

ExpressScan 4Base Calibration Procedure

Calibrate the components of the scanner so that together they produce the best images possible.

In the calibration procedure, you scan a standard film that contains a sequence of frames exposed from four or five under to four or five over in steps of one f-stop. The test frame scene must include a mid-range grey patch and some black and white features. Express Imaging Systems provides films for this purpose:

part number 39942837 Film Strip Calibration, 35mm
part number 27198836 Film Strip Calibration, APS.

To calibrate the scanner, perform the following steps.

1. Make backup copies of the current scanner calibration files to a diskette.
2. Check that the scanner has been scanning for at least 10 minutes since power up. This will ensure that the components of the lamp house are up to operating temperature. To warm up the lamphouse, go to the camera calibration screen and press (**TEST**). The main camera will now start scanning. Wait 10 minutes before starting calibration.
3. Select the Diagnostics button on the main screen, and perform prescanner calibration. Exit the Diagnostics screen.
4. Select Reset to download the default setup into the scanner.
5. Select the Camera button on the main screen.
6. Load the calibration film on the scanner as you would load a normal roll of film.
7. If you are not calibrating the scanner for the first time, skip this step.

If the scanner has not been calibrated previously, select f-stop 4.0 on the main camera's lens. Advance the cal film until the +3 negative is in view. Observe the spot RGB readback value. If any value exceeds 240, open the lens slightly until all values are under 240. Use a small piece of tape to make a registration mark on the lens aperture dial so that you can easily restore the lens to this setting.
8. Select the Access Code button. Enter the Access Code to enable changes to data in this screen.
9. Select the Start Cal button to unlock the scanner's calibration table. Note that this also disables image correction
10. Obtain a work sheet or a piece of notebook paper on which to record the results of this calibration.

11. Select the Advance Frame button until the first negative (the +4 if LFF, or -4 if FFF on the cal film) is in view.
12. Write the Prescan value of this negative in your work sheet.
13. Select the Hit Aim button and wait for the lights to change. Note that the spot RGB read back values are approaching your aim. Repeat until all values are within the aim, plus or minus 1.
14. Record the RGB Exposure values for this negative in your worksheet.
15. Advance to the next negative (+3, +2 ... through -4 if LFF, or -3, -2 ... through +4 if FFF). Repeat steps 12 - 14 for each negative.
16. Select the Stop Cal button.
17. Under the image area, select the Scanner Cal button in the Data group. This starts the Light Settings and Density Worksheet dialog.
18. For each negative, -4 to +4, enter the prescan values of the negatives you just scanned. Observe that the exposure values you recorded on your worksheet are now displayed in the table. If any of the values are incorrect, you can type over the cells of the table.
19. For -5, enter a prescan of 10 less than the -4 negative prescan. Enter the same R, G, and B numbers as the -4 negative.
20. For +5, enter a prescan of 254. Enter R, G, and B numbers in the table that cause the curves to be smooth and S-shaped.
20. Select the Plot button to recalculate (smooth) the curves.
21. Select the OK button to close the dialog screen and return to the Camera screen.
22. Answer Yes to the prompt to save changes.
23. In the Camera screen, select the OK button to close the Camera screen.
24. Answer Yes to the prompt to save changes.
25. Exit the ExpressScan program.
26. Restart the ExpressScan program and scan a few rolls of film.
27. Save copies of the new calibration files to a second diskette. Label both diskettes with today's date. Label the first with the text "old settings" and the second with the text "new settings".