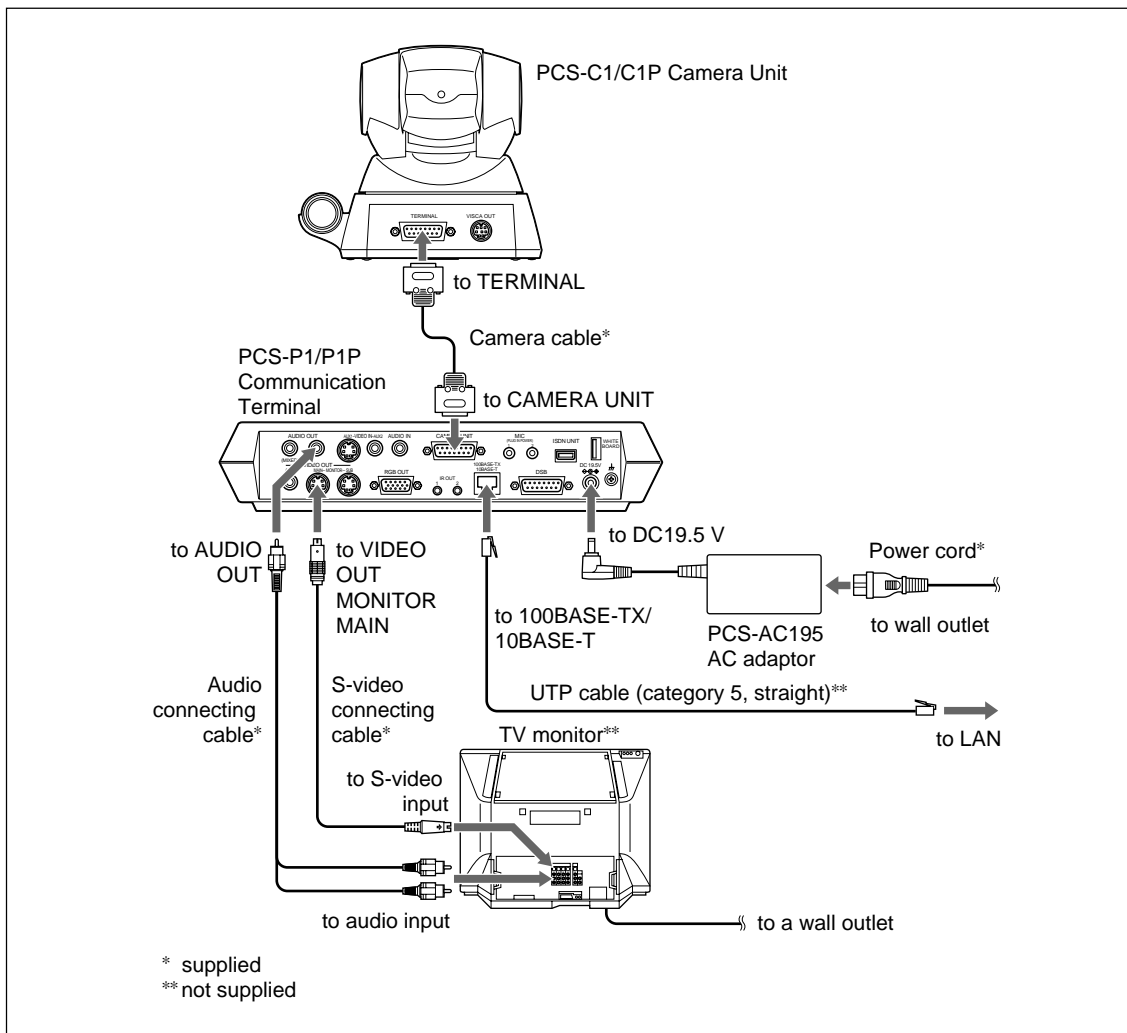
1-3. System Connections

This section describes the typical system connections.

Notes

- Be sure to turn off all the equipment before making any connections.
- Do not connect/disconnect the camera cable with the power on. Doing so may damage the Camera Unit or Communication Terminal.
- For safety, do not connect the 100BASE-TX/10BASE-T connector to a network that applies an excess voltage via the 100BASE-TX/10BASE-T connector

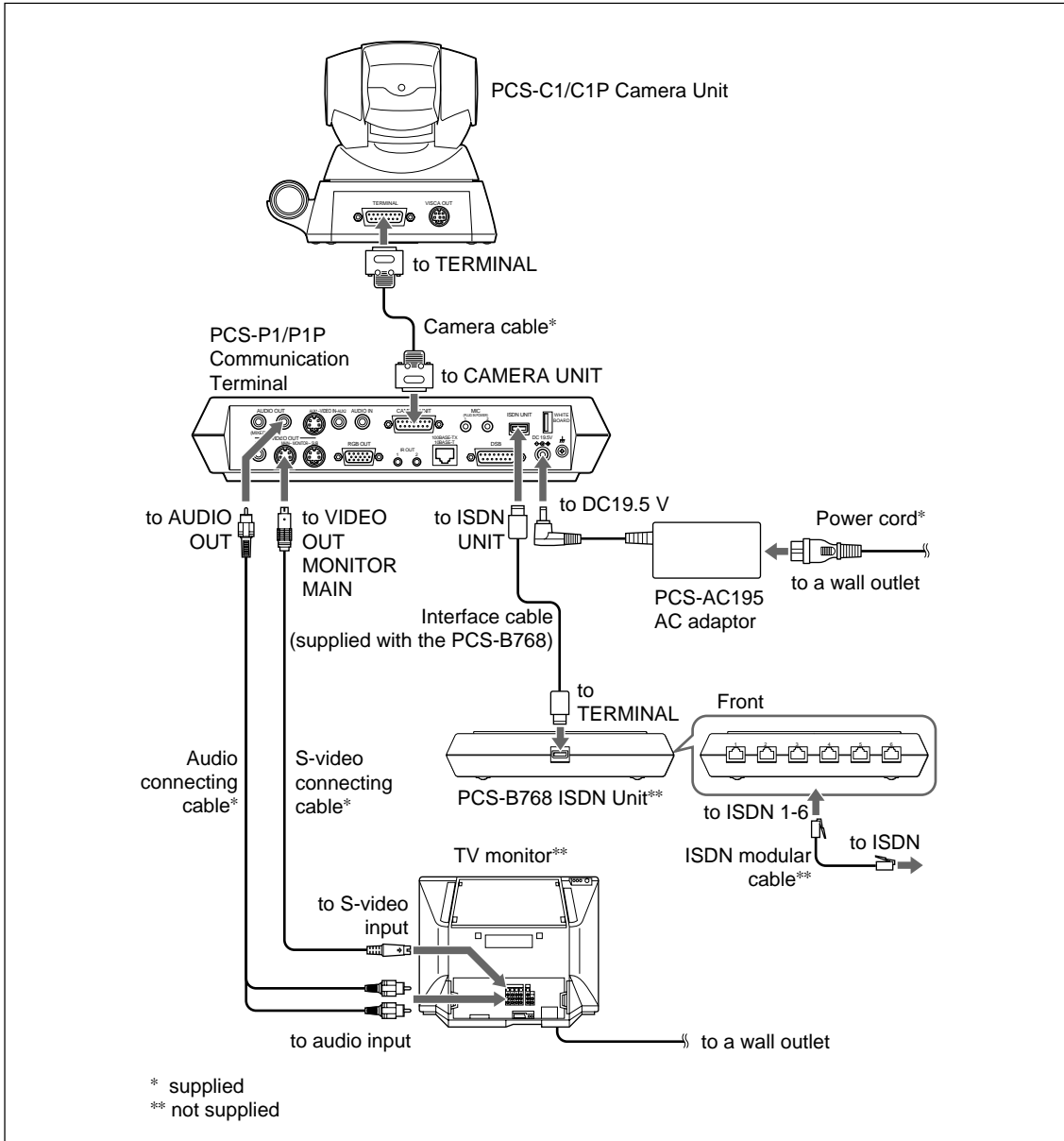
1-3-1. When Used in LAN (100BASE-TX/10BASE-T)



1-3-2. When Used in ISDN

Note

Do not connect/disconnect the camera cable or the interface cable with the power on. Doing so may damage the Camera Unit, Communication Terminal or ISDN Unit.

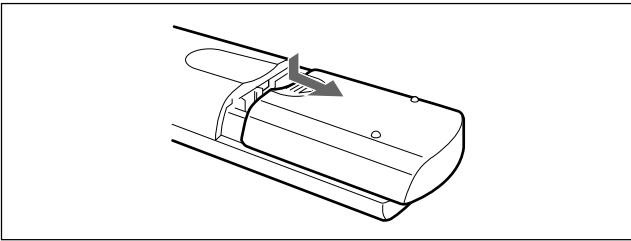


1-4. Initialization

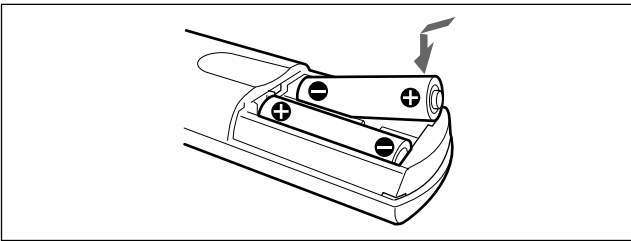
1-4-1. Inserting Batteries into the Remote Commander

Most of the operations with the Video Communication System can be controlled with the supplied Remote Commander.

1. Remove the battery compartment cover.



2. Insert two size AA (R6) batteries (supplied) with correct polarities into the battery compartment.



Note

Be sure to insert the batteries – side first. Inserting them forcibly + side first may damage the insulated film covering the batteries and cause a short circuit.

3. Replace the cover.

Notes

Battery life

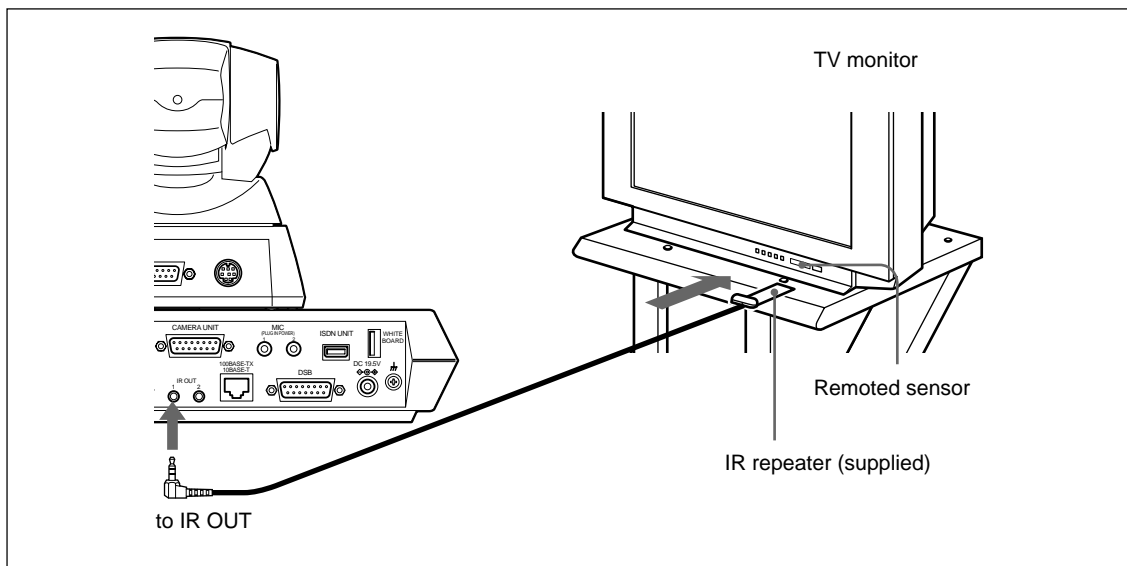
When the Remote Commander does not function properly, replace both the batteries with new ones.

Notes on batteries

- To avoid damage from possible battery leakage or corrosion, observe the following:
- Make sure to insert the batteries with the polarities in the correct direction.
- Do not mix old and new batteries, or different types of batteries.
- Do not attempt to charge the batteries.
- If you do not intend to use the Remote Commander for a long period of time, remove the batteries.
- If battery leakage occurs, clean the battery compartment and replace all the batteries with new ones.

1-4-2. Turning On/Off the TV Monitor Together With the Communication Terminal

If you use a Sony TV, insert the IR repeater under the remote sensor of the TV. Once you set the IR repeater, the TV will turn on or go to standby together with the Communication Terminal when you press the I/O button on the supplied Remote Commander.



Note

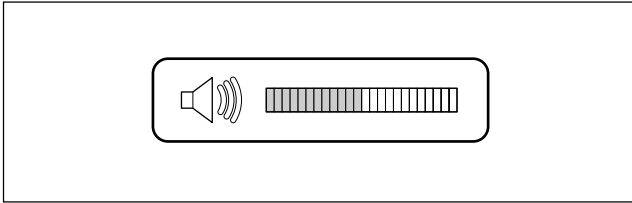
If the TV monitor is not turned on by pressing the I/O button on the Remote Commander, change the “IR Repeater Mode” setting in the General Setup menu.

For details on the “IR Repeater Mode” setting, see “General Setup Menu” on page 1-18.

1-4-3. Adjust the Volume of a Monitor Television

Adjust the television side after the volume is adjusted on the PCS-1/IP side.

1. Press the volume/bright button of a remote controller and adjust so that the volume adjustment bar is in the center position

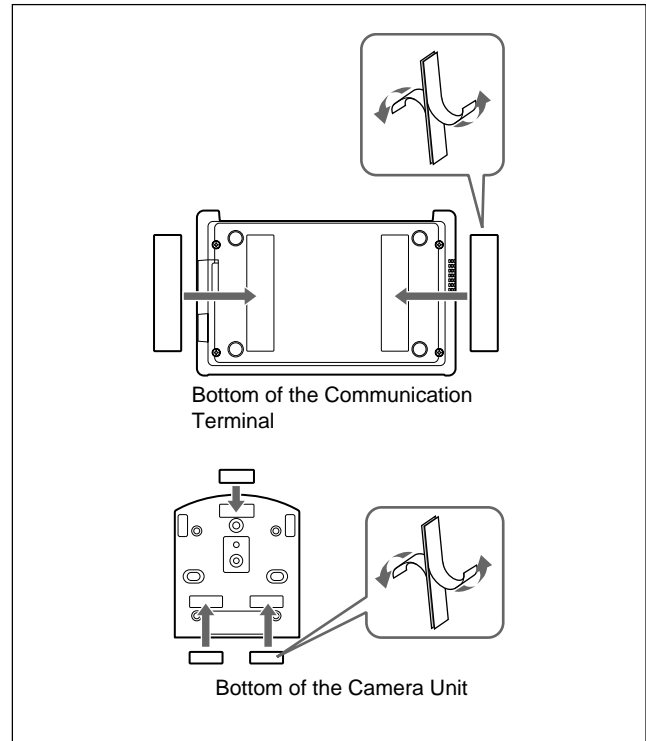


2. Adjust the volume of a monitor television.
Set to the volume in which the remote voice can be heard well.
After adjustment is completed, adjust the volume on the PCS-1/IP side.

1-4-4. Installing the Communication Terminal and Camera

You can fix the Communication Terminal or the Camera to your chosen place of installation using the supplied Velcro.

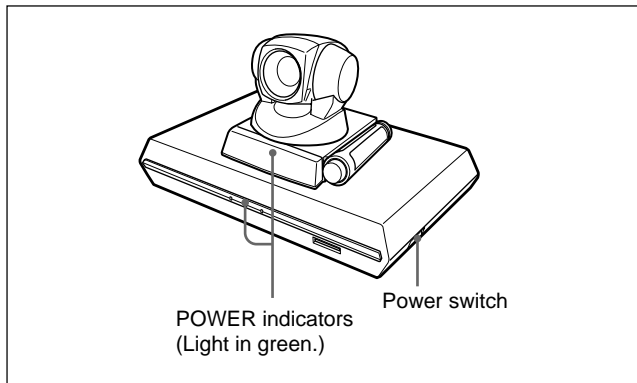
1. Stick the supplied Velcro to the bottom of the Communication Terminal or Camera.



2. Stick another piece of Velcro to the installation place.
3. Install the Communication Terminal or the Camera on the installation place by securing the two pieces of Velcro.

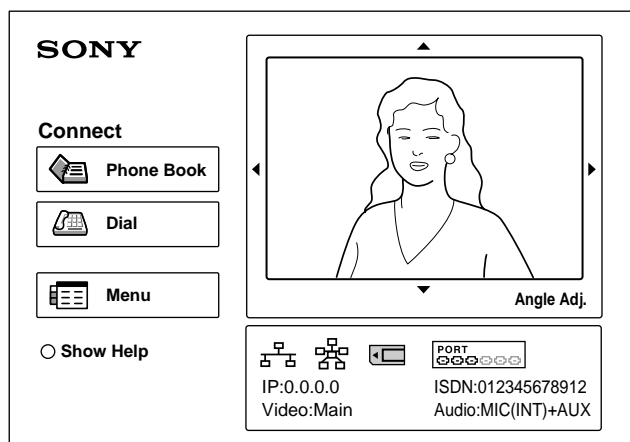
1-4-5. Turning On

1. Turn on the TV monitor.
If the IR repeater is installed in the TV monitor, set the TV monitor to standby mode. The TV monitor will turn on simultaneously when the Communication Terminal is turned on.
2. Turn on the power of any other equipment to be used for the videoconference.
3. Set the power switch on the right side of the Communication Terminal to the on position (I).



The Communication Terminal turns on after a while. Three indicators on the front of the Communication Terminal and the POWER indicator on the camera light, then only the POWER indicators on both units remain on in green. The launcher menu will appear on the monitor screen and the picture shot by the local camera will also appear in the launcher menu.

Launcher menu



Notes

- After the power is turned on, the camera moves automatically for trial operation. Be careful not to catch your finger.
- If you use force to prevent the camera moving, it may not resume moving and not output a signal to the Communication Terminal. In this case, turn off the Terminal, and turn it on again.
- When you turn on the power of the Communication Terminal for the first time after installation, the setup wizard will appear after the self-diagnosis is completed. Set up your system following the wizard.
- For setups using the wizard, see "Setting Up the System for the First Time - Initial Setup Wizard" on page 1-14.

Standby Mode Function

To save power the Communication Terminal will enter standby mode if you do not operate it for a specified period of time.

When the Communication Terminal is in standby mode, the POWER indicator lights in orange. Once the Communication Terminal receives a call, the standby mode is automatically released.

To release the standby mode

Press the I/O button on the Remote Commander.

To specify the standby time

Specify the time that you want the system to remain on before entering into standby mode (1 to 99 minutes) using "Standby Time" in the General Setup menu. If you do not want the system to enter the standby mode, set "Standby Mode" in the General Setup menu to "Off".

For the "Standby Time" and "Standby Mode" settings, see "General Setup Menu" on page 1-18.

Notes

- The POWER indicator on the camera goes off when the system enters standby mode.
- If you use a Sony TV monitor with the IR repeater installed under the remote sensor, the TV monitor will enter standby mode together with the Communication Terminal.

1-4-6. When the power is first turned on after installation

When the power is first turned on after installation, the wizard for initialization is displayed if self-diagnosis is completed. Register according to the wizard. The items set according to the wizard can also be later changed on the menu screen.

Note

The wizard for initialization is also displayed when ISDN unit PCS-B384 or PCS-B768 is newly installed after system installation. Similarly, register according to the wizard in this case.

1. Press the ↑ and ↓ buttons of a remote controller and select the language displayed in a menu or message.

Language:

You can select the desired language from English, French, German, Japanese, Spanish, Italian, Simplified Chinese, PORT (Portuguese), Traditional Chinese, and Korean*.

* Korean is added by upgrading.

2. Press the ↑, ↓, ←, and → buttons of a remote controller and click the “Next” button. Press the Enter button.

The monitor setting wizard is displayed.

Note

The monitor setting wizard is set when two or more monitors are connected to this unit. When only one monitor television is connected, select “Next” and proceed to step 5.

3. Set a monitor that outputs a signal.

Note

Notice that any menu screen is not displayed on monitors other than the set monitor when “Monitor output” is set.

Dual monitor:

Sets whether to use one monitor for a motion picture monitor using a dual monitor function when two monitors are connected.

ON:

Set when using a dual monitor function. A still picture, computer picture, or whiteboard picture is displayed in the second monitor.

OFF:

Set when not using a dual monitor function.

Monitor output (or Sub-monitor output):

Select whether to output a signal to the monitor connected to which output terminal. The “Monitor output” is changed to “Sub-monitor output” when “Dual monitor” is set to “ON”. In this case, select whether to output a signal to the sub-monitor (the second monitor) connected to which output terminal.

RGB of main unit:

Set when outputting a signal from the RGB OUT terminal of a communication terminal.

DSB RGB:

Set when outputting a signal from the RGB OUT terminal of a data solution box.

VIDEO of main unit:

Set when outputting a signal from the VIDEO OUT MONITOR MAIN or SUB terminal of a communication terminal.

- Press the ↑, ↓, ←, and → buttons of a remote controller and click the “Next” button. Press the Enter button.

The ISDN setting wizard is displayed when ISDN unit PCS-B384 or PCS-B768 is connected.

The LAN setting wizard is displayed when an ISDN unit is not connected. Proceed to step 11.

- Set the country, region, and protocol in which an ISDN line is used.

Country/region:

Select the country or region in which this unit is used.

Select “Japan” when you use this unit in Japan.

Country/region No.:

Enter the country, region’s national number, or region number in which this unit is used.

Enter “81” when you use this unit in Japan. (“81” is automatically displayed when you select “Japan” in “Country/region”.)

Protocol:

Select the protocol of the ISDN line used. Select “NTT” when you use this unit in Japan.

- Press the ↑, ↓, ←, and → buttons of a remote controller and click the “Next” button. Press the Enter button.
- Enter the telephone number of an ISDN line that this unit uses.

For one line, enter the same number in columns A1 and A2.

| Area Code | | Local Number | |
|-----------|----------------------|----------------------|----------------------|
| A1 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| A2 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| B1 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| B2 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| C1 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| C2 | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Area code:

Enter the area code.

Do not enter the first “0” of an area code.

Local code:

Enter the local code.

Note

Select a blank column and press the Enter button of a remote controller. The setting contents of an item in the above column are then copied.

Note

During use of ISDN unit PCS-B384, enter telephone numbers in columns B1 to C2 when two or three ISDN lines are connected.

During use of ISDN unit PCS-B768, enter telephone numbers in columns B1 to F2 when two to six ISDN lines are connected. To display columns D1 to F2, select “Next” and press the Enter button.

- Press the ↑, ↓, ←, and → buttons of a remote controller and click the “Next” button. Press the Enter button.

- Enter a sub-address.

In the sub-address, only numeric characters are valid.

For one line, enter the same number in columns A1 and A2.

| Sub Address | |
|-------------|----------------------|
| A1 | <input type="text"/> |
| A2 | <input type="text"/> |
| B1 | <input type="text"/> |
| B2 | <input type="text"/> |
| C1 | <input type="text"/> |
| C2 | <input type="text"/> |

Note

During use of ISDN unit PCS-B384, enter sub-addresses in columns B1 to C2 when two or three ISDN lines are connected.

During use of ISDN unit PCS-B768, enter sub-addresses in columns B1 to F2 when two to six ISDN lines are connected. To display columns D1 to F2, select “Next” and press the Enter button.

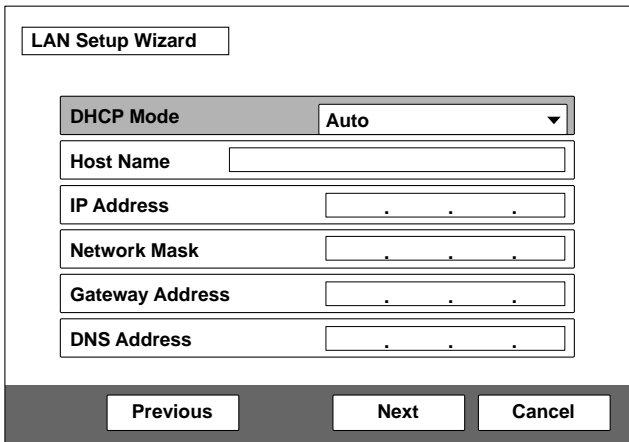
- Press the ↑, ↓, ←, and → buttons of a remote controller and click the “Next” button. Press the Enter button.

The LAN setting wizard is then displayed.

Note

When you do not use LAN, select “Next” and display a confirmation message. After that, proceed to step 13.

11. Set the following items on LAN.



DHCP mode:

Sets DHCP (Dynamic Host Configuration Protocol).

AUTO:

Acquires an IP address, network mask, gateway address, and DNS address automatically.

OFF:

Sets DHCP to “OFF”. Enter an IP address, network mask, gateway address, and DNS address when you set DHCP to “OFF”.

Host name:

Enter a host name.

IP address:

Enter the IP address of this unit.

Network mask:

Enter a network mask.

Gateway address:

Enter a default gateway address.

DNS address:

Enter a DNS (Domain Name System) server address.

Note

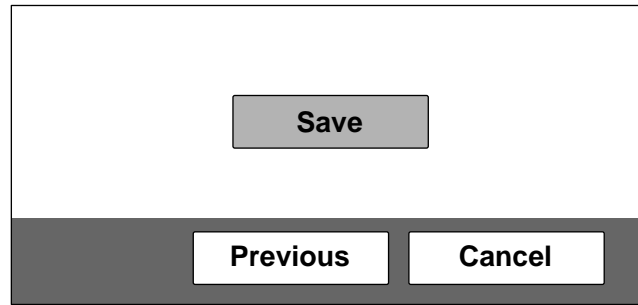
The automatically acquired IP address can be confirmed in a launcher menu or information menu when the “DHCP mode” is set to “AUTO”.

Consult the network administrator when you cannot understand the method of setting on LAN.

12. Press the ↑, ↓, ←, and → buttons of a remote controller and click the “Next” button. Press the Enter button.

A confirmation message is then displayed.

13. Press the ↑, ↓, ←, and → buttons of a remote controller and click the “Save” button. Press the Enter button.



The setting is then saved.

To stop the setting

Press the ↑, ↓, ←, and → buttons of a remote controller and click the “Cancel” button. Press the Enter button.

To return to the preceding wizard

Press the ↑, ↓, ←, and → buttons of a remote controller and click the “Return” button. Press the Enter button.

1-5. System Setting

The contents of a setting menu are shown in the table below.

Change the setting as required.

* For the ★-marked initial value, the value input in the initialization wizard (Section 1-4-6) is set.

| Item | | Contents of setting | | Initial value | |
|-------------|--------------|------------------------|---|--|-------------|
| Dial Setup | Page 1/4 | Line I/F | Select the line interface [LAN, ISDN, or ISDN (Telephone)] used. | LAN | |
| | | Bonding | Select the bonding mode in which the remaining lines can also be connected by only dialing one line when multiple ISDN lines are used. Select "On" when connecting a line in the bonding mode. Select "Auto" when automatically adjusting a line to the remote party. | Auto | |
| | | Number of Lines | Select the number of ISDN lines used during dialing of ISDN from 1B (64K), 2B (128K), 3B (192K), 4B (256K), 5B (320K), 6B (384K), 8B (512K), or 12B (768K). | 12B (768K) | |
| | | LAN Bandwidth | Set the bandwidth (bit rate) when communicating via a LAN line. | 1024Kbps | |
| | | Prefix | Set the prefix number used when connecting using an ISDN line. | None | |
| | | Restrict | Select the transmission rate (Auto or 56K) when connecting using an ISDN line. In a few countries (America, etc.) and regions, two types of rates (64 Kbps and 56 Kbps) are used. Usually, select "Auto" as the transmission rate of ISDN. | Auto | |
| | Page 2/4 | Video Mode | Select a video coding system. | All capabilities | |
| | | Video Frame | Select the maximum number of video transmission frames (15 fps or 30 fps). | 15fps | |
| | | Audio Mode | Select an audio coding system. | All capabilities | |
| | | Far End Camera Control | Set to "On" when controlling the camera on the remote party. Set to "Off" when not controlling it. | On | |
| | | T.120 Data | Set to "On" when making the data conference conforming to T.120 using NetMeeting. Set to "Off" when not making it. | Off | |
| | | H.239 | Set to "On" when using the dual video presentation mode based on the H.239 standard. Set to "Off" when not using it. | On | |
| | Page 3/4 | Prefix -A/-B/-C | Set the prefix (dial number). | Blank | |
| | Page 4/4 | Telephone Mode | Select the voice compression system during voice meeting. | Auto | |
| | | More Options Enable | Set to "On" when you want to set the items in the dial setup menu for each dial list. Set to "Off" when you do not want. | Off | |
| | | User Name Input | Set to "On" when recording the user name in a communication log before communication. Set to "Off" when not recording it. | Off | |
| | Answer Setup | Page 1/2 | Auto Answer | Select "Auto Answer" when automatically performing connection during reception of an answering call from the remote party. Select "Off" when confirming connection. | Auto Answer |
| | | | Number of Lines | Select the number of ISDN lines used during answering of ISDN from 1B (64K), 2B (128K), 3B (192K), 4B (256K), 5B (320K), 6B (384K), 8B (512K), or 12B (768K). | 12B (768K) |
| | | | Restrict | Select the transmission rate (Auto or 56K) when connecting (answering) using an ISDN line. In a few countries (America, etc.) and regions, two types of rates (64 Kbps and 56 Kbps) are used. Usually, select "Auto" as the transmission rate of ISDN. | Auto |
| | | | LAN Bandwidth | Set the bandwidth (bit rate) when communicating (incoming) via a LAN line. | 1024Kbps |
| ISDN MSN | | | Select "On" when employing multiple subscriber numbers during connection (answering) using an ISDN line. Select "Off" when not employing them. | Off | |
| Page 2/2 | | | Video Mode | Select a video coding system. | ALL |
| | | Video Frame | Select the maximum number of video transmission frames (15 fps or 30 fps). | 15fps | |
| | | Audio Mode | Select an audio coding system. | ALL | |
| | | Far End Camera Control | Set to "On" when controlling the camera on the remote party. Set to "Off" when not controlling it. | On | |
| | | T.120 Data | Set to "On" when making the data conference conforming to T.120 using NetMeeting. Set to "Off" when not making it. | Off | |
| | | H.239 | Set to "On" when using the dual video presentation mode based on the H.239 standard. Set to "Off" when not using it. | On | |

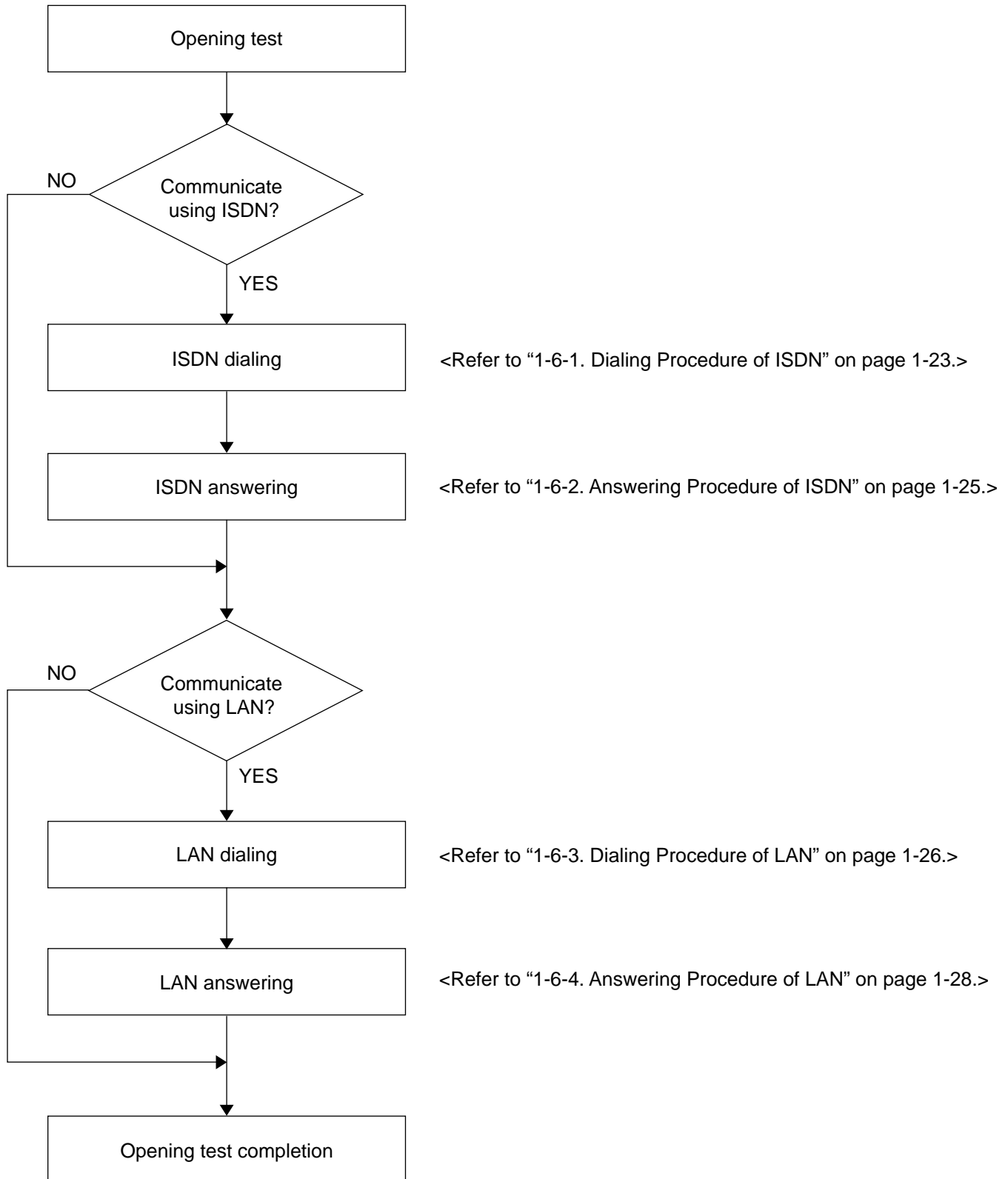
| Item | | Contents of setting | Initial value | | |
|----------------|-------------|--|--|--|----------|
| General Setup | Page 1/4 | Terminal Name | Enter the terminal name to be notified to MCU. | PCS-1 | |
| | | Dual Monitor | Set to "On" when using a dual monitor function with the two monitors connected. | Off★ | |
| | | Monitor Output (Sub-Monitor Output) | Select whether a signal should be output to the monitor connected to which output terminal. When "Dual Monitor" is set to "On", the menu is changed to "Sub-Monitor Output". Select whether a signal should be output to the sub-monitor connected to which output terminal. | VIDEO OUT★ | |
| | | Standby Mode | Set to "On" when using the standby mode. Set to "Off" when not using it. | Off | |
| | | Standby Time | Set the time (1 to 99 minutes) required until the unit is put into the standby mode when the standby mode is set to "On". | | |
| | | Time Display | Set to "On" when displaying the elapsed time in the upper-right position of the screen during the conference. Set to "Off" when not displaying it. | On | |
| | Page 2/4 | Clock Set | Set the current date and time. | | |
| | | Last Number Registration | Set to "On" when registering the remote user in the Phone Book after a conference is terminated. Set to "Off" when not registering it. | On | |
| | | T.120 PC Address | Enter the IP address of the computer used when the data conference conforming to T.120 is made using NetMeeting. | Blank | |
| | | Whiteboard Attachment | Select whether to attach the optional mimio Xi vertically or horizontally on the whiteboard. | Vertical | |
| | | Whiteboard Size | Select the size (height × width) of the whiteboard used. | 3'0"×4'0" | |
| | | Whiteboard Measurement Size | Select whether to display the whiteboard size in inches or meters. | Inches | |
| | Page 3/4 | Language | Select the language of the menu and message displayed on the screen. | English★ | |
| | | IR Repeater Mode | Select the mode for putting the monitor into the standby state or turning on the power when a Sony's monitor is used. Usually, set to "MODE 1". | MODE1 | |
| | | Control by Far End | Set to "On" when receiving the camera control command from the remote party. Set to "Off" when not receiving it. | On | |
| | | Character Input Help | Select whether to display the balloon help appearing when entering characters or numeric characters. | On | |
| | Page 4/4 | Memory Stick Format | Execute the format of the Memory Stick. | | |
| | | Video Input Selection Name • Main • Object • AUX1 • AUX2 | The input device names displayed in a launcher menu or video input select menu can be changed to arbitrary names, respectively. | All blanks | |
| | Audio Setup | Page 1/2 | Input Select | Select the audio input (MIC, AUX, or MIC + AUX). | MIC |
| | | | Mic Selection | Select the microphone used (Internal, External, or DSB MIC). | Internal |
| CTE | | | Select whether to use communication transducer CTE-600 and select the input terminal to be connected. Select "Off" when not using CTE-600. Select "AUX" when inputting to the AUDIO IN terminal of the main unit and select "DSB AUX IN" when inputting to the AUX IN terminal of a data solution box. * When CTE-600 is set so that it is used, "Input Select", "Mic Select", and "Echo Canceller" are automatically determined and cannot be changed. | Off | |
| Echo Canceller | | | Select "Internal" when using the echo canceller of the main unit and select "External" when using an external echo canceller. Select "Off" when not using the echo canceller of the main unit. | Internal | |
| Lip Sync | | | Select "On" when using a lip sync function that synchronizes the lip motion and voice of a speaker. Select "Off" when not using it. | Off | |
| Recording Mute | | | Set to "On" when outputting a voice to the AUDIO OUT (MIXED) terminal. Set to "Off" when not outputting it. | On | |
| Page 2/2 | | Beep Sound | Set to "On" when generating a beep sound during pressing of a remote controller button. Set to "Off" when not generating it. | On | |
| | | Sound Effect | Set to "On" when generating an effect sound during system start up, conference start, conference end. Set to "Off" when not generating it. | On | |
| | | Dial Tone | Set to "On" when generating a ring-back tone during dialing or a busy tone during talking. Set to "Off" when not generating it. | On | |
| | | Ringer Tone | Set to "On" when generating a ringer tone during calling. Set to "Off" when not generating it. | On | |

| Item | | Contents of setting | Initial value | |
|-----------|----------------------------|---|---|------------------------|
| LAN Setup | Page 1/8 | DHCP Mode | Set whether to use DHCP (Dynamic Host Configuration Protocol). Set to "Auto" when automatically acquiring an IP address, net mask, gateway address, and DNS address. Set to "Off" when not automatically acquiring them. | Off★ |
| | | Host Name | Set the host name of this unit. | Blank★ |
| | | IP Address | Set the IP address of this unit. | Blank★ |
| | | Network Mask | Set the network mask of this unit. | Blank★ |
| | | Gateway Address | Set a default gateway address. | Blank★ |
| | Page 2/8 | DNS Address | Set a DNS (Domain Name System) server address. | Blank |
| | | Gatekeeper Mode | Set to "On" when using a gatekeeper and set to "Off" when not using it. Set to "Auto" when automatically searching a gatekeeper. | Off |
| | | Gatekeeper Address | Set the IP address of a gatekeeper. | Blank |
| | | User Alias | Set the user name (H.323 alias) registered in a gatekeeper. | Blank |
| | Page 3/8 | User Number | Set the user number (E.164 number) registered in a gatekeeper. | Blank |
| | | SNMP Mode | Set to "On" when enabling the service of an SNMP (Simple Network Management Protocol) agent. Set to "Off" when disabling it. | Off |
| | | Trap Destination | Set the IP address of an SNMP manager that transmits a trap. | Blank |
| | | Community | Set the community name that an SNMP manager manages. Usually, set to "Public". | Public |
| | | Description | This is the description of this device. It has been entered as "Videoconference Device". Cannot be changed. | Videoconference Device |
| | | Location | Set the place in which this unit is installed. | Blank |
| | Page 4/8 | Contact | Set the information on the administrator of this unit. | Blank |
| | | NAT Mode | Set to "On" when connecting this unit to the local network in which NAT (Network Address Translation) is used. Set to "Off" when not connecting it. | Off |
| | | NAT Address | Set the IP address on the global side that NAT uses. | Blank |
| | | Packet Resent Request | Set to "On" when requesting retransmission with the packets lost during communication. Set to "Off" when not requesting it. | On |
| | | Adaptive Rate Control | Set to "On" when optimizing the LAN bandwidth. Set to "Off" when not optimizing it. * This item is fixed to "On" when "Packet Retransmission Request" is "On". | On |
| | | LAN Mode | Select the interface type and communication mode during LAN connection. | Auto Negotiation |
| | Page 5/8 | Port Number Used | Select whether to fix the TCP port number and UDP port number. User setting: The port number that the user sets is used. Default value: The default port number is used. TCP port number 2253 and UDP port number 49152 are set. | Default |
| | | TCP Port Number | Set the TCP port number when "Port Number Used" is "Custom". | 2253 |
| | | UDP Port Number | Set the UDP port number when "Port Number Used" is "Custom". | 49152 |
| | Page 6/8 | TOS | Select the definition of a TOS (Type of Service) field. Set to "Off" when not defining the TOS field. Select "IP Precedence" when defining in IP Precedence and select "Diffserve" when defining in Diffserve. * For the items below, the display dynamically varies depending on the selection. | OFF |
| | | During IP Precedence selection | | |
| | | IP Precedence | Enter IP Precedence values (0 to 7). | 0 |
| | | Low Delay | Select low delay bit On/Off of TOS field. | Off |
| | | High Throughput | Select high throughput bit On/Off of TOS field. | Off |
| | | High Reliability | Select high reliability bit On/Off of TOS field. | Off |
| | | Minimum Cost | Select minimum cost bit On/Off of TOS field. | Off |
| | | During Diffserve selection | | |
| Diffserve | | Enter Diffserve value (0 to 64). | 0 | |
| Page 7/8 | | PPPoE | Select PPPoE termination On/Off using this unit. | Off |
| | | PPPoE User Name | Enter the PPPoE connection user name (account) acquired from a provider. | Blank |
| | PPPoE Password | Enter the PPPoE connection password acquired from a provider. | Blank | |
| Page 8/8 | Fixed IP for PPPoE | Set to "On" when acquiring the PPPoE connection-fixed IP address. Set to "Off" when automatically acquiring for each session. | Off | |
| | Fixed IP Address for PPPoE | Enter the fixed IP address acquired from a provider when "Fixed IP for PPPoE" is "On". | Blank | |
| | PPPoE DNS | Select "Obtain automatically" when acquiring the IP address of the DNS server from the server during PPPoE connection. Select "Set" when the fixed IP address exists. | Obtain automatically | |
| | Primary DNS | Enter the IP address of the primary DNS server when "PPPoE DNS" is "Set". | | |
| | Secondary DNS | Enter the IP address of the secondary DNS server when "PPPoE DNS" is "Set". | | |

| Item | | Contents of setting | Initial value | |
|---|-----------------|--|--|----------------|
| Administrator Setup | Page 1/2 | Administrator Password | Set the password for an administrator. The administrator can operate a setup menu and phone book menu. | Blank |
| | | Superuser Password | Set the password for a super-user. The super-user can operate a phone book menu. | Blank |
| | | Remote Access Password | Set the password when accessing through Web control. | Blank |
| | | Web Monitor | Select whether to permit the state monitoring function (the updating of JPEG screen) via Web access. | On |
| | Page 2/2 | Save Phone Book | Save the data in a phone book in a Memory Stick. | |
| | | Load Phone Book | Load the phone book data saved in a Memory Stick to the main unit. | |
| | | Auto Dialing | Select whether to use the automatic dialing function of a private phone book. | On |
| | | Create Private Phone Book | Create a private phone book newly in a Memory Stick. | |
| | | Delete Private Phone Book | Delete the private phone book created in a Memory Stick. | |
| | | Copy to Private Phone Book | Copy the phone book data of the main unit to a Memory Stick as private phone book data. | |
| ISDN Setup | Page 1/7 | Country/Region | Select the country and region in which this unit is used. | USA★ |
| | | Country/Region Code | Enter the country, region's national number, and region number in which this unit is used. * The Country/Region No. is automatically set when it is uniquely determined by the selection of "Country/Region". | 1★ |
| | | Protocol | Select the protocol of the ISDN line used. | National ISDN★ |
| | Page 2/7 | Area Code (A1 to C2) | Enter the area code of the ISDN line used. * Do not enter the first "0" of an area code. | Blank★ |
| | | Local Number (A1 to C2) | Enter the telephone number (local number) of the ISDN line used. | Blank★ |
| | Page 3/7 | Area Code (D1 to F2) | Enter the area code of the ISDN line used. * Do not enter the first "0" of an area code. | Blank★ |
| | | Local Number (D1 to F2) | Enter the telephone number (local number) of the ISDN line used. | Blank★ |
| | Page 4/7 | Sub Address (A1 to C2) | Enter the sub-addresses when registering them. | Blank★ |
| | Page 5/7 | Sub Address (D1 to F2) | Enter the sub-addresses when registering them. | Blank★ |
| | Page 6/7 | SPID (A1 to C2) | Enter the telephone numbers and the Auto SPID tab. * This item is used only for customers in the U.S.A. and Canada. | Blank |
| Page 7/7 | SPID (D1 to F2) | Enter the telephone numbers and the Auto SPID tab. * This item is used only for customers in the U.S.A. and Canada. | Blank | |
| Multipoint Setup * Validated only when the optional software for a multipoint conference is installed. | Page 1/2 | Multipoint Mode | Select "On" when this unit is used as the master unit (MCU) of a multipoint conference. Select "Off" when not making a multipoint conference. | Off |
| | | Broadcast Mode | Select "Divide" when displaying the video in the connected terminals on the split screen. Select "Audio detect" when detecting the speaker position and transmitting the video in the terminal to all other terminals. | Split |
| | | Number of Lines | Select the number of channels in the line used for connection at the first point during ISDN connection. | 2B (128K) |
| | | Total LAN Bandwidth | Select the whole bandwidth when making a multipoint conference during LAN connection. | 1024Kbps |
| | | Restrict | Select the communication network rate of ISDN. Select "Auto" when using a normal ISDN line. Select "56K" when connecting with the country or region in which the line rate per 1B is 56 Kbps. | Auto |
| | Page 2/2 | Video Mode | Select the video system during multipoint conference. | ALL |
| | | Audio Mode | Select the audio system during multipoint conference. | ALL |
| | | Display Terminal Name | Select whether to display the terminal name of the connected terminal when a multipoint conference is terminated. | On |
| | | Far End Camera Control | Select whether to control the camera on the remote party. | On |
| | | Reject Answer | Select "On" when rejecting connection to the access from a remote party during multipoint conference. Select "Off" when permitting connection. | Off |

| Item | | Contents of setting | | Initial value |
|--------------------------------------|-------------|--|---|---------------|
| Machine Information (Information) | Page 1/1 | Host Version | Displays the software version of the main unit. | |
| | | ISDN UNIT Version | Displays the version of the connected ISDN unit (PCS-B384 or PCS-B768). | |
| | | DSB Version | Displays the version of the connected data solution box (PCS-DSB1). | |
| | | DSP Version | Displays the version of the built-in DSP for video and audio codec. | |
| | | Software Option | Displays the installed MCU software. | |
| | | Option I/F | Displays the connected optional device. | |
| | | Host Name | Displays the host name of the main unit. | |
| | | IP Address | Displays the IP address of the main unit. | |
| | | MAC Address | Displays the MAC address of the main unit. | |
| | | Serial Number | Displays the serial number of the main unit. | |
| Status | | The communication state is displayed. Each page is displayed for each connected point. | | |
| Encryption via LAN | Page 1/1 | Encryption via LAN | Select whether to encrypt the data connected via LAN. | Off |
| | | Encryption Password | Set the password when making an encryption conference. | Blank |

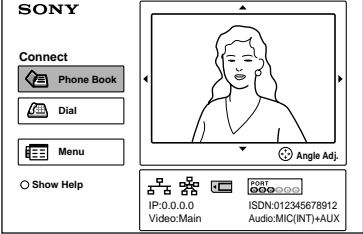
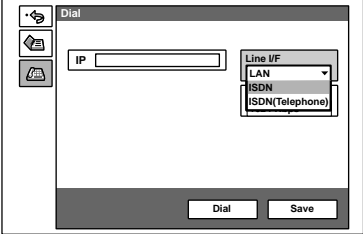
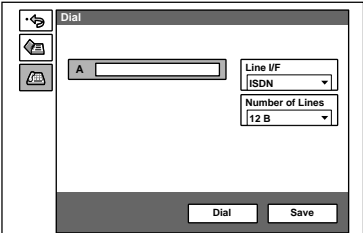
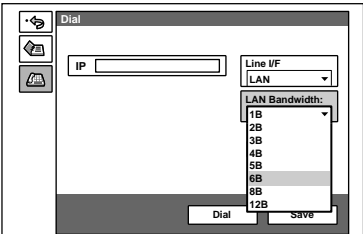
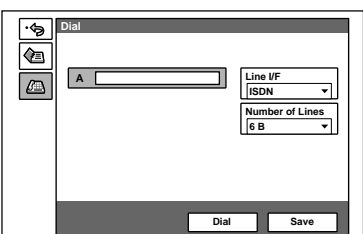
1-6. Flowchart of Opening Test

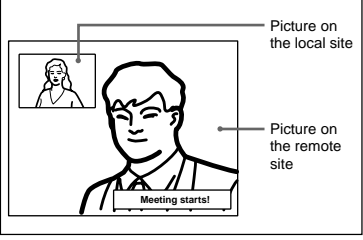


1-6-1. Dialing Procedure of ISDN

Note

It is required that the line number used in the other end is entered in the area code and local number of the ISDN setup menu of the other end.

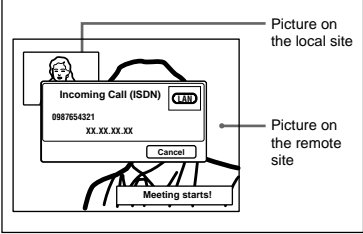
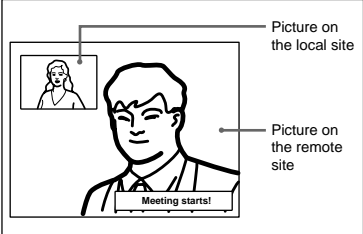
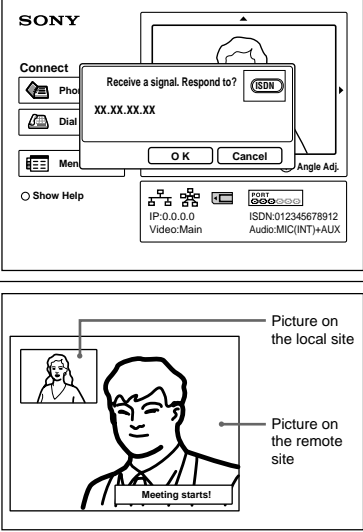
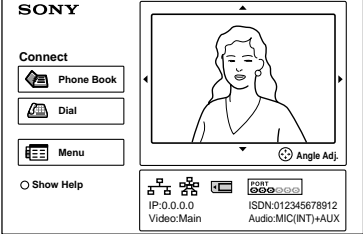
| Item | Operation | Screen | Remarks (Confirmation item) |
|------|---|--|--|
| 1. | Select "Dial" from the launcher menu using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (📞/📞) button of a remote controller. |  | The dial menu is displayed. |
| 2. | Select "Line I/F" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Then select "ISDN" from the set item using ↑ or ↓ button and press the ENTER button. |  | |
| 3. | Select line input column A using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Then, enter the remote line number. |  | |
| 4. | Select "Number of lines" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Select the number of connected lines from the set item using ↑ or ↓ button and press the ENTER button. |  | |
| 5. | Select "Dial" at the bottom of a menu using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (📞/📞) of a remote controller. |  | "Dialing (ISDN)" is displayed on the screen, and the ON LINE lamp (blue) blinks. |

| Item | Operation | Screen | Remarks (Confirmation item) |
|------|--|--|--|
| 6. | The remote party makes a response. |  | The ON LINE indicator (blue) lights. "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television. |
| 7. | <p>Disconnection</p> <p>Press the CONNECT/DISCONNECT (📶/📵) button of a remote controller. A confirmation message on whether to disconnect a line is then displayed.</p> <p>Select "OK" using a ← or → button of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (📶/📵) button of a remote controller again.</p> | | The line is disconnected and the conference is terminated. The current display returns to a launcher menu. |

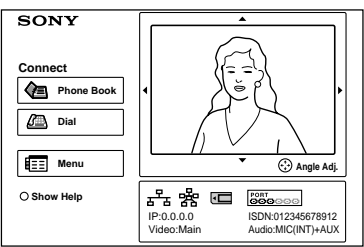
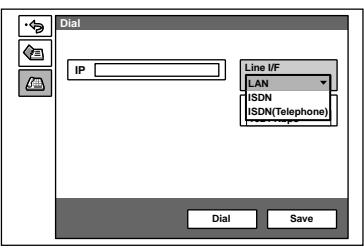
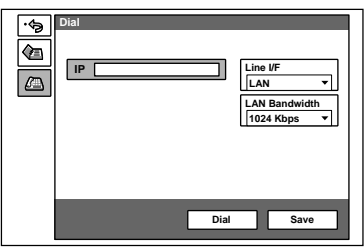
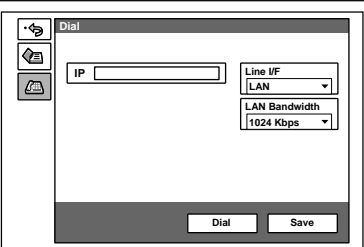
1-6-2. Answering Procedure of ISDN

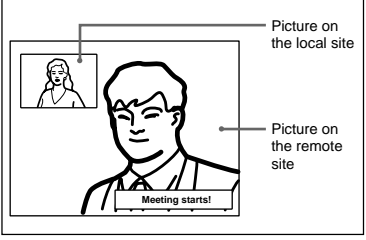
Note

It is required that the line number used in this unit is entered in the area code and local number of the ISDN setup menu before receiving a signal from the other end.

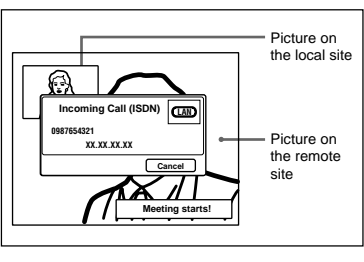
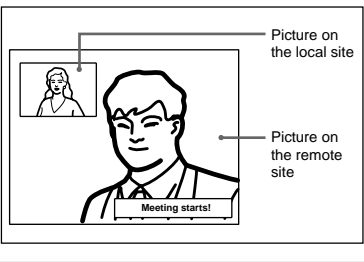
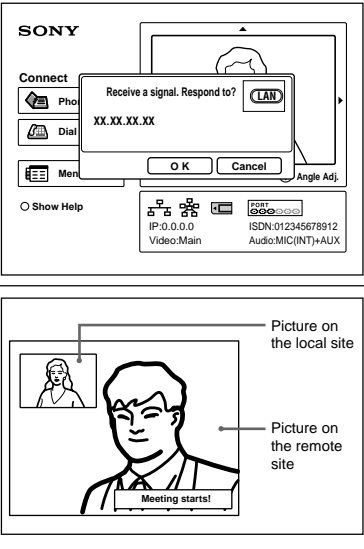
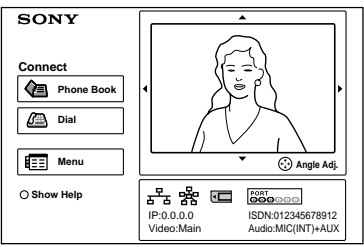
| Item | Operation | Screen | Remarks (Confirmation item) |
|------|-------------------------------|--|---|
| 1. | Calling from the remote party |  | A ringer tone occurs. "Incoming Call" is displayed on the screen. |
| 2. | <For Auto Answer> |  | During connection, "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television. |
| | <For Manual Answer> |  | A ringer tone occurs and the guide screen for incoming appears on the screen. Select "OK" using a ← or → button of a remote controller and press the ENTER button. During connection, "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television. |
| 3. | Remote disconnection |  | The message of conference termination is displayed on the screen and the current display returns to a launcher menu. |

1-6-3. Dialing Procedure of LAN

| Item | Operation | Screen | Remarks (Confirmation item) |
|------|---|---|--|
| 1. | Select "Dial" from the launcher menu using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (📞/📞) button of a remote controller. |  <p>The screenshot shows the Sony remote control interface. On the left, there is a 'Connect' section with buttons for 'Phone Book', 'Dial', and 'Menu'. Below these is a 'Show Help' option. On the right, there is a central display area showing a woman's face. Below the display, there are icons for 'LAN', 'ISDN', and 'Audio'. At the bottom, there is a status bar showing 'IP:0.0.0.0', 'Video:Main', 'ISDN:012345678912', and 'Audio:MIC(NT)+AUX'.</p> | The dial menu is displayed. |
| 2. | Select "Line I/F" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Then select "LAN" from the set item using a ↑ or ↓ button and press the ENTER button. |  <p>The screenshot shows the 'Dial' menu. There is an 'IP' input field. To the right, there is a 'Line I/F' dropdown menu with 'LAN' selected. Below it, there is an 'ISDN' dropdown menu with 'ISDN(Telephone)' selected. At the bottom, there are 'Dial' and 'Save' buttons.</p> | |
| 3. | Select an IP address input column using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Then, enter the remote IP address. Notes <ul style="list-style-type: none"> • Enter the host name and domain name (example: host.domain) in an IP address input column when a DNS server is used. Enter the user name or user number, registered in the remote LAN setup menu, in an IP address input column when a gate keeper is used. • To enter the delimitation of an IP address, press the → button or # button. |  <p>The screenshot shows the 'Dial' menu. The 'IP' input field now contains an IP address. The 'Line I/F' dropdown menu is still set to 'LAN'. Below it, there is a 'LAN Bandwidth' dropdown menu with '1024 Kbps' selected. At the bottom, there are 'Dial' and 'Save' buttons.</p> | |
| 4. | Select "LAN Bandwidth" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. Select the Bandwidth used from the set item using a ↑ or ↓ button and press the ENTER button. | | During connection, "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television. |
| 5. | Select "Dial" at the bottom of a menu using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (📞/📞) of a remote controller. |  <p>The screenshot shows the 'Dial' menu. The 'IP' input field contains an IP address. The 'Line I/F' dropdown menu is set to 'LAN'. The 'LAN Bandwidth' dropdown menu is set to '1024 Kbps'. At the bottom, there are 'Dial' and 'Save' buttons.</p> | "Dialing (LAN)" is displayed on the screen. |

| Item | Operation | Screen | Remarks (Confirmation item) |
|------|--|--|--|
| 6. | The remote party makes a response. |  | The ON LINE indicator (blue) lights. "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television. |
| 7. | <p>Disconnection</p> <p>Press the CONNECT/DISCONNECT (📞/📞) button of a remote controller. A confirmation message on whether to disconnect a line is then displayed.</p> <p>Select "OK" using a ← or → button of a remote controller and press the ENTER button, or press the CONNECT/DISCONNECT (📞/📞) button of a remote controller again.</p> | | The line is disconnected and the conference is terminated. The current display returns to a launcher menu. |

1-6-4. Answering Procedure of LAN

| Item | Operation | Screen | Remarks (Confirmation item) |
|------|-------------------------------|--|---|
| 1. | Calling from the remote party |  | A ringer tone occurs. "Incoming Call" is displayed on the screen. |
| 2. | <For Auto Answer> |  | During connection, "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television. |
| | <For Manual Answer> |  | A ringer tone occurs and the guide screen for incoming appears on the screen. Select "OK" using a ← or → button of a remote controller and press the ENTER button. During connection, "Meeting starts!" is displayed, and the remote voice and image are heard and displayed from the monitor television. |
| 3. | Remote disconnection |  | The message of conference termination is displayed on the screen and the current display returns to a launcher menu. |

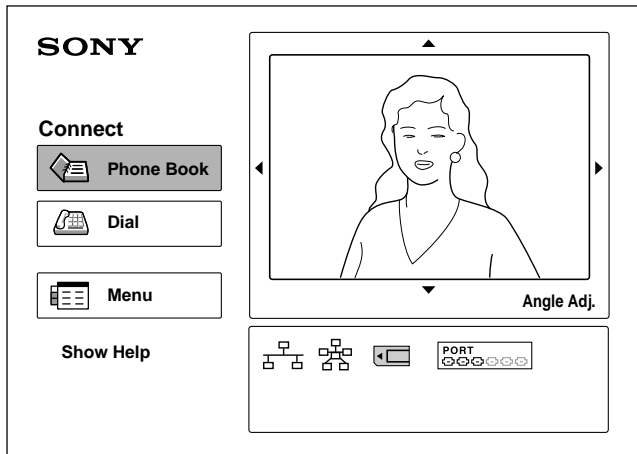
Section 2 Maintenance

2-1. Confirmation Procedure of Local Terminal Operation Using Self-Loop

A self-loop is the reflected loop in the codec of the main unit.

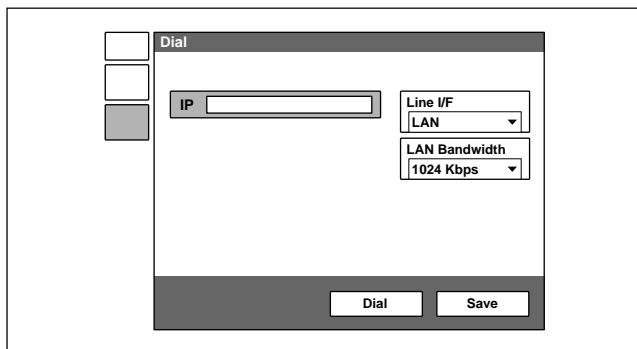
Operation procedure

1. The launcher menu below is displayed when the power switch of a communication terminal is turned on.



2. Select a dial using the \uparrow , \downarrow , \leftarrow , and \rightarrow buttons of a remote controller and press the ENTER button or the CONNECT/DISCONNECT (ON/OFF) button of a remote controller.

The dial menu is displayed.

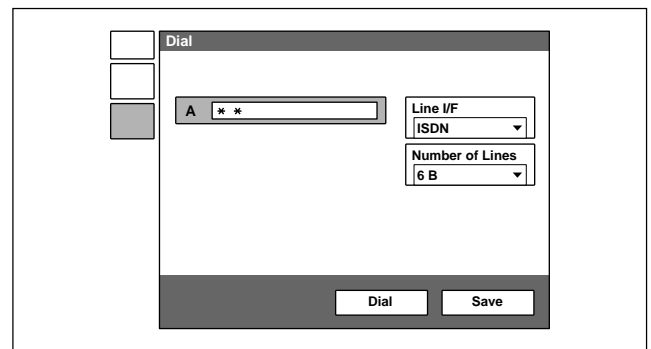


3. Select the line type.
Select "Line Type" using the \uparrow , \downarrow , \leftarrow , and \rightarrow buttons of a remote controller and press the ENTER button.
Then, select "LAN" or "ISDN" using \uparrow and \downarrow buttons and press the ENTER button.

4. Select the number of lines used.
Select "LAN Bandwidth" or "Number of Lines" using the \uparrow , \downarrow , \leftarrow , and \rightarrow buttons of a remote controller and press the ENTER button.
Then, select "1920 kbps" or "12B" using the \uparrow and \downarrow buttons and press the ENTER button.

5. Select column IP or A using the \uparrow , \downarrow , \leftarrow , and \rightarrow buttons of a remote controller and press the ENTER button.

Enter * in column A from a remote controller two times.



6. Select "Dial" using the \uparrow , \downarrow , \leftarrow , and \rightarrow buttons of a remote controller and press the ENTER button or the CONNECT/DISCONNECT (ON/OFF) button of a remote controller.

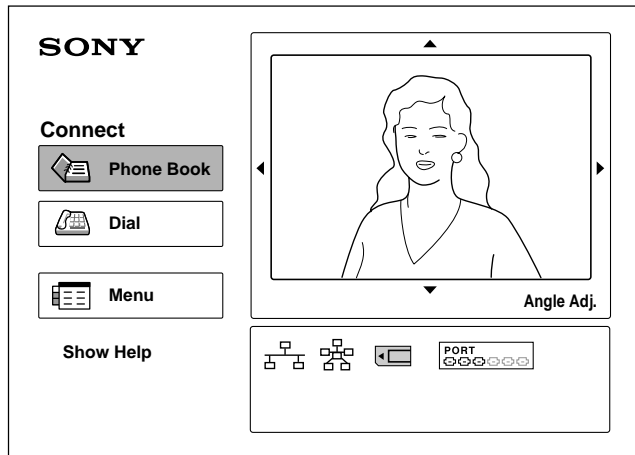
A self-loopback is started and "Dialing" is displayed on the monitor screen. "Meeting starts!" is displayed when the loopback is completed. In this case, confirm that an image and voice are looped.

2-2. LAN Communication Test using Ping

A LAN communication test can be performed using ping (ICMP).

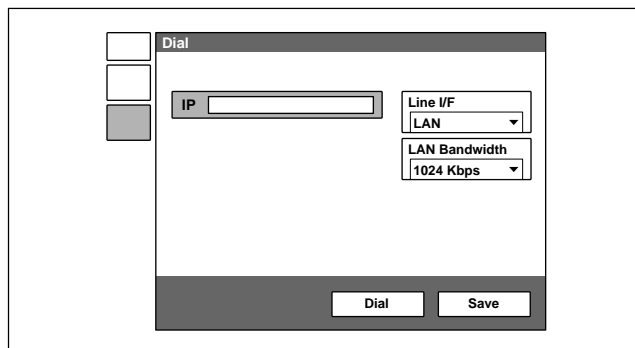
Operation procedure

1. The launcher menu below is displayed when the power switch of a communication terminal is turned on.



2. Select a dial using the \uparrow , \downarrow , \leftarrow , and \rightarrow buttons of a remote controller and press the ENTER button or the CONNECT/DISCONNECT ($\text{☎}/\text{☎}$) button of a remote controller.

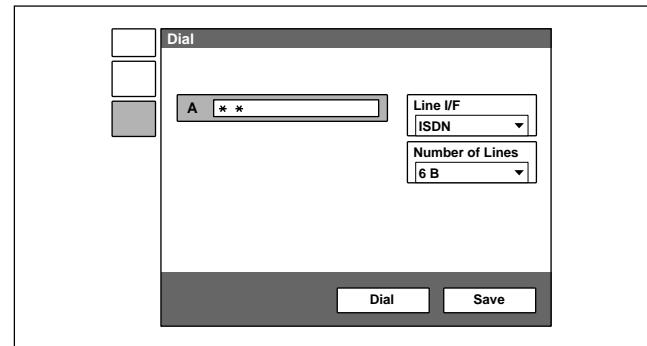
The dial menu is displayed.



3. Select "Line Type" using the \uparrow , \downarrow , \leftarrow , and \rightarrow buttons of a remote controller and press the ENTER button. Then, select "LAN" using the \uparrow and \downarrow buttons and press the ENTER button.

4. Select the IP column using the \uparrow , \downarrow , \leftarrow , and \rightarrow buttons of a remote controller and press the ENTER button. Enter "PING. remote IP address" in the IP column. For example, enter PING.192.168.0.1 when performing a connection test to the device whose IP address is 192.168.0.1.

Alphabets and numeric characters are switched using the "Kana/Alphabet/Numeric" button of a remote controller.



5. Select "Dial" using the \uparrow , \downarrow , \leftarrow , and \rightarrow buttons of a remote controller and press the ENTER button or the CONNECT/DISCONNECT ($\text{☎}/\text{☎}$) button of a remote controller.

6. The screen during LAN outgoing is displayed.

The message below is displayed in yellow below the "Dialing (LAN)" dialog box when the communication using ping succeeds.

1 reply from 192.168.0.1

The numeric character at the beginning is counted up sequentially. When it reaches 4, message window "Line cannot be connected completely. No reason: Redial again" is displayed at the bottom of the screen. When the communication using ping cannot be performed, no yellow characters is displayed and the message window described above is displayed.

2-3. Locating the Components

Inspect the items below when this unit does not operate normally.

1. This unit does not start even if the power switch on the side panel is turned on.

- Check that the power cable is connected properly.
- Check that the POWER indicator (green) on the front panel of the main unit lights.

2. The main unit does not start even if you press the I/O button of a remote controller.

- Check that the POWER indicator (orange) on the front panel of the main unit lights.
- Check that the initial screen is displayed when the power switch on the side panel is turned on again.
Check the power switch on the side panel and the power cable when the POWER indicator does not light.
- Check that the transmission block of a remote controller emits light in the local image on the monitor when you press buttons with the remote controller put toward this unit.
Check the consumed battery or failure of a remote controller when no light is emitted.

3. The initial screen is not displayed. (The screen is black.)

- Check the monitor power and input selection.
- Check that the video cable is connected properly.
- Connect with the monitor having a composite (video) input terminal when only an RGB monitor is connected.
Set the dual monitor properly in a “General setup menu” when the initial screen is displayed on the monitor having a composite (video) input terminal.

4. A local image is not displayed in the screen area of the initial screen.

- Press the “input selection” button of a remote controller and confirm that the video input selection on the local side is “Main”.
- Check that the camera cable is connected properly.
- Check that the POWER indicator (green) of a camera unit lights.

5. A line is not connected. (ISDN)

- Check that the main unit and ISDN unit are properly connected. (Pay attention to the vertical direction of a connector.)
- Check that the STATUS indicator (green) of an ISDN unit blinks.
- Check that the STATUS 1 to 6 indicators (orange) of an ISDN unit light proportionally to the number of connected lines.
Check the ISDN line and DSU (Digital Service Unit) when the indicators do not light.
- Check whether loopback operation (Section 2-1) can be performed.
- Check that the setting contents of a dial list and system setup are proper.
- For bonding connection, check that the ISDN number of the local terminal on the incoming side is properly set (on pages 2 and 3 of an “ISDN setup menu”).

6. A line is not connected. (LAN)

- Check that the LAN cable is connected properly.
- Check that the left indicator (green) of the main unit's LAN connector blinks.
- Check that the LAN indicator (LAN) is highlighted in the system status display area (in the lower-right position of the screen) of the initial screen.
- Check that an IP address is properly displayed below the LAN indicator.
- Check that the setting contents of a dial list and system setup are proper.
- Check that ping can be used for a default gateway or connection destination in the communication test (Section 2-2) based on ping.

7. The voice from the remote side cannot be heard after line connection.

- Check that the volume of the main unit is proper.
- Check that the volume of a monitor is proper.
- Check that the audio cable of the main unit and monitor is connected properly.
- Check that the remote side is not set to MIC OFF.
- Check that the audio input on the remote side is proper. (Check that a voice is normally input using an audio input level indicator on page 1/2 of an audio setup menu.)

8. A voice does not reach the remote side after line connection.

- Check that the volume of the main unit on the remote side is proper.
- Check that the volume of the monitor on the remote side is proper.
- Check that the audio cable of the main unit and monitor on the remote side is connected properly.
- Check that the local side is not set to MIC OFF.
- Check that the audio input on the local side is proper. (Check that a voice is normally input using an audio input level indicator on page 1/2 of an audio setup menu.)

9. The image from the remote side is not displayed after line connection.

- Check that the video input on the remote side is selected properly.
- Check that the display can be switched using the remote/local button of a remote controller.
- Check that a local image is displayed in self-loopback (Section 2-1) without any problem.
- Check that a remote image is displayed during connection with other remote sides.

10. An image does not reach the remote side after line connection.

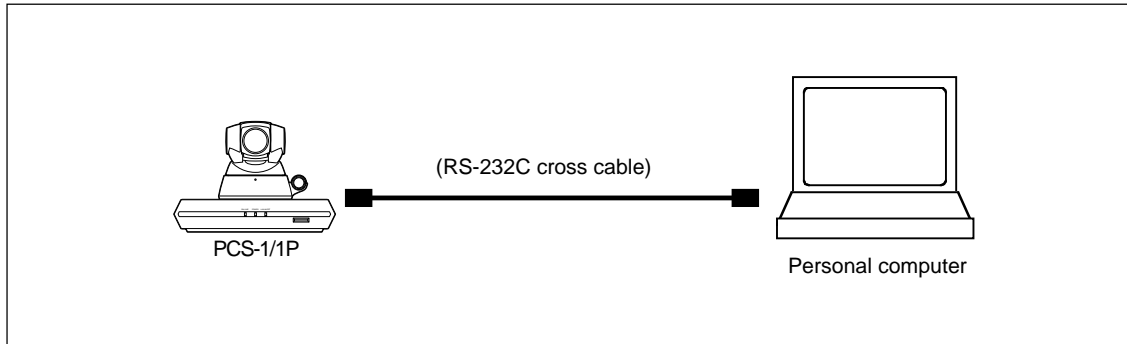
- Check that the video input on the local side is selected properly.
- Check that the display can be switched using the remote/local button of a remote controller on the remote side.
- Check that a local image is displayed in self-loopback (Section 2-1) on the remote side without any problem.
- Check that a remote image on the remote side is displayed during connection with other remote sides.

2-4. Operation Log

PCS1/1P has a function that outputs the internal processing history, between the connection and disconnection of a line, to the commercial PC connected to the outside and a function that saves the latest history of 1M byte in a Memory Stick (refer to the saving of system log on page 2-18).

Operation log using commercial PC (1)

Connect an AUX CONTROL terminal and PC to the right on the front panel of PCS-1/1P. Start the power of PCS-1/1P and PC.



Activate accessory software “Hyper Terminal” of PC Windows 95/98/2000/XP on PC and set the communication format as described below.

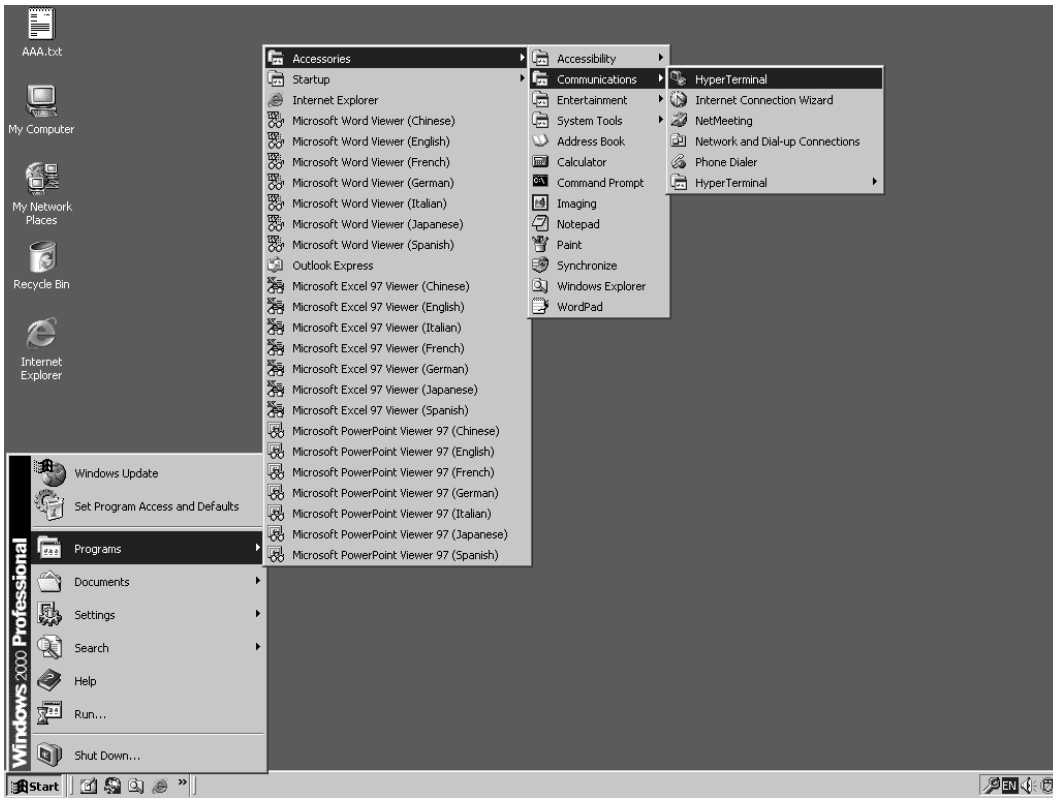
Transmission rate: 38,400 bps
Data length: 8 bits
Stop bits: 2 bits
Parity bit: None

The procedure for “Hyper Terminal” activation, communication format setting, and operation log execution is described on the next page and later.

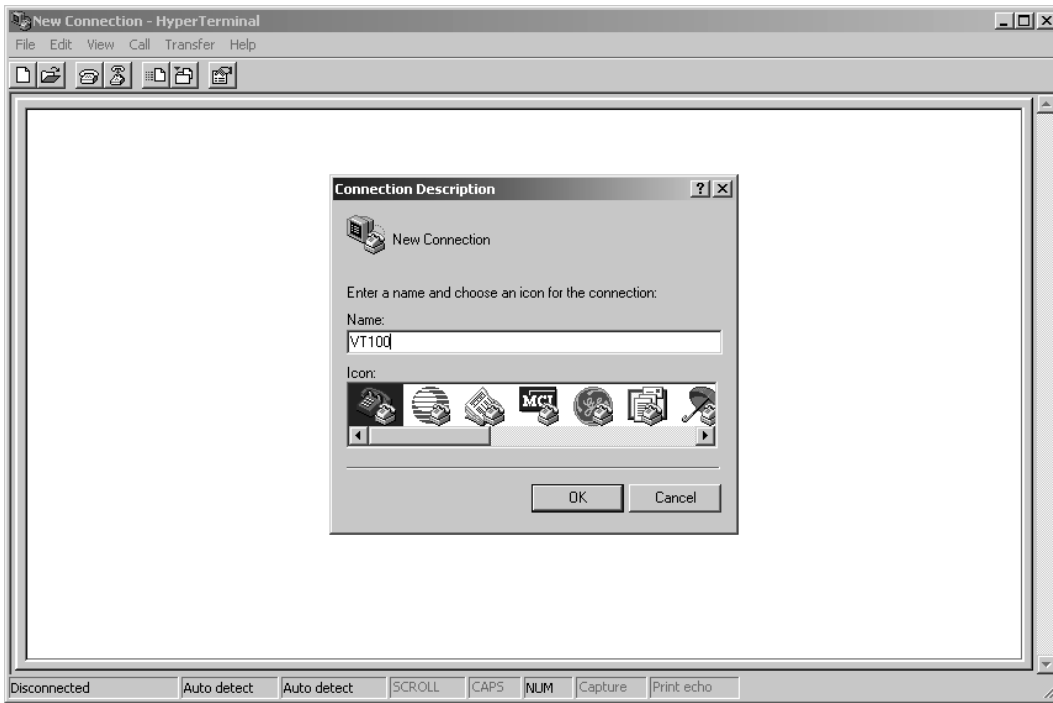
- Windows is the registered trademark of Microsoft Corporation.
- For Windows 2000/XP, the procedure is “Start menu” → “Program” → “Accessories” → “Communications” → “Hyper Terminal”.

Note: In a hyper terminal, only 500 lines can be logged. For long-time logging, use other terminal emulators.

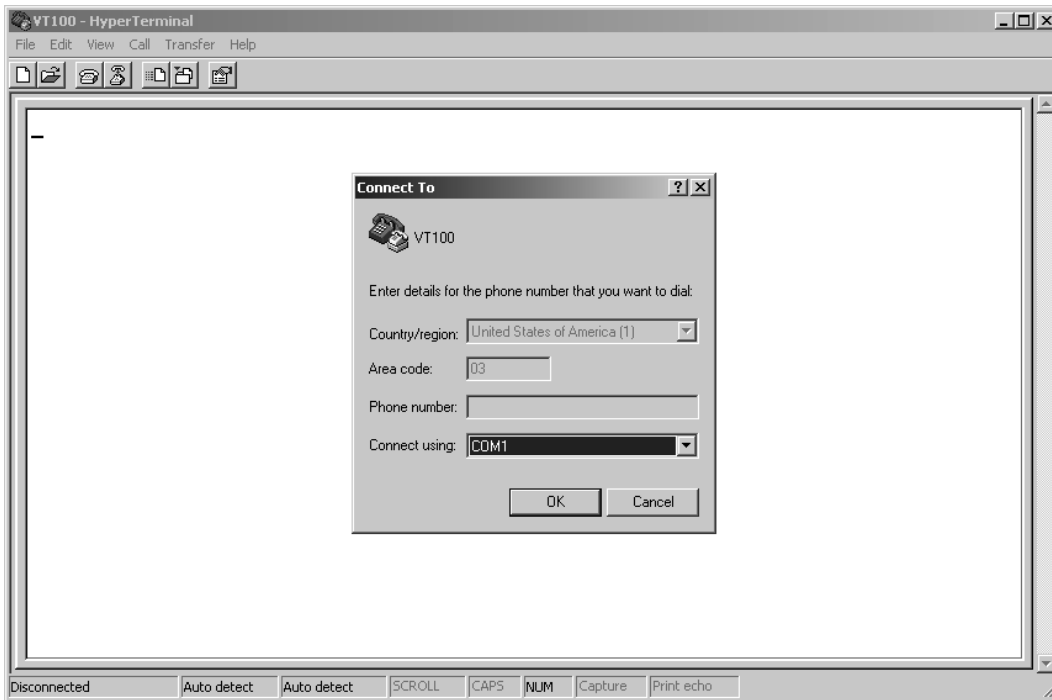
(1) Click “Start menu”, “Accessories”, “Communications”, and then “HyperTerminal”.



(2) Enter “VT100” in “Name”, select any icon, and click the “OK” button.



(3) Select "COM1" in "Connect using" and click the "OK" button.



(4) Set the baud rate as described below and click the "OK" button.

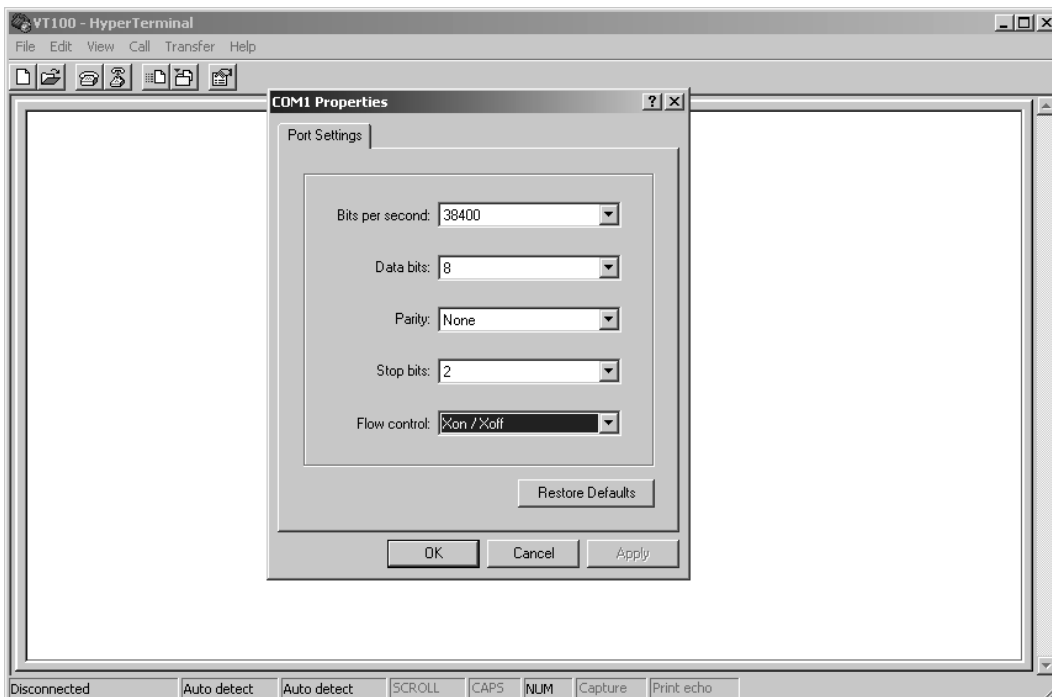
Bits per second: 38400

Data bits: 8

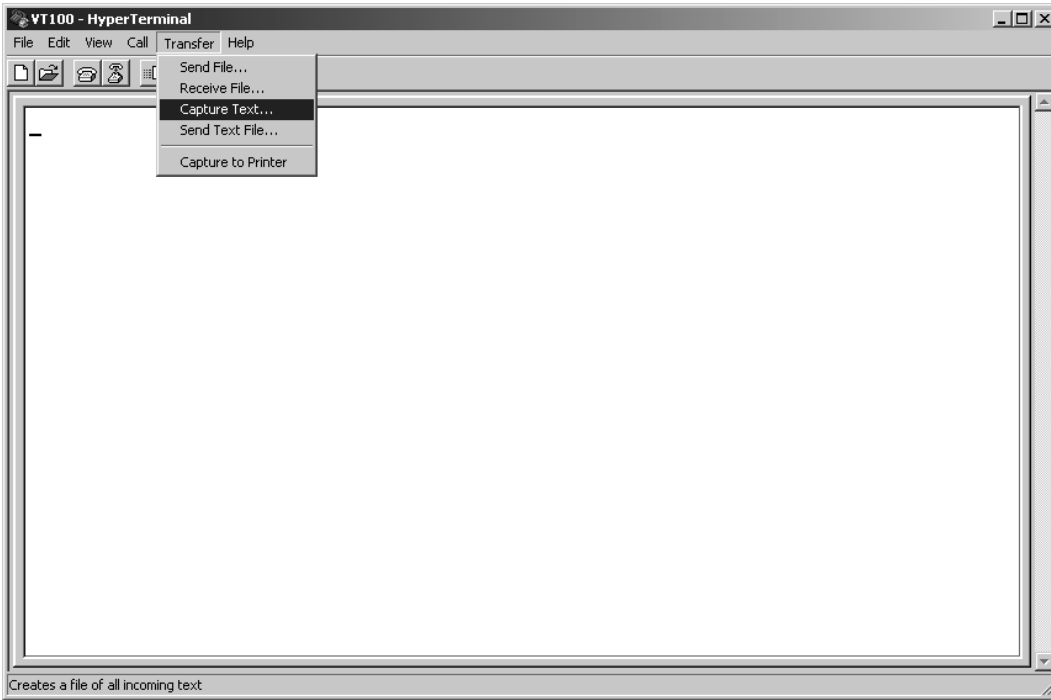
Parity: None

Stop bits: 2

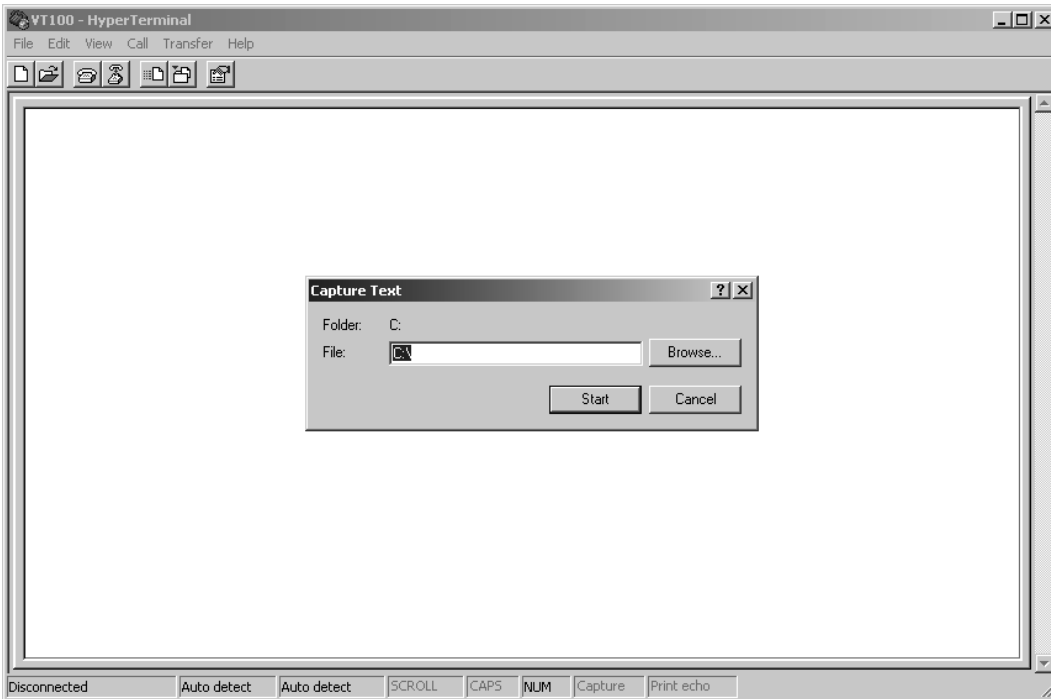
Flow control: Xon/Xoff



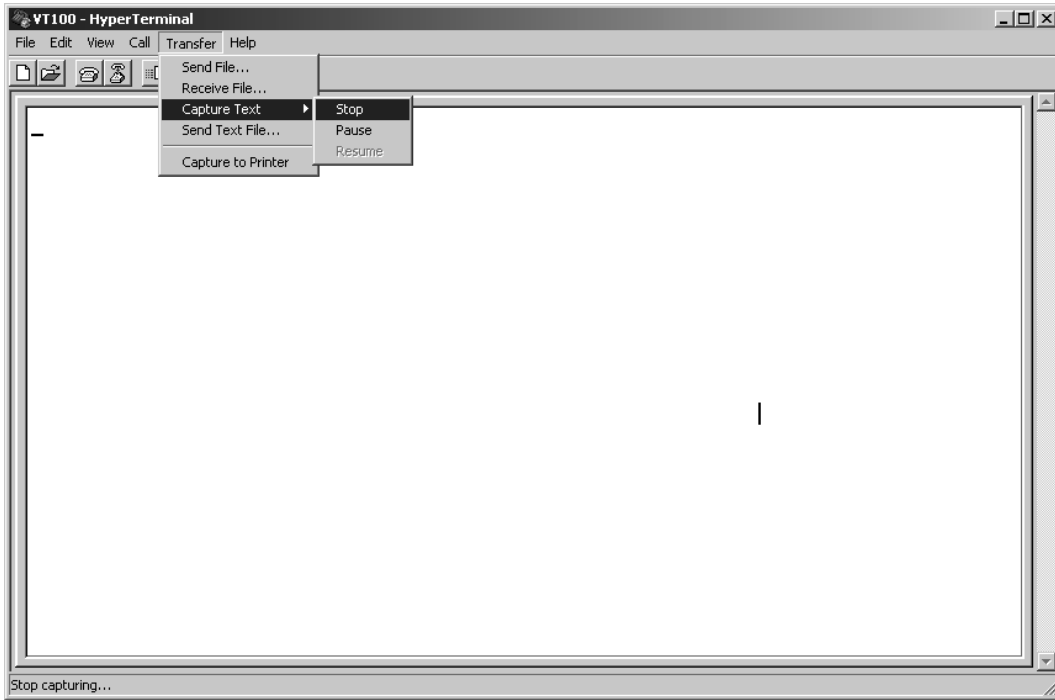
(5) Click “Capture Text” from a “Transfer” menu.



(6) Set the saving place and name of a log file and click “Start”.



(7) After logging, click “Stop” from “Capture Text” in a “Transfer” menu.



(8) Double-click the extracted log file to view a log.

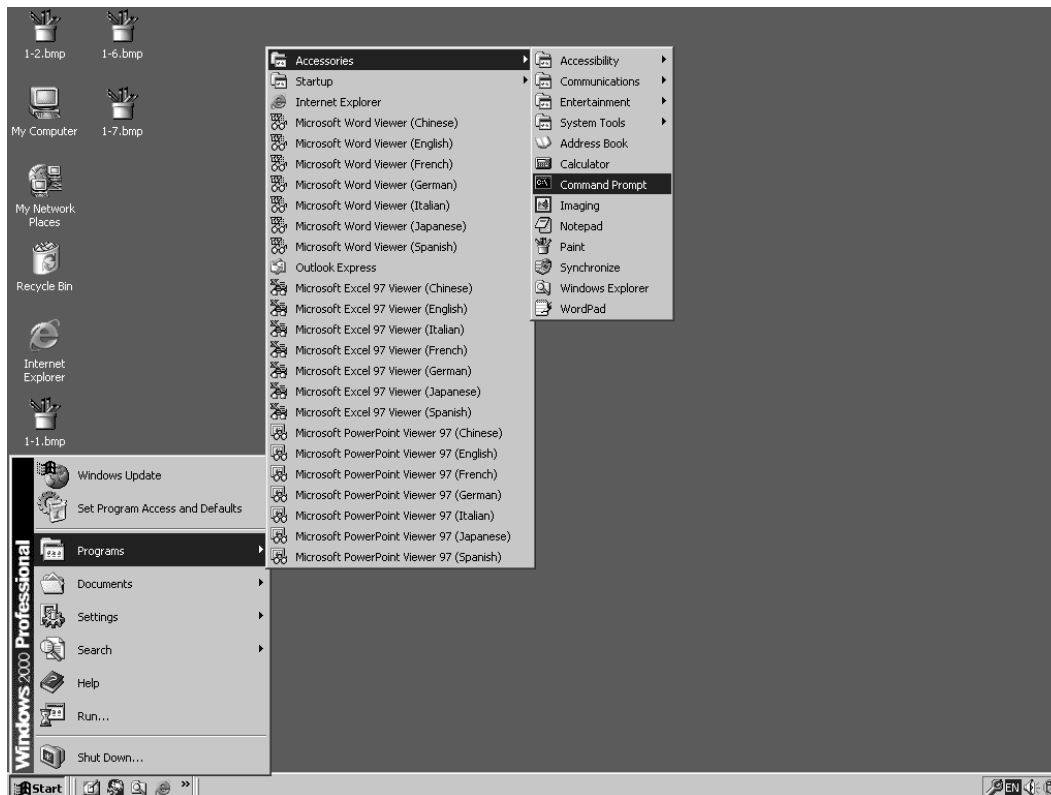
Operation log using commercial PC (2)

When PCS-1/IP is connected to LAN, a log can be extracted from PCS-1/IP using telnet with PC connected to LAN.

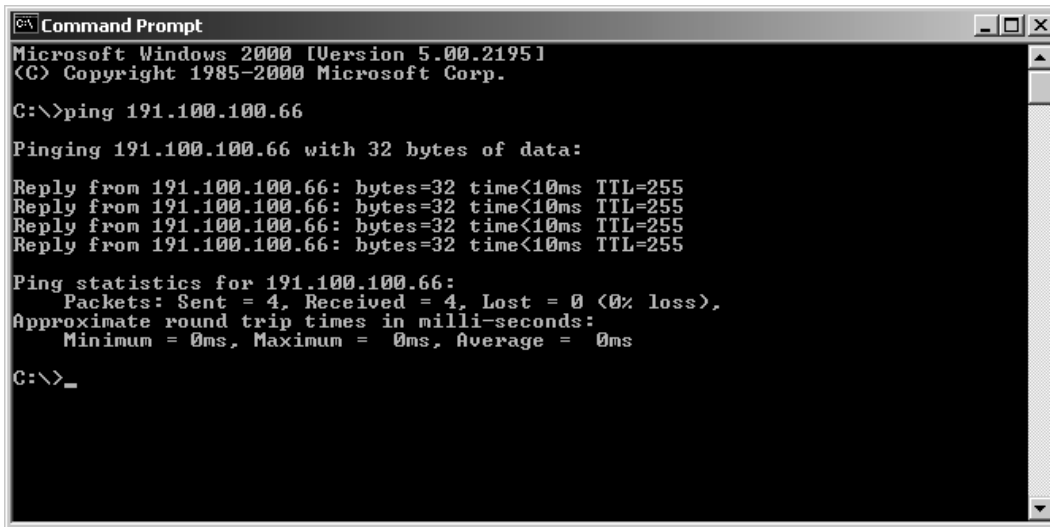
Even when PCS-1/IP is not connected to LAN, a log can be extracted from PCS-1/IP using telnet by connecting the 100BASE-TX/10BASE-T terminal on the rear panel of PCS-1/IP and the LAN terminal of PC directly using a LAN cross cable.

First, connect PCS-1/IP and PC to LAN, or connect them directly using a cross cable and set LAN of IP. After that, transmit ping from PC to PCS-1/IP and confirm that a reply is returned from PCS-1/IP.

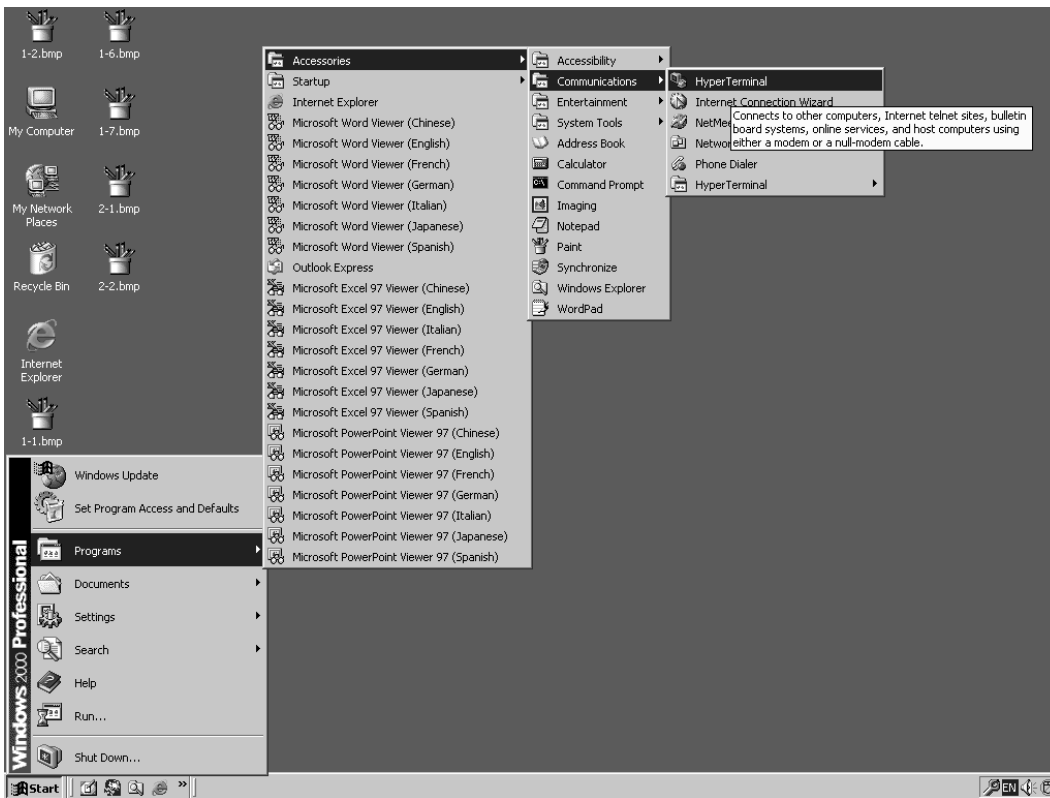
(1) Click “Command prompt” from “Start menu”.



- (2) Enter ping, and then enter the IP address of PCS-1/IP after spacing out. Press the [Enter] key and confirm that a reply is returned. After confirmation, close the command prompt.



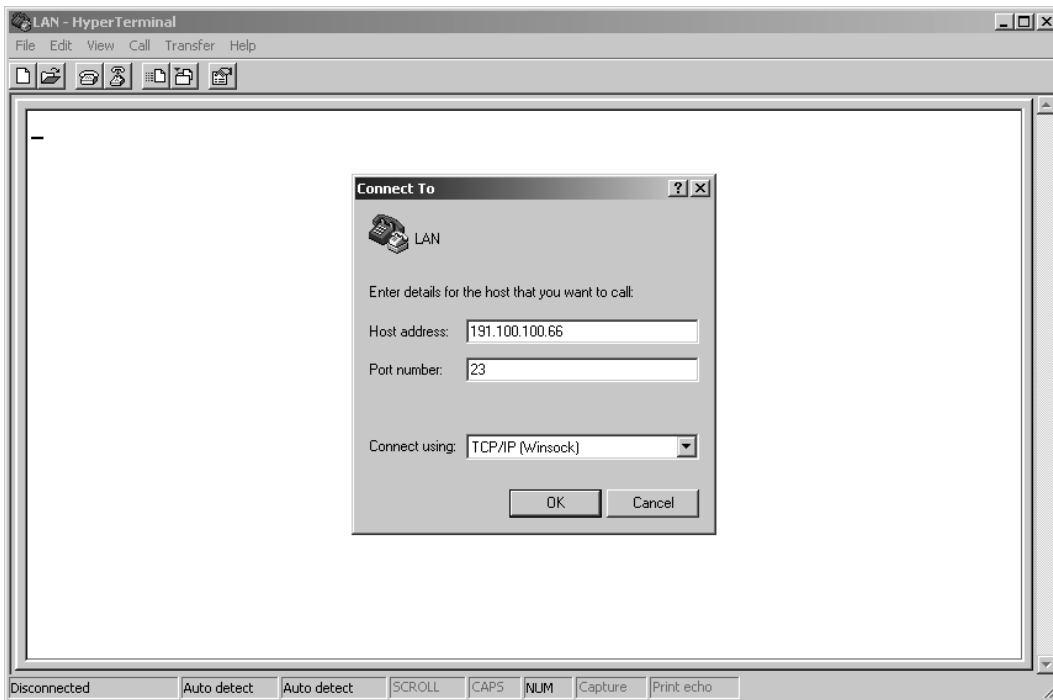
- (3) Click “Start menu”, “Accessories”, “Communications”, and then “HyperTerminal”.



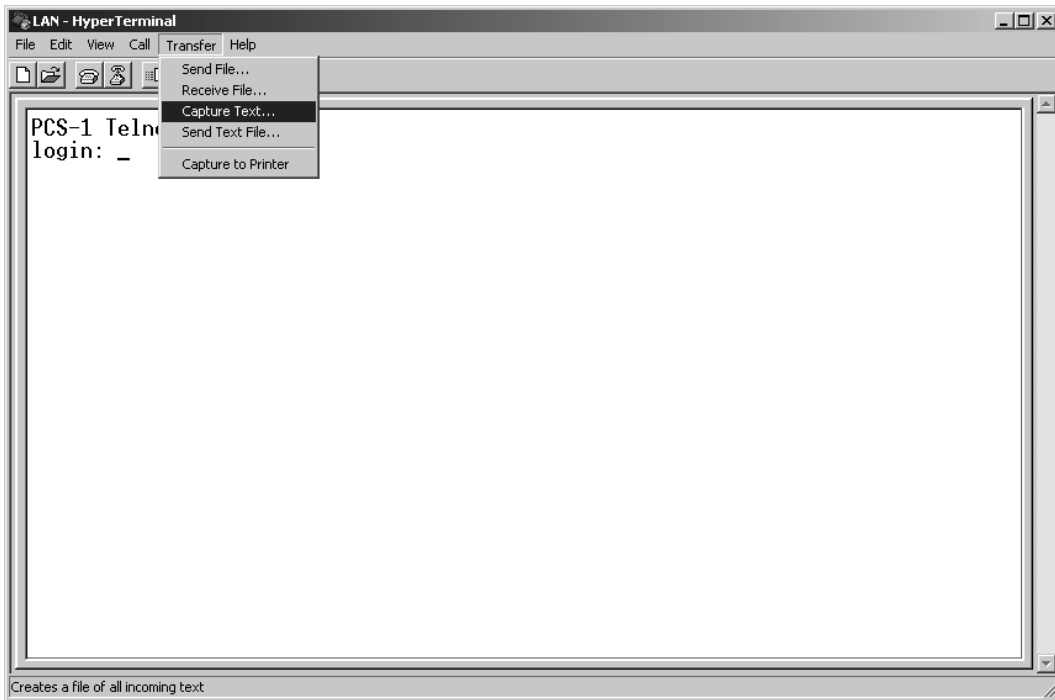
(4) Enter "LAN" in "Name:", select any icon, and click the "OK" button.



(5) Select "TCP/IP (Winsock)" in "Connect using", enter the IP address of PCS-1/IP in "Host address:", and click the "OK" button.

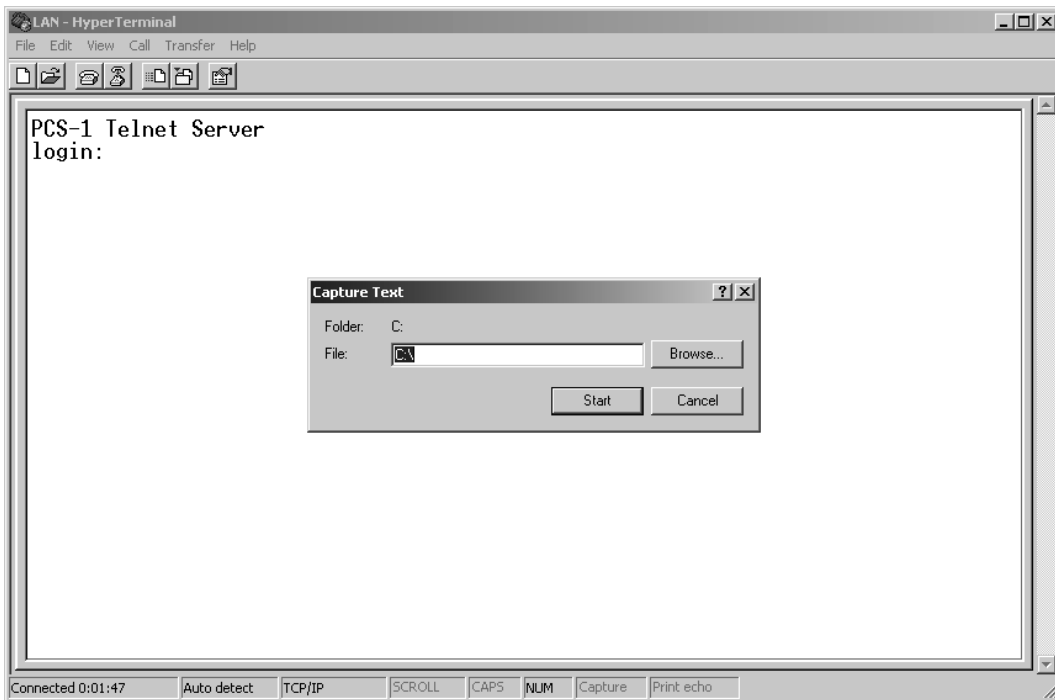


(6) Click “Capture Text” from a “Transfer” menu.



(7) Set the saving place and name of a log file and click the “Start” button.

Example of name: PCS-1LOG.txt

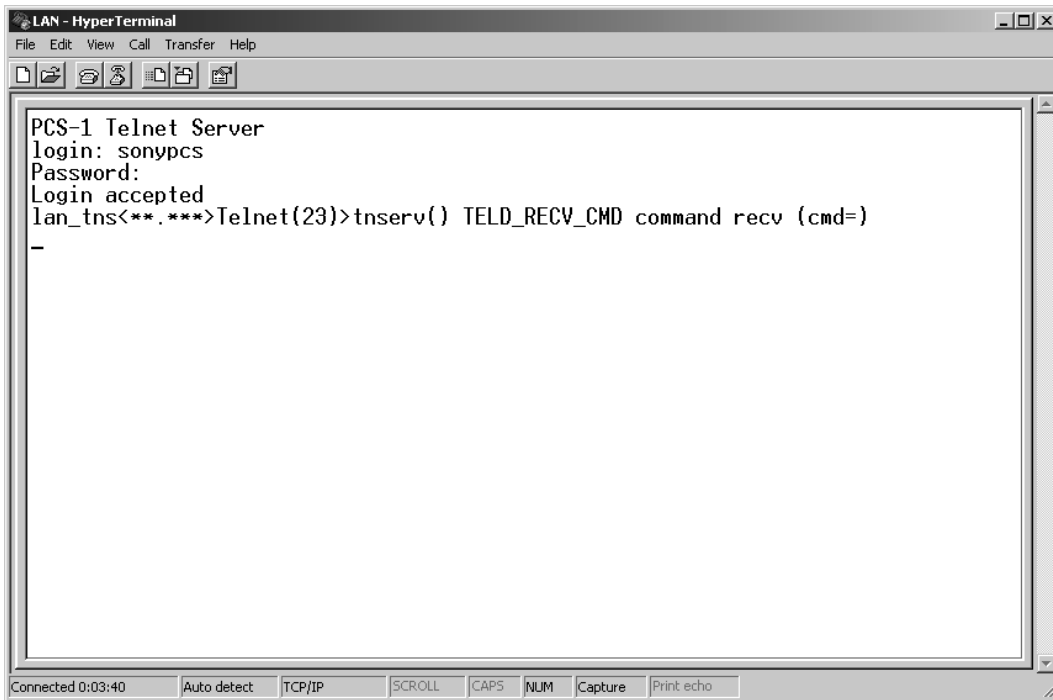


(8) The message below is displayed on the hyper terminal screen.

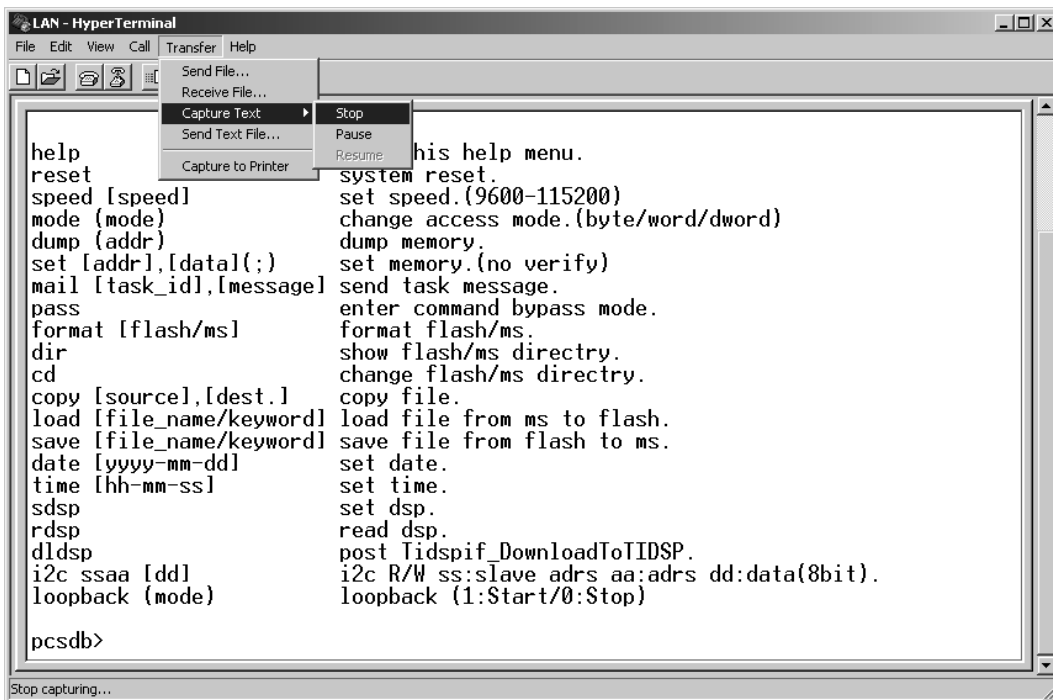
PCS-1 Telnet Server

login:

Enter sonypcs and press the Enter key. Password: is then displayed. Press the Enter key again. A log begins to be extracted.



(9) After log extraction is completed, click "Stop" from "Capture Text" in a "Transfer" menu.

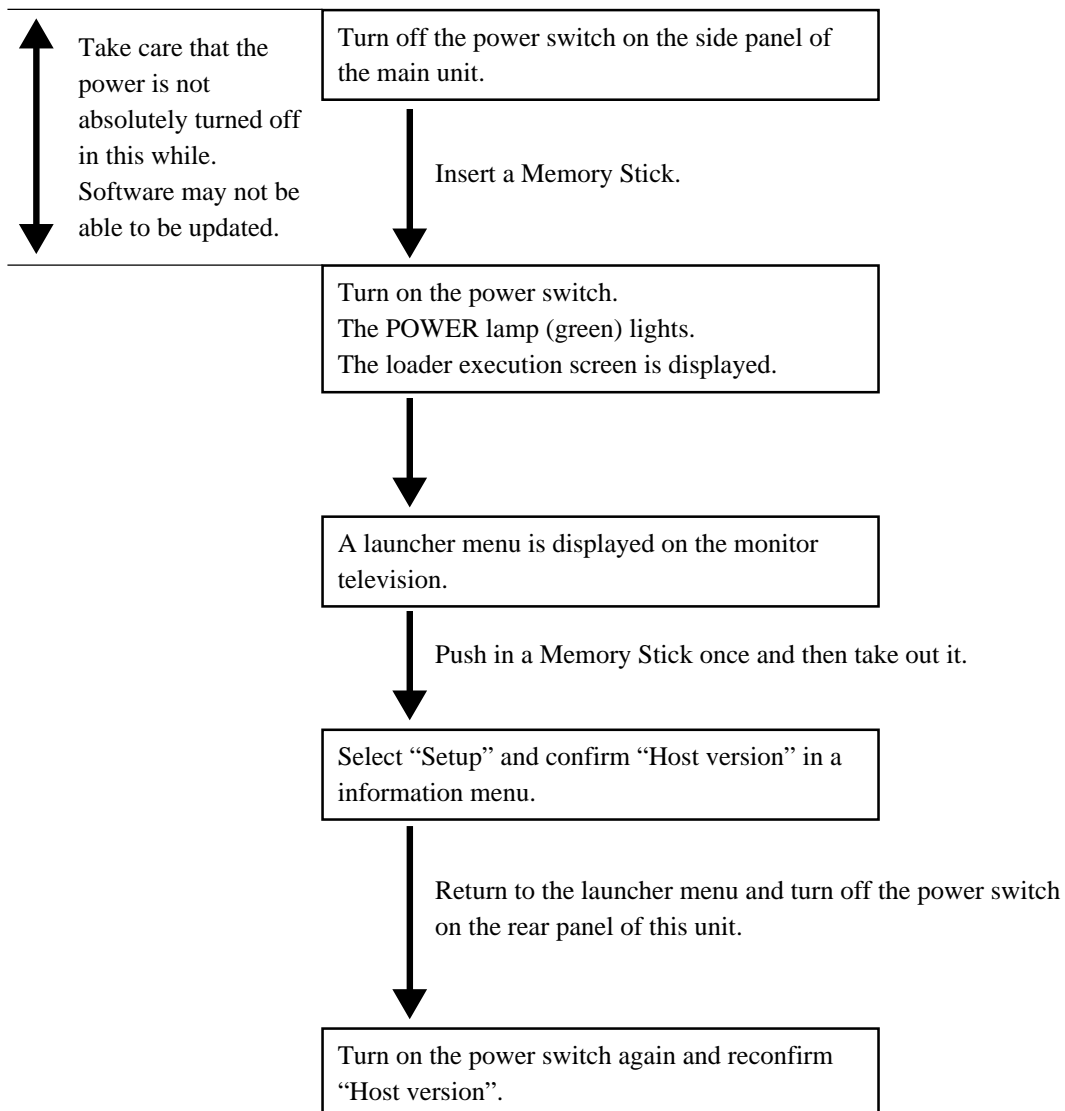
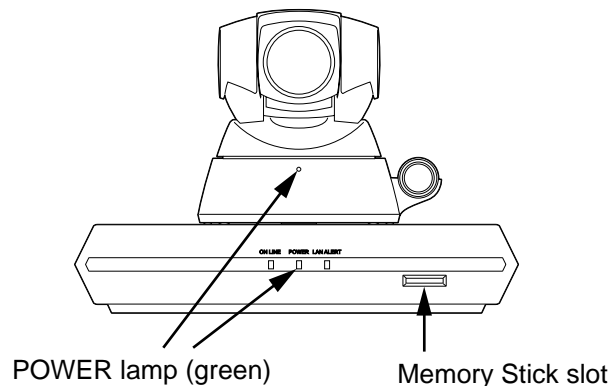


(10) Double-click the extracted log file to view a log.

2-5. Updating of Software

The software of the main unit may be updated for improvement in a function.
Two methods are available for updating.

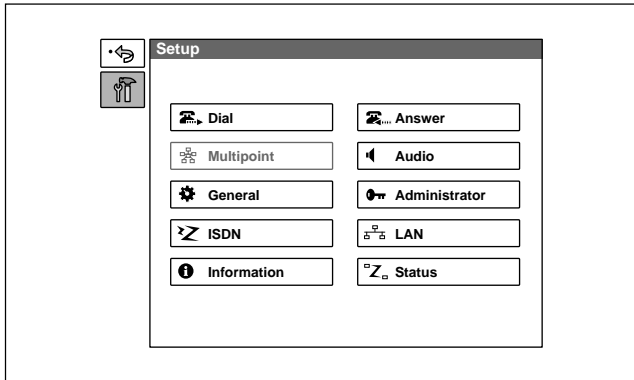
2-5-1. Updating Using Memory Stick



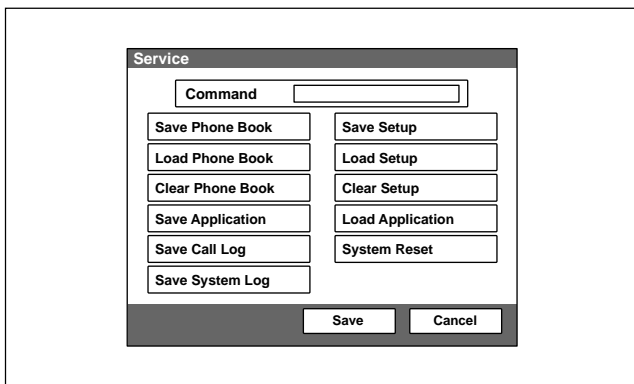
2-6. Service Mode

In the service menu of PCS-1/1P, data can be saved in the a commercial Memory Stick or read from a Memory Stick (overwritten in the current data).

1. Continuously press the menu button of a remote controller and display a “Setup” menu including “Dial” and “Answer”.



2. Press the → button of a remote controller and select “Dial”. Enter “7” and “2” sequentially using the numeric key of a remote controller without pressing the ENTER button and display the service menu.

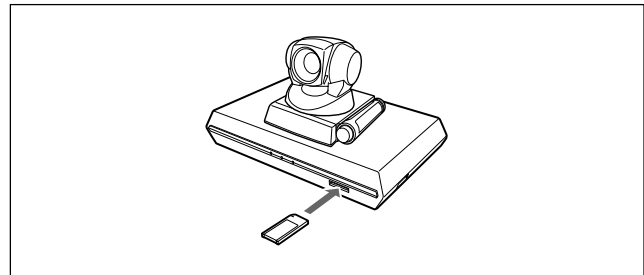


Note

To cancel the service mode, select “Cancel” using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the return button of a remote controller. The current display returns to a set menu.

For saving of a phone book, loading of a phone book, saving of application, saving of a communication log, saving of a system log, saving of setting, and loading of setting

1. Display a service menu.
2. Insert the Memory Stick, in which data can be written or in which the required contents have been already recorded, into a Memory Stick slot.



3. Select the function, which you want to execute, using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button.
4. A confirmation message on whether to execute the function is displayed. To execute, select “OK” and press the ENTER button. To cancel execution, select “Cancel” and press the ENTER button.
5. After execution or cancellation, the current display returns to a service menu.
6. Push in the Memory Stick once and take out it.

For erasure of a phone book and setup

1. Display a service menu.
2. Select the function, which you want to execute, using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button
3. A confirmation message on whether to execute the function is displayed. To execute, select “OK” and press the ENTER button. To cancel execution, select “Cancel” and press the ENTER button.
4. After execution or cancellation, the current display returns to a service menu.

For system reset

1. Display a service menu.
2. Select “System reset” using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button
3. A confirmation message on whether to execute is displayed. To execute, select “OK” and press the ENTER button. To cancel execution, select “Cancel” and press the ENTER button.
4. After execution, a launcher menu is displayed. After cancellation, the current display returns to a service menu.

For loading of application

1. Display a service menu.
2. Insert the Memory Stick, in which the application software of the version to be loaded is recorded, into a Memory Stick slot.
3. Select "Load application" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button.
4. A confirmation message on whether to execute is displayed.
5. To execute, select "OK" and press the ENTER button. The screen display during loader execution then appears. After completion, a launcher menu is displayed. To cancel execution, select "Cancel" and press the ENTER button. The current display returns to a service menu.
6. Push in the Memory Stick once and take out it.

Note

Do not turn off the power or take out a Memory Stick until the launcher menu is displayed.

For command input

1. Display a service menu.
2. Select "Command" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. A key guidance is then displayed.
3. Enter the commands in a command list from a remote controller.

Notes

- To set two or more commands, put a one-character blank between the commands and then enter them.
 - Set only one type of LAN interface. If not, the LAN interface does not operate normally.
4. Select "Save" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button. A set menu is then displayed.
 5. When a LAN interface is set (including the case where the setting is returned to the initial value), restart the main unit using the power switch of a communication terminal.

To stop setting

Select "Cancel" using ↑, ↓, ←, and → buttons of a remote controller and press the ENTER button, or press the return button of a remote controller.

Note

Do not enter commands other than shown in a command list. The internal operation mode may be changed in this case.

Contents of functions

1) Command

The internal operation mode of the main unit is changed for a test and service.

Command list

| Command | Description |
|-----------|--|
| SMS | Validates an SMS function. |
| KV66 | Sets a KV-29FX66E monitor when it is used. Using an IR repeater, this command sets the input selection of a KV-29FX66E monitor to 3 after the power is turned on. An IR output is changed so that the command during power-off sequence is sent properly. The setting of the IR repeater mode is invalidated when this command is specified. |
| WBxxxXyyy | Sets the size (height × width) of the whiteboard used. |
| YCLP** | Clips the luminance value in a menu to the specified value. The section having the luminance of more than the specified value is clipped to the specified value. (** is one of 80, 90, A0, B0, C0, D0, and E0 values.) |
| YLVL** | Shifts the luminance value in a menu downward proportionally to the specified value. As a value increase, the whole screen becomes darker. Since all values are shifted, the black side seems crushed. (** is a value of 0 < ** < 80 in decimal.) |
| D2B | Sets ISDN (2B) to the default value using a dial menu. Usually, set to LAN. |
| PWD1 | The password for an administrator invalidates the password lock of a phone book when a setting super-user password is blank in a column. |
| SMFF | Fixes a sub-monitor to the remote video. |
| BMR0 | Sets the bonding mode to Revision 0 (in which up to the conventional seven-digit address number can be used). |
| SMSTEST | Displays SAB without connecting with the SMS server. |
| PROJ | Sends the remote control code for the projector. |
| POFF | Makes the packet loss indicator non-display. |

Notes

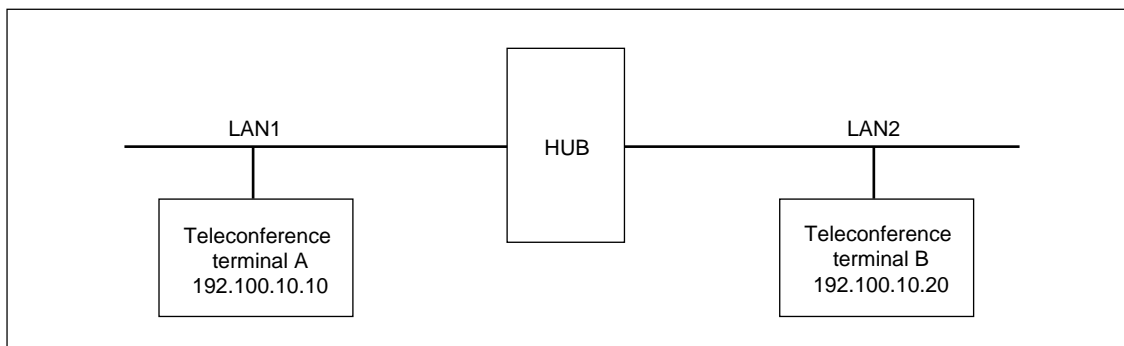
- To set two or more types of commands, put a one-character blank between commands.
- The validated command can be confirmed in a command column at all times.
- Do not enter commands other than described in the table. This may change the internal operation mode.

- 2) Save Phone Book
All contents of a phone book are recorded and saved in a Memory Stick. After execution, a file is created in the area below in the Memory Stick.
`\MSSONY\PRO\TVCONF\LIST\PCS_DLST.CSV`
 This file can be edited using Microsoft Excel. Do not change the file name.
- 3) Load Phone Book
The contents of a phone book (the file above in the folder described above) recorded in a memory stick are written in the phone book of the main unit.
The contents cannot be returned to the former setting after they are rewritten.
- 4) Clear Phone Book
All contents of a phone book in the main unit are erased.
The contents cannot be returned to the former setting after they are erased.
- 5) Save Application
The software of the main unit is saved in a Memory Stick. However, an MCU option is not saved in a Memory Stick. MCU software or LAN software is required separately.
- 6) Save Call Log
The communication log recorded in the main unit is recorded and saved in a Memory Stick. A maximum of 500 latest logs are recorded in the main unit. After execution, a file is created in the area below in a Memory Stick.
`\MSSONY\PRO\TVCONF\LOG\PCS_LOG.CSV`
 This file can be edited using Microsoft Excel.
- 7) Save System Log
A debug log is recorded and saved in a Memory Stick. A maximum of 1M byte log is recorded and saved. After execution, a file is created in the area below in a Memory Stick.
`\MSSONY\PRO\TVCONF\DEBUG\PCS_DEB.TXT`
 This file can be edited using Microsoft Memo Pad, Word Pad, or Word.
- 8) Save Setup
All set information items in a set menu are recorded and saved in a Memory Stick. After execution, a file is created in the area below in a Memory Stick.
`\MSSONY\PRO\TVCONF\SETUP\PCS_STUP.CSV`
 This file can be edited using Microsoft Excel.
- 9) Load Setup
The setup information
`(\MSSONY\PRO\TVCONF\SETUP\PCS_STUP.CSV)`
 recorded in a Memory Stick is overwritten in the setup menu of the main unit. After execution, the screen disappears once, and a launcher menu is displayed in the same way as after the power is turned on.
The set information cannot be returned to the former setting after it is rewritten.
- 10) Clear Setup
All information items, in a setup menu, set to the main unit are erased. After execution, the screen disappears once, and a setup wizard is displayed in the same way as when the power is turned on first.
- 11) Load Application
The software of the main unit recorded in a Memory Stick is loaded.
- 12) System Reset
Software reset is applied to the main unit. After execution, the screen disappears once, and a launcher menu is displayed in the same way as after the power is turned on.

Section 3

Compatibility in LAN Network

3-1. Connection via Hub



Example of system

When a call is initiated from teleconference terminal A to teleconference terminal B.

1. The LAN setup menu of teleconference terminal B is set as described below.

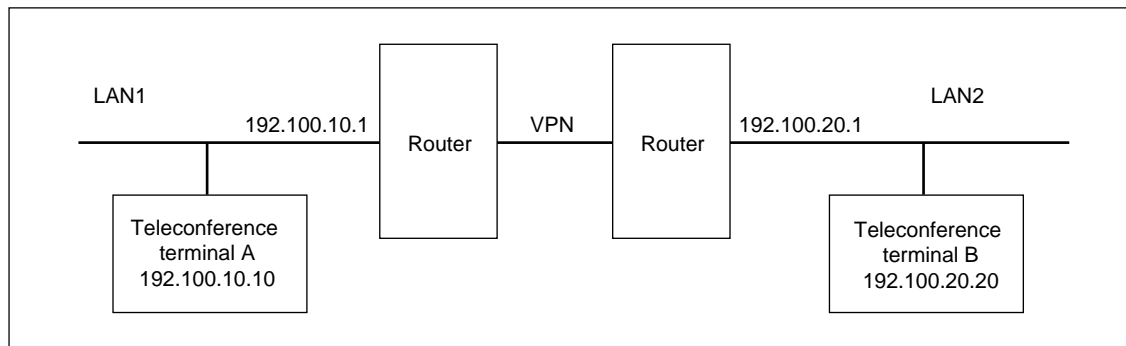
| | |
|------------------------|---|
| DHCP Mode: | OFF |
| Host Name: | Enter any name. |
| IP Address: | Local IP address (192.100.10.20) |
| Network Mask: | Depends on a network. Usually, set to 255.255.255.0. |
| Gateway Address: | Blank |
| DNS Address: | Blank |
| Gatekeeper Mode: | OFF |
| Gatekeeper Address: | Blank |
| User Alias: | Blank |
| User Number: | Blank |
| SNMP Mode: | OFF |
| Trap Destination: | Blank |
| Community: | public |
| Description: | Videoconference Device |
| Location: | Blank |
| Contact: | Blank |
| NAT Mode: | OFF |
| NAT Address: | Blank |
| Packet Resend Request: | Blank |
| Adaptive Rate Control: | OFF (Set to ON when a packet loss occurs frequently.) |
| LAN Mode: | Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/1P and Hub setting”.) |
| Port Number Used: | Default (Set to “Custom” when a port number is specified by the network administrator.) |
| TCP Port Number: | 2253 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| UDP Port Number: | 49152 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| TOS: | OFF |
| PPPoE: | OFF |
| PPPoE User Name: | Blank |
| PPPoE Password: | Blank |

- Fixed IP for PPPoE: OFF
 Fixed IP Address for PPPoE: Blank
 PPPoE DNS: Obtain automatically
 Primary DNS: Cannot be set.
 Secondary DNS: Cannot be set.
2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 192.100.10.20.
 3. The LAN setup menu of teleconference terminal A is set as described below.

DHCP Mode: OFF
 Host Name: Enter any name.
 IP Address: Local IP address (192.100.10.10)
 Network Mask: Depends on a network. Usually, set to 255.255.255.0.
 Gateway Address: Blank
 DNS Address: Blank
 Gatekeeper Mode: OFF
 Gatekeeper Address: Blank
 User Alias: Blank
 User Number: Blank
 SNMP Mode: OFF
 Trap Destination: Blank
 Community: public
 Description: Videoconference Device
 Location: Blank
 Contact: Blank
 NAT Mode: OFF
 NAT Address: Blank
 Packet Resend Request: Blank
 Adaptive Rate Control: OFF (Set to ON when a packet loss occurs frequently.)
 LAN Mode: Auto Negotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/IP and Hub setting”.)
 Port Number Used: Default (Set to “Custom” when a port number is specified by the network administrator.)
 TCP Port Number: 2253 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.)
 UDP Port Number: 49152 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.)
 TOS: OFF
 PPPoE: OFF
 PPPoE User Name: Blank
 PPPoE Password: Blank
 Fixed IP for PPPoE: OFF
 Fixed IP Address for PPPoE: Blank
 PPPoE DNS: Obtain automatically
 Primary DNS: Cannot be set.
 Secondary DNS: Cannot be set.
 4. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 192.100.10.10.
 5. Enter LAN in the phone book of teleconference terminal A for a line I/F, IP address 192.100.10.20 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B in the phone book and initiate a call. Or set LAN for a line I/F and IP address 192.100.10.20 of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-2. Connection via Router

Example of system



When a call is initiated from teleconference terminal A to teleconference terminal B.

1. The LAN setup menu of teleconference terminal B is set as described below.

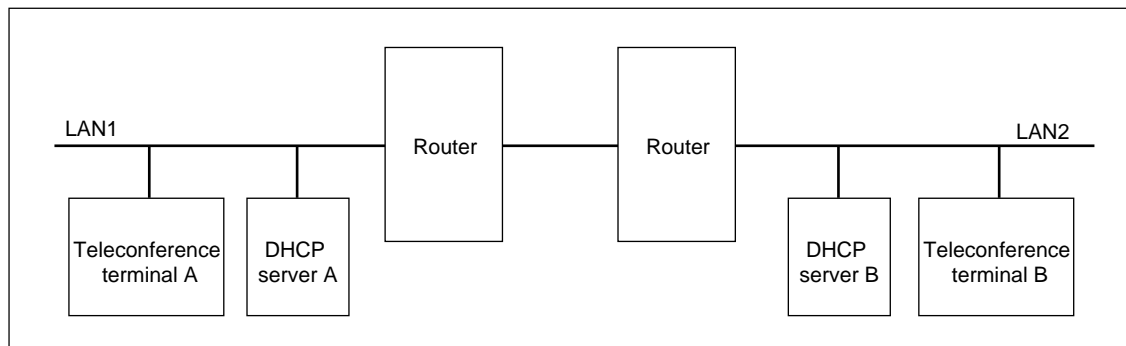
| | |
|-----------------------------|---|
| DHCP Mode: | OFF |
| Host Name: | Enter any name. |
| IP Address: | Local IP address (192.100.20.20) |
| Network Mask: | Depends on a network. Usually, set to 255.255.255.0. |
| Gateway Address: | 192.100.20.1 |
| DNS Address: | Blank |
| Gatekeeper Mode: | OFF |
| Gatekeeper Address: | Blank |
| User Alias: | Blank |
| User Number: | Blank |
| SNMP Mode: | OFF |
| Trap Destination: | Blank |
| Community: | public |
| Description: | Videoconference Device |
| Location: | Blank |
| Contact: | Blank |
| NAT Mode: | OFF |
| NAT Address: | Blank |
| Packet Resend Request: | Blank |
| Adaptive Rate Control: | OFF (Set to ON when a packet loss occurs frequently.) |
| LAN Mode: | Auto Negotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/IP and Hub setting”.) |
| Port Number Used: | Default (Set to “Custom” when a port number is specified by the network administrator.) |
| TCP Port Number: | 2253 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| UDP Port Number: | 49152 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| TOS: | OFF |
| PPPoE: | OFF |
| PPPoE User Name: | Blank |
| PPPoE Password: | Blank |
| Fixed IP for PPPoE: | OFF |
| Fixed IP Address for PPPoE: | Blank |

- PPPoE DNS: Obtain automatically
 Primary DNS: Cannot be set.
 Secondary DNS: Cannot be set.
2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 192.100.20.20.
 3. The LAN setup menu of teleconference terminal A is set as described below.

DHCP Mode: OFF
 Host Name: Enter any name.
 IP Address: Local IP address (192.100.10.10)
 Network Mask: Depends on a network. Usually, set to 255.255.255.0.
 Gateway Address: 192.100.10.1
 DNS Address: Blank
 Gatekeeper Mode: OFF
 Gatekeeper Address: Blank
 User Alias: Blank
 User Number: Blank
 SNMP Mode: OFF
 Trap Destination: Blank
 Community: public
 Description: Videoconference Device
 Location: Blank
 Contact: Blank
 NAT Mode: OFF
 NAT Address: Blank
 Packet Resend Request: Blank
 Adaptive Rate Control: OFF (Set to ON when a packet loss occurs frequently.)
 LAN Mode: Auto Negotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/IP and Hub setting”.)
 Port Number Used: Default (Set to “Custom” when a port number is specified by the network administrator.)
 TCP Port Number: 2253 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.)
 UDP Port Number: 49152 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.)
 TOS: OFF
 PPPoE: OFF
 PPPoE User Name: Blank
 PPPoE Password: Blank
 Fixed IP for PPPoE: OFF
 Fixed IP Address for PPPoE: Blank
 PPPoE DNS: Obtain automatically
 Primary DNS: Cannot be set.
 Secondary DNS: Cannot be set.
 4. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 192.100.10.10.
 5. Enter LAN in the phone book of teleconference terminal A for a line I/F, IP address 192.100.20.20 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B in the phone book and initiate a call. Or set LAN for a line I/F and IP address 192.100.20.20 of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-3. Connection via DHCP

Example of system



When a call is initiated from teleconference terminal A to teleconference terminal B.

1. The LAN setup menu of teleconference terminal B is set as described below.

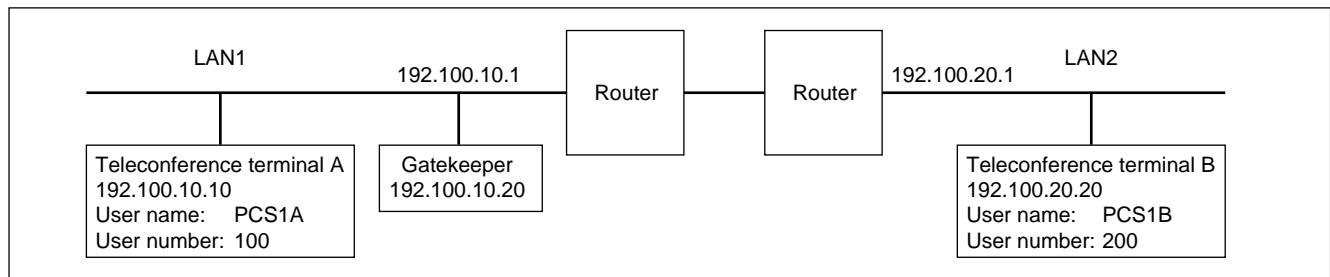
| | |
|-----------------------------|---|
| DHCP Mode: | ON |
| Host Name: | Enter any name. |
| IP Address: | Blank (Cannot be set.) |
| Network Mask: | Blank (Cannot be set.) |
| Gateway Address: | Blank (Cannot be set.) |
| DNS Address: | Blank (Cannot be set.) |
| Gatekeeper Mode: | OFF |
| Gatekeeper Address: | Blank |
| User Alias: | Blank |
| User Number: | Blank |
| SNMP Mode: | OFF |
| Trap Destination: | Blank |
| Community: | public |
| Description: | Videoconference Device |
| Location: | Blank |
| Contact: | Blank |
| NAT Mode: | OFF |
| NAT Address: | Blank |
| Packet Resend Request: | Blank |
| Adaptive Rate Control: | OFF (Set to ON when a packet loss occurs frequently.) |
| LAN Mode: | Auto Negotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/IP and Hub setting”.) |
| Port Number Used: | Default (Set to “Custom” when a port number is specified by the network administrator.) |
| TCP Port Number: | 2253 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| UDP Port Number: | 49152 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| TOS: | OFF |
| PPPoE: | OFF |
| PPPoE User Name: | Blank |
| PPPoE Password: | Blank |
| Fixed IP for PPPoE: | OFF |
| Fixed IP Address for PPPoE: | Blank |

- PPPoE DNS: Obtain automatically
 Primary DNS: Cannot be set.
 Secondary DNS: Cannot be set.
2. Confirm that the IP address is displayed in the launcher menu of teleconference terminal B.
(Example: IP:192.100.20.20)
 3. The LAN setup menu of teleconference terminal A is set as described below.

| | |
|-----------------------------|---|
| DHCP Mode: | ON |
| Host Name: | Enter any name. |
| IP Address: | Blank |
| Network Mask: | Blank |
| Gateway Address: | Blank |
| DNS Address: | Blank |
| Gatekeeper Mode: | OFF |
| Gatekeeper Address: | Blank |
| User Alias: | Blank |
| User Number: | Blank |
| SNMP Mode: | OFF |
| Trap Destination: | Blank |
| Community: | public |
| Description: | Videoconference Device |
| Location: | Blank |
| Contact: | Blank |
| NAT Mode: | OFF |
| NAT Address: | Blank |
| Packet Resend Request: | Blank |
| Adaptive Rate Control: | OFF (Set to ON when a packet loss occurs frequently.) |
| LAN Mode: | Auto Negotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/IP and Hub setting”.) |
| Port Number Used: | Default (Set to “Custom” when a port number is specified by the network administrator.) |
| TCP Port Number: | 2253 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| UDP Port Number: | 49152 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| TOS: | OFF |
| PPPoE: | OFF |
| PPPoE User Name: | Blank |
| PPPoE Password: | Blank |
| Fixed IP for PPPoE: | OFF |
| Fixed IP Address for PPPoE: | Blank |
| PPPoE DNS: | Obtain automatically |
| Primary DNS: | Cannot be set. |
| Secondary DNS: | Cannot be set. |
 4. Confirm that the IP address is displayed in the launcher menu of teleconference terminal A.
(Example: IP:192.100.10.10)
 5. Enter LAN in the phone book of teleconference terminal A for a line I/F, the IP address of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B in the phone book and initiate a call. Or set LAN for a line I/F and the IP address of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-4. Connection via Gatekeeper

Example of system



When a call is initiated from teleconference terminal A to teleconference terminal B.

1. The LAN setup menu of teleconference terminal B is set as described below.

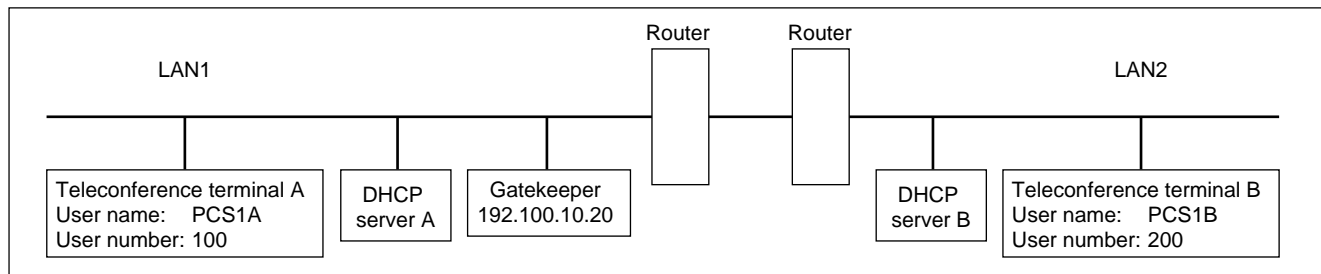
| | |
|-----------------------------|--|
| DHCP Mode: | OFF |
| Host Name: | Enter any name. |
| IP Address: | Local IP address (192.100.20.20) |
| Network Mask: | Depends on a network. Usually, set to 255.255.255.0. |
| Gateway Address: | 192.100.20.1 |
| DNS Address: | Blank |
| Gatekeeper Mode: | ON |
| Gatekeeper Address: | 192.100.10.20 |
| User Alias: | Enter any name. (Example: PCS1B) |
| User Number: | Enter any number. (Example: 200) |
| SNMP Mode: | OFF |
| Trap Destination: | Blank |
| Community: | public |
| Description: | Videoconference Device |
| Location: | Blank |
| Contact: | Blank |
| NAT Mode: | OFF |
| NAT Address: | Blank |
| Packet Resend Request: | Blank |
| Adaptive Rate Control: | OFF (Set to ON when a packet loss occurs frequently.) |
| LAN Mode: | Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/1P and Hub setting”).) |
| Port Number Used: | Default (Set to “Custom” when a port number is specified by the network administrator.) |
| TCP Port Number: | 2253 (Enter the port number specified by the network administrator when the port number used is set to “Custom”).) |
| UDP Port Number: | 49152 (Enter the port number specified by the network administrator when the port number used is set to “Custom”).) |
| TOS: | OFF |
| PPPoE: | OFF |
| PPPoE User Name: | Blank |
| PPPoE Password: | Blank |
| Fixed IP for PPPoE: | OFF |
| Fixed IP Address for PPPoE: | Blank |
| PPPoE DNS: | Obtain automatically |
| Primary DNS: | Cannot be set. |
| Secondary DNS: | Cannot be set. |

2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 192.100.20.20.
3. Confirm that “Registration Confirm” is displayed at the bottom of page 2 in the LAN setup menu of teleconference terminal B.
4. The LAN setup menu of teleconference terminal A is set as described below.

| | |
|-----------------------------|---|
| DHCP Mode: | OFF |
| Host Name: | Enter any name. |
| IP Address: | Local IP address (192.100.10.10) |
| Network Mask: | Depends on a network. Usually, set to 255.255.255.0. |
| Gateway Address: | 192.100.10.1 |
| DNS Address: | Blank |
| Gatekeeper Mode: | ON |
| Gatekeeper Address: | 192.100.10.20 |
| User Alias: | Enter any name. (Example: PCS1A) |
| User Number: | Enter any number. (Example: 100) |
| SNMP Mode: | OFF |
| Trap Destination: | Blank |
| Community: | public |
| Description: | Videoconference Device |
| Location: | Blank |
| Contact: | Blank |
| NAT Mode: | OFF |
| NAT Address: | Blank |
| Packet Resend Request: | Blank |
| Adaptive Rate Control: | OFF (Set to ON when a packet loss occurs frequently.) |
| LAN Mode: | Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/IP and Hub setting”.) |
| Port Number Used: | Default (Set to “Custom” when a port number is specified by the network administrator.) |
| TCP Port Number: | 2253 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| UDP Port Number: | 49152 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| TOS: | OFF |
| PPPoE: | OFF |
| PPPoE User Name: | Blank |
| PPPoE Password: | Blank |
| Fixed IP for PPPoE: | OFF |
| Fixed IP Address for PPPoE: | Blank |
| PPPoE DNS: | Obtain automatically |
| Primary DNS: | Cannot be set. |
| Secondary DNS: | Cannot be set. |
5. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 192.100.10.10.
6. Confirm that “Registration Confirm” is displayed at the bottom of page 2 in the LAN setup menu of teleconference terminal A.
7. Enter LAN in the dial list of teleconference terminal A for a line I/F, user name PCS1B or user number 200 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B and initiate a call. Or set LAN for a line I/F and user name PCS1B or user number 200 of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-5. Connection via DHCP and Gatekeeper

Example of system



When a call is initiated from teleconference terminal A to teleconference terminal B.

1. The LAN setup menu of teleconference terminal B is set as described below.

| | |
|-----------------------------|---|
| DHCP Mode: | ON |
| Host Name: | Enter any name. |
| IP Address: | Blank (Cannot be set.) |
| Network Mask: | Blank (Cannot be set.) |
| Gateway Address: | Blank (Cannot be set.) |
| DNS Address: | Blank (Cannot be set.) |
| Gatekeeper Mode: | ON |
| Gatekeeper Address: | 192.100.10.20 |
| User Alias: | Enter any name. (Example: PCS1B) |
| User Number: | Enter any number. (Example: 200) |
| SNMP Mode: | OFF |
| Trap Destination: | Blank |
| Community: | public |
| Description: | Videoconference Device |
| Location: | Blank |
| Contact: | Blank |
| NAT Mode: | OFF |
| NAT Address: | Blank |
| Packet Resend Request: | Blank |
| Adaptive Rate Control: | OFF (Set to ON when a packet loss occurs frequently.) |
| LAN Mode: | Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/IP and Hub setting”.) |
| Port Number Used: | Default (Set to “Custom” when a port number is specified by the network administrator.) |
| TCP Port Number: | 2253 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| UDP Port Number: | 49152 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| TOS: | OFF |
| PPPoE: | OFF |
| PPPoE User Name: | Blank |
| PPPoE Password: | Blank |
| Fixed IP for PPPoE: | OFF |
| Fixed IP Address for PPPoE: | Blank |
| PPPoE DNS: | Obtain automatically |
| Primary DNS: | Cannot be set. |
| Secondary DNS: | Cannot be set. |

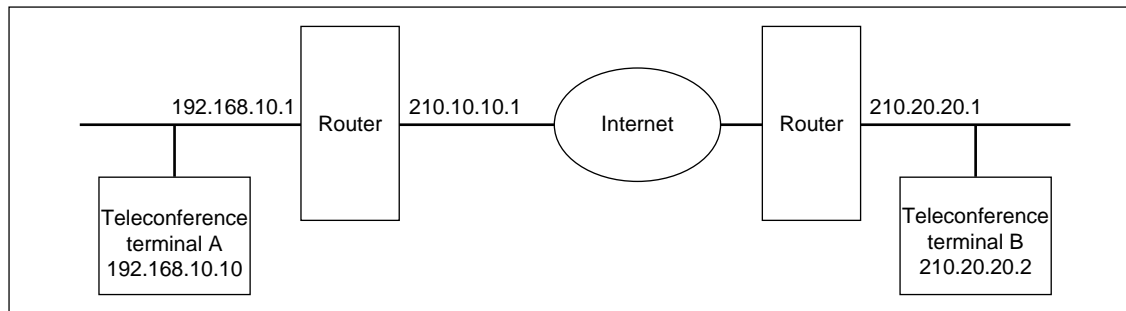
2. Confirm that the IP address is displayed in the launcher menu of teleconference terminal B.
(Example: IP:192.100.20.20)
3. Confirm that “Registration Confirm” is displayed at the bottom of page 2 in the LAN setup menu of teleconference terminal B.
4. The LAN setup menu of teleconference terminal A is set as described below.

DHCP Mode: ON
 Host Name: Enter any name.
 IP Address: Blank
 Network Mask: Blank.
 Gateway Address: Blank
 DNS Address: Blank
 Gatekeeper Mode: ON
 Gatekeeper Address: 192.100.10.20
 User Alias: Enter any name. (Example: PCS1A)
 User Number: Enter any number. (Example: 100)
 SNMP Mode: OFF
 Trap Destination: Blank
 Community: public
 Description: Videoconference Device
 Location: Blank
 Contact: Blank
 NAT Mode: OFF
 NAT Address: Blank
 Packet Resend Request: Blank
 Adaptive Rate Control: OFF (Set to ON when a packet loss occurs frequently.)
 LAN Mode: Auto Negotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/IP and Hub setting”.)
 Port Number Used: Default (Set to “Custom” when a port number is specified by the network administrator.)
 TCP Port Number: 2253 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.)
 UDP Port Number: 49152 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.)
 TOS: OFF
 PPPoE: OFF
 PPPoE User Name: Blank
 PPPoE Password: Blank
 Fixed IP for PPPoE: OFF
 Fixed IP Address for PPPoE: Blank
 PPPoE DNS: Obtain automatically
 Primary DNS: Cannot be set.
 Secondary DNS: Cannot be set.

5. Confirm that the IP address is displayed in the launcher menu of teleconference terminal A.
(Example: IP:192.100.10.10)
6. Confirm that “Registration Confirm” is displayed at the bottom of page 2 in the LAN setup menu of teleconference terminal A.
7. Enter LAN in the dial list of teleconference terminal A for a line I/F, user name PCS1B or user number 200 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B and initiate a call. Or set LAN for a line I/F and user name PCS1B or user number 200 of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-6. Connection beyond NAT

Example of system



A call is submitted from TV conference terminal A (NAT environment) to TV conference terminal B (global IP). (It cannot be usually submitted from TV conference terminal B to TV conference terminal A.)

1. The LAN setup menu of teleconference terminal B is set as described below.

| | |
|------------------------|---|
| DHCP Mode: | OFF |
| Host Name: | Enter any name. |
| IP Address: | Local IP address (210.20.20.2) |
| Network Mask: | Depends on the network. 255.255.255.248 for fixed IP8. |
| Gateway Address: | 210.20.20.1 |
| DNS Address: | Blank |
| Gatekeeper Mode: | OFF |
| Gatekeeper Address: | Blank |
| User Alias: | Blank |
| User Number: | Blank |
| SNMP Mode: | OFF |
| Trap Destination: | Blank |
| Community: | public |
| Description: | Videoconference Device |
| Location: | Blank |
| Contact: | Blank |
| NAT Mode: | OFF |
| NAT Address: | Blank |
| Packet Resend Request: | ON |
| Adaptive Rate Control: | ON |
| LAN Mode: | Auto Negotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/IP and Hub setting”.) |
| Port Number Used: | Default (Set to “Custom” when a port number is specified by the network administrator.) |
| TCP Port Number: | 2253 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| UDP Port Number: | 49152 (Enter the port number specified by the network administrator when the port number used is set to “Custom”.) |
| TOS: | OFF |
| PPPoE: | OFF |
| PPPoE User Name: | Blank |
| PPPoE Password: | Blank |
| Fixed IP for PPPoE: | OFF |

Fixed IP Address for PPPoE: Blank

PPPoE DNS: Obtain automatically

Primary DNS: Cannot be set.

Secondary DNS: Cannot be set.

2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 210.20.20.2.

3. The LAN setup menu of teleconference terminal A is set as described below.

DHCP Mode: Off (Set to "Auto" when a router has a DHCP server function. Setting is not required from "IP address" to "DNS address" when "Auto" is set.

Host Name: Enter any name.

IP Address: Local IP address (192.168.10.10)

Network Mask: 255.255.255.0.

Gateway Address: 192.168.10.1

DNS Address: Blank

Gatekeeper Mode: OFF

Gatekeeper Address: Blank

User Alias: Blank

User Number: Blank

SNMP Mode: OFF

Trap Destination: Blank

Community: public

Description: Videoconference Device

Location: Blank

Contact: Blank

NAT Mode: ON

NAT Address: 210.10.10.1

Packet Resend Request: ON

Adaptive Rate Control: ON

LAN Mode: Auto Negotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/IP and Hub setting".)

Port Number Used: Default (Set to "Custom" when a port number is specified by the network administrator.)

TCP Port Number: 2253 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)

UDP Port Number: 49152 (Enter the port number specified by the network administrator when the port number used is set to "Custom".)

TOS: OFF

PPPoE: OFF

PPPoE User Name: Blank

PPPoE Password: Blank

Fixed IP for PPPoE: OFF

Fixed IP Address for PPPoE: Blank

PPPoE DNS: Obtain automatically

Primary DNS: Cannot be set.

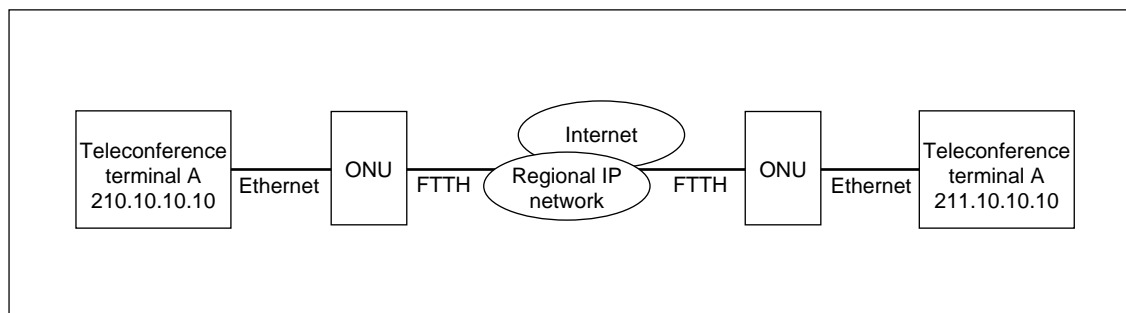
Secondary DNS: Cannot be set.

4. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 192.168.10.10.

5. Enter LAN in the phone book of teleconference terminal A for a line I/F, IP address 210.20.20.2 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B in the phone book and initiate a call. Or set LAN for a line I/F and IP address 210.20.20.2 of teleconference terminal B for an IP address by Dial, and then initiate a call.

3-7. Connection using PPPoE

Example of system



When a call is initiated from teleconference terminal A to teleconference terminal B.

1. The LAN setup menu of teleconference terminal B is set as described below.

| | |
|-----------------------------|---|
| DHCP Mode: | OFF |
| Host Name: | Blank |
| IP Address: | Blank |
| Network Mask: | Blank |
| Gateway Address: | Blank |
| DNS Address: | Blank |
| Gatekeeper Mode: | OFF |
| Gatekeeper Address: | Blank |
| User Alias: | Blank |
| User Number: | Blank |
| SNMP Mode: | OFF |
| Trap Destination: | Blank |
| Community: | public |
| Description: | Videoconference Device |
| Location: | Blank |
| Contact: | Blank |
| NAT Mode: | OFF |
| NAT Address: | Blank |
| Packet Resend Request: | ON |
| Adaptive Rate Control: | ON |
| LAN Mode: | Auto Negotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to "4-2. PCS-1/1P and Hub setting".) |
| Port Number Used: | Default |
| TCP Port Number: | 2253 |
| UDP Port Number: | 49152 |
| TOS: | OFF |
| PPPoE: | ON |
| PPPoE User Name: | User (account) name acquired from a provider |
| PPPoE Password: | Password acquired from a provider |
| Fixed IP for PPPoE: | On (When fixed IP is acquired) |
| Fixed IP Address for PPPoE: | 211.10.10.10 |
| PPPoE DNS: | Obtain automatically (Acquired from a provider. Select "Set" when the fixed DNS server address is specified. Enter the addresses specified from a provider in "Primary DNS" and "Secondary DNS", respectively.) |

- Primary DNS: Cannot be set.
 Secondary DNS: Cannot be set.
2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 211.10.10.10.
 3. The LAN setup menu of teleconference terminal A is set as described below.
 - DHCP Mode: OFF
 - Host Name: Blank
 - IP Address: Blank
 - Network Mask: Blank
 - Gateway Address: Blank
 - DNS Address: Blank
 - Gatekeeper Mode: OFF
 - Gatekeeper Address: Blank
 - User Alias: Blank
 - User Number: Blank
 - SNMP Mode: OFF
 - Trap Destination: Blank
 - Community: public
 - Description: Videoconference Device
 - Location: Blank
 - Contact: Blank
 - NAT Mode: OFF
 - NAT Address: Blank
 - Packet Resend Request: ON
 - Adaptive Rate Control: ON
 - LAN Mode: Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode. Refer to “4-2. PCS-1/IP and Hub setting”.)
 - Port Number Used: Default
 - TCP Port Number: 2253
 - UDP Port Number: 49152
 - TOS: OFF
 - PPPoE: ON
 - PPPoE User Name: User (account) name acquired from a provider
 - PPPoE Password: Password acquired from a provider
 - Fixed IP for PPPoE: On (When fixed IP is acquired)
 - Fixed IP Address for PPPoE: 210.10.10.10
 - PPPoE DNS: Obtain automatically (Acquired from a provider. Select “Set” when the fixed DNS server address is specified. Enter the addresses specified from a provider in “Primary DNS” and “Secondary DNS”, respectively.)
 - Primary DNS: Cannot be set.
 - Secondary DNS: Cannot be set.
 4. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 210.10.10.10.
 5. Enter LAN in the phone book of teleconference terminal A for a line I/F, IP address 211.10.10.10 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B in the phone book and initiate a call. Or set LAN for a line I/F and IP address 211.10.10.10 of teleconference terminal B for an IP address by Dial, and then initiate a call.

Section 4

Technical Data

4-1. PCS-1/IP Port Number Used

4-1-1. During P-P Connection (Default)

PCS-1/IP uses the port number below during P-P connection when the port number used in a LAN setup menu is set as “Default”.

| | Port number |
|----------------------|---|
| RAS (PCS-1/IP) | Any number from 2253 to 2255* (when Gatekeeper is used) |
| RAS (Gatekeeper) | 1718 or 1719 (when Gatekeeper is used) |
| Q.931 (Dialing) | Any number from 2253 to 2255* |
| Q.931 (Answering) | 1720 |
| H.245 | Any number from 2253 to 2255* |
| Audio RTP | 49152 |
| Audio RTCP | 49153 |
| Video RTP | 49154 |
| Video RTCP | 49155 |
| FECC RTP | 49156 |
| FECC RTCP | 49157 |
| Data conference RTP | 49158 |
| Data conference RTCP | 49159 |

*: Ver.2.20 to 2.32: 2253 to 2303

4-1-2. P-P Connection (Custom: When TCP port number is set to 3000 and UDP port number is set to 3100)

The port number that PCS-1/IP uses is determined by the value input to TCP and UDP port numbers when the port number used in a LAN setup menu is set as “Custom”. For example, PCS-1/IP uses the port number below during P-P connection when a TCP port number is set to 3000 and when an UDP port number is set to 3100.

| | Port number |
|----------------------|---|
| RAS (PCS-1/IP) | Any number from 3000 to 3002* (when Gatekeeper is used) |
| RAS (Gatekeeper) | 1718 or 1719 (when Gatekeeper is used) |
| Q.931 (Dialing) | Any number from 3000 to 3002* |
| Q.931 (Answering) | 1720 |
| H.245 | Any number from 3000 to 3002* |
| Audio RTP | 3100 |
| Audio RTCP | 3101 |
| Video RTP | 3102 |
| Video RTCP | 3103 |
| FECC RTP | 3104 |
| FECC RTCP | 3105 |
| Data conference RTP | 3106 |
| Data conference RTCP | 3107 |

*: Ver.2.20 to 2.32: 3000 to 3050

4-1-3. During Use of Internal MCU Function (Default)

PCS-1/IP that operates as internal MCU uses the port number below when the port number used in a LAN setup menu is set as “Default”. The port number that a child-terminal uses is the same as during P-P connection.

| | Port number (at first point) | Port number (at N'th point) |
|----------------------|--|--|
| RAS (PCS-1/IP) | Any number from 2253 to 2263* (when Gatekeeper is used) | Any number from 2253 to 2263* (when Gatekeeper is used) |
| RAS (Gatekeeper) | 1718 or 1719 (when Gatekeeper is used) | 1718 or 1719 (when Gatekeeper is used) |
| Q931 (Dialing) | Any number from 2253 to 2263* | Any number from 2253 to 2263* |
| Q931 (Answering) | 1720 | 1720 |
| H.245 | Any number from 2253 to 2263* | Any number from 2253 to 2263* |
| Audio RTP | 49152 | 49152+20 × (N-1) |
| Audio RTCP | 49153 | 49153+20 × (N-1) |
| Video RTP | 49154 | 49154+20 × (N-1) |
| Video RTCP | 49155 | 49155+20 × (N-1) |
| FECC RTP | 49156 | 49156+20 × (N-1) |
| FECC RTCP | 49157 | 49157+20 × (N-1) |
| Data conference RTP | 49158 | 49158+20 × (N-1) |
| Data conference RTCP | 49159 | 49159+20 × (N-1) |

※: Ver.2.20 to 2.32: 2253 to 2303

4-1-4. During Use of Internal MCU Function (Custom: When TCP port number is set to 3000 and when UDP port number is set to 3100)

The port number that PCS-1/IP uses is determined by the value input to TCP and UDP port numbers when the port number used in a LAN setup menu is set as “Custom”. For example, PCS-1/IP that operates as internal MCU uses the port number below during opposed connection when a TCP port number is set to 3000 and when an UDP port number is set to 3100. The port number that a child-terminal uses is the same as during opposed connection.

| | Port number (at first point) | Port number (at N'th point) |
|----------------------|--|--|
| RAS (PCS-1/IP) | Any number from 3000 to 3010* (when Gatekeeper is used) | Any number from 3000 to 3010* (when Gatekeeper is used) |
| RAS (Gatekeeper) | 1718 or 1719 (when Gatekeeper is used) | 1718 or 1719 (when Gatekeeper is used) |
| Q931 (Dialing) | Any number from 3000 to 3010* | Any number from 3000 to 3010* |
| Q931 (Answering) | 1720 | 1720 |
| H.245 | Any number from 3000 to 3010* | Any number from 3000 to 3010* |
| Audio RTP | 3100 | 3100+20 × (N-1) |
| Audio RTCP | 3101 | 3101+20 × (N-1) |
| Video RTP | 3102 | 3102+20 × (N-1) |
| Video RTCP | 3103 | 3103+20 × (N-1) |
| FECC RTP | 3104 | 3104+20 × (N-1) |
| FECC RTCP | 3105 | 3105+20 × (N-1) |
| Data conference RTP | 3106 | 3106+20 × (N-1) |
| Data conference RTCP | 3107 | 3107+20 × (N-1) |

※: Ver.2.20 to 2.32: 3000 to 3050

4-2. Setting of PCS-1/1P and HUB

The initial setting of the PCS-1/1P is Auto.

In the Auto setting of the PCS-1/1P, 10/100 can be selected automatically, however, Half/Full cannot be selected automatically. Therefore, if the HUB is set to Full mode, a connection failure or packet loss occurs. The following table shows an example of connection between the PCS-1/1P and Catalyst 2950. When the HUB is set to 100FULL or 10FULL, change the setting of HUB or adjust the PCS-1/1P setting to HUB. Refer to Operating Instructions.

Table of connection between PCS-1/1P and Catalyst 2950

| PCS-1/1P setting | AUTO | 100FULL | 100HALF | 10FULL | 10HALF |
|---------------------|-------------|--------------------|--------------------|--------------------|--------------------|
| 2950 setting | | | | | |
| AUTO | OK | Packet loss | OK | Packet loss | OK |
| 100FULL | Packet loss | OK | Packet loss | Connection failure | Connection failure |
| 100HALF | OK | Packet loss | OK | Connection failure | Connection failure |
| 10FULL | Packet loss | Connection failure | Connection failure | OK | Packet loss |
| 10HALF | OK | Connection failure | Connection failure | Packet loss | OK |

4-3. Audio and Video Input/Output Characteristics

4-3-1. Audio input/output characteristics of PCS-1/1P

| Name | Connector | Impedance | Input/output level | Remarks |
|----------------------------|-----------|-------------------------------------|---|---------|
| MIC1/MIC2 (Input) | Mini-jack | 4.7 k Ω (Plug in power) | The reference value of an input level is -55 dBs. | |
| AUDIO IN (Input) | Pin jack | 47 k Ω or higher, Unbalanced | The reference value of an input level is -9 dBs. | |
| AUDIO OUT (Output) | Pin jack | 1 k Ω or less, Unbalanced | Reference value -12 dBs | |
| AUDIO OUT (MIXED) (Output) | Pin jack | 1 k Ω or less, Unbalanced | Reference value -12 dBs | |

4-3-2. Video input/output characteristics of PCS-1/1P

| Name | Connector | Specifications | Remarks |
|---------------------------------|----------------|---|----------------------------|
| VIDEO IN AUX1 (Input) | Mini DIN 4-pin | S video input signal Y signal: 0.7 V p-p/75 Ω C signal: 0.3 V p-p/75 Ω | PCS-1: NTSC PCS-1P: PAL |
| VIDEO IN AUX2 (Input) | Pin jack | Composite input signal 1 V p-p/75 Ω | PCS-1: NTSC PCS-1P: PAL |
| VIDEO OUT AUX (Output) | Pin jack | Composite output signal 1 V p-p/75 Ω | PCS-1: NTSC PCS-1P: PAL |
| VIDEO OUT MONITOR MAIN (Output) | Mini DIN 4-pin | S video output signal Y signal: 0.7 V p-p/75 Ω C signal: 0.3 V p-p/75 Ω | PCS-1: NTSC PCS-1P: PAL |
| VIDEO OUT MONITOR SUB (Output) | Mini DIN 4-pin | S video output signal Y signal: 0.7 V p-p/75 Ω C signal: 0.3 V p-p/75 Ω | PCS-1: NTSC PCS-1P: PAL |
| RGB OUT (Output) | D-Sub 15-pin | RGB video output (H/V/R/G/B: 0.7 V p-p/75 Ω) | |

4-4. Audio Selection List of PCS-1/1P

| Audio setup menu | | Audio input | | | | Audio output | | | | Remarks | | | | |
|------------------|--------------|---------------|----------------|-----------------|-------------------------|---------------|----------------------------|------------------------|-----------------------------|---|---------------------------------|------------------------|---|---|
| CTE | Input select | MIC select | Echo canceller | Selection input | Internal echo canceller | MIC mute | AUDIO DSB AUX OUT DSB LINE | AUDIO OUT (MIXED) | Receiving volume adjustment | | | | | |
| Off | MIC | Internal | Internal | Internal MIC | Valid | Valid | Remote | Remote + Internal MIC | Valid | Recommended during use of an internal microphone. | | | | |
| | | | | | | | External | AUX | Invalid | Invalid | Remote + AUX | Invalid | | |
| | | | | | | | Internal | MIC | Valid | Valid | Remote + MIC | Valid | Recommended when PCS-A1/A300 is connected to the microphone of the main unit. | |
| | External | External | AUX | Invalid | Invalid | Invalid | Invalid | Remote | Remote + AUX | Invalid | | | | |
| | | | | | | | | Internal | DSB MIC | Valid | Valid | Remote + DSB MIC | Valid | Recommended when PCS-A1/A300 is connected to DSB MIC. |
| | | | | | | | | External | AUX | Invalid | Invalid | Remote + AUX | Invalid | |
| | AUX | Internal | Internal | Invalid | Invalid | Invalid | Invalid | Remote | Remote + AUX | Invalid | | | | |
| | | | | | | | | External | AUX | Invalid | Invalid | Remote + AUX | Valid | Recommended when an echo canceller is used. |
| | | | | | | | | External | AUX | Invalid | Invalid | Remote + AUX | Valid | Recommended when an echo canceller is used. |
| | DSB MIC | Internal | None | - | - | - | - | Remote | Remote | Valid | | | | |
| | | | | | | | | External | None | - | - | Remote | Invalid | |
| | | | | | | | | Internal | Internal MIC + AUX | Internal MIC valid | Internal MIC valid | Remote + AUX MIC + AUX | Valid | |
| External | Internal | AUX | Invalid | Invalid | Invalid | Invalid | Remote | Remote + AUX | Invalid | | | | | |
| | | | | | | | Internal | MIC + AUX | MIC valid | MIC valid | Remote + MIC of main unit + AUX | Valid | | |
| | | | | | | | External | AUX | Invalid | Invalid | Remote + AUX | Invalid | | |
| DSB MIC | Internal | DSB MIC + AUX | DSB MIC valid | DSB MIC valid | DSB MIC valid | DSB MIC valid | Remote | Remote + DSB MIC + AUX | Valid | | | | | |
| | | | | | | | External | AUX | Invalid | Invalid | Remote + AUX | Invalid | | |
| | | | | | | | External | AUX | Invalid | Invalid | Remote + AUX | Invalid | | |

| Audio setup menu | | Audio input | | | Audio output | | | | | |
|------------------|--------------|-------------|----------------|-----------------|-------------------------|----------|--------------------------------|-------------------|-----------------------------|---|
| CTE | Input select | MIC select | Echo canceller | Selection input | Internal echo canceller | MIC mute | AUDIO OUT DSB AUX OUT DSB LINE | AUDIO OUT (MIXED) | Receiving volume adjustment | Remarks |
| AUX | AUX | Internal | External | AUX | Invalid | Invalid | Remote | Remote + AUX | Invalid | Recommended during use of CTE. (Connected to the main unit.) |
| DSB AUX IN | MIC | DSB AUX IN | External | DSB AUX | Invalid | Valid | Remote | Remote + DSB AUX | Valid | Recommended during use of CTE. (Connected to DSB.) |

Audio input

- Internal MIC: Microphone incorporated into the main unit
- MIC: MIC input of main unit
- AUX: AUX input of main unit
- DSB MIC: MIC input of DSB
- DSB AUX: AUX input of DSB

Audio output

- Remote: Remote audio
- MIC: MIC input of main unit
- AUX: AUX input of main unit
- DSB MIC: MIC input of DSB
- DSB AUX: AUX input of DSB

Notes

- For AUDIO OUT (MIX), the receiving volume cannot be adjusted.
- The setting of a receiving volume is fixed when CTE is connected to the main unit. However, it can be adjusted when CTE is connected to DSB.

4-5. Remote Motion Picture Display during Multipoint Connection of PCS-1/1P

4-5-1. Remote Motion Picture Displayed at Each Point in Audio Detection Mode

The whole screen at a speaking point is displayed in other terminals. The remote motion picture displayed at a speaking point remains before speaking. Examples at six points are given below.

(Note: Sub-devices A to E are the order of connection.)

| Operation order | Operation | Main device | Sub-device A | Sub-device B | Sub-device C | Sub-device D | Sub-device E |
|-----------------|-----------------------|-------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 1 | Just after connection | Whole screen of A | Whole screen of main device | Whole screen of main device | Whole screen of main device | Whole screen of main device | Whole screen of main device |
| 2 | Spoken by A | Whole screen of A | Whole screen of main device | Whole screen of A | Whole screen of A | Whole screen of A | Whole screen of A |
| 3 | Spoken by B | Whole screen of B | Whole screen of B | Whole screen of A | Whole screen of B | Whole screen of B | Whole screen of B |
| 4 | Spoken by C | Whole screen of C | Whole screen of C | Whole screen of C | Whole screen of B | Whole screen of C | Whole screen of C |

4-5-2. Remote Motion Picture at Each Point in Broadcast Selection Mode

The whole screen of the terminal at which the “Broadcast the local side” button was pressed is displayed in other terminals. A main point is displayed in the terminal at which the “Broadcast the local side” button was pressed. A main point is displayed in the terminal at which the “Broadcast the local side” button was pressed. The whole screen of the broadcast-selected terminal is displayed in other terminals when “Broadcast sub-device A” to “Broadcast sub-device E” or “Broadcast the local side” are selected in a main device. A main point is displayed in the broadcast-selected terminal. When the “Broadcast end” button is pressed in a terminal or main terminal during broadcasting, the split screen is displayed if splitting is selected in the multipoint menu of the main terminal. If audio detection is selected in the multipoint menu of the main terminal, a main point is displayed in a sub-terminal and the terminal point during broadcast is displayed in a main terminal. Examples at six points when audio detection is selected in the multipoint menu of a main device are given below.

(Note: Sub-devices A to E are the order of connection.)

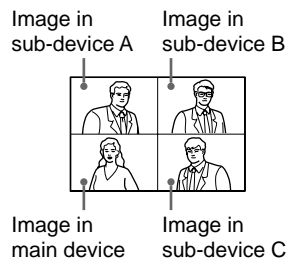
| Operation order | Operation | Main device | Sub-device A | Sub-device B | Sub-device C | Sub-device D | Sub-device E |
|-----------------|-----------------------|-------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 1 | Just after connection | Whole screen of A | Whole screen of main device | Whole screen of main device | Whole screen of main device | Whole screen of main device | Whole screen of main device |
| 2 | Broadcast A | Whole screen of A | Whole screen of main device | Whole screen of A | Whole screen of A | Whole screen of A | Whole screen of A |
| 3 | Broadcast end | Whole screen of A | Whole screen of main device | Whole screen of main device | Whole screen of main device | Whole screen of main device | Whole screen of main device |
| 4 | Broadcast B | Whole screen of B | Whole screen of B | Whole screen of main device | Whole screen of B | Whole screen of B | Whole screen of B |
| 5 | Broadcast end | Whole screen of B | Whole screen of main device | Whole screen of main device | Whole screen of main device | Whole screen of main device | Whole screen of main device |
| 6 | Broadcast C | Whole screen of C | Whole screen of C | Whole screen of C | Whole screen of main device | Whole screen of C | Whole screen of C |

4-5-3. Remote Motion Picture at Each Point in Split Mode

The images in all connected terminals are split and simultaneously displayed in all terminals.

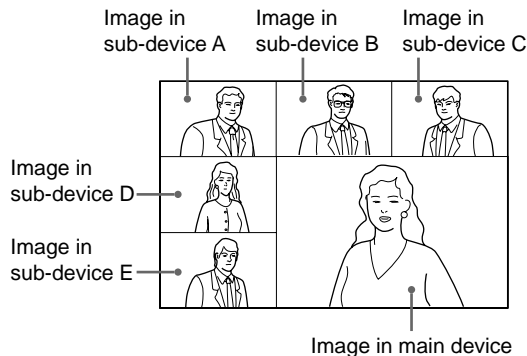
1. The number of split images is 4 when sub-terminals are 1 to 3. The position of the images is fixed in the order of connection. Examples at four points are given below.
(Note: Sub-devices A to C are the order of connection.)

Remote image in main and sub-terminals



2. The number of split images is 6 when sub-terminals are 4 and 5. The position of the images is fixed in the order of connection immediately after connection.
(Note: Sub-devices A to E are the order of connection.)

Remote image in main and sub-terminals immediately after connection



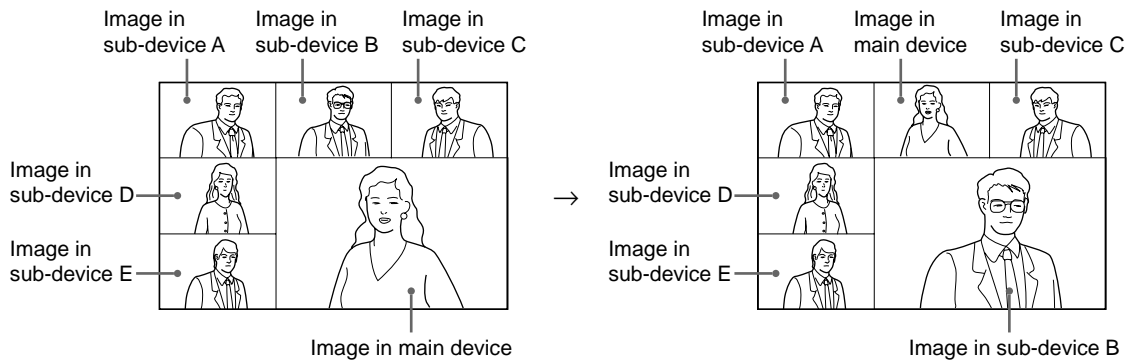
3. The image of a speaker moves to the lower-right position when he or she speaks during six-image splitting.

The image in a main terminal moves to the speaker terminal position when the previous image displayed in the lower-right position is one in the main terminal.

When the previous image displayed in the lower-right position is one in a sub-terminal, it returns to the position immediately after connection. The image in a main terminal moves to the speaker terminal position. Instead, the image in a main terminal moves to the speaker terminal position.

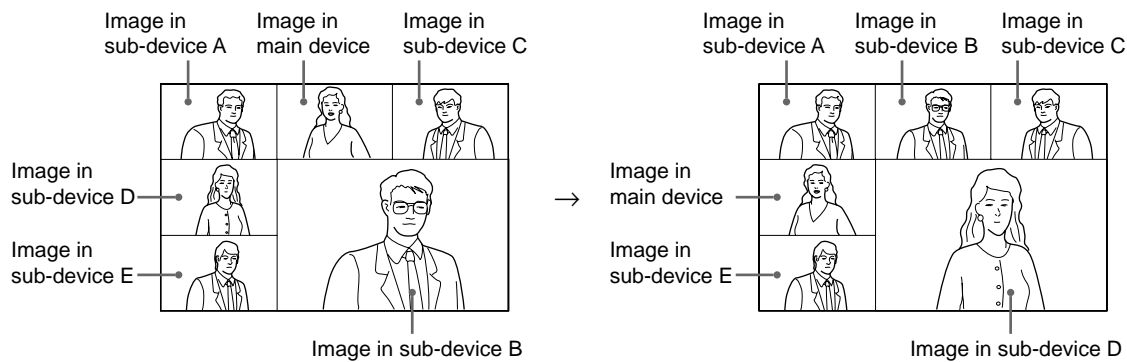
The transition examples of an image when the previous image displayed in the lower-right position is one in a main terminal and when sub-terminal B speaks are given below.

Spoken by main terminal



The transition examples of an image when the previous image displayed in the lower-right position is one in sub-terminal B and when sub-terminal D speaks are given below.

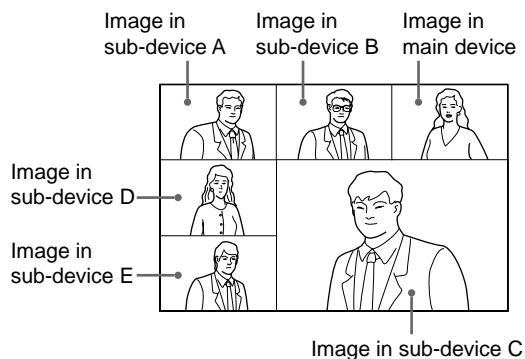
Spoken by sub-terminal B



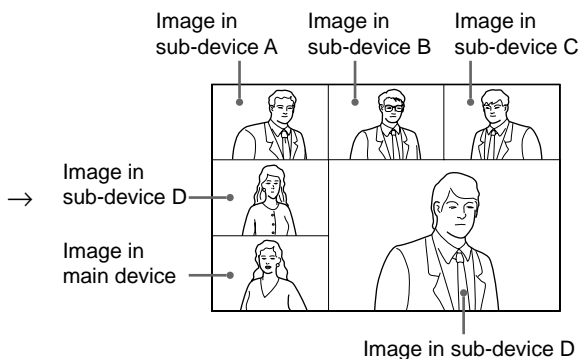
- The splitting position can be fixed during six-image splitting. When “splitting (Fix A)” to “splitting (Fix E)” or “Splitting (Fix the local side)” is selected in a main terminal, the image in the selected terminal moves to the lower-right position and the image in a main terminal moves to the position of the selected terminal.

The examples when “splitting (Fix E)” is selected after “splitting (Fix C)” is selected in a main terminal are given below.

Selection of splitting (Fix C)



Selection of splitting (Fix C)



4-6. Display Transition List of PCS-1/1P

General setup

Dual monitor: Off

Monitor output: VIDEO OUT

In this case, connect a video monitor to the VIDEO OUT MAIN terminal of the main unit. The display transition is as shown below.

| Transition state | VIDEO OUT MAIN image of main unit |
|--|--|
| Non-communication | Launcher menu |
| Motion picture communication | Remote motion picture (Sub-screen: Local motion picture) |
| One shot/continuous still picture transmission | Still picture (4CIF resolution) |
| DSB transmission | Remote motion picture (Sub-screen: Local motion picture) |
| One shot/continuous still picture reception | Still picture (4CIF resolution) |
| DSB reception | Still picture (4CIF resolution) |

General setup

Dual monitor: Off

Monitor output: RGB OUT

In this case, connect an RGB monitor to the RGB terminal of the main unit. The display transition is as shown below.

| Transition state | RGB image of main unit |
|--|--|
| Non-communication | Launcher menu |
| Motion picture communication | Remote motion picture (Sub-screen: Local motion picture) |
| One shot/continuous still picture transmission | Still picture (4CIF resolution) |
| DSB transmission | Remote motion picture (Sub-screen: Local motion picture) |
| One shot/continuous still picture reception | Still picture (4CIF resolution) |
| DSB reception | Still picture (XGA resolution) |

General setup

Dual monitor: On

Monitor output: VIDEO OUT

In this case, connect a video monitor to the VIDEO OUT MAIN/VIDEO OUT SUB terminal of the main unit. The display transition is as shown below.

| Transition state | VIDEO OUT MAIN image of main unit | VIDEO OUT SUB image of main unit |
|--|--|----------------------------------|
| Non-communication | Launcher menu | Local motion picture |
| Motion picture communication | Remote motion picture (Sub-screen: Local motion picture) | Local motion picture |
| One shot/continuous still picture transmission | Remote motion picture (Sub-screen: Local motion picture) | Still picture (4CIF resolution) |
| DSB transmission | Remote motion picture (Sub-screen: Local motion picture) | Local motion picture |
| One shot/continuous still picture reception | Remote motion picture (Sub-screen: Local motion picture) | Still picture (4CIF resolution) |
| continuous still picture reception | Still picture (4CIF resolution) | Still picture (4CIF resolution) |
| DSB reception | Remote motion picture (Sub-screen: Local motion picture) | Still picture (4CIF resolution) |

General setup

Dual monitor: On

Monitor output: RGB OUT

In this case, connect a video monitor to the VIDEO OUT MAIN terminal of the main unit and connect an RGB monitor to the RGB terminal of the main unit. The display transition is as shown below.

| Transition state | VIDEO OUT MAIN image of main unit | RGB image of main unit |
|--|---|---------------------------------|
| Non-communication | Launcher menu | Local motion picture |
| Motion picture communication | Remote motion picture (Sub-screen: Local motion picture) | Local motion picture |
| One shot/continuous still picture transmission | Remote motion picture (Sub-screen: Local motion picture) | Still picture (4CIF resolution) |
| DSB transmission | Remote motion picture (Sub-screen: Local motion picture) | Local motion picture |
| One shot/continuous still picture reception | Remote motion picture (Sub-screen: Local motion picture) | Still picture (4CIF resolution) |
| continuous still picture reception | Still picture (4CIF resolution) | Still picture (4CIF resolution) |
| DSB reception | Remote motion picture (Sub-screen: Local motion picture) | Still picture (XGA resolution) |

General setup

Dual monitor: On

Monitor output: RGB OUT (DSB)

In this case, connect a video monitor to the VIDEO OUT MAIN terminal of the main unit and connect an RGB monitor to the DSB RGB terminal. The display transition is as shown below.

| Transition state | VIDEO OUT MAIN image of main unit | DSB RGB image |
|--|---|---------------------------------|
| Non-communication | Launcher menu | Still picture (XGA resolution) |
| Motion picture communication | Remote motion picture (Sub-screen: Local motion picture) | Local motion picture |
| One shot/continuous still picture transmission | Remote motion picture (Sub-screen: Local motion picture) | Still picture (4CIF resolution) |
| DSB transmission | Remote motion picture (Sub-screen: Local motion picture) | Still picture (XGA resolution) |
| One shot/continuous still picture reception | Remote motion picture (Sub-screen: Local motion picture) | Still picture (4CIF resolution) |
| continuous still picture reception | Still picture (4CIF resolution) | Still picture (4CIF resolution) |
| DSB reception | Remote motion picture (Sub-screen: Local motion picture) | Still picture (XGA resolution) |

4-7. Priority Level List of Video and Audio Codec

High-speed bit rate of H.323 (512 K or higher)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------------|---|-------------|--------------|------------|-------------|-------------|-----------|--------|
| Sound quality priority | V | H264/30 fps | MPEG4/30 fps | SIF/60 fps | G263/30 fps | H261/30 fps | – | – |
| | A | MPEG4 AAC | G722 | G722.1 | G711 | G728 | G729 | G723.1 |
| Picture quality priority | V | H264/30 fps | MPEG4/30 fps | SIF/60 fps | G263/30 fps | H261/30 fps | – | – |
| | A | G722 | G722.1 | G729 | G723.1 | G728 | MPEG4 AAC | G711 |
| Motion priority | V | SIF/60 fps | MPEG4/30 fps | H264 | H263/30 fps | H261/30 fps | – | – |
| | A | G722 | G722.1 | G729 | G723.1 | G728 | MPEG4 AAC | G711 |

Middle-speed bit rate of H.323 (256 K to 511 K)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------------|---|-------------|--------------|-------------|-------------|------|-----------|--------|
| Sound quality priority | V | H264/15 fps | MPEG4/15 fps | H263/15 fps | H261/15 fps | – | – | – |
| | A | MPEG4 AAC | G722 | G722.1 | G711 | G728 | G729 | G723.1 |
| Picture quality priority | V | H264/15 fps | MPEG4/15 fps | H263/15 fps | H261/15 fps | – | – | – |
| | A | G722 | G722.1 | G729 | G723.1 | G728 | MPEG4 AAC | G711 |
| Motion priority | V | H264/30 fps | MPEG4/30 fps | H263/30 fps | H261/30 fps | – | – | – |
| | A | G722 | G722.1 | G729 | G723.1 | G728 | MPEG4 AAC | G711 |

Low-speed bit rate of H.323 (Under 256 K)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------------|---|-------------|--------------|-------------|-------------|------|-----------|--------|
| Sound quality priority | V | H264/15 fps | MPEG4/15 fps | H263/15 fps | H261/15 fps | – | – | – |
| | A | MPEG4 AAC | G722 | G722.1 | G711 | G728 | G729 | G723.1 |
| Picture quality priority | V | H264/15 fps | MPEG4/15 fps | H263/15 fps | H261/15 fps | – | – | – |
| | A | G722.1 | G722.1 | G723.1 | G729 | G728 | MPEG4 AAC | G711 |
| Motion priority | V | H264/30 fps | MPEG4/30 fps | H263/30 fps | H261/30 fps | – | – | – |
| | A | G722.1 | G722 | G723.1 | G729 | G728 | MPEG4 AAC | G711 |

High-speed bit rate of H.320 (512 K or higher)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------------|---|-------------|-------------|-------------|---|---|---|---|
| Sound quality priority | V | H264/30 fps | H263/30 fps | H261/30 fps | – | – | – | – |
| | A | G722 | G711 | G728 | – | – | – | – |
| Picture quality priority | V | H264/30 fps | H263/30 fps | H261/30 fps | – | – | – | – |
| | A | G722 | G728 | G711 | – | – | – | – |
| Motion priority | V | H264/30 fps | H263/30 fps | H261/30 fps | – | – | – | – |
| | A | G722 | G728 | G711 | – | – | – | – |

Middle-speed bit rate of H.320 (256 K to 511 K)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------------|---|-------------|-------------|-------------|---|---|---|---|
| Sound quality priority | V | H264/15 fps | H263/15 fps | H261/15 fps | – | – | – | – |
| | A | G722 | G711 | G728 | – | – | – | – |
| Picture quality priority | V | H264/15 fps | H263/15 fps | H261/15 fps | – | – | – | – |
| | A | G722 | G728 | G711 | – | – | – | – |
| Motion priority | V | H264/30 fps | H263/30 fps | H261/30 fps | – | – | – | – |
| | A | G722 | G728 | G711 | – | – | – | – |

Low-speed bit rate of H.320 (Under 256 K)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------------|---|-------------|-------------|-------------|---|---|---|---|
| Sound quality priority | V | H264/15 fps | H263/15 fps | H261/15 fps | – | – | – | – |
| | A | G722 | G711 | G728 | – | – | – | – |
| Picture quality priority | V | H264/15 fps | H263/15 fps | H261/15 fps | – | – | – | – |
| | A | G722 | G728 | G711 | – | – | – | – |
| Motion priority | V | H264/30 fps | H263/30 fps | H261/30 fps | – | – | – | – |
| | A | G722 | G728 | G711 | – | – | – | – |

4-8. Conference Connection Format and Its Corresponding Usable Codec List

| | H.323 opposed | H.320 opposed | H.323MCU | H.320MCU | MIX MCU | Cascade (Only LAN) | Cascade (Only LAN) |
|----------------|---------------|---------------|----------|----------|---------|--------------------|--------------------|
| Video | | | | | | | |
| Interlaced SIF | ○ | – | – | – | – | – | – |
| H.264 | ○ | ○ | – | – | – | – | – |
| MPEG4 | ○ | – | – | – | – | – | – |
| H.263 | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| H.261 | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Audio | | | | | | | |
| MPEG4 AAC | ○ | – | – | – | – | – | – |
| G.722.1 | ○ | – | – | – | – | – | – |
| G.722 | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| G.729 | ○ | – | – | – | – | – | – |
| G.728 | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| G.723.1 | ○ | – | – | – | – | – | – |
| G.711 | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

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