



SCSI for DOS Release Notes

Version 3.04

1. Overview

Release 3.04 is the next release of SCSI-View for Windows 95/98. This release supports the models SV-1620 and SV-3000 SCSI-View analyzer hardware and the PCMCIA-02 interface card on Windows 95/98 systems. This release also includes a DOS version that supports models SV-8000, SV-8020, and SV-1600 as well as models SV-3000 and SV-1620 on the DOS operating system. The features and bug fixes apply to both versions, but operating system related information applies to Windows 95/98 version.

This release consists of a DOS protected mode application, and a 32-bit VxD driver that accesses the analyzer hardware. This combination is fully Windows 95 compatible, and uses Windows 95 Plug & Play services to allocate I/O and interrupt resources to the VxD.

Other applications can run simultaneously with SCSI-View in a multi-tasking environment. Running other applications will degrade the ability of SCSI-View to keep up with very active SCSI capture activity.

2. New Features

This release includes both new functionality, fixes for bugs and problems in previous releases, and provides support for the new model SV-3000 Ultra2 Analyzer.

2.1. Recirculate Capture (SV-3000 Only)

The SV-3000 analyzer features a large hardware event buffer (2 million events), and has been designed to use this event buffer either as a large FIFO (Normal Capture) or as a recirculating buffer (Recirculate Mode Capture). Recirculate Mode is enabled either by selecting the **Options, Normal/Recirculate Capture Type** or by hitting the **Alt-r** hot key.

This mode of capture can be used for the following purposes:

- Capture of very high activity, including capture of all DATA phase data
- Capture of protocol problems using hardware triggers
- Capture of protocol problems with the host disconnected from the analyzer

The external power adapter should always be used when the analyzer is operated in recirculate mode.

It is possible to disconnect the host from the analyzer, to reconnect the host to the analyzer at a later time, and to either check whether a trigger has occurred or to explicitly stop the capture. This capability eliminates the requirement of dedicating the host to the analyzer, especially when the host is a notebook computer. This allows infrequent problems to be captured and analyzed with only the SV-3000 analyzer connected to the system under test.

2.2. Phase Filter (SV-3000 Only)

The SV-3000 hardware provides a phase filter feature that reduces by a factor of from 6 times to 10 times the number of signal change events associated with changes in REQUEST, ACKNOWLEDGE, and the data signals. The benefits of this feature are the reduction of the size of session files and the increase in SCSI command rates that can be continuously captured. Phase filtering is enabled by checking the **Capture Options, Phase Filter Capture** checkbox.

2.3. Power Down Filter (SV-3000 Only)

The SV-3000 hardware provides an event filter that stops generating signal change events when TERM Power is removed. This allows the analyzer to continue to capture while the system under test is power cycled. This option is enabled by checking the Capture Options, Filter Sigs if no **TERMPWR** checkbox.

2.4. SV-3000 POD Connection

The recommended procedure for connecting the SV-3000 POD to the host is to first connect the PCMCIA-02 PC-Card to the POD, then insert the PC-Card into the host's PC-Card socket. If the POD is connected to the PC-Card that is already inserted in the host's PC-Card socket, the POD may not be properly initialized and it may be necessary to remove and reinsert the PC-Card.

It is also recommended that the analyzer POD be connected to the system under test before starting that system, unless the system under test can deal with the possible hot-plug glitches that may occur when the analyzer-to-SCSI connection is made.

2.5. Implicit Linking

SCSI-View has always provided linking between Command, Phase, and Timing Views. It did not link Views that were opened separately (e.g., a Command View is opened, then a Phase View is opened of the same captured file). This form of implicit linking has been implemented in this release. Implicit linking can be disabled by checking the **View Display Options** checkbox invoked by **Options, Display View** item.

2.6. Device Types

In previous releases, device type was maintained by Target only. Release 3.04 maintains device types by Target and Lun. If Inquiry commands are issued to devices, SCSI-View will associate the reported device type with the Target-Lun Nexus. Alternately, the user may explicitly change the device types captured in a session by selecting the **Change Device Types** item from the Popup Menu.

2.7. BUS Reset

The SV-3000 provides the capability of asserting a **Bus Reset** on the SCSI Bus under test. This capability is accessed by selecting the Bus Reset button in the **Options, Hardware Configuration** dialog.

2.8. External Power Adapter

The SV-3000 analyzer is capable of drawing more power than can be provided by the host's PC-Card socket. A current sensor monitors the amount of current drawn from the host, and will invoke a warning dialog and stop the current capture whenever the current drawn from the host exceeds 0.5 amps. A universal power adapter is provided with the analyzer, and should be used under the following circumstances:

- Recirculate Capture
- Capture of all DATA Phase data that exceed 1024 words at Command rates that exceed 100 Commands per second
- Whenever the Exceeded Host Current Limit warning dialog appears

2.9. Temperature Limit

A temperature monitor has been added to the SV-3000 to prevent high temperatures from damaging the analyzer. The limit has been set at 60 degrees Centigrade (140 degrees Fahrenheit). High internal circuit board temperatures may result either from insulating the POD (interfering with natural convection cooling), or from extremely high Command rate captures involving capturing all DATA Phase data over long periods. It is unlikely that the latter will cause the temperature limit to be reached.

2.10. Context Help

The context sensitive help system supports Hyperlink forward and backward movement. It also permits printing of selected help topics.

2.11. SCSI-VIEW Analysis Available Without Hardware

The SCSI-View File Analysis functions will operate on exiting captured Session files without requiring SCSI-View hardware to be present. There is no longer a need to have an SV-SOFT license.

2.12. Taskbar Capture Status

During Normal capture of high SCSI activity on an SV-1620 or SV-3000, the program can appear to be hung. This a result of the SCSI-View software very actively transferring captured signal changes from the hardware to the computer, and generating the Session file. In Release 3.04, a SCSI-View Icon will appear in the Taskbar Status area. By passing the Mouse pointer over this Icon, a current capture status message will be displayed. This message will go away when the mouse pointer is moved away from the Icon. Another status message will only appear when the mouse pointer is passed over the Icon again.

2.13. Trigger Position

In Release 3.04, the SV-3000 analyzer captures varying number of events after a Recirculate Mode hardware trigger. This release provides the following four options for event capture after a trigger: 2048 Events after Trigger, 131,072 Events after Trigger, 1,048,576 Events following Trigger, and 1,966,080 Events following Trigger. This option is selected using the Radio Buttons in the **Capture Options, Set Recirc Triggers** dialog.

2.14. Hardware Capture ID Filter (SV-3000 Only)

In Release 3.04, the SV-3000 provides hardware filtering of IDs. Capture ID Filtering determines which Initiators and Targets will be captured. Both IDs must be enabled for the activity between Target and Initiator to be captured. Selection ID Filtering is controlled by 16 checkboxes in the **Capt IDs Options** dialog. This dialog is invoked by selecting the **Capt IDs** button in the **SCSI Capture Options** dialog. Filtered device IDs will be displayed in a list in the Information dialog (F8).

2.15. Hardware Data ID Filter (SV-3000 Only)

Data ID Filtering allows DATA phase signal changes to be filtered out of a capture when the Target and Initiator IDs have been enabled in the **Capt IDs Options** dialog. The Data ID Filtering is controlled by 16 checkboxes in the "Data Capture Options" dialog that is invoked by selecting the **DataCapt** button in the SCSI Capture Options dialog. Unchecked devices will have their effective Capture Length set to zero.