FOR.A®

INNOVATIONS IN VIDEO
and AUDIO TECHNOLOGY

Tutorial

MV-410HS Layout Editor (Ver.2.0-higher)

1. Before Starting

There are different ways to start editing output screen layout using the MV-410HS Layout Editor. Loading an installed layout from the MV-410HS. Creating a new layout with the MV-410HS layout Editor in offline mode. Or you can recall the patterns installed in the MV-410HS Layout Editor. You can also store the edited layout to MV-410HS memory or PC to use or edit repeatedly. Let's start with loading a layout from MV-410HS.

2. Loading Layout from MV-410HS

1) Complete the system setup and start the MV-410HS Layout Editor.
   After the application is started, the main screen is displayed. Enter the IP address, ID, and password.
   The default settings are as below.
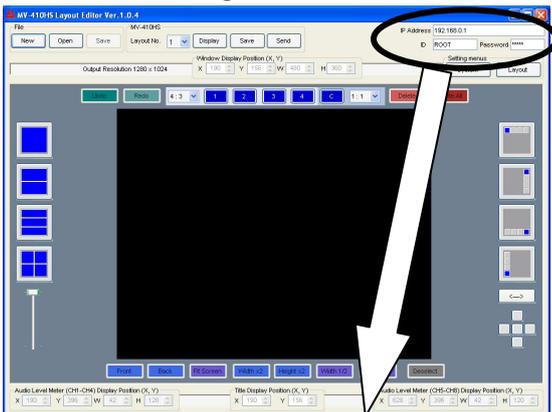
IP Address 192.168.0.1
ID ROOT Password *****

   Password: 00000

   If the entered IP address, ID or password is not correct, the error indication appears as below. Correct the error.
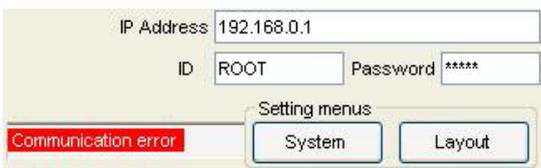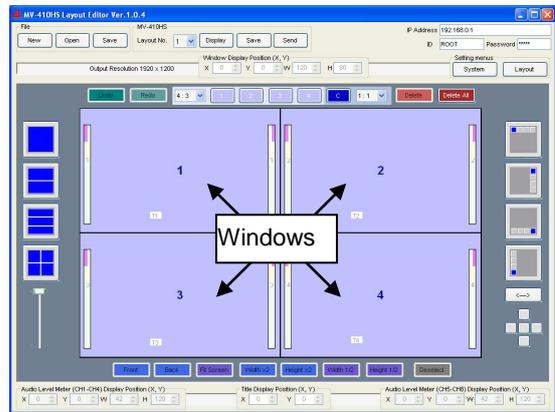

2) Select a layout number in the drop-down menu at the top of the main screen.

Layout numbers 1 to 4 are available. Each number displays a different layout in the layout editing area.

Choose number 1 and go to the next step. The screen appears as below.

3) Click **Display** at the right of the **Layout No**. box to display the monitor screen in the same layout.

3. Adding/Deleting Windows

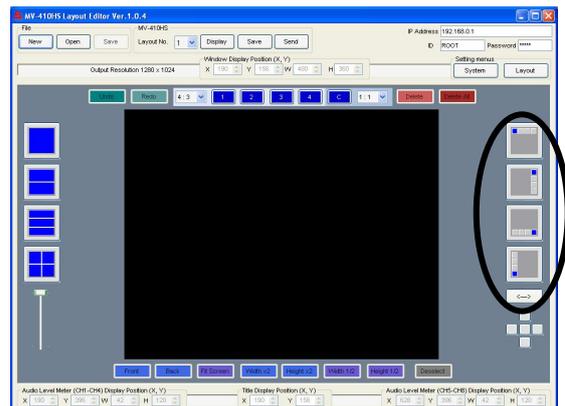## Adding Windows

There are two different ways to add windows.

1. Using **1**, **2**, **3**, **4** and **C** buttons above the layout editing area.
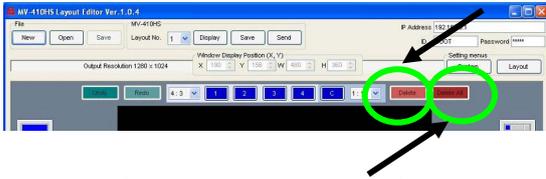

2. Using the icons at the right side of the layout editing area to add four 1/16 size windows.
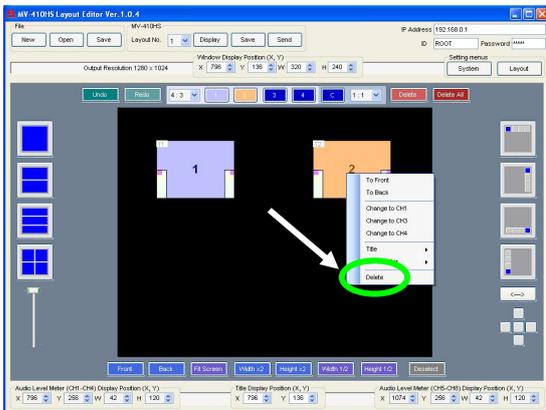
Deleting Windows

There are three different ways to delete windows.

1. Selecting the window to delete and clicking **Delete** next to the **1**, **2**, **3**, **4** and **C** buttons.

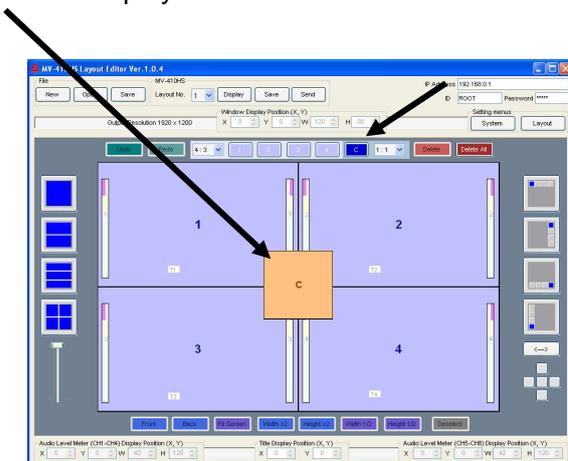**2.** Clicking **Delete All** next to the **Delete** to delete all windows.

3. Choosing **Delete** from the right-click menu of the selected window.

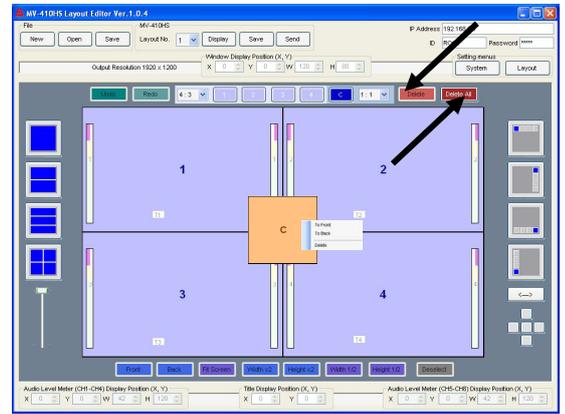

Let's add and delete windows.
At first, add the clock window.

Click the **C** among the **1**, **2**, **3**, **4** and **C** buttons right above the layout editing area. The clock window is displayed.

Now, delete the clock window.

Move the pointer to the clock window, and click **Delete** next to the **C**, or select **Delete** from the right-click menu.

Let's click **Delete All** next to **Delete**. All windows are deleted.

Click **1**, **2**, **3**, and **4** one by one to display four windows again.

Click **Delete all** again. All windows are disappeared.
Now, click **Undo**. The last operation is cancelled and all windows appear again.
Now, click **Redo**. The cancelled operation is reapplied and all windows disappear again.

Let's add windows using the icons at the right of the layout editing area. Clicking these icons will add four 1/16 size windows. In each icon there is one window in different color. The different color is indicating where the windows are lined up from. The arrow button under the icons reverses the direction.

Now, click any one of the icons to display four windows.
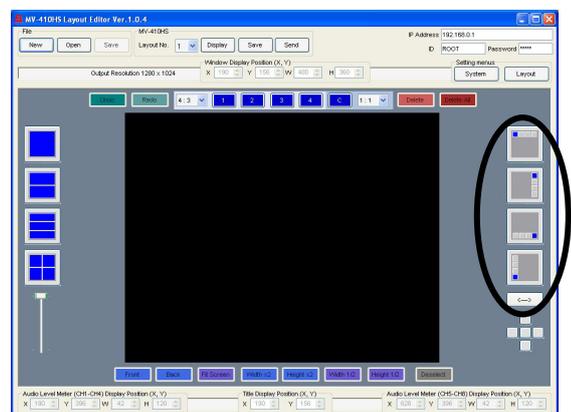
4. Changing Window Size and Layer Order

Changing Window Sizes

There are three different ways to change window sizes.

1. Dragging the edge of the window to the desired window size and releasing the mouse button. If **Aspect Ratio** is set to **Free** in the drop-down list at the left of the window buttons, the window size is freely changed regardless of the aspect ratio. If you want to retain the aspect ratio, set as below according to the used format.
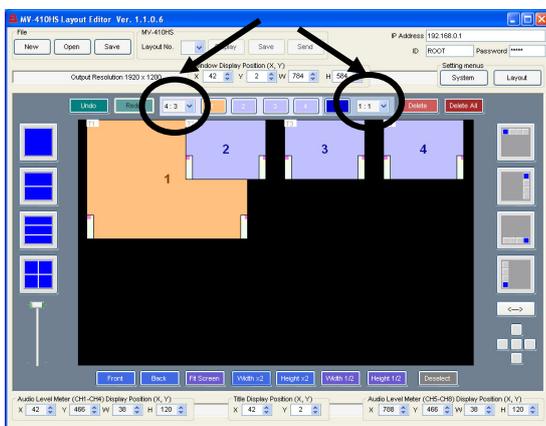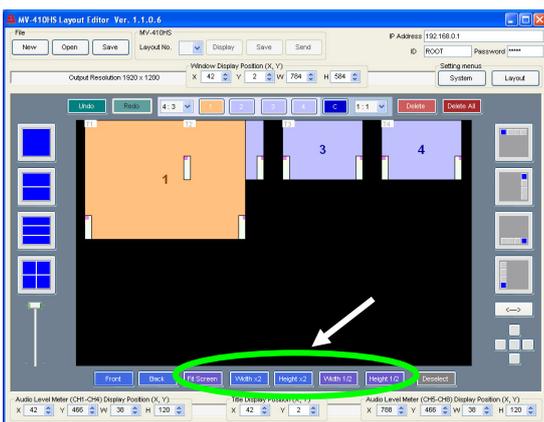

16:9	HD signal
4:3	SD signal
1:1	Clock window (Set in the box at the right of window buttons)
Free	Free of aspect ratio

2. Using the **Fit Screen**, **Double Width**, **Double Height**, **Half Width**, and **Half Height** buttons under the layout editing area.
To do this, select the window to change size first, and then click the suitable button.

3. Changing the numeric values in **W** and **H** above the window buttons.
To do this, select the window first, and change the value. Clicking the spin button arrows in the box will change the value by 8 pixels. Changing by 8 pixels may slightly affect the aspect ratio.
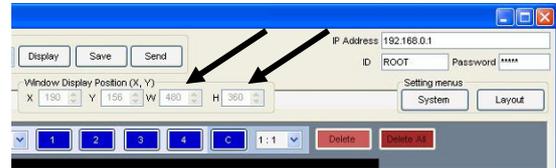

Let's enlarge the window 1 (the window number is indicated in the window) and other windows .

■ 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.

■ Video display in **Split Screen Display Mode** differs depending on the **Display Mode** in **System Setting**.

If MODE1 or MODE2 is selected:

Detects 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.

Changing Layer Order of Windows

The enlarged windows are now overlapped. Let's change the layer order for the windows.

First select a window to change the layer order, then click **Front** to bring the window to the front, or click **Back** to send the window to the back. You can also change the layer order by selecting **Front** or **Back** from the right-click menu of the selected window.
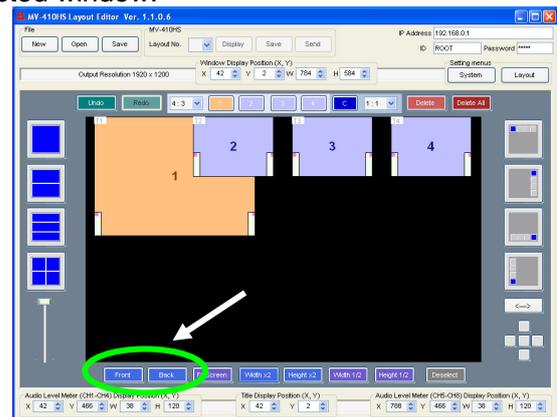
Now, reduce the size of all windows to about the previous 1/16 size to go to the next step "Moving Window".

5. Moving Window

There are three ways to move windows.

1. Drag and Drop by the mouse.
Drag the window to the desired position and release the mouse button.

2. Changing the numeric values in **X** and **Y** at the top of the layout editing window.
X is the horizontal coordinate. The base point is the left edge of the window.
Y is the vertical coordinate. The base point is the top edge of the window.
Each increment/decrement of **X** or **Y** value moves the position by two pixels.

3. Using the five buttons placed in a cross shape under the icons at the right of the layout editing area.
Each button instantly moves 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.
(The figure below is showing the case when the window2 is moved to right next to the window1.)
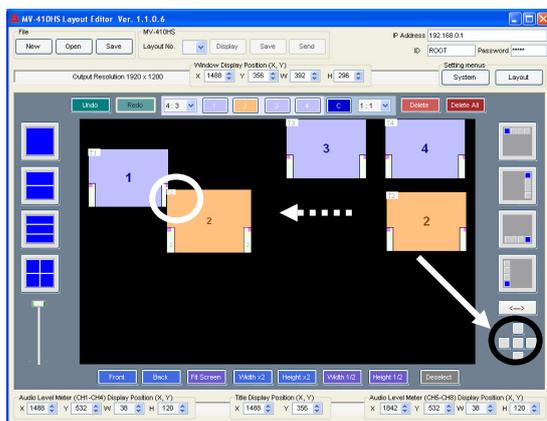
6. Changing Assigned Channel of Window

Let's change a channel displayed in a window. First, select a window to change its channel, then select the desired channel from the right-click menu.
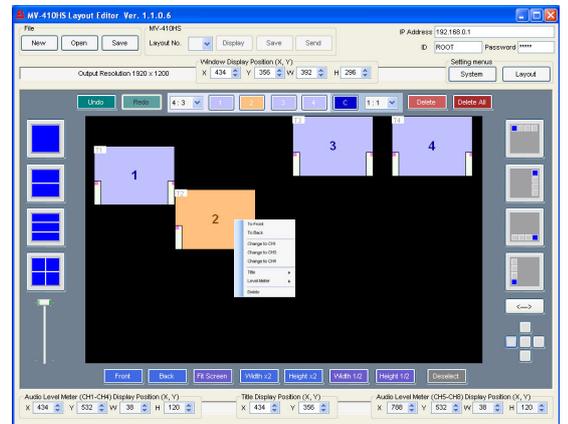
If the channel already assigned to other window is chosen, the window (channel) numbers will be exchanged. You cannot display the same channel in multiple windows.
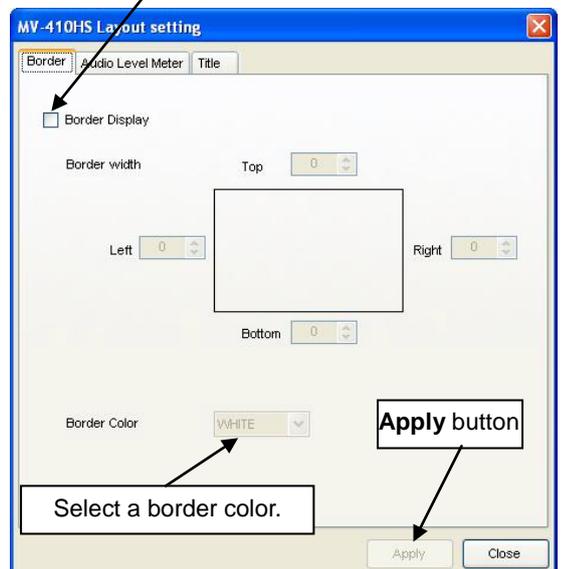
7. Adding Border

The settings for border display can be made in the **Border** page of **Layout Setting** dialog box.

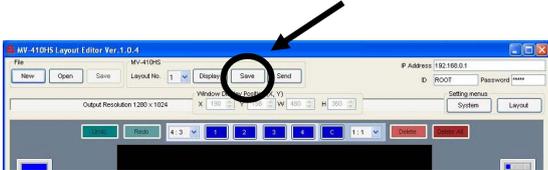1) Click **Layout Setting** in the main screen to display the **Layout Setting** dialog box.

2) Open the **Border** page.

Put a check to display a border.

Select a border color.

Apply button

3) Set width for each border line in the range from 0 to 50. One unit of the value in the setting box changes the width by 2 lines or 2 pixels.

4) Click **Apply** to apply the settings.

5) Save the settings in MV-410HS to avoid the settings to be lost when the MV-410HS is powered off. To do this, click **Close** to go back to the main screen. Then click **Save** shown below. (It is recommended to do this after completing all other settings.）
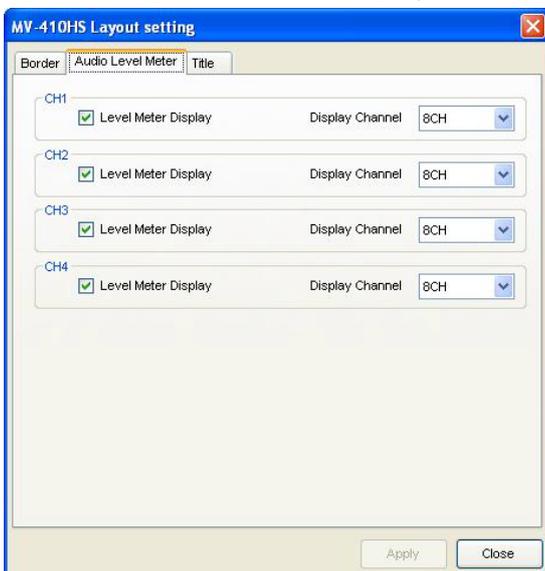

8. Audio Level Meter

Adding Audio Level Meter

The settings for Audio Level Meter display can be made in the **Audio Level Meter** page of **Layout Setting** dialog box.

1) Click **Layout Setting** in the main screen to display the **Layout Setting** dialog box. (To make the audio level meter settings for full screen display, go to the **Full Screen** page of **System Setting** dialog box.)


2) Open the **Audio Level Meter** page.

3) Put a check for each channel you want to display audio level meter, and select how many audio channels to display in the **Display Channel** box at the right. You can choose from 2CH, 4CH, and 8CH. These settings are made for channels not for windows.

4) Click **Apply** to apply the settings.

5) Save the settings to MV-410HS to avoid the settings to be lost when the MV-410HS is powered off. To do this, click **Close** to go back to the main screen. Then click **Save** shown below. (It is recommended to do this after completing all other settings.）

Moving Audio Level Meter

There are two ways to move audio level meter.

1. First, select the window to move the level meter of in the main screen, then 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.
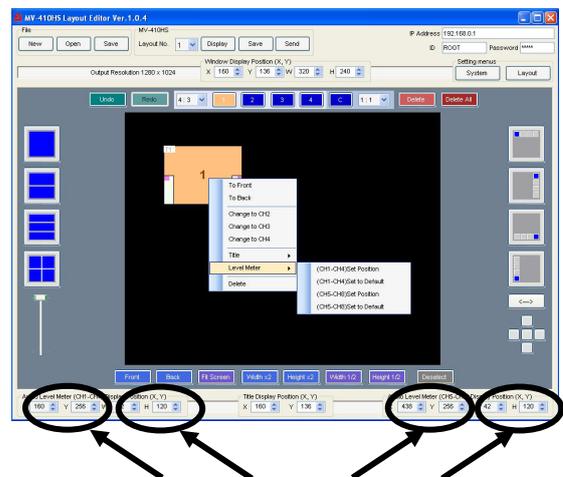
2. Select the window to move the level meter of, and change the numeric values in **X** and **Y** of **Audio Lever Meter (CH1-CH4)** or **(CH5-CH8)** at the bottom of the edit window.

9. Titles

Adding Titles

The settings for Title display can be made in the **Title** page of **Layout Setting** dialog box.

1) Click **Layout Setting** in the main screen to display the **Layout Setting** dialog box. (To make the title display settings for full screen display, go to the **Full Screen** page of **System Setting** dialog box.)


2) Open the **Title** page.

Enter the title to display.

Select a text size of title.

Select a color of title.
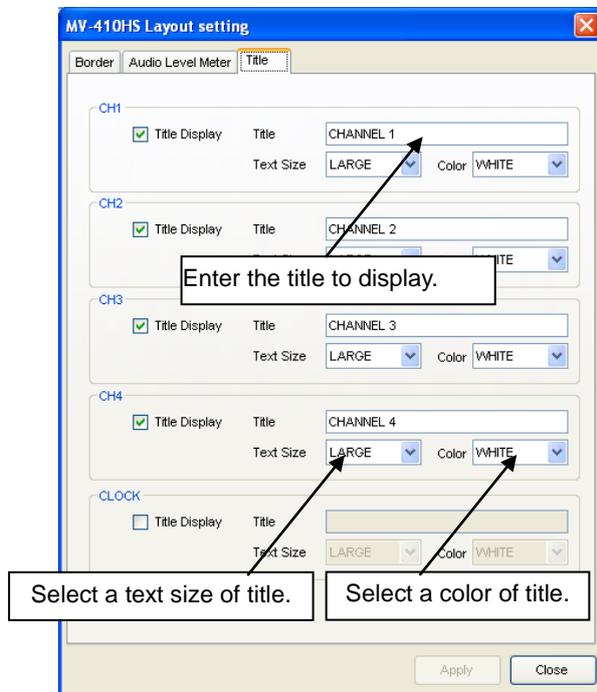
3) Put a check for each channel or the clock window you want to display a title. The channel numbers in this page represent channels not windows.

4) Enter the title to display (up to 16 characters), select a text size from **LARGE**, **MEDIUM**, and **SMALL**, and select a color for the title from **WHITE**, **YELLOW**, **GREEN**, **CYAN**, **RED**, **MAGENTA**, **BLUE**, **GRAY** and **BLACK**.

5) Click **Apply** to apply the settings.

6) Save the settings to MV-410HS to avoid the settings to be lost when the MV-410HS is powered off. To do this, click **Close** to go back to the main screen. Then click **Save** shown below. (It is recommended to do this after completing all other settings.)
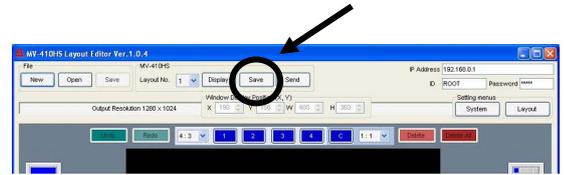
Moving Titles

There are two ways to move titles.

1. Select the window to move the title of in the main screen 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.
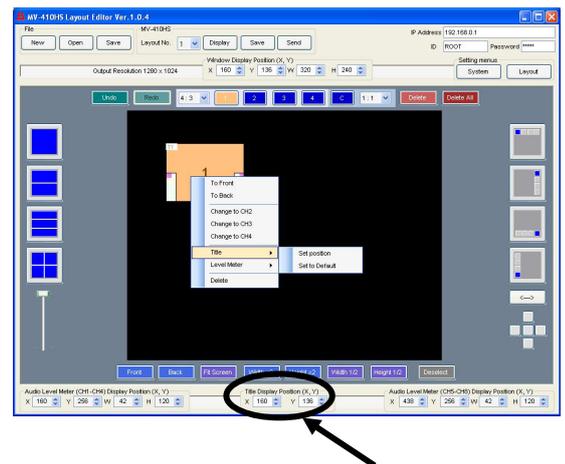

2. Select the window to move the title of, and change the numeric values in **X** and **Y** of **Title Display Position** at the bottom of the edit window.
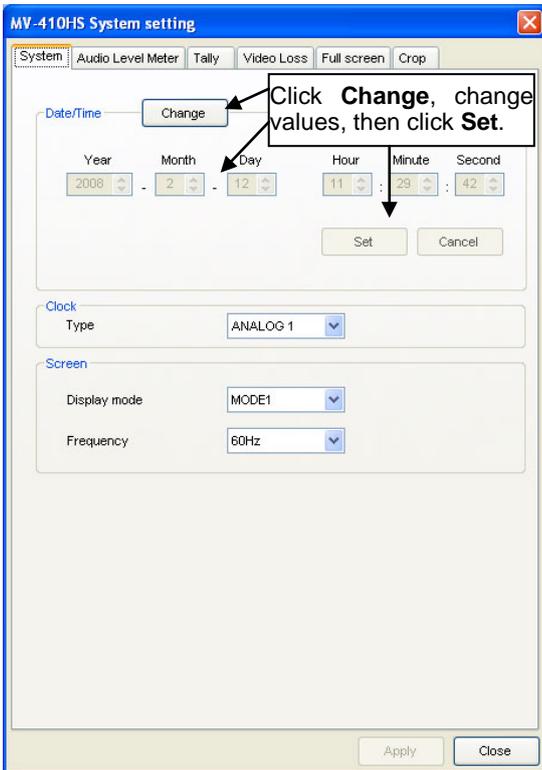
10. Clock / Display Mode

The settings for time adjustment, clock type of clock display and display mode regarding with aspect ratio can be made in the **System** page of **System Setting** dialog box.

1) Click **System Setting** in the main screen to display the **System Setting** dialog box.

2) Open the **System** page.
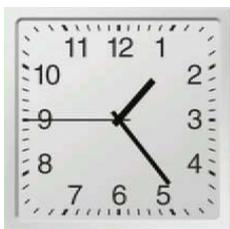

Click **Change**, change values, then click **Set**.
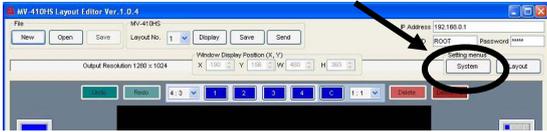
3) To adjust the date and time, in the Date/Time section, first, click **Change**, change the values, then click **Set**.

4) In the Clock section, select a clock type from **Analog1**, **Analog2**, **Digital1** and **Digital2**.

<Analog1>   **<Analog2>**

<Digital1>   **<Digital2>**

5) In the Screen section, select a display mode and a frequency.

Display Mode for
[Full Screen Display]
MODE1: Displays the title and audio level meters without overlapping on the video image while retaining the aspect ratio.
MODE2: Overlaps the title and audio level meters on the video image while retaining the aspect ratio.
MODE3: Maximizes the image to best fit the window. The aspect ratio of the input signal is not retained. The title and audio level meters are overlapped on the video image.

[Split Screen Display]
Titles and audio meters can be freely positioned.
In **MODE1** and **MODE2**, the aspect ratio of input signal is retained.
In **MODE3**, the images are maximized to best fit the window regardless of the original aspect ratio.

Output Frequency
Horizontal frequency can be selected from 60Hz, 59.94Hz or 50Hz for output.

E.g.) Selecting 50Hz for the 1080/50i input signal can reduce judder.

6) Click **Apply** to apply the settings.

7) Save the settings to MV-410HS to avoid the settings to be lost when the MV-410HS is powered off. To do this, click **Close** to go back to the main screen. Then click **Save** shown below. (It is recommended to do this after completing all other settings.）
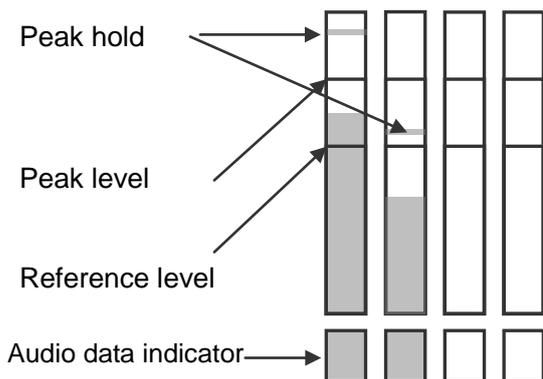
11. Other Settings in System Dialog Box

Audio Level Meter Setting

In the **Audio Level Meter** page, the reference level, peak level and peak hold time can be set to keep audio signals at the best level.
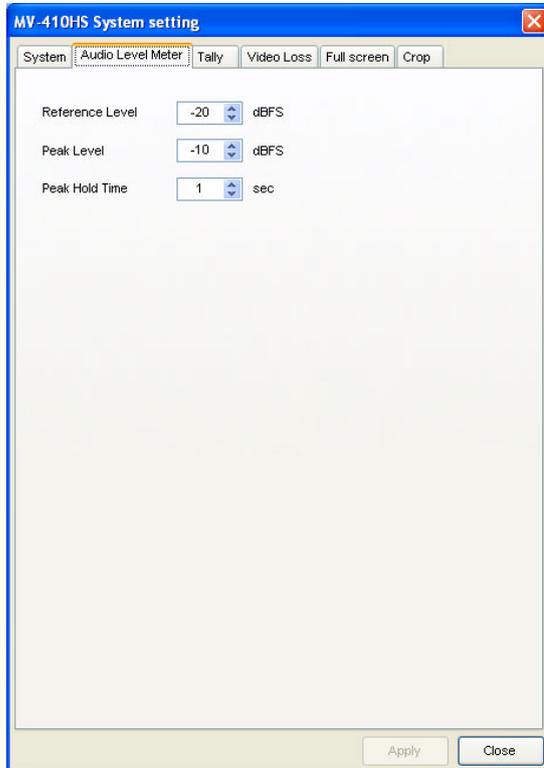

The audio level meter appears as below. The audio level above the reference level is displayed in yellow, and it of above the peak level is displayed in red.

Tally Setting

In the **Tally** page, the tally detection On or Off can be set, and also a tally color for the simultaneous receipt of red and green tally signals can be selected from red and umber.

To enable tally detection, set the tally signal input to the TALLY IN/REMOTE connector on the rear of MV-410HS.
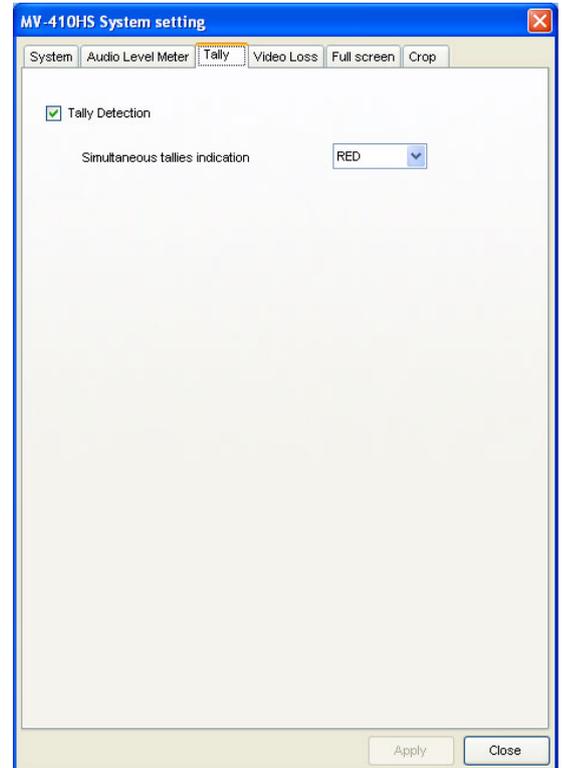
After completing the settings, click **Apply** to apply the settings to the layout.

Click **Close** to go back to the main screen, and then click **Save** to save the settings in MV-410HS to avoid the settings to be lost when the MV-410HS is powered off.

(It is recommended to do this after completing all other settings.)

Video Loss Setting

In the **Video Loss** page, there are check boxes for each channel. To enable the video loss detection, put a check in the box for each channel. There also is the Alarm display time setting box to set how long to display the alarm. The setting range is from 0 second to 100 seconds.
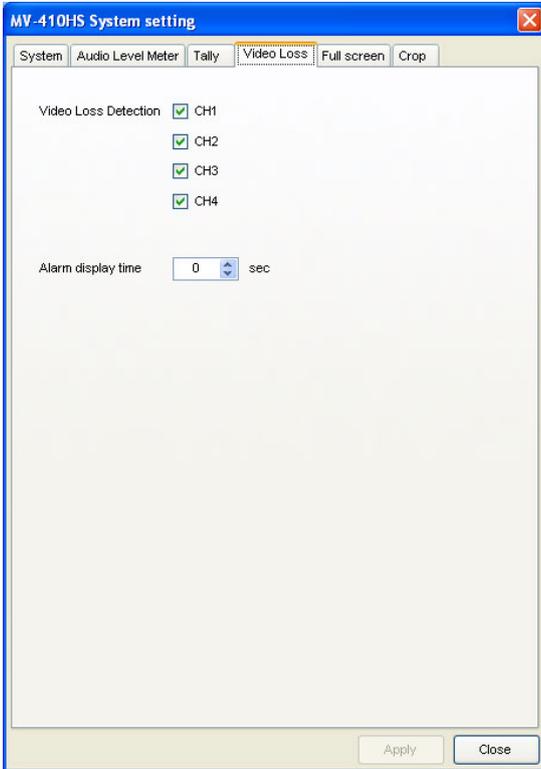

Alarm appears as below.

After completing the settings, click **Apply** to apply the settings to the layout.

Click **Close** to go back to the main screen, and then click **Save** to save the settings in MV-410HS to avoid the settings to be lost when the MV-410HS is powered off.

(It is recommended to do this after completing all other settings.)

Full Screen Setting

In the **Full Screen** page, Output resolution, level meter display and title display for full screen display can be set.

The output resolution can be selected from the following 8 options in the pull-down menu.
1280 x 1024, 1360 x 768, 1600 x 1200, 1920 x 1200, 1440 x 900, 1680 x 1050, 1920 x 1080, 1280 x 720
The audio level meter display and the title display can be set for each channel respectively.
The number of audio channels to display can be selected from 2CH, 4CH or 8CH.
Type the title in the **Title** setting box. Select the **Text size** from (Large, Medium, and Small). Select the **Color** from (White, Yellow, Green, Cyan, Red, Magenta, Blue, Gray and Black).
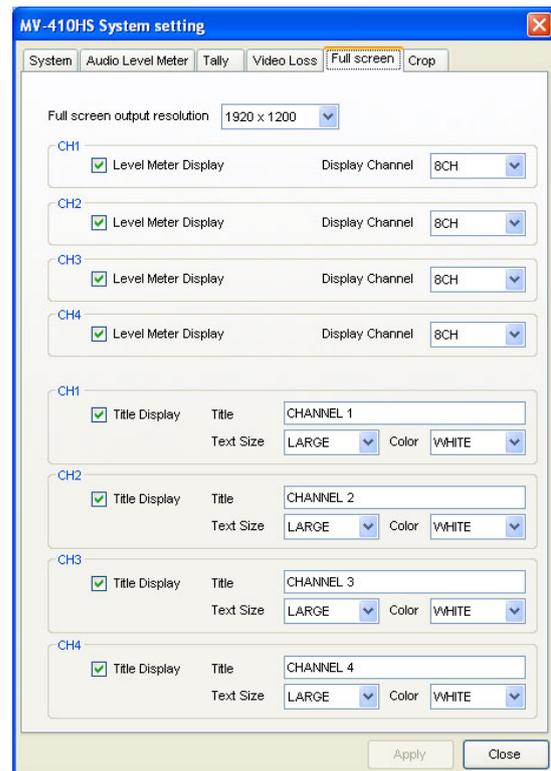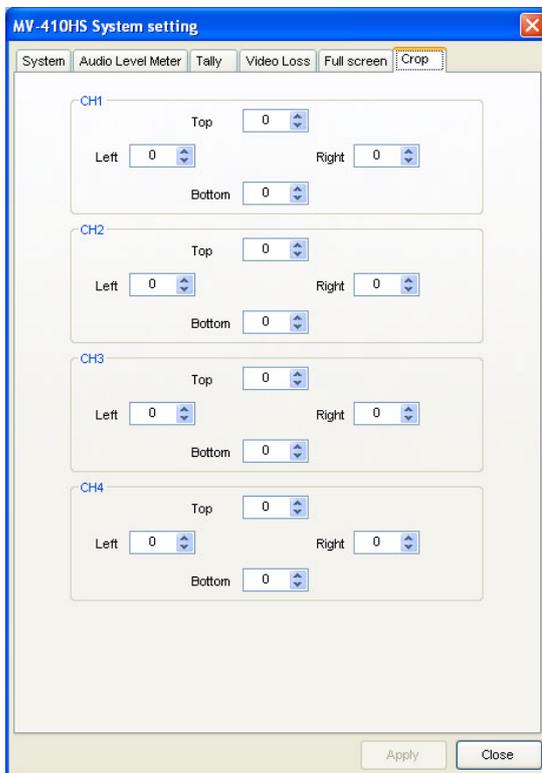

After completing the settings, click **Apply** to apply the settings to the layout.

Click **Close** to go back to the main screen, and then click **Save** to save the settings in MV-410HS to avoid the settings to be lost when the MV-410HS is powered off.

(It is recommended to do this after completing all other settings.)

Crop Setting

In the **Crop** page, the size to crop the image from each edge can be set. This is used to eliminate the black area produced by the 4:3 or 16:9 conversion to make the image to best fit the output screen without black area.

The value can be set for each side individually in the range of 0 to 120 by the unit of 4.

After completing the settings, click **Apply** to apply the settings to the layout.
Click **Close** to go back to the main screen, and then click **Save** to save the settings in MV-410HS to avoid the settings to be lost when the MV-410HS is powered off.
(It is recommended to do this after completing all other settings.)

12. Saving Layout

Saving to MV-410HS

To save the edited layout to the MV-410HS to use again, click **Save** in the MV-410HS section at the top center of the main screen.

Four layouts can be saved to the MV-410HS. If you want to save more layouts, save them to PC as described in the next section.

Saving to PC

To save the edited layout to a PC, click **Save** in the File section at the top left of the main screen, name the file and save. The saved file can be recalled by the **Open** in the same section.
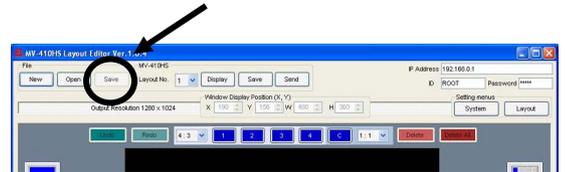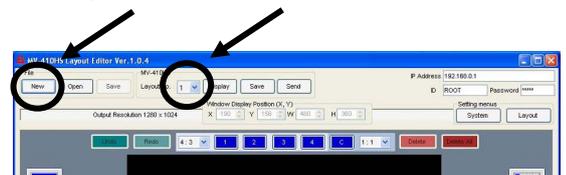

13. Creating New Layout

You can select output resolution for a new layout.

1) To create a new layout in offline mode, click **New** in **File** at the top of the main screen.
   To create a new layout by monitoring the layout on the monitor, select a layout number from **1 to 4** and click **New** in **File** at the top of the main screen.


2) If a layout number is selected, the message "Do you want to save changes to the layout before closing?" appears. Click **No**. Then the layout is closed. If there is any layout opened when you click **New**, the same message appears. If you want to keep the layout, save it as described in the previous section.

3) **Output Resolution** dialog box appears. Select a value and click **OK**.
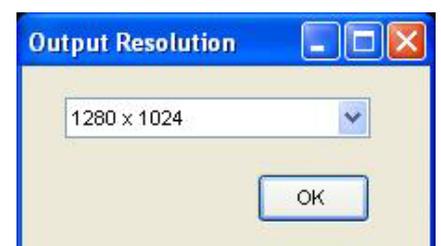
The editing procedures are the same as described in the previous sections. Save the layout as well.

14. Using Preset Patterns

MV-410HS Layout Editor has several preset patterns. The preset patterns can be easily recalled by the icons at the left of the layout editing area.
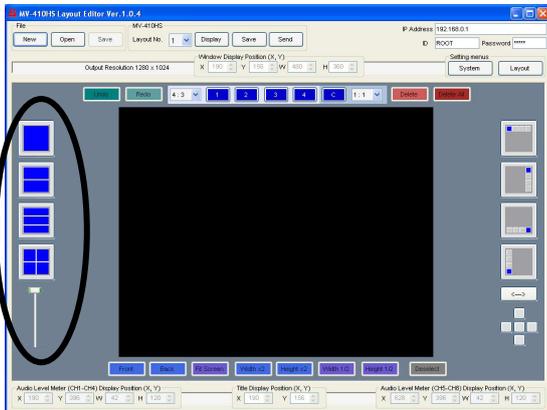
Clicking any one of full screen, two split screen, three split screen, and quad screen icons will display a layout in the layout editing area. Every screen icon except full screen icon has multiple patterns. Every click on the icon that has multiple patterns will show a different pattern. The displayed pattern can also be changed by the lever beneath the split screen icons. The number of installed patterns are as below;
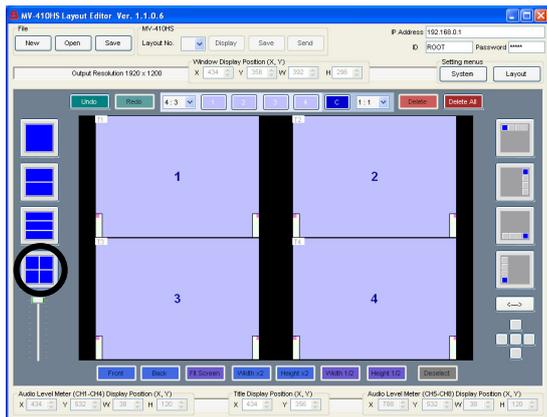
> 2 split screen: 2
> 3 split screen: 6
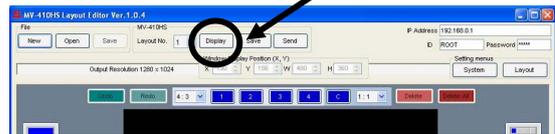> Quad screen: 11

15. Making Layouts

4 Same Size Windows (with Title, Border and out-of-window Level meters)

Displaying four same size windows.

1) Click the **Select Preset Pattern** icon to display four same size windows.

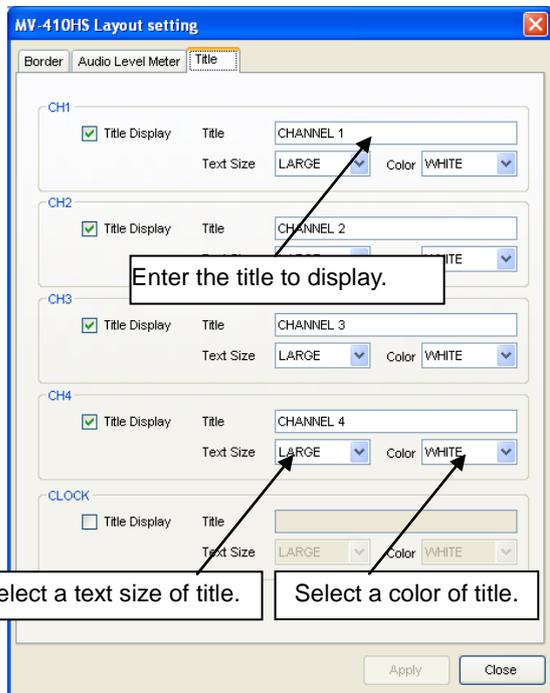2) Click **Display** at the right side of the **Layout No**. box to display the monitor screen in the same layout.

Displaying titles.

3) Click **Layout** at the top right of the main screen to open **Layout Setting** dialog box.

4) Open the **Title** page.

5) Select the **Title Display** check box, enter the title to display, and select the text size and color for each channel.

6) Click **Apply** at the bottom right of the dialog box to apply the settings to the layout.
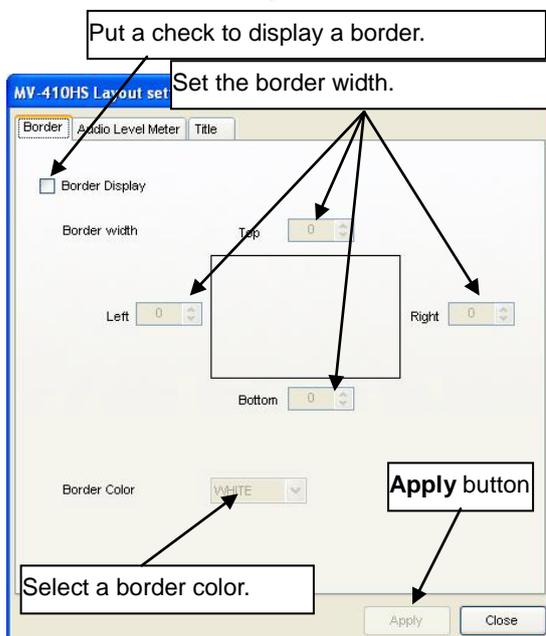
Displaying Audio Level Meters.

7) Open the **Audio Level Meter** page.
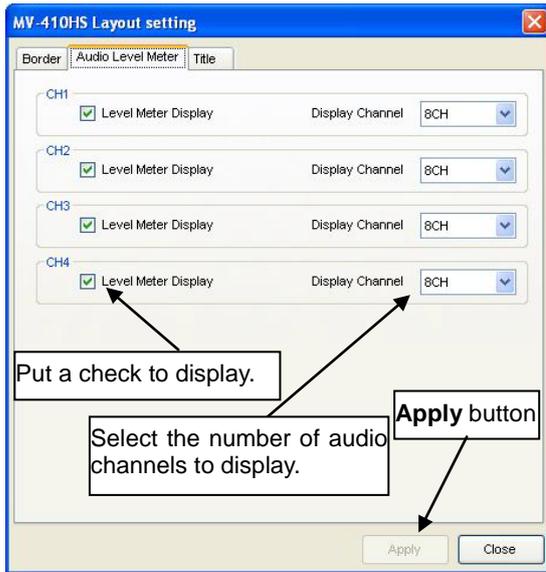
8) Select the **Level Meter Display** check box for each channel. Set the number of audio channels to display.

9) Click **Apply** at the bottom right of the dialog box to apply the settings to the layout.

Displaying Borders.

10) Open the **Border** page.

11) Select the **Border Display** check box, select a border color and set the width for each top, bottom, right and left border.

12) Click **Apply** at the bottom right of the dialog box to apply the settings to the layout.

13) Click **Close** next to the **Apply** to return to the main screen.

Moving Audio Level Meters out of image area.

14) In the main screen select the window to move the audio level meter of by the mouse, and choose **Level Meter > (CH1-CH4) 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. Do the same for the **(CH5-CH8)**.

15) To finely adjust the position, use the spin button arrows (1004) in the **X** and **Y** box under the layout editing area.

16) Click **Save** to save the settings to the MV-410HS to avoid the settings to be lost when the MV-410HS is powered off.

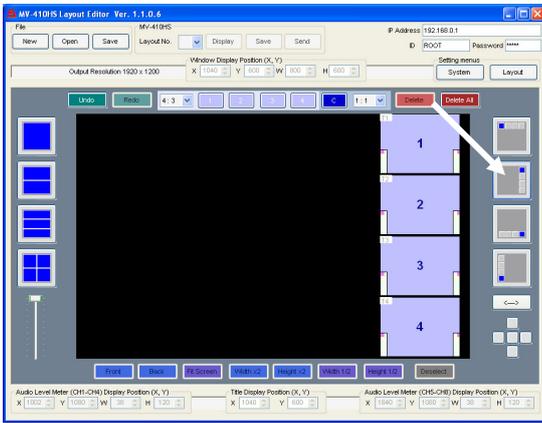

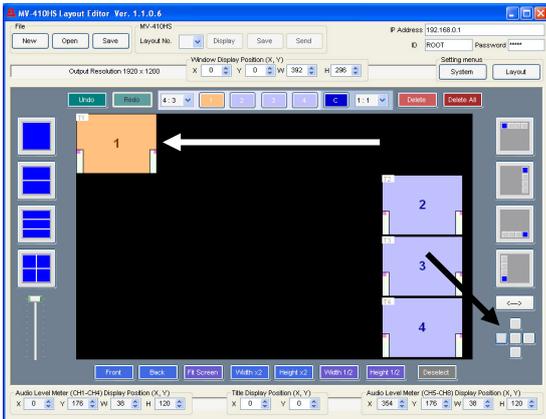**The layout editing area appears as below.**
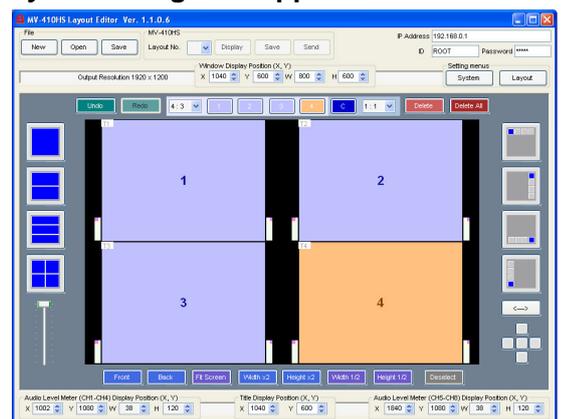
1+3 Split Screen
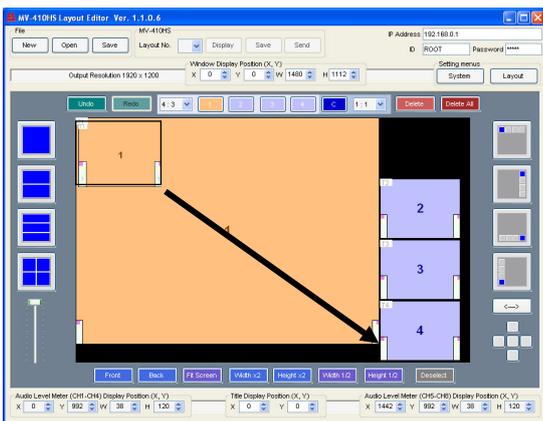(with Title, Border and Level meters)

Displaying four 1/16 size windows.

1) Click **Add 1/16 size window** icon at the right of the main screen four times.

2) Select the window1 by the mouse, and click the left button of 5 buttons under the Add 1/16 size windows icons.

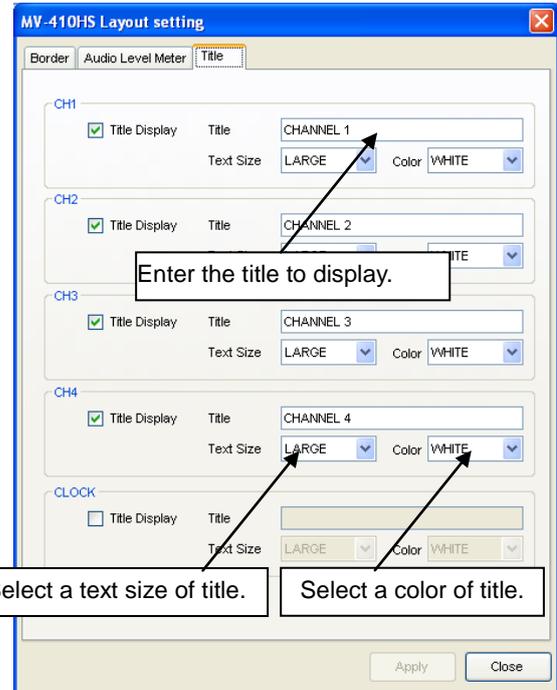3) Put the mouse cursor at the bottom right corner of the window1, and drag to enlarge the window to the desired size.

Displaying titles.

4) Click **Layout** at the top right of the main screen to open **Layout Setting** dialog box.


5) Open the **Title** page.

Enter the title to display.

Select a text size of title.

Select a color of title.

6) Select the **Title Display** check box, enter the title you wish to display, and select the text size and color for each channel.

7) Click **Apply** at the bottom right of the dialog box to apply the settings to the layout.

Displaying Audio Level Meters.

8) Open the **Audio Level Meter** page.

Put a check to display.

Select the number of audio channels to display.

Apply button
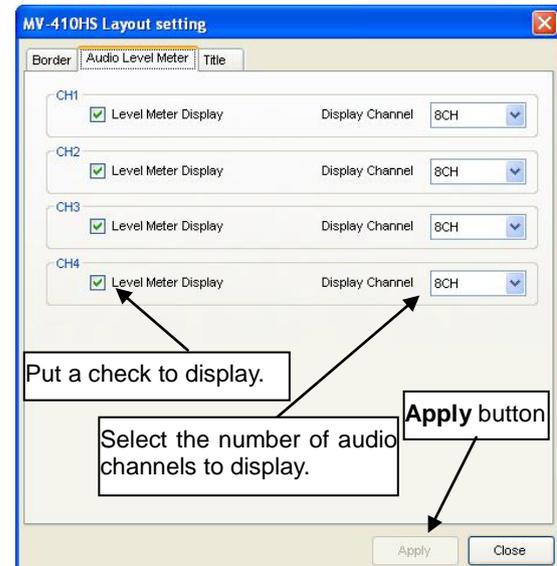
9) Select the **Level Meter Display** check box for each channel. Set the number of audio channels to display.

10) Click **Apply** at the bottom right of the dialog box to apply the settings to the layout.

Displaying Borders.

11) Open the **Border** page.

Put a check to display a border.

Set the border width.

MV-410HS Layout set

| Border | Audio Level Meter | Title |

☐ Border Display

Border width

Top [0]

Left [0]   Right [0]

Bottom [0]

Apply button

Border Color [WHITE ▾]

Select a border color.

[Apply] [Close]
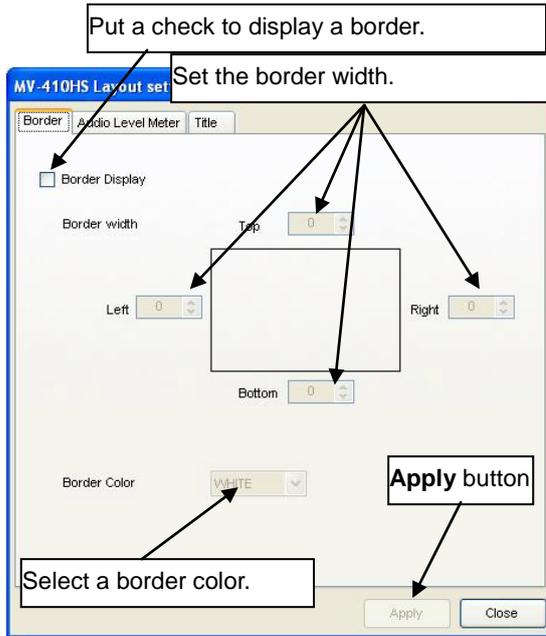
12) Select the **Border Display** check box, select a border color and set the width for each top, bottom, right and left border.

13) Click **Apply** at the bottom right of the dialog box to apply the settings to the layout.

14) Click **Close** next to the **Apply** to return to the main screen.

15) Click **Save** to save the settings to the MV-410HS to avoid the settings to be lost when the MV-410HS is powered off.
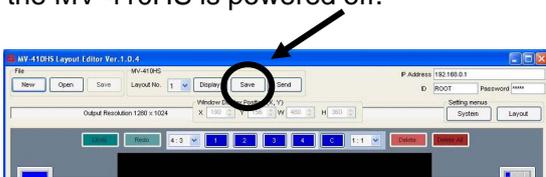
The layout editing area appears as below.

FOR.Λ®
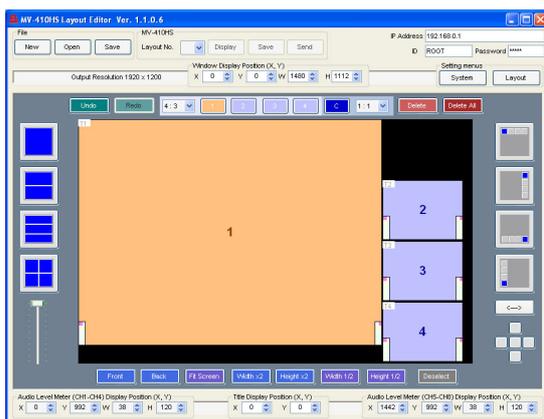
FOR-A COMPANY LIMITED

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/Okinawa/Fukuoka/Hiroshima/Nagoya/Sendai/Sapporo
R&D/Production Sakura Center/Sapporo Center

FOR-A America Corporate Office
11155 Knott Ave., Suite G&H, Cypress, CA 90630, USA
Phone: +1-714-894-3311 Fax: +1-714-894-5399

FOR-A America East Coast Office
2 Executive Drive, Suite 670, Fort Lee Executive Park, Fort Lee, NJ 07024, USA
Phone: +1-201-944-1120 Fax : +1-201-944-1132

FOR-A America Distribution & Service Center
2400 N.E. Waldo Road, Gainesville, FL 32609, USA
Phone: +1-352-371-1505 Fax: +1-352-378-5320

FOR-A Corporation of Canada
346A Queen Street West, Toronto, Ontario M5V 2A2, Canada
Phone: +1-416-977-0343 Fax: +1-416-977-0657

FOR-A Latin America & the Caribbean
5200 Blue Lagoon Drive, Suite 760, Miami, FL 33126, USA
Phone: +1-305-931-1700 Fax: +1-305-264-7890

FOR-A UK Limited
UNIT C71, Barwell Business Park, Leatherhead Road, Chessington Surrey, KT9 2NY, UK
Phone: +44(0)20-8391-7979 Fax: +44(0)20-8391-7978

FOR-A Italia S.r.l.
Via Volturno 37, 20047 Brugherio MB, Italy
Phone: +39-039-881-086/103 Fax: +39-039-878-140

FOR-A Corporation of Korea
Rm. 1007 InnoPlex, 13 Yangpyeong-dong 3-ga, Yeongdeungpo-gu, Seoul 150-103, Korea
Phone: +82(0)2-2637-0761 Fax: +82(0)2-2637-0760

FOR-A China Limited
708B Huateng Bldg., No. 302, 3 District, Jinsong, Chaoyang, Beijing 100021, China
Phone: +86(0)10-8721-6023 Fax: +86(0)10-8721-6033

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