Mi-16 Series
User
Manual

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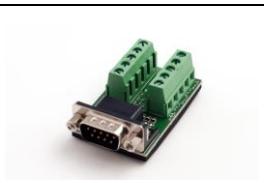
v2.31

Table of Contents

1.0 What's In The Box

QTY	Product	Description
1		Mi-16/Mi-16+/Mi-16# multiviewer
2		Rack Ears
4		RJ50 to DB9 adapter cable for GPI
4		DB9 Breakout Terminal Block
1		RJ45 to DB9 adapter cable for RS232 interface
16		Terminators for passive loop outs
1		Analog audio breakout cable
1		North American Power Cord. Note: Countries outside of North America the power cord excluded
1		Optional Redundant Power Supply.

2.0 Key Features

There are 3 models in the Mi-16 family

- Mi-16 - 16x1 multiivewer, one source per window, no copy or duplicating sources
- Mi-16+ - 8x2 multiviewer, one source per window, no copy or duplicating sources
- Mi-16# - 16x2 multiviewer, sources can be copy and duplicated from any input to any output

General features for all Mi-16 series

- Low latency – single frame processing delay
- Accepts 16 auto-detect 3G/HD/SD-SDI inputs
- 16 passive input loop through
- Windows can be sized and moved freely
- Decode up to 16 embedded audio channels per SDI input, up to a total of 128 meters
- Ethernet for configuration and extenernal control
- Dynamic UMD/labes & Tallies (TSL)
- 20 standalone labels
- 4 customizable logos
- 32 GPIs for tallies, count up/down triggers or alarms
- Digital and Analog clocks can be sync'd with LTC or NTP
- Borders can be turn on or off
- Safe area markers
- Visual alarm tags for video/audio alarm detection
- Audio monitoring output – stereo, AES, embedded SDI and HDMI
- Optional redundant power supply
- 3 year warranty

Mi-16 specific features

- 2 simultaneous and indentical HDMI and SDI outputs
- Each source can only be assigned to a window once

Mi-16+ specific features

- 2 independent outputs, 8 windows on each output
- 2 analog and 2 digital clocks
- Each source can only be assigned to a single window

Mi-16# specific features

- 2 independent outputs
- 2 analog and 2 digital clocks
- Each source can be freely assigned to any window
- Each source can be copied up to 16 times as long as they are the same size
- Each source can be copied to a different size window, but only up to 16 times
- Once a source is copied to a different size, the total number of sources will be decrease by one.

2.1 Specifications

Mi-16 SPECIFICATIONS			
Inputs	16 3G/HD/SD-SDI	**Video Outputs**	2 identical DVI/HDMI, SDI
Loop outs	16 passive loop outs	**Audio Outputs**	AES and Analog audio monitor outputs
Connectors	BNC IEC 61169-8 Annex A	**Output Resolution**	1920 x 1080p 50/60Hz
Total Windows	16	**On Screen Display**	Borders, labels, tally UMD, OMD, IMD, dynaimic UMD
Serial Digital	SMPTE 424M, 292M, 259M	**General Purpose IO**	Up to 32 inputs with RJ50 - DB9 connectors
Equalization	120m at 2.97 Gbps, 140m at 1.48 Gbps, 400m at 270 Mbps with Belden 1694A	**Serial Port**	Connector: RJ45, Baud Rate up to 115200 Format, TSL, TSI, AXP
Return Loss	> 15db up to 1.485 Gbps > 10db up to 3G	**IP**	100 Base-Tx, TSL, AXP Connector: RJ45
Embedded Audio	SMPTE-272M-A	**Electrical**	50W, 90-250V 50/60 Hz
Alarms	No audio, audio high/low, no video, video black, video frozen, WSS, AFD	**EMI/RFI**	Complies with FCC Part 15 Class A, CE, EU EMC, C-tick
Power	90-250 AC / 12 DC	**Size**	1 RU, 25 cm (10")

Mi-16+ SPECIFICATIONS			
Inputs	16 3G/HD/SD-SDI	**Video Outputs**	2 independent DVI/HDMI, SDI outputs
Loop outs	16 passive loop outs	**Audio Outputs**	AES and Analog audio monitor outputs
Connectors	BNC IEC 61169-8 Annex A	**Output Resolution**	1920 x 1080p 50/60Hz
Total Windows	16	**On Screen Display**	Borders, labels, tally UMD, OMD, IMD, dynaimic UMD
Serial Digital	SMPTE 424M, 292M, 259M	**General Purpose IO**	Up to 32 inputs with RJ50 - DB9 connectors
Equalization	120m at 2.97 Gbps, 140m at 1.48 Gbps, 400m at 270 Mbps with Belden 1694A	**Serial Port**	Connector: RJ45, Baud Rate up to 115200 Format, TSL, TSI, AXP
Return Loss	> 15db up to 1.485 Gbps > 10db up to 3G	**IP**	100 Base-Tx, TSL, AXP Connector: RJ45
Embedded Audio	SMPTE-272M-A	**Electrical**	50W, 90-250V 50/60 Hz
Alarms	No audio, audio high/low, no video, video black, video frozen, WSS, AFD	**EMI/RFI**	Complies with FCC Part 15 Class A, CE, EU EMC, C-tick
Power	90-250 AC / 12 DC	**Size**	1 RU, 25 cm (10”)

Mi-16# SPECIFICATIONS			
Inputs	16 3G/HD/SD-SDI	**Video Outputs**	2 independent DVI/HDMI, SDI outputs
Loop outs	16 passive loop outs	**Audio Outputs**	AES and Analog audio monitor outputs
Connectors	BNC IEC 61169-8 Annex A	**Output Resolution**	1920 x 1080p 50/60Hz
Total Windows	32+	**On Screen Display**	Borders, labels, tally UMD, OMD, IMD, dynaimic UMD
Serial Digital	SMPTE 424M, 292M, 259M	**General Purpose IO**	Up to 32 inputs with RJ50 - DB9 connectors
Equalization	120m at 2.97 Gbps, 140m at 1.48 Gbps, 400m at 270 Mbps with Belden 1694A	**Serial Port**	Connector: RJ45, Baud Rate up to 115200 Format, TSL, TSI, AXP
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Power	90-250 AC / 12 DC	**Size**	1 RU, 25 cm (10”)

2.2 Rear Views

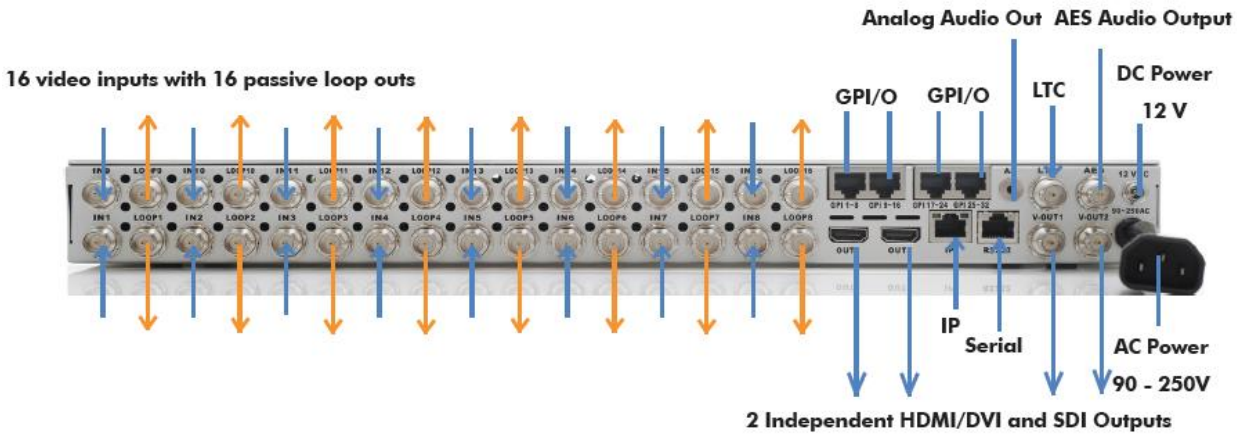


Figure 2-1 Mi-16x rear view

3.0 Hardware boot up

There is no on/off on the Mi-16, this is due to the UL safety regulation imposed on 1 rack unit products. To power on the Mi-16, insert power cord directly to the AC power receptacle, the Mi-16 will boot in approximately 10 seconds. When the HDMI output is connect to the screen, the following information will display on the lower third of the display for about 5 seconds (see Fig. 1), then followed by the Apantac logo, then the very last screen layout prior to powering off the unit.

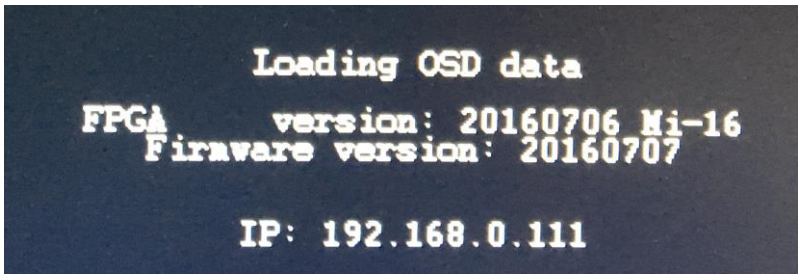
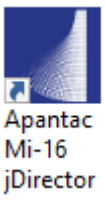


Figure 1: FPGA/FW versions and IP address of the unit will be displayed for 5 seconds

4.0 Software

This section will help you get the Mi-16 setup as quickly as possible.
Before you can successfully run the jDirector, you must first run the installation from the provided CD or download it from the Apantac website.

After completing the Apantac jDirector software installation open the application by using the shortcut created on the Windows Desktop or from the shortcut in the Windows Start Menu under the APANTAC folder.



When launching the jDirector software you will first see the intialization screen.

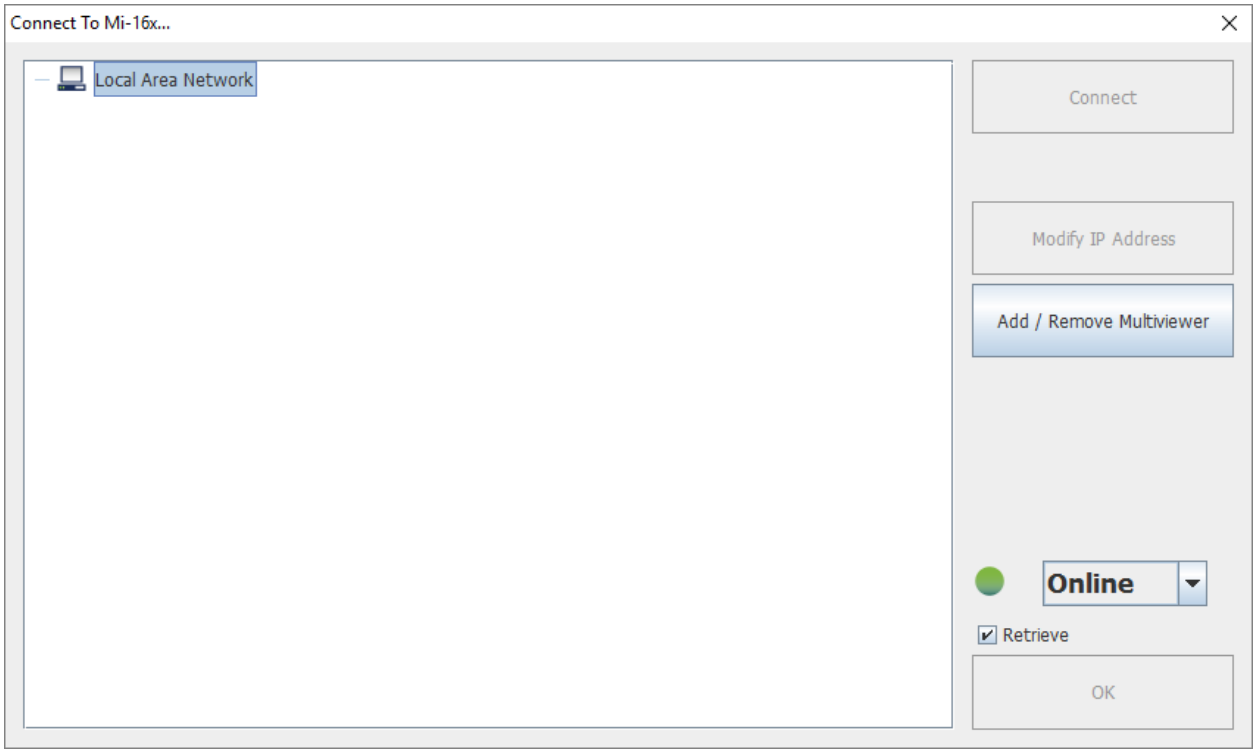


Figure 2: jDirector Initialization screen

To connect to the multiviewer your PC must be connected to the same subnet as the multiviewer. The IP address(es) is displayed briefly on the monitor attached to the corresponding output at boot up.

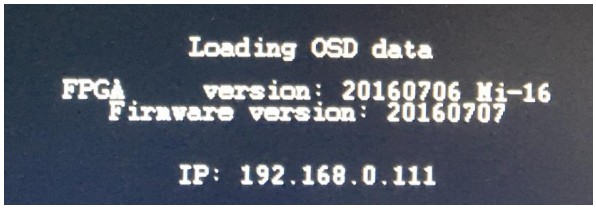


Figure 3: IP address of the unit will be displayed for 5 seconds on boot up.

The **default IP** address is **192.168.0.100**

To connect to the Mi-16 multiviewer click the **Add / Remove Multiviewer** button

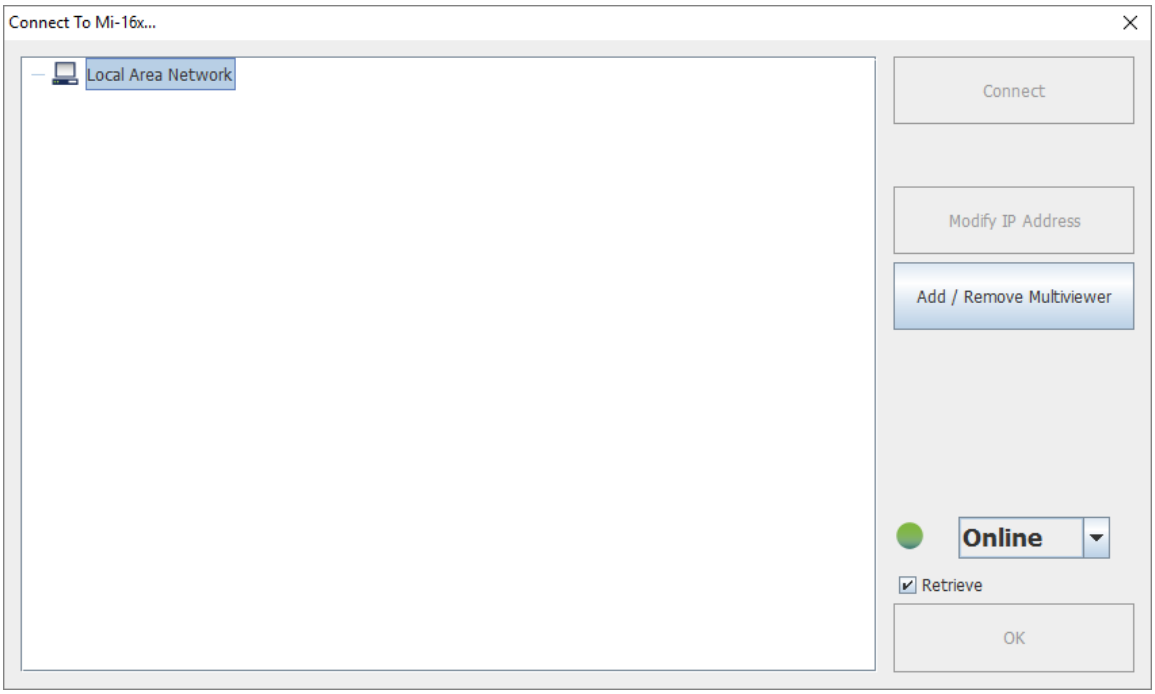


Figure 4: **Local Area Network -> Mi-16x IP Address Manager**

- Click the **ADD Mi-16x** button

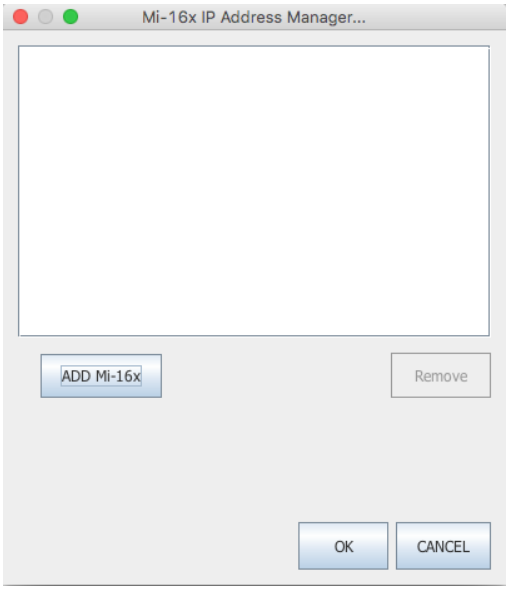


Figure 5**:** **Add Mi-16 module**

There are 3 different models in the Mi-16 series, Mi-16, Mi-16+ and Mi-16#

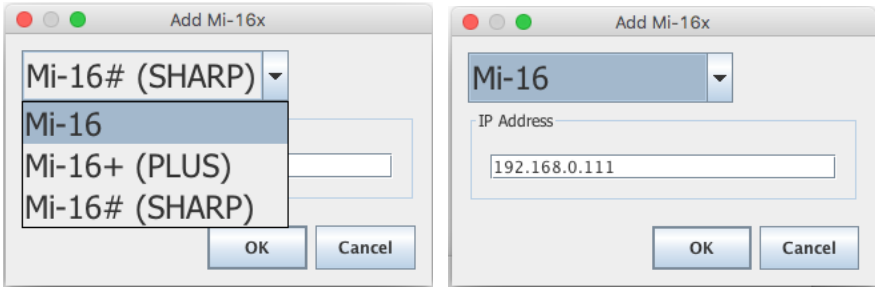


Figure 6**: Select your Mi-16 model and then enter the IP address**

Note: Even if you select incorrect Mi-16 model, the jDirector will automatically detect the proper version of hardware you have.

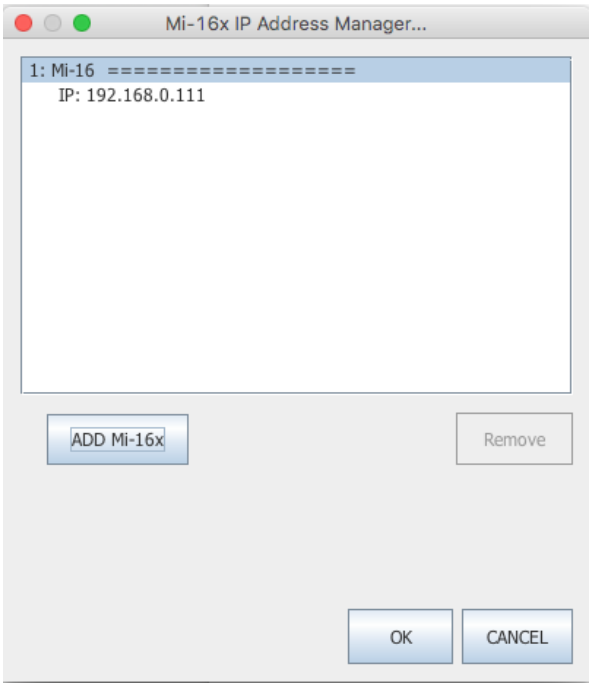


Figure 7: **Add Mi-16 module**

After you have completed the above steps, click "**OK**" to continue, then the jDirector will take to the overview mode of the user interface.

If you have already connected to this Mi-16 once before, you may see this dialog when you connect to it again, click on "**OK**" to continue.

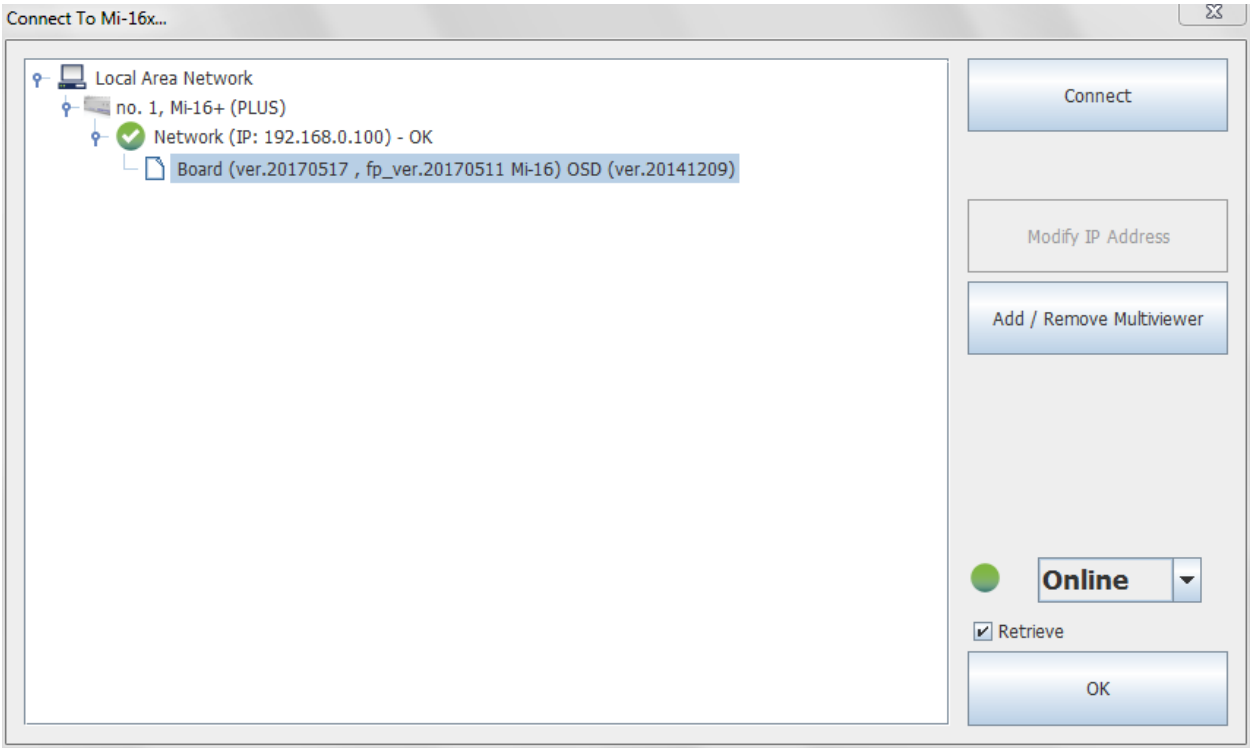


Figure 8: **Connecting to a Mi-16 that displays a previous connection**

4.1 Changing the Mi-16 IP Address

When at the "Connect to the Mi-16x…" window when first opening the jDirector software you should see the current IP address if you have added a unit with the above instructions or have previousely connected to the Mi-16.

- Left click on the Network line to highlight it.
- Click the **Modifiy IP Address** button.
- Enter in the desired IP address, Subnet mask and Gateway.
  Then confirm the change by clicking the **OK** button.
- Reboot the Mi-16 unit to make the change active.

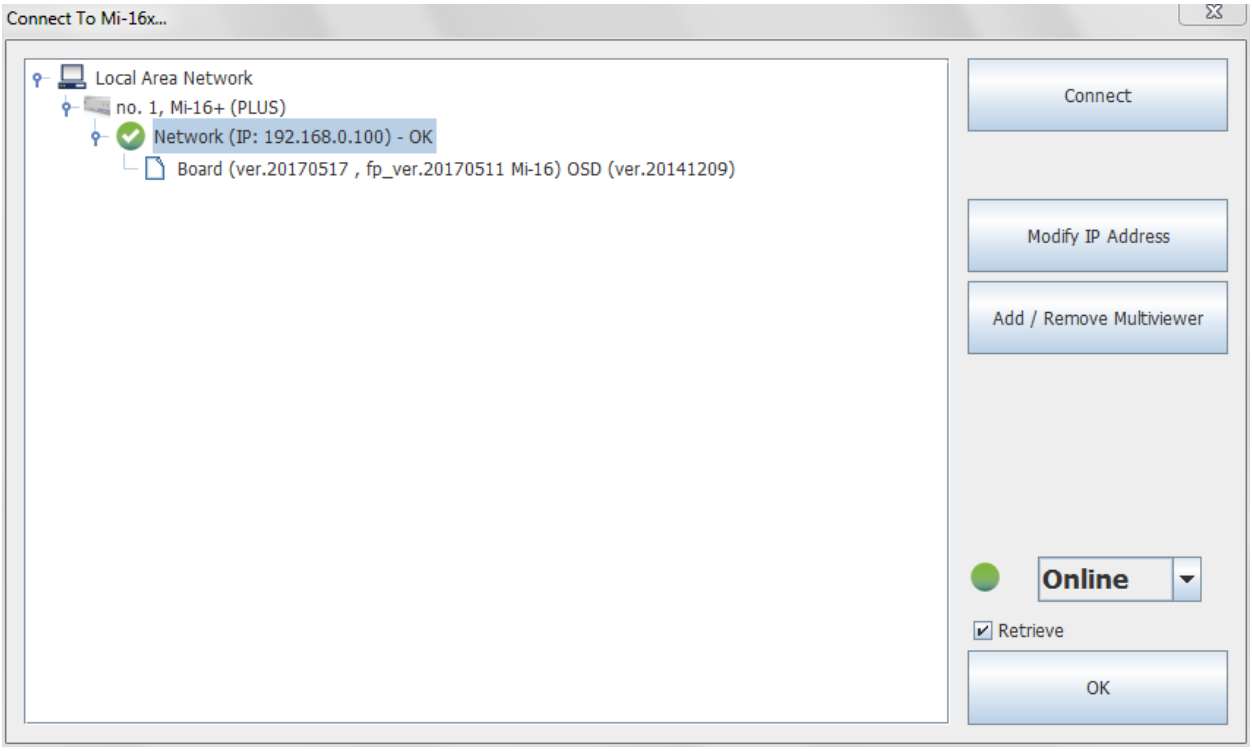


Figure 9: **Mi-16 change IP Address.**

4.2 Configuring of the Mi-16 series

Mi-16

The Mi-16 is the most basic model of the Mi-16 family. There are 16 inputs and 1 output. Each source can be only assigned to a single window. Once the jDirector is connected to the Mi-16, the following editor layout will appear:

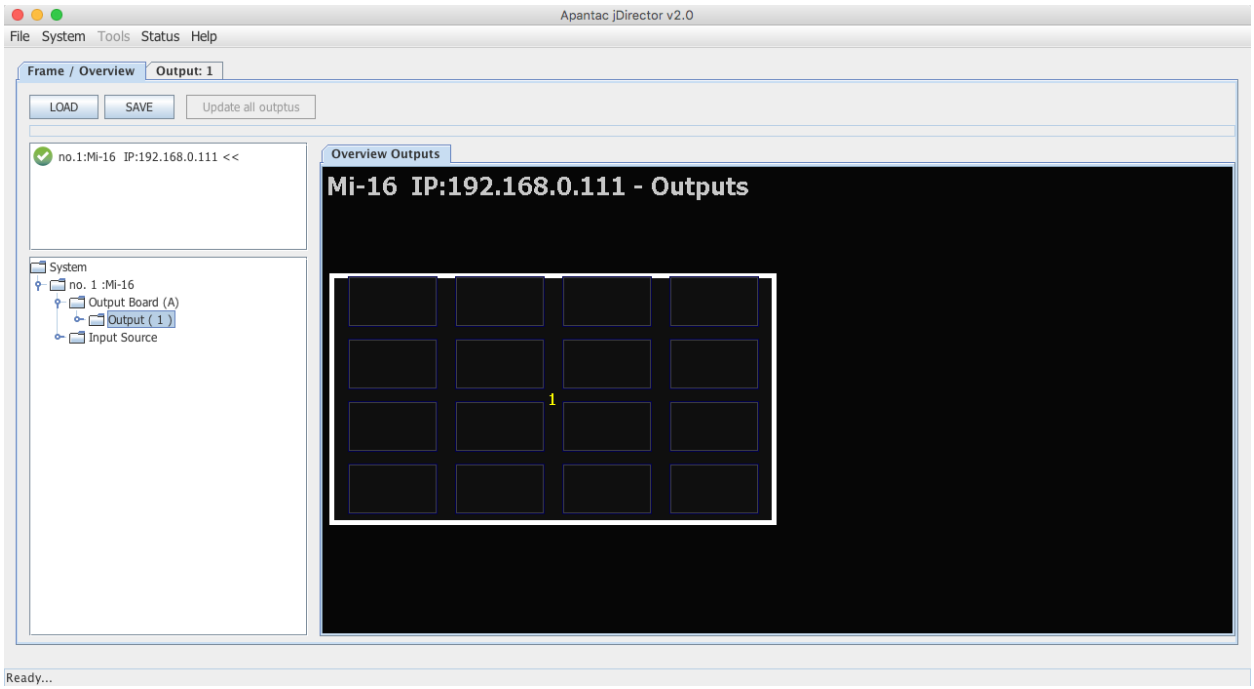


Figure 10: **Mi-16 Overview Mode**

Select the Output 1 tab at the top or double click within the white outline of the *Overview Output* and this will take you to jDirector's editing mode.

Mi-16+

The Mi-16+ is the medium model of the Mi-16 family. There are 16 inputs and 2 outputs with 8 windows on each output. Each source can be only assigned to a single window. Once the jDirector is connected to the Mi-16+, the following editor layout will appear:

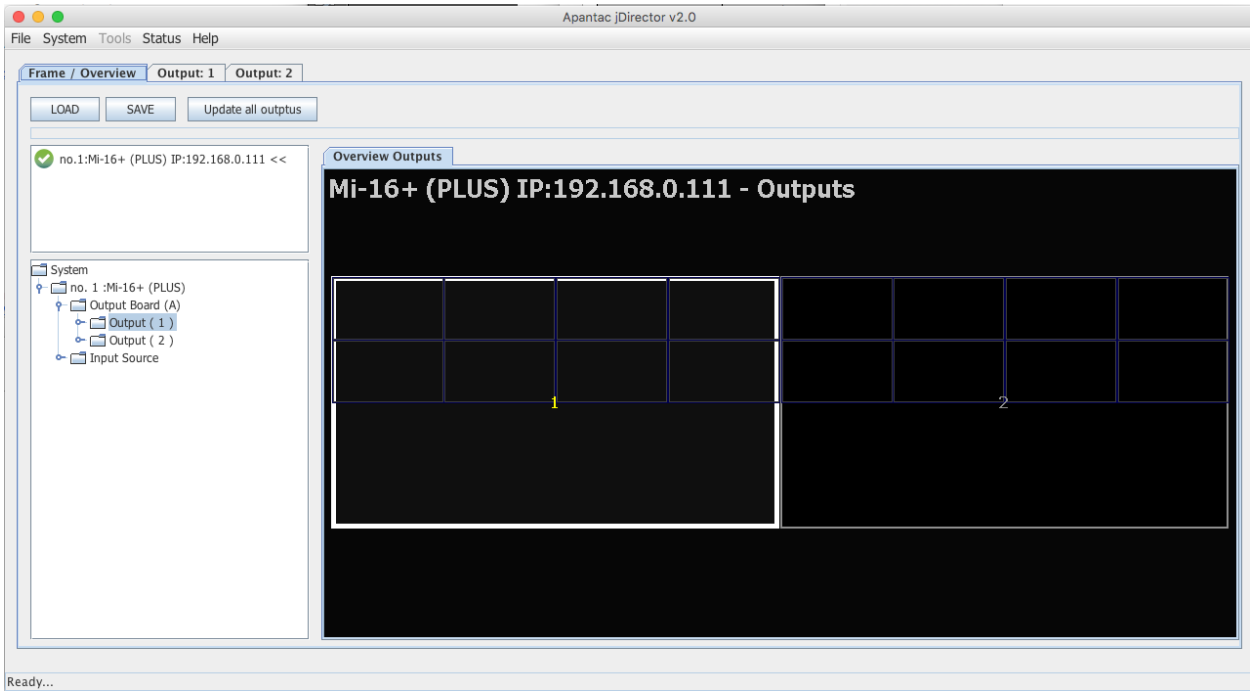


Figure 11: **Mi-16+ Overview Mode**

Select the Output 1 or Output 2 tab at the top or double click within the white outline of desired output in the *Overview Output* and this will take you to jDirector's editing mode.

Mi-16#

The Mi-16# is the most adavanced model of the Mi-16 family. There are 16 inputs and 2 outputs, each output can have up to 16 windows. Each source can be copied to multiple windows of the same size or different sizes. Once the jDirector is connected to the Mi-16#, the following editor layout will appear:

Note: In the Mi-16# there are 16 windows resources; when a source is copied to a same size window it will not consume any additional window resources, however when a source is copied to a different size window than its original size it will consume one additional window resource. For example if source one is copied to a different size window then there are only 14 window resources left instead of 15.

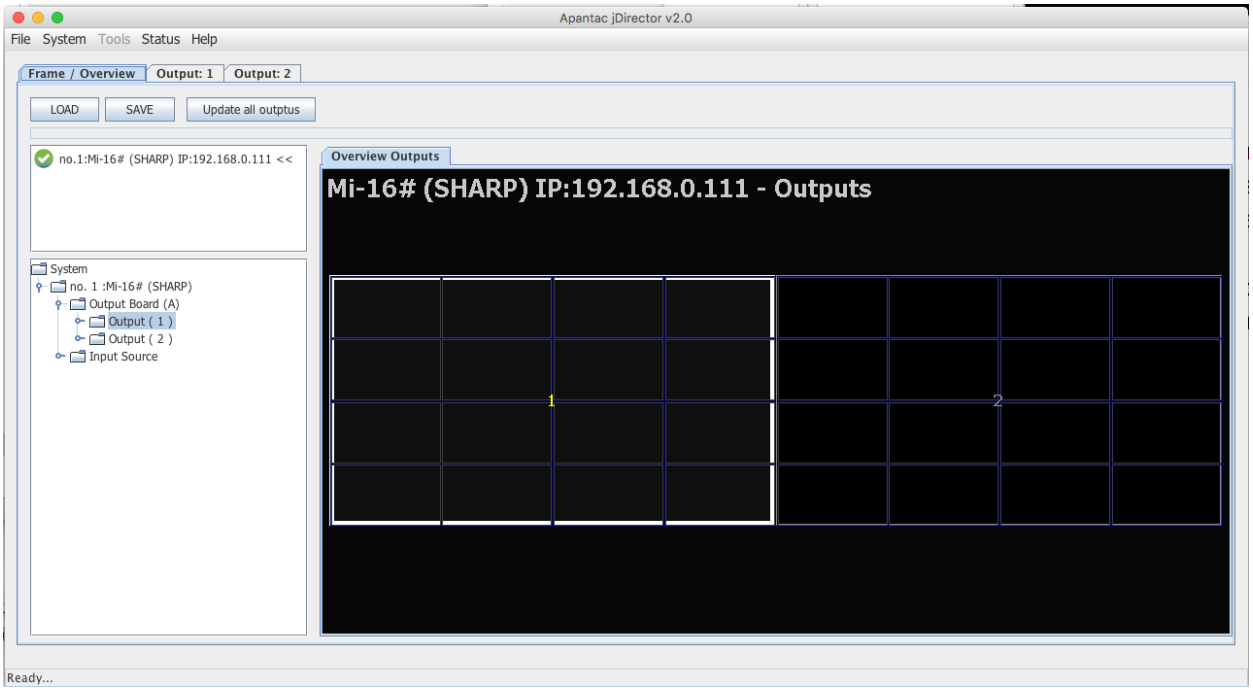


Figure 12: Mi-16# Overview Mode

Select the Output 1 or Output 2 tab at the top or double click within the white outline of desired output in the *Overview Output* and this will take you to jDirector's editing mode.

5.0 Common features and configurations

5.1 Editing mode

The jDirector editor consists of four major work areas:

1. Tool Bar – this is where all the tool short cuts reside
2. Work Space – this is the space to edit the on screen layout and look
3. Window Bin – this is where all the windows templates reside
4. Object Bin – this is where all the objects such as standalone labels, digital clocks, analog clocks and temperature alarm reside
5. 

button on the tool bar will update the currently active layout on the PC to the Mi-16 output.

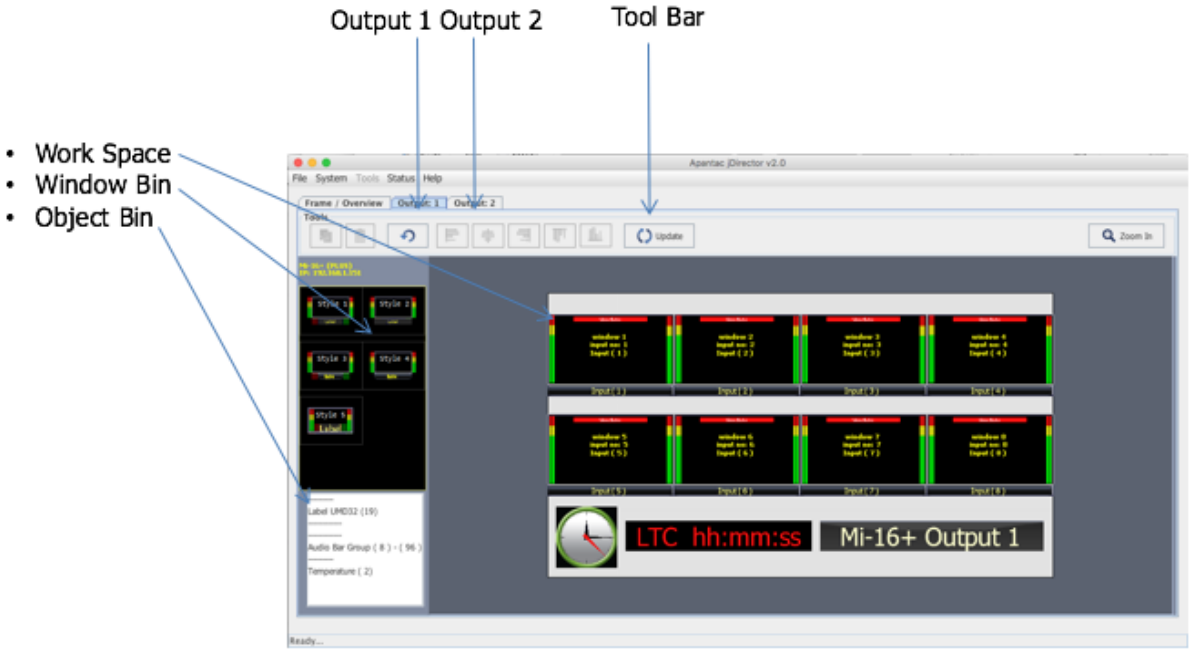


Figure 13: Mi-16 editing mode

Note: Mi-16 will only have Output 1 whereas Mi-16+ and Mi16# will have both Output 1 and Output 2.

5.2 System level settings

5.2.1 Set output timing

The Mi-16 series comes with the default output setting of 1080P 60Hz, it can easily be changed to 1080P 50Hz by doing the following,

On the Top Level Menu, click on System -> Output Manager to set the output timing.

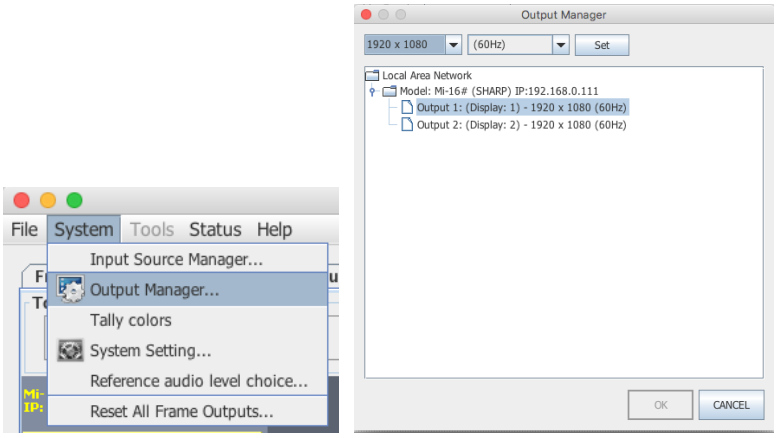


Figure 14: **Output Manager**

5.2.2 Sources, Names, Tally and Other Setups

Every Mi-16's source attributes can be configured in a single place. Since the Mi-16# allows copying of the sources these attributes can follow the sources every time it is assigned to a new window.

These attributes are as follows:

Names

- The default names are Input (1) to Input (16), each name can have up to 32 characters
- The names can be static or dynamic. When the names are set to dynamic, the UMD of the window will become blank and waiting for the name assignment to come from an external tally management system such as TSL or TSI.

TSL

In order for the names to be dynamic the TSL address is assigned to each source. The default assignment is 0 ~ 16

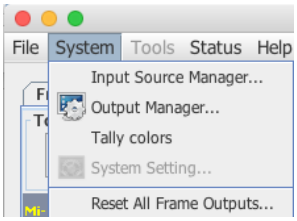
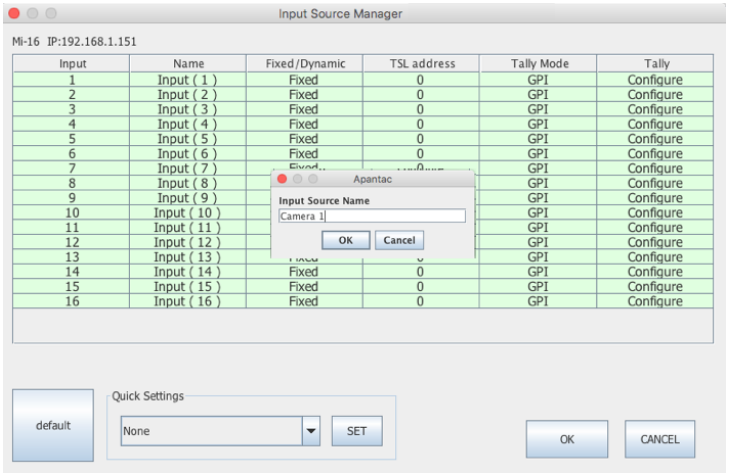
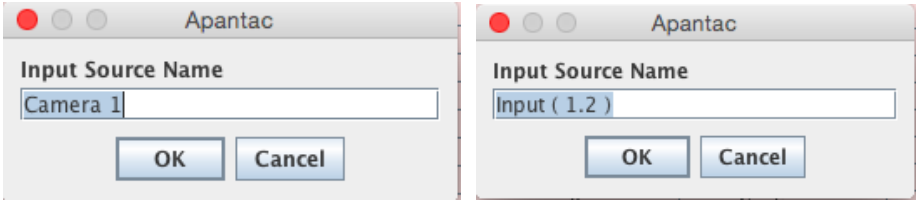
Tally Mode

The Tally can be either trigger via GPI or an external tally management system such as TSL or TSI.

Tally attributes

Whether the tally trigger is GPI or TSL the tally indicators can be assigned to on screen elements such as LEDs, borders, UMD text and UMD text colors.

To start configuring the Input Source table

On the top menu, go to System -> Input Source Manager, the Input Source Manager dialog will pop up.	  **Figure 15**: Input source manager
Name the source	
Click on any of the Name field and start assigning names. Click <OK>, then it will automatically jump to the next name until you hit <Cancel>	 **Figure 16**: Enter source names

Continue to name all the sources.

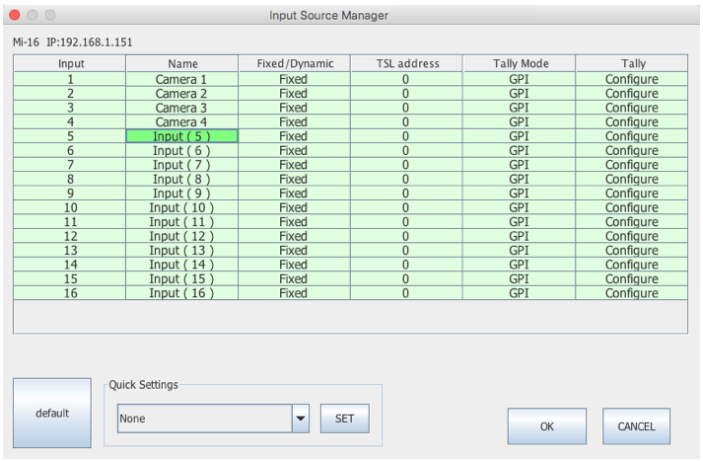


Figure 17: Input source manager with updated names

Quick Settings

There are several quick settings that will speed up the setup process

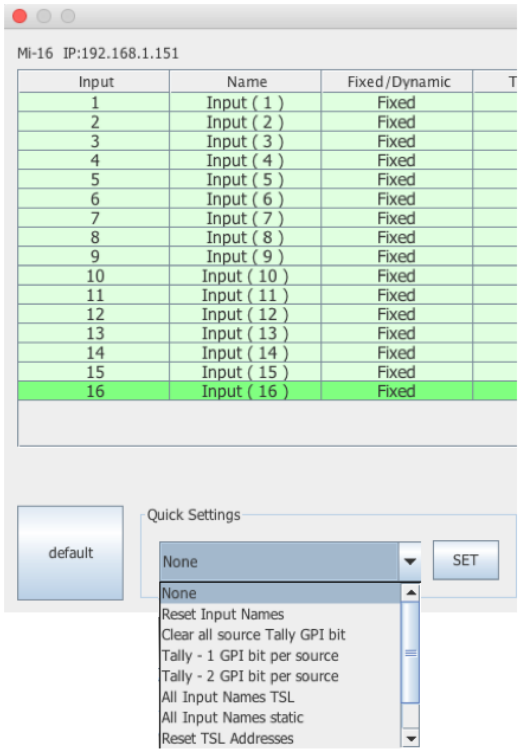
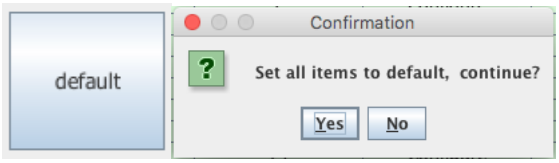
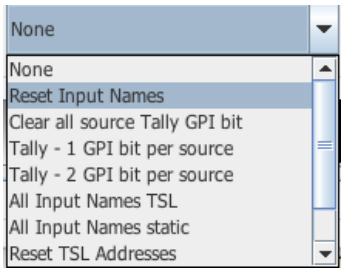
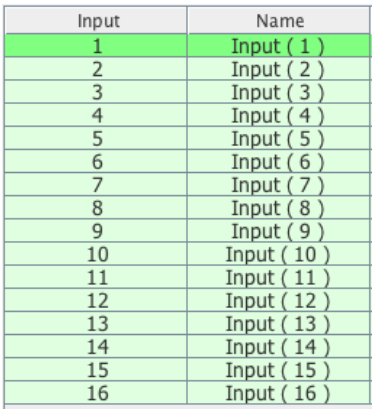
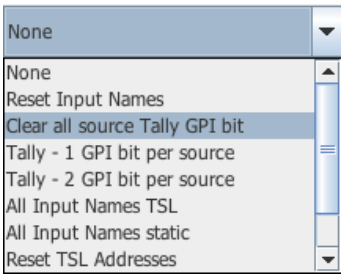
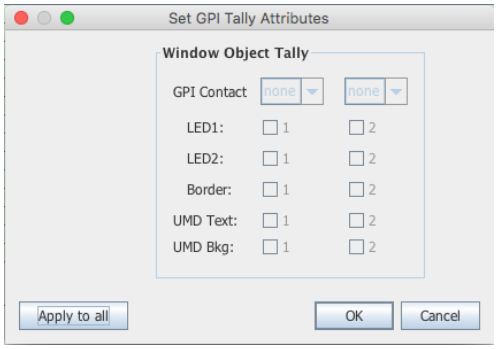
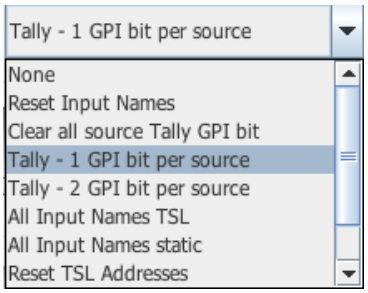
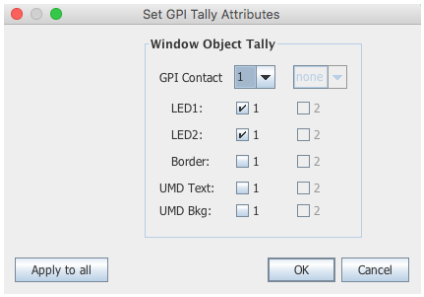
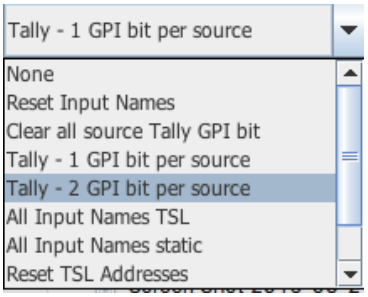
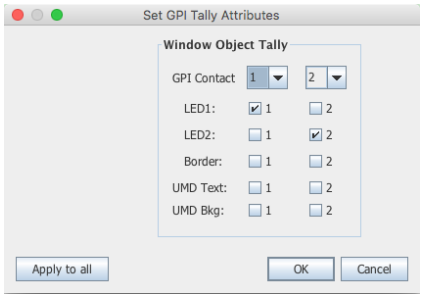
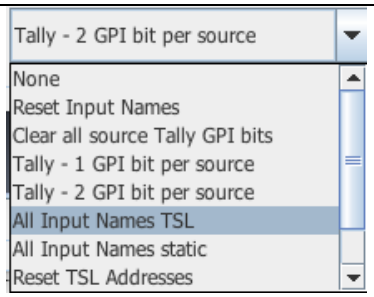
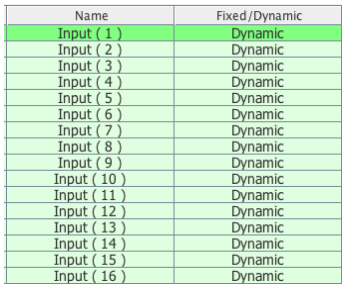
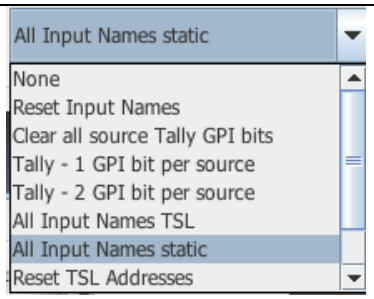
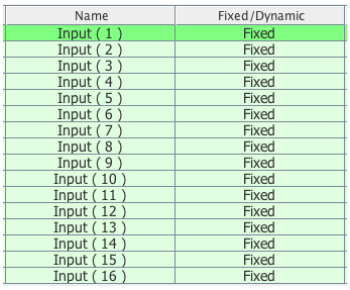
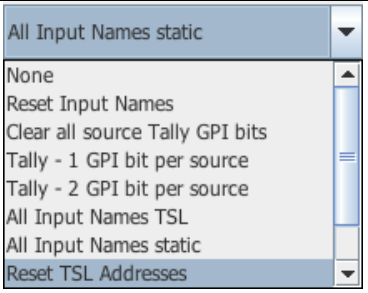
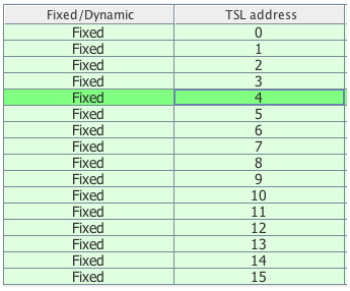
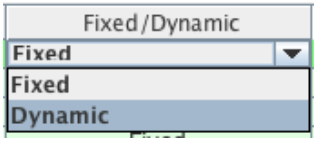
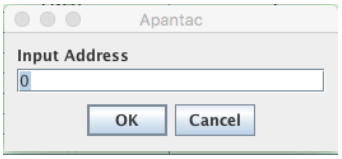
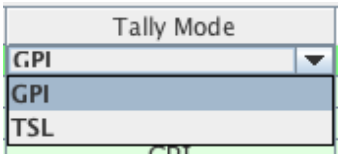
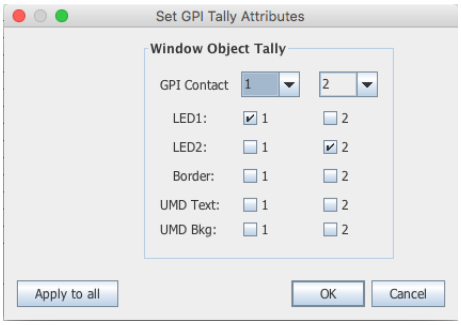
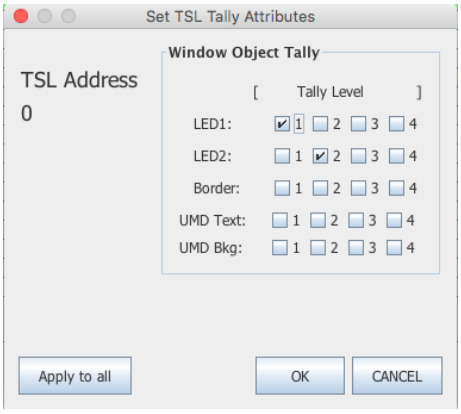


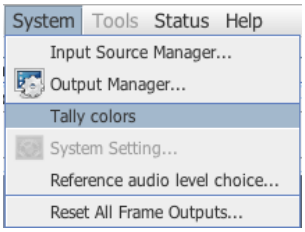
Figure 18: Enter source names

Set all attributes to default	 **Figure 19**: Enter source names
Rest Input Names <SET> – will set all the input names back to Input (1), Input (2) and so on	 **Figure 20**: Enter source names  **Figure 21**: Enter source names
Clear all source Tally GPI bit <SET> – will clear all GPI tally settings	 **Figure 22**: Enter source names  **Figure 23**: Enter source names

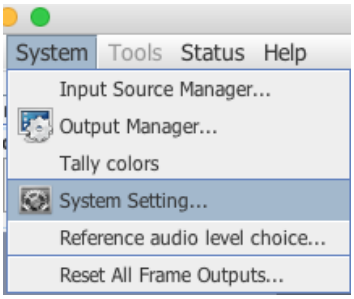
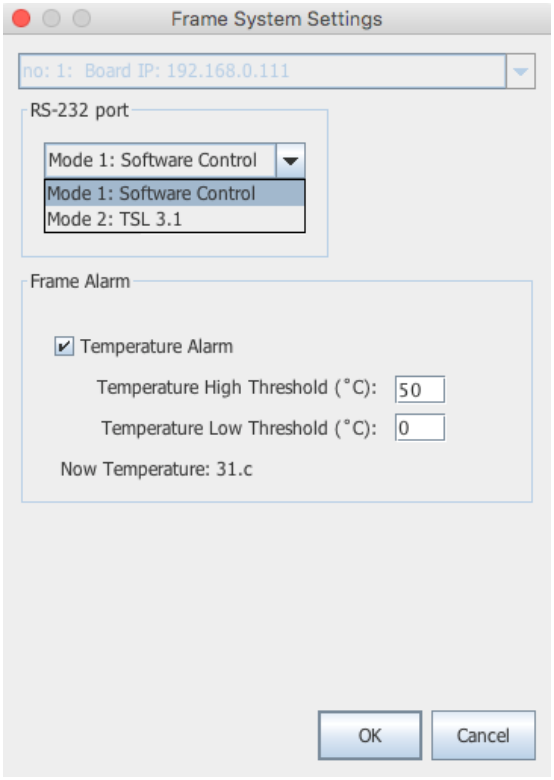
Tally – 1 GPI bit per source <SET> - will sequentially assign one GPI tally per source	  **Figure 24**: Enter source names
Tally – 2 GPI bit per source <SET> - will sequentially assign two GPI tally per source	  **Figure 25**: Enter source names **Figure 26**: Enter source names
All Input Names TSL <SET> will change all Fixed/Dyanmic Names from "Fixed" to "Dynamic"	  **Figure 27**: Enter source names **Figure 28**: Enter source names
All Input Names static <SET> will change all Fixed/Dyanmic Names from "Dynamic" to "Fixed"	  **Figure 29**: Enter source names **Figure 30**: Enter source names
Reset TSL Addresses <SET> will set all TSL address back to default 0 ~ 15	  **Figure 31**: Enter source names **Figure 32**: Enter source names

Settings	
Change Name from Fixed to Dynamic and vise versa	 **Figure 33**: Enter source names
Change TSL addressesk. Double Click on the TSL address Cell and change it to the desired number between 0 to 127	 **Figure 34**: Enter source names
Change the Tally Mode between GPI to Tally	 **Figure 35**: Enter source names
Set GPI Tally attributes. Set Tally mode to GPI then double click on Tally -> Configure	 **Figure 36**: Enter source names
Set TSL Tally attributes. Set Tally mode to TSL then double click on Tally -> Configure	 **Figure 37**: Enter source names

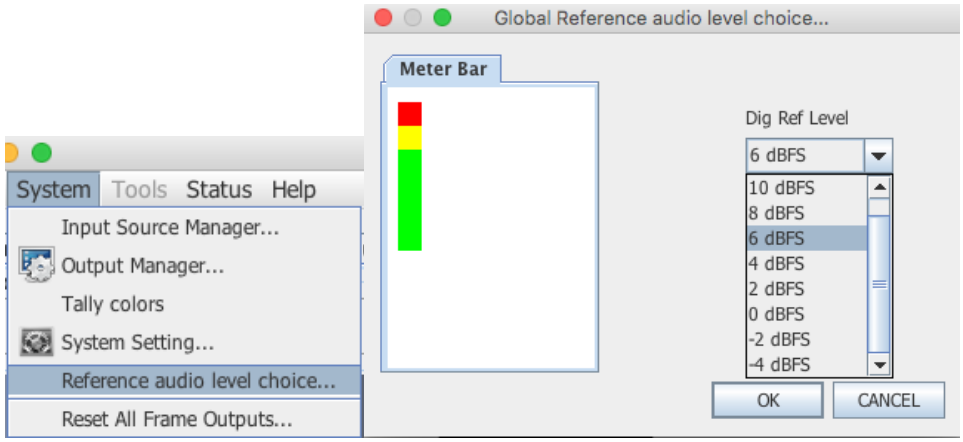
5.2.3 Set Tally colors

Set Tally Colors. System -> Set Tally colors	

5.2.4 System Settings

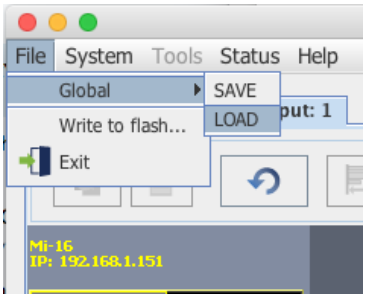
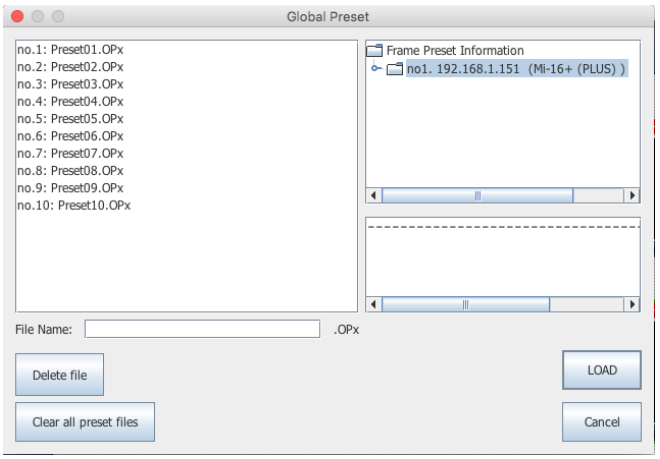
Set system settings. System -> System Settings	
RS-232 Communication mode can be set for software control or TSL. Temperature alarm setting as well as current temperature will also be shown in this dialog.	

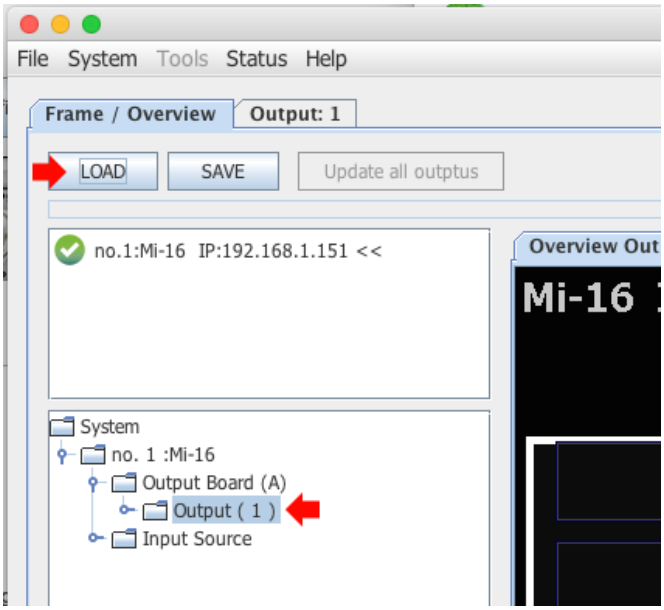
5.2.5 Audio reference settings

Reference audio setting can be set	

5.2.6 Load presets

The Mi-16 series can have up to 30 presets. Each Mi-16x comes with 10 preloaded presets. Please see *Appendix A* for all the preset layouts.

Load Presets by File -> Glogal -> LOAD	 Figure 38: File -> Global -> LOAD
Highlight the preset you want to load, then click on <LOAD>	

You can also load preset from the overview mode. Highlight the preset you want to load then clock on <LOAD>	

6.0 Editing

6.1 To delete a window

There are two methods to remove a window.

1. Highlight the window you would like to delete
    a. Press the <delete> key

Figure 39: Click on the window you want to delete to highlight it then press the <delete> key on the keyboard.

b. Or right click on the window and select <Close>

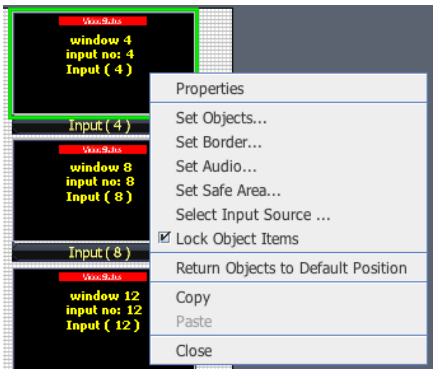


Figure 40: Right click on the window you want to delete to highlight it then select <Close> to close the window

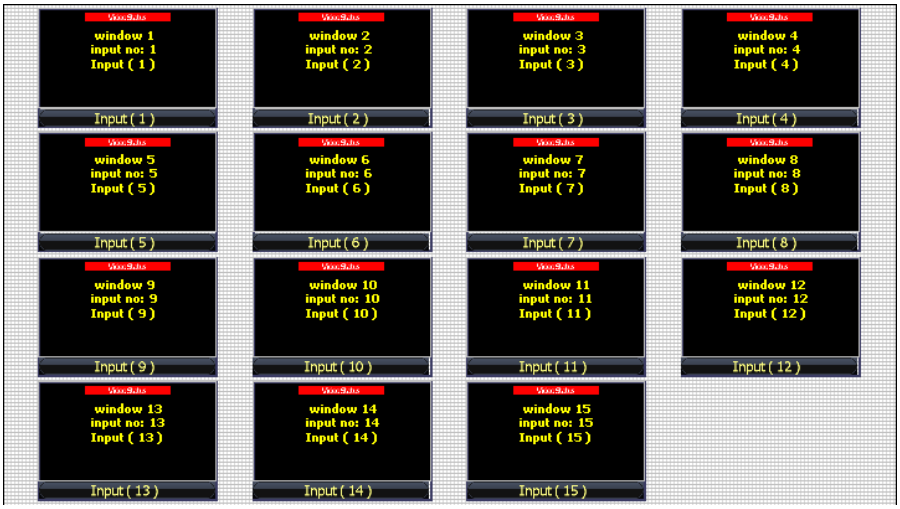


Figure 41: The end result

How to delete multiple windows

1. Press and hold the <CTRL> Key
2. Highlight the windows you would like to delete
    a. Press the <delete> key

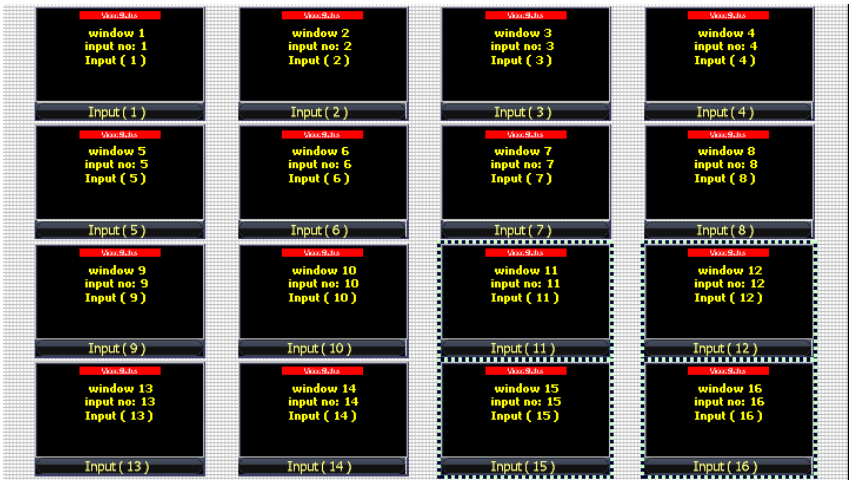


Figure 42: Hold down the CTRL key and click on multiple windows then press the <delete> key on the keyboard

    b. Or right click on one of the highlighted windows and select <Close>

Figure 43: Hold down the CTRL key and click on multiple windows then right click on a highlighted window then select <Close>

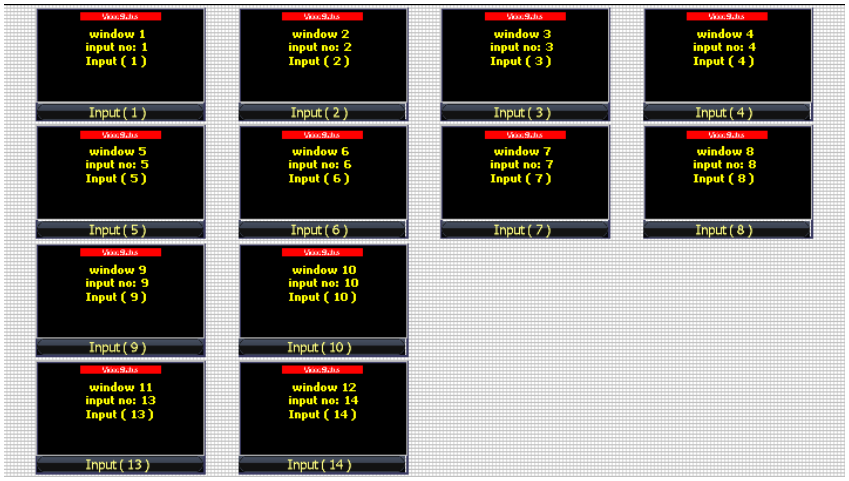


Figure 44: The end result

6.2 Mi-16 series window styles

- The Mi-16 series comes with 5 basic window styles.
  These styles are located in the "Window Bin" area of the jDirector editor.
- Each window style consists of 4 window templates
- Each window has 5 predefined sizes – 1/4, 1/9, 1/16, 1/25 and 1/36

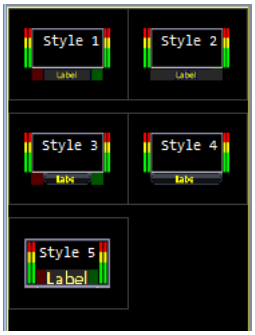


Figure 45: Click on the window style you want to load.

Style 1 templates – windows with 2 tally LEDs

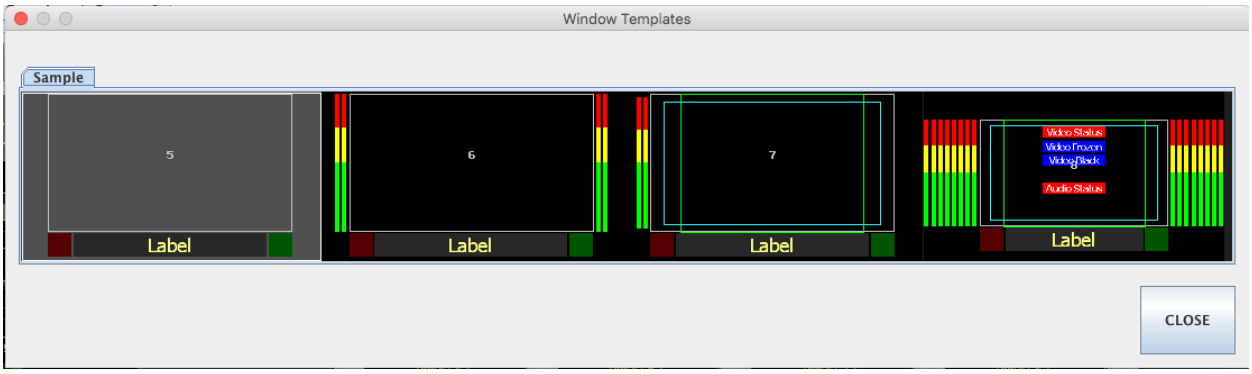


Figure 46: Click on the window preset you want to load.

Style 2 templates – windows with no tally LEDs

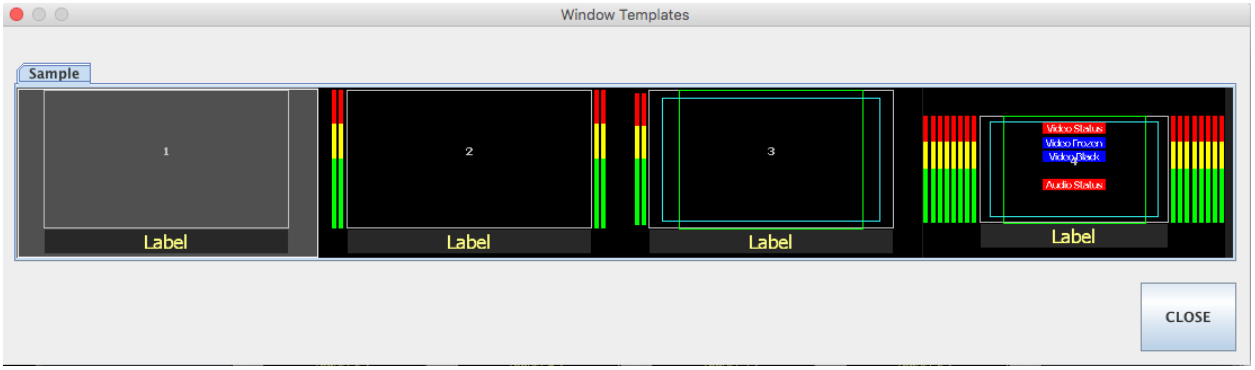


Figure 47: Click on the window preset you want to load.

Style 3 templates – windows with skin labels and 2 tally LEDs

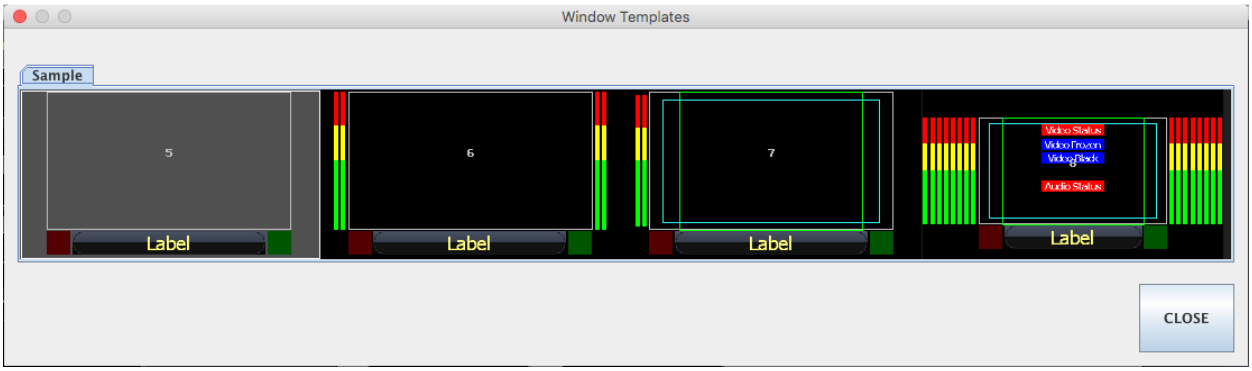


Figure 48: Click on the window preset you want to load.

Style 4 templates – windows with skin labels and no tally LEDs

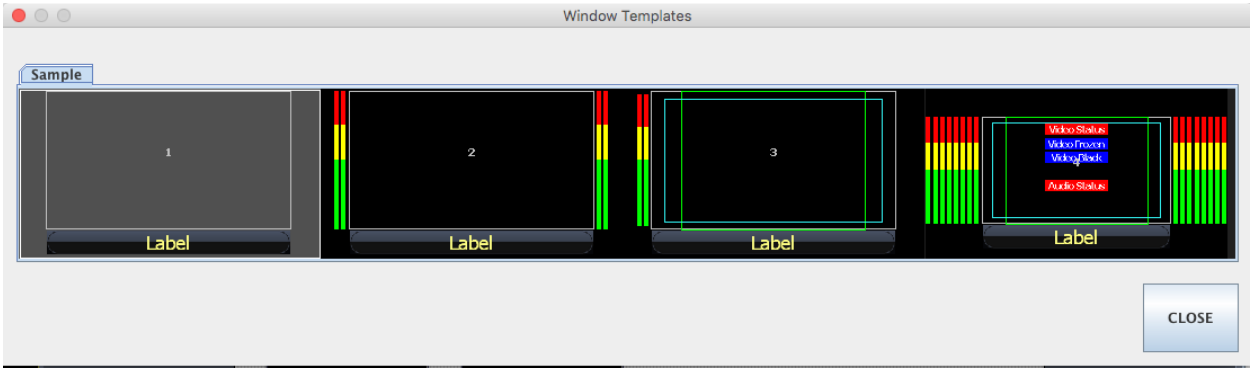


Figure 49: Click on the window preset you want to load.

Style 5 templates – windows with labels and tally LEDs over the video

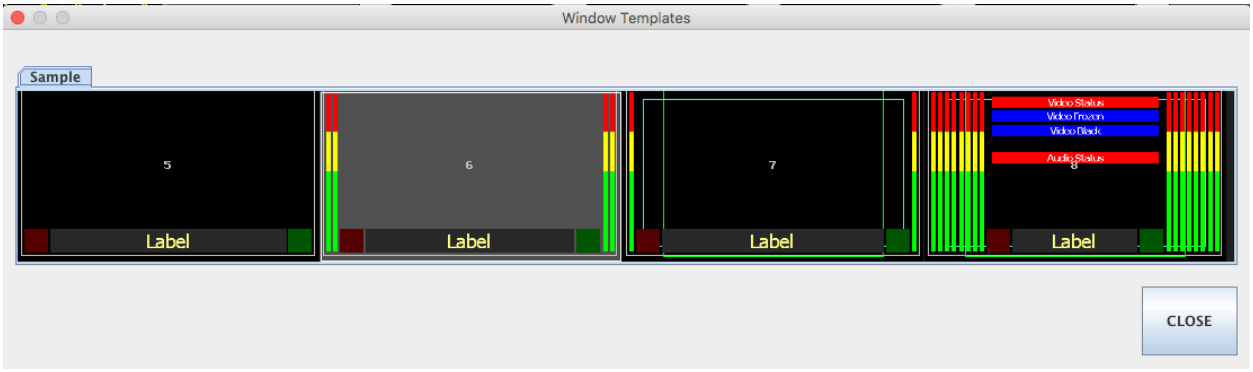


Figure 50: Click on the window preset you want to load.

6.3 How to insert a window

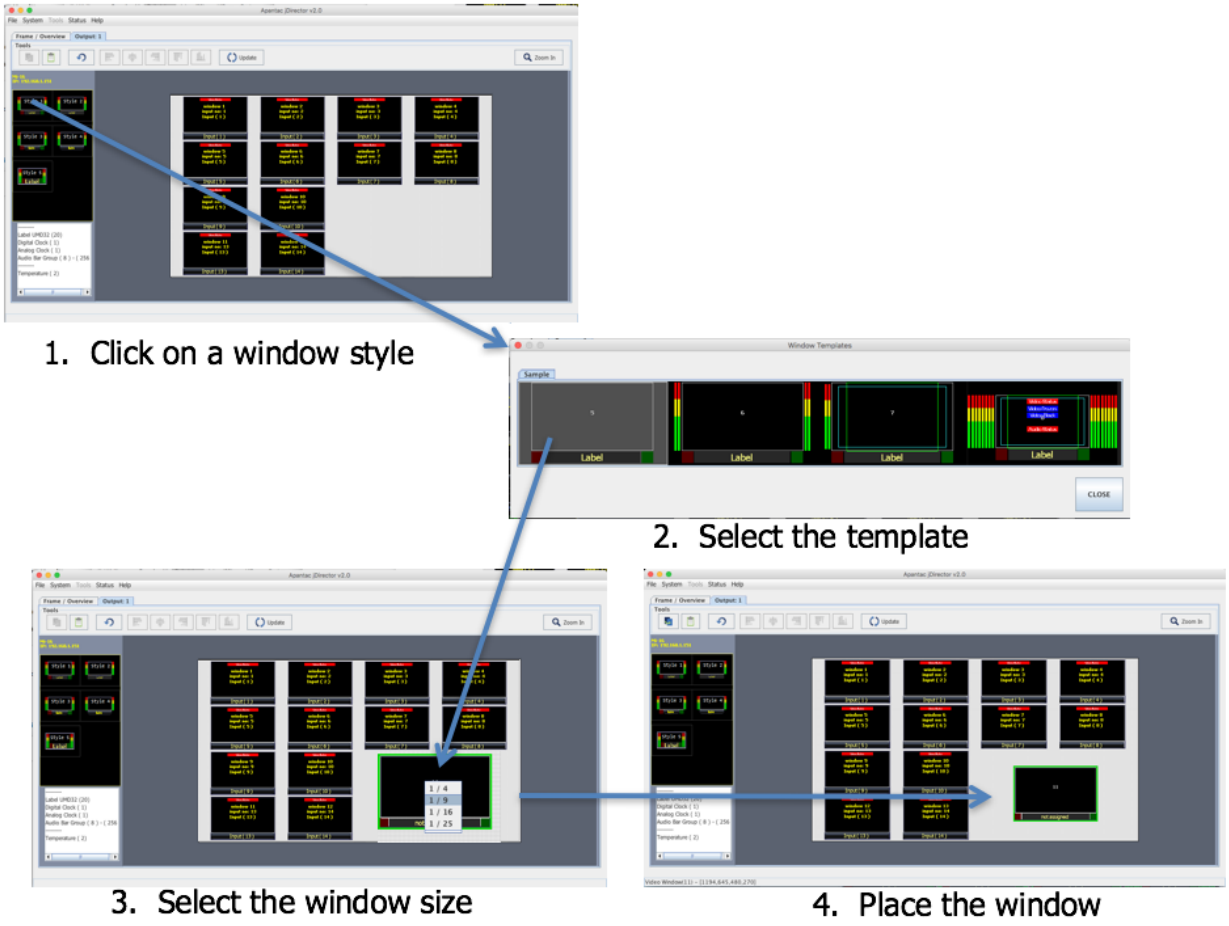
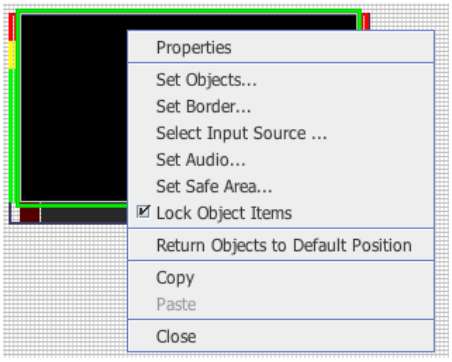


Figure 51: Steps to place a window onto the layout.

6.4 Customizing Window Elements

In addition to window templates each window elements can still be customized by right clicking on the window.	 Figure 52: Right click on a window

Set Window Objects

Tally LEDs:
On/off

Borders:
On/off, width and skin

OMD/UMD:
On/off

Alarm tags:
Video format, Video frozen

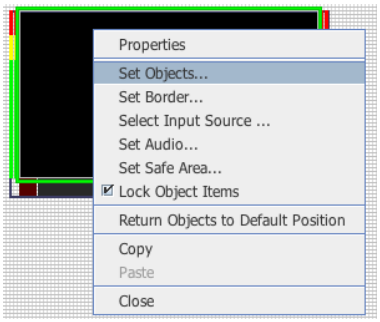


Figure 53: Select <Set Object>

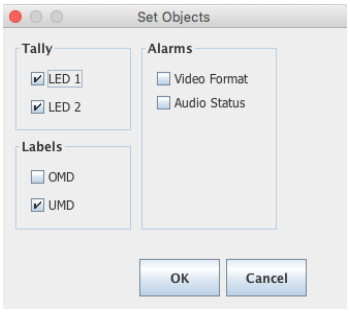


Figure 54: Check the objects to turn on/off

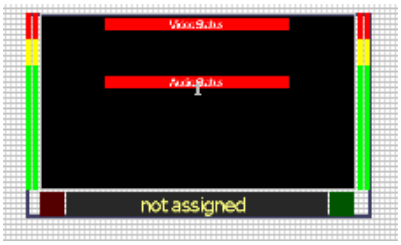


Figure 55: Alarm tags turned on

Set Borders:

- Size 0 to 7 pixels
- Size 0 = border off
- Colors

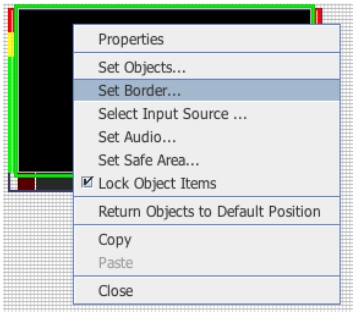


Figure 56: Select <Set Border>

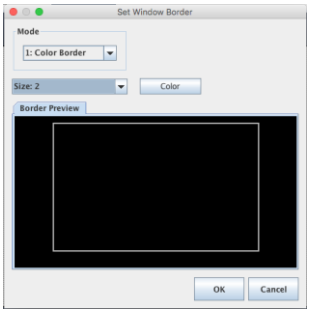


Figure 57: Set Window border

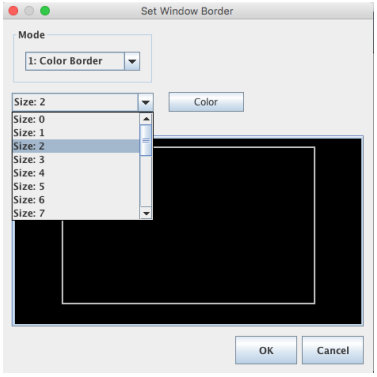


Figure 58: Alarm tags turned

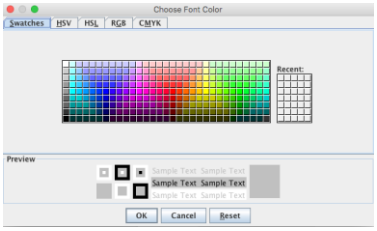


Figure 59: Alarm tags turned on

Set Border Skins:

There are 6 predefined skins. If you would like to make your own skins please contact Apantac tech support for futher assistance.

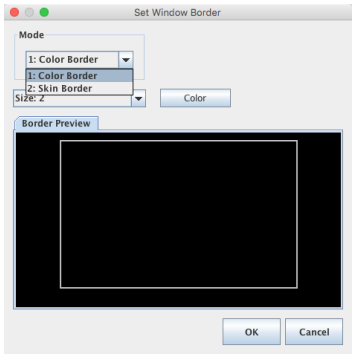


Figure 60: Choose Skin Border

Figure 61: Skin 1

Figure 62: Skin 2

Figure 63: Skin 3

Figure 64: Skin 4

Figure 65: Skin 5

Figure 66: Skin 6

Select Input Source.

Note:
Only the Mi-16# allows you to freely assign sources to a window.

Mi-16 and Mi-16+ the sources are only assignable to a single window. If source is green as seen in Figure 68 the source is available. If it is black the source has been used.

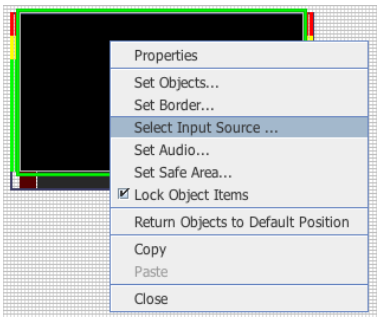


Figure 67: Select Input source

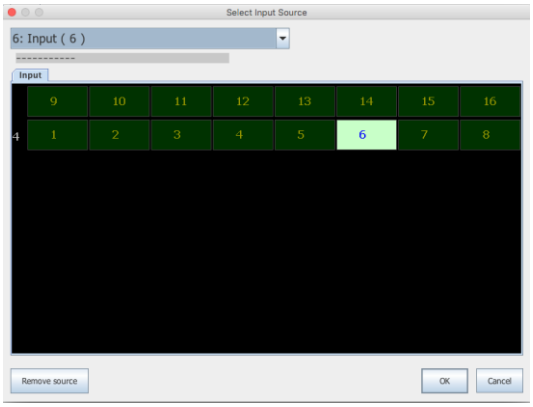
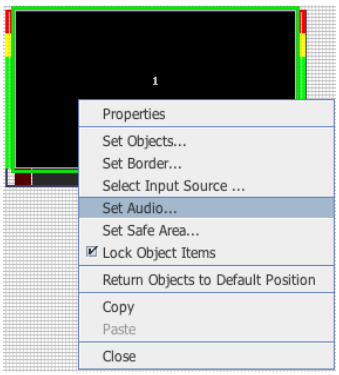
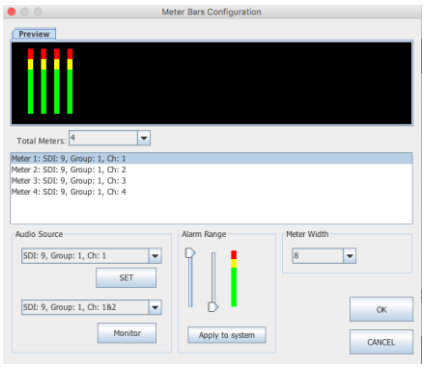
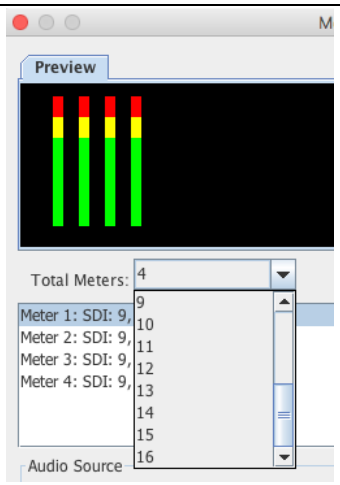


Figure 68: The available sources

Adding / removing audio meters to windows by right clicking on a window and select <Set Audio>	 Figure 69: Select Audio
Once a source is assigned to a window, you can now make audio assignments to the meters. You can assign up to 16 channels of audio to a single window	 Figure 70: Alarm tags turn  Figure 71: Alarm tags turn

Set Safe Area
Each window can have up to 2 safe areas.

To set and enable the safe area right click on a window and select <Set Safe Area>

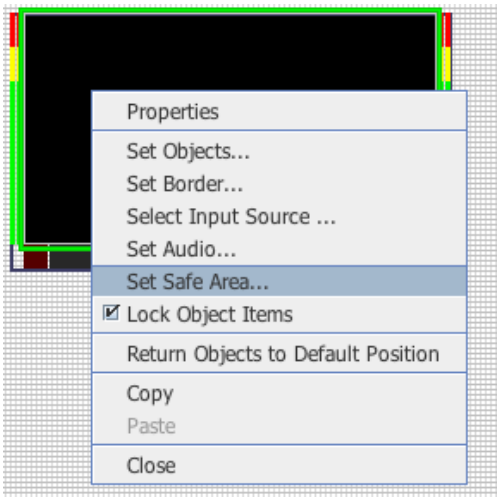


Figure 72: Enable first safe area

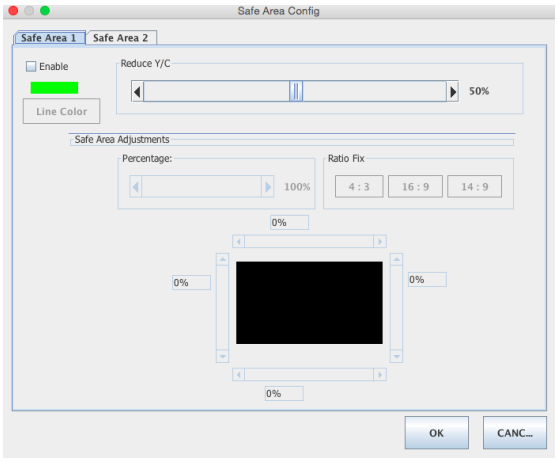


Figure 73: Enable first safe area

There are two tabs
Safe Area 1 and **Safe Area 2**

Check the "Enable" box on Safe Area 1 then use the Percentage slider to move the safe area to 5% on each side.

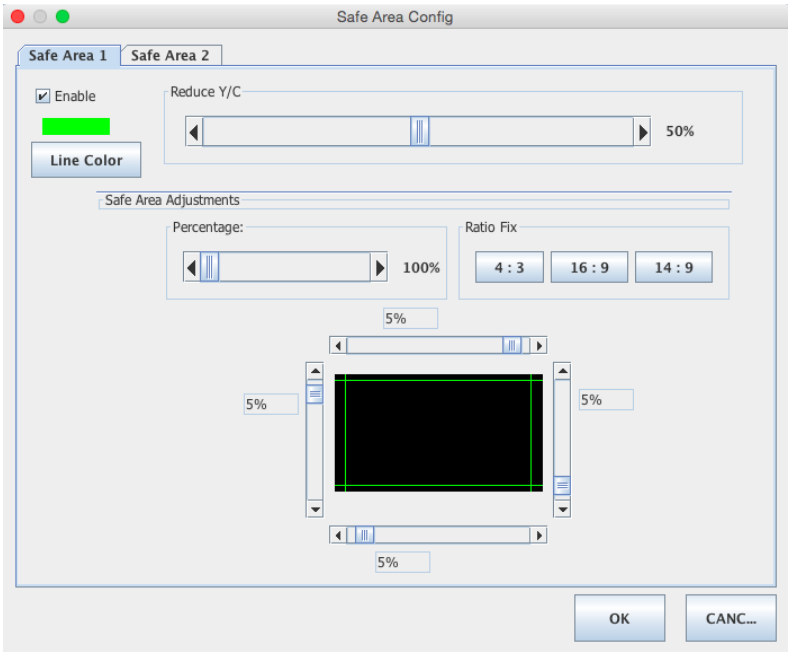


Figure 74: Set percentage

Click on Safe Area 2 tab
Check the "Enable" box then select Ratio Fix <4:3>
then click OK to exit

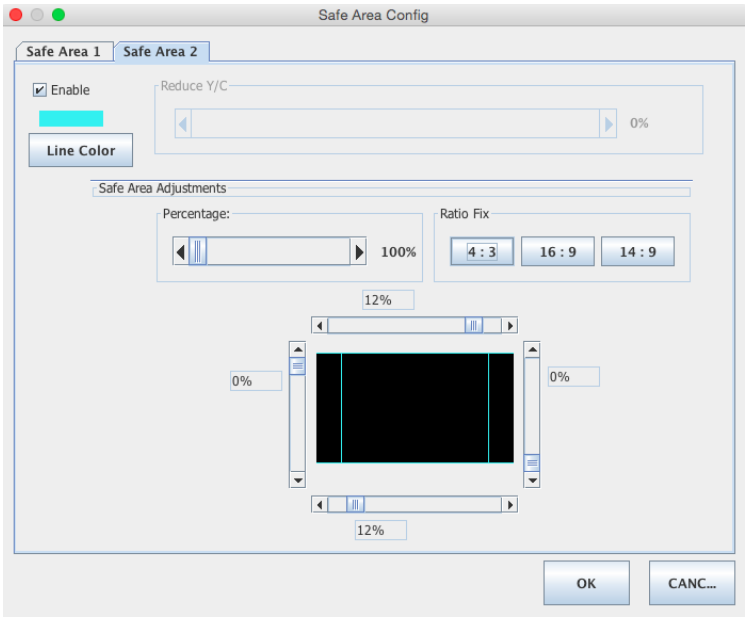


Figure 75: Enable second safe area and enable 4x3 safe area

You can now see the the safe areas enabled on the window

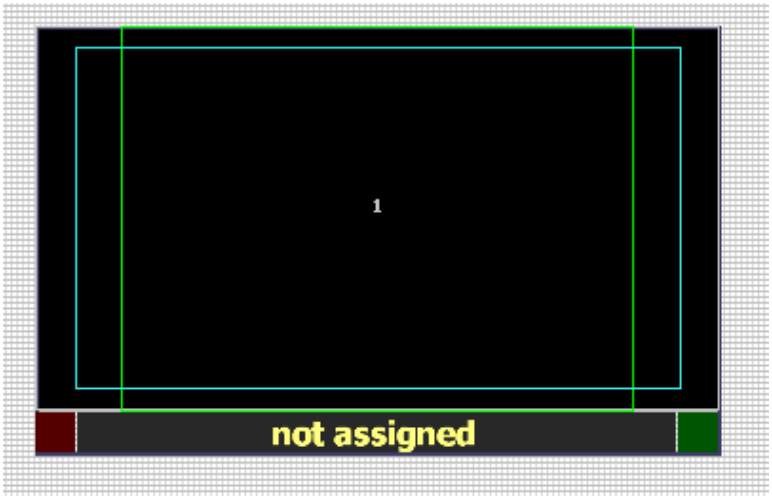


Figure 76: After safe area was turned on

Unlocking objects
The objects in the windows cannot be moved until it is unlocked

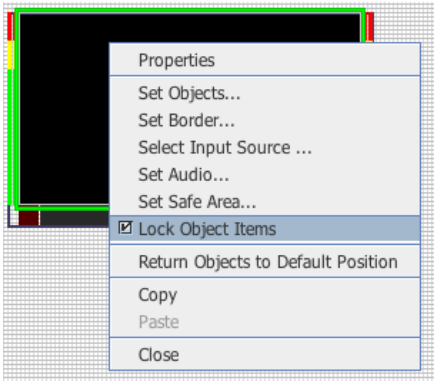
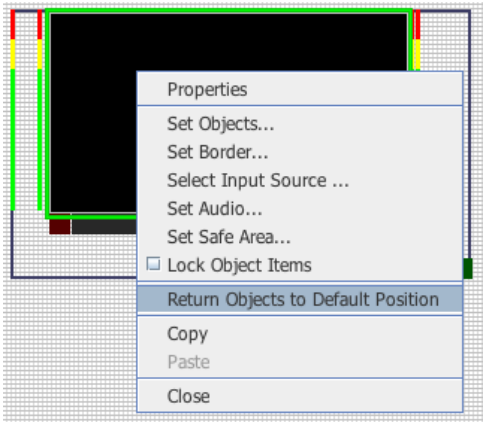
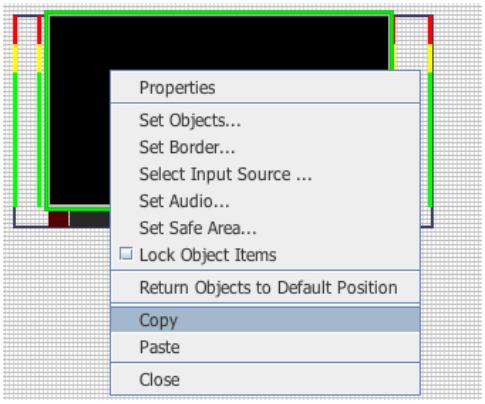
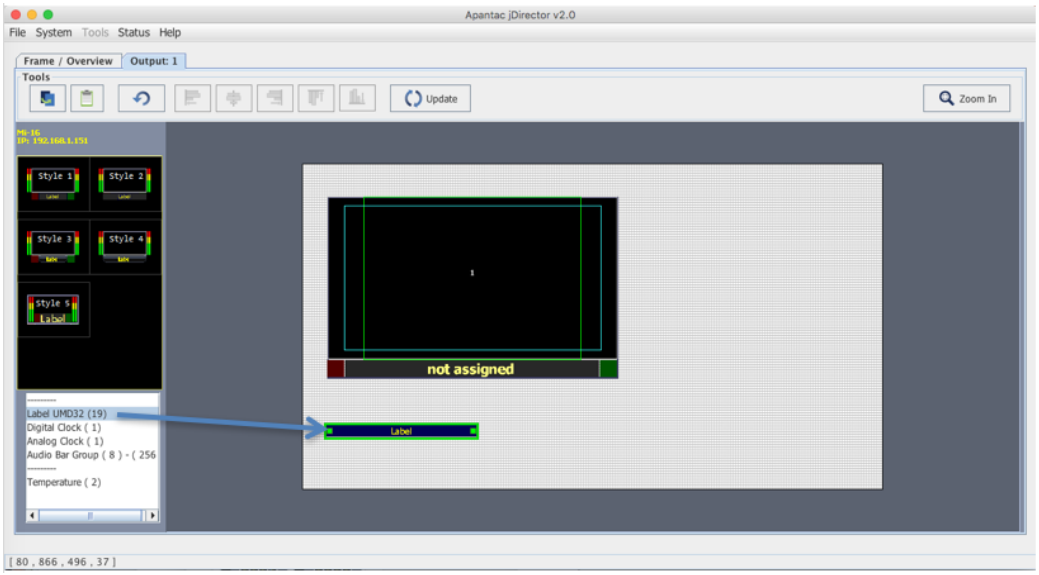


Figure 77: Lock Object Items toggle

Return objects to default position – returns all objects to the position prior to their move	 **Figure 78**: Return Objects to Default Position
Copy/Paste – Windows can be copied and pasted	 **Figure 79**: Copy/Paste of Windows
Setup standalone label	 **Figure 80**: Insert Label

Insert Digital Clock.

Drag "Digital Clock" into the work space

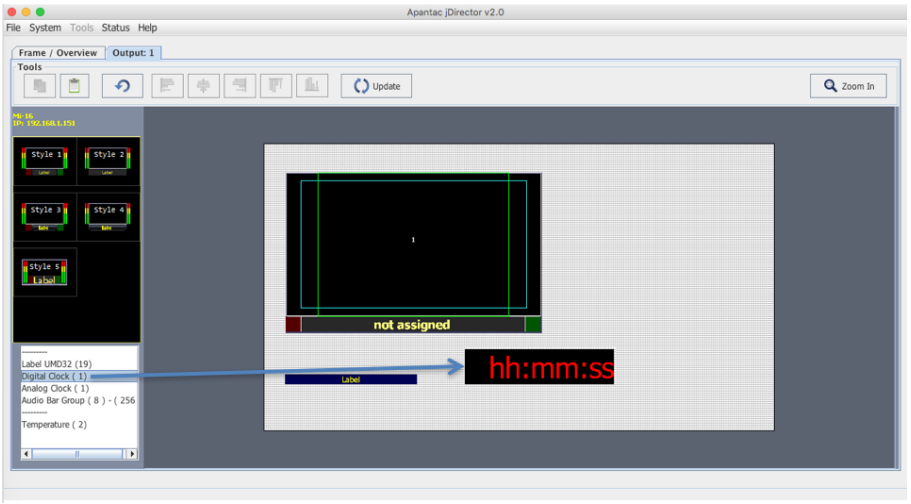


Figure 81: Drag the digital clock onto the workspace

Right click on the Clock to bring up the properties dialog.

Option

Uncheck "Enable DATE", "Enable YEAR",

Name

Remove "Clock" from the Name field

Time Zone

Select the time zone from the drop down menu.

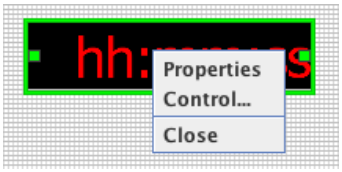


Figure 82: Edit digital clock properties

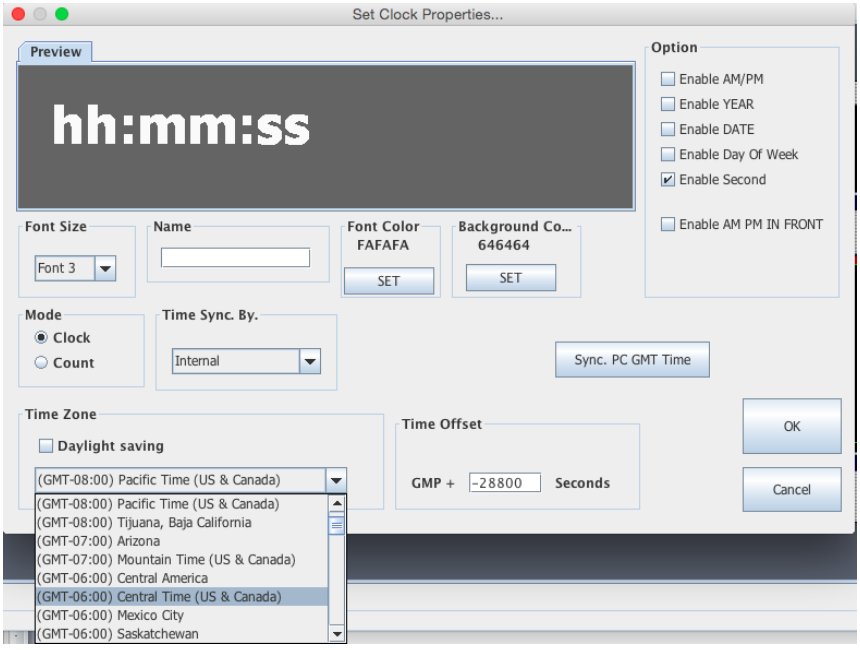


Figure 83: The digital clock

Clock **Font Color**

Set Font Color to white, click <OK>

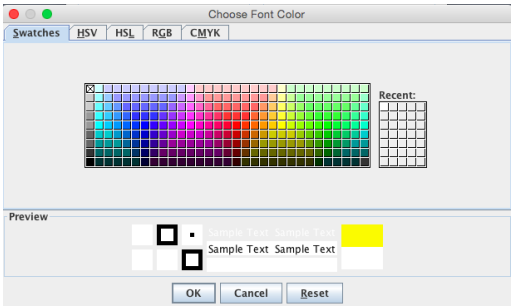


Figure 84: Edit font color

Clock **Background Color**

Set Background Color to black then click <OK>

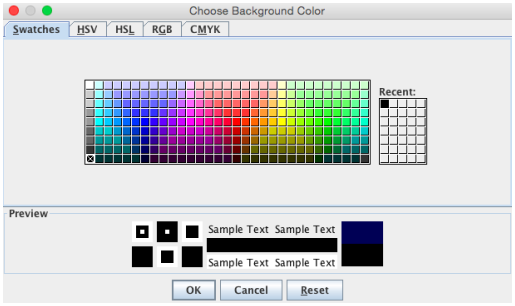


Figure 85: Edit background color

Label Properties

Right click on the label to bring up the properties dialog.

Select Font 4 for the largest size font.

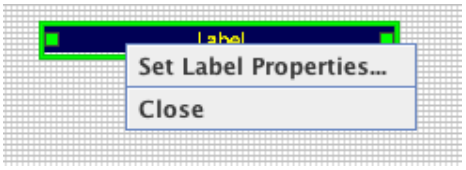


Figure 86: Set label properties

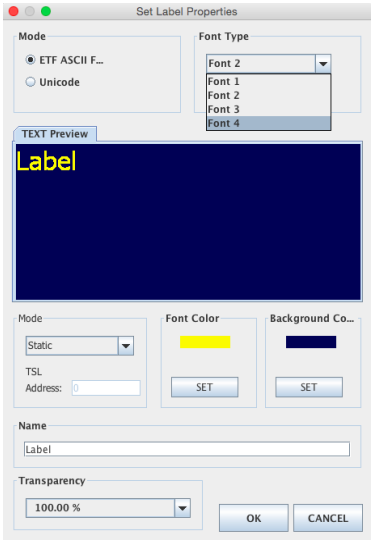


Figure 87: Set label properties

Label **Font Color**

Set font color to White click <OK>

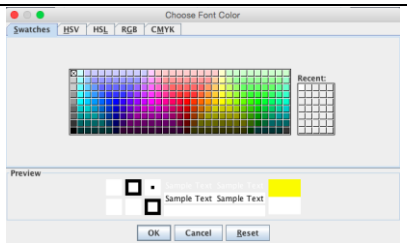


Figure 88: Set font color

Label **Background Color**

Set background color to black then click <OK>

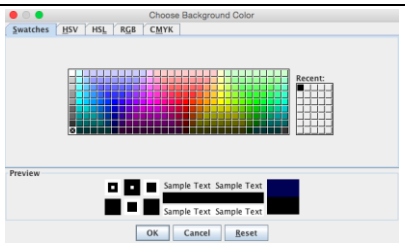


Figure 89: Set background color

Set Label Mode:
Follow Source or Static.

When set to **Follow Source** the label name will follow the name assigned in the **Input Source Manager**.

When set to <Static> the label name can be manually renamed to names such as "Program" and "Preview"

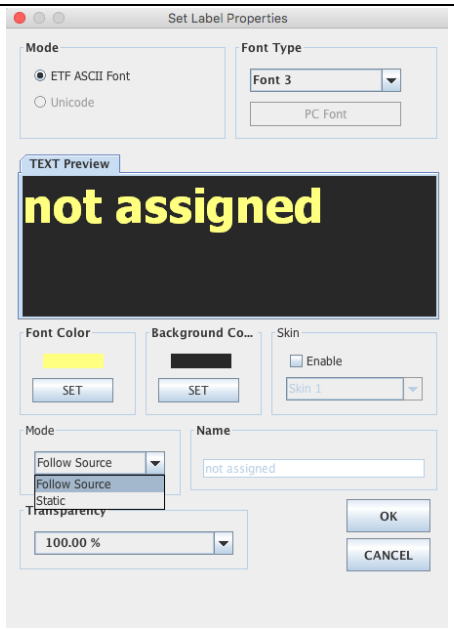


Figure 90: Set Label Mode

To insert a Digital Clock click and hold then drag the <Digital Clock> to the layout Work Space.

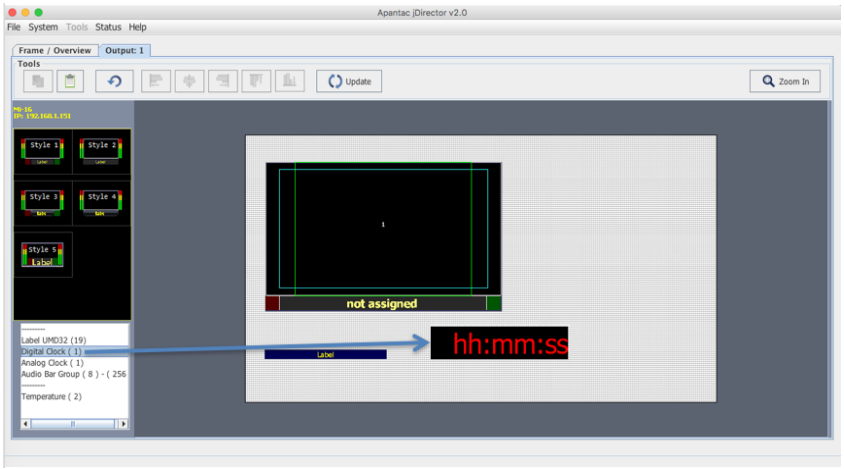


Figure 91: Insert a Digital Clok

Right Click on the digital clock in the the Work Space and then select Properties from the contextual menu to open this configuration dialog.

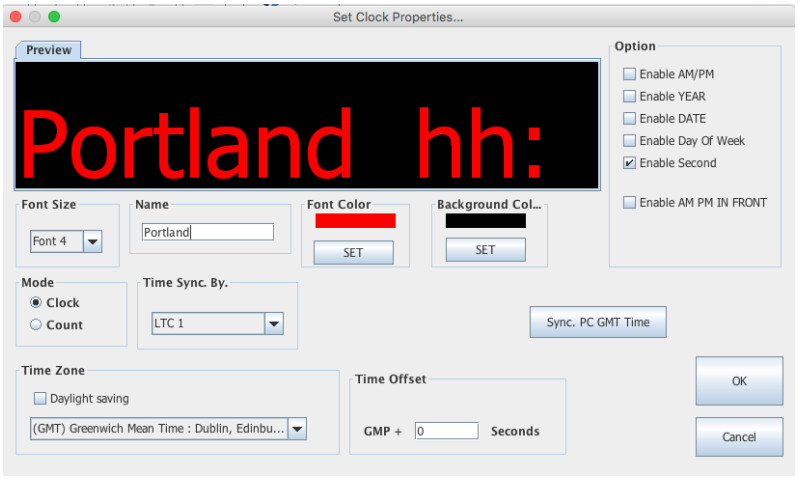


Figure 92: Set Clock Properties

The font size of the clock can be set in 4 different sizes.

The digital clock can be named in the Name box.

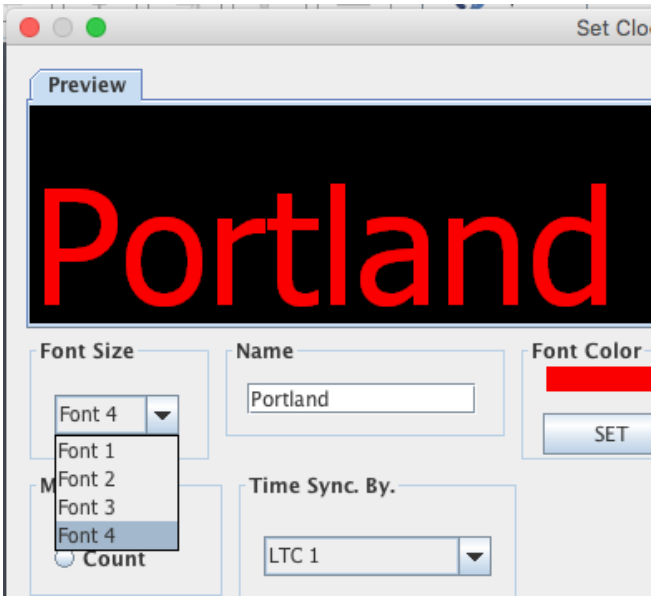


Figure 93: Clock Font Size

The digital clock properties can be set as the following:

1. Clock or a counter
2. can be sync'd to Internal, LTC or NTP
3. Daylight savings on/off
4. Time zone selection for the clock when set to Internal

When the clock is set to Internal it can be sync'd to the PC's clock by clicking on <Sync. PC GMT Time>

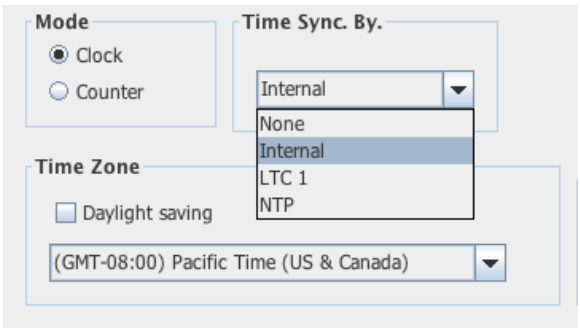


Figure 94: Clock Sync method selection

Figure 95: Sync the Clock with the connected PC

Insert an Analog Clock by dragging the <Analog Clock> to the work space

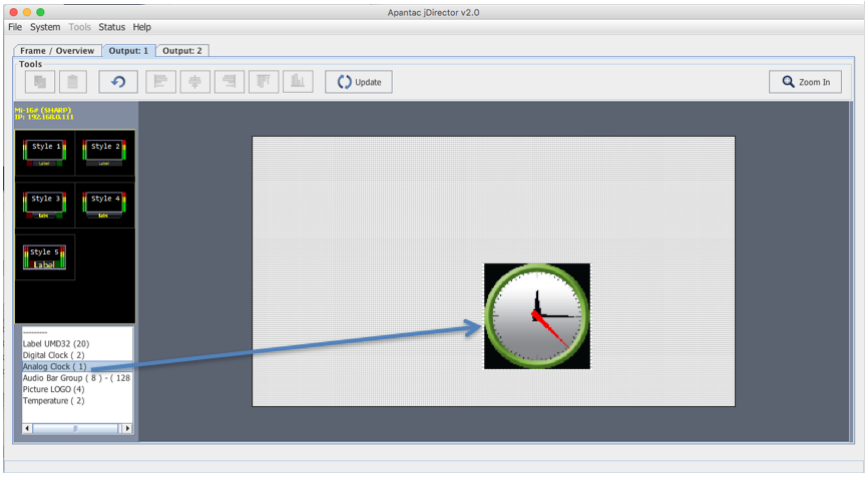


Figure 96: Insert Analog Clock

To set the properties on the analog clock right click on the clock and select <Properties>

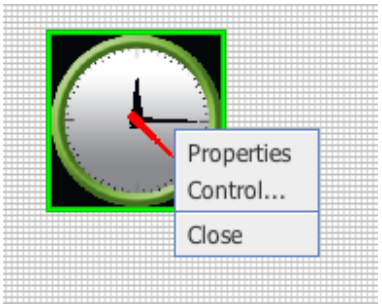


Figure 97: Open Analog Clock Properties

The analog clock properties can be set as the following:

1. Can be sync'd to Internal, LTC or NTP
2. Daylight savings on/off
3. Time zone selection for the clock when set to Internal

When the clock is set to Internal it can be sync'd to the PC's clock by clicking on <Sync. PC GMT Time>

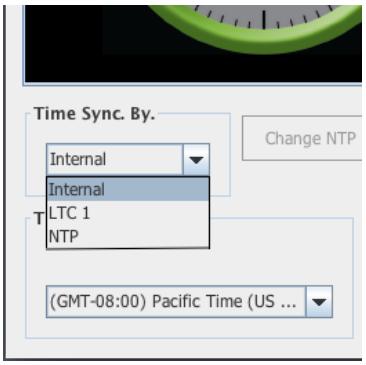


Figure 98: Time Sync method

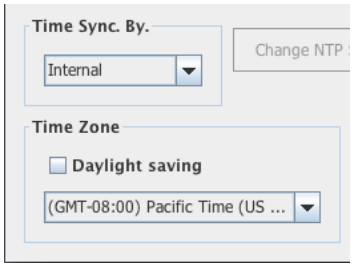


Figure 99: Time Zone selection

Figure 100: Sync the Clock with the connected PC

Clock faces

There are 3 different clock faces (skins) you can choose from.

The clock hands and color can also be configured

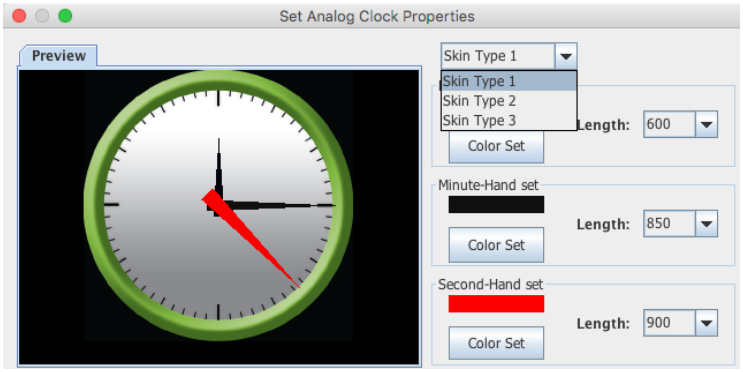


Figure 101: Skin Type 1

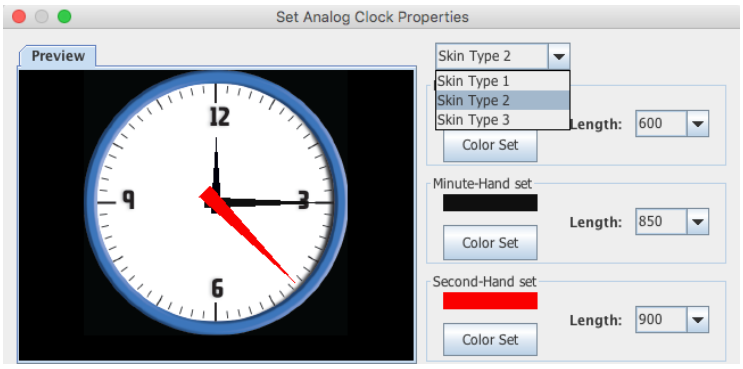


Figure 102: Skin Type 2

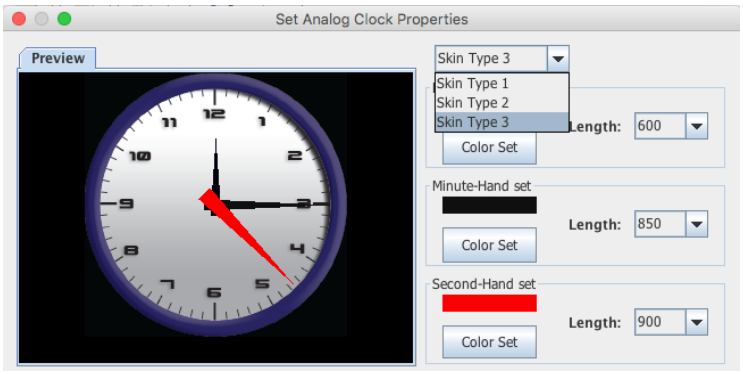
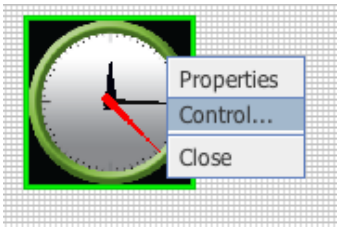


Figure 103: Skin Type 2

To adjust the GMT time right click on the Clock and select <Control>



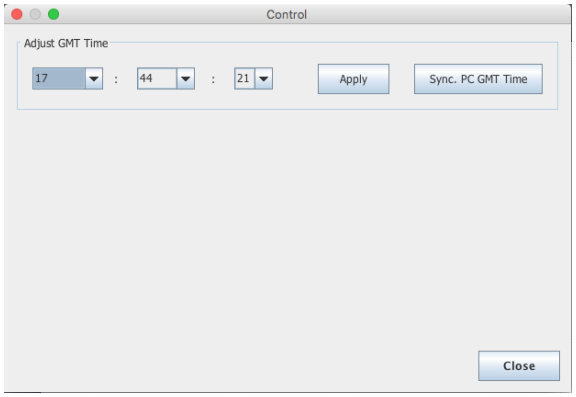


Figure 104: Adjust GMT Time

Add standalone audio meters by dragging the <Audio Bar Group> to the Workspace.

Right click on the meters to set the properties.

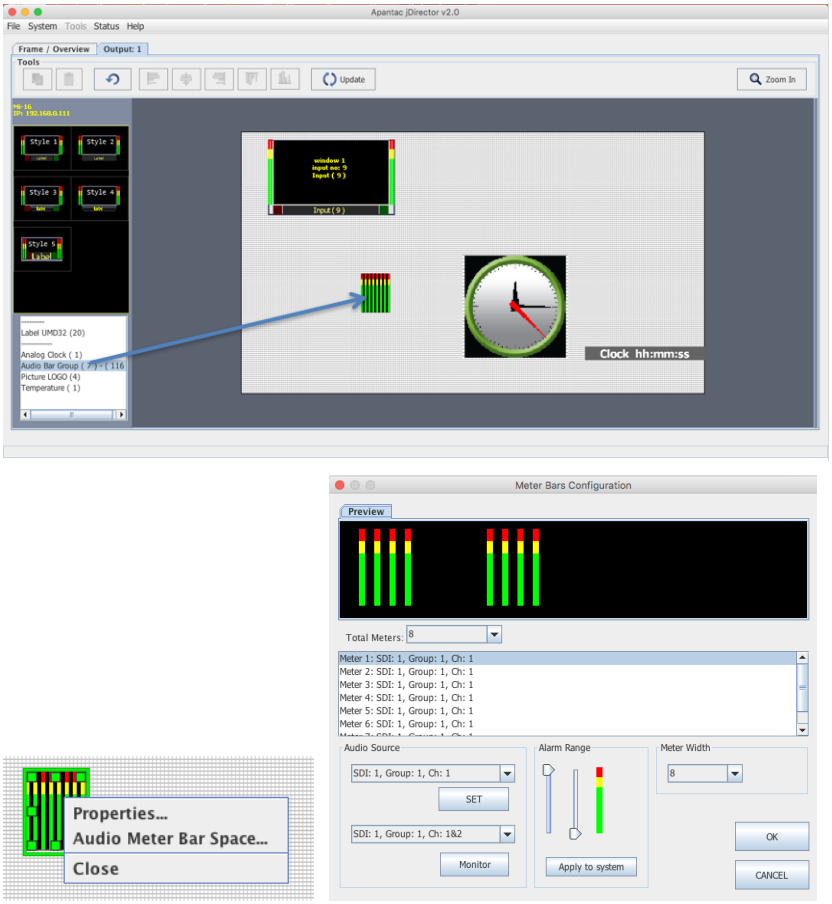


Figure 105: Add standalone Audio Meters

Audio sources can be assigned to each of the meters.

Any pair of the audio meters can also be sent to the audio monitoring output by clicking on <Monitor>.

Audio alarm range and audio meter width can also be set here.

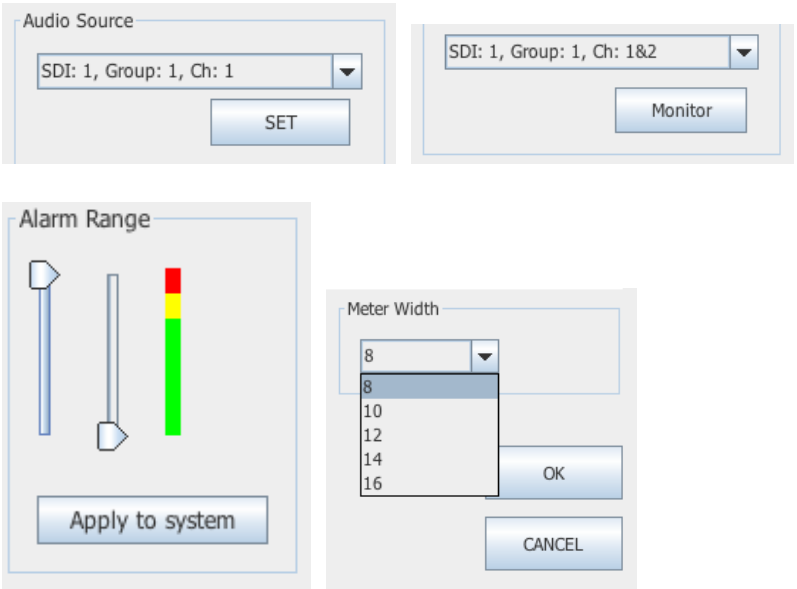
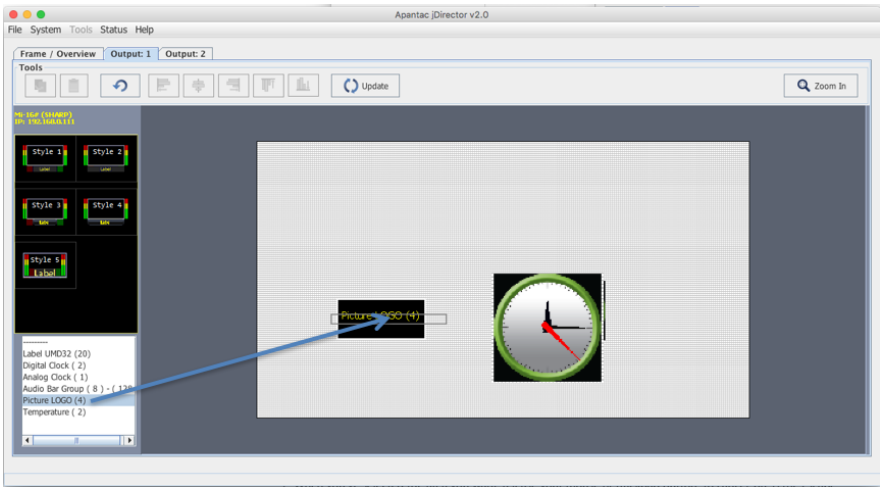
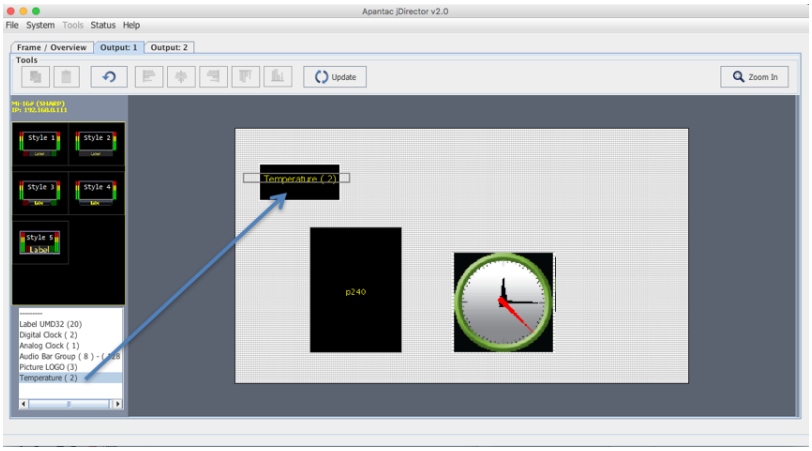
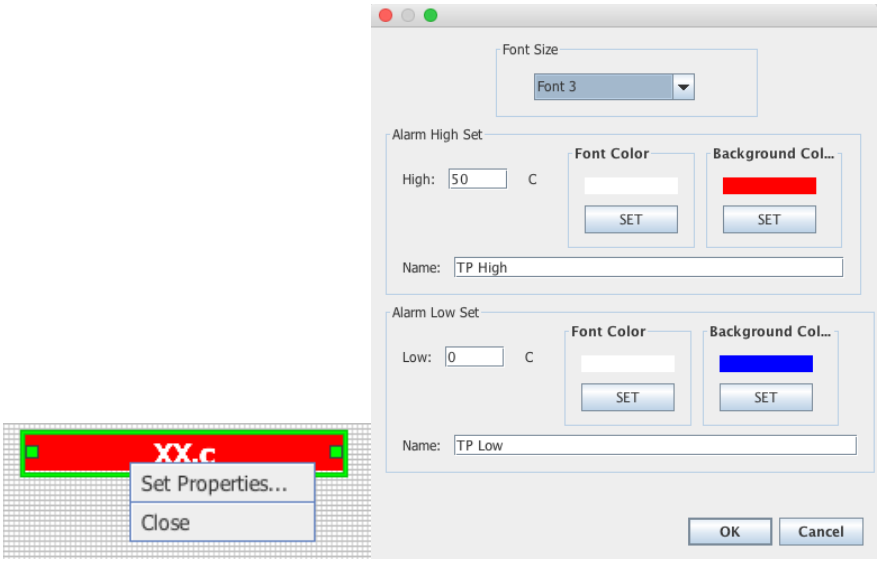


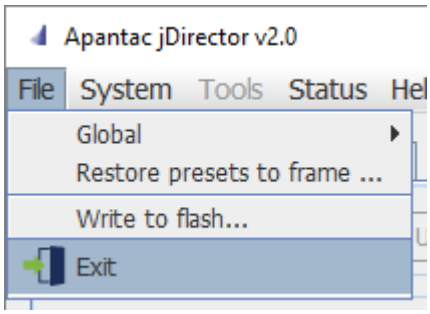
Figure 106: Audio Meter configuration

Add a logo to the layout by dragging the Picture LOGO to the Workspace. When letting go of the mouse button a dialog box will open for you to choose the logo file.	 **Figure 107**: Adding custom logo to Workspace
Insert a temperature warning by dragging <Temperature> to the workspace.	 **Figure 108**: Adding Temperature Alarm
Set Temperature alarm property by right clicking on the temperature alarm	 **Figure 109**: Temperature Alarm configuration

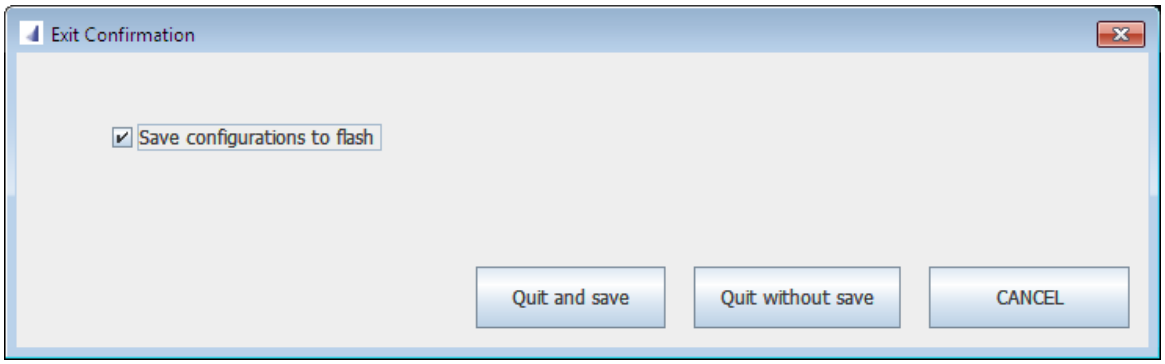
7.0 Saving Default Layout

The Default Layout is the layout loaded by the Multiviewer during the power on sequence. This layout is similar to a Saved Preset file but is treated differently by the Multiviewer, as it will not be visibile under the Preset Load dialog. A common practice is to create the desired layout save it as a preset for future use and then performing the **Quit and Save** function by exting the jDirector software. This Quit and Save is what gerenates the Default Layout or sometimes refered to as the *Last Layout* or *Latest Layout*.

After creating your desired layout or Loading a previously saved Preset file it is recommended that you first **Update all outputs** so all changes are reflected on your Outputs and then select File>Exit.



This will prompt you with the Exit Confirmation dialog box.
Complete the save by selecting the checkbox for **Save configurations to flash** and then click the **Quit and save** button.

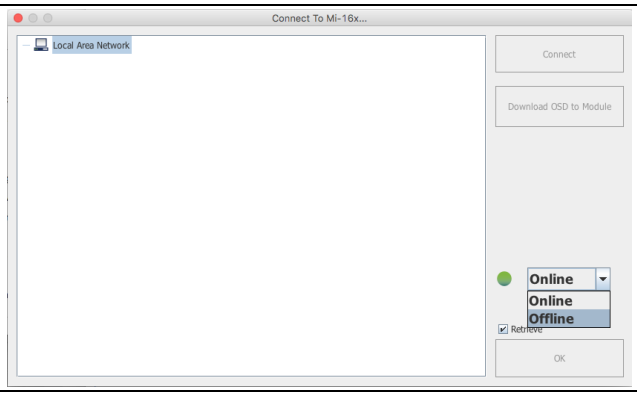
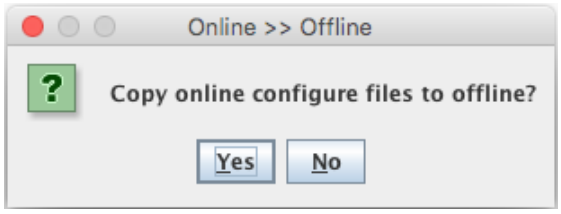
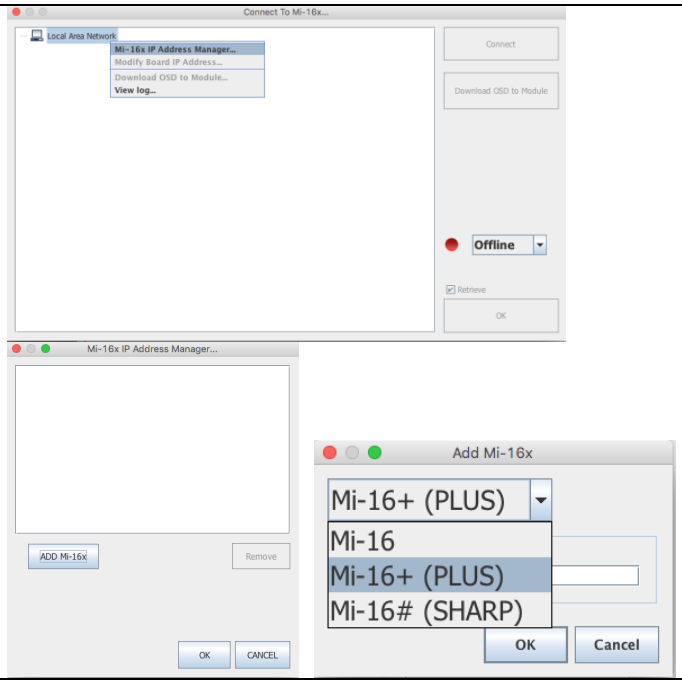
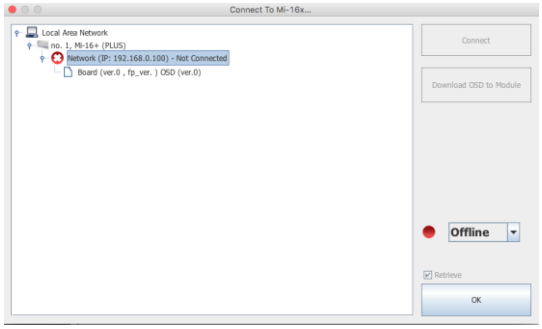


The Default Layout is updated each time a Quit and Save is completed.

8.0 Offline Mode

The jDirector software can also work in offline mode.

Note: Some features do not behave normally under Offline mode.

Start with a fresh copy of jDirector and select offline mode	
It will prompt you to copy your online folder to the offline folder. If you would like to continue to make edits to your online layout then click <Yes>, otherwise click <No>	
Add a Mi-16 to the editor. You can choose from the list.	
Once you enter the offline mode, you can start editing as if you were online.	

Appendix

Mi-16 presets

The Mi-16 can store up to 30 presets. It comes with 10 pre configured layouts as below,

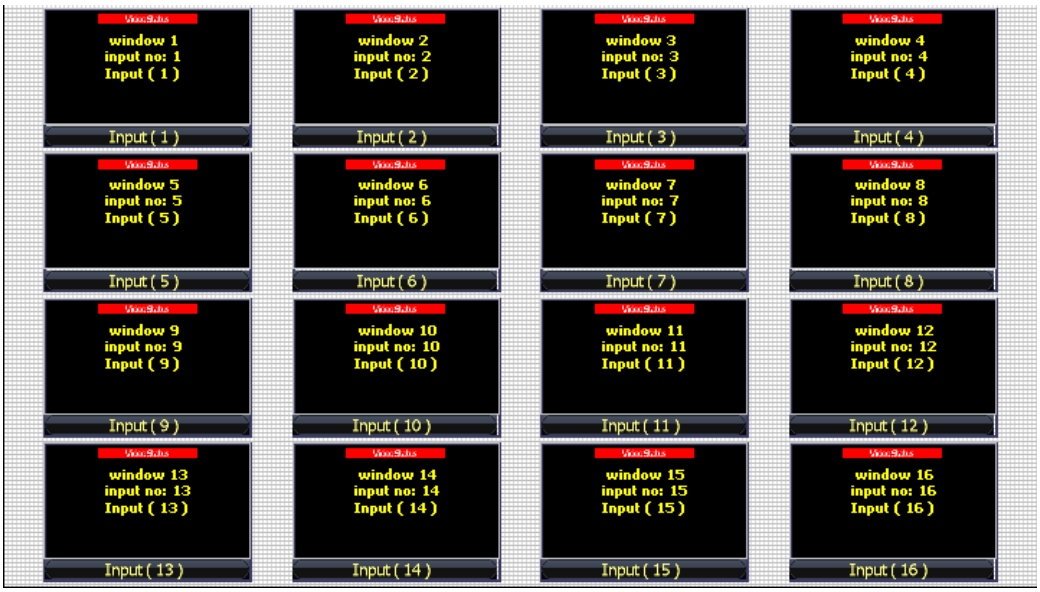


Figure 110: Preset1 – 16 windows (Preset1.OPx)

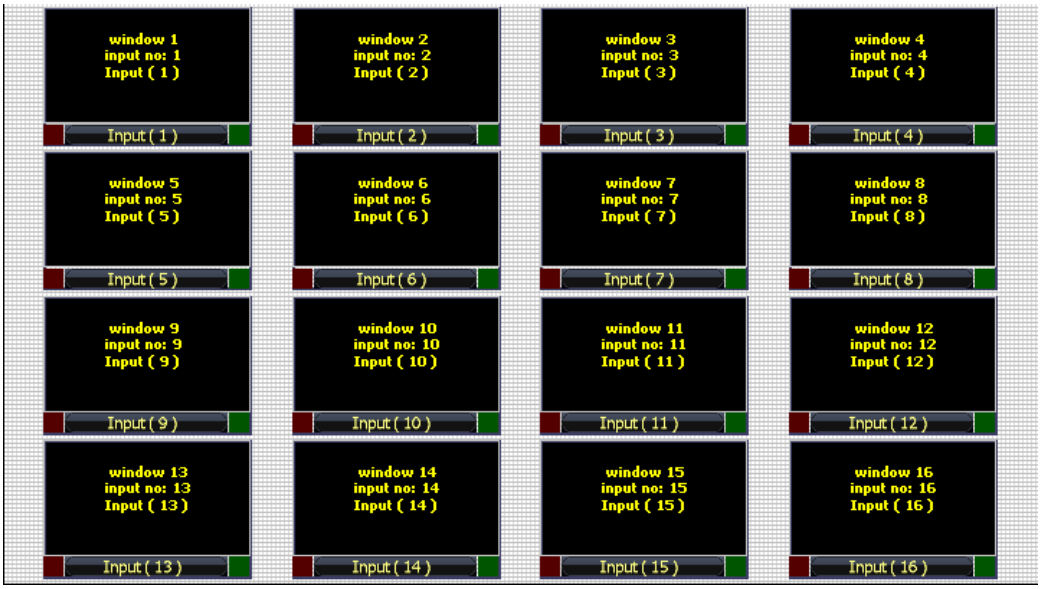


Figure 111: Preset2 – 16 windows with 2 Tally LEDs (Preset2.OPx)

Figure 112: Preset3 – 16 windows with 2 audio meters each (Preset3.OPx)

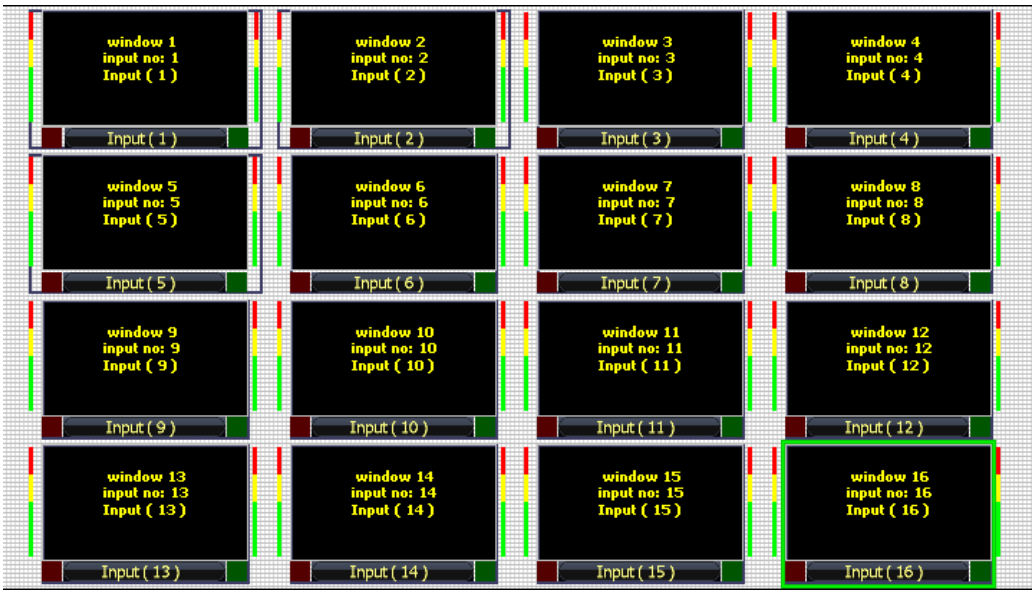


Figure 113: Preset4 – 16 windows with 2 Tally LEDs and 2 Audio Meters (Preset4.OPx)

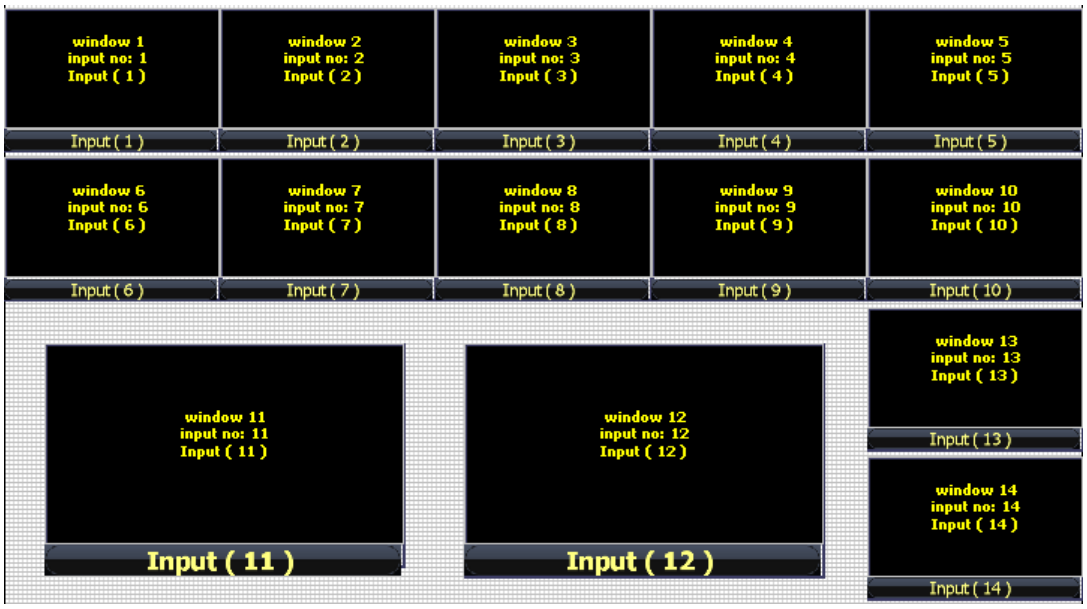


Figure 114: Preset5 – 14 windows (Preset5.OPx)

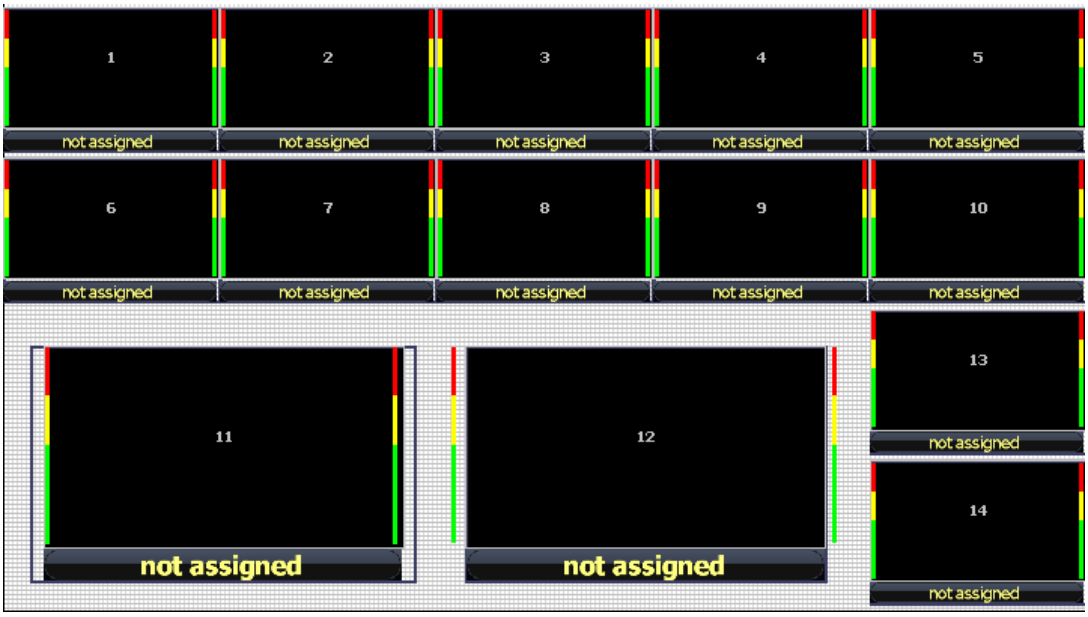


Figure 115: Preset6 – 14 windows with 2 audio meters (Preset6.OPx)

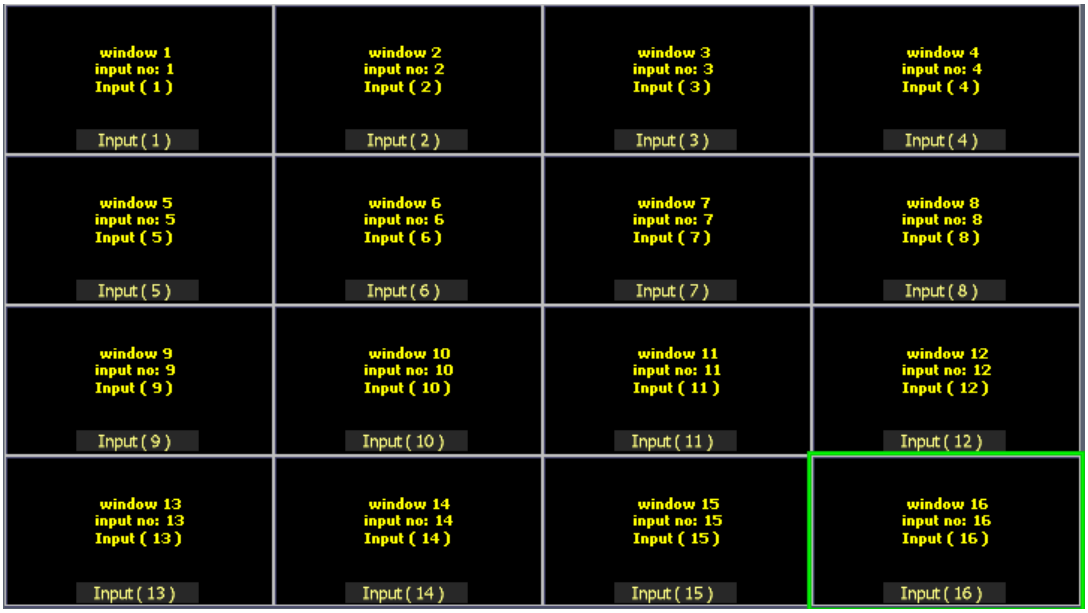


Figure 116: Preset7 – 16 windows with labels inside the windows (Preset7.OPx)

Figure 117: Preset8 – 11 windows (Preset8.OPx)

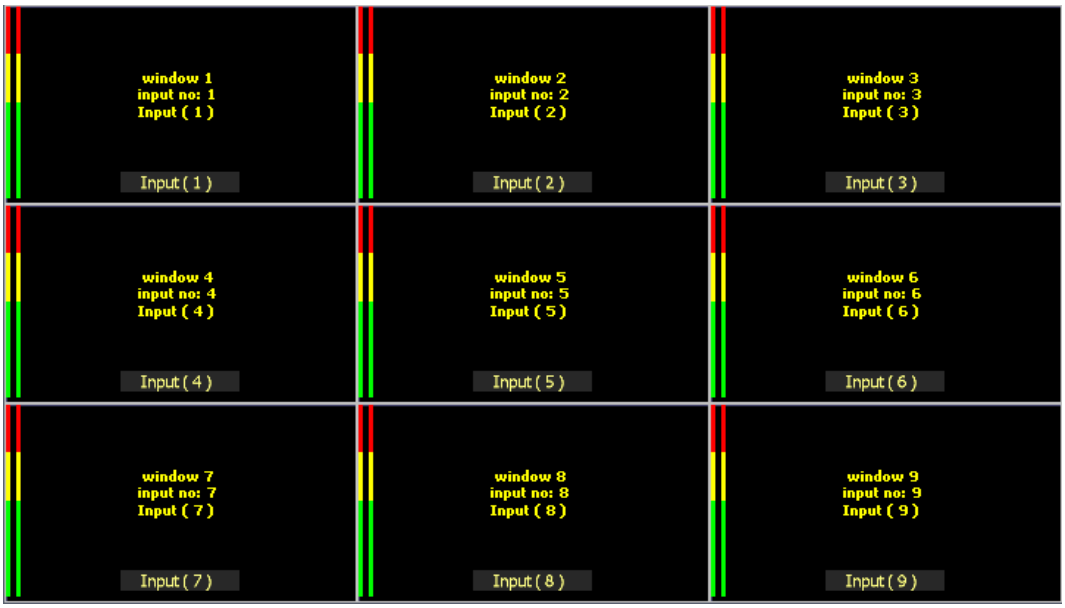


Figure 118: Preset9 – 9 windows with 2 audio meters and labels inside (Preset9.OPx)

Mi-16+ presets

The Mi-16+ can store up to 30 presets. It comes with 10 pre configured layouts as below,

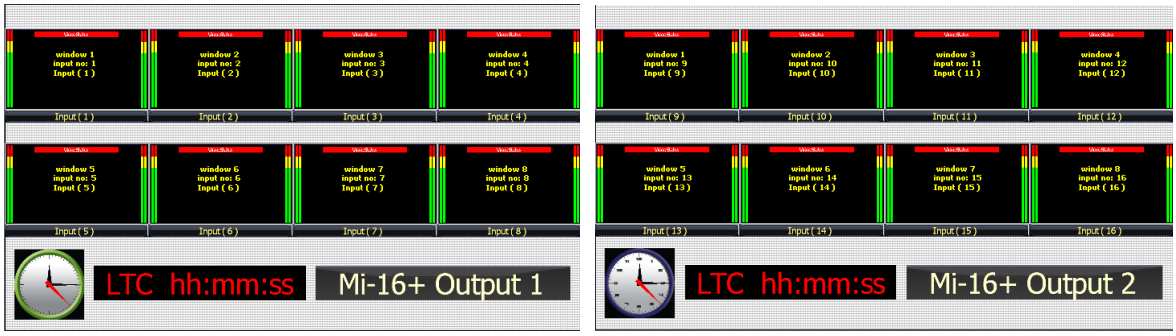


Figure 119: Preset1 – 8 windows on each output with Analog, digital clocks and Standalone Labels (Preset1.OPx)

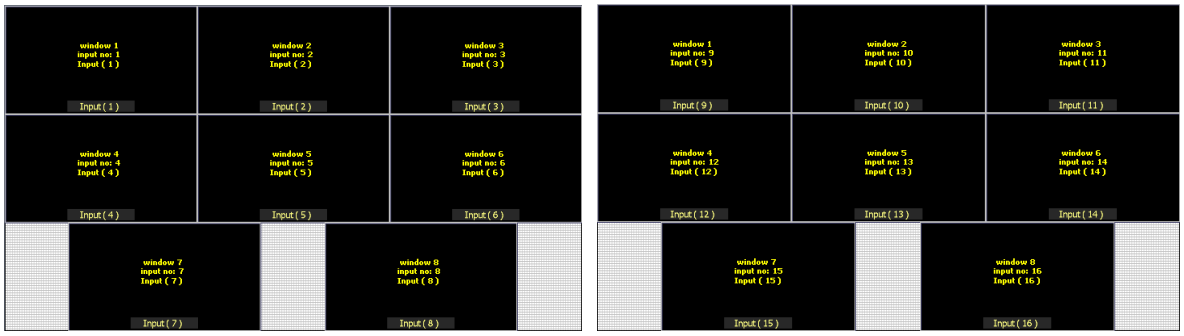


Figure 120: Preset2 – 8 windows on each output, labels inside the windows (Preset2.OPx)

Figure 121: Preset3 – 7 windows on each ouputs (Preset3.OPx)

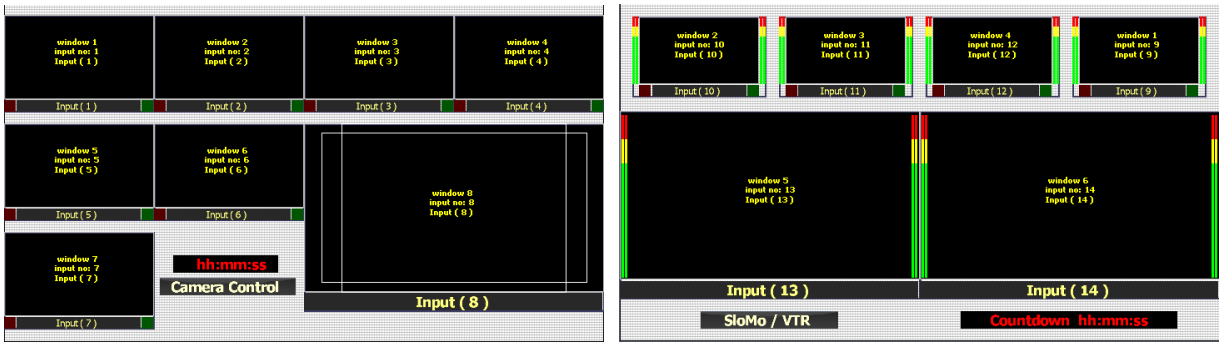


Figure 122: Preset4 – (Preset4.OPx)

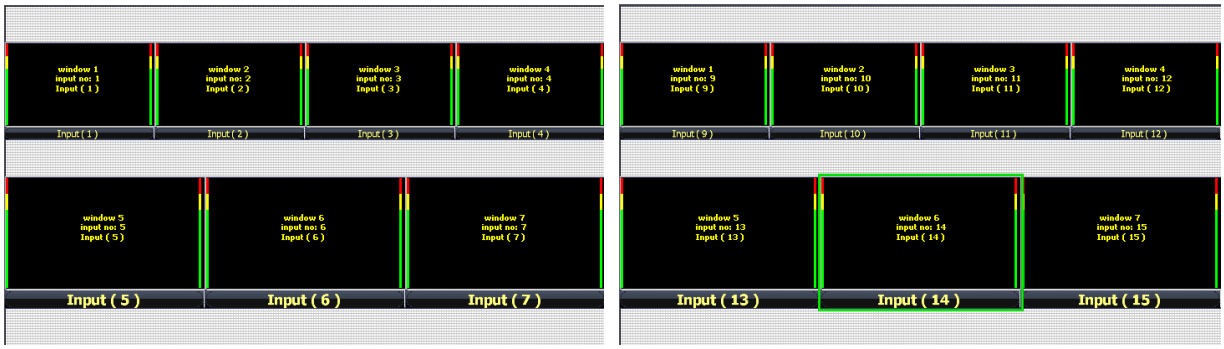


Figure 123: Preset5 – 15 windows (Preset5.OPx)

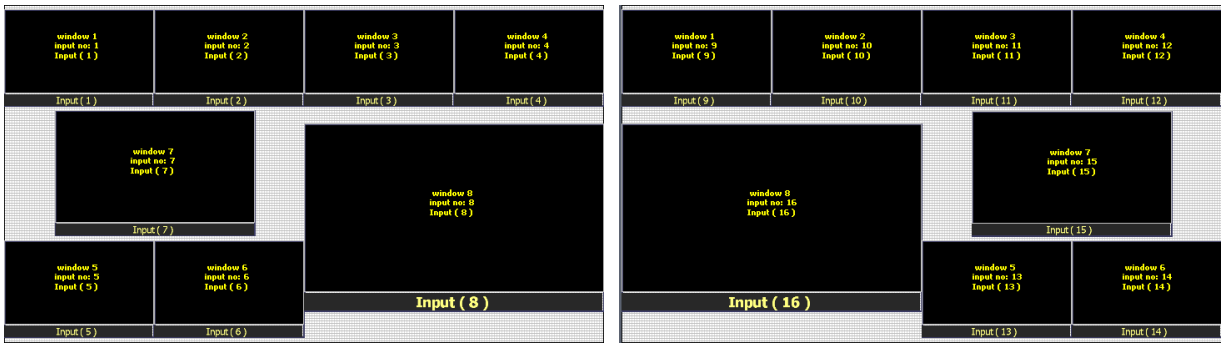


Figure 124: Preset6 – 16 windows (Preset6.OPx)

Figure 125: Preset7 – 16 windows with audio meters and tally LEDs (Preset7.OPx)

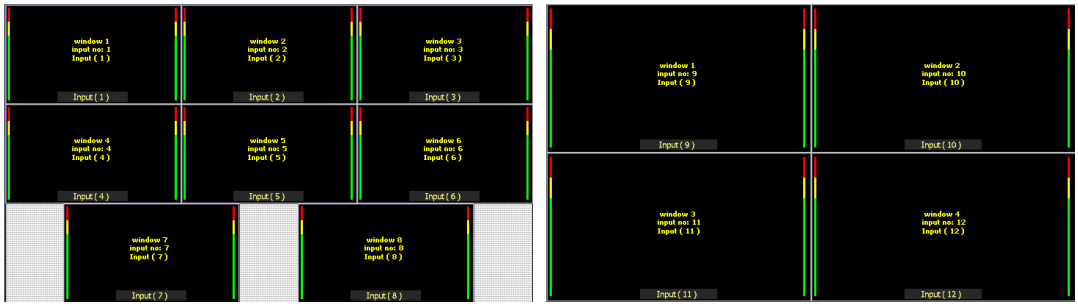


Figure 126: Preset8 – 12 windows with 2 audio meters (Preset8.OPx)

Figure 127: Preset9 – 9 windows with 2 audio meters and labels inside (Preset9.OPx)

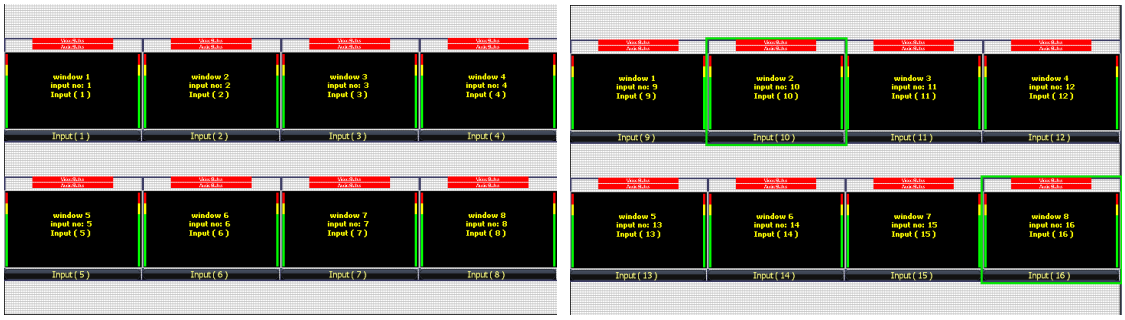


Figure 128: Preset10 – 16 windows with 2 audio meters (Preset10.OPx)

Mi-16# presets

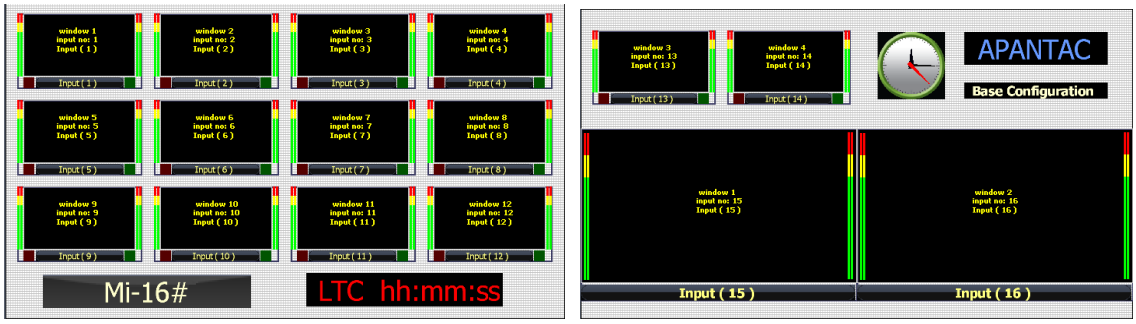


Figure 129: Preset1 – (Preset01.OPX)

Figure 130: Preset2 – (Preset02.OPX)

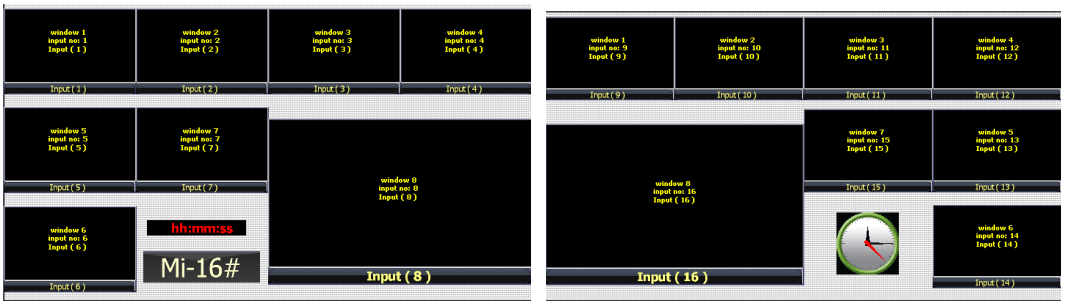


Figure 131: Preset3 – (Preset3.OPX)

Figure 132: Preset4 – (Preset4.OPX)

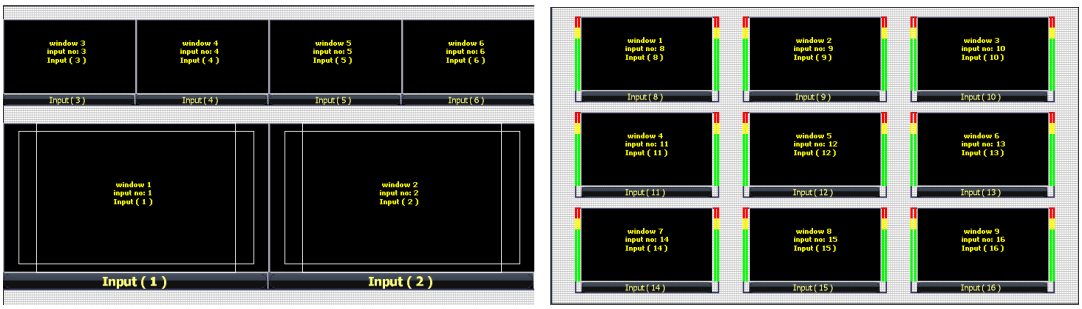


Figure 133: Preset5 – (Preset5.OPX)

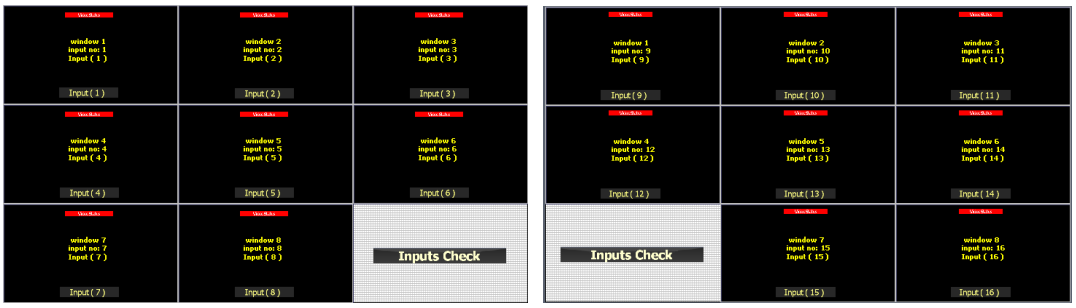


Figure 134: Preset6 – (Preset6.OPX)

Figure 135: Preset7 – (Preset7.OPX)

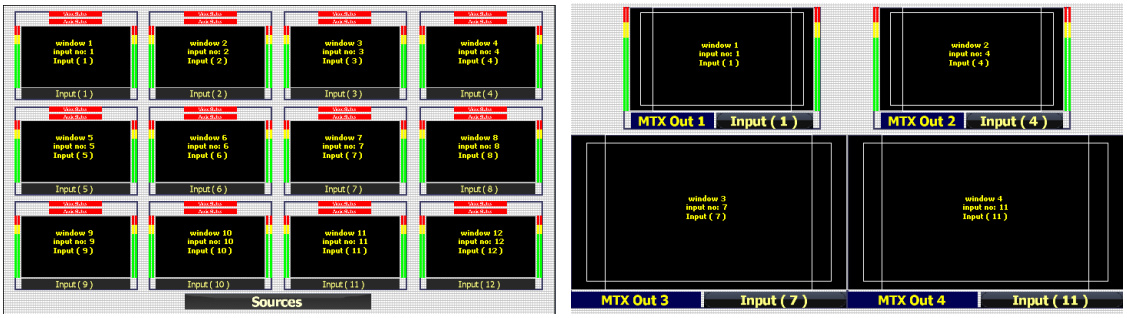


Figure 136: Preset8 – (Preset8.OPX)

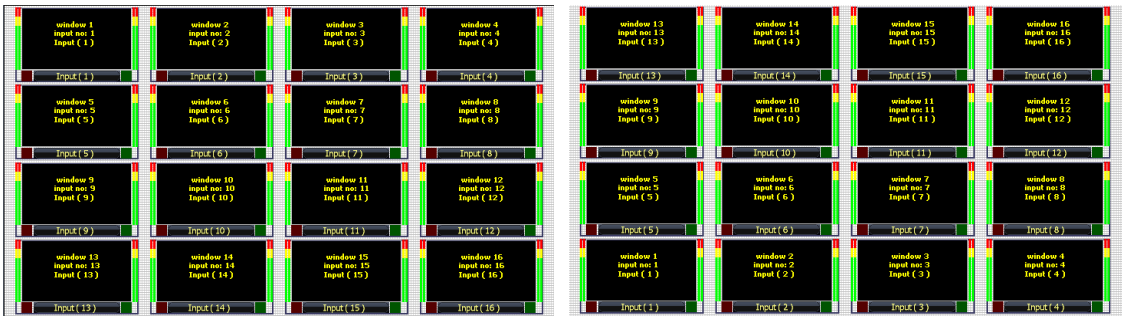
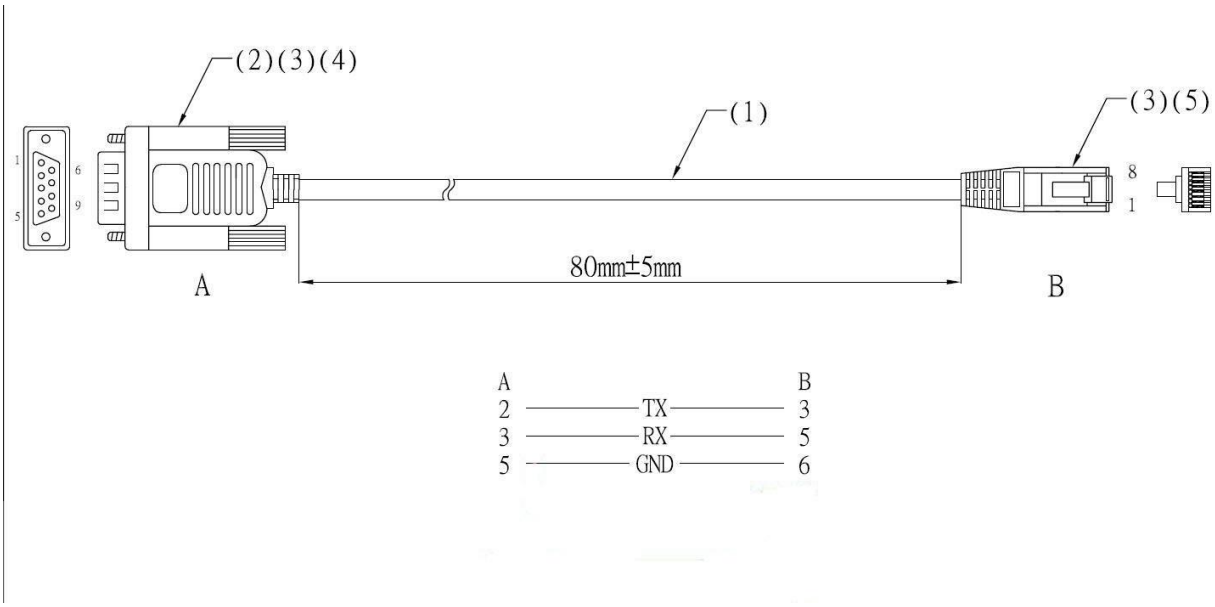
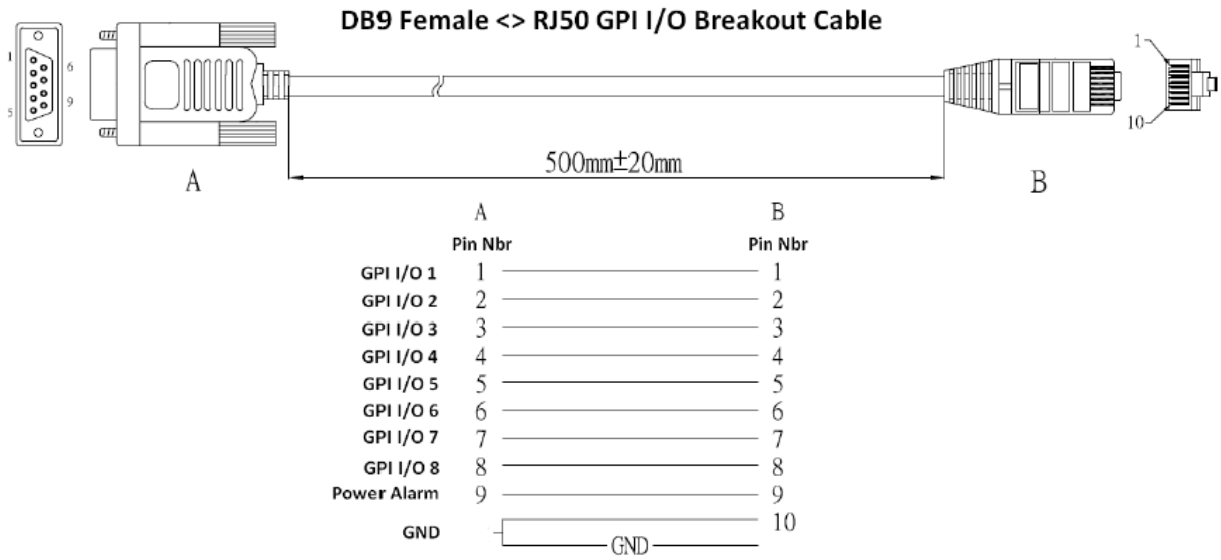


Figure 137: Preset9 – (Preset9.OPX)

Figure 138: Preset10 – (Preset10.OPX)

Cable Pinouts





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WARRANTY STATEMENT

Apantac LLC (herein after referred to as "Apantac") warrants to the original purchaser of the products manufactured by Apantac (the "Product,") will be free from defects in material and workmanship for a period of three (3) year from the date of shipment of the Product to the purchaser.
If the Product proves to be defective during the three (3) year warranty period, the purchaser's exclusive remedy and Apantac's sole obligation under this warranty is expressly limited, at Apantac's sole option, to:

(a) repair the defective Product without charge for parts and labor or,
(b) provide a replacement in exchange for the defective Product or,
(c) if after a reasonable time, is unable to correct the defect or provide a replacement Product in good working order, then the purchaser shall be entitled to recover damages subject to the limitation of liability set forth below.

Limitation of Liability

Apantac's liability under this warranty shall not exceed the purchase price paid for the defective product. In no event shall Apantac be liable for any incidental, special or consequential damages, including without limitation, loss of profits for any breach of this warranty.

If Apantac replaces the defective Product with a replacement Product as provided under the terms of this Warranty, in no event will the term of the warranty on the replacement Product exceed the number of months remaining on the warranty covering the defective Product.

Equipment manufactured by other suppliers and supplied by Apantac carries the respective manufacturer's warranty. Apantac assumes no warranty responsibility either expressed or implied for equipment manufactured by others and supplied by Apantac.

This hardware warranty shall not apply to any defect, failure or damage:

a) Caused by improper use of the Product or inadequate maintenance and care of the Product;
b) Resulting from attempts by those other than Apantac representatives to install, repair, or service the Product;
c) Caused by installation of the Product in a hostile operating environment or connection of the Product to incompatible equipment;