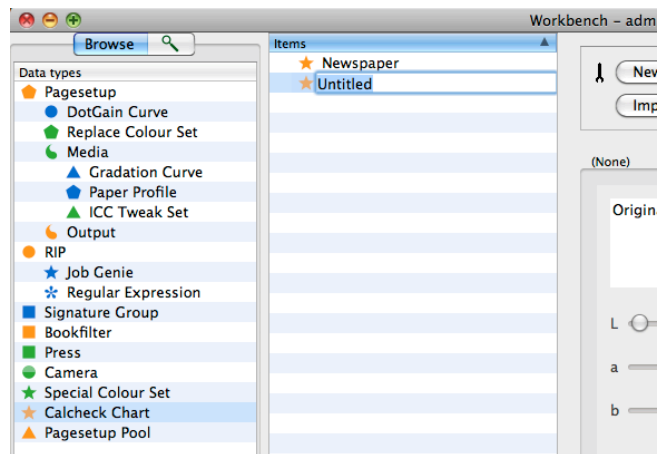


How To – Create a Calcheck Chart

Calcheck Charts are used by the Calcheck and Displays applications in Blackmagic/Veripress to colour verify printed output or SoftProof displays.

The two most common methods used to create a Calcheck Chart are to either import a defined chart from a file, or generate a chart from a press ICC match profile.

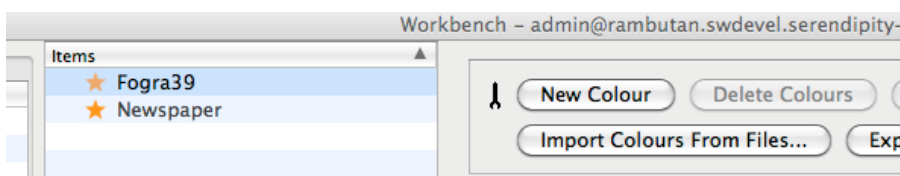
1. Open the Workbench Application.
2. Select Calcheck Chart from the Workbench Data Types list.
3. Create a new chart by choosing File menu > New.
4. Enter a name for the chart by typing in the highlighted "Untitled" name field in the Items list. Press Enter.
5. Open the Calcheck Chart toolbar (spanner icon).



HowTo Import Patches from Files

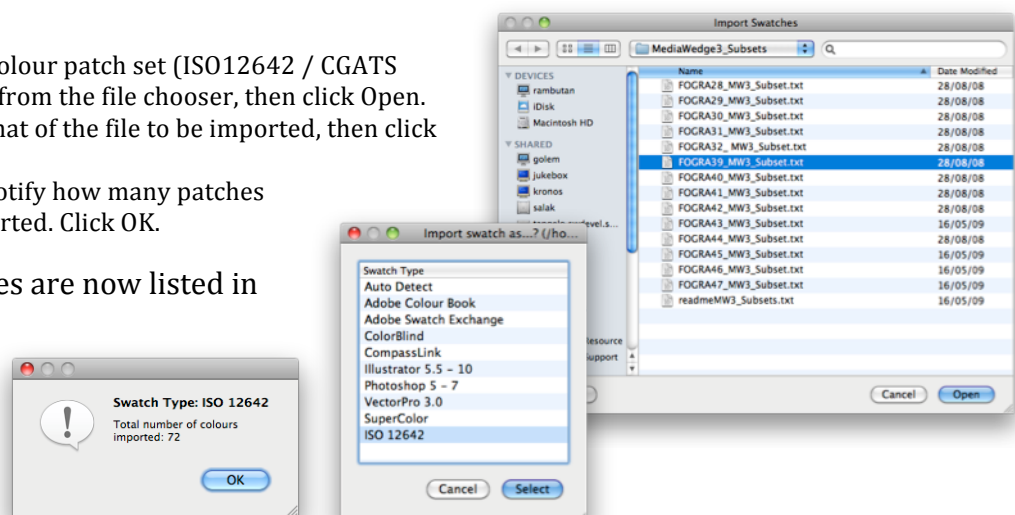
Import Patches From Files... - if you have an ISO 12642 / CGATS formatted file with defined verification chart values

1. Click the *Import Patches From Files...* button in the toolbar.

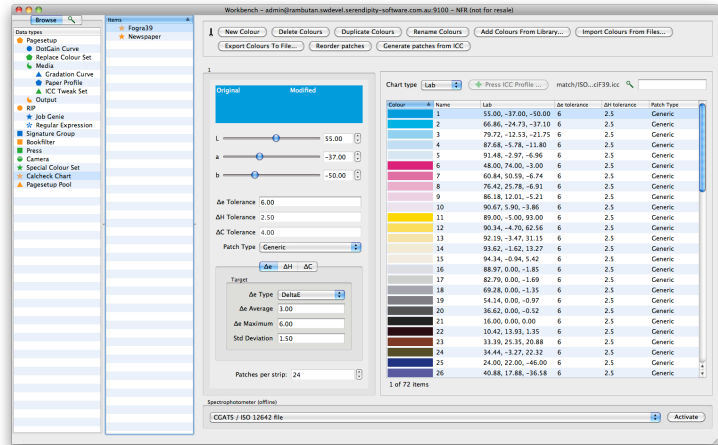


2. Select desired colour patch set (ISO12642 / CGATS format) .txt file from the file chooser, then click Open.
3. Choose the format of the file to be imported, then click Select.
4. A pop-up will notify how many patches have been imported. Click OK.

The imported patches are now listed in the Calcheck Chart.



- Patch delta(Δ) tolerances need to be configured. Calcheck Chart has default delta(Δ) tolerances but you may need to alter these to meet your press standard.

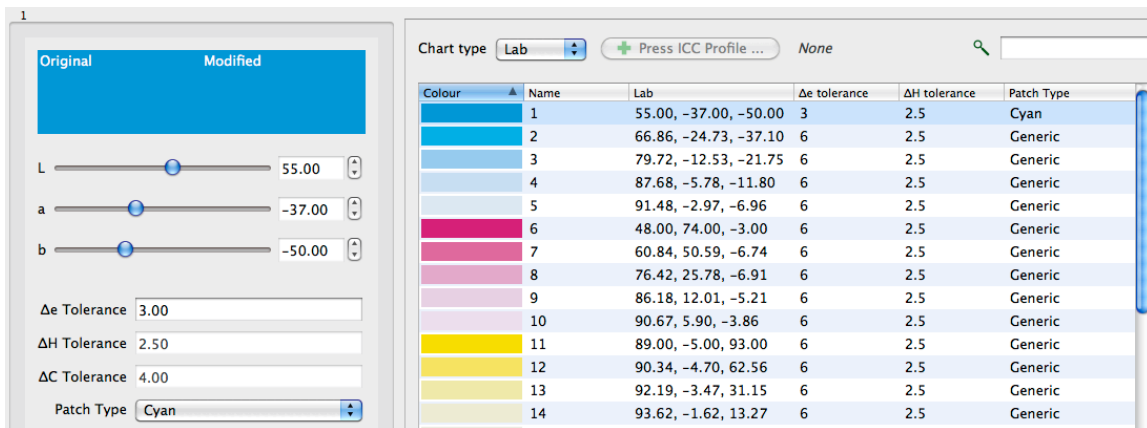
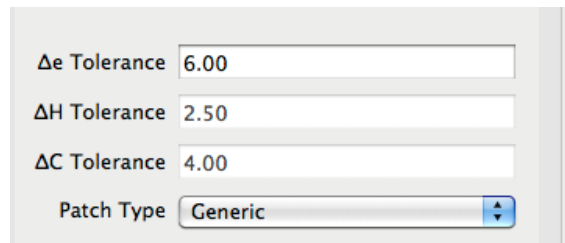


Generic type patches usually make up the majority of the patches in a Calcheck chart.

If required, change the Generic patch Δ tolerances by selecting all the Generic patches in the list, then entering the desired $\Delta e/\Delta H/\Delta C$ Tolerances to be used for the patches.

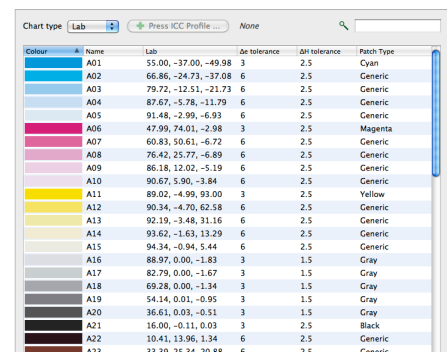
Note: Multiple Patches can be block marked (shift-click) or individually marked (ctrl/cmd-click) to change patch type and tolerances simultaneously.

- Process Colour (Cyan, Magenta, Yellow, Black), Gray and Paper patches need to be defined and the Δ tolerances set for each patch.
- Choose the first of these patches from the list. Select the *Patch Type* for the patch from the drop-down then enter the specific $\Delta e/\Delta H/\Delta C$ Tolerances (or leave the default tolerances values).
- Repeat this process for all process colour, gray and paper patches being defined.



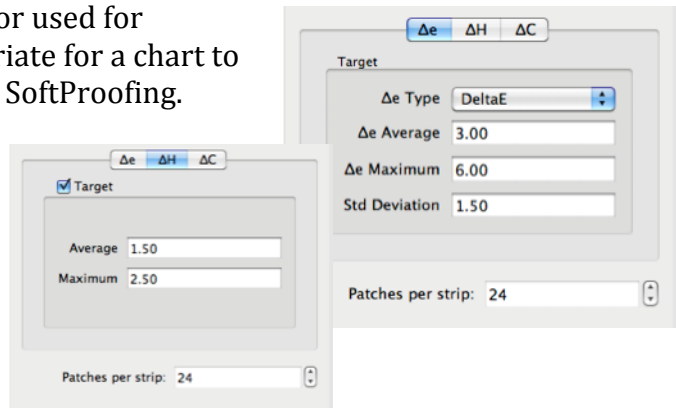
Note: There will normally only be one patch in the set/chart defined as Cyan, Magenta, Yellow, Black and Paper, however it is common to have several defined Gray patches. Check the specifications for your imported patch set or press standard for patch definitions.

- Choose the Δe standard against which the calcheck chart will be compared from the *Delta Type* drop-down. Set the *Delta Average*, *Delta Maximum* and *Std Deviation* tolerances for the chart.
- Enter the number of *Patches per Strip* for the chart, when it is printed.



Note: DeltaE (CIE76) is the usual standard for used for verifying printed proofs, CIE2000 is appropriate for a chart to be used for colour verifying a monitor when SoftProofing.

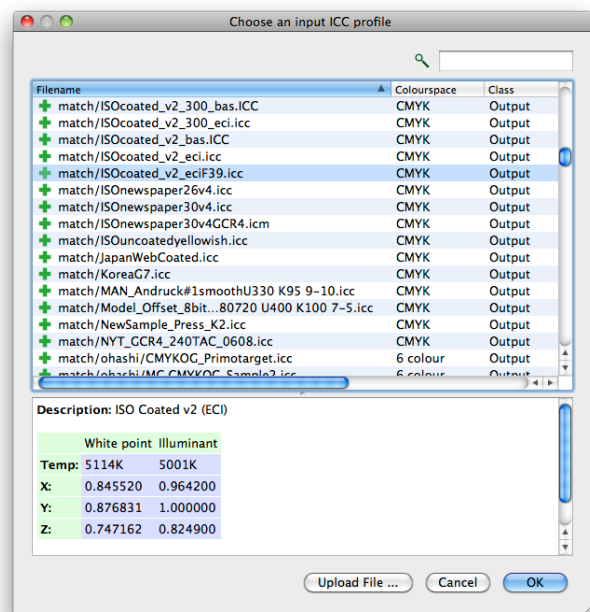
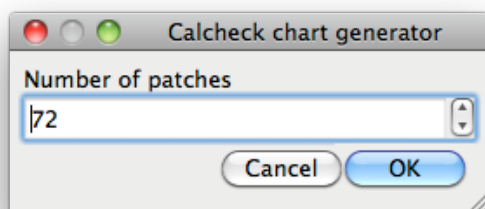
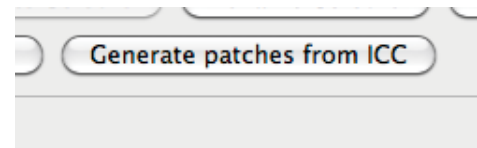
11. If either ΔH or ΔC is to be measured when Calchecking then click on the $\Delta H/\Delta C$ tab, tick the *Target* checkbox and enter the *Average* and *Maximum* values
12. Save the completed Calcheck chart. File Menu > Save.



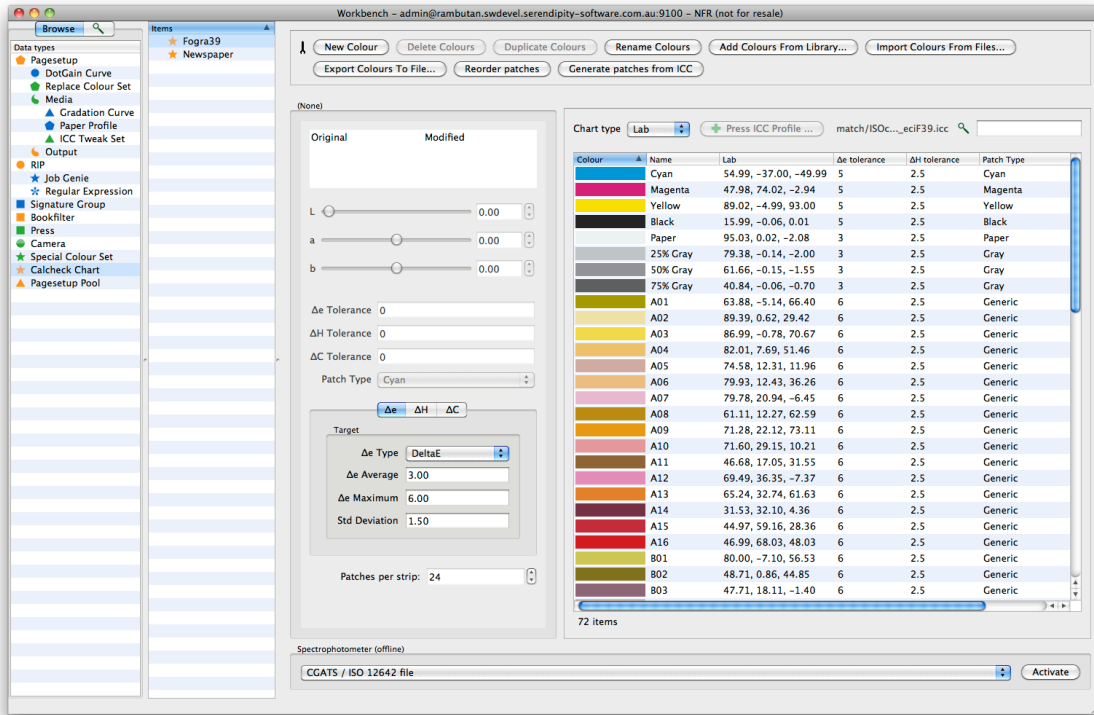
HowTo Generate Patches from ICC

Generate patches from ICC - if you have a Press ICC profile and want to use Blackmagic/Veripress to generate a chart from the ICC profile gamut information.

1. Click the *Generate Patches from ICC* button in the toolbar.
2. Select the same Press ICC profile assigned as the match profile in your *Pagesetup* (for printed proofs) or *Press* (for Softproofing) from the Blackmagic/Veripress database. Click OK.
3. If the ICC profile has not previously been used in Blackmagic/Veripress, then select *Upload File...* button in pop-up window and follow the prompts to select and load the ICC profile.
4. Set the number of patches for the chart in the *Calcheck Chart Generator* pop-up window, then click OK.



5. The patches are now generated from the ICC profile and listed in the Calcheck Chart.



- Patches defining Process Colours (Cyan, Magenta, Yellow and Black), Gray and Paper are automatically generated when the chart is created.

Colour	Name	Lab	Δe tolerance	ΔH tolerance	Patch Type
	Cyan	54.99, -37.00, -49.99	5	2.5	Cyan
	Magenta	47.98, 74.02, -2.94	5	2.5	Magenta
	Yellow	89.02, -4.99, 93.00	5	2.5	Yellow
	Black	15.99, -0.06, 0.01	5	2.5	Black
	Paper	95.03, 0.02, -2.08	3	2.5	Paper
	25% Gray	79.38, -0.14, -2.00	3	2.5	Gray
	50% Gray	61.66, -0.15, -1.55	3	2.5	Gray
	75% Gray	40.84, -0.06, -0.70	3	2.5	Gray
	A01	63.88, -5.14, 66.40	6	2.5	Generic
	A02	89.39, 0.62, 29.42	6	2.5	Generic

- Patch delta(Δ) tolerances need to be configured. Calcheck Chart has default delta(Δ) tolerances but you may need to alter these to meet your press standard.

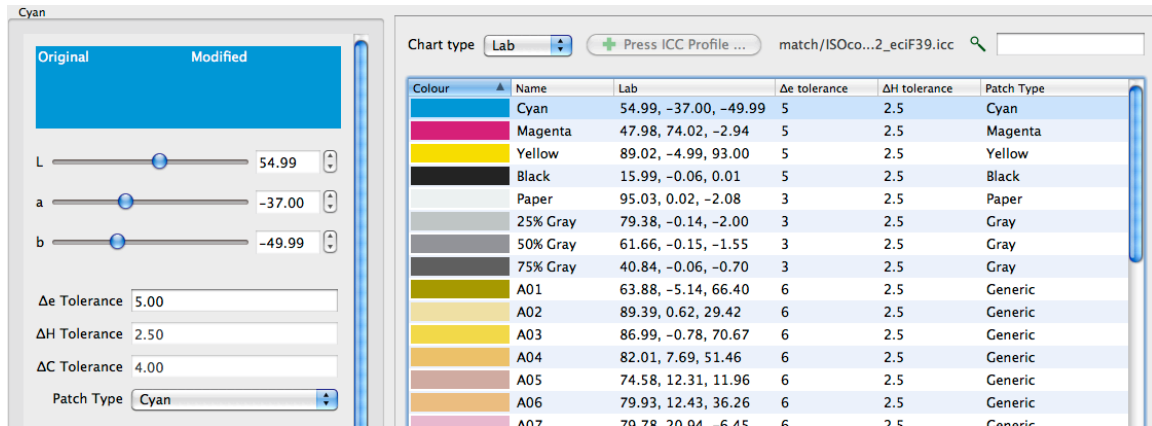
Generic type patches usually make up the majority of the patches in a Calcheck chart.

If required, change the Generic patch Δ tolerances by selecting all the Generic patches in the list, then entering the desired $\Delta e/\Delta H/\Delta C$ Tolerances to be used for the patches.

Δe Tolerance	<input type="text" value="6.00"/>
ΔH Tolerance	<input type="text" value="2.50"/>
ΔC Tolerance	<input type="text" value="4.00"/>
Patch Type	<input type="text" value="Generic"/>

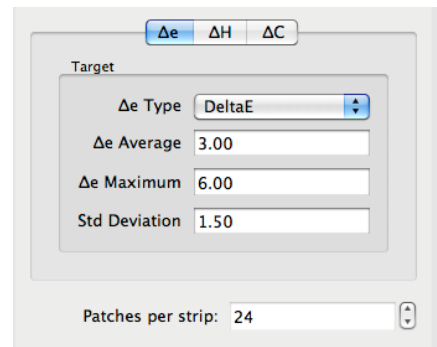
Note: Multiple Patches can be block marked (shift-click) or individually marked (ctrl/cmd-click) to change patch type and tolerances simultaneously.

8. If required, change the Process Colour (Cyan, Magenta, Yellow, Black), Gray and Paper patch Δ tolerances for chart.
9. Click on each patch, then enter the specific $\Delta e/\Delta H/\Delta C$ Tolerances for the patch.



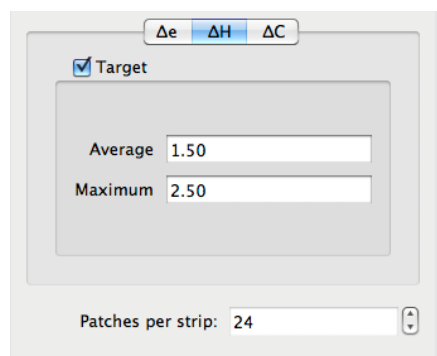
Note: The Calcheck Chart Generator creates one patch in the chart set for Cyan, Magenta, Yellow, Black and Paper, plus 3 Gray patches. If more process colour or gray patches are required for the chart, they can be added via the *Add New Colour* option in the toolbar. In this case the Lab or CMYK values for the new patch must be defined.

10. Choose the Δe standard against which the calcheck chart will be compared from the *Δe Type* drop-down. Set the *Δe Average*, *Δe Maximum* and *Std Deviation* tolerances for the chart.
11. Enter the number of *Patches per Strip* for the chart, when it is printed.



Note: DeltaE (CIE76) is the usual standard for used for verifying printed proofs, CIE2000 is appropriate for a chart to be used for colour verifying a monitor when SoftProofing.

12. If either ΔH or ΔC is to be measured when Calchecking then click on the *$\Delta H/\Delta C$ tab*, tick the *Target* checkbox and enter the *Average* and *Maximum* values
13. Save the completed Calcheck chart. File Menu > Save.



CMYK Calcheck Charts

Calcheck Charts made up of colour patches defined by Lab values are recommended for all standard proofing workflows.

However, if a CMYK Calcheck Chart is required a chart can be created manually or by importing defined CMYK chart from a file.

HowTo Import CMYK Patches from Files

First, ensure the ISO 12642 / CGATS formatted file from which the chart is to be created includes CMYK values.

Follow the *Import Patches from Files* guide AFTER completing these steps:

1. Choose CMYK from the Chart Type drop-down above the Patch List panel. Once CMYK is selected the Press ICC Profile field will automatically assigned with the default system CMYK match ICC profile.
2. If the default system ICC profile is not the same Press ICC profile assigned as the match profile in your *Pagesetup* (for printed proofs) or *Press* (for Softproofing) then click the *Press ICC Profile* button and select the ICC profile from the Blackmagic

Alternate methods to create Calcheck Charts

1. Calcheck Charts can be created manually, one patch at a time clicking Add New Colour button in the toolbar, then setting *Patch Type* and $\Delta e/\Delta H/\Delta C$ Tolerances.