

Operating instructions for the Axon GenePix scanner

Preparation for scanning:

1. After power-on, give the scanner 15 minutes to warm up before acquiring any images
2. Load the slides upside down in the scanner
3. Start GenePixPro by clicking on the 'GenePixPro' icon

Preview scanning and defining the scan area:

4. Press 'Preview Scan' to start a preview scan
5. You can then press the 'Scan Area' button:
 - ◆ Move the mouse cursor to the top left of the features on the image
 - ◆ Hold down the mouse cursor and drag a rectangle around the region containing the features
6. Confirm that all features have been included within the scan area

Optimising the scanner settings:

Maximizing the dynamic range:

7. Open the 'Hardware Settings' dialog box
8. Start a 'Preview Scan' and change the 'PMT Gain' for each wavelength whilst scanning
9. You should aim to use the highest scan setting that does not lead to a significant level of saturation
10. Ensure that the image resolution has been set to 5 μm per pixel

Balancing the PMTs:

11. Start a 'Preview Scan' and 'Zoom' in on the features
12. Switch to the 'Histogram' tab and set the 'Min Intensity' and 'Max Intensity' fields to 500 and 65530
13. While scanning, adjust the PMT Gain in each channel until the ratio 'Count Ratio' is about 1.0
14. Save the 'Hardware Settings' by clicking the 'File' button and selecting 'Save Settings As'
15. Type in an appropriate file name and then press 'Save'

Performing a Data Scan and Saving an Image:

15. Press 'Data Scan' to start a full scan
16. To save the image, click on 'File' and select 'Save Images'
17. Navigate to the correct file location and select 'Single Image TIFF Files'
18. Type in an appropriate file name and then press 'Save'

Calibrate System (doesn't needed to be performed very often!):

19. Click 'Hardware Diagnostic' and select 'Calibrate System'
20. Check both the laser check boxes to calibrate both wavelengths
21. Click 'Start' and the wizard will then guide you through the procedure

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