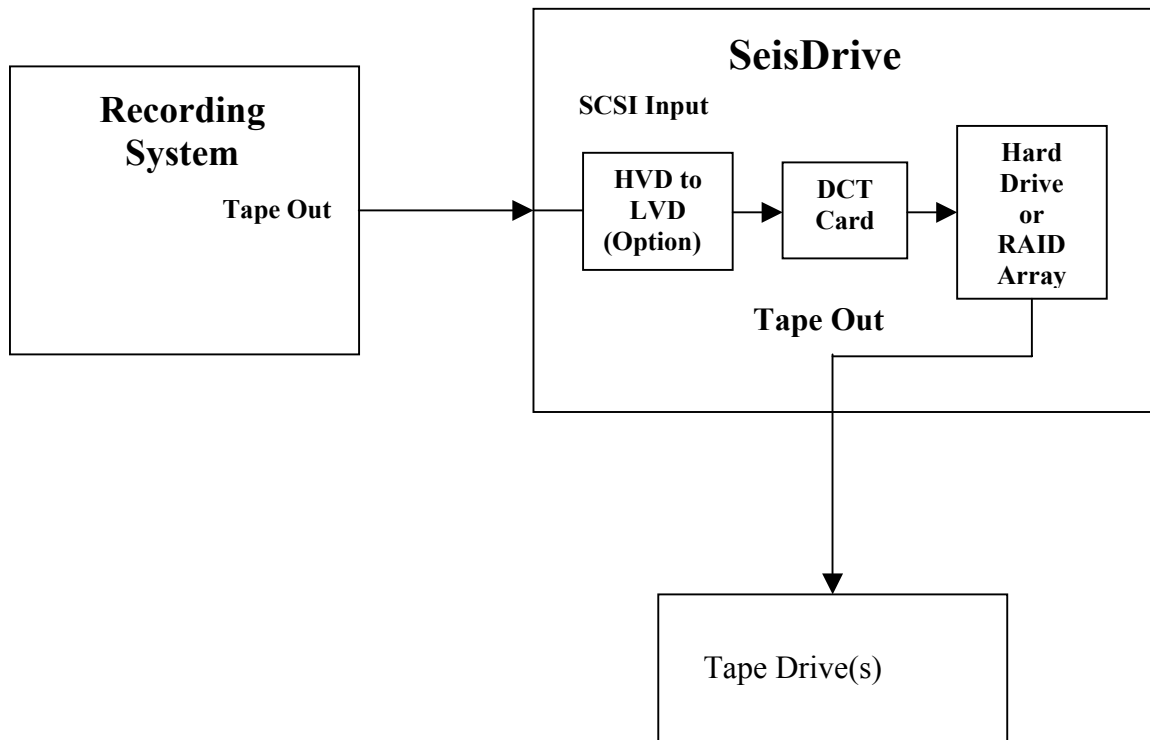# SSI
SOFTWARE SCIENCES, INC.

SeisDrive System Installation

The following information is intended to assist the successful installation of a SeisDrive system by a qualified engineer or technician.

Recording System	**SeisDrive**
Tape Out	SCSI Input

- HVD to LVD (Option)
- DCT Card
- Hard Drive or RAID Array
- Tape Out
- Tape Drive(s)

SeisDrive System Configuration Block Diagram

Basic Installation Precautions

To avoid damaging the system during installation:

1. Ensure SeisDrive power supply voltage setting matches supply voltage before connecting power cable.
2. All cable connections must be made with all systems powered down.
3. Take care when connecting SCSI 68P cable connectors to avoid bent pins.

Tape Emulator (DCT) Card Installation

The Tape Emulator (DCT) card is designed to emulate a SCSI tape drive and provides the ability to record seismic data directly to hard disk or RAID array.

SCSI Inputs

The DCT card has dual LVD/SE input ports A & B, but only port A is active as indicated below. These inputs accept Low Voltage Differential (LVD) or Single Ended (SE) SCSI inputs and are auto-terminating. Connections may be made to either the 68P SCSI-3 connector on the top edge of the card (J1) or to the VHDCI connector on the back edge of the card (J8).

LVD/SE
Input J1
Port A

LVD/SE
Input J8
Port A
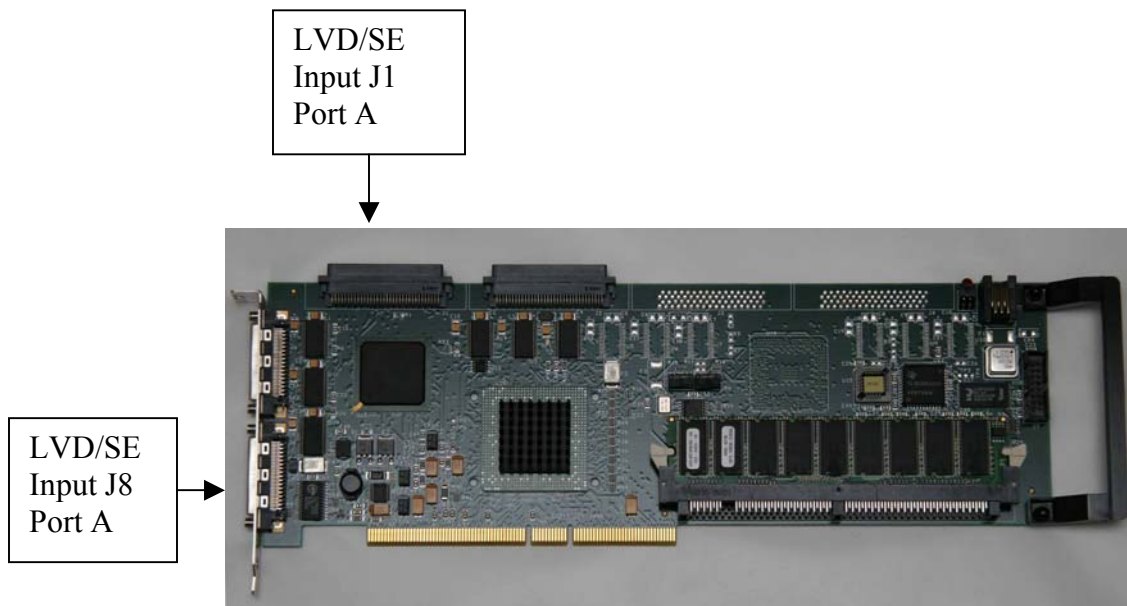
Note: **A number of recording systems output High Voltage Differential (HVD) SCSI, which requires the addition of a Rancho HVD to LVD converter card as shown below.**

The Rancho HVD to LVD converter card is also auto-terminating, so no external SCSI terminators are required. Jumper configuration options for the card are provided on the following page. The card should be configured with the Factory Default settings for correct operation.

Note: All cable connections must be made with system power off in order to avoid component damage.

DCT Software Driver Installation

Once the DCT and HVD to LVD cards have been successfully installed, the DCT software driver must be installed by following the instructions in the DCT Driver Installation document DCT102102, also included below. This document can also be found in the DCT Driver subdirectory of the Drivers directory on the SeisNet Install CD provided with each system.

SeisNet Software Installation

All SeisNet software is preloaded on the SeisDrive PC in the c:\SeisNet directory and the system is ready for operation with the following exception.

When connecting tape drives to the system it will be necessary to ensure that the software driver for each connected drive is loaded and running before attempting to write to tape.

Refer to the 3590 Driver Installation procedure on the following pages.

Note: Additional system information documents may be accessed in the Docs directory on the SeisNet Software CD supplied with the system.

Software Key Activation

Once activated during initial system build, the SeisNet parallel port software key should not need to be setup again except possibly if the system is completely rebuilt and you are getting a Security Violation message and are unable to start SeisNet.

In this case you will need to locate the keysetup.exe utility program located in the ProgramFiles directory on the SeisNet CD and with the SeisNet Key attached to the parallel port, execute the following command from the START/RUN option:

x:\ Keysetup.exe /u /d   where x:\ represents the path to the keysetup.exe file

Note: You will then need to reboot SeisNet before checking that the security violation has been eliminated.

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RTLVD-HVDV2

JUMPER CONFIGURATIONS

Rev A1, A4

JUMPERS			
LOCATION	JUMPER DESCRIPTION	FUNCTION	FACTORY SETTING
JP1	HVD Terminator Power	ON = Send Term Power to HVD Bus	ON
JP2	LVD Terminator Enable	ON = Enabled	ON
JP3	HVD Terminator Disable	ON = Disabled	OFF
JP4	LVD Terminator Power	ON = Send Term Power to LVD Bus	ON

CONNECTORS	
J1	HVD
J2	DC Power
J3	DC Power
J4	LVD/SE
J5	Reset
J6	Pin 1 XFER_ACTIVE Output (Chip active) Pin 2 Removed (key pin) Pin 3 Ground Pin 4 WS_ENABLE
J7	SCSI Activity LED Connector
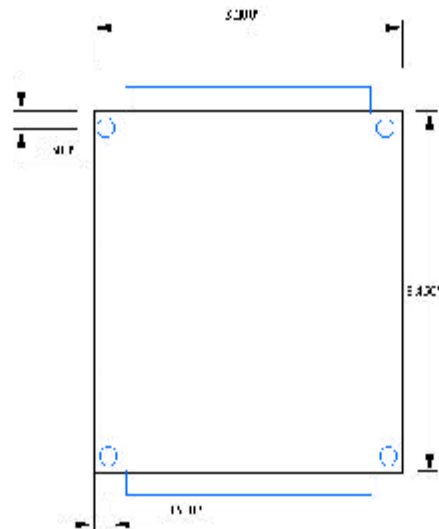
LSI SCSI Controller Super Blocking

Instruction for editing Windows 2000/XP registry to enable 128K super blocked data transfers to tape, using an LSI SCSI Adapter

In order to enable super blocked (128K) data transfers to tape, the Windows 2000/XP registry needs to be edited as follows:

By default, transfers are limited to 65536 bytes.
Enabling larger transfers requires the addition of a new subkey in the registry. Use the following procedure to add the new subkey:

1. Click on "Start", select "Run", and open the REGEDT32 program.

2. Select HKEY_LOCAL_MACHINE and follow the tree structure down to the LSI driver as follows:

>   HKEY_LOCAL_MACHINE
>   SYSTEM
>   CurrentControlSet
>   Services
>   symc8xx

3. Select the "symc8xx" key and use Edit/Add Key to create a new subkey named "Parameters".

4. Select the new "Parameters" key and use Edit/Add Key to create a new "Device" subkey. If multiple adapters are installed, you can specify separate subkeys for each adapter by using a subkey name of "DeviceN", where N = the SCSI host adapter number (0, 1, 2, etc.). The tree structure should now look as follows:

>   HKEY_LOCAL_MACHINE
>   SYSTEM
>   CurrentControlSet
>   Services
>   symc8xx
>   Parameters
>   Device   (or DeviceN)

5. Select the "Device" key and use Edit/Add Value to add a new value name of "MaximumSGList". Set the data type to REG_DWORD and enter a value from 16 to 255 (10 hex to FF hex). A value of 255 (FF hex) enables the maximum 1 MByte transfer size. Setting a value higher than 255 results with the default of 64K transfers.

6. Exit the Registry Editor, then shutdown and reboot the system

Adaptec SCSI Controller Super Blocking

Instruction for editing Windows 2000/XP registry to enable 128K super blocked data transfers to tape, using an Adaptec SCSI Adapter

In order to enable super blocked (128K) data transfers to tape, the Windows 2000/XP registry needs to be edited as follows:

By default, transfers are limited to 65536 bytes.
Enabling larger transfers requires the addition of a new subkey in the registry. Use the following procedure to add the new subkey:

1. Click on "Start", select "Run", and open the REGEDT32 program.

2. Select HKEY_LOCAL_MACHINE and follow the tree structure down to the Adaptec driver as follows:

        HKEY_LOCAL_MACHINE
              SYSTEM
                    CurrentControlSet
                       Services
                            aic78xx

3. Select the "aic78xx" key and use Edit/Add Key to create a new subkey named "Parameters".

4. Select the new "Parameters" key and use Edit/Add Key to create a new "Device" subkey. If multiple adapters are installed, you can specify separate subkeys for each adapter by using a subkey name of "DeviceN", where N = the SCSI host adapter number (0, 1, 2, etc.). The tree structure should now look as follows:

        HKEY_LOCAL_MACHINE
              SYSTEM
                    CurrentControlSet
                       Services
                            aic78xx
                    Parameters
                                Device   (or DeviceN)

5. Select the "Device" key and use Edit/Add Value to add a new value name of "MaximumSGList". Set the data type to REG_DWORD

and enter a value from 16 to 255 (10 hex to FF hex). A value of 255 (FF hex) enables the maximum 1 MByte transfer size. Setting a value higher than 255 results with the default of 64K transfers.

6. Exit the Registry Editor, then shutdown and reboot the system.

Auto Flow Selection - using desktop shortcuts

SeisNet desktop shortcuts may be created to automatically select a specific flow file as follows:

Create a SeisNet.exe shortcut on the desktop, then right click to properties and edit Target to:

C:\SeisNet\SeisNet.exe /startupfile=c:\seisnet\xxxx.flw

Where xxxx represents the flow name you wish to auto select when the shortcut is executed.