

OPERATION MANUAL

Remote Control Software MV-1600 Multi Viewer

Version 0.3 - Higher

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1. Setup

1-1. Overview

The Multi Viewer MV-1600 uses a network connection to enable remote control from a PC and video transmission 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 transmission can be performed in two ways: Using Internet Explorer or using the dedicated software MV-1600 LiveViewer. Although software must be installed to use MV-1600 LiveViewer, it allows a higher frame rate for video transmission compared to Internet Explorer.

1-2. Operating Environment

The MV-1600 remote control software requires the PC operating environment below.

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) * ¹
	Visual C++2005 (stored on supplied CD-ROM) * ¹
	Java2 Runtime Environment 5.0 (stored on supplied CD-ROM) * ²
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 (for VGA) Resolution of 1280x1024 pixels or higher (for SXGA) Capable of displaying full color (24 bit)
LAN adapter	At least one 10BASE-T/100BASE-TX compatible port
LAN cable	Enhanced category 5 or higher

*1: Not needed if not using MV-1600 LiveViewer.

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

1-3. About This Manual

The following conventions are used through out this manual:

- Text enclosed by a square (such as **MATT**) indicates **buttons** on the operation panel.
- Text enclosed by square brackets (such as **[SETUP]**) indicates the **menu**.
- Shaded text (such as **OFF**) indicates the setting **parameters** or **values** in the menu.

1-4. Software Installation

1-4-1. Using the Video transmission Function in Internet Explorer

To use the video transmission function (Viewer) in Internet Explorer, the Java2 Runtime Environment 5.0 must be installed beforehand. See section 1-4-3. "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) in Internet Explorer may not perform properly with other version of the Java2 Runtime Environment than 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.

1-4-2. Using MV-1600 LiveViewer

To use the video transmission function with MV-1600 LiveViewer, four software applications provided by Microsoft and the MV-1600 LiveViewer must be installed in the order below. The installation procedure is described starting from section 1-4-4. "Windows Installer 3.1" to section 1-4-7. "MV-1600 LiveViewer."

- (1) Windows Installer 3.1
- (2) Microsoft .NET Framework 2.0
- (3) Microsoft Visual C++2005 Redistributable
- (4) MV-1600 Live Viewer

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 (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 close all applications that are running before starting installation.

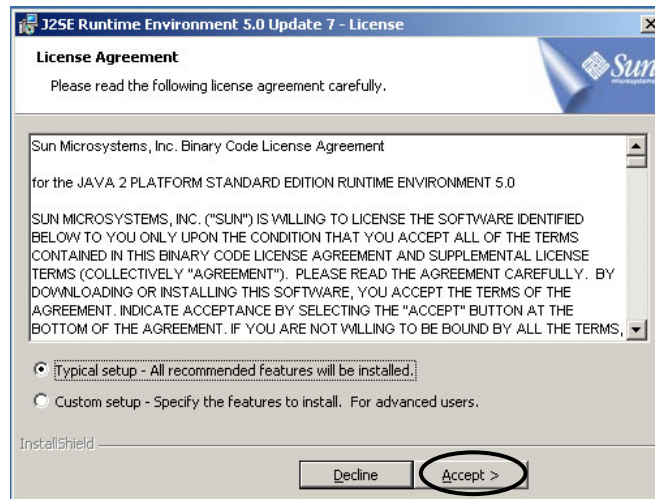
IMPORTANT
Be sure to perform all software installation by logging in with Administrator rights. The installation will not be performed properly under User rights.

1-4-3. Java2 Runtime Environment

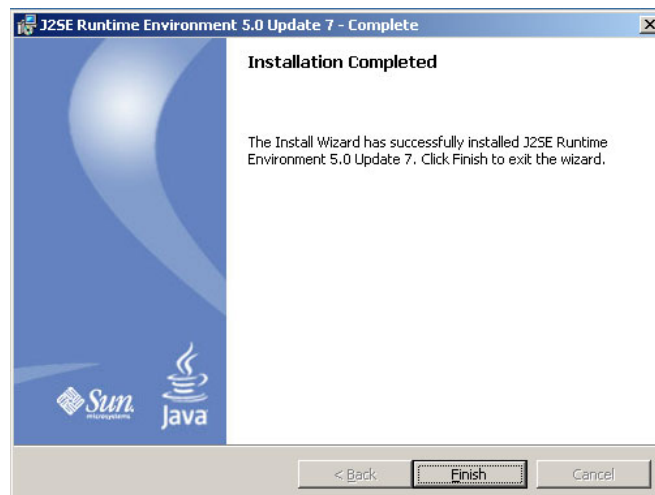
- 1) Load the supplied Installation CD-ROM into the PC, and open the CD-ROM drive. Run the file "jre-1_5_0_07-windows-i586-p.exe" to start the installation wizard.



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



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

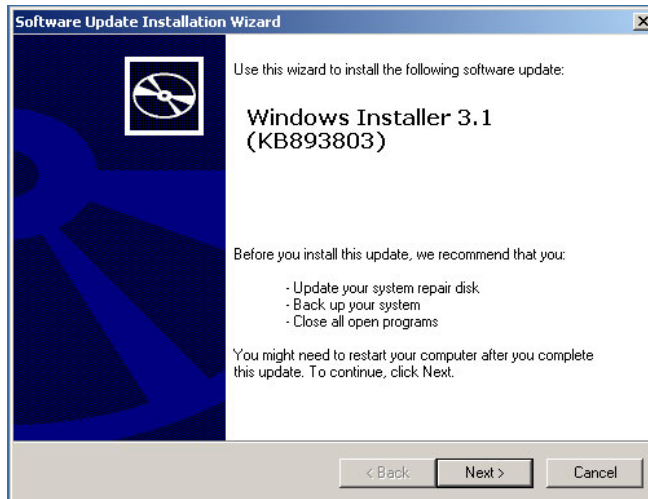


1-4-4. Windows Installer 3.1

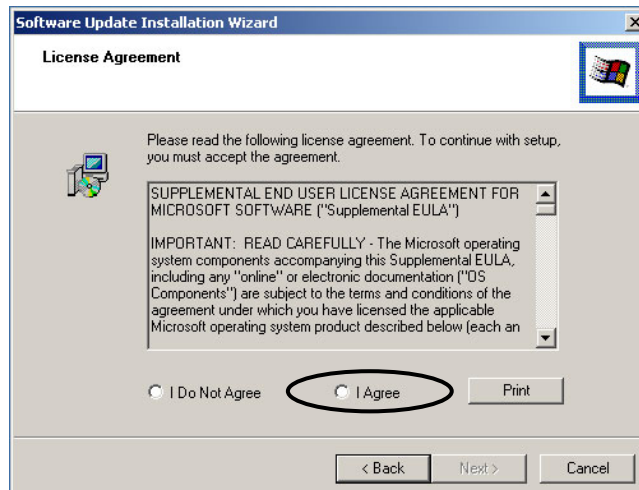
- 1) Load the supplied Installation CD-ROM into the PC, and open the CD-ROM drive. Run the file "WindowsInstaller-KB893803-v2-x86.exe" to start the installation wizard.



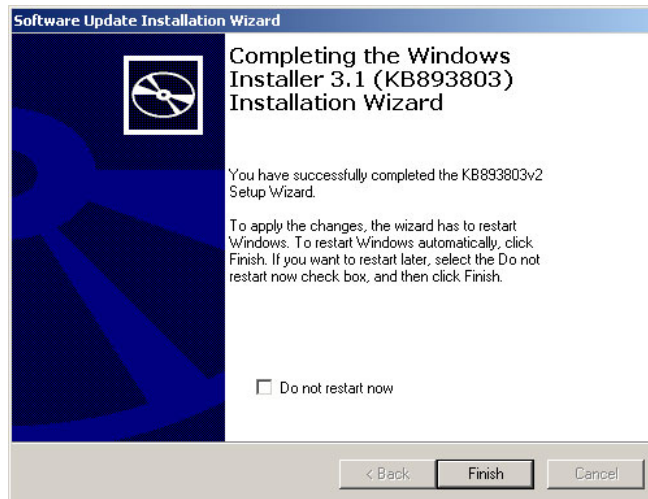
- 2) After the installation wizard is started, click **Next**.



- 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.

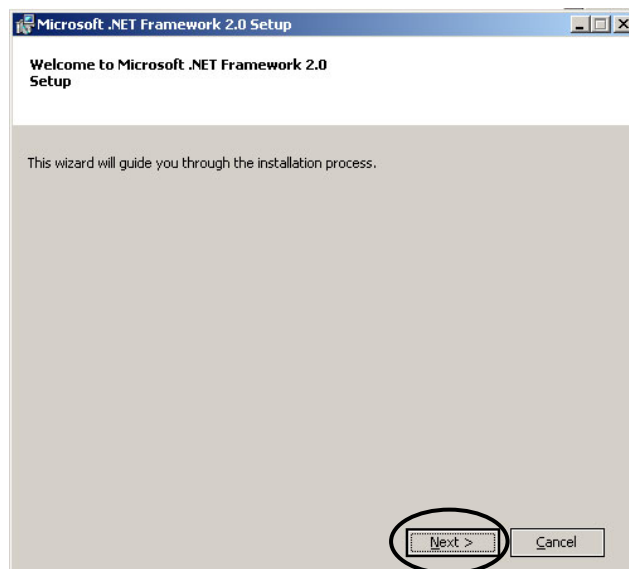


1-4-5. Microsoft .NET Framework 2.0

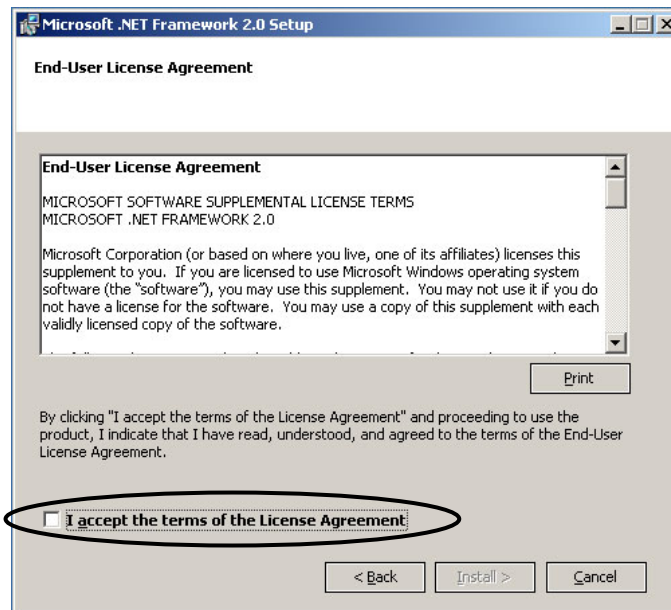
- 1) Run the file "dotnetfx.exe" on the CD-ROM to start the setup wizard.



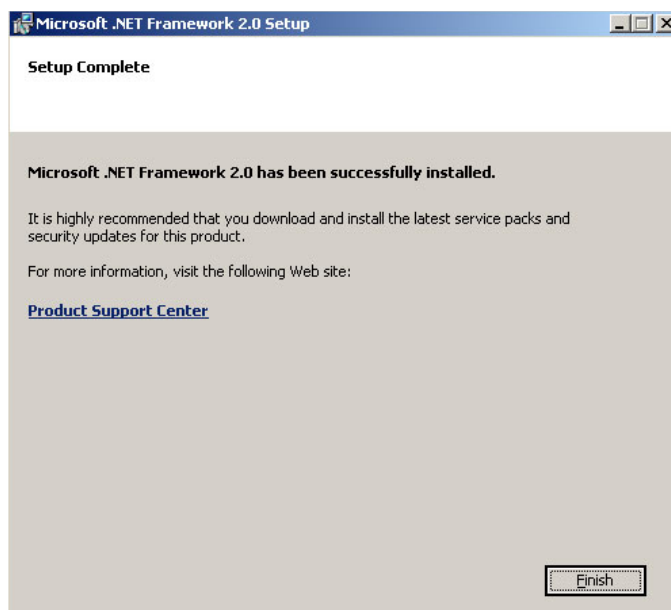
- 2) After the setup wizard is started, click **Next**.



- 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**.

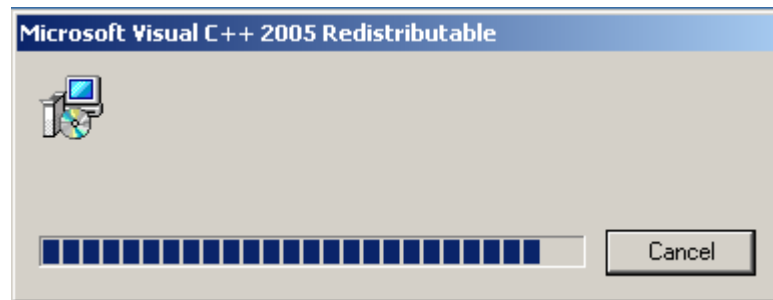


1-4-6. Microsoft Visual C++ 2005 Redistributable

1) Run the file "vcredist_x86.exe" on the CD-ROM.



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.



1-4-7. MV-1600 LiveViewer

Create a folder, and then copy the file "MV1600LiveViewer.exe" on the CD-ROM to the created folder.

1-5. Software Uninstallation

To uninstall the software, delete the file "MV1600LiveViewer.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.

1-6. Connections

When controlling the MV-1600 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-1600, or use a straight LAN cable to connect the MV-1600 and PC through a router or hub.

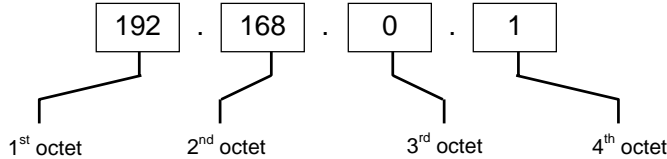


For details, see section 7. "LAN Interface" in the separate MV-1600 Operation Manual.

NOTE
In the unicast mode, only one PC can be connected to each MV-1600 unit.

1-7. 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-1600 in this range.</p> <div style="text-align: center;">  <p>The diagram shows the IP address 192.168.0.1. Each number is enclosed in a box. Below each box is a label: '1st octet' under 192, '2nd octet' under 168, '3rd octet' under 0, and '4th octet' under 1. Lines connect the boxes to their respective labels.</p> </div> <p>1st octet: 1 to 223 (except 127) 2nd octet: 0 to 255 3rd octet: 0 to 255 4th octet: 1 to 254</p> <p>* This is set at the LAN menu of the MV-1600. * 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-1600. * 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-1600. * 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). * The setting can be confirmed on the LAN menu of the MV-1600.</p>

NOTE

The LAN settings of the MV-1600 unit cannot be changed from the PC.

To change the LAN settings of the MV-1600 locally, refer to section 5-6. "LAN (LAN Settings)" in the separate MV-1600 Operation Manual.

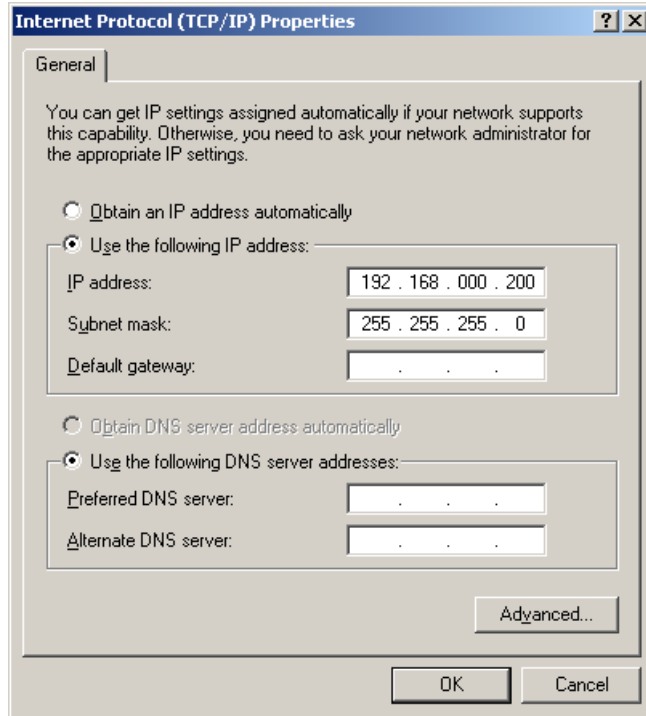
1-8. PC Network Settings

The PC network settings need to match the network settings of the MV-1600. The procedure for making the network settings at the PC varies depending on the OS, and so refer to the OS manual for details. This setting example shows the case of connecting to the MV-1600 with the default settings. The MV-1600 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-1600 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 **Start** 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 **Start** 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 **OK** button, and then close all setting windows [Internet Protocol (TCP/IP) Properties].

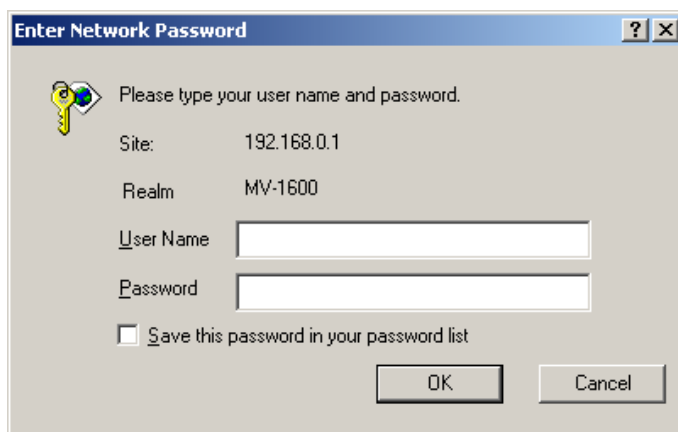
2. Remote Control in Internet Explorer

2-1. Starting and Connecting in Internet Explorer

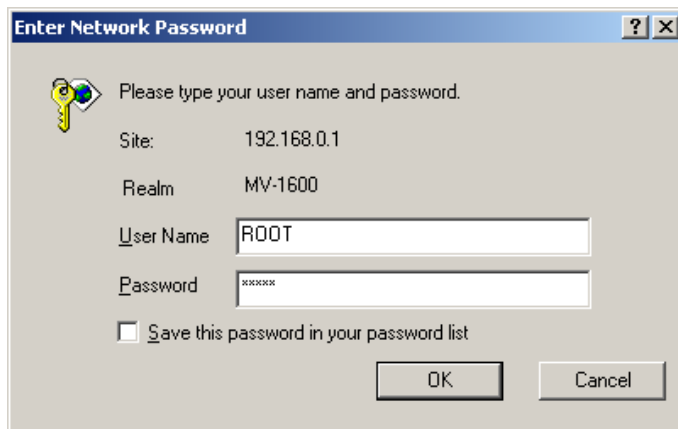
From the **Start** button on the taskbar, select "Programs" (All Programs in Windows XP), and then select "Internet Explorer" to start it.

- 1) Enter the IP address that has set at LAN menu in MV-1600 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

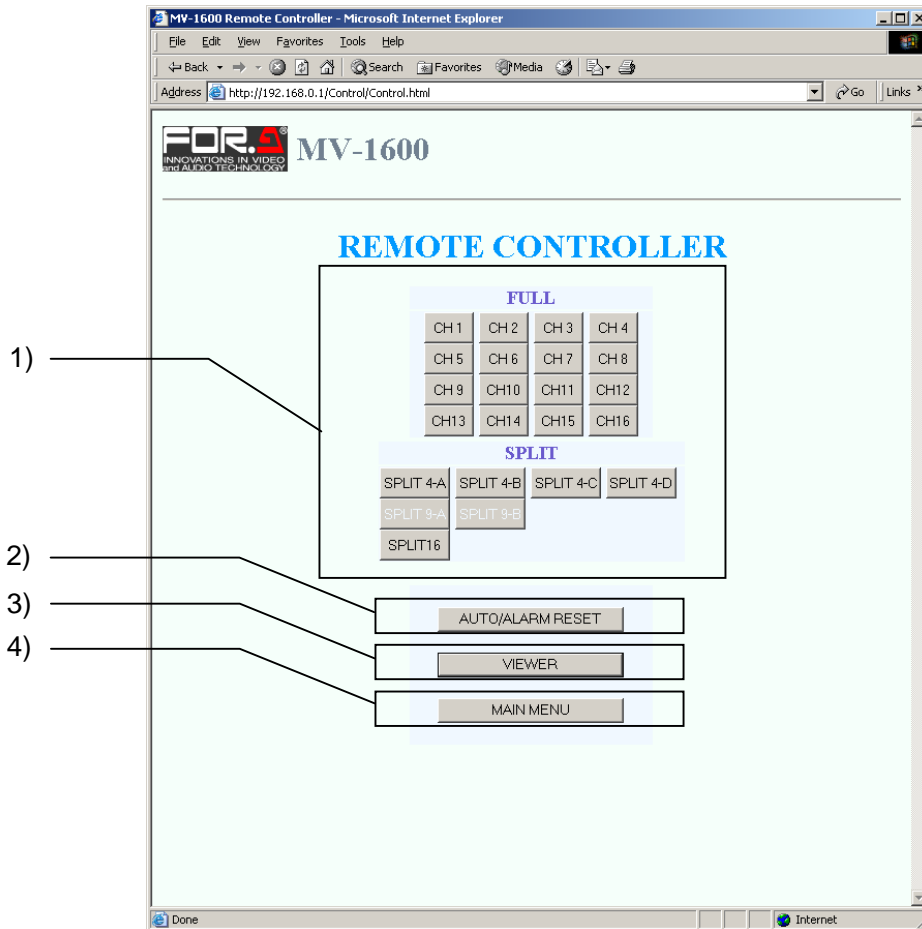
If you turn the MV-1600 power off and then on again during connecting PC with the MV-1600, the operation of the Internet Explorer may become unstable. Whenever the power of MV-1600 was turned off and on, restart the Internet Explorer.

2-2. Exiting Internet Explorer

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) Output screen control

Used to select output channels or screens for video transmission, SXGA output and VIDEO output1 and 2.

2) AUTO / ALARM RESET

Used to start automatic channel or page switching for full screen, quad screen or 9-split screen. Also used to reset the alarm during the alarm operation. However, external alarms can be reset only when the alarm input mode is set to TRIG.

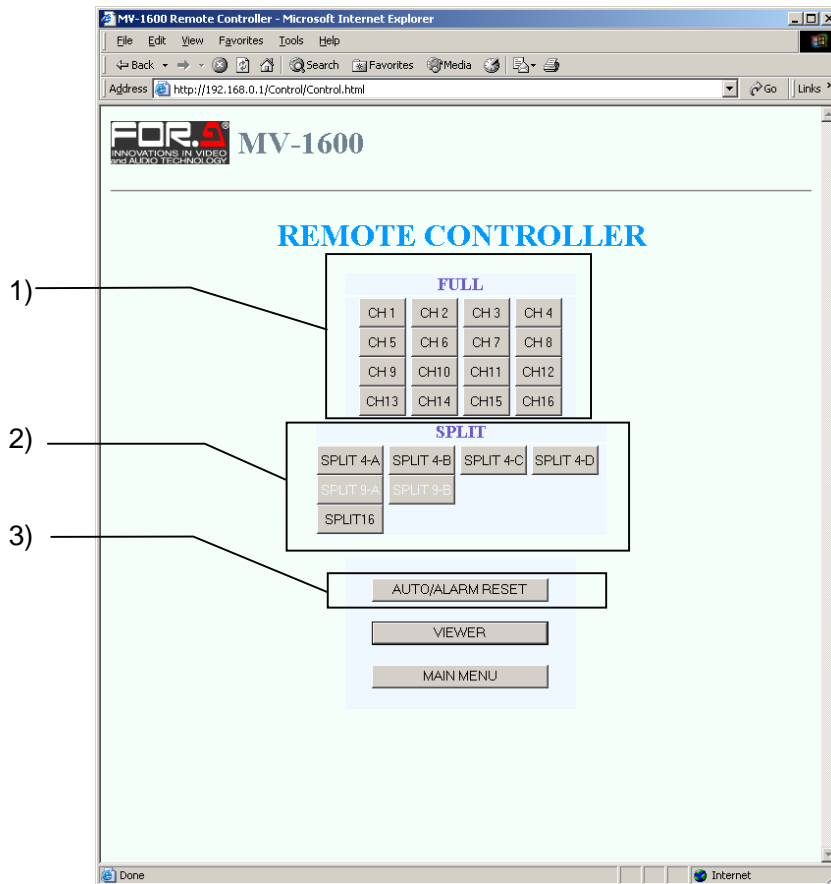
3) VIEWER

Used to display the LiveViewer screen.

4) MAIN MENU

Used to return to the [MAIN MENU] screen.

2-4. Video Output Control



1) CH1 to CH16

Used to select a channel to display in full screen for SXGA output, VIDEO output 1 and 2, and the video transmission over a LAN.

IMPORTANT

The displayed channels are the same for SXGA output, VIDEO output and the video transmission over a LAN.

2) SPLIT

Used to select a split screen to display for SXGA output, VIDEO output 1 and 2, and the video transmission over a LAN.

IMPORTANT

When SPLIT4 (A-D) or SPLIT 16 is selected, the same channels are displayed in SXGA output, VIDEO output and the video transmission over a LAN. However, when 9-split screen is selected, 9-split screen is displayed in SXGA output, but 16-split screen is displayed in VIDEO output and the video transmission over a LAN.

3) AUTO / ALARM RESET

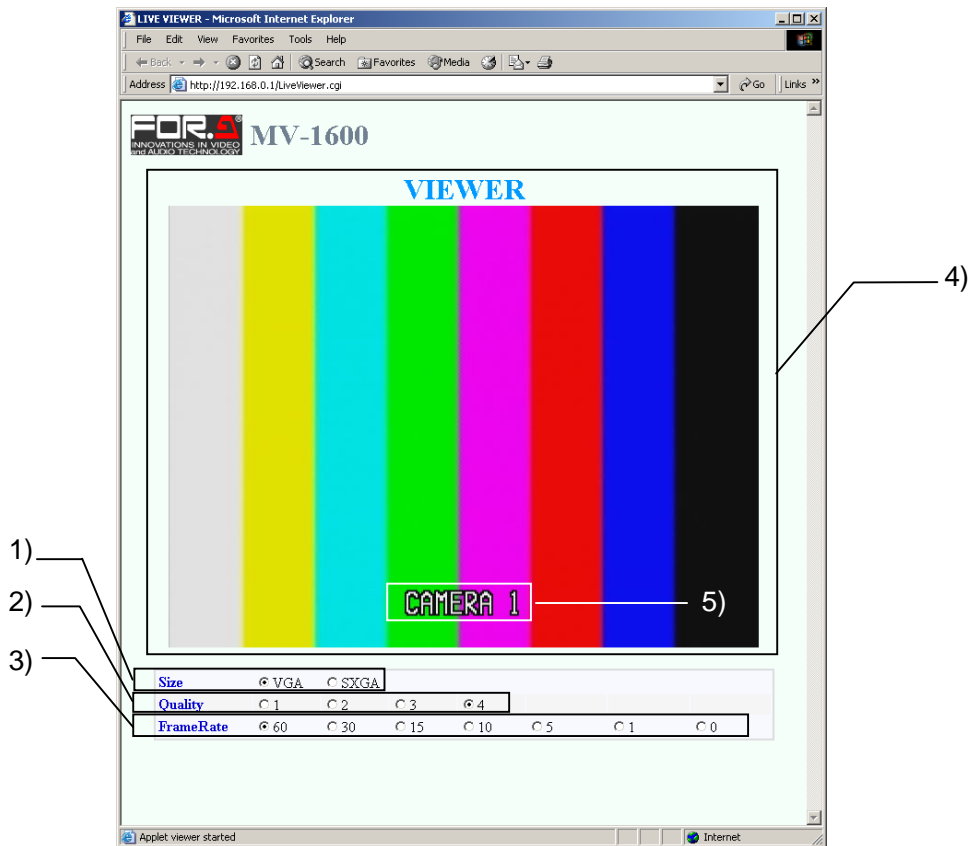
Used to start automatic channel or page switching for full screen, quad screen or 9-split screen.

NOTE

Refer to section 4-3. "Displaying Full Screen", 4-4. "Displaying Split Screens" and 4-6. "Auto Sequencing Mode" in the separate MV-1600 Operation Manual for details.

2-5. Video Transmission (VIEWER)

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



1) SIZE

Used to select the JPEG image size to transmit from VGA (640x480pixels) and SXGA (1280x960pixels). The frame rate for SXGA is lower than VGA because the data size of SXGA is larger.

2) QUALITY

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

3) FRAME RATE

Used to set the frame rate for video transmission.

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 transmission is stopped. If operation of the control screen becomes sluggish during video transmission, select 0FPS to temporarily stop video transmission.

NOTE

The sufficient frame rate may not be obtained because of the transmitted 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, or use the dedicated MV-1600 LiveViewer software. Inadequate frame rate may cause the images to shake up and down. If this happens, lower the frame rate setting.

4) VIEWER Screen

Used to display images transmitted from the MV-1600.

NOTE
The video transmission function is available regardless of the setting of the "FUNCTION" in the [SYSTEM] menu. For details, see section 5-7. "SYSTEM (System Settings)" in the separate MV-1600 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 transmission channel, JPEG image compression ratio, or frame rate is changed locally in the MV-1600, or remotely by the RS-232C/LAN commands or in Internet Explorer while the [VIEWER] screen is open.
To view the MENU of the main unit on the VIEWER screen, the screen must be set to the full screen display of Channel 1.

5) TITLE

Displays the title of the currently displayed video.

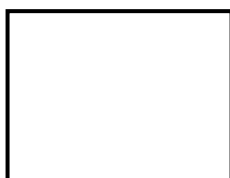
IMPORTANT
Title is not displayed when the "TITLE (SXGA)" is set to off in the [DISPLAY] menu. See section 2-6-5. "DISPLAY" for details.

6) ALARM/LOSS

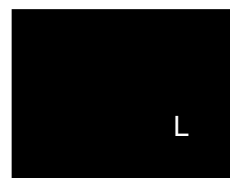
"A" is displayed for the channel that receives an alarm input.

"L" is displayed on the black screen for the channel that is affected by video loss.

<Alarm display>



<Video loss display>



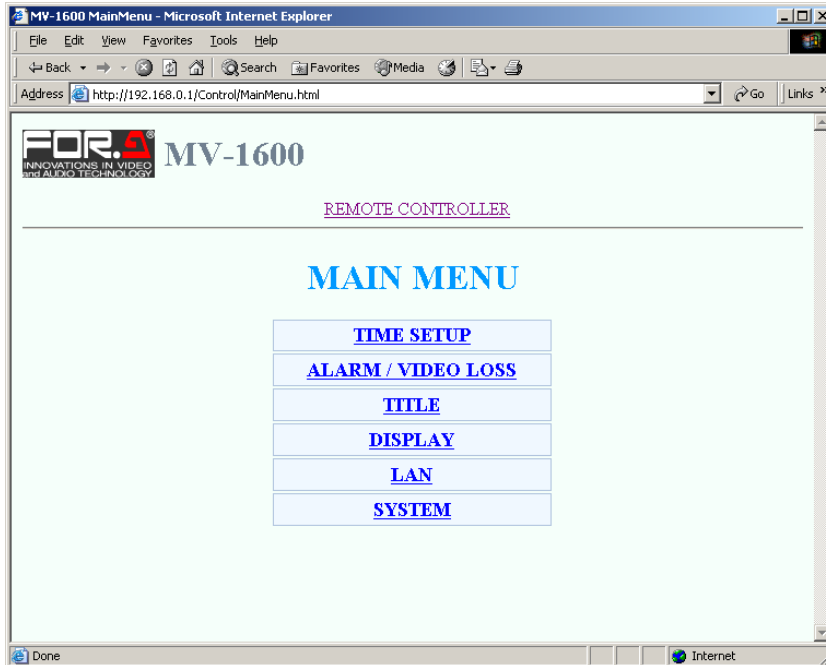
*Two alarm display modes are selectable for external alarm and video loss. See section 4-7. "External Alarm and Video Loss Display" in the separate MV-1600 operation manual for details.

IMPORTANT
"A" and "L" are not displayed when the "MARK (SXGA)" is set off in the [DISPLAY] menu. See section 2-6-5. "DISPLAY" for details.

2-6. Menu Operations

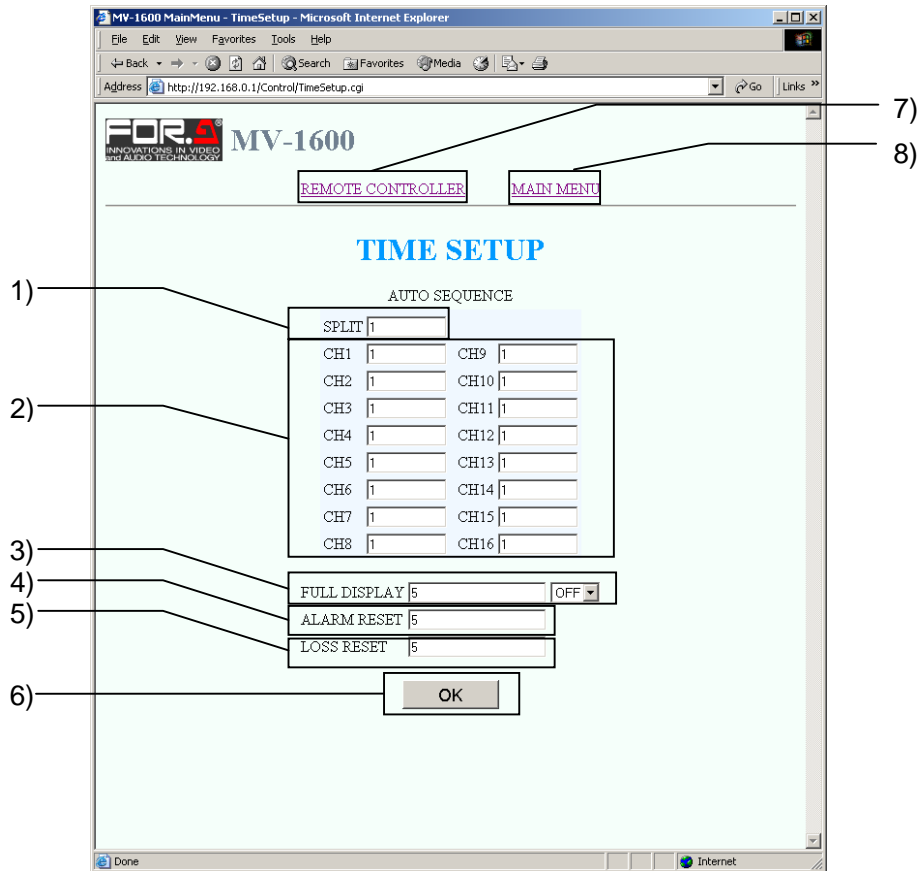
2-6-1. MAIN MENU

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



2-6-2. TIME SETUP

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



1) AUTO SEQUENCE (SPLIT)

Used to set auto sequencing interval for quad and 9-split screen display. Settings are adjustable from one to 30 seconds.

2) AUTO SEQUENCE (FULL)

Used to set auto sequencing interval for full screen display. Settings are adjustable from one to 30 seconds. Channels that are set to "0" seconds are automatically skipped.

3) FULL DISPLAY

Used to set the time for automatic switching from full screen display mode to split-screen. Settings are adjustable from one to 60 seconds. No automatic recovery operation is performed if it is set to OFF.

4) ALARM RESET

Used to set a time to reset alarm when alarm input mode is set to TRIG. Settings are adjustable from one to 60 seconds.

5) LOSS RESET

Used to set a time to reset video loss. Settings are adjustable from one to 60 seconds.

6) OK Button

Used to confirm settings made on the [TIME SETUP] screen.

7) REMOTE CONTROLLER

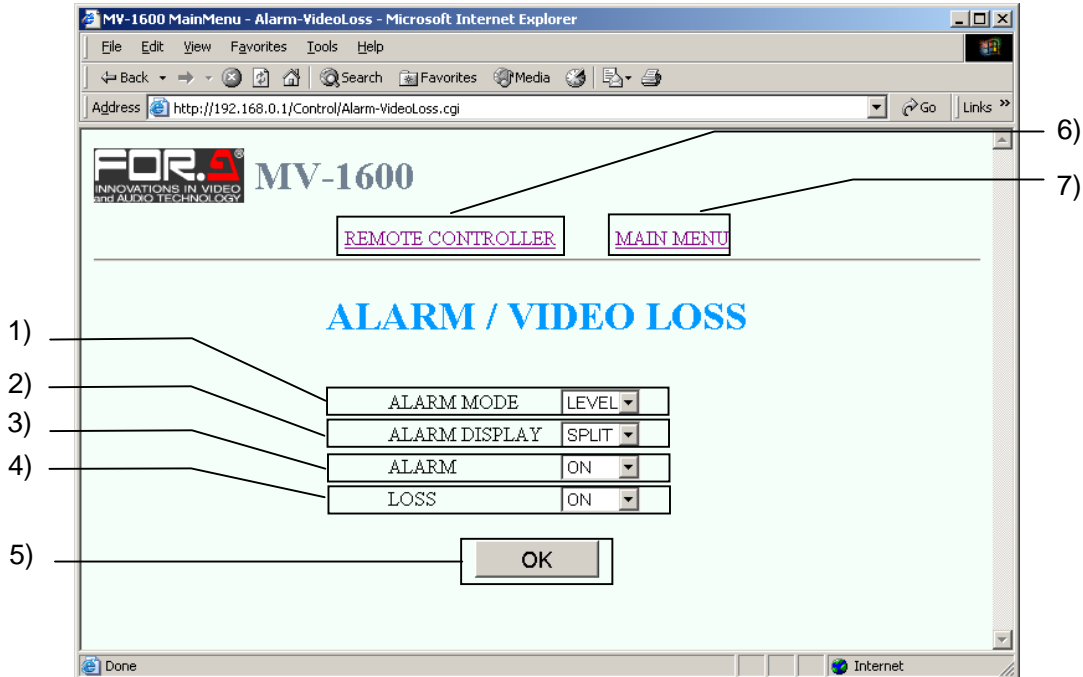
Used to return to the [REMOTE CONTROLLER] screen.

8) MAIN MENU

Used to return to the [MAIN MENU] screen.

2-6-3. ALARM/VIDEO LOSS

Clicking the "ALARM/VIDEO LOSS" on 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].

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 an alarm was detected is displayed in full-screen.

SPLIT: When an alarm is detected, all channels are displayed in 16-split screen.

3) ALARM

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

4) LOSS

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

5) OK Button

Used to confirm settings made on the [ALARM/VIDEO LOSS] screen.

6) REMOTE CONTROLLER

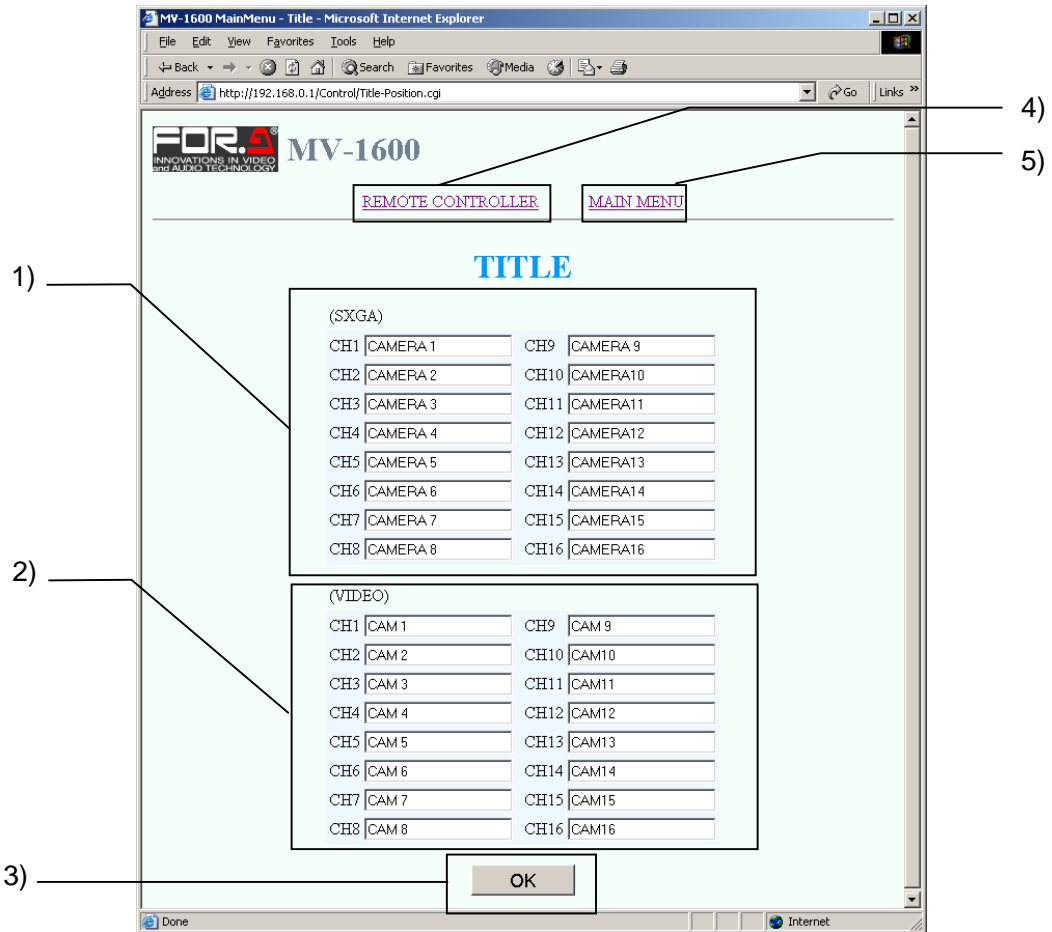
Used to return to the [REMOTE CONTROLLER] screen.

7) MAIN MENU

Used to return to the [MAIN MENU] screen.

2-6-4. TITLE

Clicking the "TITLE " on the [MAIN MENU] screen opens the [TITLE] screen shown below.



1) CH1 to CH16 (SXGA)

Used to set camera titles of up to 8 characters long for each channel of the video transmission over a LAN and SXGA output.



For details on the available characters, see section 5-4-1. "TITLE SET (SXGA·VIDEO)" in the separate MV-1600 Operation Manual.

2) CH1 to CH16 (VIDEO)

Used to set camera titles of up to 6 characters long for each channel of VIDEO output.



For details on the available characters, see section 5-4-1. "TITLE SET (SXGA·VIDEO)" in the separate MV-1600 Operation Manual.

3) OK Button

Used to confirm settings made on the [TITLE] screen.

4) REMOTE CONTROLLER

Used to return to the [REMOTE CONTROLLER] screen.

5) MAIN MENU

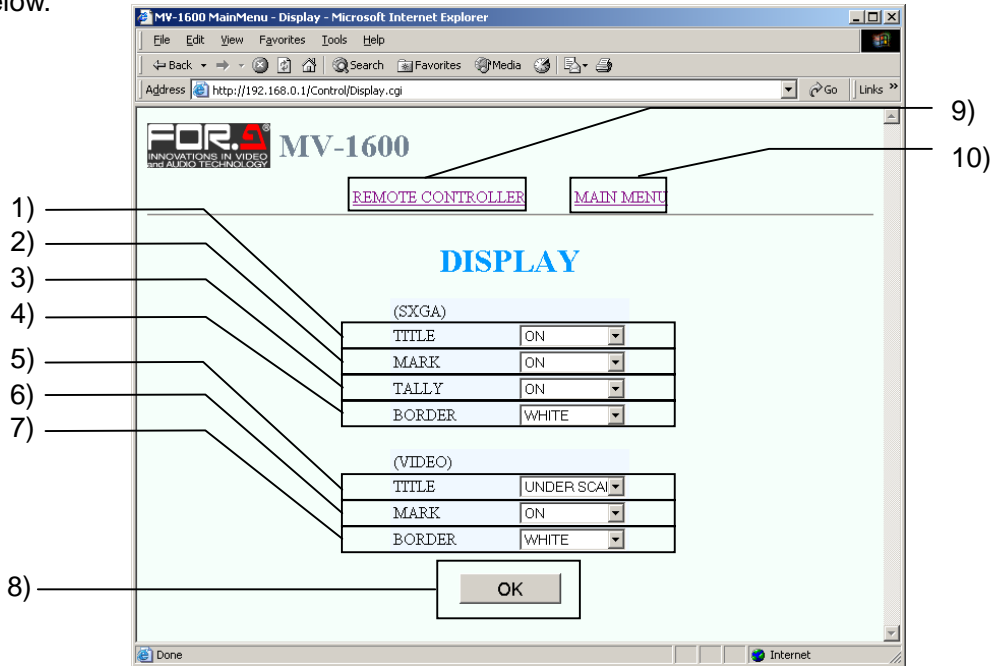
Used to return to the [MAIN MENU] screen.

NOTE

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

2-6-5. DISPLAY

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



1) TITLE (SXGA)

Used to set the camera title display on or off for video transmission over a LAN and SXGA output.

2) MARK (SXGA)

Used to set the "A" and "L" display on or off for the alarm and video loss of video transmission over a LAN and SXGA output.

3) TALLY (SXGA)

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

4) BORDER (SXGA)

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

5) TITLE (VIDEO)

Used to select the camera title display mode for VIDEO OUT.

UNDER SCAN: suitable for the monitor which has the under scan function.

OVER SCAN: suitable for the standard monitor.

OFF : no title display

6) MARK (VIDEO)

Used to set the "A" and "L" display on or off for the alarm and video loss of VIDEO output

7) BORDER (VIDEO)

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

8) OK button

Used to confirm the settings made on [DISPLAY] screen.

9) REMOTE CONTROLLER

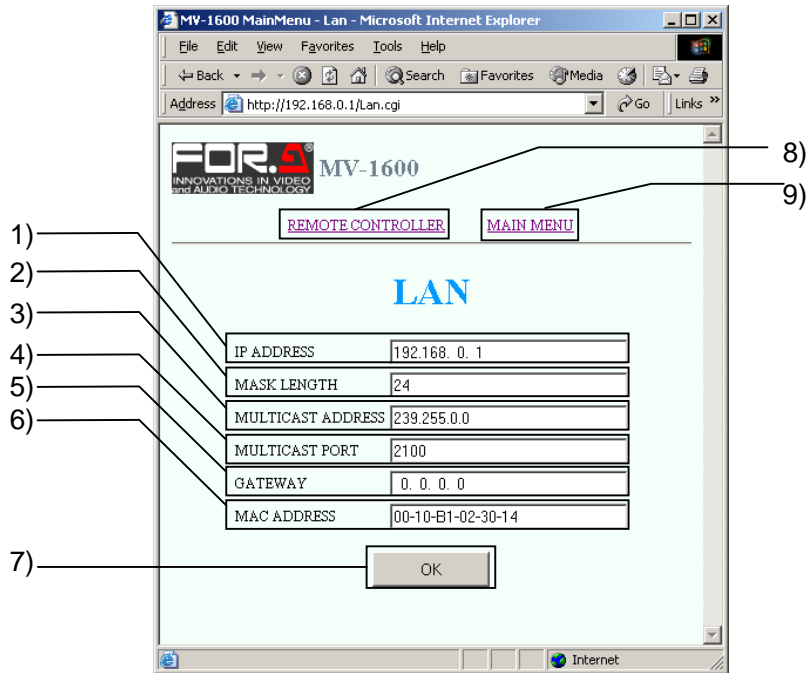
Used to return to the [REMOTE CONTROLLER] screen.

10) MAIN MENU

Used to return to the [MAIN MENU] screen.

2-6-6. LAN

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



1) IP ADDRESS

Displays the IP address of the MV-1600.

2) MASK LENGTH

Displays the subnet mask length setting of the MV-1600.

3) MULTICAST ADDRESS

Used to set the multicast address of the MV-1600 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-1600 for multicast mode operation. Setting range is from "1024" to "65535".

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

5) GATEWAY

Displays the gateway setting of the MV-1600.

6) MAC ADDRESS

Displays the MAC address of the MV-1600.

7) OK button

Used to register the LAN settings.

8) REMOTE CONTROLLER

Used to return to the [REMOTE CONTROLLER] screen.

9) MAIN MENU

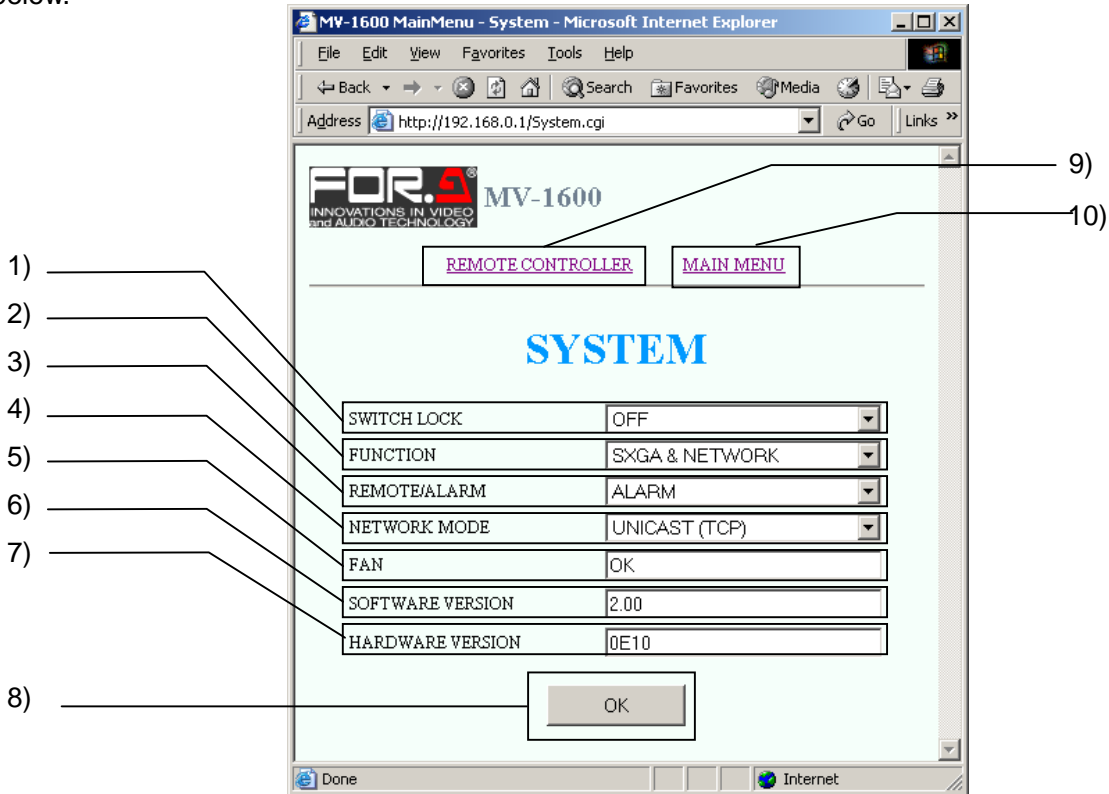
Used to return to the [MAIN MENU] screen.



The LAN settings except MULTICAST ADDRESS and MULTICAST PORT can only be made at the menu of the MV-1600 locally. For details, see section 5-6. "LAN (LAN Settings)" in the separate MV-1600 Operation Manual.

2-6-7. SYSTEM

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



1) SWITCH LOCK

Used to lock the front panel operation on the MV-1600.

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.

The video transfer function is also enabled. However, the frame rates (refresh interval) of video transfer over LAN interface is reduced, because the priority is on the SXGA output.

NETWORK: The video transmission over a LAN interface function is enabled.

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

SXGA & NETWORK: Both SXGA output and video transmission over a LAN interface functions are enabled. However, the frame rate (refresh rate) for each function may become slower than using either one alone.

SXGA & NETWORK (+ALARM) : 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) REMOTE / ALARM

Used to set the connector on the rear panel to use for REMOTE control or ALARM input.

REMOTE: Enables the remote control of the MV-1600

ALARM: Enables to receive external alarm inputs.

* CH1 to CH16 pins of REMOTE connector receive alarm signals.

4) NETWORK MODE

Used to select network mode.

Unicast (TCP): Sets to unicast mode.

Multicast (UDP): Sets to multicaste mode.

5) FAN

Displays the cooling fan status.

OK: The fan is operating without any problems.

NG: An error has occurred in the fan.

6) SOFTWARE VERSION

Displays the internal software version.

7) HARDWARE VERSION

Displays the internal hardware version.

8) OK button

Used to confirm the settings made on the [SYSTEM] screen.

9) REMOTE CONTROLLER

Used to return to the [REMOTE CONTROLLER] screen.

10) MAIN MENU

Used to return to the [MAIN MENU] screen.

IMPORTANT

This control software updates the status information of MV-1600 at the every startup and displays it.

If you wish to display the current status information, press button to update the information manually.

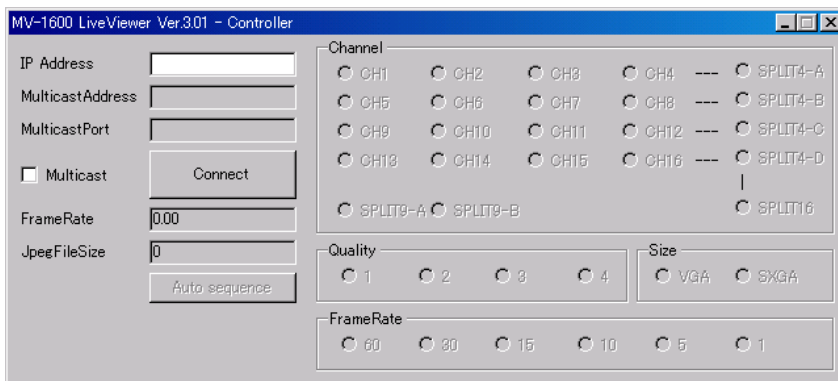
3. Video transmission by MV-1600 LiveViewer

3-1. Starting and Connecting MV-1600 LiveViewer

Double-click the "MV1600LiveViewer.exe" file that was copied from the CD-ROM to start the software.

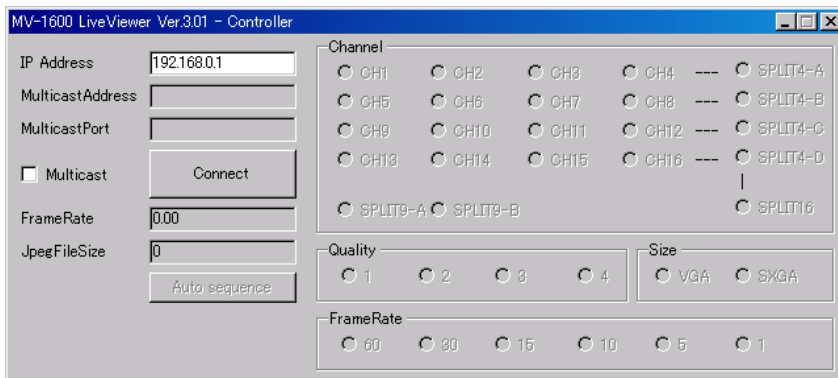


The Controller screen shown below is displayed.



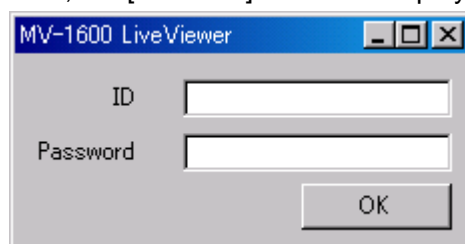
1) When connecting MV-1600 in unicast mode:

Enter the IP address of the MV-1600 to connect in the address box, and then click the **Connect** button.

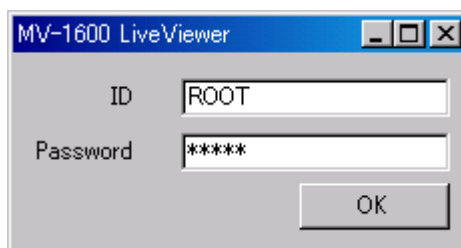


If the ID is set, the authentication window shown below is displayed.

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



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

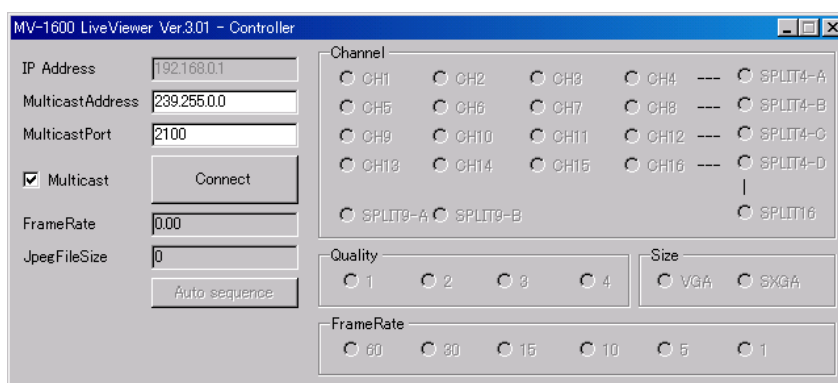


NOTE

The video transmission function is available regardless of the setting of "FUNCTION" in the [SYSTEM] menu. For details, see section 5-7. "SYSTEM (System Settings)" in the separate MV-1600 Operation Manual.

When using the MV-1600 LiveViewer, the Viewer function of Internet Explorer is not available.

- 2) When connecting MV-1600 in multicast mode (with optional software):
Click the "Multicast" check box and enter the multicast address and multicast port of the MV-1600 to connect. Click the **Connect** button to establish the connection and display the [VIEWER] screen.



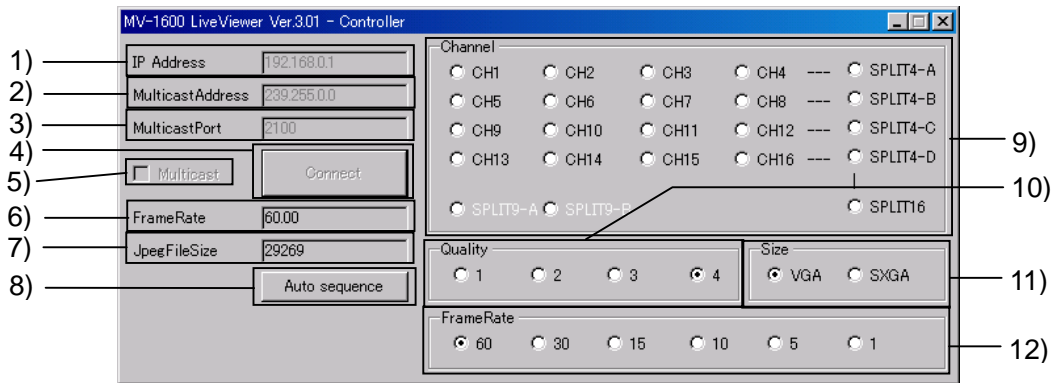
NOTE

When using the MV-1600 LiveViewer, the Viewer screen of Internet Explorer is not available.

3-2. Shutting Off and Exiting MV-1600 LiveViewer

To disconnect from the MV-1600, click the **x** button at the top-right corner of the [VIEWER] screen. To exit MV-1600 LiveViewer, click the **x** button at the top-right corner of the [Controller] screen.

3-3. Control Screen of MV-1600 LiveViewer



1) IP ADDRESS

Used to display or enter the IP address of the MV-1600 that is currently connected or is to be connected. To change the controlled MV-1600, close the [VIEWER] screen, enter the IP address, and then click the **Connect** button again.

2) MULTICAST ADDRESS

Used to display the multicast address of the MV-1600 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-1600 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-1600 specified by IP address and open the [VIEWER] screen.

5) MULTICAST

Used to switch between unicast mode and multicast mode.
 Not checked: Connects MV-1600 in unicast mode.
 Checked: Connects MV-1600 in multicast mode.

6) FRAME RATE

Displays the current actual frame rate.

7) JPEG FILE SIZE

Displays the file size of the image being transferred. The unit is bytes.

8) AUTO SEQUENCE

Used to start auto sequencing of full screen, quad screen or 9-split screen.

IMPORTANT

When 9-split screen auto sequencing is selected, the 16-split screen will be displayed on the video transmission over a LAN. See section 4-3. "Displaying Full Screen", 4-4. "Displaying Split Screens" and 4-6. "Auto Sequencing Mode" for details.

9) CHANNEL

Used to select a channel or a page to display for SXGA output, VIDEO output 1 and 2, and video transmission over a LAN interface.

IMPORTANT

The selections made here are shared by SXGA output, Video output and the video transmission over a LAN.

In quad and 16-split screen, the same channels are displayed in SXGA output, VIDEO output and the video transmission over a LAN interface. However, when 9-split screen is selected, 9-split screen is displayed in SXGA output, but 16-split screen is displayed in VIDEO output and the video transmission over a LAN interface.

10) QUALITY

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

11) SIZE

Used to select the JPEG image size to transmit from VGA (640x480pixels) and SXGA (1280x960pixels). The frame rate for SXGA is lower than VGA because the data size of SXGA is larger.

12) FRAME RATE

Used to set the frame rate for transmission.

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 sufficient frame rate may not be obtained because of the transmitted 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. Inadequate frame rate may cause the images to shake up and down. If this happens, lower the frame rate setting.

The display on the **MV-1600 Live Viewer screen** will not be correctly updated if the camera title, video transmission channel, JPEG image compression ratio, or frame rate is changed locally in the MV-1600, or remotely by the RS-232C/LAN commands or in Internet Explorer while the **MV-1600 Live Viewer screen** is open.

To view the [MENU] of the main unit on the MV-1600 Live Viewer screen, the screen must be set to the full screen display of Channel 1.

The video transfer channel, quality and frame rate cannot be changed when connecting the MV-1600 in multicast mode. To change these settings, use the [VIEWER] screen of Internet Explorer.

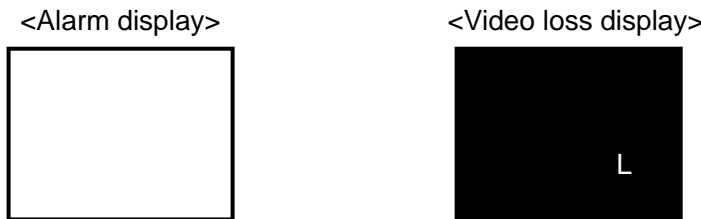
3-4. Viewer Screen in MV-1600 LiveViewer



- 1) **Image Area**
Displays the image that is transmitted from the MV-1600.
- 2) **TITLE**
Displays the title of the video.

NOTE
The display on the [VIEWER] screen will not be correctly updated if the camera title, video transmission channel, JPEG image compression ratio, or frame rate is changed locally in the MV-1600, or remotely by the RS-232C/LAN commands or in Internet Explorer while the [VIEWER] screen is open. The camera title is not displayed, if the TITLE(SXGA) is set off in the [DISPLAY] menu. See section 2-6-5. "DISPLAY" for details.

- 3) **ALARM/LOSS**
"A" is displayed for the channel that receives an alarm input.
"L" is displayed on the black screen for the channel that is affected by video loss.



*Two alarm display modes are available for external alarm and video loss. See section 4-7. "External Alarm and Video Loss Display" in the separate MV-1600 operation manual for details.

IMPORTANT
"A" and "L" are not displayed when the "MARK (SXGA)" is set off in the [DISPLAY] menu. See section 2-6-5. "DISPLAY" for details.

4. Troubleshooting

Be sure to check the following points before requesting repairs.

IMPORTANT
If the MV-1600 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-1600 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-1600 remote control software again.
The MV-1600 does not operate over a network.	Is the MV-1600 turned on?	Check that the MV-1600 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-1600 network settings made correctly?	From the MV-1600 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-1600 units over the network.	
The video from MV-1600 is not displayed via network.	Is the network mode set correctly?	Check that the MV-1600 network operation mode matches to that of the MV-1600 LiveViewer.

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.



FOR-A COMPANY LIMITED

Head Office : 3-8-1 Ebisu, Shibuya-ku, Tokyo 150-0013, Japan
Overseas Division Phone: +81 (0)3-3446-3936, Fax: +81 (0)3-3446-1470
Japan Branch Offices : Osaka/Fukuoka/Hiroshima/Nagoya/Sendai/Sapporo
R&D/Production : Sakura Center/Sapporo Center/Florida Center/Los Angeles Center

FOR-A America Corporate Office

11125 Knott Ave., Suite #A, Cypress, CA 90630, U.S.A.
Phone : +1 714-894-3311 Fax : +1 714-894-5399

FOR-A America East Coast Office

1065 Avenue of the Americas Suite #1701A New York, NY 10018, U.S.A.
Phone : +1 212-861-2758 Fax : +1 212-861-2793

FOR-A America Distribution & Service Center

2400 N.E. Waldo Road, Gainesville, FL 32609, U.S.A.
Phone: +1 352-371-1505 Fax : +1 352-378-5320

FOR-A Corporation of Canada

425 Queen Street West, Suite 211, Toronto, Ontario M5V 2A5, CANADA
Phone: +1 416-977-0343 Fax : +1 416-977-0657

FOR-A UK Limited

UNIT C71, Barwell Business Park, Leatherhead Road, Chessington Surrey, KT9 2NY, U.K.
Phone: +44 (0)20-8391-7979 Fax : +44 (0)20-8391-7978

FOR-A Italia S.r.l.

Viale Europa 50 20093, Cologno Monzese (MI), Milan, ITALY
Phone: +39 02-254-3635/6 Fax : +39 02-254-0477

FOR-A Corporation of Korea

801 Dangsang Bld., 53-1 Dangsang-Dong, Youngdeungpo-Gu, Seoul 150-800, Korea
Phone: +82 (0)2-2637-0761 Fax : +82 (0)2-2637-0760

*The contents of this manual are subject to change without notice.