

80-PIN ULTRASCSI HARD DRIVE DIY FOR S-550 & W-30

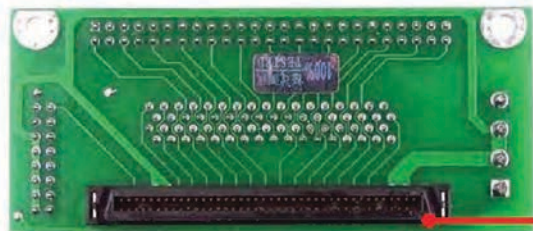
The S-550 and W-30 normally use external 50-Pin SCSI hard drives. It's possible to connect newer 80-Pin UltraSCSI hard drives using an inexpensive 80-pin to 50-pin Single Connector Attachment SCSI Adapter Board (SCA). These SCA adapter boards can be found on eBay and elsewhere for less than \$5 (USD). The big advantage this offers is that you can use newer hard drives to replace your old 25+ year-old dinosaurs which are slowly failing. Although you won't benefit from faster speeds or larger capacities, they do offer a less noisy environment and are more reliable. Compared to the older 50-pin Quantum hard drives on eBay, these newer 80-pin UltraSCSI hard drives are far less expensive. I bought an 18GB UltraSCSI hard drive for only \$5 (USD) w/warranty. The last 50-pin Quantum hard drive I bought was over \$45 (USD) and sounded like a broken blender. Setup is very easy and you can use your existing SCSI hard drive case. If you don't have an external SCSI hard drive case, old LaCie SCSI CDROM's are a good eBay purchase. Just pull out the old CDROM, pop in the hard drive with the SCA Adapter Board and you're ready



SCA Adapter Board (Front)

50-Pin Male Connector

This plugs into the existing 50-Pin Female connector inside the SCSI hard drive case. The SCSI hard drive case connects to the DB25 Female connector on the S-550 (HD5-IF SCSI card) or the W-30 DB25 Female connector via a DB25-Pin Male to 50-Pin Male Centronics cable



SCA Adapter Board (Back)

4-Pin Male Power Connector

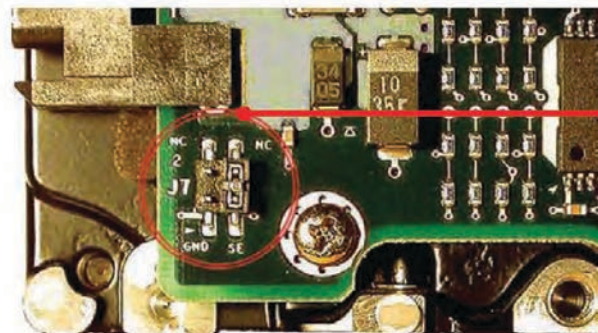
This plugs into the existing 4-Pin Female power connector inside the SCSI hard drive case

re: Jumpers

If the sampler does not recognise the hard drive, try experimenting with different jumper settings for MTR and DLY

80-Pin Female Connector

This plugs into the 80-Pin Male connector on the back of the UltraSCSI hard drive. This a direct connection and no cables are needed



SE/NC Jumper Detail (Hard Drive PCB)

SE/NC Jumpers On Hard Drive PCB

Most UltraSCSI 80-Pin hard drives have very tiny SE/NC jumpers. These need to be jumpered to the SE position (Single Ended)

Note: If this is the only device or the last device in the SCSI chain, depending on the make and model SCA hard drive, it may or may not require a 50-pin terminator. Mine would only work without one. The SCA hard drive used for this DIY was an **18GB Quantum Atlas V, Model: 37URC**

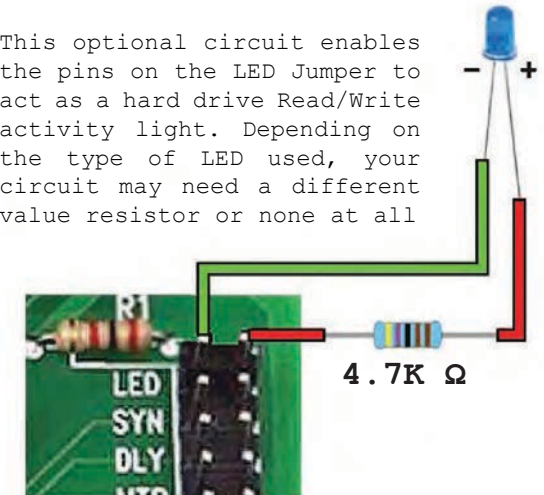
NOTE: To date, I've been unable to figure out any way to get an UltraSCSI drive to boot the O/S. Starting up still requires booting the O/S from a FDD or USB/FDE

JUMPER SETTINGS

- LED* - **Optional** See Circuit Below
- SYN - **ON** Synchronous Spindle Sync
- DLY - **OFF** Host Delayed Motor Start
- MTR - **OFF** Motor Start Via SCSI
- ID3 - **OFF** SCSI ID 8 to 15. Don't Use!
- ID2 - Use the ID0 - ID1 - ID2 jumpers
- ID1 - to set the hard drive SCSI device
- ID0 - numbers. The sampler is #7

ID2								
ID1								
ID0								
ID#	0	1	2	3	4	5	6	7

* This optional circuit enables the pins on the LED Jumper to act as a hard drive Read/Write activity light. Depending on the type of LED used, your circuit may need a different value resistor or none at all



INSTALLATION CHECKLIST

- Remove old hard drive from external SCSI case *(Or prepare a new external SCSI case)*
- Set jumpers on the 80-pin SCA adapter board (See chart on previous page)
- Set the SE/NC jumpers on the hard drive PCB to SE - Single Ended (See image on previous page)
- Connect 50-pin ribbon cable to 80-pin SCA adapter board
- Connect 4-pin power cable from power supply to 80-pin SCA adapter board
- Optional: Add hard drive activity LED circuit (See diagram on previous page)
- Connect SCA adapter board to back of hard drive (Add three layers of electrical tape as insulation between board and hard drive)
- Secure hard drive and SCA adapter board inside external SCSI case
- As mentioned on the previous page, depending on your hard drive model, you may or may not need to connect a 50-pin terminator
- Connect the hard drive to the sampler, just as you always did before, using the DB25 Male <--> 50-pin Centronics Male cable
- Power on the hard drive, wait 30 seconds then power on the sampler
- If the sampler does not see the hard drive, select "HD Restart" from the sampler menu. If the hard drive is still missing
 - Go to the HD Setup menu and change "Hard Disk ID = n" to a different number then change it back to the original number
 - Still nothing? Power off only the hard drive, wait 30 seconds and power it on again. Select "HD Restart" from the menu
- When the sampler sees the hard drive, use the sampler menu to format the hard drive

