

# OPERATION MANUAL

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Remote Control Software  
MV-400  
Multi Viewer

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Version 3.0 - Higher - Rev.1



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## Trademarks

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# 1. Setup

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## 1-1. Overview

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The Multi Viewer MV-400 uses a network connection to enable remote control from a PC and video transfer to a PC. Remote control is possible using the Internet Explorer web browser preinstalled in Windows so that no special software needs to be installed. Video transfer can be performed in two ways: Using Internet Explorer or using the special MV-400 LiveViewer software. Although software must be installed to use MV-400 LiveViewer, it allows a higher frame rate for video transfer compared to Internet Explorer.

## 1-2. Operating Environment

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The MV-400 remote control software requires the PC operating environment below.

Compatible OS	Windows 2000 Professional SP4 and later or Windows XP SP2 or later (Professional or Home Edition)
Software	Internet Explorer 6.0 or later
	.NET Framework 2.0 (stored on supplied CD-ROM) * <sup>1</sup>
	Visual C++2005 Redistributable (stored on supplied CD-ROM) * <sup>1</sup>
	Java2 Runtime Environment 5.0 (stored on supplied CD-ROM) * <sup>2</sup>
CPU	Pentium IV 3 GHz or faster
Memory	1GB or more (512MB if Multicast mode is not used.)
Display	Resolution of 1024x768 pixels or higher Capable of displaying full color (24 bit) * When transmitting 1280 x 960 pixels video with the optional software (MV-40EX), use a display with a resolution higher than 1280 x 1024 pixels.
LAN adapter	At least one 10BASE-T/100BASE-TX compatible port
LAN cable	Enhanced category 5 or higher

\*1: Not needed if using MV-400 LiveViewer.

\*2: Not needed if the video transfer (Viewer) function will not be used in Internet Explorer.

## 1-3. Software Installation

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### 1-3-1. Using the Video Transfer Function in Internet Explorer

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To use the video transfer function (Viewer) with Internet Explorer, the Java2 Runtime Environment 5.0 must be installed beforehand. See section 1-3-3. "Java2 Runtime Environment" for the installation procedure.

#### IMPORTANT

Be sure to perform all software installation by logging in with Administrator rights. The installation will not be performed properly under User rights.

The video transmission function (Viewer) with Internet Explorer may not perform properly with other version of the Java2 Runtime Environment than the version 5.0. Open Add/Remove Programs (Add or Remove Programs in Windows XP) in the Control Panel and see if there is the Java2 Runtime Environment of higher version. If there is the higher version, uninstall it.

### 1-3-2. Using MV-400 LiveViewer

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To use the video transfer function with MV-400 LiveViewer, three software applications provided by Microsoft and the MV-400 LiveViewer must be installed in the order below. The installation procedure is described starting from section 1-3-4. "Windows Installer 3.1" to section 1-3-7. "MV-400 LiveViewer."

- (1) Windows Installer 3.1
- (2) Microsoft .NET Framework 2.0
- (3) Microsoft Visual C++2005 Redistributable
- (4) MV-400 LiveViewer

Please note, however, that some PCs may already have this software installed. To check, open Add/Remove Programs (Add or Remove Programs in Windows XP) in the Control Panel, and see if the software from (1) to (3) are installed. You do not need to install the software if it is already installed.

#### NOTE

An older version of the software, "Microsoft .NET Framework 1.1" is usually preinstalled in Windows XP. In this case, "Microsoft .NET Framework 2.0" must be installed.

The PC needs to be restarted during the installation process. Therefore, be sure to exit all applications that are running before starting installation.

#### IMPORTANT

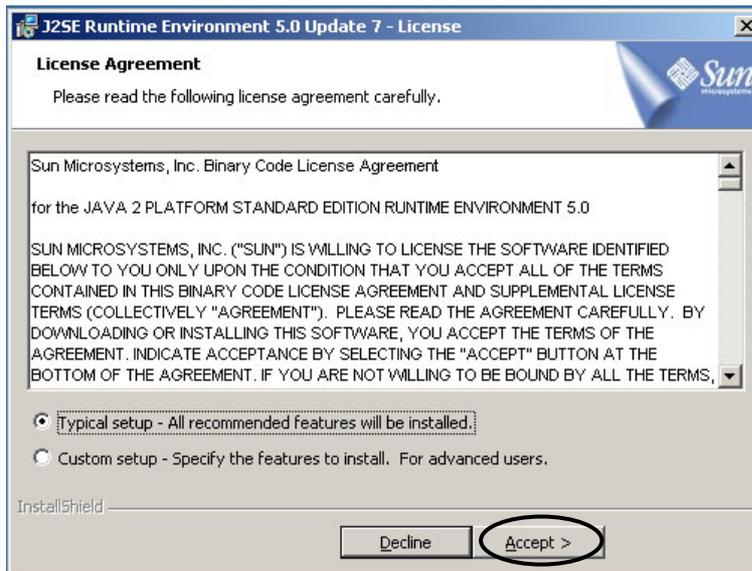
Be sure to perform all software installation by logging in with Administrator rights. The installation will not be performed properly under User rights.

## 1-3-3. Java2 Runtime Environment

- 1) Load the supplied Installation CD-ROM into the PC, and open the CD-ROM drive. Run the file "jre-1\_5\_0\_07-windows-i586-p.exe" to start the installation wizard.



- 2) After the installation wizard starts, the [License Agreement] dialog is displayed. Click **Accept** to start installation.



- 3) When installation is completed normally, the next screen is displayed. Click **Finish** to restart the PC.

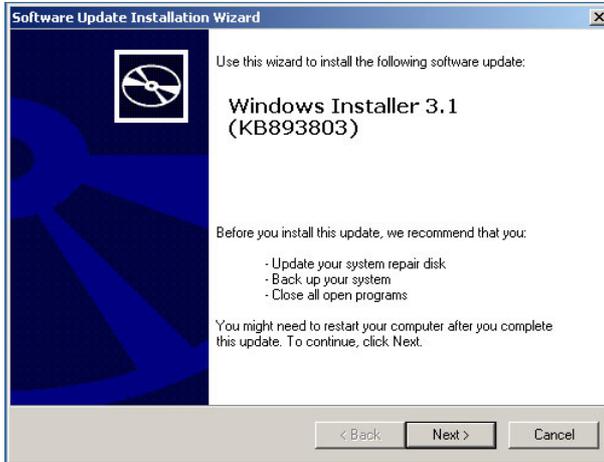


## 1-3-4. Windows Installer 3.1

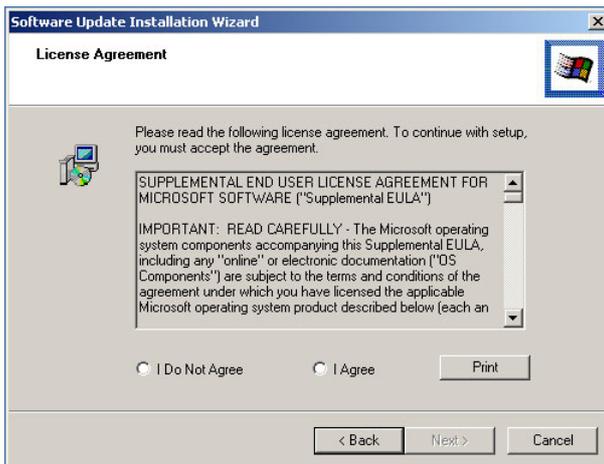
- 1) Load the supplied Installation CD-ROM into the PC, and open the CD-ROM drive. Run the file "WindowsInstaller-KB893803-v2-x86.exe" to start the installation wizard.



- 2) After the installation wizard is started, click **Next**.



- 3) The [License Agreement] dialog is displayed. Select the "I Agree" check box, and then click the **Next** button to start installation.



- 4) When installation is completed normally, the screen shown below is displayed. Click **Finish** to restart the PC.



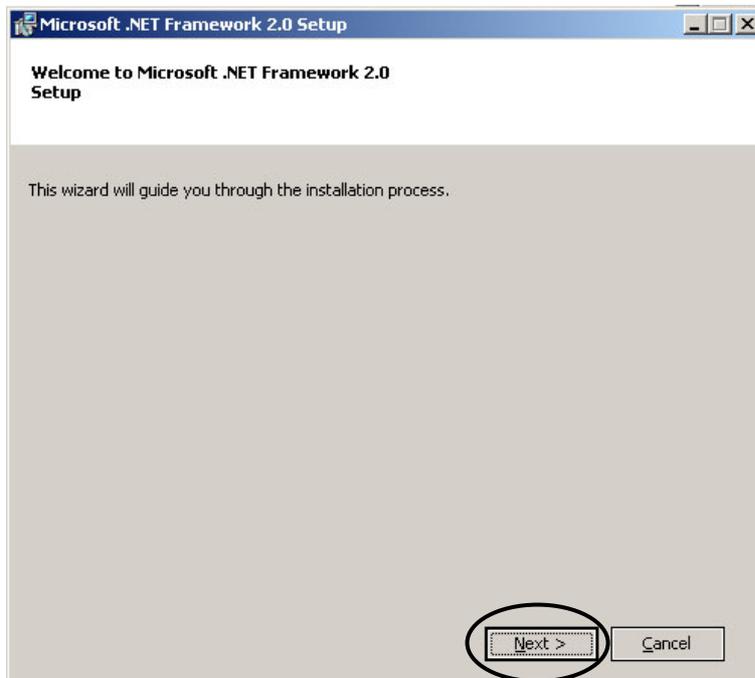
## 1-3-5. Microsoft .NET Framework 2.0

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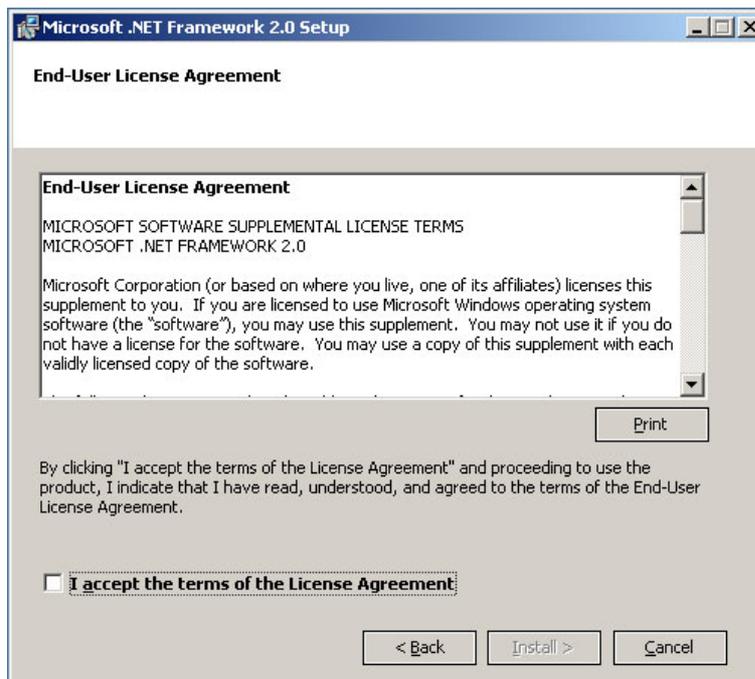
- 1) Run the file "dotnetfx.exe" on the CD-ROM to start the setup wizard.



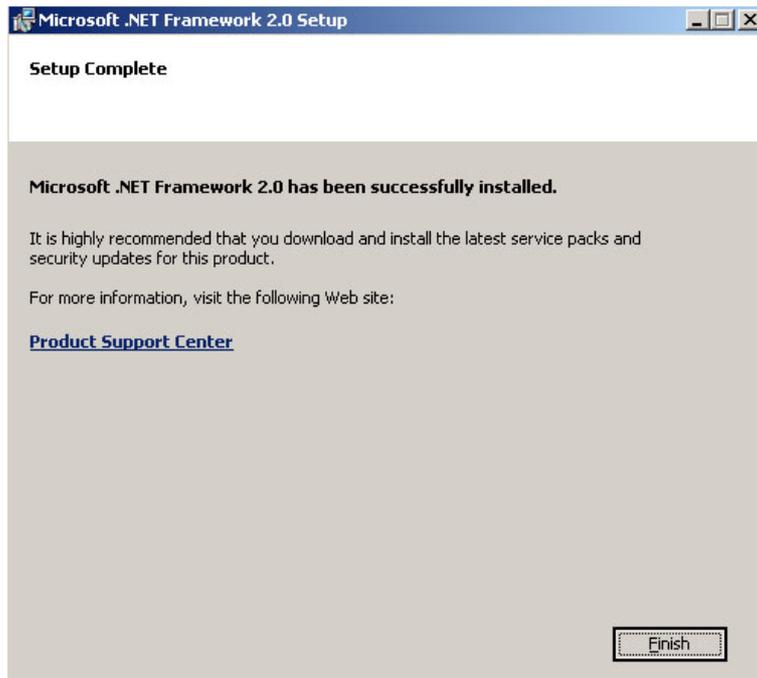
- 2) After the setup wizard is started, click **Next**.



- 3) The End User License Agreement is displayed. Select "I accept the terms..." check box, and then click **Install** to start the installation process.



- 4) When installation is completed normally, the screen shown below is displayed. Click **Finish**.



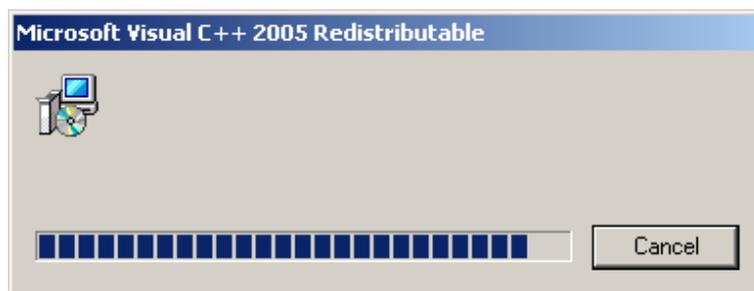
## 1-3-6. Microsoft Visual C++ 2005 Redistributable

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- 1) Run the file "vcredist\_x86.exe" on the CD-ROM to start the setup wizard.



- 2) Once vcredist\_x86.exe is started, the progress bar shown below is displayed. When the progress bar reaches the end, the installation is complete.



## 1-3-7. MV-400 LiveViewer

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Create a folder, and then copy the file "MV400LiveViewer.exe" on the CD-ROM to the created folder.

## 1-4. Software Uninstallation

To uninstall the software, delete the file "MV400LiveViewer.exe" copied from the CD-ROM. The programs "Windows Installer 3.1", "Microsoft .NET Framework 2.0" and "Microsoft Visual C++2005 Redistributable" do not need to be uninstalled.

## 1-5. Connections

When controlling the MV-400 over a LAN interface, be aware that the cables and equipment used may vary depending on the connection method. Generally, use a crossover LAN cable to connect a PC directly to the MV-400, or use a straight LAN cable to connect the MV-400 and PC through a router or hub.



For details, see section 7. "LAN Interface" in the separate MV-400 Operation Manual.

### NOTE

For the unicast mode, no more than one PC can be connected to each MV-400 unit.

## 1-6. Communication Standards

The communication standards are shown below.

Protocol	TCP/IP
IP address	<p>Setting range: 0.0.0.0 to 255.255.255.255</p> <p>There are certain limitations on IP addresses set by the PC as shown below. Set the IP address of the MV-400 in this range.</p> <div style="text-align: center;"> </div> <p>1<sup>st</sup> octet: 1 to 223 (except for 127)            2<sup>nd</sup> octet: 0 to 255            3<sup>rd</sup> octet: 0 to 255            4<sup>th</sup> octet: 1 to 254</p> <p>* This is set at the LAN menu of the MV-400.            * The default setting is 192.168.0.1.</p>
Subnet mask length	<p>Setting range: 0 to 31</p> <p>* This is set at the LAN menu of the MV-400.            * The default setting is 24.</p>
Gateway	<p>Setting range: 0.0.0.0 to 255.255.255.255</p> <p>* This is set at the LAN menu of the MV-400.            * The value 0.0.0.0 signifies that the gateway has not been set.            * The default setting is 0.0.0.0.</p>
MAC address	<p>This is already set at factory shipping (cannot be changed).</p> <p>* The setting can be confirmed on the LAN menu of the MV-400.</p>

### NOTE

The LAN settings of the MV-400 unit cannot be changed from the PC.

To change the LAN settings of the MV-400, refer to section 5-6. "LAN (LAN Settings)" in the separate MV-400 Operation Manual to change the settings locally.

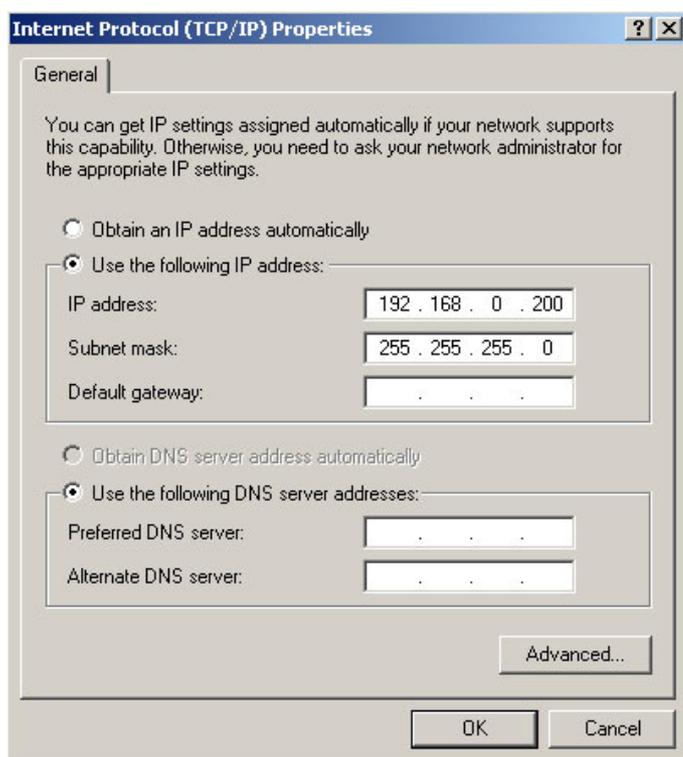
## 1-7. PC Network Settings

The PC network settings need to match the network settings of the MV-400. The procedure for making the network settings at the PC vary depending on the OS, and so refer to the OS manual for details. This setting example shows the case when connecting to the MV-400 with the default settings. The MV-400 default settings are shown below.

IP address	192. 168. 0.1
Subnet mask length	24
Gateway	0.0.0.0

### 1) Setting in Windows 2000

Click the **Start** button on the taskbar, select "Settings" → "Network and Dial-up Connections" and then right-click the "Local Area Connection" icon to open [Properties] window. Double-clicking "Internet Protocol (TCP/IP)" under the [General] tab opens the [Internet Protocol (TCP/IP) Properties] window. Make the settings as shown in the example below. Make a note of the settings before changing them in case you need to return the IP address to its original settings later.



IP address for PC	192.168.0.yyy (yyy is any number from 2 to 254 except for the number set for the MV-400 unit and the gateway number. In this example, the setting is yyy=200.)
Subnet mask	Set to 255.255.255.0.

## **2) Setting in Windows XP with the default Start menu setting**

Click the **S** button on the taskbar, open [Control Panel], and double-click "Network Connections". Right-click the "Local Area Connection" icon to open [Properties] window. Double-clicking "Internet Protocol (TCP/IP)" under the [General] tab opens the [Internet Protocol (TCP/IP) Properties] window. The settings are then made in the same way as 1) above.

## **3) Setting in Windows XP with the Start menu setting changed to Classic**

Click the **S** button on the taskbar, select "Settings" → "Network Connections" and then right-click the "Local Area Connection" icon to open [Properties] window. Double-clicking "Internet Protocol (TCP/IP)" under the [General] tab opens the [Internet Protocol (TCP/IP) Properties] window. The settings are then made in the same way as 1) above.

When the settings are completed, click the **O** button, and then close all setting windows.

## 2. Remote Control in Internet Explorer

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### 2-1. Starting and Connecting in Internet Explorer

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From the **Start** button on the taskbar, select "Programs" (All Programs in Windows XP), and then select "Internet Explorer" to start it.

- 1) Enter the IP address that has set at LAN menu in MV-400 into the address bar and press the **Enter** key. If the ID is set, the authentication window is displayed whenever communication is established.

If the ID is no set, the control screen is displayed whenever communication is established.



- 2) Enter the user name and password and click **OK**. The control screen is displayed when the entered user name and password match the stored data.



#### NOTE

If you turn the MV-400 power off and then on again during connecting PC with the MV-400, the operation of the Internet Explorer may become unstable. If the MV-400 power was turned off and on, restart the Internet Explorer.

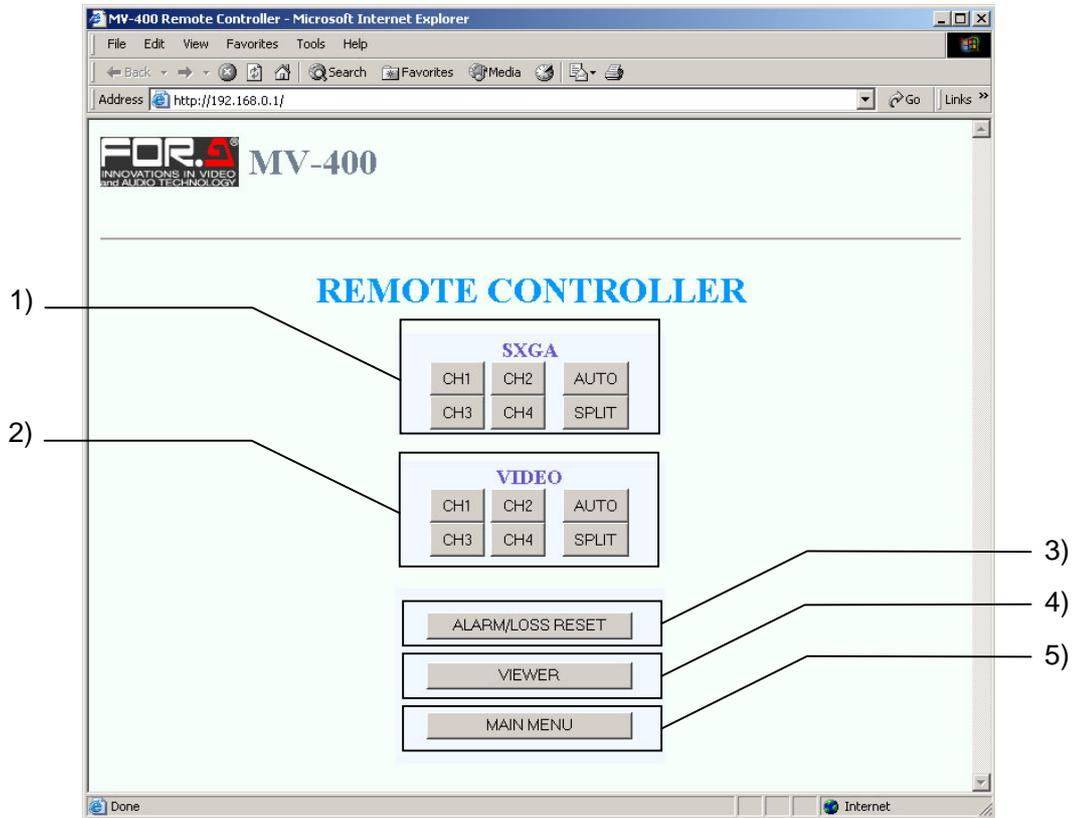
### 2-2. Exiting Internet Explorer

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To exit the Internet Explorer, click the **X** button at the top-right corner of the Internet Explorer window.

## 2-3. Control Screen

The screen below is displayed when communication is established.



### 1) SXGA Output Control

This operates the SXGA screen output from the VGA OUT connector.

### 2) Video Output Control

This operates the video screen output from the VIDEO OUT1 connector.

### 3) ALARM/LOSS RESET

This resets the alarm. However, external alarms can be reset only when the alarm input mode is set to TRIG.

### 4) VIEWER

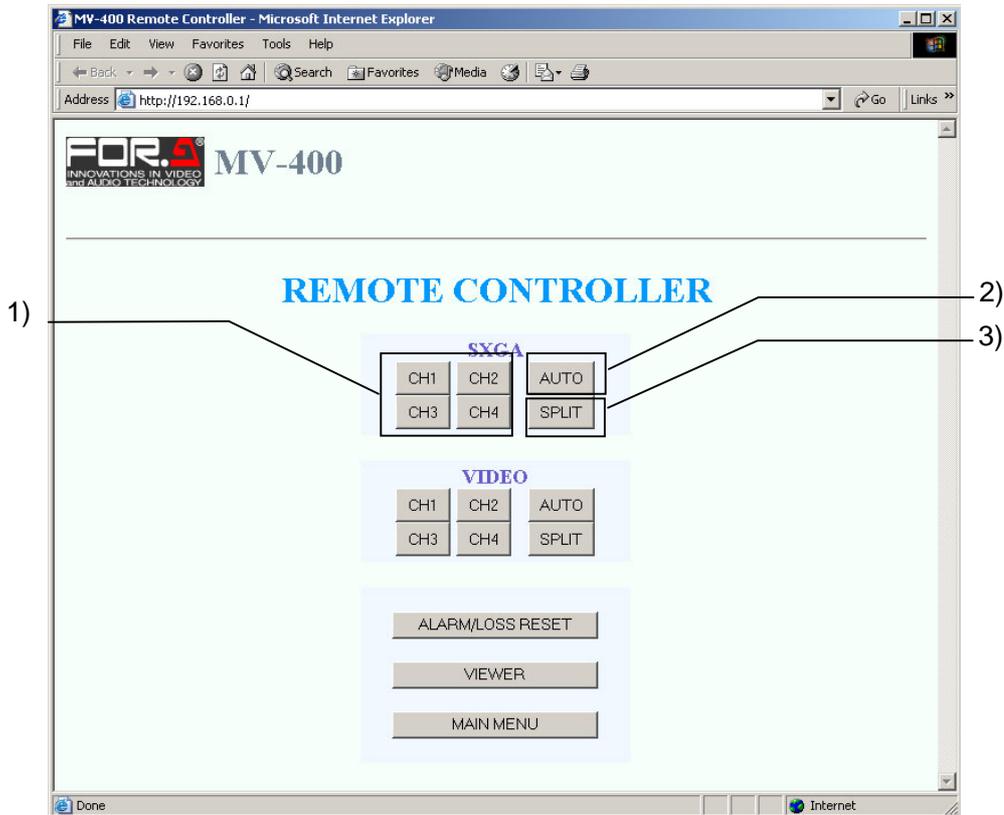
This displays the LiveViewer screen.

### 5) MAIN MENU

Used to return to the [MAIN MENU] screen.

## 2-4. SXGA Output Control

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### 1) CH1 to CH4

Used to select a channel displayed on SXGA in full screen.

### 2) AUTO

Used to start auto sequencing of the full screen display.

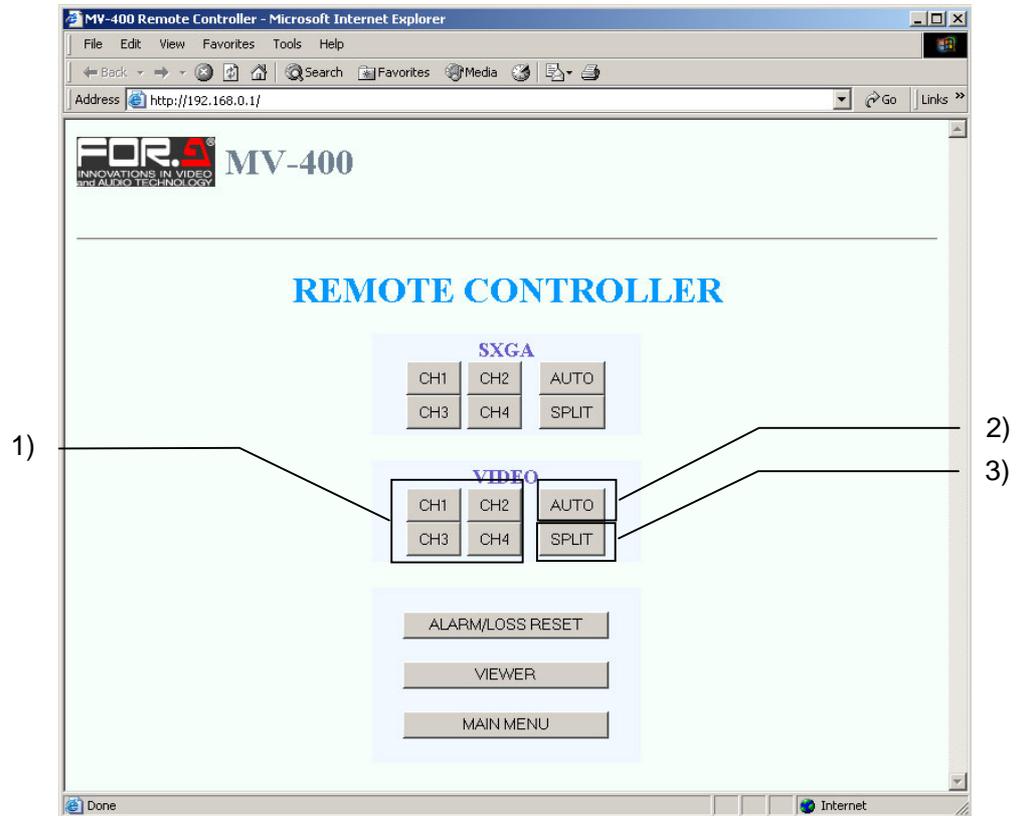
### 3) SPLIT

Used to display the split screen that is currently selected for SXGA.



For details, refer to section 4-3. "SXGA Output Control" in the separate MV-400 Operation Manual.

## 2-5. Video Output Control



### 1) CH1 to CH4

Used to select a channel displayed on VIDEO OUT in full-screen.

### 2) AUTO

Used to start auto sequencing of the full-screen display.

### 3) SPLIT

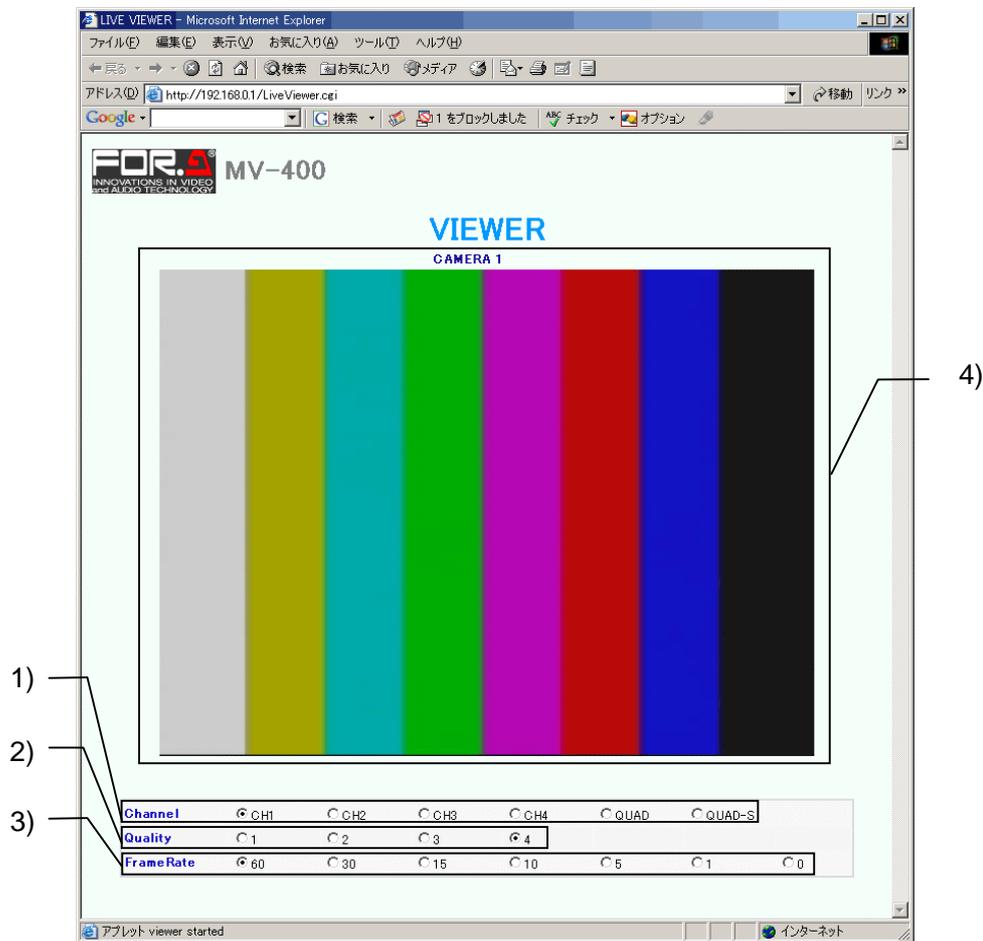
Used to display the split-screen that is currently selected for VIDEO OUT.



For details, refer to section 4-4. "Video Output Control" in the separate MV-400 Operation Manual.

## 2-6. Video Transfer (VIEWER)

Clicking the **VIEWER** button displays the [VIEWER] screen shown below.



### 1) Channel

Used to select the screen for video transfer from CH1 to CH4, QUAD and QUAD-S. QUAD is a quad screen for image size of 640 x 480 pixels. QUAD-S is a quad screen for image size of 1280 x 960 pixels. QUAD-S is available with the optional software. The frame rate at the QUAD-S is lower than other screen option due to larger transmitting data size.

### 2) Quality

Used to select the compression ratio of the JPEG image for video transfer from 1 to 4. A higher number represents a higher resolution.

### 3) Frame Rate

Used to set the frame rate for video transfer.

For NTSC, the available frame rates are 0FPS, 1FPS, 5FPS, 10FPS, 15FPS, 30FPS, and 60FPS.

For PAL, the available frame rates are 0FPS, 1FPS, 4FPS, 8FPS, 12FPS, 25FPS, and 50FPS. When 0FPS is selected, video transfer is stopped. If operation of the control screen becomes sluggish during video transfer, select 0FPS to temporarily stop video transfer.

#### NOTE

The frame rate that was set may not be adequate because of the transferred video images, JPEG compression ratio, specifications of the connected PC, network environment, and other factors. In this case, either change the JPEG compression ratio to reduce the data volume being transferred, or use the dedicated MV-400 LiveViewer software. If the frame rate setting is not adequate, the images may appear to shake up and down. If this happens, lower the frame rate setting.

#### 4) VIEWER Screen

Used to display images transferred from the MV-400.

#### NOTE

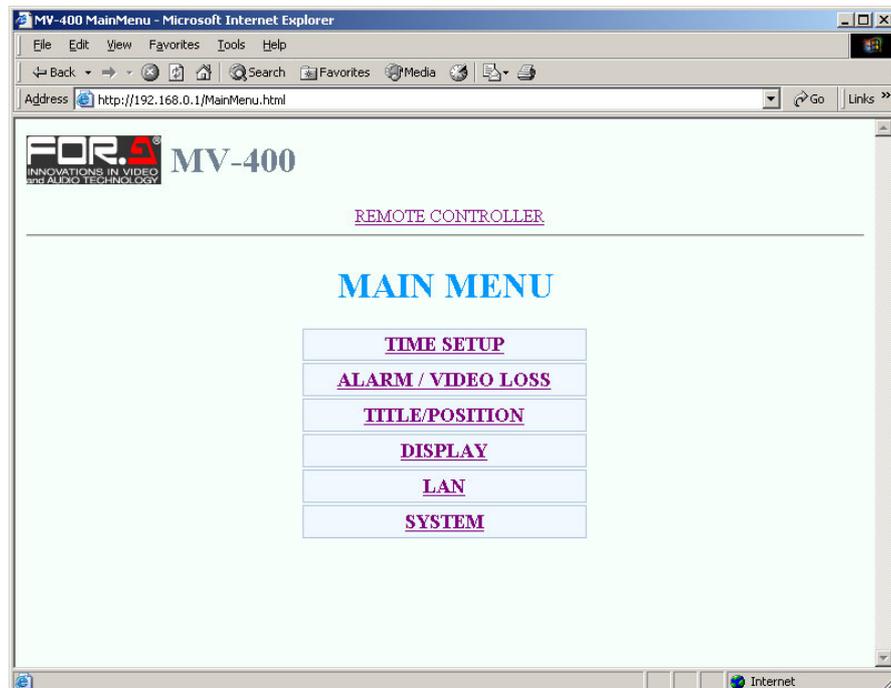
To use the video transfer function, set FUNCTION to NETWORK. If the optional software is installed the video transfer function is available regardless of the FUNCTION setting. For details, refer to section 5-7. "SYSTEM (System Settings)" in the separate MV-400 Operation Manual.

The camera title that includes Japanese kana may not be displayed properly in the [VIEWER] screen. The display on the [VIEWER] screen will not be correctly updated if the camera title, video transfer channel, JPEG image compression ratio, or frame rate is changed locally in the MV-400, or remotely by the RS-232C/LAN commands or in Internet Explorer while the [VIEWER] screen is open.

## 2-7. Menu Operations

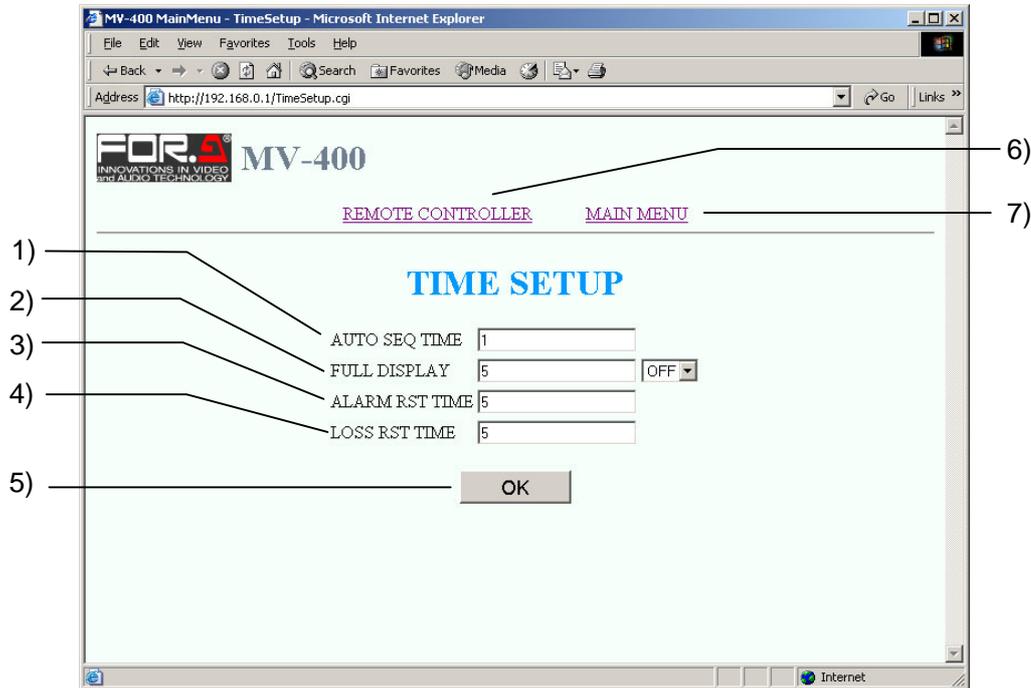
### 2-7-1. MAIN MENU

Clicking "MAIN MENU" in the [REMOTE CONTROLLER] screen opens the [MAIN MENU] screen shown below. Clicking a submenu opens the respective submenu screen.



## 2-7-2. TIME SETUP

Clicking "TIME SETUP" in the [MAIN MENU] screen opens the [TIME SETUP] screen.



### 1) AUTO SEQ TIME

Used to set screen switching time for full screen automatic sequencing operation. It can be set from 1 second to 60 seconds.

### 2) FULL DISPLAY

Used to set the time for automatic switching from fullscreen display mode to split-screen. It can be set from 1 second to 60 seconds. No automatic recovery operation is performed if it is set to OFF.

### 3) ALARM RST TIME

Used to set a time to reset alarm when ALARM MODE is set to TRIG. It can be set from 1 second to 60 seconds.

### 4) LOSS RST TIME

Used to set a time to reset video loss. It can be set from 1 second to 60 seconds.

### 5) OK Button

Used to confirm changes.

### 6) REMOTE CONTROLLER

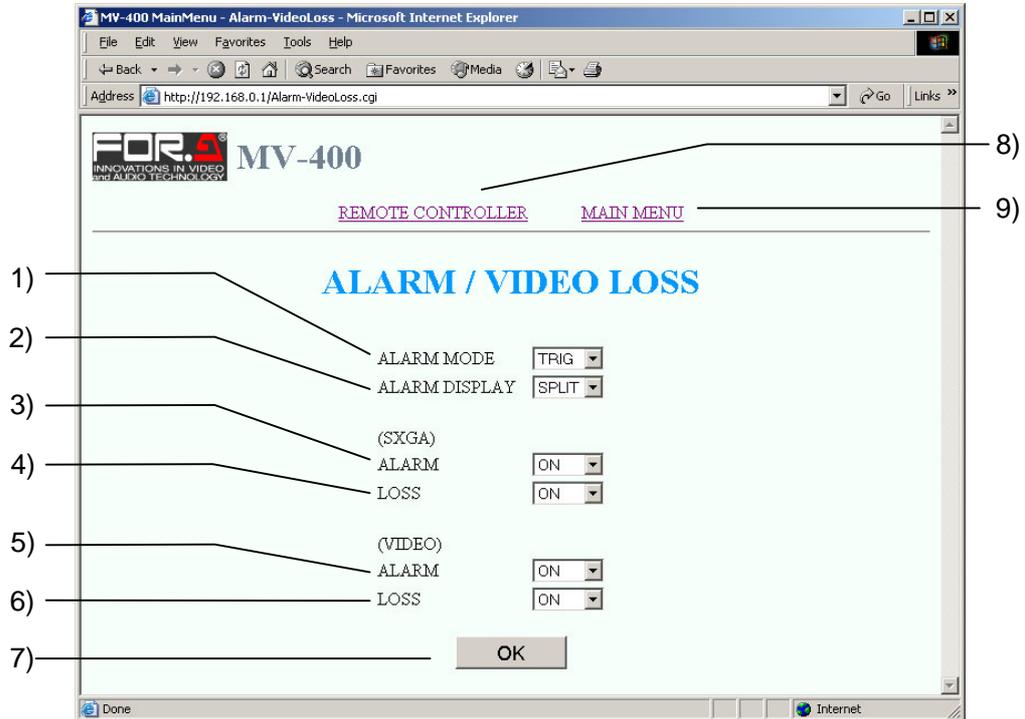
Used to return to the [REMOTE CONTROLLER] screen.

### 7) MAIN MENU

Used to return to the [MAIN MENU] screen.

## 2-7-3. ALARM/VIDEO LOSS

Clicking "ALARM/VIDEO LOSS" in the [MAIN MENU] screen opens the [ALARM/VIDEO LOSS] screen shown below.



### 1) ALARM MODE

Used to select alarm input mode from TRIG and LEVEL.

TRIG: The alarm state is activated when the alarm input signal changes from HIGH to LOW. The alarm is reset in the time that was set in ALARM RESET TIME.

LEVEL: The alarm state is activated while the alarm input signal is LOW.

### 2) ALARM DISPLAY

Used to select alarm display mode for an external alarm or video loss from FULL and SPLIT.

FULL: The channel where the alarm was detected is displayed in full-screen.

SPLIT: When an alarm is detected, all channels are displayed in quad screen.

### 3) ALARM (SXGA)

Used to enables (ON) or disables (OFF) alarm display operation for SXGA when an external alarm is detected.

### 4) LOSS (SXGA)

Used to enables (ON) or disables (OFF) alarm display operation for SXGA when a video loss is detected.

### 5) ALARM (VIDEO)

Used to enables (ON) or disables (OFF) alarm display operation for VIDEO OUT when an external alarm is detected.

### 6) LOSS (VIDEO)

Used to enables (ON) or disables (OFF) alarm display operation for VIDEO OUT when a video loss is detected.

### 7) OK Button

Used to confirm changes.

### 8) REMOTE CONTROLLER

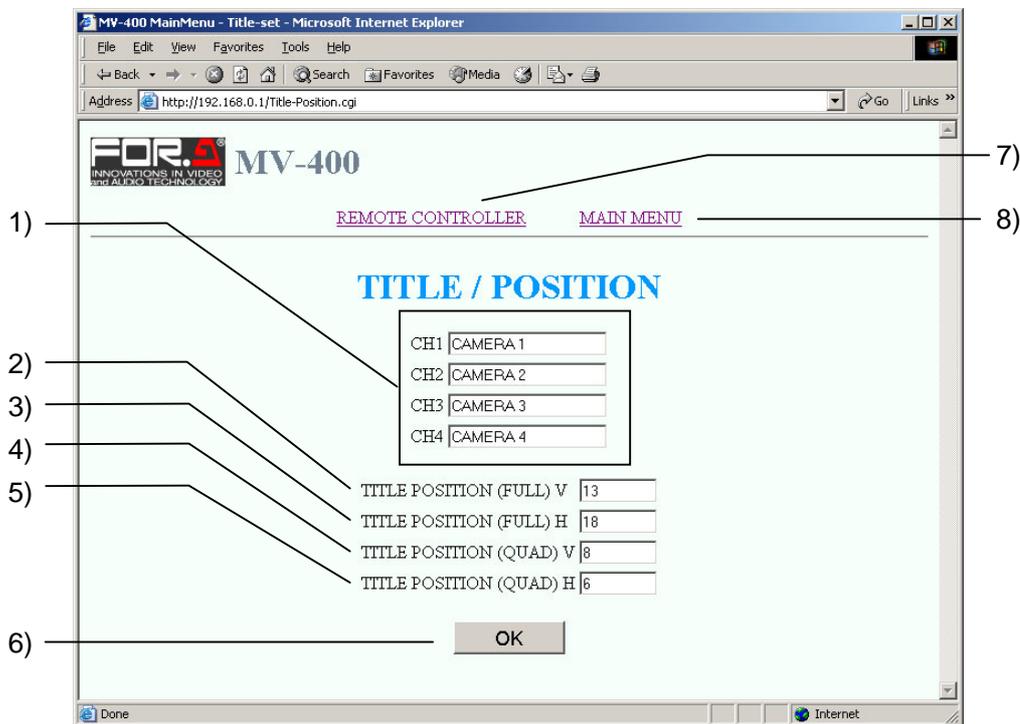
Used to return to the [REMOTE CONTROLLER] screen.

### 9) MAIN MENU

Used to return to the [MAIN MENU] screen.

## 2-7-4. TITLE/POSITION

Clicking "TITLE/POSITION" in the [MAIN MENU] screen opens the [TITLE/POSITION] screen shown below.



### 1) CH1 to CH4

Used to set a title for each channel (within 8 characters).



For details about the available characters, refer to section 5-4-1. "TITLE SET (Camera Title Settings)" in the separate MV-400 Operation Manual.

**2) TITLE POSITION (FULL) V**

Used to set the vertical position of the camera title display in full-screen mode for VIDEO OUT.

For NTSC, the position can be set from 00 to 13.

For PAL, the position can be set from 00 to 16.

**3) TITLE POSITION (FULL) H**

Used to set the horizontal position of the camera title display in full-screen mode for VIDEO OUT.

For NTSC and PAL, the position can be set from 00 to 36.

**4) TITLE POSITION (QUAD) V**

Used to set the vertical position of the camera title display in quad screen mode for VIDEO OUT.

For NTSC, the position can be set from 00 to 08.

For PAL, the position can be set from 00 to 10.

**5) TITLE POSITION (QUAD) H**

Used to set the horizontal position of the camera title display in quad screen mode for VIDEO OUT.

For NTSC and PAL, the position can be set from 00 to 13.

**6) OK Button**

Used to confirm changes.

**7) REMOTE CONTROLLER**

Used to return to the [REMOTE CONTROLLER] screen.

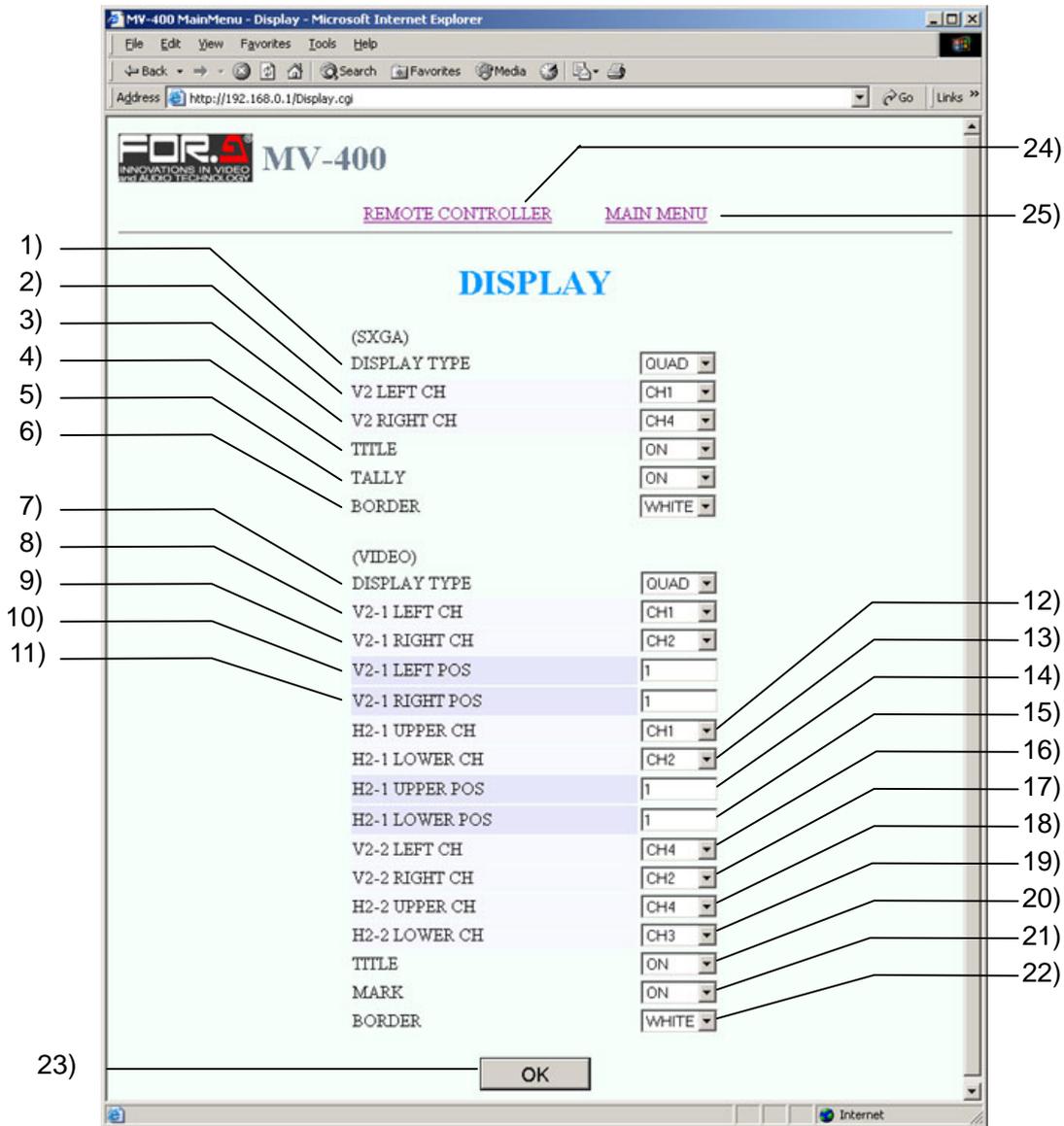
**8) MAIN MENU**

Used to return to the [MAIN MENU] screen.

NOTE
The camera title that includes Japanese kana may not be displayed properly in the [VIEWER] screen.

## 2-7-5. DISPLAY

Clicking "DISPLAY" in the [MAIN MENU] screen opens the DISPLAY screen shown below.



### 1) DISPLAY TYPE (SXGA)

Used to select the type of split-screen display for SXGA output from QUAD and V2.

### 2) V2 LEFT CH (SXGA)

Used to select a channel displayed on the left side in V2 split-screen mode for SXGA output. The same channel as V2 RIGHT CH cannot be selected.

### 3) V2 RIGHT CH (SXGA)

Used to select a channel displayed on the right side in V2 split-screen mode for SXGA output. The same channel as V2 LEFT CH cannot be selected.

### 4) TITLE (SXGA)

Used to set the title display ON or OFF for SXGA output.

**5) TALLY (SXGA)**

Used to set the tally frame display On or OFF for the alarm and video loss channel for SXGA output.

**6) BORDER (SXGA)**

Used to select the border display for SXGA output from WHITE, BLACK, and OFF.

**7) DISPLAY TYPE (VIDEO)**

Used to select the type of split-screen display for VIDEO OUT from Quad, V2-1, H2-1, V2-2, and H2-2.

**8) V2-1 LEFT CH (VIDEO)**

Used to select a channel displayed on the left side in V2-1 split-screen mode for VIDEO OUT. The same channel as V2-1 RIGHT CH cannot be selected.

**9) V2-1 RIGHT CH (VIDEO)**

Used to select a channel displayed on the right side in V2-1 split-screen mode for VIDEO OUT. The same channel as V2-1 LEFT CH cannot be selected.

**10) V2-1 LEFT POS (VIDEO)**

Used to set the view area of the channel displayed on the left side in V2-1 split-screen mode for VIDEO OUT. The position can be set from 01 to 88.

**11) V2-1 RIGHT POS (VIDEO)**

Used to set the view area of the channel displayed on the right side in V2-1 split-screen mode for VIDEO OUT. The position can be set from 01 to 88.

**12) H2-1 UPPER CH (VIDEO)**

Used to select a channel displayed at the top in H2-1 split-screen mode for VIDEO OUT. The same channel as H2-1 LOWER CH cannot be selected.

**13) H2-1 LOWER CH (VIDEO)**

Used to select a channel displayed at the bottom in H2-1 split-screen mode for VIDEO OUT. The same channel as H2-1 UPPER CH cannot be selected.

**14) H2-1 UPPER POS (VIDEO)**

Used to set the view area of the channel displayed at the top in H2-1 split-screen mode for video output.

For NTSC, the position can be set from 01 to 60.

For PAL, the position can be set from 01 to 72.

**15) H2-1 LOWER POS (VIDEO)**

Used to set the view area of the channel displayed at the bottom in H2-1 split-screen mode for video output.

For NTSC, the position can be set from 01 to 60.

For PAL, the position can be set from 01 to 72.

**16) V2-2 LEFT CH (VIDEO)**

Used to select a channel displayed on the left side in V2-2 split-screen mode for VIDEO OUT. The same channel as V2-2 RIGHT CH cannot be selected.

**17) V2-2 RIGHT CH (VIDEO)**

Used to select a channel displayed on the right side in V2-2 split-screen mode for VIDEO OUT. The same channel as V2-2 LEFT CH cannot be selected.

**18) H2-2 UPPER CH (VIDEO)**

Used to select a channel displayed at the top in H2-2 split-screen mode for VIDEO OUT. The same channel as H2-2 LOWER CH cannot be selected.

**19) H2-2 LOWER CH (VIDEO)**

Used to select a channel displayed at the bottom in H2-2 split-screen mode for VIDEO OUT. The same channel as H2-2 UPPER CH cannot be selected.

**20) TITLE (VIDEO)**

Used to set the camera title display ON or OFF for VIDEO OUT.

**21) MARK (VIDEO)**

Used to set the ALARM text and LOSS text display ON or OFF for the alarm and video loss channel for VIDEO OUT.

**22) BORDER (VIDEO)**

Used to select the border display for VIDEO OUT from WHITE, BLACK, and OFF.

**23) OK Button**

Used to confirm changes.

**24) REMOTE CONTROLLER**

Used to return to the [REMOTE CONTROLLER] screen.

**25) MAIN MENU**

Used to return to the [MAIN MENU] screen.

## 2-7-6. LAN

Clicking "LAN" in the [MAIN MENU] screen opens the LAN screen shown below.

1) IP ADDRESS 192.168.0.1

2) MASK LENGTH 24

3) MULTICAST ADDRESS 239.255.0.0

4) MULTICAST PORT 2100

5) GATEWAY 0.0.0.0

6) MAC ADDRESS 00-10-B1-02-20-01

7) OK

8) FOR.A MV-400

9) MAIN MENU

### 1) IP ADDRESS

Used to display the IP address of the MV-400.

### 2) MASK LENGTH

Used to display the setting for the subnet mask length of the MV-400.

### 3) MULTICAST ADDRESS

Used to set the multicast address of the MV-400 for multicast mode operation. Setting range is from "224.0.1.0" to "239.255.255.255".

\* This setting is not necessary when operating in unicast mode.

### 4) MULTICAST PORT

Used to set the multicast port of the MV-400 for multicast mode operation. Setting range is from "1024" to "65535".

\* This setting is not necessary when operating in unicast mode.

### 5) GATEWAY

Used to display the setting for the gateway of the MV-400.

### 6) MAC ADDRESS

Used to display the MAC address of the MV-400.

**7) OK button**

Used to confirm changes.

**8) REMOTE CONTROLLER**

Used to return to the [REMOTE CONTROLLER] screen.

**9) MAIN MENU**

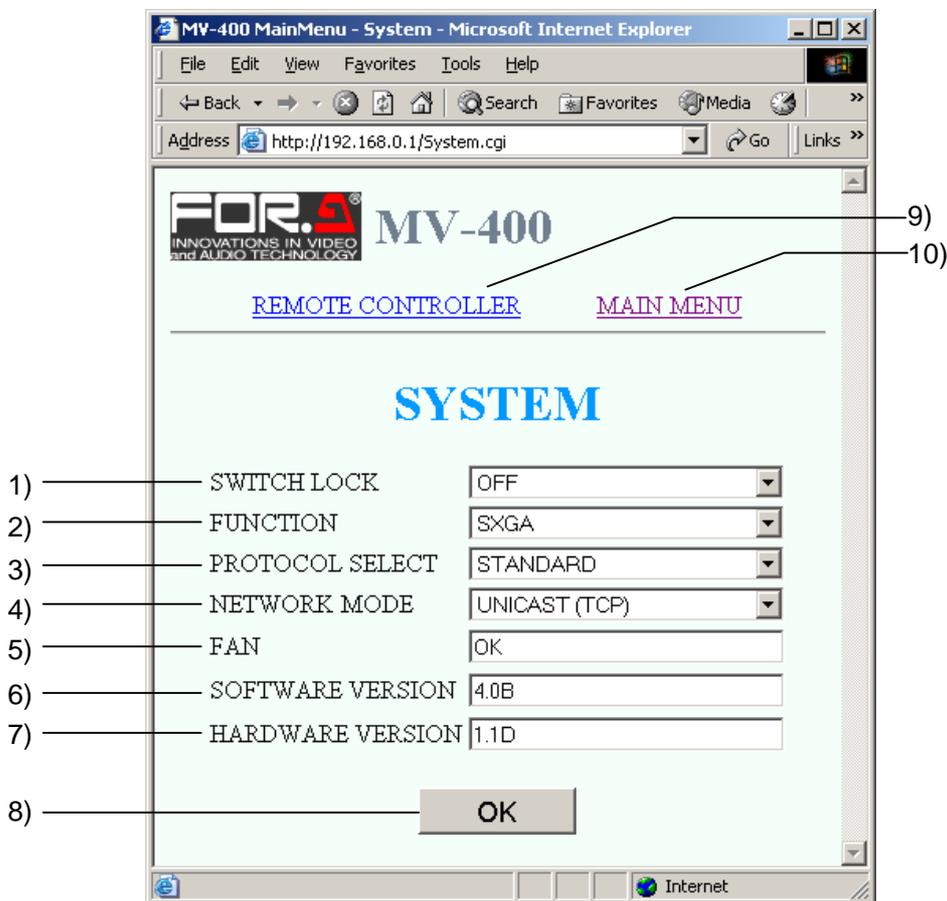
Used to return to the [MAIN MENU] screen.



The LAN settings except MULTICAST ADDRESS and MULTICAST PORT can only be made at the menu of the MV-400 locally. For details, refer to section 5-6. "LAN (LAN Settings)" in the separate MV-400 Operation Manual.

## 2-7-7. SYSTEM

Clicking "SYSTEM" in the [MAIN MENU] screen opens the SYSTEM screen shown below.



**1) SWITCH LOCK**

Used to lock the front panel operation on the MV-400.

OFF: Operation lock is not activated. All buttons are enabled.

ON: Operation lock is activated. All buttons are disabled except for the **MENU** button.

**2) FUNCTION**

Used to select operation mode.

**SXGA:** The SXGA output function is enabled. If the optional software is installed, the video transfer function is also enabled. In this case, the frame rates (refresh interval) of video transfer over LAN interface is reduced, because the priority is on the SXGA output.

**NETWORK:** The video transfer function over the LAN interface is enabled.

**NETWORK(+ALARM):** The video data stream includes alarm and video loss information.

**SXGA & NETWORK:** Available with the optional software. Concurrent use of the SXGA output function and the video transfer function over the LAN interface is enabled. However, concurrent use will result in lower frame rate compare to the use of either one of functions.

**SXGA & NETWORK(+ALARM):** Available with the optional software. Concurrent use of the SXGA output function and the video transfer function over the LAN interface is enabled and the video data stream includes alarm and video loss information.

### **3) PROTOCOL SELECT**

Used to select communication protocol type for the RS-232C interface.

**STANDARD:** Operates using standard protocol.

**OLD:** Operates using old protocol. This is based on the communication protocol of the FOR-A MV-40F Multi Viewer.

### **4) NETWORK MODE**

Used to select network mode.

**Unicast (TCP):** Operates in unicast mode.

**Multicast (UDP):** Operates in multicaste mode. This option is available with the optional software.

### **5) FAN**

Used to display the cooling fan status.

**OK:** The fan is operating without any problems.

**NG:** An error has occurred in the fan.

### **6) SOFTWARE VERSION**

Used to display the internal software version.

### **7) HARDWARE VERSION**

Used to display the internal hardware version.

### **8) OK Button**

Used to confirm changes.

### **9) REMOTE CONTROLLER**

Used to return to the [REMOTE CONTROLLER] screen.

### **10) MAIN MENU**

Used to return to the [MAIN MENU] screen.

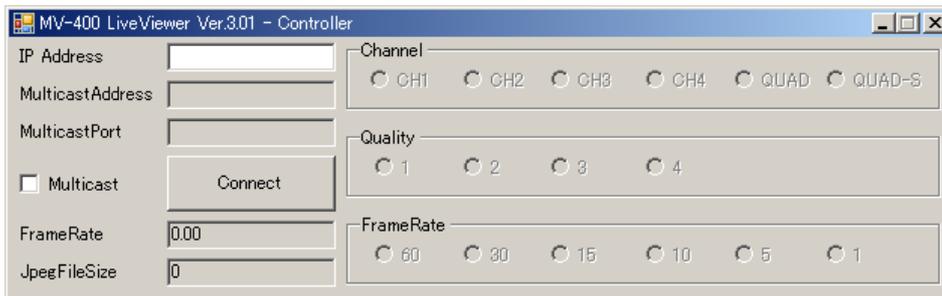
## 3. Video Transfer Using MV-400 LiveViewer

### 3-1. Starting and Connecting MV-400 LiveViewer

Double-click the "MV400LiveViewer.exe" file that was copied from the CD-ROM to start the software.

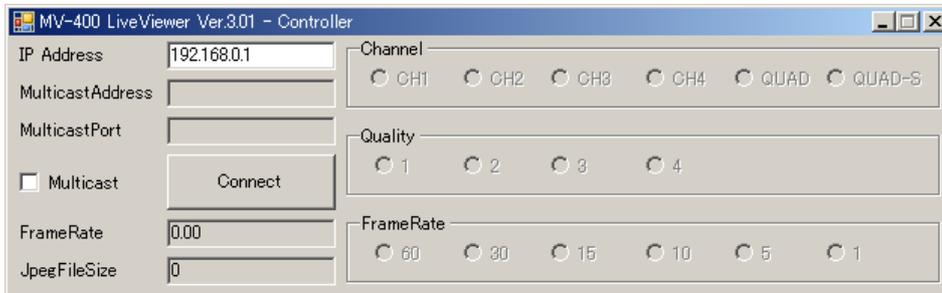


The Controller screen shown below is displayed.



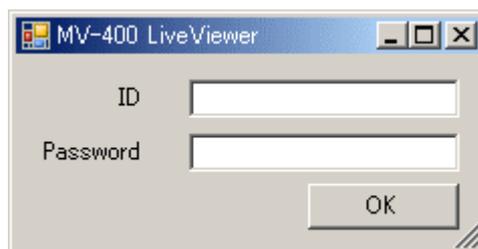
1) When connecting MV-400 in unicast mode:

Enter the IP address of the MV-400 to connect to in the address box, and then click the **Connect** button.

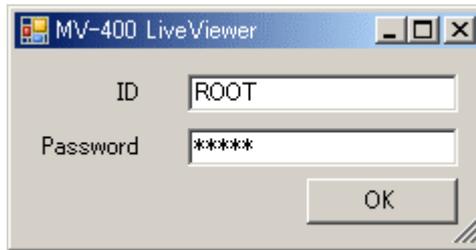


If the ID is set, the authentication window shown below is displayed.

\* If the ID is not set, the [VIEWER] screen is displayed.



Enter the user name and password, and then click **OK**. The [VIEWER] screen is displayed when the entered user name and password match the stored data.



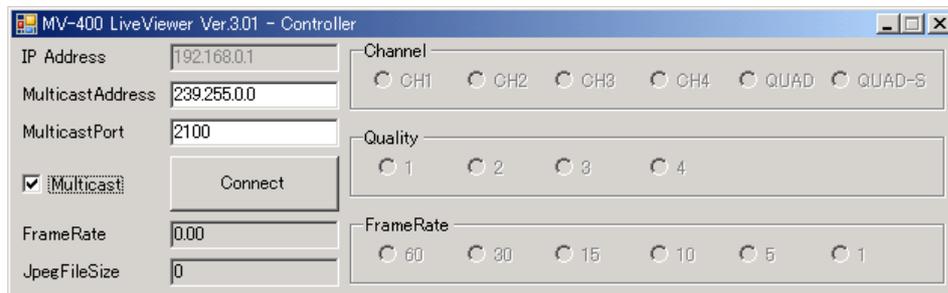
**NOTE**

To use the video transfer function, set FUNCTION to NETWORK. If the optional software is installed the video transfer function is available regardless of the FUNCTION setting. For details, refer to section 5-7. "SYSTEM (System Settings)" in the separate MV-400 Operation Manual.

When using the MV-400 LiveViewer, the [VIEWER] screen of Internet Explorer is not available.

Enter the IP address of the MV-400 that you want to connect to in the address box, and then click the **Connect** button to establish the connection and display the [VIEWER] screen.

- 2) When connecting MV-400 in multicast mode (with optional software):  
Click the "Multicast" check box and enter the multicast address and multicast port of the MV-400 to connect. Click the **Connect** button to establish the connection and display the [VIEWER] screen.



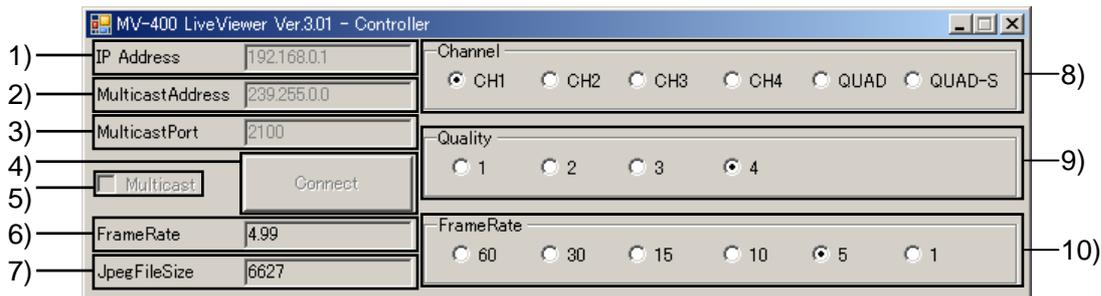
**NOTE**

When using the MV-400 LiveViewer, the Viewer screen of Internet Explorer is not available.

### 3-2. Shutting Off and Exiting MV-400 LiveViewer

To disconnect from the MV-400, click the **x** button at the top-right corner of the [VIEWER] screen. To exit MV-400 LiveViewer, click the **x** button at the top-right corner of the [Controller] screen.

## 3-3. Controller Screen of MV-400 LiveViewer



### 1) IP Address

Used to display the IP address of the MV-400 that is currently connected. To change the controlled MV-400, close the [VIEWER] screen, enter the required IP address, and then click the Connect button again.

### 2) MULTICAST ADDRESS

Used to display the multicast address of the MV-400 that is currently connected. To change the multicast address, close the [VIEWER] screen, enter the required multicast address, and then click the Connect button again.

### 3) MULTICAST PORT

Used to display the multicast port of the MV-400 that is currently connected. To change the multicast port, close the [VIEWER] screen, enter the required multicast port, and then click the Connect button again.

### 4) Connect

Used to establish a connection with the MV-400 specified by IP address and open the [VIEWER] screen.

### 5) MULTICAST

Used to switch between unicast mode and multicast mode.

Not checked: Connects MV-400 in unicast mode.

Checked: Connects MV-400 in multicast mode.

### 6) Frame Rate

Used to display the current actual frame rate.

### 7) Jpeg File Size

Used to display the file size of the image being transferred. The unit is bytes.

### 8) Channel

Used to select the screen for video transfer from CH1 to CH4, QUAD and QUAD-S. QUAD is a quad screen for image size of 640 x 480 pixels. QUAD-S is a quad screen for image size of 1280 x 960 pixels. QUAD-S is available with the optional software. The frame rate at the QUAD-S is lower than other screen option due to larger transmitting data size.

### 9) Quality

Used to select the JPEG compression for transfer from 1 to 4. A higher number indicates a higher resolution.

### 10) Frame Rate

Used to set the frame rate for transfer.

For NTSC, the available frame rates are 1FPS, 5FPS, 10FPS, 15FPS, 30FPS, and 60FPS.

For PAL, the available frame rates are 1FPS, 4FPS, 8FPS, 12FPS, 25FPS, and 50FPS.

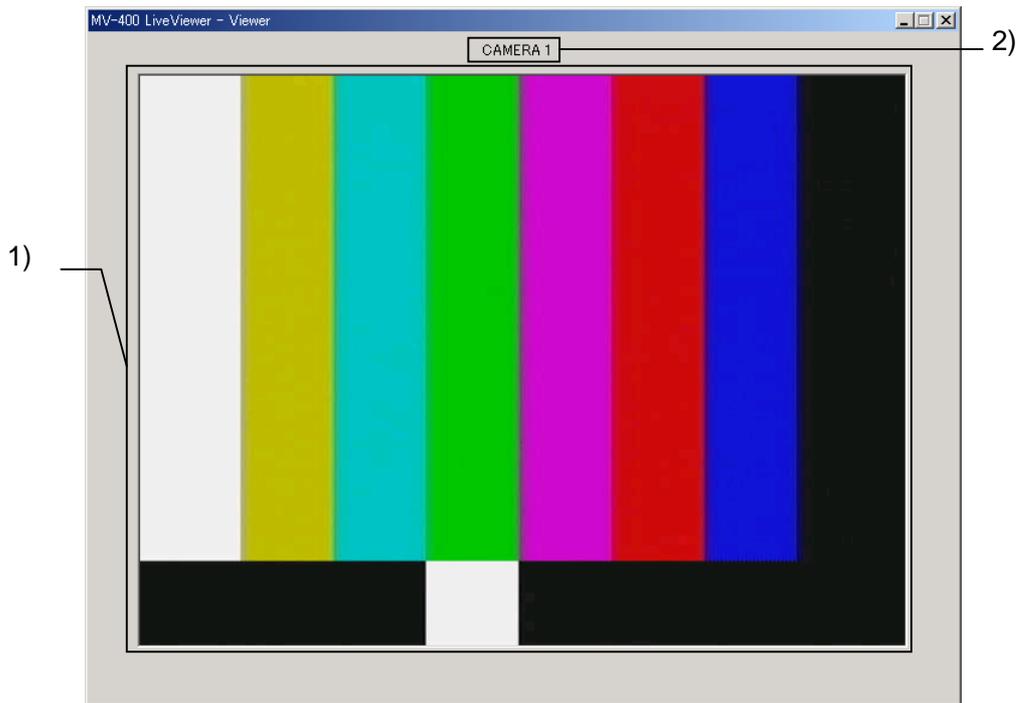
#### NOTE

The frame rate that was set may not be adequate because of the transferred video images, JPEG compression ratio, specifications of the connected PC, network environment, and other factors. In this case, change the JPEG compression ratio to reduce the data volume being transferred. If the frame rate setting is not adequate, the images may appear to shake up and down. If this happens, lower the frame rate setting.

The display on the [VIEWER] screen will not be correctly updated if the camera title, video transfer channel, JPEG image compression ratio, or frame rate is changed locally in the MV-400, or remotely by the RS-232C/LAN commands or in Internet Explorer while the [VIEWER] screen is open.

The video transfer channel, quality and frame rate cannot be changed when connecting the MV-400 in multicast mode. To change these settings, use the [VIEWER] screen of Internet Explorer.

## 3-4. Viewer Screen in MV-400 LiveViewer



### 1) Image Area

Used to display the image that is transferred from the MV-400.

### 2) TITLE

Used to display the title of the video.

#### NOTE

The display on the [VIEWER] screen will not be correctly updated if the camera title, video transfer channel, JPEG image compression ratio, or frame rate is changed locally in the MV-400, or remotely by the RS-232C/LAN commands or in Internet Explorer while the [VIEWER] screen is open.

## 4. Troubleshooting

Be sure to check the following points before requesting repairs.

### IMPORTANT

If the MV-400 still does not operate properly after checking all of the points below, try turning the power off and then on again. Also, try restarting the PC and the software. If this still does not fix the problem, please contact your FOR-A dealer.

Symptom	Check point	Remedy
The MV-400 remote control software does not start.	Does the PC meet the operating environment conditions?	Start with a PC that meets the operating environment conditions.
	Is other software currently running?	There may be a conflict with another software program. Close all other programs, and then start the MV-400 remote control software again.
The MV-400 does not operate over a network.	Is the MV-400 turned on?	Check that the MV-400 is turned on.
	Is the network connected correctly?	Check that the network wires and cables are connected properly.
		Check that the cable type is correct.
	Are the LAN adapter and other hardware operating properly?	Use the device manager or diagnostic program to check if the hardware is operating properly.
		Check that the drivers are installed correctly.
	Were the PC network settings made correctly?	Check that the TCP/IP protocol is installed and that the IP address and other settings are correct.
Were the MV-400 network settings made correctly?	From the MV-400 menu, check that the IP address and other settings are correct.	
Is the same IP address being used twice?	Check that no IP addresses are duplicated among all PCs and MV-400 units over the network.	
The video from MV-400 via network is not displayed.	Is the network mode set correctly?	Check that the MV-400 network operation mode matches the MV-400 LiveViewer mode setting.



## **Warning**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.



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