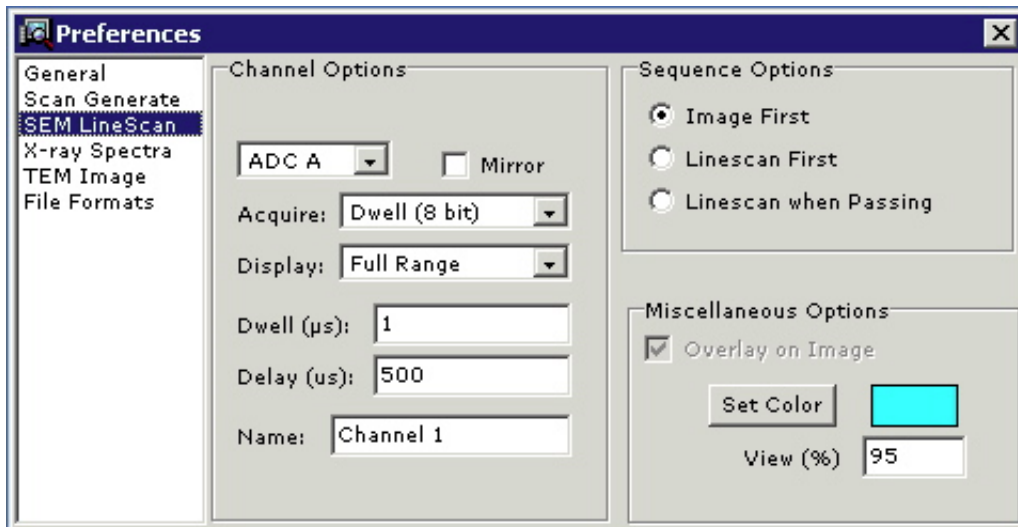


# SEM Linescan Preferences

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current for: v1.6.0

A linescan is a separate single-line horizontal scan that is executed independently of the normal image frame. A linescan has its own dwell and interpixel delay which can be significantly different from the dwell and interpixel delay assigned to the frame. The user can assign the linescan to execute before, at the middle of, or after the frame is acquired. Refer to the [configuration examples](#) for descriptions of common applications of linescans. The SEM Linescan Preferences panel is shown below:

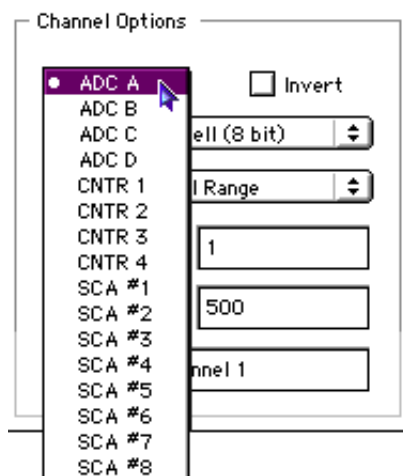


Other Preferences

- [General](#)
- [Scan Generate](#)
- [SEM LineScan](#) •
- [X-ray Spectra](#)
- [TEM Image](#)
- [File Formats](#)

## • Channel Options

- **Physical Channel.** The physical source for the linescan data. The linescan appears as an overlay on the image window for the lowest numbered [Logical Channel](#) enabled in SEM Image Preferences for version 1.5.6, but the source for the linescan data is selected separately here.



Physical channels are the actual analog or digital signal inputs to the 4pi system. There are 4 analog inputs labeled **ADC A - ADC B**, 4 TTL counter inputs labeled **CNTR 1 - CNTR 4**, and 8 SCA inputs labeled **SCA 1 - SCA 8**. Read more about [Physical Channels](#) in the SEM Image Preferences for version 1.5.6.

- **Mirror.** Read about the [Mirror](#) setting in the SEM Image Preferences for version 1.5.6.
- **Acquire.** Read about the [Acquire](#) menu in the SEM Image Preferences for version 1.5.6.
- **Display.** Read about the [Display](#) menu in the SEM Image Preferences for version 1.5.6.

- **Dwell.** Read about the [Dwell](#) setting in the SEM Image Preferences for version 1.5.6.
- **Delay.** This is, for the line scan, equivalent to the (inter-)pixel delay specified in [Scan Generate Preferences for version 1.5.6](#). It is the settling time allowed for the beam, plus the input source instrument being used. Before the linescan begins, a horizontal and vertical retrace delay is executed to give the beam time to be positioned.
- **Name.** The name given to a stand alone linescan window.

- **Sequence Options**

Linescans are presently limited to a single horizontal scan across the image area, vertically centered. The scan may be set to be performed before, after, or in the middle of the image acquisition as described below:

- **Image First.** The image is completely acquired before the linescan runs, for each frame.
- **Linescan First.** The linescan is executed before image acquisition begins.
- **Linescan when passing.** The image is acquired down to the line where the linescan will occur, then the linescan runs, and then the image acquisition picks up on the next line. This requires no vertical repositioning of the beam, and may be useful for samples that change over time, but in the latter case could cause a discontinuity since the image scan is suspended for the duration of the linescan.

- **Miscellaneous Options**

- **Overlay on Image.** (currently always selected) Determines whether to overlay a graph of the linescan data on the lowest logical channel's image window.
- **Set Color.** This button accesses the operating system's color-picking services, and allows the line-profile color to be set.
- **View %.** Enter a number between 0 and 100 to set the physical size of the line profile within the image window as a percentage of the half-height image window size. The default is 95%.