

**SONY®**

COMMUNICATION SYSTEM

**PCS-1**

**PCS-1P**

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可能性があります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

## **⚠ WARNING**

This manual is intended for qualified service personnel only.

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

## **⚠ WARNUNG**

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

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

## **⚠ AVERTISSEMENT**

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

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# Section 1 Installation

## 1-1. Caution on Installation

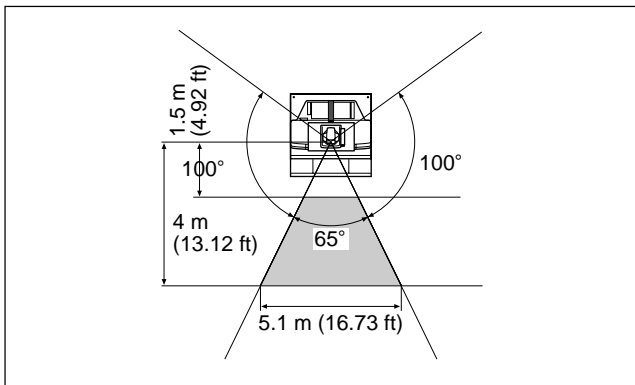
### 1-1-1. Lay Out the Videoconferencing Room

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

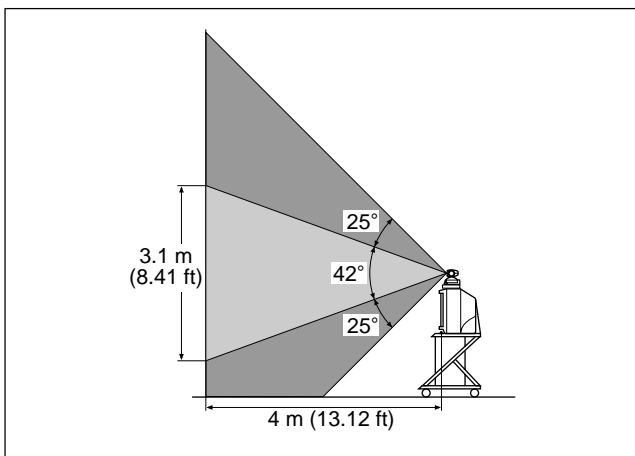
#### Camera Range

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

#### Top view (horizontal range at maximum zoom-out)



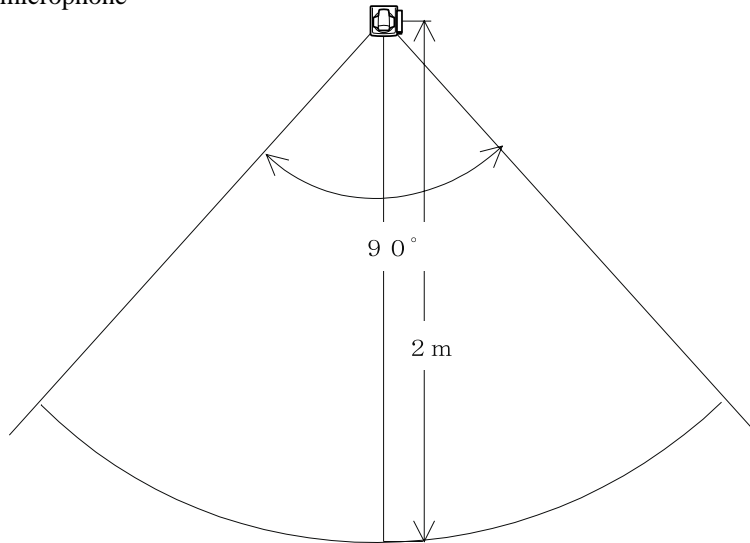
#### Side view (vertical range at maximum zoom-out)



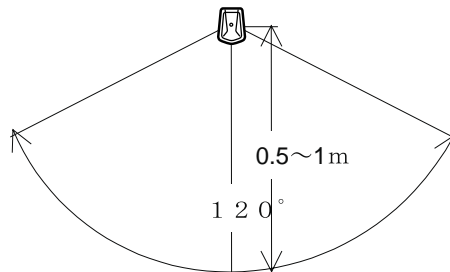
## Highly directional range of microphone

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

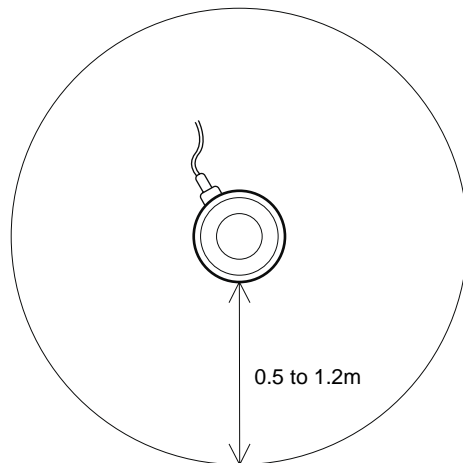
1: For internal microphone



2: For extension microphone (PCS-A300)

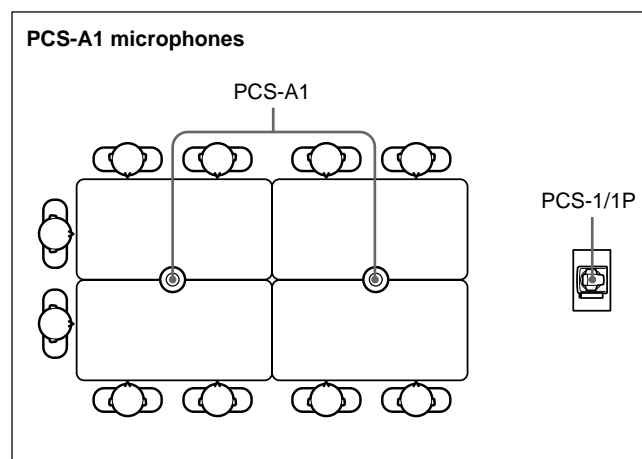
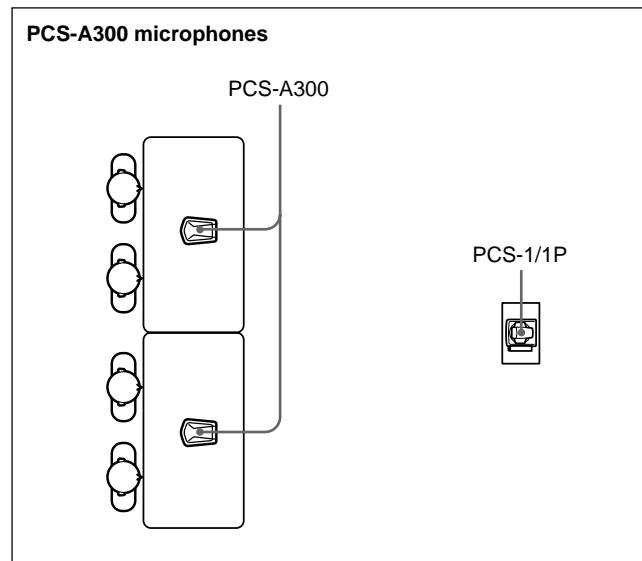
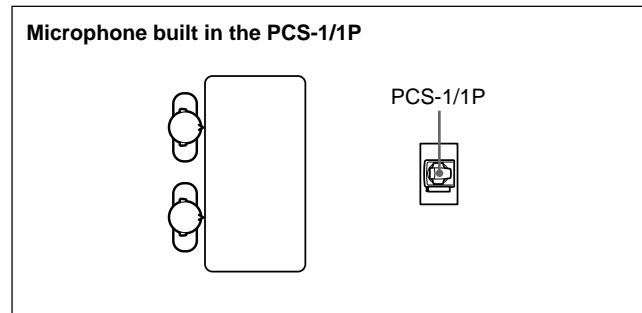


3: For extension microphone (PCS-A1)



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

### Microphone layout examples



### Notes on installation of the microphones

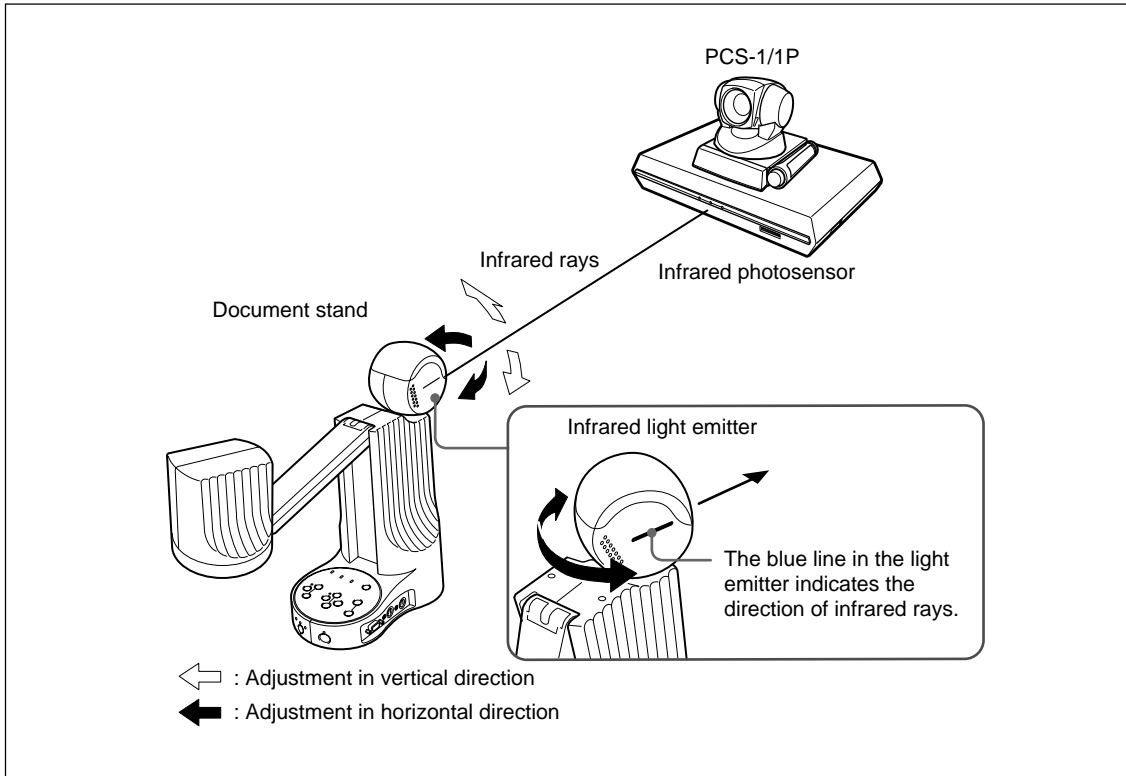
- Install microphone about 50 cm away from the participants.
- Install the speakers behind the microphones.
- Place the microphone in a quiet, echo-free location.
- Install microphones away from equipment that may cause noise.
- Avoid covering a microphone with paper, etc., or moving it. If you do either,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

## Installation of document stand

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

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

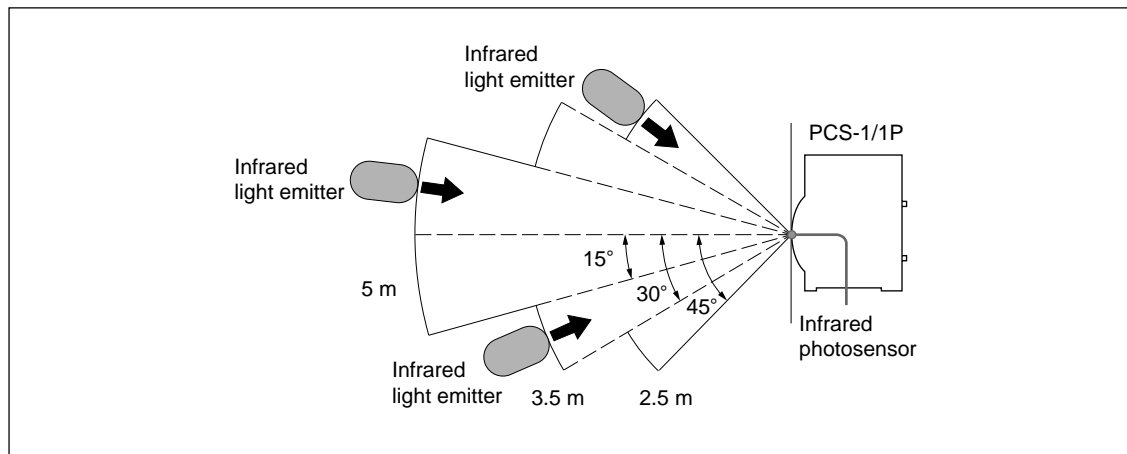
Connect it with PCS-1/1P using a MONITOR OUT terminal when the infrared light emitter is used in excess of about 5 m.





b. Installation range (Reference)

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



**Notes**

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

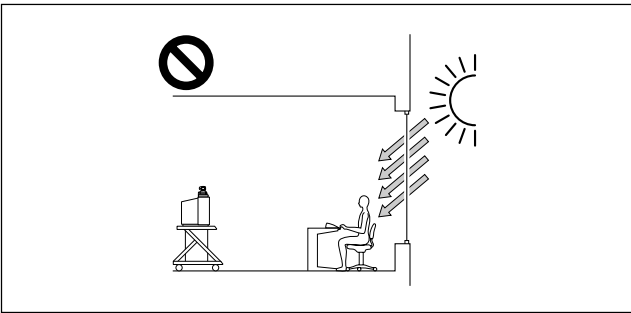
## 1-1-2. Operating Environment

### Layout Considerations

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

### Lighting Considerations

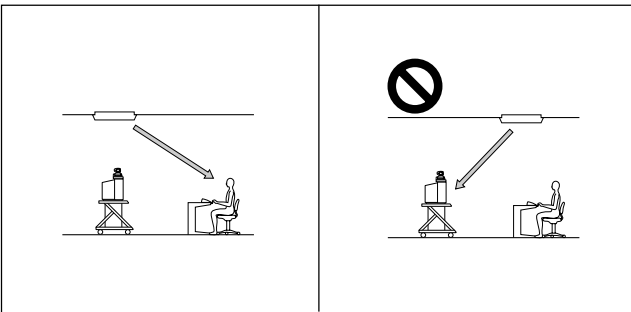
Do not point the camera toward a window where sunlight comes in as back lighting may decrease the contrast. If it is necessary, cover the window with a thick curtain.



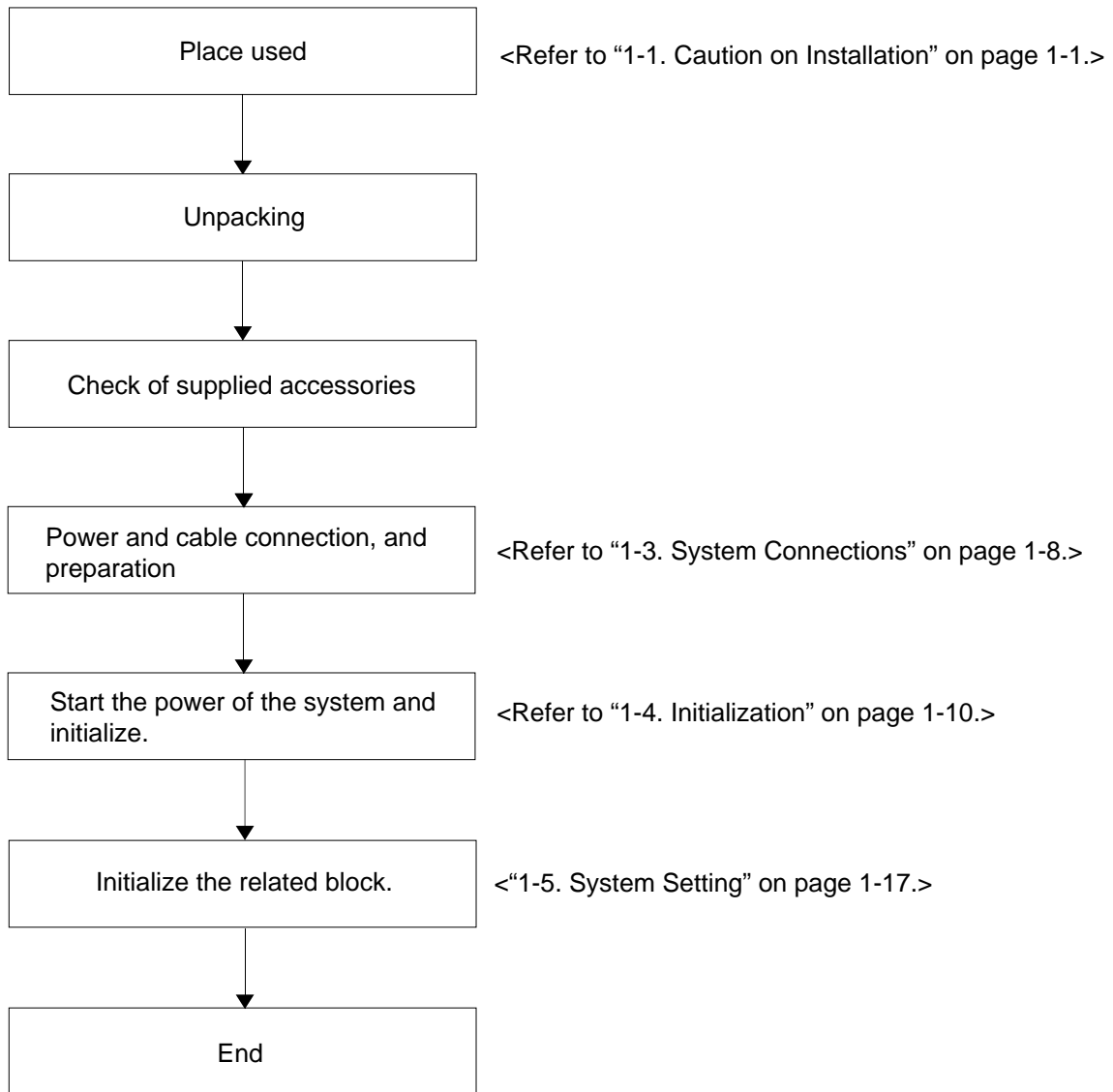
Adjust room lighting so that it falls on the participants. Avoid direct light on the TV monitor. Light intensity on faces should be about 300 lux or more.

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

Installing the Communication Terminal and Camera



## 1-2. Flowchart of Installation



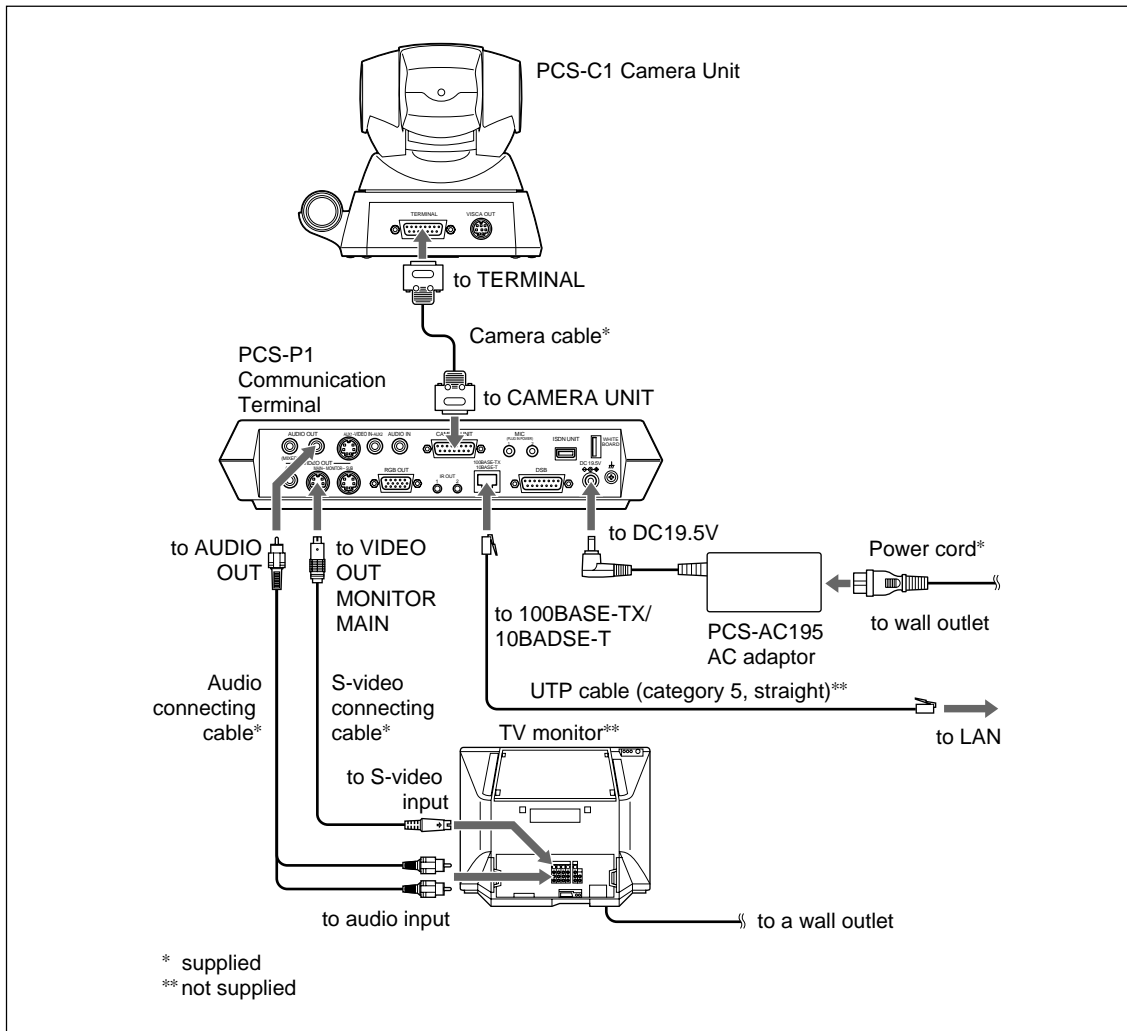
### 1-3. System Connections

This section describes the typical system connections.

#### Notes

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

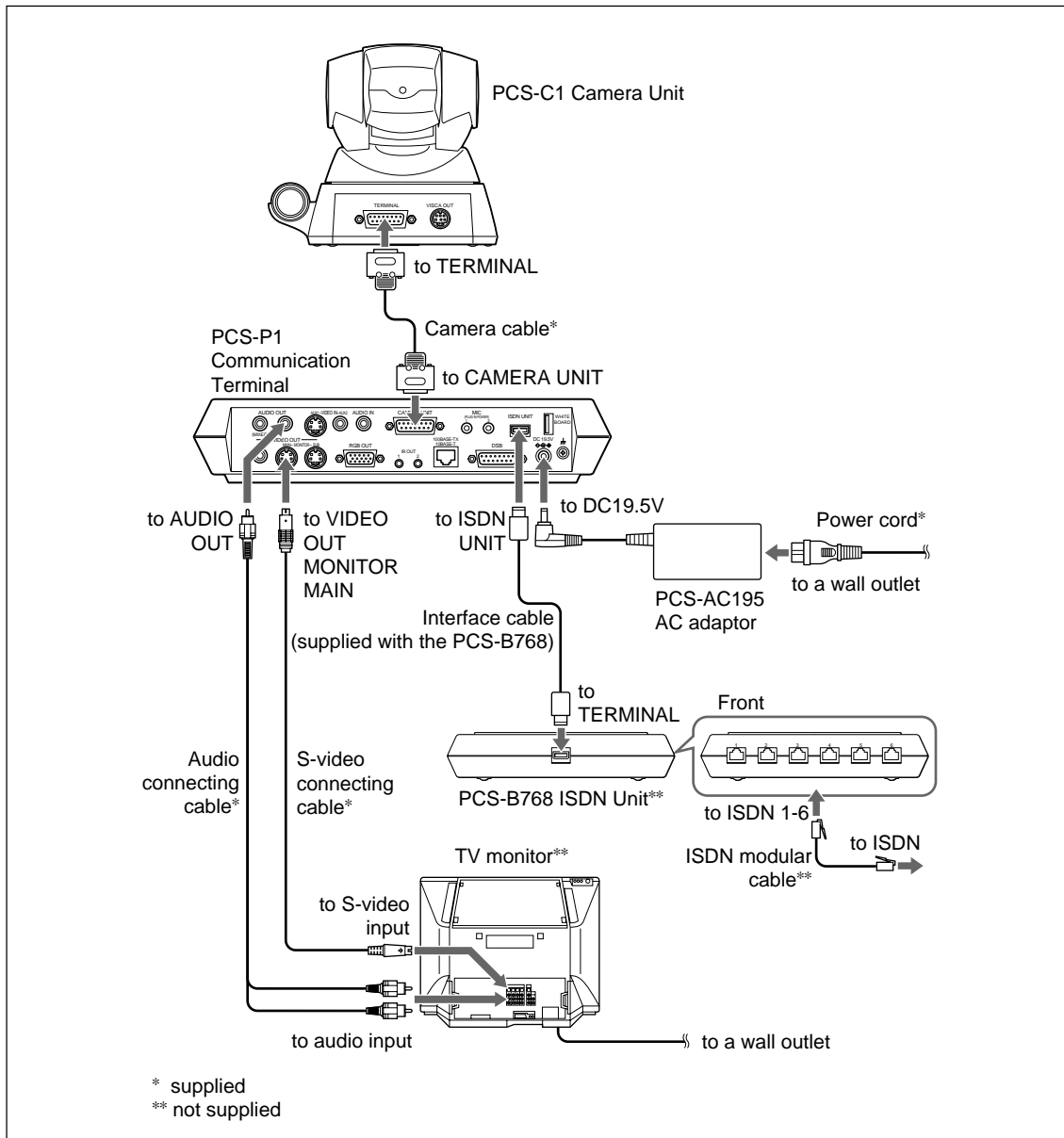
#### 1-3-1. When Used in LAN (100BASE-TX/10BASE-T)



### 1-3-2. When Used in ISDN

**Note**

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

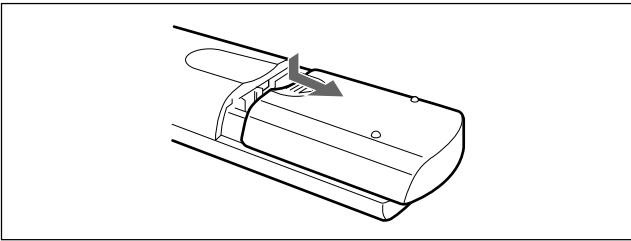


## 1-4. Initialization

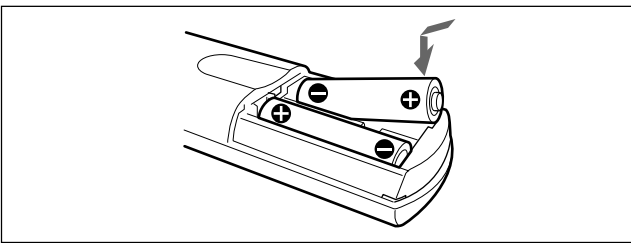
### 1-4-1. Inserting Batteries into the Remote Commander

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

1. Remove the battery compartment cover.



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



#### Note

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

3. Replace the cover.

#### Notes

##### Battery life

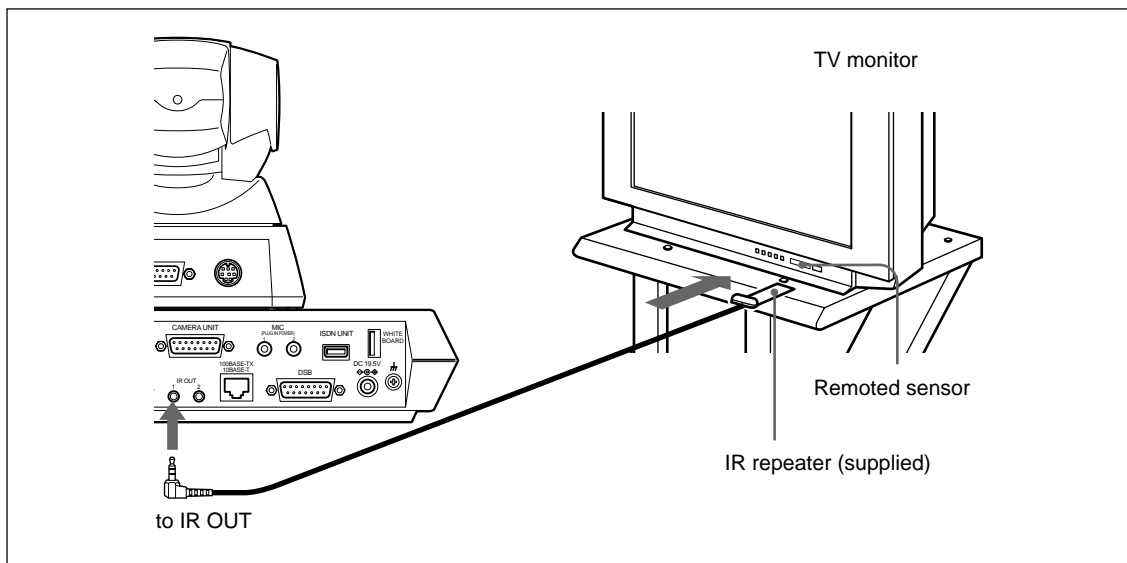
When the Remote Commander does not function properly, replace both the batteries with new ones.

##### Notes on batteries

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

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

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



### Note

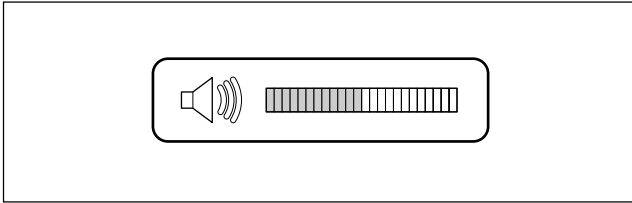
If the TV monitor is not turned on by pressing the I/O button on the Remote Commander, change the “IR Repeater Mode” setting in the General Setup menu.

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

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

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

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

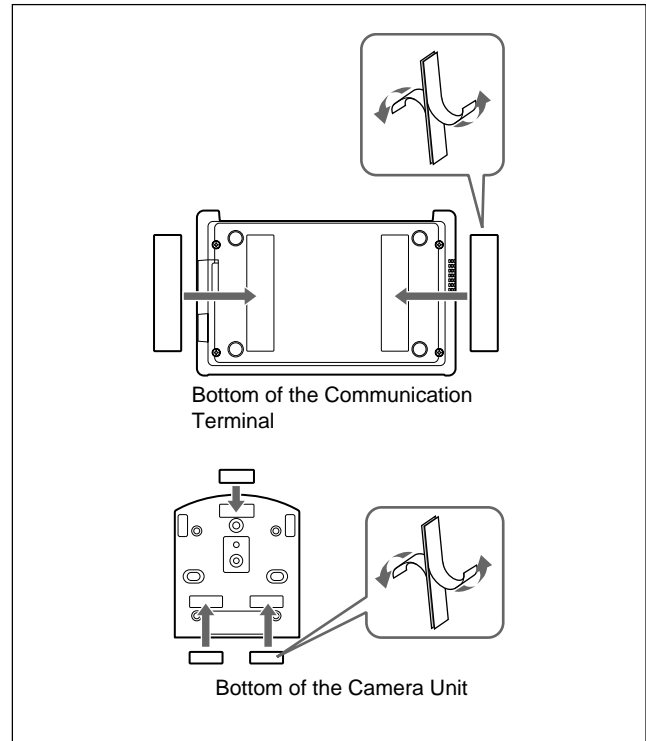


2. Adjust the volume of a monitor television.  
Set to the volume in which the remote voice can be heard well.  
After adjustment is completed, adjust the volume on the PCS-1/IP side.

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

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

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

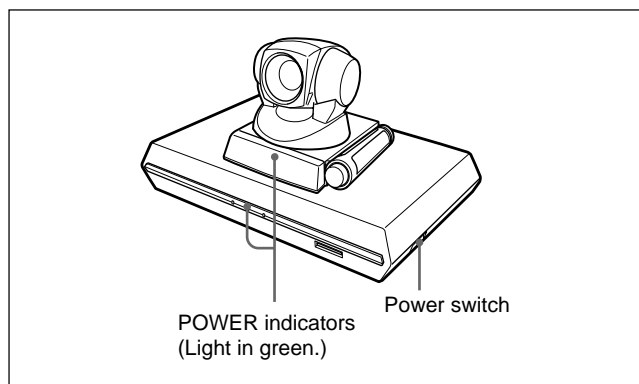


2. Stick another piece of Velcro to the installation place.
3. Install the Communication Terminal or the Camera on the installation place by securing the two pieces of Velcro.



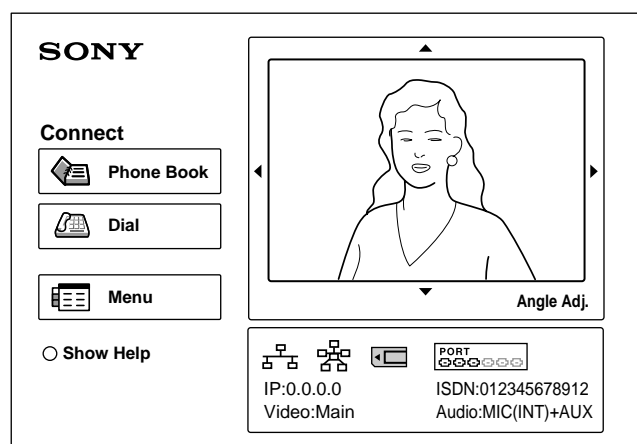
## 1-4-5. Turning On

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



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

### Launcher menu



### Notes

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

### Standby Mode Function

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

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

### To release the standby mode

Press the I/O button on the Remote Commander.

### To specify the standby time

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

For the “Standby Time” and “Standby Mode” settings, see “General Setup Menu” on page 1-17.

### Notes

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

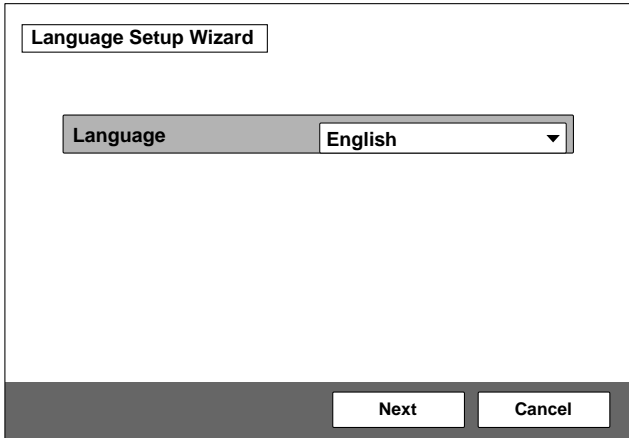
### 1-4-6. When the Power was First Turned on after Installation

When you turn on the Communication Terminal for the first time after installation and the self-diagnosis is completed, the setup wizard appears on the monitor screen. Register your local system data with the setup wizard using the Remote Commander.

**Note**

You can change the settings made with the setup wizard later using the Setup menus.

1. Select the language used for the on-screen menus and messages in the Language Setup Wizard.  
Language: Select one of seven languages; English, French, German, Japanese, Spanish, Italian, Chinese.



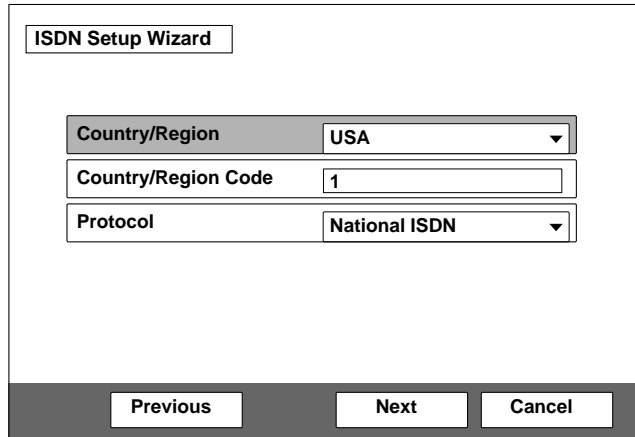
2. Use the ↑, ↓, ← or → button on the Remote Commander to select “Next”, then press the PUSH ENTER button.

The ISDN Setup Wizard appears.

**Note**

When you are not using the ISDN line, select “Next” to display the LAN Setup Wizard, then proceed to step 9.

3. Set the following items on the ISDN line.



**Country/Region:**

Select your country or region.

**Country/Region Code:**

Enter your country code or region code with the number buttons on the Remote Commander.

**Protocol:**

Select the protocol of the ISDN line you are using.

4. Use the ↑, ↓, ← or → button to select “Next”, then press the PUSH ENTER button.

- Enter the telephone number of the ISDN used by the system.  
When you use one ISDN line, enter the same number both in the A1 and A2 text boxes (except for the USA and Canada).

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

**Area Code:**

Enter the area code. Do not enter the first “0” number.

**Local Number:**

Enter the telephone number.

**When you select Auto SPID (only for customers in the USA and Canada)**

You can automatically set up the Area Code and Local Number on this page, and SPID items in the SPID menu.

**Note**

When 2-6 ISDN lines are used, enter the telephone numbers in the B1 to F2 text boxes in addition to the A1 and A2 boxes. To open the menu with D1 to F2 text boxes, select “Next”, then press the PUSH ENTER button.

- Use the ↑, ↓, ← or → button to select “Next”, then press the PUSH ENTER button.

- Enter the sub-addresses.  
Only numerals are available for a sub-address.  
When you use one ISDN line, enter the same number both in the A1 and A2 text boxes (except for the USA and Canada).

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

**Note**

When 2-6 ISDN lines are used, enter the sub-addresses in the B1 to F2 text boxes in addition to the A1 and A2 boxes. To open the menu with these text boxes, select “Next”, then press the PUSH ENTER button.

- Use the ↑, ↓, ← or → button to select “Next”, then press the PUSH ENTER button.

**For customers in other countries than the USA and Canada**

The LAN Setup Wizard appears.

For customers in the USA and Canada

The ISDN Setup Wizard (SPID menu) appears.

Set the SPID items, then select “Next” and press the PUSH ENTER button.

The LAN Setup Wizard appears.

For details on the SPID settings, see “SPID Setting for Customers in the USA and Canada” on page 46.

**Note**

When you do not use the LAN, select “Next” to display the message window for confirmation, then proceed to step 11.

9. Set the following items on the LAN.

LAN Setup Wizard

DHCP Mode: Auto

Host Name: [ ]

IP Address: [ . . . ]

Network Mask: [ . . . ]

Gateway Address: [ . . . ]

DNS Address: [ . . . ]

Previous Next Cancel

**DHCP Mode:**

Sets the DHCP (Dynamic Host Configuration Protocol).

**Auto:**

Automatically assigns your IP address, network mask, gateway address and DNS address.

**Off:**

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

**Host Name:**

Enter your host name.

**IP Address:**

Enter your IP address.

**Network Mask:**

Enter your network mask.

**Gateway Address:**

Enter your default gateway address.

**DNS Address:**

Enter your DNS (Domain Name System) server address.

**Note**

When you set “DHCP Mode” to “Auto”, the assigned IP address is shown in the launcher menu or Machine Information menu.

When you do not know how to set up the LAN configuration, contact your network administrator.

10. Use the ↑, ↓, ← or → button to select “Next”, then press the PUSH ENTER button.  
The message window for confirmation appears.

11. Use the ↑, ↓, ← or → button to select “Save”, then press the PUSH ENTER button.  
The settings are saved.

Save

Previous Cancel

**To cancel the setting**

Press the ↑, ↓, ← or → button to select “Cancel”, then press the PUSH ENTER button.

**To go back to the previous wizard**

Press the ↑, ↓, ← or → button to select “Previous”, then press the PUSH ENTER button.

## 1-5. System Setting

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

Change the setting as required.

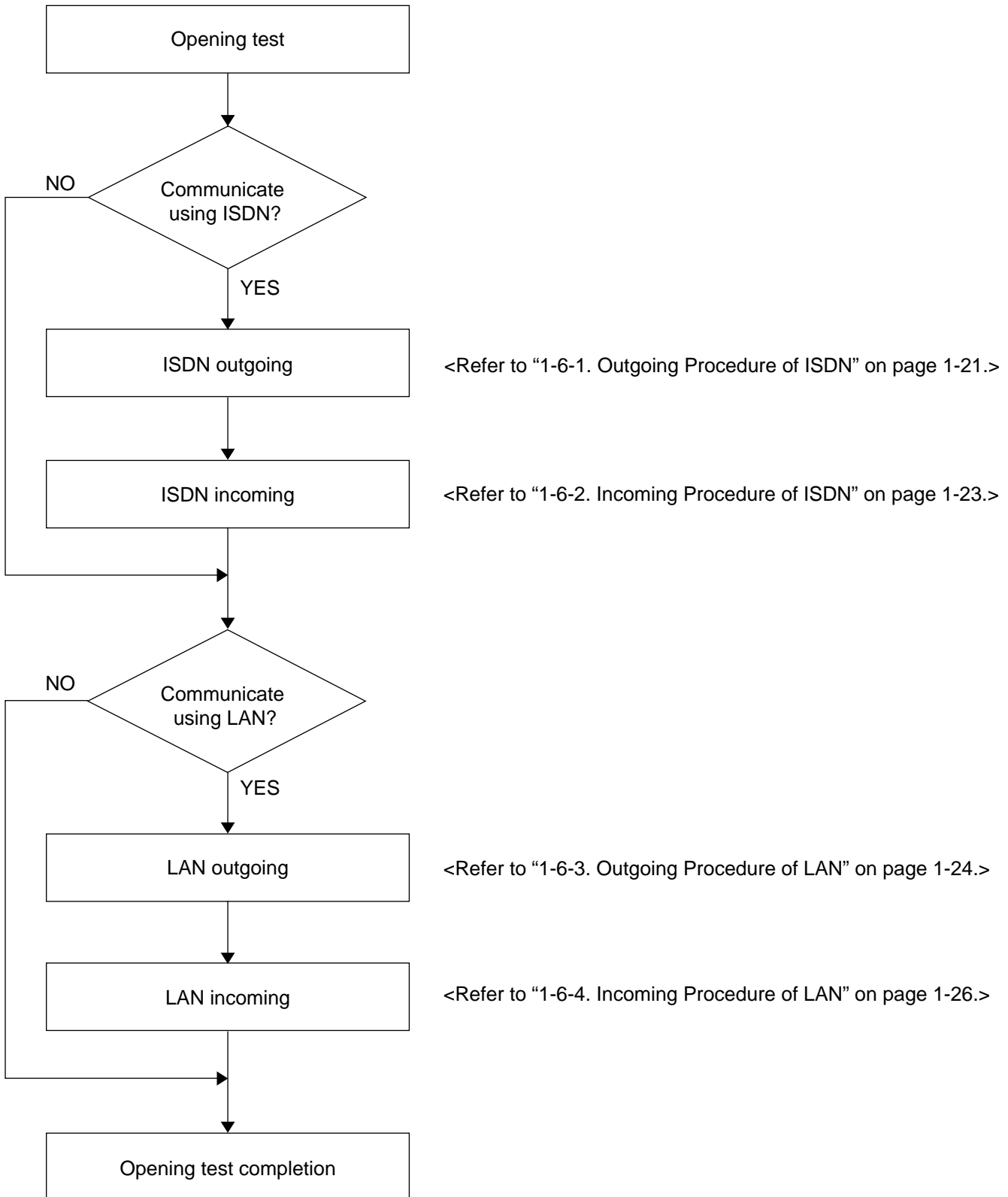
	Item	Contents of setting	Initial value
Outgoing setting	Line type	Select the line interface (LAN, ISDN, or voice telephone) used.	LAN
	Bonding	Select "On" when connecting using a bonding interface through which the remaining lines can also be connected by only dialing one line when multiple ISDN lines are used. Select "Auto" when automatically adjusting to the remote side.	Auto
	Number of lines used	Select the number of ISDN lines used during outgoing of bonding. 1B, 2B, 3B, 4B, 5B, 6B, 8B, or 12B channel can be selected.	12B
	LAN band used	Set the bandwidth (1 to 1920) when communicating via LAN.	1024
	Prefix selection	Set the prefix number used when connecting using an ISDN line.	None
	Restricted network	Select the communication rate (Auto or 56K) when connecting using an ISDN line. In a few countries (America, etc.) and regions, two types of rates (64 Kbps and 56 Kbps) are used. Usually, select "Auto" as the communication rate of ISDN.	Auto
	Video system	Select a video coding system.	All capabilities
	Number of video frames	Select the maximum number of video transmission frames (15 fps or 30 fps).	15 fps
	Audio system	Select an audio coding system.	All capabilities
	Remote camera control	Set to "On" when controlling the camera on the remote side. Set to "Off" when not controlling it.	On
	T.120 data	Set to "On" when making the data conference conforming to T.120 using NetMeeting. Set to "Off" when not making it.	Off
	Prefix -A/-B/-C	Set the prefix (outgoing number).	Blank
	Voice telephone	Select the voice compression system during voice meeting.	Auto
	Detail setting	Set to "On" when you want to have outgoing attributes for each dial list. Set to "Off" when you do not want.	Off
Name entry	Set to "On" when recording the user name in a communication log before communication. Set to "Off" when not recording it.	Off	
Multipoint	Multipoint mode	Set to "On" when making a conference using an internal MCU (multipoint conference) function. Set to "Off" when not making it.	Off
A multipoint setting menu can be set only when optional H.320 MCU software or H.323 MCU software is installed.	Broadcasting mode	Set to "Divide" when displaying the connected terminal in the broadcasting display mode of a multipoint conference by division. Set to "Audio detect" when displaying the terminal with the highest volume in the participated terminals.	Divide
	Number of lines used	Select the number of ISDN lines for each sub-terminal of a multipoint conference.	2B×5
	LAN band used	Enter the bandwidth when a multipoint conference is made using LAN. The bandwidth can be set in the range of 1 kHz to 1920 kHz.	1024
	Restricted network	Select the communication rate (Auto or 56 K) when connecting using an ISDN line. In a few countries (America, etc.) and regions, two types of rates (64 Kbps and 56 Kbps) are used. Usually, select "Auto" as the communication rate of ISDN.	Auto
	Video system	Select a video coding system.	All capabilities
	Audio system	Select an audio coding system.	All capabilities
	Terminal name display	Set to "On" when displaying the terminal name at a connection point on the monitor screen during disconnection. Set to "Off" when not displaying it.	On
	Remote camera control	Set to "On" when controlling the camera on the remote side. Set to "Off" when not controlling it.	On
General setting	Terminal name	Enter the terminal name to be notified in external MCU.	Blank
	Dual monitor	Set to "On" when using a dual monitor function with the two monitors connected.	Off
	Monitor output (Sub-monitor output)	Select whether a signal should be output to the monitor connected to which output terminal. When "Dual monitor" is set to "On", the menu is changed to "Sub-monitor output". Select whether a signal should be output to the sub-monitor connected to which output terminal.	Video terminal of main unit
	Standby mode	Set to "On" when using the standby mode. Set to "Off" when not using it.	Off
	Standby time	Set the time (1 to 99 minutes) required until the unit is put into the standby mode when the standby mode is "On".	
	Passage time display	Set to "On" when displaying the talking time. Set to "Off" when not displaying it.	On
	Use of DSB	Set to "On" when using optional data solution box PCS-DSB1. Set to "Off" when not using it.	On
	List registration after conference termination	Set to "On" when registering the remote user in an address book after a conference is terminated. Set to "Off" when not registering it.	On
	T.120 PC address	Enter the IP address of the computer used when the data conference conforming to T.120 is made using NetMeeting.	Blank

Item	Contents of setting	Initial value	
General setting	Language setting/ Language	Select the language (English, French, German, Japanese, Spanish, Italian, or Chinese) of the menu and message displayed on the screen.	Japan/Japanese
	IR repeater mode	Select the mode for putting the monitor into the standby state or turning on the power when a Sony's monitor is used. Usually, set to "Mode 1".	MODE1
	Camera control reception	Set to "on" when receiving the camera control command from the remote side. Set to "Off" when not receiving it.	On
	Memory Stick format	Execute the format of a Memory Stick.	
ISDN setting	Country/region	Select the country and region in which a communication terminal is used. Set to "Japan" when a communication terminal is used in Japan.	Japan
	Country/region number	Set the country/region number. Set to "81" when a communication terminal is used in Japan.	81
	Protocol	Select the protocol of the ISDN line used. Select "NTT" when an ISDN line is used in Japan.	NTT
	Trunk exchange number/local number	Set the connected ISDN line number. Be sure to set the ISDN number when a bonding interface is used.	
	Sub-address	Enter it when a sub-address is registered	
Incoming setting	Automatic incoming	Select automatic incoming "On" and manual incoming "Off".	On
	Number of lines used	Select the number of ISDN lines used during incoming. 1B, 2B, 3B, 4B, 5B, 6B, 8B, or 12B channel can be selected.	12B
	Restricted network	Select the communication rate (Auto or 56 K) when connecting using an ISDN line. In a few countries (America, etc.) and regions, two types of rates (64 Kbps and 56 Kbps) are used. Usually, select "Auto" as the communication rate of ISDN.	Auto
	LAN band used	Set the bandwidth (1 to 1920) when communicating via LAN.	1024 Kbps
	ISDN dial-in	Set to "On" when using multiple subscriber numbers during connection using an ISDN line. Set to "Off" when not using them.	Off
	Video system	Select a video coding system.	All capabilities
	Number of video frames	Select the maximum number of video transmission frames (15 fps or 30 fps).	15 fps
	Audio system	Select an audio coding system.	All capabilities
	Remote camera control	Set to "On" when controlling the camera on the remote side. Set to "Off" when not controlling it.	On
	T.120 data	Set to "On" when making the data conference conforming to T.120 using NetMeeting. Set to "Off" when not making it.	Off
Audio setting	Input switching	Select the audio input (MIC, AUX, or MIC + AUX).	MIC
	Microphone selection	Select the microphone used (internal, external, DSB MIC, or DSB AUX IN).	Internal
	Lip sync	Set to "On" when using a lip sync function. Set to "Off" when not using it.	Off
	Echo canceller	Set to "Internal" when using an internal echo canceller and set to "External" when using an external echo canceller. Set to "Off" when not using an internal echo canceller.	Internal
	Beep Sound	Set to "On" when generating a beep sound during reception of a remote controller signal. Set to "Off" when not generating it.	On
	Recording mute	Set to "On" when outputting a voice to the AUDIO OUT (MIXED) terminal. Set to "Off" when not outputting it.	On
Setting for administrator	Administrator password	Set the password for an administrator. The administrator can operate a setting menu and address book menu.	
	Super-user password	Set the password for a super-user. The super-user can operate an address book menu.	
	Remote access password	Set the password when accessing from Web.	
	Web monitor	Select whether to permit the conference state monitoring function (the updating of JPEG screen) from Web.	On
	Storage of address book Loading of address book	Save the data in an address book menu in "Memory Stick". Load the data in an address book menu from "Memory Stick".	
Setting of LAN	DHCP mode	Set whether to use DHCP (Dynamic Host Configuration Protocol). Set to "Auto" when automatically acquiring an IP address, net mask, gateway address, and DNS address. Set to "Off" when not automatically acquiring it.	Off
	Host name	Set the host name of this unit.	Blank
	IP address	Set the IP address of this unit.	Blank
	Network mask	Set the network mask of this unit.	Blank
	Gateway address	Set a default gateway address.	Blank
	DNS address	Set a DNS (Domain Name System) server address.	Blank
	Gate keeper used	Set to "On" when using a gate keeper and set to "Off" when not using it. Set to "Auto" when automatically searching a gate keeper.	Off
	Gate keeper address User name	Set the IP address of a gate keeper. Set the user name (H.323 alias) registered in a gate keeper.	Blank Blank

	Item	Contents of setting	Initial value	
Setting of LAN	User number	Set the user number (E.164 number) registered in a gate keeper.	Blank	
	SNMP service	Set to "On" when enabling the service of an SNMP (Simple Network Management Protocol) agent. Set to "Off" when disabling it.	Off	
	Trap transmission destination	Set the IP address of an SNMP manager that transmits a trap.	Blank	
	Community name	Set the community name that an SNMP manager manages. Usually, set to "Public".	Public	
	Description of device	This is the description of this device. It has been input as "Videoconference Device". Cannot be changed.	Videoconference Device	
	Installation place	Set the place in which this unit is installed.	Blank	
	Contact of administrator	Set the information on the administrator of this unit.	Blank	
	NAT setting	Set to "On" when connecting this unit to the local network in which NAT (Network Address Translation) was used. Set to "Off" when not connecting it.	Off	
	NAT address	Set the IP address on the global side that NAT uses.	Blank	
	Packet retransmission request	Used for future function expansion.	Blank	
	Optimum rate control	Set to "On" when always optimizing the LAN band used. Set to "Off" when not optimizing it.	Off	
	Port number used	Select whether to fix the TCP port number and UDP port number. User setting: The port number that the user sets is used. Default value: The default port number is used. TCP port number 2253 and UDP port number 49152 are set.	Default value	
	TCP port number	Set the TCP port number when "Port number used" is "User setting".	Blank	
	UDP port number	Set the UDP port number when "Port number used" is "User setting".	Blank	
Communication state	Remote camera control	Display whether a camera remote control can be performed.		
	T.120 data	Display whether a T.120 data conference can be performed.		
	Line I/F	Display the line interface used.		
	Line rate	Display the number of connected lines and the transmission rate during communication.		
	DSB	Display whether data solution box PCS-DSB1 can be used.		
	White board	Used for future function expansion.		
	Audio coding system	Display the current audio coding system.	(*1)	
	Video coding system	Display the current video coding system.		
	Video frame rate	Display the maximum frame rate of a motion picture.		
	LSD rate	Display the data transmission rate of LSD.		
	MLP rate	Display the data transmission rate of MLP.		
HMLP rate	Display the data transmission rate of HMLP.			
Information	Host version	The software version of a communication terminal is displayed.		
	ISDN UNIT version	The version of connected ISDN unit PCS-B768 is displayed.		
	DSB version	The version of connected data solution box PCS-DSB1 is displayed.		
	DSP version	The version of a video and audio codec is displayed.		
	Software option	The type of installed optional MCU software is displayed.		
	Option I/F	The connected optional equipment is displayed.		
	Host name	The host name is displayed.		
	IP address	The IP address is displayed.		
	MAC address	The MAC address is displayed.		
	Serial number	The serial number is displayed.		

(\*1) : Displayed with the transmission and reception columns divided. The setting state of this side is displayed on the transmission column, and the reception enable state of this side is displayed on the reception column.

## 1-6. Flowchart of Opening Test



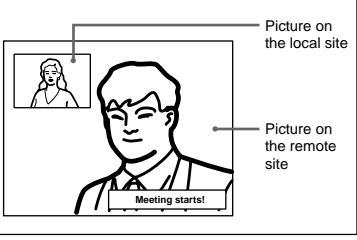


## 1-6-1. Outgoing Procedure of ISDN

### Note

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

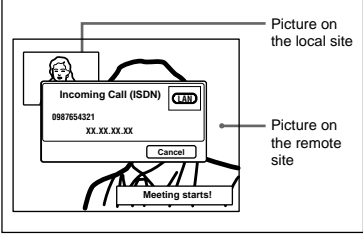
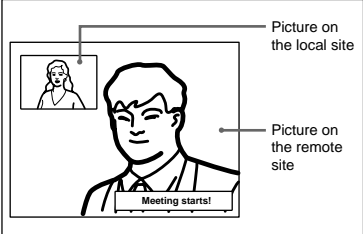
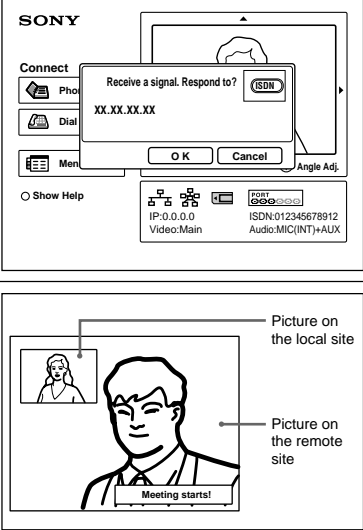
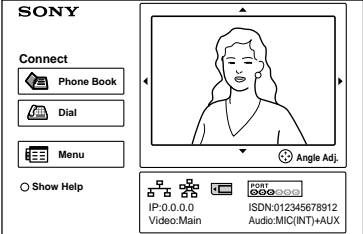
Item	Operation	Screen	Remarks (Confirmation item)
1.	Select "Dial" from the launcher menu using ↑, ↓, ←, and → buttons of a remote controller and press the decide button, or press the connect/disconnect (☎/📞) button of a remote controller.		The dial menu is displayed.
2.	Select "Line type" using ↑, ↓,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

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

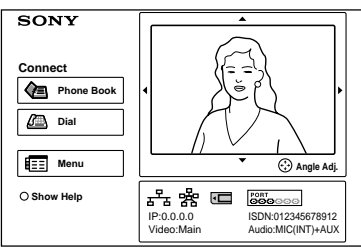
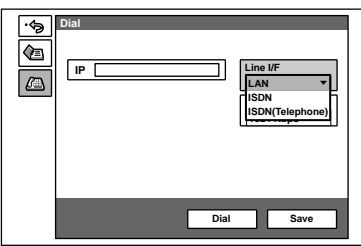
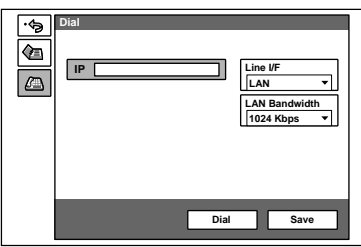
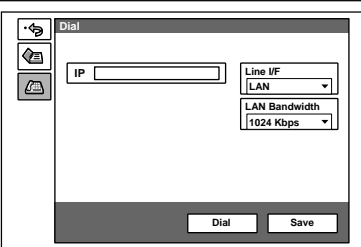
## 1-6-2. Incoming Procedure of ISDN

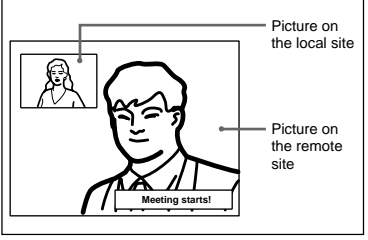
### Note

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

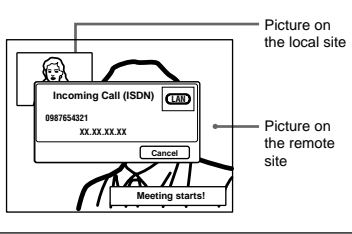
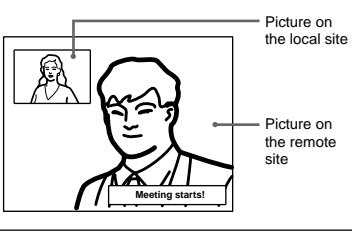
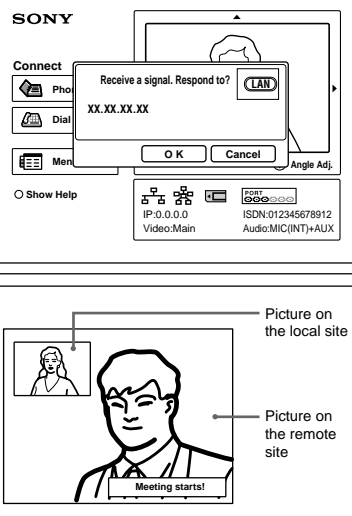
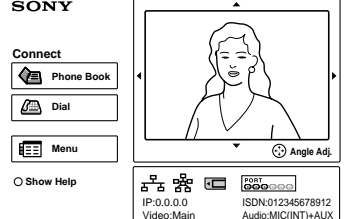
Item	Operation	Screen	Remarks (Confirmation item)
1.	Incoming from the remote side		An incoming sound occurs. "Incoming" is displayed on the screen.
2.	<For automatic response>		During connection, "Start meeting" is displayed, and the remote voice and image are heard and displayed from the monitor television.
	<For manual response>		A call sound occurs and the guide screen for incoming appears on the screen. Select "OK" using a ← or → button of a remote controller and press the decide button. During connection, "Start meeting" is displayed, and the remote voice and image are heard and displayed from the monitor television.
3.	Remote disconnection		The message of conference termination is displayed on the screen and the current display returns to a launcher menu.

### 1-6-3. Outgoing Procedure of LAN

Item	Operation	Screen	Remarks (Confirmation item)
1.	Select "Dial" from the launcher menu using ↑, ↓, ←, and → buttons of a remote controller and press the decide button, or press the connect/disconnect (☎/☎) button of a remote controller.		The dial menu is displayed.
2.	Select "Line type" using ↑, ↓, ←, and → buttons of a remote controller and press the decide button, or select "LAN" from the set item using a ↑ or ↓ button and press the decide button.		
3.	Select an IP address input column using ↑, ↓, ←, and → buttons of a remote controller and press the decide button. Then, enter the remote IP address. <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• Enter the host name and domain name (example: host.domain) in an IP address input column when a DNS server is used. Enter the user name or user number, registered in the remote LAN set menu, in an IP address input column when a gate keeper is used.</li> <li>• To enter the delimitation of an IP address, press the → button or # button.</li> </ul>		
4.	Select "LAN band used" using ↑, ↓, ←, and → buttons of a remote controller and press the decide button. Select the band used from the set item using a ↑ or ↓ button and press the decide button.		During connection, "Start meeting" is displayed, and the remote voice and image are heard and displayed from the monitor television.
5.	Select "Dial" at the bottom of a menu using ↑, ↓, ←, and → buttons of a remote controller and press the decide button, or press the connect/disconnect (☎/☎) of a remote controller.		"Outgoing (LAN)" is displayed on the screen.

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

### 1-6-4. Incoming Procedure of LAN

Item	Operation	Screen	Remarks (Confirmation item)
1.	Incoming from the remote side		An incoming sound occurs. "Incoming" is displayed on the screen.
2.	<For automatic response>		During connection, "Start meeting" is displayed, and the remote voice and image are heard and displayed from the monitor television.
	<For manual response>		A call sound occurs and the guide screen for incoming appears on the screen. Select "OK" using a ← or → button of a remote controller and press the decide button. During connection, "Start meeting" is displayed, and the remote voice and image are heard and displayed from the monitor television.
3.	Remote disconnection		The message of conference termination is displayed on the screen and the current display returns to a launcher menu.

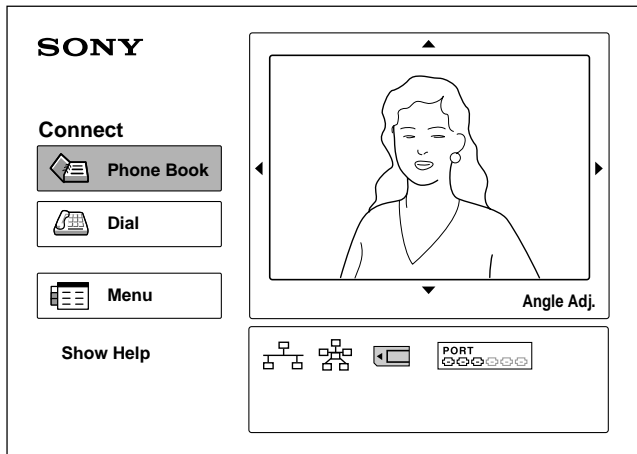
## Section 2 Maintenance

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

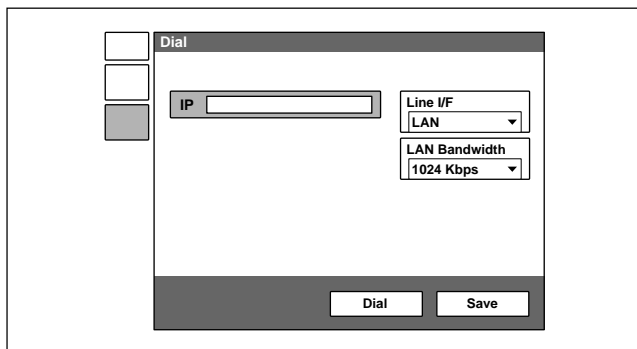
A self-loop is the reflected loop in ISDN unit PCS-B768. It does not operate when ISDN unit PCS-B768 is not connected to the communication terminal.

#### Operation procedure

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

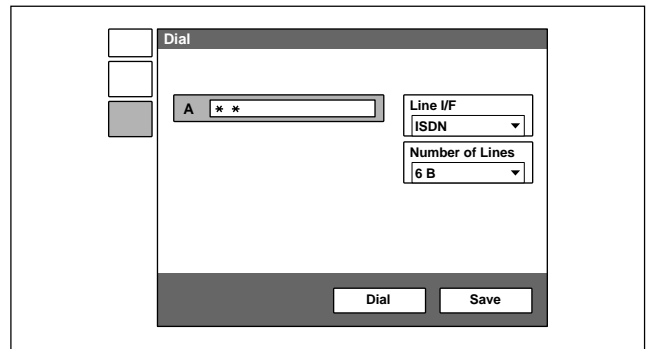


2. Select a dial using ↑, ↓, ←, and → buttons of a remote controller and press the decide button, or press the connect/disconnect (I/O) button of a remote controller. The dial menu is displayed.



3. Select the line type.  
Select "Line type" using ↑, ↓, ←, and → buttons of a remote controller and press the decide button.  
Then, select "ISDN" using ↑ and ↓ buttons and press the decide button.

4. Select the number of lines used.  
Select "Number of lines used" using ↑, ↓, ←, and → buttons of a remote controller and press the decide button.  
Then, select "12B" using ↑ and ↓ buttons and press the decide button.
5. Select column A using ↑, ↓, ←, and → buttons of a remote controller and press the decide button.  
Enter \* in column A from the remote controller two times



6. Select "Dial" using ↑, ↓, ←, and → buttons of a remote controller and press the decide button, or press the connect/disconnect (I/O) button of a remote controller.  
A self-loopback is started and "Outgoing" is displayed on the monitor screen. "Start meeting" is displayed when the loopback is completed. In this case, confirm that an image and voice are looped.

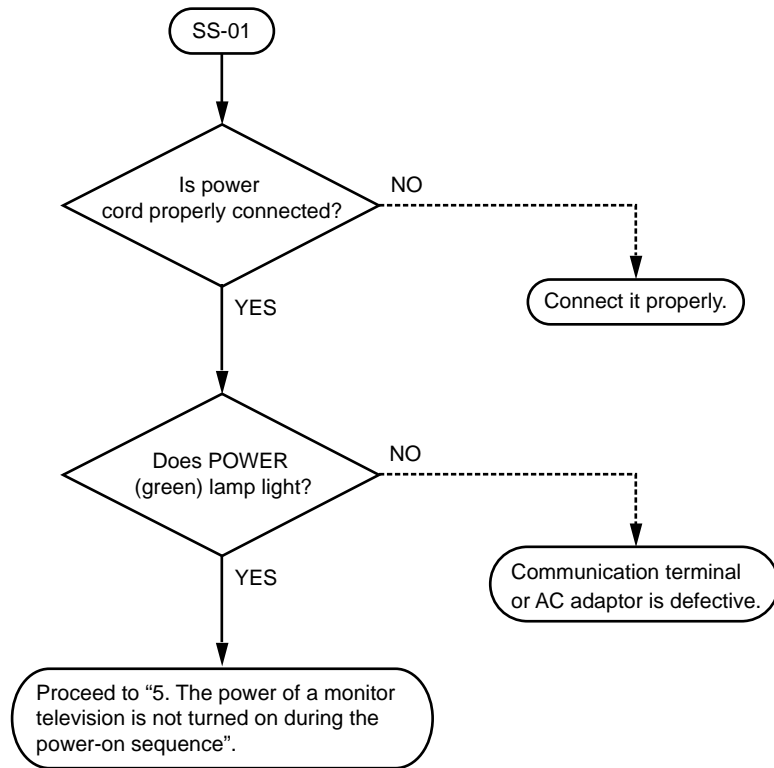
## 2-2. Separation of Components

The main troubles that occur during failure are described in the table below.

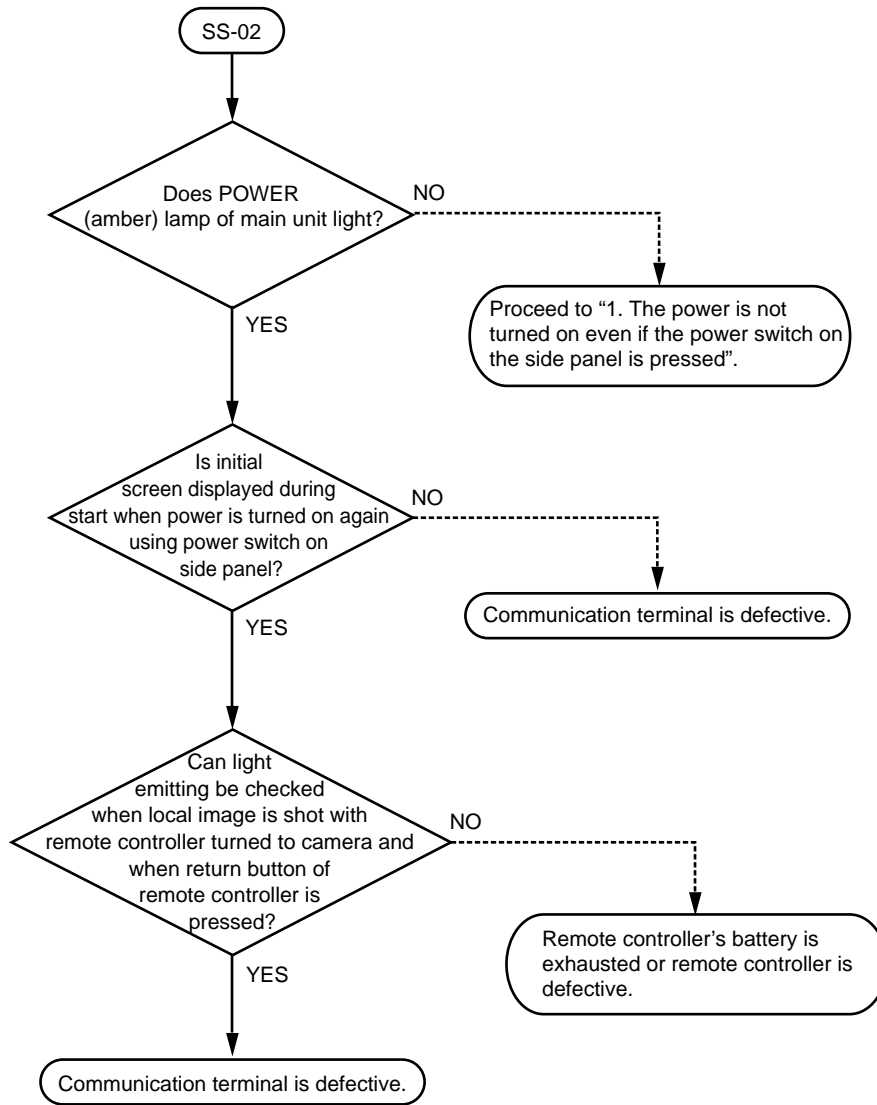
Trouble		
1.	The power is not turned on even if the power switch on the side panel is pressed.	SS-01
2.	The power is not turned on even if the power button of a remote controller is pressed.	SS-02
3.	The power is not turned on during automatic incoming. (ISDN)	SS-03
4.	The power is not turned on during automatic incoming. (LAN)	SS-04
5.	The power of a monitor television is not turned on during the power-on sequence.	SS-05
6.	The image from a camera is not displayed after the power is turned on.	SS-06
7.	No function can be operated using a remote controller.	SS-07
8.	The camera on the local side cannot be operated.	SS-08
9.	No line is connected. (ISDN)	SS-09
10.	No line is connected. (LAN)	SS-10
11.	No voice can be heard from the remote side after a line is connected.	SS-11
12.	No voice can be transmitted to the remote side after a line is connected.	SS-12
13.	No video input (object, AUX1, or AUX2) image can be displayed. The image of a camera is displayed.	SS-13
14.	An image on the remote side is not displayed after a line is connected.	SS-14
15.	An image cannot be transmitted to the remote side after a line is connected.	SS-15



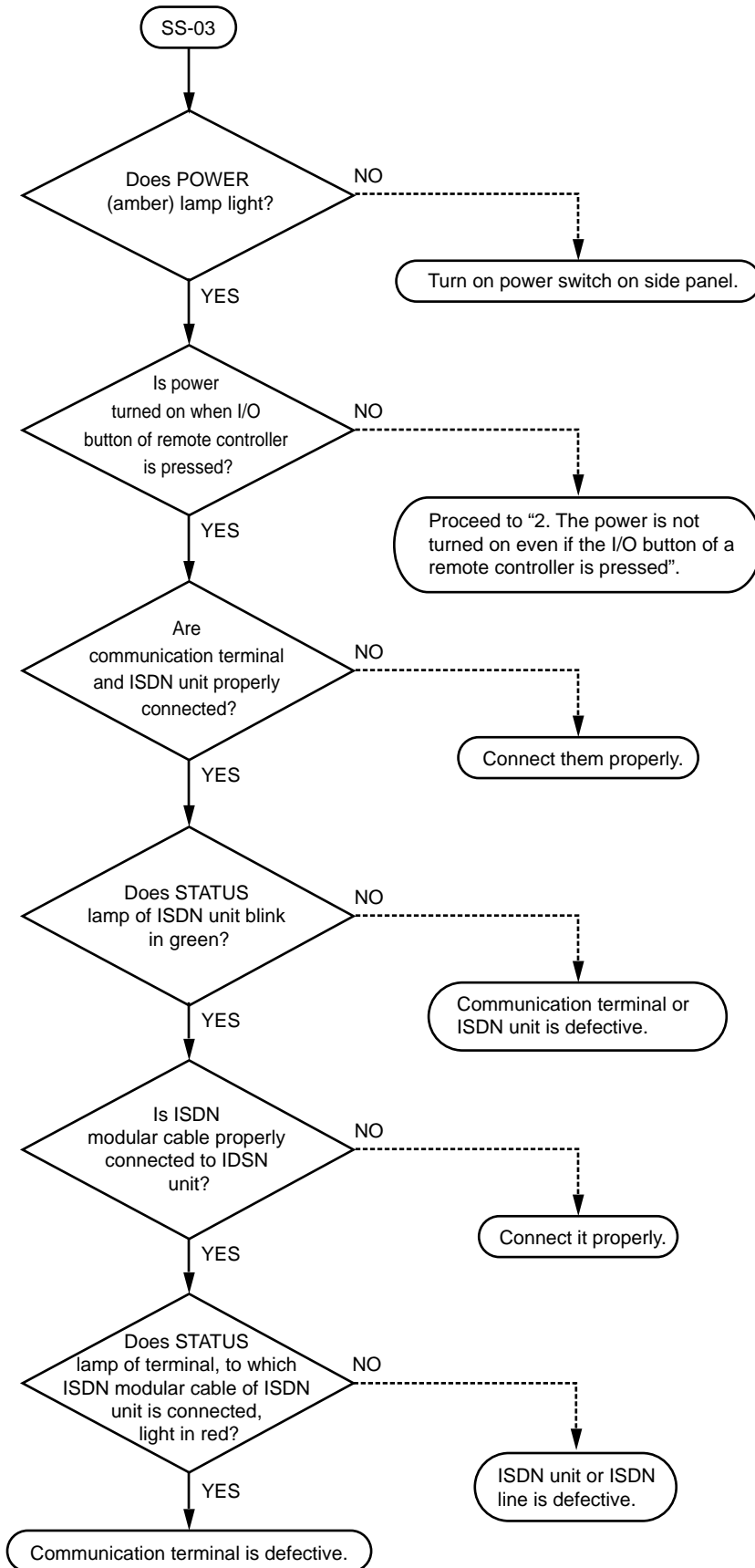
1. The power is not turned on even if the power switch on the side panel is pressed.



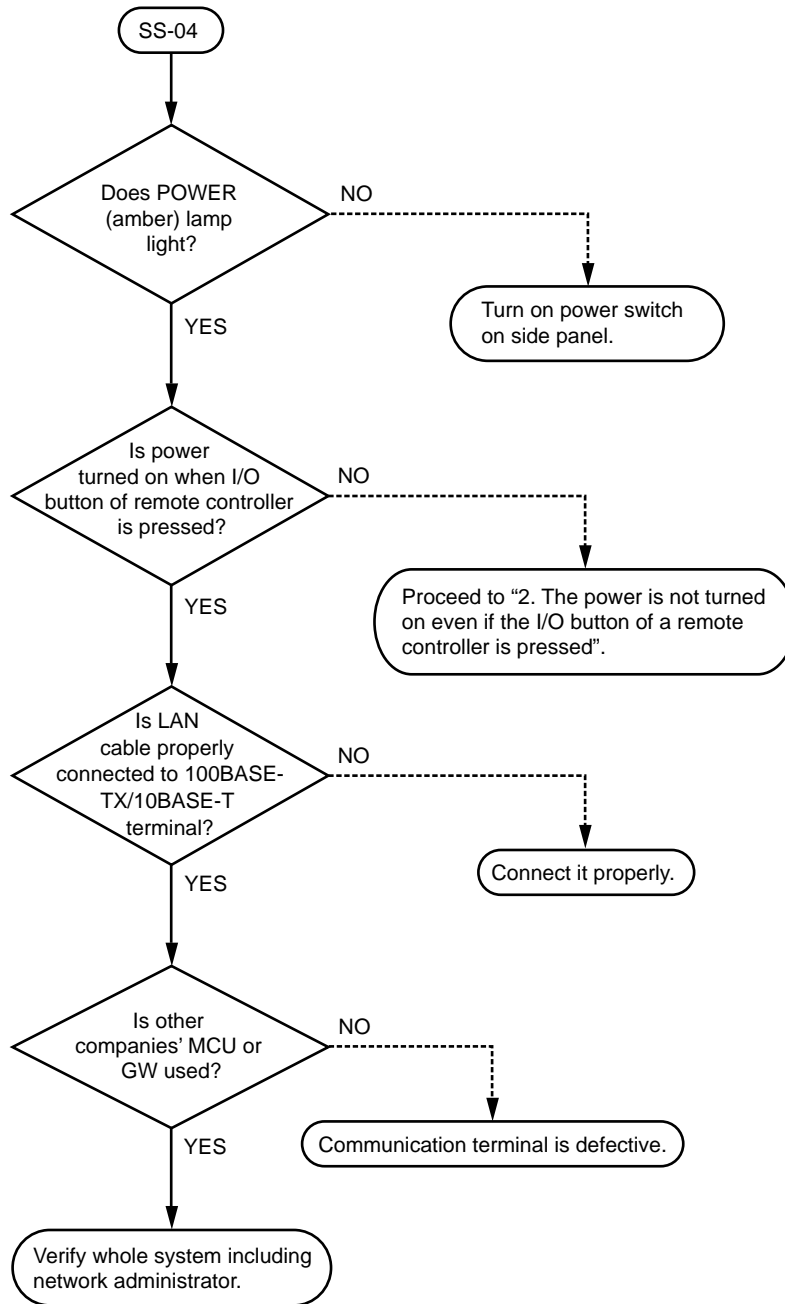
2. The power is not turned on even if the power button of a remote controller is pressed.



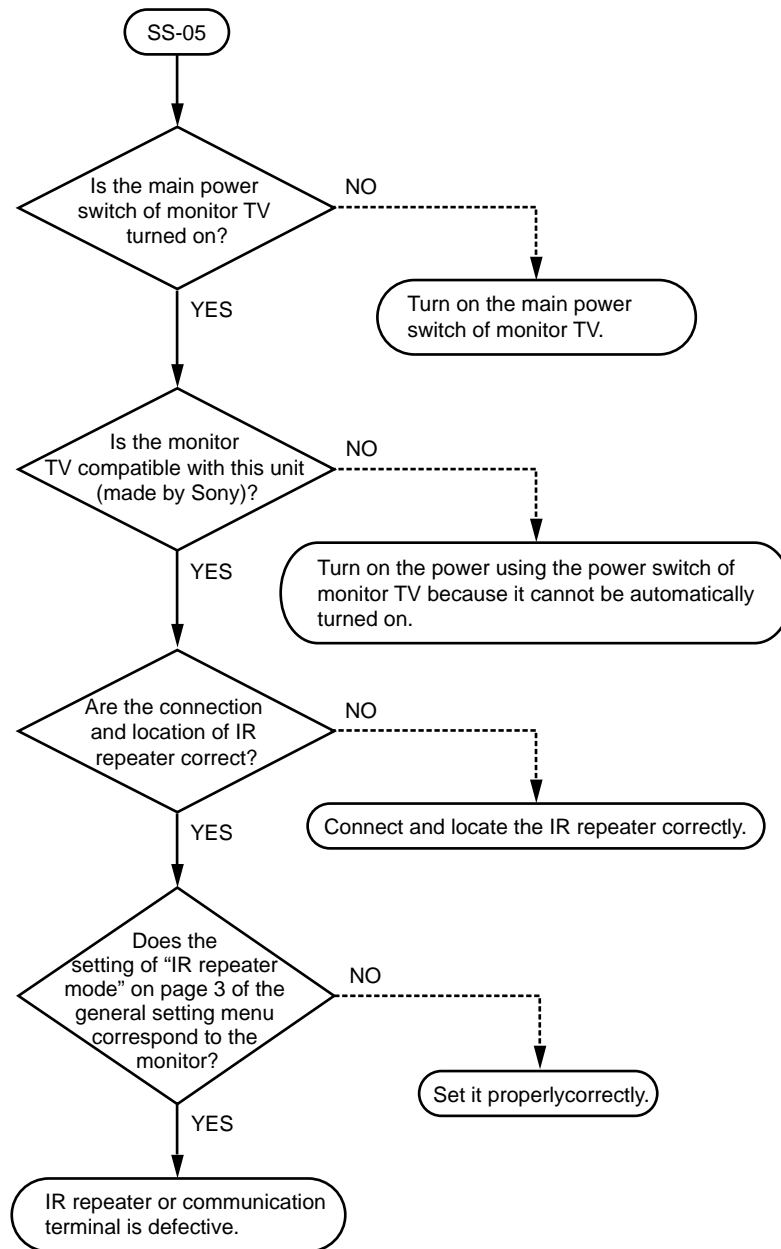
3. The power is not turned on during automatic incoming. (ISDN)



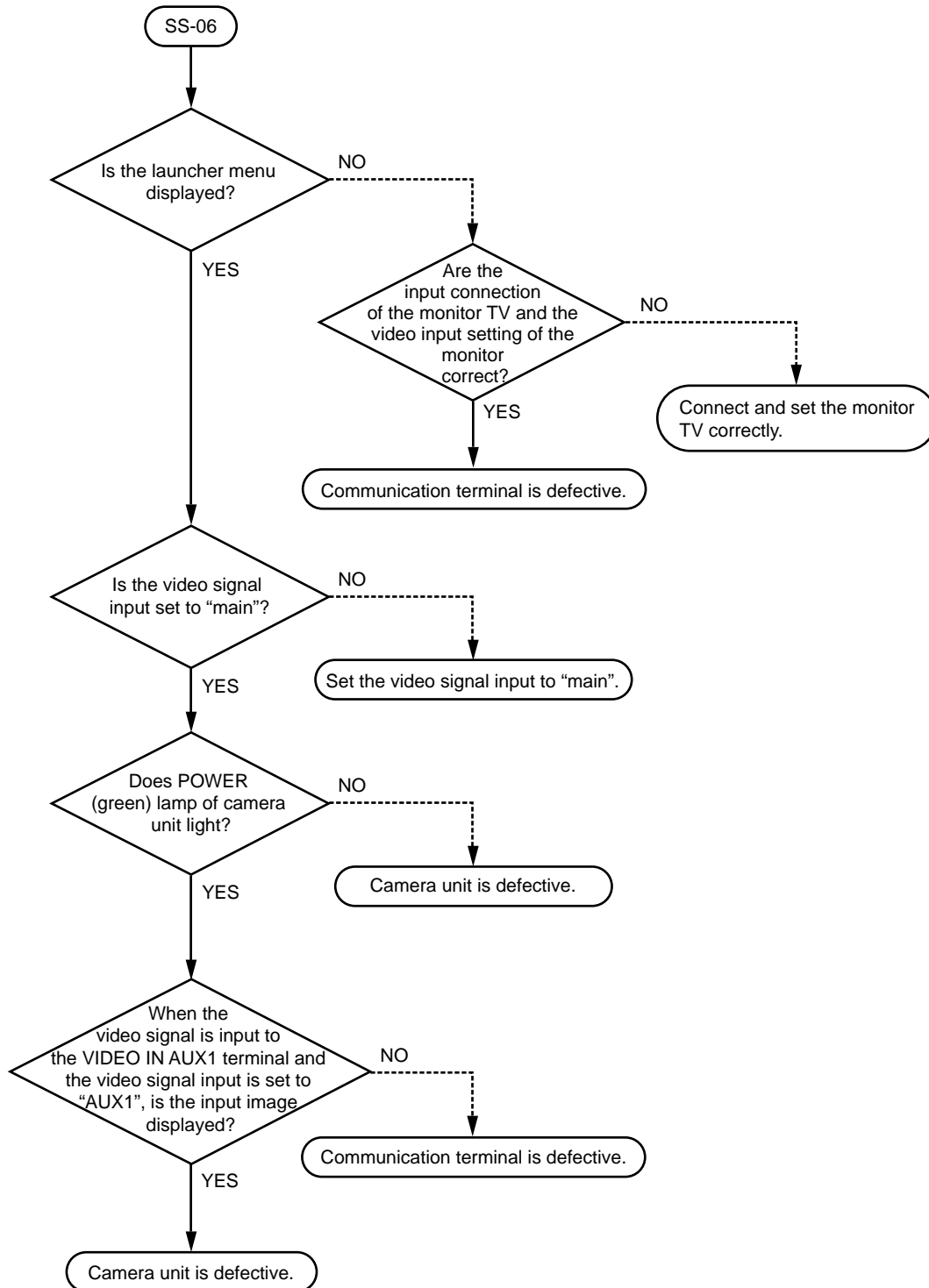
4. The power is not turned on during automatic incoming. (LAN)



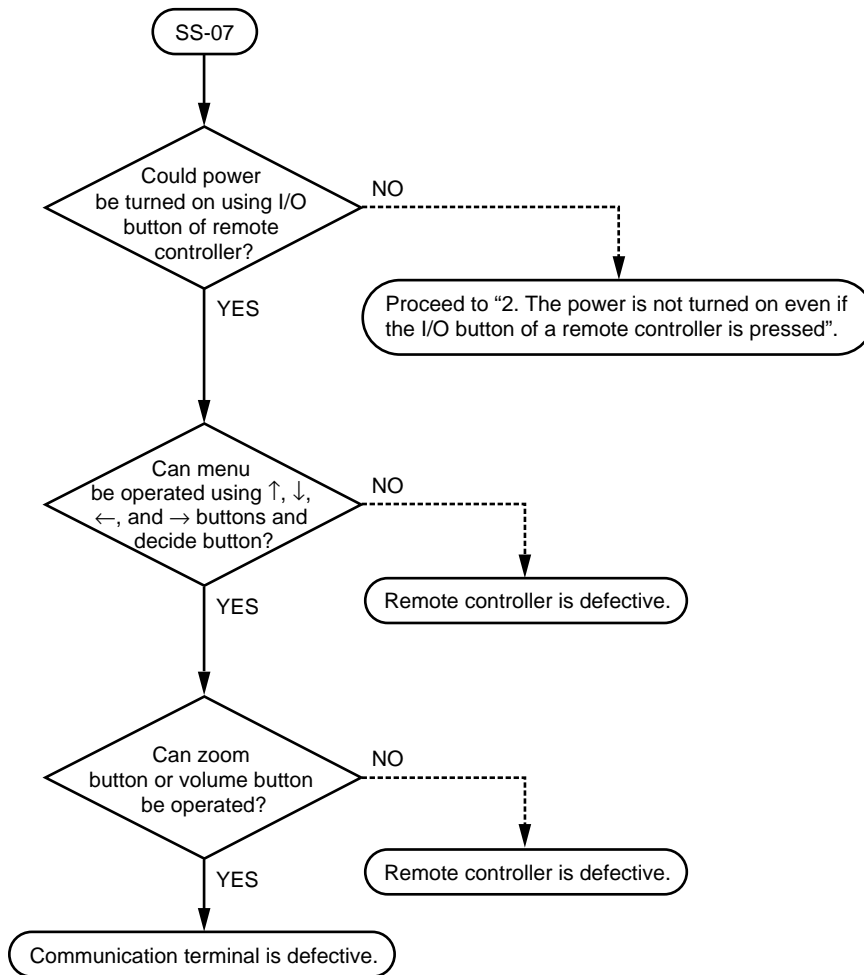
5. The power of a monitor television is not turned on during the power-on sequence.



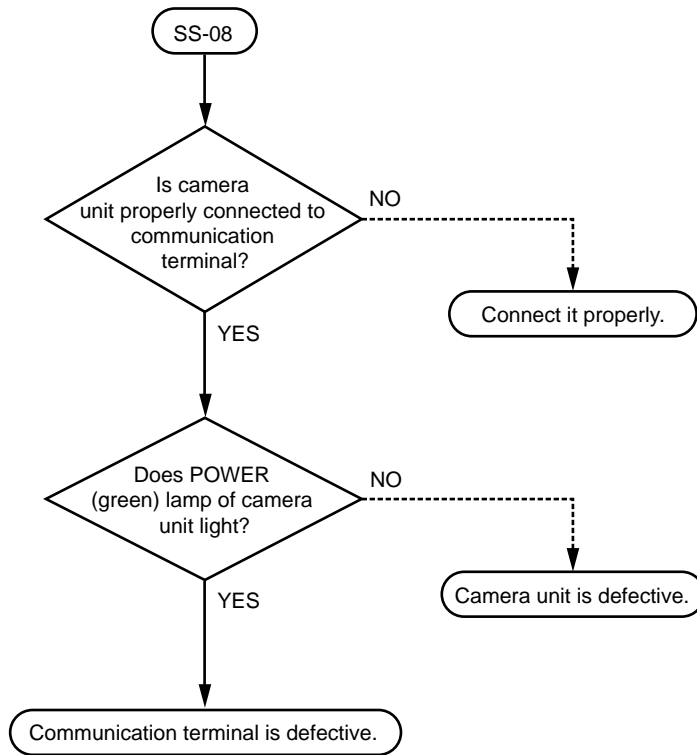
6. The image from a camera is not displayed after the power is turned on.



7. No function can be operated using a remote controller.

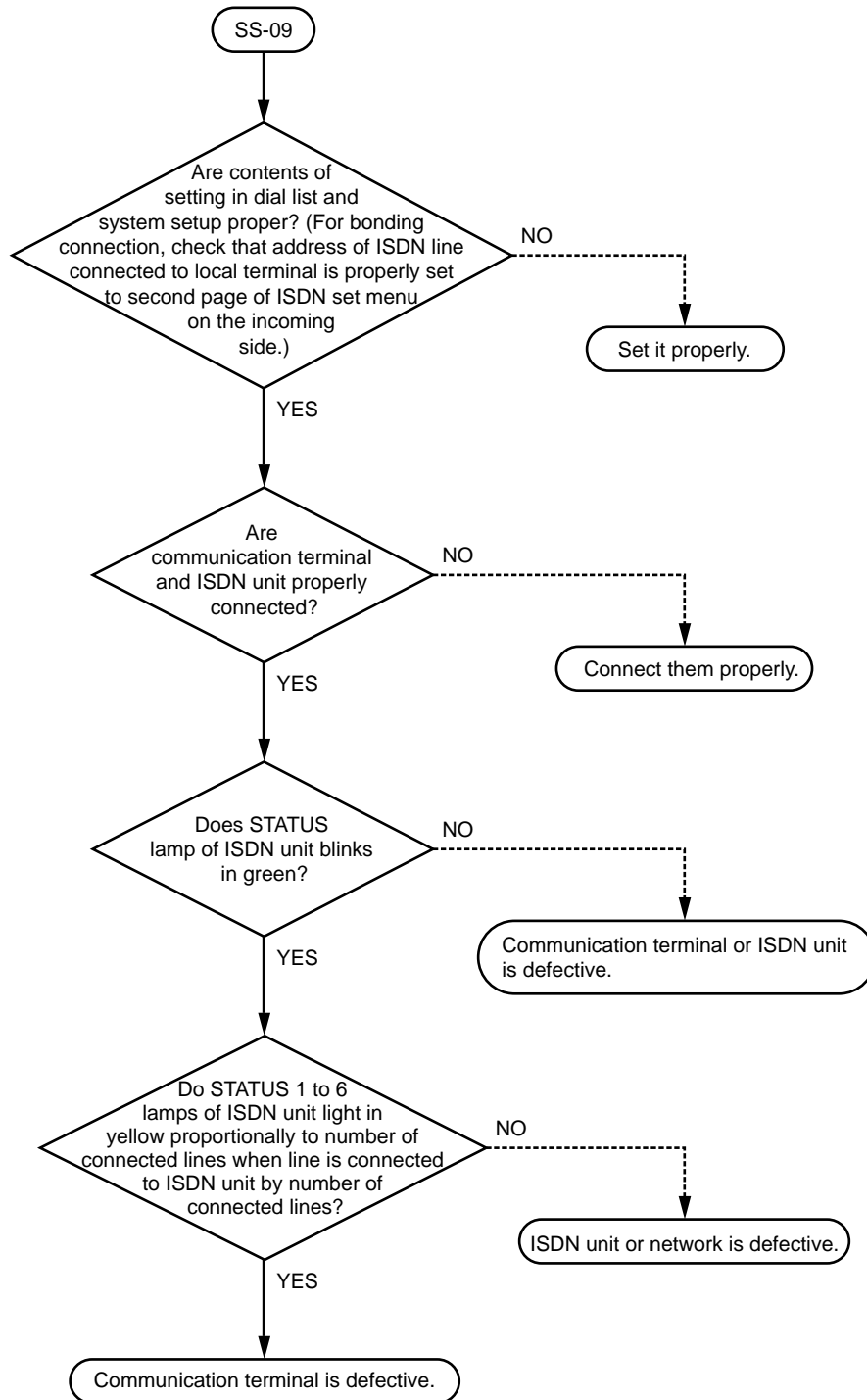


8. The camera on the local side cannot be operated.

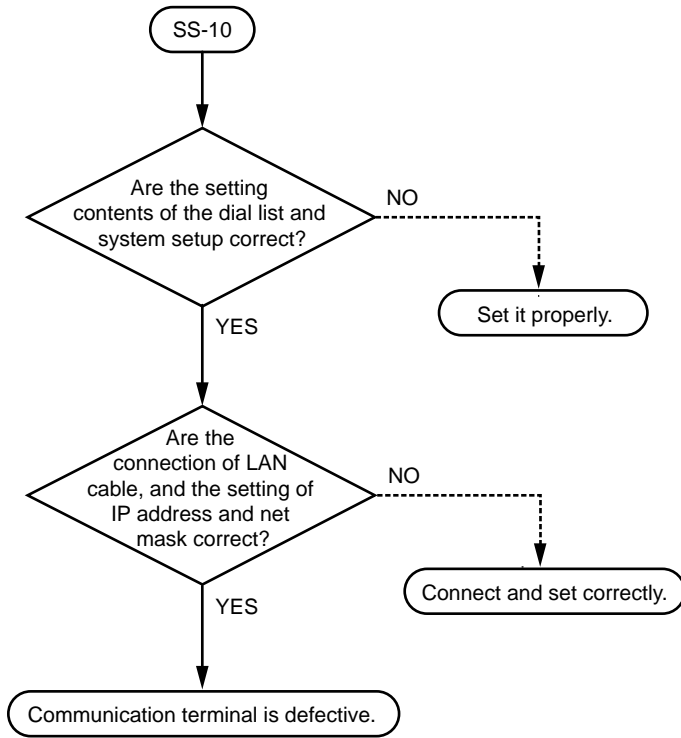




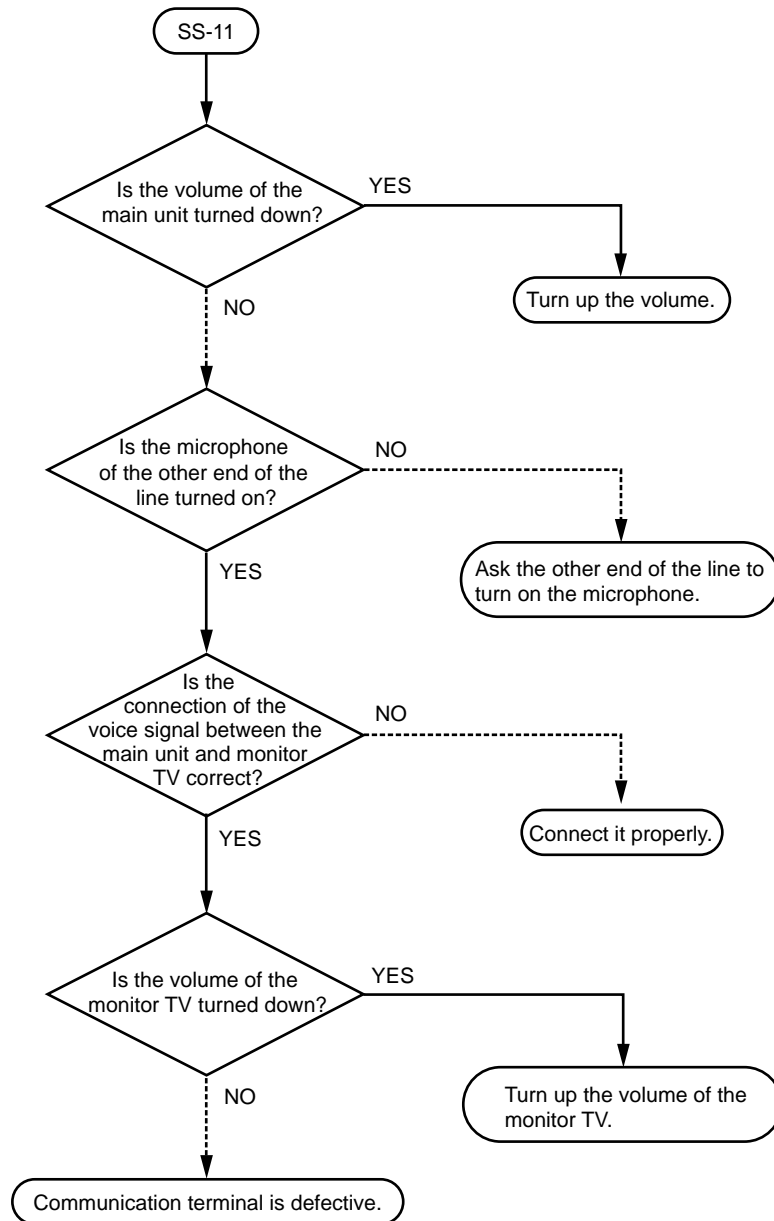
9. No line is connected. (ISDN)



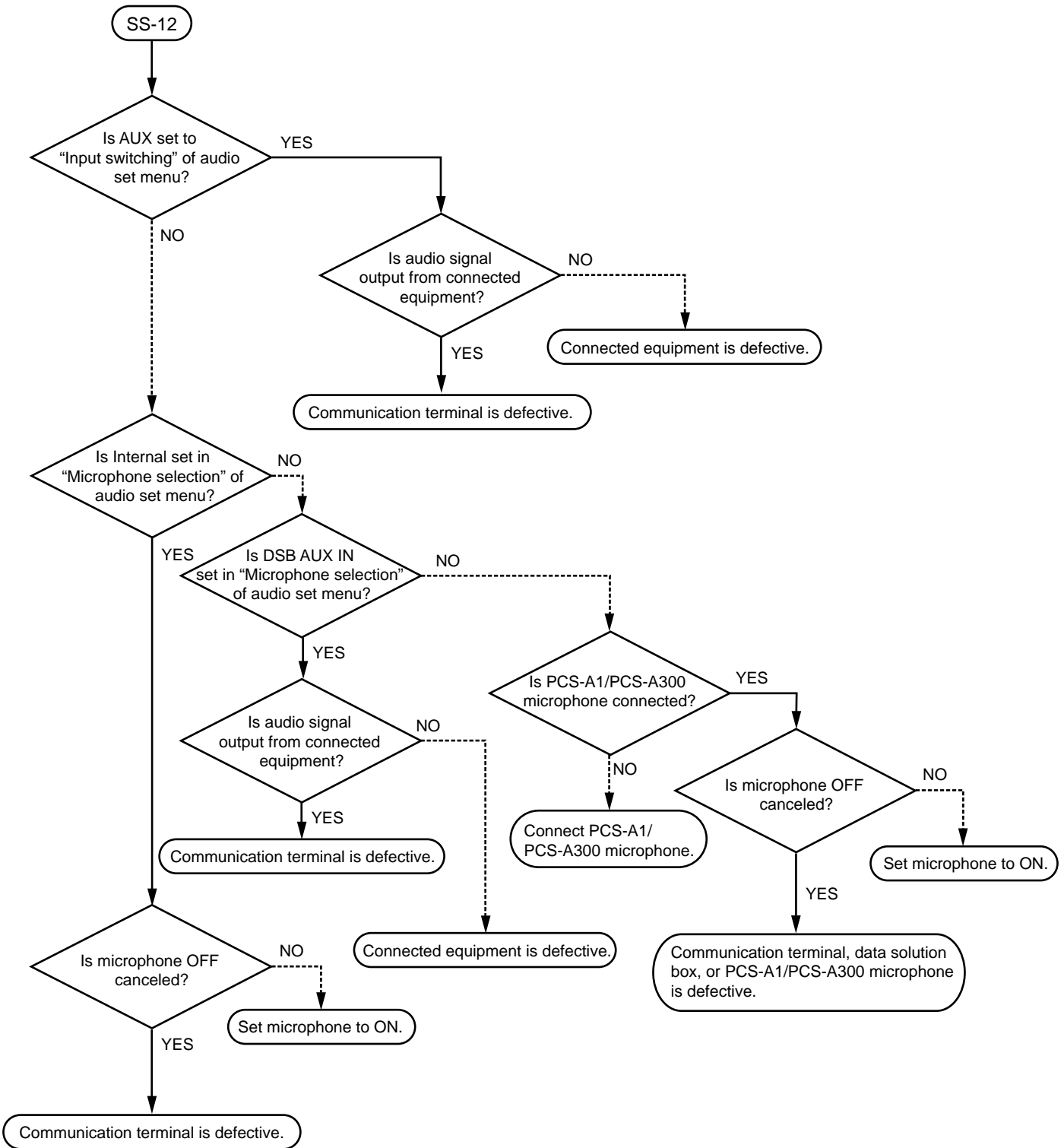
10. No line is connected. (LAN)



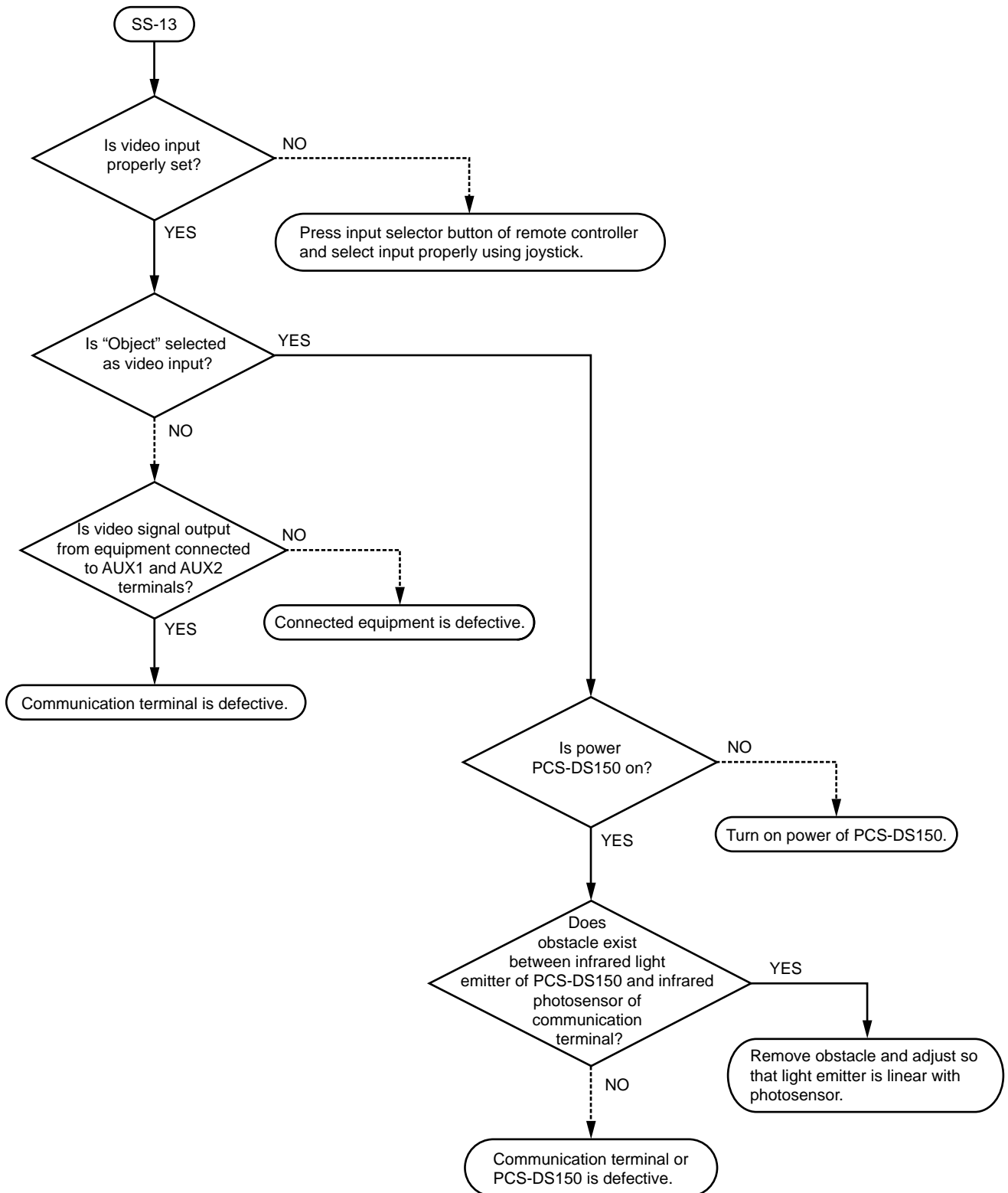
11. No voice can be heard from the remote side after a line is connected.



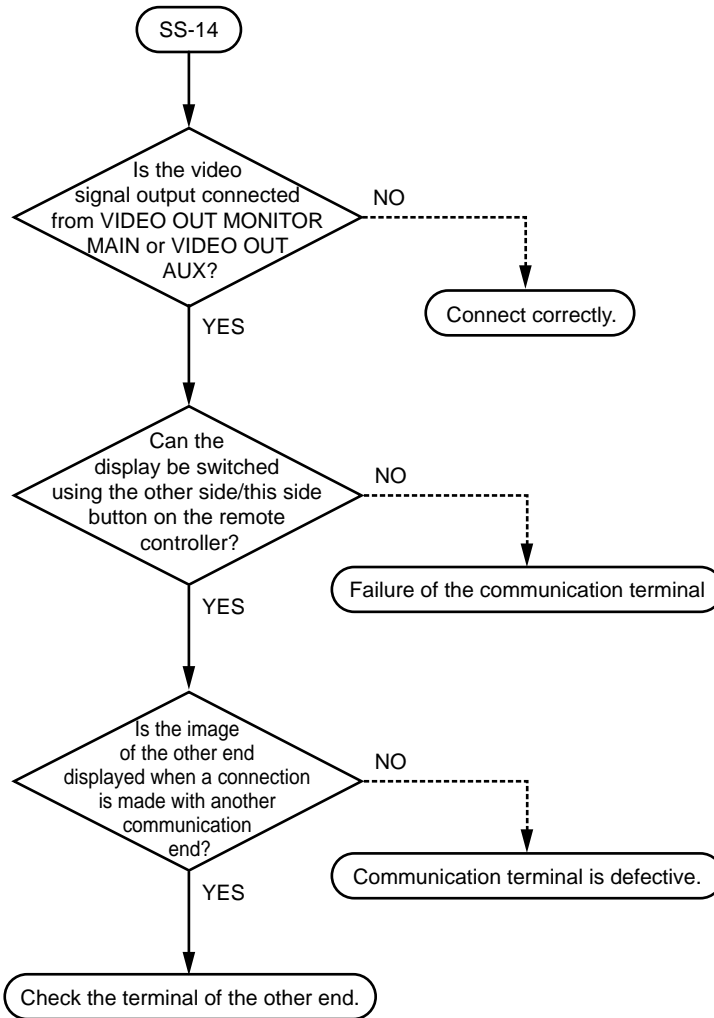
12. No voice can be transmitted to the remote side after a line is connected.



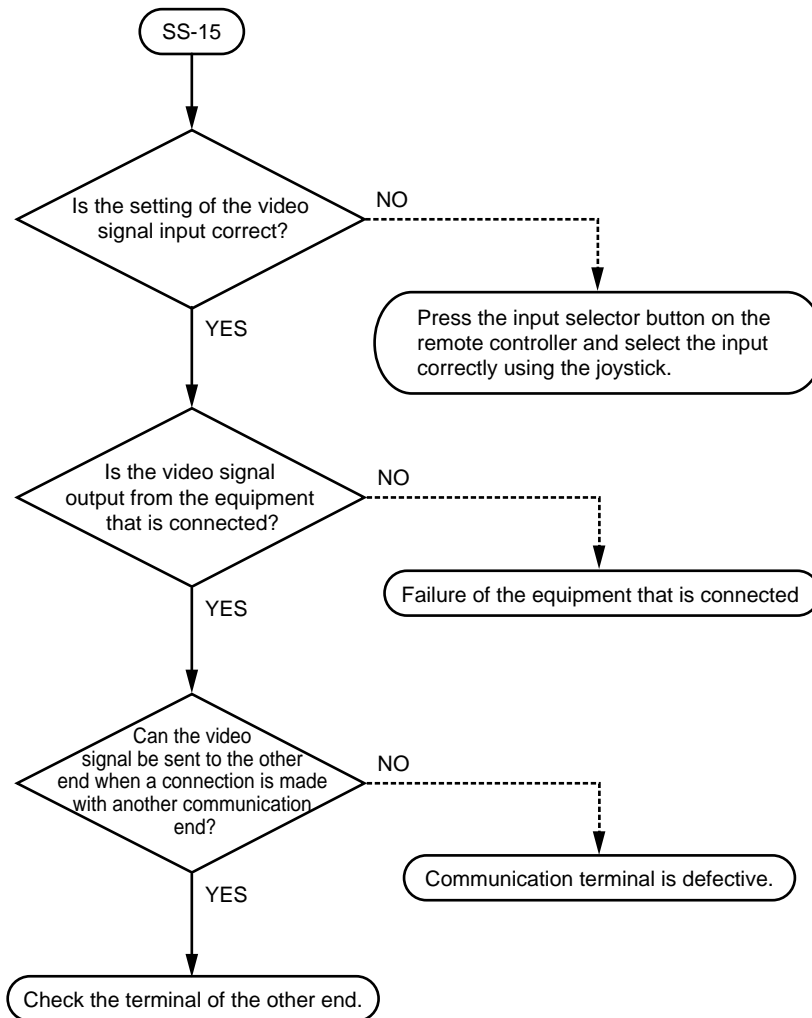
13. No video input (object, AUX1, or AUX2) image can be displayed. The image of a camera is displayed.



14. An image on the remote side is not displayed after a line is connected.



15. An image cannot be transmitted to the remote side after a line is connected.



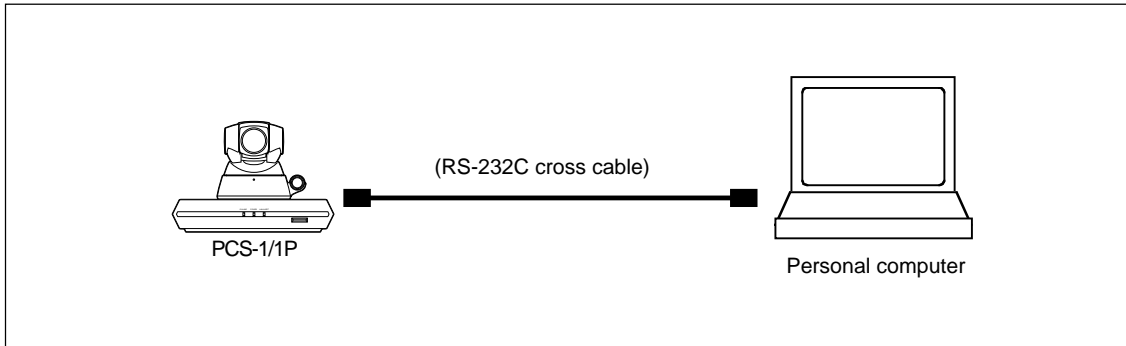
## 2-3. Operation Log

PCS1/1P has a function that outputs the internal processing history, between the connection and disconnection of a line, to the commercial PC connected to the outside and a function that saves the latest history of 1M byte in a memory stick (refer to the saving of system log on page 56).

### Operation log using commercial PC (1)

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

Start the power of PCS-1/1P and PC.



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

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

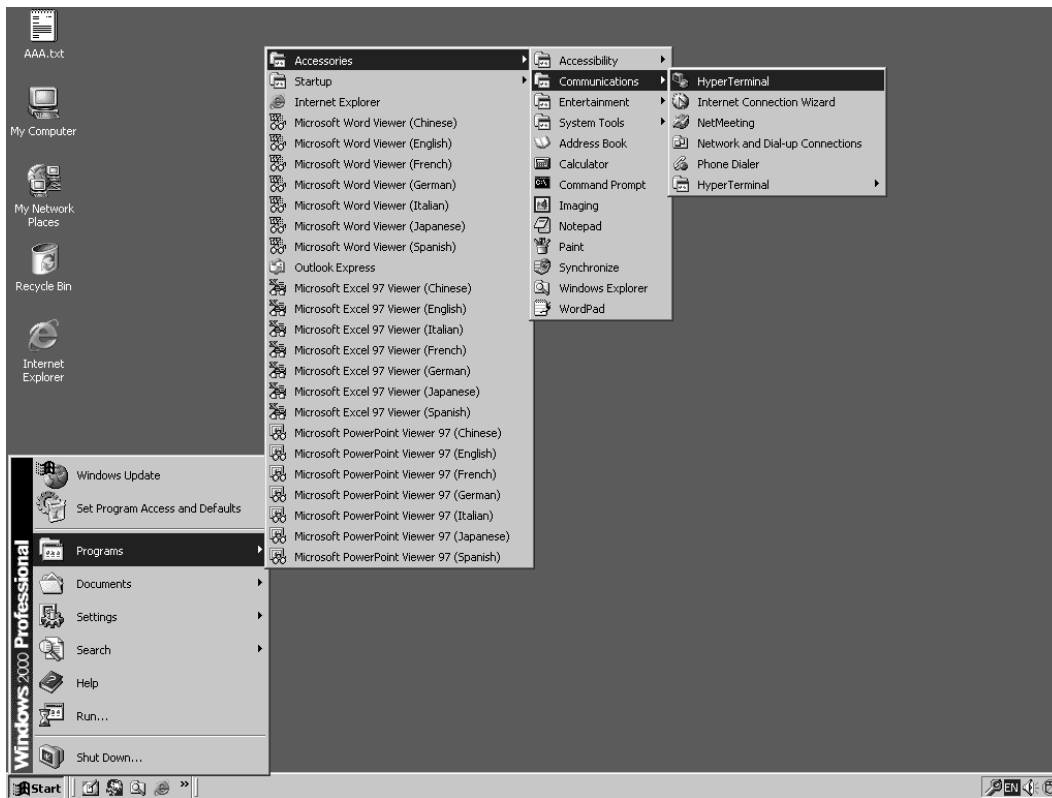
The procedure for HYPERTERM activation, communication format setting, and operation log execution is described on the next page and later.

- WINDOWS 95/98/2000/XP is the registered trademark of Microsoft Corporation.
- For WINDOWS 2000/XP, the procedure is “Start menu” → “Program” → “Accessory” → “Communication” → “Hyper terminal”.

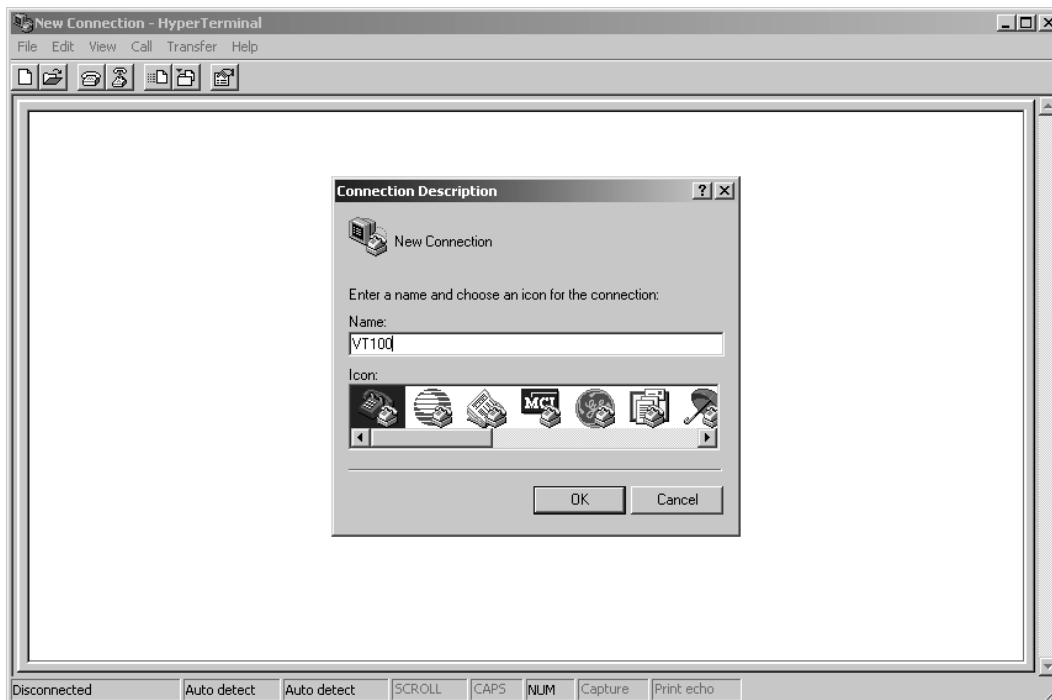
Note: In a hyper terminal, only 500 lines can be logged. For long-time logging, use other terminal emulators.



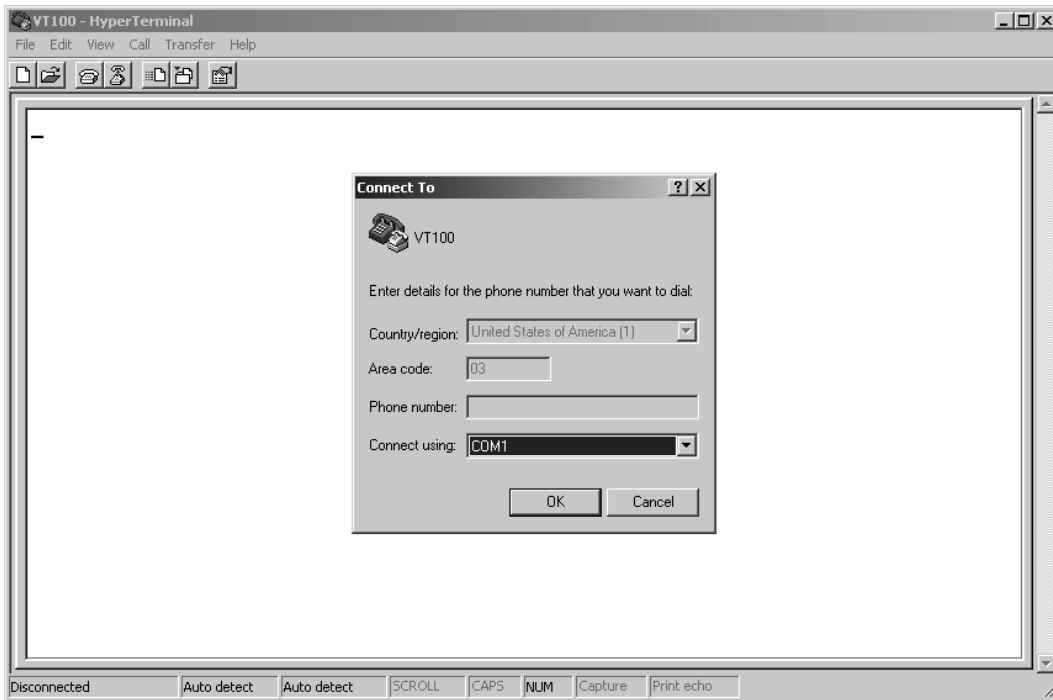
(1) Click “Start menu”, “Accessory”, “Communication”, and then “Hyper terminal”.



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

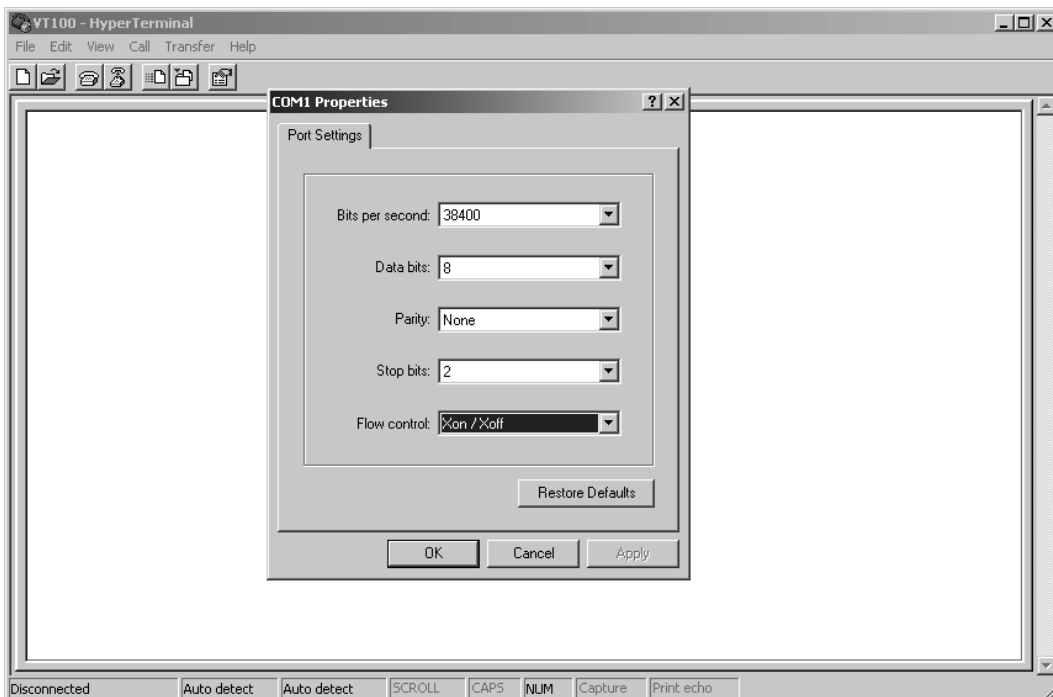


(3) Select “COM1” in “Connect To” and click the “OK” button.

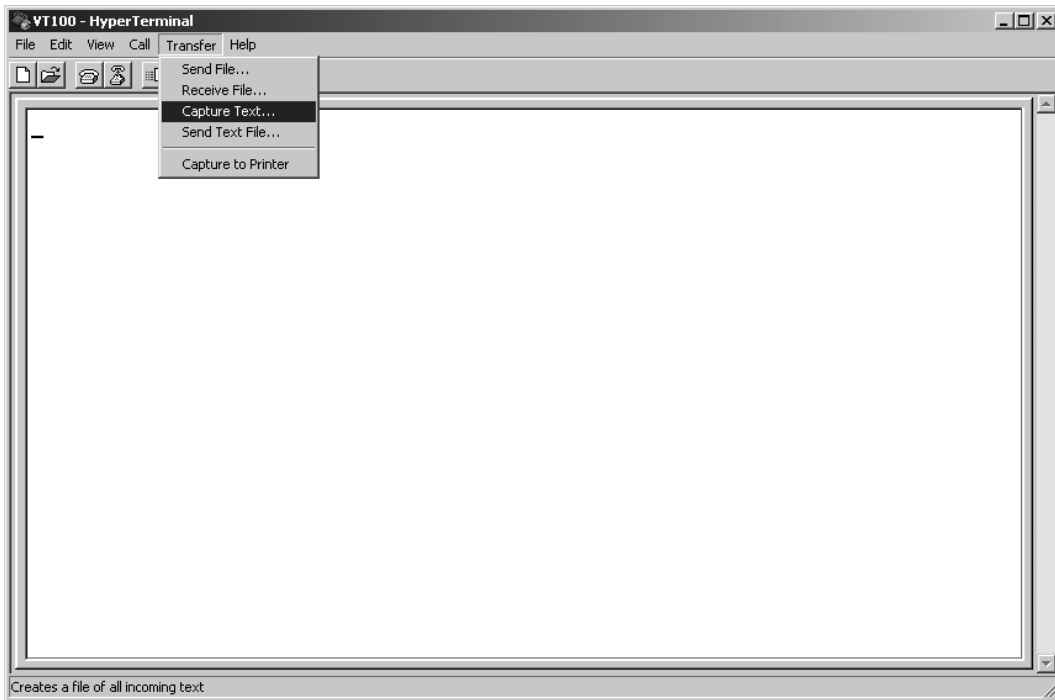


(4) Set the baud rate as described below and click the “OK” button.

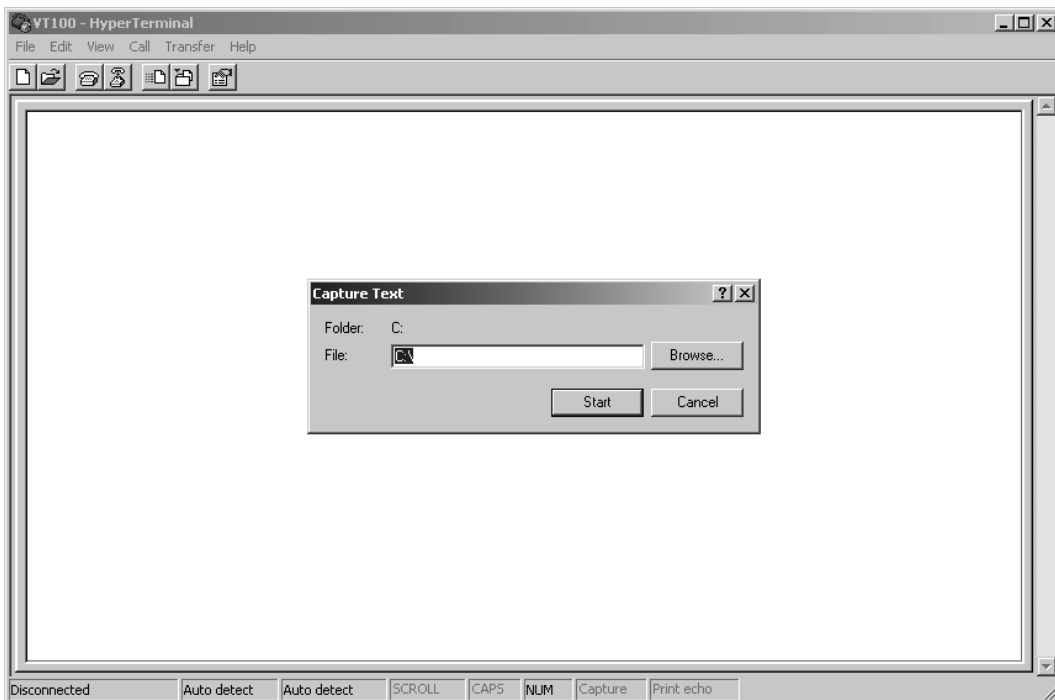
Bit/s: 38,400  
Data bit: 8  
Parity: None  
Stop bit: 2  
Flow control: Xon/Xoff



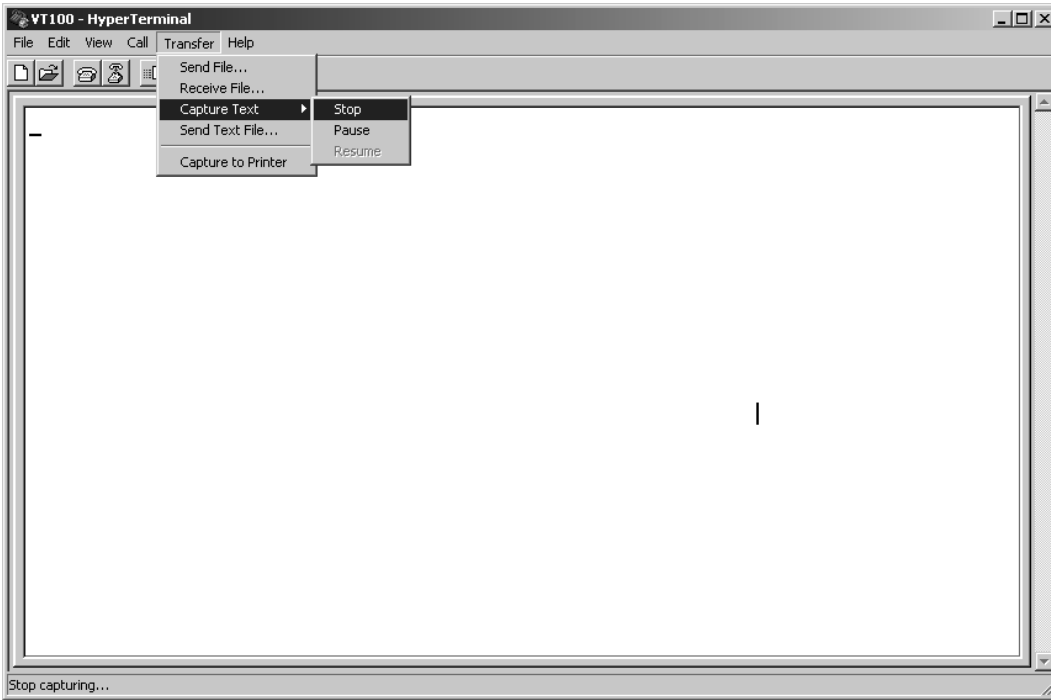
(5) Click “Capture Text” from a “Transfer” menu.



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



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



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

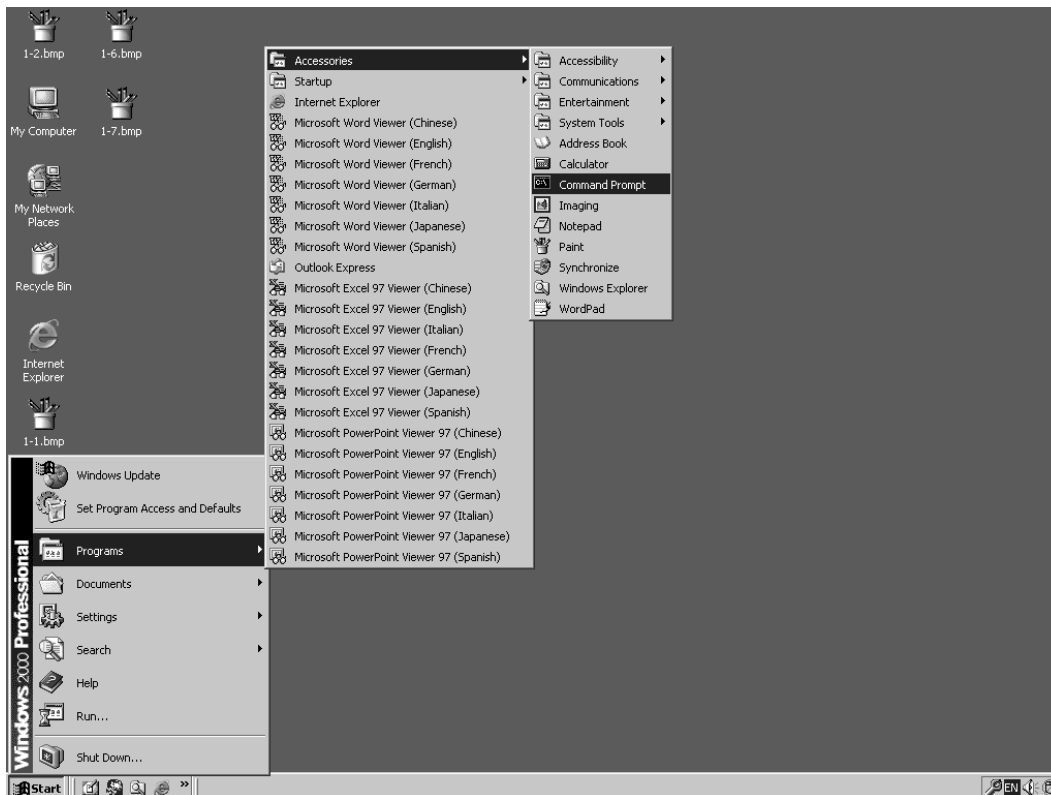
## Operation log using commercial PC (2)

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

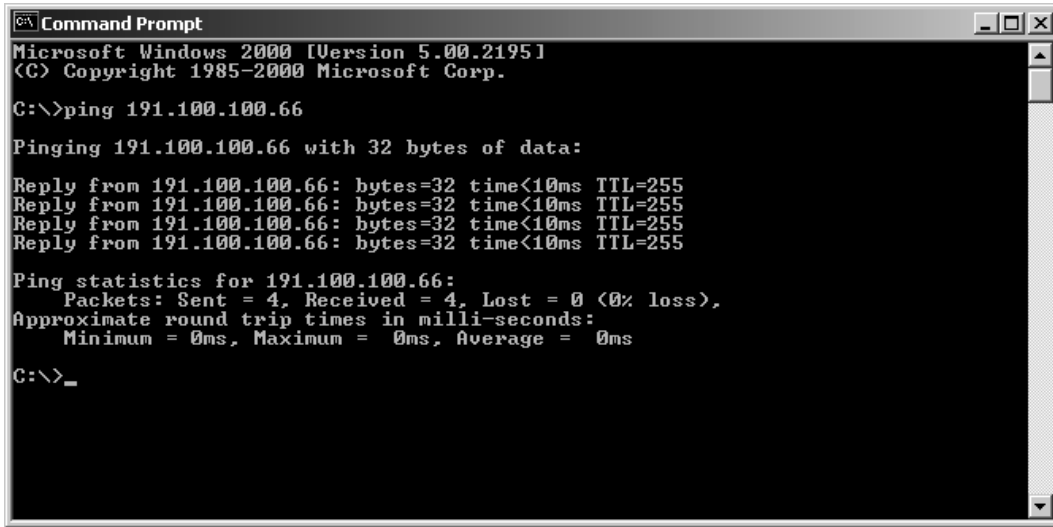
Even when PCS-1/1P is not connected to LAN, a log can be extracted from PCS-1/1P using telnet by connecting the 100BASE-TX/10BASE-T terminal on the rear panel of PCS-1/1P and the LAN terminal of PC directly using a LAN cross cable.

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

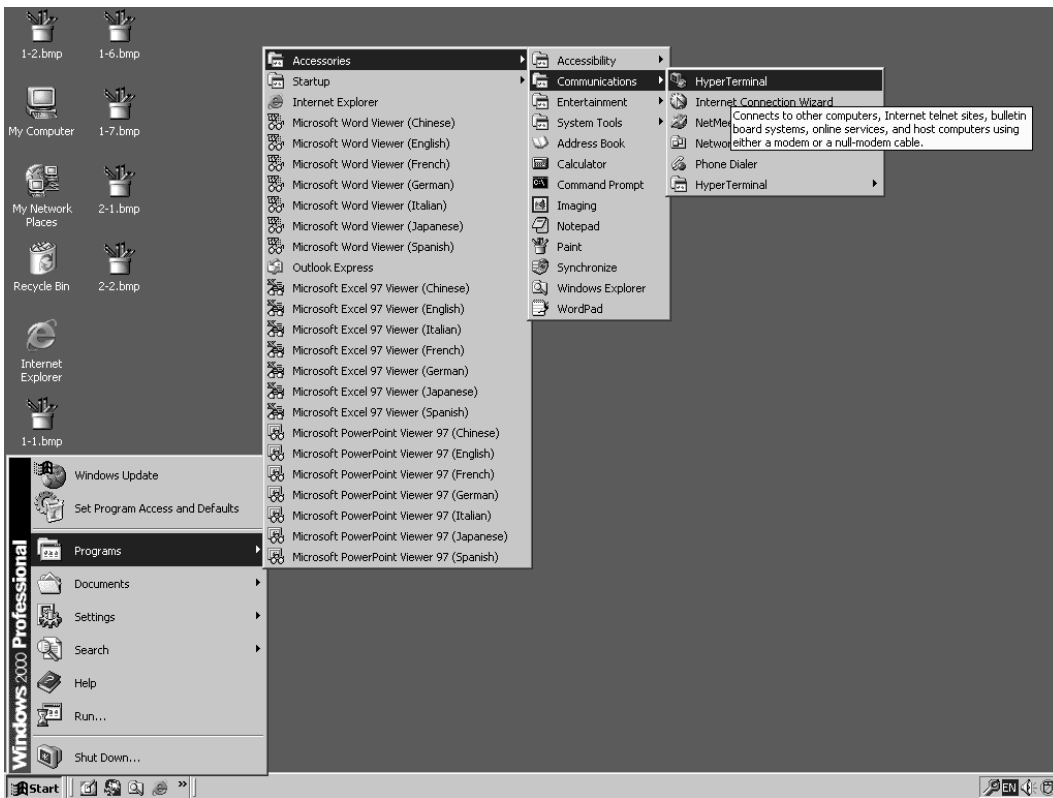
(1) Click “Command prompt” from “Start menu”.



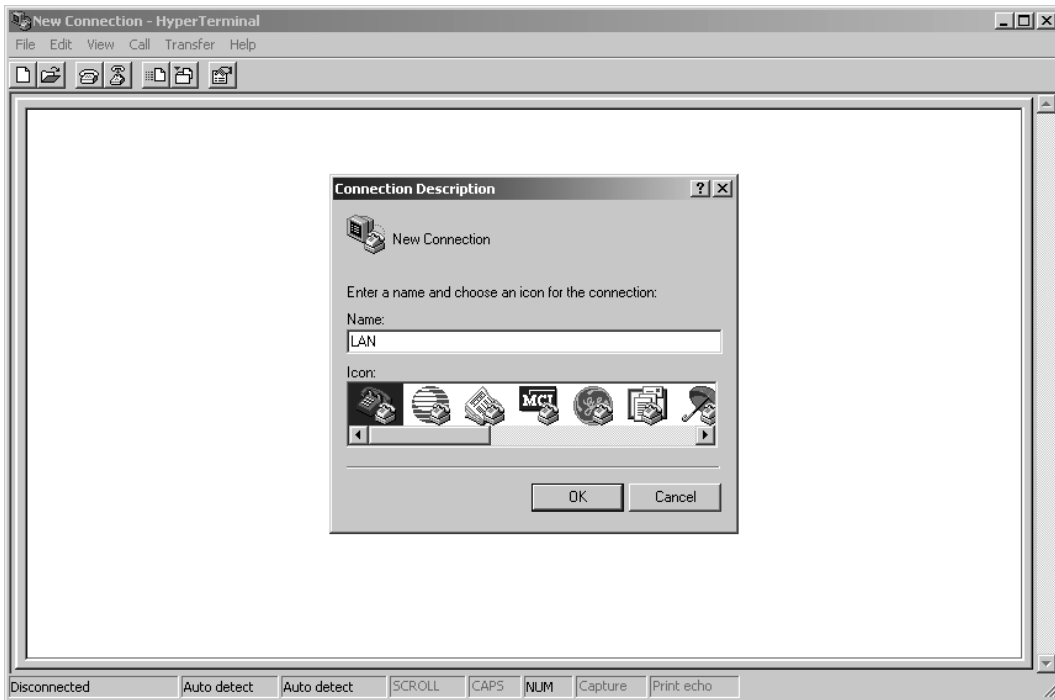
- (2) Enter ping, and then enter the IP address of PCS-1/IP after spacing out. Press the [Enter] key and confirm that a reply is returned. After confirmation, close the command prompt.



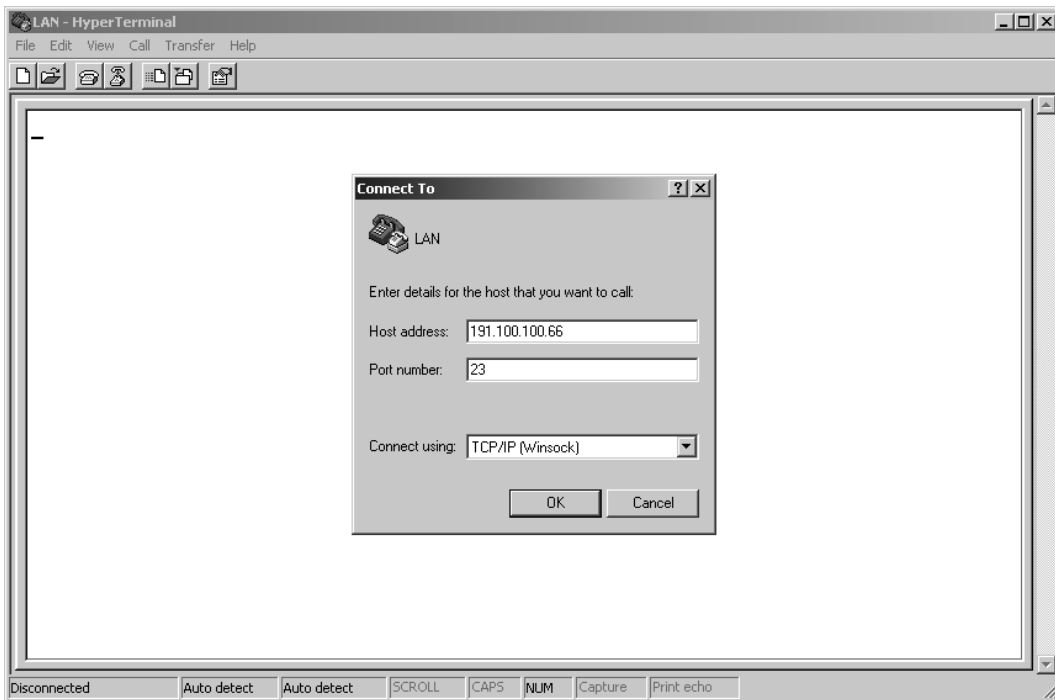
- (3) Click “Start menu”, “Accessory”, “Communication”, and then “Hyper terminal”.



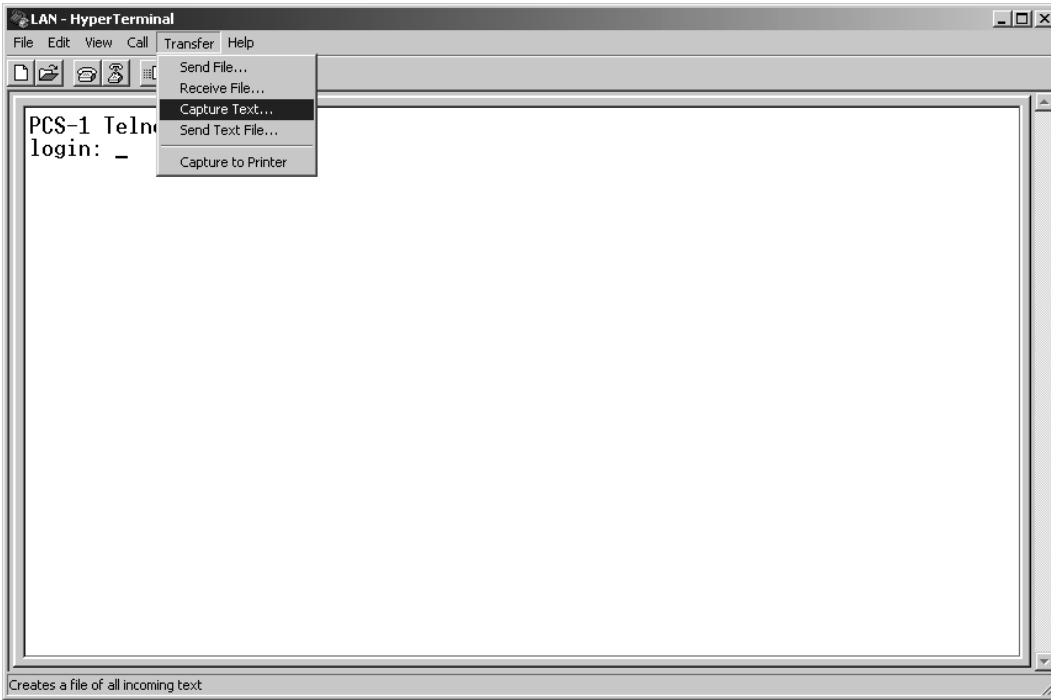
(4) Enter “LAN” in “Name:”, select any icon, and click the “OK” button.



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

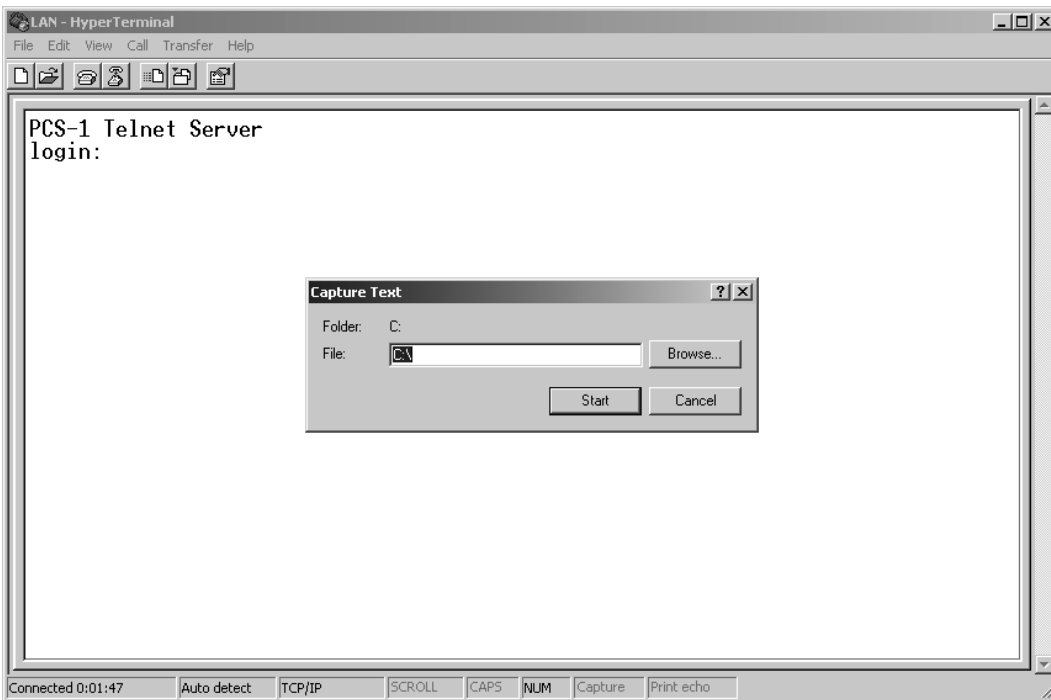


(6) Click “Capture Text” from a “Transfer” menu.



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

Example of name: PCS-1LOG.txt



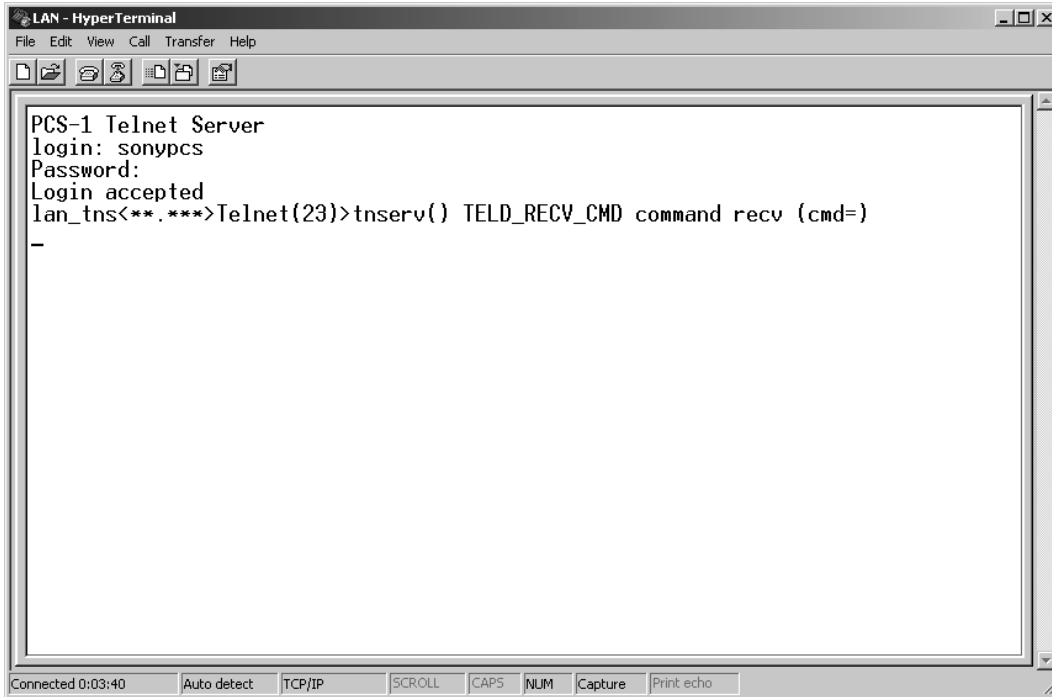


(8) The message below is displayed on the hyper terminal screen.

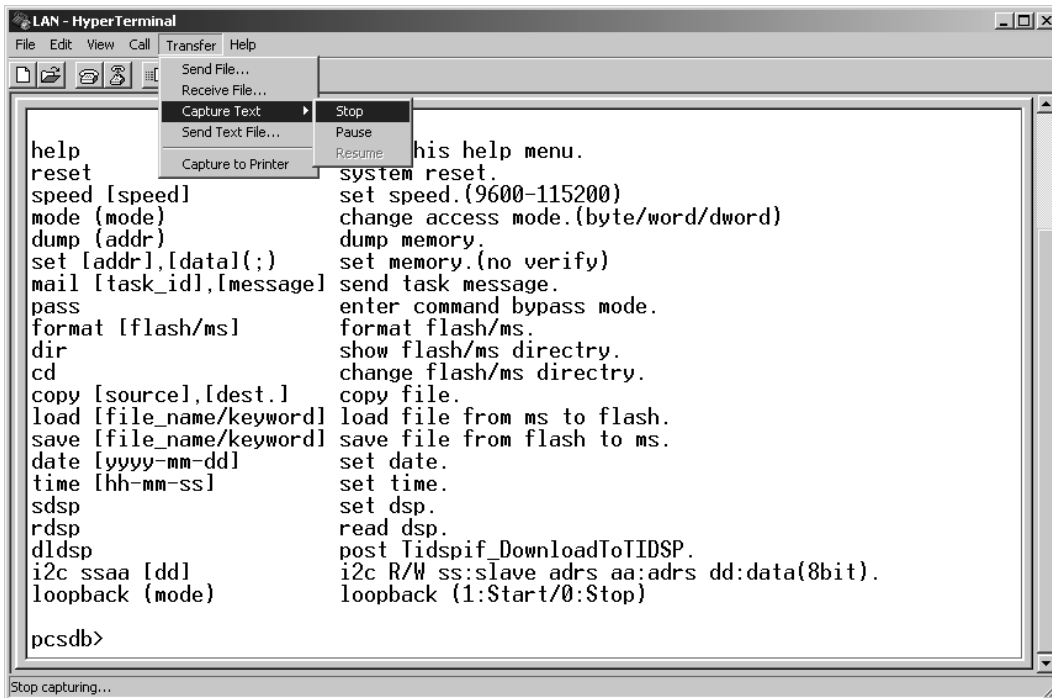
PCS-1 Telnet Server

login:

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



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

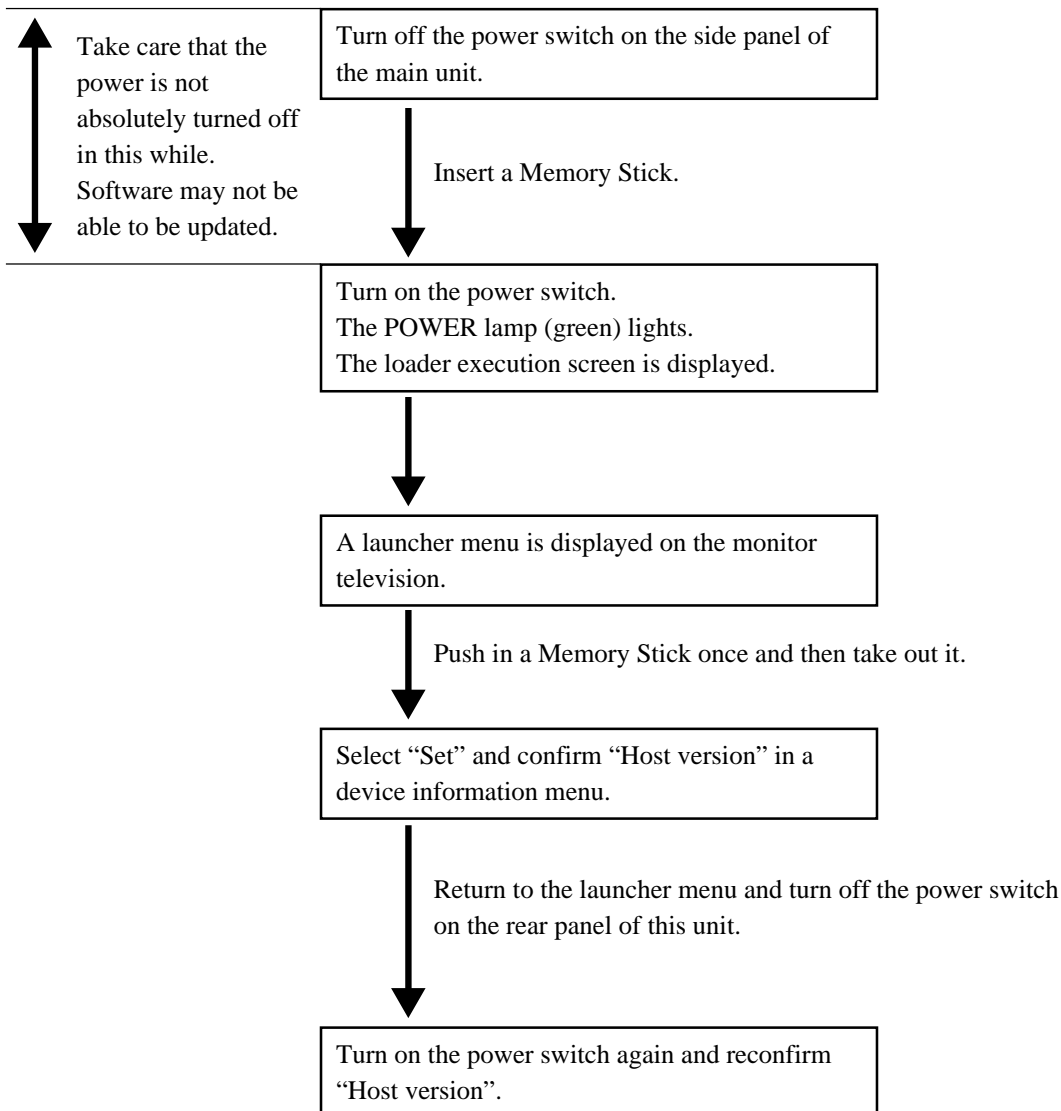
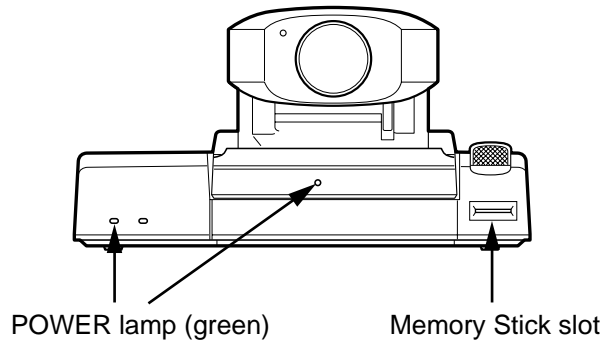


(10) Double-click the extracted log file to view a log.

## 2-4. Updating of Software

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

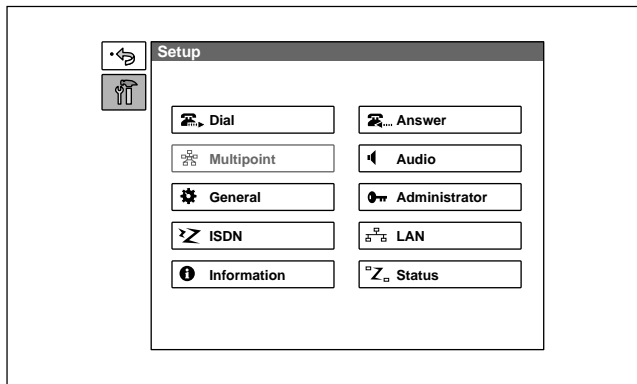
### 2-4-1. Updating Using Memory Stick



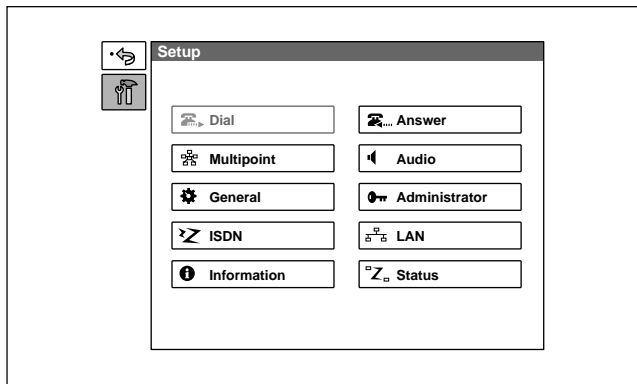
## 2-5. Service Mode

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

1. Continuously press the menu button of a remote controller and display a “Set” menu including “Outgoing” and “Incoming”.



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

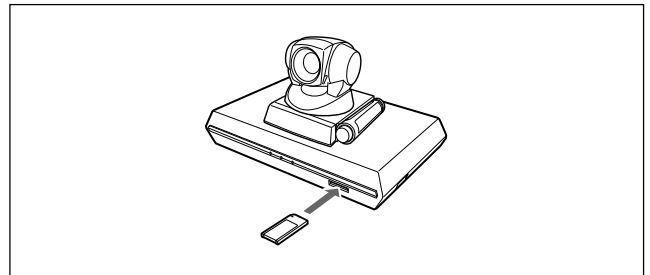


### Note

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

**For saving of an address book, loading of an address book, saving of application, saving of a communication log, saving of a system log, saving of setting, and loading of setting**

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



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

**For erasure of an address book and setting**

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

**For system reset**

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

### For loading of application

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

#### Note

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

### For command input

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

#### Notes

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

### To stop setting

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

#### Note

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

### Contents of functions

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

#### Command list

Command	Contents
100F	Sets a LAN interface to the 100BASE full-duplex mode.
100H	Sets a LAN interface to the 100BASE half-duplex mode.
10F	Sets a LAN interface to the 10BASE full-duplex mode.
10H	Sets a LAN interface to the 10BASE half-duplex mode.
TOS1 to TOS255	Sets the Type Of Service (TOS) bit value to a transmission packet. Consult the network administrator for the set value.
Blank (The input value above is cleared.)	Set using an initial value. The LAN interface mode is Auto Negotiation. Reception packet loss indicator display ON TOS0

#### Notes

- To set two or more commands, put a one-character blank between the commands.
- Set only one type of LAN interface. If not, the LAN interface does not operate normally.
- The enabled command can be confirmed in a command column at all times.
- Do not enter commands other than shown in a command list. The internal operation mode may be changed in this case.

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

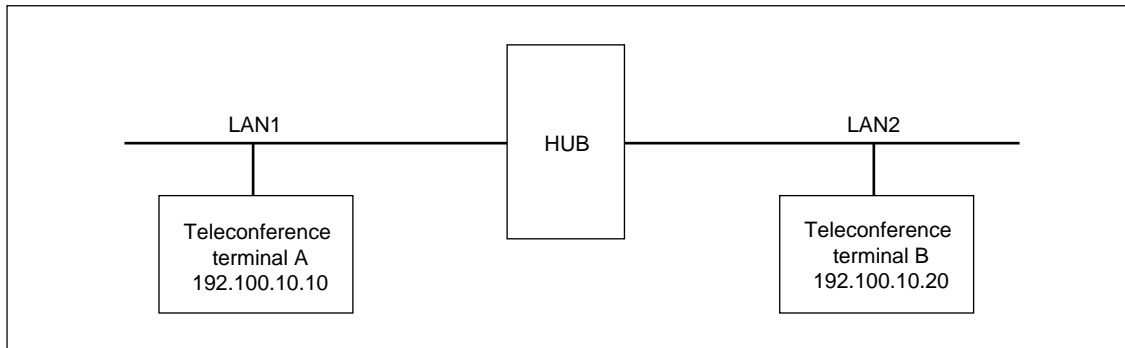


## Section 3

### Compatibility in LAN Network

#### 3-1. Connection via Hub

##### Example of system



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

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

DHCP mode:	OFF
Host name:	Enter any name.
IP address:	Local IP address (192.100.10.20)
Network mask:	Depends on a network. Usually, set to 255.255.255.0.
Gateway address:	Blank
DNS address:	Blank
Gatekeeper used:	OFF
Gatekeeper address:	Blank
User name:	Blank
User number:	Blank
SNMP service:	OFF
Trap transmission destination:	Blank
Community name:	public
Description of device:	Videoconference Device
Installation place:	Blank
Contact of administrator:	Blank
NAT setting:	OFF
NAT address:	Blank
Packet retransmission request:	Blank
Optimum rate control:	OFF (Set to ON when a packet loss occurs frequently.)
Port number used:	Specified value (Set to "User setting" 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 "User setting".)
UDP port number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "User setting".)
- Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 192.100.10.20.

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

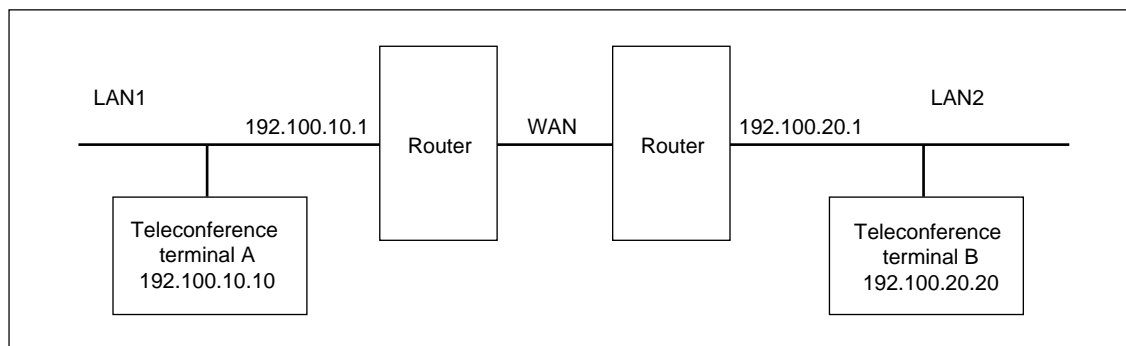
- DHCP mode: OFF
- Host name: Enter any name.
- IP address: Local IP address (192.100.10.10)
- Network mask: Depends on a network. Usually, set to 255.255.255.0.
- Gateway address: Blank
- DNS address: Blank
- Gatekeeper used: OFF
- Gatekeeper address: Blank
- User name: Blank
- User number: Blank
- SNMP service: OFF
- Trap transmission destination: Blank
- Community name: public
- Description of device: Videoconference Device
- Installation place: Blank
- Contact of administrator: Blank
- NAT setting: OFF
- NAT address: Blank
- Packet retransmission request: Blank
- Optimum rate control: OFF (Set to ON when a packet loss occurs frequently.)
- Port number used: Specified value (Set to "User setting" 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 "User setting".)
- UDP port number: 49152 (Enter the port number specified by the network administrator when the port number used is set to "User setting".)

4. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 192.100.10.20.
5. Enter LAN in the address book of teleconference terminal A for a line type, IP address 192.100.10.20 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B in the address book and initiate a call. Or set LAN for a line type and IP address 192.100.10.20 of teleconference terminal B for an IP address by dialing, and then initiate a call.



## 3-2. Connection via Router

### Example of system



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

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

DHCP mode:	OFF
Host name:	Enter any name.
IP address:	Local IP address (192.100.20.20)
Network mask:	Depends on a network. Usually, set to 255.255.255.0.
Gateway address:	192.100.20.1
DNS address:	Blank
Gatekeeper used:	OFF
Gatekeeper address:	Blank
User name:	Blank
User number:	Blank
SNMP service:	OFF
Trap transmission destination:	Blank
Community name:	public
Description of device:	Videoconference Device
Installation place:	Blank
Contact of administrator:	Blank
NAT setting:	OFF
NAT address:	Blank
Packet retransmission request:	Blank
Optimum rate control:	OFF (Set to ON when a packet loss occurs frequently.)
Port number used:	Specified value (Set to "User setting" 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 "User setting".)
UDP port number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "User setting".)
- Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 192.100.20.20.

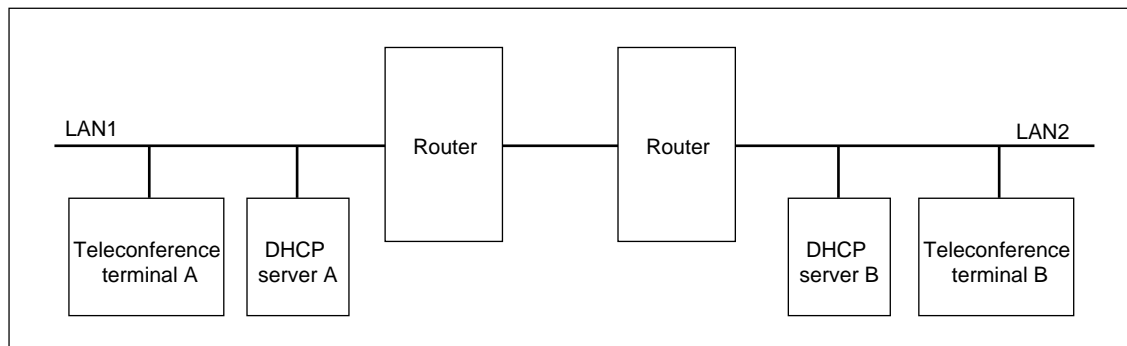
3. The LAN set menu of teleconference terminal A is set as described below.

- DHCP mode: OFF
- Host name: Enter any name.
- IP address: Local IP address (192.100.10.10)
- Network mask: Depends on a network. Usually, set to 255.255.255.0.
- Gateway address: 192.100.10.1
- DNS address: Blank
- Gatekeeper used: OFF
- Gatekeeper address: Blank
- User name: Blank
- User number: Blank
- SNMP service: OFF
- Trap transmission destination: Blank
- Community name: public
- Description of device: Videoconference Device
- Installation place: Blank
- Contact of administrator: Blank
- NAT setting: OFF
- NAT address: Blank
- Packet retransmission request: Blank
- Optimum rate control: OFF (Set to ON when a packet loss occurs frequently.)
- Port number used: Specified value (Set to "User setting" 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 "User setting".)
- UDP port number: 49152 (Enter the port number specified by the network administrator when the port number used is set to "User setting".)

4. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 192.100.10.10.
5. Enter LAN in the address book of teleconference terminal A for a line type, IP address 192.100.20.20 of teleconference terminal B in it for an IP address, and other required items. After that, register teleconference terminal B in the address book and initiate a call. Or set LAN for a line type and IP address 192.100.20.20 of teleconference terminal B for an IP address by dialing, and then initiate a call.

### 3-3. Connection via DHCP

#### Example of system



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

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

DHCP mode:	ON
Host name:	Enter any name.
IP address:	Blank
Network mask:	Blank
Gateway address:	Blank
DNS address:	Blank
Gatekeeper used:	OFF
Gatekeeper address:	Blank
User name:	Blank
User number:	Blank
SNMP service:	OFF
Trap transmission destination:	Blank
Community name:	public
Description of device:	Videoconference Device
Installation place:	Blank
Contact of administrator:	Blank
NAT setting:	OFF
NAT address:	Blank
Packet retransmission request:	Blank
Optimum rate control:	OFF (Set to ON when a packet loss occurs frequently.)
Port number used:	Specified value (Set to "User setting" 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 "User setting".)
UDP port number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "User setting".)

2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 192.100.20.20.

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

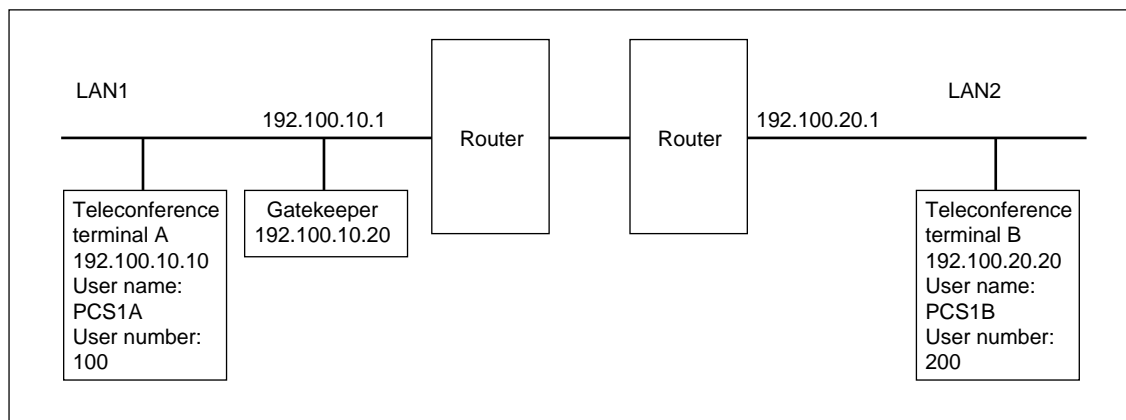
- DHCP mode: ON
- Host name: Enter any name.
- IP address: Blank
- Network mask: Blank
- Gateway address: Blank
- DNS address: Blank
- Gatekeeper used: OFF
- Gatekeeper address: Blank
- User name: Blank
- User number: Blank
- SNMP service: OFF
- Trap transmission destination: Blank
- Community name: public
- Description of device: Videoconference Device
- Installation place: Blank
- Contact of administrator: Blank
- NAT setting: OFF
- NAT address: Blank
- Packet retransmission request: Blank
- Optimum rate control: OFF (Set to ON when a packet loss occurs frequently.)
- Port number used: Specified value (Set to "User setting" 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 "User setting".)
- UDP port number: 49152 (Enter the port number specified by the network administrator when the port number used is set to "User setting".)

4. Confirm that the IP address displayed in the launcher menu of teleconference terminal A is 192.100.10.10.

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

### 3-4. Connection via Gatekeeper

#### Example of system



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

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

DHCP mode:	OFF
Host name:	Enter any name.
IP address:	Local IP address (192.100.20.20)
Network mask:	Depends on a network. Usually, set to 255.255.255.0.
Gateway address:	192.100.20.1
DNS address:	Blank
Gatekeeper used:	ON
Gatekeeper address:	192.100.10.20
User name:	Enter any name. (Example: PCS1B)
User number:	Enter any number. (Example: 200)
SNMP service:	OFF
Trap transmission destination:	Blank
Community name:	public
Description of device:	Videoconference Device
Installation place:	Blank
Contact of administrator:	Blank
NAT setting:	OFF
NAT address:	Blank
Packet retransmission request:	Blank
Optimum rate control:	OFF (Set to ON when a packet loss occurs frequently.)
Port number used:	Specified value (Set to "User setting" 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 "User setting".)
UDP port number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "User setting".)
2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 192.100.20.20.
3. Confirm that Registration Confirm is displayed at the bottom of page 2/5 in the LAN set menu of teleconference terminal B.

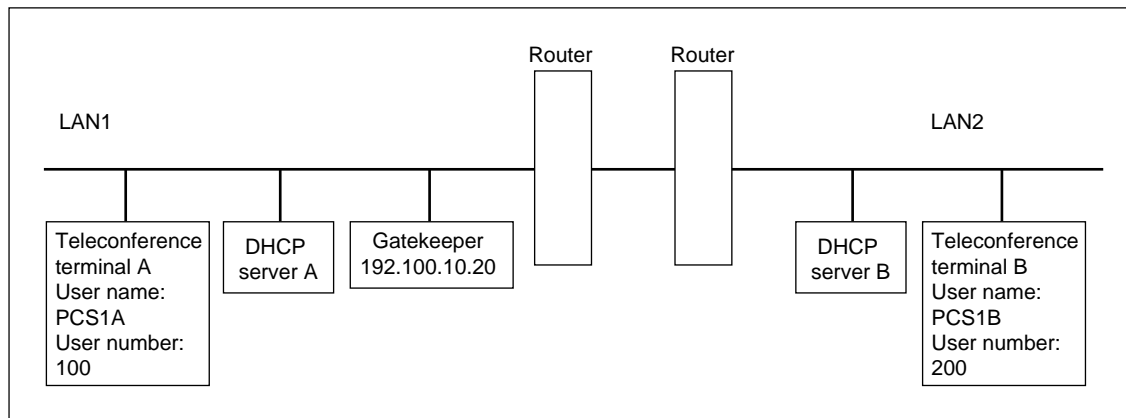
4. The LAN set menu of teleconference terminal A is set as described below.

DHCP mode:	OFF
Host name:	Enter any name.
IP address:	Local IP address (192.100.10.10)
Network mask:	Depends on a network. Usually, set to 255.255.255.0.
Gateway address:	192.100.10.1
DNS address:	Blank
Gatekeeper used:	ON
Gatekeeper address:	192.100.10.20
User name:	Enter any name. (Example: PCS1A)
User number:	Enter any number. (Example: 100)
SNMP service:	OFF
Trap transmission destination:	Blank
Community name:	public
Description of device:	Videoconference Device
Installation place:	Blank
Contact of administrator:	Blank
NAT setting:	OFF
NAT address:	Blank
Packet retransmission request:	Blank
Optimum rate control:	OFF (Set to ON when a packet loss occurs frequently.)
Port number used:	Specified value (Set to "User setting" 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 "User setting".)
UDP port number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "User setting".)

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

### 3-5. Connection via DHCP and Gatekeeper

#### Example of system



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

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

DHCP mode:	ON
Host name:	Enter any name.
IP address:	Blank
Network mask:	Blank
Gateway address:	Blank
DNS address:	Blank
Gatekeeper used:	ON
Gatekeeper address:	192.100.10.20
User name:	Enter any name. (Example: PCS1B)
User number:	Enter any number. (Example: 200)
SNMP service:	OFF
Trap transmission destination:	Blank
Community name:	public
Description of device:	Videoconference Device
Installation place:	Blank
Contact of administrator:	Blank
NAT setting:	OFF
NAT address:	Blank
Packet retransmission request:	Blank
Optimum rate control:	OFF (Set to ON when a packet loss occurs frequently.)
Port number used:	Specified value (Set to "User setting" 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 "User setting".)
UDP port number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "User setting".)
2. Confirm that the IP address displayed in the launcher menu of teleconference terminal B is 192.100.20.20.
3. Confirm that Registration Confirm is displayed at the bottom of page 2/5 in the LAN set menu of teleconference terminal B.

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

DHCP mode:	ON
Host name:	Enter any name.
IP address:	Blank
Network mask:	Blank.
Gateway address:	Blank
DNS address:	Blank
Gatekeeper used:	ON
Gatekeeper address:	192.100.10.20
User name:	Enter any name. (Example: PCS1A)
User number:	Enter any number. (Example: 100)
SNMP service:	OFF
Trap transmission destination:	Blank
Community name:	public
Description of device:	Videoconference Device
Installation place:	Blank
Contact of administrator:	Blank
NAT setting:	OFF
NAT address:	Blank
Packet retransmission request:	Blank
Optimum rate control:	OFF (Set to ON when a packet loss occurs frequently.)
Port number used:	Specified value (Set to "User setting" 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 "User setting".)
UDP port number:	49152 (Enter the port number specified by the network administrator when the port number used is set to "User setting".)

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



## Section 4 Technical Data

### 4-1. PCS-1/1P Port Number Used

#### 4-1-1. During Opposed Connection (Specified Value)

PCS-1 uses the port number below during opposed connection when the port number used in a LAN set menu is set as “Specified value”.

	Port number
RAS (PCS-1/1P)	2253 (when GK is used)
RAS (Gatekeeper)	1719 (when GK is used)
Q.931 (Outgoing)	2254
Q.931 (Incoming)	1720
H.245	2255 (Outgoing), 2254 (Incoming)
Audio RTP	49152
Audio RTCP	49153
Video RTP	49154
Video RTCP	49155
FECC RTP	49156
FECC RTCP	49157
Data conference RTP	49158
Data conference RTCP	49159

#### 4-1-2. Opposed Connection (User Setting: When TCP port number is set to 3000 and UDP port number is set to 3100)

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

	Port number
RAS (PCS-1/1P)	3000 (when GK is used)
RAS (Gatekeeper)	1719 (when GK is used)
Q.931 (Outgoing)	3001
Q.931 (Incoming)	1720
H.245	3002 (Outgoing), 3001 (Incoming)
Audio RTP	3100
Audio RTCP	3101
Video RTP	3102
Video RTCP	3103
FECC RTP	3104
FECC RTCP	3105
Data conference RTP	3106
Data conference RTCP	3107

### 4-1-3. During Use of Internal MCU Function (Specified Value)

PCS-1/IP that operates as internal MCU uses the port number below when the port number used in a LAN set menu is set as “Specified value”. The port number that a sub-terminal uses is the same as during opposed connection.

	Port number (at first point)	Port number (at N'th point)
RAS (PCS-1/IP)	2253 (when GK is used)	2253 (when GK is used)
RAS (Gatekeeper)	1719 (when GK is used)	1719 (when GK is used)
Q931 (Outgoing)	2254	$2254+2 \times (N-1)$
Q931 (Incoming)	1720	1720
H.245	2255 (Outgoing), 2254 (Incoming)	$2255+2 \times (N-1)$ (Outgoing), 2254 (Incoming)
Audio RTP	49152	$49152+20 \times (N-1)$
Audio RTCP	49153	$49153+20 \times (N-1)$
Video RTP	49154	$49154+20 \times (N-1)$
Video RTCP	49155	$49155+20 \times (N-1)$
FECC RTP	49156	$49156+20 \times (N-1)$
FECC RTCP	49157	$49157+20 \times (N-1)$
Data conference RTP	49158	$49158+20 \times (N-1)$
Data conference RTCP	49159	$49159+20 \times (N-1)$

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

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

	Port number (at first point)	Port number (at N'th point)
RAS (PCS-1/IP)	3000 (when GK is used)	3000 (when GK is used)
RAS (Gatekeeper)	1719 (when GK is used)	1719 (when GK is used)
Q931 (Outgoing)	3001	$3001+2 \times (N-1)$
Q931 (Incoming)	1720	1720
H.245	3002 (Outgoing), 3001 (Incoming)	$3002+2 \times (N-1)$ (Outgoing), 3001 (Incoming)
Audio RTP	3100	$3100+20 \times (N-1)$
Audio RTCP	3101	$3101+20 \times (N-1)$
Video RTP	3102	$3102+20 \times (N-1)$
Video RTCP	3103	$3103+20 \times (N-1)$
FECC RTP	3104	$3104+20 \times (N-1)$
FECC RTCP	3105	$3105+20 \times (N-1)$
Data conference RTP	3106	$3106+20 \times (N-1)$
Data conference RTCP	3107	$3107+20 \times (N-1)$

## 4-2. Setting of PCS-1 and HUB

The initial setting of the PCS-1 is Auto.

In the Auto setting of the PCS-1, 10/100 can be selected automatically, however, Half/Full cannot be selected automatically. Therefore, if the HUB is set to Full mode, a connection failure or packet loss occurs. The following table shows an example of connection between the PCS-1 and Catalyst 2950. When the HUB is set to 100FULL or 10FULL, change the setting of HUB or adjust the PCS-1 setting to HUB. Refer to “2-5. Service Mode” for the setting procedure of the PCS-1.

**Table of connection between PCS-1 and Catalyst 2950**

<b>PCS-1 setting</b>	<b>AUTO</b>	<b>100FULL</b>	<b>100HALF</b>	<b>10FULL</b>	<b>10HALF</b>
<b>2950 setting</b>					
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





