

vGauge G12C Color Display firmware can be updated by loading a FLASH MEMORY file from PC/Laptop using the supplied 6-pin to USB cable.

A firmware update utility (BMPLoad) and latest G12C firmware file can be obtained from the vGauge support Web site.



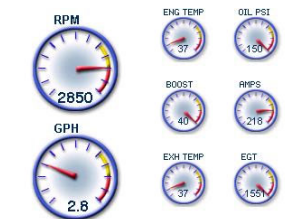



There are two types of updates that can be performed on vGauge Color Displays

Display Firmware (*.upg) – Only needed occasionally to fix problems or add features.

Display Themes (*.BIN) - Change display graphic elements and gauge styles.

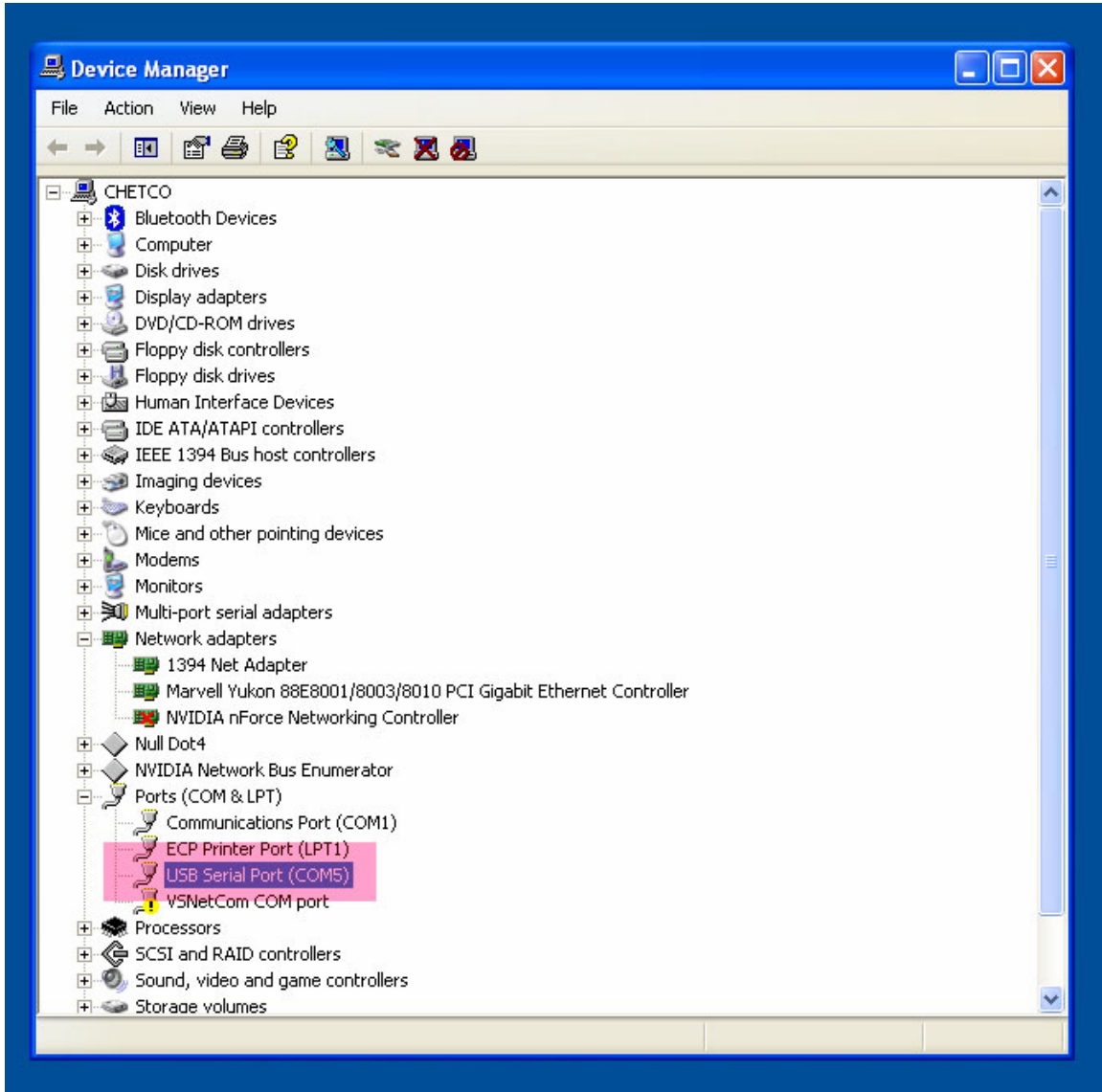
Normally only Display Theme files need to be loaded to alter the look and style of instrument panels. Only one Theme file can be loaded at a time. Display Theme files allow for customization of any vGauge Color display via USB connection to PC/Laptop.

Several Theme libraries have been developed and can be quickly modified to create a large number of graphic styles.

Theme File Name	Day Mode	Night Mode
G12C_Landscape_Blue3D_123009.BIN		
G12C_Landscape_Classic_123009.BIN		
G12C_Landscape_White_123009.BIN		

Theme File names are formatted to identify the display type, orientation, style, and version.

The first step in performing a firmware update is connecting the supplied USB adapter cable to host PC/Laptop and verifying proper USB drivers are installed and a new COM port number is assigned in DEVICE MANAGER

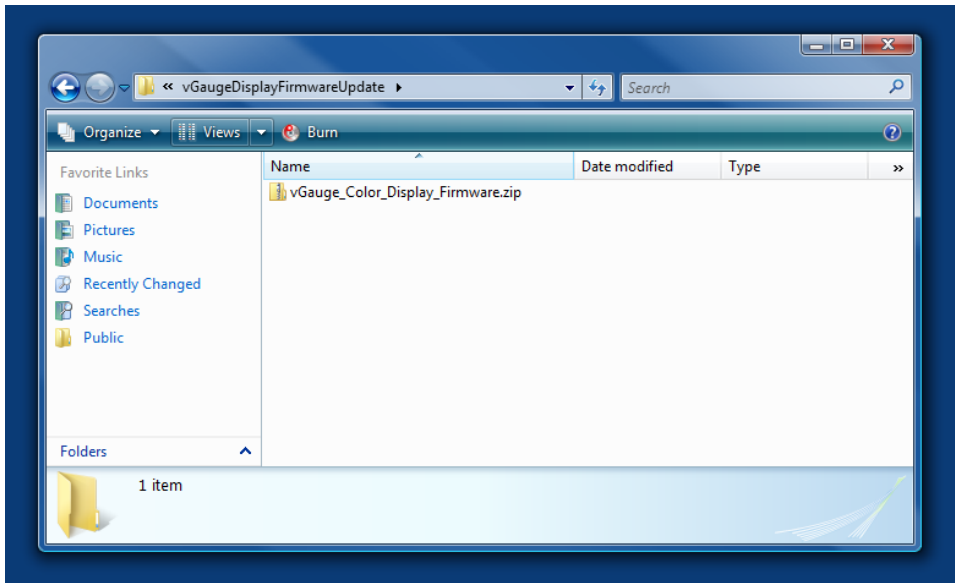


In this example - COM PORT 5 was assigned to the G12C display when the USB cable was attached to the host PC. Verify the correct COM port by disconnecting the USB cable and it should disappear from the list. Reconnect should reinstall the same COM PORT number.

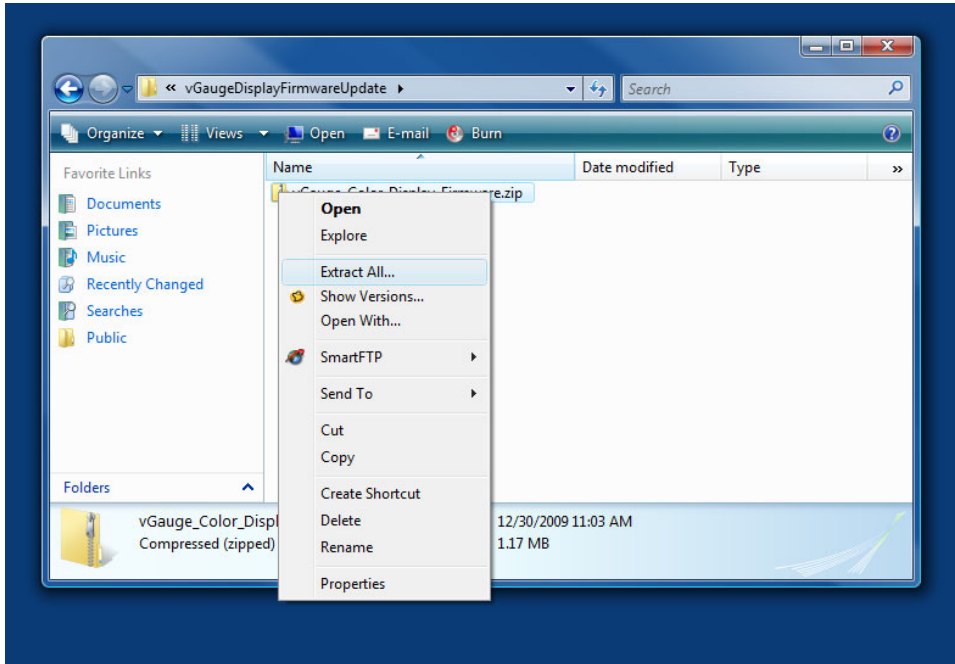
Once you have verified the COM PORT number assigned to the G12C display, proceed to running the BMPLoad.exe utility to connect and download the update.

Download the **vGauge12C_Color_Display_Firmware.zip** file from the Support page on the Chetco Digital Instruments Web Site at <http://www.chetcodigital.com/vgauge/support.htm>

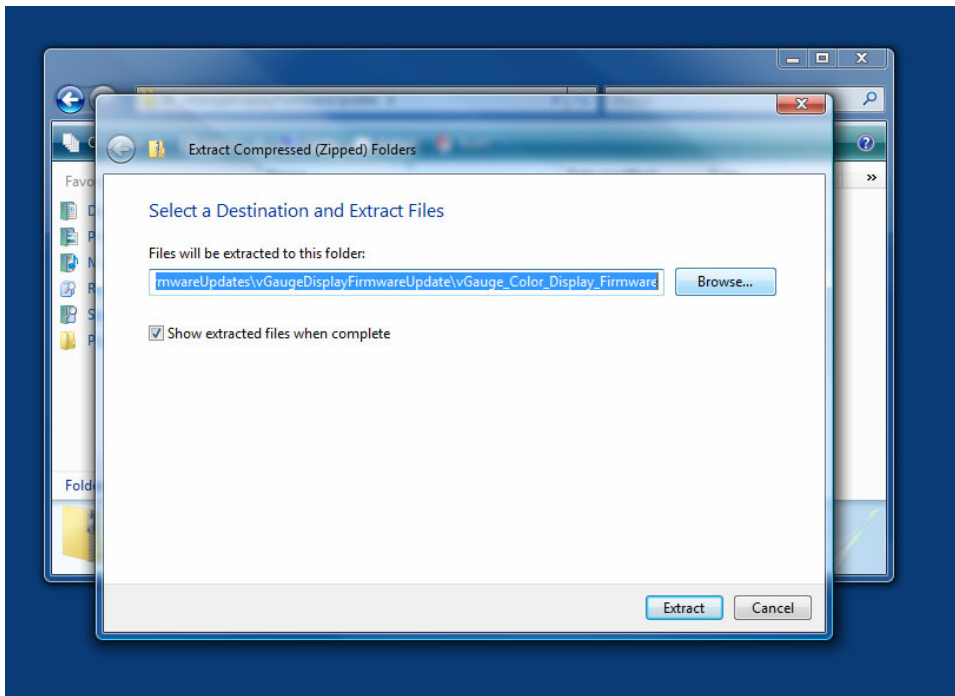
This is a compressed file format and must be extracted to access the contents.



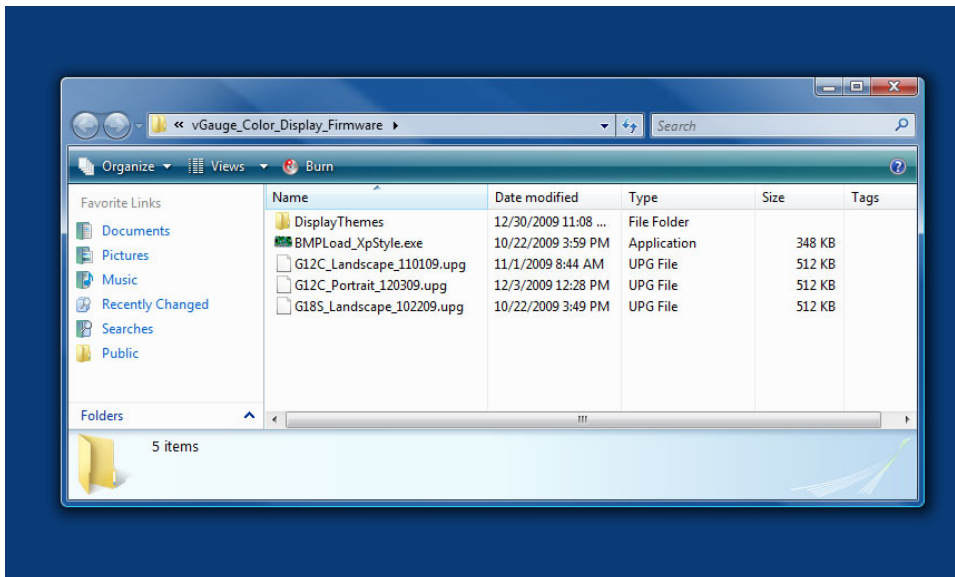
To extract the contents, right click on the folder and select Extract All.



When prompted, select the desired location to store the extracted files.



Once extracted, the target folder will contain the BMPLoad.exe application, display firmware upgrade files (*.upg) and an additional folder for the various display themes.

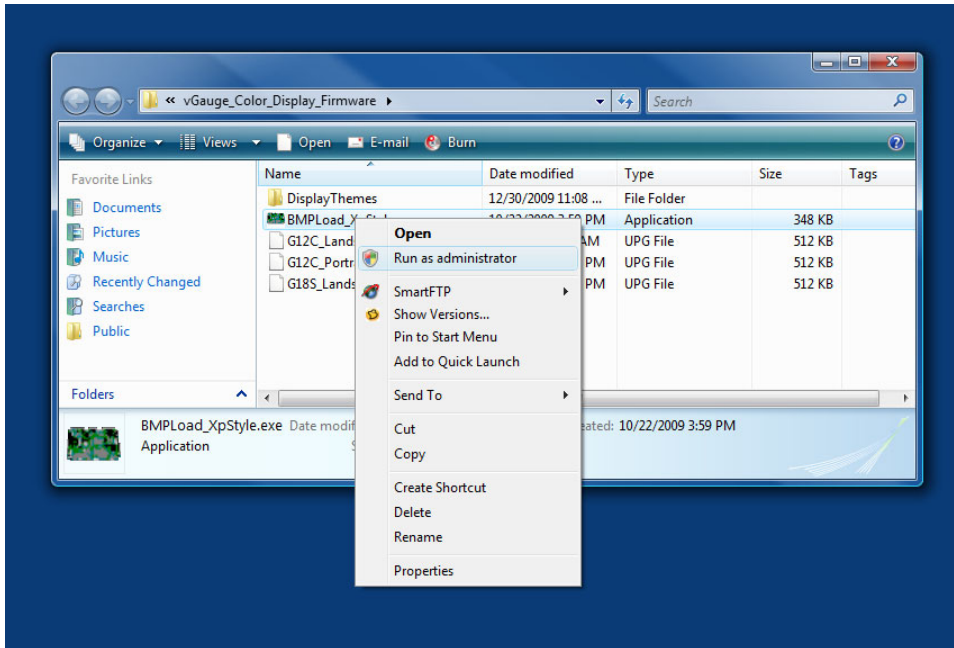


When performing an update – first load the latest firmware then load the desired display theme file. Firmware files are marked with a “*.upg” extension. Display theme files are a “*.bin” extension.

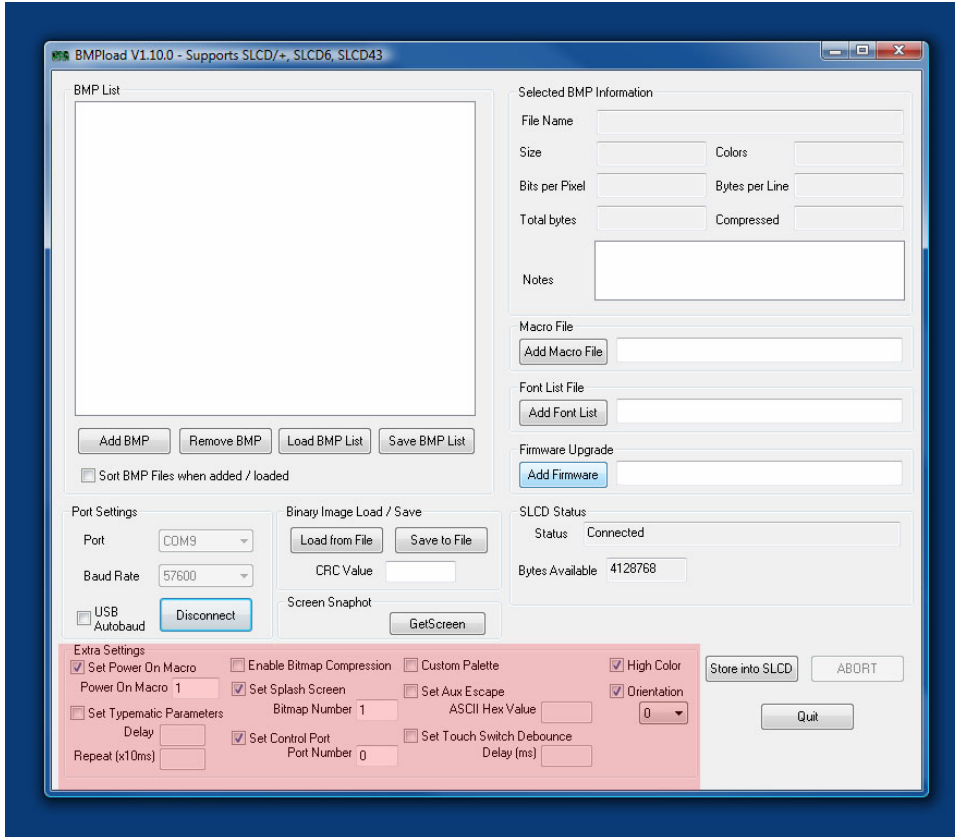
Most Theme files can be loaded without need to reload Firmware files as long the Display Orientation (Landscape or Portrait) is not changed. If changing orientation, both Firmware and Theme files will need to be loaded.

This App Note describes how to load both Firmware Files and Theme Files. You may skip the Firmware portion if just changing Themes. The procedures are essentially the same except for the target file.

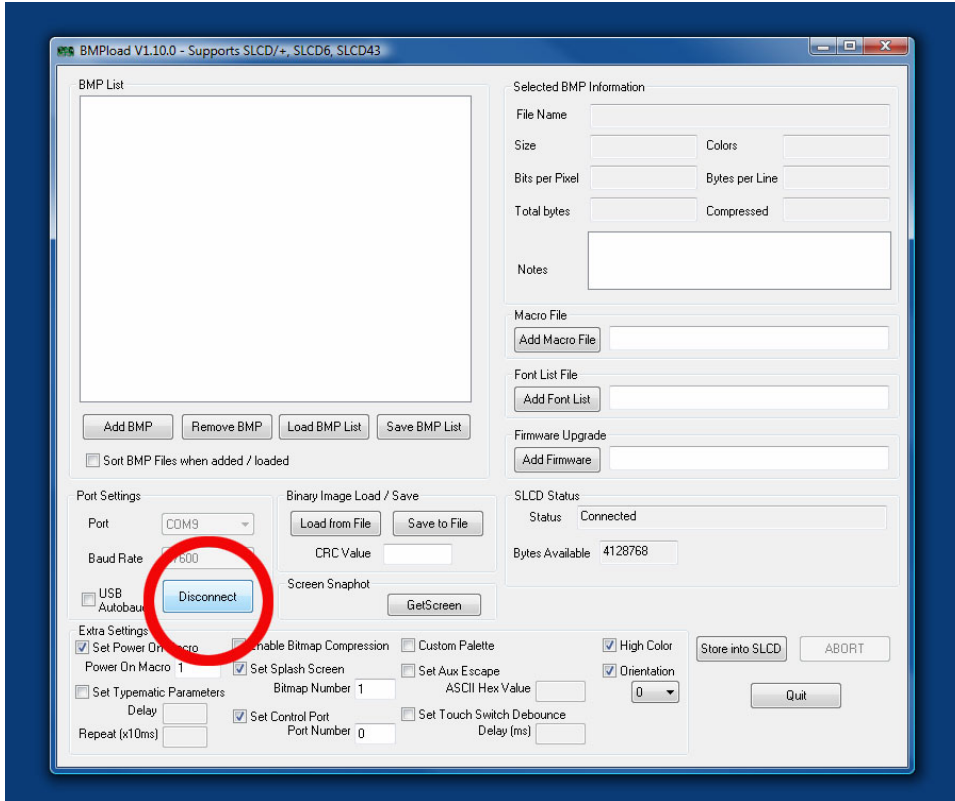
Start BMPLoad by double clicking on the BMPLoad.exe file. On Windows Vista you may need to right-click and select “Run as Administrator”.



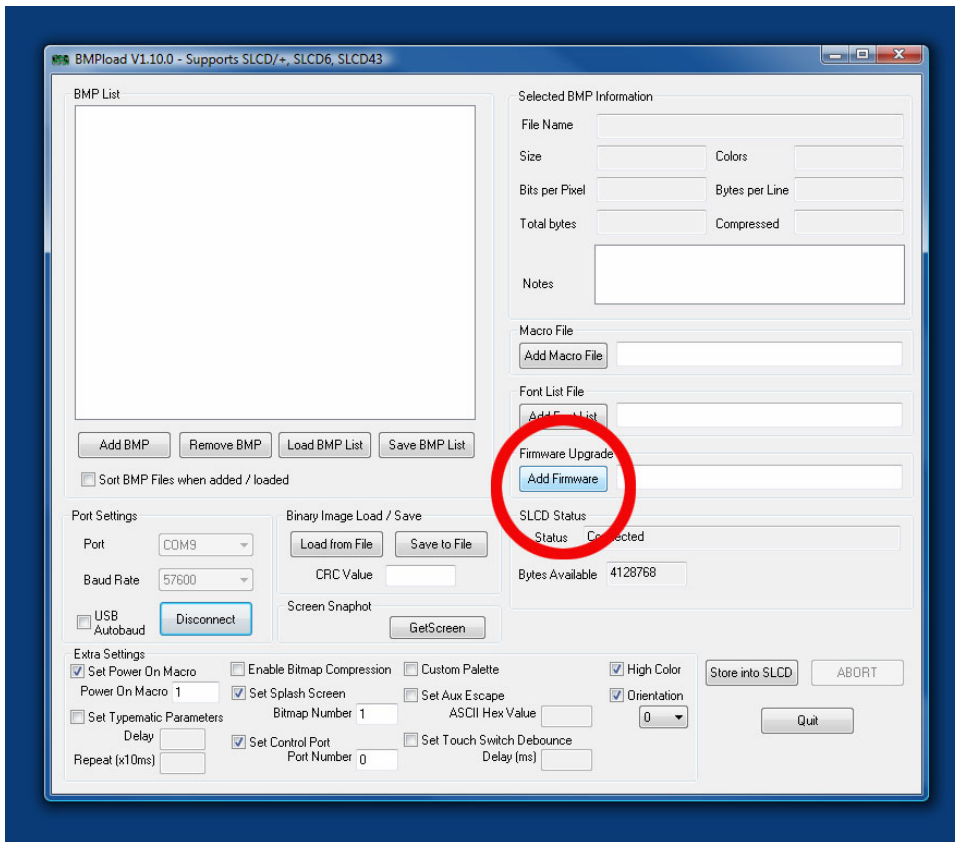
After configuring the COM PORT SETTINGS section, verify the EXTRA SETTINGS section are correct. If not, change them to match the values shown in the dialog.



Test the connection by selecting the “Connect” Button. If successful, the SLCD Status will show “Connected”

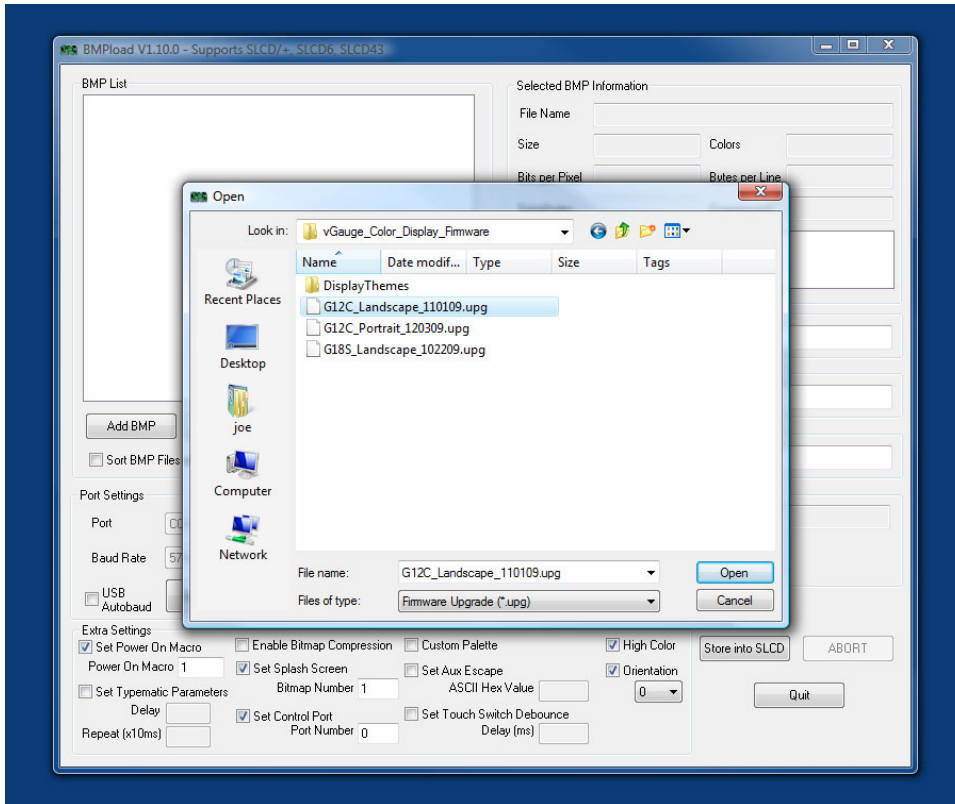


Next – select the firmware file to load into the display.

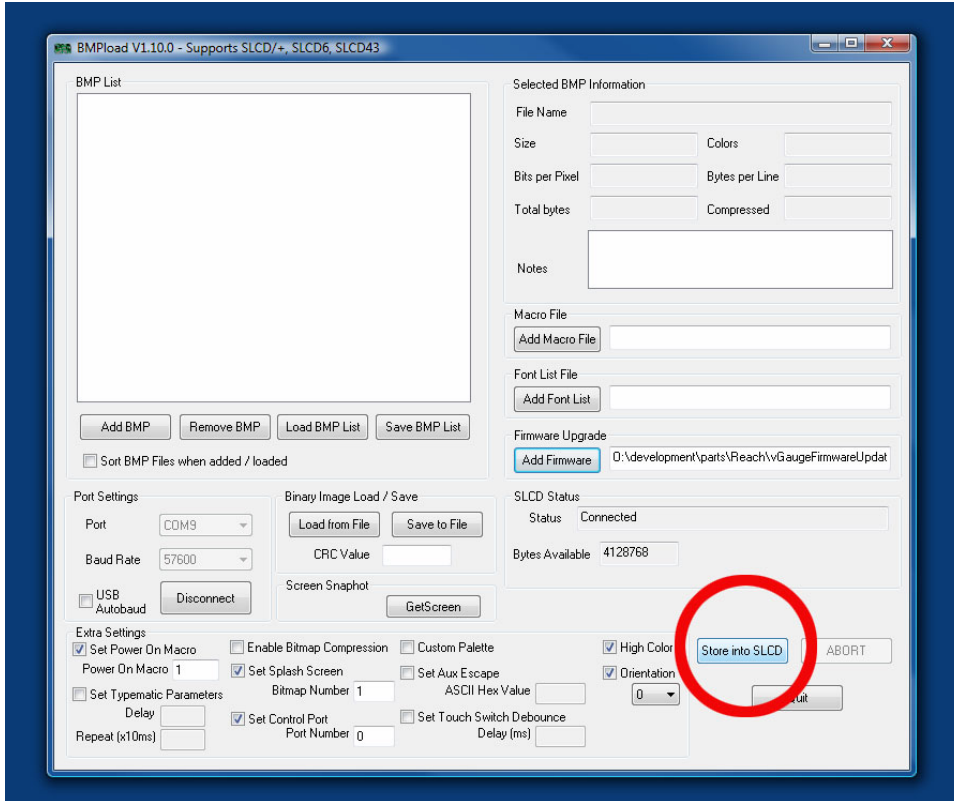


Be sure to select the correct file to match the display type. Also note there may be both Landscape and Portrait versions for each display type.

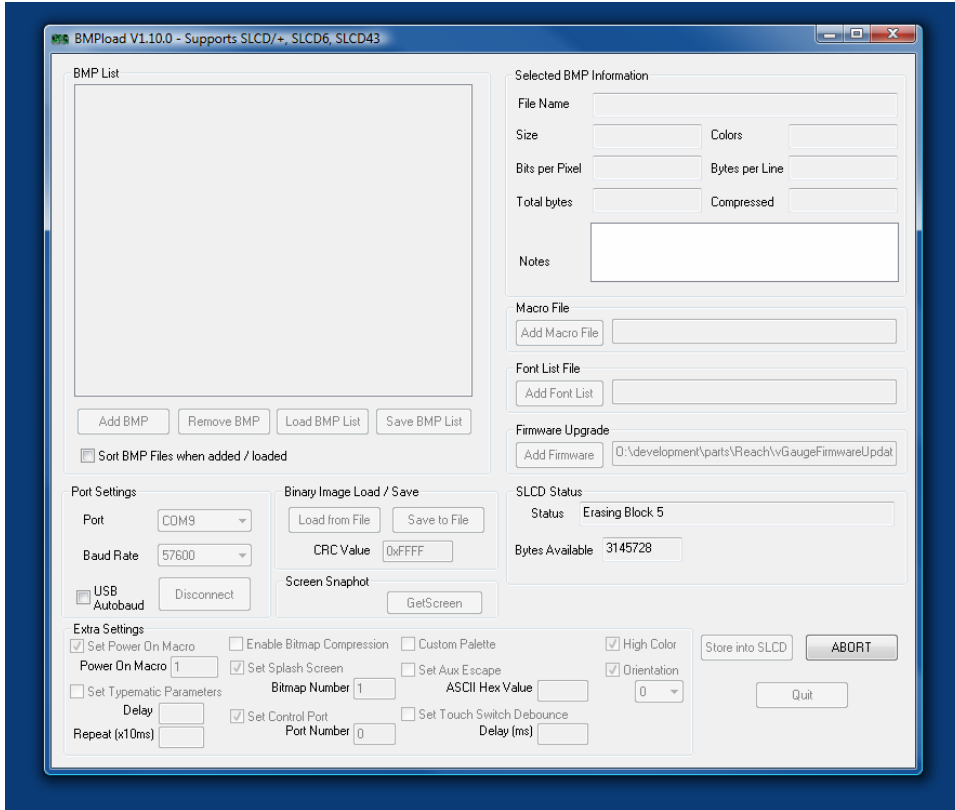
When choosing a Display Orientation (Landscape or Portrait) be sure to select the correct matching Theme file. Landscape Themes will not work with Portrait Firmware or Portrait Themes with Landscape Firmware.



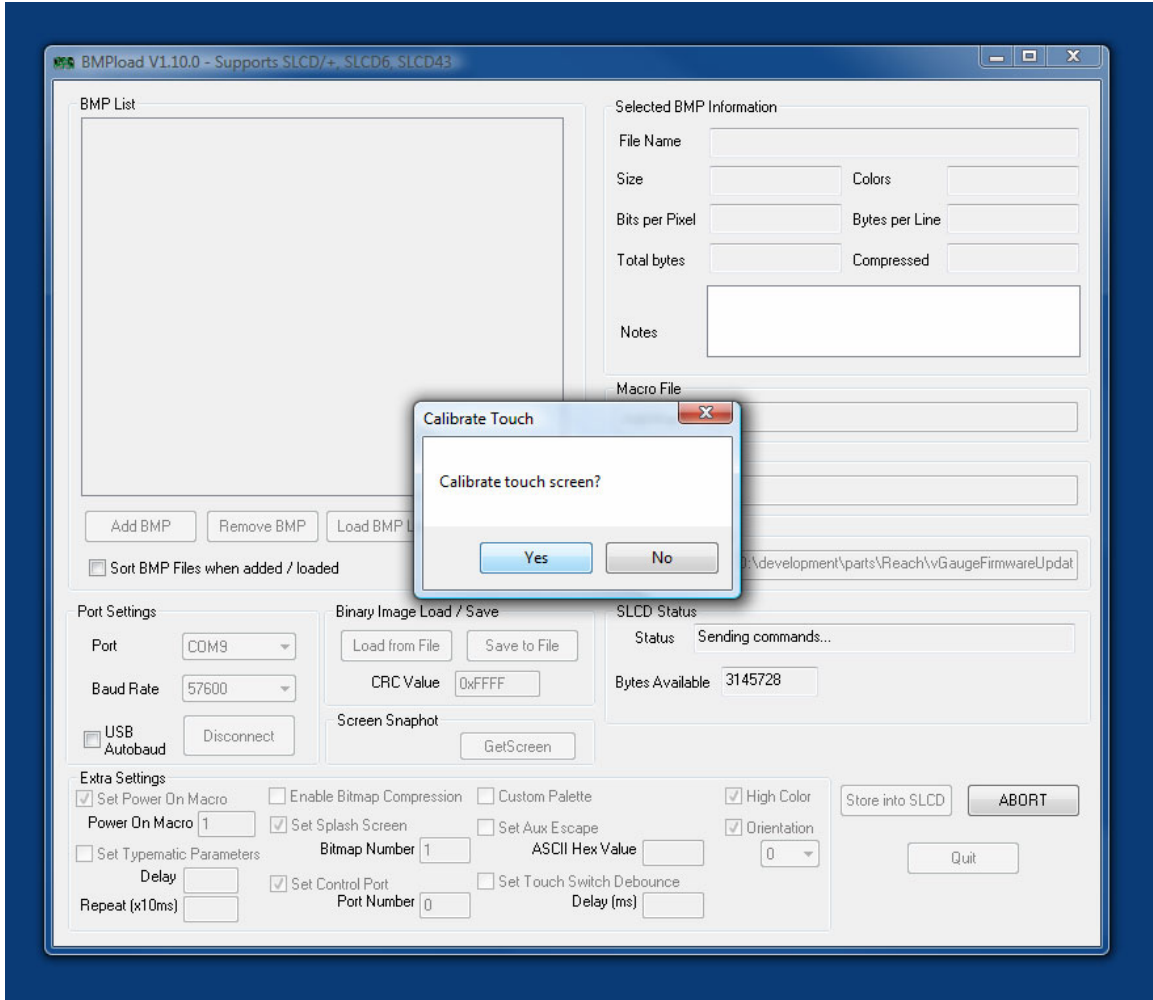
After choosing the correct file, select the “Store Onto SLCD” button to start loading the new file.



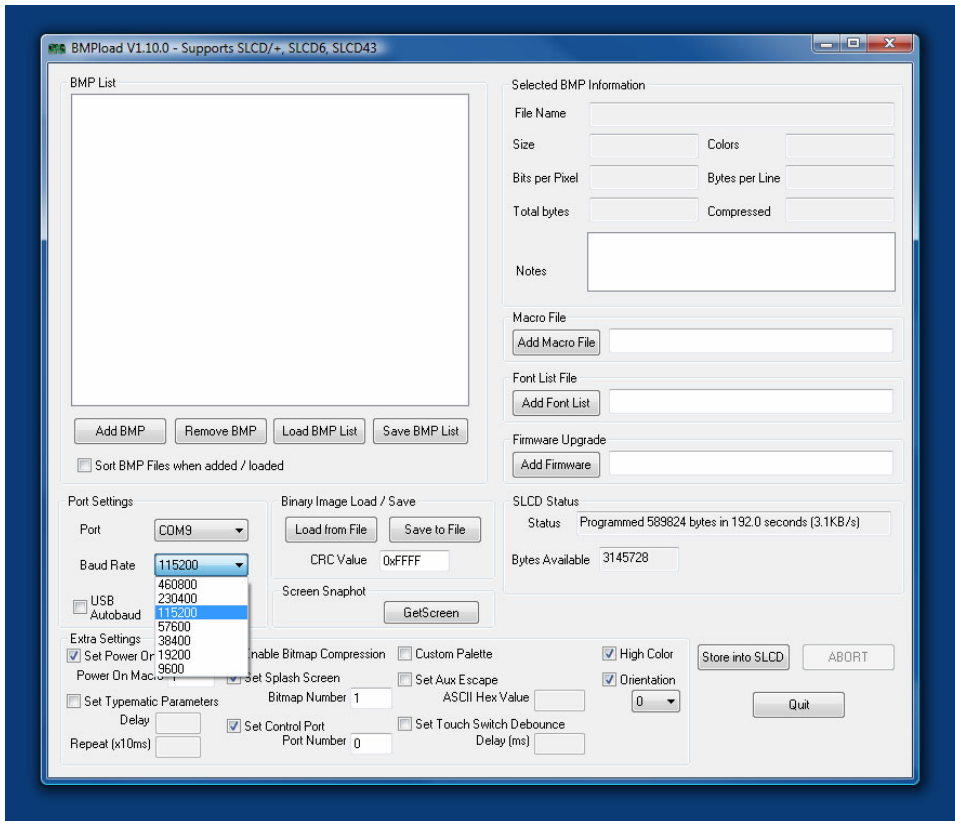
A status bar will show progress. This can take from 1 to 2 minutes depending on the system.



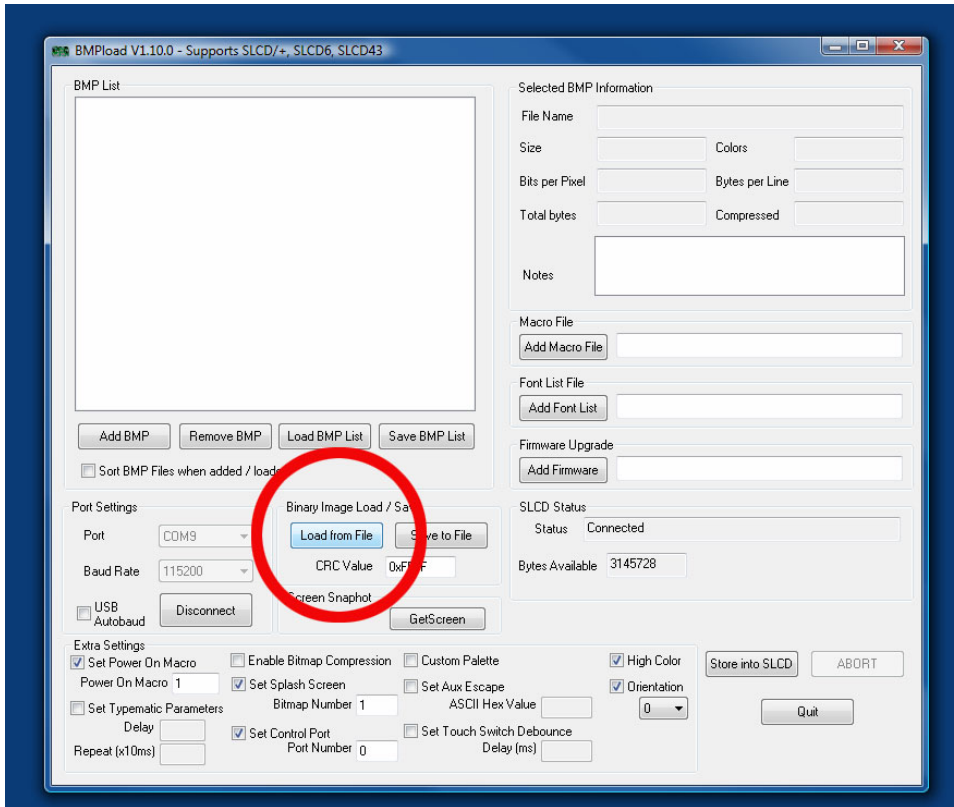
Once completed, you will be asked to calibrate the touch screen. Skip this step for now as you will need to do this after loading the Theme file.



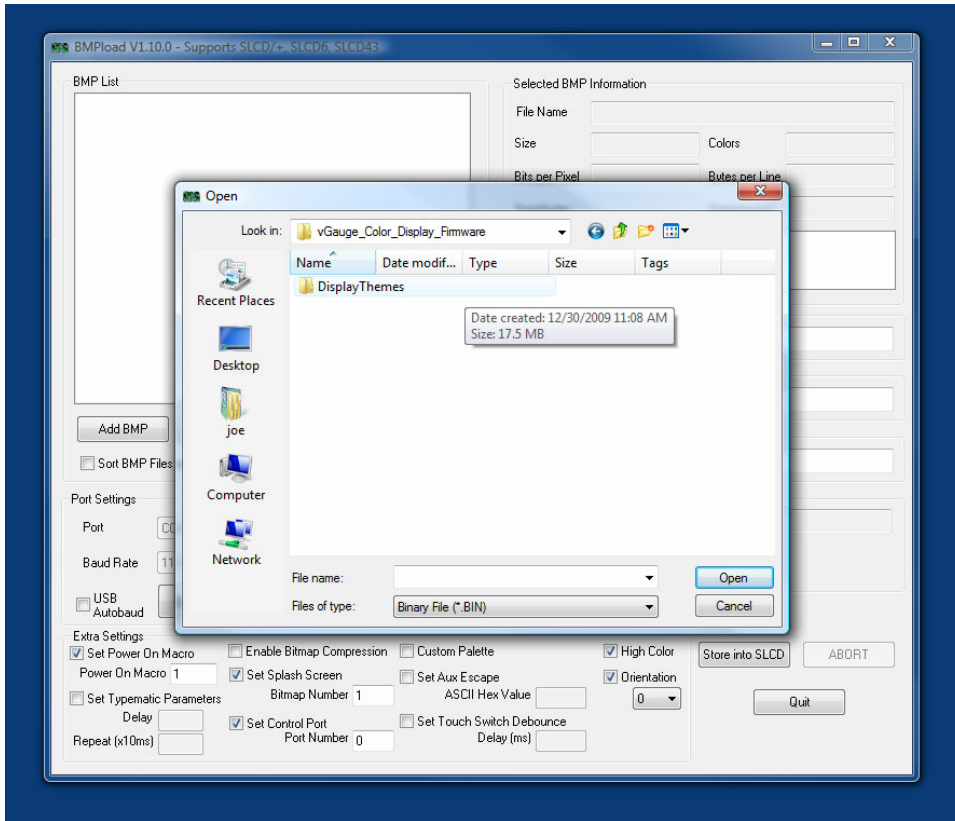
After performing a firmware update, the unit Baud rate will be reset to the default of 115200. It is recommended to reset the Baud rate to 115200 and test the connection again at the new rate to verify operation. Once the new theme file is loaded, it will reset to the old 57600 rate.



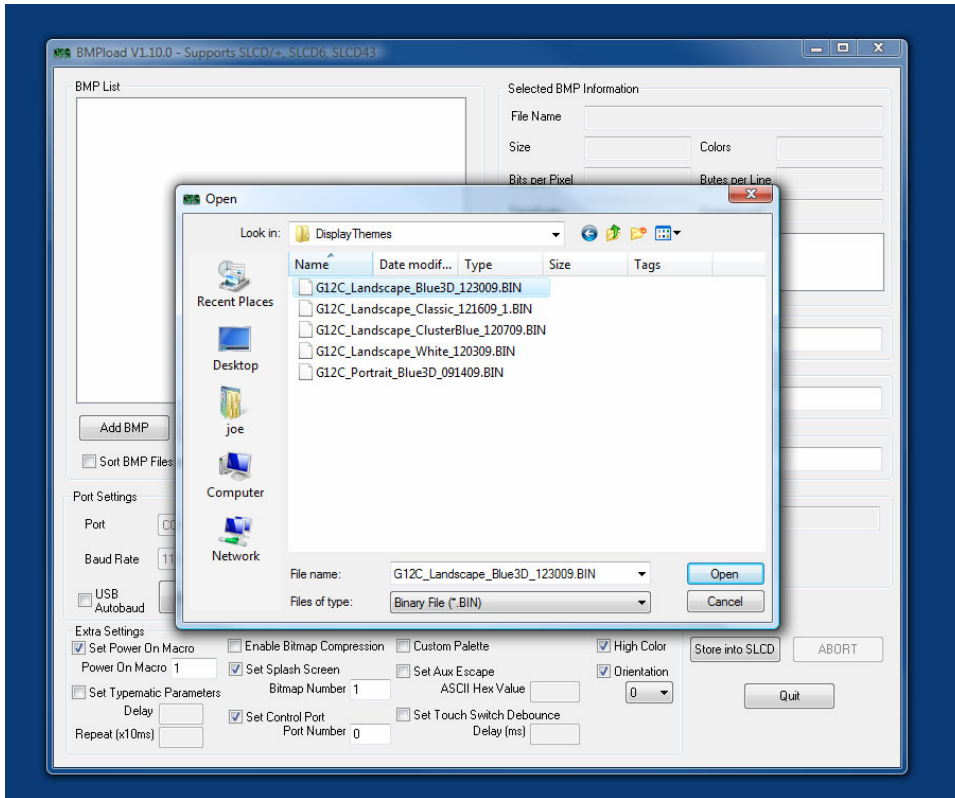
Now that the new firmware file is loaded, the next step is to load the desired Theme file. Choose the “Load From File” button.



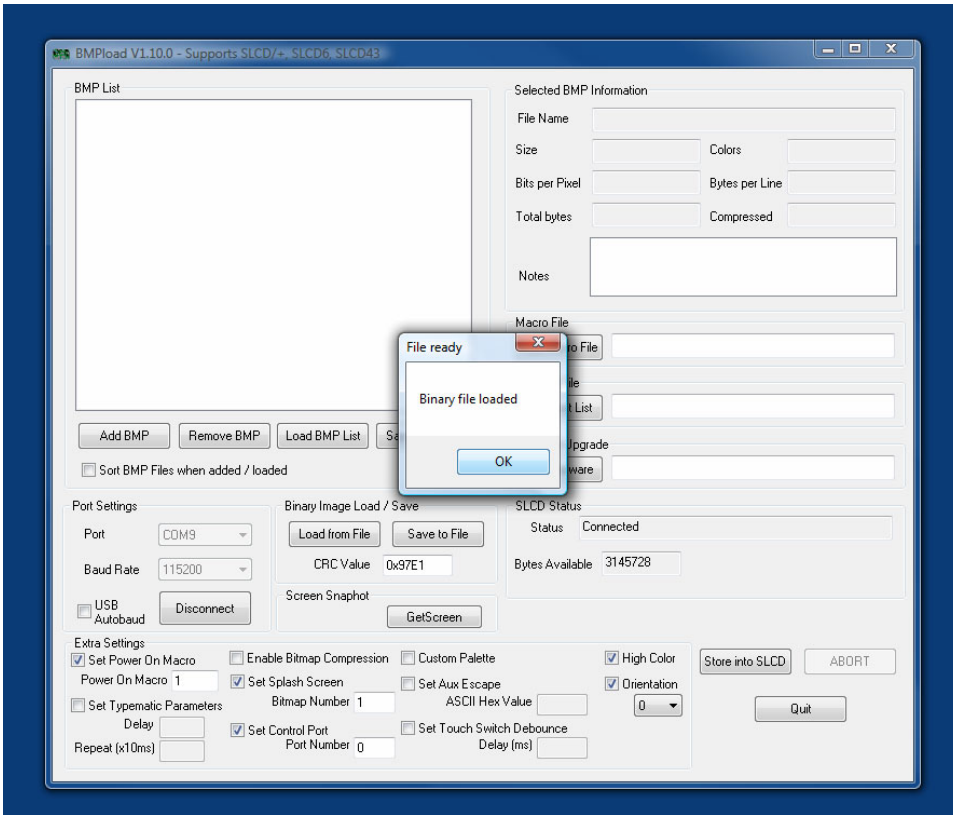
Next, pick the desired theme folder for the target Display type.



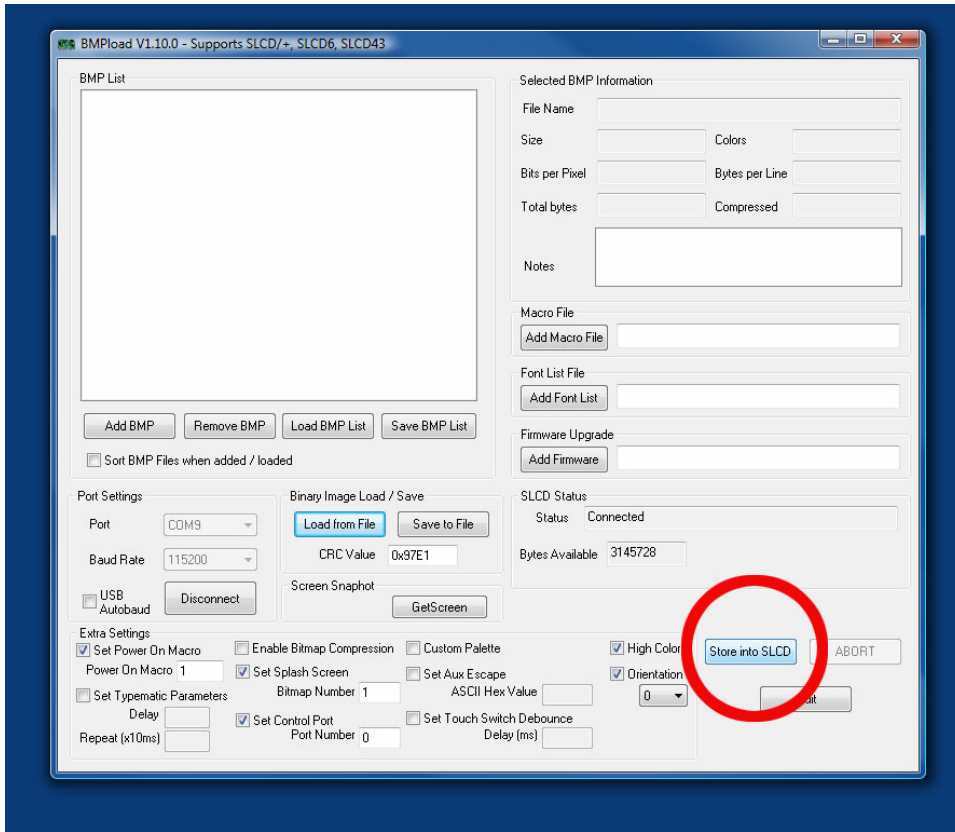
And then choose the desired theme file (*.bin)



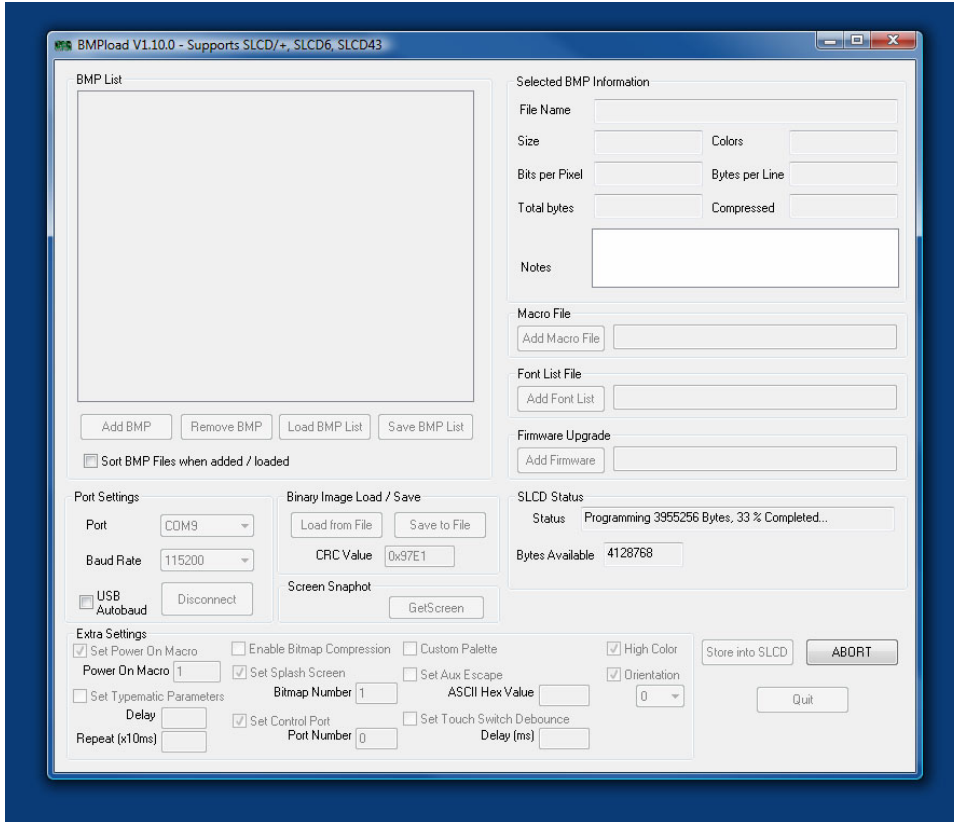
After the Theme file is found, it is checked and verified.



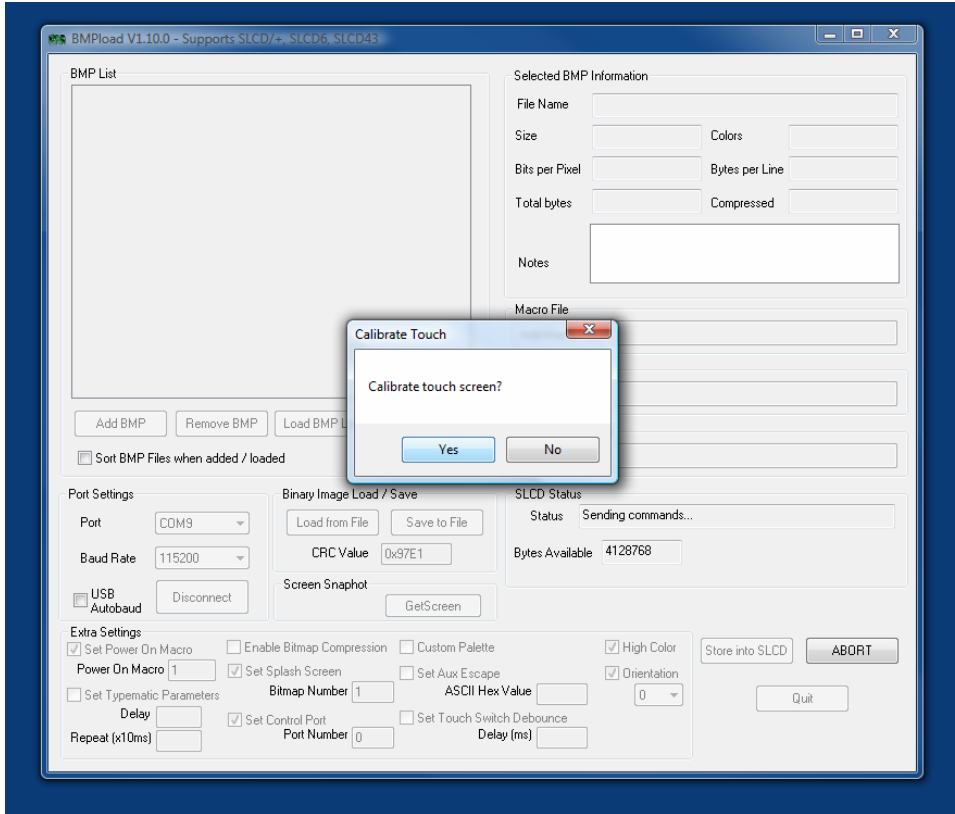
Next, load the Theme File to the target display by selecting the “Store into SLCD” button



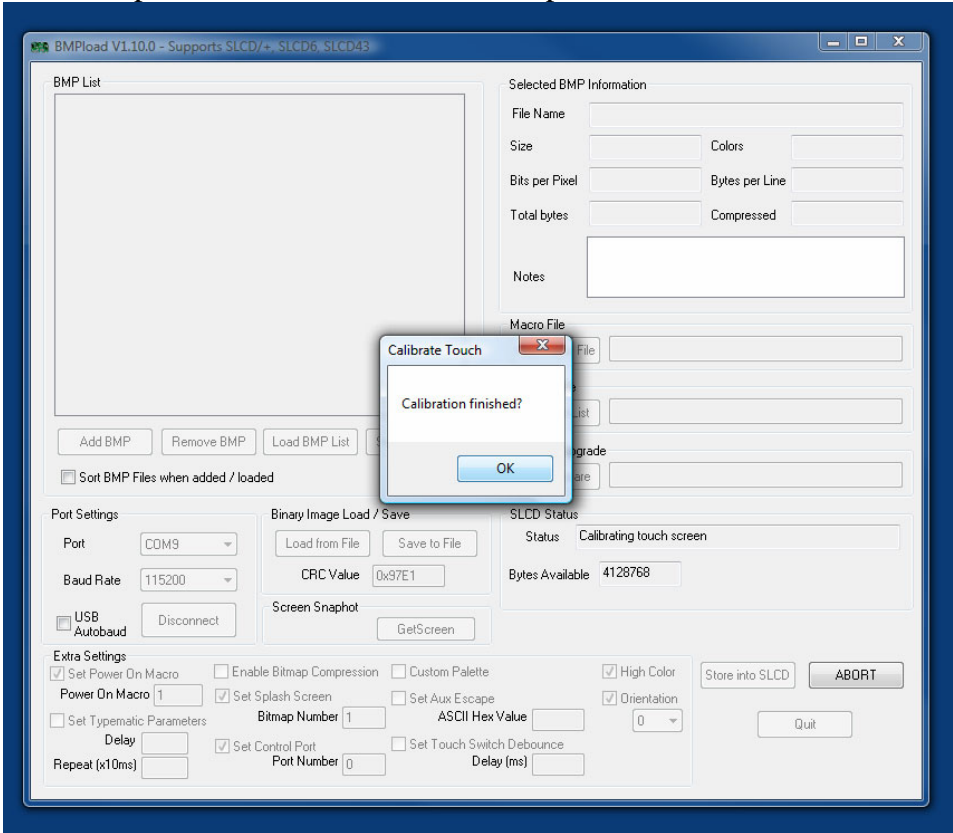
Again, progress will show in the status field. It may take up to 5 minutes to load a theme file. Do not perform any other tasks while loading the file.



Once the file is completed, you will be asked to calibrate the touch area of the display. Select “OK” and proceed with the on screen instruction on the display.



Once completed, Select OK to finish the operation.

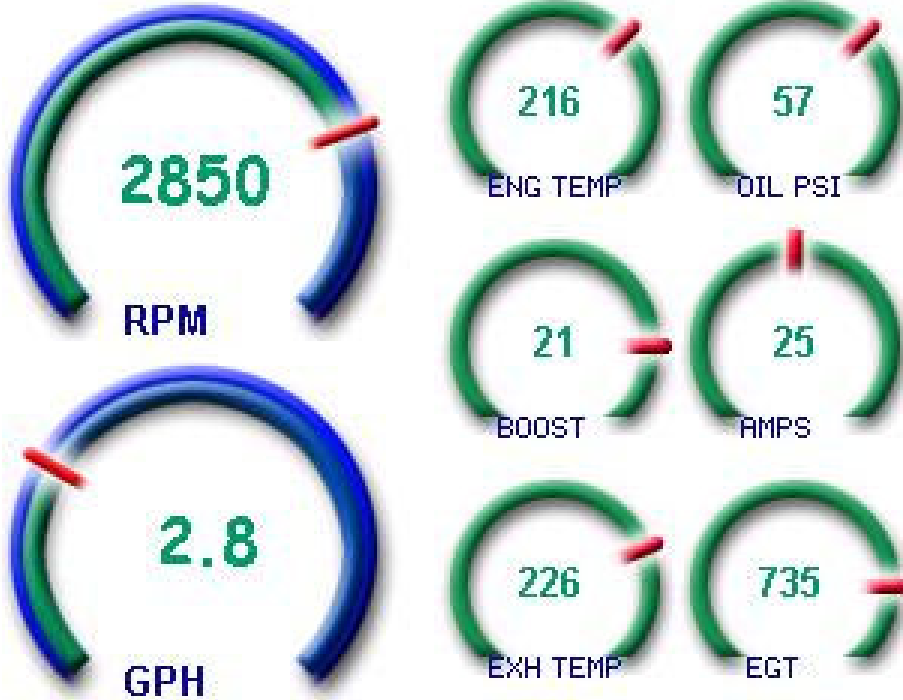


At this point you may disconnect the USB cable from the display and cycle power to reset and initialize at the new Baud Rate of 57600.

Connect your display back to the serial cable from the vGauge Remote Sensor. Since most vGauge color displays require separate power inputs, be sure to reconnect the power cable as well. If power is applied but serial data is not available (not attached to vGauge Remote Sensor unit) the Splash Screen will appear with the current revision number.



Otherwise if serial data is being received, the Display will immediately start showing gauges with the new Theme.



Only one theme file may be loaded at a time. Each theme may require reconfiguration of screen layouts as element sizes may change. Be sure to choose both Firmware files and Theme files to match Display orientation.

Refer to the **vDash** Users manual on how to layout and design gauge screens using the new themes. Most Themes have several different graphic elements which can be placed and arranged on one of several instrumentation pages.

The most common problem in loading files is improper selection of Baud Rates when connecting to Displays. The normal Baud Rate is 57600. However after loading a Firmware file, the Baud rate will be reset to 115200 until a new Theme file is loaded. If a problem occurs in connecting, try the alternate Baud rate of 115200.