Panasonic

Network Interface Unit
Operating Instructions

Model No. WJ-NT104

Before attempting to connect or operate this product,
please read these instructions carefully and save this manual for future use.

Caution:

Before attempting to connect or operate this product, please read the label on the bottom.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
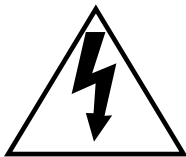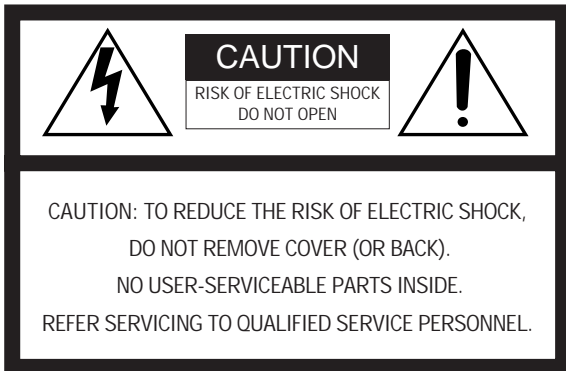
The lightning flash with arrowhead symbol, within an equilateral triangle, is interned to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

The serial number of this product may be found on the bottom of the unit.
You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. _____

Serial No. _____

WARNING:
To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

CONTENTS

PREFACE

The WJ-NT104 is an interface unit provided with image capture, JPEG compression and HTTP server functions enabling it to send analog video output from a video set to a 10Base-T Ethernet. In a surveillance system it lets you monitor surveillance pictures on a general purpose PC using the TCP/IP protocol and a WWW browser.

FEATURES

• Can display images from up to four cameras.
  The image of any channel selected on the WJ-NT104 is displayed on the network monitor.
• Connected to combination cameras of the WV-CS650 or WV-CS850 series (options) via coaxial cables, the Interface unit can control the pan/tilt head and lens of the connected cameras.
• Records and transmits images before and after an alarm in synchronization with an alarm unit.
• Controls CCTV equipment (options) connected via RS-232C or RS-485.
  Combined with a modem, provides PPP (Point-to-Point) connections.

• Comes with a home page template which can be customized by rewriting the HTML file using FTP (File Transfer Protocol).
• Designed for rack mounting using the optional WV-Q204/1 mounting brackets.
  Use of the optional WV-Q204/2 mounting brackets permits mounting up to two WJ-NT104 units in a rack side by side.
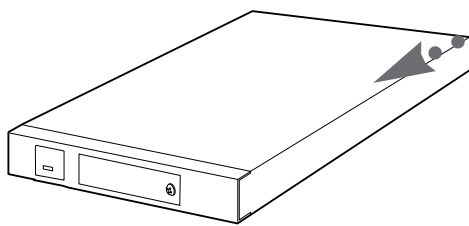
WJ-NT104
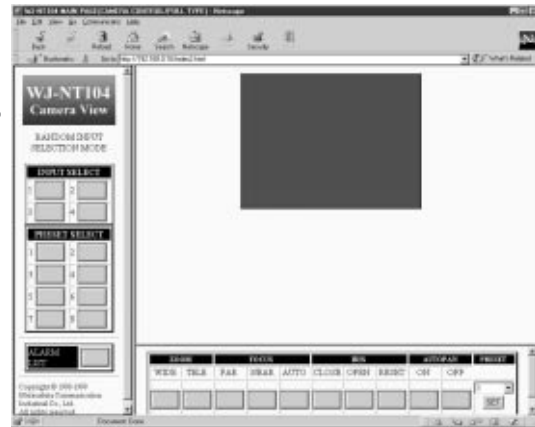
Homepage

PRECAUTIONS

- **Refer all work related to the installation of this product to qualified service personnel or system installers.**

- **Do not attempt to disassemble the appliance.**
  To prevent electric shock, do not remove screws or covers.
  There are no user-serviceable parts inside. Contact qualified service personnel for maintenance.

- **Handle the appliance with care.**
  Do not strike or shake, as this may damage the appliance.

- **Do not expose the appliance to water or moisture, nor try to operate it in wet areas.**
  Do take immediate action if the appliance becomes wet. Turn the power off and refer servicing to qualified service personnel. Moisture may damage the appliance and also cause electric shock.

- **Do not use strong or abrasive detergents when cleaning the appliance body.**
  Use a dry cloth to clean the appliance when it is dirty.
  When the dirt is hard to remove, use a mild detergent and wipe gently.

- **Do not operate the appliance beyond its specified temperature, humidity or power source ratings.**
  Do not use the appliance in an extreme environment where high temperature or high humidity exists.
  Use the appliance at temperatures within –10 °C - +50 °C (14 °F - 122 °F) and a humidity below 90 %.
  The input power source for this appliance is 230 V AC 50 Hz.

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

■ Front View
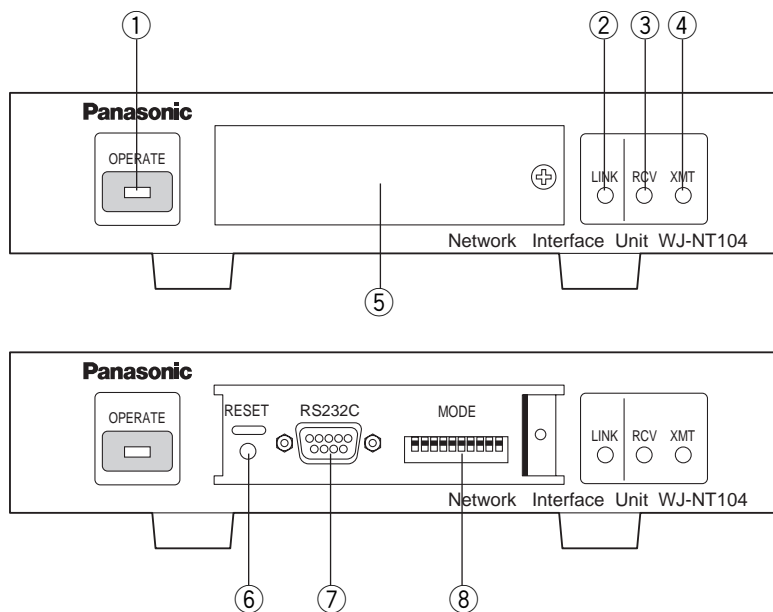
■ Rear View
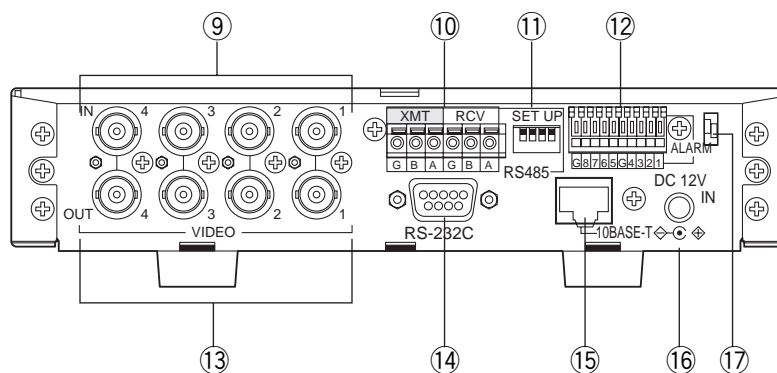
① **Operate indicator [OPERATE]**
Is on while the power of the WJ-NT104 is turned on.

② **Link indicator [LINK]**
Lights when the unit is connected to a normally operating network.

③ **Receiving indicator [RCV]**
Lights when data is received from the network.

④ **Transmitting indicator [XMT]**
Lights when data is transmitted to the network.

⑤ **Front panel**

⑥ **Reset button [RESET]**
Used to set or change a mode, or to restart.

⑦ **RS-232C port [RS232]**
Used as an alternative to the RS-232C port ⑭ on the rear panel.

⑧ **Mode selector [MODE]**
Used to set a mode.
Set all the switches to OFF except when setting a mode.

MODE
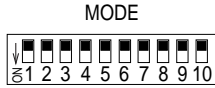
• **SW1**
To initialize the IP address (IP=192.168.0.10) or other data already set.
• It takes about 10 seconds after **SW1** is set to **ON** and the **RESET** button is pressed for the data to be initialized.
• After initializing, set SW1 back to **OFF** and press the **RESET** button again to restart.

• **SW2**
To return the HTML file, JPEG or other image data stored in the WJ-NT104 to the factory default settings. The IP address and other setup data will not be initialized.

• It takes a few minutes after **SW2** is set to **ON** and the **RESET** button is pressed for the data to be initialized.
• After initializing, set **SW2** back to **OFF** and press the **RESET** button again to restart.

To return all data, including settings and home page, to the factory default settings, set both **SW1** and **SW2** to **ON** and press the **RESET** button.

• **SW3, SW4, SW5, SW6, SW7, SW8, SW10**
Keep these in the **OFF** position.

• **SW9**
Selects the RS-232C port (front or rear panel). Setting SW9 to **OFF** selects the rear panel port, setting it to **ON** selects the front panel port.

Switch Positions

	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10
To operate	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
To initialize	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

⑨ **Video input connectors [VIDEO IN 1/2/3/4] (BNC)**
Used to connect cameras.

⑩ **RS-485 connectors [XMT/RCV]**
To connect the control data cables of combination cameras (options)

⑪ **RS-485 setup switches [RS485 SETUP]**
Used when combination cameras with an RS-485 interface are connected.

RS-485 mode	SW1	SW2	SW3	SW4
Half Duplex (2 Lines)/termination ON	ON	ON	ON	ON
Full Duplex (4 Lines)/termination ON	ON	OFF	OFF	ON
Half Duplex (2 Lines)/termination OFF	OFF	ON	ON	ON
Full Duplex (4 Lines)/termination OFF	OFF	OFF	ON	ON

SET UP

⑫ **Alarm input/output port [ALARM]**
To connect an external alarm unit. Input and output can be changed from the ADMINISTRATOR SETUP PAGE.

⑬ **Video output connectors [VIDEO OUT 1/2/3/4] (BNC)**
The video signal connected to VIDEO IN is looped through to this connector.

⑭ **RS-232C port [RS-232C]**
To connect a modem or CCTV equipment for controlling the system.

⑮ **Ethernet port [10BASE-T]**
To connect a 10Base-T cable.

⑯ **DC power connector [DC 12V IN]**
To connect the AC adapter (accessory).

⑰ **Cord clamp (accessory)**
To clamp the cord of the AC adapter (accessory).
Insert the clamp into the hole in the rear panel shown below.

Cord clamp
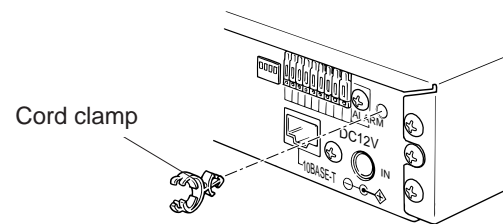
INSTALLATIONS

The installation described below should be made by qualified service personal or system installers.

■ Mounting in a Rack

The WJ-NT104 can be mounted in a rack using the optional WV-Q204/1E mounting brackets.
Use of the optional WV-Q204/2E mounting brackets permits mounting up to two WJ-NT104 units in a rack side by side.

1. Remove the four rubber feet by removing the four screws from the bottom of the WJ-NT104.

Rubber feet
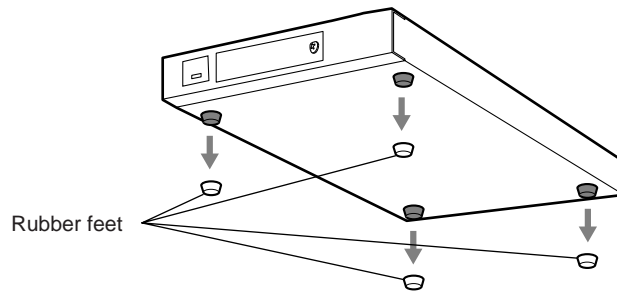
● Mounting one WJ-NT104 with the WV-Q204/1E

2. Fix the mounting brackets (large and small) on both sides of the WJ-NT104 with the eight supplied screws (M3x8) as shown below.

Rack mounting
bracket (small)

Rack mounting
bracket (large)
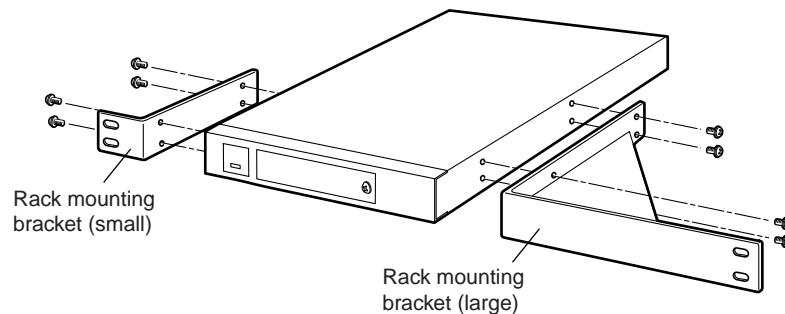
● Mounting two WJ-NT104 with the WV-Q204/2E

2. Place the joint metals on the WJ-NT104 units as shown below and fix them with the twelve supplied screws (M3x6)
   Note: Remove two screws from the rear of the WJ-NT104 beforehand.

   Fix the mounting brackets (small) on both sides of the WJ-NT104 units with the eight supplied screws (M3x8) as shown below.

Joint metal

(Remove 2 screws from the rear beforehand.)

Rack mounting
bracket (small)

Rack mounting
bracket (small)

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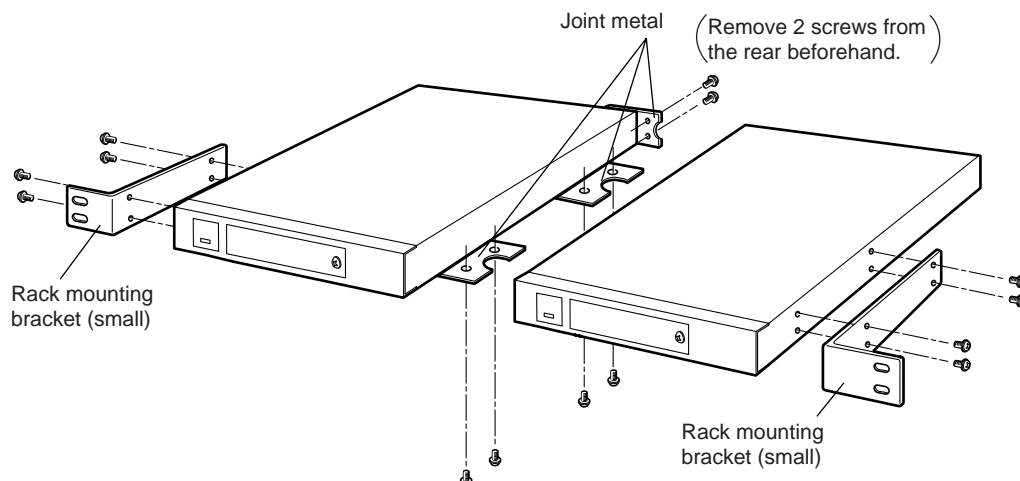
3. Install the WJ-NT104 with the rack mounting brackets in the rack by using four screws (not included).

Cautions:
- Do not block the ventilation opening or slots in the cover to prevent the appliance from overheating. Always keep the temperature in the rack within +45 °C (122 °F).
- Secure the rear of the appliance to the rack by using additional mounting brackets (procured locally) if the rack is subject to vibration.

Mounting two WJ-NT104s

Rack mounting screws
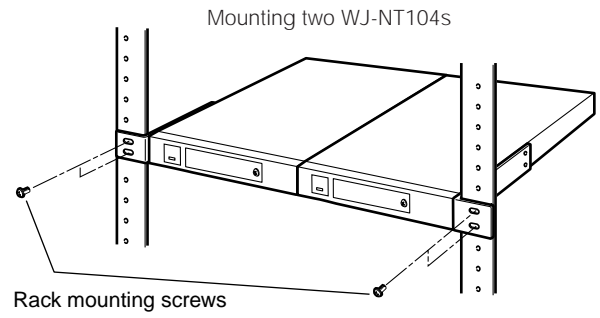
SYSTEM CONNECTIONS

The WJ-NT104 can be operated either in a LAN type connection to an Ethernet or a PPP type connection to a public line via a modem/terminal adapter (TA).

■ LAN Type Connection

For LAN type connection, it is necessary to set the IP address, netmask, and default gateway of the WJ-NT104 according to your LAN environment.

● Access from a PC on the same subnet

Shown below is an example of direct access from a client PC on the same subnet.
IP address and netmask must be properly set.
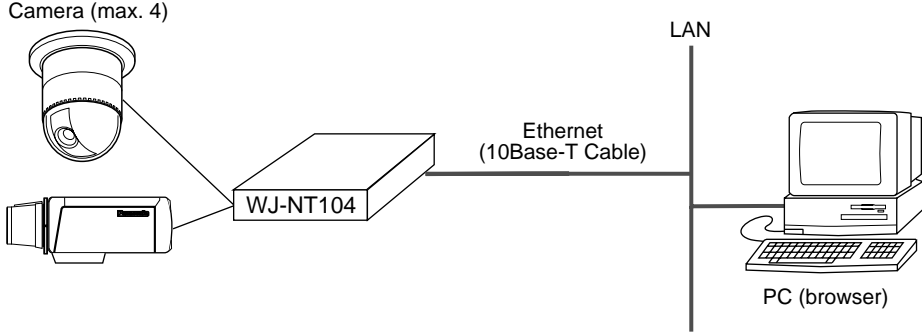
● Access from PCs via routers

Shown below is an example of monitoring from PCs on two or more subnets via routers, for example.
IP address, netmask and default gateway must be properly set.
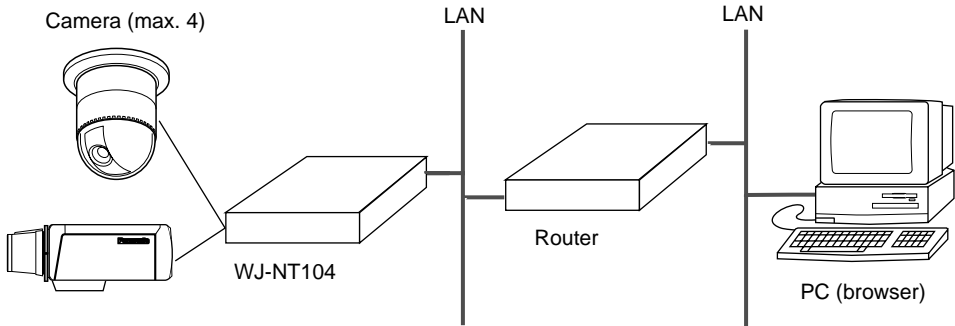
● FTP Client Function

The FTP client supports the image uploading in normal and alarm modes.

• **Normal upload mode**
In this mode, the images are uploaded to the specified directory periodically in normally.

• **Alarm upload mode**
In this mode, the alarm images are uploaded to the specified directory when an alarm input is received.
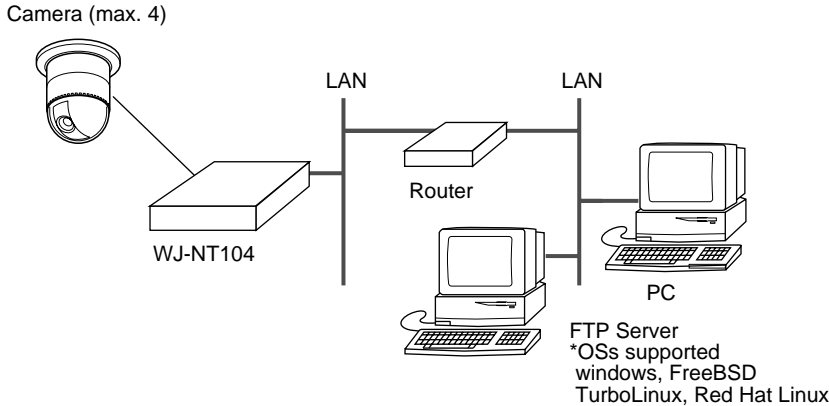
■ PPP (Point to Point Protocol) Type Connection

● Access from a Client PC to the WJ-NT104

• Direct connection to the WJ-NT104

In this configuration, a client PC accesses the WJ-NT104 via a public line using PPP (Point to Point Protocol). With **PPP MODE** in the **NETWORK SETUP** dialog box set to **P to P ACCESS**, the WJ-NT104 can be accessed by a PC running Windows95, for example.
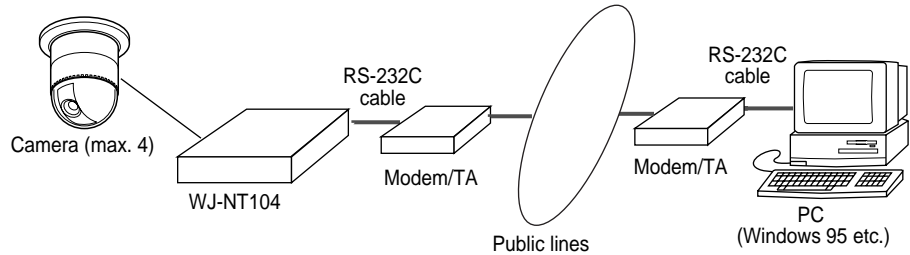
Note: Connection between the WJ-NT104 (DB 9-pin) and Modem/TA (DB 9-pin or DB 25-pin) are shown figure below.

DB9	DB25		DB9	DB9
1	8		1	1
2	3		2	2
3	2		3	3
4	20		4	4
5	7		5	5
6	6		6	6
7	4		7	7
8	5		8	8
9	22		9	9

• Connection via a dial-up server (or a router)

Set an WJ-NT104 telephone number and IP address in the dial-up server (or ISDN, POTS router) in advance. This configuration enables the dial-up server to access the WJ-NT104 using PPP (Point to Point Protocol) when a PC specifies the set address. With **PPP MODE** in the **NETWORK SETUP** dialog box set to **NETWORK ACCESS**, the WJ-NT104 can be accessed by a PC running Windows95, for example.
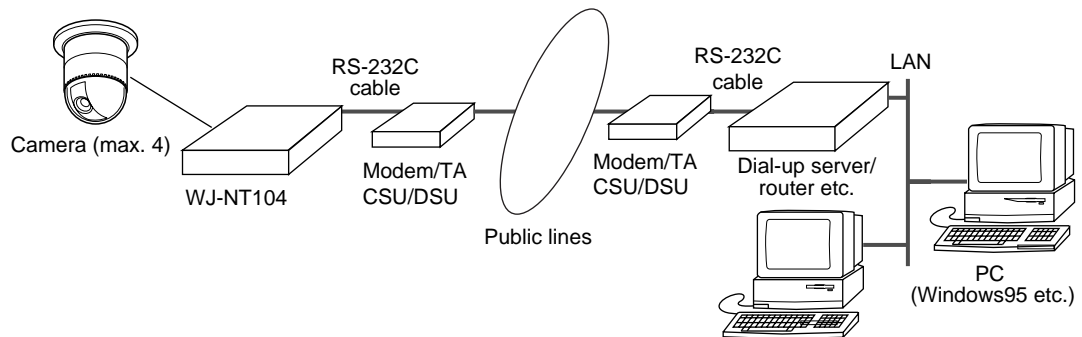
● Access from the WJ-NT104 to a Client PC

Set the telephone number, user name, password, etc. of the client PC in the WJ-NT104.
In this configuration, the WJ-NT104 calls the registered destination and accesses it using PPP (Point to Point Protocol) when an alarm input is received.
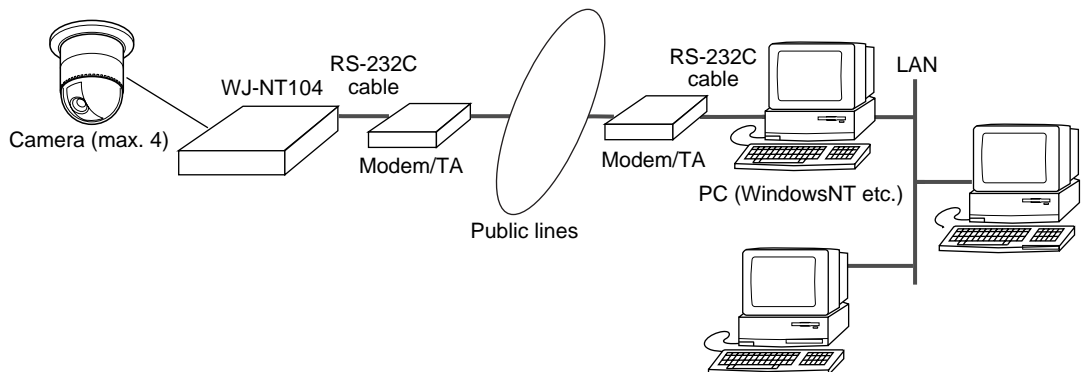
∗ Requires a PC satisfying the following conditions.

• OS: Windows95, Windows98 or Windows NT4.0
• WWW browser active
    Recommended browser > Internet Explorer Ver 4.0 or higher
                          Netscape Navigator Ver. 4.04 or
                          higher
• Display resolution: 800 x 600 pixels or more

Camera

To PC directly or via hub

10Base-T cable

AC adapter (Accessory)
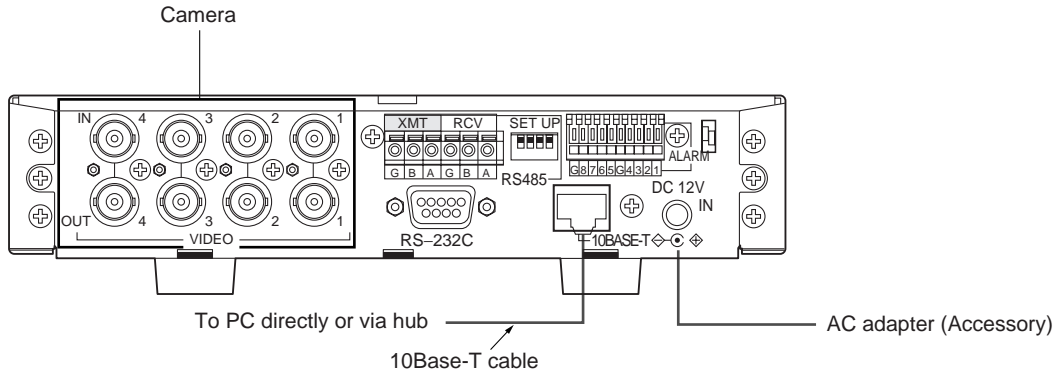
■ LAN Type Connection

The figure below shows how the WJ-NT104 can be connected directly to a PC for testing before it is connected directly to a network. The connection can also be made via a hub.

● Direct Connection to a PC without Hub

Connect the 10Base-T port on the PC to the Ethernet port on the WJ-NT104 with a crossover cable.

Camera (max. 4)

Ethernet crossover cable

WJ-NT104

PC (browser)
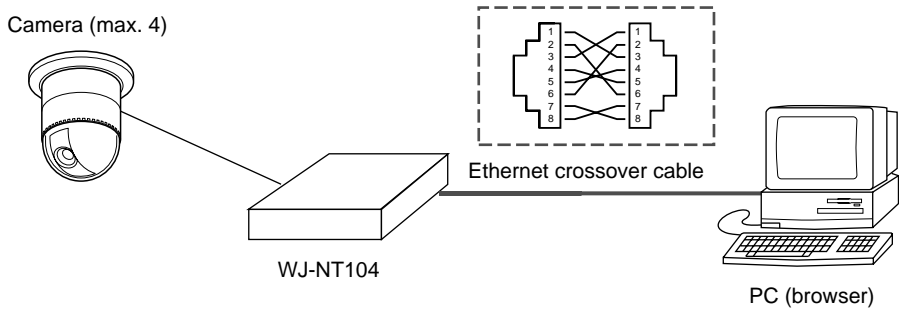
● Connection to a Client PC via Hub

Connect the 10Base-T port on the PC to the Ethernet port on the WJ-NT104 with straight cables via a hub.

Camera (max. 4)

Ethernet straight cable

Ethernet straight cable

WJ-NT104

Hub

PC (browser)

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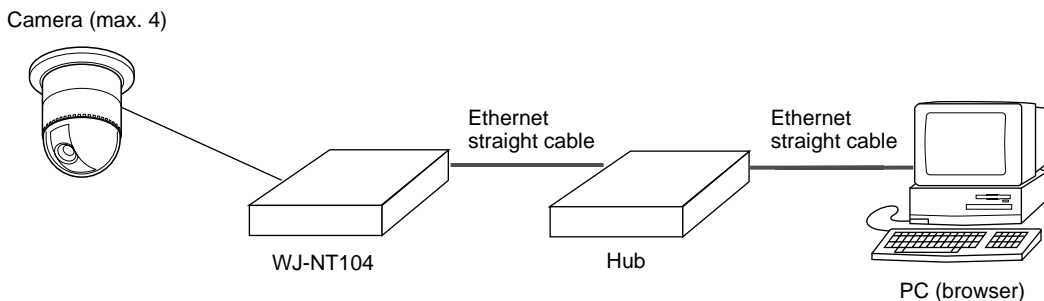
● PC Setup

The factory default settings of the WJ-NT104 are as follows:

IP address	192.168.0.10
Netmask	255.255.255.0
Default gateway	192.168.0.1

For a client PC to access WJ-NT104 factory default settings, set the IP address of the PC to 192.168.0.XX (XX means any number from 2 to 254 except 10).

① Connect the WJ-NT104 to the PC. (See page 12.)

② Change the PC's **TCP/IP** to match the factory default settings of the WJ-NT104.

If your PC's OS is Windows95 or Windows98, proceed as follows:

(1) Click the **Start** button, point to **settings**, and then click **Control Panel**.

(2) Double-click **Network**.

(3) In the **Network** dialog box, click the **Configuration** tab.

(4) Choose **TCP/IP**, and then click the **[Properties]** button to display the **TCP/IP Properties** dialog box.

(5) Specify an IP address as follows:
IP Address: 192.168.0.9
Subnet Mask: 255.255.255.0

③ Restart the PC.
Start the WWW browser, and select **[Do not use proxy for address 192.168.0.10]**.
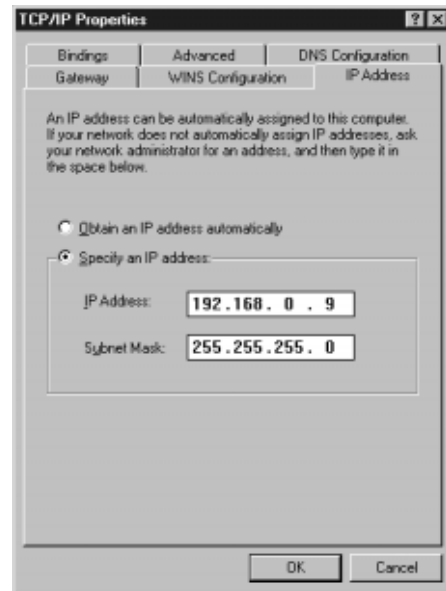
If your browser is Netscape Navigator, proceed as follows:

(1) Click the **Edit** menu, and then click **Preferences**.

(2) In the **Preferences** dialog box, click **Advanced**, and then click **Proxies**.
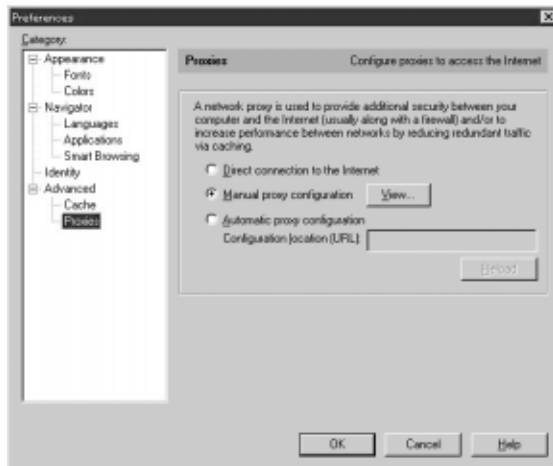
(3) Select the **Manual proxy configuration** option, and then click the **[View]** button to display the **Manual Proxy Configuration** dialog box.
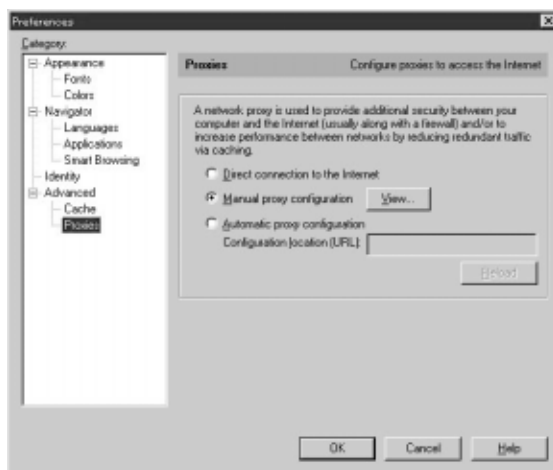
(4) In the space **[Do not use proxy servers for domains beginning with:]**, specify 192.168.0.10.
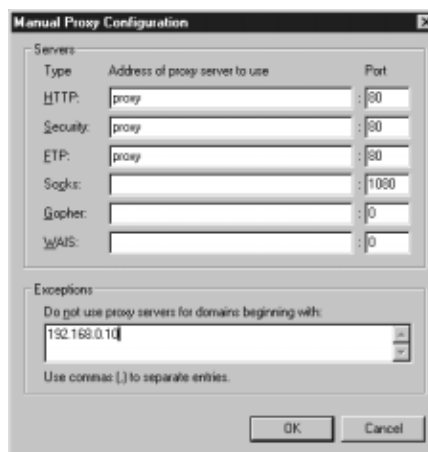
④ In the **Location** bar, specify http://192.168.0.10.

⑤ The browser displays the **MAIN PAGE** of the WJ-NT104's home page. If there is a camera input, it also displays the camera image.

⑥ Click [button] on the home page and verify the functions of the WJ-NT104.
For details on home page operations see MAIN PAGE on page 30.

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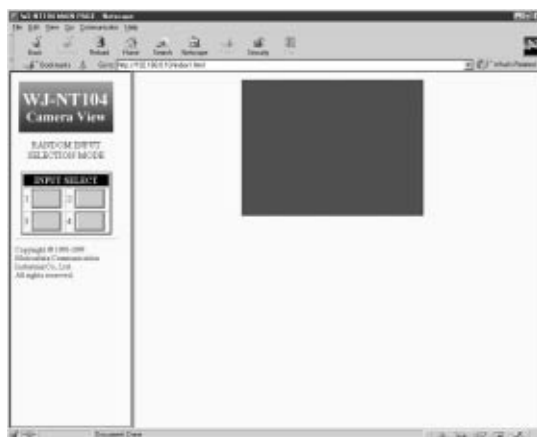
■ WJ-NT104 Setup

First, it is necessary to set an IP address for the WJ-NT104 according to the operating environment. Consult your network administrator for the address to set.

● IP Address Setting via LAN Connection

① On the Location bar, enter http://192.168.0.10/hwset-up.html to display the **ADMINISTRATOR SETUP PAGE**.
To open the **ADMINISTRATOR SETUP PAGE**, you need to enter your user ID and password. The default ID and password are [admin] and [nil], respectively.
Click the **[NETWORK]** button to display the **NETWORK SETUP** dialog box.

② Set **IP-ADDRESS, NETMASK, DEFAULT GATEWAY**.
Consult your network administrator for the correct settings.

③ Specify the TCP/IP settings for the PC.
If the PC is already operating on a network, specify its original IP address in the **TCP/IP Properties** dialog box (before changing it to 192.168.0.9).

If the PC is running Windows95 or Windows98, select **Control Panel → Network → Configuration**, click the **[Properties]** button to open the **TCP/ IP Properties** dialog box, and enter the IP address. Refer to the settings on page 13.

④ Restart the PC.

⑤ Start the PC's browser.
Specify http://(IP address set in the WJ-NT104)/ in the **Location** bar. The connection is established when the image from the WJ-NT104 is displayed on the PC screen.

Note: Refer page 14 for further details.
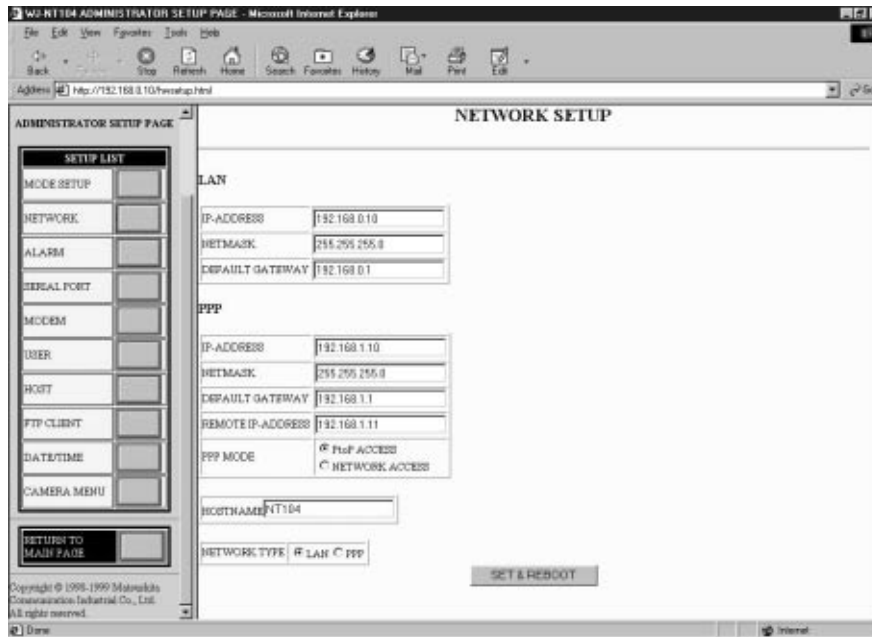
● IP Address Setting via RS-232C Connection

For further information, refer to page 54.

■ PPP Type Connection 1 (P to P ACCESS)

To use this mode, match the IP address of the PC with the address of the WJ-NT104.
The WJ-NT104 permits PPP (Point-to-Point Protocol) connection via a public line or the ISDN by connecting it to a modem or a terminal adapter (TA).
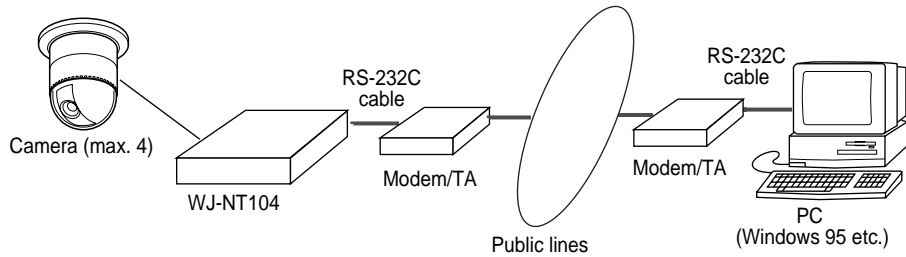
● Setup Procedures

To set up the PPP connection, access the WJ-NT104 from a PC via a LAN and open the **ADMINISTRATOR SETUP PAGE**.
If the WJ-NT104 is already connected to a LAN, go to the Location bar and specify http://192.168.0.10 (or IP address set previously)/hwsetup.html to display the **ADMINISTRATOR SETUP PAGE**. If it is not yet connected to a LAN, connect to the LAN following the procedures described under "PREPARATIONS" (p. 12) and specify hwsetup.html to open the **ADMINISTRATOR SETUP PAGE**.

① On the **ADMINISTRATOR SETUP PAGE**, click the **[SERIAL PORT]** button to open the **SERIAL PORT SETUP** dialog box.

RS-232C SETUP
TYPE: Select **MODEM/TA**
BAUD RATE, DATA BIT, STOP BIT, PARITY, USE FLOW CONTROL:
Set these items to match the settings of the modem/TA used. If the settings of the modem/TA are unknown, set 57 600 bps (see note), 8 bit, 1 bit, NONE, and NONE, respectively.

Note: Set a baud rate (net nec.) close to that of the modem or TA connected. If there is a large difference, it may take much longer for images to appear.

② Click the **[SET&REBOOT]** button to save the settings.
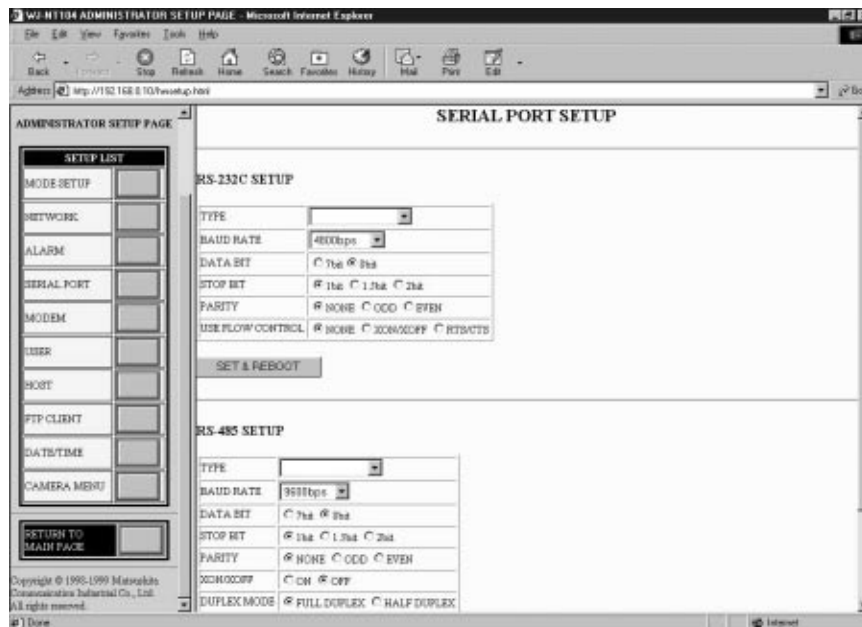
③ On the **ADMINISTRATOR SETUP PAGE**, click the **[MODEM]** button to open the **MODEM/TA SETUP** dialog box.
Make the necessary entries for **MODEM MODELS, MODEM INITIALIZE COMMAND** (specify directly), **LINE TYPE,
LOCAL TELEPHONE NUMBER, DESTINATION TELEPHONE NUMBER, LOGON ID, LOGON PASSWORD** and **REDIAL
(NUMBER OF TIMES/INTERVAL)**.

④ Click the **[SET]** button to save.
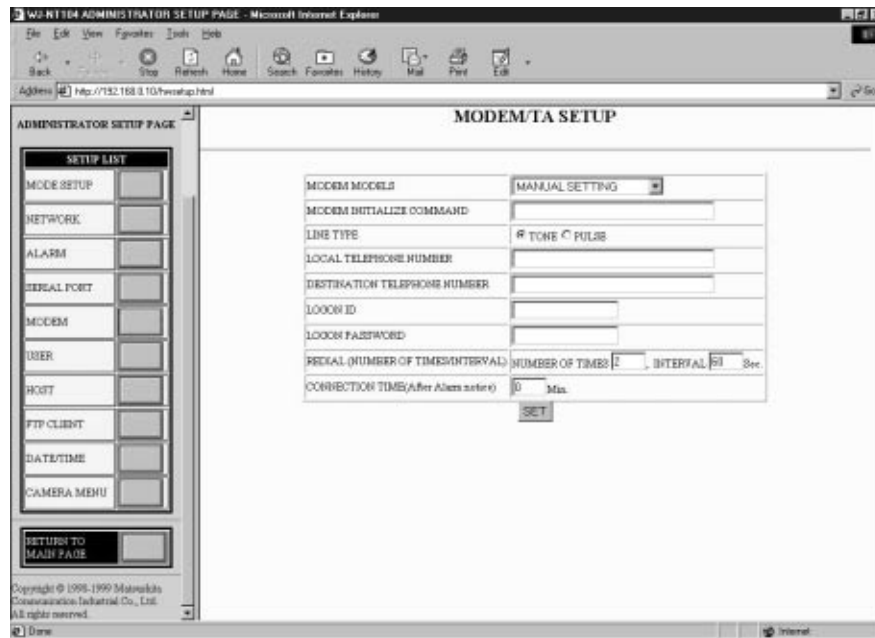
⑤ On the **ADMINISTRATOR SETUP PAGE**, click the **[NETWORK]** button to open the **NETWORK SETUP** dialog box. For
NETWORK TYPE, mark **PPP**.
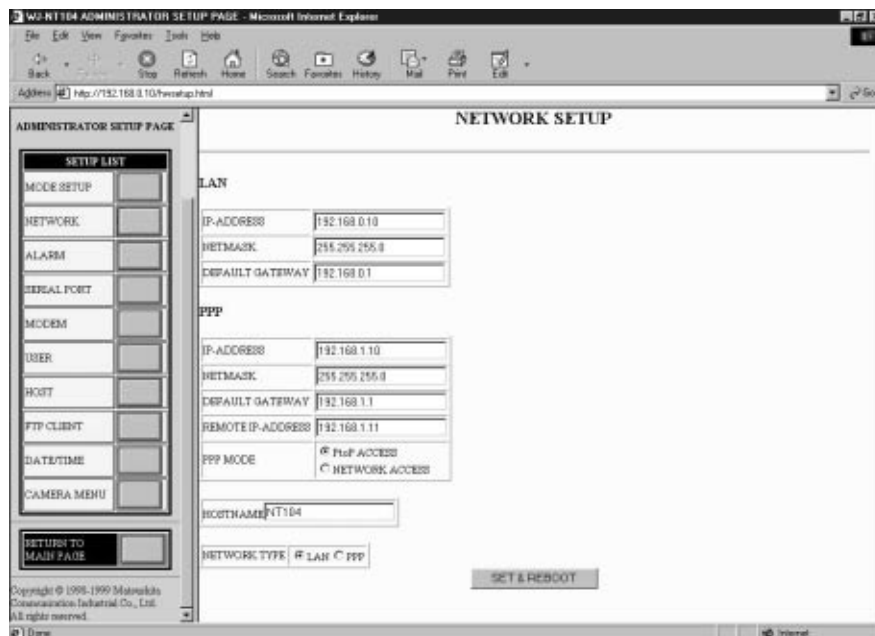
⑥ Click the **[SET & REBOOT]** button to save.
The WJ-NT104 is switched from LAN connection mode to PPP connection mode.

⑦ Connect the RS-232C port on the rear panel of the WJ-NT104 to the RS-232C port on the modem/TA with a RS-232C
cable, and access the WJ-NT104 from a client PC via the modem/TA.

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● Access Procedures

Follow these procedures to access the WJ-NT104 from a PC running Windows95 or Windows98 via a PPP type connection.

1. Preparations

① Check that the following software is installed in the PC.
- **TCP/IP protocol**
  The TCP/IP protocol comes as an accessory with Windows95/98. Access the **Control Panel → Network** dialog box. If **TCP/IP → Dial-Up Adapter** is not listed, you need to install the TCP/IP protocol. For details refer to the Windows95/98 help file.
- **Dial-Up Networking**
  Dial-Up Networking comes as an accessory with Windows95/98. If the Dial-Up Networking icon is not in **My Computer**, it is not installed. To find out how to install it, refer to the Windows95/98 help file.

② Check the destination.
  Check the phone number, phone system (type of line), communication speed, etc. of the client that will access the WJ-NT104.

③ Connect a modem or TA to the PC and set it up.
  The following description is based on the assumption that the device to which the modem or TA will be connected has already been set up. For the modem or TA connection, refer to the instruction manual for the modem or TA.

2. Connection Setup

To access the WJ-NT104, set up the connection using Dial-Up Networking. It needs to be set up only once.
If the **Dial-Up Networking** icon is not in **My Computer**, it is not installed. You can use the following procedure to install it.

(1) Click the **Start** button, point to **Settings**, and then click **Control Panel**.
(2) Double-click **Add/Remove Programs**.
(3) Click the **Windows Setup** tab, click **Communications**, and then click the **[Details]** button.
(4) Click the Dial-Up Networking check box, and then click the **[OK]** button.
Click OK again, and follow the instructions on your screen.

① Double-click **My Computer**, and then double-click **Dial-Up Networking**.

② Double-click the **Make New Connection** icon.
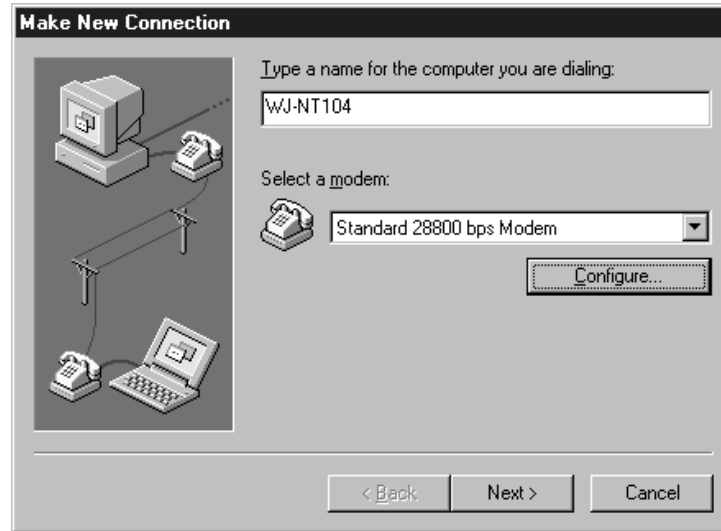
③ Type a name for the PC and select a modem. Then click the **[Next]** button.
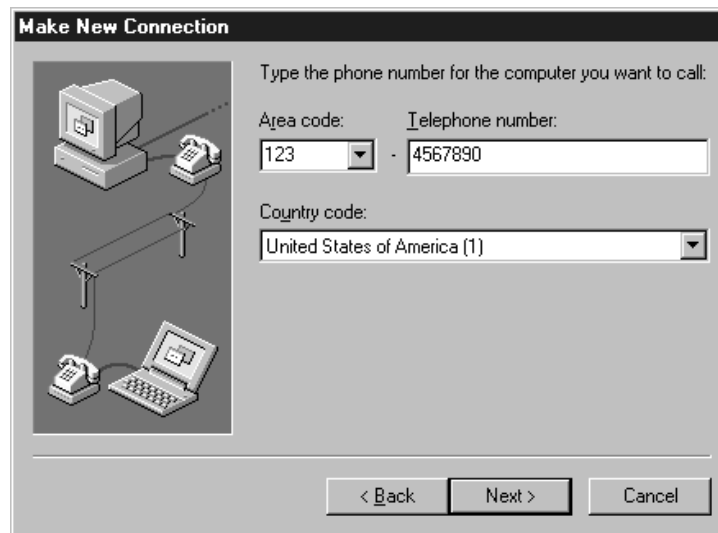
④ Enter the phone number and click the **[Next>]** button.
A message appears, reading [You have successfully created a new Dial-Up Networking connection called:].

⑤ Click the **[Finish]** button.
The screen returns to the **Dial-Up Networking** window.
The newly created icon is displayed.

⑥ Right-click the new icon to display the pull-down menu, and then click **Properties**.

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⑥ Click the **[Server Type...]** button.

⑦ For Type of Dial-up Server, select **PPP: Windows95, Windows NT 3.5, Internet** (for Windows95), or **PPP: Windows95/98, Windows NT 4.0**, **Internet** (for Windows98).

⑧ Remove all checks in the **Advanced options** field.

⑨ Check **TCP/IP** in the **Allowed network protocols** field.

⑩ Click the **[TCP/IP Settings....]** button to display the **TCP/IP Settings** dialog box.

⑪ Check **Server assigned IP address**.

⑫ Check **Server assigned name server addresses**.

⑬ Remove checks from **User IP header compression** and **Use default gateway on remote network**.
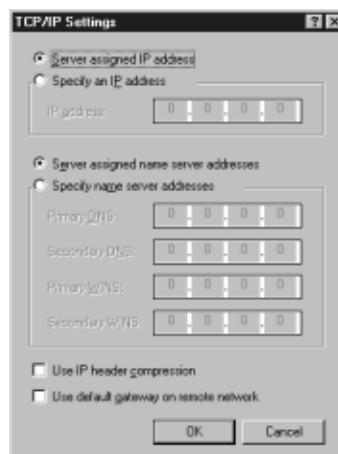
⑭ Click the **[OK]** button.
The screen returns to the **Server Types** dialog box. Click the **[OK]** button and click it again.

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3. Access Procedures

① Double-click the new icon in the **Dial-Up Networking** window.

② After checking the contents of the dialog box, click the **[Connect]** button.
   The **Connection Established** dialog box is displayed after a short delay to indicate that the connection is under way.
   * With some versions of Windows95 this dialog box is not displayed.

③ Double-click the icon shown on the task bar to display the **Connected to WJ-NT104** dialog box which indicates that the connection is under way.
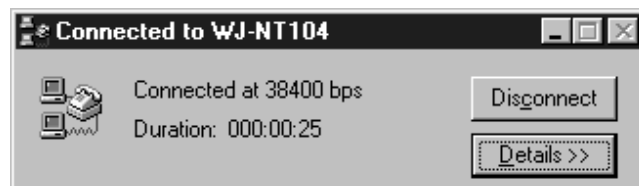
④ To disconnect, click the **[Disconnect]** button.

■ PPP Type Connection 2 (NETWORK ACCESS)

1. Windows NT Setup
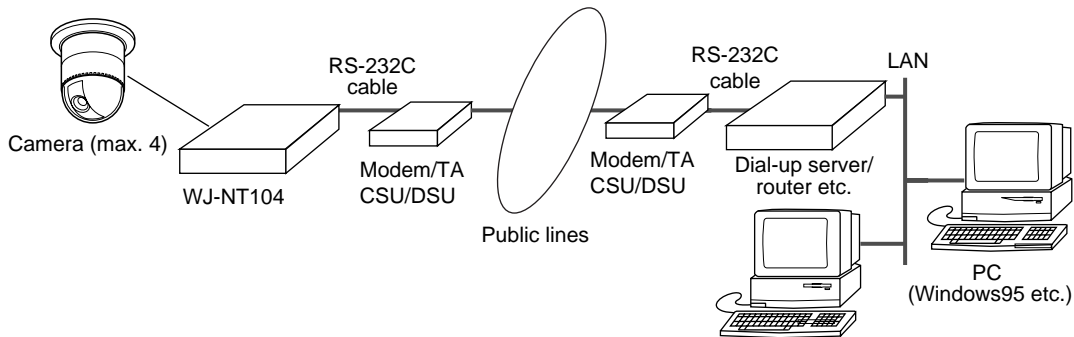
Camera (max. 4)
WJ-NT104
RS-232C cable
Modem/TA CSU/DSU
Public lines
Modem/TA CSU/DSU
RS-232C cable
Dial-up server/ router etc.
LAN
PC (Windows95 etc.)

If the **Dial-Up Networking** icon is not in **My Computer**, it is not installed. You can use the following procedure to install it.
   (1) Right-click the **Network Neighborhood** icon on the desktop, and then click **Properties** in the pull-down menu.
   (2) In **Network** dialog box, click the **Services** tab.
   (3) If the Remote Access Service is not in the Network Services list, click the **[Add]** button to display the **Select Network Service** dialog box.
   (4) Choose **Remote Access Service**, and then click the **[OK]** button to display the **Windows NT Setup** dialog box.
   (5) Click the **[Continue]** button in the dialog box to install Remote Access Service.

① When installed, Remote Access Service appears in the list of Network Services.
   In the **Network** dialog box, choose **Remote Access Service**, and then click the **[Properties]** button to display the Remote Access Setup window.
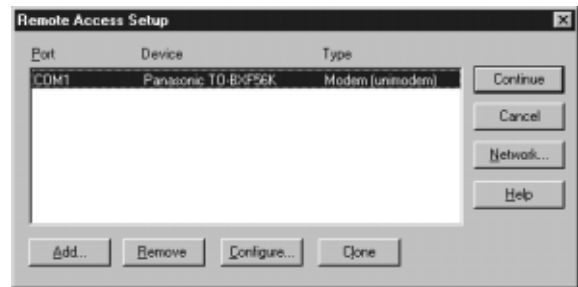
② Click the **[Configure]** button and configure the port in the **Configure Port Usage** dialog box. Then click **[OK]** to return to the Remote Access Setup window of Step ①.
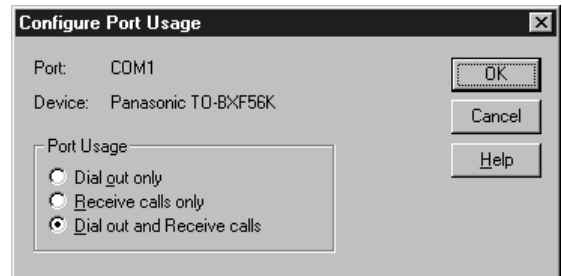
③ Click the **[Network...]** button and set the protocols used in the **Network Configuration** dialog box as follows:

④ Check **TCP/IP** in the **Dial out Protocols** field.

⑤ Check **TCP/IP** in the **Allow remote clients running** field.

⑥ Check **Allow any authentication including clear test** in the **Encryption settings** field.
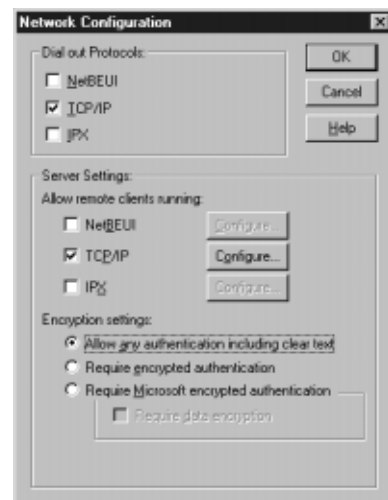
⑦ Click the **[Configure...]** button to display the **RAS Server TCP/IP Configuration** dialog box.
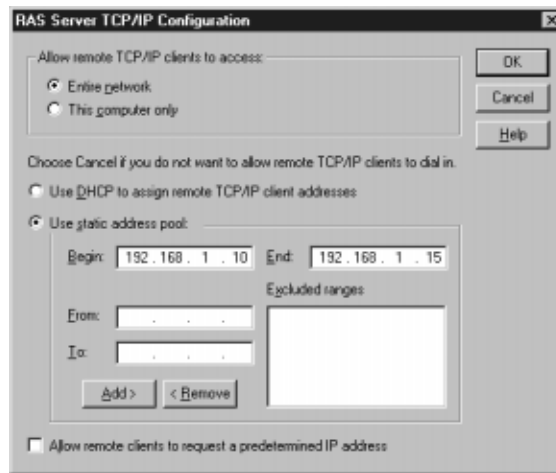
⑧ Check **Entire network** in the **Allow remote TCP/IP clients to access** field.
⑨ Check **Use static address pool** under **Choose Cancel if you do not want to allow remote TCP/IP clients to dial in.**

⑩ Set **Begin** and **End** of an address.
   The above dialog box setting applies in cases where addresses from 192.168.1.10 to 192.168.1.15 can be pooled.
   Click the **[OK]** button.

⑪ Set **Remote Access Admin** to grant remote access permission to users. To activate the **Remote Access Admin.**
   (1) Click the **Start** button, point to **Programs**, and then **Administrative Tools**.
   (2) Click **Remote Access Admin**.
   (3) Point to **Users menu** and then click **Permissions** to display the **Remote Access Permissions** window.

⑫ Select a user to whom remote access permission is to be granted, and check **Grant dialin permission to user**.

⑬ Click the **[OK]** button.

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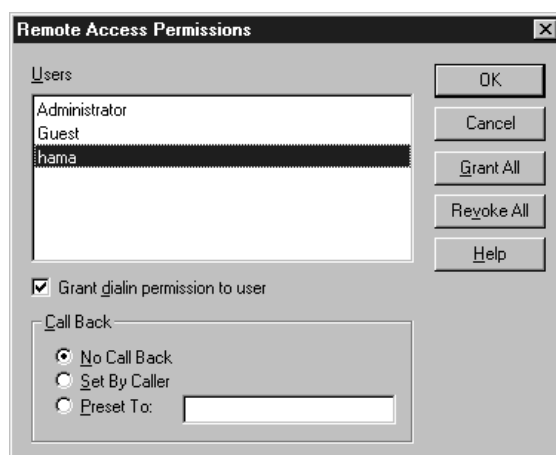
2. Windows98 Setup

If the **Dial-Up Networking** icon is not in **My Computer**, it is not installed. You can use the following procedure to install it.

    (1)   Click the **Start** button, point to **Settings**, and then click **Control Panel**.
    (2)   Double-click **Add/Remove Programs**.
    (3)   Click the **Windows Setup** tab, click **Communications**, and then click the **[Details]** button.
    (4)   Click the Dial-Up Networking check box, and then click the **[OK]** button.
   Click OK again, and follow the instructions on your screen.

① Click the icon on the taskbar to display the **Dial-Up Server** dialog box.

② If more than one modem is connected, click the tab at the top of the box and select a modem to use.

③ Check **Allow caller access**.

④ Click the **[Change Password...]** button.
   The **Dial-Up Networking Password** dialog box is displayed.
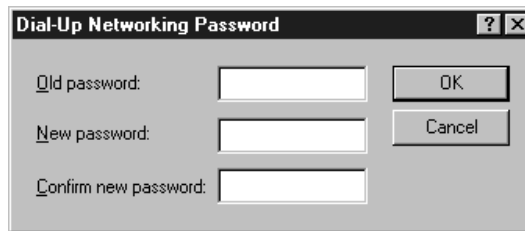
⑤ Enter a password, and then click the **[OK]** button
   Type the same password as used to set up the connection and modem/TA.

⑥ Click the **[Server Types...]** button to display the **Server Types** dialog box.

⑦ For **Types of Dial-Up Servers**, select **PPP:Internet, Windows NT Server, Windows98**.

⑧ In the Advanced options field, remove checks from **Enable software compression** and **Require encrypted password**.

⑨ Click the **[OK]** button.
   The screen returns to the **Dial-Up Server** dialog box. Click the **[OK]** button.

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MAIN PAGE AND CONTROLS

■ Main Page and Control Windows

On the Location bar of the PC, type http://192.168.0.10 (or IP address set for WJ-NT104) to display the MAIN PAGE default window.
The MAIN PAGE window is available in the following five modes:

1. Images without camera control / PULL mode
2. Images without camera control / PUSH mode
3. Images with camera control / PULL mode
4. Images with camera control / PUSH mode
5. Others

The mode 1 to 4 windows may differ slightly depending on the operation mode.

For the Main Page setup see MODE SETUP on page 41.
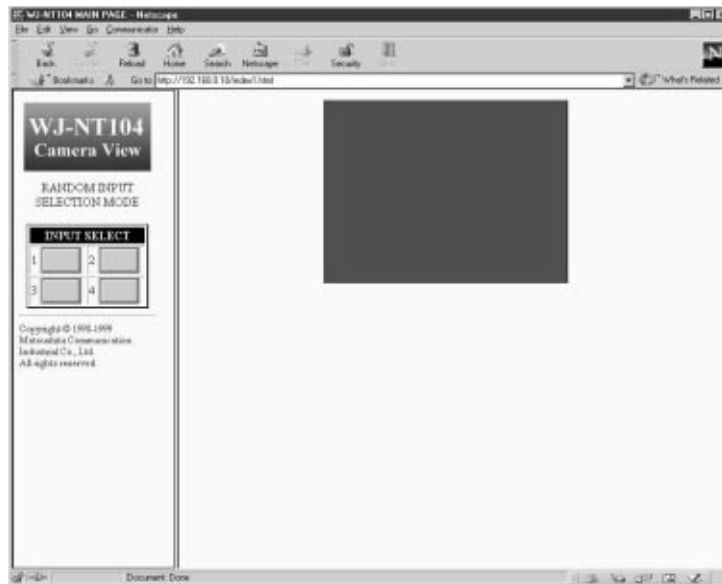
■ Operation Modes

The following three modes are available for controlling the input from the up to four cameras connected to the WJ-NT104.
- **Random Input Selection Mode**
- **Multi Input Selection Mode**
- **Fixed Input Selection Mode**

To set up the mode, access the **ADMINISTRATOR SETUP PAGE** (see page 40) from the home page of the WJ-NT104. To select a mode see MODE SETUP on page 41.

● Random Input Selection Mode

- Unless a user changes channels, the last selected channel is used to continue transmission.
  A change of channel by one user causes the channels of the other users connected to the WJ-NT104 to be switched to that same channel. This means that the monitored picture may suddenly change to another.
- The image transfer rate is highest in this mode.
- This mode is the factory default setting.
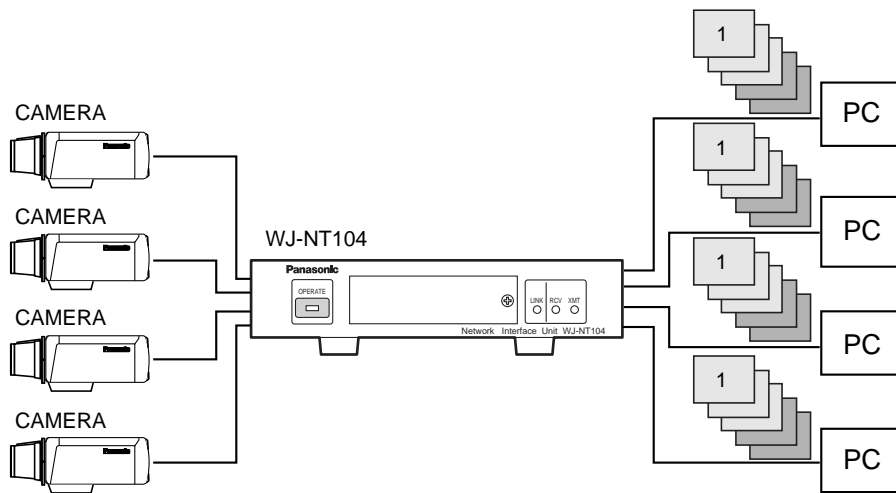
● Multi Input Selection Mode

- This mode switches periodically between multiple channels at high speed so that transmission to two or more users requesting different channels is possible. There is no sudden change to another camera picture.
- The image transfer rate is lowest in this mode.
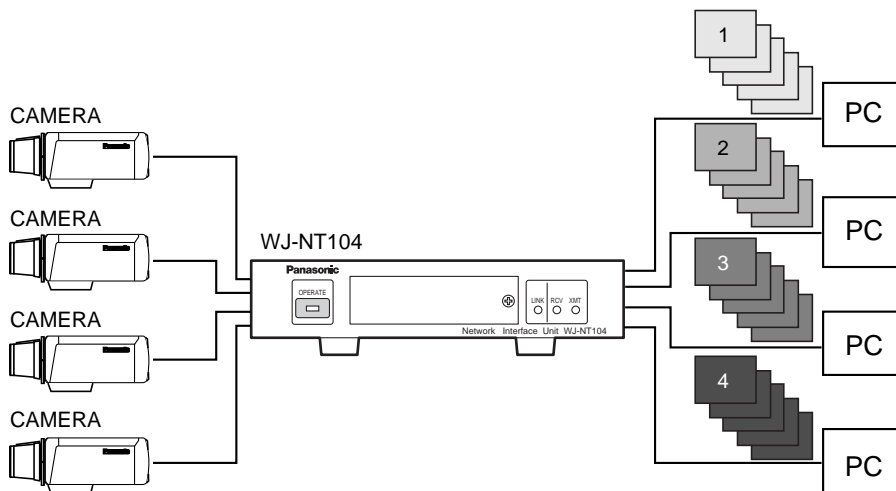
● **Fixed Input Selection Mode**

- You cannot select other than the channels specified by ADMINISTRATION SETUP PAGE.
- The image transfer rate is highest in this mode.
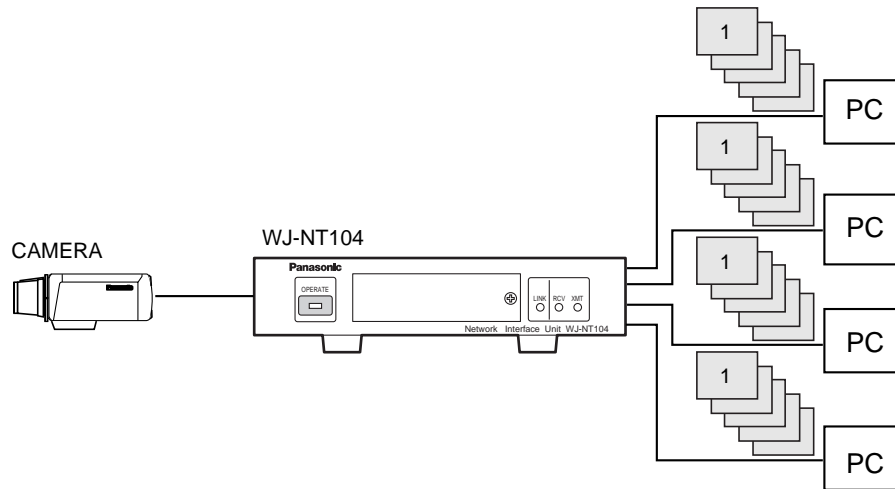
● **Sequence Mode**

- This is an applied version of **Random Input Selection Mode**, used to change channels at specified intervals. Pan/tilt, zoom, and other camera functions cannot be controlled in this mode.
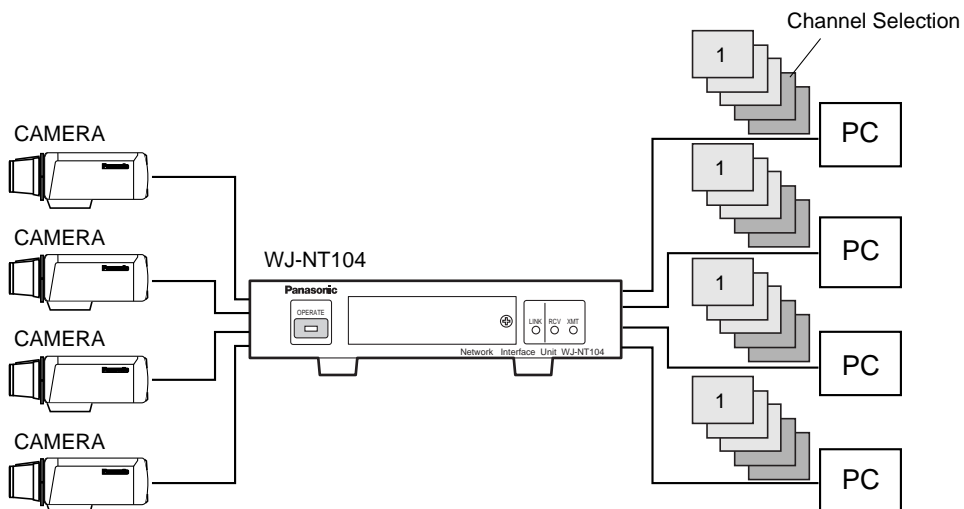
■ Pull Mode and Push Mode

The WJ-NT104 has two modes of video output.

● Pull Mode

A request to receive the newest image is automatically and repeatedly sent from the PC to the WJ-NT104. The image received by the PC is displayed as frame feed image (semi-animated picture). The process of sending the request, receiving the data, and displaying the image on the screen is performed by the Java Script program included in the HTML.

Camera (max. 4)

Coaxial cable
(video + control)

PC (browser)

Network

WJ-NT104

Request to receive the newest
image is sent from personal computer.
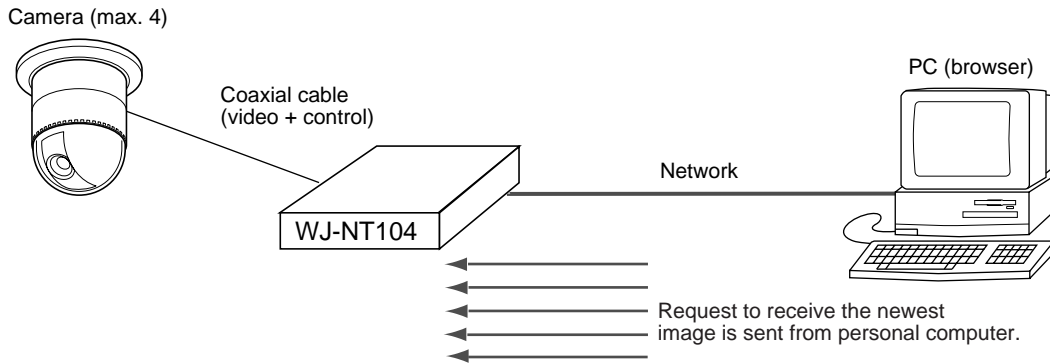
Note: To display images in pull mode requires Internet Explorer 4.0, Netscape Navigator 3.0, or a browser of a newer version which can execute Java Script.

● Push Mode

A request to send continuous images is sent from the PC to the WJ-NT104. The WJ-NT104 receives the newest image at set time intervals, and continuously sends the received images to the PC.

Camera (max. 4)

Coaxial cable
(video + control)

Network

WJ-NT104

Newest image is continuously
sent from the WJ-NT104.
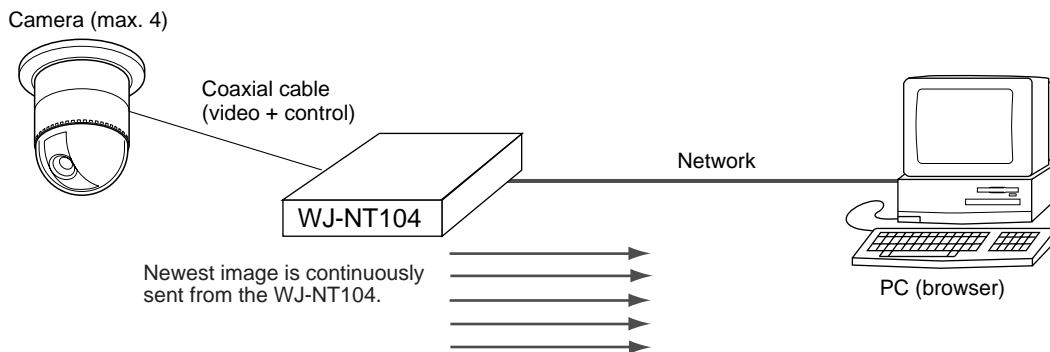
PC (browser)

Note: To display images in push mode requires Netscape Navigator 3.X or a browser of a newer version. Internet Explorer does not support displaying images in push mode.

To select a mode see MODE SETUP on page 41.

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■ Picture Quality Setup

● Image Resolution

The following four image resolutions (number of picture elements) are available. The higher the resolution, the larger the image and the lower the display speed.

① **752 x 568 pixel**
② **752 x 280 pixel**
③ **368 x 280 pixel**
④ **176 x 136 pixel**

Note:
>   The display size of images received in any of the above resolutions can be changed from the WWW browser.
>   • Incoming images with a resolution except of 752 x 280 pixels are displayed in the size in which they are received.
>   • Incoming images with a resolution of 752 x 280 pixels are displayed in 752 x 568 pixel size.

● Image Quality

The following four image qualities (compression ratios) are available. The lower the compression ratio, the better the image quality, but the large size of the image data file slows down the image display speed.

① **Super Fine (compressed to about 1/6)**
② **Fine (compressed to about 1/10)**
③ **Normal (compressed to about 1/16)**
④ **Rough (compressed to about 1/25)**

■ MAIN PAGE (without Camera Control) [index1.html]

● Random Input Selection Mode
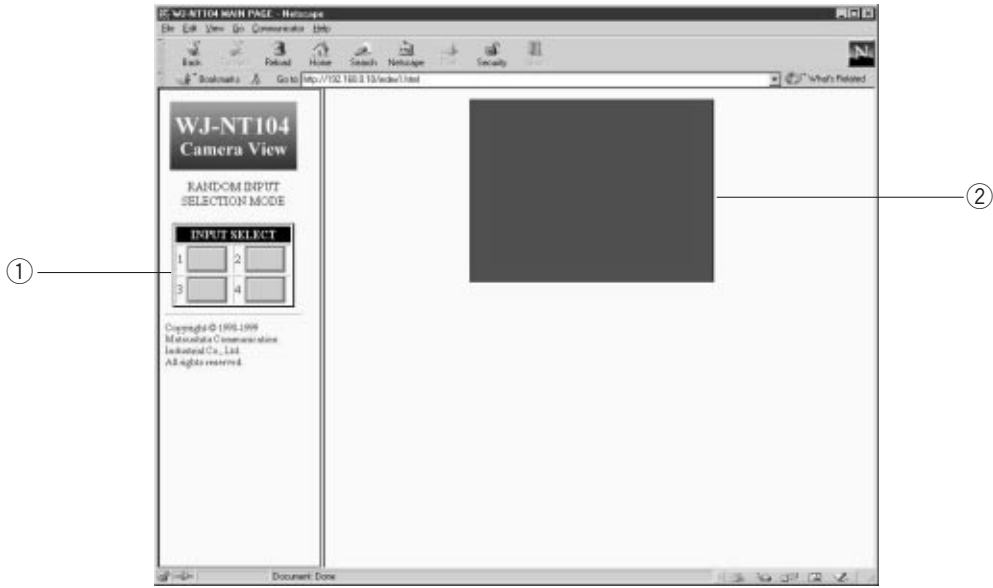
① **INPUT SELECT**
These buttons are used to switch the images of up to four cameras.
A change of channel by one user causes the channels of the other users connected to the WJ-NT104 to be switched to that same channel.

② **Live image display**
Images of the selected camera are displayed on the default page as semi-animated pictures.

● Fixed Input Selection Mode
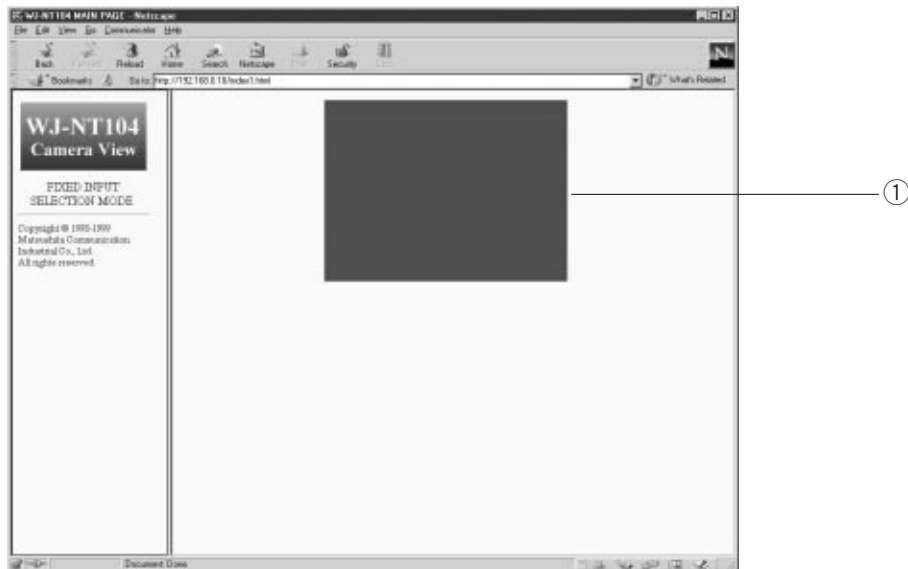
① **Live image display**
Only the images of the camera channels specified in the MODE SETUP window are displayed.
Note: Ordinary users are barred from selecting video input channels.

● **Multi Input Selection Mode**
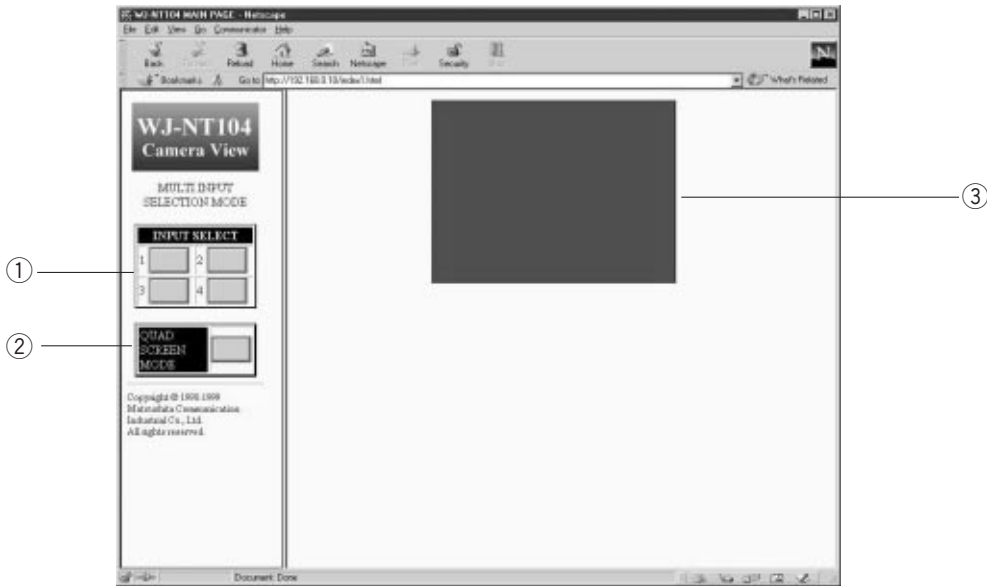
① **INPUT SELECT**
These buttons are used to switch the images of up to four cameras.
A change of channel by one user affects only that terminal, but not the channels monitored by other users.

② **QUAD SCREEN MODE**
Clocking this button will display images of up to four cameras in quad pattern on a single monitor screen (see below).

③ **Live image display**
Images of the selected camera are displayed on the default page as semi-animated pictures.

● **Quad Screen Mode [index4.html]**

① **RETURN TO MAIN PAGE**
Restores Multi Input Selection mode.

② **ALARM LIST**
Camera video input before and after alarm input can be temporarily stored in the internal memory of the WJ-NT104.
For alarm display see ALARM LIST on page 37.

③ **Live image display**
Images from up to four cameras are displayed.

■ MAIN PAGE (with Camera Control) [index2.html]

● Random Input Selection Mode

① **INPUT SELECT**
These buttons are used to switch images of up to four cameras.

② **PRESET SELECT**
To move the combination camera (option) connected to the WJ-NT104 to any of 8 preset position numbers.
To register preset positions refer to the CAMERA MENU SETUP on page 53.

③ **ALARM LIST**
Camera video input before and after alarm input can be temporarily stored in the internal memory of the WJ-NT104.
For alarm display see ALARM LIST on page 37.

④ **Live image display**
Images from the cameras connected to the WJ-NT104 are displayed.
Images of the selected camera are displayed on the default page as semi-animated pictures.

⑤ **Pan/Tilt**
Clicking anywhere on the live image moves the connected combination camera (option) up and down, or to the right and left. The camera pan/tilt angle decreases as the point clicked moves closer to the image center. Clicking the image center will not move the camera. Zooming does not change the camera pan/tilt angle. Click the image repeatedly to move the camera to the desired position. You cannot pan or tilt the camera continuously by dragging on the live image.

⑥ **ZOOM**
The connected combination camera (option) can be zoomed by clicking the **[TELE]** or **[WIDE]** button under ZOOM.
Clicking the **[TELE]** or **[WIDE]** button will operate the camera in telescopic or wide-angle mode for a specified time, after which the mode is released automatically. These modes cannot be retained by keeping the **[TELE]** or **[WIDE]** button depressed. You need to click the **[TELE]** or **[WIDE]** button again.

⑦ **FOCUS**
The connected combination camera (option) can be focused by clicking the **[FAR]**, **[NEAR]** or **[AUTO]** button under FOCUS.
Clicking the **[FAR]** or **[NEAR]** button will operate the camera in focusing mode for a specified time, after which the mode is released automatically. Clicking the **[AUTO]** button will automatically focus the image on the screen. Focus control cannot be retained by keeping the **[FAR]** or **[NEAR]** button depressed. You need to click the **[FAR]** or **[NEAR]** button again.

⑧ **IRIS**
The connected combination camera (option) can be controlled to close or open the iris by clicking the **[OPEN]** or **[CLOSE]** button under IRIS. Clicking the **[OPEN]** or **[CLOSE]** button will open or close the camera iris for a specified time, after which the operation is released automatically.

Clicking the **[RESET]** button on the screen will reset the iris of the displayed camera to the factory default setting. Iris control cannot be retained by keeping the **[OPEN]** or **[CLOSE]** button depressed. You need to click the **[OPEN]** or **[CLOSE]** button again.

⑨ **AUTOPAN**
The auto pan status of the connected combination camera (option) can be changed by clicking the **[ON]** or **[OFF]** button under AUTOPAN.

Note: When LOCAL is selected in the camera setup, AUTOPAN automatically stops after 1 minute. When REMOTE is selected in the camera setup, AUTOPAN will not be released automatically.

⑩ **PRESET**
To move the connected combination camera (option) to any of 64 preset positions. Select a preset position number, then press the **[SET]** button to move the camera to the position.

● **Fixed Input Selection Mode**
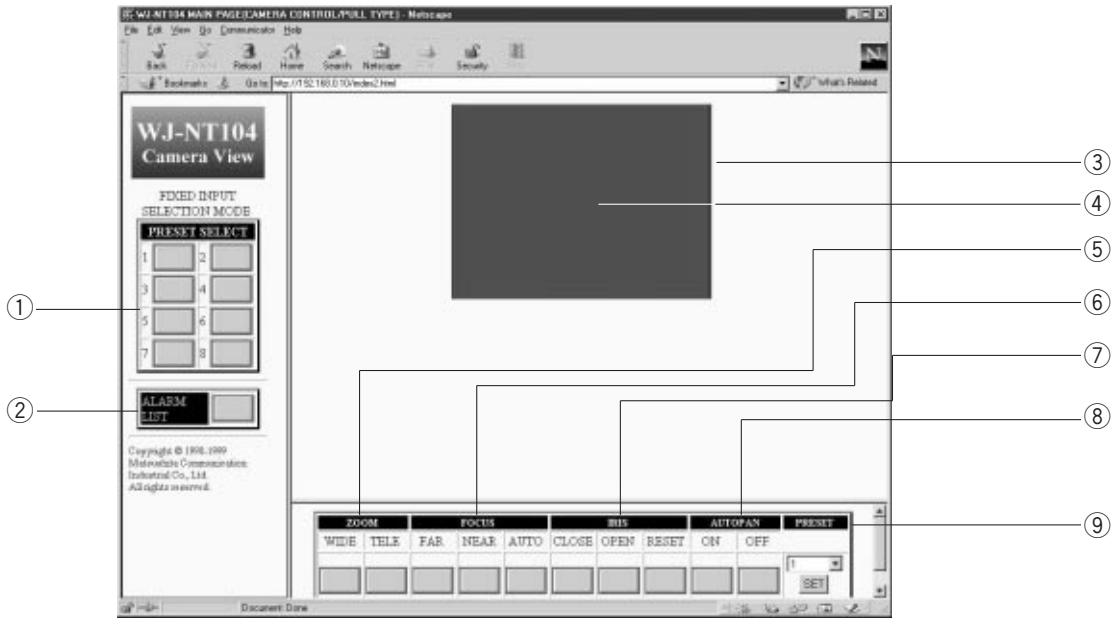
① **PRESET SELECT**

To move the combination camera (option) connected to the WJ-NT104 to any of 8 preset position numbers.
To register preset positions refer to the CAMERA MENU SETUP on page 53.

② **ALARM LIST**

Camera video input before and after alarm input can be temporarily stored in the internal memory of the WJ-NT104.
For alarm display see ALARM LIST on page 37.

③ **Live image display**

Images from the cameras connected to the WJ-NT104 are displayed.
Note: Other than the camera of the channel set cannot be selected.

④ **Pan/Tilt**

Clicking anywhere on the live image moves the connected combination camera (option) up and down, or to the right and left. The camera pan/tilt angle decreases as the point clicked moves closer to the image center. Clicking the image center will not move the camera. Zooming does not change the camera pan/tilt angle. Click the image repeatedly to move the camera to the desired position. You cannot pan or tilt the camera continuously by dragging on the live image.

⑤ **ZOOM**

The connected combination camera (option) can be zoomed by clicking the **[TELE]** or **[WIDE]** button under ZOOM.
Clicking the **[TELE]** or **[WIDE]** button will operate the camera in telescopic or wide-angle mode for a specified time, after which the mode is released automatically. These modes cannot be retained by keeping the **[TELE]** or **[WIDE]** button depressed. You need to click the **[TELE]** or **[WIDE]** button again.

⑥ **FOCUS**

The connected combination camera (option) can be focused by clicking the **[FAR]**, **[NEAR]** or **[AUTO]** button under FOCUS.
Clicking the **[FAR]** or **[NEAR]** button will operate the camera in focusing mode for a specified time, after which the mode is released automatically. Clicking the **[AUTO]** button will automatically focus the video on the screen. Focus control cannot be retained by keeping the **[FAR]** or **[NEAR]** button depressed. You need to click the **[FAR]** or **[NEAR]** button again.

⑦ **IRIS**

The connected combination camera (option) can be controlled to close or open the iris by clicking the **[OPEN]** or **[CLOSE]** button under IRIS. Clicking the **[OPEN]** or **[CLOSE]** button will open or close the camera iris for a specified time, after which the operation is released automatically.

Clicking the **[RESET]** button on the screen will reset the iris of the displayed camera to the factory default setting. Iris control cannot be retained by keeping the **[OPEN]** or **[CLOSE]** button depressed. You need to click the **[OPEN]** or **[CLOSE]** button again.

⑧ **AUTOPAN**

The auto pan status of the connected combination camera (option) can be changed by clicking the **[ON]** or **[OFF]** button under AUTOPAN.

Note: When LOCAL is selected in the camera setup, AUTOPAN automatically stops after 1 minute. When REMOTE is selected in the camera setup, AUTOPAN will not be released automatically.

⑨ **PRESET**

To move the connected combination camera (option) to any of 64 preset positions. Select a preset position number then press the **[SET]** button to move the camera to the position.

● **Multi Input Selection Mode**
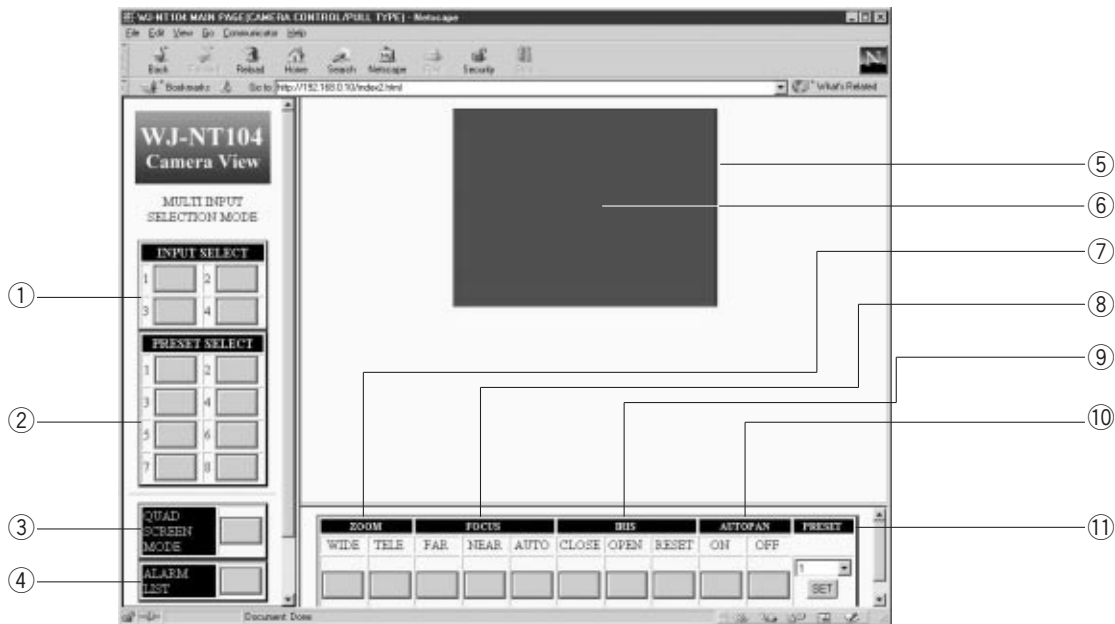
① **INPUT SELECT**

These buttons are used to switch images from up to four cameras.

A change of channel by one user affects only that terminal, but not the channels monitored by other users.

② **PRESET SELECT**

To move the combination camera (option) connected to the WJ-NT104 to any of 8 preset position numbers.

To register preset positions refer to the CAMERA MENU SETUP on page 53.

③ **QUAD SCREEN MODE**

Clicking this button will display images of up to four cameras in quad pattern on a single monitor screen.

④ **ALARM LIST**

Camera video input before and after alarm input can be temporarily stored in the internal memory of the WJ-NT104.

For alarm display see ALARM LIST on page 37.

⑤ **Live image display**

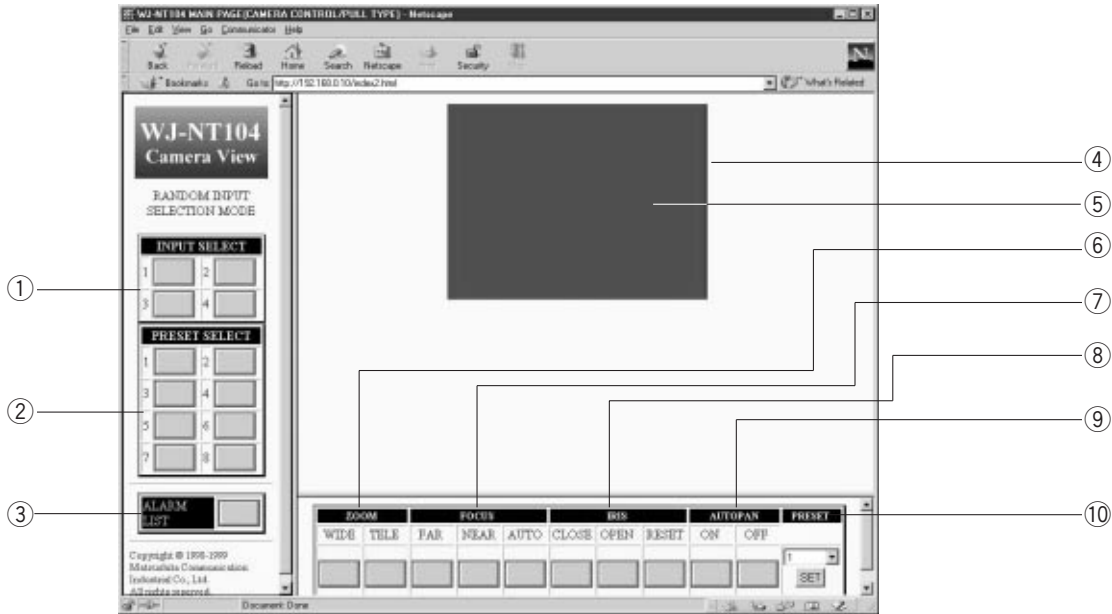Images of the selected camera are displayed on the default page as semi-animated pictures.

⑥ **Pan/Tilt**

Clicking anywhere on the live image moves the connected combination camera (option) up and down, or to the right and left. The camera pan/tilt angle decreases as the point clicked moves closer to the image center. Clicking the image center will not move the camera. Zooming does not change the camera pan/tilt angle. Click the image repeatedly to move the camera to the desired position. You cannot pan or tilt the camera continuously by dragging on the live image.

⑦ **ZOOM**

The connected combination camera (option) can be zoomed by clicking the **[TELE]** or **[WIDE]** button under ZOOM.

Clicking the **[TELE]** or **[WIDE]** button will operate the camera in telescopic or wide-angle mode for a specified time, after which the mode is released automatically. These modes cannot be retained by keeping the **[TELE]** or **[WIDE]** button depressed. You need to click the **[TELE]** or **[WIDE]** button again.

⑧ **FOCUS**

The connected combination camera (option) can be focused by clicking the **[FAR]**, **[NEAR]** or **[AUTO]** button under FOCUS.

Clicking the **[FAR]** or **[NEAR]** button will operate the camera in focusing mode for a specified time, after which the mode is released automatically. Clicking the **[AUTO]** button will automatically focus the video on the screen. Focus control cannot be retained by keeping the **[FAR]** or **[NEAR]** button depressed. You need to click the **[FAR]** or **[NEAR]** button again.

⑨ **IRIS**

The connected combination camera (option) can be controlled to close or open the iris by clicking the **[OPEN]** or **[CLOSE]** button under IRIS. Clicking the **[OPEN]** or **[CLOSE]** button will open or close the camera iris for a specified time, after which the operation is released automatically.

Clicking the **[RESET]** button on the screen will reset the iris of the displayed camera to the factory default setting. Iris control cannot be retained by keeping the **[OPEN]** or **[CLOSE]** button depressed. You need to click the **[OPEN]** or **[CLOSE]** button again.

⑩ **AUTOPAN**

The auto pan status of the connected combination camera (option) can be changed by clicking the **[ON]** or **[OFF]** button under AUTOPAN.

Note: When LOCAL is selected in the camera setup, AUTOPAN automatically stops after 1 minute. When REMOTE is selected in the camera setup, AUTOPAN will not stop automatically.

⑪ **PRESET**

To move the connected combination camera (option) to any of 64 preset positions. Select a preset position number, then press the **[SET]** button to move the camera to the position.

ALARM FUNCTION

■ ALARM LIST Window

On the Location bar, type http://192.168.0.10 (or IP address set for WJ-NT104)/almindex.html, or click the ALARM LIST button on the MAIN PAGE to display the ALARM LIST window. The window displays a list of alarm input dates, times and channels. To display recorded alarm images, click the icon on the list.
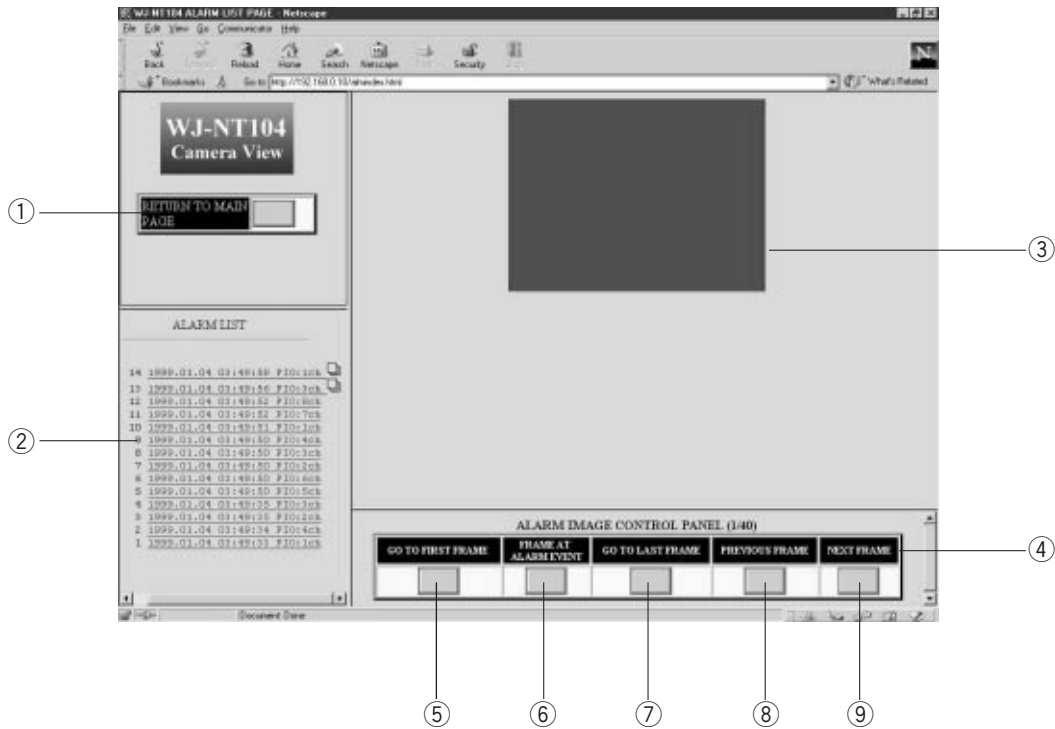
① **RETURN TO MAIN PAGE**
Click to return to the MAIN PAGE window.

② **ALARM LIST**
Displays a list of alarm IDs, dates, times and channels where alarm was generated. The list stores up to 100 alarms. An icon at the right end of the line indicates that images have been recorded. Clicking the icon will display the alarm images.

③ **Alarm image display**
Alarm images are displayed in this space. The image display size is specified in the MODE SETUP window. (Images for which size 640 x 240 was selected, will be fitted to the screen (640 x 480)).

④ **ALARM IMAGE CONTROL PANEL**
For frame-by-frame display of alarm images in CONTINUOUS RECORDING mode. The control panel is not displayed in SINGLE FRAME RECORDING mode.

⑤ **GO TO FIRST FRAME**
To jump to the first of a series of alarm images

⑥ **FRAME AT ALARM EVENT**
To jump to the first image after an alarm in CONTINUOUS RECORDING (BEFORE/AFTER ALARM) mode; to jump to the first of alarm images in CONTINUOUS RECORDING (AFTER ALARM) mode.

⑦ **GO TO LAST FRAME**
To jump to the last of a series of alarm images

⑧ **PREVIOUS FRAME**
To move one frame backward.

⑨ **NEXT FRAME**
To move one frame forward.

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■ ALARM Recording

The WJ-NT104 records images before and after an alarm is activated and notifies the user of alarm input. Alarm images can be recorded in the following three modes:

● Single Frame Recording Mode

When an alarm is received, the alarm image is captured and saved as a still image after the specified delay time.
  • The delay time from receiving an alarm until capture of the alarm image can be specified in the range of 0 to 10 seconds in increments of 100 ms.

```
                        Set delay time

  Alarm activated      Single Frame Recording      Time base
```
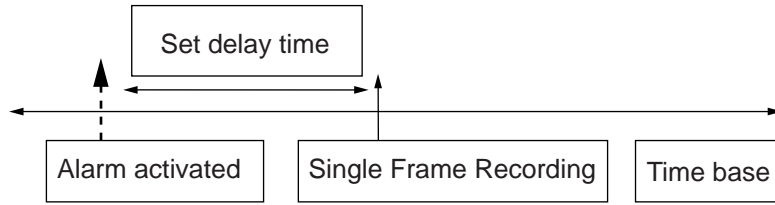
● Continuous Recording [after alarm] Mode

When an alarm is received, the specified number of alarm images are captured and saved after the specified delay time.
  • The delay time from receiving an alarm until capture of the alarm image can be specified in the range of 0 to 10 seconds in increments of 100 ms.
  • The number of images to save can be set to between 1 and 16 (resolution 752 x 568).
  • A frame rate of 1/10, 1/5, 3/10, 1/2, 1, 2, 3, 5, or 10 can be selected.
  • If another alarm is received while recording an alarm, the on-going alarm processing is suspended and the new alarm image is recorded with priority over the preceding one.

```
                        Set delay time

  Alarm activated      Continuous recording      Time base
```
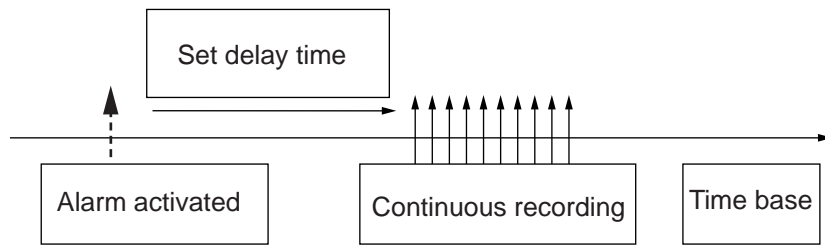
● Continuous Recording [before/after alarm] Mode

Images before receiving an alarm are recorded at the preset frame rate and in the preset number of images. After an alarm is activated, the specified number of images are continuously captured and saved.
  • The total number of images to be saved before and after an alarm can be set to between 1 and 16 (resolution 752 x 568).
  • A frame rate of 1/10, 1/5, 3/10, 1/2, 1, 2, 3, 5, or 10 can be selected. (Frame rate 10 is not available for recording before an alarm event.)
  • If another alarm is received while recording an alarm, the on-going alarm processing is suspended and the new alarm image is recorded with priority over the preceding one.

```
  Before continuous          After continuous
  recording                  recording

  Alarm activated                           Time base
```
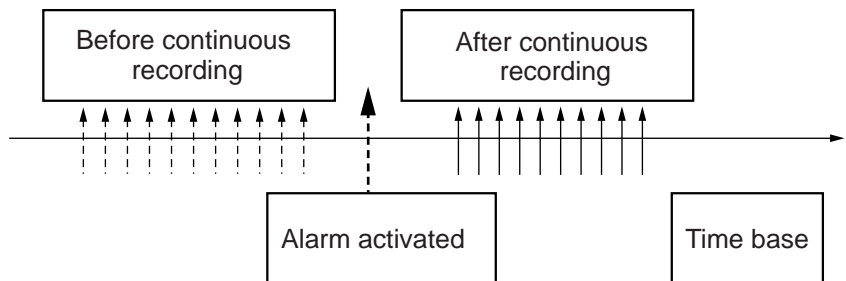
Note: This mode is valid only in Fixed Input Selection mode is selected.

Maximum number of recorded alarm images

Differs depending on resolution and picture quality.

	Super Fine/Fine	Normal/Rough
752 x 568	16mages	24 images
752 x 280	41 images	57 images
368 x 280	90 images	122 images
176 x 136	255 images	255 images

■ ALARM NOTICE

The WJ-NT104 can notify the user of an alarm event. The notice is sent either by Panasonic original protocol, e-mail (SMTP client) or a combination of both.

● E-Mail Notice

Mail is sent to the mail server using SMTP (Simple Mail Transfer Protocol).
16 mail addresses can be specified.

- Mail contents include the URL to access the alarm image, date and time (hours, minutes, seconds) of the alarm, camera channel, and connection port ID.
- If mail is not sent to the mail server before the set timeout, the mail is automatically deleted.
- In case of continuous recording [after/before], mail contents are as follows:

  [Explanation]
  NT104:
  > Host name set by network setup (8 characters maximum). Default setting is WJ-NT104.

  Date and time of alarm activation:
  > Based on the time of the internal clock of the WJ-NT104.

  Generating port:
  > Port number of the alarm input/output terminal where an alarm is generated

  Link to alarm image:
  > Alarm image URL. In continuous recording mode, the URL of the first image. In the following cases, accessing the URL may not display the alarm image.

  ① Alarm image is overwritten.
  (For the number of alarm images recorded see page 38.)
  ② Alarm log is overwritten.
  (Up to 100 alarm logs can be recorded.)
  ③ NT104 is restarted due to a change in settings.
  ④ Power is switched back on or the reset button is pressed.
  > Number of frames recorded:
  >> Number of alarm images to be recorded. None in case Single Frame Recording mode.

[Example]

```
 !!! ALARM NOTICE !!!
Source    :  133. 185. 10. 47 (NT104)
Port      :  PI0 5ch
Date      :  Jul/04/99
Link      :  http://133. 185. 10. 47/ALM0001_00.JPG

<NUMBER OF FRAMES RECORDED>
Total     :  14
Before    :  4
After     :  10
```

■ Alarm Image Readout

Recorded alarm images can be read out by accessing the alarm list (almindex.html) of the WJ-NT104.

SETUP PROCEDURES

■ How to Read ADMINISTRATOR SETUP PAGE

On the Location bar, type http://192.168.0.10/hwsetup.html to display the **ADMINISTRATOR SETUP PAGE**. To open the **ADMINISTRATOR SETUP PAGE**, you need to enter your user ID and password. The default ID and password are [admin] and [nil (none)], respectively.
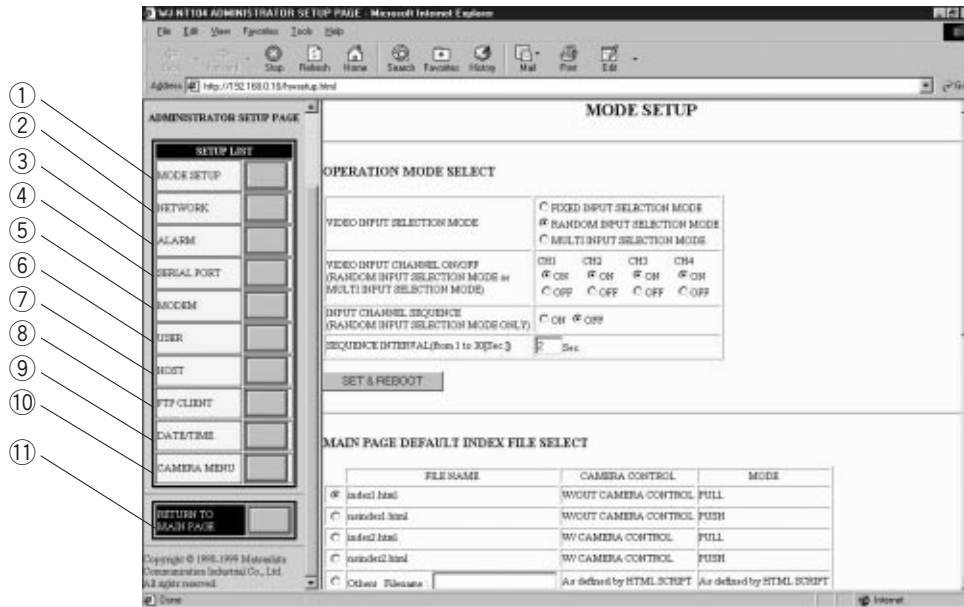
[SET][SUBMIT] button
> Clicking this button stores the settings made on the **ADMINISTRATOR SETUP PAGE** in the WJ-NT104.
> The setting range of this button is indicated by the ruled line that separates one item from another.
> The area showing the data within the range returns to the original display when the button is clicked.
> The system is not restarted when this button is pressed.

[SET & REBOOT] button
> Clicking this button stores the settings made on this page in the WJ-NT104. Remember, however, that any recorded alarm data will be deleted.

① **MODE SETUP**
To set the default page when a file name is specified. Also set operation mode, image quality, and camera control selection on this page.

② **NETWORK**
To select LAN/PPP and set the IP address, network, and default gateway.

③ **ALARM**
To set alarm input ON/OFF, alarm image save mode, image overwrite YES/NO, number of images recorded, frame rate, and parallel I/O port (See page 37).

④ **SERIAL PORT**
To select RS-232C or RS-485 and set the communication parameters.

⑤ **MODEM**
To set the modem or TA to be used in the PPP connection.

⑥ **USER**
User authorization, user registration, user deletion. To register or delete a user table.

⑦ **HOST**
To set the address of the host that can be accessed without user certification.

⑧ **FTP CLIENT**
To set the FTP client.

⑨ **DATE/TIME**
To set the internal clock of the device.

⑩ **CAMERA MENU**
To set connected cameras (option) by remote control.

⑪ **RETURN TO MAIN PAGE**
To return to the MAIN PAGE window.

■ MODE SETUP

On the **ADMINISTRATOR SETUP PAGE**, click the **MODE SETUP** button to display the **MODE SETUP** window.
Select the operation mode, image quality and camera control.
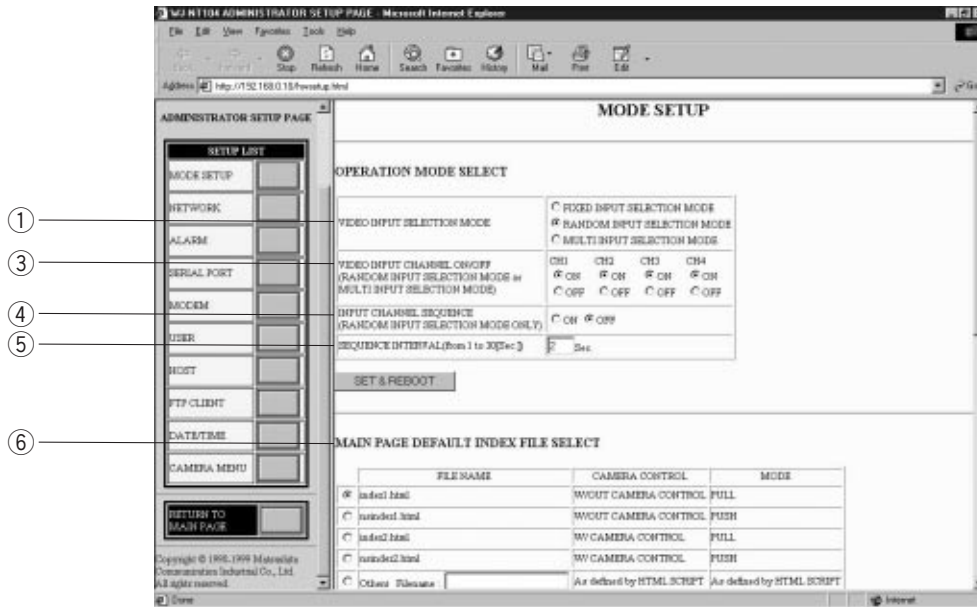
① **VIDEO INPUT SELECTION MODE**
Select an operation mode for the camera displayed on the monitor.
The factory default setting is RANDOM INPUT SELECTION MODE.

② **INPUT CHANNEL**
This item is available in FIXED INPUT SELECTION MODE only. Select a channel for display on the monitor.
The factory default setting is CH1

③ **VIDEO INPUT CHANNEL ON/OFF**
This item is available in RANDOM INPUT SELECTION MODE or MULTI INPUT SELECTION MODE only.
   • **RANDOM INPUT SELECTION MODE**
   Channels set to OFF will not be displayed. In sequence mode, such channels are skipped.

   • **MULTI INPUT SELECTION MODE**
   If a channel set to OFF is selected, the frame rate goes up because images are captured by skipping the channel set to OFF.

The factory default setting for channels are ON.

④ **INPUT CHANNEL SEQUENCE**
This item is available in **RANDOM INPUT SELECTION MODE** only.
Set sequence operation to ON or OFF.
The factory default setting is OFF.

⑤ **SEQUENCE INTERVAL**
This item is available in **RANDOM INPUT SELECTION MODE** only. It defines the dwell time (time until changeover to the next channels) for sequence operation.
Dwell time can be set to a value between 1 and 30 seconds in increments of 1 second.
The factory default setting is 2 Sec.

⑥ **MAIN PAGE DEFAULT INDEX FILE SELECT**
Set the window to be displayed when only a URL is specified on the LOCATION bar.
Note: If OTHERS is marked, the name specified next to File name will open the MAIN PAGE window.

The factory default setting is index1.html
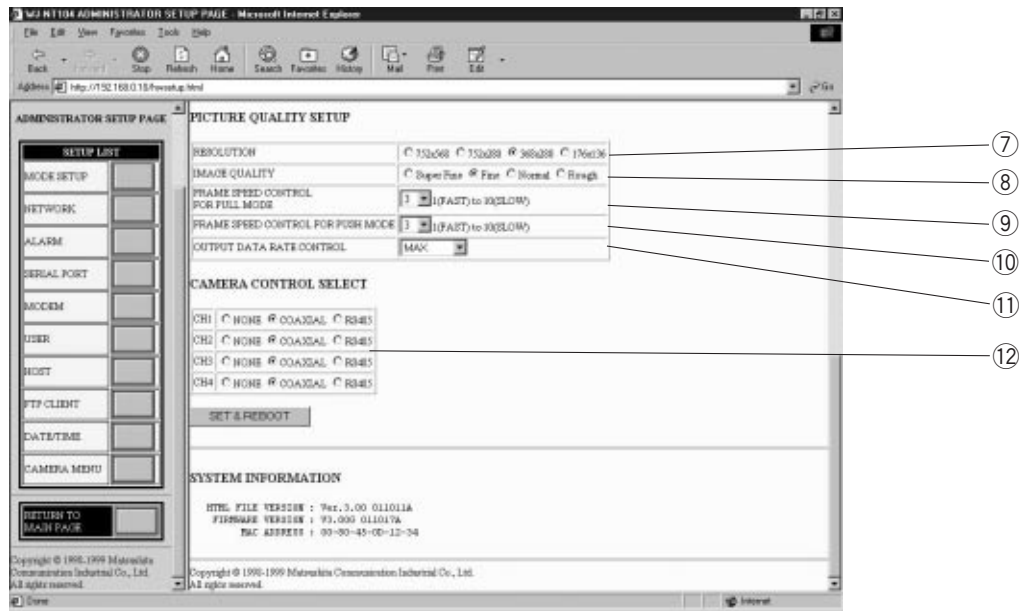
⑦ **RESOLUTION**
Set a pixel number (resolution) for images from the WJ-NT104. The same value is applied for live images and alarm images.

The factory default setting is 320x240 pixels

⑧ **IMAGE QUALITY**
Set the image quality for images from the WJ-NT104. The same value is applied for live images and alarm images.
The factory default setting is FINE.

⑨ **FRAME SPEED CONTROL FOR PULL MODE**
Set a frame speed for PULL mode.
1 is the highest frame speed. The higher the number, the lower the frame speed.
The factory default setting is 3.

⑩ **FRAME SPEED CONTROL FOR PUSH MODE**
Set a frame speed for PUSH mode.
This mode is supported by the Netscape Navigator browser only.
1 is the highest frame speed. The higher the number, the lower the frame speed.
The factory default setting is 3.

⑪ **OUTPUT DATA RATE CONTROL**
Selecting a lower data rate reduces the possibility if a network traffic jam.
The factory default setting is MAX.

⑫ **CAMERA CONTROL SELECT**
A camera control cable can be selected for each channel.
The factory default setting is COAXIAL.

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■ NETWORK SETUP

On the **ADMINISTRATOR SETUP PAGE** click the **NETWORK** button to display the **NETWORK SETUP** window.
Select LAN/PPP, and set IP address, netmask, and default gateway.
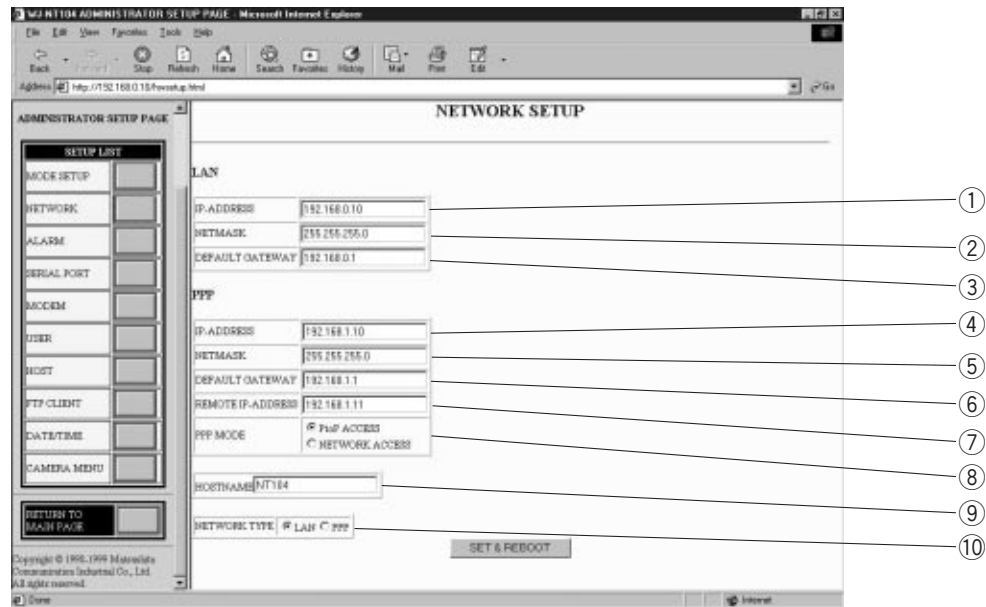
① **IP ADDRESS (LAN)**
Enter the IP address to be used with LAN.
The factory default setting is **192.168.0.10**.

② **NETMASK (LAN)**
Enter the netmask to be used with LAN.
The factory default setting is **255.255.255.0**.

③ **DEFAULT GATEWAY (LAN)**
Enter the default gateway to be used with LAN.
The factory default setting is **192.168.0.1**.

④ **IP ADDRESS (PPP)**
Enter the IP address to be used with PPP.
The factory default setting is **192.168.1.10**.

⑤ **NETMASK (PPP)**
Enter the netmask to be used with PPP.
The factory default setting is **255.255.255.0**.

⑥ **DEFAULT GATEWAY (PPP)**
Enter the default gateway to be used with PPP.
The factory default setting is **192.168.1.1**.

⑦ **REMOTE IP ADDRESS**
Used when **PPP mode** is on **P to P ACCESS**.
Enter the IP address of the PC which calls and access-es the WJ-NT104. The PC's IP address must be set to Obtain an IP automatically. The factory default setting is **192. 168. 1.11**.

⑧ **PPP MODE**
   • **P to P ACCESS** mode
   To use this mode, match the IP address of the PC with the address of the WJ-NT104.

   • **NETWORK ACCESS** mode
   To use this mode, match the address of the WJ-NT104 with the address of the PC. (Independent of outgoing and incoming calls)

   The factory default setting is **P to P ACCESS**.

⑨ **HOSTNAME**
Enter the host name.
Alarm notice (e-mail) is sent in the host name specified here. The host name you enter may be different from that entered for the domain settings (DNS).
The factory default setting is WJ-NT104.

⑩ **NETWORK TYPE**
Select **LAN or PPP**.
If PPP is marked, access via LAN is not possible.

■ ALARM SETUP

On the **ADMINISTRATOR SETUP PAGE**, click the **ALARM** button to display the **ALARM SETUP** window.
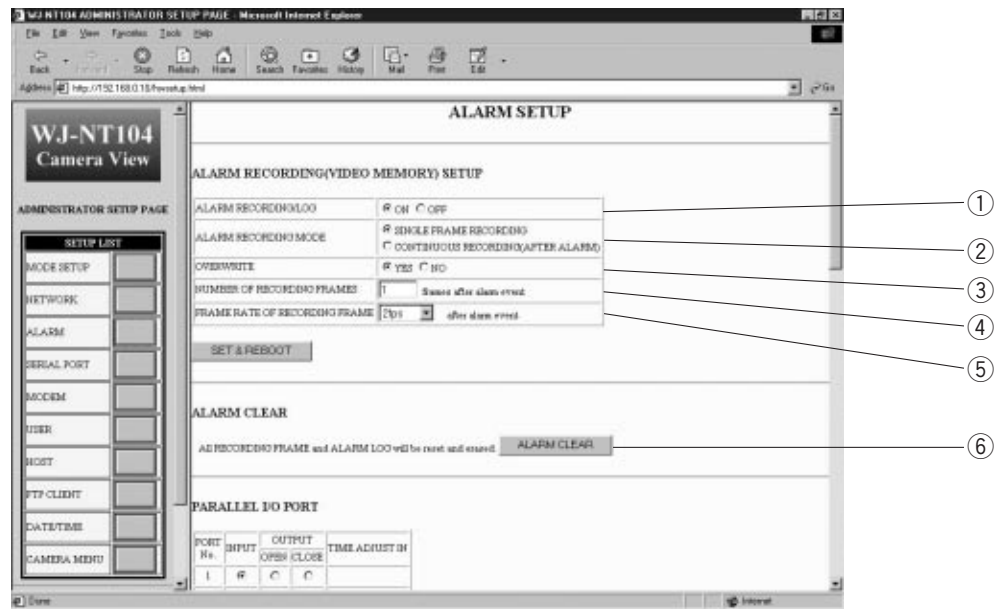
① **ALARM RECORDING/LOG**
Set the alarm recording function to **ON** or **OFF**.

② **ALARM RECORDING MODE**
Select on alarm image recording mode.

③ **OVERWRITE**
When **YES** is marked, old alarm images are overwritten by new alarm images.
When **NO** is marked, new alarm images received after the limit for recording of alarm images has been reached will not be recorded.

④ **NUMBER OF RECORDING FRAMES**
Set a number of images to be recorded before and after an alarm is activated.

Note: Depending on the recording mode, this item is not shown on the window.

⑤ **FRAME RATE OF RECORDING FRAME**
Set a frame rate range for recording before and after an alarm is activated.

Note: Depending on the recording mode, this item is not shown on the window.

⑥ **ALARM CLEAR**
Clicking this button clears the alarm images and alarm log file saved in the memory.

⑦ **PARALLEL I/O PORT**
Designate the Alarm Input/Output Port (Parallel I/O port). The factory default setting is INPUT.
Port number 8 can also be used for time adjustment. If a contact input is received within plus or minus 3 minutes of the hour, the internal clock is set to the hour.
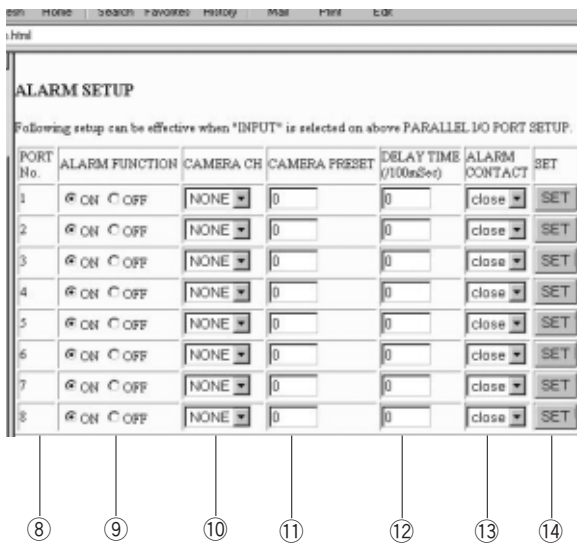
⑧ PORT No.
Same as the alarm terminal numbers on the rear panel

⑨ ALARM FUNCTION
Set the alarm function to ON or OFF.

⑩ CAMERA CH
Specify a camera channel to be selected when an alarm is activated.

⑪ CAMERA PRESET
Specify a preset position for the camera when an alarm is activated.
This is valid only when a camera with preset function is connected.

⑫ DELAY TIME (per 100 msec)
Set the time from activation of an alarm to the start of recording.

⑬ ALARM CONTACT
Select between normally closed (NC) and normally open (NO) alarm contact.
open: Accepts an NC alarm signal
close: Accepts an NO alarm signal

⑭ SET button
Clicking this button saves the settings in the WJ-NT104.
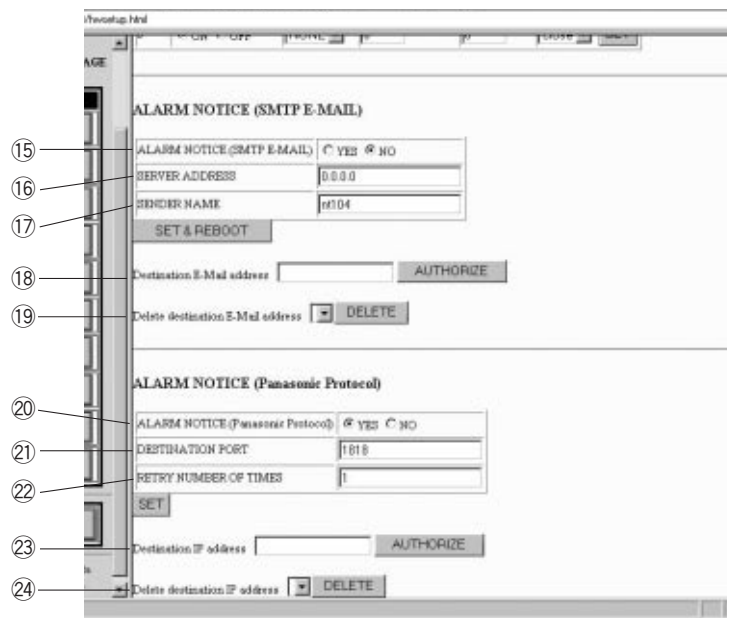
⑮ ALARM NOTICE (SMTP E-MAIL)
To use the e-mail notice function, select YES.

⑯ SERVER ADDRESS
Specify the address of the mail server to which mail is sent directly from the WJ-NT104.

⑰ SENDER NAME
Set the name of a mail sender (up to 8, alphanumeric characters lower case).

⑱ Destination E-Mail address
Specify the destination mail addresses of alarm notice recipients. Up to 16 addresses can be set.

⑲ Delete destination E-Mail addresses
Displays the list of e-mail addresses to receive alarm notices. Clicking the DELETE button will delete an address from the list.

⑳ ALARM NOTICE (Panasonic Protocol)
If Panasonic's special alarm receiving software* is installed, mark YES to use the alarm notice function.
* This software will be available in the near future as an option.

㉑ DESTINATION PORT
Specify 1818.

㉒ RETRY NUMBER OF TIMES
Enter the number of retries in the event that an alarm notice is undeliverable.

㉓ Destination IP address
Specify the IP addresses of PCs to which an alarm notice is to be sent. Up to 16 IP addresses can be set.

㉔ Delete destination IP addresses
Displays the list of IP addresses to receive alarm notices. Clicking the DELETE button will delete an address from the list.

■ SERIAL PORT SETUP

On the **ADMINISTRATOR SETUP PAGE**, click the **SERIAL PORT** button to display the **SERIAL PORT SETUP** window. Specify whether to use the RS-232C or RS-485 interface, and set the communication parameters.
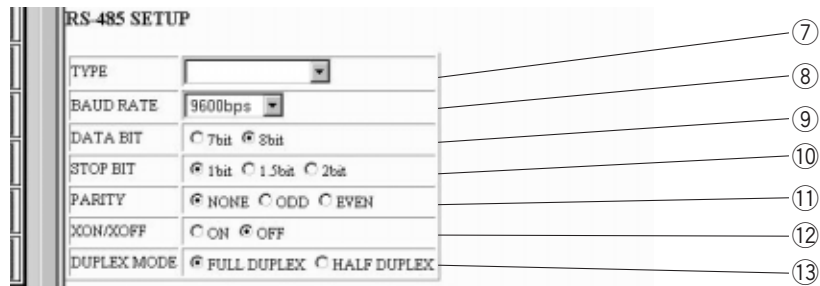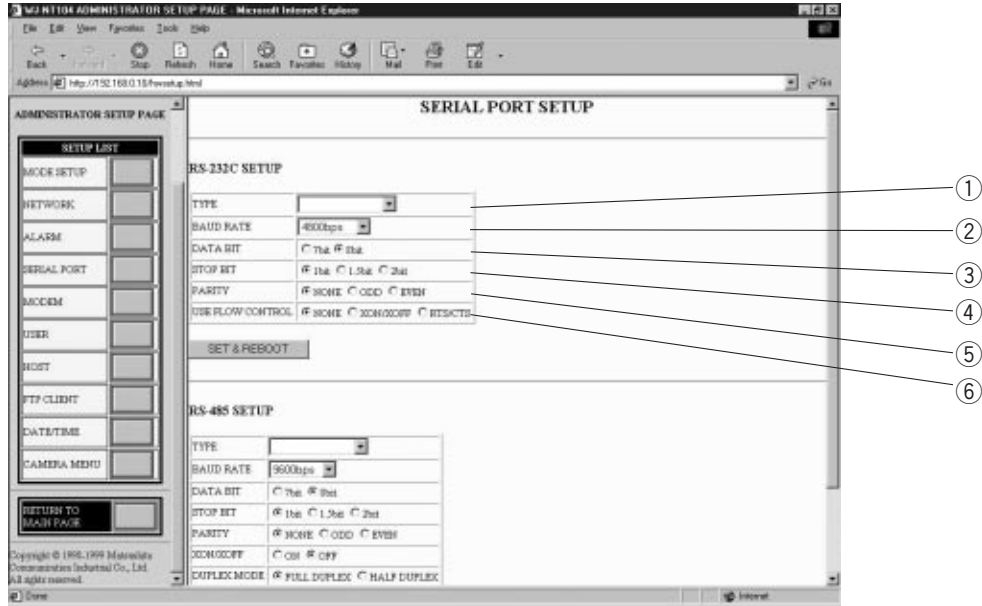
① **TYPE (RS-232C)**
Set up the RS-232C port usage. Select NONE, MODEM/TA, WJ-SX550A/B, WJ-FS616, WJ-DR200 or Serial Through.
The factory default setting is **NONE**.

② **BAUD RATE (RS-232C)**
Set the baud rate for RS-232C to 300, 1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, or 115200 bps can be selected.
The factory default setting is **4800 bps**.
It is recommended that 38400 bps be selected for a 56 kbps modem, and 57600 bps when for a TA.

③ **DATA BIT (RS-232C)**
Set the data bits for RS-232C.
The factory default setting is **8 bits**.

④ **STOP BIT(RS-232C)**
Set the stop bit for RS-232C.
The factory default setting is **1 bit**.

⑤ **PARITY (RS-232C)**
Set the parity bit for RS-232C.
The factory default setting is **NONE**.

⑥ **USE FLOW CONTROL (RS-232C)**
Set flow control for RS-232C.
The factory default setting is **NONE**.

⑦ **TYPE (RS-485)**
Set up the RS-485 port usage. Select NONE or CAMERA + WJ-SX550A/B.
The factory default setting is **NONE**.

⑧ **BAUD RATE (RS-485)**
Set the baud rate for RS-485 to 1200, 2400, 4800, 9600, 19200, or 38400 bps can be selected.
The factory default setting is **4800 bps**.

⑨ **DATA BIT (RS-485)**
Set the data bits for RS-485.
The factory default setting is **8 bits**.

⑩ **STOP BIT (RS-485)**
Set the stop bit for RS-485.
The factory default setting is **1 bit**.

⑪ **PARITY(RS-485)**
Set the parity bit for RS-485.
The factory default setting is **NONE**.

⑫ **X ON/X OFF (RS-485)**
Set flow control for RS-485 (X ON/X OFF).
The factory default setting is **OFF**.

⑬ **DUPLEX MODE**
Set the communication mode for RS-485.
The factory default setting is **FULL DUPLEX**.

■ MODEM SETUP

On the **ADMINISTRATOR SETUP PAGE**, click the **MODEM** button to display the **MODEM/TA SETUP** window. Select the modem or TA (terminal adapter) for the PPP connection.
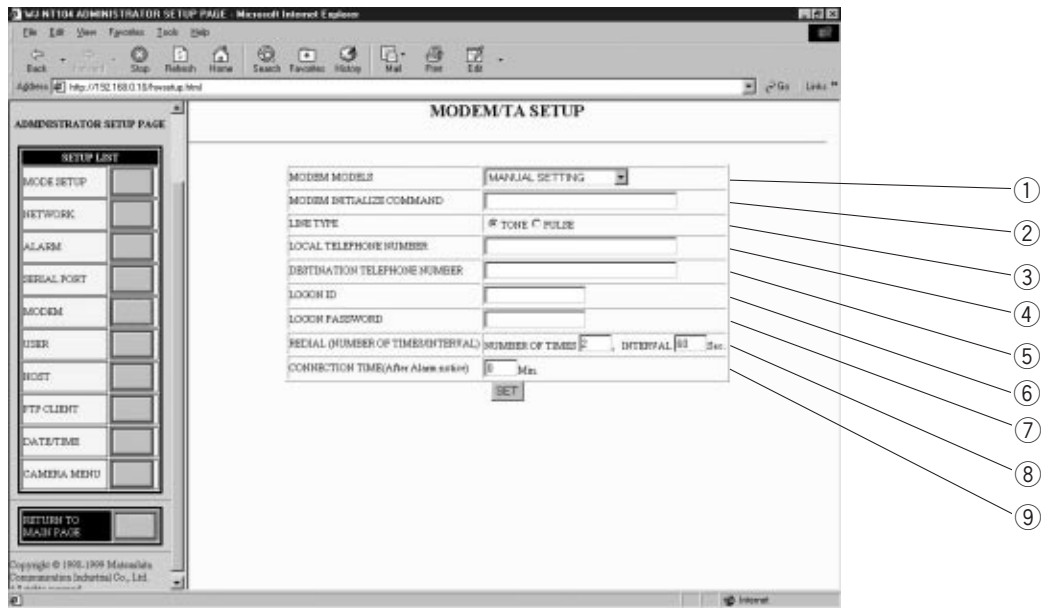
① **MODEM MODELS**

Set a modem mode. Depending on the set value, the modem initializing command is issued. Select manual setting or standard modem.
The factory default setting is **MANUAL SETTING**.

② **MODEM INITIALIZE COMMAND**

This command is valid when **MANUAL SETTING** is selected for **MODEM MODELS**.
Refer to the manual for the modem and set the initializing command.

③ **LINE TYPE**

Select the type of telephone line to use. The factory default setting is **TONE**.

④ **LOCAL TELEPHONE NUMBER**

Set a telephone number for the WJ-NT104.

⑤ **DESTINATION TELEPHONE NUMBER**

Set the destination telephone numbers in case the alarm notice function is used.

⑥ **LOGON ID**

Set an ID code to log into the destination network when making calls from the WJ-NT104.

⑦ **LOGON PASSWORD**

Set a password to log into the destination network when making calls from the WJ-NT104.

⑧ **REDIAL (NUMBER OF TIMES/INTERVAL)**

In case of failure of the PPP connection, the number is redialed for the set number of times.
The factory default setting is 2 retries at intervals of 60 seconds.

⑨ **CONNECTION TIME (After alarm notice)**

Set a time to automatically disconnect the line after the WJ-NT104 accesses an alarm notice recipient. The time countdown starts with completion of alarm notice processing. The factory default setting is 0 minute.

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■ USER SETUP

On the **ADMINISTRATOR SETUP PAGE**, click the **USER** button to display the **USER SETUP** window. Use this window to register or delete users.
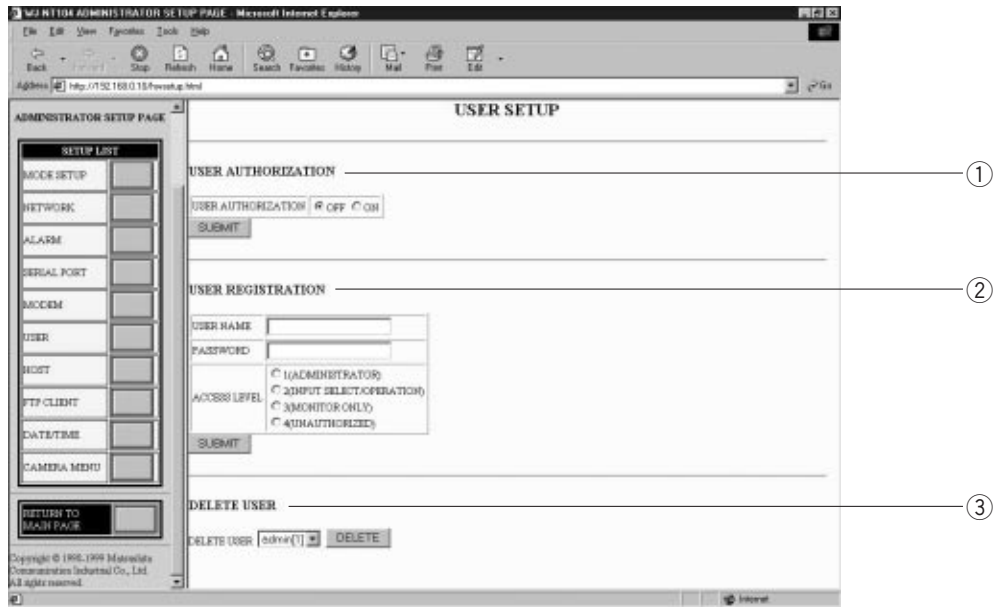
① **USER AUTHORIZATION**
Set **USER AUTHORIZATION** to **OFF** or **ON**.
Even if USER AUTHORIZATION is set to OFF, host authorization is necessary to access the pages exclusive to your network administrator, or to use the FTP function and PPP connection (to call the WJ-NT104).
The factory default setting is **OFF**.

② **USER REGISTRATION**
Set **USER NAME, PASSWORD**, and **ACCESS LEVEL**.
USER NAME and **PASSWORD** can be entered in up to 16 upper or lower case alphanumerics characters and symbols. Select an **ACCESS LEVEL** 1 to 4. To change an already registered password and access level, set them in the same way as to register a new password and access level, and then press the **[SUBMIT]** button.
For user authorization, refer to the ACCESS AUTHORIZATION on page 57.

③ **DELETE USER**
Select a registered user and click the **[DELETE]** button to delete.
The list of currently registered users can be viewed by clicking this pulldown list. The number in brackets is the access level.

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■ HOST SETUP

On the **ADMINISTRATOR SETUP PAGE**, click the **HOST** button to display the **HOST SETUP** window. Use this window to register or delete hosts that can be accessed without user authorization.
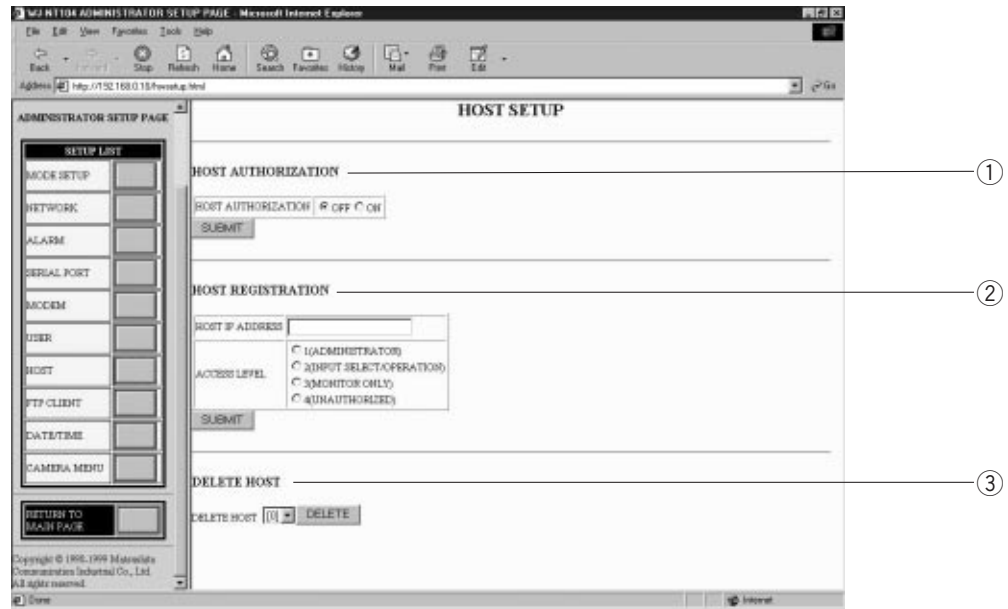
① **HOST AUTHORIZATION**
Set **HOST AUTHORIZATION** to **OFF** or **ON**.
The factory default setting is **OFF**.

② **HOST REGISTRATION**
Set a **HOST IP ADDRESS** and **ACCESS LEVEL**.
Select an **ACCESS LEVEL** (1 to 4). To change an already registered password and access level, set them in the same way as to register a new password and access level, and then press the **[SUBMIT]** button.
For host authorization, refer to ACCESS AUTHORIZATION on page 57.

③ **DELETE HOST**
Select a registered **HOST** and press the **[DELETE]** button to delete.
The list of currently registered hosts can be viewed by clicking this pulldown list. The number in brackets is the access level.

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■ FTP CLIENT SETUP

On the **ADMINISTRATOR SETUP PAGE**, click the **FTP CLIENT** button to display the **FTP CLIENT SETUP** window.
Set FTP server address, user name, password, mode, Normal setup and Alarm setup.
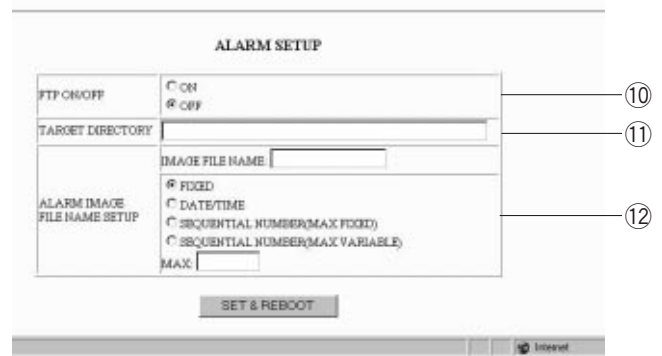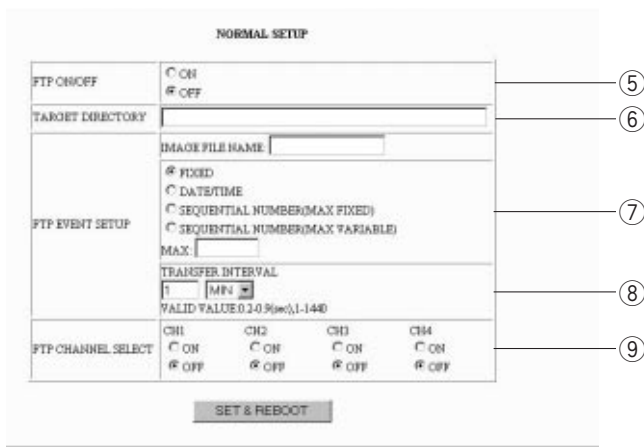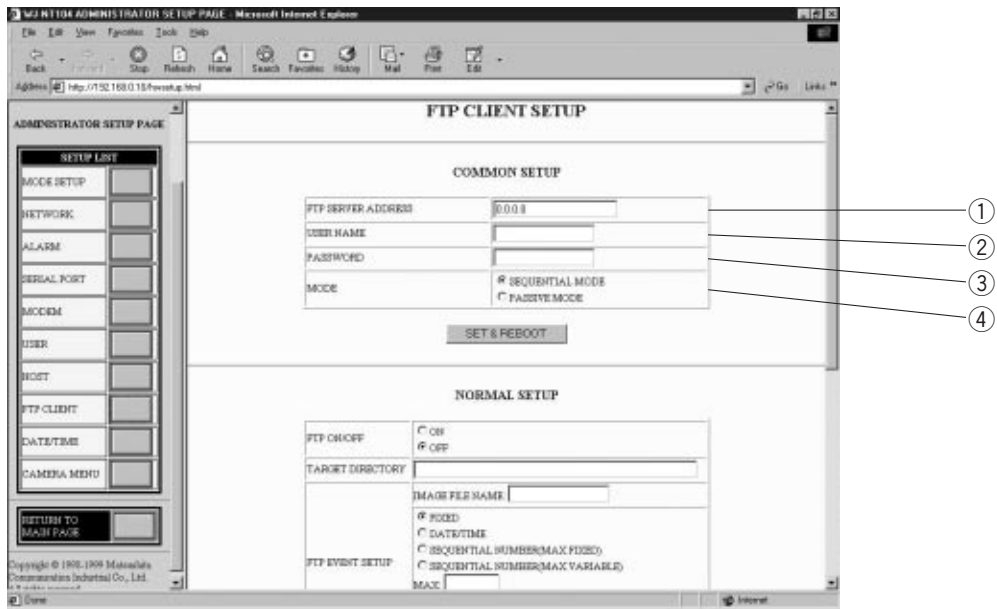
Common Setup

① **FTP SERVER ADDRESS**
Specifies the IP address of the FTP server to which images are sent directly from the WJ-NT104.

② **USER NAME**
Specifies the user name when the WJ-NT104 logs in to FTP server.

③ **PASSWORD**
Specifies the password when the WJ-NT104 logs in to FTP server.

④ **MODE**
Specifies upload mode for FTP client.

SEQUENTIAL MODE: The images are uploaded to the data port on default value.
PASSIVE MODE: The images are uploaded to specified data port from FTP server.

Normal Setup

⑤ **FTP ON/OFF**
Selects to enable or disable image upload with the FTP periodically.
ON: Enables upload.
OFF: Disables upload.

The factory default is OFF.

⑥ **TARGET DIRECTORY**
Specifies the absolute path for the directory of the FTP server when uploading the images periodically.

⑦ **FTP EVENT SETUP IMAGE FILE NAME**
Enter the desired image file name in the box.
The file name consists of **x**(image file name) ✱✱✱✱✱✱. jpg

x: camera CH number (1 – 4)
FIXED mode: Only the image file name, no addition ✱✱✱✱✱.

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DATE/TIME mode: added digits (month, date, hour, minute, second, and last 2-digit year).
Added MMDDhhmmsssYY (for example, 0123134500 101 for January 23 13:45:00.1, 2001)
SEQUENTIAL NUMBER(MAX FIXED) mode: added number 00001 to 65535 automatically.
SEQUENTIAL NUMBER(MAX VARIABLE) mode: added number between 00001 to max.(your setting number till 65535).
Is disabled to specify over 65535.

⑧ **TRANSFER INTERVAL**
Specify the interval time for uploading the data periodically.

Valid Value: seconds: between 0.2 and 1 with 0.1 increment
between 1 and 3600 with 1 increment
minutes: between 1 and 1440

For examples: 1min and 30sec: set 90 sec.
2 hours: set 120 min.

Notes:
• It is disabled to specify the time in combination with the minutes and seconds.
• It may occur that uploading is disabled with the specified duration through the line status.

⑨ **FTP CHANNEL SELECT**
You can specify the input channel for uploading when the multi input selection mode is set in the MODE SETUP window.

ON: Enables uploading.
OFF: Disables uploading.

The factory defaults are OFF.

Alarm Setup

⑩ **FTP ON/OFF**
Selects to enable or disable alarm image upload with the FTP when an alarm is received.

ON: Enables alarm upload.
OFF: Disables alarm upload.

The factory default is ON.

⑪ **TARGET DIRECTORY**
Specifies the absolute path for the directory of the FTP server when uploading the alarm images.

Note: There are 3 alarm recording modes available, Single Frame, Continuous (post-images), and Continuous (pre and post-images) recording. It is enabled to specify the directory of FTP server for normal and alarm status, and store the uploading images separately.

⑫ **ALARM IMAGE FILE NAME SETUP**
Enter the desired image file name in the box.
The file name consists of **x**(image file name)✶✶✶✶✶. jpg

x: camera CH number (1 – 4)
FIXED mode: Only the image file name, no addition ✶✶✶✶✶.
DATE/TIME mode: added digits (month, date, hour, minute, second, and last 2-digit year).
Added MMDDhhmmsssYY (for example, 0123134500101 for January 23 13:45:00.1, 2001)
SEQUENTIAL NUMBER(MAX FIXED) mode: added number 00001 to 65535 automatically.
SEQUENTIAL NUMBER(MAX VARIABLE) mode: added number between 00001 to max.(your setting number till 65535).
Is disabled to specify over 65535.

Note: This FTP client function can support the FTP server such as Windows 2000, Windows NT, Free BSD, Turbolinux, and Red Hat Linux.

■ DATE & TIME SETUP

On the **ADMINISTRATOR SETUP PAGE**, click the **DATE/TIME** button to display the **CLOCK SETUP** window. Use this window to adjust the internal clock of the device.
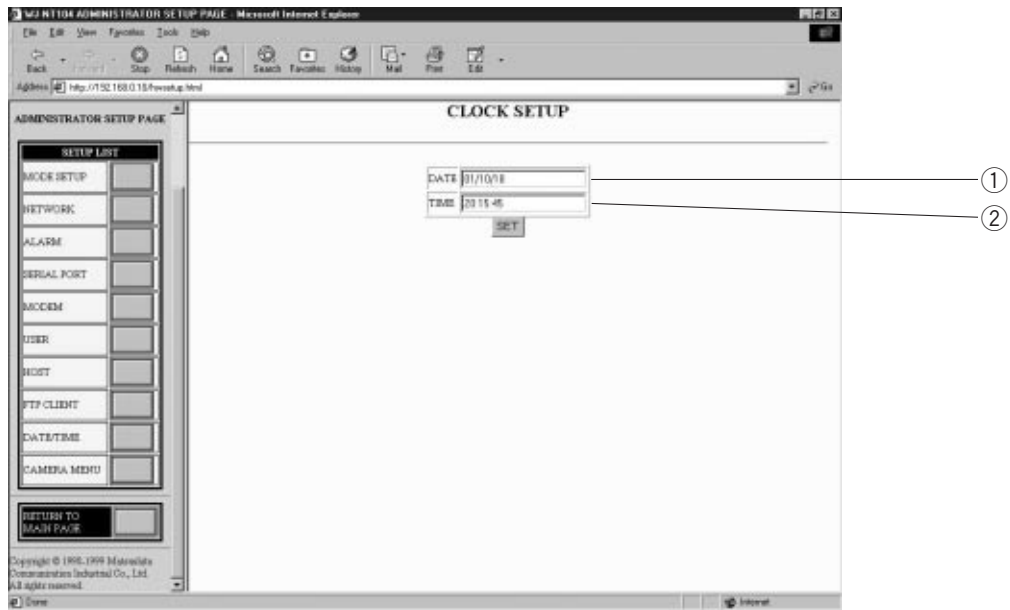
① **DATE**

Set a date in the order of YY/MM/DD (for example, 99/01/23 for January 23, 1999). The date is shown when this window is called on the screen.

② **TIME**

Set a time in the order of HH:MM:SS (for example, 12:03:45 for 3 minutes 45 seconds past 12 o'clock). Use the 24-hour system for time setting. The date is shown when this window is called on the screen.

■ CAMERA MENU SETUP

On the **ADMINISTRATOR SETUP PAGE**, click the **CAMERA MENU** button to display the **CAMERA MENU SETUP** window.
The **CAMERA MENU SETUP** function is available in **RANDOM INPUT SELECTION MODE** and **FIXED INPUT SELECTION MODE**, but not in **MULTI INPUT SELECTION MODE**.
The cameras (option) can be set by remote control from this page.
For the individual functions of the camera menu, refer to the operating instructions for the camera.
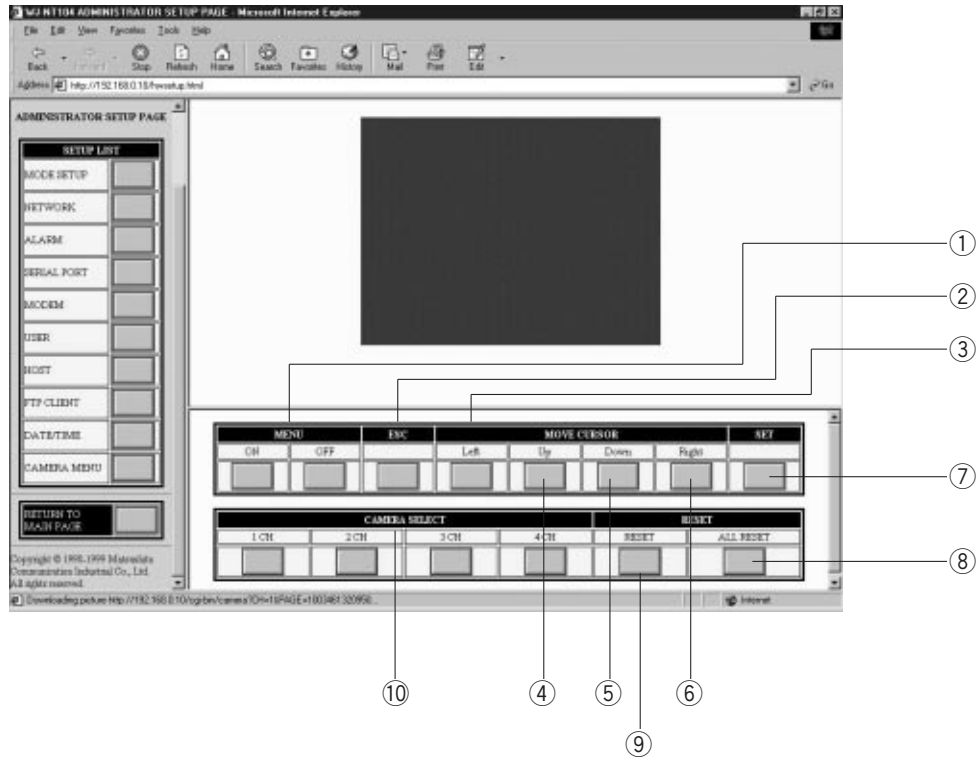
① **MENU ON/OFF**
Select **ON** or **OFF** for **CAMERA MENU**.

② **ESC**
Escape from the currently selection and return to the previous page of the **CAMERA MENU**.

③ **MOVE CURSOR - Left**
To move the cursor to the left. Use to change settings or adjust levels.

④ **MOVE CURSOR - Up**
To move the cursor up.

⑤ **MOVE CURSOR - Down**
To move the cursor down.

⑥ **MOVE CURSOR - Right**
To move the cursor to the right. Use to change settings or adjust levels.

⑦ **SET**
To execute the currently selected settings or to enter a submenu of the **CAMERA MENU**.

⑧ **ALL RESET**
To reset all camera settings to the factory defaults, clicking this button when the cursor is positioned on the CAMERA RESET in the SPECIAL MENU.

⑨ **RESET**
To reset individual parameters to the factory defaults. Clicking this button will enter the SPECIAL MENU when the cursor is positioned on the SPECIAL in the menu.

⑩ **CAMERA SELECT**
To select any of the cameras connected.

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● **Confirmation of the set values**

Turn OFF all Mode Setup switches inside the WJ-NT104 front panel, and then press the RESET button to restart the unit.   Restarting makes the addresses entered take effect.

Perform a communication check by means of ping commands as follows.

10Base-T
crossover cable

WJ-NT104

PC
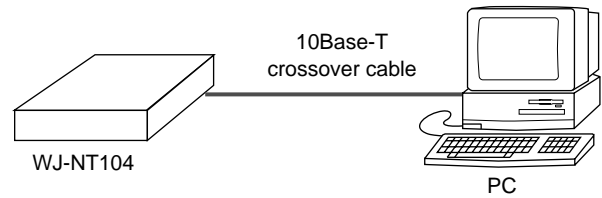
① Connect the WJ-NT104 to the PC (see page 10).

② Click the **[START]** button on the PC, and then point to **[Programs]**. In the program menu, choose **[MS-DOS Prompt]**, and enter the following commands.

> C: \Windows>ping 192.168.0.10 (if the WJ-NT104 address is 192.168.0.10)

• The address has been set properly if the WJ-NT104 responds as follows:

> Pinging 192.168.0.10 With 32 bytes of data :
>
> Reply from 192.168.0.10 : bytes = 32 time = 1ms TTL = 255
> Reply from 192.168.0.10 : bytes = 32 time = 1ms TTL = 255
> Reply from 192.168.0.10 : bytes = 32 time = 1ms TTL = 255
> Reply from 192.168.0.10 : bytes = 32 time = 1ms TTL = 255

• If the request times out without a response from the WJ-NT104, the address may not have been set properly. Attempt to set it again.

> Pinging 192.168.0.10 With 32 bytes of data :
>
> Request timed out.
> Request timed out.
> Request timed out
> Request timed out.

• If the WJ-NT104 responds as below, the network setup of the PC may be wrong. Correct the setup (e.g., change the IP address to 192.168.0.2 and the sub netmask to 255.255.255.0), and enter the ping command again.

> Pinging 192.168.0.10 With 32 bytes of data :
>
> Destination host unreachable.
> Destination host unreachable.
> Destination host unreachable.
> Destination host unreachable.

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■ Network Setup

For the network setup, you need to set the IP address using the Utility Software provided and connect the WJ-NT104 to a PC via the RS-232C port.

● Connection

The COM1 port of the RS-232C interface is used for setting the IP address. Your PC should be IBM-PC compatible, have Windows95, Windows98 or Windows NT4.0 installed, and have an RS-232C port.
Before installing the Utility Software provided, read the Readme.txt file on Utility Software disc.

① Connect the RS-232C port on the front of the WJ-NT104 and the RS-232C port of the PC with an RS-232C cable.

② Set bits #7 and #9 of the MODE selector to ON position (leave the others on OFF), and then press the RESET button on the front of the WJ-NT104.

③ Click the **Start** button, point to **Programs** and then **WJ-NT104 Utilities**, then click **Network Configuration**.

④ To set the IP address: Enter the IP address into the **[IP ADDRESS]** fields of the dialog box, then click the **[SET]** button. If the IP address has been set properly, the response command REI and the IP address entered (in hexadecimal, 8-bit notation, e.g., REI:COA8000A for IP address 192.168.0.10) should appear in the WJ-NT104 RESPONSE field. If a wrong number is shown, click the **[SET]** button again.

⑤ To set the netmask: Enter a set value into the **[NETMASK]** fields of the dialog box, then click the **[SET]** button. If the netmask has been set properly, the response command REM and the set value entered (in hexadecimal, 8-bit notation, e.g., REM:FFFFFF00 for the set value 255.255.255.0) should appear in the WJ-NT104 RESPONSE field. If a wrong number is shown, click the **[SET]** button again.

⑥ To set the default gateway: Enter a set value into the **[DEFAULT GATEWAY]** fields of the dialog box, then click the **[SET]** button. If the default gateway has been set properly, the response command REG and the set value entered (in hexadecimal, 8-bit notation, e.g., REG:COA80001 for the set value 192.168.0.1) should appear in the **WJ-NT104 RESPONSE** field. If a wrong number is shown, click the **[SET]** button again.

⑦ Complete the setup by clicking the **[EXIT]** button.

⑧ Return all switches on the MODE selector to OFF position and then press the RESET button on the front of the WJ-NT104.
This completes setup and return to the normal application mode.

RS-232C cable

WJ-NT104

PC

Frame ——— Frame
Shield

9-pin D-sub connector (female)

9-pin D-sub connector (female)

WJ-NT104 Network Configuration Software

IP ADDRESS 192 . 168 . 0 . 10   SET

NETMASK 255 . 255 . 255 . 0   SET

DEFAULT GATEWAY 192 . 168 . 0 . 1   SET

WJ-NT104 RESPONSE

EXIT
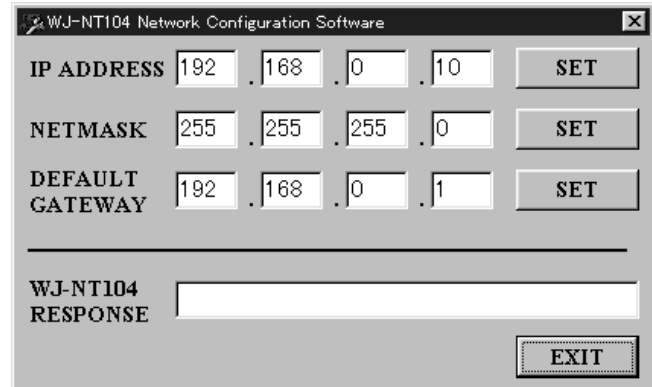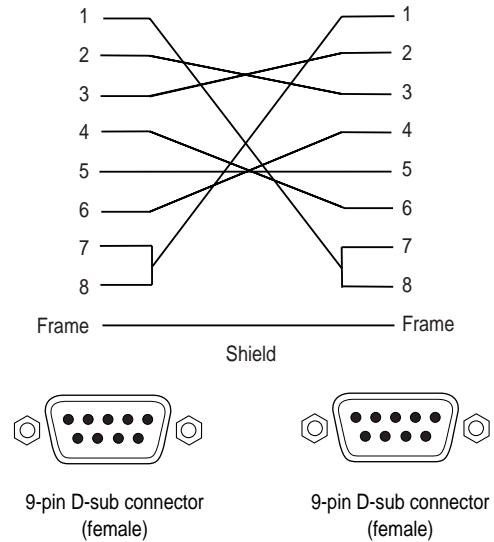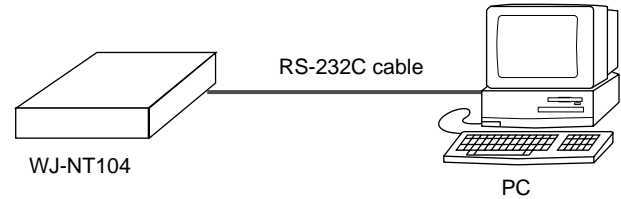
■ Camera Menu Setup

This is software to control the camera menu of the WV-CS654 and CS854 (optional).
It allows a user to open the menu of a camera connected to the WJ-NT104 with a coaxial cable and select preset position and other camera settings.
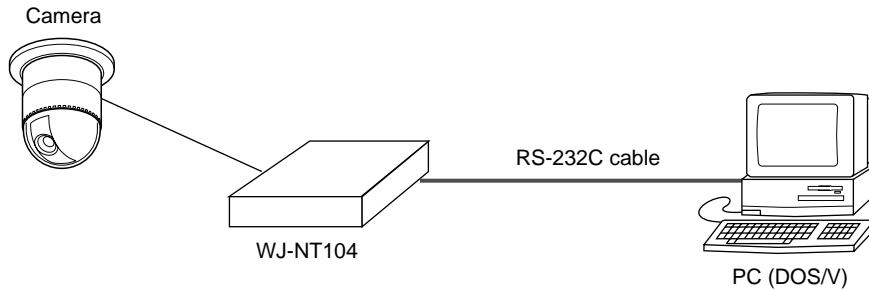
● Operation

① Connect the RS-232C port on the front of the WJ-NT104 and the RS-232C port of the PC with an RS-232C cable.

② Set bits #7 and #9 of the MODE selector to ON position (leave the others on OFF), and then press the RESET button on the front of the WJ-NT104.

③ Click the **Start** button, point to **Programs** and then **WJ-NT104 Utilities**. Click **Camera Setup**.

④ Select a channel under **Camera Select**.

⑤ Click the **[MENU ON/OFF]** button, to open the Menu.
Should it not appear, click the button repeatedly.

⑥ Use **[UP]**, **[DOWN]**, **[LEFT]**, **[RIGHT]**, **[ENTER]**, and **[ESC]** buttons to select a menu and execute a selected menu item.
For menu operations and setup refer to the operation manual of the connected camera.

⑦ The **[SPECIAL]** button is effective only when the cursor points to SPECIAL on the camera menu.

⑧ When the **[Camera Control]** button is depressed, a panel for Coaxial Camera Control appears.
PAN/TILT, ZOOM, and FOCUS control are selectable only in the "position setting menu."
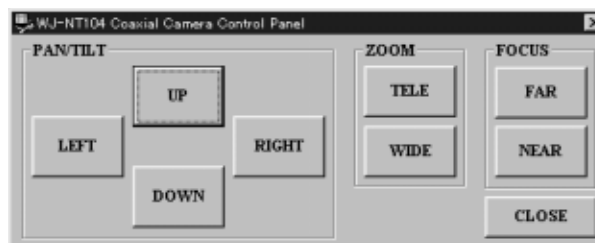
⑨ To exit from the setup, press the **[EXIT]** button.

⑩ Return all switches on the MODE selector to OFF position and then press the RESET button on the front of the WJ-NT104.
This completes setup and return to the normal application mode.

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ACCESS AUTHORIZATION

■ Control of Access Authorization

User access authorization is controlled as follows.

● Unlimited access

If neither user nor host authorization is used (set to OFF) in a network, all users may perform the following operations at access level 2.
- Controlling cameras and other equipment connected to the WJ-NT104
- Monitoring live images
- Monitoring alarm images and querying the log files
- Accessing the data stored in the WJ-NT104

* Accessing the ADMINISTRATOR SETUP PAGE of the WJ-NT104 requires an administrator account.

● Limited access

- Access is limited according to the host access levels specified in the HOST SETUP window. The HOST SETUP window is queried using the IP address of the host requesting access to the WJ-NT104. When accessing via a proxy server, the access level therefore is determined by the IP address of the proxy server.
- When access is made from a PC not registered in the HOST SETUP window, the dialog box shown below prompts the user to enter User Name and Password. The access level is determined when both the user name and password are entered.

■ Access Level

Four access levels can be assigned to control access by users.

More than one user can be assigned the same access level. While device control commands are given top priority in the execution chain, there is no priority attached to the access level. It is possible to designate more than one network administrator and to change designated administrators.

● Administrator (Level 1)

- Access to and setup of ADMINISTRATOR SETUP PAGE
- Rewriting data stored in the WJ-NT104 using FTP (File Transfer protocol)
- Controlling cameras and other equipment connected to the WJ-NT104
- Monitoring live images
- Monitoring alarm images and querying the log files
- Accessing the data stored in the WJ-NT104

● Input Select and operation (Level 2)

- Controlling cameras and other equipment connected to the WJ-NT104
- Monitoring live images
- Monitoring alarm images and querying the log files
- Accessing the data stored in the WJ-NT104

● Monitoring only (Level 3)

- Monitoring live image.
- Monitoring alarm images and querying the log files
- Accessing the data stored in the WJ-NT104

● Unauthorized level (Level 4)

- Access to the WJ-NT104 is denied.

■ Registration

Administrator level (Level 1) users only can be registered in the HOST SETUP and USER SETUP windows. Each window is provided with fields for making the necessary entries.
The factory default setting is USER NAME: admin, PASSWORD: nil (none), ACCESS LEVEL: 1. An "admin" user can change passwords, but is not authorized to delete users or change access levels.

● Host Setup Window

A maximum of 16 terminal addresses can be registered in the HOST SETUP window. Initially there are no addresses registered.
Enter the host IP address as a dotted (.) notation, for example. 192.168.0.10. The host name cannot be specified. The host IP address "0.0.0.0" is invalid. Select (mark) any of access levels 1 to 4.

● User Setup Window

A maximum of 16 users can be registered in the USER SETUP window.
Enter a user name and password consisting of up to 16 alphanumeric characters (case sensitive). Select (mark) any of access levels 1 to 4.

● WJ-NT104 Authorized Functions

```
        ┌─────────────────┐
        │   Operation     │
        │    Request      │
        └────────┬────────┘
                 │
        ┌────────┴────────┐
        │     Check       │
        │ Operation Level │
        └────────┬────────┘
                 │
        ┌────────┴────────┐
        │   Host Level    │──────────── NG
        │ Authorization   │              │
        │    Process      │              │
        └────────┬────────┘              │
            OK   │                       │
                 │              ┌────────┴────────┐
                 │              │   User Level    │
                 │              │ Authorization   │
                 │              │    Process      │
                 │              └───┬─────────┬───┘
                 │             OK   │         │ NG
                 │                  │         │
        ┌────────┴────────┐   ┌─────┴────────┐
        │  Operation will │   │ Operation will │
        │  be Accepted    │   │  be Denied     │
        └─────────────────┘   └────────────────┘
```

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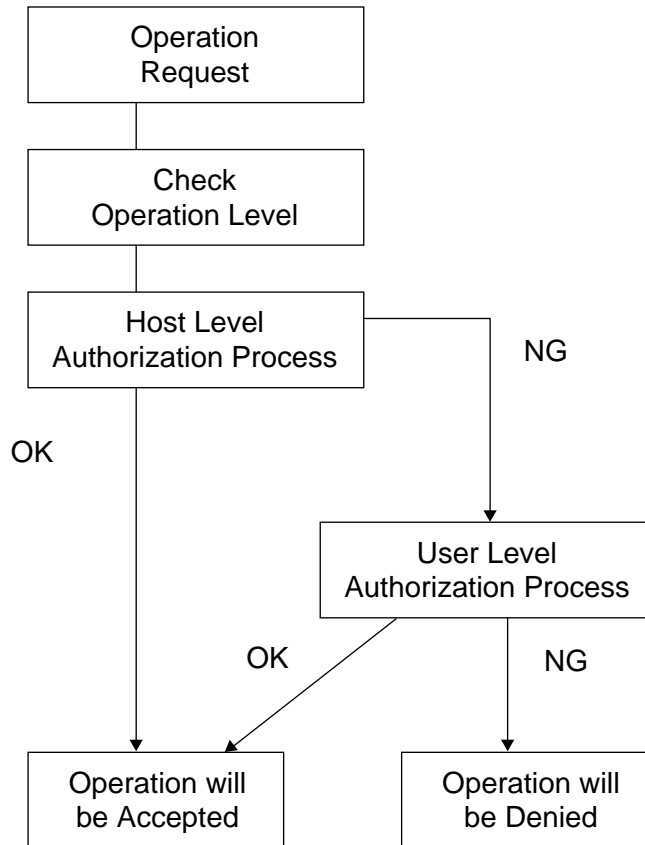
EXTENSION FUNCTIONS

■ WJ-FS616 Video Multiplexer Control

● Connection

(1) Connect MULTISCREEN OUT on the rear of the WJ-FS616 to VIDEO IN 1 on the rear of the WJ-NT104.
(2) Connect the RS-232C ports of both units with a RS-232C cable.

• Fixed Input Selection Mode

In this mode, only images from the MULTISCREEN OUT connector of the Video Multiplexer are available.

RS-232C

DB25		DB9
2	....	2
3	....	3
6	....	4
7	....	5
20	....	6
5	....	7
4	....	8

WJ-FS616
(MULTISCREEN OUT)   WJ-NT104 (VIDEO IN1)
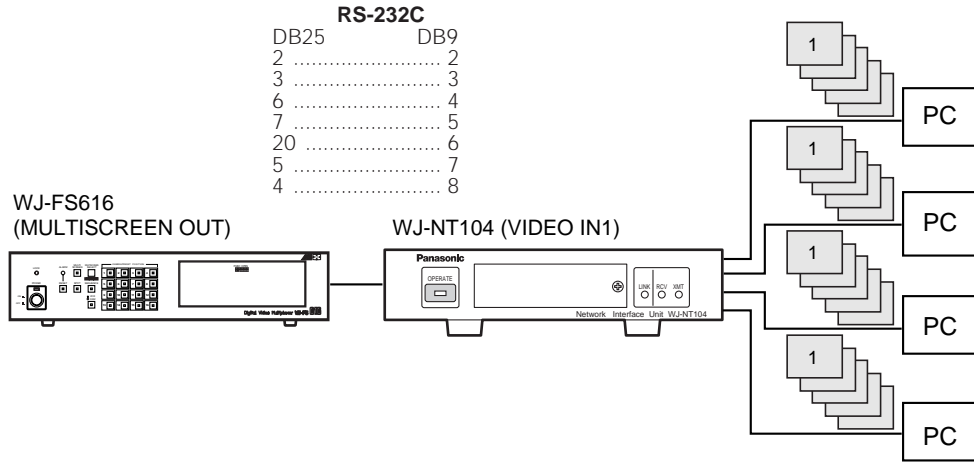
● Setup

(1) On the ADMINISTRATOR SETUP PAGE, click the **[SERIAL PORT]** button to open the SERIAL PORT SETUP window. For **TYPE**, select "WJ-FS616. Set the same communication parameters as for the WJ-FS616.
(2) On the ADMINISTRATOR SETUP PAGE, click the **[MODE SETUP]** button to open the MODE SETUP window.
(3) For **VIDEO INPUT SELECTION MODE** under **OPERATION MODE SELECT**, mark FIXED INPUT SELECTION MODE.

● Control Operation

On the Location bar, type http://192.168.0.10/fsindex.html to open the **WJ-FS616 OPERATION VIEW** window.
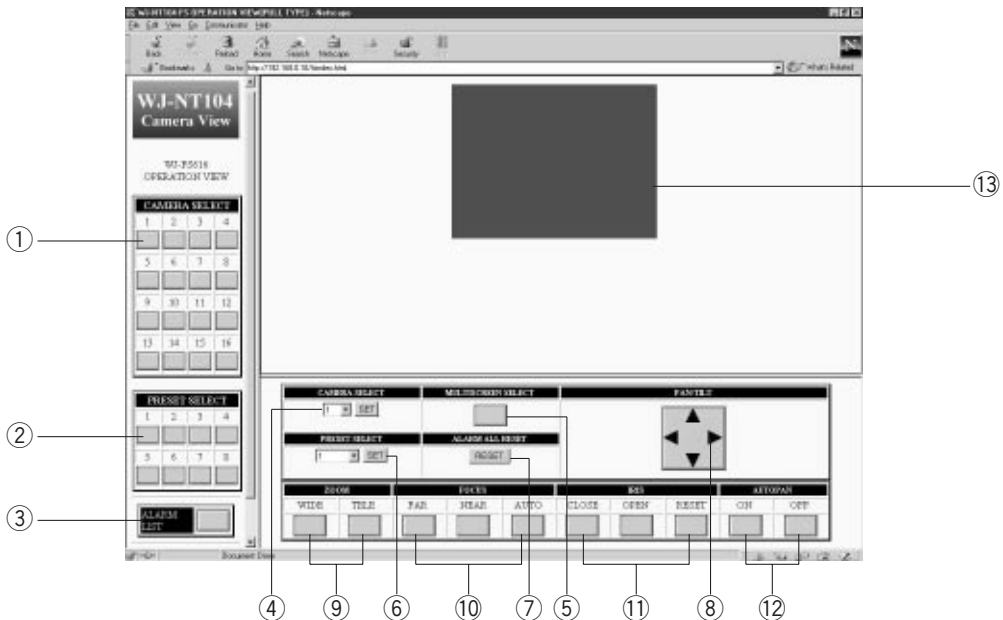
① **CAMERA SELECT (Left window panel)**
To select a camera (camera 1 to 16) connected to the WJ-FS616 Video Multiplexer. The image of the selected camera is displayed in spot mode.

② **PRESET SELECT (Left window panel)**
To move the combination camera (option) connected to the WJ-FS616 to any of 8 preset positions.

③ **ALARM LIST**
Any image before or after alarm input can be temporarily stored in the internal memory of the WJ-NT104. For alarm display see ALARM LIST on page 37.

④ **CAMERA SELECT (Bottom window panel)**
To select a camera (camera 1 to 16) connected to the WJ-FS616. Select a camera number, and then click **[SET]** to apply it. The image of the selected camera is displayed in spot mode.

⑤ **MULTISCREEN SELECT**
Clicking this button repeatedly will switch the screen as follows:
4 → 7 → 9 → 10 → 13 → 16→ 4 screen segments

⑥ **PRESET SELECT (Bottom window panel)**
To move the combination camera (option) connected to the WJ-FS616 to any of 64 preset positions. Select a preset position number, and then click the **[SET]** button to move the camera to the position.

⑦ **ALARM ALL RESET**
To reset all alarms activated in the Video Multiplexer, and return it to normal condition.

⑧ **PAN/TILT**
Clicking anywhere on the live image moves the connected combination camera (option) up and down, or to the right and left. The camera pan/tilt angle decreases as the point clicked moves closer to the image center. Clicking the image center will not move the camera. Zooming does not change the camera pan/tilt angle. Click the image repeatedly to move the camera to the desired position. You cannot pan or tilt the camera continuously by dragging on the live image.

⑨ **ZOOM**
The connected combination camera (option) can be zoomed by clicking the **[TELE]** or **[WIDE]** button under ZOOM.
Clicking the **[TELE]** or **[WIDE]** button will operate the camera in telescopic or wide-angle mode for a specified time, after which the mode is released automatically. These modes cannot be retained by keeping the **[TELE]** or **[WIDE]** button depressed. You need to click the **[TELE]** or **[WIDE]** button again.

⑩ **FOCUS**
The connected combination camera (option) can be focused by clicking the **[FAR]**, **[NEAR]** or **[AUTO]** button under FOCUS.
Clicking the **[FAR]** or **[NEAR]** button will operate the camera in focusing mode for a specified time, after which the mode is released automatically. Clicking the **[AUTO]** button will automatically focus the image on the screen. Focus control cannot be retained by keeping the **[FAR]** or **[NEAR]** button depressed. You need to click the **[FAR]** or **[NEAR]** button again.

⑪ **IRIS**
The connected combination camera (option) can be controlled to close or open the iris by clicking the **[CLOSE]** or **[OPEN]** button under IRIS.
Clicking the **[OPEN]** or **[CLOSE]** button will open or close the camera iris for a specified time, after which the operation is released automatically.
Clicking the **[RESET]** button on the screen will reset the iris of the displayed camera to the factory default setting. Iris control cannot be retained by keeping the **[OPEN]** or **[CLOSE]** button depressed. You need to click the **[OPEN]** or **[CLOSE]** button again.

⑫ **AUTO PAN**
The auto pan status of the connected combination camera (option) can be changed by clicking the **[ON]** or **[OFF]** button under AUTOPAN.
Note: Note: When LOCAL is selected in the camera setup menu, auto pan is released automatically after 1 minute. When REMOTE is selected, auto pan will not be released automatically.

⑬ **Image Display**
The image output from the MULTISCREEN OUT connector of the video multiplexer connected to the WJ-NT104 is displayed.

■ WJ-SX550A/B/C Matrix Switcher Control

● Connections

(1) Connect the MONITOR OUT connectors on the rear of the WJ-SX550A/B/C to the VIDEO IN connectors 1 to 4 on the rear of the WJ-NT104.

(2) Connect the RS-232C ports (of WJ-SX550A/B/C and WJ-NT104) with a RS-232C cable. You can also connect the CONTROL DATA port on the rear of the WJ-SX550A/B/C to the RS-485 connectors on the rear of the WJ-NT104.

• Random Input Selection Mode

For VIDEO INPUT SELECTION MODE under OPERATION MODE SELECT, mark RANDOM INPUT SELECTION MODE.
Unless a user changes channels, the last selected channel is used to continue transmission.
The image transfer speed is higher than in Multi Input Selection Mode.
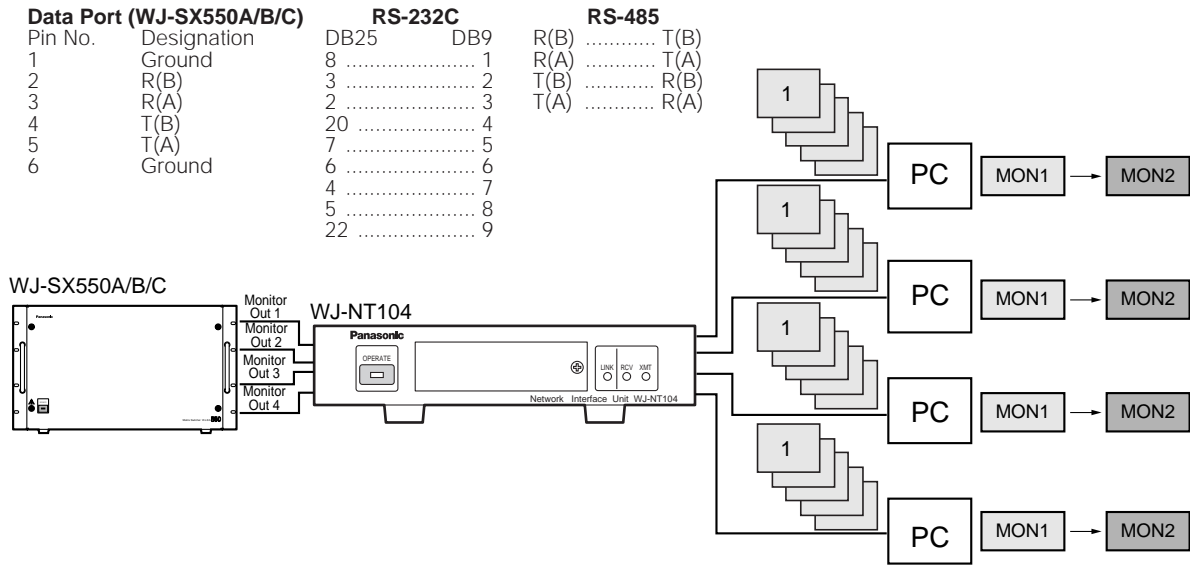
Data Port (WJ-SX550A/B/C)		RS-232C		RS-485	
Pin No.	Designation	DB25	DB9	R(B)	T(B)
1	Ground	8 1		R(A)	T(A)
2	R(B)	3 2		T(B)	R(B)
3	R(A)	2 3		T(A)	R(A)
4	T(B)	20 4			
5	T(A)	7 5			
6	Ground	6 6			
		4 7			
		5 8			
		22 9			

• Multi Input Selection Mode

For VIDEO INPUT SELECTION MODE under OPERATION MODE SELECT, mark MULTI INPUT SELECTION MODE.
This mode switches periodically between multiple channels at high speed so that transmission to two or more users requesting different channels is possible.
The image transfer speed is lower than in Random Input Selection Mode.

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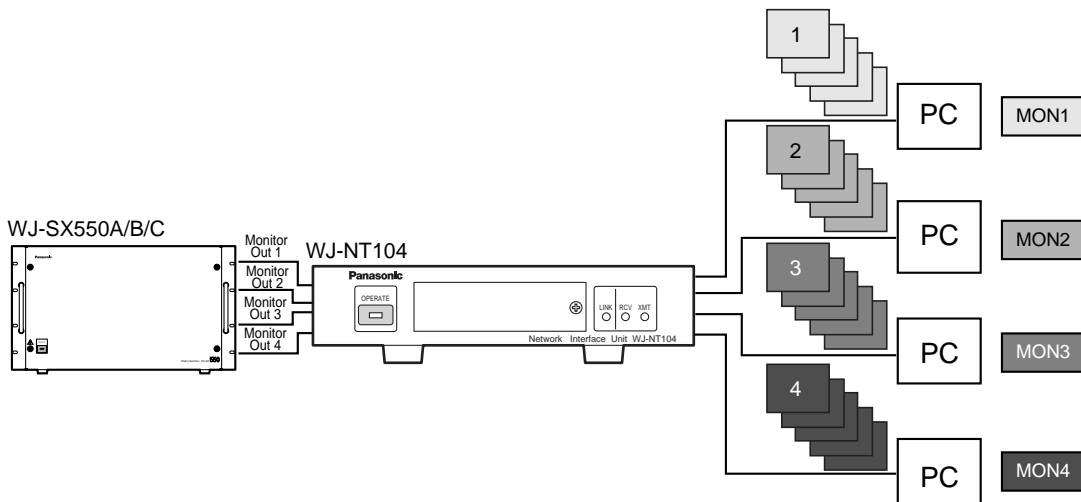
● Setup

In the **SERIAL PORT SETUP** window, set TYPE under RS-232C SETUP or RS-485 SETUP to "WJ-SX550A". Set the same communication parameters as for the Matrix Switcher. (For further details refer to the operation manual of the WJ-SX550A Matrix Switcher.) Click the link to [MATRIX SW CONFIGURATION page] at the bottom of the **SERIAL PORT SETUP** window to open the MATRIX SWITCHER CONFIGURATION window.
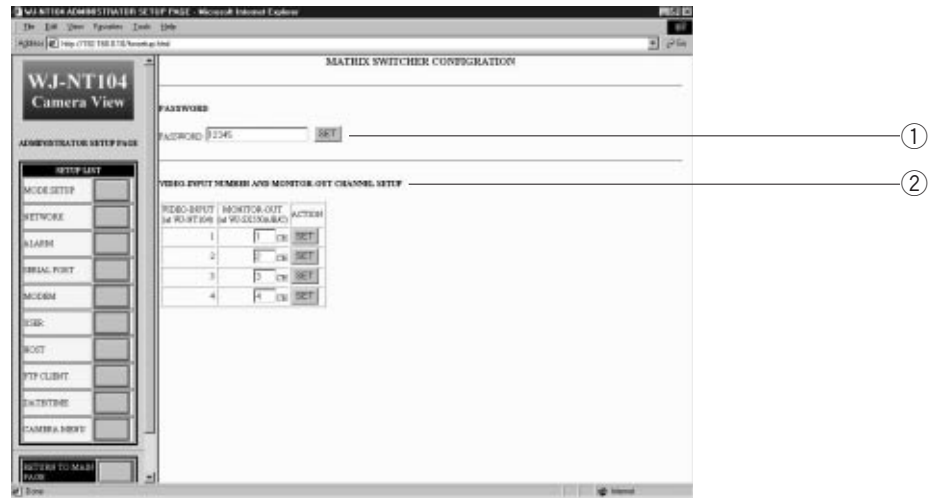
① **PASSWORD**
Enter the same 5-digit password as set for the Matrix Switcher.

② **VIDEO-INPUT NUMBER AND MONITOR-OUT CHAN-NEL SETUP**
Set a channel number for the monitor output of the WJ-

WJ-SX550A Matrix Switcher to be connected to the video input connector on the WJ-NT104 network inter-face unit. The status when selecting VIDEO-INPUT (at WJ-NT104) in the above table is the same as when a monitor compatible with the WJ-SX550A is selected.

● Control Operation

On the Location bar, type the URL http://192.168.0.10/sxindex.html to access the WJ-SX550 OPERATION VIEW window for the Matrix Switcher.
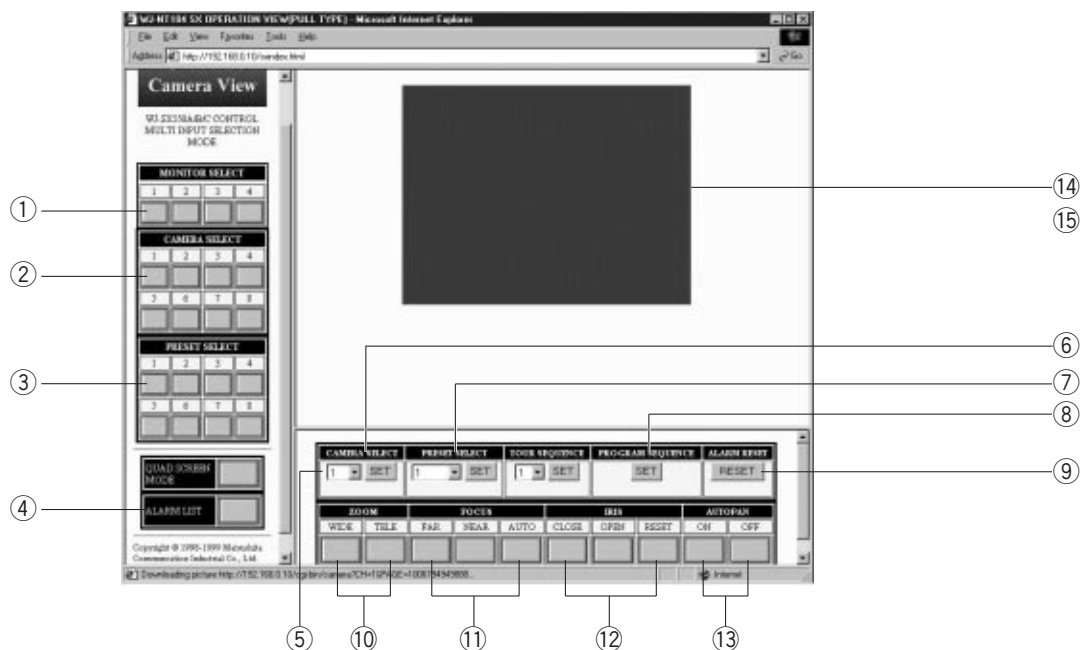
① **VIDEO IN (WJ-NT104)**
Selects any of the four video inputs of the Interface Unit for display on the monitor. Set the monitor outputs of the Matrix Switcher to match the video inputs of the Interface Unit, referring to MATRIX SWITCHER CONFIGURATION on page 62.
The video channels will be switched in accordance with the operating mode selected. Refer to MAIN PAGE AND CONTROLS on page 25 for a description of operating modes and to MODE SETUP on page 41 for mode setting procedures.

② **CAMERA SELECT (Left window panel)**
To select a camera (camera 01 to 08) connected to the WJ-SX550A Matrix Switcher. The image of the selected camera is displayed on the monitor in the previously selected input mode.

③ **PRESET SELECT (Left part of screen)**
To move the combination camera (option) connected to the WJ-SX550A to any of 8 preset positions.

④ **ALARM LIST**
Any image before and after alarm input can be temporarily stored in the internal memory of the WJ-NT104. For alarm display see ALARM LIST on page 37.

⑤ **CAMERA SELECT (Bottom window panel)**
To select a camera (CAMERA 1 to 128) connected to the WJ-SX550A. Select a camera number, and then click **[SET]** to apply it. The image of the selected camera is displayed on the monitor in the previously selected input mode.

⑥ **PRESET SELECT (Bottom window panel)**
To move the combination camera (option) connected to the WJ-SX550A to any of 64 preset positions. Select a preset position number, and then click the **[SET]** button to move the camera to the position.

⑦ **TOUR SEQUENCE**
To run the tour sequence of the WJ-SX550 matrix switcher. Select a tour sequence number, and then click the [SET] button to run the sequence.

⑧ **PROGRAM SEQUENCE**
To run the program sequence of the WJ-SX550 matrix switcher. Click the [SET] button to run the assigned sequence.

⑨ **ALARM ALL RESET**
To reset all alarms activated in the Matrix Switcher, and return it to normal condition.

⑩ **ZOOM**
The connected combination camera (option) can be zoomed by clicking the **[TELE]** or **[WIDE]** button under ZOOM.
Clicking the **[TELE]** or **[WIDE]** button will operate the camera in telescopic or wide-angle mode for a specified time, after which the mode is released automatically. These modes cannot be retained by keeping the **[TELE]** or **[WIDE]** button depressed. You need to click the **[TELE]** or **[WIDE]** button again.

⑪ **FOCUS**
The connected combination camera (option) can be focused by clicking the **[FAR]**, **[NEAR]** or **[AUTO]** button under FOCUS.
Clicking the **[FAR]** or **[NEAR]** button will operate the camera in focusing mode for a specified time, after which the mode is released automatically. Clicking the **[AUTO]** button will automatically focus the image on the screen. Focus control cannot be retained by keeping the **[FAR]** or **[NEAR]** button depressed. You need to click the **[FAR]** or **[NEAR]** button again.

⑫ **IRIS**
The connected combination camera (option) can be controlled to close or open iris by clicking the **[CLOSE]** or **[OPEN]** button under IRIS.
Clicking the **[OPEN]** or **[CLOSE]** button will open or close the camera iris for a specified time, after which the operation is released automatically.
Clicking the **[RESET]** button on the screen will reset the iris of the displayed camera to the factory default setting. Iris control cannot be retained by keeping the **[OPEN]** or **[CLOSE]** button depressed. You need to click the **[OPEN]** or **[CLOSE]** button again.

⑬ **AUTO PAN**
The auto pan status of the connected combination camera (option) can be changed by clicking the **[ON]** or **[OFF]** button under AUTOPAN.
Note: When LOCAL is selected in the camera setup menu, auto pan is released automatically after 1 minute. When REMOTE is selected, auto pan will not be released automatically.

⑭ **Image Display**
To display the image output from the Matrix Switcher connected to the WJ-NT104 Interface Unit. Set the monitor outputs of the Matrix Switcher to match the video inputs of the Interface Unit, referring to MATRIX SWITCHER CONFIGURATION on page 62.

⑮ **PAN/TILT**
Clicking anywhere on the live image moves the connected combination camera (option) up and down, or to the right and left. The camera pan/tilt angle decreases as the point clicked moves closer to the image center. Clicking the image center will not move the camera. Zooming does not change the camera pan/tilt angle. Click the image repeatedly to move the camera to the desired position. You cannot pan or tilt the camera continuously by dragging on the live image.

■ WJ-DR200 AV Disk Recorder Control

● Connections

• Fixed Input Selection Mode

(1) Connect CAMERA 1 and 2 to the VIDEO IN A and B connectors on the rear of the WJ-DR200.
(2) Connect the VIDEO OUT connector on the rear of the WJ-DR200 to the VIDEO IN 1 connector on the rear of the WJ-NT104.
(3) Connect the RS-232C ports (of WJ-DR200 and WJ-NT104) with a RS-232C cable.
  • Only the images from the VIDEO OUT connector on the rear of the AV Disc Recorder are available.
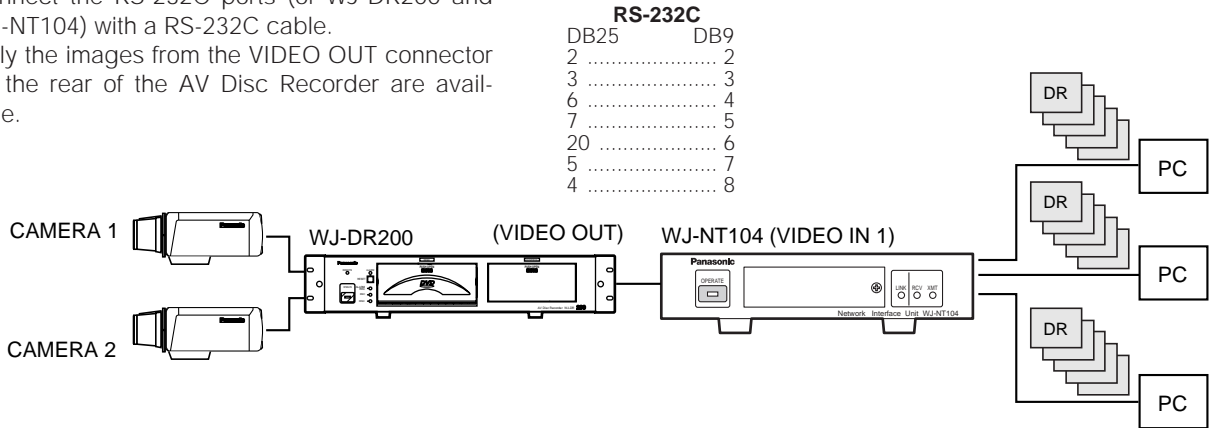
RS-232C

DB25	DB9
2	2
3	3
6	4
7	5
20	6
5	7
4	8

CAMERA 1 WJ-DR200 (VIDEO OUT) WJ-NT104 (VIDEO IN 1)

CAMERA 2

DR PC
DR PC
DR PC

• Random Input Selection Mode

(1) Connect CAMERA 1 and 2 to the VIDEO IN 1 and 2 connectors on the rear of the WJ-NT104.
(2) Connect the VIDEO OUT 1 and 2 connectors on the rear of the WJ-NT104 to the VIDEO IN A and B connectors of the WJ-DR200.
(3) Connect the VIDEO OUT connector of the WJ-DR200 to the VIDEO IN 3 connector of the WJ-NT104.
(4) Connect the RS-232C ports (of WJ-DR200 and WJ-NT104) with a RS-232C cable.
  • For VIDEO INPUT SELECTION MODE under OPERATION MODE SELECT, mark RANDOM INPUT SELECTION MODE.
  • Enables control of cameras connected to the VIDEO IN connector of the WJ-NT104 (requires customizing the WJ-DR200 OPERATION VIEW window).
  • Unless a user changes channels, the last selected channel is used to continue transmission.

CAMERA 1 WJ-NT104

CAMERA 2

WJ-DR200 (VIDEO OUT)

CAM1 PC
CAM1 PC
CAM1 PC

• Multi Input Selection Mode

(1) Connect CAMERA 1 and 2 to the VIDEO IN 1 and 2 connectors on the rear of the WJ-NT104.
(2) Connect the VIDEO OUT 1 and 2 connectors on the rear of the WJ-NT104 to the VIDEO IN A and B connectors of the WJ-DR200.
(3) Connect the VIDEO OUT connector of the WJ-DR200 to the VIDEO IN 3 connector of the WJ-NT104.
(4) Connect the RS-232C ports (of WJ-DR200 and WJ-NT104) with a RS-232C cable.
  • For VIDEO INPUT SELECTION MODE under OPERATION MODE SELECT, mark MULTI INPUT SELECTION MODE.
  • Enables control of cameras connected to the VIDEO IN connector of the WJ-NT104 (requires customizing the WJ-DR200 OPERATION VIEW window).
  • This mode switches periodically between multiple channels at high speed so that transmission to two or more users requesting different channels is possible.

CAMERA 1 WJ-NT104

CAMERA 2

WJ-DR200 (VIDEO OUT)

CAM1 PC
CAM2 PC
DR200 PC
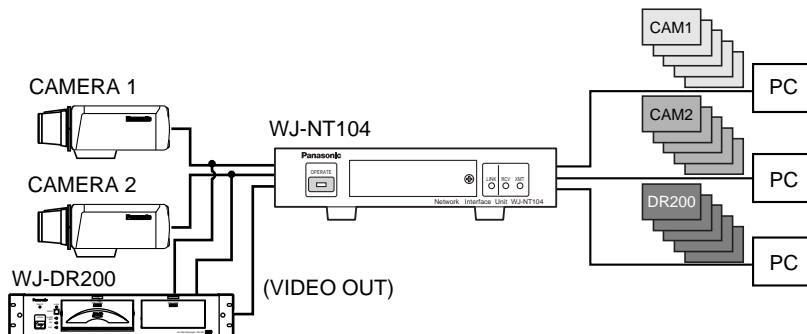
● **Setup**

In the SERIAL PORT SETUP window, set TYPE under RS-232C to "WJ-DR200". Set the same communication parameters as for the WJ-DR200 AV Disk Recorder. (For further details refer to the operation manual of the WJ-DR200 AV Disk Recorder.)

● **Control Operation**

On the Location bar, type the URL http://192.168.0.10/drindex.html to access the WJ-DR200 OPERATION VIEW window for the AV Disk Recorder.
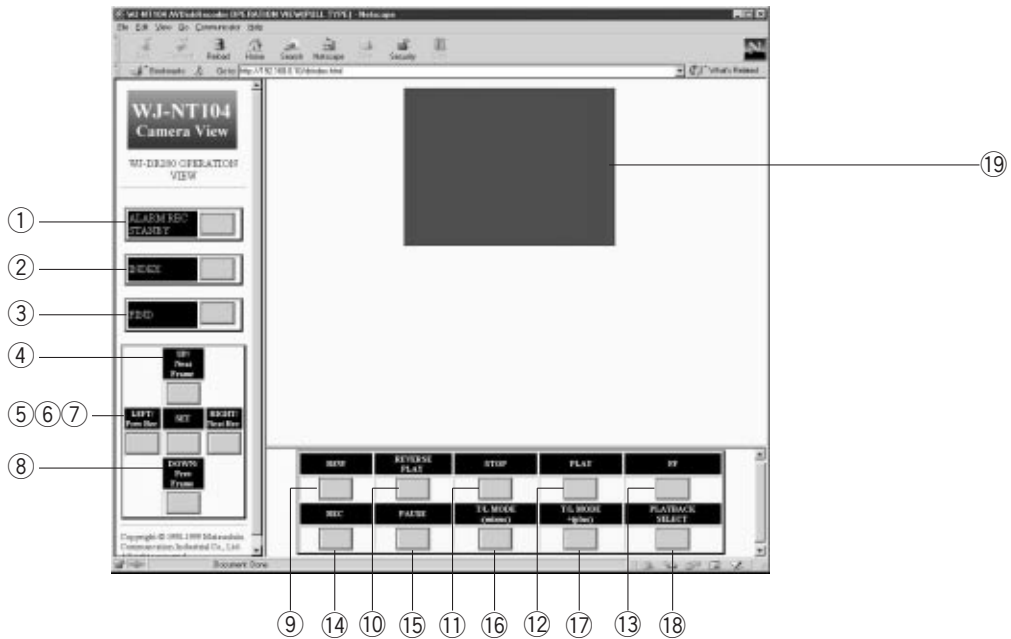
① **ALARM REC STANDBY**
To toggle between enabling and disabling alarm recording on the WJ-DR200 AV Disk Recorder.

② **INDEX**
To search the disk for recorded frames. Clicking the **[INDEX]** button opens the WJ-DR200 RECORD LIST window. Click the **[REFRESH]** button in the window to refresh the recording list displayed in the image window. Then click the recording number to play back the selected frames. To exit from search mode, click the **[STOP]** button.

This button also toggles between displaying recordings as a list and as a group of thumbnails.
You can also use this window to search the disk by the same operation as from the WJ-DR200.
Refer to the operation manual of the WJ-DR200 for details.

③ **FIND**

To directly specify and play back a recorded frame.

④ **UP/Next Frame**

Click in paused playback to advance the playback operation one step to the next frame.

Also moves the cursor up one line in the recording list or thumbnails.

⑤ **LEFT/Prev Rec**

To move the playback operation back one step to the previous record.

Also moves the cursor to the left in the recording list or thumbnails.

⑥ **SET**

Click to start playback of frames selected in the recording list or group of thumbnails.

In frame search, click this button to apply the entered value.

⑦ **RIGHT/Next Rec**

To move the playback operation one step to the next record.

Also moves the cursor to the right in the recording list or thumbnails.

⑧ **DOWN/Prev Frame**

Click in paused playback to move the playback operation back one step to the previous frame.

Also moves the cursor down one line in the recording list or thumbnails.

⑨ **REW**

To play back a recording in backward search.

⑩ **REVERSE PLAY**

To play back frames in reverse order.

⑪ **STOP**

Clicking this button will terminate all modes of operation, such as recording, playback, and setting.

⑫ **PLAY**

To play back frames in forward order.

⑬ **FF**

To play back a recording in forward search.

⑭ **REC**

To start recording in the previously defined mode.

⑮ **PAUSE**

Click to temporarily pause playback.

⑯ **TL MODE - (minus)**

Clicking this button in playback will increase the playback speed.

Clicking it in paused playback will decrement the playback channel (or camera ID). To play back the selected channel, click the **[PLAYBACK SELECT]** button.

⑰ **TL MODE + (plus)**

Clicking this button in playback will decrease the playback speed.

Clicking it in paused playback will increment the playback channel (or camera ID). To play back the selected channel, click the **[PLAYBACK SELECT]** button.

⑱ **PLAYBACK SELECT**

Clicking this button after selecting the input channel with the (+) or (–) button will start playback of the respective channel.

⑲ **Image Display**

To display the images previously selected as input.

Note: Note: The buttons in the window have the same functions as those of the WJ-DR200. Refer to the operation manual of the WJ-DR200 for details.

■ WJ-HD100 Digital Disk Recorder Control

It is enabled control of the WJ-HD100 disk recorder from the PC via the WJ-NT104 Network Interface Unit. (disabled control with PSoData)
Also refer to the operating instructions for the disk recorder together.

● Connections

• Fixed input selection mode

In this mode, only images from the MONITOR OUT connector of the disk recorder are available.
(1) Connect MONITOR OUT of the disk recorder to VIDEO IN 1 on the rear of the WJ-NT104.
(2) Connect the RS-232C ports (of the disk recorder and the WJ-NT104) with a RS-232C cable.
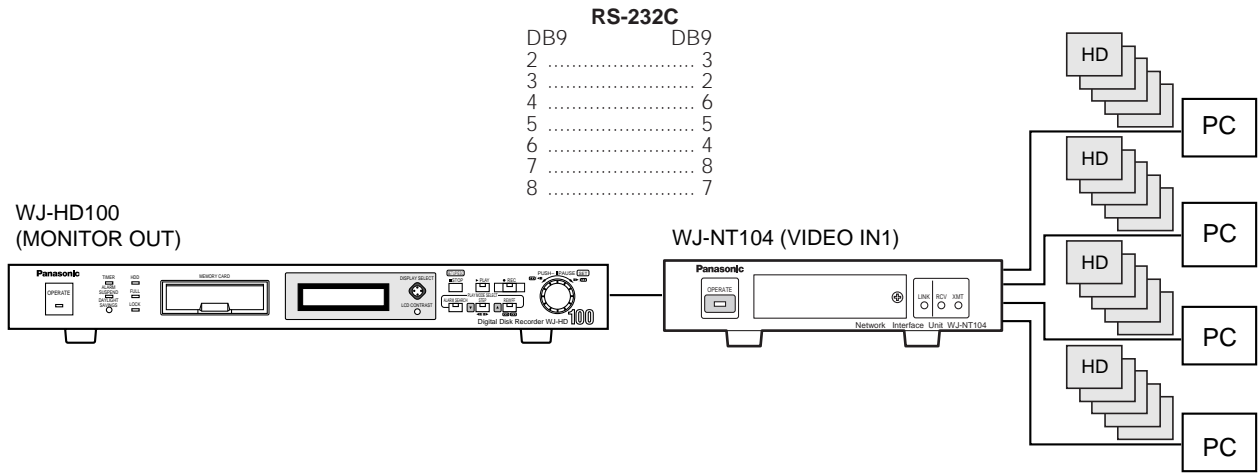
● Setup

In the SERIAL PORT SETUP window, set TYPE under RS-232C to "Serial through". Set the same communication parameters as for the WJ-HD100 disk recorder.
In the MODE SETUP window, for VIDEO INPUT SELECTION MODE under OPERATION MODE SELECT, mark FIXED INPUT SELECTION MODE.

● Control Operation

Type the URL http://192.168.0.10/hd1index.html to access the WJ-HD100 CONTROL window for the disk recorder.

① **SETUP MENU ON**
Opens the setup menu of the WJ-HD100.

② **SETUP MENU OFF**
Closes the setup menu of the WJ-HD100.

③ **ALARM RECALL ON**
Opens the alarm recall table.

④ **ALARM RECALL OFF**
Closes the alarm recall table.

⑤ **RIGHT**
Moves the cursor to the right.

⑥ **UP**
Moves the cursor up.

⑦ **LEFT**
Moves the cursor to the left.

⑧ **ESC**
Activates as the ESC button of the disk recorder.

⑨ **DOWN**
Moves the cursor down.

⑩ **SET**
Activates as the SET button (JogDail) of the disk recorder.

⑪ **DATE**
To specify year/month/date for the recording search.

⑫ **TIME**
To specify hour/min/sec for the recording search.

⑬ **SEARCH**
Searches the record specified in the DATE and TIME boxes.

⑭ **Image Display**
To display the images previously selected as input.

⑮ **STOP**
Clicking this button will terminate all modes of operation, such as recording, and playback.

⑯ **PLAY**
To playback frames in forward order.

⑰ **REC**
To start recording in the previously defined mode.

⑱ **PREV FRAME**
Click in paused playback to move the playback operation back one step to the previous frame.

⑲ **NEXT FRAME**
Click in paused playback to advance the playback operation one step to the next frame.

⑳ **TO THE FIRST FRAME**
To jump to the first image of a series of recording.

㉑ **TO THE LAST FRAME**
To jump to the last image of a series of recording.

㉒ **FF**
To playback a recording in forward search. The button located far right operates the fastest speed.

㉓ **PAUSE**
Click to temporarily pause playback.

㉔ **REW**
To playback a recording in backward search. The button located far left operates the fastest speed.

■ **WJ-HD500 Digital Disk Recorder Control**

It is enabled control of the WJ-HD500 disk recorder from the PC via the WJ-NT104 Network Interface Unit (disabled control with PS·Data).
Also refer to the operating instructions for the disk recorder together.

● **Connections**

• **Fixed input selection mode**

In this mode, only images from the MULTISCREEN OUT connector of the disk recorder are available.
For VIDEO INPUT SELECTION MODE under OPERATION MODE SELECT, mark FIXED INPUT SELECTION MODE.
(1) Connect the camera(s) to VIDEO IN connector(s) on the rear of the disk recorder.
(2) Connect MULTISCREEN OUT of the disk recorder to VIDEO IN 1 on the rear of the WJ-NT104.
(3) Connect the RS-232C ports (of the disk recorder and the WJ-NT104) with a RS-232C cable.

• **Random input selection mode**

Enables control of cameras connected to the VIDEO IN connector of the WJ-NT104.
For VIDEO INPUT SELECTION MODE under OPERATION MODE SELECT, mark RANDOM INPUT SELECTION MODE.
(1) Connect CAMERA 2 and 3 to the VIDEO IN 2 and 3 connectors on the rear of the WJ-NT104.
(2) Connect the VIDEO OUT 2 and 3 connectors on the rear of the WJ-NT104 to the VIDEO IN 2 and 3 connector of the disk recorder.
(3) Connect MULTISCREEN OUT of the disk recorder to the VIDEO IN 1 connector of the WJ-NT104
(4) Connect the RS-232C ports (of the disk recorder and the WJ-NT104) with a RS-232C cable.

- **Multi input selection mode**

  Enables control of cameras connected to the VIDEO IN connector of the WJ-NT104.

  For VIDEO INPUT SELECTION MODE under OPERATION MODE SELECT, mark MULTI INPUT SELECTION MODE.

  This mode switches periodically between multiple channels at high speed so that transmission to two or more users requesting different channel is possible.

  (1) Connect CAMERA 2 and 3 to the VIDEO IN 2 and 3 connectors on the rear of the WJ-NT104.

  (2) Connect the VIDEO OUT 2 and 3 connectors on the rear of the WJ-NT104 to the VIDEO IN 2 and 3 connector of the disk recorder.

  (3) Connect MULTISCREEN OUT of the disk recorder to the VIDEO IN 1 connector of the WJ-NT104

  (4) Connect the RS-232C ports (of the disk recorder and the WJ-NT104) with a RS-232C cable.
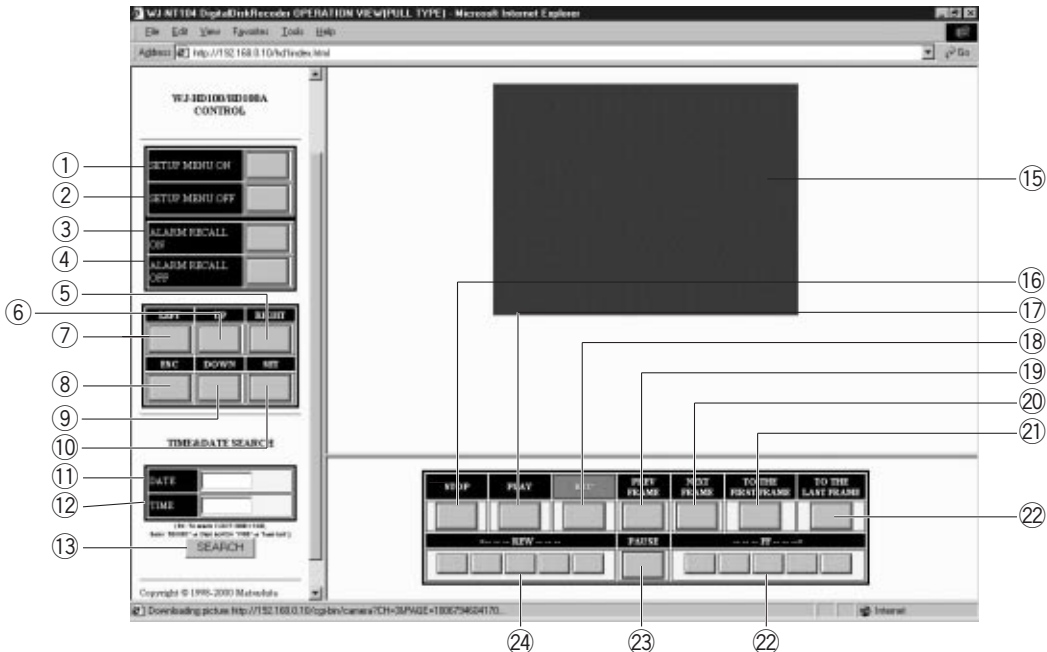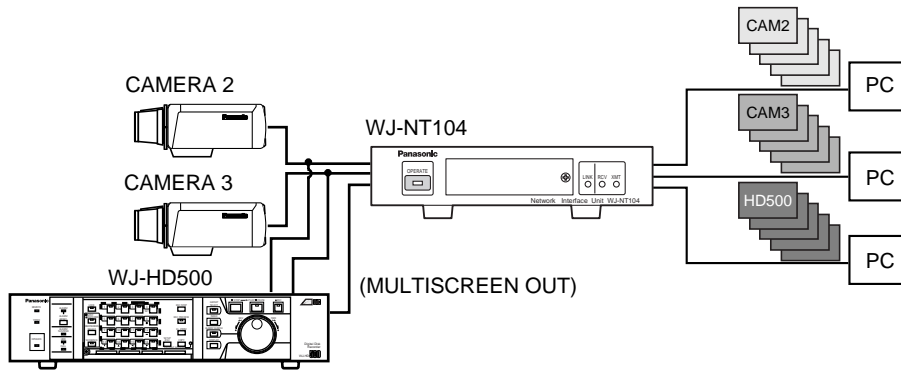

● **Setup**

In the SERIAL PORT SETUP window, set TYPE under RS-232C to "Serial through". Set the same communication parameters as for the WJ-HD500 disk recorder.

● **Control Operation**

Type the URL http://192.168.0.10/hd5index.html to access the WJ-HD500 CONTROL window for the disk recorder.
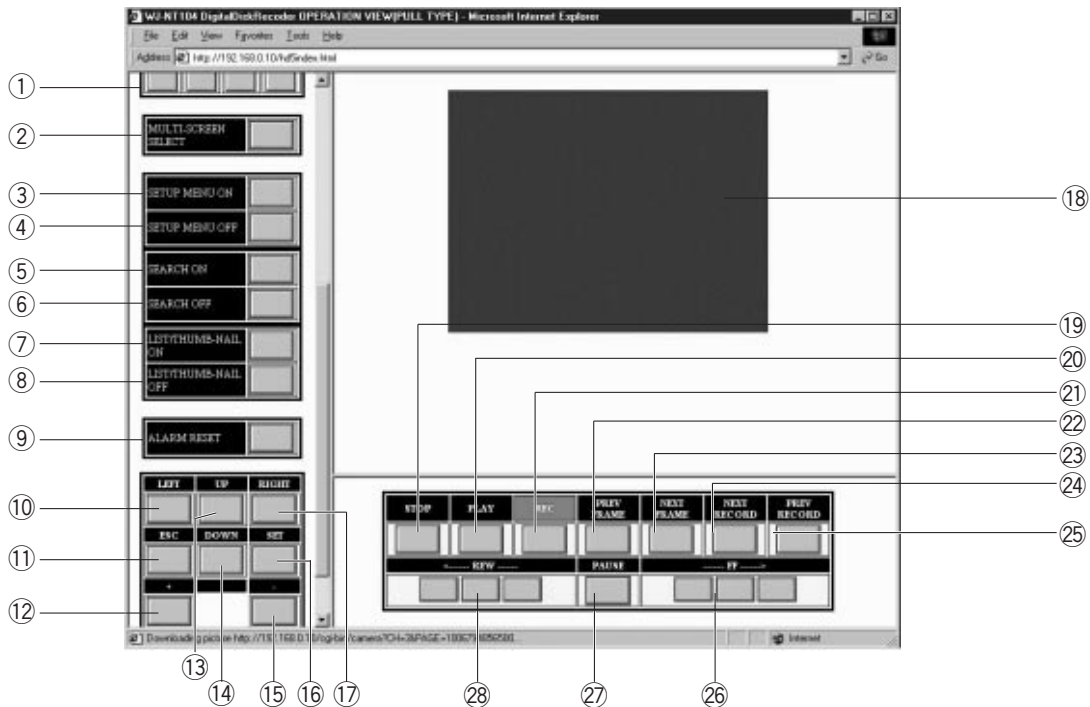
① **CAMERA SELECT**
To select a camera (camera 1 to 16) connected to the WJ-HD500.

② **MULTI-SCREEN SELECT**
Selects the multiscreen pattern to be displayed on the image display.

③ **SETUP MENU ON**
Opens the setup menu of the WJ- HD500.

④ **SETUP MENU OFF**
Closes the setup menu of the WJ-HD500.

⑤ **SEARCH ON**
To display search window when the recording list or thumbnail is displayed.

⑥ **SEARCH OFF**
To close search window.

⑦ **LIST/THUMB-NAIL ON**
Opens recording list or thumbnail.

⑧ **LIST/THUMB-NAIL OFF**
Closes recording list or thumbnail.

⑨ **ARALM RESET**
Resets an activated alarm.

⑩ **LEFT**
Moves the cursor to the left.

⑪ **ESC**
Activates as the ESC button of the disk recorder.

⑫ **+**
Selects a increment value in the setup menu.

⑬ **UP**
Moves the cursor up.

⑭ **DOWN**
Moves the cursor down.

⑮ **–**
Selects a decrement value in the setup menu.

⑯ **SET**
Activates as the SET button of the disk recorder.

⑰ **RIGHT**
Moves the cursor to the right.

⑱ **Image Display**
To display the images previously selected as input.

⑲ **STOP**
Clicking this button will terminate all modes of operation, such as recording, and playback.

⑳ **PLAY**
To playback frames in forward order.

㉑ **REC**
To start recording in the previously defined mode.

㉒ **PREV FRAME**
Click in paused playback to move the playback operation back one step to the previous frame.

㉓ **NEXT FRAME**
Click in paused playback to advance the playback operation one step to the next frame.

㉔ **NEXT RECORD**
To move the playback operation one step to the next record.

㉕ **PREV RECORD**
To move the playback operation back one step to the previous record.

㉖ **FF**
To playback a recording in forward search. The button located far right operates the fastest speed.

㉗ **PAUSE**
Click to temporarily pause playback.

㉘ **REW**
To playback a recording in backward search. The button located far left operates the fastest speed.

CONTENTS UPLOAD

Contents can be uploaded by means of an FTP (File Transfer Protocol). The following describes how to upload contents produced by using a PC.

■ Uploading a File

Upload contents produced by using a PC by the following procedures.

① Click the **[Start]** button, point to **Programs**, and then click **MS-DOS Prompt** to open the MS-DOS window.

② Enter an FTP command in the MS-DOS window and start the FTP. Then enter the IP address of the WJ-NT104.
C:\CONTENTS>FTP 192.168.0.10

③ In response to the input request for a user account, log in the user at the administrator level (Level 1).
User (192.168.0.10 : (none)) : admin

④ Enter a password.
Password:

⑤ After finishing the log-in operation, enter "**bin**" to select a binary transmission mode.
ftp>**bin**

⑥ Enter a put command to upload the file.
ftp>**put upload.html**

⑦ After finishing the transmission, enter "**quit**" to exit from the FTP.
ftp>**quit**

Notes
To transmit more than one file at a time, enter "prompt" to release the interactive mode, and follow "mput" of the input command with a wild card symbol (for example, "*").
> **ftp>prompt**
> **Interactive mode off**
> **ftp>mput *.html**

■ Content Storage Memory

• Content files such as HTML that have been uploaded by means of the FTP are stored in the flash ROM of the WJ-NT104. Hence, they are protected from erasure when the power switch is turned off. However, they are returned to an initial state during version-up operation or if reset after turning on the Mode Setup Switch "**2**" of the WJ-NT104. Be sure to back up the files before attempting to conduct such operations.

• No directories can be prepared in the content memory interior.

• Reading of the contents file name is case-sensitive.

Storing capacity: Approx. 1.5 Mbytes in total
Number. of storable files :   Max. 650
  * The above figures are subject to change, depending on file sizes and memory usage.

CONTROL BY HTML DESCRIPTION

Image display, camera operation, and alarm image display can be effected on the WWW browser by means of commands described in the HTML (Hyper Text Mark-up Language) file. The WJ-NT104 employs CGI (Common Gateway Interface) to carry out these functions. When using a function, the following syntax is used.

Syntax: http://<IP address >/<CGI function>?<Parameter>=<value> [&<Parameter> = <value>...]

■ Image Display

● CGI function for image display

CGI item	URL	Parameter name	Parameter	Description
Pull mode image get	/cgi-bin/camera	CH	1-4	To get a frame of a new image. Parameter CH: Fixed Input, Random Input mode: Ignored (or can be omitted) Multi Input mode: Essential
Push mode image get	/cgi-bin/push	CH	1-4	Push mode image get command for Netscape Parameter CH: Fixed Input, Random Input mode: Ignored (or can be omitted) Multi Input mode: Essential
Channel No. conversion (See page 79.)	/cgi-bin/chconv	CH	1-4	Channel for converting %c: Essential
		FILE	File name	Name of files to be converted: Essential

● HTML Sample File [mainview1.html]

```
<HTML>
<HEAD>
</HEAD>
<BODY BGCOLOR="#FFFFCC">
<CENTER>
<SCRIPT LANGUAGE="JavaScript">
var myDate = new Date();
var tmpImg = new Image(%W,%H);
width=%W
height=%H
function drawcamera() {
  document.CamImg.src=this.src;
}
function loadcamera() {                                                          1
  myDate = new Date();
  tmpImg.src = "/cgi-bin/camera?CH=%c&PAGE="+ myDate.getTime();
  tmpImg.onload = drawcamera;
  tmpImg.onerror= drawcamera;
}

document.write("<IMG         SRC=/cgi-bin/camera?CH=%c&PAGE="+myDate.getTime()+"         NAME=CamImg
onLoad=\"TimerID=setTimeout('loadcamera()',%i);\"               onError=\"TimerID=setTimeout('loadcamera()',%i);\"   2
WIDTH="+width+" HEIGHT="+height+ " VSPACE=5></A>");

</SCRIPT>
</CENTER>
</BODY>
</HTML>
```

1 This is a function to call new images by means of JavaScript.

2 This is a time interval (msec) to be converted by %i, requesting a new image in pull mode (see page 79). The page number of the argument is added for nullifying the cache.

● HTML Sample File [nsmainview1.html]

```
<HTML>
  <HEAD></HEAD>
  <BODY BGCOLOR="#FFFFCC">
    <CENTER>
      <SCRIPT LANGUAGE="JavaScript">
      width=%W
      height=%H
      myDate = new Date();
      document.write("<IMG SRC=/cgi-bin/push?CH=%c&PAGE="+myDate.getTime()+"
      WIDTH="+width+" HEIGHT="+height+ " VSPACE=5></A>");
      </SCRIPT>                                                          ─── 1
    </CENTER>
  </BODY>
</HTML
```

1 This is to request a new image in push mode. The page number of the argument is added for nullifying the cache.

■ Camera Operation

● CGI functions related to camera operation

The WV-CS654 and CS854 (optional) can be operated by using the following commands.
The following commands can be selected at a time. (Example: PAN and TILT can be operated in a combined manner.)

CGI item	URL	Parameter name	Parameter	Parameter

Camera control	/cgi-bin/camctrl	CHSEL	1-4	Selecting a video channel
				  Random Camera mode: Enabled
				  Multi Camera/Fixed Camera mode: Disabled

		CH	1-4	Selecting a camera to be controlled in the Multi Camera mode Random Camera and Fixed Camera modes are ineffective even if they are selected, and commands are applied only to the CH displayed.
		PRESET	0-64	0: Calling a home position 1 to 64: Calling a preset position
		PAN	–10-10	PAN & STOP Negative: Left, Positive: Right The moving distance is in proportion to their absolute values.
		TILT	–10-10	TILT & STOP Negative: Down, Positive: Up The moving distance is in proportion to their absolute values.
		ZOOM	–10-10	ZOOM Negative: Wide, Positive: Tele Zooming ratio is in proportion to their absolute values.
		ATPAN	on, off	Turning ON/OFF of auto pan
		AF	on	Auto Focus
		FOCUS	–10-10	Focus Negative: Near, Positive: Far Focusing ratio is in proportion to their absolute values.
		IRIS	–10-10	Iris Negative: Close, Positive: Open, 0: Reset The iris-opening ratio is in proportion to their absolute values.
		FILE	file name	Specifies the file name when the user wants to display a different image after performing a camera control operation. If the parameter is omitted, the image displayed on the screen is not changed.

● HTML Sample File [mainpanel1.html]

```
<HTML>
<HEAD>
</HEAD>
<BODY BGCOLOR="#FFFFCC">
<CENTER>
<!— TITELE LOGO IMAGE —>
<IMG SRC=/nt10logo.jpg VSPACE=8>
<SCRIPT LANGUAGE="JavaScript">
mode=%m            <!— RANDOM=0,FIXED=1,MULTI=2    —>

if(mode == 0) <!— RANDOM CAMERA SELECTION ONLY —>
{
  <!— CH SELECT FUNCTION —>
  document.write("RANDOM INPUT SELECTION MODE")
  document.write("<P><TABLE BORDER=2 BORDERCOLOR=black WIDTH=90% BGCOLOR=#DCfeff>")
  document.write("<TR>")
  document.write("<TH BORDER=2 COLSPAN=4 BGCOLOR=black><FONT SIZE=3 COLOR=#DCfeff>")
  document.write("INPUT SELECT</TH>")
  document.write("</FONT></TR>")
  document.write("<FONT SIZE=4>")
  document.write("<TR>")
  document.write("<TD>1</TD><TD><A HREF=\"/cgi-bin/camctrl?CHSEL=1\"><IMG SRC=\"/button.jpg\" BOR-
DER=0></A></TD>")
  document.write("<TD>2</TD><TD><A HREF=\"/cgi-bin/camctrl?CHSEL=2\"><IMG SRC=\"/button.jpg\" BOR-
DER=0></A></TD>")
  document.write("</TR>")
  document.write("<TR>")
  document.write("<TD>3</TD><TD><A HREF=\"/cgi-bin/camctrl?CHSEL=3\"><IMG SRC=\"/button.jpg\" BOR-
DER=0></A></TD>")
  document.write("<TD>4</TD><TD><A HREF=\"/cgi-bin/camctrl?CHSEL=4\"><IMG SRC=\"/button.jpg\" BOR-
DER=0></A></TD>")
  document.write("</TR>")
  document.write("</FONT>")
  document.write("</TABLE>")
}
else if(mode==1) {
  document.write("FIXED INPUT SELECTION MODE")
}
else if(mode == 2) <!— MULTI MODE ONLY —>
{
  document.write("MULTI INPUT SELECTION MODE")
  <!— CH SELECT FUNCTION —>
  document.write("<P><TABLE BORDER=2 BORDERCOLOR=black width=90% BGCOLOR=#DCfeff>")
  document.write("<TR>")
  document.write("<TH BORDER=2 COLSPAN=4 BGCOLOR=black><FONT SIZE=3 COLOR=#DCfeff>")
  document.write("INPUT SELECT</TH>")
  document.write("</FONT></TR>")
  document.write("<TR><FONT SIZE=4>")
  document.write("<TD>1</TD><TD><A HREF=\"/cgi-bin/chconv?CH=1&FILE=mainview1.html\" TARGET=\"main-
view\"><IMG SRC=\"/button.jpg\" BORDER=0></A></TD>")
  document.write("<TD>2</TD><TD><A HREF=\"/cgi-bin/chconv?CH=2&FILE=mainview1.html\" TARGET=\"main-
view\"><IMG SRC=\"/button.jpg\" BORDER=0></A></TD>")
  document.write("</TR>")
  document.write("<TR>")
  document.write("<TD>3</TD><TD><A HREF=\"/cgi-bin/chconv?CH=3&FILE=mainview1.html\" TARGET=\"main-
view\"><IMG SRC=\"/button.jpg\" BORDER=0></A></TD>")
  document.write("<TD>4</TD><TD><A HREF=\"/cgi-bin/chconv?CH=4&FILE=mainview1.html\" TARGET=\"main-
view\"><IMG SRC=\"/button.jpg\" BORDER=0></A></TD>")
  document.write("</FONT></TR>")
  document.write("</TABLE>")
```

[1]

[2]

```
<!— QUAD SCREEN —>
document.write("<P><TABLE BORDER=3 BORDERCOLOR=black WIDTH=90% BGCOLOR=#DCfeff>")
document.write("<TR>")
document.write("<TD BGCOLOR=black width=66% ><font SIZE=3 color=#DCfeff>")
document.write(" QUAD SCREEN MODE</TD>")
    document.write("          <TD><a     href=\"/index4.html\"     target=\"_top\"><IMG     SRC=\"/button.jpg\"——3
BORDER=0></A></TD>")
document.write("</TR>")
document.write("</TABLE>")
}
</SCRIPT>
</CENTER>
<HR>
<FONT SIZE=2 COLOR=BLUE>
Copyright &#169 1998-1999
Matsushita Communication Industrial Co., Ltd.<BR>
All rights reserved.
</FONT>
</BODY>
</HTML>
```

1 If selecting a channel in the Random Input Selection mode, set a value to argument CHSEL and carry out the CGI function (camctrl).

2 If selecting a channel in the Multi Input Selection mode, the "chconv" function is used to make known the channel selection to the mainview.html and camctrl.html.

3 This is a link to Quad Screen display. The link button for the four-screen concurrent display is indicated only in the Multi Input Selection mode.

● HTML Sample File 2 [camctrl.html]

```
<HTML>
<BODY BGCOLOR="#FFFFCC">
<CENTER>
<TABLE BORDER=3 width=95% BORDERCOLOR=black BGCOLOR="#DCFEFF">
 <TR>
  <TH BORDER=3 COLSPAN=2 BGCOLOR=black><FONT SIZE=2 COLOR="#DCFEFF">
    ZOOM  </FONT></TH>
  <TH BORDER=3 COLSPAN=3 BGCOLOR=black><FONT SIZE=2 COLOR="#DCFEFF">
    FOCUS </FONT></TH>
  <TH BORDER=3 COLSPAN=3 BGCOLOR=black><FONT SIZE=2 COLOR="#DCFEFF">
    IRIS  </FONT></TH>
  <TH BORDER=3 COLSPAN=2 BGCOLOR=black><FONT SIZE=2 COLOR="#DCFEFF">
    AUTOPAN</FONT></TH>
  <TH BORDER=3 COLSPAN=1 BGCOLOR=black><FONT SIZE=2 COLOR="#DCFEFF">
    PRESET </FONT></TH>
 </FONT></TR>
 <TR ALIGN="center" >
  <TD>WIDE</TD> <TD>TELE </TD> <TD>FAR </TD> <TD>NEAR</TD> <TD>AUTO</TD>
  <TD>CLOSE</TD><TD>OPEN </TD> <TD>RESET</TD> <TD>ON </TD> <TD>OFF </TD>
 </TR>
 <TR ALIGN="center">
  <TD><A HREF="/cgi-bin/camctrl?CH=%c&ZOOM=-5"> <IMG SRC="/button.jpg" BORDER=0></A></TD>
  <TD><A HREF="/cgi-bin/camctrl?CH=%c&ZOOM=5">  <IMG SRC="/button.jpg" BORDER=0></A></TD>
  <TD><A HREF="/cgi-bin/camctrl?CH=%c&FOCUS=5">  <IMG SRC="/button.jpg" BORDER=0></A></TD>
  <TD><A HREF="/cgi-bin/camctrl?CH=%c&FOCUS=-5"> <IMG SRC="/button.jpg" BORDER=0></A></TD>
  <TD><A HREF="/cgi-bin/camctrl?CH=%c&AF=on">    <IMG SRC="/button.jpg" BORDER=0></A></TD>
  <TD><A HREF="/cgi-bin/camctrl?CH=%c&IRIS=-5"> <IMG SRC="/button.jpg" BORDER=0></A></TD>
  <TD><A HREF="/cgi-bin/camctrl?CH=%c&IRIS=5">   <IMG SRC="/button.jpg" BORDER=0></A></TD>
  <TD><A HREF="/cgi-bin/camctrl?CH=%c&IRIS=0">   <IMG SRC="/button.jpg" BORDER=0></A></TD>
  <TD><A HREF="/cgi-bin/camctrl?CH=%c&ATPAN=on"> <IMG SRC="/button.jpg" BORDER=0></A></TD>
  <TD><A HREF="/cgi-bin/camctrl?CH=%c&ATPAN=off"><IMG SRC="/button.jpg" BORDER=0></A></TD>
  <TD>
   <FORM ACTION="/cgi-bin/camctrl">
    <INPUT TYPE="hidden" NAME="CH" VALUE="%c">
    <SELECT NAME="PRESET">
    <SCRIPT LANGUAGE="JavaScript">
     for(i=1 ;i<=64; i++)
       document.writeln("<OPTION>"+i)
     document.writeln("<OPTION VALUE=0>HOME")
                </SCRIPT>
    </SELECT><BR>
    <FONT SIZE=3><INPUT TYPE=SUBMIT VALUE="SET"></FONT>
   </FORM>
  </TD>
 </TR>
</TABLE>
</CENTER>
</BODY>
</HTML>
```

1. This changes the zooming ratio of the camera (optional) in the channel designated by %c (page 79). Negative values indicate TELE and positive ones indicate WIDE.

2. This changes the focusing ratio of the camera (optional) in the channel designated by %c (page 79). Negative values indicate FAR and positive ones indicate NEAR. AF is the abbreviation of "auto focus."

3. This changes the iris-opening/closing ratio of the camera (optional) in the channel designated by %c (page 79). Negative values indicate OPEN and positive ones indicate CLOSE. The value zero (0) indicates resetting.

4. This selects ON/OFF of the auto pan function of the camera (optional) in the channel designated by %c (page 79).

5. This calls a preset position (1 to 64) of the camera (optional) in the channel designated by %c (page 79).

■ Alarm Operation

● CGI functions related to alarm

Alarm images and log files recorded in the WJ-NT104 can be queried by using the following commands.

CGI item	URL	Parameter name	Parameter	Description
Alarm log file list	/cgi-bin/almlog	TARGETI	HTML frame name	Alarm image display target name (A new window is opened, if the paramete is omitted.)
		TARGETC	HTML frame name	Alarm image control frame target name (The control frame cannot be used, if the paramete is omitted.)
		BGCOLOR	000000 -FFFFFF	Background color (Default color of the browser, if the paramete is omitted.) (Hexadecimal, 6-bit or HTML color name)
		IMGHTML	file name	HTML file name for the alarm image frame (Direct display of images, if the paramete is omitted.)
Alarm image control (See page 80.)	/cgi-bin/almctrl	LNO	000 -FFFF	Alarm image log number (hexadecimal, 4-bit)
		FNO	00-FF	Alarm image frame number (hexadecimal, 2-bit)
		FILE	file name	File name to be converted (/almctrl.html if the paramete is omitted.)

● HTML Sample File [almctrl.html]

```
<HTML>
<BODY BGCOLOR="#FFC1C2">
<CENTER>
<B>ALARM IMAGE CONTROL PANEL
<SCRIPT LANGUAGE="JavaScript">
 document.write("("+(0x%c+1)+"/"+(0x%t+1)+")")
</SCRIPT>
</B>
<TABLE BORDER=3 width=95% BORDERCOLOR=black bgCOLOR="#DCFEFF">
 <TR>
  <TH BORDER=3 BGCOLOR=black> <FONT SIZE=2 COLOR="#DCFEFF">
      GO TO FIRST FRAME
  </TH>
  <TH BORDER=3 BGCOLOR=black><FONT SIZE=2 COLOR="#DCFEFF">
      FRAME AT <BR>ALARM EVENT</TH>
  <TH BORDER=3 BGCOLOR=black><FONT SIZE=2 COLOR="#DCFEFF">
      GO TO LAST FRAME</TH>
  <TH BORDER=3 BGCOLOR=black><FONT SIZE=2 COLOR="#DCFEFF">
      PREVIOUS FRAME</TH>
  <TH BORDER=3 BGCOLOR=black><FONT SIZE=2 COLOR="#DCFEFF">
      NEXT FRAME</TH>
</TR>
<TR ALIGN="center">
          <TD><A    HREF="/cgi-bin/almctrl?LNO=%l&FNO=%h&FILE=almimg.html"    TARGET="almimg"        1
onClick="location='/cgi-bin/almctrl?LNO=%l&FNO=%h'">
    <IMG SRC="/button.jpg" BORDER=0></A></TD>
          <TD><A    HREF="/cgi-bin/almctrl?LNO=%l&FNO=%a&FILE=almimg.html"    TARGET="almimg"        2
onClick="location='/cgi-bin/almctrl?LNO=%l&FNO=%a'">
    <IMG SRC="/button.jpg" BORDER=0></A></TD>
          <TD><A    HREF="/cgi-bin/almctrl?LNO=%l&FNO=%t&FILE=almimg.html"    TARGET="almimg"        3
onClick="location='/cgi-bin/almctrl?LNO=%l&FNO=%t'">
    <IMG SRC="/button.jpg" BORDER=0></A></TD>
     <TD><A  HREF="/cgi-bin/almctrl?LNO=%l&FNO=%p&FILE=almimg.html"  TARGET="almimg"  onClick="loca-   4
tion='/cgi-bin/almctrl?LNO=%l&FNO=%p'">
    <IMG SRC="/button.jpg" BORDER=0></A></TD>
          <TD><A    HREF="/cgi-bin/almctrl?LNO=%l&FNO=%n&FILE=almimg.html"    TARGET="almimg"        5
onClick="location='/cgi-bin/almctrl?LNO=%l&FNO=%n'">
    <IMG SRC="/button.jpg" BORDER=0></A></TD>
</TR>
</TABLE>
</CENTER>
</BODY>
</HTML>
```

1 When the button is clicked, the first frame is displayed.

2 When the button is clicked, the frame immediately after alarm is displayed.

3 When the button is clicked, the last frame is displayed.

4 When the button is clicked, the image of the preceding frame is displayed.

5 When the button is clicked, the image of the next frame is displayed.

■ Substitute Character Strings in HTTP Server

Parameters can be described in HTML files by means of substitute characters as described below.

● Ordinary HTML file get

When an HTML file containing the following substitute characters is transmitted to a client through the HTML protocol, it is transmitted with the substitute characters unconditionally converted into internal parameters.
Any characters that begin with % but are not substitute ones are displayed as they are (for example, %k is displayed as %k).
If a user wants to transmit a character string that is the same as a substitute, one of the following methods can be chosen.

(Example : %m / %m)

Item	Substitute character	Description
Action mode	%m	In the Random Input Selection mode, %m is substituted with 0, and in the 1ch static mode, it is substituted with 1.
Camera channel	%c	In the Multi Input Selection mode, %m is substituted with 2. Channel (1 to 4) selected in the Random Input Selection mode. Camera channel is not fixed in other modes.
Pull interval	%i	Call interval (msec.) in the pull mode (decimal).
Live image data size	%w %h	%w and %h indicate respectively the width and height of current live image. %W and %H respectively indicate the width and height of the frame in which the above-mentioned live image is displayed.
Live image display size	%W %H	
Version	%v	Firmware Version
Ether address	%e	Ether address (MAC address) 00-00-00-00-00-00 type (hexadecimal, 2 x 6-bit)

● /cgi-bin/chconv

Substitute characters other than %c are the same as in ordinary HTML file get. This substitute character is used to designate a channel number in the Multi Input Selection mode.

Item	Substitute character	Description
Camera channel	%c	Value (1 - 4) of channel argument

● **cgi-bin/almctrl**

The substitute characters ordinarily used for HTML file get are not applicable. This substitute character is used in the same way as those for HTML file get.

Item	Substitute character	Description
Log number	%l	Log number 0000-FFFF (hexadecimal, 6-bit)
First frame number	%h	First frame number of an alarm image for specified log number (LNO). Normally, 00.
Frame number immediately after alarm	%a	Frame number immediately after receiving an alarm for specified log number (LNO). 00 - FF (hexadecimal, 2-bit)
Last frame	%t	Last frame number of an alarm image for specified log number (LNO). 00 - FF (hexadecimal, 2-bit)
Specified frame	%c	Same as the value of argument FNO. 00 - FF (hexadecimal, 2-bit)
Next frame number	%n	Value of preceding argument FNO. If FNO represents the first frame number (= %h) of the specified log number (LNO), the value of FNO is applied. 00 - FF (hexadecimal, 2-bit)
Preceding frame number	%p	Value of preceding argument FNO. If FNO represents the last frame number (= %t) of the specified log number (LNO), the value of FNO is applied. 00 - FF (hexadecimal, 2-bit)
Alarm image display size	%W %H	%W and %H respectively represent the width and height in which an alarm image of the specified log number (LNO) is displayed. (%w, %h, %W, %H) = (640, 480, 640, 480) or (640, 240, 640, 480) or (320, 240, 320, 240) or (160, 120, 160, 120)

For example, the first alarm number of the specified log is described in the HTML by /alm%|_%h.jpg.

TROUBLESHOOTING

Prior to having the unit repaired, check the following items.

Symptoms	Check items
No power is supplied (Operation indicator is off)	• Is an AC adapter (optional) connected to the DC power connector on the WJ-NT104 rear panel?
No access from the browser. • Modem connection	• Is the modem power switch turned ON? • Is the modem cable connected to the RS-232C connector on the rear panel? • Is PPP selected for NETWORK TYPE in the Network Setup? (Refer to CD-ROM)
• LAN connection	• Is a 10Base-T cable connected to the Ethernet connector on the rear panel?
	• Is the link indicator of the front panel on? If it is not on, the unit is not correctly connected to the LAN or the network is not correctly connected. Check for any poor contact or cable disconnection.
	• Is the WJ-NT104 IP address correctly set? (Refer to CD-ROM.)
	• Is the wrong IP address accessed? (Refer to CD-ROM.) If making access from Windows95 or UNIX, check the connection in the following manner. >ping **[IP address set in the WJ-NT104]** If the WJ-NT104 responds to the above command, the connection is correct. If it does not respond, perform the following procedure: (1) Initialize referring to MODE SETTING to reset the IP address to 192.168.0.10. (2) Set the IP address again referring to GLOBAL NETWORK CONNECTION (on CD-ROM).
	• Has the set IP address already been assigned to another device? (Refer to CD-ROM) • Does the set IP address match the conventions of the network/subnet to which the WJ-NT104 is connected? WJ-NT104 and client PC connected to the same subnet: • Are the IP addresses of the WJ-NT104 and the client PC set for the same subnet? • Is the browser set to **[Use proxy server]**? When accessing an NT104 on the same subnet, it is recommended to select **[Do not use proxy server]** for the IP address. WJ-NT104 and client PC connected to different subnets: • Is the correct value set for the WJ-NT104 default gateway?
No image is displayed.	• Are power switches of cameras and other connected devices turned on?
Images are not updated.	• With some WWW browsers or browser versions images may not be updated, camera control may not function normally, etc. It is recommended to use Netscape Navigator Ver. 4.04 or higher, or Internet Explorer Ver. 4.0 or higher. • Under conditions such as network congestion or simultaneous access to the WJ-NT104 by too many users, the display of images may be suspended. In this case, click the [Refresh] button.
The certification window that opens when displaying a default page cannot be closed.	• Enter correct user name and password. If the correct user name and password are unknown, repeatedly press the [ESC] button on the screen. If a series of more than one input is accepted, the certification window is not displayed again.
The image transfer rate of the connected modem is very low.	• Check the actual data transfer rate of the circuit between the modems. The image rate may be improved in some cases, if the bit rate in the SERIAL PORT SETUP window it set to a value near the actual data transfer rate.
HTML file is not displayed.	• Check the contents of the HTML file. An HTML file is not displayed, if it is incorrectly described or broken. HTML files may be broken, if they have not been fully initialized. Initialize the files again by turning on the Mode Setup Switch No. 2 of the WJ-NT104.
Images cannot be saved.	• Check the image display mode. Images cannot be saved in push mode.
Image get is abnormally slow, or PC does not react at all.	• According to an announcement by Microsoft, Windows95 may develop trouble if operated uninterruptedly for more than 50 consecutive days. It is recommended to reset your PC once a week.

Live images cannot be updated. Alarm images cannot be updated.	• Image requests may not be made to the WJ-NT104, because data are called from the cache of the PC. Should this phenomenon occur frequently, it is recommended to set the browser in the following manner:
	For Netscape Navigator
	  In the **[SETTING]** menu, set the memory cache and disk cache under **[DETAIL-CACHE]** to 0 Kbyte.
	For Internet Explorer
	  In the View drop-down menu of the browser, click Internet Options, and then click Settings for Temporary Internet Files. Under **[Check for newer version of stored pages]**, mark **[Every visit to the page]**.

PERIPHERALS

● **Network System**

Device	Outline
Ethernet hub or Switching hub	To be used when connecting to a LAN. Can be connected to a hub for 10Base-T or 10/100 BASE-TX or a switching hub for 10Base-T or 10/100 BASE.
Modem	To be used when connecting to a telephone circuit (POTS).
Terminal adapter	To be used when connecting to an ISDN circuit.

● **Monitoring Browser**

Browser Type	Available image modes	
Netscape Navigator Ver. 4.04 or higher	Push mode under the Netscape system Pull mode under the JavaScript system	[Except Ver. 6.0 series]
Internet Explorer Ver. 4.0 or higher	Pull mode under the JavaScript system	

● **CCTV Camera (option)**

Device	Available image modes	Outline
CCTV camera	Recommend: Panasonic-made	Camera capable of image output in compliance with the NTSC standard.
Combination camera	WV-CS654, WV-CS854	Coaxial communication type. Both pan/tilt head control and lens control can be used via LAN from a remote PC.

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SPECIFICATIONS

**General**

Power Required: 12 V DC, 800 mA
Ambient Operating Temperature: –10 °C - +50 °C (14 °F - 122 °F)
Ambient Operating Humidity: Less than 90 %
Dimensions: 210 (W) x 44 (H) x 350 (D) mm
                                         8-1/4″ (W) x 1-3/4″ (H) x 13-3/4″ (D)
Weight: 2.3 kg (5.1 lbs.)

Input and Output

Video Input: 1.0 V[p-p]/75 Ω, PAL Composite Video Signal (x4)
Video Output: 1.0 V[p-p]/75 Ω, PAL Composite Video Signal (x4)
Serial Control Port: RS-232C (9-pin D-sub Connector), RS-485 (Terminal board)
Parallel Control Port: Default 8-bit input (I/O selectable for all bits depending on the configuration)
Image Resolution: Selectable from 752 (H) x 568 (V); 752 (H) x 280 (V); 368 (H) x 280 (V); or 176 (H) x 136 (V)
Image Compression: JPEG (image quality selectable in 4 stages)
Installed protocol: HTTP, TCP/IP, PPP, FTP, SMTP
Camera Coaxial Control: Pan/Tilt, Zoom, Focus, Preset, Auto Focus (for Combination Camera WV-CS850/CS854 Series)
LAN Interface: 10Base-T, 8-conductor Modular Jack
Security measures: Password type

AC Adapter
Input: 230 AC 50 Hz 17 W
Output: 12 V DC 800 mA
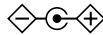
Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

STANDARD ACCESSORIES

AC Adapter 1
Utility Software (CD-ROM) 1
Cord Clamp 1

NM1201-0   V8QB5921AN   Printed in Japan
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