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### SECTION 1 – OVERVIEW OF 8.3 POST M5 PATCH 01

This patch CD contains fixes for issues with LX 8.3 M5 software listed below. Refer to Appendix A for additional description of these issues. Note: The OnLine Centers have these patches available for download over Insite as an alternative delivery option.

- **PatchMR0053** These are the same original patches that were included on the predecessor “Signa 83 Post M5 Patch” CD-ROM (part # 2274462). These were included on this CD-ROM, to minimize the number of patch CD-ROM’s.
- **PatchMR0062** - efgre3d SmartPrep for UCERD receiver selection
- **PatchMR0063** - IVI slowdown Fix
- **PatchMR0064** - WorkList DICOM dictionary patch
- **PatchMR0065** - Excessive ghosting on FSE scans with TR > 4000

#### Note

Before attempting to load these patches, review the entire installation procedure for these patches.

### SECTION 2 - REQUIRED MATERIALS

Signa Lx 8.3 Post M5 Patch 01 Software CD-ROM 2274462-2 Rev 0.

### SECTION 3 - PATCH INSTALLATION INSTRUCTIONS

1. With the system running and software at the scanning level, go to the Service Desktop. Then select the [**C Shell**] button in the lower left toolbar.
2. Inside the C Shell window, log in as the root user by typing the following:

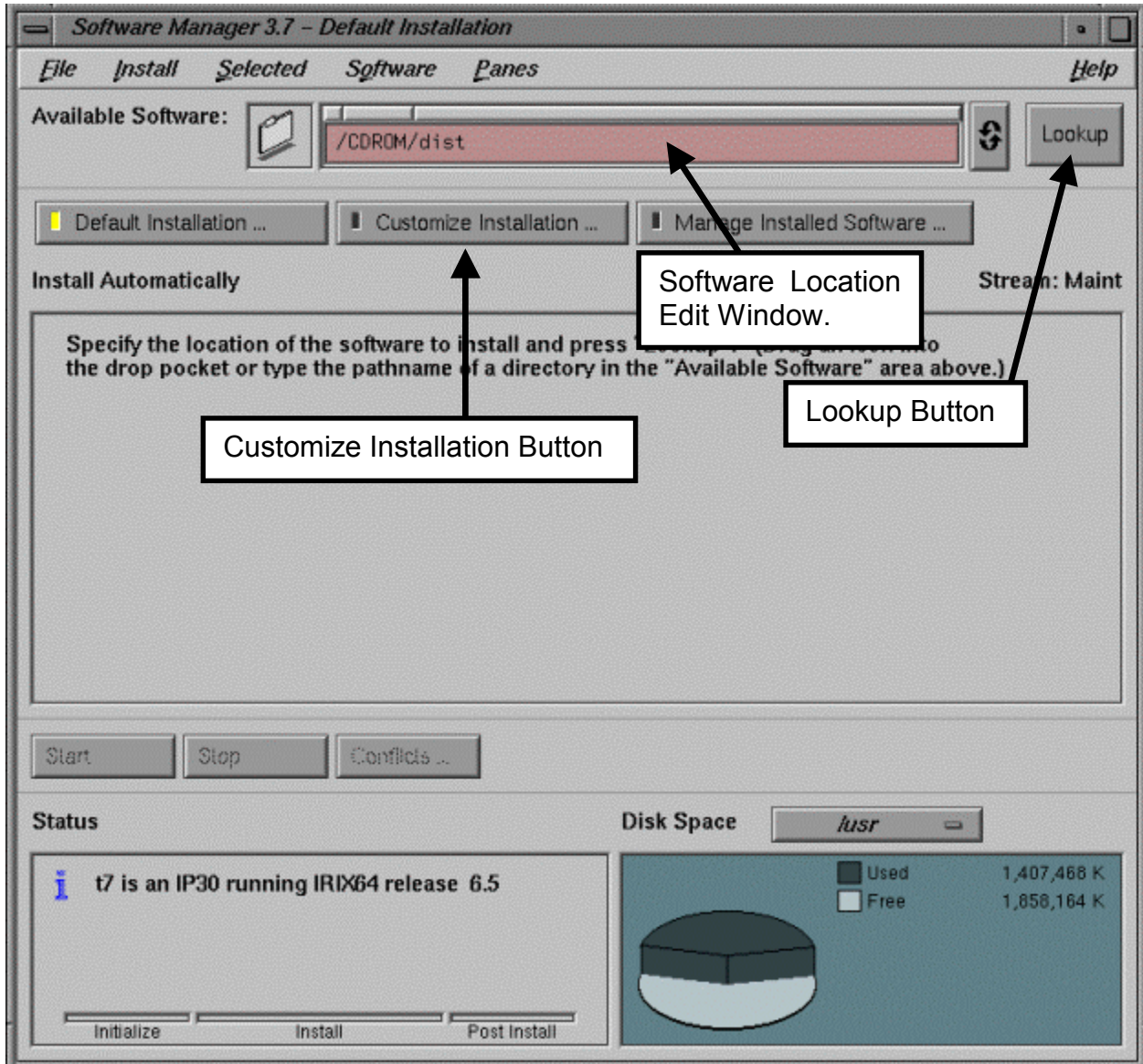
**su - <Enter>**

Password: **operator <Enter>** ("operator" is the system default root password. Use whatever password is appropriate for the system you are working on if it has been changed)

3. Place the patch CD in the system CD drive. Wait 20 seconds for the system to see the CD, or until the amber light on the front of the CD drive stops blinking.
4. Inside the C Shell, type the following:

**mediad <Enter>** (this command mounts the CDRom)

**swmgr <Enter>** (This command starts the software manager which is used to load the patch)

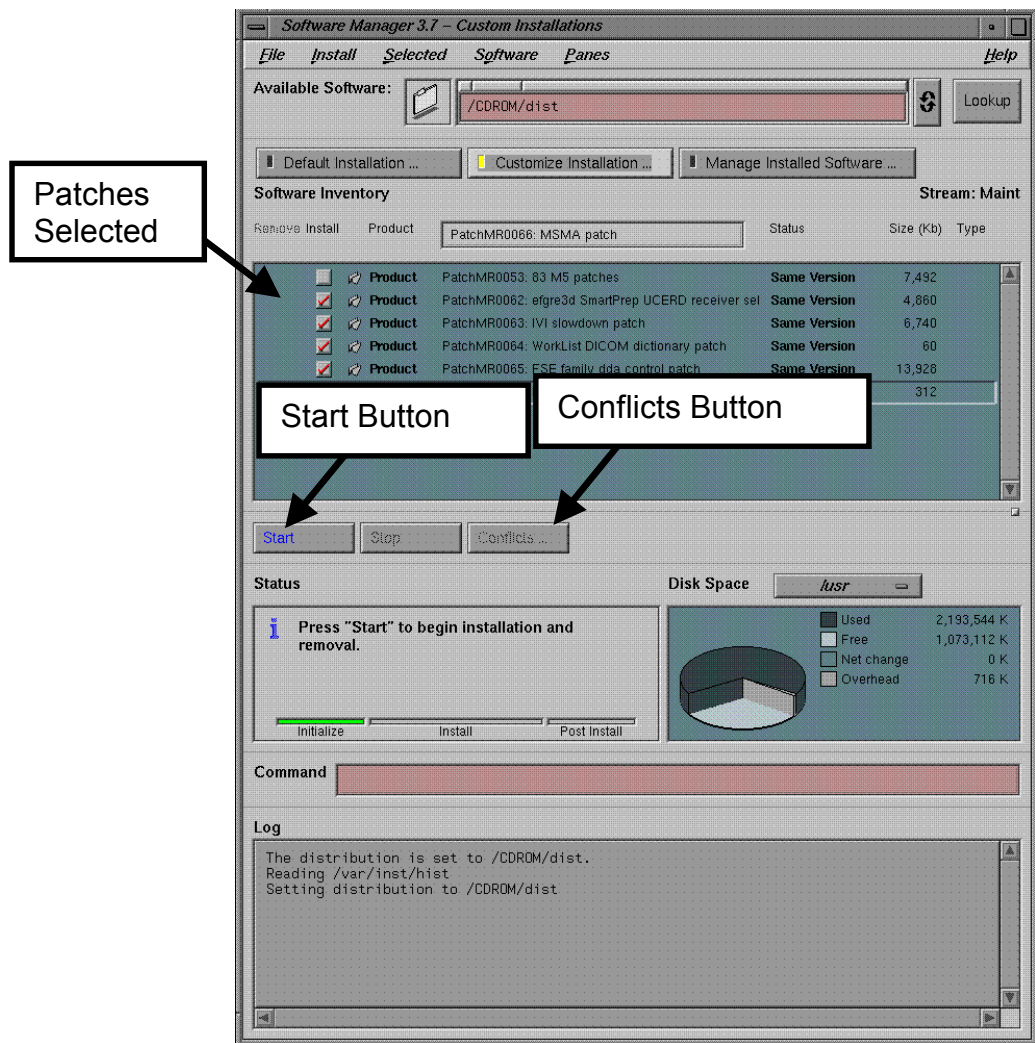


**SOFTWARE MANAGER INITIALIZATION**  
ILLUSTRATION 1

5. Once the Software Manager starts, begin typing the following in the **[Software Location Edit Window]**. See Illustration 1.

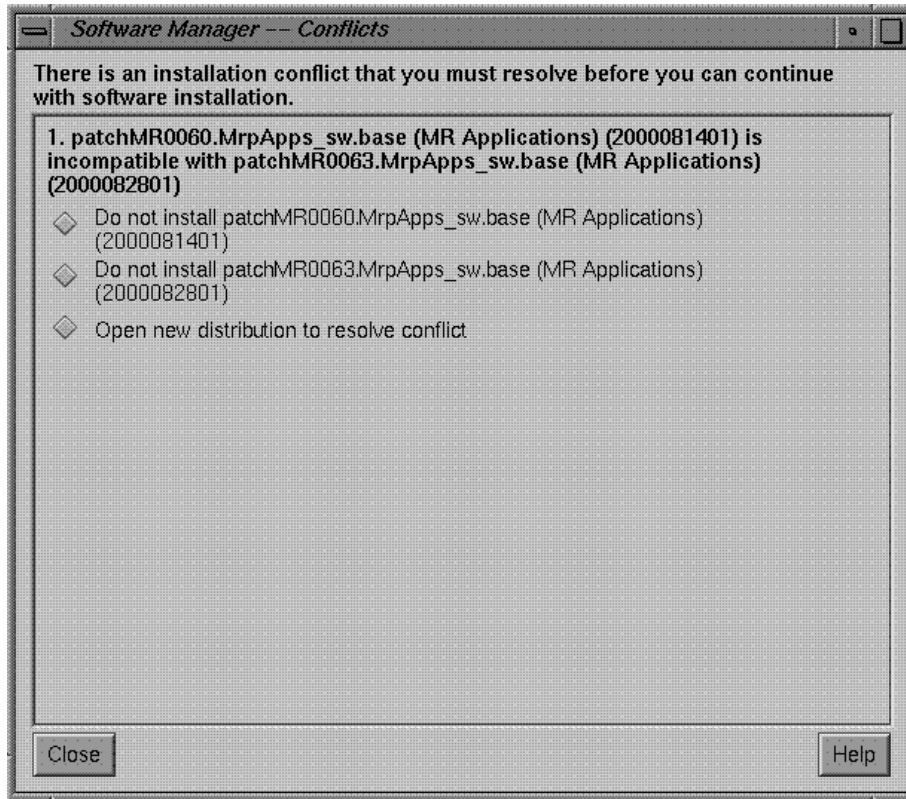
**/CDROM/dist**

6. Push the **[Lookup]** button found to the right of the **[Software Location Edit Window]**. See Illustration 1.
7. Push the **[Customize Installation]** button at the top of the screen. See Illustration 1.



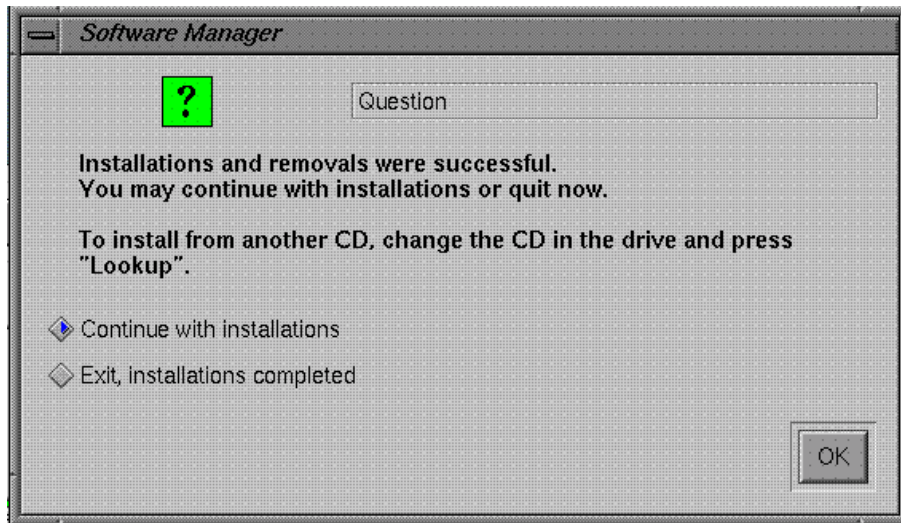
LOADING THE PATCH  
ILLUSTRATION 2

8. All available patches should be visible at this time in the selection window. Any patches that apply to your system and are not loaded will be selected (check marked). It is recommended that all selected patches be loaded, but you can deselect any by clicking the little gray check box at the left of the patch description. See Illustration 2. One of two things will happen next:
  - a. The **[Start]** button will activate (The letters in "Start" will change colors or shades). If the **[Start]** button activates, push it and the patch load will begin. A progress bar will open and count up from 0 to 100%. The load takes less than 2 minutes. When the progress bar goes away, a confirmation window will be displayed. Select **[Exit]** to quit the Software manager.
  - b. After the patch is selected, if there is a problem, the **[Conflicts]** button will activate, (the letters in "Conflicts" change colors or shades). If this happens, this indicates that your system does not need this patch and the indicated patch will not be loaded. Push the **[Conflicts]** to view the error if desired, see Illustration 3 for an example error message. Choose **[Close]** to continue from the Conflicts window.



**WARNING MESSAGE THAT THE SOFTWARE LOADED WILL NOT NEED THE PATCH**  
ILLUSTRATION 3

9. After installation, select **Exit, Installations completed** checkbox, then select **[OK]**. See Illustration 4.



**INSTALLATION DECISION WINDOW**  
ILLUSTRATION 4

10. If a CD ROM was used for the load, in the C Shell type the following to eject the CD-ROM from the drive:

- umount /CDROM <Enter>** (un-mounts the CD from the system)
- eject <Enter>** (opens the CD drawer)

11. Only if the patch was required and loaded, verify it is installed by typing in the C Shell:

**getver <Enter>** You should an entry for each patch loaded as follows:

patchMR0053 is 83.273Q\_M5\_0012.aPa

patchMR0062 is 83.273Q\_M5\_0012.aPd

patchMR0063 is 83.273Q\_M5\_0012.aPd

patchMR0064 is 83.273Q\_M5\_0012.aPd

patchMR0065 is 83.273Q\_M5\_0012.aPd

12. Reboot Signa for the patches to take effect.

## APPENDIX A – LX POST M5 PATCH DESCRIPTIONS

### **patchMR00062 - efgre3d SmartPrep for UCERD receiver selection**

SPR #MRIge61417

**Problem Description:** SmartPrep using efgre3d PSD results in 1 of 4 phased array channels with no signal (just noise). This problem is limited to systems with a UCERD and is caused by incorrect Receiver channel selection.

### **patchMR00063 - Interactive Vascular Imaging (IVI) Slowdown Fix**

SPR #MRIge60914

**Problem Description:** After the 8.3 M5 software upgrade, Interactive Vascular Image (IVI) processing done on the Indigo host computer is much slower (up to twice as slow) as compared to performance with Release 8.2.5 software. There have been complaints of slower IVI performance on Octane also, but not as severe.

### **patchMR00064 - Worklist DICOM dictionary Fix**

SPR #MRIge60049

**Problem Description:** Modality Worklist is not updating patient lists. Error log indicates tag 0040 and element 0007 Worklist information is not being pulled back reliably. The DICOM dictionary (WLDICOM30.bin) is not supporting the following attributes.

1. Scheduled Procedure Description (0040,0007)
2. Recipients of Results (0040,1010)
3. Requested Procedure Comments (0040,1400)
4. Imaging service request comments (0040,2400)

### **patchMR00065 – Fix for Excessive ghosting on FSE scans with TR > 4000**

SPR #MRIge61199

**Problem Description:** With the FSE family of PSDs (fse, fse-xl, ssfse, frfse and 3dfse) a ghost of the CSF can appear in the image when the TR exceeds 4000 ms.

This problem occurs in the 8.3 release because phase correction has been moved to prescan. In Release 8.25 and earlier, phase correction was executed before each pass.

### **patchMR00053 Description**

Patch 00053 loads fixes for the following five issues. The CQA or SPR numbers are given for reference. Patch 00053 was originally distributed with the 8.3 FMI's on CD-ROM 2274462. It is included on the Signa 83 Post M5 Patch 01, 2274462-2, so all 8.3 Post M5 patches are included on one CD-ROM.

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#### **1) LX3/8.3 Sys reboot w/communication loss**

CQA 1001092 (MRlge58318)

**Problem Description:** System intermittently reboots w/ loss of communication to SCSI controller 2 which is the DASM/serial port expansion chain. As a result, customer cannot film. Using scsistat, system does not recognize the DASM or controller 2 chain.

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#### **2) GRX Radial Direction Selection Icon/Pulldown Doesn't Work**

SPR #MRlge59345

**Problem Description:** After entering a specific scan prescription, when Oblique is selected the operator may choose to select radial slices in the GRX window. As part of the radial selection, the direction, CW or CCW should be selectable as a pull down menu, but the pull down menu is missing.

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#### **3) Smartstep causes CERD error on SmartPrep & 8.3 SmartStep sequence will not perform second scan location.**

MRlge59011 & CQA 1001820 (MRlge58957)

**Problem Description:**

a) When this site first had SmartStep installed, with ME1 software, they used it with SmartPrep successfully, many times. After awhile a CERD error started to occur and eventually the CERD error occurred every time that the sequence would change from scanning the mask stage, to the SmartPrep stage of the Arterial phase.

b) SmartStep sequence will not perform second scan location. It will auto prescan. Scanner aborts after moving to second scan location. Scanner error 2234209 "An Unexpected CERD Network packet was received by ASC Data Acquisition during acquisition. The Unexpected opcode is 40117. Internal Software error please retry acquisition." Proc:NSP File : TPS : asc\_asc\_end\_cmmnd Line:796

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#### **4) 8.3\_M4 system crashed upon applications boot**

CQA 1002660 (MRlge59499)

**Problem Description:** The system crashed when booting up applications. The error log indicates the host was shut down due to the failure of WLServer. A large number of database files were in the */usr/g/hisris* directory. Suspect the WLServer failed to initialize due to all of these files.

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## 5) Tracker Problem on Copy/Paste

MRlge59552

**Problem Description:** After loading a 3d Fast TOF protocol with SmartPrep, the tech prescribed a slab from an axial that was part of a 3-plane localizer. She then prescribed the tracker on the sagittal. The series was saved and downloaded. She wanted to change the tracker so she copied/pasted and viewed the protocol. She erased the tracker from the sagittal scan and wanted to prescribe it on the coronal. The line did not appear as expected and it was only a small circle and it could not be moved. She could drop trackers on the sagittal and axial images, but not the coronal.

## 6) MOD Drive not Useable

**Problem Description:** Following the applications software load portion of the 8.3 M5 FMI, a RestoreINFO is done which is followed by an automatic reboot of the Signa System. The system may not recognize the MOD Drive following this or any subsequent reboots. Thus, the MOD drive may not be usable for archive or file saving.

### Symptoms:

**Symptom #1:** Rebooting the system results in an error message "Timeout on adapter 1 Target 4. External scsi device/cable diagnostic failed." The system can still be booted up *from the Startup Screen*. Note: this symptom is identical for systems running 8.3 **M4** or 8.2.5 version software.

**Symptom #2:** Rebooting the system results in an error message "unexpected buss free". The MOD drive will not be useable because the MOD Drive will not be visible to the system. This symptom is unique to systems running 8.3 **M5** version software. To verify whether the MOD Drive is recognized by the system following reboot type: **hinv <Enter>** in a C shell.

The following lines will be part of output if the MOD is recognized by the system:

```
...
Integral SCSI controller 1: Version QL1040B (rev. 2), single ended
CDROM: unit 3 on SCSI controller 1
Optical disk: unit 4 on SCSI controller 1 ← (if this line is not present the MOD Drive is not
recognized by the system)
```

### Root Causes:

**Root Cause #1:** The SCSI timeout errors are caused by the MOD Drive firmware on the affected T5-2600 MOD Drives.

**Root Cause #2:** The MOD drive being unusable is due to the MOD Drive firmware timing problem made worse by an extra SCSI reset added in the boot-up software on 8.3 **M5** version software only.

**Short Term Corrective Action:** The patchMR00053 short term fix removed the additional SCSI reset, so that the MOD drive will remain useable in most cases. **Please note: after installing this patch, the SCSI timeout errors may still be present!** The patch removes the extra SCSI reset that contributed to the system not recognizing the MOD drive.

### Longer Term Corrective Actions:

The T5-2600(\*) Series MOD Patch CD, 2282631 contains a firmware fix that corrects the root cause of the SCSI timeout errors. Refer to Appendix B for more information.

## APPENDIX B – T5-2600(\*) MOD PATCH CD, (PART #2282631)

A separate CD-ROM is available and will initially be delivered with the LX 8.3 Post M5 Patch CD, to provide new firmware for systems with Maxoptix T5-2600 and T5-2600\* series MOD Drives. The installation instructions are listed below and are also contained in a *readme.txt* file on the CD.

### Effectivity:

Patch named patchMR0061 installs upgraded firmware from Maxoptix on T5-2600 and T5-2600 "Star" drives. Upgraded firmware is Version A7.0 for T5-2600 and H4.5 for T5-2600 "Star" drives.

The "Star" T5-2600 has a physical large GRAY button on the front of the drive.  
The Original T5-2600 has a physical smaller BEIGE button on the front of the drive.

### Failure Modes:

T5-2600 Drive Failure Modes (Firmware A6.5):

Problem 1: Message "Unexpected bus FREE" given during boot up of SGI machine.

Problem 2: RESET time becomes excessive and computer fails to detect drive during the boot up probe time of the SCSI bus.

T5-2600 "Star" Drive Failure Modes (Firmware H4.2):

Problem 1: Data transfers of 8MB or greater not correctly recorded on media.

Problem 2: RESET time becomes excessive and computer fails to detect drive during the boot up probe time of the SCSI bus.

Now the patch can be installed with the SGI software manager (swmgr) which installs the patch, updates the software revision and creates backups of the original files. The patch cannot be installed while the customer is up in applications. The system MUST BE IDLE and SHUTDOWN!!!!

### Installation Instructions:

1) From login screen, login as **root**. No application software should be running, it will cause a failure during the install.

2) **cd /usr/g/insite/data <ENTER>**

3) **tar -xvf MODFWpatch.tar <ENTER>**

4) **chmod 555 instpatch <ENTER>**

5) **./instpatch <ENTER>**

6) Wait for completion (may take a few minutes). See more detailed explanation in the Installation Notes, below.

7) To verify firmware version on system, type: **/export/home/sdc/bin/scsistat <Enter>**

Version A7.0 for T5-2600 and H4.5 for T5-2600 "Star" drives.

8) Once a firmware load has been attempted, **getver** will record the patch as installed (even if load was unsuccessful):

Build number for patchMR0061 is <Maxoptix\_firmware\_patch>

9) Reboot.

### Installation Notes:

When installing the patch, the following instructions must be followed:

This operation will download this new firmware into the 'Maxoptix T5-2600' optical disk drive.

PLEASE DO NOT INTERRUPT THIS OPERATION

The drive will indicate its activity by the LED going GREEN, and then ORANGE. There will be a period where the LED will go out. It is NOT done! Please wait. The LED will again go GREEN, and then ORANGE. When this cycle is done, the drive should be ready to be used with the new firmware active. You can confirm the revision of firmware using 'scsistat' program.

Please watch the drive light for completion.

Sleeping for 5 seconds as a guarantee

DONE!!! Thanks for waiting...

Installations and removals were successful.

#### Uninstall:

In the attempt that user is not satisfied with new firmware, or installation of new firmware was not successful, the Maxoptix patch may be uninstalled. To do this, launch Guided Install from the Service Desktop Manager and select the "Install" button. Login to Guided Install as **root**. Select the "patch" tab. Select **patchMR0061** and then select the **[Uninstall]** button, towards the bottom of the screen.

To confirm firmware version, Type: **/export/home/sdc/bin/scsistat <Enter>**. Original version firmware is Version A6.5 for T5-2600 and H4.2 for T5-2600 "Star" drives.

Also verify that the stamp in getver has been removed. Type: **/usr/g/bin/getver** and check to see that Build number for patchMR0061 is <Maxoptix\_firmware\_patch> does not appear.