PrimeVue Manager – ServCom Configuration

Purpose of Document

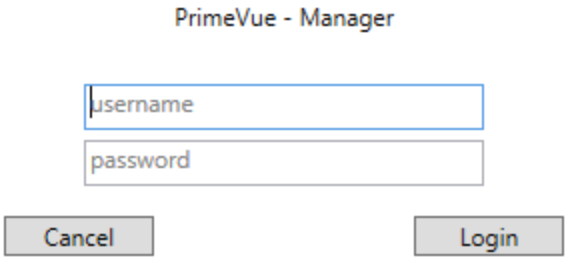
To demonstrate how to configure ServCom in PrimeVue Manager (also referred to as Server Config).

Basic Table of Contents

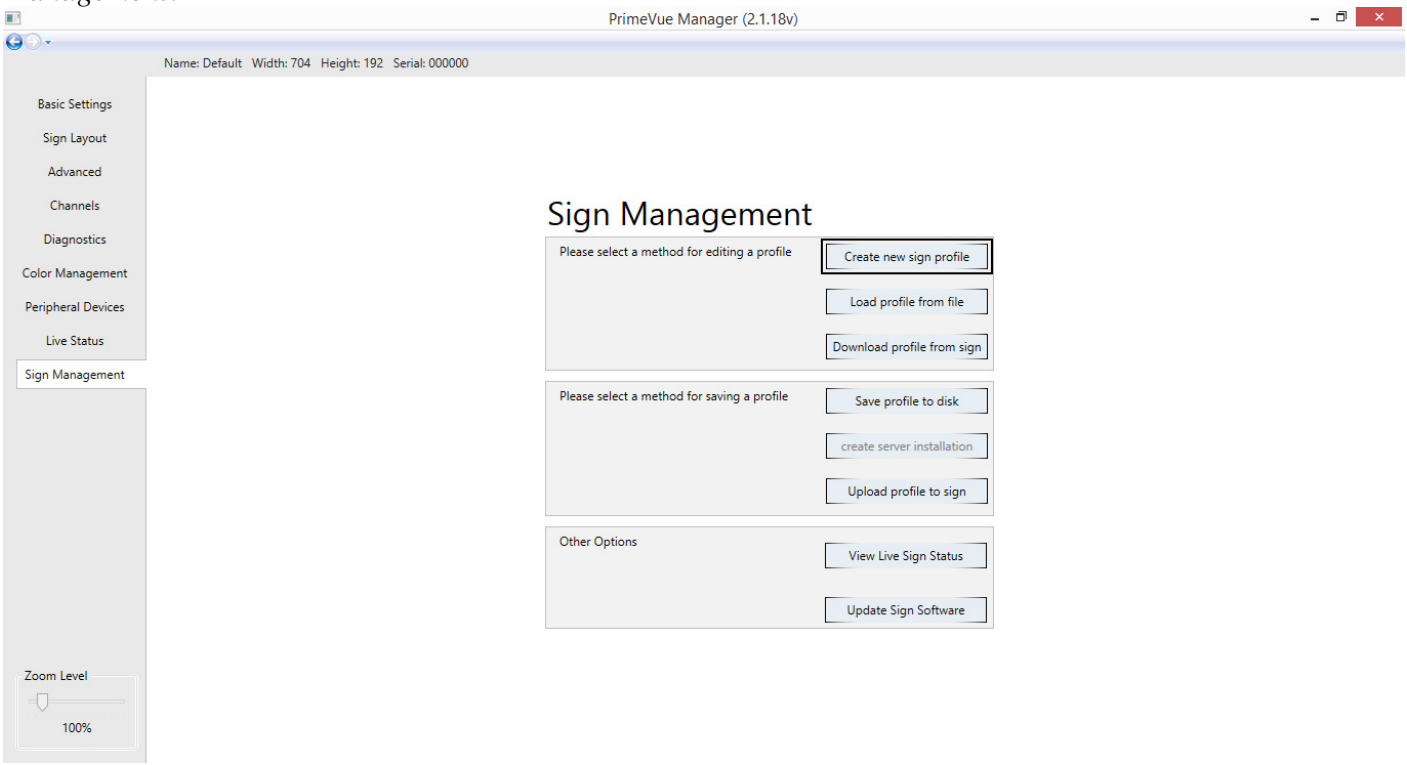
Full Table of Contents

0.0 Introduction

Log in using your user name and password.



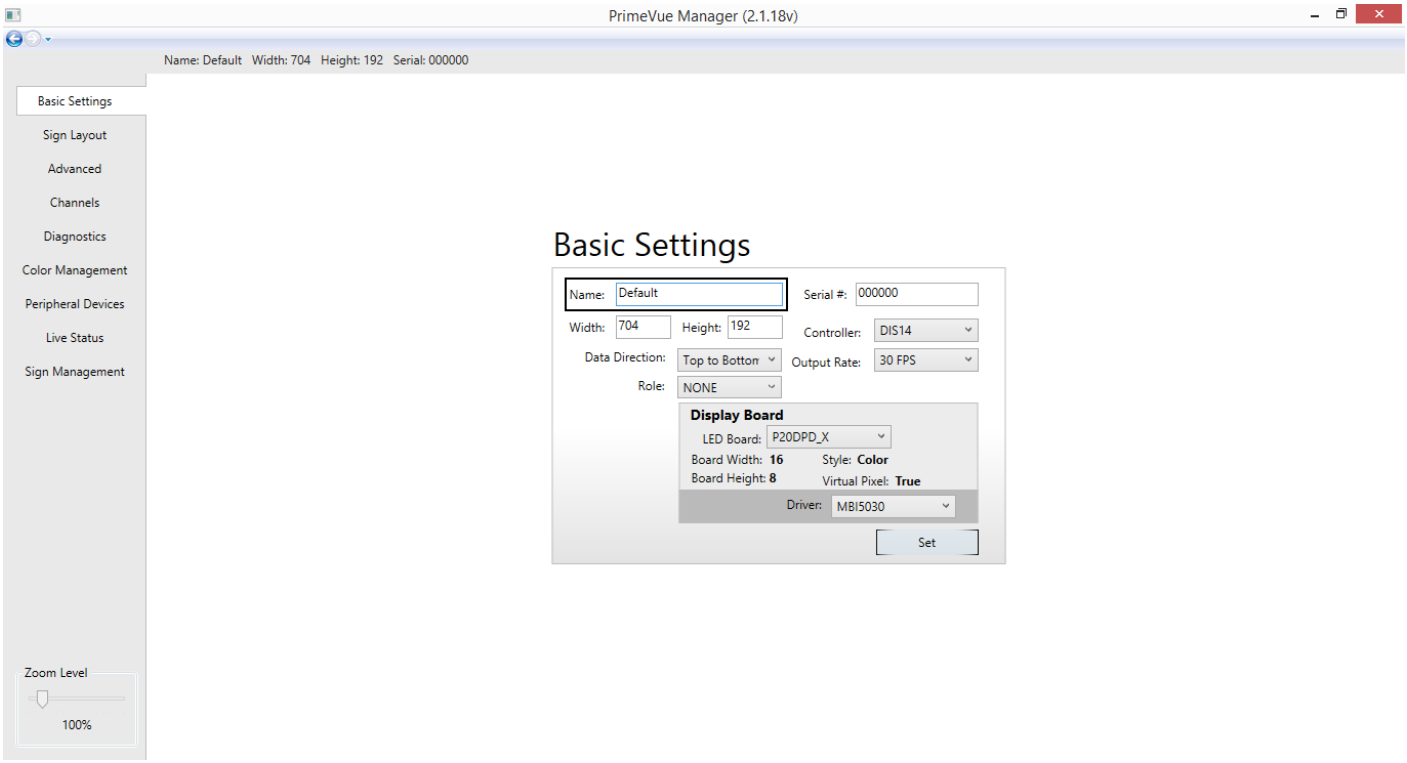
To configure ServCom for a new sign, click “Create new sign profile.” For other options, *see 9. Sign Management*.



1.0 Basic Settings

1.1 Name

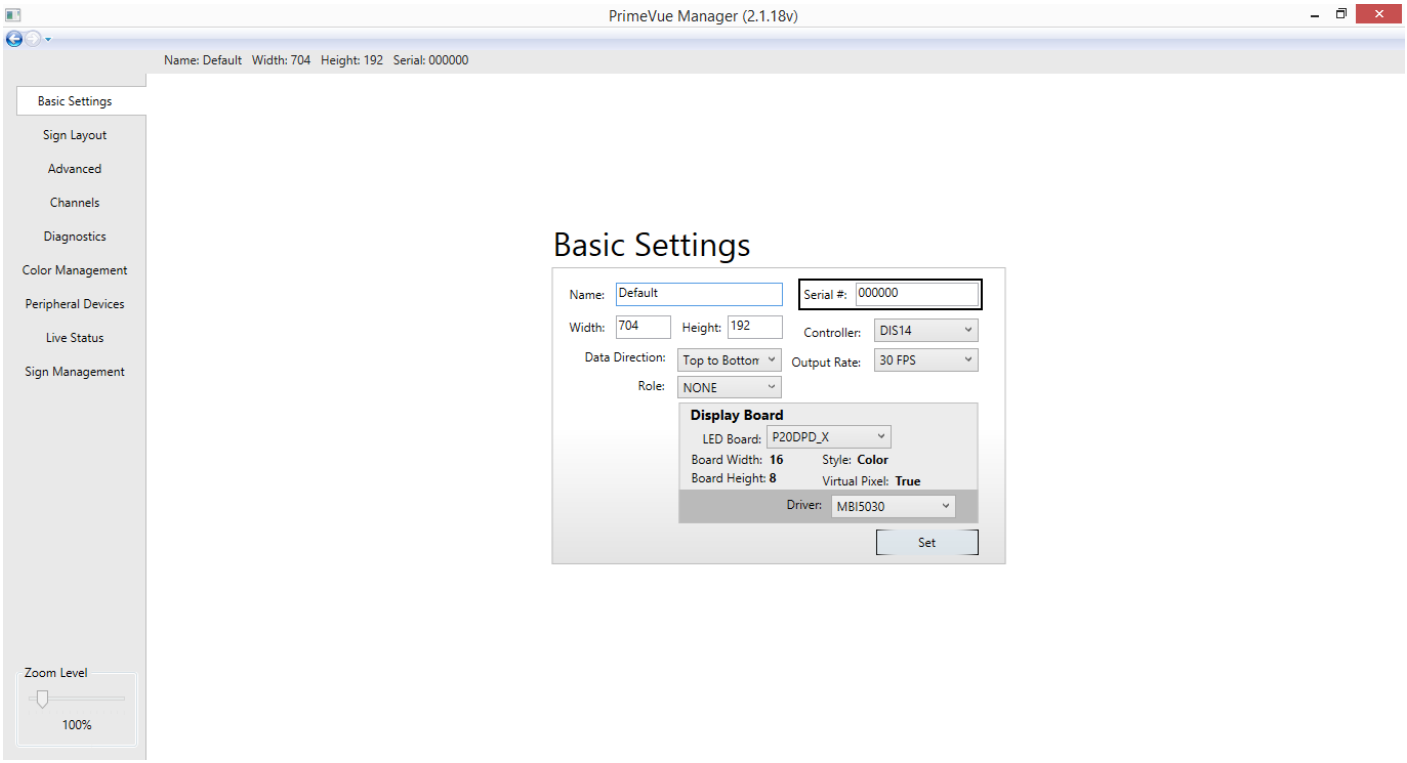
Enter the desired name of sign into the text box. If unchanged, sign's name will remain “Default.”



1.2 Serial Number

The Serial Number field is used for the TeamViewer number. This number appears in feedback emails.

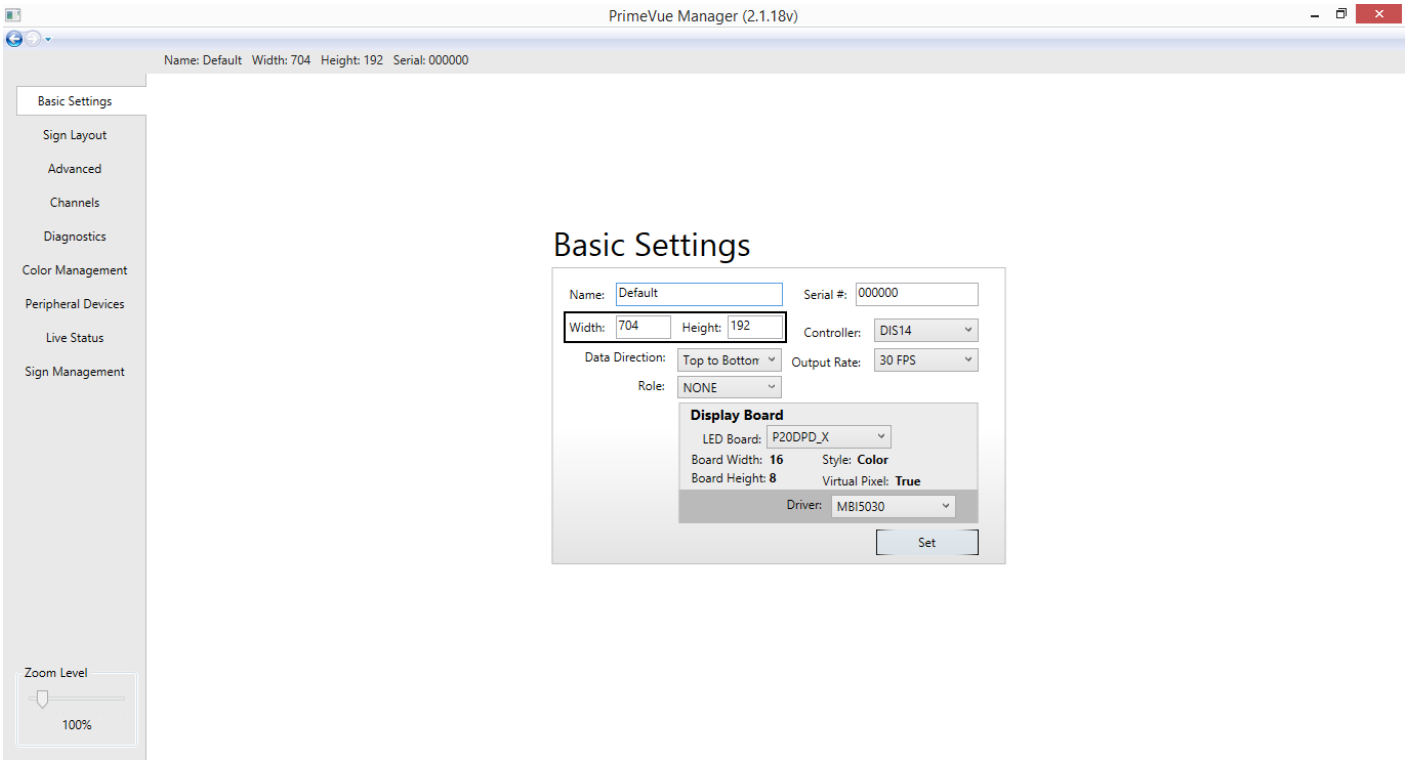
Enter the TeamViewer of the sign in the Serial Number field, if the sign has a TeamViewer number.



1.3 Sign Resolution

Use the **Width** and **Height** boxes to enter in the appropriate resolution of the sign. Always enter the physical size of the sign, not the Virtual Pixel size.

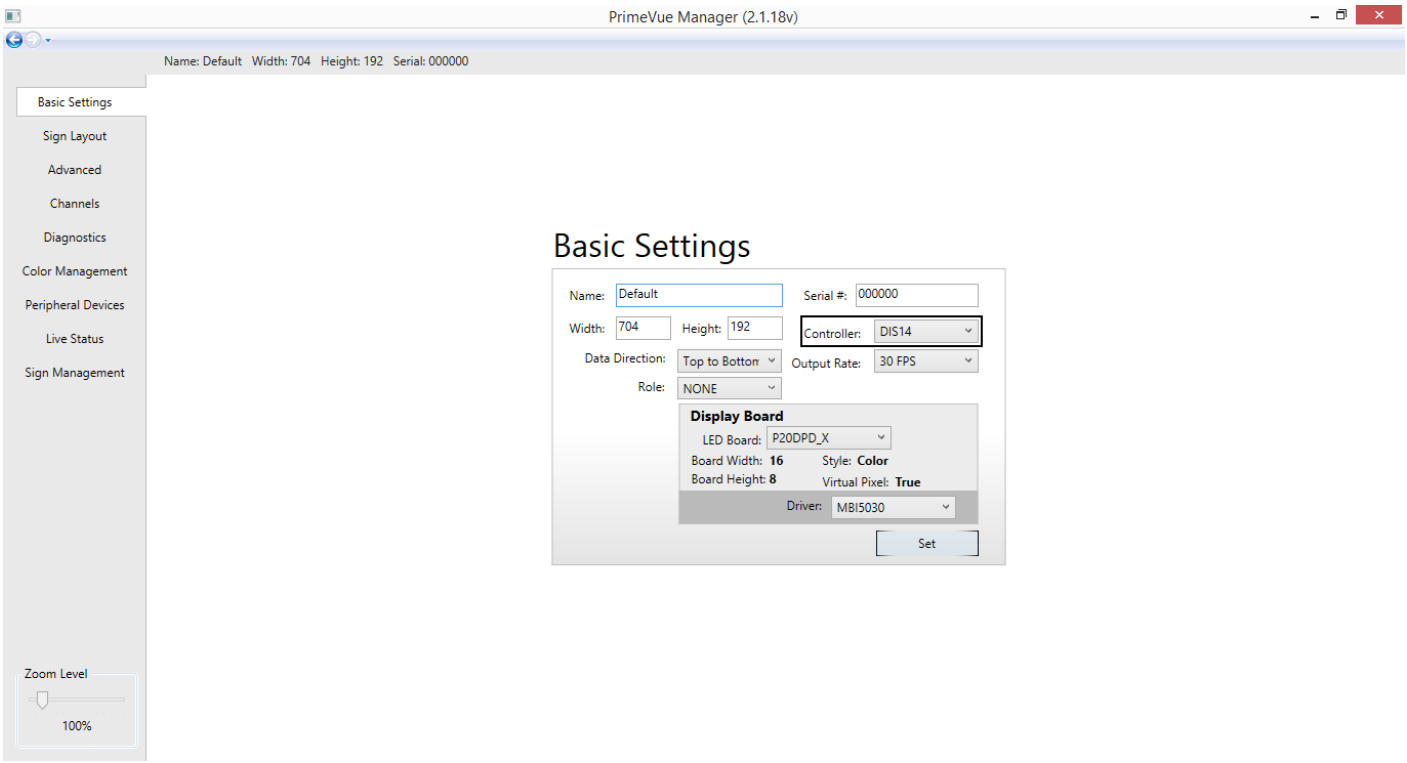
If an improper measurement is entered, the number will be displayed in red. Correct measurements are displayed in black.



1.4 Controller

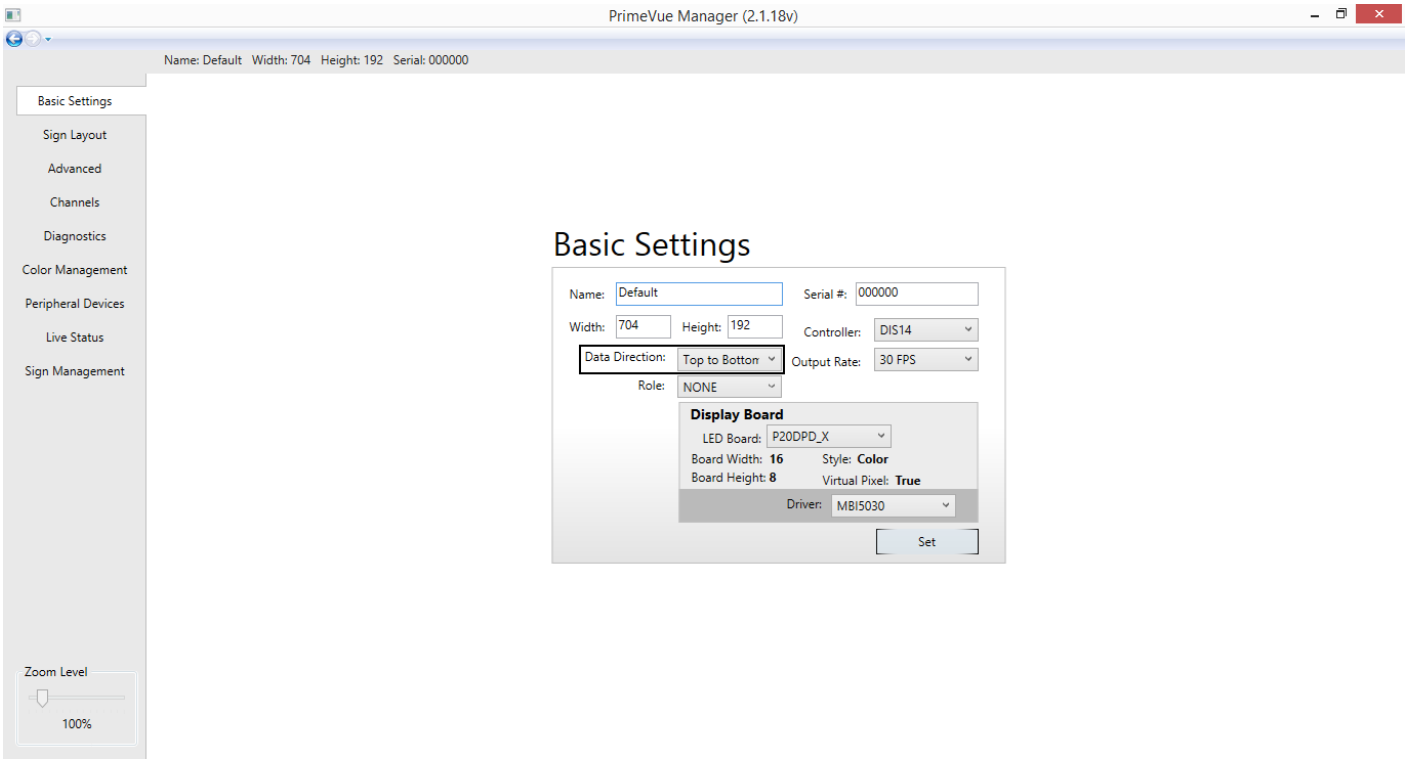
The controller refers to the hardware that drives the LED boards.

Select the type of controller the board uses. Options are DIS12+ and DIS14.



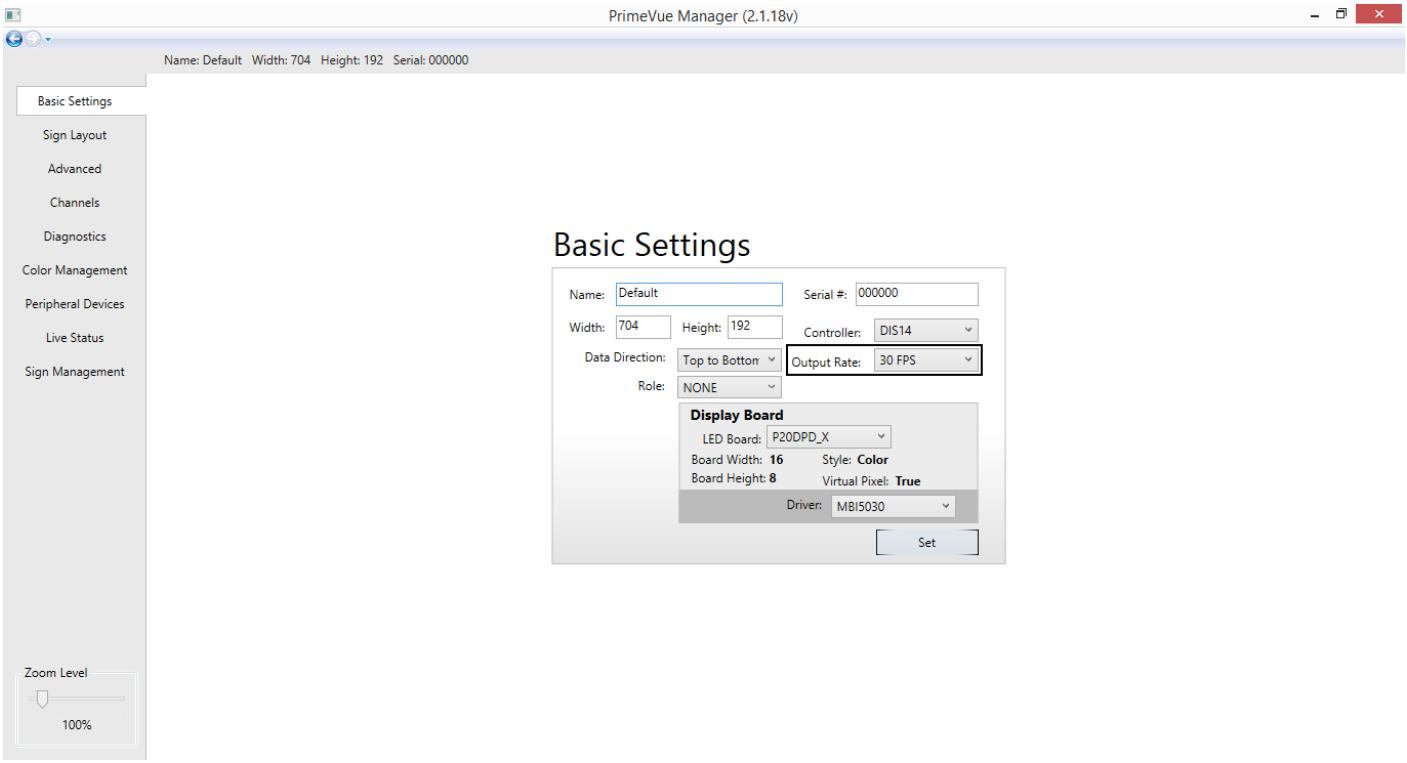
1.5 Data Direction

Data direction refers to the way the sign is wired. Most signs are wired top to bottom. Select this option unless the sign, usually an EMC sign, is wired from bottom to top.



1.6 Output Rate

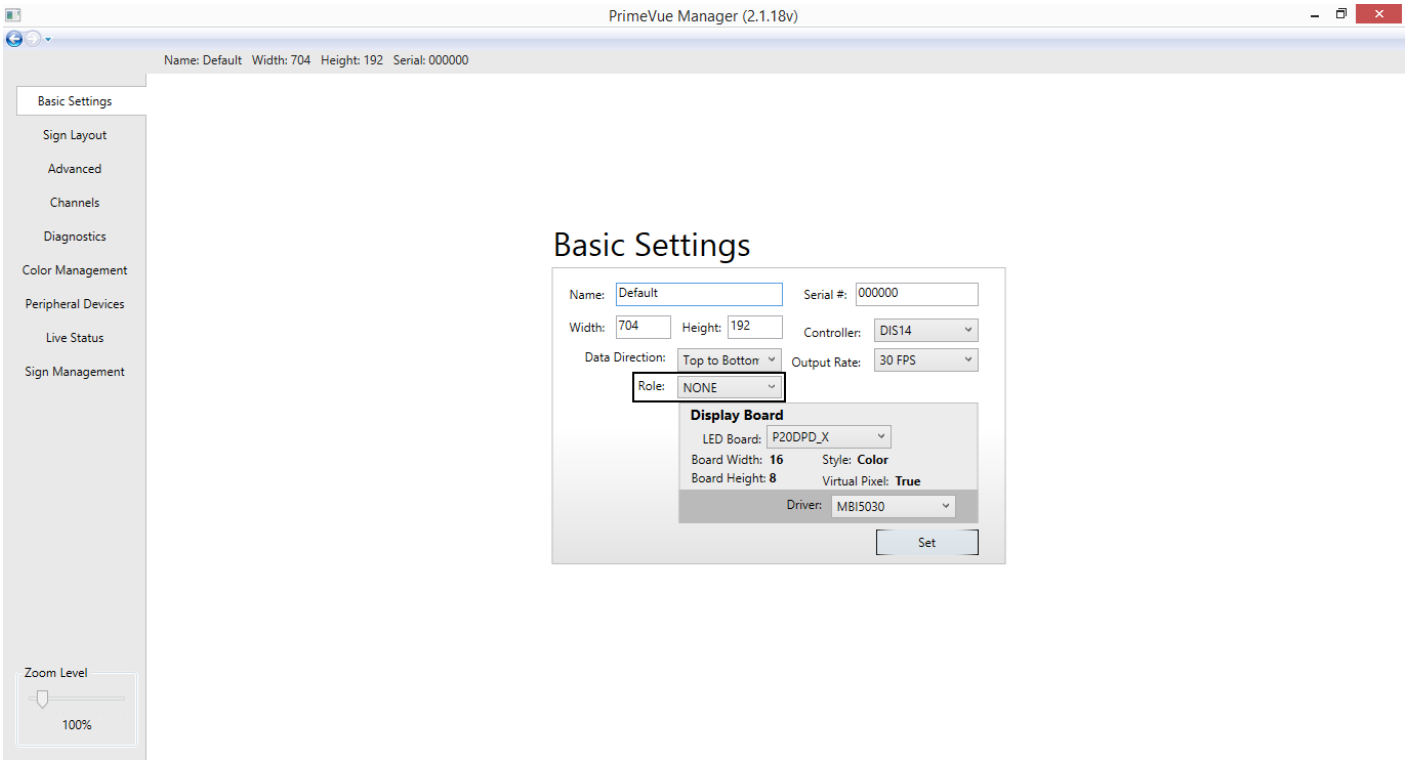
The output rate should be set to 30 fps for EMC signs and 5 fps for billboards.



1.7 Computer Role

Under “Role,” select the appropriate role for the configuration. Options are as follows:

NONE – A stand-alone computer
SENDER – A primary computer
BACKUP – A secondary computer
MASTER – Not implemented. Do not use



Specifying NONE means there is no backup computer. Starting ServCom will allow the sign to send frames immediately.

Specifying SENDER sets the sign to rely on a backup. If a sender finds a backup, it sends frames immediately. If it doesn't, it times out before sending frames. (Timing out typically takes a minute or two.)

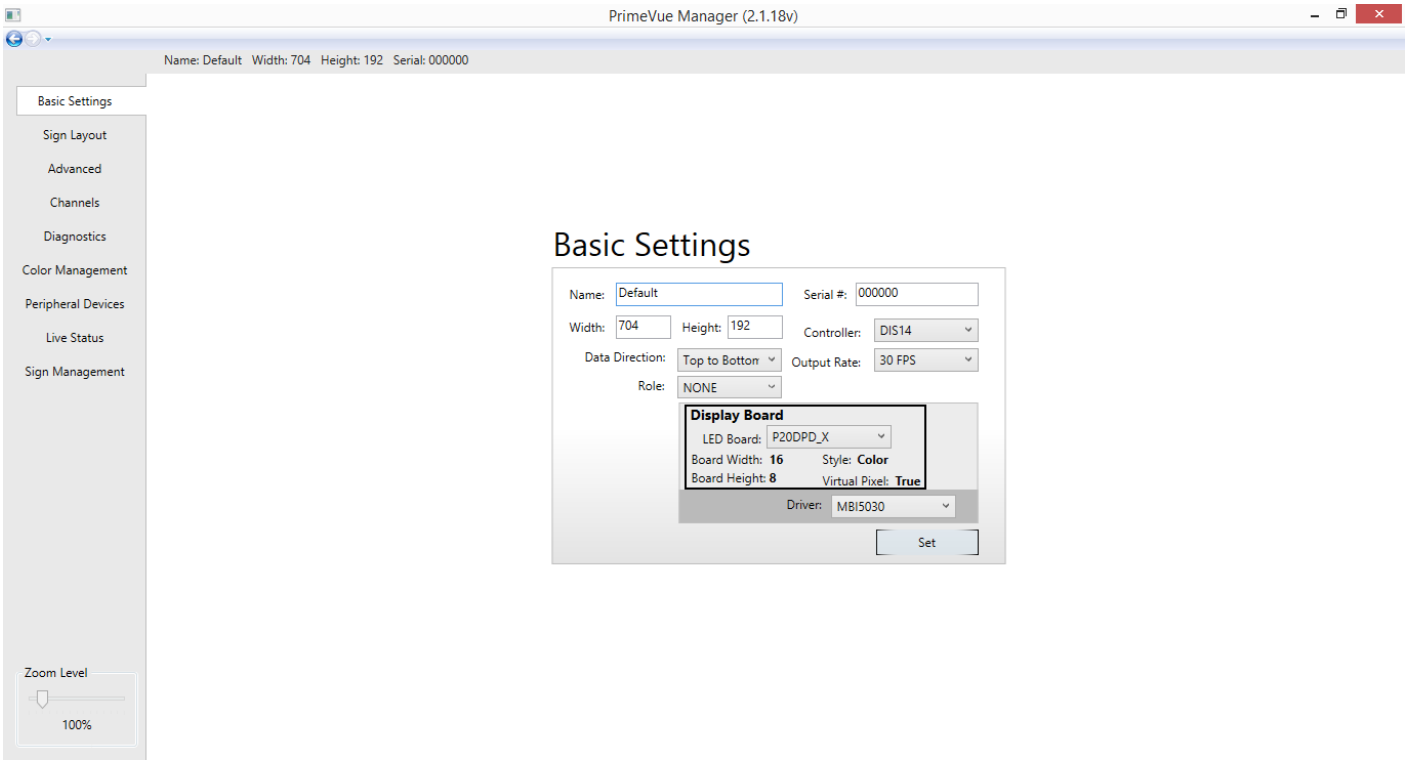
IMPORTANT: A primary computer needs to have a backup defined. If no backup is defined, it will not send out frames, resulting in a blank screen.

A computer specified as a BACKUP will not send out frames if it finds the primary source. It idles until the primary source fails; this causes the BACKUP to send out frames immediately.

Specifying MASTER is not yet implemented. Please ignore this option.

1.8 LED Board

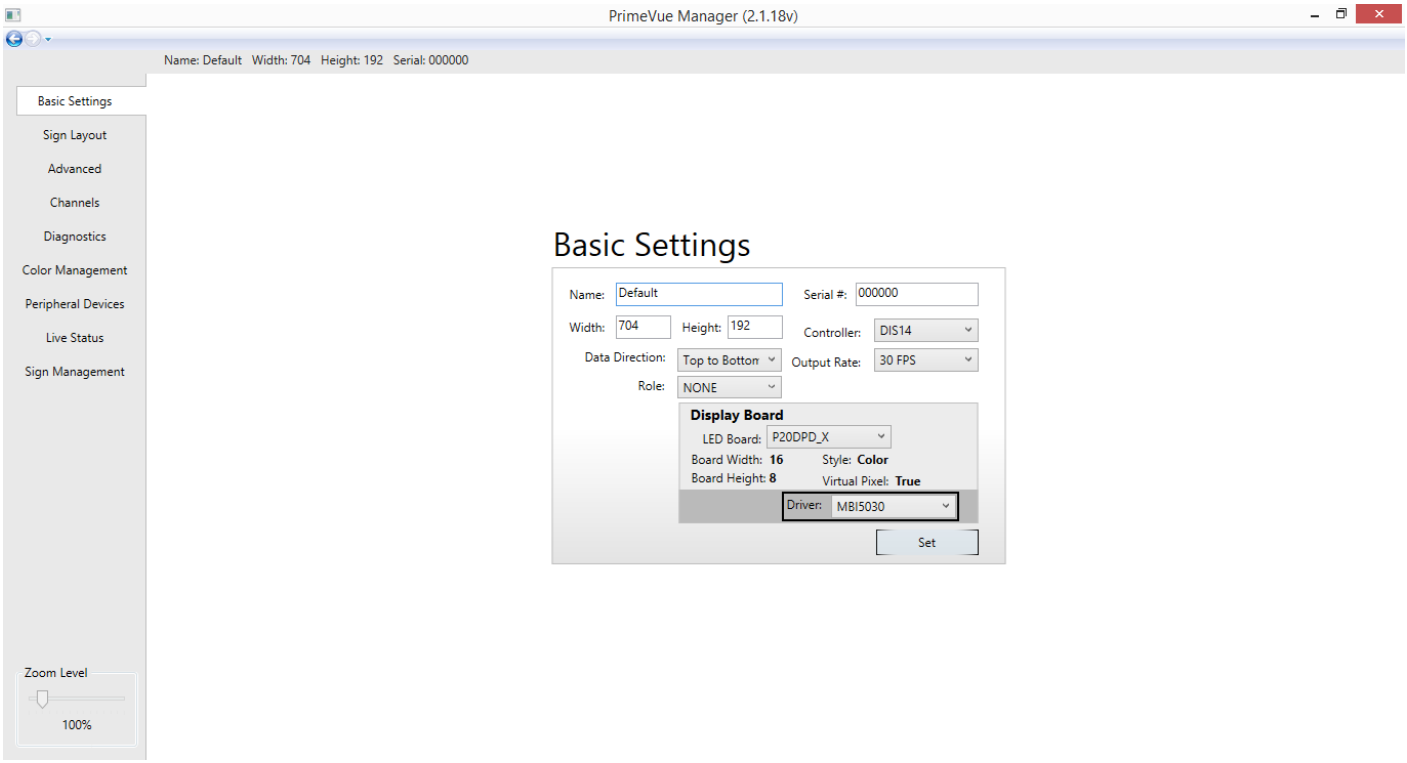
In the display board section, select the appropriate model of LED Board. Corresponding information for each board will be displayed below the drop-down menu.



1.9 Driver

Beneath the Display Board section, use the Driver drop-down menu to select the appropriate driver.

WARNING: Selecting an inappropriate driver will give erroneous feedback reports.



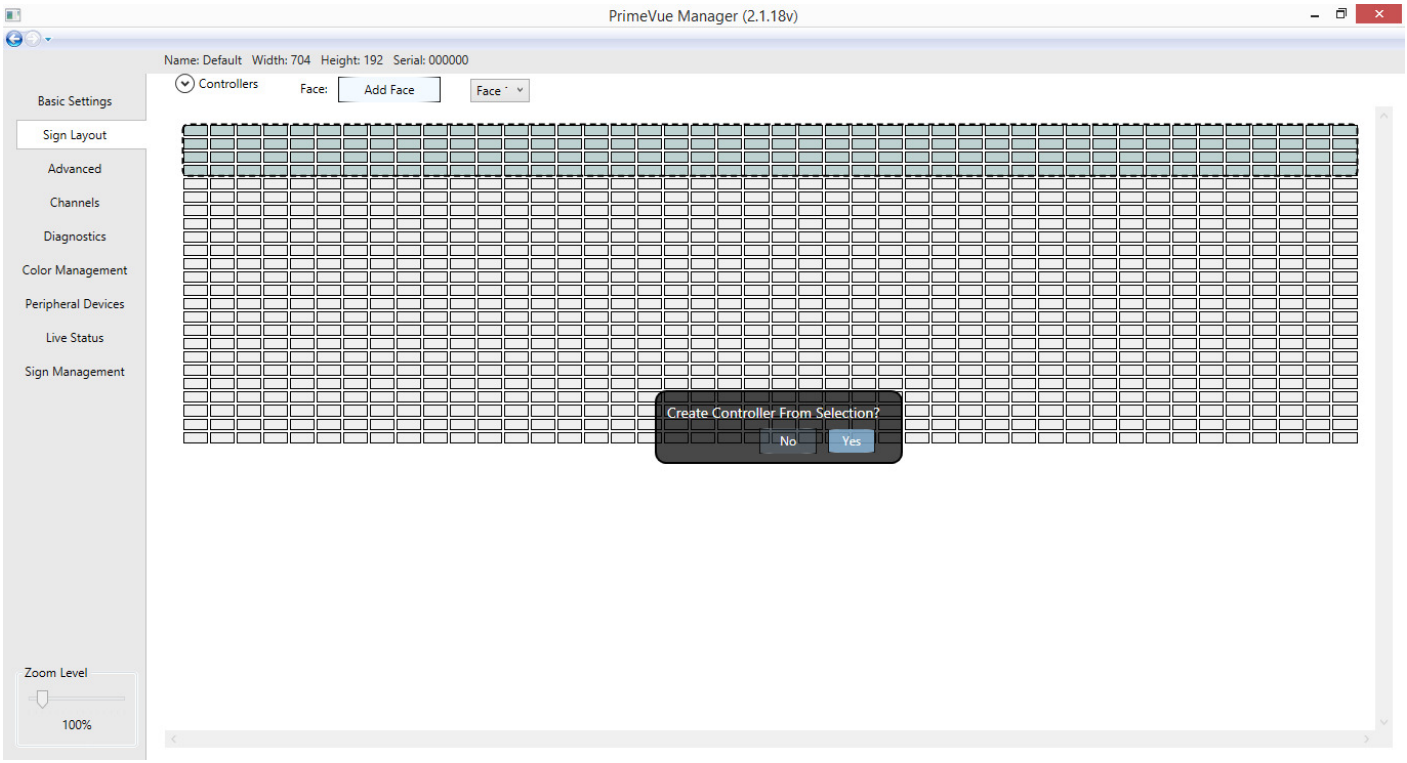
Once all the above information fields have been properly completed, **click the Set button.** This will open the Sign Layout section, which may also be accessed via the “Sign Layout” tab.

2.0 Sign Layout

2.1 Controller Creation

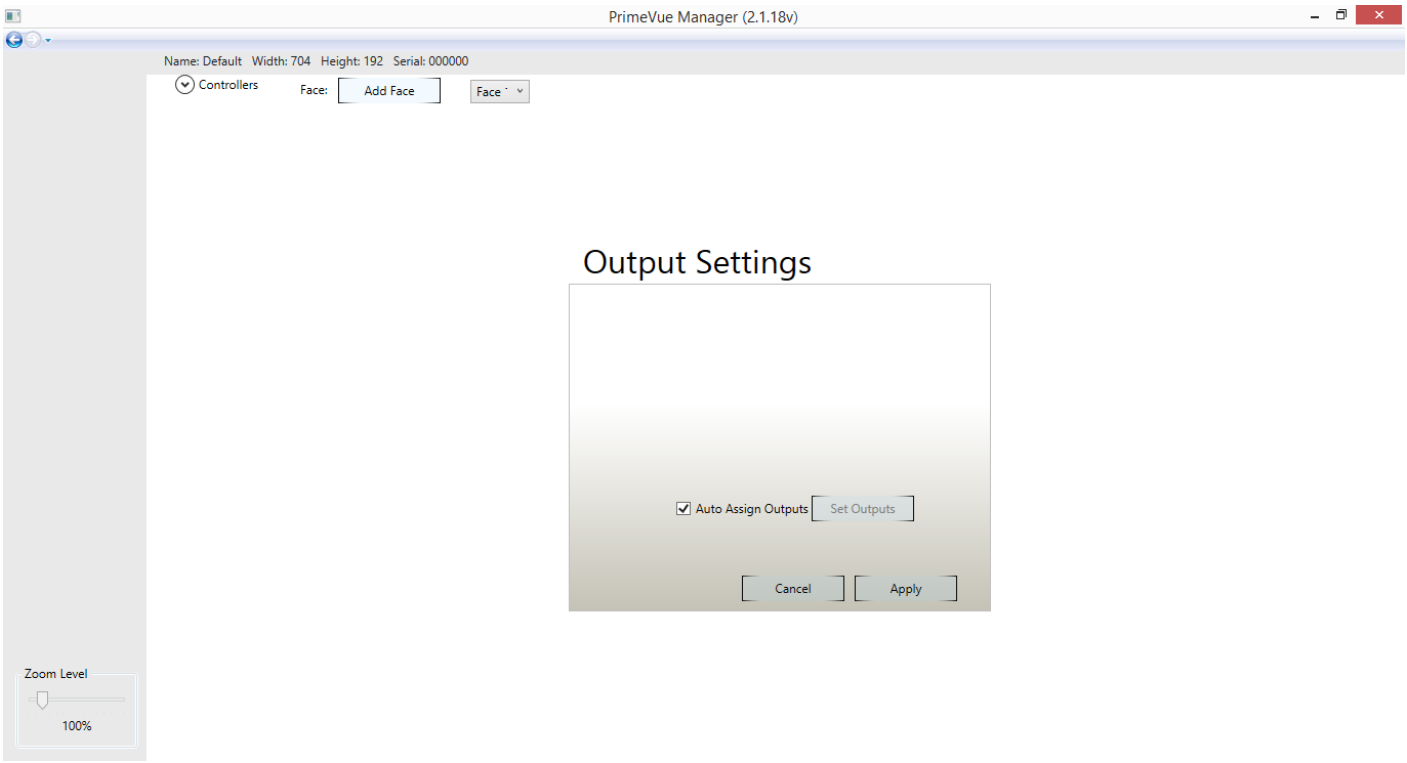
In the Sign Layout section, a matrix of the sign's display boards will be displayed according to the resolution of the sign as entered in the **Basic Settings** section.

To enter controller setup into the program: Click and drag to select the number of boards for the first controller. When the “Create Controller from Selection” dialog appears, click “Yes” to create the controller.

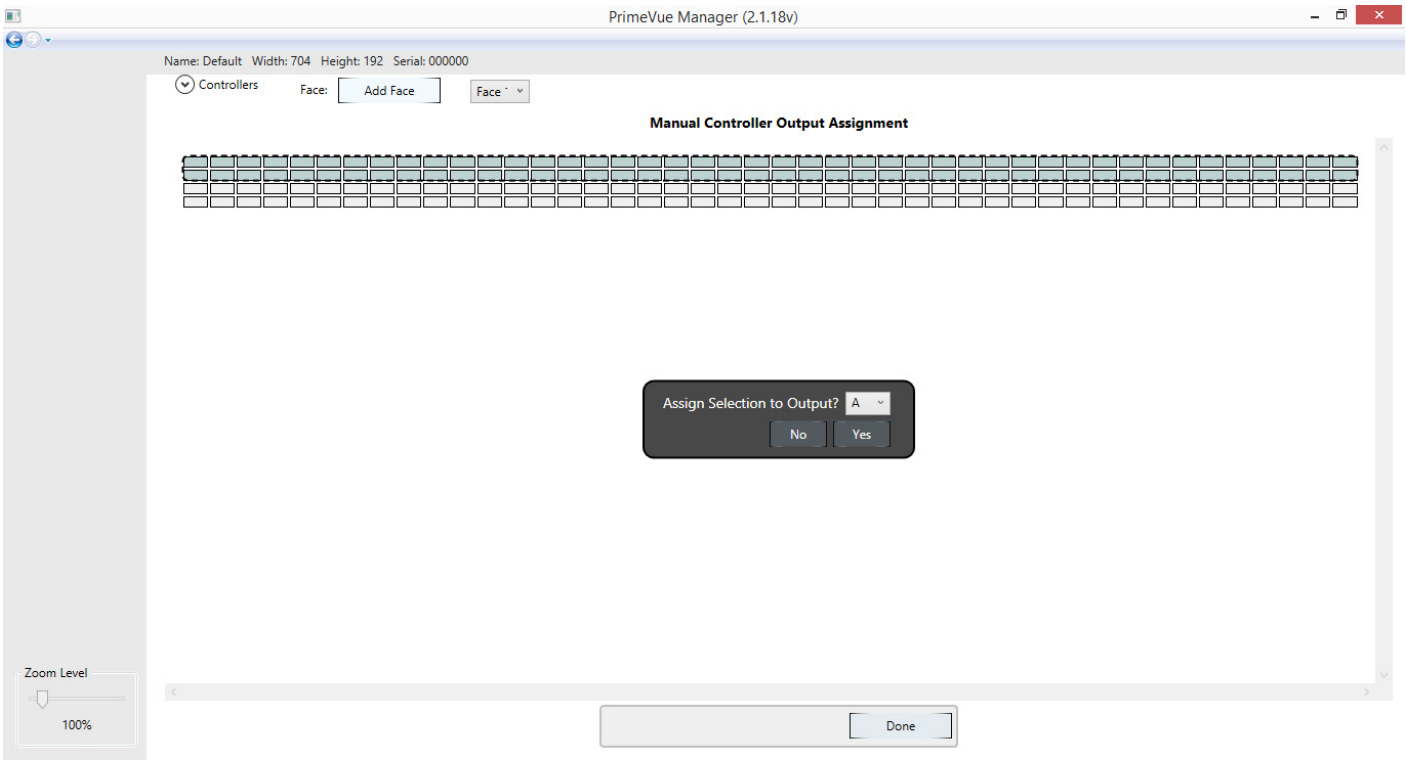


2.2 Controller Settings

The next page will give the option to **Auto Assign Outputs**. This should be selected **if and only if** the sign has one row of display boards per output on the controller.



For other wirings, uncheck “Auto Assign Outputs” and click the “Set Outputs” button. This will bring you to a display of the board matrix for the controller currently being created. Click and drag to select the number of rows in the first controller. When the “Assign Selection to Output?” option appears, select the letter of the corresponding output. (These outputs are marked on the physical controller.) Repeat for each output.



Click **Done** to return to the Output Settings page. Click **Apply** to apply your changes.

2.3 Adding Additional Controllers

Repeat the above steps for each controller. They will be automatically named c_0, c_1, etc.

Output letters should correspond to the letters on the physical controller. They should match the physical controller exactly.

2.4 Managing Controllers

Manage controllers with the “Controller” drop-down menu. This menu displays controller settings and allows the deletion of controller configurations.

(Note: The “Edit” button currently has no functionality.)

Click **Add Face** to add another face of controllers to the sign. Add as many faces as the sign requires.

Select the face you wish to edit from the **Face** drop-down menu.

If desired, use the **zoom bar** in the lower left of the screen to zoom in on specific portions of controller

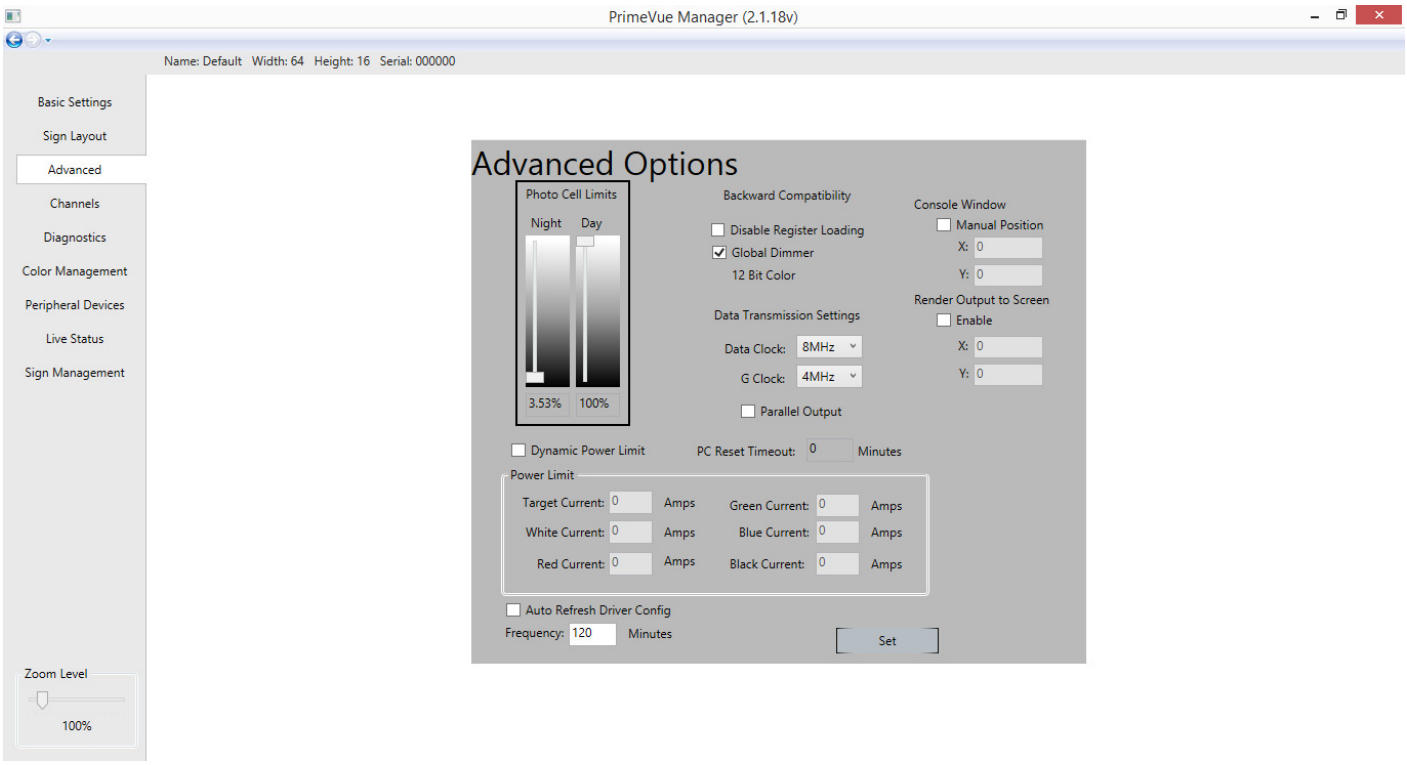
layouts.

3.0 Advanced

Most advanced settings do not need to be changed from default. Explanations of these settings are found in this section.

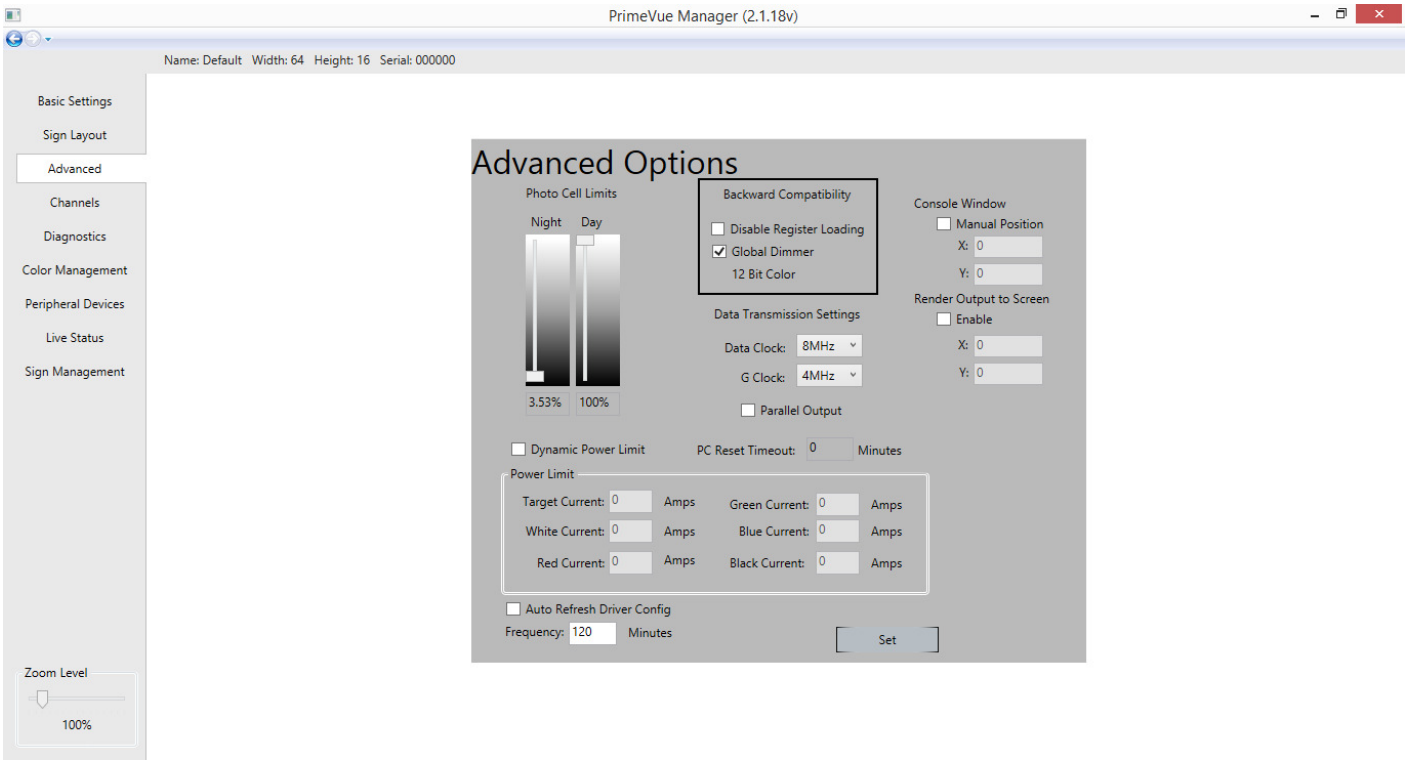
3.1 Photo Cell Limits

Control maximum and minimum brightness allowed during day and night. Default setting for brightness sliders is optimal in most situations.

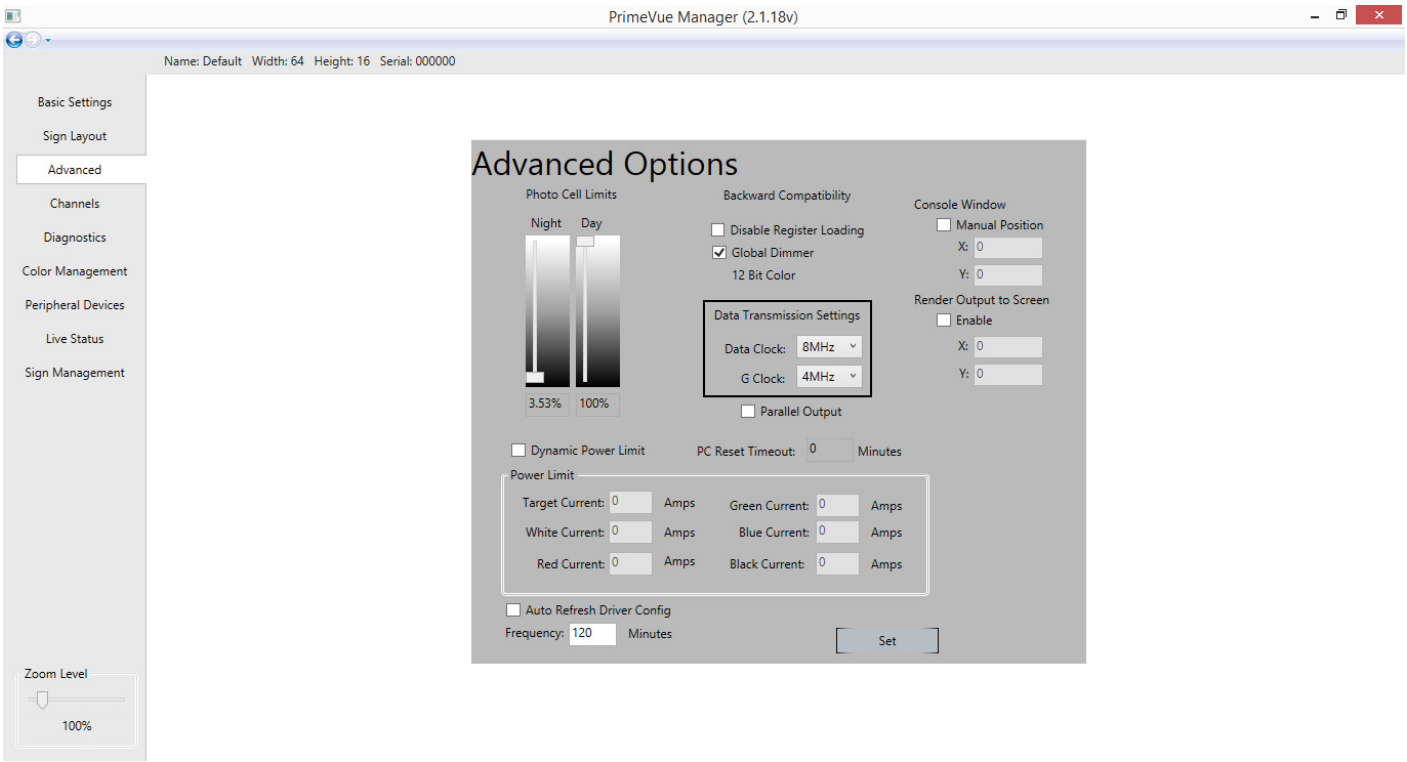


3.2 Backward Compatibility

Do not change **Backward Compatibility** options. The default is correct for all current signs.



3.3 Data Transmission Settings

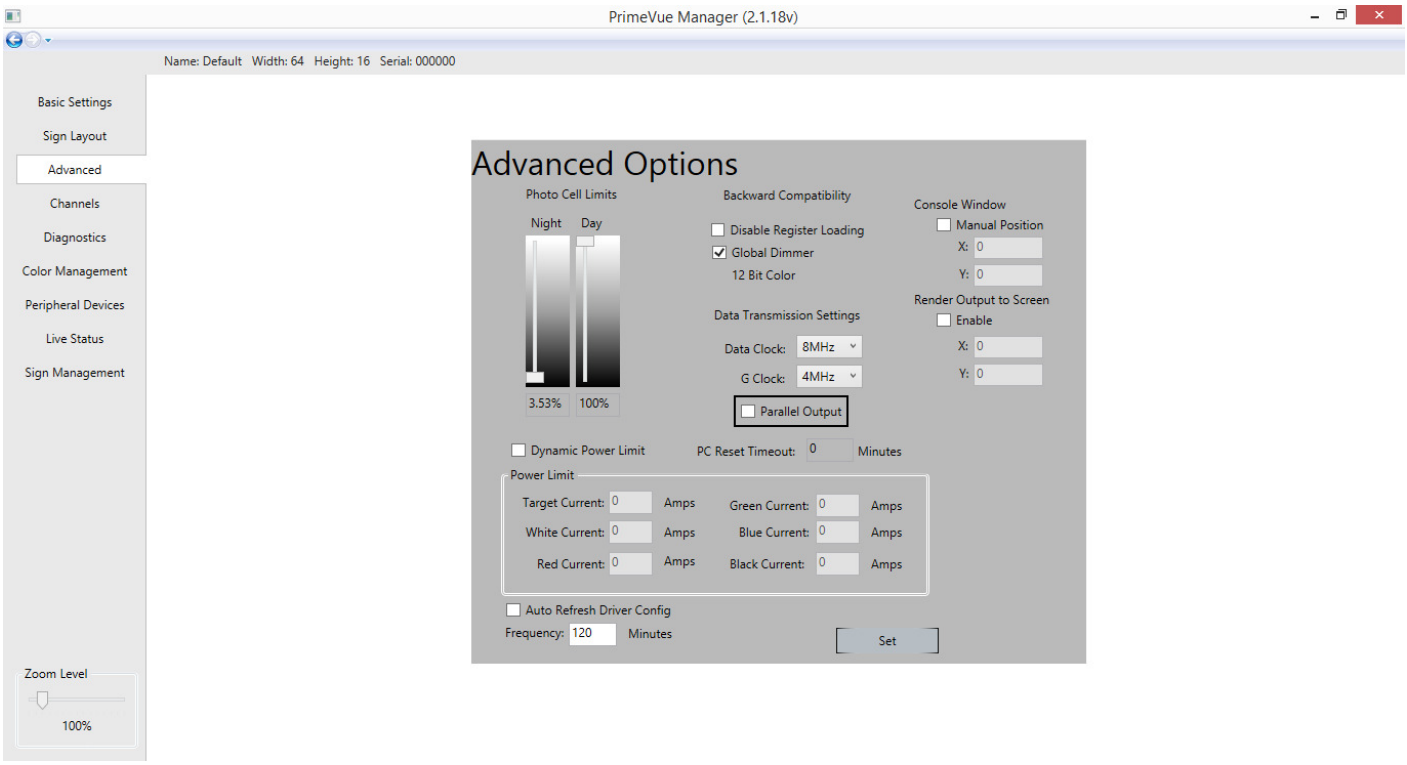


The **Data Clock** determines how quickly color information is sent across the sign. This setting defaults to 8MHz, which is correct for all current signs.

The **G Clock** determines how quickly the LEDs flicker on and off. The higher the G Clock, the smoother the image. In general, perform warehouse testing at 8MHz. If setting a sign up for field use, set the G Clock to 4MHz.

3.4 Parallel Output

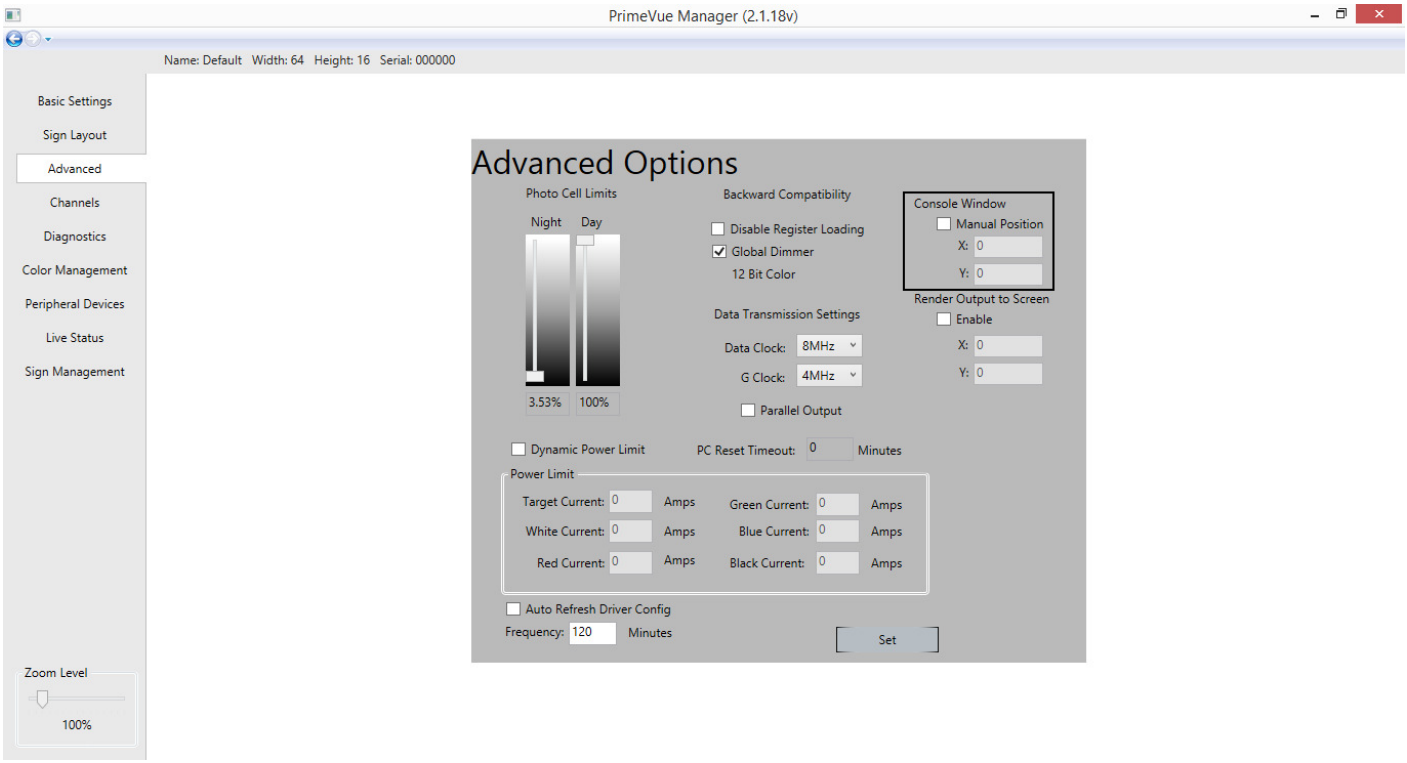
To use the Parallel Output option, a board must have 1) exactly 1 row per output, 2) rows of the same length, and 3) connectors which are arranged sequentially without any spaces (e.g. if E goes bad, it should not be plugged into G instead. All rows must be reconnected to remain sequential)



If the sign fails even one of these requirements, do not use the **Parallel Output** option. In general, all billboards meet this requirement. Many EMC signs, however, do not.

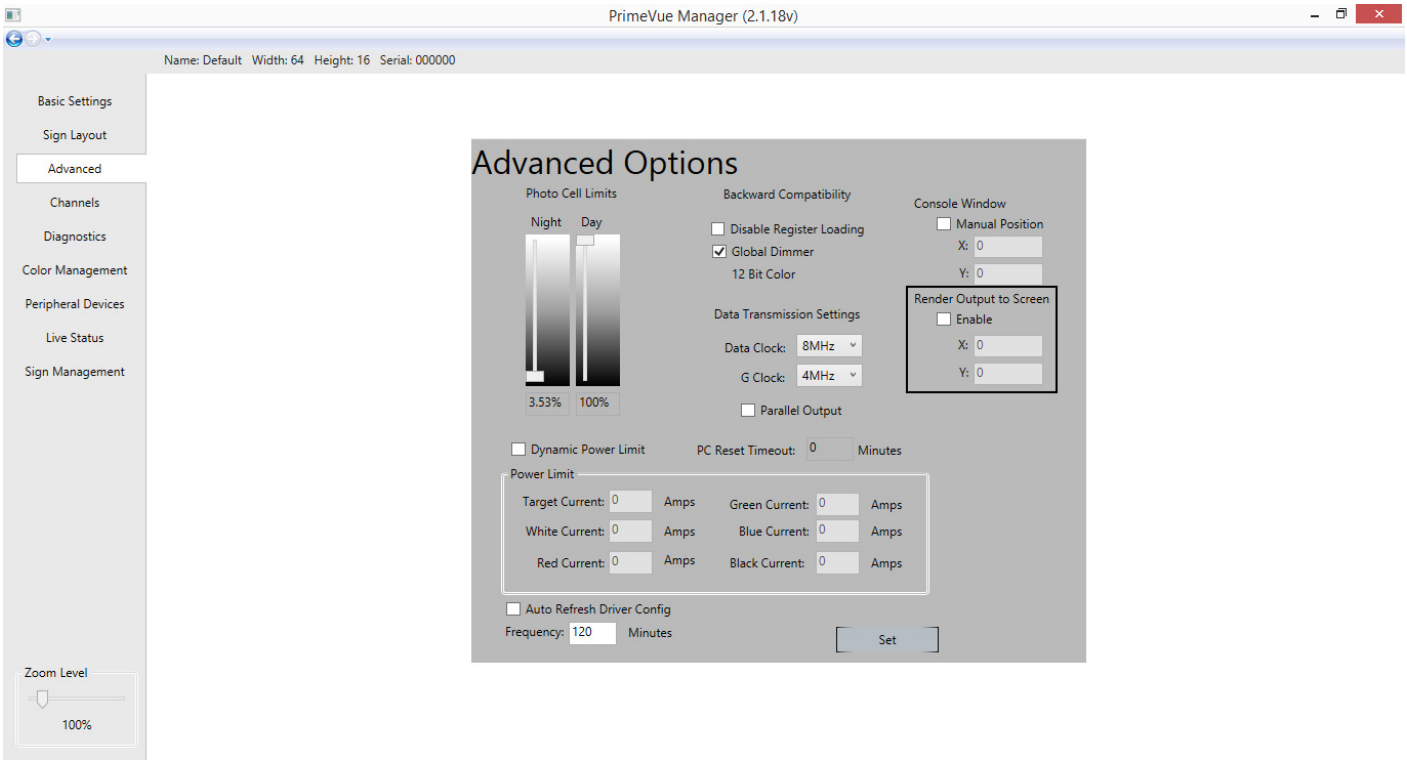
3.5 Console Window

Under Console Window, enter the x and y coordinates at which you wish to display ServCom on the computer running ServCom.



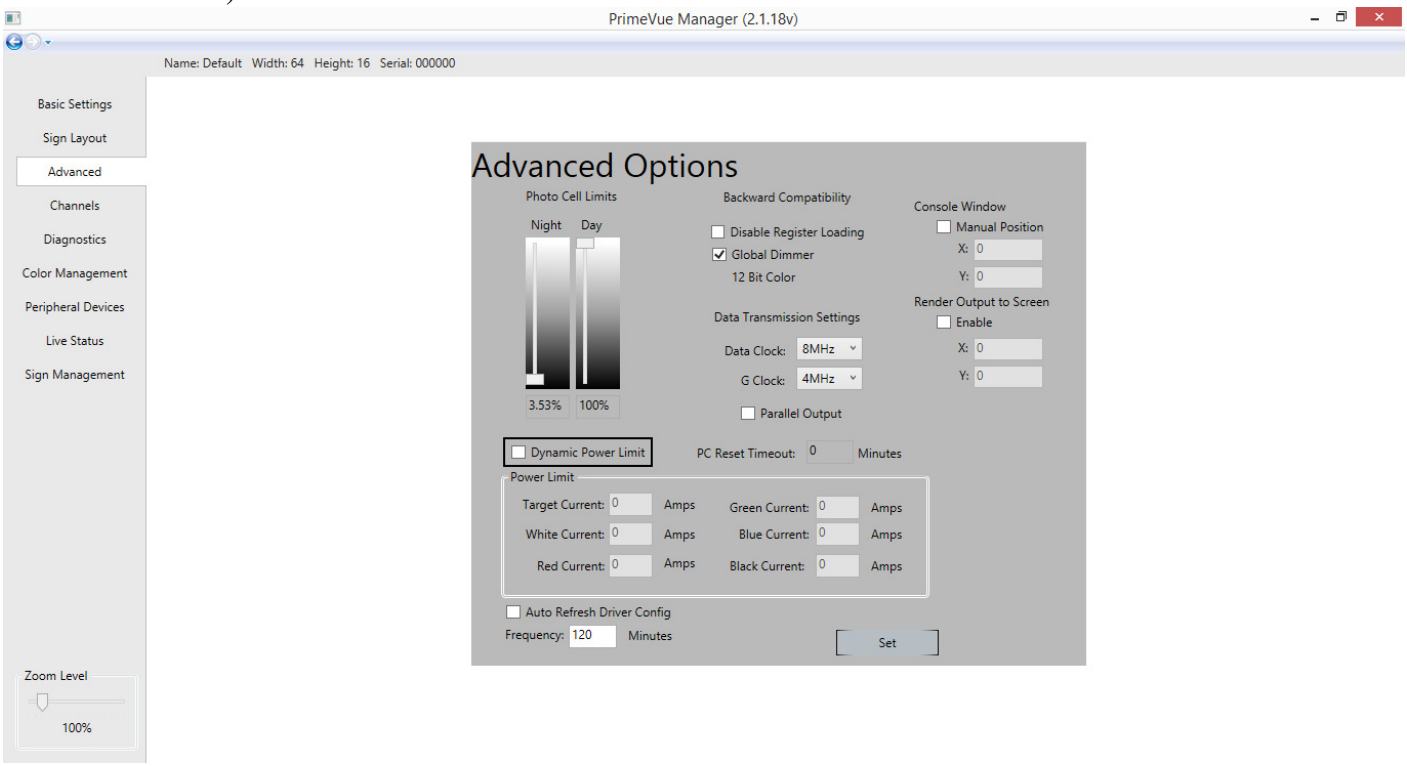
3.6 Render Output to Screen

If enabled, this option outputs of ServCom on screen. Purpose is to allow the use of a greater variety of controllers, or two display sign output on a desired screen.



3.7 Dynamic Power Limit

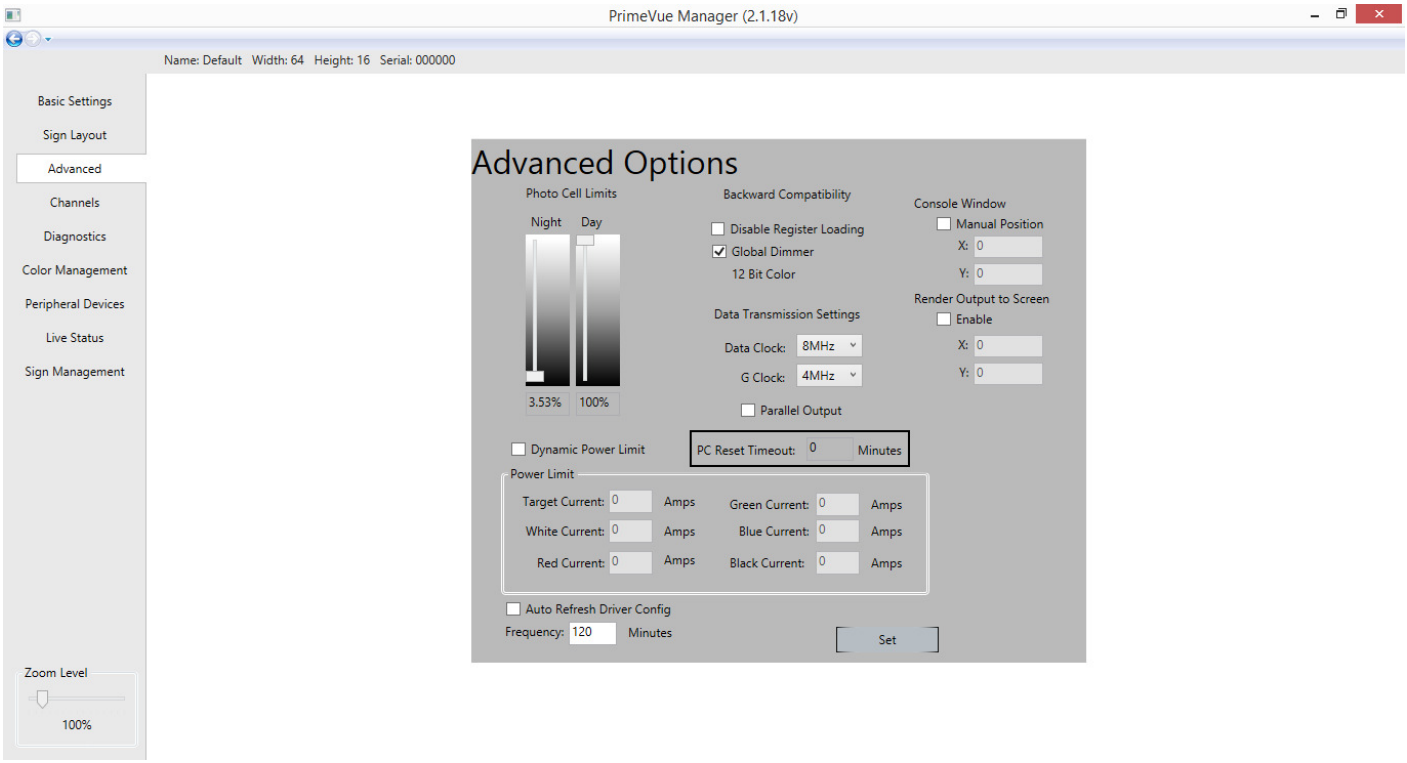
The Dynamic Power Limit caps the maximum power-usage of the sign. This feature is rarely used. The **Power Limit** section beneath is a part of this feature. (The usage of this feature is separate from the purpose of this document.)



Please ignore **Dynamic Power Limit** for most signs.

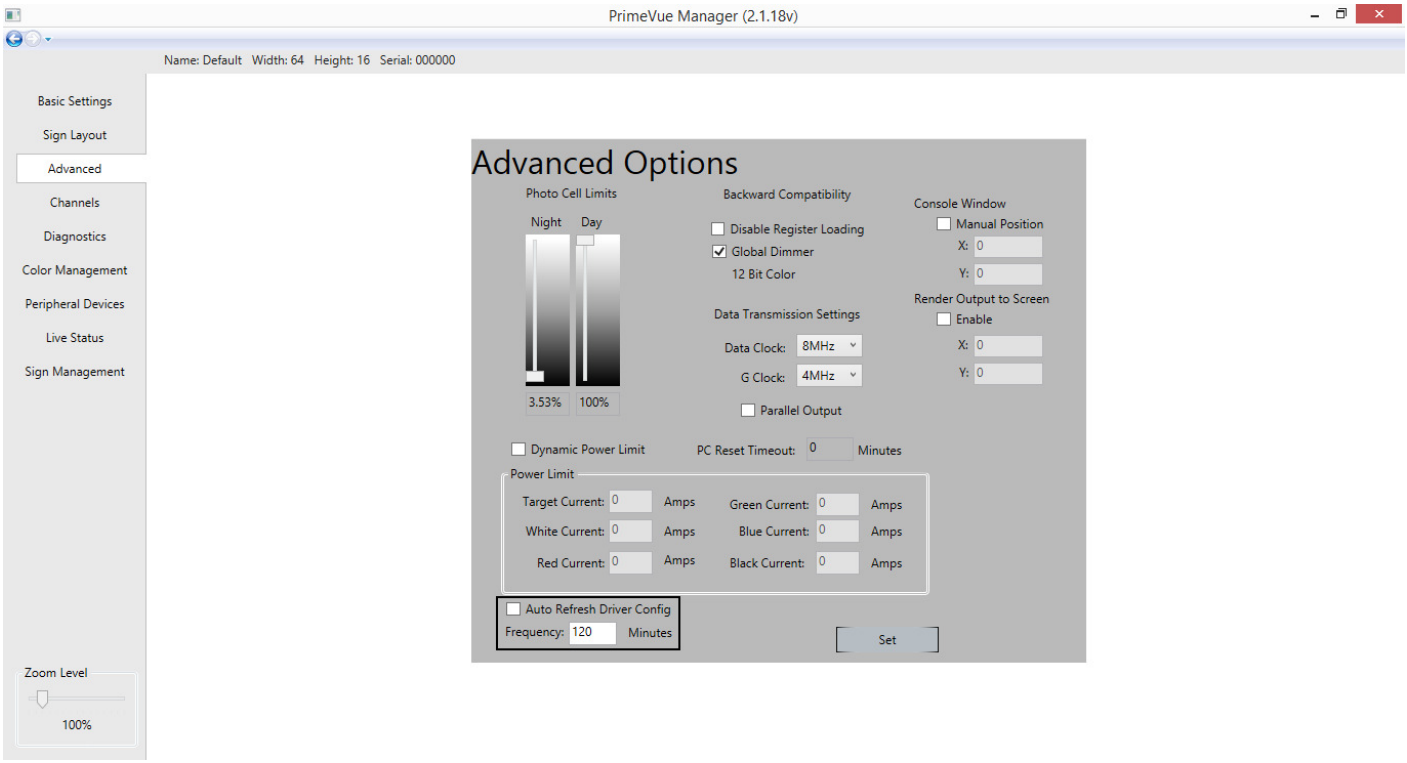
3.8 PC Reset Timeout

Enter number of minutes sign will display last image once sign stops receiving data. When this time expires, the sign will go black.



3.9 Auto Refresh Driver Config

Use this setting for EMCs, which do not have native feedback error detection. This setting allows the sign to automatically refresh the driver config at set intervals to remove potential display artifacts (due to driver config errors).



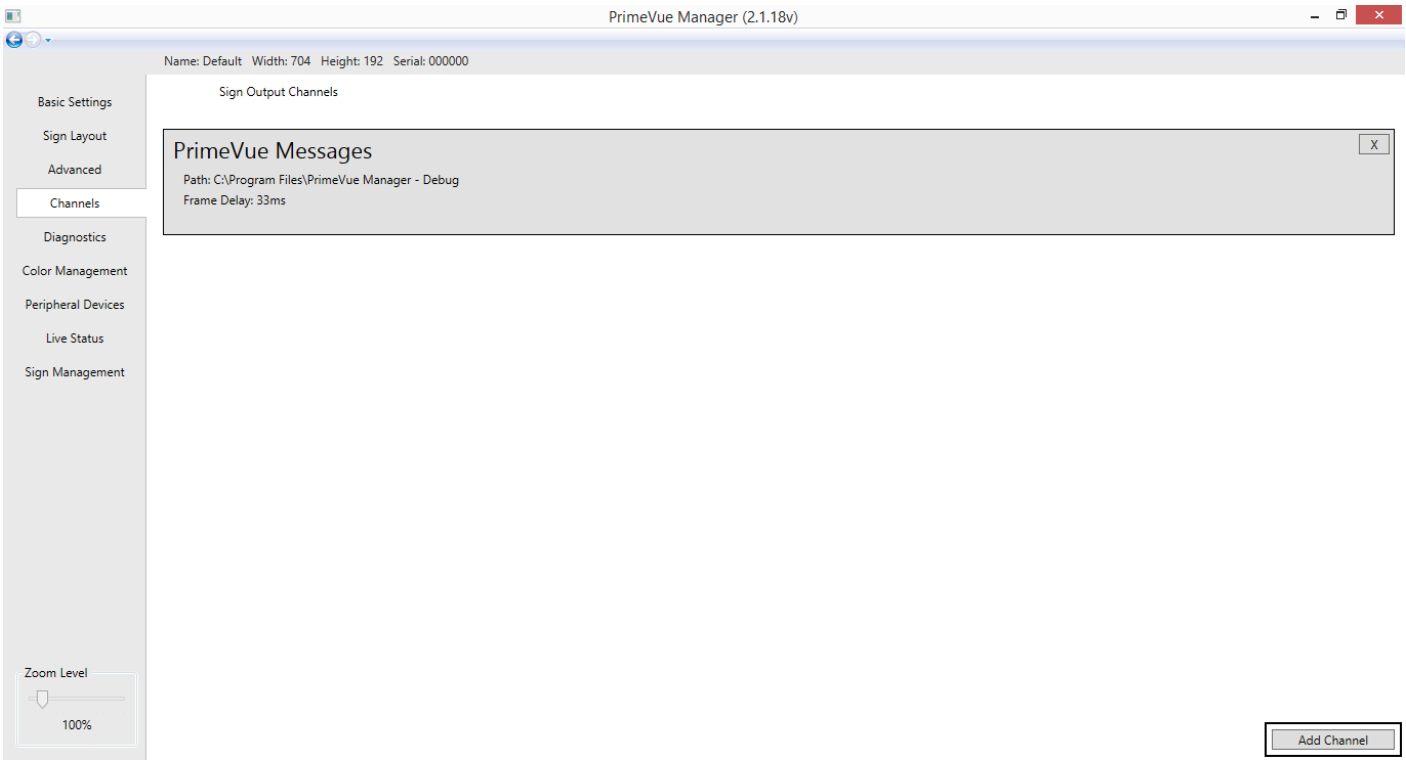
If setting up an EMC, enable Auto Refresh Config with the default frequency of 120 entered into the text book.

Do not use this setting for billboards. If setting up a billboard, ensure this option is unchecked.

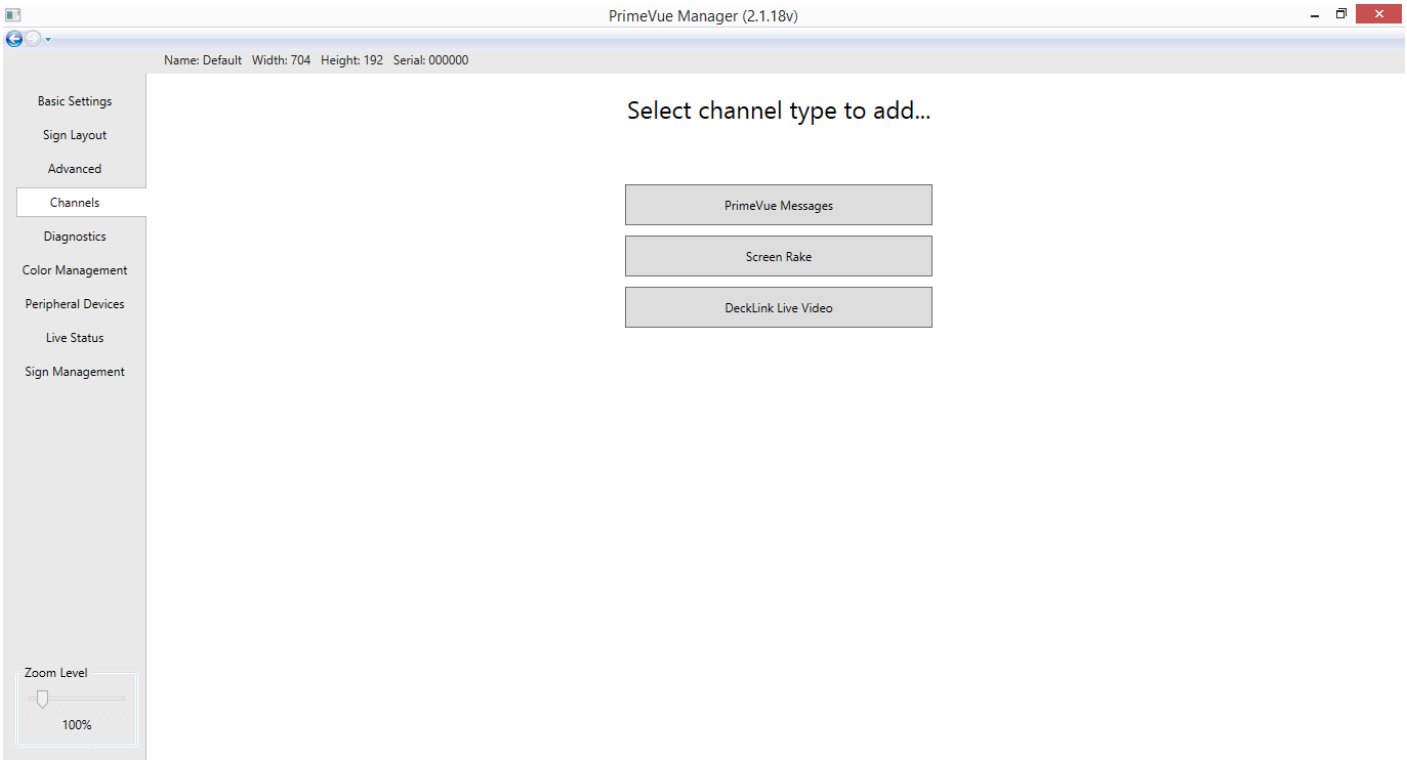
4.0 Channels

Assigned appropriate channel(s) to your sign by using the “Channels” tab. New profiles in PrimeVue Manager will have a single PrimeVue Messages channel created as a default.

To add a new channel, click the “Add Channel” button at the lower-right of the window.



Select the type of channel you wish to create.



For EMCs, use the default PrimeVue Messages channel.

For billboards, remove the PrimeVue Messages channel by clicking the “x” button. Then click **Add Channel** and select **Screen Rake** from the three options.

For signs with a video capture option, add a DeckLink Live Video channel. This allows you to display live video on the sign. Click **Add Channel** and select **DeckLink Live Video** from the three options.

Once you have created the appropriate channels, click the desired channel to configure its settings.

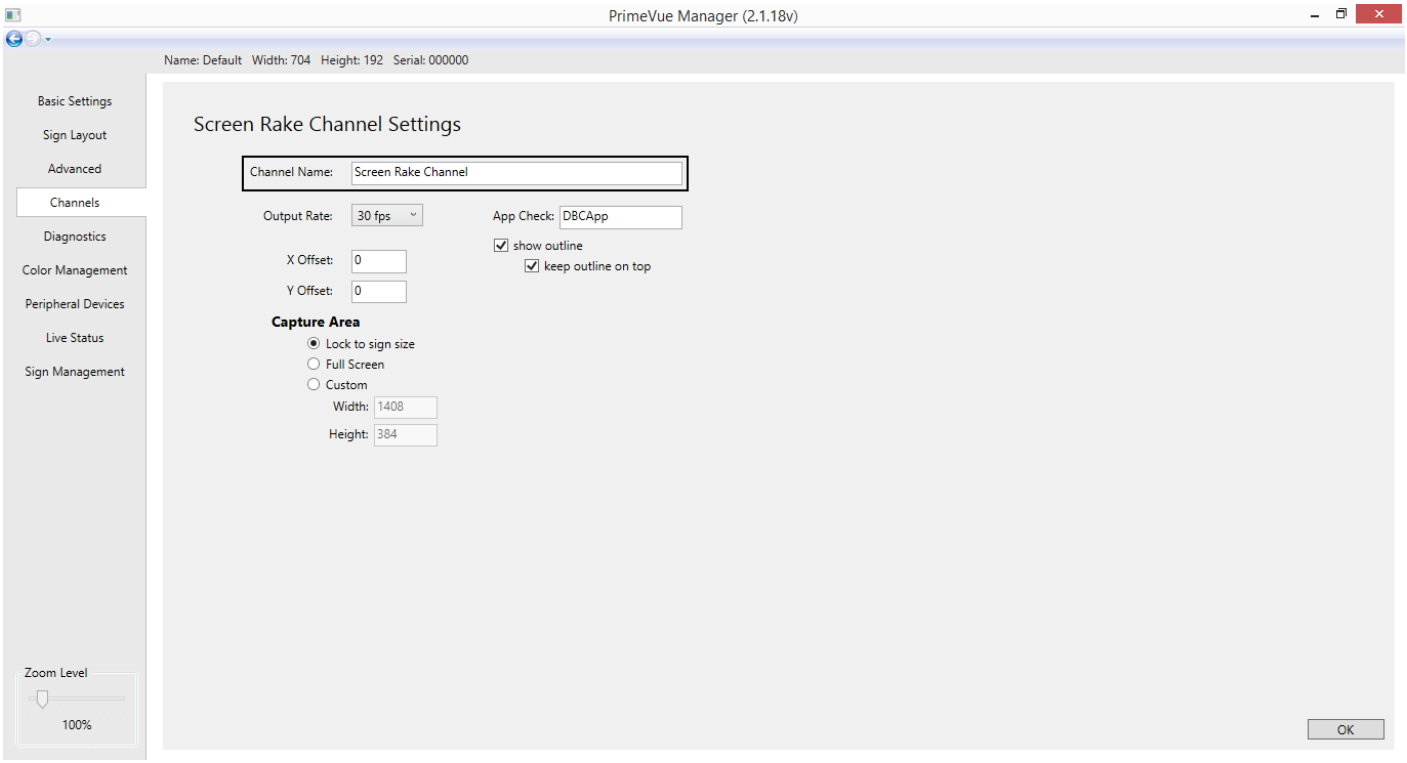
4.1 PrimeVue Messages settings

No editable settings at this time. Simply creating the channel enables its use.

4.2 Screen Rake settings

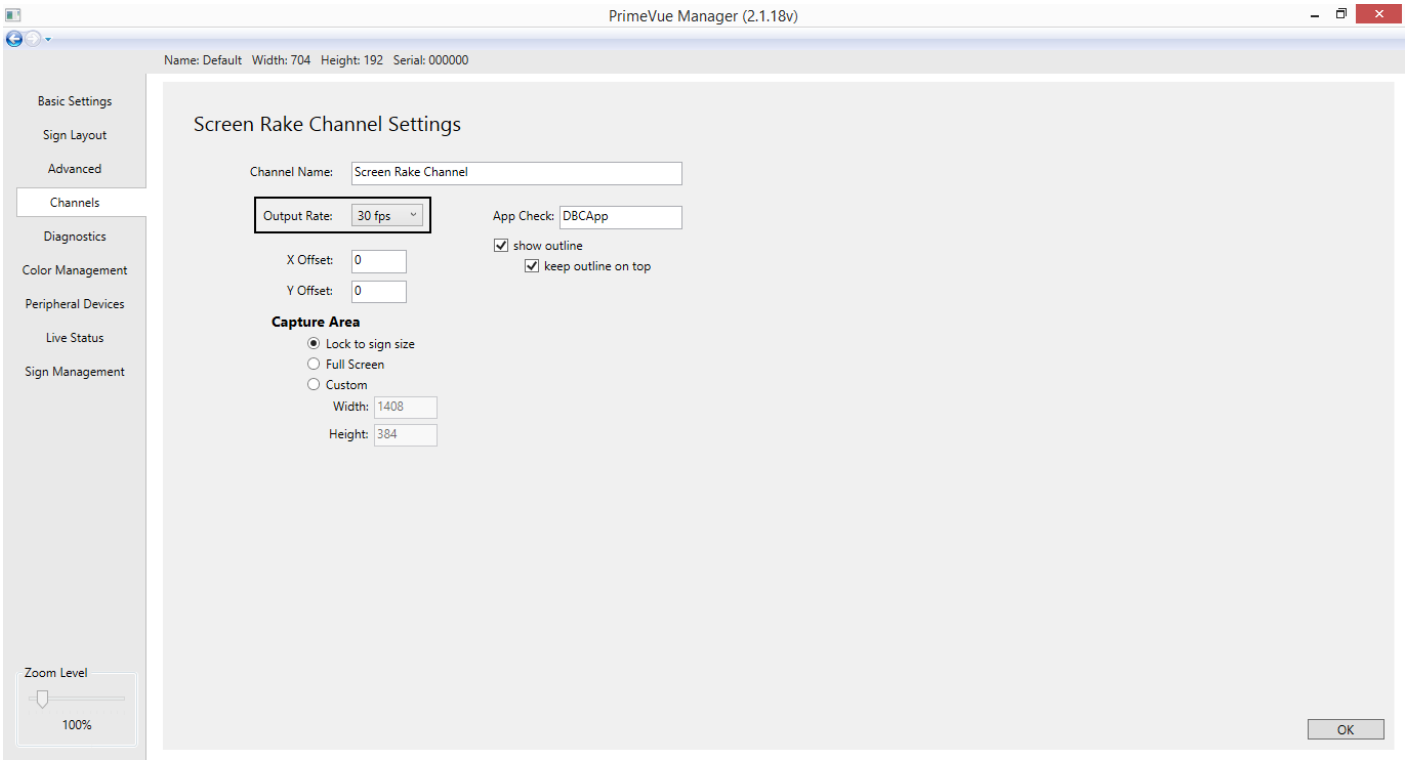
4.2.1 Channel Name

Enter desired channel name in the text box.



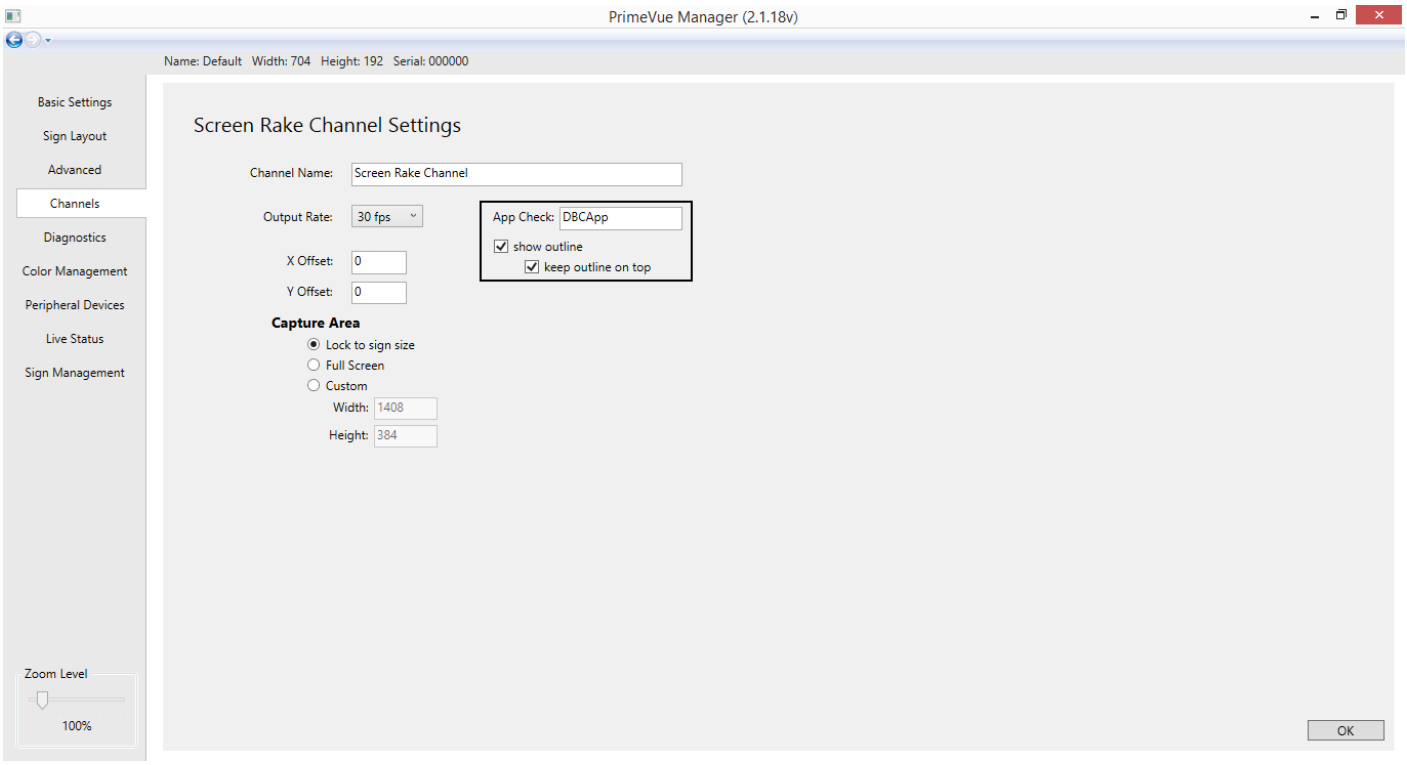
4.2.2 Output Range

Billboards should be set to 5 fps. Signs displaying animations should use a higher frame rate.



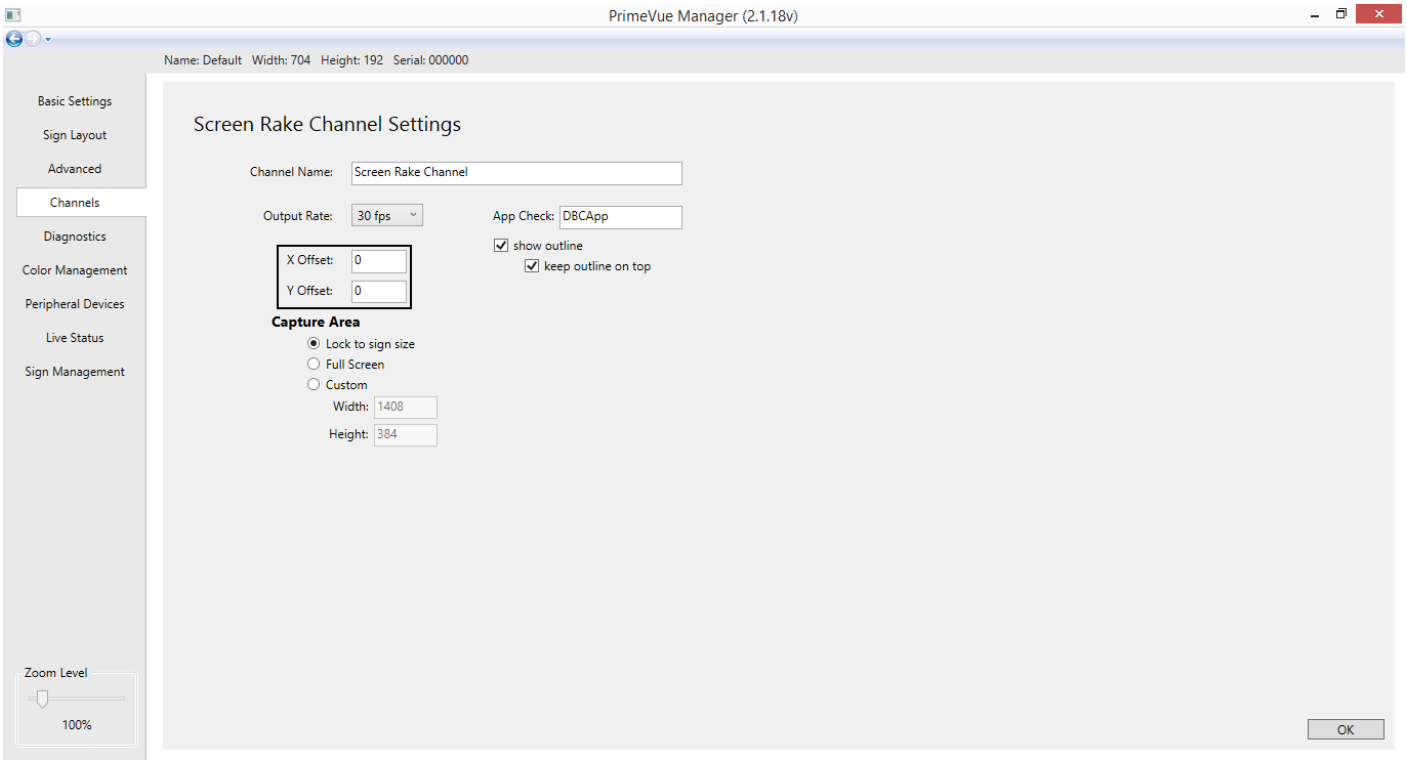
4.2.3 App Check

Looks for a the application which runs the billboard (DBCApp) so the sign only outputs when it finds the application. In a test environment, the field may be changed to *system* so that the sign will always output. Change back to DBCApp once testing is completed.



4.2.4 X and Y Offsets

This setting sets which portion of the screen is transmitted to the sign. The default is 0/0, which will display the upper left-hand corner of the desktop.



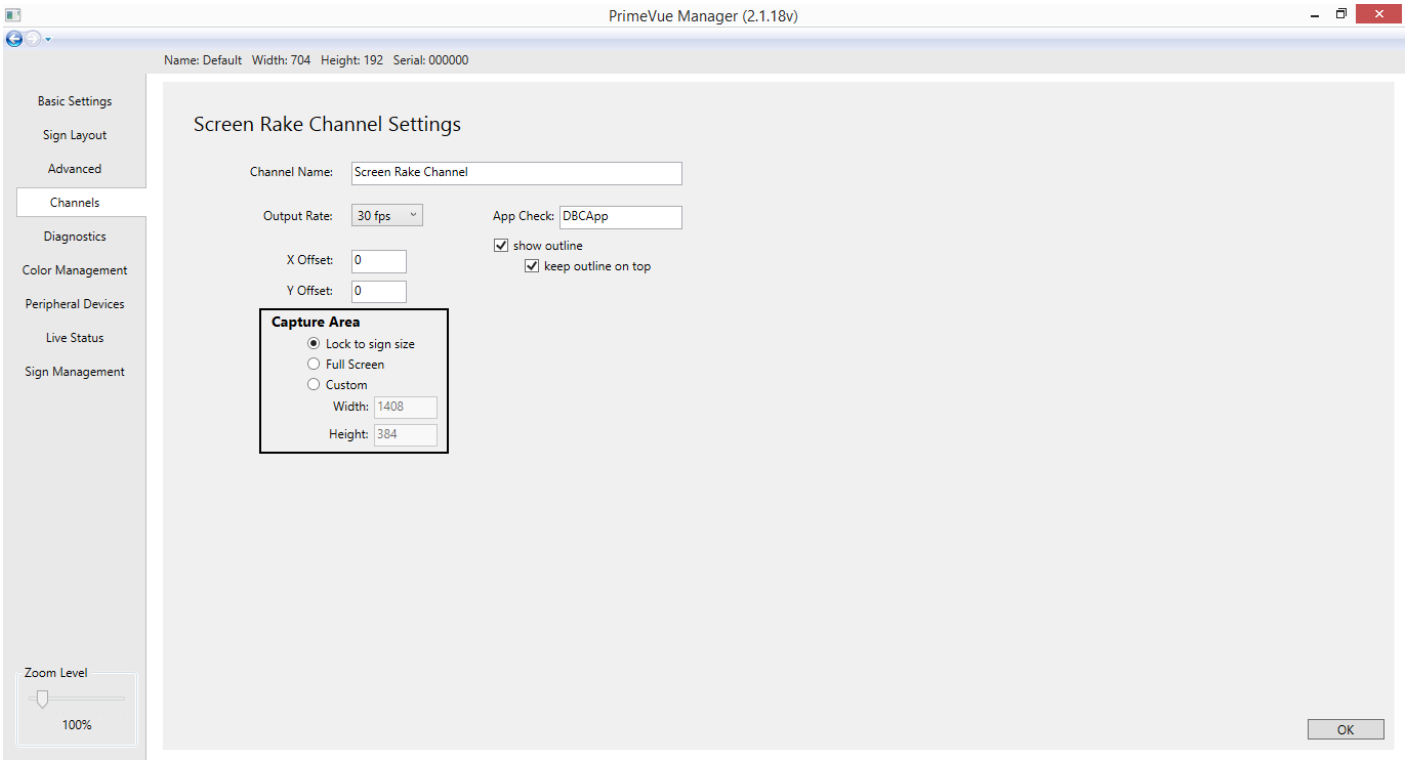
If using a secondary monitor, set the X Offset to start at the resolution of the primary monitor so that the output image begins on the secondary monitor.

4.2.5 Capture Area

Lock to sign size: captures just the resolution it needs to output to the sign.

Full Screen: Captures entire screen and resizes it to fit the sign (does not maintain aspect ratio)..

Custom: Defines size to be resized to the sign (does not maintain aspect ratio).



4.2.6 Show Outline

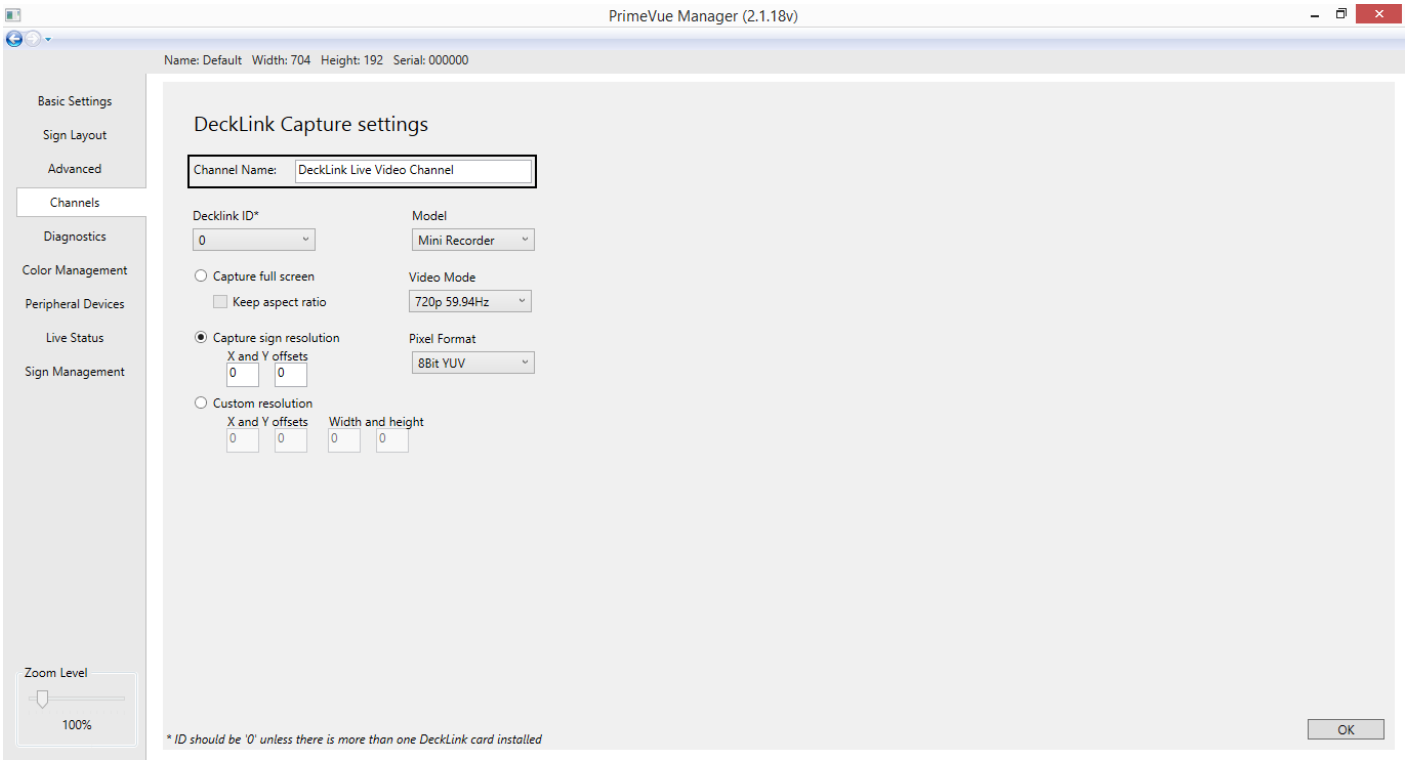
To display a green line identifying the capture, enable Show Outline. The setting can be disabled if there are relevant problems in Windows.

Click **OK** to save settings

4.3 DeckLink Capture settings

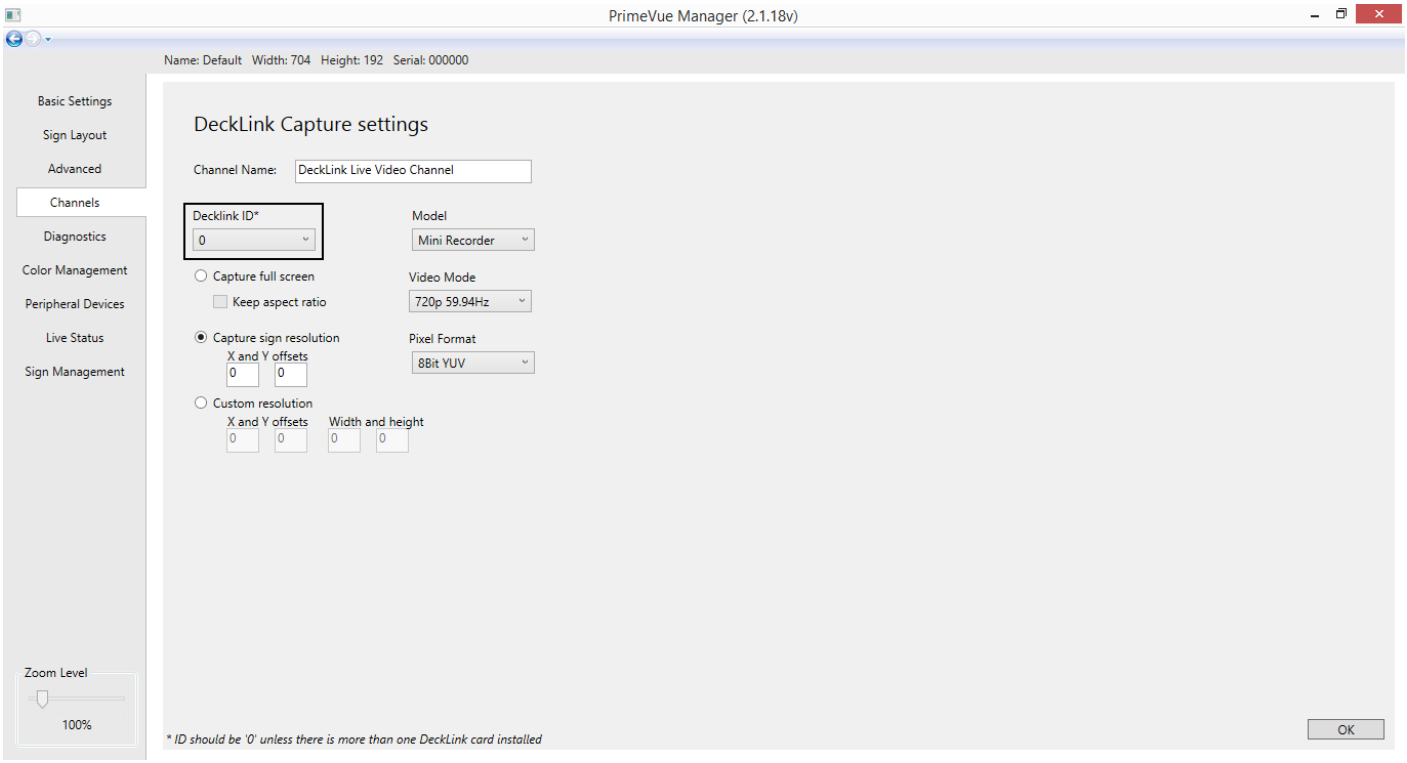
4.3.1 Channel Name

Enter desired channel name in the text box.



4.3.2 DeckLink ID

If you have multiple live videos coming to the sign, enter which capture card you wish to display. The default is 0.

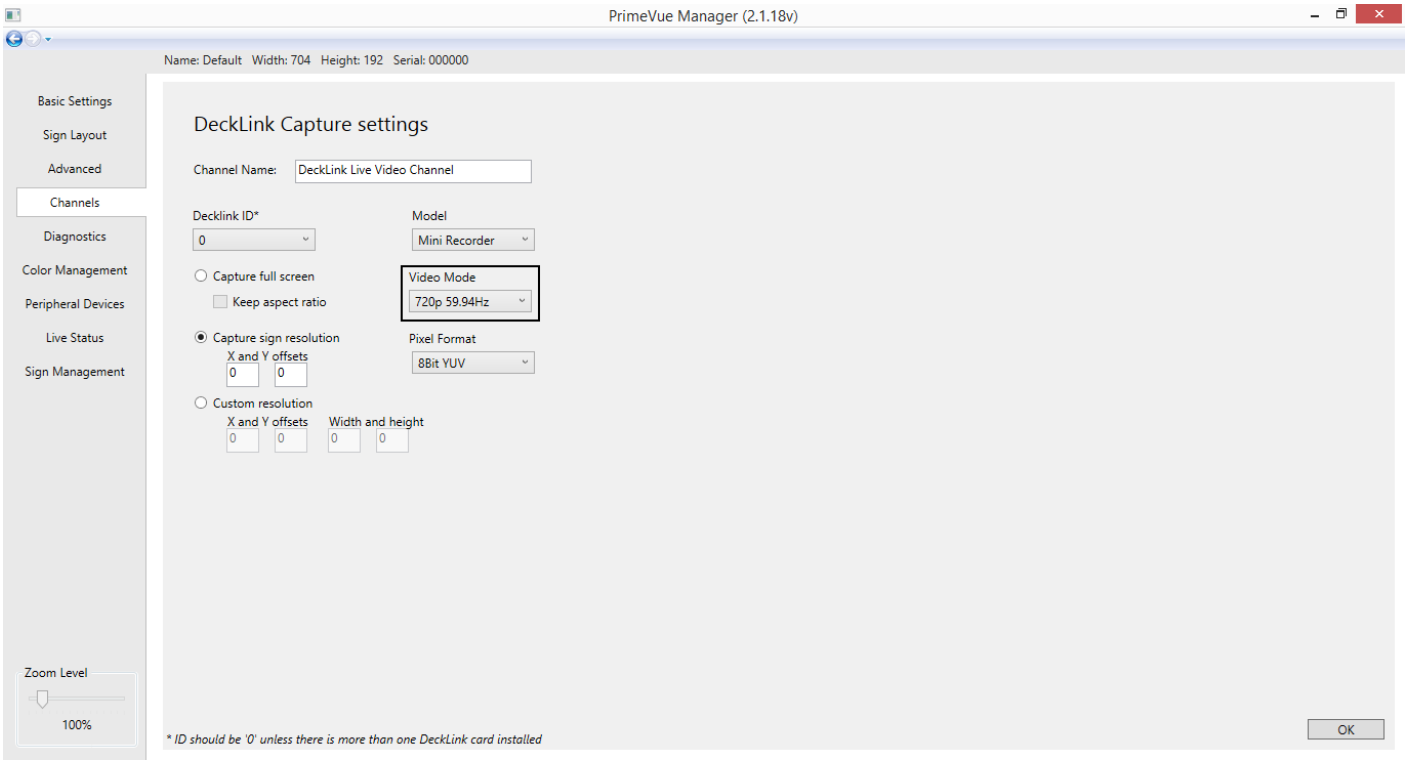


4.3.3 Model

Setting not yet implemented. Please ignore this field.

4.3.4 Video Mode

Must exactly match the capture source, otherwise output will fail.



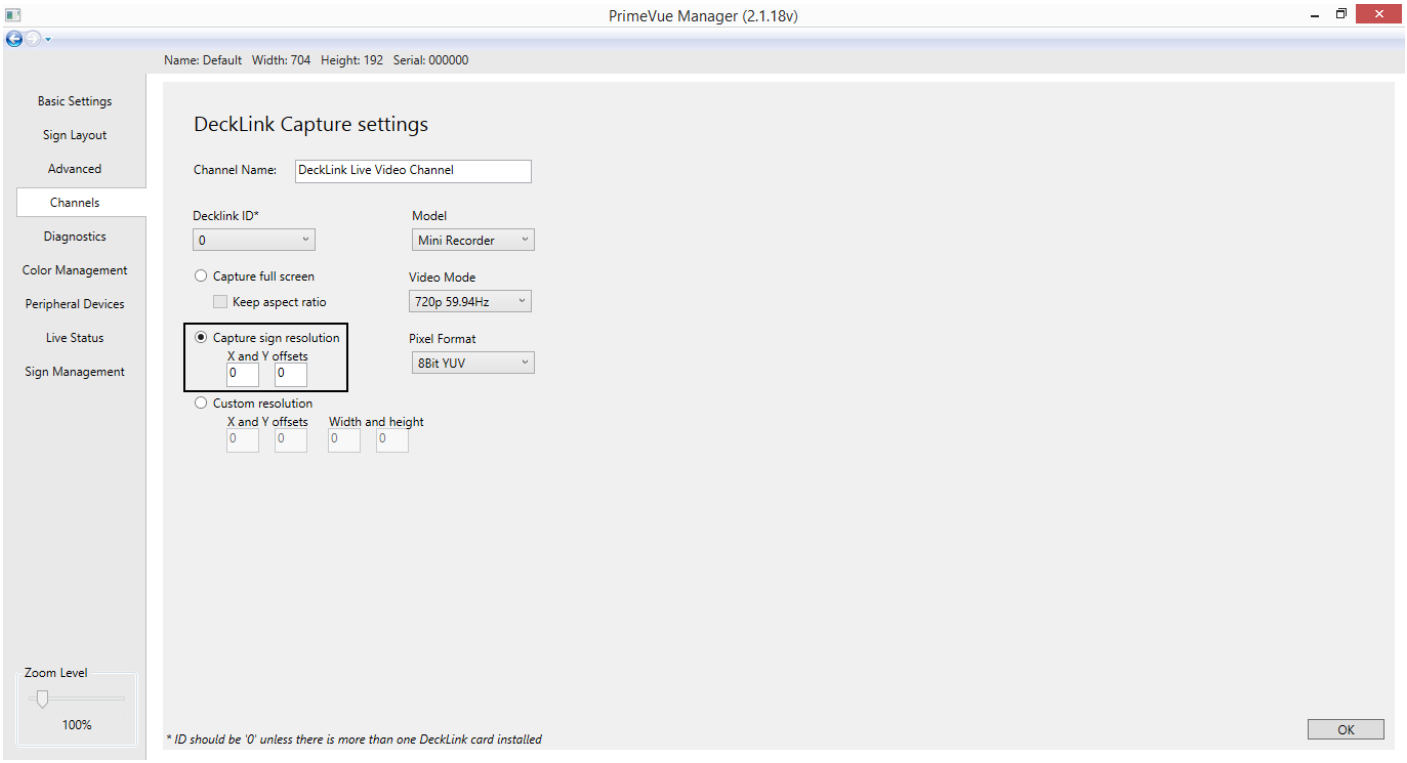
4.3.5 Pixel Format

Setting not yet implemented. Leave at 8Bit YUV.

4.3.6 Capture full screen

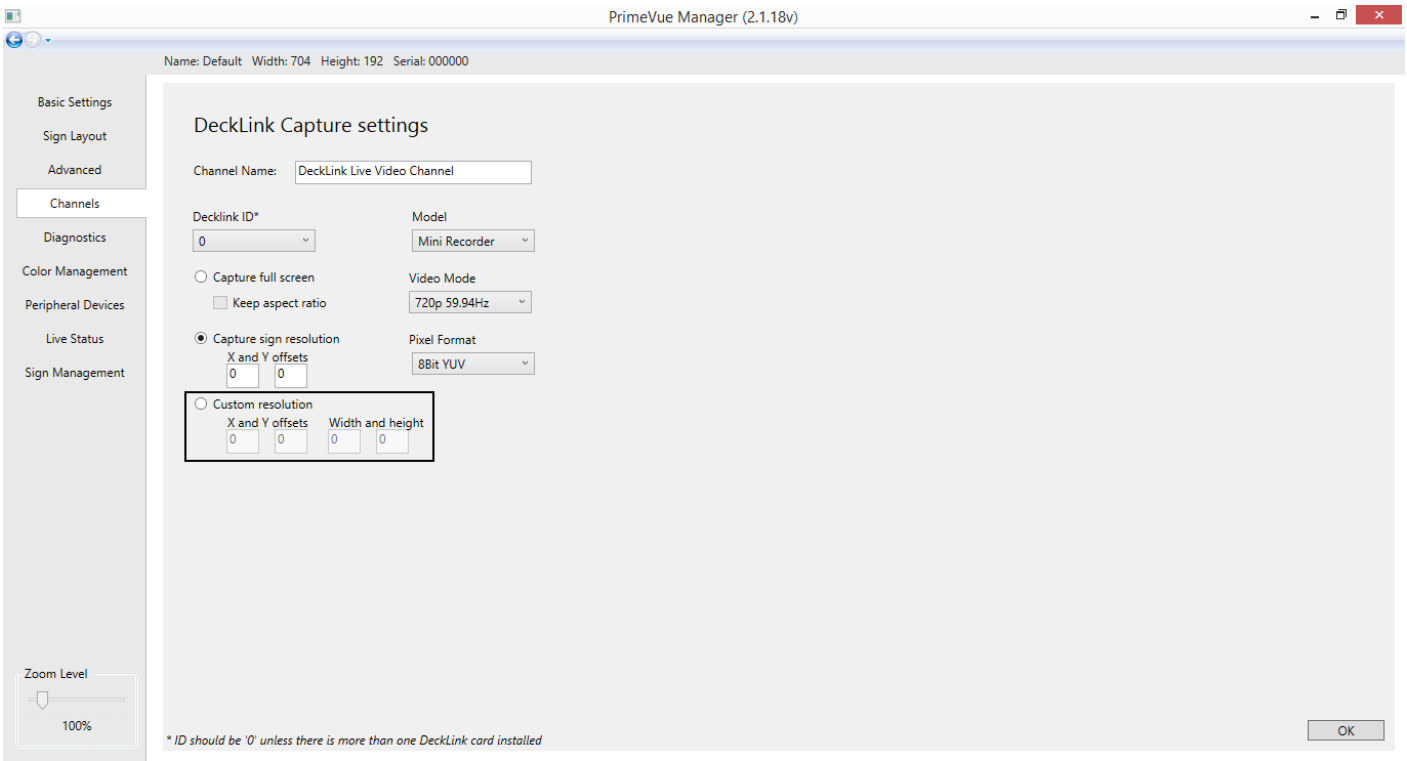
Allows entire source to be output to the sign. Selecting “Keep aspect ratio” will force the sign to drop portions of the video that do not fit into the sign.

Capture sign resolution: allows to capture a specific portion of the screen. Enter the X and Y axes at which the capture area will begin (default is 0/0, which will start from the upper-left corner of the screen).



4.3.7 Custom resolution

Set exact dimensions to be displayed. Sign will resize to fit (will not keep aspect ratio).



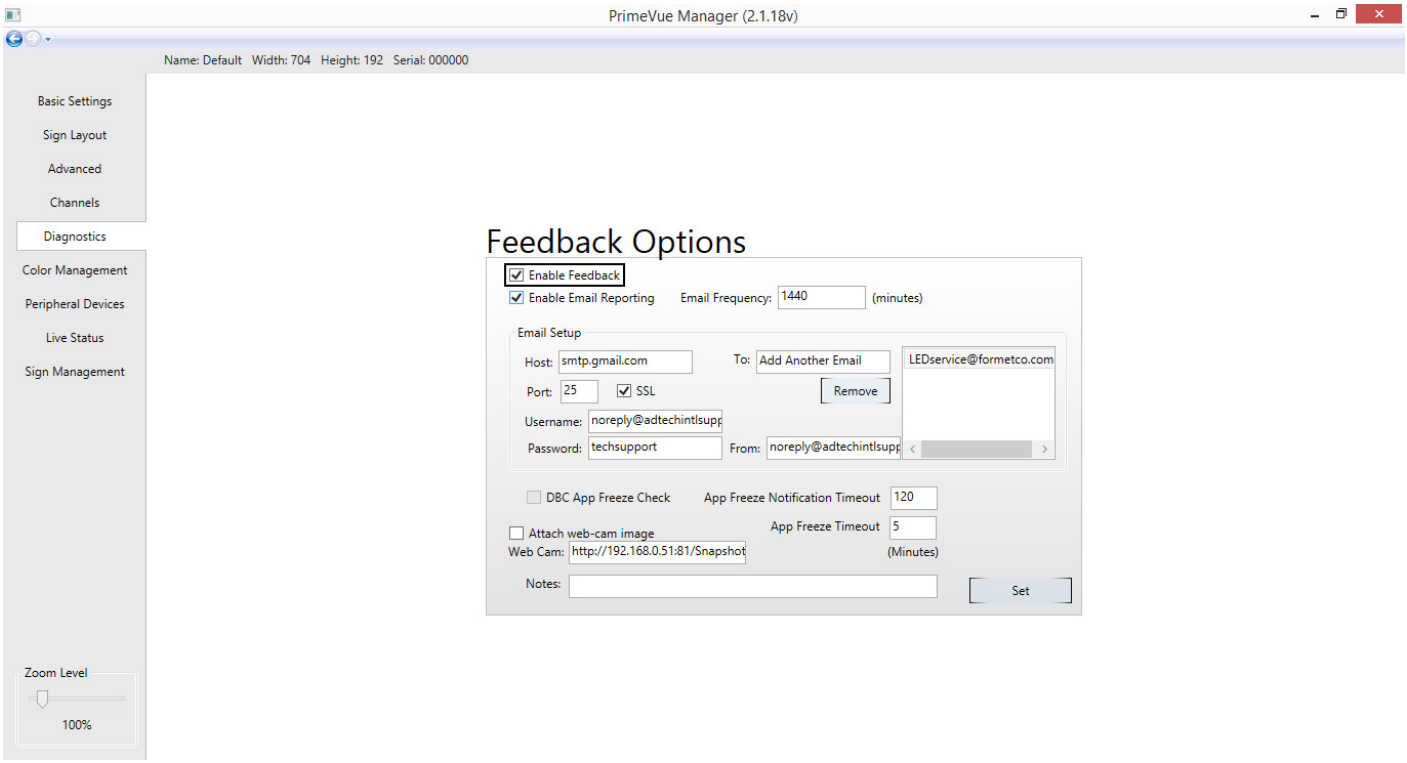
Click OK to apply settings.

Multiple channels may be created for each sign by clicking the “Add Channel” button.

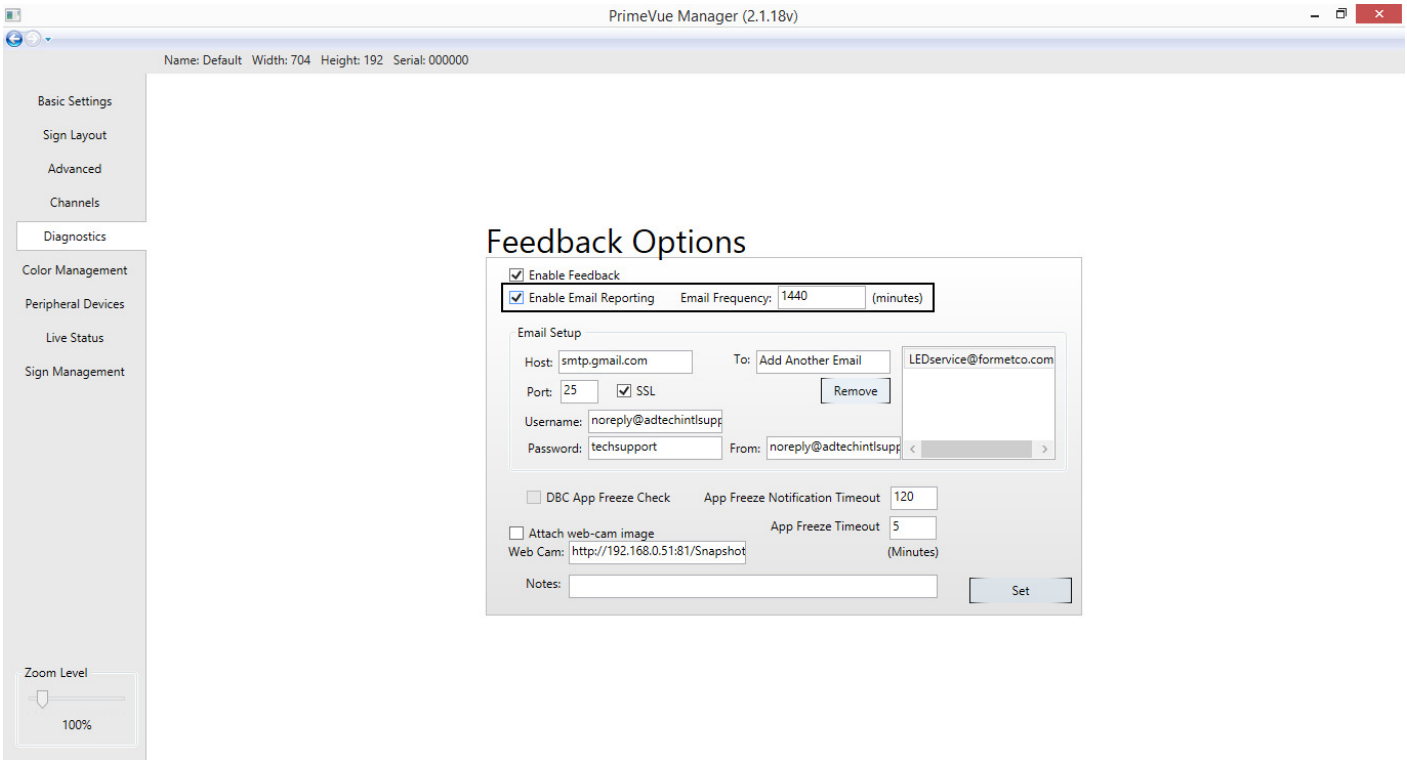
5.0 Diagnostics

5.1 Feedback Options

Click “Enable Feedback” to enable feedback

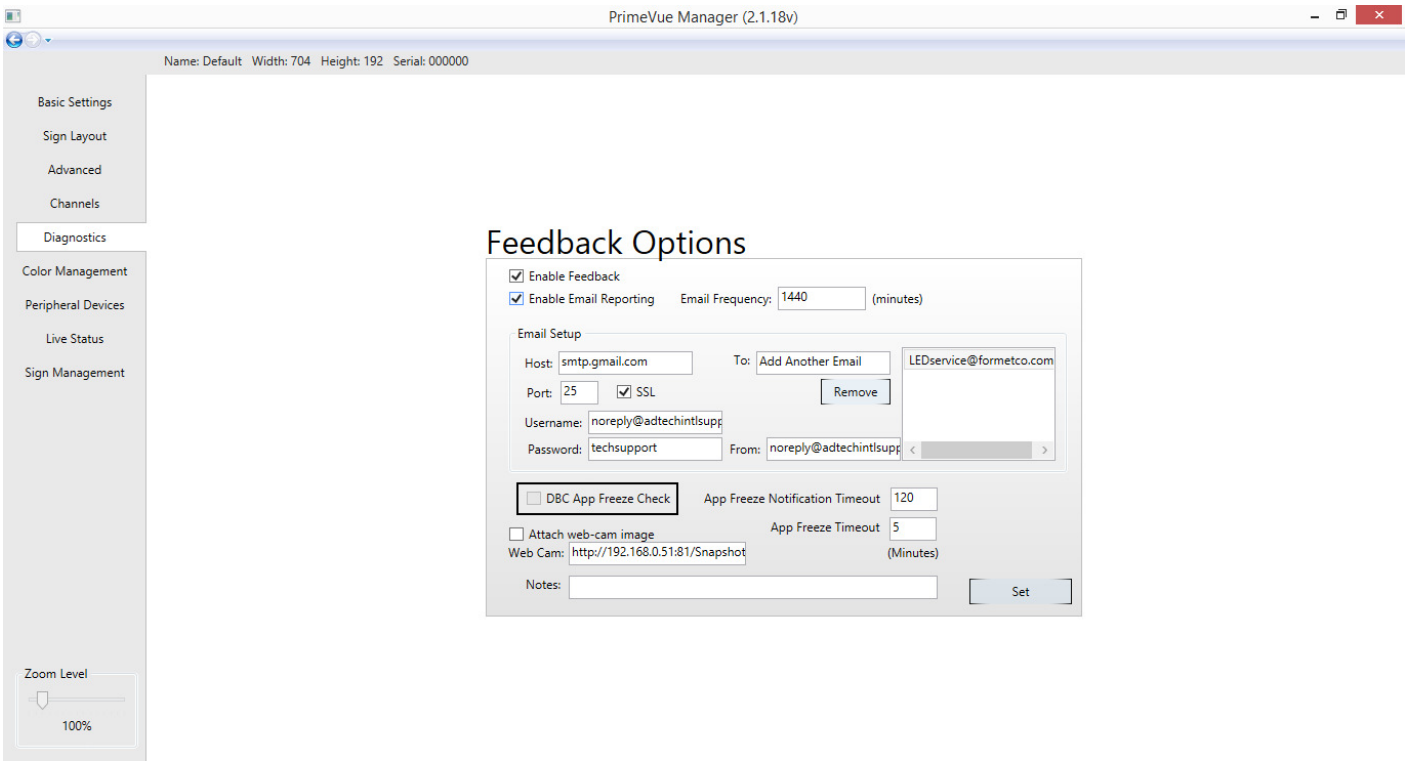


Click **Enable Email Reporting** to enable the sending of feedback emails. Enter email frequency (default is 1440 minutes). Change or add email addresses by entering the address into the **To** field and clicking **Add**. Remove emails by selecting the desired email to remove and clicking **Remove**.

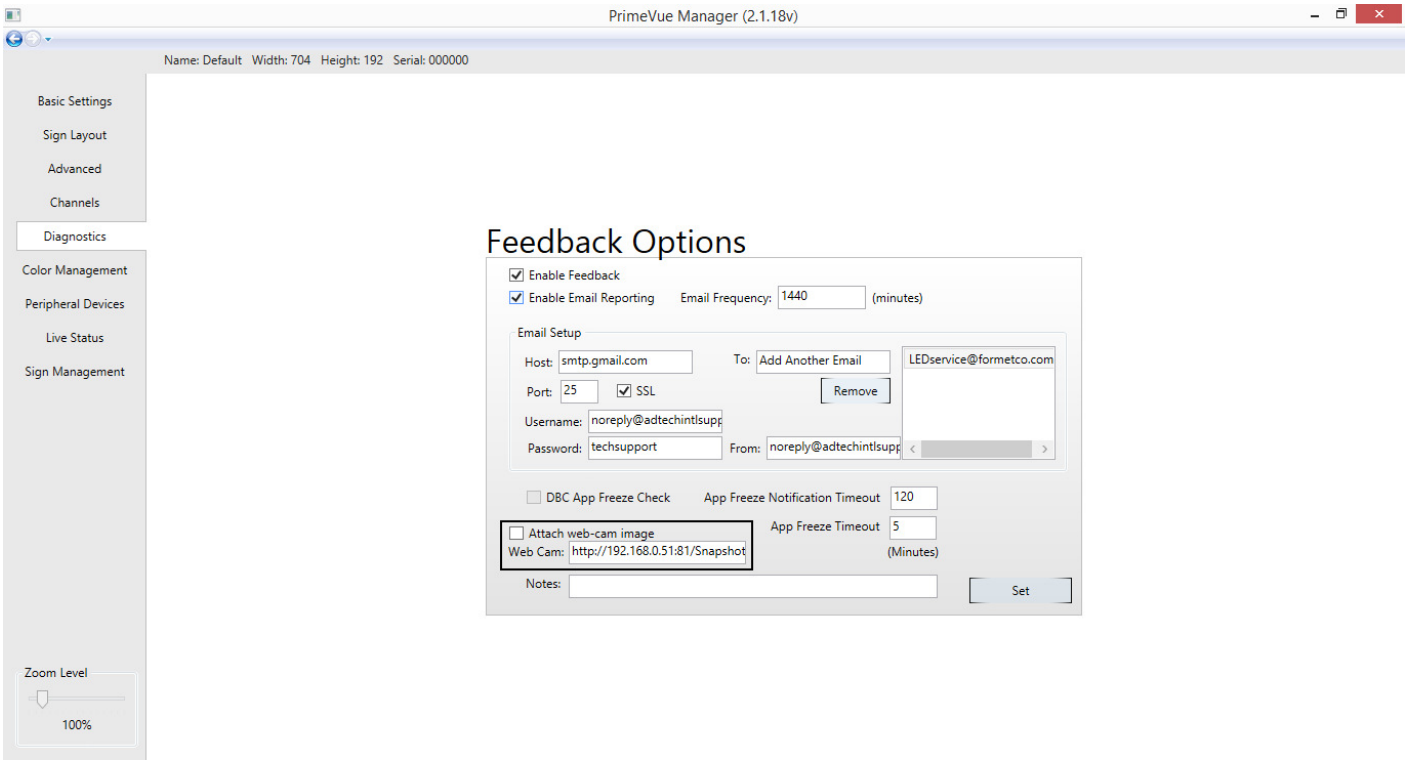


Other email settings should not be changed.

DBC App Freeze Check: enables email notifications for possible freezing of DBC App. Enter frequency of emails in “App Freeze Notification Timeout” field. Enter time before timeout is detected in “App Freeze Timeout” field.



Click “Attach web-cam image” to enable a web cam to send pictures with feedback emails. Default IP address should work for most web cams.



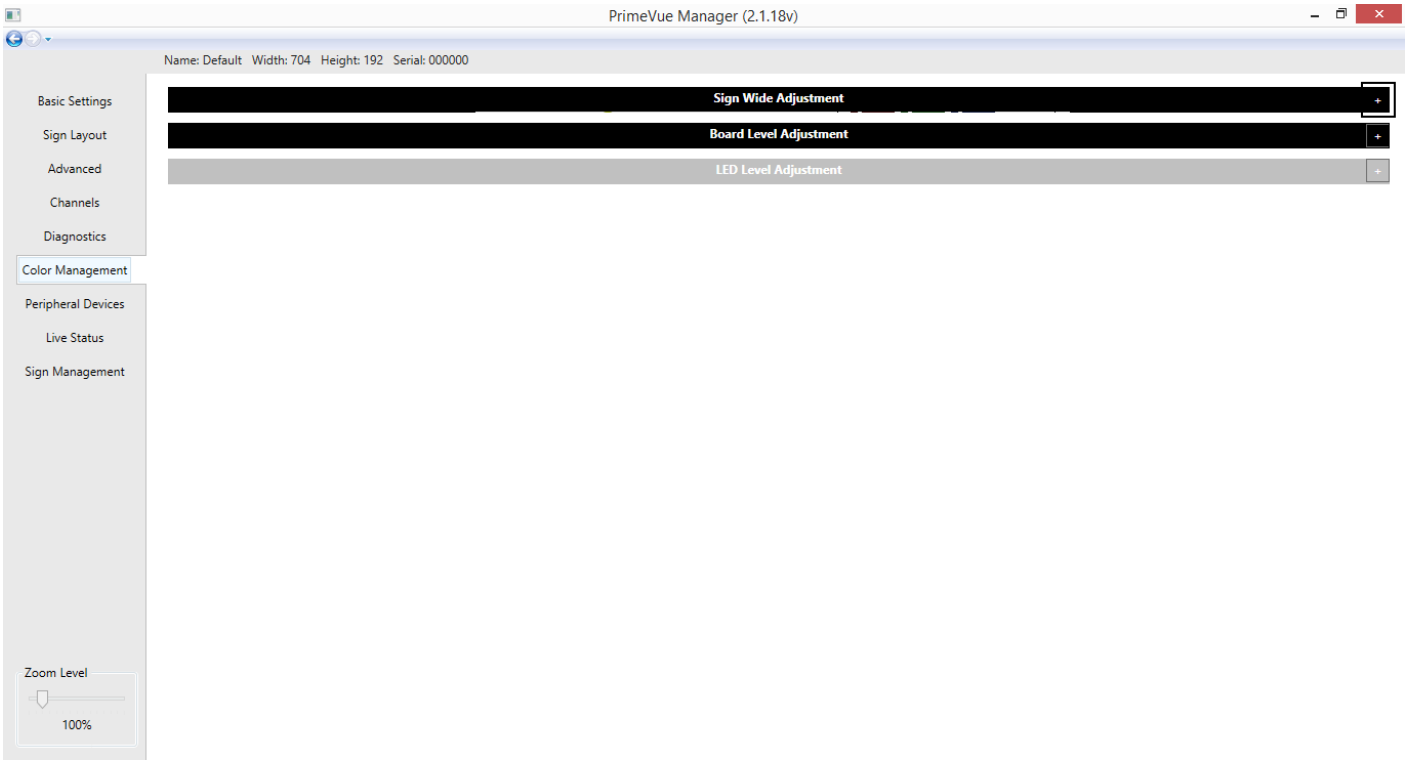
Notes: blanket field for information to include in feedback emails, such as contact information.

Click **Set** to apply settings.

6. Color Management

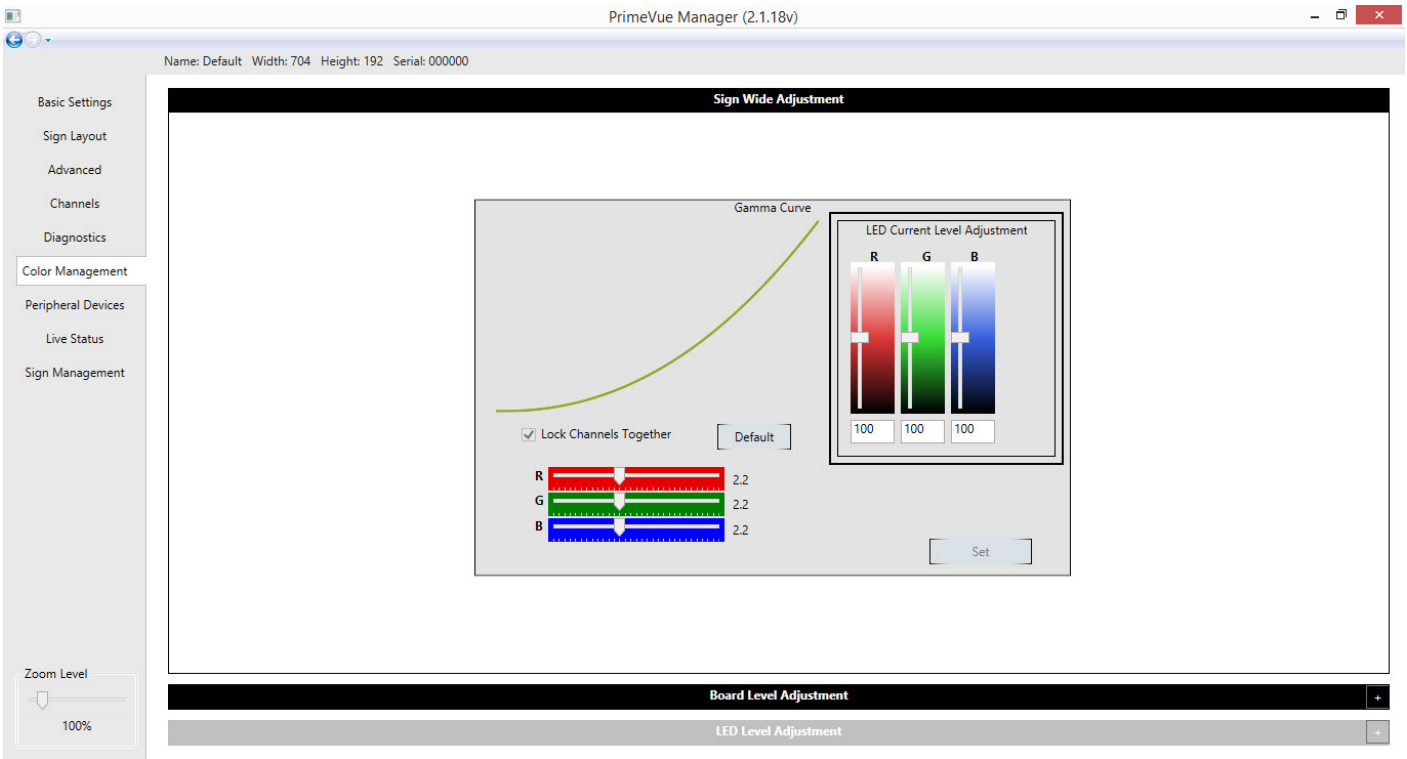
6.1 Sign Wide Adjustment

Click the “**+**” symbol to the right of **Sign Wide Adjustment** to enter color settings.



6.1.1 LED Current Level Adjustment

A new sign ships at the optimal brightness. As LED boards dim, these sliders may be raised to maintain optimal brightness.



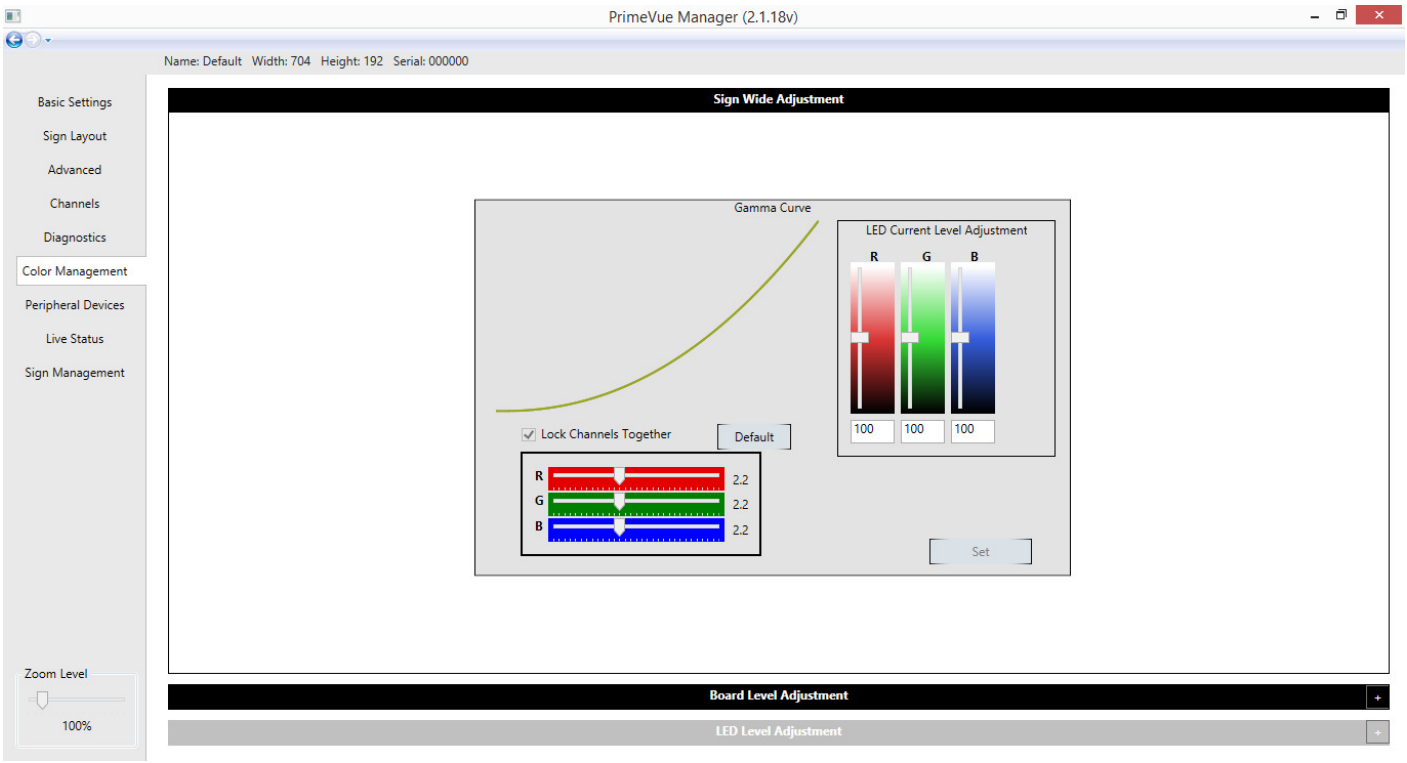
Sliders may also be adjusted to maintain color balance. For example, if the sign looks too pink, turn down the red settings (or raise green and blue settings).

Avoid raising LED levels over 100. Doing so reduces the lifespan of the LEDs.

The **Lock Channels Together** setting is not currently implemented. Please ignore.

6.1.2 Gamma Curve

Bottom three sliders (Gamma Curve) should always remain at 2.2



Click "**Set**" to apply settings.

6.2 Board Level Adjustment

Ignore Board Level Adjustment. Feature not yet implemented.

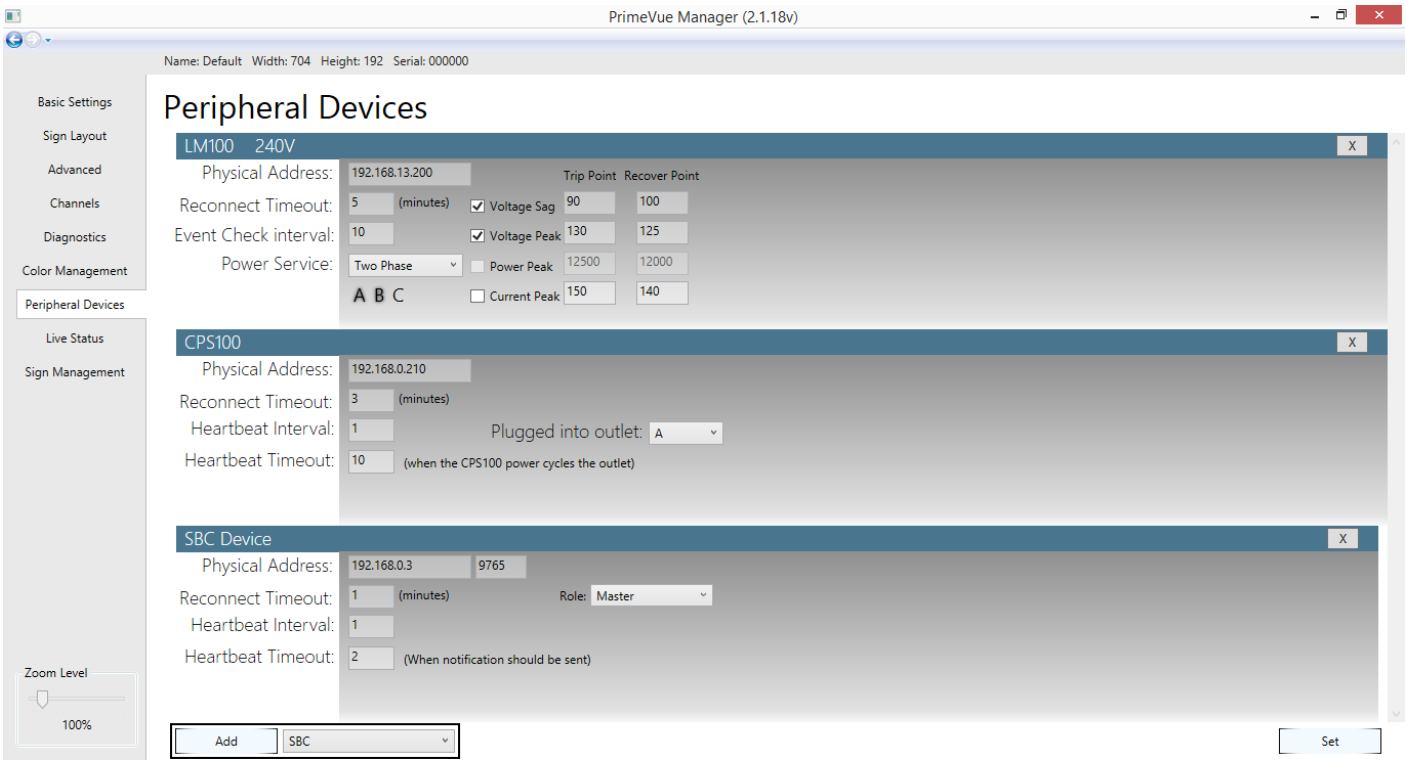
6.3 LED Level Adjustment

Ignore LED Level Adjustment. Feature not yet implemented.

7.0 Peripheral Devices

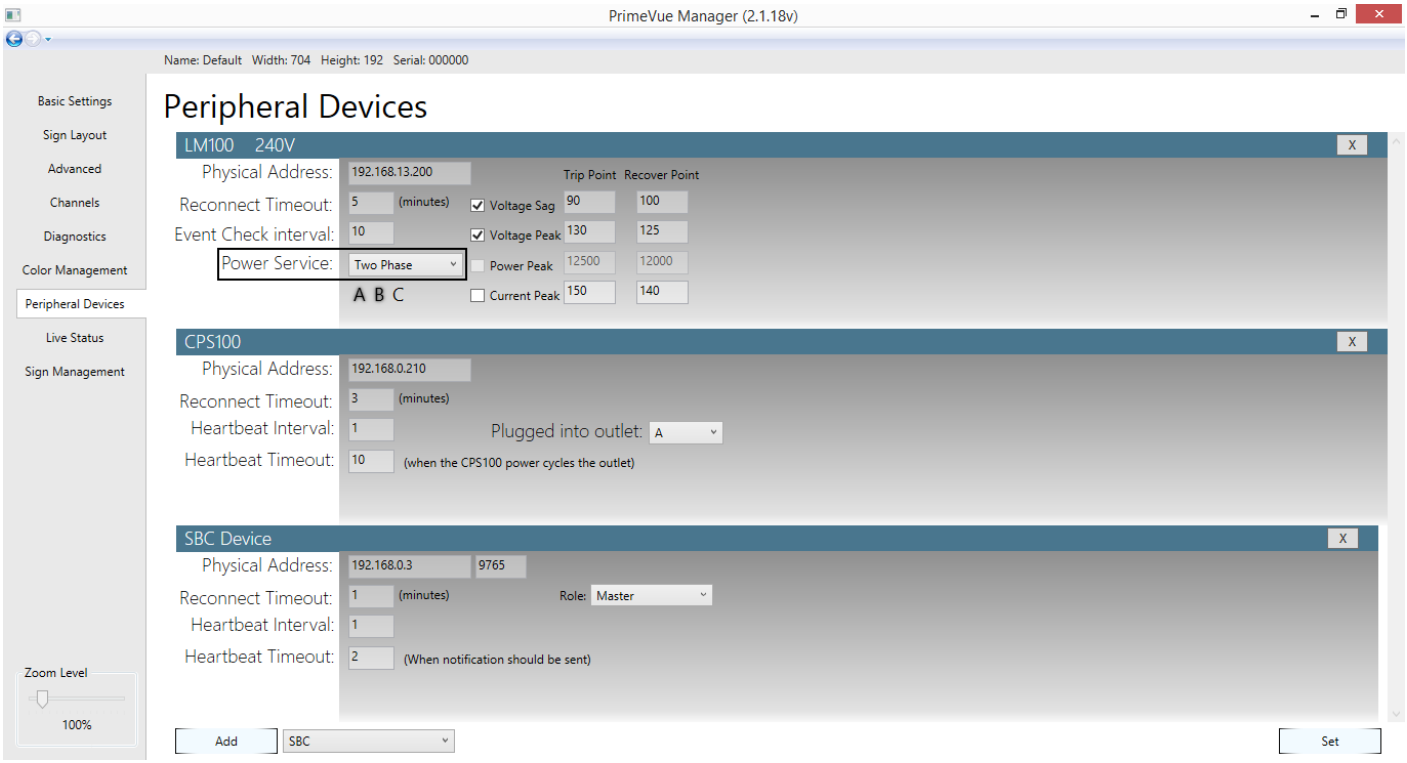
Peripheral devices can communicate with ServCom.

Use the drop-down at the bottom of the window to select which type of device to add. Click “Add” to add the device.



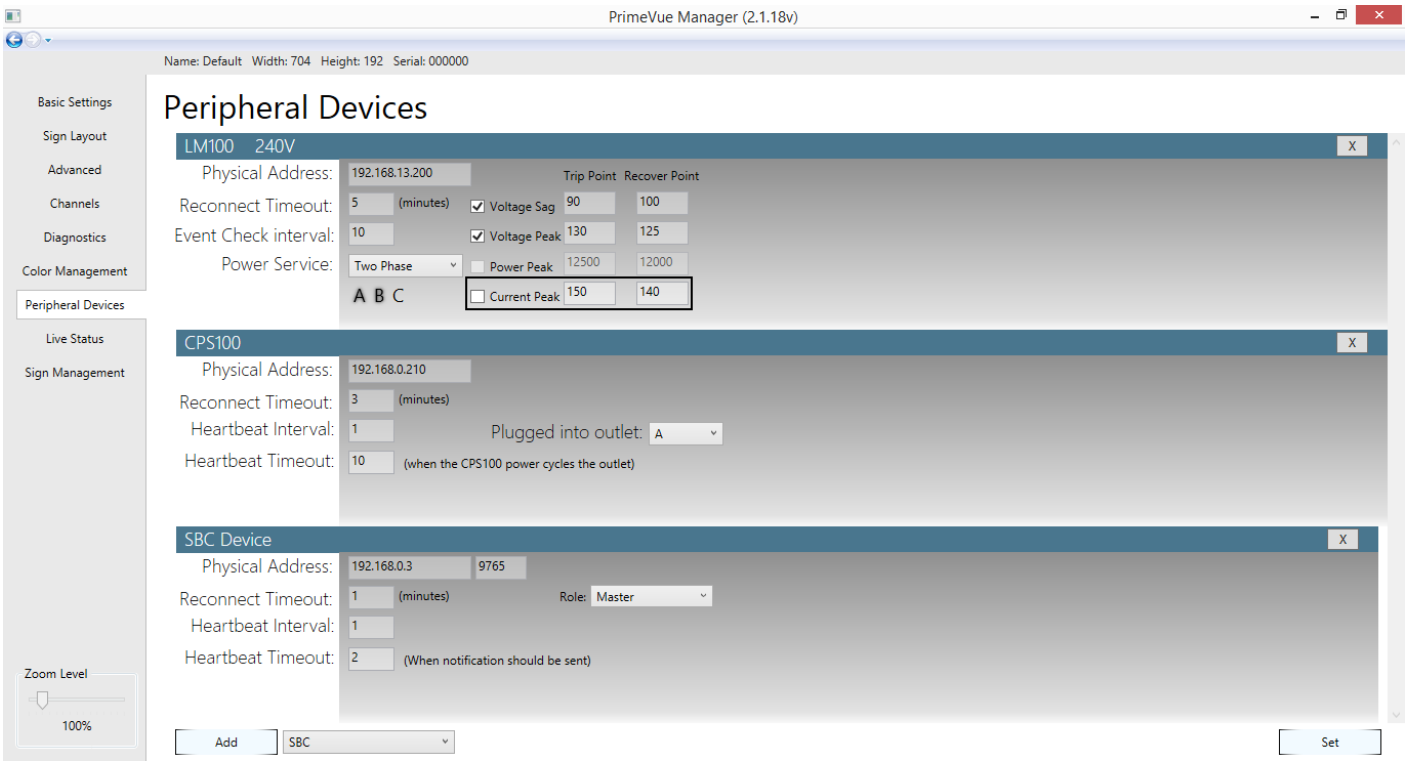
7.1 LM100 Power Monitor

To add a device that monitors power to the sign, enter the IP Address of the device. Select appropriate Power Service Phase.



For **Voltage Sag**, **Voltage Peak**, and **Power Peak**, the default values should be sufficient for most signs.

Enable **Current Peak** if monitor supports current monitoring

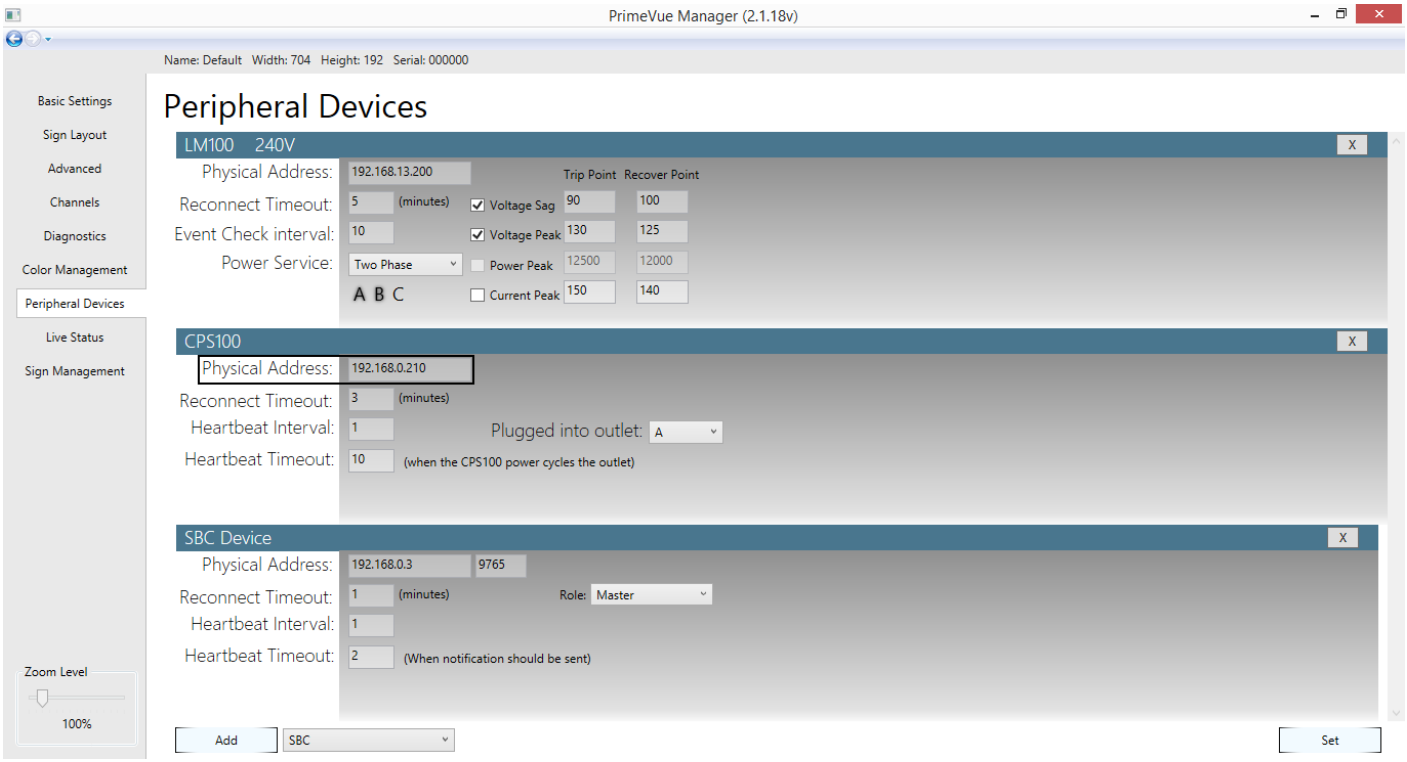


Leave **Reconnect Timeout** and **Event Check** interval at default settings.

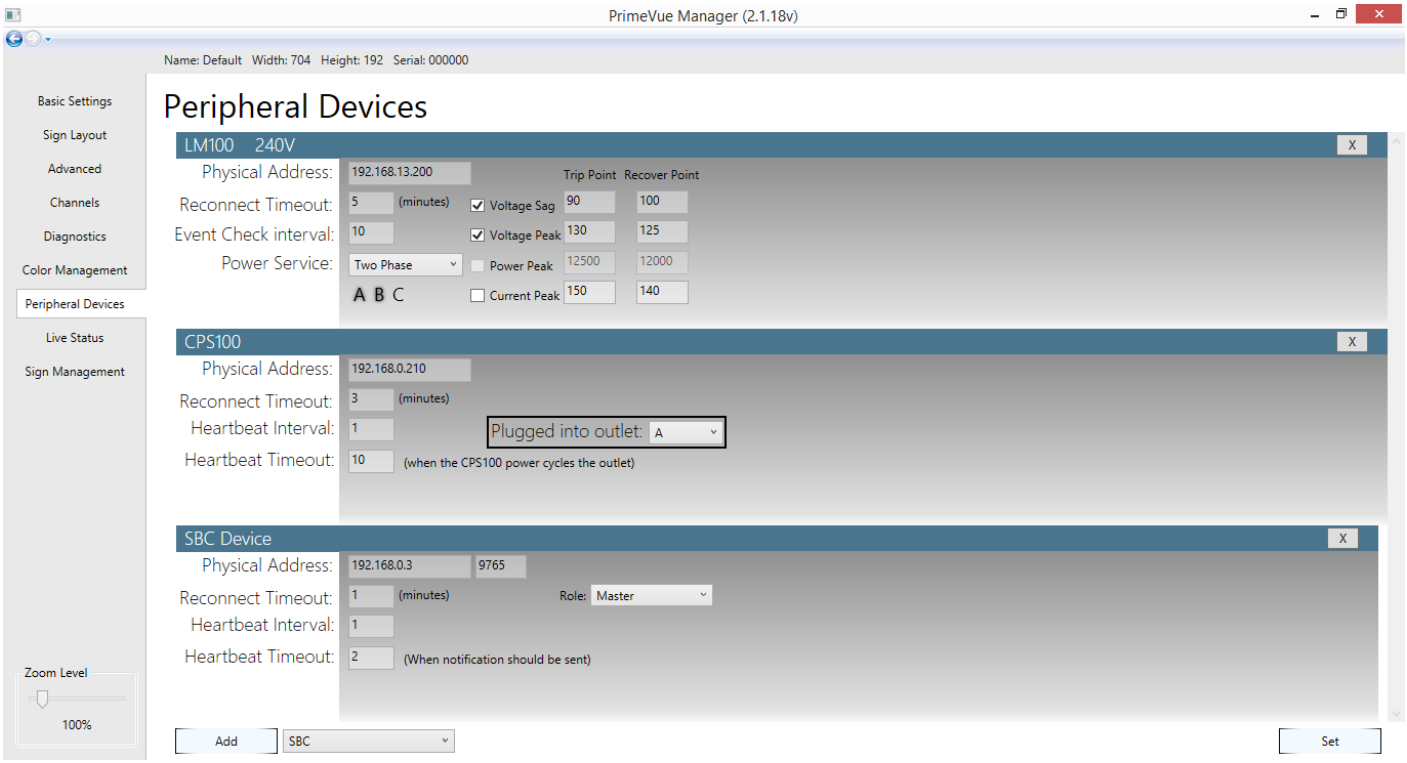
7.2 CPS100 Power Strip

To add a power strip to the sign, select “CPS100 Power Strip from the dropdown menu.

Enter IP address of power strip.



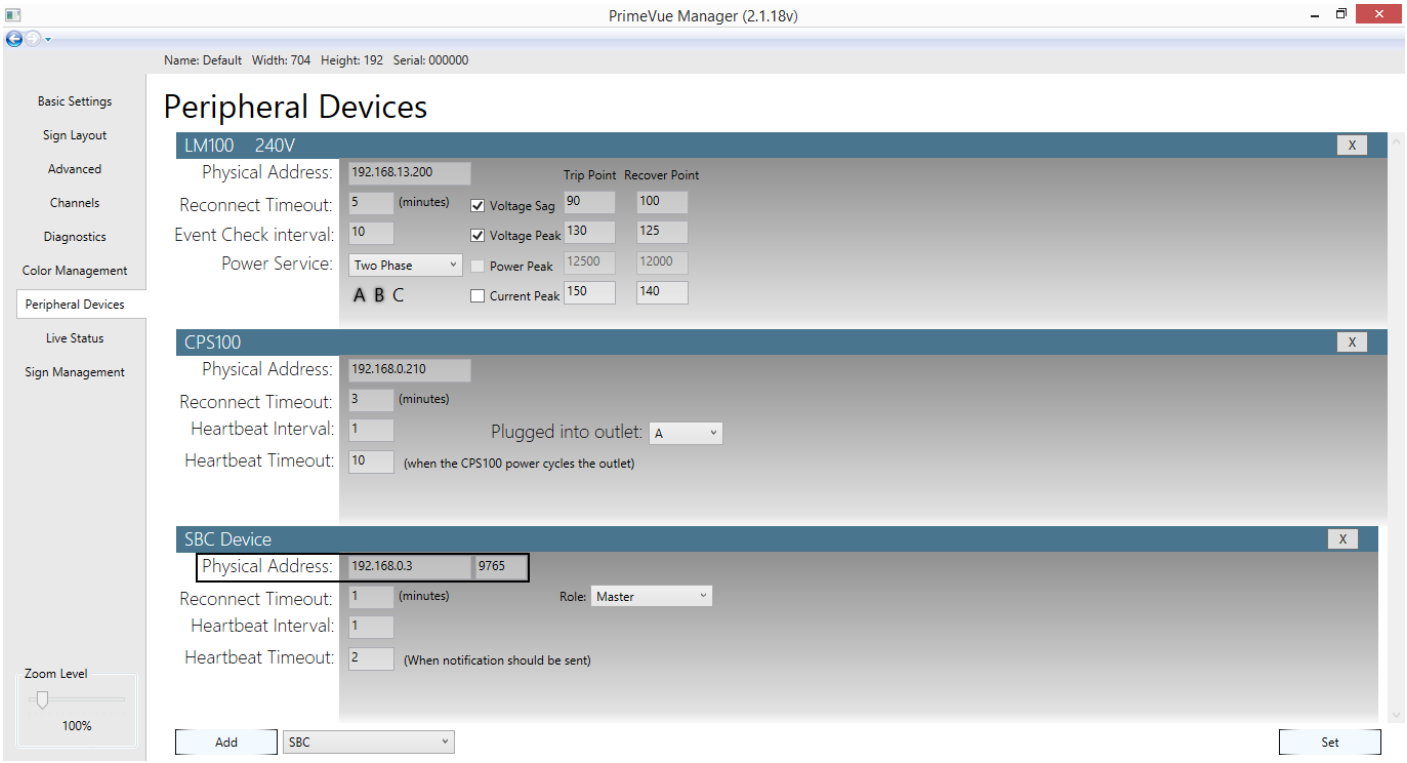
Enter outlet that the computer is plugged into. If primary (sender), it will be plugged into A; if secondary (backup), it will be plugged into B.



Leave **Reconnect Timeout, Heartbeat Interval**, and **Heartbeat Timeout** at default.

7.3 SBC (Single Board Computer)

Enter IP address of single board computer (SBC). This is the section in which to configure the backup computer's connection. If a backup connection is not added here, the primary computer will not output frames.



Leave Role drop-down at default. Option not yet implemented.

Leave **Reconnect Timeout**, **Heartbeat Interval**, and **Heartbeat Timeout** at default.

Click “Set” to apply settings.

8.0 Live Status

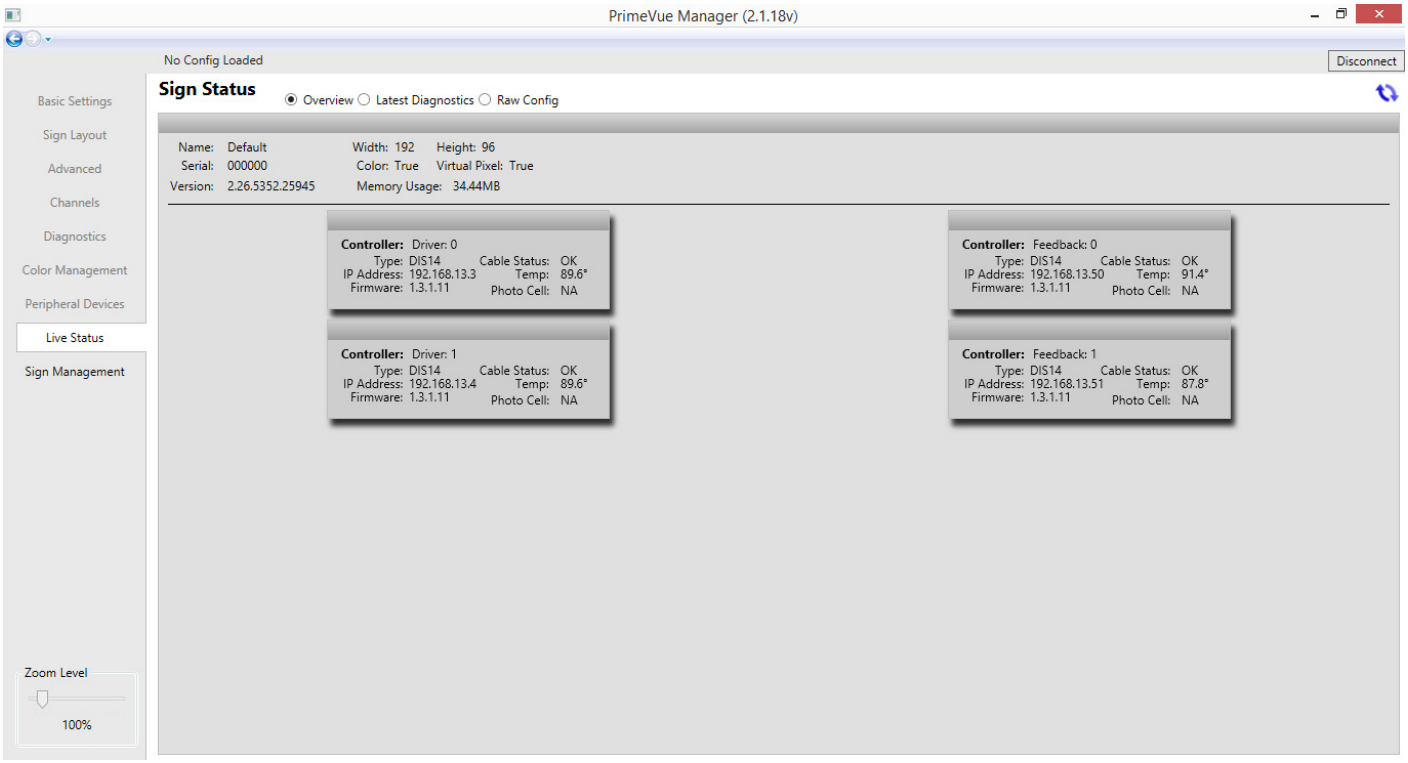
Under “Download Profile,” enter the IP address of the sign and click “Connect.” An invalid IP address will cause the program to time out after 30 seconds.

To refresh information, click overview, then click the refresh button.

When finished, click disconnect to end connection with sign. This connection is separate from configuration of setting (i.e. live status can be run independently of sign configuration).

8.1 Overview

This section gives an overview of sign information. Each controller is listed separately.



8.2 Latest Diagnostics

LED test is no longer implemented. Please ignore.

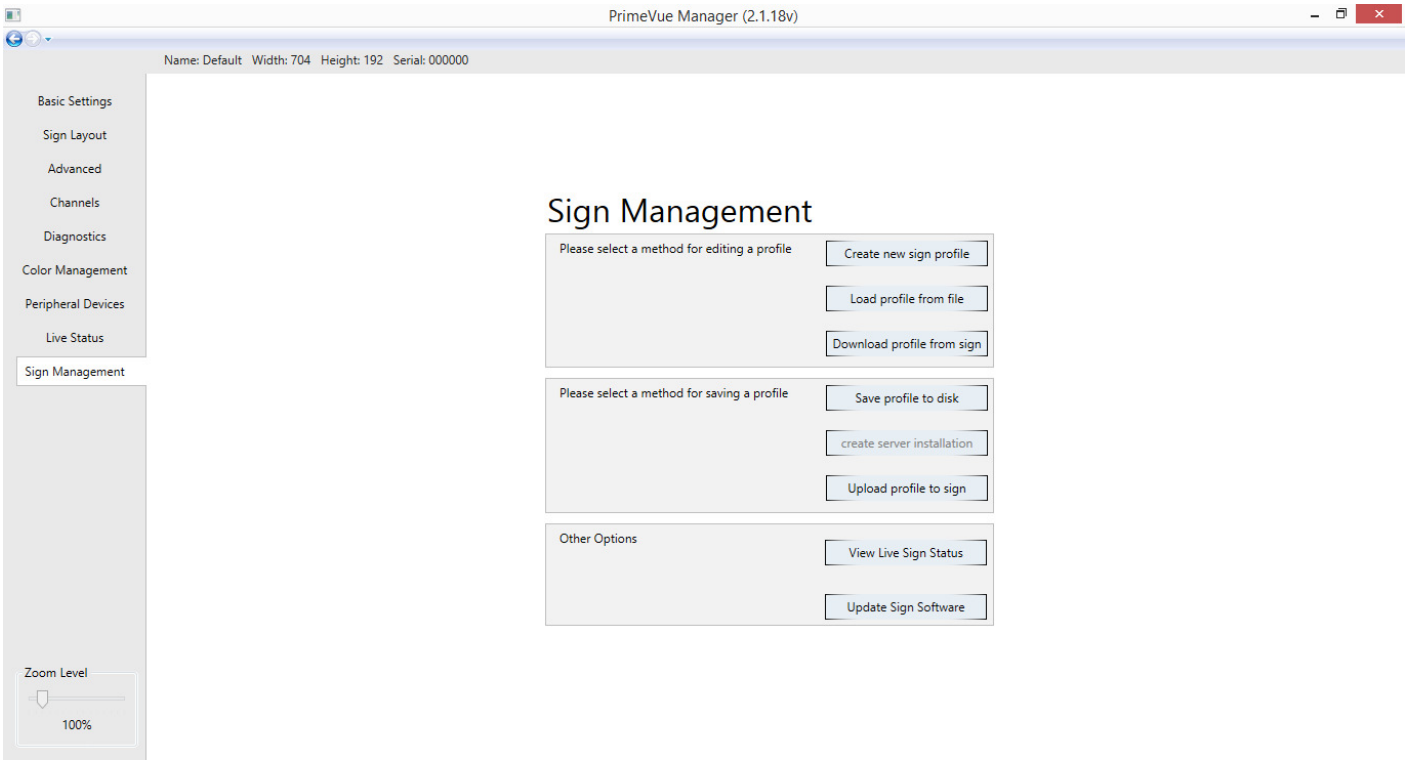
Cable test displays health of cables (healthy cables are displayed in green).

Board Configuration displays health of the board (healthy boards are displayed in green). If a board is displayed as red, click on it to see which driver is bad.

8.3 Raw Config

Not implemented. Please ignore.

9.0 Sign Management



9.1 Editing a Profile

Create new profile: Create new sign configuration

Load profile: Open a sign config file (.cfg)

Download profile from sign: Down the sign's current configuration

9.2 Saving a Profile

Save profile to disk: Saves PrimeVue's current configuration to computer running PrimeVue

Create serer installation: Not implemented

Upload profile to sign: Upload PrimeVue's current configuration to the connected sign

9.3 Other Options

View Live Sign Status: Opens Live Status section (*see 8. Live Status*)

Update Sign Software: Used to update ServCom. Select appropriate software, enter in the sign's IP address, and click “Connect.”

Update success may be checked on ServCom or in Live Status under “Overview.”