SONY

VIDEO COMMUNICATION SYSTEM

PCS-G70
PCS-G70P

SYSTEM INTEGRATION MANUAL

1st Edition

⚠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ことがあります。
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 manual 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.

Table of Contents

1. Installation

1-1. Caution on Installation 1-1
1-1-1. Videoconferencing Room Layout 1-1
1-1-2. Operating Environment 1-3
1-2. Flowchart of Installation 1-4
1-3. System Connections 1-5
1-3-1. When Used in LAN (100BASE-TX/10BASE-T) 1-5
(with one Camera and one Monitor) 1-5
1-3-2. When Used in ISDN (with one Camera and one Monitor) 1-6
1-4. Initialization 1-7
1-4-1. Inserting Batteries into the Remote Commander 1-7
1-4-2. Turning On/Off the TV Monitor Together with the Communication Terminal 1-8
1-4-3. When the Power is First Turned On after Installation 1-9
1-4-4. Adjust the Volume of TV Monitor 1-14
1-5. System Setting 1-15
1-5-1. Menu Configuration 1-15
1-5-2. System Setting Table 1-16
1-6. Flowchart of Opening Test 1-23
1-6-1. Dialing Procedure of ISDN 1-24
1-6-2. Answering Procedure of ISDN 1-25
1-6-3. Dialing Procedure of LAN 1-26
1-6-4. Answering Procedure of LAN 1-27
1-7. Conducting a Videoconference Using the Dual Video Function 1-28
1-7-1. System Configuration Using 2 Cameras and 3 Monitors 1-28
1-7-2. Activating the Dual Video Function 1-29
1-8. Connecting Four Camera Units 1-30

2. Maintenance

2-1. Confirmation Procedure of Local Terminal Operation Using Self-Loop ... 2-1
2-2. LAN Communication Test Using Ping 2-1
2-3. Failure Analysis 2-2
2-4. How to Take Log 2-4
2-5. Updating of Software 2-14
2-5-1. Updating Using Memory Stick 2-14
2-6. Service Mode 2-15

3. Compatibility in LAN Network

3-1. Connection via Hub 3-1
3-2. Connection via Router 3-3
3-3. Connection via DHCP 3-5
3-4. Connection via Gatekeeper 3-7
3-5. Connection via DHCP and Gatekeeper 3-9
3-6. Connection beyond NAT 3-11
3-7. Connection using PPPoE 3-13

4. Technical Data

4-1. Communication Terminal Port Number Used 4-1
4-1-1. Without H.323MCU Option (Default) 4-1
4-1-2. Without H.323MCU Option (Custom: When TCP port number is set to 3000 and UDP port number is set to 3100) 4-1
4-1-3. With H.323MCU Option (Default) 4-2
4-1-4. With H.323MCU Option (Custom: When TCP port number is set to 3000 and when UDP port number is set to 3100) 4-2
4-2. Setting of Communication Terminal and HUB 4-3
4-3. Audio and Video Input/Output Characteristics of Communication Terminal 4-4
4-3-1. Audio Input/Output Characteristics of PCS-PG70/PG70P 4-4
4-3-2. Video Input/Output Characteristics of PCS-PG70/PG70P 4-4
4-4. Audio Selection List of PCS-G70/G70P 4-5
4-5. Displayed Window during Multipoint Connection of PCS-PG70/PG70P 4-6
4-5-1. Displayed Picture at Each Point in Voice Activate Mode 4-6
4-5-2. Displayed Picture at Each Point in Broadcast Mode with Full Screen Mode 4-7
4-5-3. Displayed Picture at Each Point in Broadcast Mode with Split Window Mode 4-8
4-6. Display Transition List of PCS-G70/G70P 4-11
4-7. Priority Level List of Video and Audio Codec 4-16
4-8. Supported Video/Audio Codec 4-17

Section 1
Installation

1-1. Caution on Installation

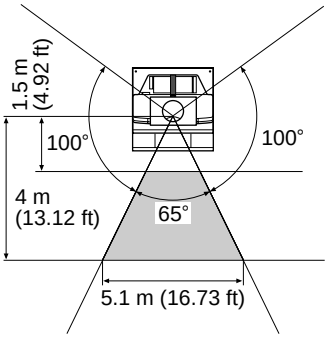
1-1-1. Videoconferencing Room Layout

Be sure to position the camera and microphone appropriately in the videoconferencing room.

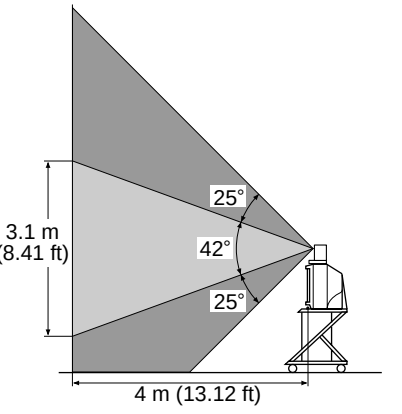
Shooting range of camera unit

represents the shooting area of the camera unit 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 the videoconference room.

Top view
(horizontal range at maximum zoom-out)

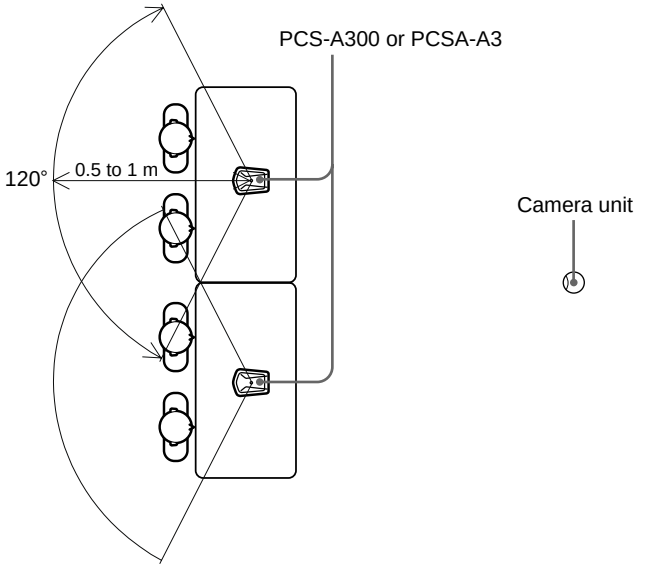


Side view
(vertical range at maximum zoom-out)

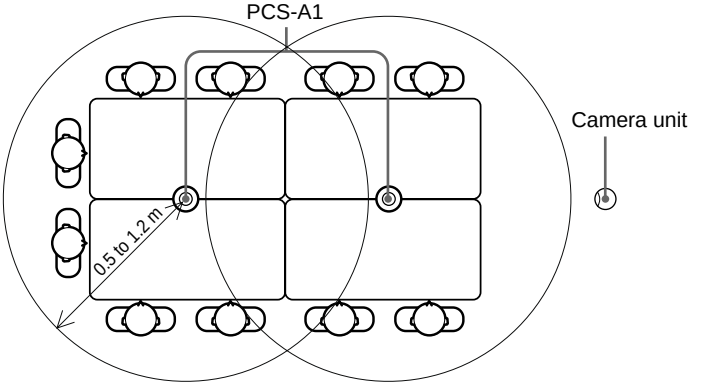


Directional range and layout examples of microphone

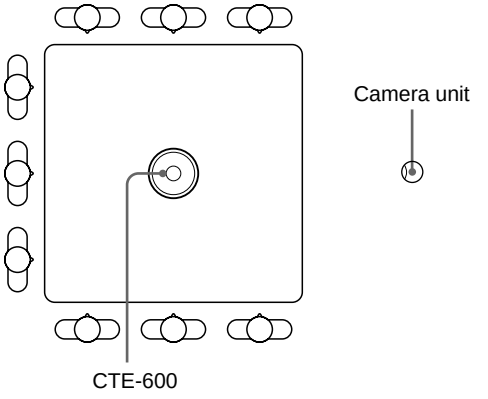
Extension microphone (PCS-A300 or PCSA-A3)



Extension microphone (PCS-A1)



Microphone layout example using a communication transducer



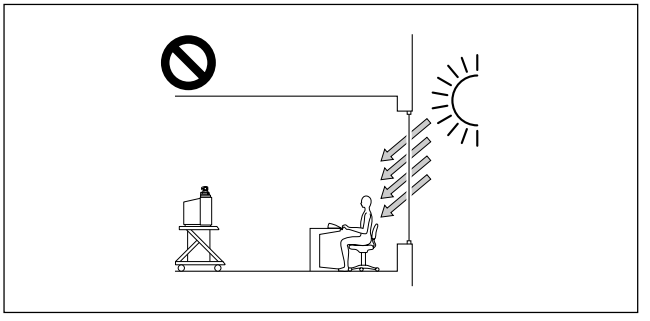
1-1-2. Operating Environment

Layout Considerations

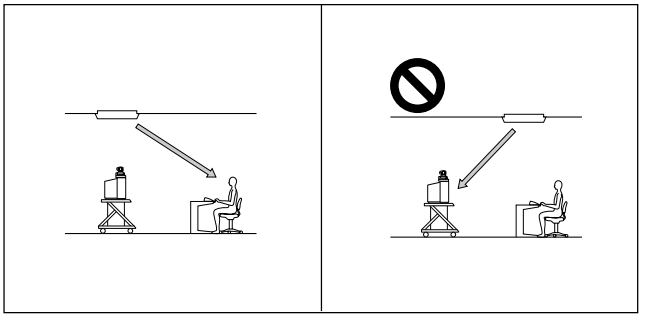
- Avoid having large, moving objects, especially people, behind the participants, as the quality of the picture transmitted to the remote party will deteriorate.
- Do not seat participants in front of a wall with fine stripe patterns.
- Choose a room where echo will not occur.
- Do not install the system 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

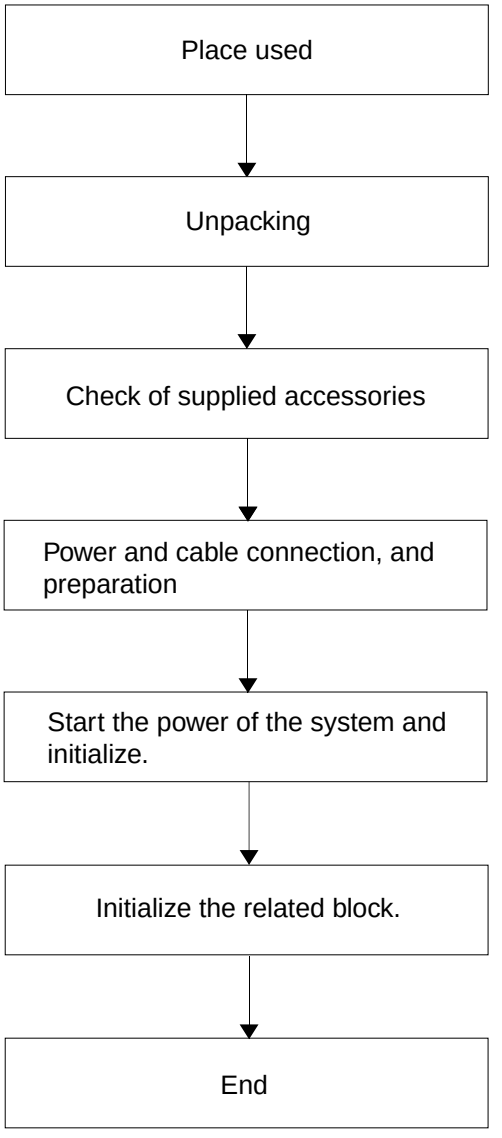
Do not point the camera toward a window where sunlight comes in as back lighting may decrease the contrast. If it is necessary, cover the window with a thick curtain.



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.



1-2. Flowchart of Installation



<Refer to “1-1. Caution on Installation” on page 1-1.>

<Refer to “1-3. System Connections” on page 1-5.>

<Refer to “1-4. Initialization” on page 1-7.>

<Refer to “1-5. System Setting” on page 1-15.>

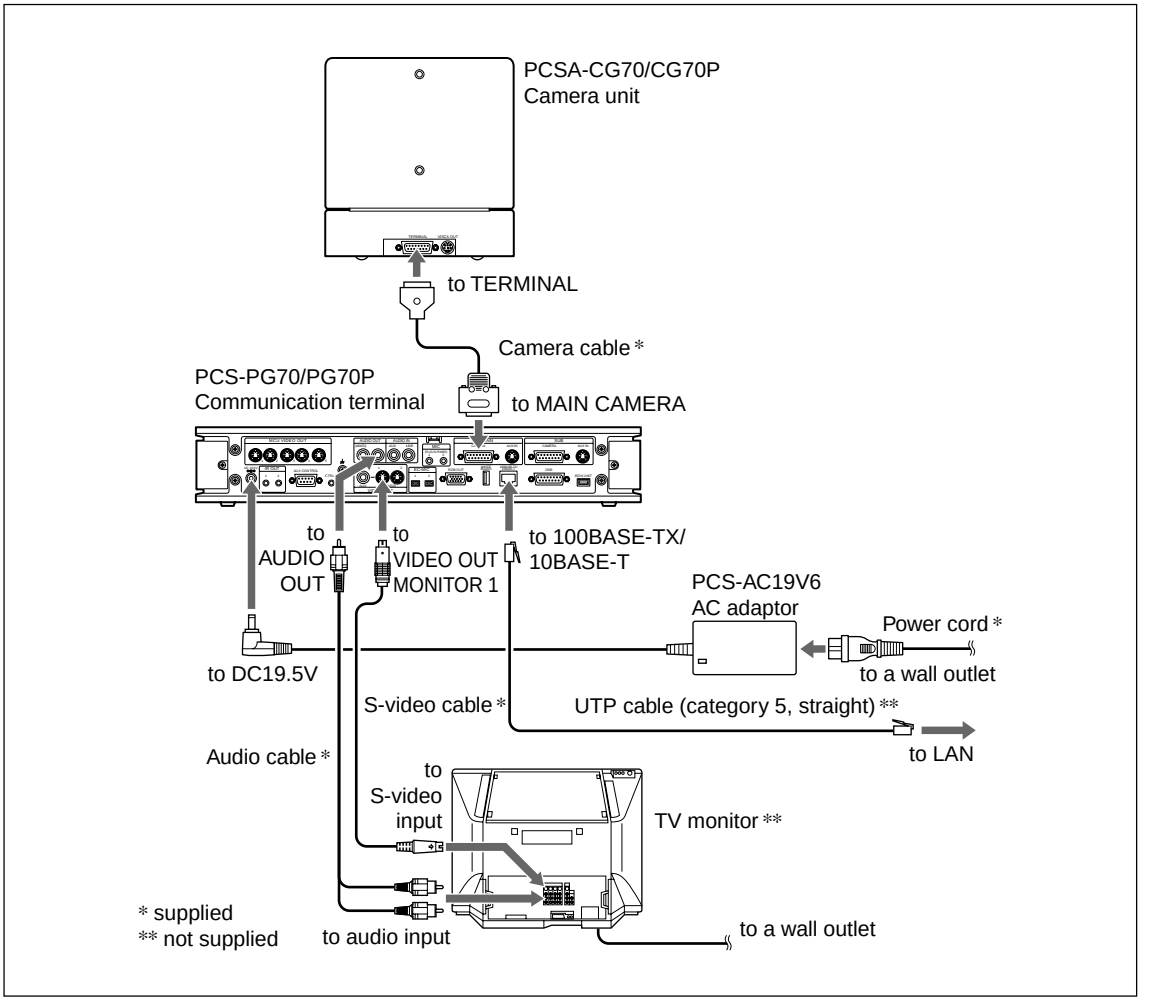
1-3. System Connections

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) (with one Camera and one Monitor)



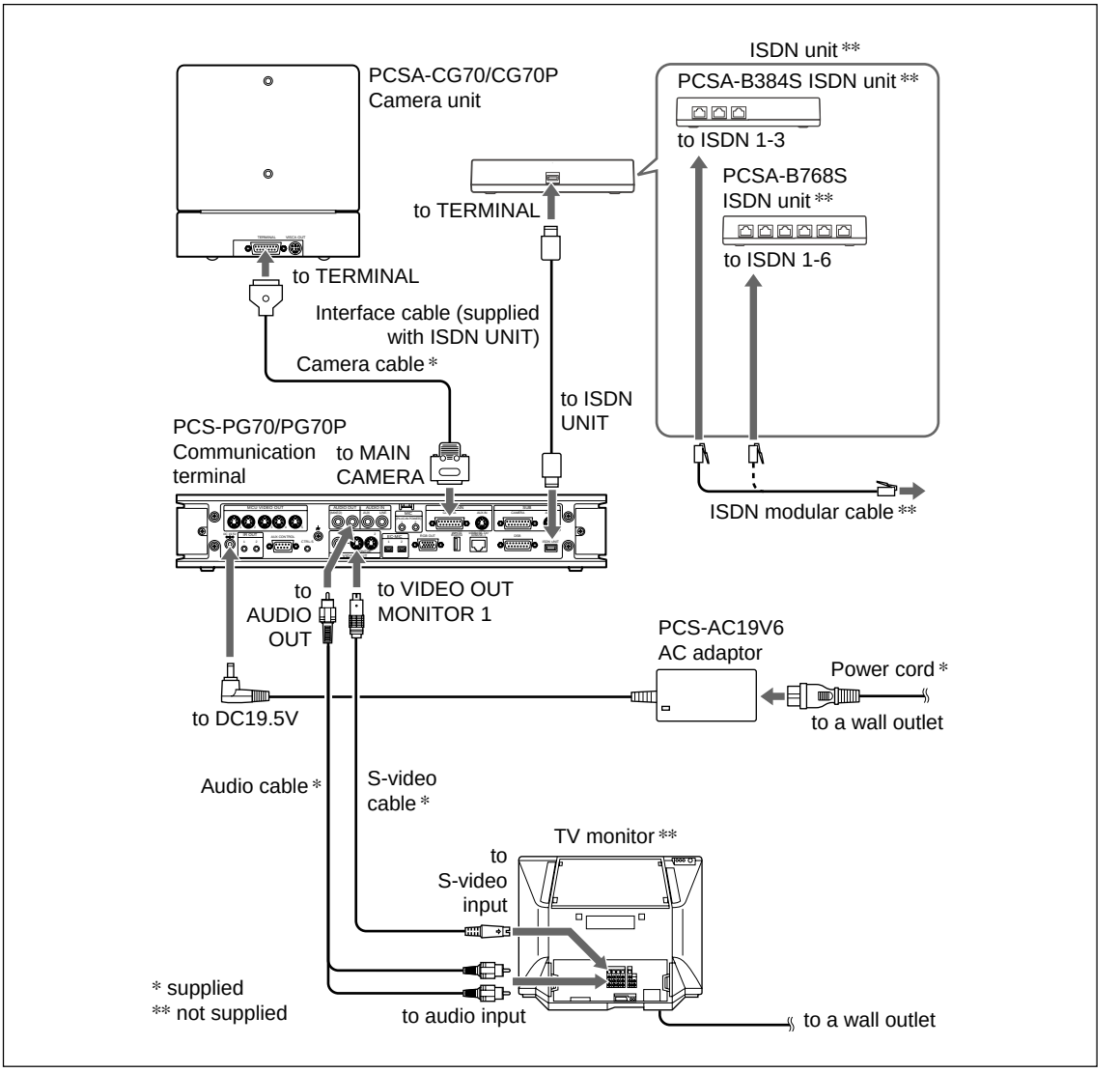
Notes

- If the system uses only one camera, be sure to connect it to the MAIN CAMERA connector.
- The AUDIO OUT (MIXED) jack is used to make an audio recording of a conference. This is not used during regular conferences.

1-3-2. When Used in ISDN (with one Camera and one Monitor)

Notes

- 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.
- Used with an ISDN unit for the first time, the communication terminal may automatically upgrade the software of the ISDN unit. While the upgrading message is displayed on the monitor screen, be sure not to turn off the communication terminal. Doing so may cause malfunction of the system.



Notes

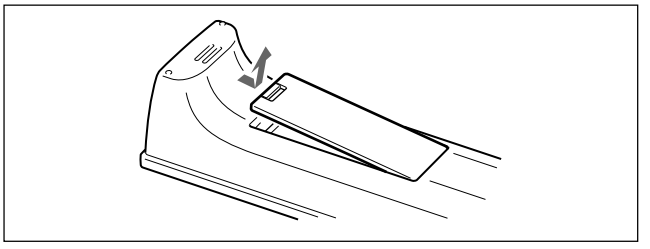
- If the system uses only one camera, be sure to connect it to the MAIN CAMERA connector.
- The AUDIO OUT (MIXED) jack is used to make an audio recording of a conference. This is not used during regular conferences.
- PCS-B384 or PCS-B768 is available for an ISDN unit.

1-4. Initialization

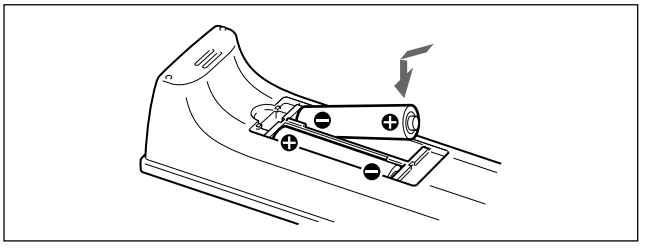
1-4-1. Inserting Batteries into the Remote Commander

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 AAA (R03) 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.

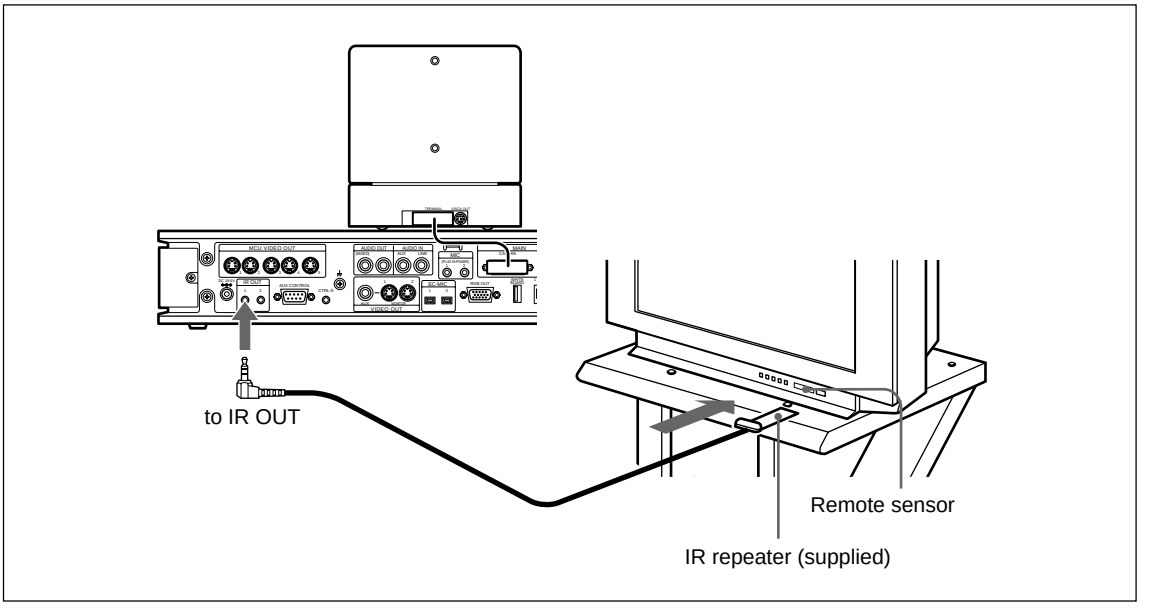
Notes on batteries

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 the remote commander is not used for a long period of time, remove the batteries from it.
- 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 a Sony TV monitor is used, insert the IR repeater under the remote sensor of the TV monitor. Once the IR repeater is set, the TV monitor will turn on or go to standby together with the communication terminal by pressing the I/⏻ button on the supplied remote commander.

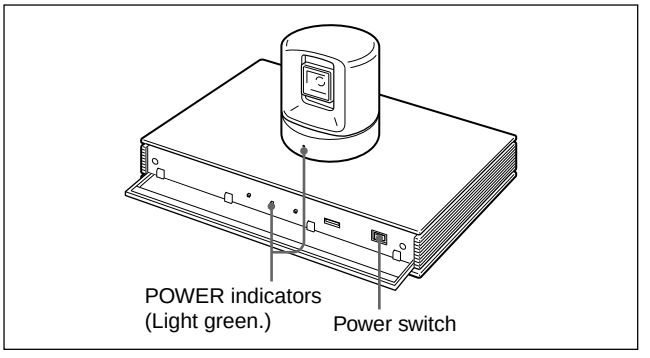


1-4-3. When the Power is First Turned On after Installation

Turning On

Turn on the communication terminal in the following procedure.

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.

Notes

- After the power is turned on, the camera unit moves automatically for trial operation. Be careful not to catch your finger.
- If the camera is obstructed forcefully while it is moving, it may not resume moving or output a signal to the communication terminal. In this case, turn off the terminal, and turn it on again.
- A Sony TV monitor may not turn on if the “IR Repeater Mode” setting does not meet the TV monitor specifications. In this case, turn on the TV monitor manually or by using its remote controller, perform the setup wizard of the communication terminal, and then change the “IR Repeater Mode” setting in the General Setup menu.

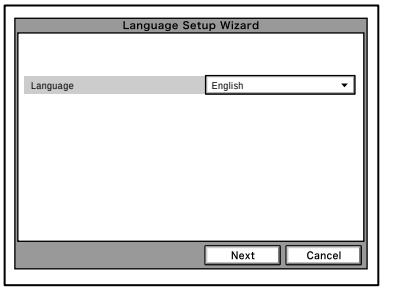
Setting Up the System for the First Time — Initial Setup Wizard

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.

Notes

- The wizard for initialization is also displayed when the ISDN unit is newly installed after system installation. Similarly, register according to the wizard in this case.
- When the communication terminal and the camera are separately installed, point the remote commander to the camera unit for operations.

1. Use the ↑ or ↓ button on the remote controller to select the language displayed in the menus or messages.
   Language:
   Select one of the desired language from English, French, German, Japanese, Spanish, Italian, Simplified Chinese, Portuguese, and Korean*.
   * Korean is added by upgrading.



2. Select “Next” using the ↑, ↓, ←, or → button on the remote commander, then press the PUSH ENTER button.
   The Monitor Setup Wizard is displayed.

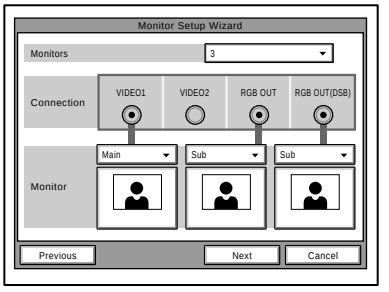
   Note

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

3. Set a monitor that outputs a signal.

Note

No menus other than the selected monitor(s) will be displayed.



Monitors:

Select the number of monitors connected to the system.

1: One monitor connected.
2: Two monitors connected.
3: Three monitors connected.

Connection:

Selects the output connector to which the device to be used is connected.

VIDEO 1:	Selects the device connected to the VIDEO 1 connector.
VIDEO 2:	Selects the device connected to the VIDEO 2 connector.
RGB OUT:	Selects the device connected to the RGB OUT connector as the main monitor.
RGB OUT (DSB):	Selects the device connected to the RGB OUT connector on the data solution box.

Monitor:

Define the monitor connected to the corresponding connector as the main monitor or the sub monitor.

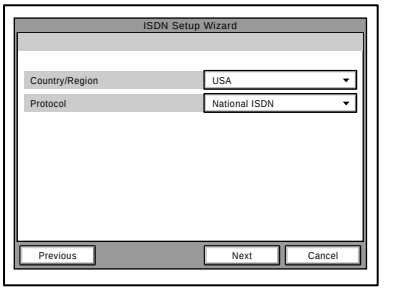
Main: Defines the monitor as the main monitor.
Sub: Defines the monitor as the sub monitor.

4. Select “Next” using the ↑, ↓, ←, or → button on the remote commander, then press the PUSH ENTER button.

The ISDN Setup Wizard is displayed when the ISDN unit is connected.

When the ISDN unit is not connected, the LAN setting wizard is displayed. Proceed to step 11.

5. Set the country/region and protocol in which an ISDN line is used.



Country/Region:

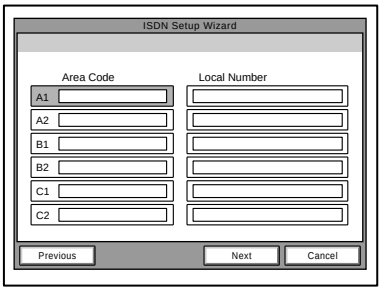
Select the country or region in which this system is used.

Protocol:

Select the protocol of the ISDN line used.

6. Select “Next” using the ↑, ↓, ←, or → button on the remote commander, then press the PUSH ENTER button.

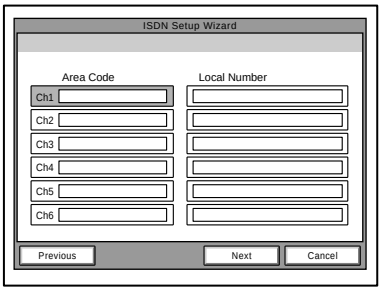
7. Enter the telephone number(s) of the ISDN line used by the system.
   When the ISDN unit PCS-B384/B768 or PCSA-B384S/B768S is used, enter the same number in the text boxes A1 and A2 for one line (except for the U.S.A. and Canada).



Area Code:
Enter the area code.
Do not enter the first "0" of an area code.
Local Number:
Enter the telephone number.

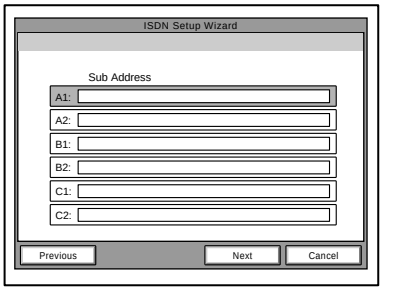
Notes

- By pressing the PUSH ENTER button with a blank text box selected, the content in the text box above will be copied to the selected text box.
- When the ISDN unit PCS-B384 or PCSA-B384S is used to connect two or three ISDN lines, enter the telephone numbers in the text boxes B1 to C2.
- When the ISDN unit PCS-B768 or PCSA-B768S is used to connect two to six ISDN lines, enter the telephone numbers in the text boxes B1 to F2. To open the menu with the text boxes D1 to F2, select "Next" and press the PUSH ENTER button.
- When the ISDN unit PCSA-PRI is used, Ch1 to Ch23 (T1), or Ch1 to Ch30 (E1) are displayed. Enter the telephone numbers according to the number of channels to be used.



8. Select "Next" using the ↑, ↓, ←, or → button on the remote commander, then press the PUSH ENTER button.

9. Enter the sub-address(es).
   Only numeric characters are available for a sub-address.
   When the ISDN unit PCS-B384/B768 or PCSA-B384S/B768S is used, enter the same number in the text boxes A1 and A2 for one line.



Notes

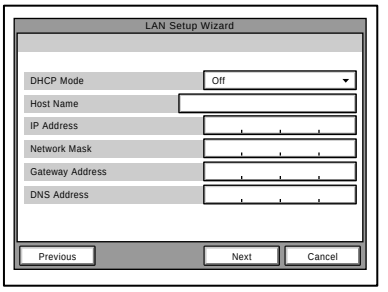
- When the ISDN unit PCS-B384 or PCSA-B384S is used to connect two or three ISDN lines, enter sub-addresses in the text boxes B1 to C2.
- When the ISDN unit PCS-B768 or PCSA-B768S is used to connect two to six ISDN lines, enter sub-addresses in the text boxes B1 to F2. To open the menu with the text boxes D1 to F2, select "Next" and press the PUSH ENTER button.
- When the ISDN unit PCSA-PRI is used, Ch1 to Ch23 (T1), or Ch1 to Ch30 (E1) are displayed. Enter the sub-addresses according to the number of channels to be used.

10. Select "Next" using the ↑, ↓, ←, or → button on the remote commander, then press the PUSH ENTER button.
    The LAN Setup Wizard is then displayed.

Note

When the LAN is not used, 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: Automatically assigns an IP address, network mask, gateway address, and DNS address.

OFF: Deactivates DHCP. In this case set an IP address, network mask, gateway address, and DNS address manually.

Host Name:

Enter a host name.

IP Address:

Enter an IP address for the communication terminal.

Network Mask:

Enter a network mask.

Gateway Address:

Enter a default gateway address.

DNS Address:

Enter a DNS (Domain Name System) server address.

Notes

- If the "DHCP Mode" has been set to "AUTO", the automatically assigned IP address can be confirmed in the launcher menu or information menu.
- If you do not know how to setup the LAN, check with a network administrator for connecting-network.

12. Select "Next" using the ↑, ↓, ←, or → button on the remote commander, then press the PUSH ENTER button.

A confirmation message is then displayed.

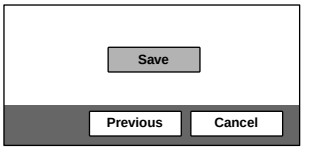
Notes

- **To stop the setting**

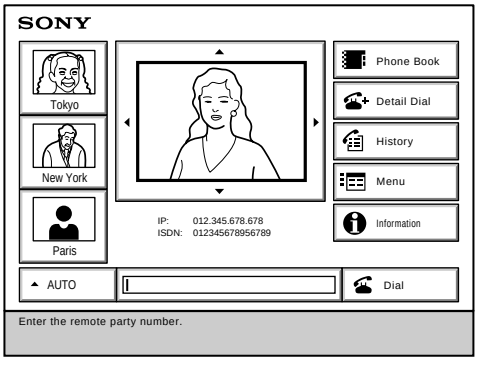
  Select "Cancel" using the ↑, ↓, ←, or → button on the remote commander, then press the PUSH ENTER button.
- **To return to the preceding wizard**

  Select "Return" using the ↑, ↓, ←, or → button on the remote commander, then press the PUSH ENTER button.

13. Select "Save" using the ↑, ↓, ←, or → button on the remote commander, then press the PUSH ENTER button.



The settings are saved, and then the launcher menu will be displayed.



Launcher menu

Note

Used with an optional device especially designed for use with this system, such as the data solution box or ISDN unit, for the first time, the communication terminal may automatically upgrade the software of the connected device. While the upgrading message is displayed on the monitor screen, be sure not to turn off the communication terminal. Doing so may cause malfunction of the system. System malfunction may also occur when a system power-off has been caused by an accidental problem such as a power interruption during upgrading. If connection of the data solution box or ISDN unit to the communication terminal is not re-established even after the system power is recovered, consult a Sony dealer.

Standby Mode Function

To save power, the communication terminal will enter standby mode if it is not operated 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/⏻ button on the remote commander.

To specify the standby time

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

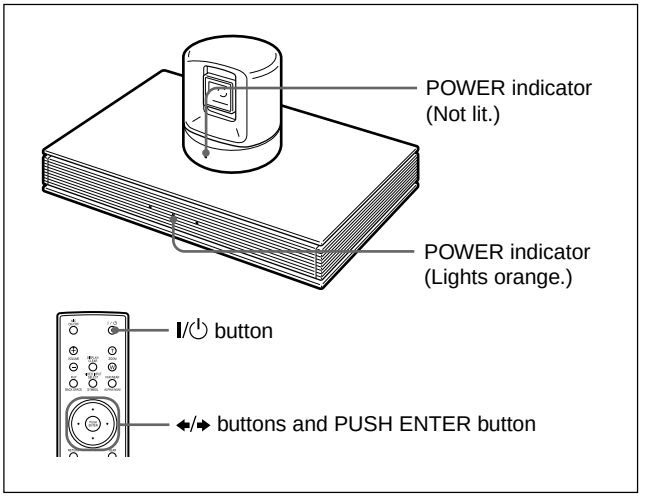
Notes

- The POWER indicator on the camera goes off when the system enters standby mode.
- If the IR repeater is installed under the remote sensor of a SONY TV monitor, the TV monitor will enter standby mode together with the communication terminal.

Setting the Video Communication System to Standby Mode

The video communication system can be turned on with the I/⏻ button on the remote commander when it is in standby mode.

1. Display the launcher menu on the monitor screen, then press the I/⏻ button on the remote commander.
   The message "Power off?" appears on the monitor screen.
2. Select "OK" with the ← or → button on the remote commander, then press the PUSH ENTER button.
   Alternatively, press the I/⏻ button on the remote commander.



The video communication system enters standby mode and the POWER indicator on the communication terminal lights in orange. The POWER indicator on the camera unit goes out.
If the IR repeater is installed under the remote sensor of a Sony TV monitor, the TV monitor will go into standby together with the video communication system.

To cancel setting the system to standby

Select "Cancel" with the ← or → button on the remote commander, then press the PUSH ENTER button in step 2 above.

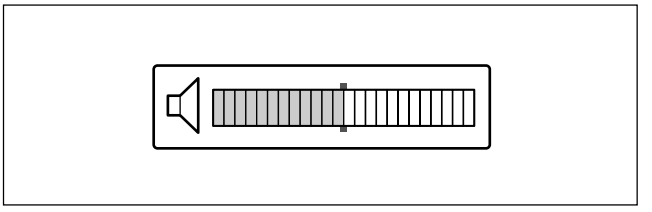
Turning Off

1. Open the front panel of the communication terminal, and then slide the power switch on the right to the off position (○).
2. Turn off the power of other equipment used for the videoconference.

1-4-4. Adjust the Volume of TV Monitor

Before adjusting the volume on the TV monitor, set the volume on the communication terminal to the appropriate position.

1. Press the VOLUME +/– buttons on the remote commander to set the volume level on the adjustment bar displayed on the screen to the middle position.



2. Adjust the volume on the TV monitor so that you can properly hear a remote party speaking.

To adjust the picture on the TV monitor

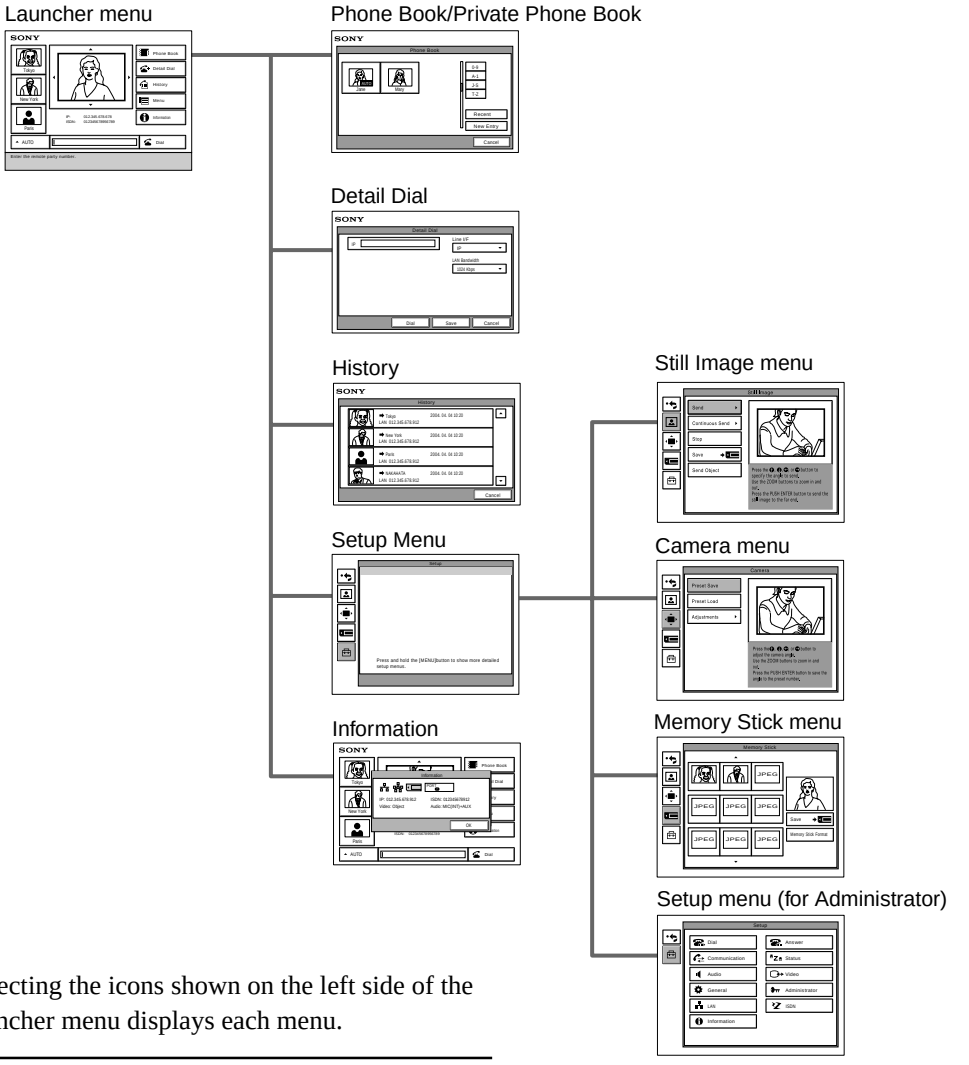
Use the controls on the TV monitor to adjust the picture, hue, contrast, brightness, or sharpness.

Notes

- For details on picture adjustments, refer to the operating instructions of the TV monitor.
- Do not activate the TV's surround sound feature as it may cause the echo canceller of the communication terminal not to function properly and make strange sounds.

1-5. System Setting

1-5-1. Menu Configuration



Selecting the icons shown on the left side of the launcher menu displays each menu.

Icon	Displayed menu
	Returns to the previous menu.
	Still Image menu
	Camera menu
	Memory Stick menu
	Setup menu

1-5-2. System Setting Table

Menu	Page	Item	Description	Default
Dial Setup	1/2	Line I/F	Select line interface [IP, ISDN, or ISDN (Telephone)] used.	IP
		Bonding	Select bonding mode in which 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 remote party.	Auto
		Telephone Mode	Select audio compression system during voice meeting.	Auto
		More Options Enable	Set to “On” when you want to set items in the dial setup menu for each dial list. Set to “Off” when you do not.	Off
		User Name Input	Set to “On” when recording user name in communication log before communication. Set to “Off” when not recording it.	Off
	2/2	Prefix	Set prefix number used when connecting using an ISDN line.	None
		Prefix-A	Set ISDN prefix (dial number).	Blank
		Prefix-B		
		Prefix-C		
		Select LAN Prefix	Set “Enabled” when using prefix for connection using a LAN line. Set “Disabled” when not using it.	Disabled
		LAN Prefix	Set LAN prefix (dial number).	Blank
Answer Setup	1/1	Auto Answer	Select “On” to connect automatically according to a call. Select “Off” to confirm connection.	On
		ISDN MSN	Select “On” when using multiple subscriber numbers during connection (answering) with an ISDN line. Select “Off” when not using them.	Off
		Mic on Answer	Select “On” to enable microphone when answering a call. Select “Off” to disable it.	On
		Reject Answer ∗1	Select “On” to reject connection when a call is received during conference. Select “Off” to make connection.	Off
Communication Setup	1/3	Individual Setting	Select “On” to set communication mode individually for dialing, answering, and for multipoint ∗1. Select “Off” to set it collectively.	Off
		Number of Lines	Select the number of ISDN lines used for ISDN communication from 1B (64 K) up to 30B (1920 K).	30B
		LAN Bandwidth	Select bandwidth (bit rate) when communicating via a LAN line.	1024 Kbps
	2/3	Video Mode	Select video coding format.	Auto
		Interlace Mode ∗2	Select “On” when using interlace SIF mode. Select “Off” when not using it.	On
		4CIF Mode ∗2	Select “On” when using 4CIF mode. Select “Off” when not using it.	On
		Video Frame	Select maximum number of video transmission frames (15 fps or 30 fps).	Auto
		Audio Mode	Select audio coding format.	Auto
		Restrict	Select transmission rate (Auto or 56K) when connecting using an ISDN line. Two rates (64 Kbps and 56 Kbps) are used in some countries (USA, etc.) and regions.	Auto

∗1: Setting is added when H.320 or H.323 MCU Software is installed. (Continued)

∗2: In the system version 1.02, these items are automatically set when the Video Mode setting is set to “Auto”.

Menu	Page	Item	Description	Default
Communication Setup	3/3	Far End Camera Control	Select “On” when controlling camera on the remote party. Select “Off” when not controlling it.	On
		T.120 Data	Select “On” when having data conference conforming to T.120 using NetMeeting. Select “Off” when not having it.	Off
		H.239	Select “On” when using dual-video presentation function conforming to H.239. Select “Off” when not using it.	On
	4/4*3	Multipoint Mode	Select “On” when having multipoint videoconference. Select “Auto” when switching automatically.	Auto
		Broadcast Mode	Select “Split” when displaying video of all connected terminals on the split window. Select “Voice Activate” when switching video to be distributed by audio detection.	Split
		Split	Select “Automatic” to switch between 4-split window (for 1 to 3 terminals) and 6-split window (for 4 to 6 terminals), or “Six-screen Mosaic” to always display 6-split window.	Automatic
		Sender Screen	Select monitor video displayed on sending terminals during multipoint videoconference.	Full Screen
Status			Display current communication status. ISDN line status, LAN line status, and LAN communication status are also displayed according to the line interface used.	
Audio Setup	1/2	Input Select	Select the audio input (MIC, AUX, or MIC + AUX).	MIC
		Mic Selection	Select microphone to be used (MIC, DSB MIC, or LINE).	MIC
		CTE	Select whether to use the communication transducer CTE-600 and select input connector to be connected. Select “Off” when not using CTE-600. Select “LINE” when inputting to LINE connector of the communication terminal, and select “DSB AUX IN” when inputting to AUX IN connector of the data solution box. **Note** When CTE-600 is set to be used, “Input Select”, “Mic Select”, and “Echo Canceller” are automatically determined and cannot be changed.	Off
		Echo Canceller	Select “On” when using an echo canceller. Select “Off” when not using it.	On
		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	Select “On” when outputting audio signal to AUDIO OUT (MIXED) connector. Select “Off” when not outputting it.	On
	2/2	Beep Sound	Select “On” to generate beep sound from pressing the remote commander button. Select “Off” not to generate.	On
		Sound Effect	Select “On” to generate effect sound at system start up and conference start/end. Select “Off” not to generate.	On
		Dial Tone	Select “On” to generate ring-back tone or busy tone during dialing. Select “Off” not to generate.	On
		Ringer Tone	Select “On” to generate ringer tone with an incoming call. Select “Off” not to generate	On

*3: Setting is added when H.320 or H.323 MCU Software is installed.

(Continued)

Menu	Page	Item 1	Page	Item 2	Description	Default
Video Setup	1/1	Video Input	1/1	Dual Video	Select “On” when distributing 2-channel moving picture simultaneously from the beginning of conference. Select “Off” when not distributing it. **Note** This function is not available in the system version 1.00 to 1.02.	Off
				Split	Select “Vertical or “Horizontal” when splitting the screen into two. Select “Off” when not splitting it.	Off
				MAIN	Select video picture of video input 1.	CAMERA
				SUB	Select video picture of video input 2.	Not selected
		Custom Input Label	1/1	Main Camera	Enter the name when “Main Camera” is selected on the video input selection window.	Blank
				Object	Enter the name when “Object” is selected on the video input selection window.	Blank
				AUX1	Enter the name when “AUX1” is selected on the video input selection window.	Blank
				Sub Camera	Enter the name when “Sub Camera” is selected on the video input selection window.	Blank
				Object	Enter the name when “Object” is selected on the video input selection window.	Blank
				AUX2	Enter the name when “AUX2” is selected on the video input selection window.	Blank
		Monitor Out	1/1	Monitors	Select the number of monitors connected to the communication terminal.	1
				Connection	Select connectors connecting to the monitors. You can select them up to the number specified in “Monitors”.	VIDEO1
				Monitor	Select “Main” or “Sub” for connected monitors to be used as. Only one “Main” monitor can be selected. When 1 or 3 monitors are used, VIDEO1 is always “Main” monitor.	Main
General Setup	1/1	Device Setup	1/2	Clock Set	Set the current date and time.	
				Terminal Name	Enter terminal name to be notified to MCU.	PCS-G70
				Standby Mode	Select “On” when using standby mode. Select “Off” when not using it.	Off
				Standby Time	Set the time (1 to 99 minutes) required until the unit is put into standby mode when standby mode is set to “On”.	30
				Last Number Registration	Select “On” when registering the remote user in Phone Book after a conference ends. Select “Off” when not registering it.	On
				Control by Far End	Select “On” when receiving camera control command from the remote party. Select “Off” when not receiving it.	On
			2/2	Language	Select language of menu and message displayed on the screen.	English
				IR Repeater Mode	Select mode to put the monitor into standby state or to turn on power when a Sony’s monitor is used. Usually, set to “MODE 1”.	MODE1
				T.120 PC Address	Enter the IP address of computer used when data conference conforming to T.120 is made using NetMeeting.	Blank
		Menu Screens	1/3	Time Display	Select “On” when displaying elapsed time at upper right of the screen during conference. Select “Off” when not displaying it.	On
				Display Terminal Name	Select whether to display the connected terminal name on the screen at the time of disconnection.	Show temporarily
				Character Input Help	Select “On” when displaying balloon help appearing when entering alphanumeric characters. Select “Off” when not displaying it.	On

(Continued)

Menu	Page	Item 1	Page	Item 2	Description	Default
General Setup	1/1	Menu Screens	2/3	Phone Book Button	Select “On” when displaying Phone Book button on the launcher screen. Select “Off” when not displaying it.	On
				Detailed Dial Button	Select “On” when displaying Detailed Dial button on the launcher screen. Select “Off” when not displaying them.	On
				Menu Button	Select “On” when displaying Menu button on the launcher screen. Select “Off” when not displaying it.	On
				Information Button	Select “On” when displaying Information button on the launcher screen. Select “Off” when not displaying it.	On
				History Button	Select “On” when displaying History button on the launcher screen. Select “Off” when not displaying it.	On
			3/3	Direct Phone Book Button	Select “On” when displaying Direct Phone Book button on the launcher screen. Select “Off” when not displaying it.	On
				Direct Dial	Select “On” when displaying Direct Dial text box on the launcher screen. Select “Off” when not displaying it.	On
				Guide	Select “On” when displaying the guide at the bottom of the launcher screen. Select “Off” when not displaying it.	On
		Whiteboard	1/1	Whiteboard Attachment	Select whether to attach Whiteboard “mimio-Xi” vertically or horizontally.	Vertical
				Whiteboard Size	Select the size (height × width) of Whiteboard used.	3'0" × 4'0"
				Whiteboard Measurement Size	Select whether to show the Whiteboard size in inches or meters.	Inches
Administrator Setup	1/1	Password	1/3	Administrator Password	Set administrator password. Administrator can modify the setup menu (for administrator) and phone book menu.	Blank
				Phone Book Modification Password	Set password used to modify the phone book.	Blank
				Save Settings Password	Set password used to save various settings.	Blank
				Remote Access Password	Set password used to access the system through the Web browser. Access is available with a password for administrator or for superuser.	Blank
			2/3	Dial Setup	Select “Enabled” when password is required to save the dial setup settings. Select “Disabled” when it is not required.	Enabled
				Answer Setup	Select “Enabled” when password is required to save the answer setup settings. Select “Disabled” when it is not required.	Enabled
				Transmission Mode	Select “Enabled” when password is required to save the communication setup settings. Select “Disabled” when it is not required.	Enabled
				Audio Setup	Select “Enabled” when password is required to save the audio setup settings. Select “Disabled” when it is not required.	Enabled
				Video Setup	Select “Enabled” when password is required to save the video setup settings. Select “Disabled” when it is not required.	Enabled
				General Setup	Select “Enabled” when password is required to save the general setup settings. Select “Disabled” when it is not required.	Enabled

(Continued)

Menu	Page	Item 1	Page	Item 2	Description	Default
Administrator Setup	1/1	Password	3/3	LAN Setup	Select “Enabled” when password is required to save the LAN setup settings. Select “Disabled” when it is not required.	Enabled
				ISDN Setup	Select “Enabled” when password is required to save the ISDN setup settings. Select “Disabled” when it is not required.	Enabled
				VCP Setup *4	Select “Enabled” when password is required to save the VCP setup settings. Select “Disabled” when it is not required.	Enabled
		Phone Book	1/2	Save Phone Book	Save phone book data in Memory Stick. Memory Stick must be inserted in the communication terminal. When another data is already saved in the Memory Stick, it is overwritten.	
				Load Phone Book	Load phone book data saved in Memory Stick to the communication terminal. Memory Stick must be inserted in the communication terminal. When phone book data is already registered in the communication terminal, it is overwritten.	
				Clear Phone Book	Delete phone book data registered in the communication terminal.	
			2/2	Auto Dialing	Select whether to automatically dial to a person in the list specified by private phone book created in Memory Stick when Memory Stick is inserted.	On
				Create Private Phone Book	Create a new private phone book in Memory Stick. Memory Stick must be inserted in the communication terminal.	
				Delete Private Phone Book	Delete private phone book saved in Memory Stick. Memory Stick must be inserted in the communication terminal.	
				Copy to Private Phone Book	Copy phone book list saved in the communication terminal to Memory Stick as private phone book. Memory Stick must be inserted in the communication terminal.	
		Other Settings	1/1	Web Monitor	Select “On” when allowing conference monitoring function (auto-update of JPEG images) from the Web browser. Select “Off” when inhibiting it.	On
LAN Setup	1/1	General	1/2	DHCP Mode	Select “Auto” when using DHCP (Dynamic Host Configuration Protocol). Select “Off” when not using it. When “Auto” is set, IP address, net mask, gateway address, and DNS address are automatically acquired.	Off
				Host Name	Enter host name.	Blank
				IP Address	Enter IP address when DHCP mode is set to “Off”.	Blank
				Network Mask	Enter network mask when DHCP mode is set to “Off”.	Blank
				Gateway Address	Enter gateway address when DHCP mode is set to “Off”.	Blank
				DNS Address	Enter DNS (Domain Name System) server address when DHCP mode is set to “Off”.	Blank
			2/2	LAN Mode	Select interface type and communication mode for LAN connection.	Auto Negotiation
		Gatekeeper	1/1	Gatekeeper Mode	Select “On” when using a gatekeeper and set to “Off” when not using it. Select “Auto” when automatically searching a gatekeeper.	Off
				Gatekeeper Address	Set IP address of gatekeeper.	Blank
				User Alias	Set user name (H.323 alias) to be registered in a gatekeeper.	Blank
				User Number	Set user number (E.164 number) to be registered in a gatekeeper.	Blank

*4: Setting is added when VCP setup is added by the service command.

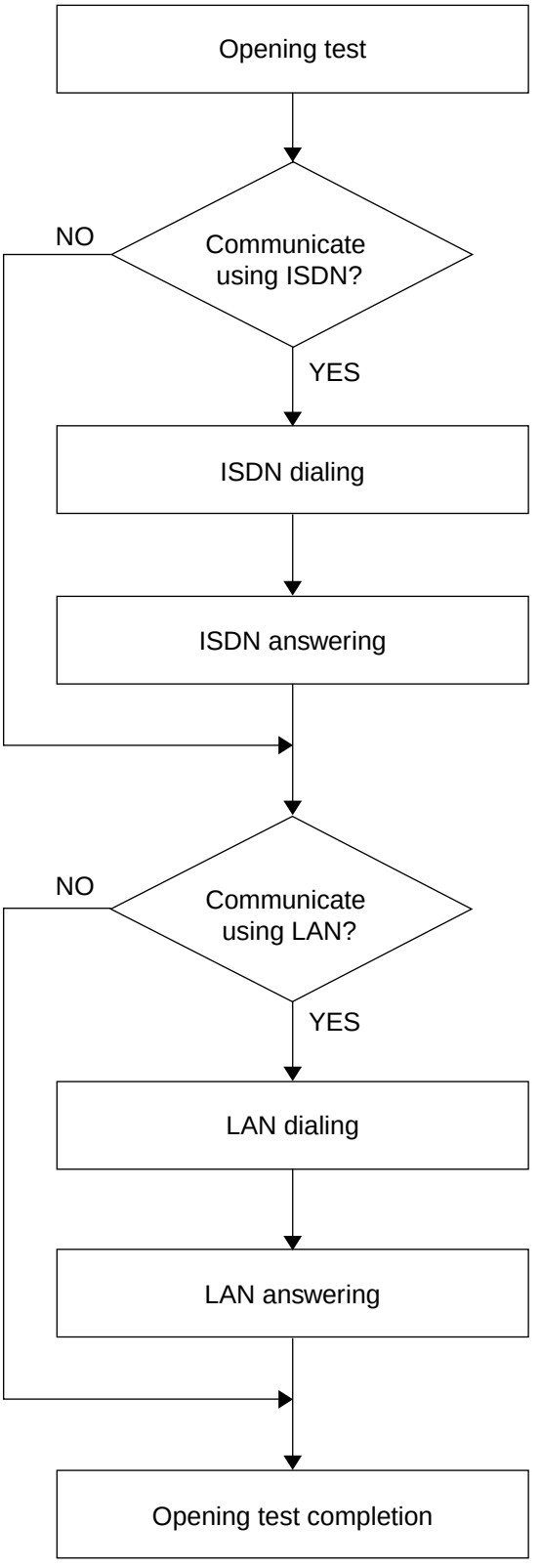
(Continued)

Menu	Page	Item 1	Page	Item 2	Description	Default
LAN Setup	1/1	SNMP	1/1	SNMP Mode	Select “On” when enabling service of SNMP (Simple Network Management Protocol) agent. Select “Off” when disabling it.	Off
				Trap Destination	Set IP address of SNMP manager that transmits a trap.	Blank
				Community	Set community name that SNMP manager manages. Usually, set to “public”.	public
				Description	This is the description of this device. Entered as “Videoconference Device”. This cannot be changed.	Videoconference Device
				Location	Set the place where this unit is installed.	Blank
				Contact	Set information on the administrator of this unit.	Blank
		PPPoE	1/2	PPPoE	Select PPPoE termination On/Off using this unit.	Off
				PPPoE User Name	Enter PPPoE connection user name (account) acquired from provider.	Blank
				PPPoE Password	Enter PPPoE connection password acquired from provider.	
			2/2	Fixed IP for PPPoE	Select “On” when fixed IP address for PPPoE connection is acquired from provider. Select “Off” when automatically acquiring it for each session.	Off
				Fixed IP Address for PPPoE	Enter fixed IP address acquired from provider when “Fixed IP for PPPoE” is “On”.	Blank
				PPPoE DNS	Select “Obtain automatically” when acquiring IP address of DNS server from the server during PPPoE connection. Select “Specify” when fixed IP address exists.	Blank
				Primary DNS	Enter IP address of primary DNS server when “PPPoE DNS” is “Specify”.	Blank
				Secondary DNS	Enter IP address of secondary DNS server when “PPPoE DNS” is “Specify”.	Blank
		NAT/Port	1/1	NAT Mode	Select “On” when connecting this unit to local network using NAT (Network Address Translation). Select “Off” when not connecting it.	Off
				NAT Address	Set IP address on the global side that NAT uses.	Blank
				Port Number Used	Select whether to fix TCP port number and UDP port number. Custom: The port number that the user sets is used. Default: Default port number is used. TCP port number 2253 and UDP port number 49152 are set.	Default value
				TCP Port Number	Set TCP port number when “Port Number Used” is “Custom”.	2253
				UDP Port Number	Set UDP port number when “Port Number Used” is “Custom”.	49152
		QoS	1/1	Hybrid	Select “On” when automatically switching forward error correction function, packet resend request function, and adaptive rate control function according to network status. Select “Off” when not switching them.	On
				Forward Error Correction	Select “On” when correcting data by receiver if error is detected in packets received when “Hybrid” is set to “Off”. Select “Off” when not correcting data.	On
				Packet Resend Request	Select “On” when making a resend request due to packet loss when “Hybrid” is set to “Off”. Select “Off” when not making it.	On
				Adaptive Rate Control	Select “On” when adapting LAN band when “Hybrid”, “Forward Error Correction”, and “Packet Resend Request” are set to “Off”. Select “Off” when not adapting it.	On

(Continued)

Menu	Page	Item 1	Page	Item 2	Description	Default
LAN Setup	1/1	TOS	1/1	TOS	Select definition method of TOS (Type of Service) field.	Off
				IP Proecedence	Enter IP Precedence values (0 to 7) when TOS is set to “IP Precedence”.	0
				Low Delay	Select “On” when specifying bit rate of Low Delay in TOS field when TOS is set to “IP Precedence”. Select “Off” when not specifying it.	Off
				High Throughput	Select “On” when specifying bit rate of High Throughput in TOS field when TOS is set to “IP Precedence”. Select “Off” when not specifying it.	Off
				High Reliability	Select “On” when specifying bit rate of Reliability in TOS field when TOS is set to “IP Precedence”. Select “Off” when not specifying it.	Off
				Minimum Cost	Select “On” when specifying bit rate of Minimum Cost in TOS field when TOS is set to “IP Precedence”. Select “Off” when not specifying it.	Off
				Diffserve	Enter Diffserve value (0 to 64) when TOS is set to “Diffserve”.	0
		Encryption via LAN	1/1	Encryption via LAN	Set whether to encrypt data when connected via LAN.	Off
				Encryption Password	Enter password necessary to start an encrypted videoconference.	Blank
ISDN Setup	1/3	Country/Region			Select country/region in which this unit is used.	Not selected
		Protocol			Select ISDN line protocol to be used.	Euro ISDN
	2/3	Area Code			Enter area code of ISDN line used. **Note** Do not enter the first “0” of area code.	Blank
		Local Number			Enter telephone number (local number) of ISDN line used.	Blank
	3/3	Sub Address			Enter ISDN sub-addresses when registering it.	Blank
Machine Information					Display versions of communication terminal and separately available dedicated equipment, as well as optional software used.	

1-6. Flowchart of Opening Test



<Refer to "1-6-1. Dialing Procedure of ISDN" on page 1-24.>

<Refer to "1-6-2. Answering Procedure of ISDN" on page 1-25.>

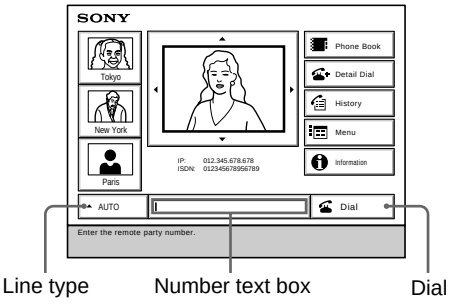
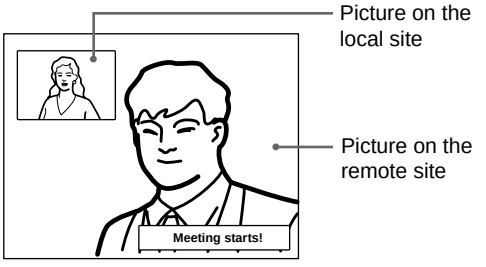
<Refer to "1-6-3. Dialing Procedure of LAN" on page 1-26.>

<Refer to "1-6-4. Answering Procedure of LAN" on page 1-27.>

1-6-1. Dialing Procedure of ISDN

Note

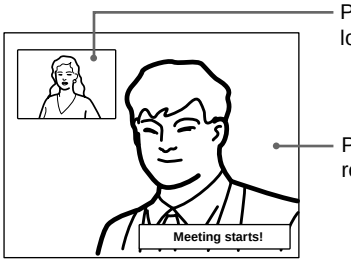
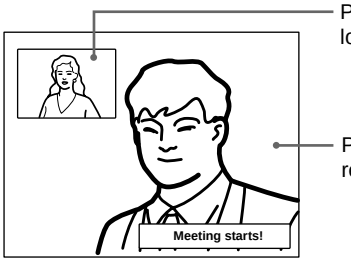
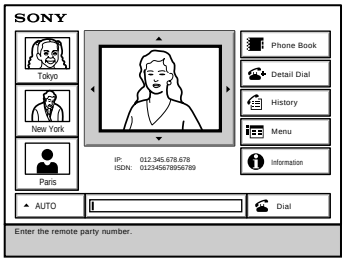
It is required that the line number used in the other end is entered in the area code and telephone number of the ISDN setup menu of the other end. The number of lines used when dialing is determined by the "Number of Lines" setting in "Communication Setup". The following describes direct-dialing procedure.

Item	Operation	Screen	Remarks (Confirmation item)
1.	Select "Line I/F" from the launcher menu using the ↑, ↓, ←, → buttons on the remote commander, and press the PUSH ENTER button. Select "ISDN" from the setting items using the ↑, ↓ buttons, and press the PUSH ENTER button.		An ISDN unit (not supplied) must be connected to the communication terminal.
2.	Select the number entry field using the ↑, ↓, ←, → buttons on the remote commander, and press the PUSH ENTER button.		
3.	Select "Dial" at the bottom of the menu using the ↑, ↓, ←, → buttons on the remote commander and press the Enter button, or press the CONNECT/ DISCONNECT button on the remote commander.		"Dialing (ISDN)" is displayed on the screen, and the ONLINE indicator (blue) blinks.
4.	The remote party answers.		The ONLINE indicator (blue) lights. "Meeting starts!" is displayed, and the remote party's voice and image are heard and displayed from/on the TV monitor.
5.	Disconnection Press the CONNECT/DISCONNECT button on the remote commander. A confirmation message on whether to disconnect a line is then displayed. Select "OK" using ← or → button on the remote commander, and press the PUSH ENTER button, or press the CONNECT/ DISCONNECT button again.		The line is disconnected and the videoconference is terminated. The current display returns to the launcher menu.

1-6-2. Answering Procedure of ISDN

Note

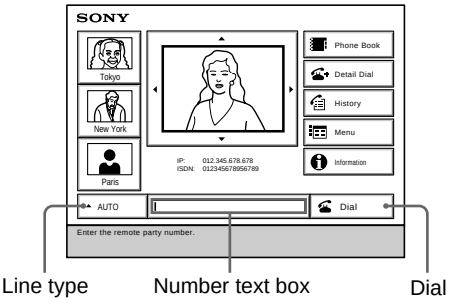
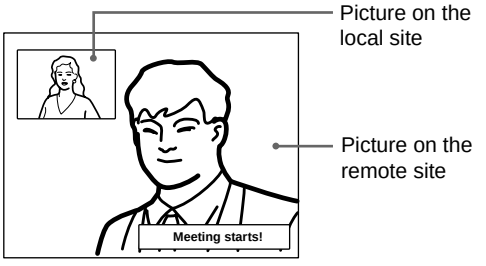
It is required that the line number used in this unit is entered in the area code and telephone number of the ISDN setup menu before receiving a call from the remote party. The number of lines used when answering is determined by the “Number of Lines” setting in “Communication Setup”.

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>		“Meeting starts!” is displayed when connected, and the remote party’s voice and image are heard and displayed from/on the TV monitor.
	<For Manual Answer>		A ringer tone occurs and the guide screen for incoming appears on the screen. Select “OK” using ← or → button on the remote commander, and press the PUSH ENTER button.
			“Meeting starts!” is displayed when connected, and the remote party’s voice and image are heard and displayed from/on the TV monitor.
3.	Remote disconnection		The line is disconnected and the videoconference is terminated. The current display returns to the launcher menu.

1-6-3. Dialing Procedure of LAN

Note

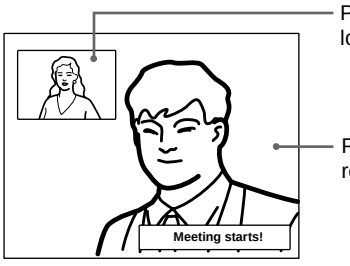
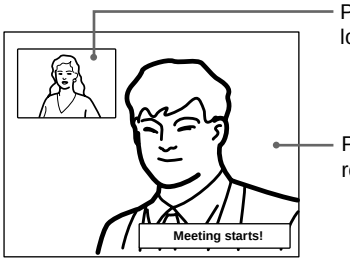
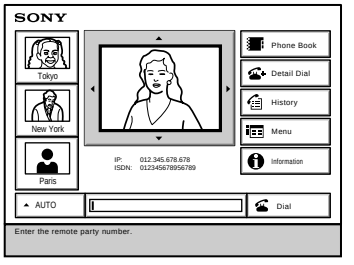
When dialing via LAN, it is required to change LAN setup in accordance with the environment used. Perform proper environment setting referring to “Section 3 Compatibility in LAN Network”. The LAN bandwidth on the dialing side is determined by the “LAN Bandwidth” setting in “Communication Setup”. The following describes direct-dialing procedure.

Item	Operation	Screen	Remarks (Confirmation item)
1.	Select “Line I/F” from the launcher menu using the ↑, ↓, ←, → buttons on the remote commander, and press the PUSH ENTER button. Select “IP” from the setting items using the ↑, ↓ buttons, and press the PUSH ENTER button.		Acquired IP must be displayed at the center of the screen.
2.	Select the number entry field using the ↑, ↓, ←, → buttons on the remote commander, and press the PUSH ENTER button. Then enter remote party’s IP.		
3.	Select “Dial” at the bottom of the menu using the ↑, ↓, ←, → buttons on the remote commander, and press the PUSH ENTER button, or press the CONNECT/ DISCONNECT button on the remote commander.		“Dialing (LAN)” is displayed on the screen, and the ONLINE indicator (blue) blinks.
4.	The remote party answers.		The ONLINE indicator (blue) lights. “Meeting starts!” is displayed, and the remote party’s voice and image are heard and displayed from/on the TV monitor.
5.	Disconnection Press the CONNECT/DISCONNECT button on the remote commander. A confirmation message on whether to disconnect a line is then displayed. Select “OK” using ← or → button on the remote commander, and press the PUSH ENTER button, or press the CONNECT/ DISCONNECT button again.		The line is disconnected and the videoconference is terminated. The current display returns to the launcher menu.

1-6-4. Answering Procedure of LAN

Note

When answering via LAN, it is required to change LAN setup in accordance with the environment used. Perform proper environment setting referring to “Section 3 Compatibility in LAN Network”. The LAN bandwidth on the answering side is determined by the “LAN Bandwidth” setting in “Communication Setup”.

Item	Operation	Screen	Remarks (Confirmation item)
1.	Calling from the remote party		A ringer tone occurs when IP has been acquired. “Incoming Call” is displayed on the screen.
2.	<For Auto Answer>		“Meeting starts!” is displayed when connected, and the remote party’s voice and image are heard and displayed from/on the TV monitor.
	<For Manual Answer>		A ringer tone occurs and the guide screen for incoming appears on the screen. Select “OK” using ← or → button on the remote commander, and press the PUSH ENTER button.
			“Meeting starts!” is displayed when connected, and the remote party’s voice and image are heard and displayed from/on the TV monitor.
3.	Remote disconnection		The line is disconnected and the videoconference is terminated. The current display returns to the launcher menu.

1-7. Conducting a Videoconference Using the Dual Video Function

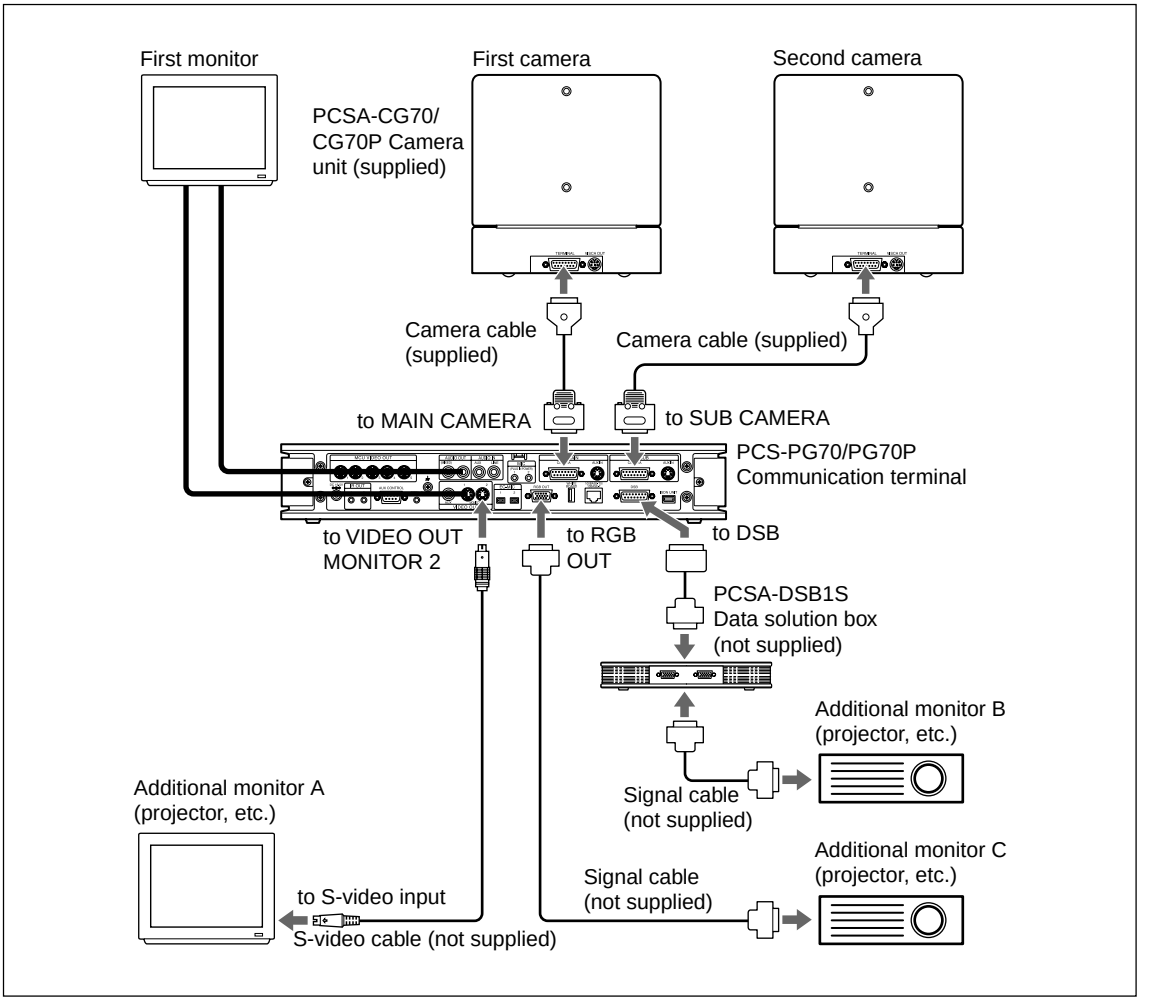
The dual video function allows the simultaneous sending and receiving of two images using two cameras.

1-7-1. System Configuration Using 2 Cameras and 3 Monitors

This section describes how to configure a system using 2 cameras and 3 monitors.

Notes

- For connecting power cables and communication units/cables, refer to “1-3. System Connections”.
- 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.



- To conduct a videoconference using the dual video function, the H.239 setting of the Communication Setup menu of both local and remote terminals must be “On”.
- Up to four monitors can be connected to the system. However, only three monitors, including the first monitor, can be used at one time.
- The dual video function can only be used in a two-point videoconference.

Note

PCS-DSB1 (not supplied) is also available for the data solution box.

Video Input Switching for Dual-Video Conference

Video input selection on the distribution side

Input 2 \ Input 1	Main camera	AUX1	Object (1)	Sub camera	AUX2	Object (2)
Main camera	—	—	—	—	—	—
AUX1	—	—	—	—	—	—
Object (1)	—	—	—	—	—	—
Sub camera	○	○	○	—	—	—
AUX2	○	○	○	—	—	—
Object (2)	○	○	○ (Note)	—	—	—

(Note) Same video picture is input into Object (1) and Object (2).

Input Control from Receiver Side

- The receiver can switch Input 1 of the distribution side only.
- Switching of only Main camera, AUX1, and Object (1) is available.
- Item “VTR” is not used when connecting to Sony video communication system, but is used when connecting to equipment of other companies.

1-7-2. Activating the Dual Video Function

The dual video function is activated when either starting or during a videoconference.

Notes

- In the system versions 1.00 to 1.20, the dual video function cannot be activated as a videoconference starts.
- If the operation is transferred to a multipoint videoconference while the dual video function is in use, it automatically stops.
- If images are sent through the data solution box PCSA-DSB1S or PCS-DSB1 while the dual video function is in use, it stops until the image transfer is complete, and then resumes.

To activate dual video when starting a videoconference

Set “Dual Video” in the Video Setup menu to “On”.
Sending and receiving of dual video begins automatically when a videoconference is started.

To activate dual video during a videoconference

While the videoconference is in progress, press the PUSH ENTER button on the remote commander to display the communication submenu, and then set “Dual Video” to “On”.

Note

If the dual video function cannot be used, “Dual Video” does not appear on the communication submenu.

To change the monitor display

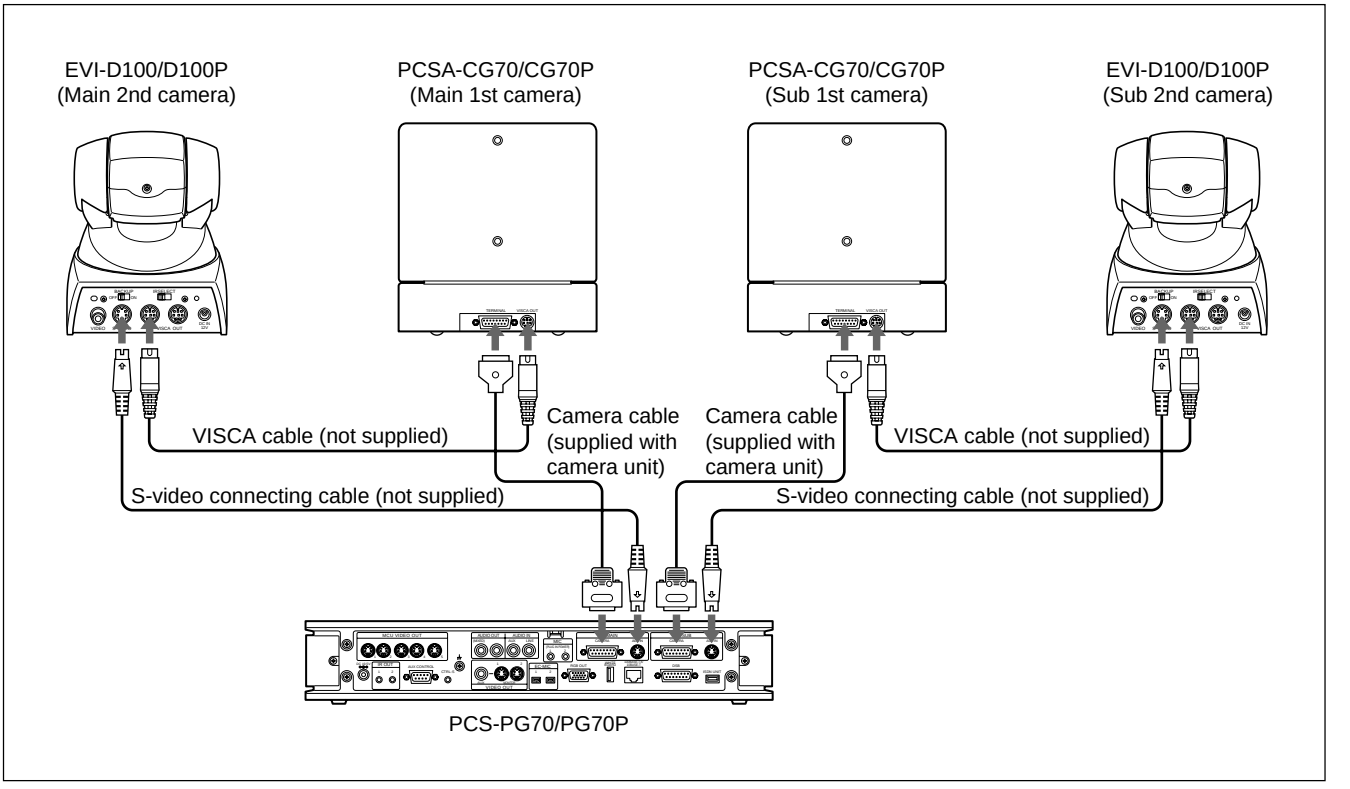
To switch the display of the first monitor, press the FAR/NEAR button on the remote commander. To change the display on another monitor, press the DISPLAY button on the remote commander. Each time you press the DISPLAY button, the display changes.

1-8. Connecting Four Camera Units

Up to four camera units can be connected to PCS-PG70/PG70P as illustrated below.

Notes

- The figure below shows connections of camera units only.
- 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.



Note

Besides EVI-D100/D100P (not supplied), BRC-300/300P (not supplied) can also be used.

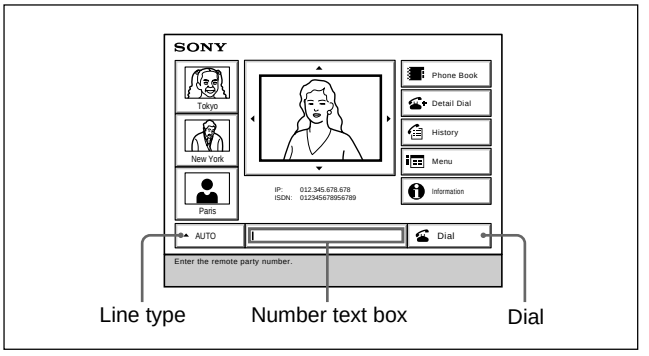
Section 2
Maintenance

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

A self-loop is the loopback in the codec of the communication terminal.

Operation procedure

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



2. Select “Line I/F” using the ↑, ↓, ←, → buttons on the remote commander, and press the PUSH ENTER button. Then, select “LAN” or “ISDN” using the ↑ and ↓ buttons, and press the PUSH ENTER button.
3. Select the number entry field using the ↑, ↓, ←, → buttons on the remote commander, and press the PUSH ENTER button. Then, enter ✻ (asterisk) twice from the remote commander.
4. Select “Dial” using the ↑, ↓, ←, → buttons on the remote commander and press the PUSH ENTER button, or press the CONNECT/DISCONNECT button on the remote commander.

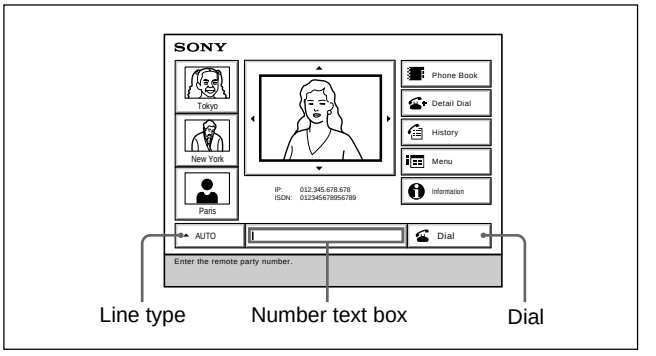
   A self-loopback is started and “Dialing” appears on the monitor screen. “Meeting starts!” appears when the loopback is completed. Confirm that video picture and voice are looped back at this time.

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 on the communication terminal is turned on.



2. Select “Line I/F” using the ↑, ↓, ←, → buttons on the remote commander, and press the PUSH ENTER button. Then, select “LAN” using the ↑ and ↓ buttons, and press the Enter button.
3. Select the number entry field using the ↑, ↓, ←, → buttons on the remote commander, and press the PUSH ENTER button. Then, enter “PING. remote IP address” from the remote commander.
   For example, enter PING.192.168.0.1 when performing a connection test to a terminal whose IP address is 192.168.0.1.
   Alphabets and numeric characters are switched using the “ALPHA/NUM” button on the remote commander.
4. Select “Dial” using the ↑, ↓, ←, → buttons on the remote commander and press the PUSH ENTER button, or press the CONNECT/DISCONNECT button on the remote commander.
5. The screen during LAN dialing is displayed. A message “I reply from 192.168.0.1” is displayed in yellow below the “Dialing (LAN)” dialog box when the communication using ping succeeds.
   The number at the beginning is counted up sequentially. When it reaches 4, a message window “Line cannot be connected completely. No reason: Redial” appears at the bottom of the screen.
   When the communication using ping cannot be performed, no yellow characters is displayed and the message window above appears.

2-3. Failure Analysis

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

1. The communication terminal does not start even if its power switch is turned on.

- Check that the power cable is connected properly.
- Check that the POWER indicator (green) on the front panel of the communication terminal 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 communication terminal lights.
- Check that the initial screen is displayed when the power switch of the communication terminal is turned on again.

  Check the power switch of the communication terminal and the power cable when the POWER indicator does not light.
- Check that the transmission block of a remote commander emits light in the local image on the monitor when you press buttons on the remote commander put toward the camera unit.

  Check the consumed battery or failure of the remote commander 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 the remote commander 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.
- Check that the camera unit is connected to the MAIN CAMERA connector on the communication terminal.

5. A line is not connected. (ISDN)

- Check that the communication terminal and ISDN unit are properly connected. (Pay attention to the vertical orientation of the 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 “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 communication terminal's LAN connector blinks.
- Check that the LAN indicator (🖧) 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 LAN 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 communication terminal is proper.
- Check that the volume of a monitor is proper.
- Check that the audio cable of the communication terminal 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 communication terminal 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 communication terminal 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 "FAR/NEAR" button on the remote commander.
- 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.

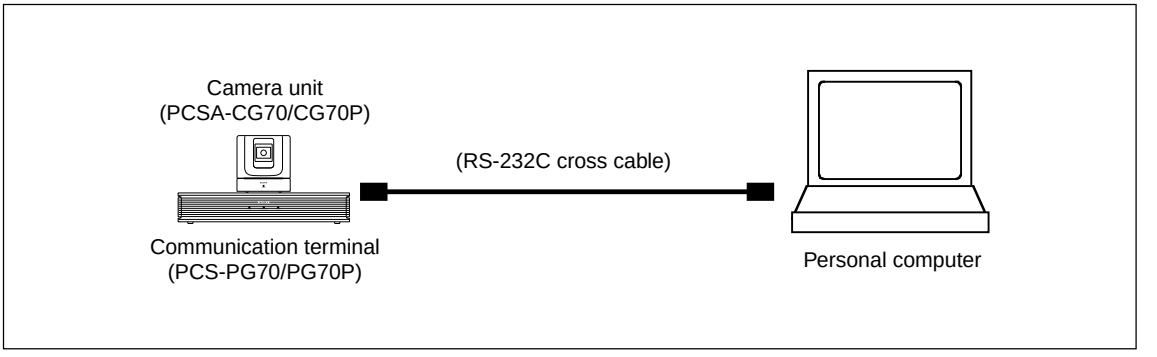
- Check that the video input on the local side is selected properly.
- Check that the display can be switched using the "FAR/NEAR" button on the remote commander on the remote side.
- Check that a local image is displayed in self-loopback (Section 2-1) on the remote side without any problem.
- Check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

2-4. How to Take Log

Communication terminal has a function that outputs the internal processing history, between the connection and disconnection of a line, to the commercial personal computer (referred to as PC hereafter) 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 for extracting log using commercial PC (1)

Connect an AUX CONTROL terminal on the front panel of the communication terminal and PC.
Turn on the power of the communication terminal and PC.



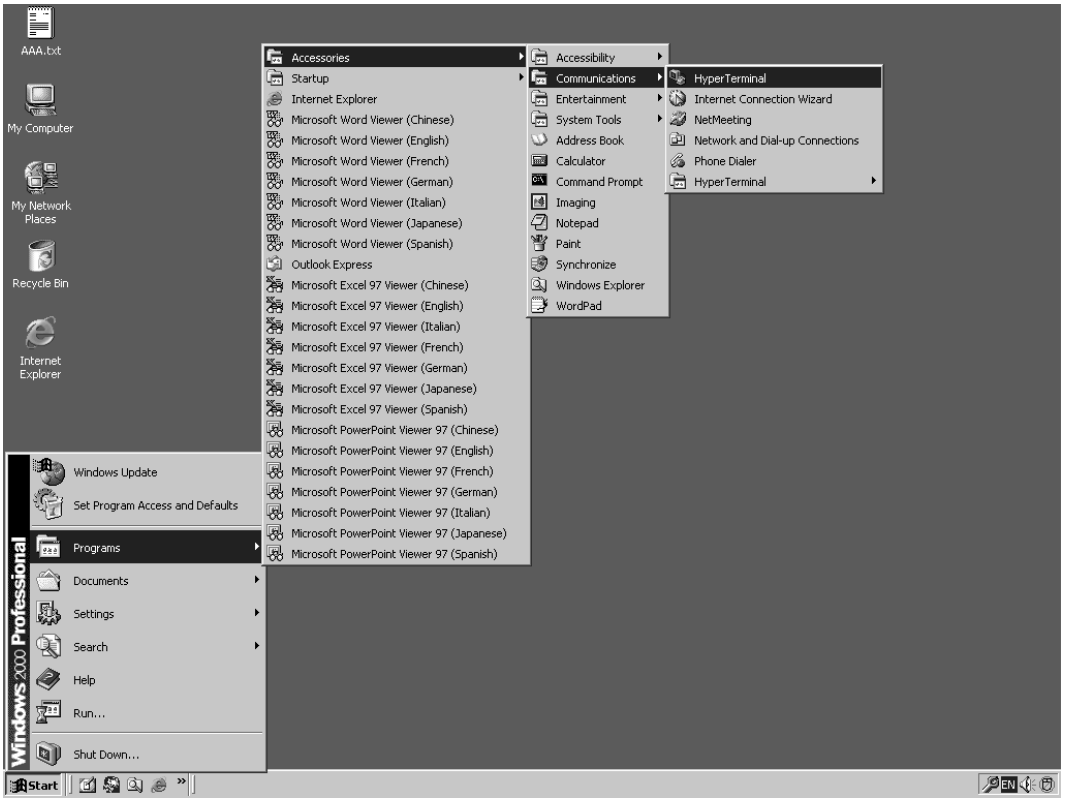
Activate accessory software “Hyper Terminal” of OS Windows 95/98/2000/XP on PC and set the properties of a communication port as follows.

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

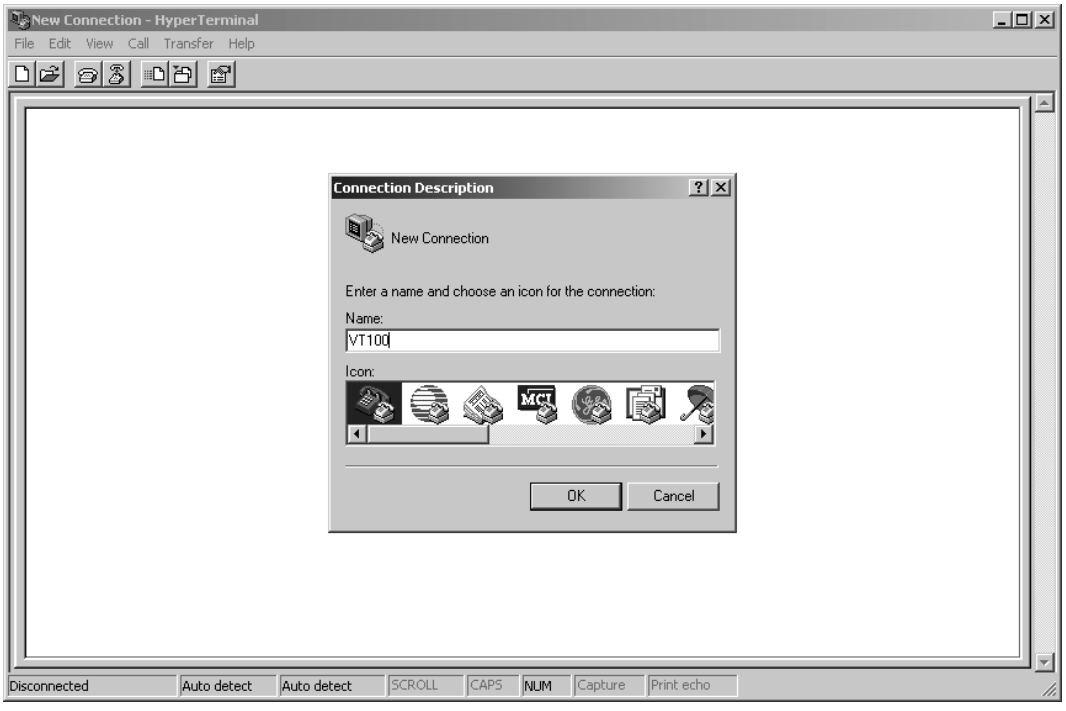
The procedure for “Hyper Terminal” activation, communication format setting, and log extraction is described on the next page and later.

- Windows is the registered trademark of Microsoft Corporation in the United States and other countries.
- 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 emulator.

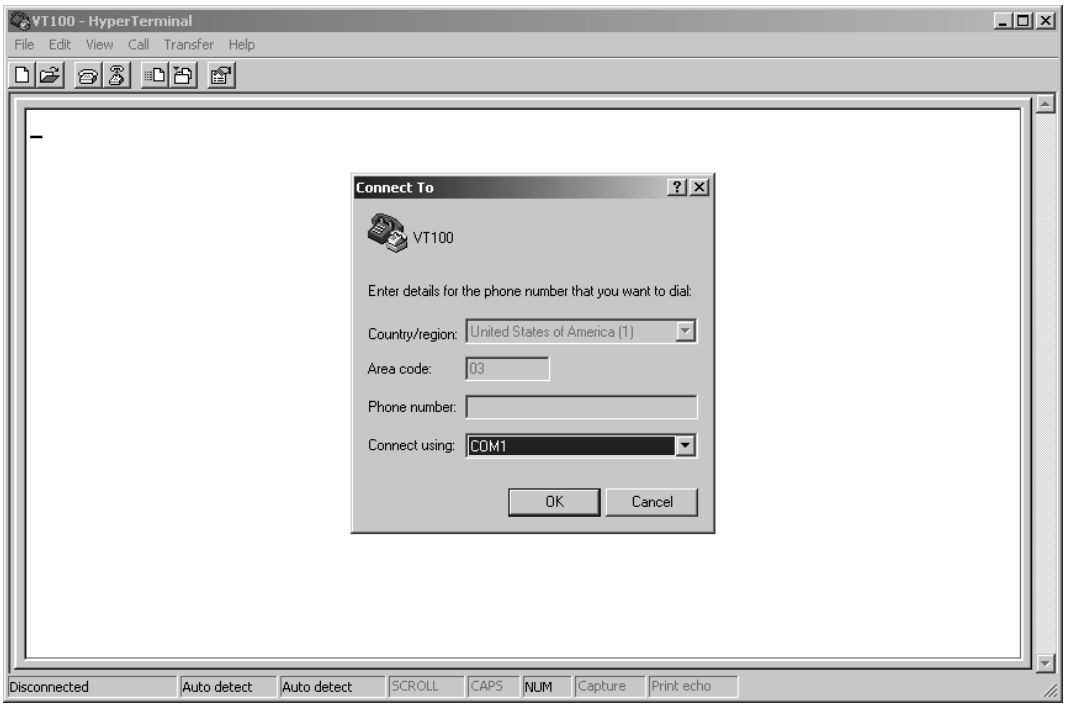
(1) Click “HyperTerminal” from “Start menu”.



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

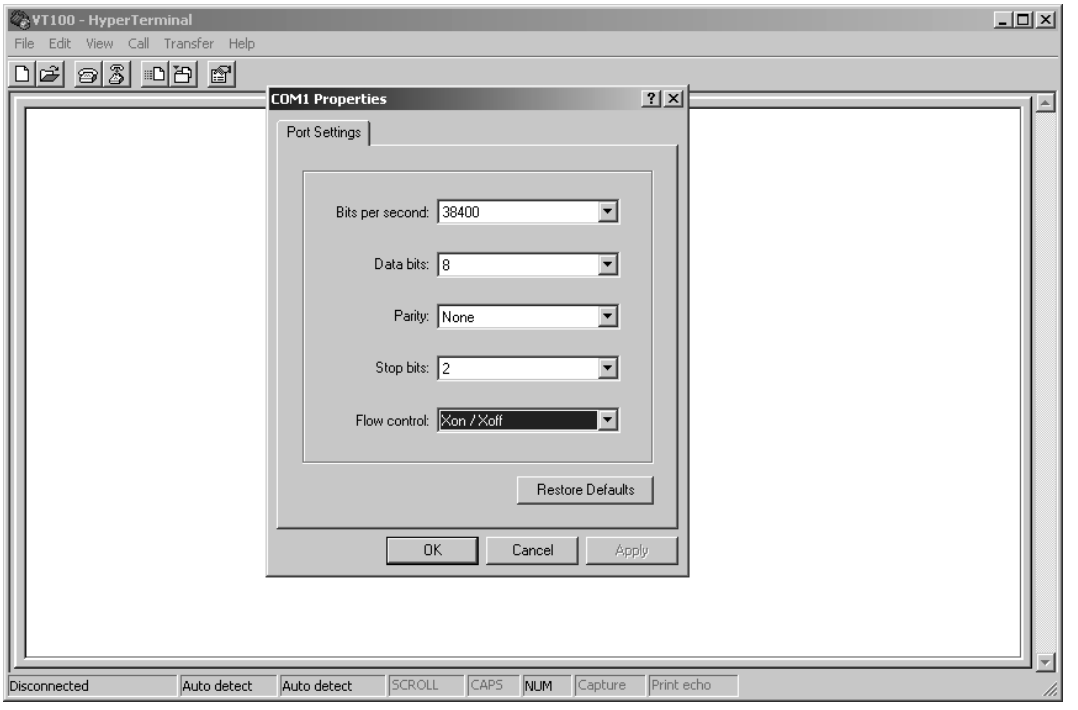


(3) Select “COM1” in a drop-down box “Connect using” and click the “OK” button.

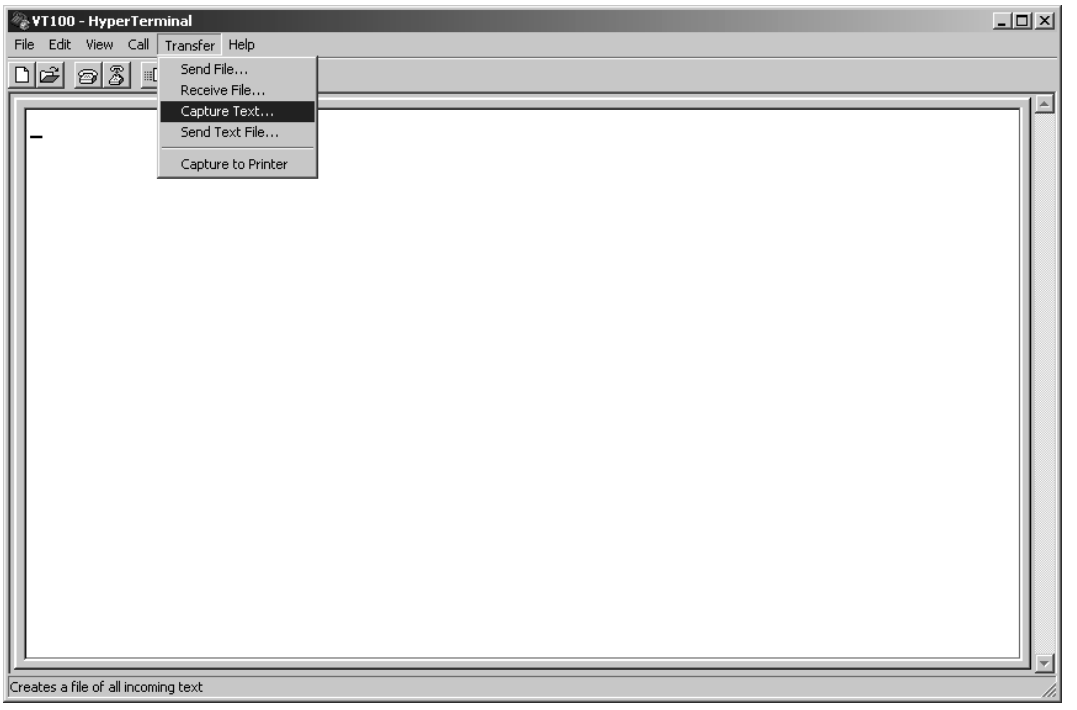


(4) Set the properties of the port as follows and click the “OK” button.

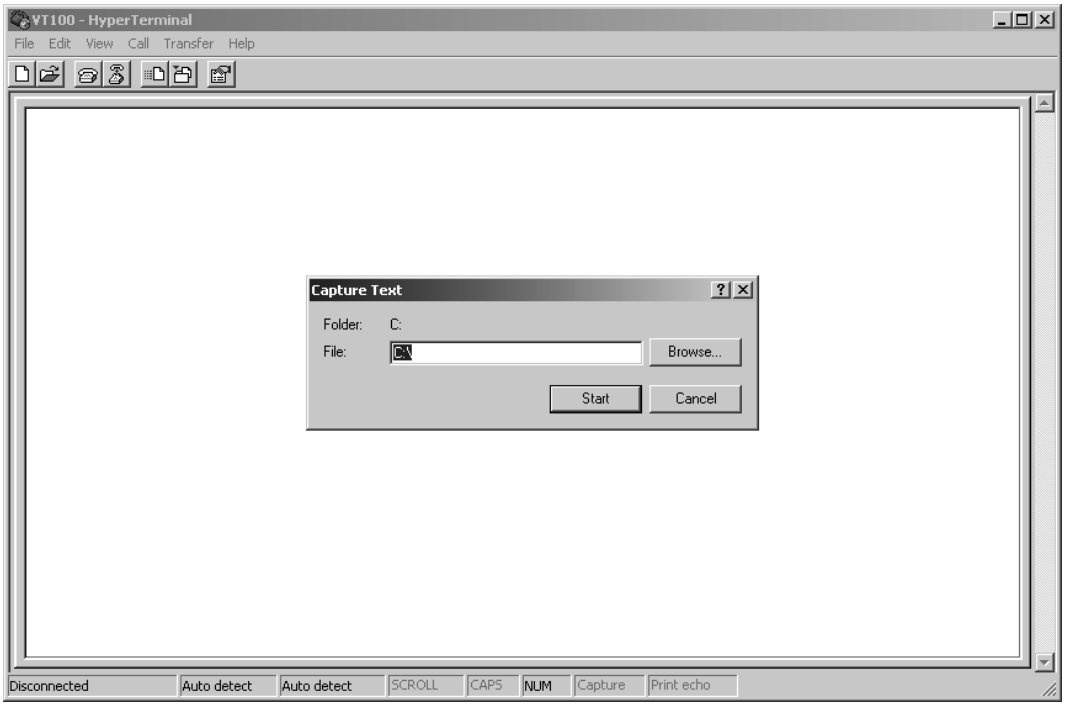
Bits per second: 38400
Data bits: 8
Parity: None
Stop bits: 2
Flow control: Xon/Xoff



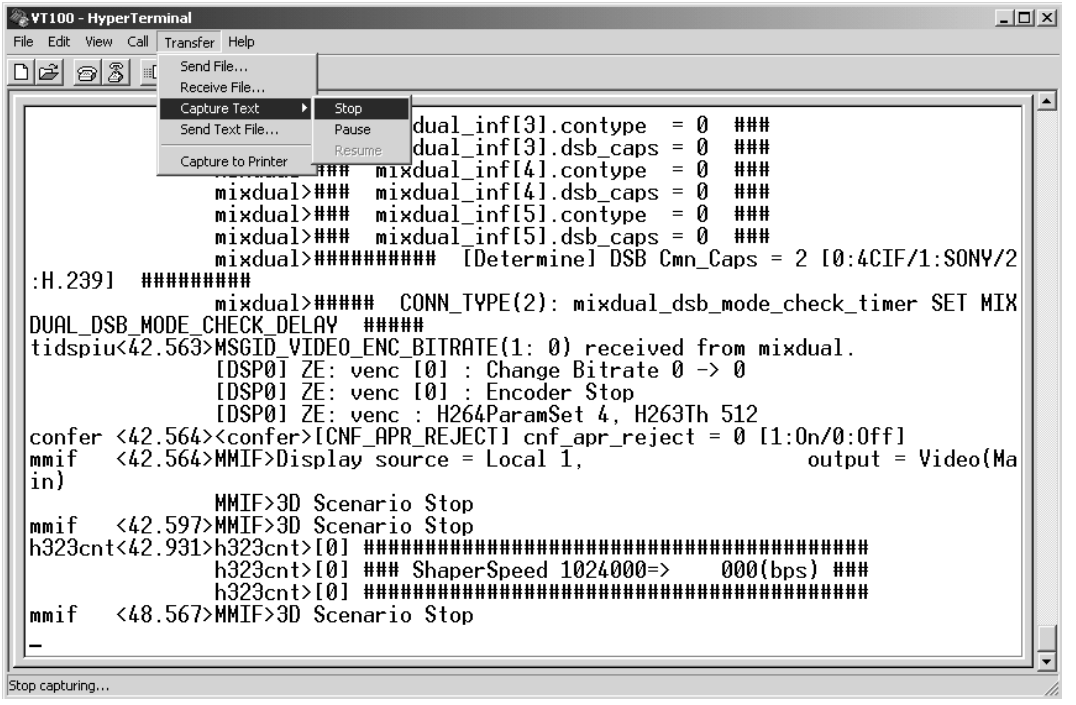
(5) Click “Capture Text” from the Transfer menu.



(6) Set the saving place and name of a log file and click “Start”.
Example of file name: PCSG70LOG.txt



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

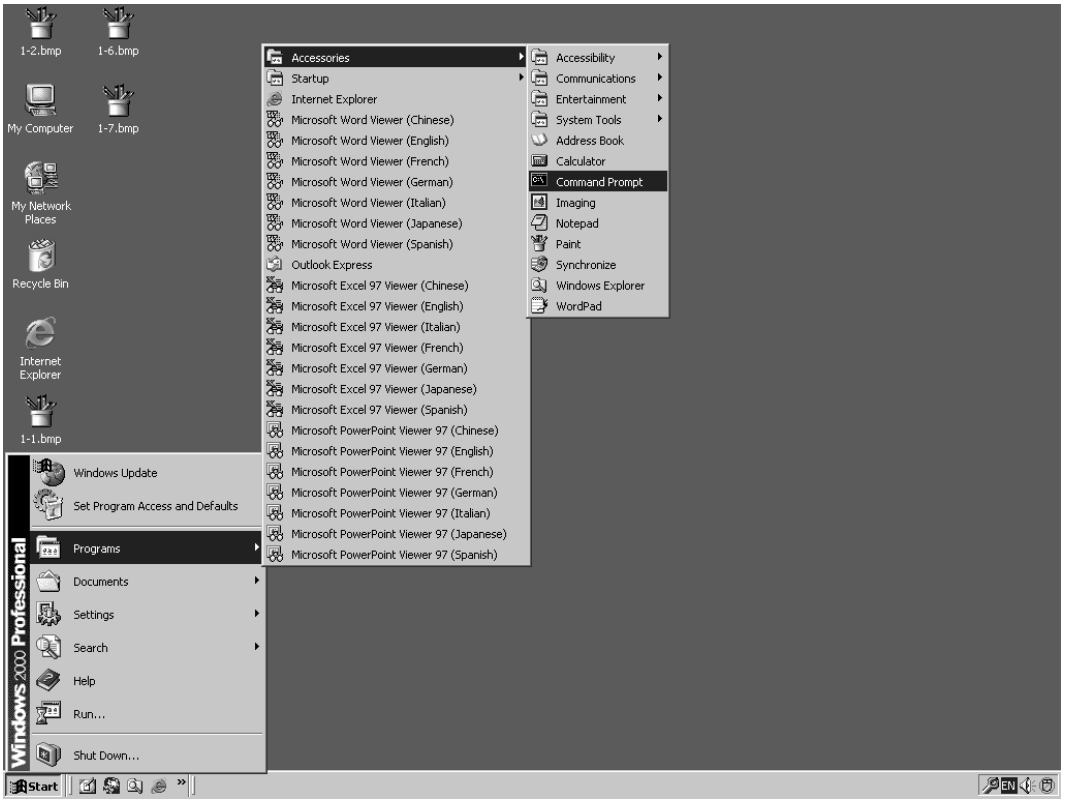


(8) Double-click the extracted log file to view a log.

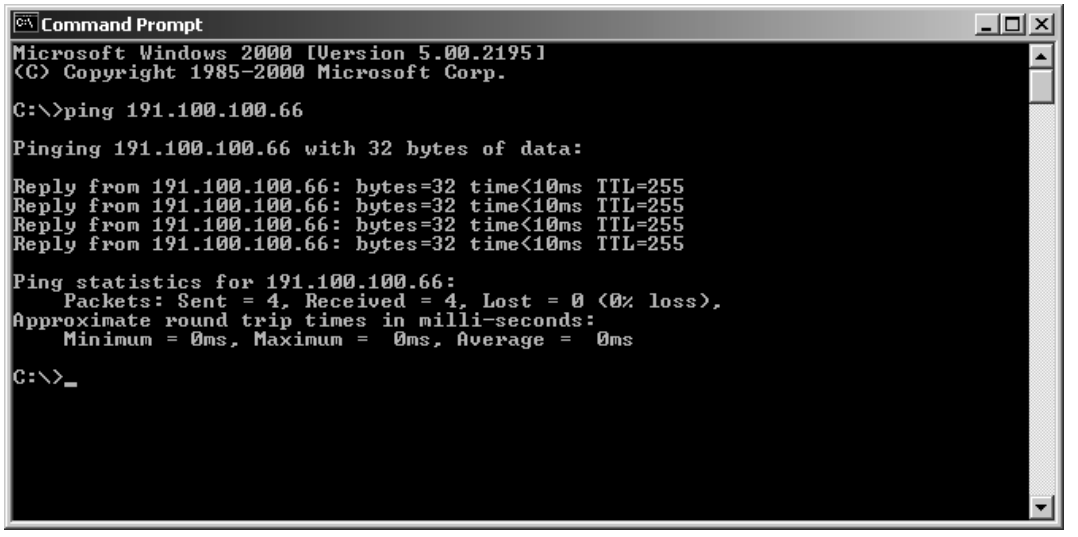
Operation for extracting log using commercial PC (2)

When the communication terminal is connected to LAN, a log can be extracted from the communication terminal using telnet with PC connected to LAN.
Even when the communication terminal is not connected to LAN, a log can be extracted from the communication terminal using telnet by connecting the 100BASE-TX/10BASE-T connector on the rear panel of the communication terminal and the LAN connector of PC directly using a LAN cross cable.
First, connect the communication terminal and PC to LAN, or connect them directly using a cross cable and set LAN (TCP/IP) properties of PC. After that, issue “ping” command PC to the communication terminal and confirm that a reply is returned from the communication terminal.

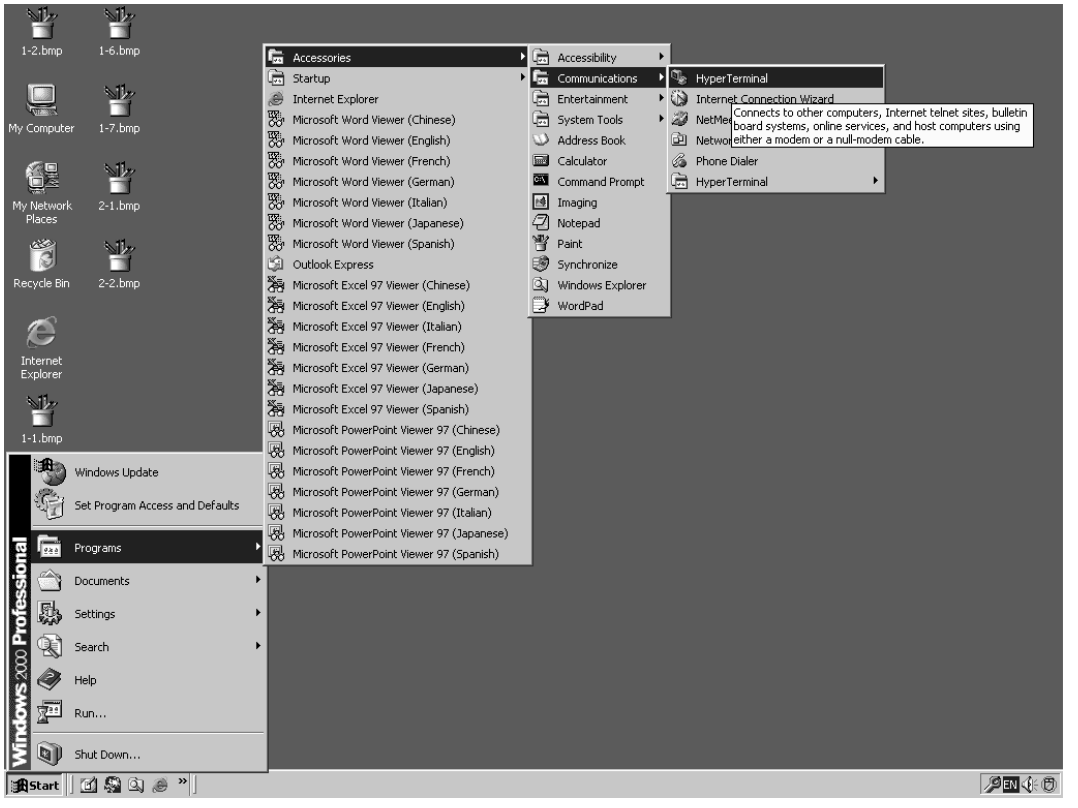
(1) Click “Command Prompt” from “Start menu”.



(2) Type “ping” and the IP address of the communication terminal after spacing out. Press the Enter key and confirm that a reply is returned. After confirmation, close the command prompt window.

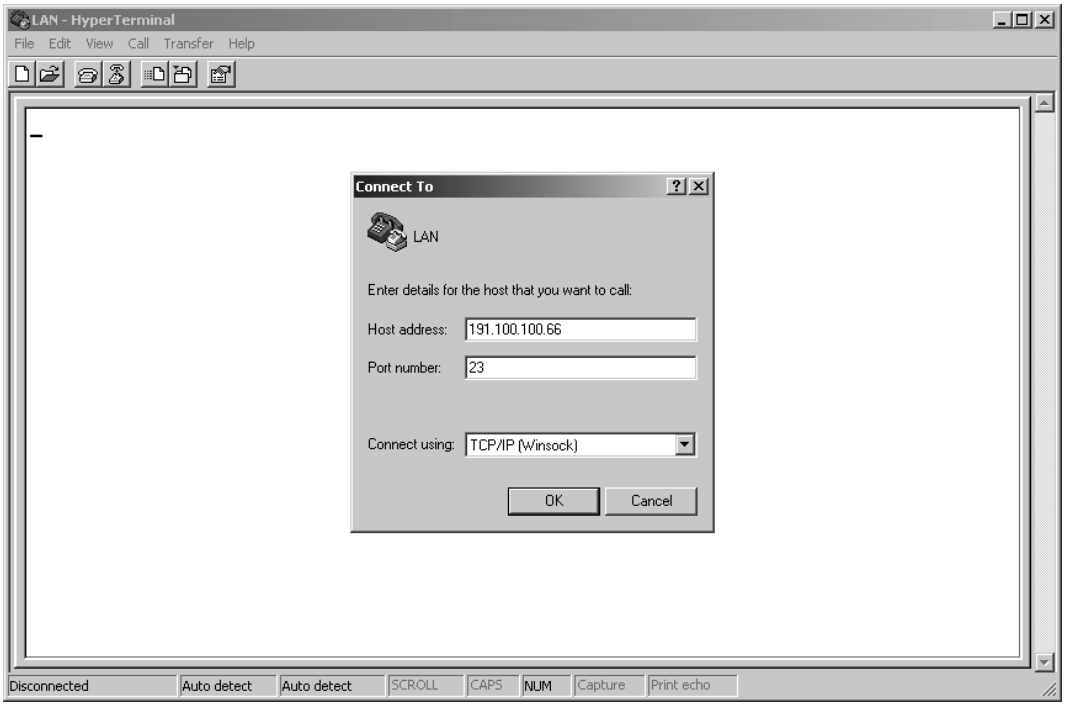


(3) Click “HyperTerminal” from “Start menu”.

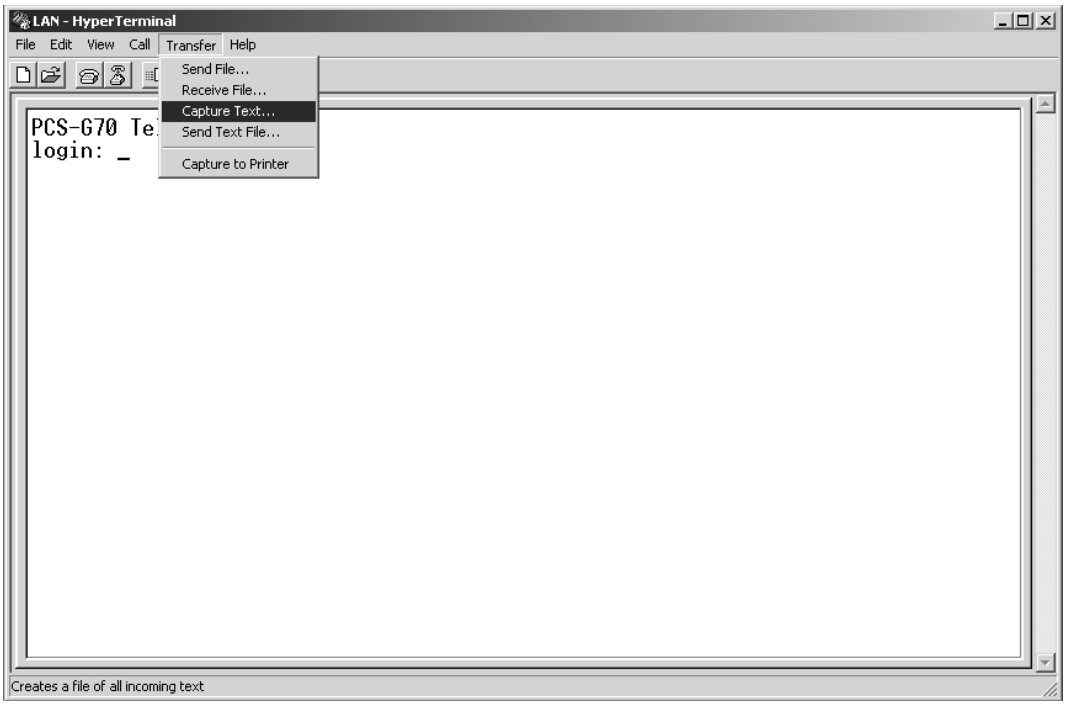


(4) Enter “LAN” in the text box “Name:”, select any icon, and click the “OK” button.

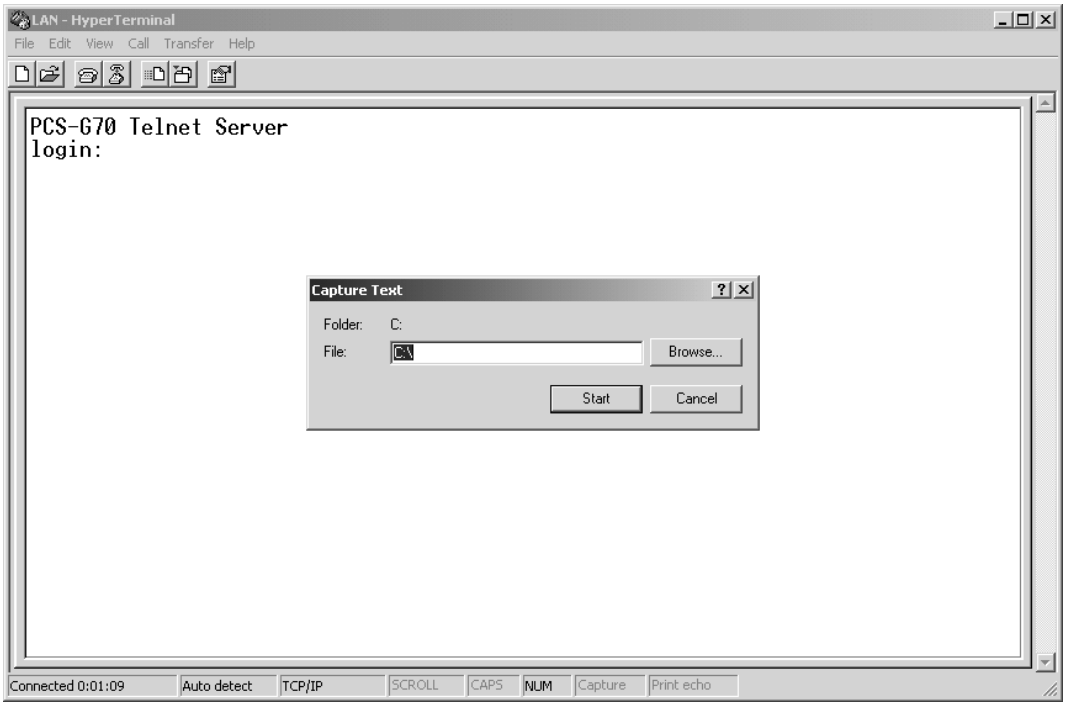
(5) Select “TCP/IP (Winsock)” in the drop-down box “Connect using”, enter the IP address of the communication terminal in the text box “Host address:”, and click the “OK” button.



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



(7) Set the saving place and name of a log file and click the “Start” button.
Example of file name: PCSG70LOG.txt



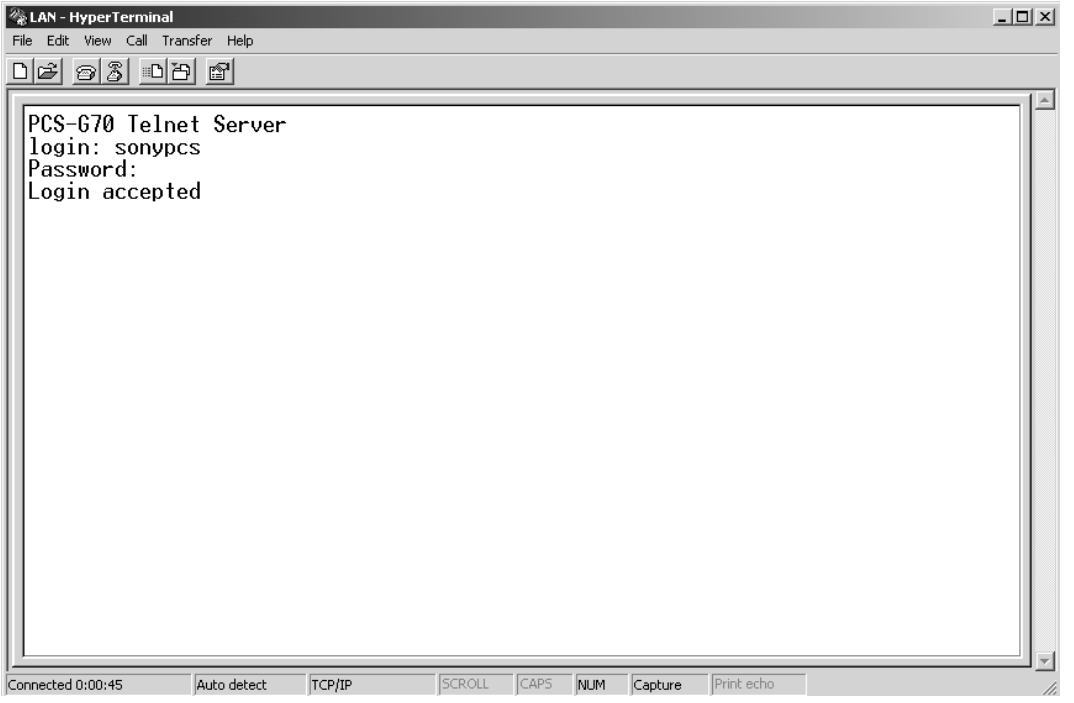
(8) The message below is already displayed on the hyper terminal screen.

PCS-G70 Telnet Server

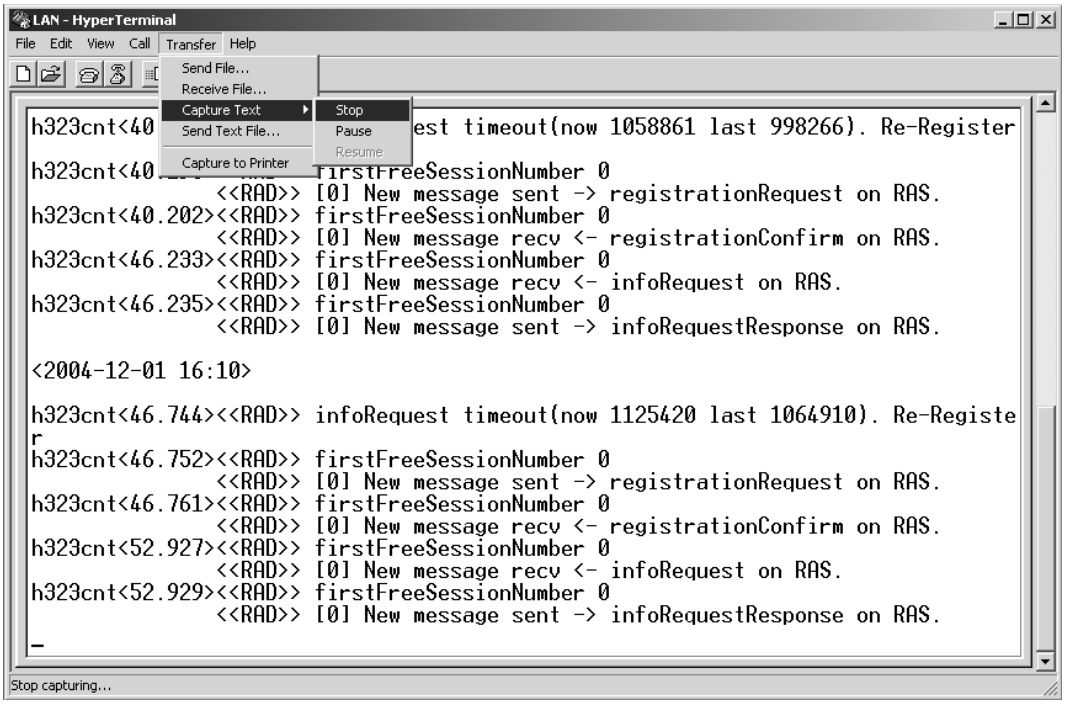
login:

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 the Transfer menu.



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

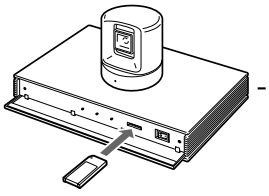
2-5. Updating of Software

The software of this system may be updated for improvement in a function.
Two methods are available for updating.

Note

Besides the communication terminal, software of the ISDN unit and data solution box (not supplied) is also included in the system software.

2-5-1. Updating Using Memory Stick



Turn off the power switch of the communication terminal.

Insert a Memory Stick storing system software into Memory Stick slot of the communication terminal.

Notes

- For details of storing system software in the Memory Stick, consult the Sony service staff.
- Use a 128-Mbyte Memory Stick.

Turn on the power switch.
- The POWER indicator (green) lights.
- The loader execution screen is displayed.

Note

Make sure that the power stays on during this time. Software maynot get updated.

Note

The update operation takes approx. 5 minutes.

The launcher menu is displayed on the TV monitor.

Push in the Memory Stick once and then take out it.

Select “Setup” and confirm “Host version” in an information menu.

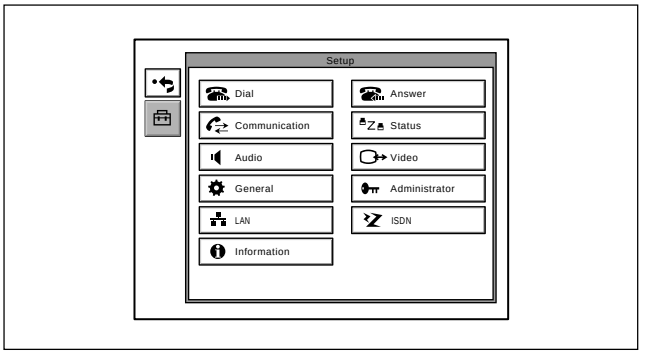
Return to the launcher menu and turn off the power switch on the rear panel of this unit.

Turn on the power switch again and reconfirm “Host version”.

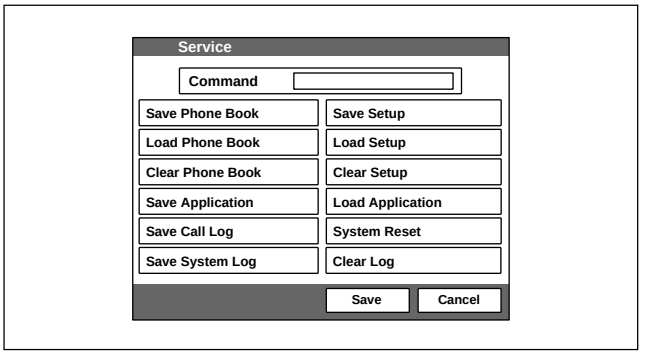
2-6. Service Mode

In the service menu of communication terminal, 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 on the remote commander and display the Setup menu including "Dial" and "Answer".



2. Select "Dial" using the ➡ button on the remote commander. Enter "7" and "2" sequentially using the numeric key on the remote commander without pressing the PUSH ENTER button and display the Service menu.

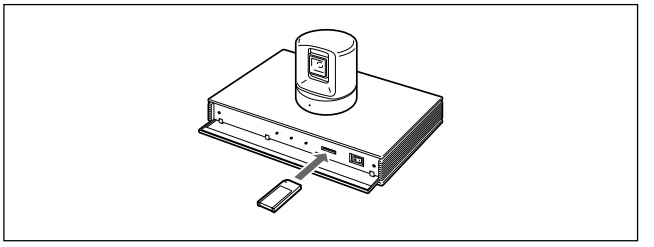


Note

To cancel the Service mode, select "Cancel" using ⬆, ⬇, ⬅ and ➡ buttons on the remote commander and press the PUSH ENTER button, or press the RETURN button on the remote commander. The current display returns to the Setup 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 the Service menu.
2. Insert the Memory Stick, in which data can be written or in which the required contents have been already recorded, into the Memory Stick slot.



3. Select the function, which you want to execute, using ⬆, ⬇, ⬅ and ➡ buttons on the remote commander and press the PUSH ENTER button.
4. A confirmation message on whether to execute the function is displayed. To execute, select "OK" and press the PUSH ENTER button. To cancel execution, select "Cancel" and press the PUSH ENTER button.
5. After execution or cancellation, the current display returns to the Service menu.
6. Push in the Memory Stick once and take out it.

For erasing a phone book, a log, and setup

1. Display the Service menu.
2. Select the function, which you want to execute, using ⬆, ⬇, ⬅ and ➡ buttons on the remote commander and press the PUSH ENTER button
3. A confirmation message on whether to execute the function is displayed. To execute, select "OK" and press the PUSH ENTER button. To cancel execution, select "Cancel" and press the PUSH ENTER button.
4. After execution or cancellation, the current display returns to the Service menu.

For system reset

1. Display the Service menu.
2. Select "System Reset" using ⬆, ⬇, ⬅ and ➡ buttons on the remote commander and press the PUSH ENTER button
3. A confirmation message on whether to execute is displayed. To execute, select "OK" and press the PUSH ENTER button. To cancel execution, select "Cancel" and press the PUSH ENTER button.
4. After execution, the launcher menu is displayed. After cancellation, the current display returns to the Service menu.

For loading of application

1. Display the Service menu.
2. Insert the Memory Stick, in which the application software of the version to be loaded is recorded, into the Memory Stick slot.
3. Select “Load Application” using ↑, ↓, ← and → buttons on the remote commander and press the PUSH ENTER button.
4. A confirmation message on whether to execute is displayed.
5. To execute, select “OK” and press the PUSH ENTER button. The screen display during loader execution then appears. After completion, the launcher menu is displayed. To cancel execution, select “Cancel” and press the PUSH ENTER button. The current display returns to the 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 the Service menu.
2. Select “Command” using ↑, ↓, ← and → buttons on the remote commander and press the PUSH ENTER button.
   A key guidance is then displayed.
3. Enter the commands in a command list from the remote commander.

   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. Otherwise, the LAN interface does not operate normally.
   - The validated command can be confirmed in a command column at all times.
   - Use only the commands in the command table. If any other command (a free character string) is entered, the internal operation mode may become an improper state.

4. Select “Save” using ↑, ↓, ← and → buttons on the remote commander and press the PUSH ENTER button.
   A Setup 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 system using the power switch of the communication terminal.

To stop setting

Select “Cancel” using ↑, ↓, ← and → buttons on the remote commander and press the PUSH ENTER button, or press the RETURN button on the remote commander.

Service menu function list

Command:

The commands listed in the table below are those for changing the internal operation mode of the communication terminal when the system is used in a special environment.

Command	Description
SMS	Validates an SMS function.
KV66	For KV-29FX66E monitors. Sets the input selection to 3 after power on when a KV-29FX66E monitor is being used. An IR output is changed so that the command during power-off sequence is sent properly. The monitor mode setting is invalidated when this command is specified, but the mode setting becomes valid by deleting this command.
WBxxxXyyy	Adjusts the angle of view of the whiteboard used.
D2B	Sets ISDN (2B) to the default value using the dial menu.
BMR0	AVAYA Bonding Mode Revision 0
PROJ	Sends the remote control code for the projector.
POFF	Does not display the packet loss indicator.
E1PRI	Changes forcibly to E1 (Default is T1 in NTSC models)
T1PRI	Changes forcibly to T1 (Default is E1 in PAL models)
PDx	Performs parallel dialing in units of xB (0-29) (default: in units of 5B). When 0 is entered, sets the default value 5B. When 30 or more is entered, sets the default value 29B. (Examples: PD1, PD29)

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, but do not change the file name.

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 communication terminal.
The contents cannot be returned to the former setting after they are rewritten.

Clear Phone Book:
All contents of a phone book of the communication terminal are erased.
The contents cannot be returned to the former setting after they are erased.

Save Application:
The software of the system is saved in a Memory Stick. However, an MCU option is not saved in the Memory Stick. MCU software or LAN software is required separately.

Save Call Log:
The communication log recorded in the communication terminal is recorded and saved in a Memory Stick. A maximum of 500 latest logs are recorded in the communication terminal. After execution, a file is created in the area below in the Memory Stick.
\MSSONY\PRO\TVCONF\LOG\PCS_LOG.CSV
This file can be edited using Microsoft Excel.

Save System Log:
A debug log is recorded and saved in a Memory Stick. A maximum of 1M bytes log is recorded and saved. After execution, a file is created in the area below in the Memory Stick.
\MSSONY\PRO\TVCONF\DEBUG\PCS_DEB.TXT
This file can be edited using Microsoft Notepad, WordPad, or Word.

Save Setup:
All settings in the Setup menu 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\SETUP\PCS_STUP.CSV
This file can be edited using Microsoft Excel.

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 communication terminal. After execution, the screen disappears once, and the launcher menu is displayed in the same way as after the power is turned on.
The setup information cannot be returned to the former setting after it is rewritten.

Clear Setup:
All setting in the Setup menu of the communication terminal are erased. After execution, the screen disappears once, and the Initial Setup Wizard is displayed in the same way as when the power is turned on first.

Load Application:
The software of the system recorded in a Memory Stick is loaded.

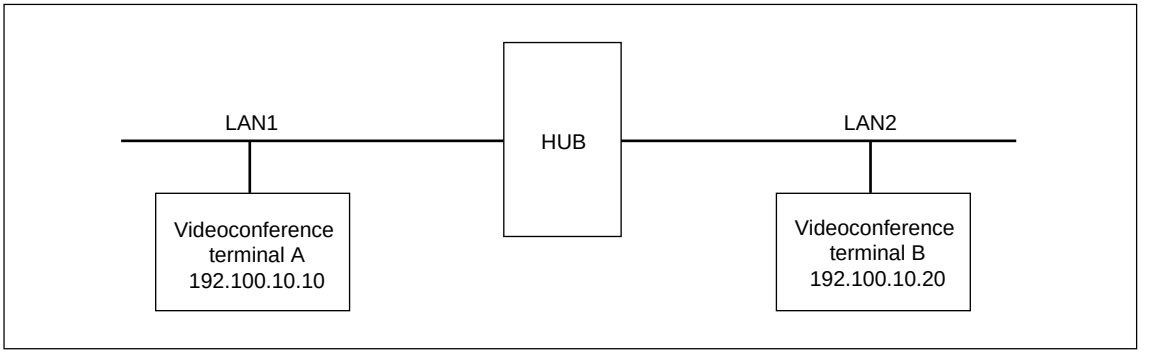
System Reset:
Software reset is applied to the communication terminal. After execution, the screen disappears once, and the launcher menu is displayed in the same way as after the power is turned on.

Clear Logs:
The communication log and the system log recorded in the communication terminal are erased. When the communication log is erased, the content of the Log menu is also erased. These information cannot be restored once they are erased.

Section 3
Compatibility in LAN Network

3-1. Connection via Hub

Example of system



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

1. The LAN Setup menu of videoconference 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
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
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
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.
NAT Mode:	Off
NAT Address:	Blank
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”.)
Hybrid: On
TOS: Off

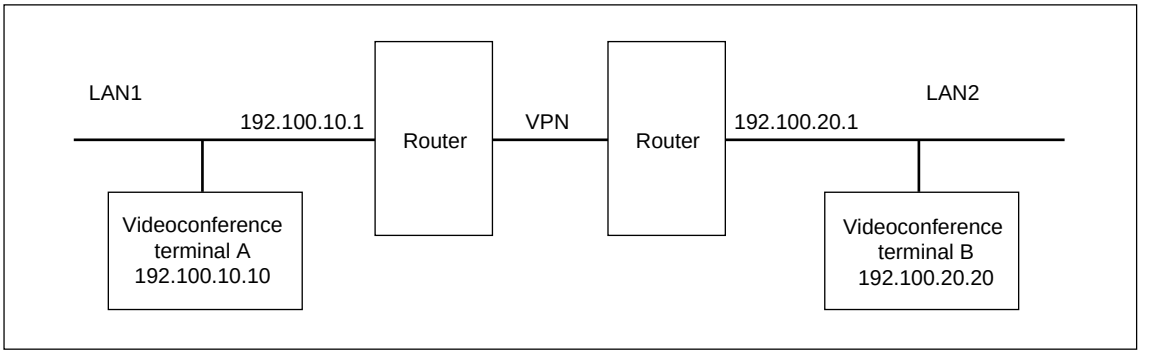
2. Confirm that the IP address displayed in the launcher menu of videoconference terminal B is 192.100.10.20.
3. The LAN Setup menu of videoconference terminal A is set as described below.

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
LAN Mode: Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
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
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.
NAT Mode: Off
NAT Address: Blank
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”.)
Hybrid: On
TOS: Off

4. Confirm that the IP address displayed in the launcher menu of videoconference terminal A is 192.100.10.10.
5. Enter LAN in the phone book of videoconference terminal A for a line I/F, IP address 192.100.10.20 of videoconference terminal B in it for an IP address, and other required items. After that, register videoconference 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 videoconference 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 videoconference terminal A to videoconference terminal B.

1. The LAN Setup menu of videoconference 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
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
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
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.
NAT Mode:	Off
NAT Address:	Blank
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”.)

Hybrid: On
TOS: Off

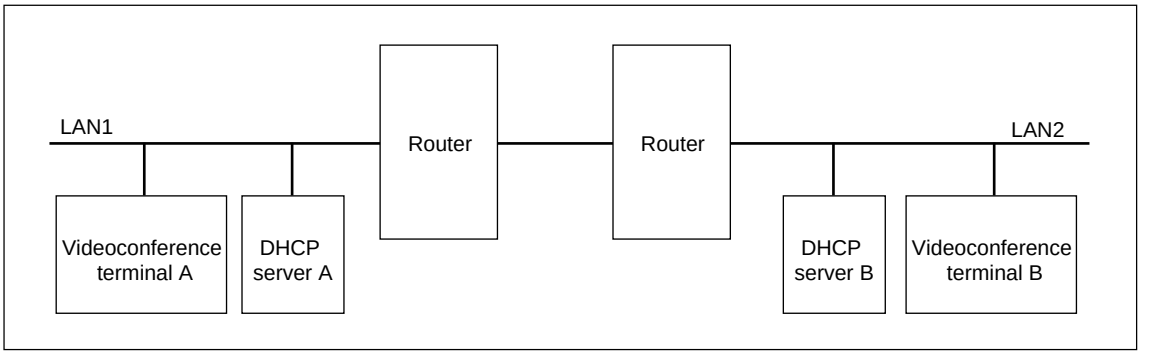
2. Confirm that the IP address displayed in the launcher menu of videoconference terminal B is 192.100.20.20.
3. The LAN Setup menu of videoconference terminal A is set as described below.

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
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
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
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.
NAT Mode:	Off
NAT Address:	Blank
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”.)
Hybrid:	On
TOS:	Off

4. Confirm that the IP address displayed in the launcher menu of videoconference terminal A is 192.100.10.10.
5. Enter LAN in the phone book of videoconference terminal A for a line I/F, IP address 192.100.20.20 of videoconference terminal B in it for an IP address, and other required items. After that, register videoconference 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 videoconference 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 videoconference terminal A to videoconference terminal B.

1. The LAN Setup menu of videoconference terminal B is set as described below.

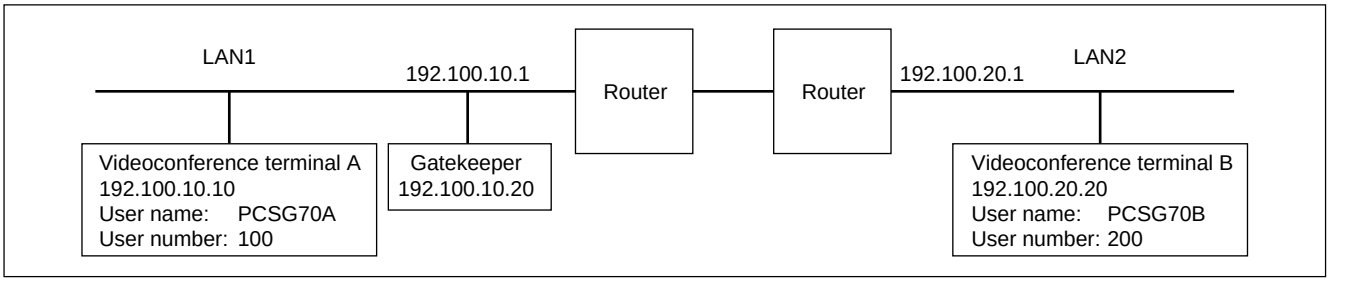
DHCP Mode:	On
Host Name:	Enter any name.
IP Address:	Blank (Cannot be set.)
Network Mask:	Blank (Cannot be set.)
Gateway Address:	Blank (Cannot be set.)
DNS Address:	Blank (Cannot be set.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
Gatekeeper 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
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.
NAT Mode:	Off
NAT Address:	Blank
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”.)

Hybrid: On
TOS: Off

2. Confirm that the IP address is displayed in the launcher menu of videoconference terminal B. (Example: IP:192.100.20.20)
3. The LAN Setup menu of videoconference terminal A 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.)
   LAN Mode: Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
   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
   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.
   NAT Mode: Off
   NAT Address: Blank
   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”.)
   Hybrid: On
   TOS: Off
4. Confirm that the IP address is displayed in the launcher menu of videoconference terminal A. (Example: IP:192.100.10.10)
5. Enter LAN in the phone book of videoconference terminal A for a line I/F, the IP address of videoconference terminal B in it for an IP address, and other required items. After that, register videoconference terminal B in the phone book and initiate a call. Or set LAN for a line I/F and the IP address of videoconference 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 videoconference terminal A to videoconference terminal B.

1. The LAN Setup menu of videoconference 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
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
Gatekeeper Mode:	On
Gatekeeper Address:	192.100.10.20
User Alias:	Enter any name. (Example: PCSG70B)
User Number:	Enter any number. (Example: 200)
SNMP Mode:	Off
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
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.
NAT Mode:	Off
NAT Address:	Blank
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”.)
Hybrid:	On
TOS:	Off

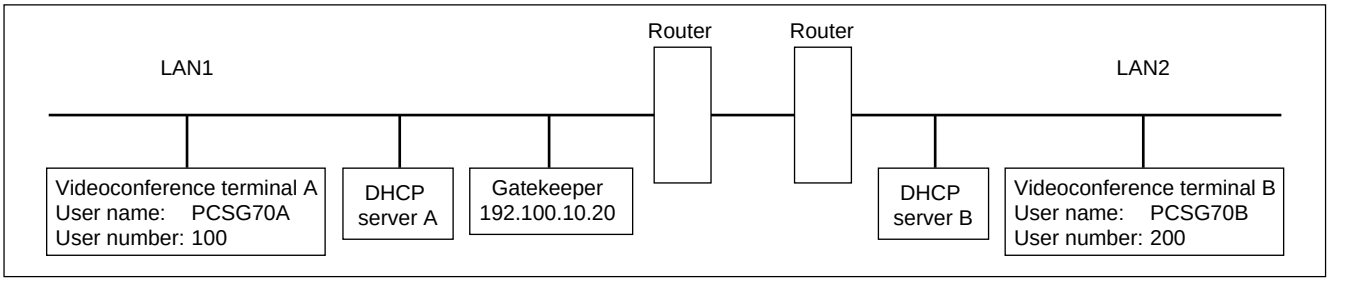
2. Confirm that the IP address displayed in the launcher menu of videoconference terminal B is 192.100.20.20.
3. Confirm that “Registration Confirm” is displayed at the bottom of page 2 in the LAN Setup menu of videoconference terminal B.
4. The LAN Setup menu of videoconference terminal A is set as 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
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
Gatekeeper Mode:	On
Gatekeeper Address:	192.100.10.20
User Alias:	Enter any name. (Example: PCSG70A)
User Number:	Enter any number. (Example: 100)
SNMP Mode:	Off
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
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.
NAT Mode:	Off
NAT Address:	Blank
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”.)
Hybrid:	On
TOS:	Off

5. Confirm that the IP address displayed in the launcher menu of videoconference 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 videoconference terminal A.
7. Enter LAN in the dial list of videoconference terminal A for a line I/F, user name PCSG70B or user number 200 of videoconference terminal B in it for an IP address, and other required items. After that, register videoconference terminal B and initiate a call. Or set LAN for a line I/F and user name PCSG70B or user number 200 of videoconference 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 videoconference terminal A to videoconference terminal B.

1. The LAN Setup menu of videoconference 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.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
Gatekeeper Mode:	On
Gatekeeper Address:	192.100.10.20
User Alias:	Enter any name. (Example: PCSG70B)
User Number:	Enter any number. (Example: 200)
SNMP Mode:	Off
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
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.
NAT Mode:	Off
NAT Address:	Blank
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”.)
Hybrid:	On
TOS:	Off

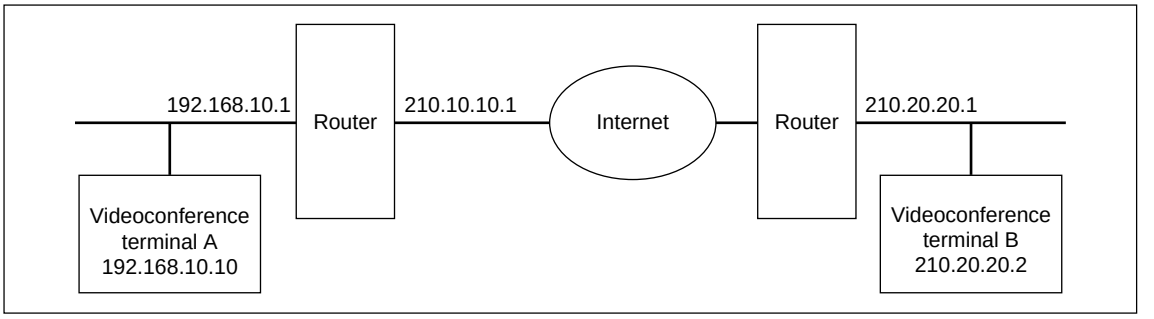
2. Confirm that the IP address is displayed in the launcher menu of videoconference terminal B. (Example: IP:192.100.20.20)
3. Confirm that “Registration Confirm” is displayed at the bottom of page 2 in the LAN Setup menu of videoconference terminal B.
4. The LAN Setup menu of videoconference terminal A 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.)
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
Gatekeeper Mode:	On
Gatekeeper Address:	192.100.10.20
User Alias:	Enter any name. (Example: PCSG70A)
User Number:	Enter any number. (Example: 100)
SNMP Mode:	Off
Trap Destination:	Blank
Community:	public
Description:	Videoconference Device
Location:	Blank
Contact:	Blank
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.
NAT Mode:	Off
NAT Address:	Blank
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”.)
Hybrid:	On
TOS:	Off

5. Confirm that the IP address is displayed in the launcher menu of videoconference 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 videoconference terminal A.
7. Enter LAN in the dial list of videoconference terminal A for a line I/F, user name PCSG70B or user number 200 of videoconference terminal B in it for an IP address, and other required items. After that, register videoconference terminal B and initiate a call. Or set LAN for a line I/F and user name PCSG70B or user number 200 of videoconference 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 videoconference terminal A (NAT environment) to videoconference terminal B (global IP). (It cannot be usually submitted from videoconference terminal B to videoconference terminal A.)

1. The LAN Setup menu of videoconference 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
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
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
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.
NAT Mode:	Off
NAT Address:	Blank
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”.)
Hybrid: On
TOS: Off

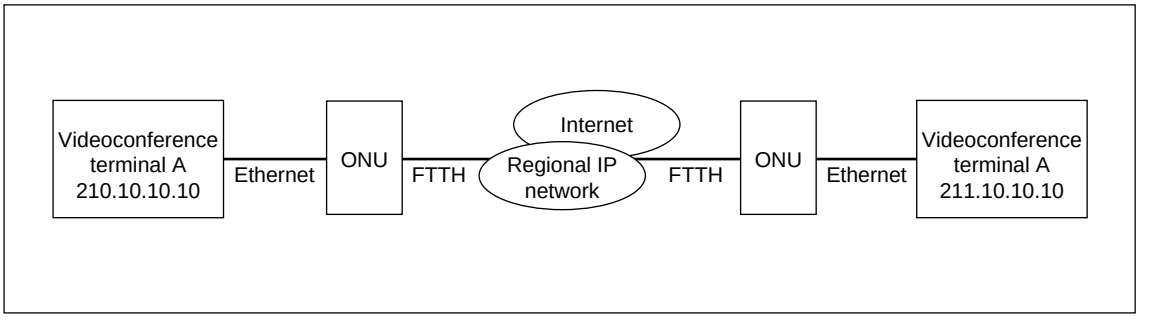
2. Confirm that the IP address displayed in the launcher menu of videoconference terminal B is 210.20.20.2.
3. The LAN Setup menu of videoconference terminal A is set as described below.

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
LAN Mode: Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
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
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.
NAT Mode: On
NAT Address: 210.10.10.1
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”.)
Hybrid: On
TOS: Off

4. Confirm that the IP address displayed in the launcher menu of videoconference terminal A is 192.168.10.10.
5. Enter LAN in the phone book of videoconference terminal A for a line I/F, IP address 210.20.20.2 of videoconference terminal B in it for an IP address, and other required items. After that, register videoconference 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 videoconference 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 videoconference terminal A to videoconference terminal B.

1. The LAN Setup menu of videoconference 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
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
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
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 “Specify” 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.
NAT Mode:	Off
NAT Address:	Blank
Port Number Used:	Default
TCP Port Number:	2253
UDP Port Number:	49152
Hybrid:	On
TOS:	Off

2. Confirm that the IP address displayed in the launcher menu of videoconference terminal B is 211.10.10.10.
3. The LAN Setup menu of videoconference 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
LAN Mode:	Auto Nagotiation (This mode is changed to a proper mode when mismatching occurs in the mode.)
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
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 “Specify” 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.
NAT Mode:	Off
NAT Address:	Blank
Port Number Used:	Default
TCP Port Number:	2253
UDP Port Number:	49152
Hybrid:	On
TOS:	Off

4. Confirm that the IP address displayed in the launcher menu of videoconference terminal A is 210.10.10.10.
5. Enter LAN in the phone book of videoconference terminal A for a line I/F, IP address 211.10.10.10 of videoconference terminal B in it for an IP address, and other required items. After that, register videoconference 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 videoconference terminal B for an IP address by Dial, and then initiate a call.

Section 4
Technical Data

4-1. Communication Terminal Port Number Used

4-1-1. Without H.323MCU Option (Default)

The communication terminal uses the port number below during point-to-point (P-P) connection when the port number used in the LAN Setup menu is set as “Default”.

Signal	Port number
RAS (Communication terminal)	Any number from 2253 to 2255 (when GK is used)
RAS (GK: Gatekeeper)	1718 or 1719 (when GK 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/Dual video RTP	49158
Data conference/Dual video RTCP	49159

4-1-2. Without H.323MCU Option (Custom: When TCP port number is set to 3000 and UDP port number is set to 3100)

The port number that the communication terminal 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, communication terminal uses port numbers below during P-P connection when a TCP port number is set to 3000 and when a UDP port number is set to 3100.

Signal	Port number
RAS (Communication terminal)	Any number from 3000 to 3002 (when GK is used)
RAS (GK: Gatekeeper)	1718 or 1719 (when GK 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/Dual video RTP	3106
Data conference/Dual video RTCP	3107

4-1-3. With H.323MCU Option (Default)

The communication terminal that operates as internal MCU uses the port number below when the port number used in the LAN Setup menu is set as “Default”. The port number that a sub-terminal uses is the same as during P-P connection.

Signal	Port number (at first point)	Port number (at Nth point)
RAS (Communication terminal)	Any number from 2253 to 2263 (When GK is used)	Any number from 2253 to 2263 (When GK is used)
RAS (GK: Gatekeeper)	1718 or 1719 (When GK is used)	1718 or 1719 (when GK 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/Dual video RTP	49158	49158 + 20 × (N – 1)
Data conference/Dual video RTCP	49159	49159 + 20 × (N – 1)

4-1-4. With H.323MCU Option (Custom: When TCP port number is set to 3000 and when UDP port number is set to 3100)

The port number that the communication terminal uses is determined by the value input to TCP and UDP port numbers when the port number used in the LAN Setup menu is set as “Custom”. For example, communication terminal that operates as internal MCU uses the port number below when a TCP port number is set to 3000 and when a UDP port number is set to 3100. The port number that a sub-terminal uses is the same as in P-P connection.

Signal	Port number (at first point)	Port number (at Nth point)
RAS (Communication terminal)	Any number from 3000 to 3010 (When GK is used)	Any number from 3000 to 3010 (When GK is used)
RAS (GK: Gatekeeper)	1718 or 1719 (when GK is used)	1718 or 1719 (when GK 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/Dual video RTP	3106	3106 + 20 × (N – 1)
Data conference/Dual video RTCP	3107	3107 + 20 × (N – 1)

4-2. Setting of Communication Terminal and HUB

The LAN Mode setting of the communication terminal PCS-PG70/PG70P is “Auto Negotiation” as default setting.
When LAN Mode setting of the PCS-PG70/PG70P has been set to “Auto Negotiation”, 10M/100M 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-PG70/PG70P and Catalyst 2950. When the HUB is set to 100FULL or 10FULL, change the setting of HUB or adjust the PCS-PG70/PG70P setting to HUB. Refer to Operating Instructions.

Table of connection between PCS-PG70/PG70P and Catalyst 2950

PCS-PG70/PG70P setting → ↓ 2950 setting	Auto Negotiation	100Mbps Full Duplex	100Mbps Half Duplex	10Mbps Full Duplex	10Mbps Half Duplex
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 of Communication Terminal

4-3-1. Audio Input/Output Characteristics of PCS-PG70/PG70P

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

4-3-2. Video Input/Output Characteristics of PCS-PG70/PG70P

Name	Connector	Specifications	Remarks
MAIN AUX IN (Input)	Mini DIN 7-pin	S video input signal Y signal: 0.7 V p-p/75 Ω C signal: 0.3 V p-p/75 Ω	PCS-G70: NTSC PCS-G70P: PAL
SUB AUX IN (Input)	Mini DIN 7-pin	S video input signal Y signal: 0.7 V p-p/75 Ω C signal: 0.3 V p-p/75 Ω	PCS-G70: NTSC PCS-G70P: PAL
VIDEO OUT AUX (Output)	Phono jack	Composite output signal 1 V p-p/75 Ω	PCS-G70: NTSC PCS-G70P: PAL
VIDEO OUT MONITOR 1 (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-G70: NTSC PCS-G70P: PAL
VIDEO OUT MONITOR 2 (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-G70: NTSC PCS-G70P: PAL
RGB OUT (Output)	D-Sub 15-pin	RGB video output (H/V/R/G/B: 0.7 V p-p/75 Ω)	
MCU VIDEO OUT (1 to 5)	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-G70: NTSC PCS-G70P: PAL

4-4. Audio Selection List of PCS-G70/G70P

Audio setup menu				Audio input			Audio output			
CTE	**Input select**	**MIC select**	**Echo canceller**	**Selection input**	**Echo canceller**	**MIC mute**	**AUDIO OUT, DSB AUX OUT, DSB LINE OUT**	**AUDIO OUT (MIXED)**	**Receiving volume adjustment**	**Remarks**
Off	MIC	MIC	On	MIC	Valid	Valid	Remote	Remote + MIC	Valid	Recomended when a specified microphene *1 is used.
			Off	MIC	Invalid	Valid	Remote	Remote + MIC	Valid	
		DSB MIC	On	DSB MIC	Valid	Valid	Remote	Remote + DSB MIC	Valid	Recomended when a specified microphene *1 is used.
			Off	DSB MIC	Invalid	Valid	Remote	Remote + DSB MIC	Valid	
		LINE	On	LINE	Valid	Valid	Remote	Remote + LINE	Valid	
			Off	LINE	Invalid	Valid	Remote	Remote + LINE	Valid	
	AUX	MIC	On	AUX	Invalid	Invalid	Remote	Remote + AUX	Valid	
			Off	AUX	Invalid	Invalid	Remote	Remote + AUX	Valid	Recommended when an external echo canceller is used.
		DSB MIC	On	AUX	Invalid	Invalid	Remote	Remote + AUX	Valid	
			Off	AUX	Invalid	Invalid	Remote	Remote + AUX	Valid	Recommended when an external echo canceller is used.
		LINE	On	AUX	Invalid	Invalid	Remote	Remote + AUX	Valid	
			Off	AUX	Invalid	Invalid	Remote	Remote + AUX	Valid	
	MIC + AUX	MIC	On	MIC + AUX	MIC valid	MIC valid	Remote	Remote + MIC + AUX	Valid	
			Off	MIC + AUX	Invalid	MIC valid	Remote	Remote + MIC + AUX	Valid	
		DSB MIC	On	DSB MIC + AUX	DSB MIC valid	DSB MIC valid	Remote	Remote + DSB MIC + AUX	Valid	
			Off	DSB MIC + AUX	Invalid	DSB MIC valid	Remote	Remote + DSB MIC + AUX	Valid	
		LINE	On	LINE + AUX	LINE valid	LINE valid	Remote	Remote + LINE + AUX	Valid	
			Off	LINE + AUX	Invalid	LINE valid	Remote	Remote + LINE + AUX	Valid	
LINE	MIC	LINE	Off	LINE	Invalid	Valid	Remote	Remote + LINE	Valid	Recommended during use of CTE. (Connected to the main unit.)
DSB AUX IN	MIC	DSB AUX IN	Off	DSB AUX	Invalid	Valid	Remote	Remote + DSB AUX	Valid	Recommended during use of CTE. (Connected to DSB.)

*1: PCS-A1/A300, PCSA-A3, etc.

Audio input/output

- MIC: MMIC1/MIC2 input of Communication terminal
- DSB MIC: MIC1 to MIC5 input of Data solution box
- LINE: AUDIO LINE input of Communication terminal
- AUX: AUDIO AUX input of Communication terminal
- DSB AUX: AUX input of DSB
- Remote: Remote audio

4-5. Displayed Window during Multipoint Connection of PCS-PG70/PG70P

4-5-1. Displayed Picture at Each Point in Voice Activate Mode

In Voice Activate mode, a speaker's picture is displayed in other terminals, however the speaker's terminal is the same picture as the one before speaking.

Example at six points is shown below. (Note: Sub-terminals A to E are in connection order.)

Operation order	Operation	Main terminal	Sub-terminal A	Sub-terminal B	Sub-terminal C	Sub-terminal D	Sub-terminal E
1	Just after connection	Picture from Sub-terminal A	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal
2	Spoken by A	Picture from Sub-terminal A	Picture from Main terminal	Picture from Sub-terminal A	Picture from Sub-terminal A	Picture from Sub-terminal A	Picture from Sub-terminal A
3	Spoken by B	Picture from Sub-terminal B	Picture from Sub-terminal B	Picture from Sub-terminal A	Picture from Sub-terminal B	Picture from Sub-terminal B	Picture from Sub-terminal B
4	Spoken by C	Picture from Sub-terminal C	Picture from Sub-terminal C	Picture from Sub-terminal C	Picture from Sub-terminal B	Picture from Sub-terminal C	Picture from Sub-terminal C

4-5-2. Displayed Picture at Each Point in Broadcast Mode with Full Screen Mode

The picture from the terminal at which the “Self Broadcast” was selected is displayed in other terminals. In the terminal at which the “Self Broadcast” was selected displays a picture that is set by Sender Screen setting in the Communication Setup menu of the terminal. When this setting is “Full Screen”, the picture is displayed from the main terminal. For “Automatic” or “Six-screen Mosaic”, refer to Section 4-5-3.

The following describes the operation with Full Screen mode.

- In the main terminal, when “A Broadcast” to “E Broadcast” or “Self Broadcast” is selected:
  A selected terminal displays the picture from the main terminal.
  Other terminals display the picture from the selected terminal.
- In the main terminal or broadcasting terminal, when “Stop Broadcast” is selected:
  When Broadcast Mode setting is “Split”, each terminal displays the split window.
  When Broadcast Mode setting is “Voice Activate”, the main terminal remains the picture from the broadcasting terminal and each sub-terminal displays the picture from the main terminal.

Example at six points is shown below with the main terminal selecting Voice Activate mode.
(Note: Sub-terminals A to E are in connection order.)

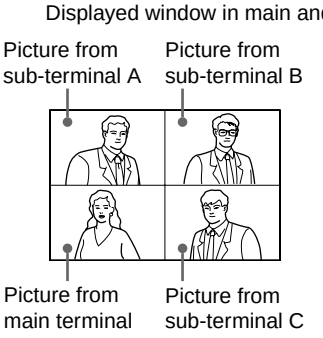
Operation order	Operation	Main terminal	Sub-terminal A	Sub-terminal B	Sub-terminal C	Sub-terminal D	Sub-terminal E
1	Just after connection	Picture from Sub-terminal A	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal
2	Broadcast A	Picture from Sub-terminal A	Picture from Main terminal	Picture from Sub-terminal A	Picture from Sub-terminal A	Picture from Sub-terminal A	Picture from Sub-terminal A
3	Stop Broadcast	Picture from Sub-terminal A	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal
4	Broadcast B	Picture from Sub-terminal B	Picture from Sub-terminal B	Picture from Main terminal	Picture from Sub-terminal B	Picture from Sub-terminal B	Picture from Sub-terminal B
5	Stop Broadcast	Picture from Sub-terminal B	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal	Picture from Main terminal
6	Broadcast C	Picture from Sub-terminal C	Picture from Sub-terminal C	Picture from Sub-terminal C	Picture from Main terminal	Picture from Sub-terminal C	Picture from Sub-terminal C

4-5-3. Displayed Picture at Each Point in Broadcast Mode with Split Window Mode

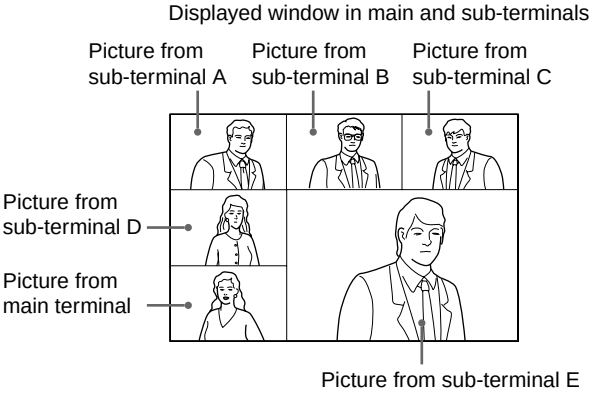
1. Immediately after connection

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

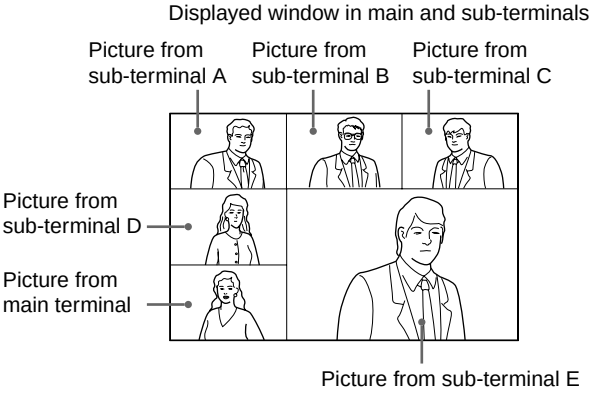
a. When “Automatic” is set for Split setting in the Communication Setup menu:
When one to three sub-terminals are connected, each terminal displays the four-split window. The picture position of each terminal is fixed in connection order.
Example at four points is shown below. (Note: Sub-terminals A to C are in connection order.)



When four or five sub-terminals are connected, each terminal displays the six-split window. The picture position of each terminal is fixed in connection order immediately after connection.
Example at six points is shown below. (Note: Sub-terminals A to E are in connection order.)



b. When “Six-screen Mosaic” is set for Split setting in the Communication Setup menu:
Each terminal displays the six-split window irrespective of connected sub-terminals number. The picture position of each terminal is fixed in connection order immediately after connection.
Example at four points is shown below. (Note: Sub-terminals A to E are in connection order.)

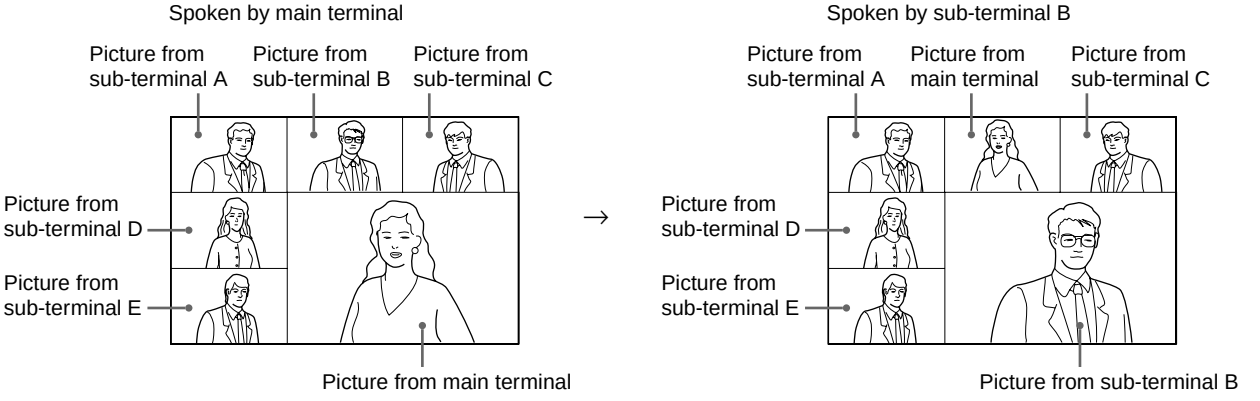


2. Immediately after speaking

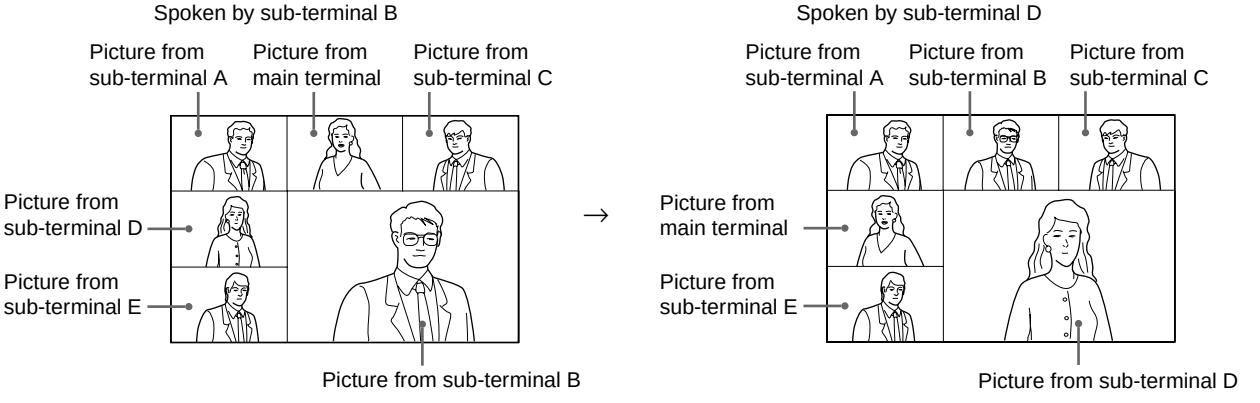
a. Four-split window
   The picture position is always fixed in connection order.

b. Six-split window
   When a person speaks, the speaker's picture position moves to the lower-right position.
   When the previous picture displayed in the lower-right position is one from the main terminal, the picture from the main terminal moves to the position in which the speaker terminal was present before speaking.
   When the previous picture displayed in the lower-right position is one from a sub-terminal, it returns to the position immediately after connection. Instead, the picture from the main terminal moves to the speaker terminal position.

   The transition example of a picture when the speaker changes to the sub-terminal B from the main terminal is shown below.



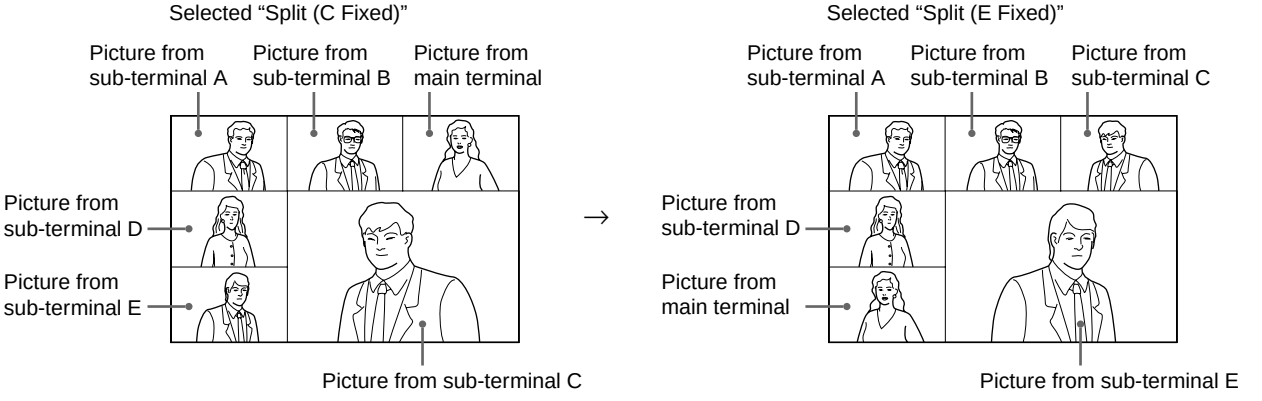
   The transition example of a picture when the speaker changes to the sub-terminal D from the sub-terminal B is shown below.



3. Selecting one terminal by main terminal (in six-split window mode only)

The position of a sub-terminal selected by the main terminal can be moved to the lower-right position and fixed in the six-split window mode.
When “Split (A Fixed)” to “Split (E Fixed)” or “Split (Near End Fixed)” is selected in the main terminal, the picture from the selected terminal moves to the lower-right position and the picture from the main terminal moves to the position in which the selected terminal was present before selecting.

The example when “Split (E Fixed)” is selected after “Split (C Fixed)” has been selected by the main terminal is shown below.



Note

During a videoconference in the split window mode, if a terminal transiently operates and ends the transmission with a full screen mode (examples: s/ps or DSB), the picture position from each terminal will return to the initial position of the connection order.

4-6. Display Transition List of PCS-G70/G70P

Video setup 1

Number of monitors: 1
Main monitor: Video1
In this case, connect a video monitor to the VIDEO OUT MONITOR 1 connector of the communication terminal (CT).
The display transition is as shown below.

Note

Still picture and motion picture are abbreviated to “s/p” and “m/p” respectively in the following tables.

Transition state	VIDEO1 image
Non-communication	Launcher menu
M/p communication	Remote motion picture (Sub-screen: Local m/p)
One shot/continuous s/p transmission	s/p (4CIF resolution)
DSB transmission	Remote m/p (Sub-screen: Local m/p)
One shot/continuous s/p reception	s/p (4CIF resolution)
DSB reception	s/p (4CIF resolution)

Video setup 2

Number of monitors: 1
Main monitor: RGB
In this case, connect an RGB monitor to the RGB connector of CT.
The display transition is as shown below.

Transition state	RGB image
Non-communication	Launcher menu
M/p communication	Remote m/p (Sub-screen: Local m/p)
One shot/continuous s/p transmission	s/p (4CIF resolution)
DSB transmission	Remote m/p (Sub-screen: Local m/p)
One shot/continuous s/p reception	s/p (4CIF resolution)
DSB reception	s/p (XGA resolution)

Video setup 3

Number of monitors: 1
Main monitor: DSB RGB
In this case, connect an RGB monitor to the DSB RGB connector of the data solution box connected to CT.
The display transition is as shown below.

Transition state	DSB RGB image
Non-communication	Launcher menu
M/p communication	Remote m/p (Sub-screen: Local m/p)
One shot/continuous s/p transmission	s/p (4CIF resolution)
DSB transmission	Remote m/p (Sub-screen: Local m/p)
One shot/continuous s/p reception	s/p (4CIF resolution)
DSB reception	s/p (XGA resolution)

Video setup 4

Number of monitors: 2
Main monitor: Video1 Sub monitor1: Video2
In this case, connect video monitors to the VIDEO OUT MONITOR 1 and connectors of CT.
The display transition is as shown below.

Transition state	VIDEO1 image	VIDEO2 image
Non-communication	Launcher menu	Local m/p
M/p communication	Remote m/p (Sub-screen: Local m/p)	Local m/p
One shot/continuous s/p transmission	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
DSB transmission	Remote m/p (Sub-screen: Local m/p)	Local m/p
One shot s/p reception	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
Continuous s/p reception	s/p (4CIF resolution)	s/p (4CIF resolution)
DSB reception	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)

Video setup 5

Number of monitors: 2
Main monitor: Video1 Sub monitor1: RGB
In this case, connect a video monitor to the VIDEO OUT MONITOR 1 connector, and an RGB monitor to the RGB OUT connector of CT.
The display transition is as shown below.

Transition state	VIDEO1 image	RGB image
Non-communication	Launcher menu	Local m/p
M/p communication	Remote m/p (Sub-screen: Local m/p)	Local m/p
One shot/continuous s/p transmission	s/p (4CIF resolution)	s/p (4CIF resolution)
DSB transmission	Remote m/p (Sub-screen: Local m/p)	Local m/p
One shot s/p reception	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
Continuous s/p reception	s/p (4CIF resolution)	s/p (4CIF resolution)
DSB reception	Remote m/p (Sub-screen: Local m/p)	s/p (XGA resolution)

Video setup 6

Number of monitors: 2
Main monitor: Video1 Sub monitor1: DSB RGB
In this case, connect a video monitor to the VIDEO OUT MONITOR 1 connector, and an RGB monitor to the DSB RGB connector of the data solution box connected to CT.
The display transition is as shown below.

Transition state	VIDEO1 image	DSB RGB image
Non-communication	Launcher menu	s/p (XGA resolution)
M/p communication	Remote m/p (Sub-screen: Local m/p)	Local m/p
One shot/continuous s/p transmission	s/p (4CIF resolution)	s/p (4CIF resolution)
DSB transmission	Remote m/p (Sub-screen: Local m/p)	s/p (XGA resolution)
One shot s/p reception	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
Continuous s/p reception	s/p (4CIF resolution)	s/p (4CIF resolution)
DSB reception	Remote m/p (Sub-screen: Local m/p)	s/p (XGA resolution)

Video setup 7

Number of monitors: 2
Main monitor: RGB Sub monitor1: Video1
In this case, connect an RGB monitor to the RGB OUT connector, and a video monitor to the VIDEO OUT MONITOR 1 connector of CT.
The display transition is as shown below.

Transition state	RGB image	VIDEO1 image
Non-communication	Launcher menu	Local m/p
M/p communication	Remote m/p (Sub-screen: Local m/p)	Local m/p
One shot/continuous s/p transmission	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
DSB transmission	Remote m/p (Sub-screen: Local m/p)	Local m/p
One shot s/p reception	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
Continuous s/p reception	s/p (4CIF resolution)	s/p (4CIF resolution)
DSB reception	s/p (XGA resolution)	Local m/p

Video setup 8

Number of monitors: 2
Main monitor: DSB RGB Sub monitor1: Video1
In this case, connect an RGB monitor to the DSB RGB connector of the data solution box connected to CT, and a video monitor to the VIDEO OUT MONITOR 1 connector of CT.
The display transition is as shown below.

Transition state	DSB RGB image	VIDEO1 image
Non-communication	Launcher menu	Local m/p
M/p communication	Remote m/p (Sub-screen: Local m/p)	Local m/p
One shot/continuous s/p transmission	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
DSB transmission	s/p (XGA resolution)	Local m/p
One shot s/p reception	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
Continuous s/p reception	s/p (4CIF resolution)	s/p (4CIF resolution)
DSB reception	s/p (XGA resolution)	Local m/p

Video setup 9

Number of monitors: 2
Main monitor: RGB Sub monitor1: DSB RGB
In this case, connect RGB monitors to the RGB OUT connector of CT and DSB RGB connector of the data solution box connected to CT.
The display transition is as shown below.

Transition state	RGB image	DSB RGB image
Non-communication	Launcher menu	s/p (XGA resolution)
M/p communication	Remote m/p (Sub-screen: Local m/p)	Local m/p
One shot/continuous s/p transmission	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
DSB transmission	Remote m/p (Sub-screen: Local m/p)	s/p (XGA resolution)
One shot s/p reception	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
Continuous s/p reception	s/p (4CIF resolution)	s/p (4CIF resolution)
DSB reception	Remote m/p (Sub-screen: Local m/p)	s/p (XGA resolution)

Video setup 10

Number of monitors: 2

Main monitor: DSB RGB Sub monitor1: RGB

In this case, connect RGB monitors to the DSB RGB connector of the data solution box connected to CT and RGB OUT connector of CT.

The display transition is as shown below.

Transition state	DSB RGB image	RGB image
Non-communication	Launcher menu	Local m/p
M/p communication	Remote m/p (Sub-screen: Local m/p)	Local m/p
One shot/continuous s/p transmission	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
DSB transmission	s/p (XGA resolution)	Local m/p
One shot s/p reception	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)
Continuous s/p reception	s/p (4CIF resolution)	s/p (4CIF resolution)
DSB reception	s/p (XGA resolution)	Local m/p

Video setup 11

Number of monitors: 3

Main monitor: Video1 Sub monitor1: Video2 Sub monitor2: RGB

In this case, connect video monitors to the VIDEO OUT MONITOR 1 and 2 connectors, and an RGB monitor to the RGB OUT connector of CT.

The display transition is as shown below.

Transition state	VIDEO1 image	VIDEO2 image	RGB image
Non-communication	Launcher menu	Local m/p	Local m/p
M/p communication	Remote m/p (Sub-screen: Local m/p)	Local m/p	Local m/p
One shot/continuous s/p transmission	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)	Local m/p
DSB transmission	Remote m/p (Sub-screen: Local m/p)	Local m/p	Local m/p
One shot s/p reception	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)	Local m/p
Continuous s/p reception	s/p (4CIF resolution)	s/p (4CIF resolution)	Local m/p
DSB reception	Remote m/p (Sub-screen: Local m/p)	Local m/p	s/p (XGA resolution)

Video setup 12

Number of monitors: 3

Main monitor: Video1 Sub monitor1: Video2 Sub monitor2: DSB RGB

In this case, connect video monitors to the VIDEO OUT MONITOR 1 and 2 connectors of CT, and an RGB monitor to the DSB RGB connector of the data solution box connected to CT.

The display transition is as shown below.

Transition state	VIDEO1 image	VIDEO2 image	DSB RGB image
Non-communication	Launcher menu	Local m/p	s/p (XGA resolution)
M/p communication	Remote m/p (Sub-screen: Local m/p)	Local m/p	Local m/p
One shot/continuous s/p transmission	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)	s/p (4CIF resolution)
DSB transmission	Remote m/p (Sub-screen: Local m/p)	Local m/p	s/p (XGA resolution)
One shot s/p reception	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)	s/p (4CIF resolution)
Continuous s/p reception	s/p (4CIF resolution)	s/p (4CIF resolution)	s/p (4CIF resolution)
DSB reception	Remote m/p (Sub-screen: Local m/p)	Local m/p	s/p (XGA resolution)

Video setup 13

Number of monitors: 3

Main monitor: Video1 Sub monitor1: RGB Sub monitor2: DSB RGB

In this case, connect a video monitor to the VIDEO OUT MONITOR 1 connector, and RGB monitors to the RGB OUT connector of CT and DSB RGB connector of the data solution box connected to CT.

The display transition is as shown below.

Transition state	VIDEO1 image	RGB image	DSB RGB image
Non-communication	Launcher menu	Local m/p	s/p (XGA resolution)
M/p communication	Remote m/p (Sub-screen: Local m/p)	Local m/p	Local m/p
One shot/continuous s/p transmission	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)	Local m/p
DSB transmission	Remote m/p (Sub-screen: Local m/p)	Local m/p	s/p (XGA resolution)
One shot s/p reception	Remote m/p (Sub-screen: Local m/p)	s/p (4CIF resolution)	Local m/p
Continuous s/p reception	s/p (4CIF resolution)	s/p (4CIF resolution)	Local m/p
DSB reception	Remote m/p (Sub-screen: Local m/p)	Local m/p	s/p (XGA resolution)

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

1. Video: Point-to-point connection
   (Video setup: Auto, Interlace mode: On, 4CIF mode: On, Frame rate: Auto)

Priority	Bit rate (kbps)				
	1 - 384	**385 - 512**	**513 - 1024**	**1025 - 3073**	**3074 - 4096**
1	H.264-CIF15	H.264-CIF30	H.264-CIF30	H.264-ISIF	H.263-SD
2	MPEG4V-CIF15	H.264-CIF15	MPEG4V-CIF30	H.263-ISIF	H.263-4CIF30
3	H.263-CIF15	MPEG4V-CIF15	H.263-CIF30	H.264-CIF30	H.263-4CIF15
4	H.261-CIF15	H.263-CIF15	H.261-CIF30	MPEG4V-CIF30	H.264-ISIF
5	H.264-CIF30	H.261-CIF15	H.264-CIF15	H.263-CIF30	H.263-ISIF
6	MPEG4V-CIF30	MPEG4V-CIF30	MPEG4V-CIF15	H.261-CIF30	H.264-CIF30
7	H.261-CIF30	H.261-CIF30	H.263-CIF15	H.264-CIF15	MPEG4V-CIF30
8	H.264-QCIF30	H.264-QCIF30	H.261-CIF15	MPEG4V-CIF15	H.263-CIF30
9	H.263-QCIF30	H.263-QCIF30	H.264-ISIF	H.263-CIF15	H.261-CIF30
10	H.261-QCIF30	H.261-QCIF30	H.263-ISIF	H.261-CIF15	H.264-CIF15
11	H.264-QCIF15	H.264-QCIF15	H.264-QCIF30	H.263-SD	MPEG4V-CIF15
12	H.263-QCIF15	H.263-QCIF15	H.263-QCIF30	H.263-4CIF30	H.263-CIF15
13	H.261-QCIF15	H.261-QCIF15	H.261-QCIF30	H.263-4CIF15	H.261-CIF15
14	—	—	H.264-QCIF15	H.264-QCIF30	H.264-QCIF30
15	—	—	H.263-QCIF15	H.263-QCIF30	H.263-QCIF30
16	—	—	H.261-QCIF15	H.261-QCIF30	H.261-QCIF30
17	—	—	—	H.264-QCIF15	H.264-QCIF15
18	—	—	—	H.263-QCIF15	H.263-QCIF15
19	—	—	—	H.261-QCIF15	H.261-QCIF15

2. Video: Multipoint connection
   (does not depend on bit rate)

Priority	(MCU)
1	H.264-CIF30
2	H.264-CIF15
3	H.263-CIF30
4	H.263-CIF15
5	H.261-CIF30
6	H.261-CIF15
7	H.264-QCIF30
8	H.263-QCIF30
9	H.264-QCIF15
10	H.263-QCIF15
11	H.261-QCIF30
12	H.261-QCIF15

3. Audio
   (Audio setup: Auto)

Priority	Bit rate (kbps)	
	1 - 128	**129 and Higher**
1	.G.722.1*	MPEG AAC
2	G.729*	G.722
3	G.728	.G.722.1*
4	G.723.1*	G.711
5	MPEG AAC	G.728
6	G.722	G.729*
7	G.711	G.723.1*

*: Valid for H.323 P-P only.

4-8. Supported Video/Audio Codec

	H.323 P-P	H.320 P-P	H.323 MCU	H.320 MCU	MIX MCU	Cascade (Only LAN)	Cascade (MIX)
Video							
Interlaced SIF	○	○	–	–	–	–	–
Interlaced SIF (H.264)	○	○	–	–	–	–	–
H.264	○	○	○	○	○	○	○
MPEG4	○	–	–	–	–	–	–
H.263	○	○	○	○	○	○	○
H.263 4CIF	○	–	–	–	–	–	–
H.261	○	○	○	○	○	○	○
Audio							
MPEG4 AAC	○	○	○	○	○	○	○
G.722.1	○	–	–	–	–	–	–
G.722	○	○	○	○	○	○	○
G.729	○	–	–	–	–	–	–
G.728	○	○	○	○	○	○	○
G.723.1	○	–	–	–	–	–	–
G.711	○	○	○	○	○	○	○

PCS-G70 (UC)
PCS-G70P (CE) E
9-955-144-01

Sony Corporation
PSNC BCC Communication Systems Div.

2004. 12 08
©2004