

# OPERATION MANUAL

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## MV-410HS Layout Editor

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Version 3.0 - higher



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## Trademark

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Microsoft ® Windows XP operating system is a trademark of Microsoft Corporation.  
.NET Framework is a trademark of Microsoft Corporation.  
Pentium ® is a trademark of Intel Corporation.

# 1. Setup

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## 1-1. Overview

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MV-410HS Layout Editor is a software to customize the layout of the MV-410HS split screen from a computer. Up to 4 preset patterns (SPLIT 1 to 4) can be stored. Those stored layouts are easily recalled by using the SPLIT button on the front panel of MV-410HS. MV-410HS and a computer can be connected via LAN.

## 1-2. System Requirements

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To install MV-410HS Layout Editor, your computer must meet the following requirements.

OS	Windows® XP operating system SP2 or later Professional (32-bit)	Windows® 7 operating system Professional (32/64-bit)
CPU	Pentium® 4 processor 1.3 GHz or faster	Intel® Core™2 Duo processor 2 GHz or faster
Memory	512 MB or more	2 GB or more
Display	Resolution of 1024 x 768pixels or better Must be capable of full color (24-bit) display	
Network port	Ethernet, at least one port 100BASE-TX/1000BASE-T	
Network cable	100BASE-TX: Category 5 or better 1000BASE-T : Category 6, or enhanced category 5	
Software	Microsoft® .NET Framework 2.0 (Supplied on the CD-ROM) Windows® Installer 3.1 (Supplied on the CD-ROM)	

## 1-3. Operation Flow

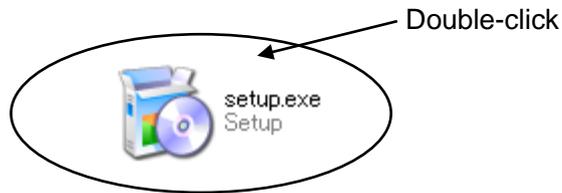
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- (1) Installing MV-410HS Layout Editor
- (2) Connecting MV-410HS Layout Editor installed PC to MV-410HS
- (3) Starting MV-410HS and MV-410HS Layout Editor
- (4) Creating a split screen layout
- (5) Displaying a split screen layout

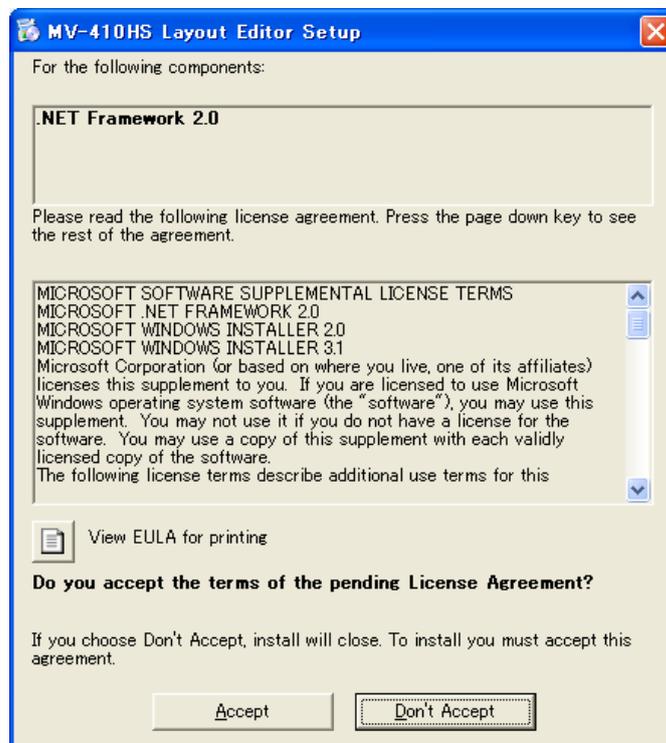
## 1-4. Installing MV-410HS Layout Editor

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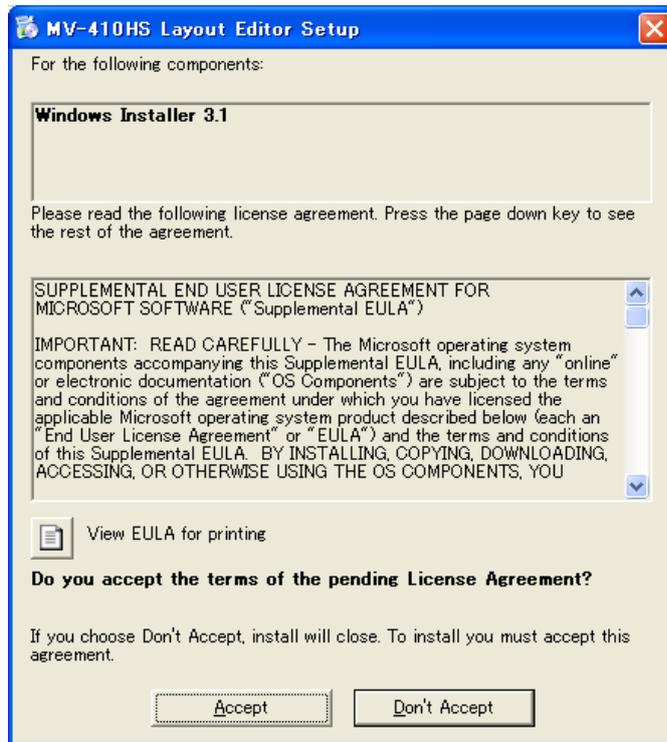
- (1) Load the supplied Installation CD-ROM into the PC, and open the CD-ROM drive. Run the file "**setup.exe**" to start the setup wizard.



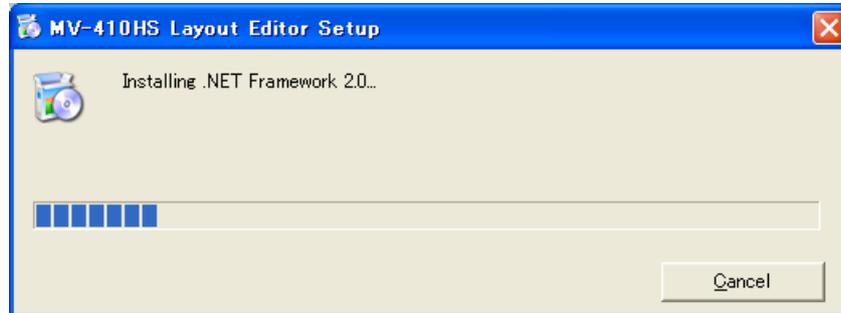
- (2) If [.NET Framework 2.0] is not installed on your PC, the screen shown below is displayed. Click **Accept**. If [.NET Framework 2.0] is already installed on your PC, this screen is not displayed.



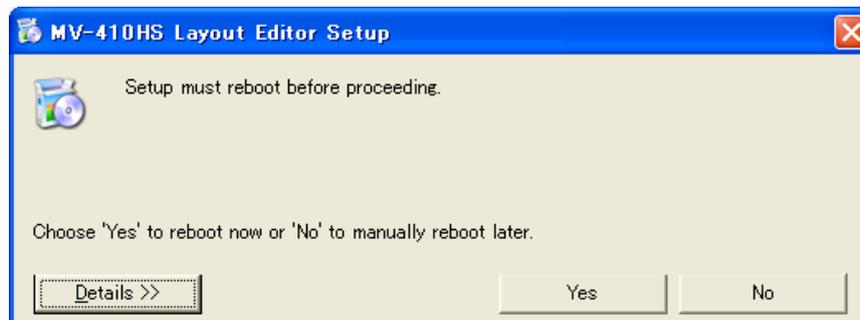
- (3) If [Windows Installer 3.1] is not installed on your PC, the screen shown below is displayed. Click **Accept**. If [Windows Installer 3.1] is already installed on your PC, this screen is not displayed.



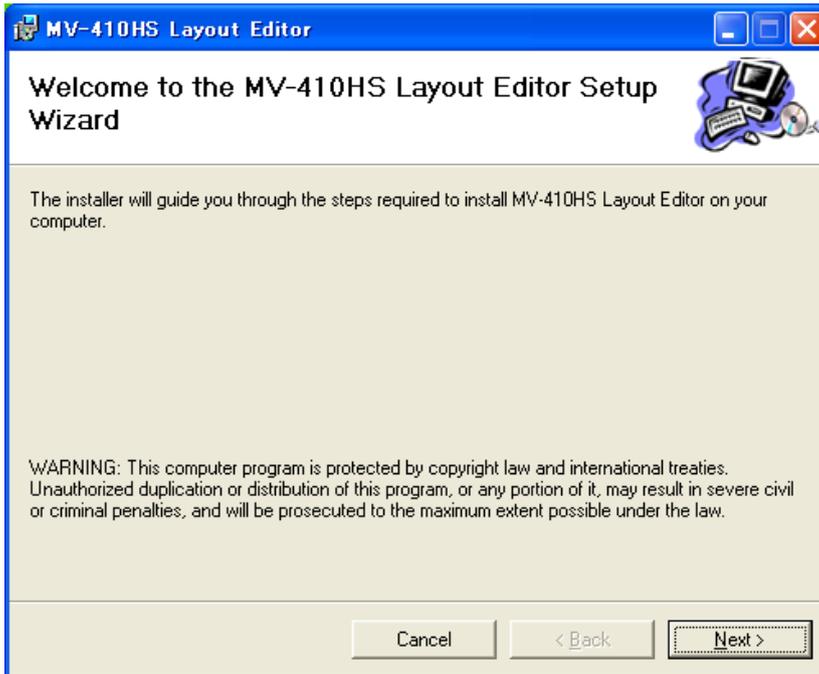
- (4) If [.NET Framework 2.0] is not installed, the installation starts.



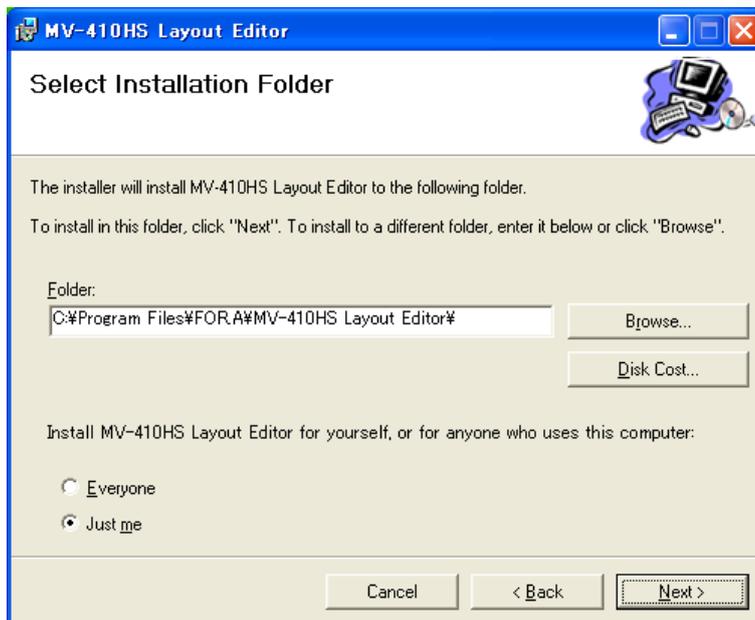
- (5) When installation of [.NET Framework 2.0] is complete, the screen shown below is displayed requiring a reboot. Click **Yes** to reboot your PC.



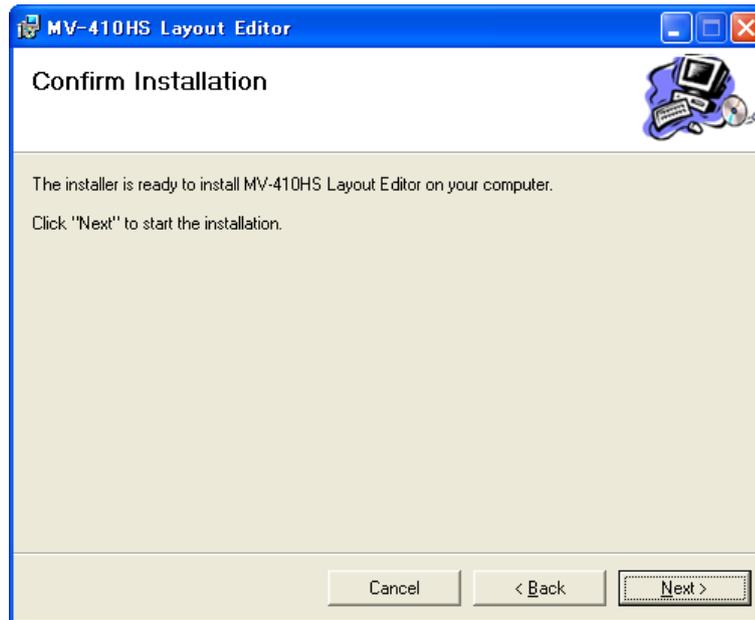
(6) After the setup wizard is started, click **Next**.



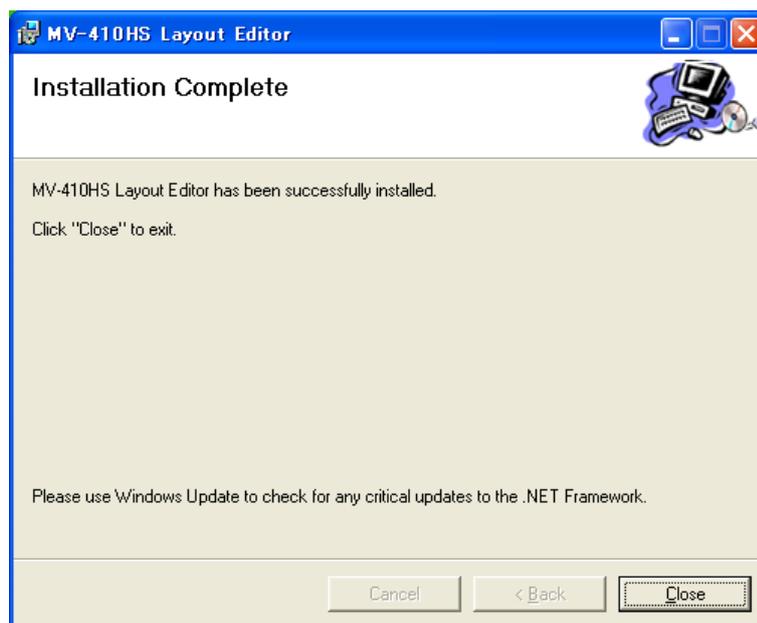
(7) Select the installation directory. It is not necessary to change the folder. Select whether to install MV-410HS Layout Editor for current user only or for all users. The default is set to the current user. When the settings are completed, click **NEXT>**.



- (8) Click **NEXT>** to start the installation.



- (9) When installation is completed normally, the screen shown below is displayed. Click **Close** to quit the setup wizard.

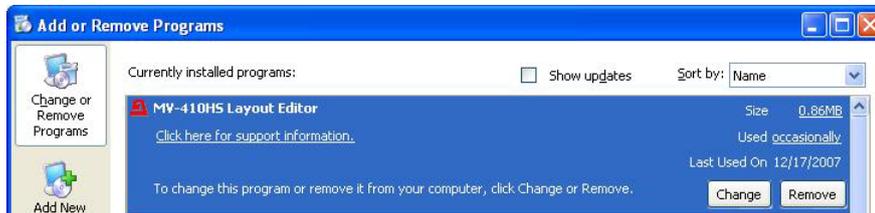


## 1-5. Removing MV-410HS Layout Editor

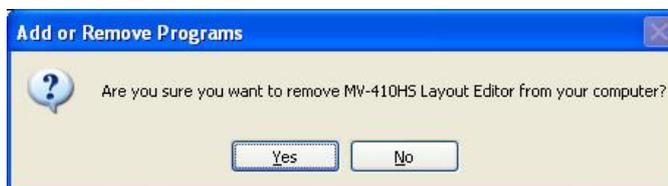
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To remove MV-410HS Layout Editor, follow the procedure below.

- 1) Go to **Start > Control Panel**. In the **Add or Remove Programs** window, select “**MV-410HS Layout Editor**”, and click **Remove**.



- 2) The confirmation dialog shown below is displayed. Click **Yes** to start the uninstallation.



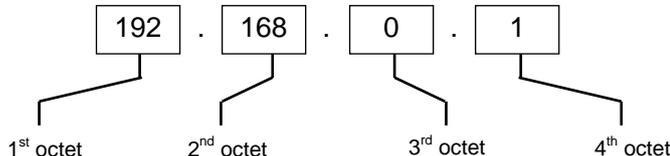
The "Windows Installer 3.1" and "Microsoft .NET Framework 2.0" do not need to be removed.

## 1-6. Connections

To use MV-410HS Layout Editor, connect MV-410HS and PC over a LAN interface. Be aware that the cables and equipment used vary depending on the connection method. Use a crossover LAN cable to connect the computer directly to the MV-410HS. Use a straight through LAN cable for the connection using a router or a hub.

## 1-7. Communication Standard

The communication standards for serial control over a LAN interface is as follows.

Protocol	TCP/IP Protocol
IP address	<p>Setting range: 0.0.0.0 to 255.255.255.255</p> <p>However, there also are limitations on IP addresses set by the PC as shown below. Set the IP address 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. Lines connect the boxes to labels below: '192' to '1<sup>st</sup> octet', '168' to '2<sup>nd</sup> octet', '0' to '3<sup>rd</sup> octet', and '1' to '4<sup>th</sup> octet'.</p> </div> <p>1<sup>st</sup> octet: 1 to 223 (except 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 in the menu screen on the main unit.            * The default setting is 192.168.0.1.</p>
Subnet mask length	<p>Setting range: 0 to 31</p> <p>* This is set in the menu screen on the main unit.            * The default setting is 24.</p>
Gateway	<p>Setting range: 0.0.0.0 to 255.255.255.255</p> <p>* This is set in the menu screen on the main unit.            * 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 in the menu screen on the main unit.</p>

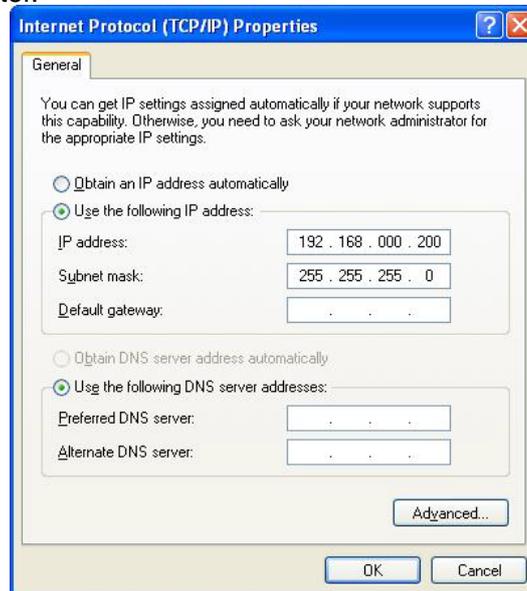
## 1-8. PC Network Settings

The PC network settings need to match that of the MV-410HS. The procedure for making the network settings at the PC vary depending on the OS, so refer to the OS manual for details. This setting example shows the case when connecting to the MV-410HS with the default settings. The MV-410HS default settings are shown below.

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

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

Click **Start** on the taskbar, open [**Control Panel**], and double-click "**Network Connections**". Right-click "**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-410HS 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 Start menu setting changed to Classic

Click **Start** 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 **OK**, and then close all setting windows.

## 2. Starting & Exiting MV-410HS Layout Editor

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### 2-1. Starting MV-410HS Layout Editor

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To start MV-410HS Layout Editor, go to **Start > Programs > FOR.A** and select "**MV-410HS Layout Editor**".

### 2-2. Exiting MV-410HS Layout Editor

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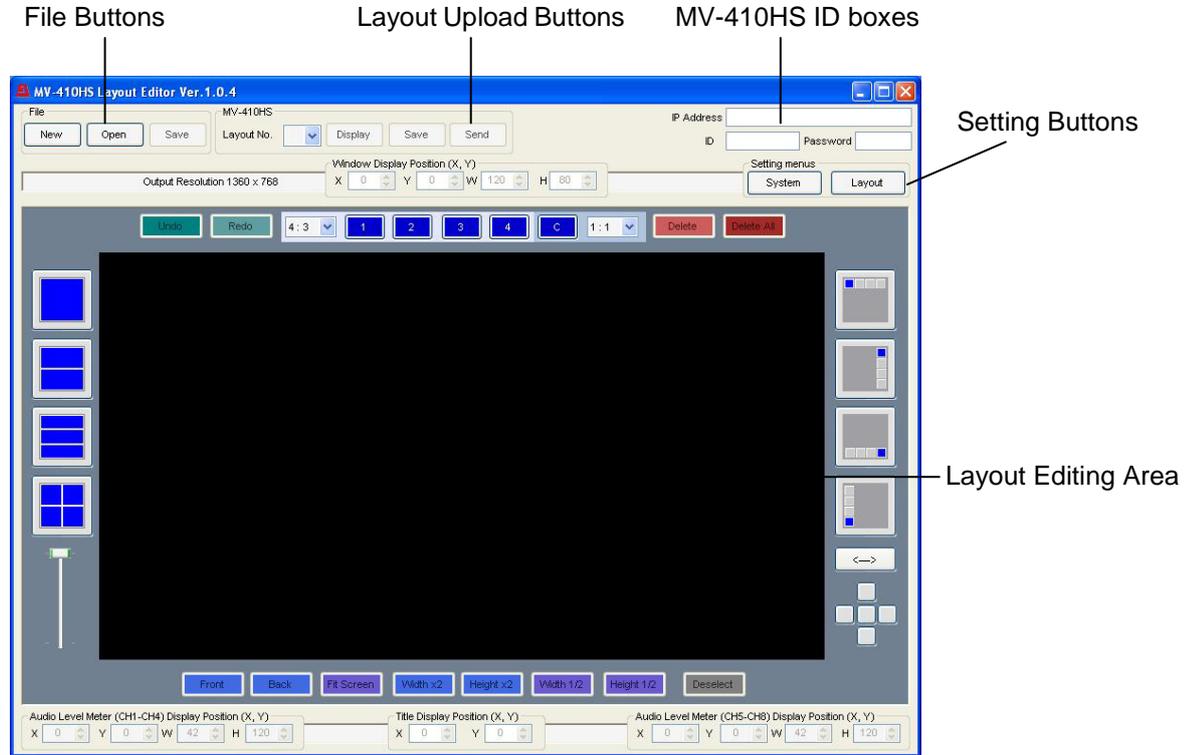
To exit MV-410HS Layout Editor, click the  button at the top-right corner of the screen.

NOTE
All unsaved changes will be lost when the application is closed. Save the current layout to MV-410HS or to your computer before closing the application.

# 3. Main Screen and Dialog Boxes

## 3-1. Main Screen

After the application is started the screen shown below is displayed.



### 3-1-1. MV-410HS ID Boxes

IP Address	<input type="text"/>
ID	<input type="text"/>
Password	<input type="text"/>

- (1) IP address  
Enter the IP address of MV-410HS to be connected.
- (2) ID  
Enter the ID specified in MV-410HS.
- (3) Password  
Enter the password specified in MV-410HS.

### 3-1-2. File Buttons

File
New    Open    Save

- (1) New  
Creates a new layout.

<b>NOTE</b>
All unsaved changes will be lost when a new layout is created. Save the current layout to MV-410HS or to your computer before creating a new layout.

- (2) Open  
Opens a layout saved on the computer.

NOTE
All unsaved changes will be lost when a layout saved on the computer is opened. Save the current layout to MV-410HS or to your computer before opening a layout.

- (3) Save  
Save the currently opened layout on the computer.

NOTE
The MV-410HS system settings as well as the layout settings are saved as a layout file.

### 3-1-3. Layout Upload Buttons



- (1) Layout Number  
Selects a layout number of the layout to be edited or saved. Up to 4 patterns can be saved to MV-410HS. Once the layout number is selected, the layout is loaded from MV-410HS into the layout editing area.

NOTE
Selecting the same number as the layout number of MV-410HS allows users to easily check the layout, since the changes in the layout editing area are applied to MV-410HS in real-time. However, all unsaved changes will be lost when MV-410HS is powered off. Save the current layout to MV-410HS before powering off MV-410HS.



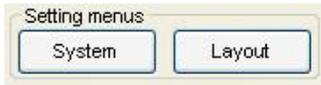
Layout Number is empty right after the application is started. In this status, layouts can be created without communicating with MV-410HS (off-line). The created layouts can be saved on the computer and loaded into MV-410HS when connected.

- (2) Display  
Displays the layout selected in the **Layout Number** drop-down list on MV-410HS output monitor.
- (3) Save  
Saves the current layout to MV-410HS.

NOTE
All unsaved changes will be lost when MV-410HS is powered off. Save the current layout to MV-410HS before powering off MV-410HS.

- (4) Send  
Sends the current layout to MV-410HS. Normally you do not need to click the Send button since the changes of the layout are sent real-time to MV-410HS. If the layouts in the layout editing area and MV-410HS do not match due to a communication error, click the Send button.

### 3-1-4. Setting Buttons



(1) System

The MV-410HS system settings and full screen display settings can be made. See section 3-2. "System Setting" for details.

**NOTE**

The layout cannot be edited while the **System Setting** dialog box is displayed. To edit the layout, close the **System Setting** dialog box.

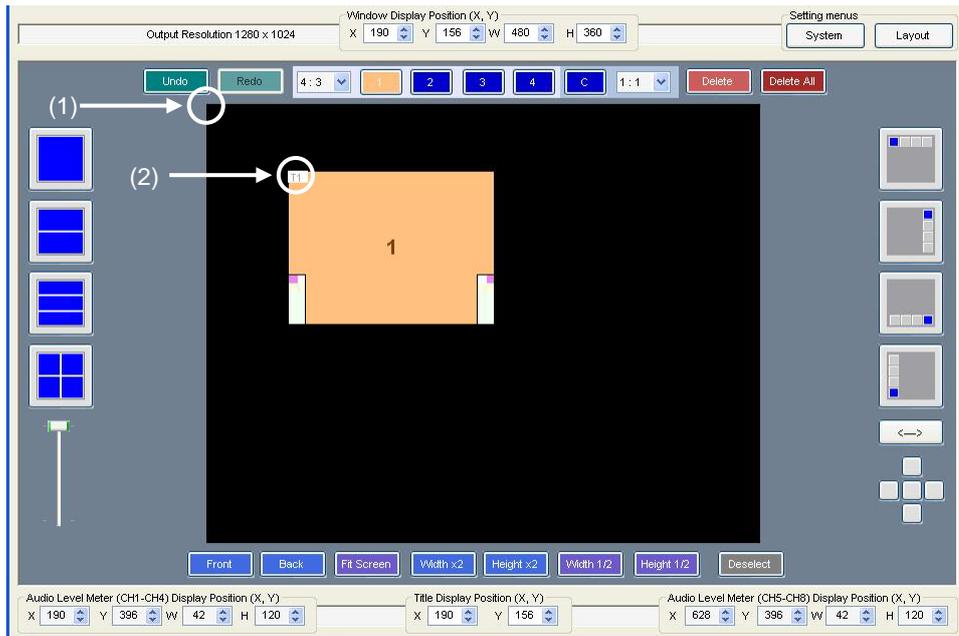
(2) Layout

The layout settings can be made for each layout separately. See section 3-3. "Layout Setting" for details.

**NOTE**

The layout cannot be edited while the **Layout Setting** dialog box is displayed. To edit the layout, close the **Layout Setting** dialog box.

### 3-1-5. Layout editing area and Editing Tools



(1) Layout editing area base point

The coordinate (0, 0) base point of the layout editing area is the top-left corner of the area. The X coordinate value increases from left to right. (The right end is the highest.) The Y coordinate value increases from top to bottom. (The bottom end is the highest.)

(2) Window base point

The location of a window is determined by the X coordinate of the left edge of the window, and the Y coordinate of the top edge of the window.

**NOTE**

The valid coordinate range for placing a window varies depending on the output resolution.

(3) Output Resolution

Displays the output resolution of the selected layout.



**NOTE**

The output resolution can only be selected when creating a new layout. The resolution of the layout loaded from MV-410HS or the layout opened from the computer cannot be changed.

(4) Window Display Position (X, Y)

Displays the display position of the selected window. Also the window display position can be adjusted by changing the numeric values.

**NOTE**

**Window Display Position** for both **X** and **Y** can be adjusted in units of 2 pixels.

(5) Window Size (W, H)

Displays the size of the selected window. Also the window size can be adjusted by changing the numeric values. If **Aspect Ratio** is set to other than **Free**, changing either of **W** (width) or **H** (height) changes the other automatically.

**NOTE**

**Window Size** for both **Width** and **Height** can only be adjusted in units of 8 pixels. Due to this limitation, the specified aspect ratio may not always be applied accurately.

(6) Undo

Cancels the last action performed.



(7) Redo

Cancels the last undo command.

(8) Aspect Ratio

Changes the aspect ratio of the selected window. The window size can be changed while retaining the specified aspect ratio.

16:9	Used for the window that displays an HD signal.
4:3	Used for the window that displays an SD signal.
1:1	Selectable for the clock window only.
Free	The window size can be changed without retaining the aspect ratio.

**NOTE**

The **Aspect Ratio** drop-down list to the left of the **1** button is for the video windows. The **Aspect Ratio** drop-down list to the right of the **C** button is for the clock window.

(9) Add / Select Window

Selects a window for changing the settings. Clicking either of **1**, **2**, **3**, or **4** selects the window of the selected number. Clicking **C** selects the clock window. If the selected window is not displayed in the layout editing area, a window is added to the layout editing area.

### NOTE

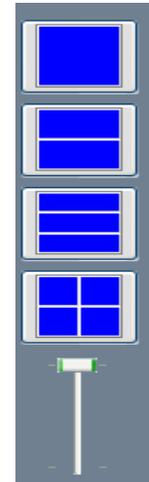
The number displayed in a window and the channel number of the input video signal displayed within the window are the same.

#### (10) Delete Window

Clicking **Delete** deletes the selected window from the layout edit screen. Clicking **Delete All** deletes all windows from the layout edit screen.

#### (11) Select Preset Pattern

Clicking any one of the **split screen icons** at the left of the layout editing area selects a preset pattern of split screen. If multiple patterns of the same number split screen exist, the displayed pattern can be changed to other pattern by the lever beneath the **split screen icons**. Every click on the **split screen icon** also changes the pattern display.

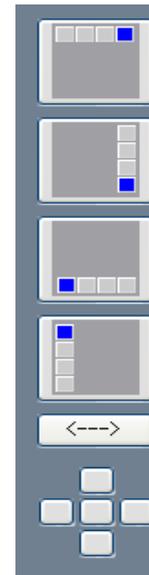


#### (12) Add / Move 1/16 size window

Clicking any one of the **add 1/16 size window icon** at the right of the layout editing area adds a 1/16 size window at the place each icon depicts. Every click add a window in a row shown in the icon.

The arrow button beneath the **add 1/16 size window icon** changes the direction of the window line opposite.

Five buttons under the icons instantly move a window right next to the other window in each direction. If there is no window in the direction, the window is moved to the edge of the layout editing area. The center button positions a window at the center.



#### (13) Front (Bring to front)

Arranges the selected window to the front.



#### (14) Back (Send to back)

Arranges the selected window to the back.

#### (15) Fit Screen

Maximizes the window to best fit the selected window size. If **Aspect Ratio** is set to other than **Free**, the aspect ratio is retained.

#### (16) Width x 2

Sets the width of the selected window to double the width of the original window. If **Aspect Ratio** is set to other than **Free**, the aspect ratio is retained.

- (17) Height x 2  
Doubles the height of the selected window to double the height of the original window. If **Aspect Ratio** is set to other than **Free**, the aspect ratio is retained.
- (18) Width 1/2  
Sets the width of the selected window to half the width of the original window. If **Aspect Ratio** is set to other than **Free**, the aspect ratio is retained.
- (19) Height 1/2  
Sets the height of the selected window to half the height of the original window. If **Aspect Ratio** is set to other than **Free**, the aspect ratio is retained.
- (20) Deselect  
Deselects the selected window.
- (21) Title Display Position (X, Y)  
Displays the display position of the selected window title. Also the title display position can be adjusted by changing the numeric value.  
The X value represents the position of the left edge of title and the Y value represents the top edge of title.



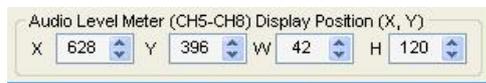
- (22) Audio Level Meter (CH1-CH4) Display Position (X, Y)  
Displays the display positions of the audio level meters (CH1-CH4) of the selected window. Also the audio level meter display position can be adjusted by changing the numeric value.  
The X value represents the position of the left edge of audio level meter and the Y value represents the bottom edge of audio level meter.



**Display order of Audio Level Meter (CH1-CH4)**



- (23) Audio Level Meter (CH5-CH8) Display Position (X, Y)  
Displays the display positions of the audio level meters (CH5-CH8) of the selected window. Also the audio level meter display position can be adjusted by changing the numeric value.  
The X value represents the position of the left edge of audio level meter and the Y coordinate represents the bottom edge of audio level meter.



**Display order of Audio Level Meter (CH5-CH8)**



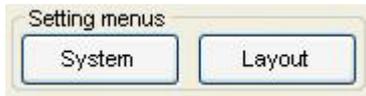
- (24) Audio Level Meter Display Size (W, H)  
Displays the display size of the audio level meter of the selected window. Also the audio level meter display size can be adjusted by changing the numeric value.

<b>NOTE</b>
<p><b>Audio Level Meter Display Size</b> for <b>Width</b> can be adjusted in units of 16 pixels and <b>Height</b> can be adjusted in units of 120 pixels. These settings are common to both <b>CH1-CH4</b> and <b>CH5-CH8</b>.</p>

## 3-2. System Setting

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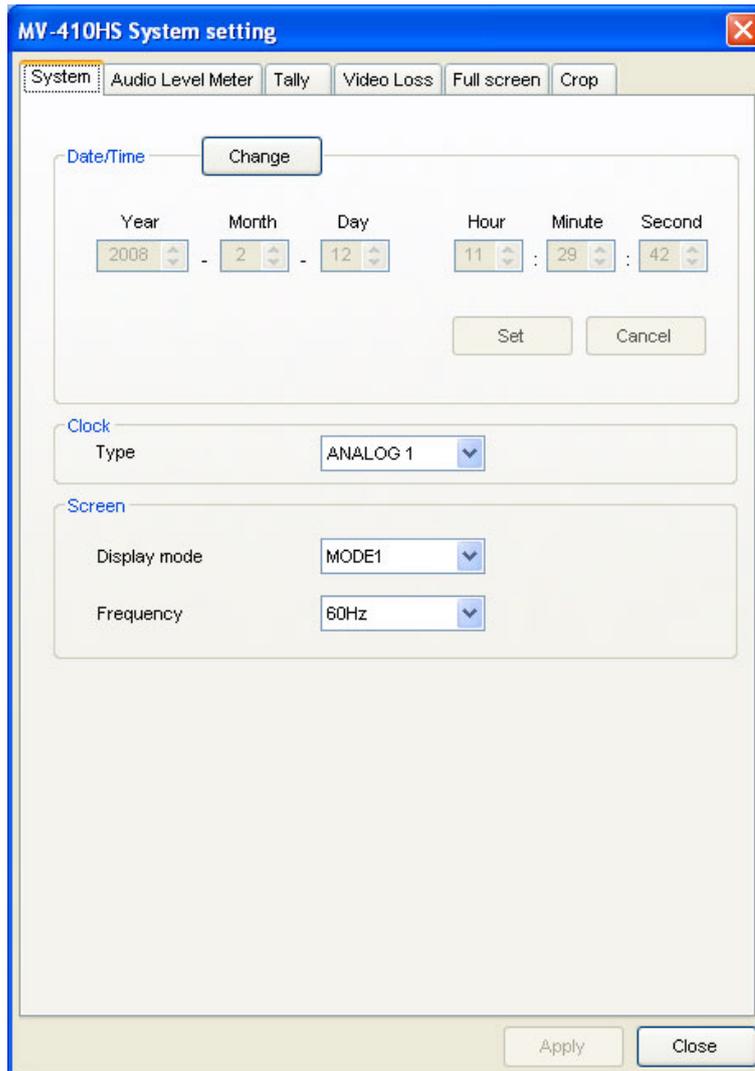
Clicking the **System Setting** button in the main screen displays the **System Setting** dialog box as shown below.



### 3-2-1. System

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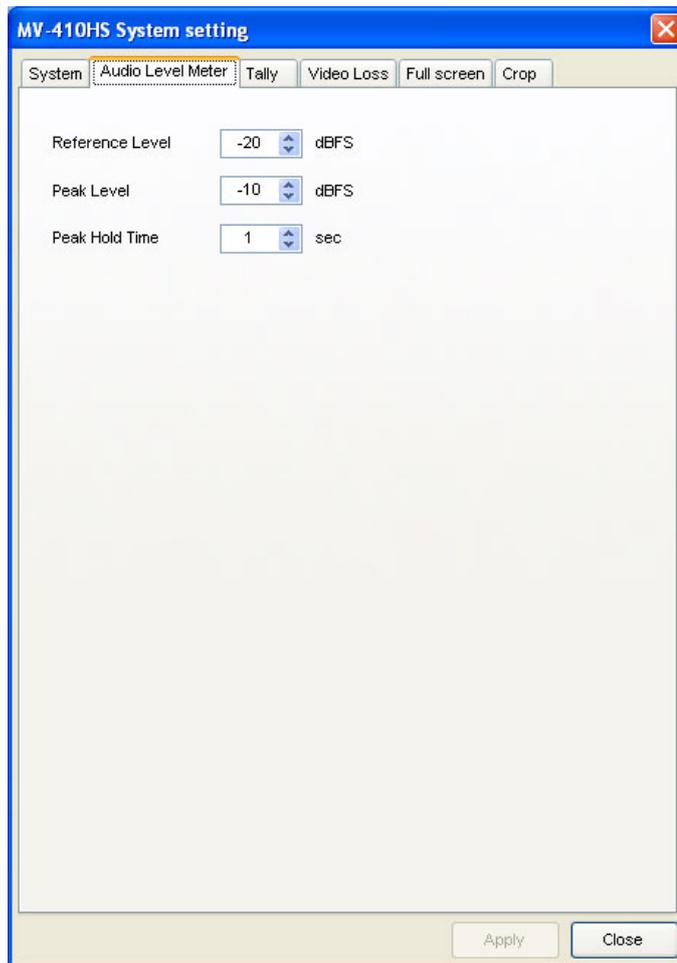
Clicking the **System** tab displays the screen as shown below.





## 3-2-2. Audio Level Meter

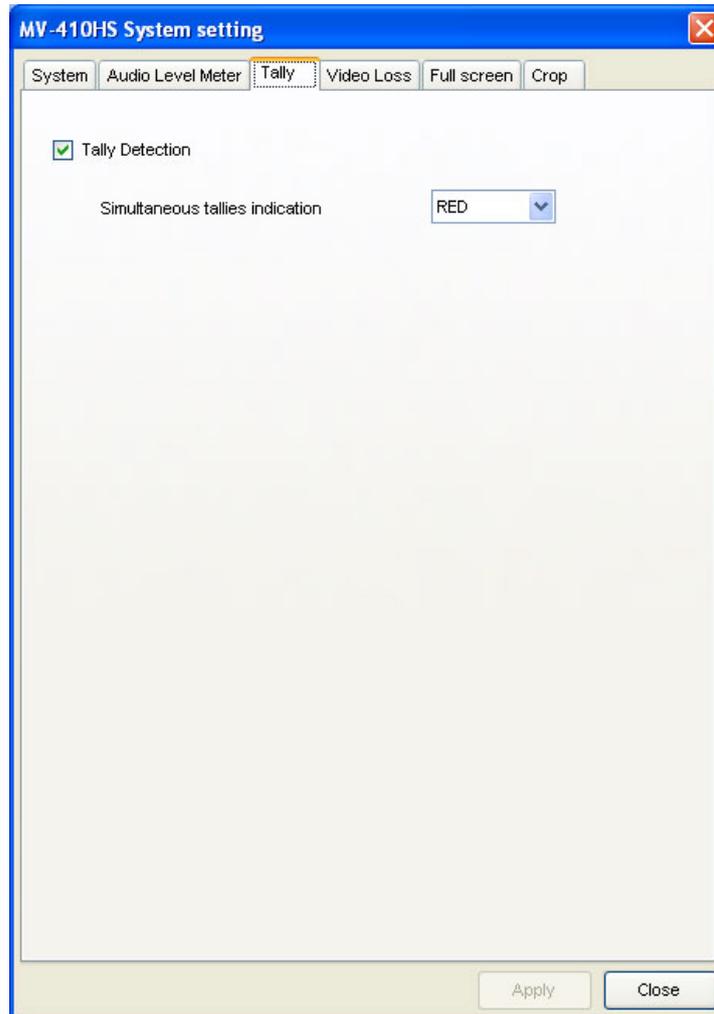
Clicking the **Audio Level Meter** tab displays the screen as shown below.



Item	Description
Reference Level	Sets the reference level in the range from -60dBFS to -1dBFS.
Peak Level	Sets the peak level in the range from -30dBFS to 0dBFS. Peak Level must always be larger than Reference Level.
Peak Hold Time	Sets the peak hold time in the range from 0 sec to 10 sec. If set to 0 sec, no Peak Hold display is provided.
Apply	Applies the changes made in this screen to MV-410HS. To save the settings in MV-410HS, click <b>Save</b> on the <b>main</b> screen; otherwise, the changes will be lost when the MV-410HS is powered off.
Close	Closes <b>System Setting</b> dialog and returns to <b>main</b> screen.

### 3-2-3. Tally

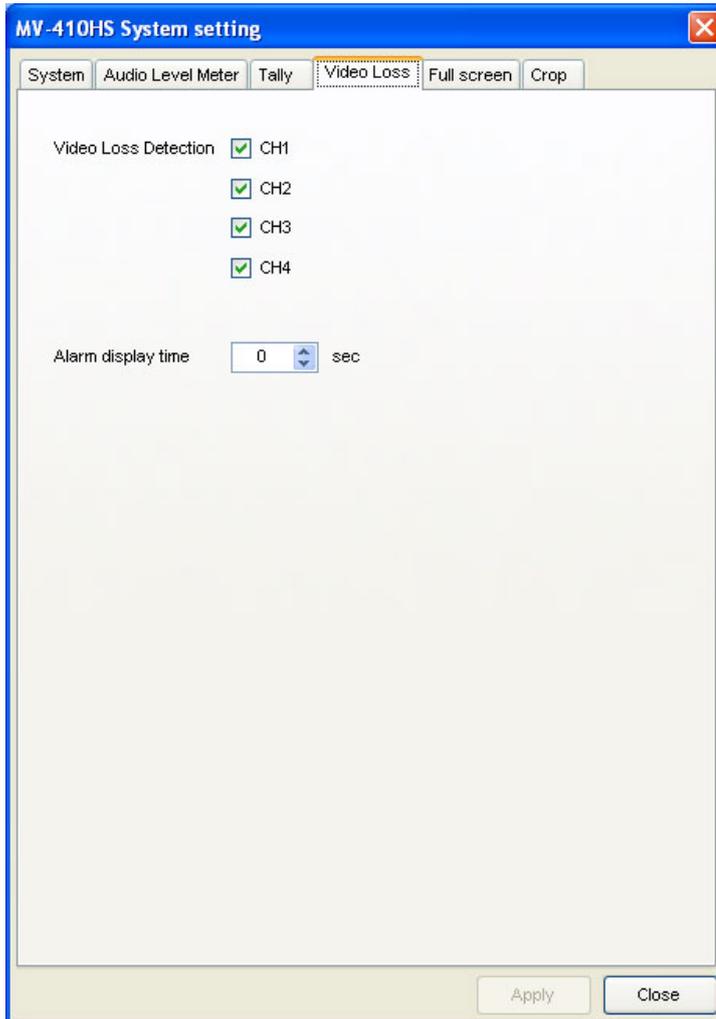
Clicking the **Tally** tab displays the screen as shown below.



Item	Description
Tally Detection	Enables and disables the tally detection. Selecting the checkbox enables the tally detection.
Simultaneous tallies indication	Sets the color of tally display for when the red tally and the green tally are input at the same time. <b>RED</b> Displays a red frame if the red tally and the green tally are input at the same time. <b>UMBER</b> Displays an orange frame if the red tally and the green tally are input at the same time.
Apply	Applies the changes made in this screen to MV-410HS. To save the settings in MV-410HS, click <b>Save</b> on the <b>main</b> screen; otherwise, the changes will be lost when the MV-410HS is powered off.
Close	Closes <b>System Setting</b> dialog and returns to <b>main</b> screen.

## 3-2-4. Video Loss

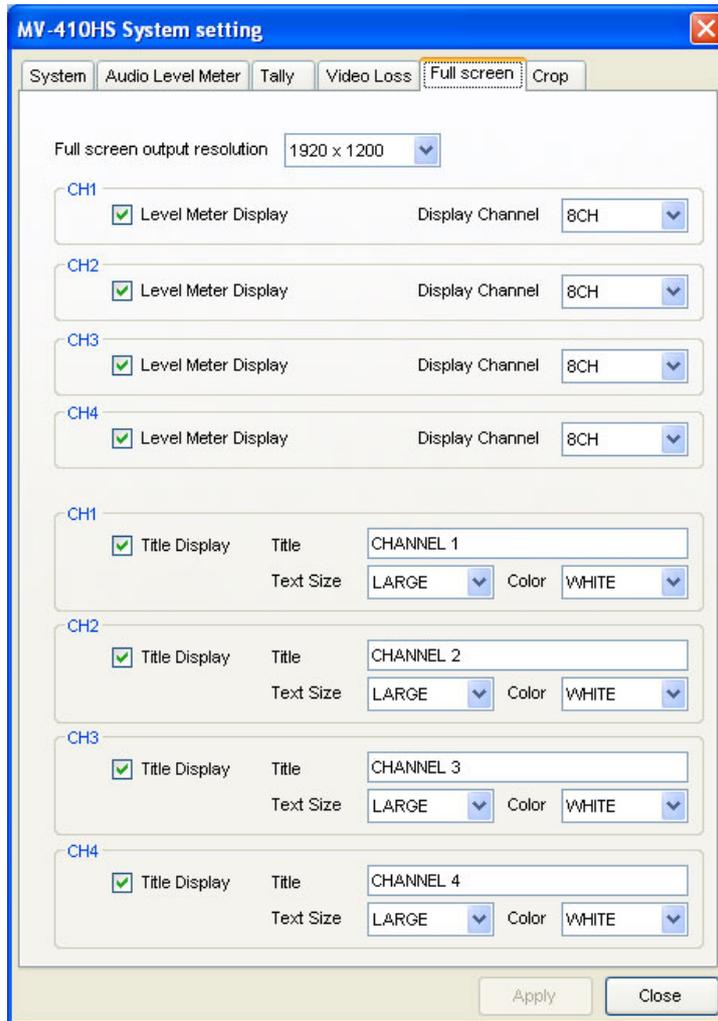
Clicking the **Video Loss** tab displays the screen as shown below.



Item	Description
Video Loss Detection	Enables and disables the video loss detection. Selecting the checkbox enables the video loss detection.
Alarm Display Time	When a video loss is detected, an alarm is displayed within the window for the time length set in this box. The setting range is 00 second to 100 seconds. The value 00 second continues the alarm display until the video loss is recovered or output channel is switched to another channel.
Apply	Applies the changes made in this screen to MV-410HS. To save the settings in MV-410HS, click <b>Save</b> on the <b>main</b> screen; otherwise, the changes will be lost when the MV-410HS is powered off.
Close	Closes <b>System Setting</b> dialog and returns to <b>main</b> screen.

## 3-2-5. Full Screen

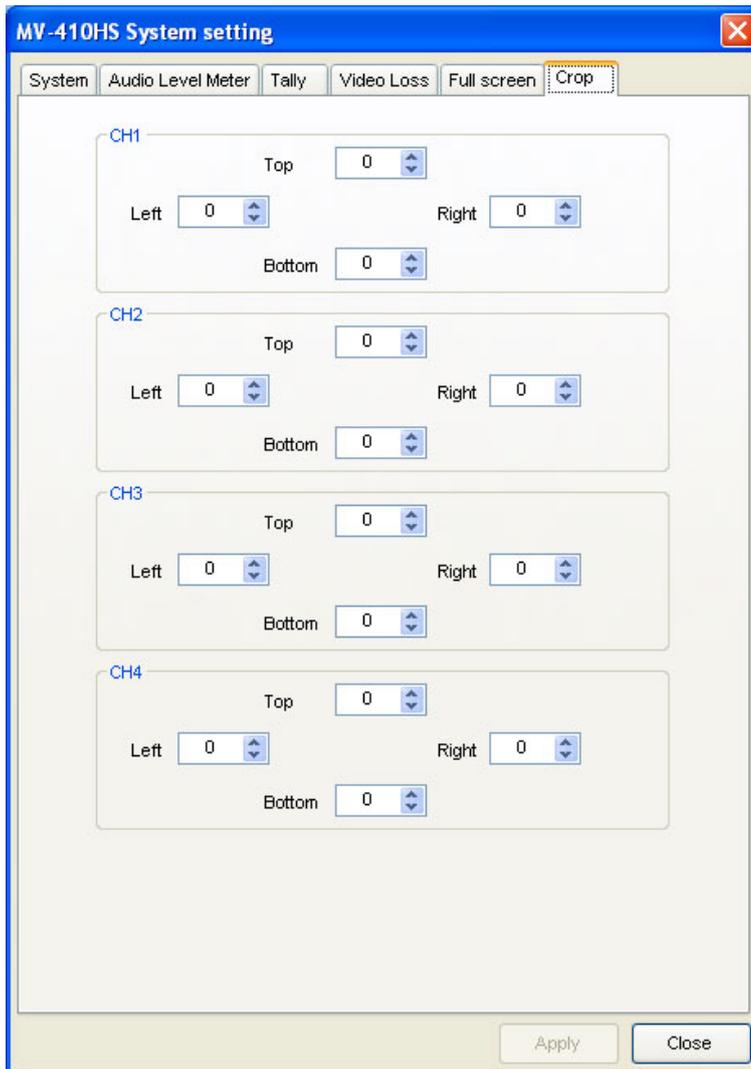
Clicking the **Full Screen** tab displays the screen as shown below.



Item	Description
Full Screen Output Resolution	Selects the output resolution for full screen display. The available settings are as follows: 1280 x 1024, 1360 x 768, 1600 x 1200, 1920 x 1200, 1440 x 900, 1680 x 1050, 1920 x 1080, 1280 x 720
Level Meter Display	Shows and hides the audio level meter for full screen display. Selecting the checkbox shows the audio level meter.
Display Channel	Specifies the number of audio level meter channels displayed for full screen display. The available settings are: 2CH, 4CH, and 8CH.
Title Display	Shows and hides the title. Selecting the checkbox shows the title.
Title	Sets the title to be displayed. Up to 16 characters can be used.
Text Size	Selects the text size. The available settings are: SMALL, MEDIUM, and LARGE.
Color	Selects the title color. The available settings are: WHITE, YELLOW, GREEN, CYAN, RED, MAGENTA, BLUE, GRAY, and BLACK.
Apply	Applies the changes made in this screen to MV-410HS. To save the settings in MV-410HS, click <b>Save</b> on the <b>main</b> screen; otherwise, the changes will be lost when the MV-410HS is powered off.
Close	Closes <b>System Setting</b> dialog and returns to <b>main</b> screen.

## 3-2-6. Crop

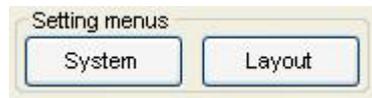
Clicking the **Crop** tab displays the screen as shown below.



Item	Description
Crop (Top)	Sets how much to crop from the top edge of images. Setting range: 0 to 120
Crop (Bottom)	Sets how much to crop from the bottom edge of images. Setting range: 0 to 120
Crop (Left)	Sets how much to crop from the left side of images. Setting range: 0 to 120
Crop (Right)	Sets how much to crop from the right side of images. Setting range: 0 to 120
Apply	Applies the changes made in this screen to MV-410HS. To save the settings in MV-410HS, click <b>Save</b> on the <b>main</b> screen; otherwise, the changes will be lost when the MV-410HS is powered off.
Close	Closes <b>System Setting</b> dialog and returns to <b>main</b> screen.

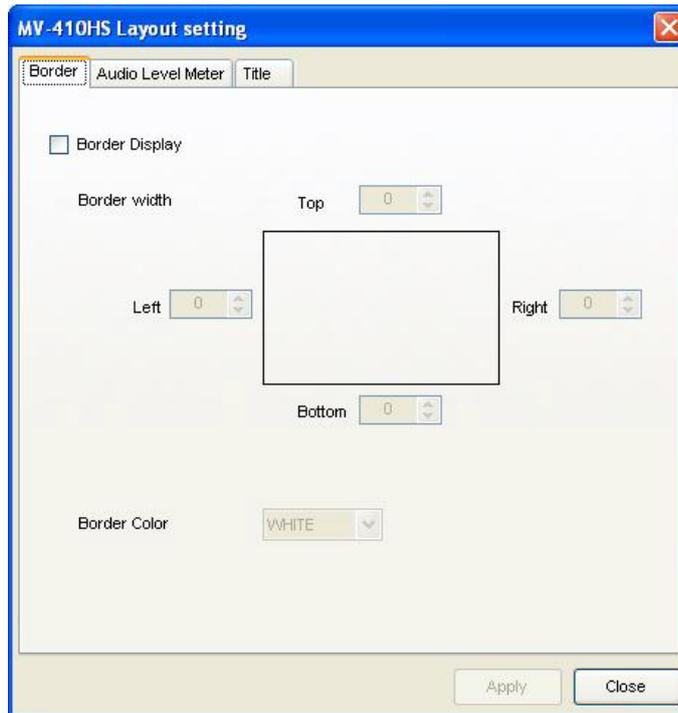
## 3-3. Layout Setting

Clicking the **Layout Setting** button in the main screen displays the **Layout Setting** dialog box as shown below. The parameters for each layout can be set separately with this dialog box.



### 3-3-1. Border

Clicking the **Border** tab displays the screen as shown below.



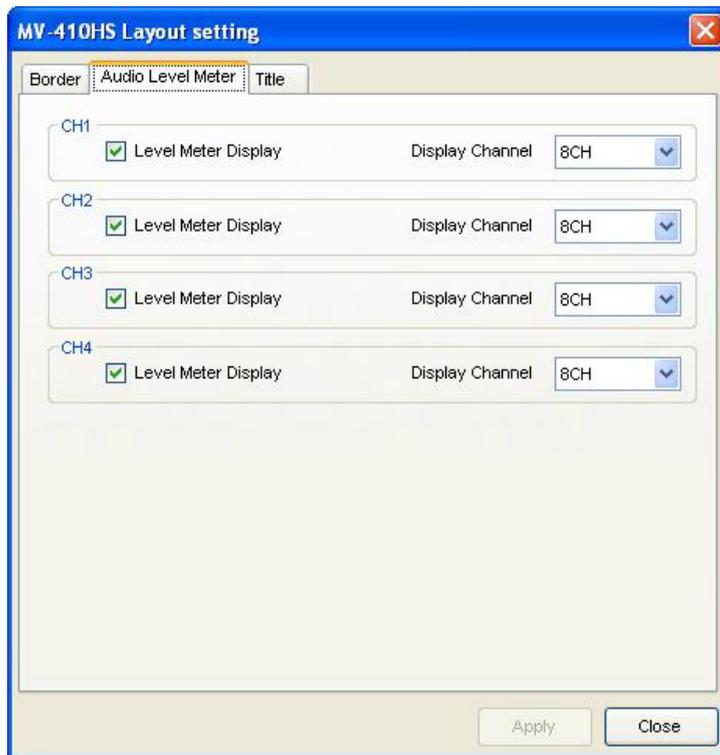
Item	Description
Border Display	Shows and hides the borders. Selecting the checkbox shows the borders.
Border width (Top)	Sets the top border line width in the range from 0 to 50.
Border width (Bottom)	Sets the bottom border line width in the range from 0 to 50.
Border width (Left)	Sets the left border line width in the range from 0 to 50.
Border width (Right)	Sets the right border line width in the range from 0 to 50.
Border Color	Selects the border color. The available settings are: WHITE, YELLOW, CYAN, MAGENTA, BLUE, GRAY, and BLACK
Apply	Applies the changes made in this screen to MV-410HS. To save the settings in MV-410HS, click <b>Save</b> on the <b>main</b> screen; otherwise, the changes will be lost when the MV-410HS is powered off.
Close	Closes <b>Layout Setting</b> dialog and returns to <b>main</b> screen.

#### IMPORTANT

The minimum size of windows is 120(W) x 80(H). Displaying video images requires the area larger than 96(W) x 56(H). Therefore, if the border width is set too wide for the small window, the border width is automatically narrowed.

## 3-3-2. Audio Level Meter

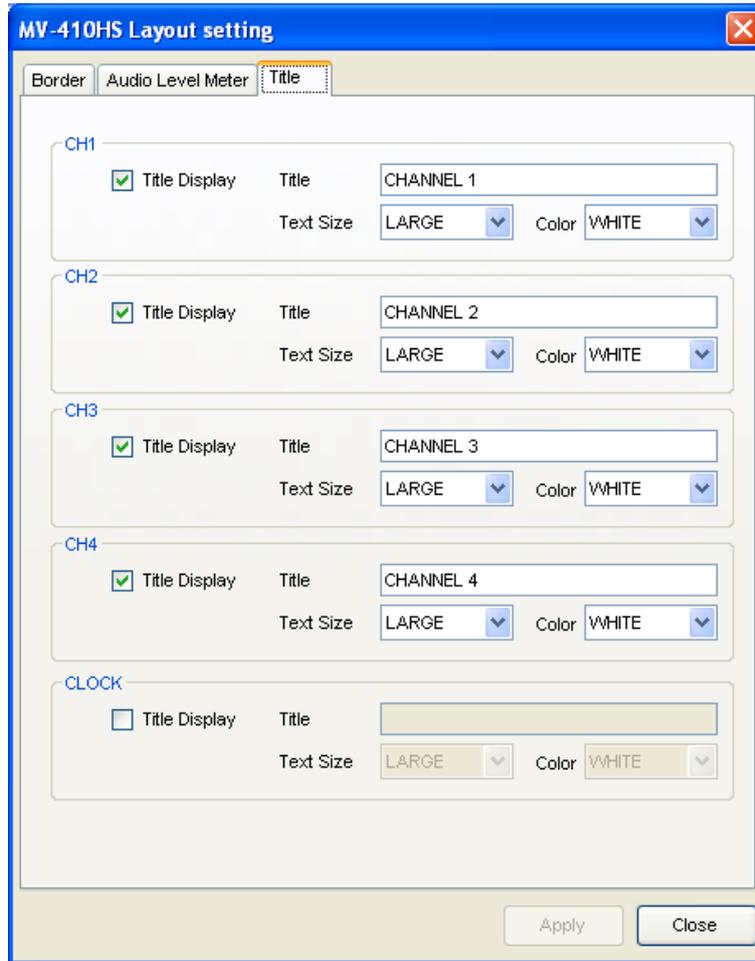
Clicking the **Audio Level Meter** tab displays the screen as shown below.



Item	Description
Level Meter Display	Shows and hides the audio level meter. Selecting the checkbox shows the audio level meter.
Display Channel	Selects how many audio channels to display. The available settings are: 2CH, 4CH, and 8CH.
Apply	Applies the changes made in this screen to MV-410HS. To save the settings in MV-410HS, click <b>Save</b> on the <b>main</b> screen; otherwise, the changes will be lost when the MV-410HS is powered off.
Close	Closes <b>Layout Setting</b> dialog and returns to <b>main</b> screen.

### 3-3-3. Title

Clicking the **Title** tab displays the screen as shown below.

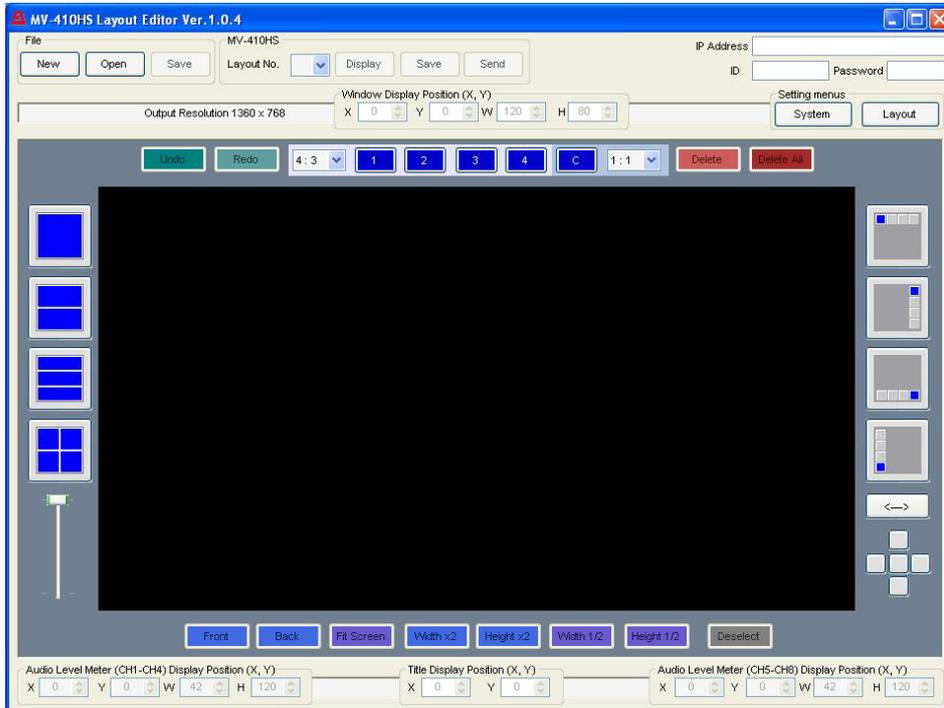


Item	Description
Title Display	Shows and hides the title. Selecting the checkbox shows the title.
Title	Sets the title to be displayed. Up to 16 characters can be used.
Text Size	Selects the text size. The available settings are: SMALL, MEDIUM, and LARGE.
Color	Selects the title color. The available settings are: WHITE, YELLOW, GREEN, CYAN, RED, MAGENTA, BLUE, GRAY, and BLACK.
Apply	Applies the changes made in this screen to MV-410HS. To save the settings in MV-410HS, click <b>Save</b> on the <b>main</b> screen; otherwise, the changes will be lost when the MV-410HS is powered off.
Close	Closes <b>Layout Setting</b> dialog and returns to <b>main</b> screen.

# 4. Using MV-410HS Layout Editor

## 4-1. Establishing Connection

To start **MV-410HS Layout Editor**, go to **Start > Programs > FOR.A** and select "**MV-410HS Layout Editor**". After the application is started the screen shown below is displayed.

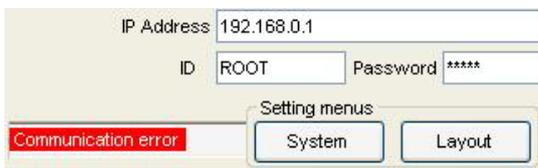


Enter the IP address, ID and password of MV-410HS that you wish to connect.

IP Address	192.168.0.1
ID	ROOT
Password	*****

The default settings of MV-410HS are as follows:

IP address: 192.168.0.1  
ID: ROOT  
Password: 00000



If a communication error occurs as shown above, make sure that the IP address, ID, and password are set correctly.

## 4-2. Creating and Loading Layout

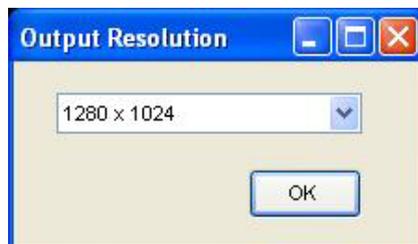
This section explains how to create a new layout or edit a layout loaded from MV-410HS. The created layout can also be saved on the computer and reloaded for editing. The output resolution can only be selected for the newly created layouts and it cannot be changed for the layouts loaded from MV-410HS or the layouts stored in the computer.

### 4-2-1. Creating New Layout

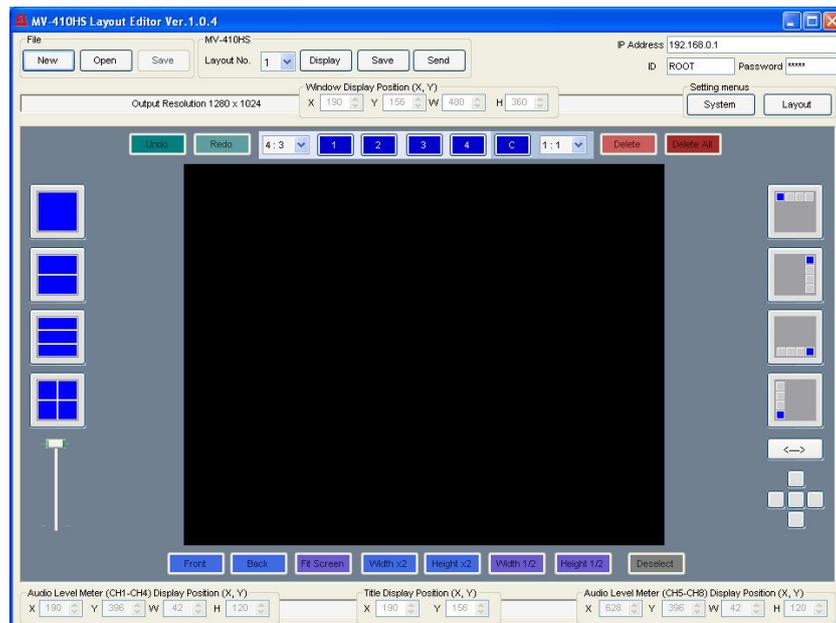
- (1) To create a new layout, select a layout number from **1-4** and click the **New** button in **File** at the top of the main screen.



- (2) The **Output Resolution** dialog box is displayed. Set the output resolution and click **OK**.



- (3) Edit the layout in the layout editing area that is currently opened. For example, add and move windows, or change the window size. See section 4-3. "Editing Layouts" for details.

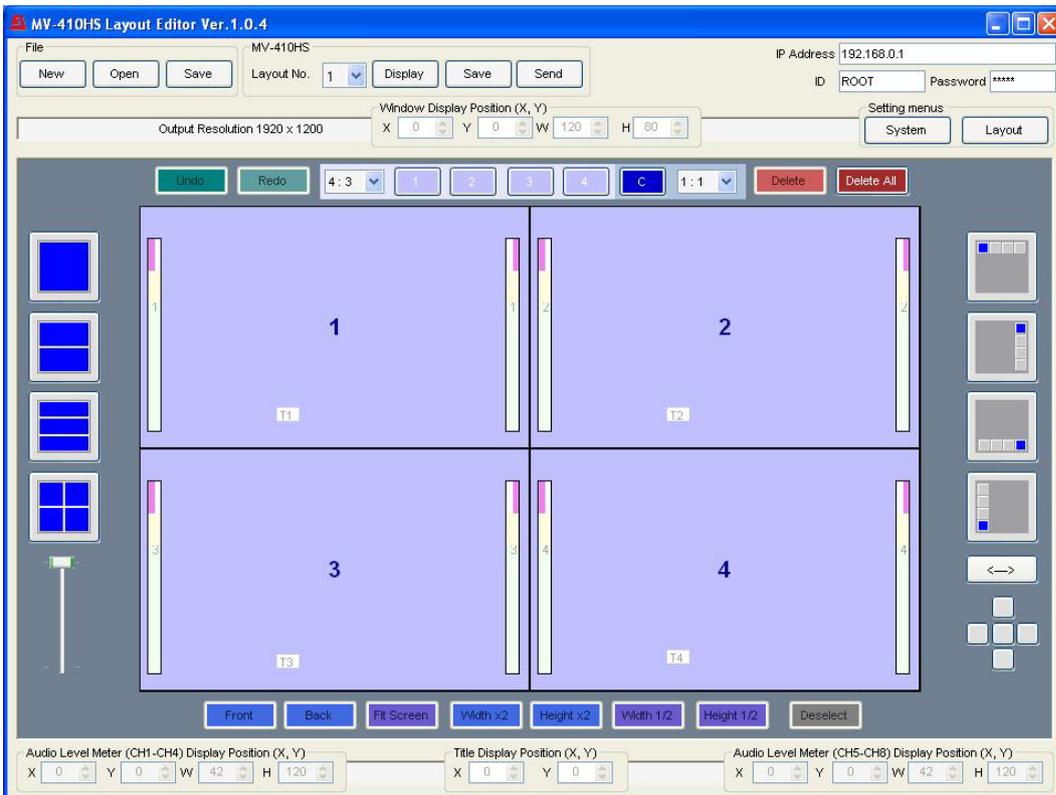


## 4-2-2. Loading Existing Layout

To edit a layout in MV-410HS, first select a layout number from the **Layout Number** drop-down list in MV-410HS in the main screen.



The layouts of the layout numbers 1-4 correspond to the layouts of the **1-4** VIDEO SELECT buttons on the front panel of MV-410HS. Selecting a layout loads and displays the layout in the layout editing area as shown below. Edit the layout. (See section 4-3 “Editing Layouts” for details.) Clicking the **Display** button displays the layout selected in the **Layout Number** drop-down list on MV-410HS output screen.



If the editing layout and the layout output from MV-410HS matches, users can easily check the layout, since the changes in the layout editing area are applied to MV-410HS in real-time.

### NOTE

The output resolution can only be selected when creating a new layout. The resolution of the layout loaded from MV-410HS or the layout stored in the computer cannot be changed.

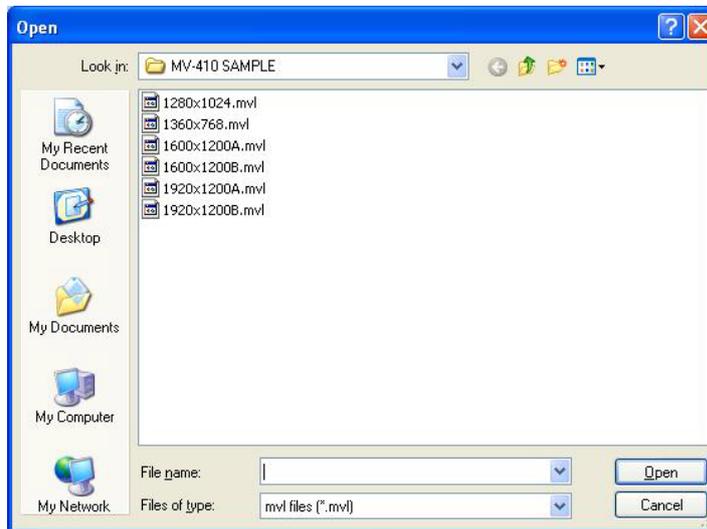
## 4-2-3. Opening Saved Layout

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(1) To edit the layout saved on the computer, click the **Open** button in **File**.



(2) Selecting a layout file and clicking **Open** opens the layout.



### NOTE

The output resolution can only be selected when creating a new layout. The resolution of the layout loaded from MV-410HS or the layout stored in the computer cannot be changed.

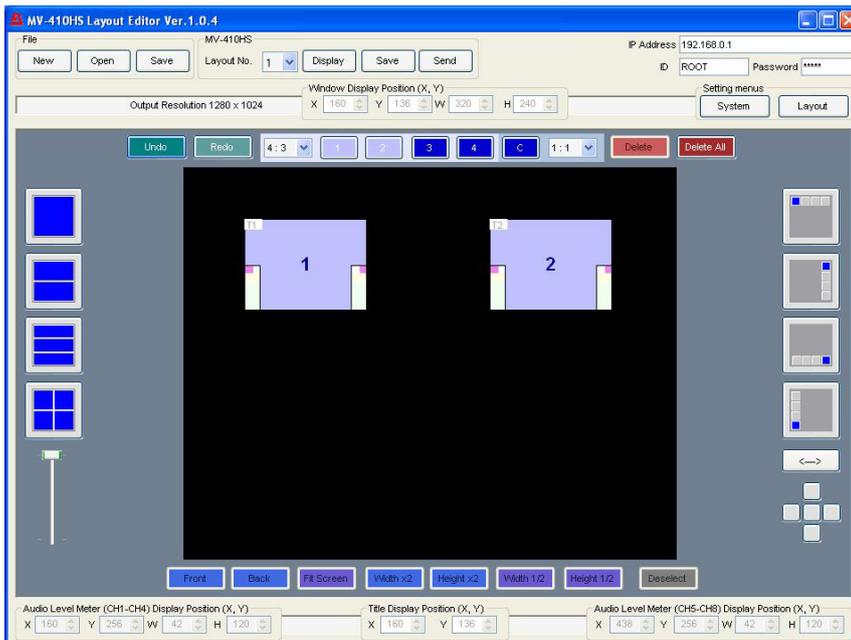
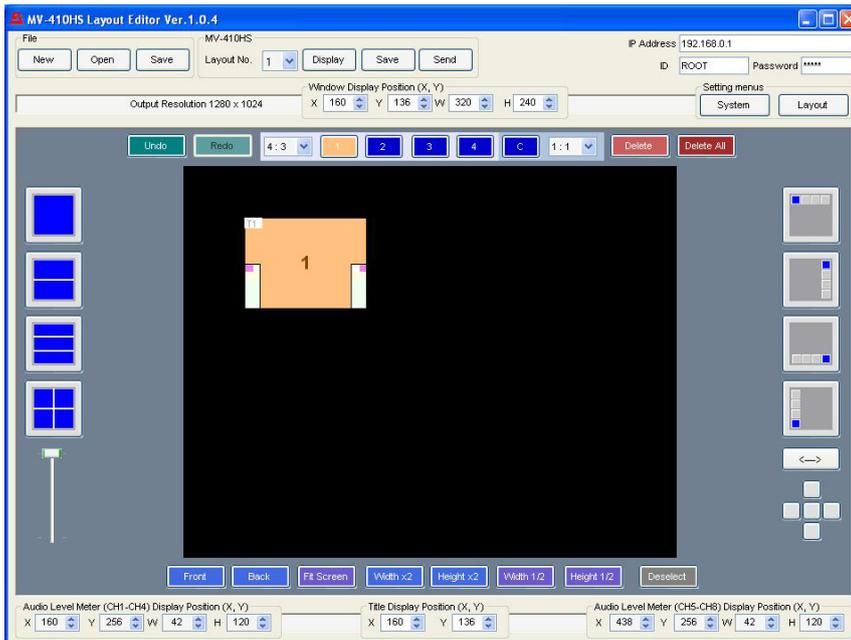
## 4-3. Editing Layouts

### 4-3-1. Adding Windows

Windows can be added using the buttons **1**, **2**, **3**, **4**, and **C**.



Clicking the button of window that is not displayed in the layout editing area adds the window to the layout editing area. Up to four video windows and one clock window can be added.

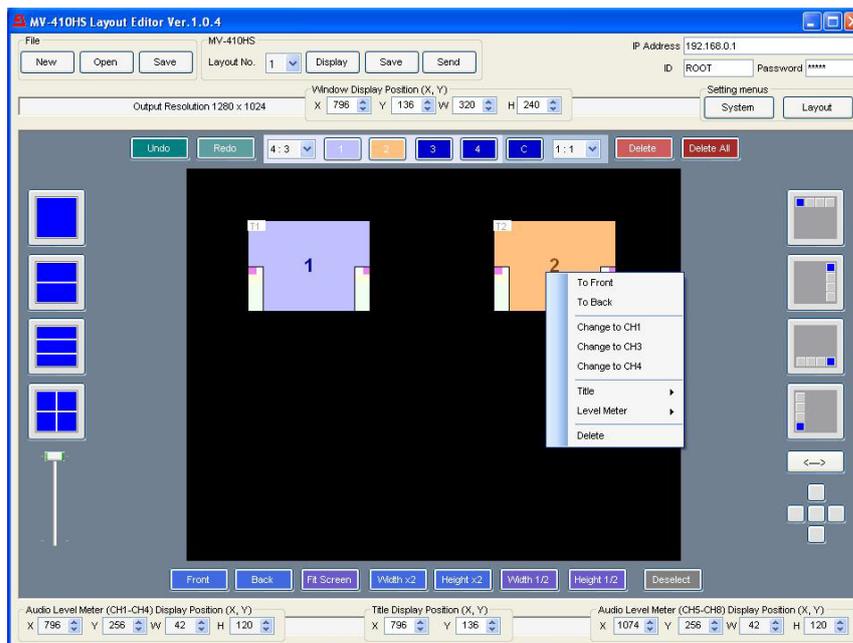


## 4-3-2. Deleting Windows

To delete a window, select a window and click **Delete**. To delete all windows in the editing are, click **Delete All**.

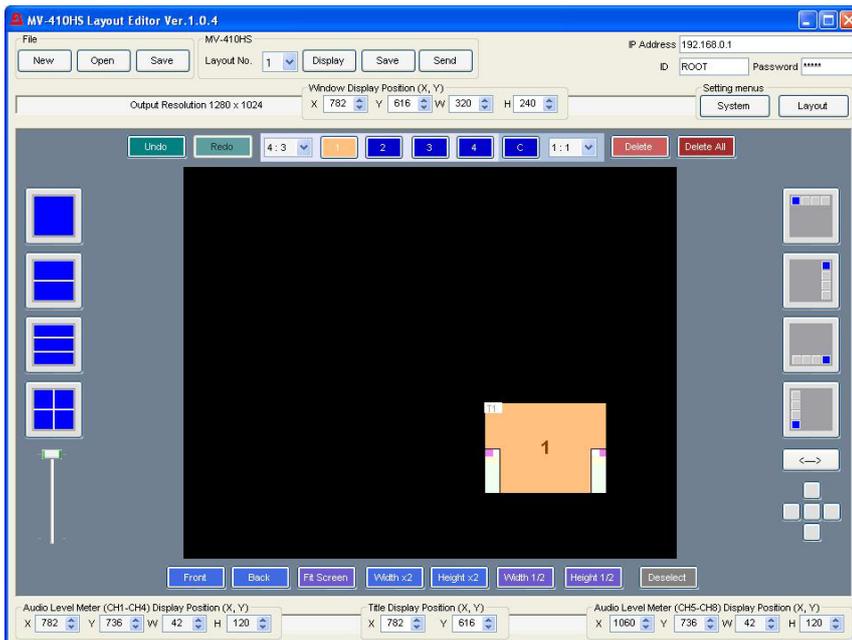
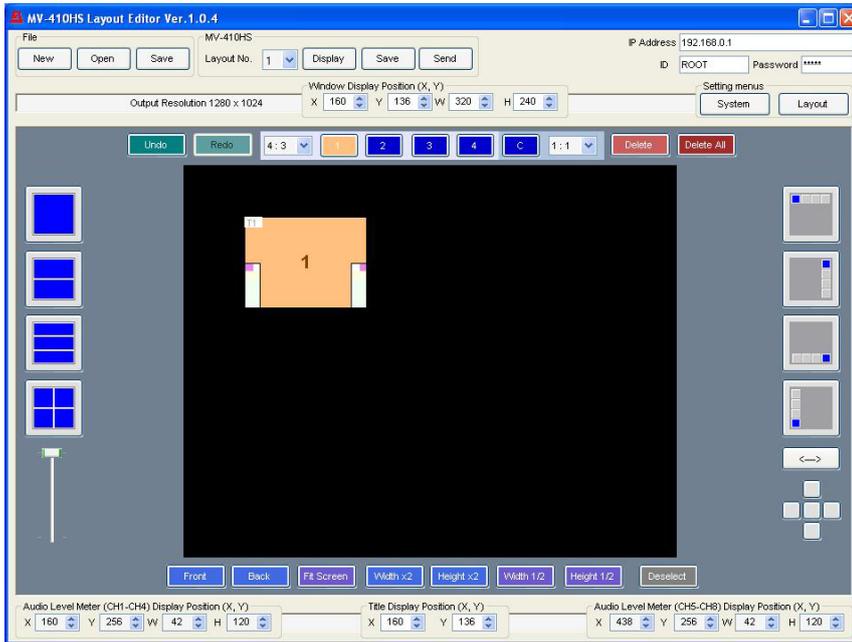


A window can also be deleted by selecting a window and choosing **Delete** from the right-click menu.



## 4-3-3. Moving Window

To move a window, drag the window to the desired position and release the mouse button.



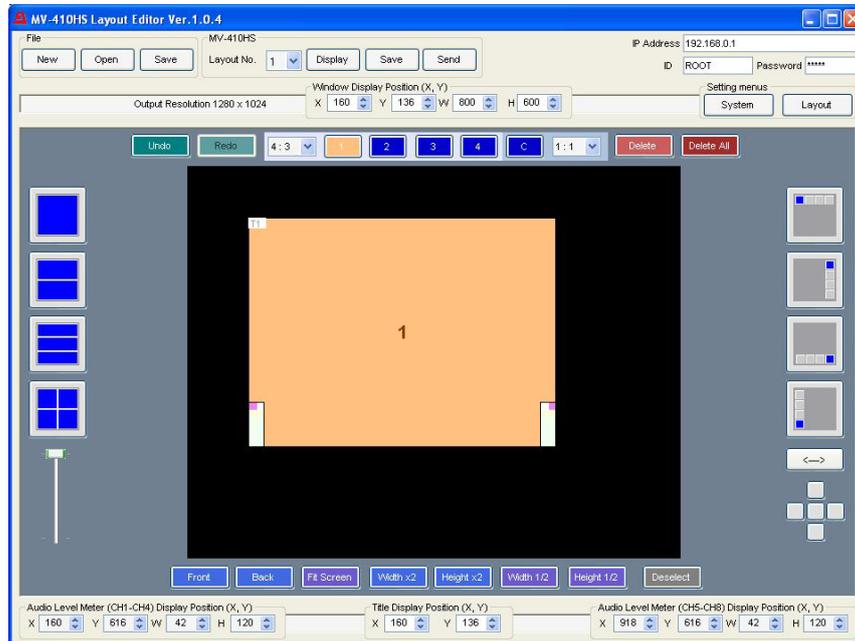
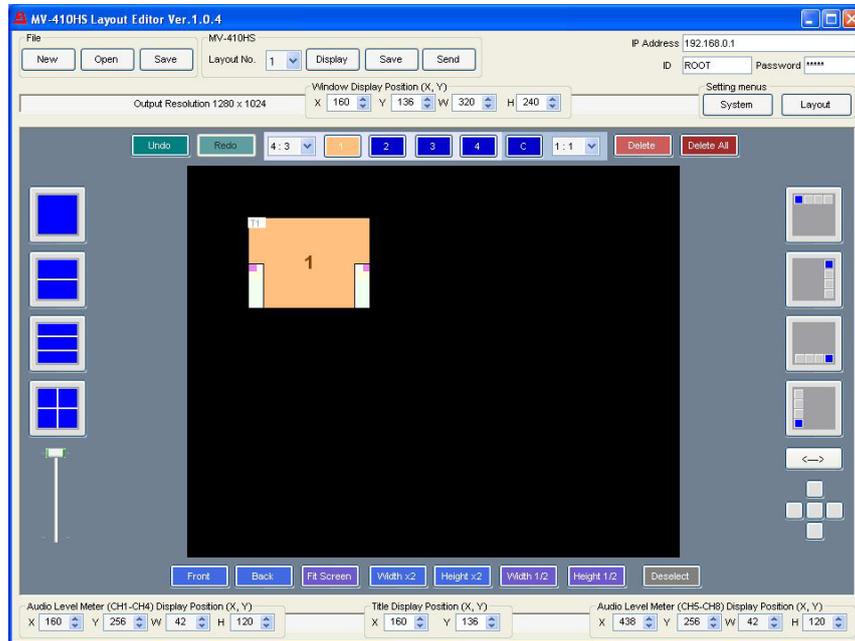
A window can also be moved by changing the numeric values in **X** and **Y** at the top of the edit window or using the arrow keys on the keyboard. (Select the window first.) Only one window can be moved at a time.

### NOTE

When a window is moved, its title and audio level meters also move along with the window. The title and audio level meters located outside the window move inside if they are reached to the edge of the edit screen.

## 4-3-4. Setting Window Size

To change the window size, drag the edge of the window until the desired window size is obtained and release the mouse button. The window size can also be adjusted by selecting a window and changing the numeric values in **W** and **H**.



If **Aspect Ratio** is set to other than **Free**, the size can be adjusted while retaining the aspect ratio.



The window size can also be changed by clicking the **Fit Screen**, **Double Width**, **Double Height**, **Half Width**, and **Half Height** buttons.

The actual video display is within the area left after the removal of areas for tally and border displays from the set window size.

## NOTE

- The minimum window size is 120 (W) x 80 (H). However, due to the minimum video display area requirement of 96 (W) x 56 (H), the border width will be automatically reduced to obtain the display area.
- How a video signal is displayed in each window in **Split Screen Display Mode** differs depending on the **Display Mode** in **System Setting**.

### If MODE1 or MODE2 is selected

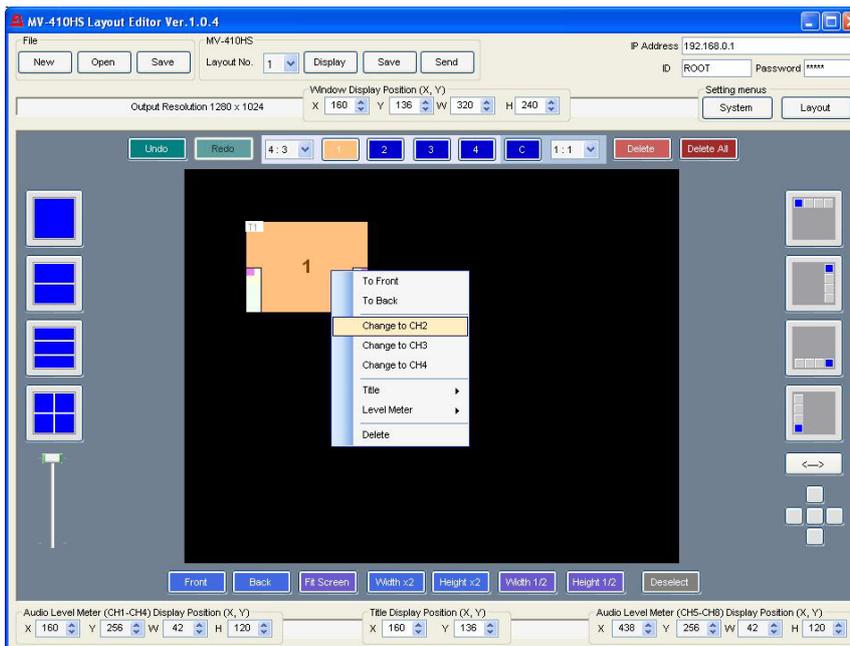
Auto detects the aspect ratio of the input video signal and maximizes the image to best fit the window while retaining the aspect ratio.

### If MODE3 is selected

Maximizes the image to best fit the window. The aspect ratio of the input signal is not retained.

## 4-3-5. Changing Channel of Window

To change the display channel of a window, select the window and right-click to display the menu. From the right-click menu, choose a channel.



## NOTE

Displaying the video signal of the same channel to multiple windows is not possible. If the channel that is already existed in the layout editing area is chosen, the window (channel) numbers will be exchanged.

## 4-3-6. Changing Layer Order of Windows

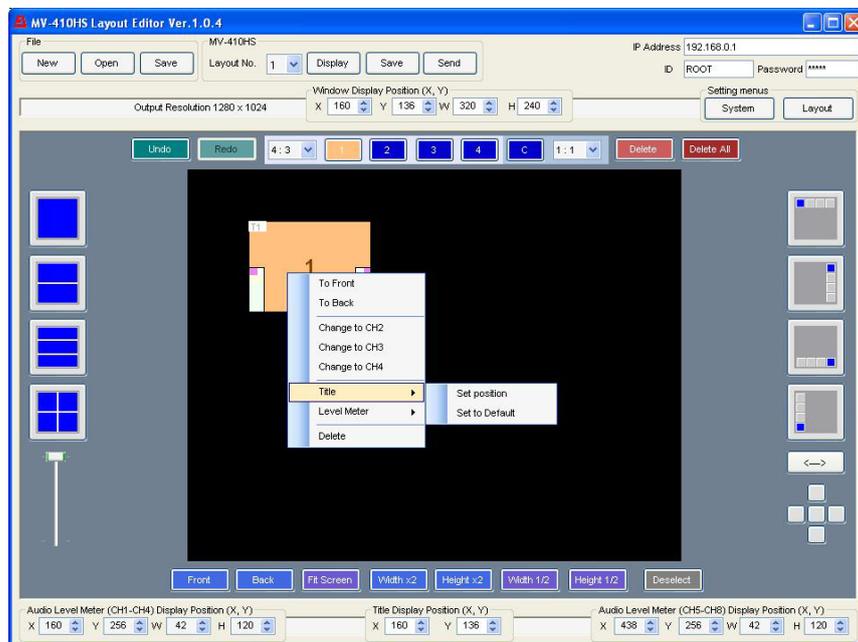
To change the layer order of overlapped windows, follow the instruction below.

First select a window you wish to change the layer order. To bring the window to the front, click **Front**. To send the window to the back, click **Back**. The layer order can also be changed by selecting a window and choosing **To Front** or **To Back** from the right-click menu.



## 4-3-7. Changing Display Position of a Title

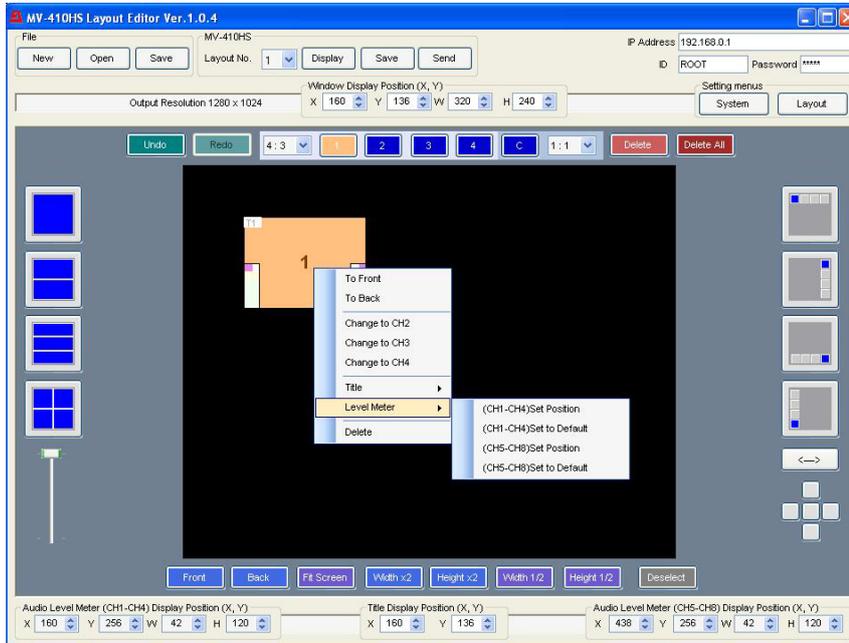
To change the display position of a title, select the window of the title that you wish to move and choose **Title > Set Position** from the right-click menu. The title moves along with the cursor as you drag the mouse. Move the cursor to the desired position and click the left mouse button. The display position of a title can also be adjusted by selecting a title and changing the numeric values in **X** and **Y** at the bottom of the edit window.



To reset the display position of the title to the default value, choose **Title > Set to Default** from the right-click menu.

## 4-3-8. Changing Display Position of Audio Level Meters

To change the display position of the audio level meters, select the window of the audio level meters that you wish to move and choose **Level Meter > (CH1-CH4) or (CH5-CH8) Set Position** from the right-click menu. The audio level meters move along with the cursor as you drag the mouse. Move the cursor to the desired position and click the left mouse button. The display position of the audio level meters can also be adjusted by selecting the audio level meters (CH1-CH4) or (CH5-CH8) and changing the numeric values in **X** and **Y** at the bottom of the edit window.



To reset the display position of the audio level meter to the default value, choose **Level Meter > (CH1-CH4) or (CH5-CH8) Set to Default** from the right-click menu.

## 4-4. Saving Layout to MV-410HS

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Once the connection between MV-410HS and Layout Editor is established, the changes of the layout are applied real-time to MV-410HS. However, since the changes are not backed up to the memory, unsaved changes will be lost when MV-410HS is powered off. To save changes to MV-410HS, click the **Save** button in **MV-410HS** in the main screen.



## 4-5. Saving Layout as File on Computer

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To save the created layout as a file on the computer, click the **Save** button in **File** and give a desired name. The saved file can be loaded by clicking the **Open** button in **File**.



## 4-6. Closing MV-410HS Layout Editor

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To close the application, Click  at the top-right corner of the screen.

# 5. Displaying Layout on MV-410HS Output

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## 5-1. MV-410HS

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Pressing the **SPLIT** button on the front panel of MV-410HS and pressing either of **1**, **2**, **3**, or **4** button displays a pattern of four patterns preset in MV-410HS Layout Editor.

## 5-2. MV-410HS Layout Editor

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Choose a layout number from the **Layout Number** drop-down list and press the **Display** button.

