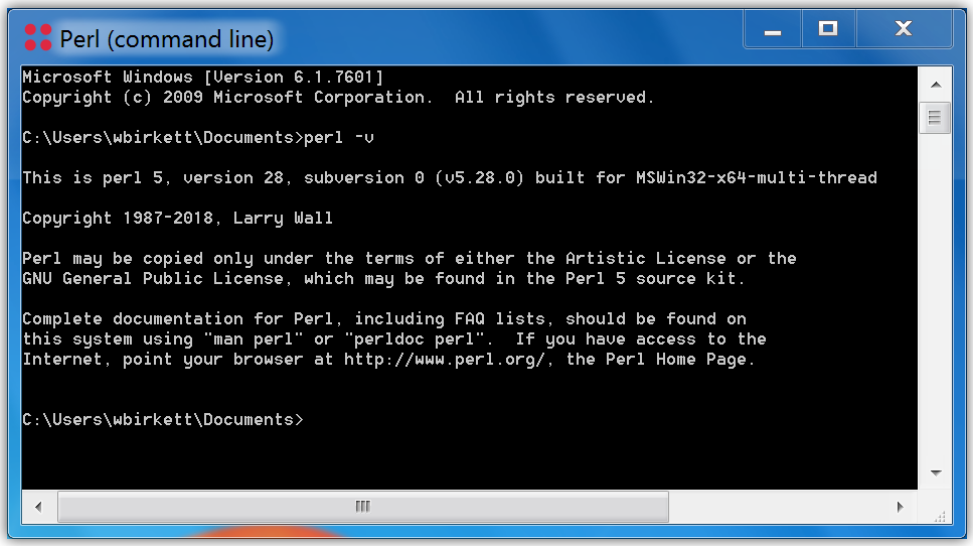
Installing the Color Tool Kit – Windows

The **Color Tool Kit** is a set of **Perl modules** based on the **ICC profile** standard. It can be used to read, write and create ICC profiles. It also includes a number of support modules for handling measurements, colorimetry, images, matrix operations, and optimization. The tool kit is free, open source software, available at **CPAN**, https://metacpan.org/release/ICC-Profile.

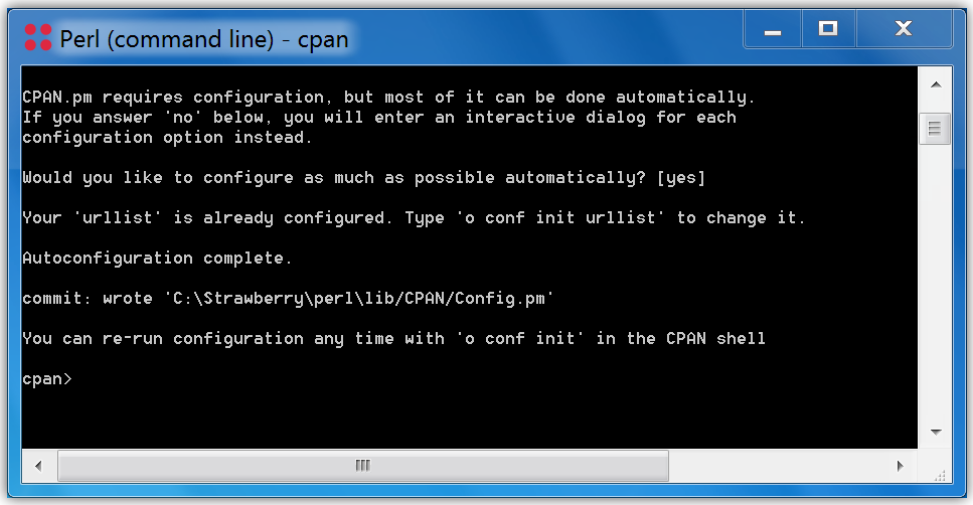
The software is written in the Perl programming language. You don't need to be a programmer to use the tool kit, but you should learn some basics of the Perl language. There are many good Perl books available, some are free http://www.perl.org/books/library.html.

Perl is not included with Windows. You will need to install **Strawberry Perl**, http://strawberryperl.com/. Use the **Recommended version**, 32-bit or 64-bit, as appropriate for your OS.

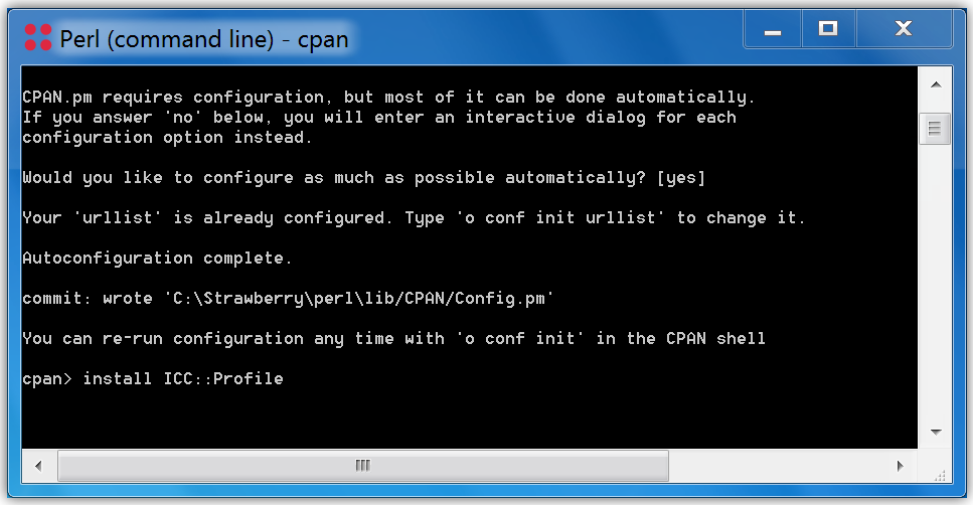
Once Strawberry Perl is installed, launch the **Perl (command line)** program. You will find this program in the Start menu, in the Strawberry Perl folder. Type **`perl -v`** at the prompt followed by return. Perl will print a response similar to that shown below.



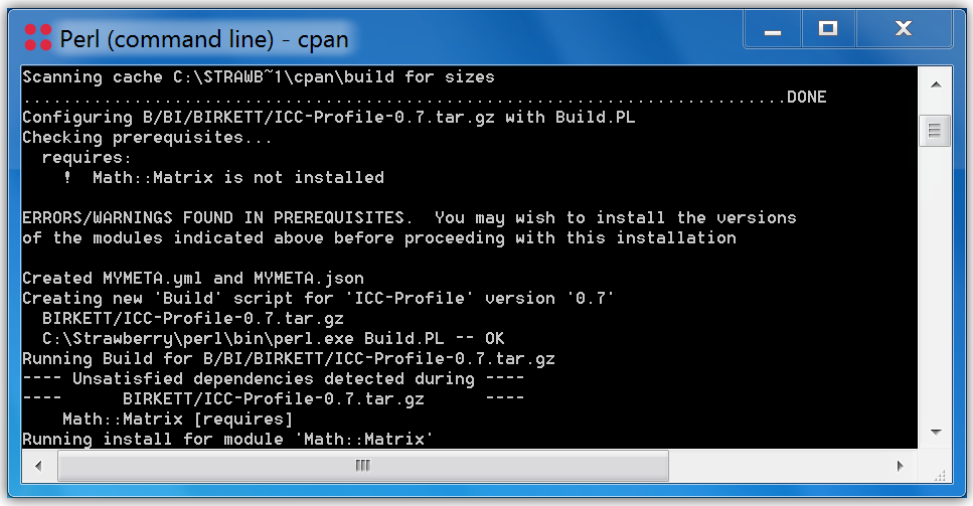
Next, type **`cpan`** followed by return to start the module installer program. The first time you run **cpan** it will configure itself, asking a few questions. Let the software configure itself automatically. When the configuration is complete, you will see the **cpan>** prompt.



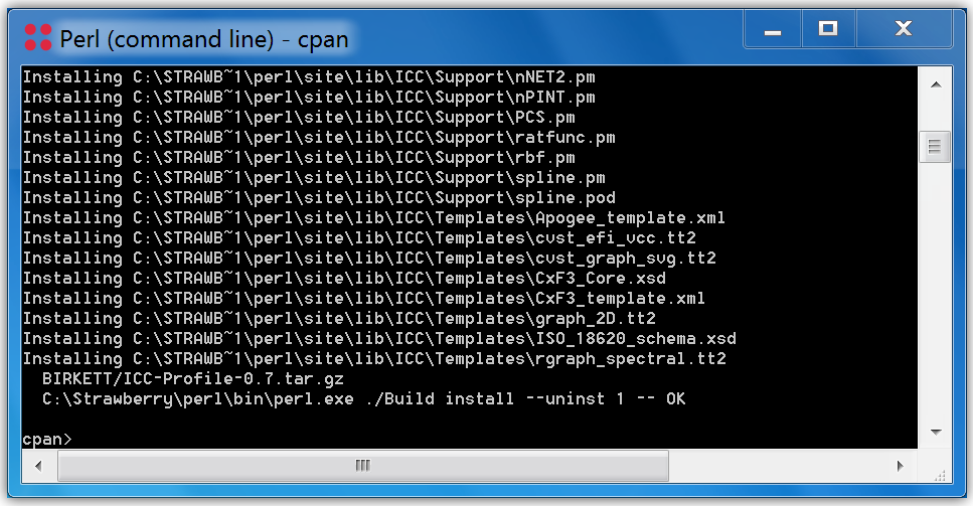
At the **cpan>** prompt, type **install ICC::Profile** followed by return.



The **cpan** program will download the Color Tool Kit, and check for everything needed to complete the install. If there are prerequisite modules that are not already installed, **cpan** will download and install them automatically. The **Math::Matrix** module is a prerequisite.

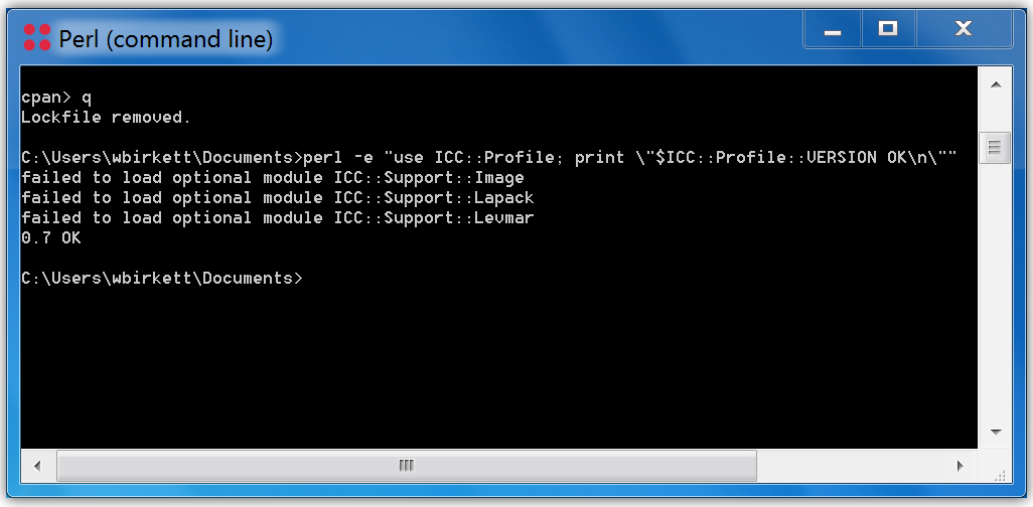


When all of the prerequisites are satisfied, the Color Tool Kit is installed. This process should end with **OK**. If there were problems, the install will end with **NOT OK**, and an explanation of what went wrong.



Verify Install

Exit **cpan** by typing the letter **q** (for quit) followed by return. Then type (or copy and paste) this line **`perl –e "use ICC::Profile; print \"$ICC::Profile::VERSION OK\n\""`** followed by return.



This will load the ICC::Profile modules, and print the version number.
If the version number is printed, followed by **OK**, the installation was successful.

At this time, the **optional modules** are only available for **Mac OS**. The **PressCal 3** program does not require these modules. But, if you want to run **PressCal 12U**, you must use a Mac (recommended).

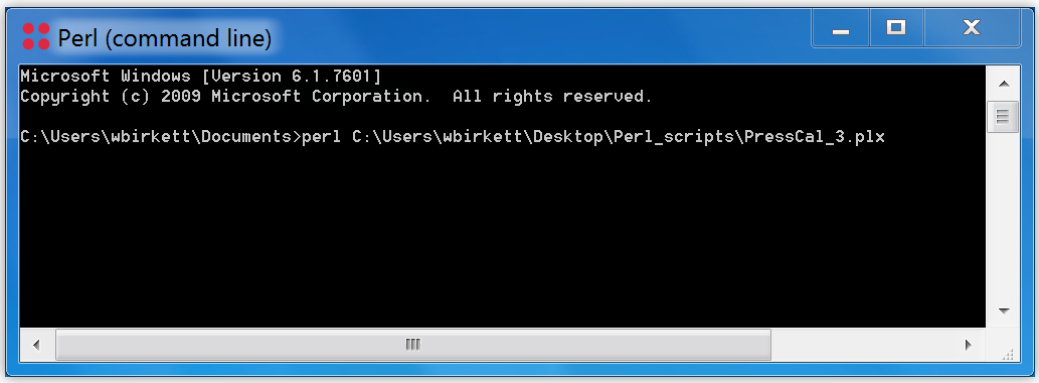
Notepad++ Editor

PressCal contains a data block which must be edited to change the settings. This can be done with any text editor, but we recommend you use the **Notepad++** editor. This is free, open source software. With the addition of the **NppExec** plug-in, this editor is comparable to the **TextMate** editor we recommend for the Mac platform.

Download the current Notepad++ version appropriate for you OS from https://notepad-plus-plus.org/. Run the installer, using default values. When the install is finished, Notepad++ will open with the change log. Exit the program.

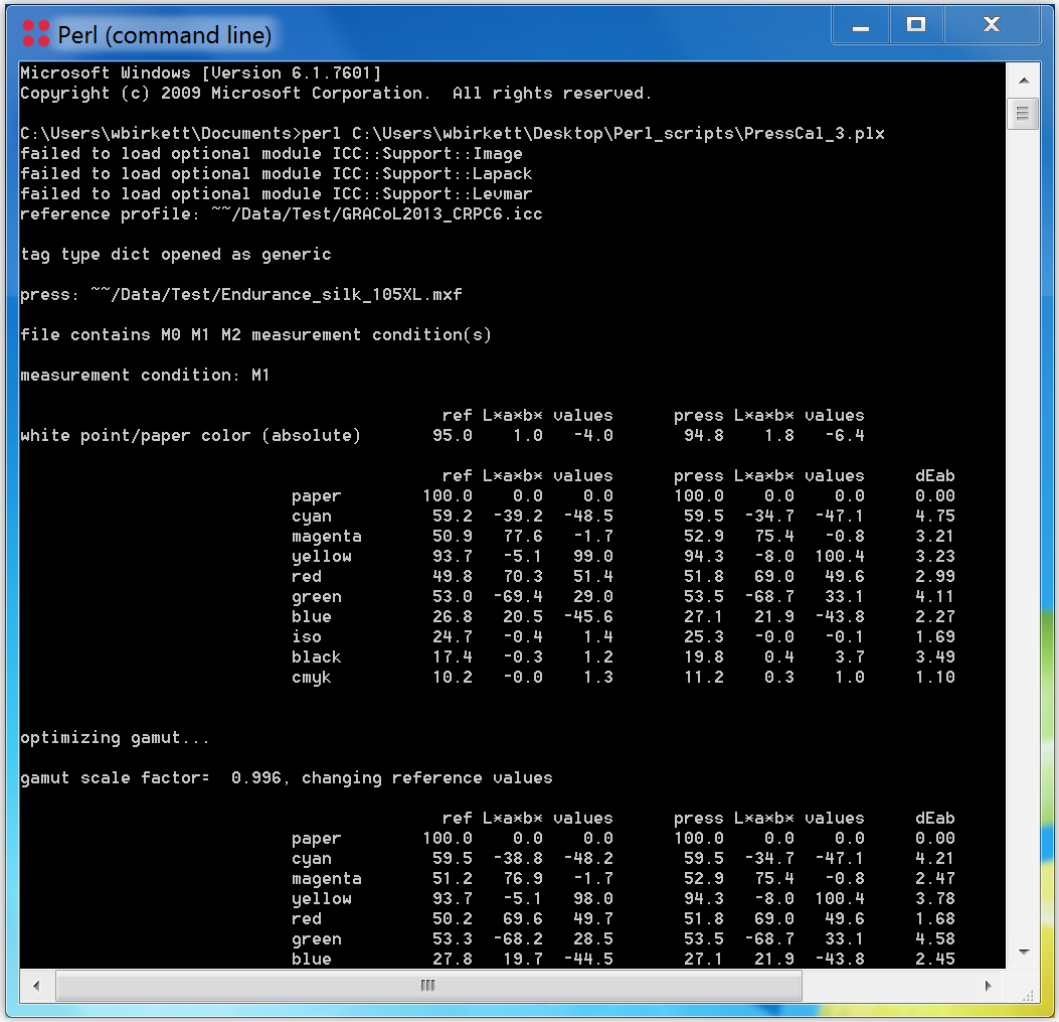
Running PressCal from the Command Line

Download the PressCal 3 software, and unzip the archive in a convenient location. In the **Perl (command line)** program type **`perl`** followed by a space. Now, drag the **PressCal3** file into the window, and hit return.

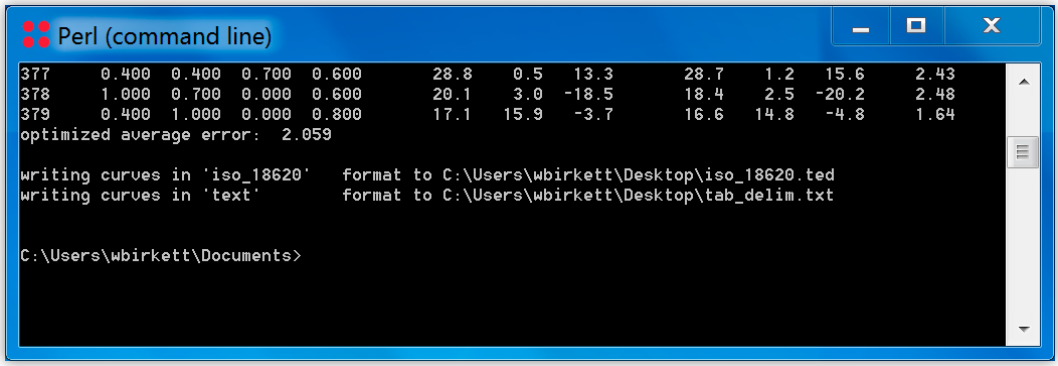


This will run the program, with the output directed to the **Perl (command line)** window.

The output should look something like this.



Ending with the command line prompt (>).



Graphs of the curves will be plotted in your web browser. Curves will be output in the format(s) specified by the **`output:`** setting.

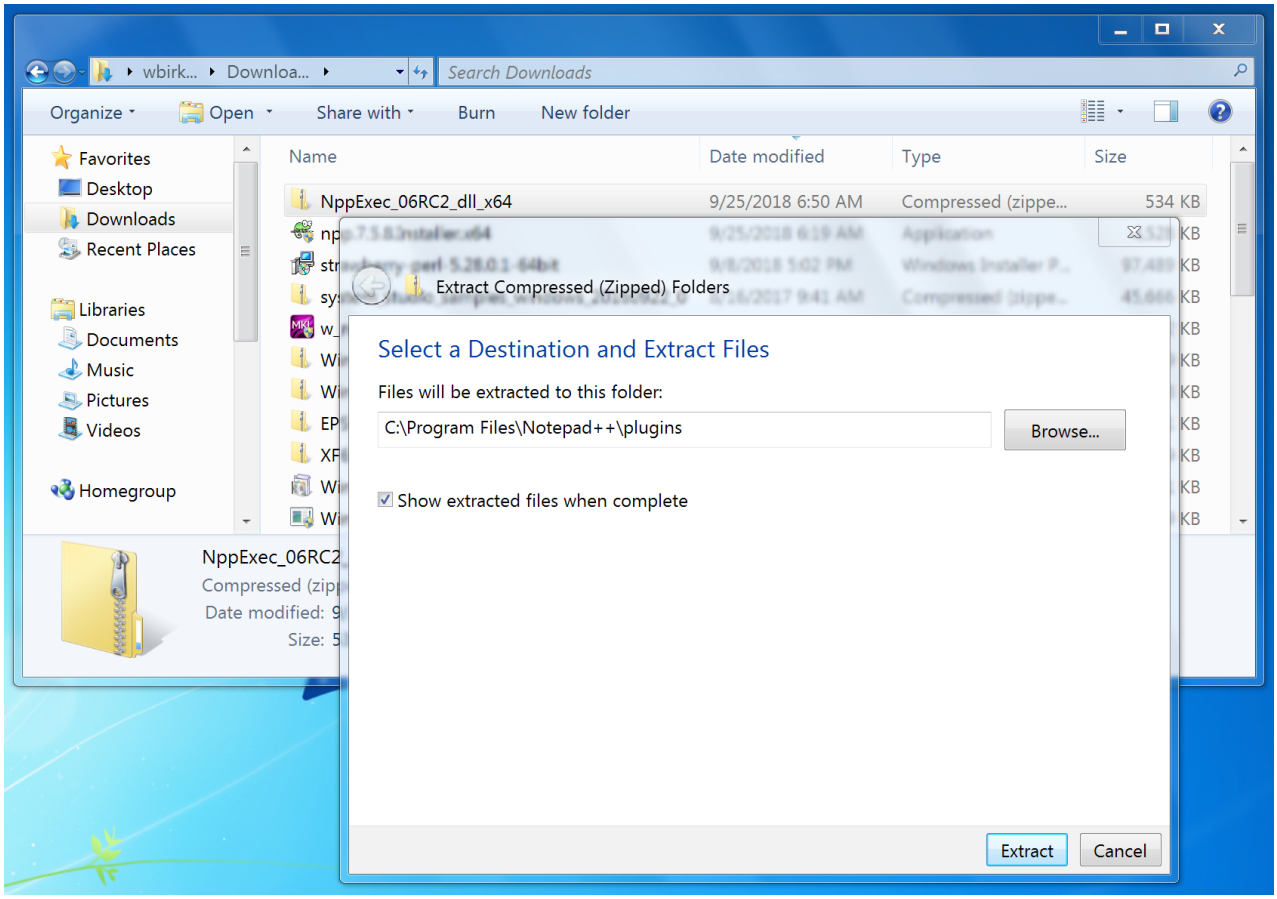
Running PressCal from Notepad++

It is possible to run PressCal directly from the Notepad++ editor, but this requires additional configuration with a higher level of technical difficulty. It's not essential to add this capability – it's a convenience that will save you a little time in the long run. If you wish to continue, the instructions begin on the next page with the installation of the **NppExec** plugin.

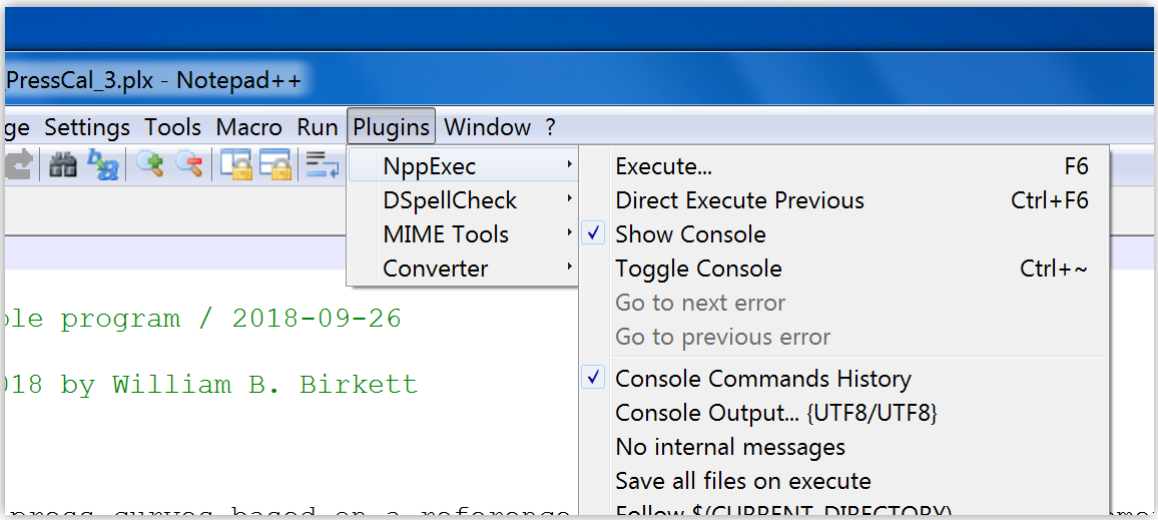
NppExec Plugin

Download the **NppExec** plugin from https://sourceforge.net/projects/npp-plugins/files/NppExec/. There are many versions available. Typically, you'll want to pick the release with the most Downloads/ Week. That release will be available in 32-bit and 64-bit versions. Choose the version that matches your Notepad++ app (32-bit or 64-bit). The download is a zipped folder.

To install NppExec, select the downloaded zipped file, and select **Extract All...** from the right-click menu. You will be prompted to select a destination. Use the Notepad++ plugins folder.

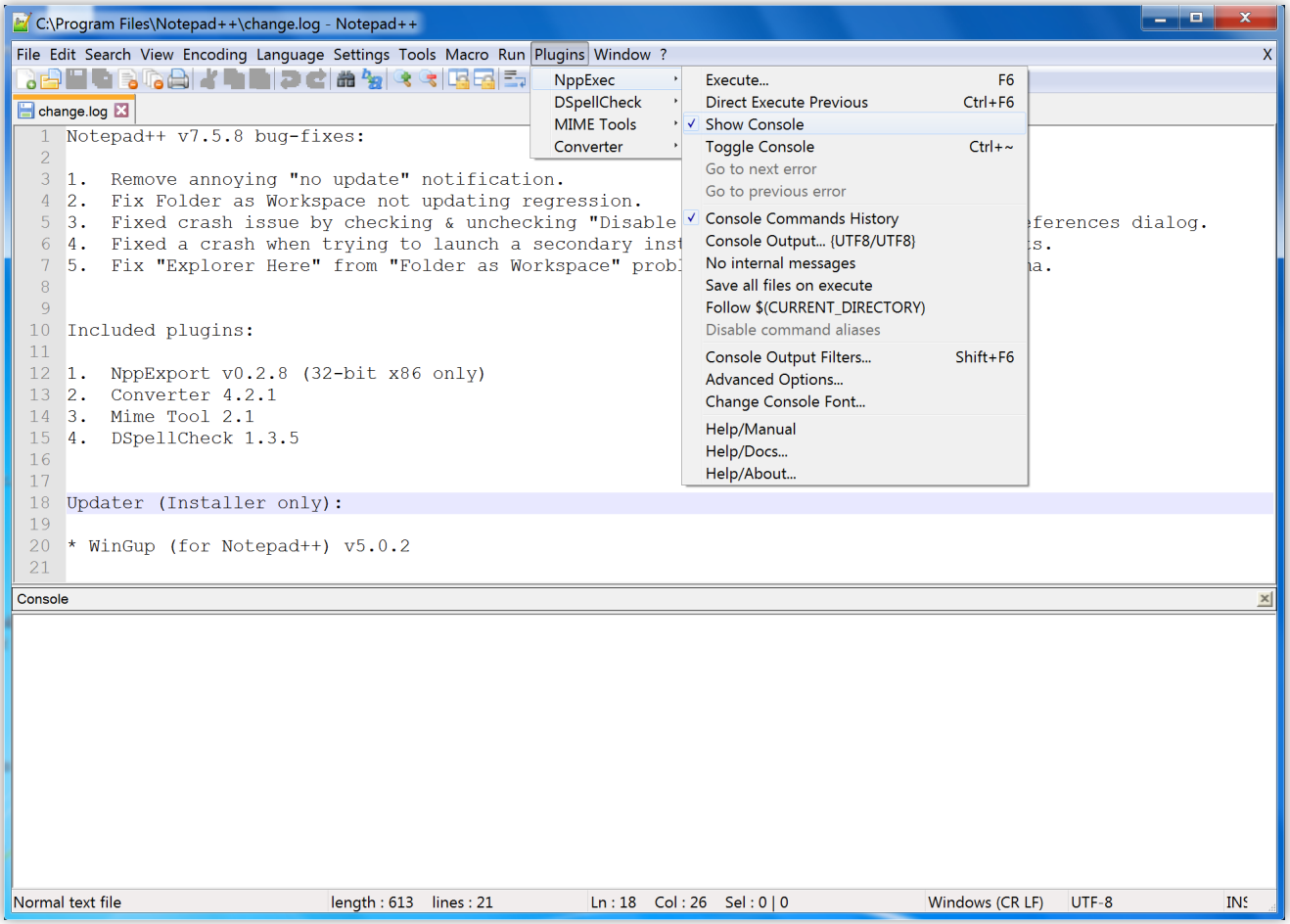


For this example, the location was **C:\Program Files\Notepad++\plugins**. You may have installed Notepad++ in a different location. After the files are extracted, run Notepad++ and select the Plugins menu. You should see a menu item for NppExec, like the screenshot below.



Enabling the NppExec Console

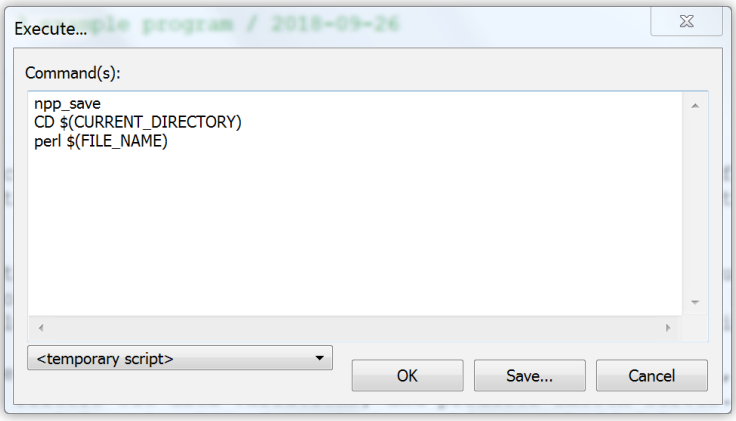
The NppExec plugin adds the option for a console window. PressCal uses this window for its output log. In the **Plugins** menu, select the **NppExec** entry, and click on **Show Console**.



The console is the blank panel at the bottom of the Notepad++ window. PressCal's output will display there as the program runs. The console can be made a separate window by double-clicking on the gray bar labeled **Console**.

Running PressCal from Notepad++

Open PressCal 3 in Notepad++. From the NppExec menu shown above, select the **Execute...** item. This will open a dialog with a rectangle box labeled **Command(s):** Enter the text shown below, and click **OK**.



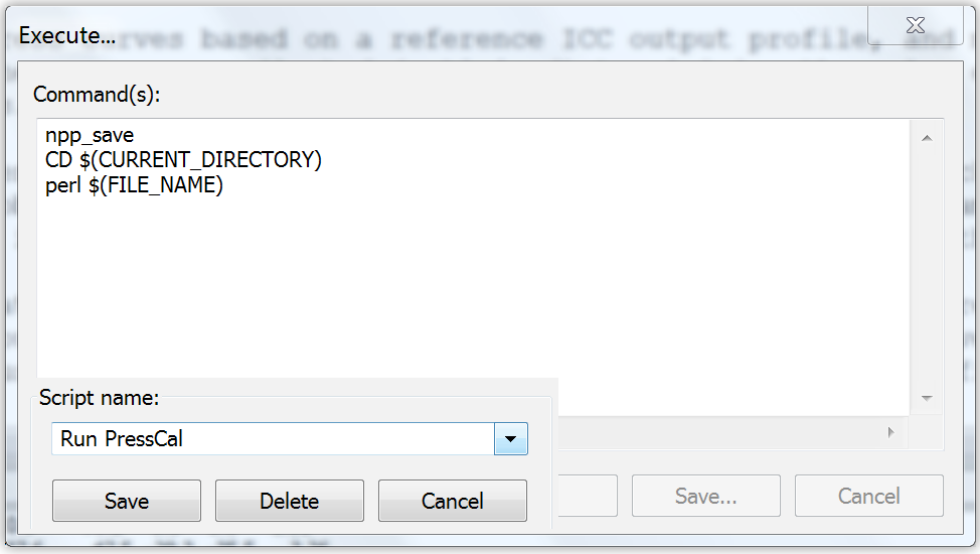
(Here is the text to copy and paste)

```
npp_save
CD $(CURRENT_DIRECTORY)
perl $(FILE_NAME)
```

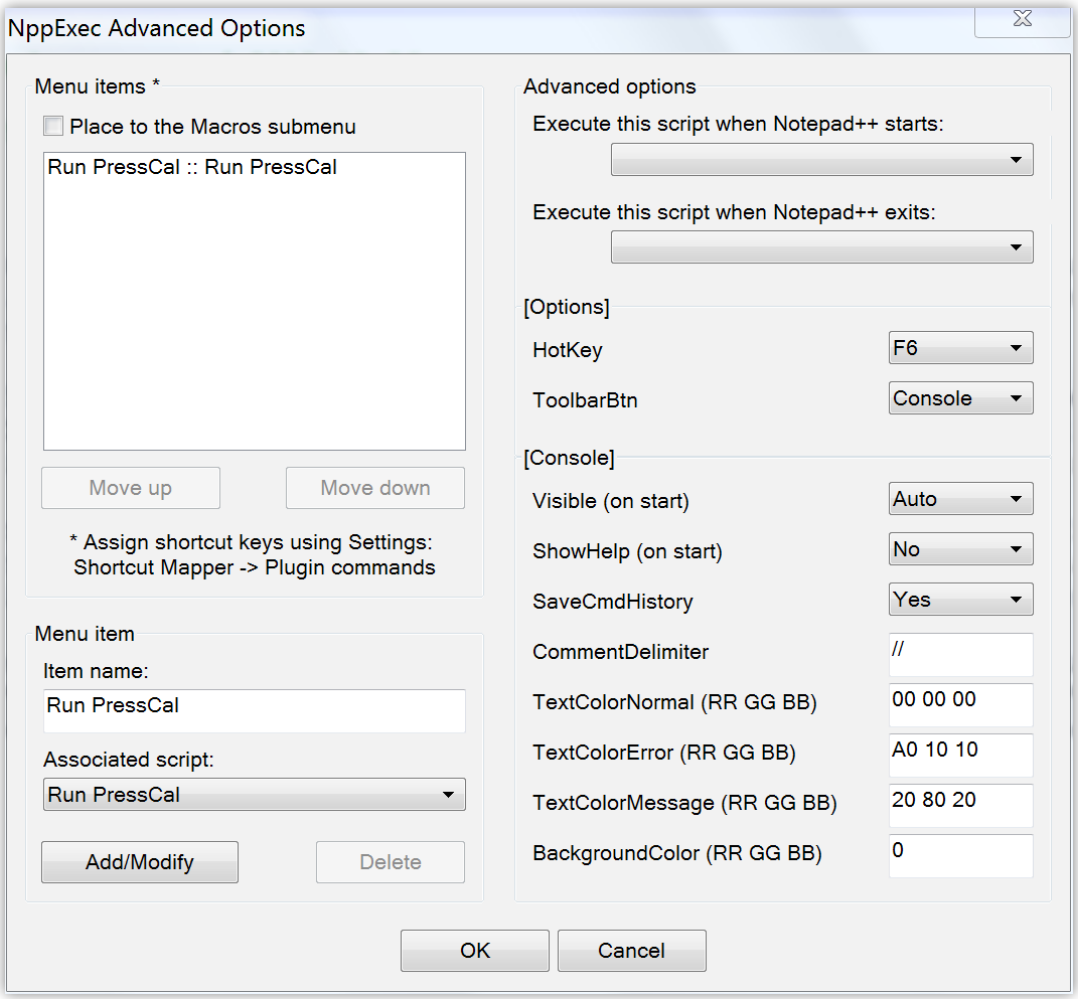
PressCal should run, as it did previously from Perl (command line). This time the output will go to the console instead of the Perl (command line) window.

Making a Keyboard Shortcut

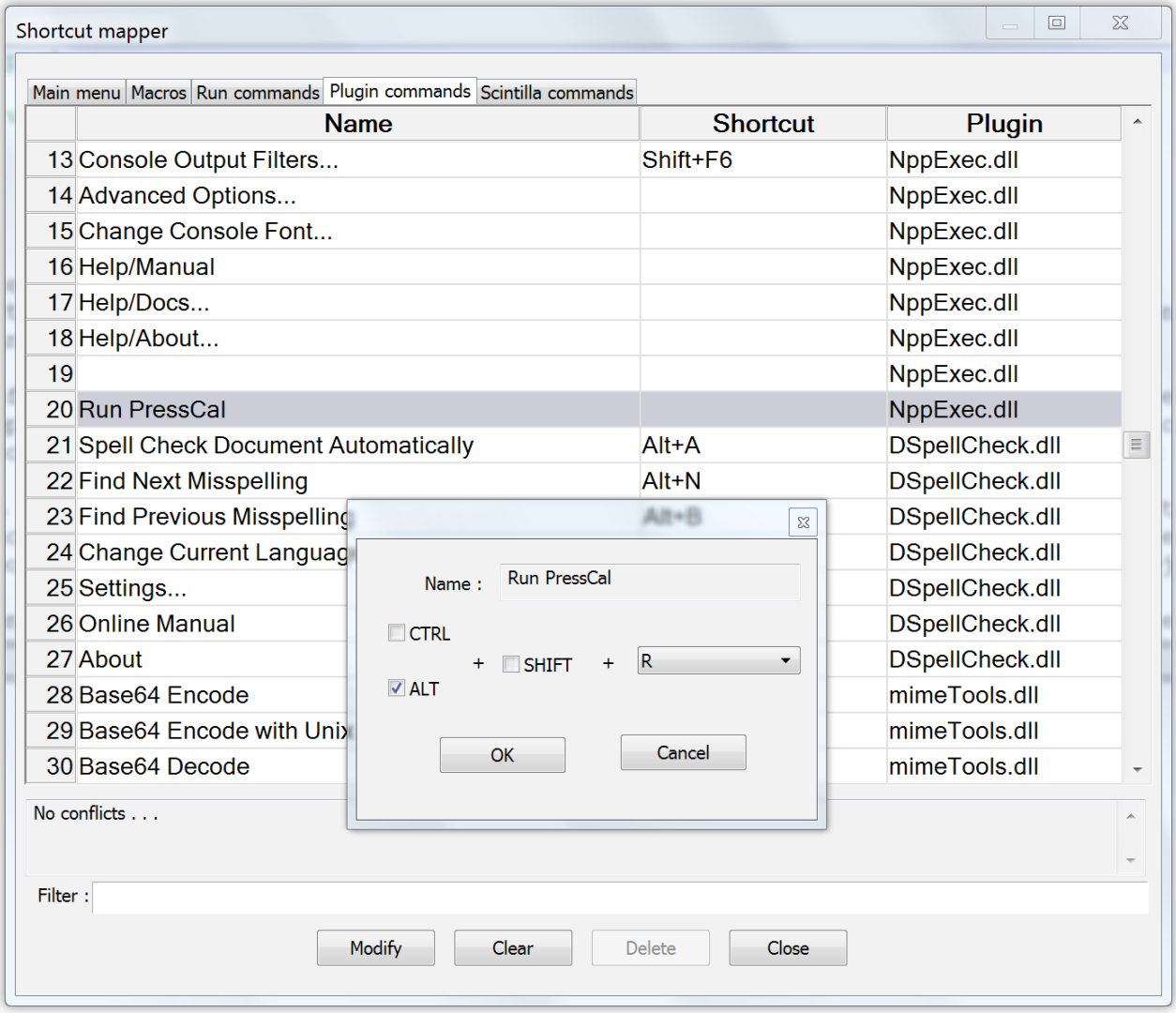
With a few more steps, the **Command(s):** script can be executed with a single keystroke, like **TextMate** on the Mac. Begin by saving the script. Select the **Plugins->NppExec->Execute...** menu item, and click the **Save...** button. Enter the Script name: **Run PressCal** and click **Save**.



Next, select the **Plugins->NppExec->Advanced Options...** menu item. Choose **Run PressCal** from the **Associated Script:** pull down menu, enter **Run PressCal** for the **Item name:** and uncheck the **Place to Macros submenu** check box. Click **Add/Modify,** then **OK**



Quit **Notepad++** and re-open it. Select the **Settings->Shortcut mapper...** menu item. Click on the **Plugin commands** tab, scroll down to the **Run PressCal** entry, and select it. Click the **Modify** button. In the dialog that appears, check the **ALT** box, select the letter **R** from the pull down, and click **OK**. Click the **Close** button to complete this step.



Test the shortcut by pressing **ALT-R** (with PressCal 3 open in Notepad++). The program should run as it did previously.

Web Browser

Your web browser is used to display graphs of the curves using HTML5 SVG graphics. All modern web browsers support this. Each time you run PressCal, the HTML documents will be overwritten, and new curves displayed. We like the Firefox browser because it adds tabs for each new graph, and retains the previous ones. This allows you to compare the curves. Before running PressCal, you might want to open your web browser so it is ready to plot the graphs. Otherwise, the graphs may plot in different windows, rather than in tabs of a single window.