

SONY

SMO-F561 / RMO-S561

***Magneto-Optical
Disk Drive***

SMO-F561 / RMO-S561 Installation Guide

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Printing History

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Note:

SMO-F561 / RMO-S561 support many kind of MO media, but some operating system cannot support all kind of media. (See appendix; 1-3) Please select proper sector size of the media for each operating system.

Installation Procedure on Windows98/ME

Requirement:

1. SCSI host adapter

SCSI host adapter controls the command and data transfer between MO drive and host computer. (Ex. AHA-2940, AHA-3940 of Adaptec) Windows98/ME supports most of SCSI host adapters.

2. Device driver

Device driver controls MO drive. Windows98/ME encloses the device driver on installation CD-ROM or floppy disk. If you use RMO-S561, we recommend using the "Disk Drive Tune UP™" bundled with RMO-S561.

3. SCSI cable

SCSI cable is used for connecting host adapter and MO drive. Please select proper SCSI cable.

4. Format utility software

Format utility software enables format and partition on the media. Format utility is often supplied with SCSI host adapter (e.g. ASPI manager and ASPI driver for AHA-29xx are provided from Adaptec). If you use RMO-S561, we recommend using the "Disk Drive Tune UP™".

Installation:

1) Connection

- Set the SCSI host adapter into the host computer.
- Attach the MO drive using proper SCSI cable.
- Set proper SCSI ID and termination on the MO drive.

2) Windows Native support

2)-1 Preparation

- Turn on the drive and insert the media.
- Turn on the power of the host system and boot Windows98/ME.

2)-2 To detect the connected hardware

- Click the Start button, point to Setting, a system and boot Windows98/ME.
- Click Add New Hardware icon.
- Follow the instructions on display

2)-3 Format and Label the media

- Double-click My Computer icon to view various drive icons.
- Highlight the Removable drive icon
- Click the File menu, and click Format to initialize and label media.

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3) Install the device driver

3)-1 Preparation

- Turn on the MO drive and host computer.
- Install the device driver on Windows98/ME and reboot the host computer. (Please refer to the user's guide of the Device Driver)

3)-2 Format the media and partition

- Format and make partition on the media by using format utility software, such as "Desk Drive Tune Up™".

Note:

- "Disk Drive Tune UP™" supports all kind of MO media (8.6GB, 9.1GB), but some others format utility software or native Windows98/ME system does not support 4096 Byte/sector media. Please confirm the proper media before using the device driver. If you have any question, please contact your dealer of the device driver. (See appendix: **Table 1**)
- Windows98/ME does not support WORM media.
- Before rebooting a host PC, please don't replace other media of a different sector size.

Installation Procedure on WindowsNT

Requirement:

1. SCSI host adapter

SCSI host adapter controls the command and data transfer between MO drive and host computer. (Ex. AHA-2940, AHA-3940)

2. Device driver

Device driver controls MO drive. WindowsNT include the Device Driver. If you use RMO-S561, we recommend using the "Disk Drive Tune UP™" is bundled with RMO-S561.

3. SCSI cable

SCSI cable is used for connecting host adapter and MO drive. Please select proper SCSI cable.

4. Format Utility software

Format utility software enables format and partition on the media. Format utility is often supplied with SCSI host adapter (e.g. ASPI manager and ASPI driver for AHA-29xx are provided from Adaptec). If you use RMO-S561, we recommend using the "Disk Drive Tune UP™".

Installation:

1) Connection

- Set the SCSI host adapter into the host computer.
- Attach the MO drive using proper SCSI cable.
- Set proper SCSI ID and termination on the MO drive.

2) Windows Native support

2)-1 Preparation

- Turn on the drive and insert the media.
- Turn on the power of the host system and boot WindowsNT.
- Let it Auto configure the hardware.

2)-2 Format the media and partition

- a) Click the Start button, point to Program and click "Administrative Tools".

Click Disk Administrator

- Verify to write signature to the media.
- Highlight the drive to be partitioned.

(Only one partition is available with removal media)

- Click File, then Create Partition
- Choose partition parameters and click OK.
- Close Disk Administrator, and then click Yes to confirm.

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- b) Click Disk Administrator again
 - Highlight the partitioned drive.
 - Click Tool menu, and click Format.
- Choose format type and make volume label name.
- Format the media.
 - Close Disk Administrator.

3) Install the device driver

3)-1 Preparation

- Login WindowsNT as administrator or equivalent.
- Install the device driver on WindowsNT and reboot the host computer. (Please refer to the user's guide of the Device Driver.)

3)-2 Format the media and partition

- Format and make partition on the media by using format utility software, such as "Desk Drive Tune Up™".

Note:

- There are two format types that Disk Administrator of Windows NT supports.
 - 1) FAT16: allows media to be removed easily.
 - 2) NTFS: 'locks' the media into the drive.
- "Disk Drive Tune UP™" supports only FAT16, FAT32 and UDF file system. If you want to use NTFS file system, please use disk administrator after login as administrator.
- "Disk Drive Tune UP™" supports all kind of MO media (8.6GB, 9.1GB), but some others format utility software do not support 8.6GB and 9.1GB media. Please confirm the proper media before using the device driver. If you have any question, please contact your dealer of the device driver. (See appendix: **Table 1**)
- Windows NT does not support WORM media.
- Before rebooting a host PC, please don't replace other media of a different sector size.

Installation Procedure on Windows2000/XP

Requirement:

1. SCSI host adapter

SCSI host adapter controls the command and data transfer between MO drive and host computer. (Ex. AHA-2940, AHA-3940)

2. Device driver

Device driver controls MO drive. Windows2000/XP includes the Device Driver as a default setting. If you use RMO-S561, we recommend using the "Disk Drive Tune UP™", bundled with RMO-S561.

3. SCSI cable

SCSI cable is used for connecting host adapter and MO drive. Please select proper SCSI cable.

4. Format Utility software

Format utility software enables format and partition on the media. Format utility is often supplied with SCSI host adapter (e.g. ASPI manager and ASPI driver for AHA-29xx are provided from Adaptec). If you use RMO-S561, we recommend using the "Disk Drive Tune UP™".

Installation:

1) Connection

- Set the SCSI host adapter into the host computer.
- Attach the MO drive using proper SCSI cable.
- Set proper SCSI ID and termination on the MO drive.

2) Windows Native support

2)-1 Preparation

- Turn on the drive and insert the media.
- Turn on the power of the host system and boot Windows2000/XP.
- Let it Auto configure the hardware.

2)-2 Format the media

Right-click the My computer icon on the Windows desktop, and click "Manage".
Click the Disk management.

- Right-click Removable drive icon, and click Format
- Choose format type and make volume label name.
- Format the media.
 - Close Disk management.

2)-3 Create partition on the media

Windows2000/XP does not create partitions on removable media devices. If you want to create partitions, we recommend using the “Disk Drive Tune UP™”.

3) Install the device driver

3)-1 Preparation

- Login Windows2000/XP as administrator.
- Install the device driver on Windows2000/XP and reboot the host computer. (Please refer to the user’s guide of the Device Driver)

3)-2 Format the media and partition

- Format and make partition on the media by using format utility software, such as “Desk Drive Tune Up™”.

Note:

- There are two format types that Disk Administrator of Windows2000/XP supports.
 - 1) FAT16 / 32: allows media to be removed easily.
 - 2) NTFS: ‘locks’ the media into the drive.
- “Disk Drive Tune UP™” supports only FAT16, FAT32 and UDF file system. If you want to use NTFS file system, please use disk administrator after login as administrator or equivalent.
- “Disk Drive Tune UP™” supports all kind of MO media (8.6GB, 9.1GB), but some others format utility software do not support 8.6GB and 9.1GB media. Windows2000 needs to install “Service pack 3” to support 4096 Byte/sector media. Please confirm the proper media before using the device driver. If you have any question, please contact your dealer of the device driver provider.
- Windows2000/XP does not support WORM media.
- Before rebooting a host PC, please don’t replace other media of a different sector size.

Installation Procedure on SUN System

Test equipment:

The following procedure was confirmed with the following system and drive combination:

Host:	SUN SPARC station 20
OS:	Solaris 2.5.1, 2.6, 7
Target:	RMO-S561
	- 512 byte/sector media is used.

Since the SCSI driver "sd" which comes with the SUN's UNIX system is for device type 0 (see page 10 and 11), the cases with device type 7 or more than 512 bytes/sector media are not supported.

Installation:

1) Connection

- Set the SCSI host adapter into the host computer using proper SCSI cable.
- Set proper SCSI ID on the MO drive.
- Set proper termination.
- Set the Device Type 0.

2) Login

- Turn on the MO drive and the host computer.
- Interrupting the boot process and run a Reconfiguration Boot with "boot-r" command.
- Login as a super user.

3) Format and partition

To make a disk accessible, perform the following three command:

- 'format': to format media.
- 'newfs': to make UFS file system.
- 'mount': to mount media.

Note:

- SUN System supports only 512 byte/sector MO media as its native support, If you would like using 1024 byte/sector, 2048 byte/sector, or 4096 byte/sector media, please use proper device driver software for SUN system.

Installation Procedure on SUN System

Test equipment:

The following procedure was confirmed with the following system and drive combination:

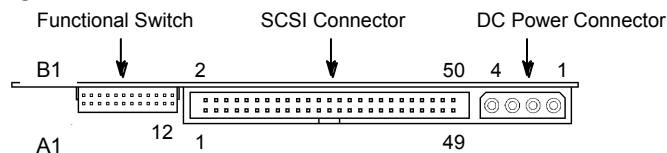
Host: SUN ULTRA SPARC 30
OS: Solaris 8, 9
Target: SMO-F561
- Device type is set to 0
- 512 byte/sector media is used.

Installation:

1) Setting the MO drive

- Set the SCSI host adapter into the host computer using proper SCSI cable.
- Set proper SCSI ID on the MO drive. (This example case ID is set 4)
- Set proper termination.
- Set the Device Type 0. (Enable auto configuration for format.)

Rear Panel



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Functional Switch Connector Pin Assignments

A1	SCSI ID2	B1	GND
A2	SCSI ID1	B2	GND
A3	SCSI ID0	B3	GND
A4	Disable SCSI Parity	B4	GND
A5	Disable Write Cache	B5	Reserved
A6	Disable Auto Spin-up	B6	Reserved
A7	Force Verify for Write command	B7	Reserved
A8	Disable Manual Eject	B8	Reserved
A9	Enable Ultra SCSI	B9	Reserved
A10	Device Type	B10	Reserved
A11	Enable Termination	B11	GND
A12	Terminator Power	B12	Terminator Power Source

SCSI ID Setting

SCSI ID	Connector Pin		
	A1/B1	A2/B2	A3/B3
0	OFF	OFF	OFF
1	OFF	OFF	ON
2	OFF	ON	OFF
3	OFF	ON	ON
4	ON	OFF	OFF
5	ON	OFF	ON
6	ON	ON	OFF
7	ON	ON	ON

2) Automatically Configure the MO Drive

1. Become superuser or equivalent role.

2. Create the /reconfigure file that will be read when the system is booted.

touch /reconfigure

3. Shut down the system.

shutdown -i0 -gn -y

-in Brings the system down to init level 0, the power-down state.

-g30 Notifies logged-in users that they have n seconds before the system begins to shut down.

-y Specifies that the command should run without user intervention.

The **ok** prompt is displayed after the system is shut down.

4. Turn off the power to the system and all external peripheral devices.

5. Make sure that the disk you are adding has a different target number than the other devices on the system.

(This example case ID is set 4)

6. Turn on the power to the MO drive.

7. Turn on the power to the system.

The system boots and displays the login prompt.

8. Log back in as superuser or assume an equivalent role.

3) Format and allocate slices on the media

1. Stop Volume Management * 1 (two methods A and B are available)

A Stop volume management temporary.

- a. Become superuser.
- b. Enter the volmgt stop command.

/etc/init.d/volmgt stop

B Access MO drive, Jaz, and Zip drives without using volume management permanently.

Comment the following line in the **/etc/vold.conf** file by inserting a pound (#) sign at the beginning of the text, like this:

use rmdisk drive /dev/rdisk/c*s2 dev_rmdisk.so rmdisk%d

Note; method A is recommended

*** 1,** volume manager (vold) actively manages all removable media devices since the Solaris 8 6/00 release.

(For more information on removable media with volume management, see “chapter 17 Managing Removable Media” in System Administration Guide Basic Administration.)

However, there are some restrictions on volume management in case of using MO drive as follows;

Cannot execute format command unless stop volume management.

Cannot make file system on the media unless stop volume management.

2. Format the Media

a) Invoke the format utility with option -e * 2

format -e

b) Select the disk that you want to configure automatically.

*** 2** format option **-e**: enable SCSI expert menu. Removal media devices are listed only when users execute format in expert mode. This option is not recommended for casual use.

Warning – Do not use the format window that comes from file manager automatically, when the unformatted media is inserted before volume management shutdown.

Caution – Be sure you have specified the correct device name before performing this step.

Example—Formatting a Disk

The following example shows how to format the disk c0t2d0.

```
-----  
-  
AVAILABLE DISK SELECTIONS:  
  0. c0t0d0 <SUN4.2G cyl 3880 alt 2 hd 16 sec 135>  
    /pci@1f,4000/scsi@3/sd@0,0  
  1. c0t2d0 <SONY-SMO-F561-1.07 cyl 5705 alt 2 hd 32 sec 48>  
    /pci@1f,4000/scsi@3/sd@2,0  
Specify disk (enter its number): 1  
AVAILABLE DRIVE TYPES:  
  0. Auto configure  
  1. Quantum ProDrive 80S  
  2. Quantum ProDrive 105S  
    |  
 18. SUN4.2G  
 19. other  
Specify disk type (enter its number): 0 * 3  
Auto configuration via format.dat[no]? n  
Auto configuration via generic SCSI-2[no]? y  
c0t2d0: configured with capacity of 1.89GB  
<SONY-SMO-F561-1.07 cyl 5705 alt 2 hd 32 sec 48>  
selecting c0t2d0  
[disk formatted]  
-----
```

```
-  
* 3   SCSI-2 drives do not require a format.dat entry. The format utility automatically  
      configures the SCSI-2 drivers if the drives are powered on during a reconfiguration  
      boot.
```

3. Create the appropriate disk slices.

c) Select the partition menu.

format > partition

d) Display the slice information for the current disk drive.

partition > print

e) Divide the media into slices. * 4

Select the partition table you want to modify, and re-create slices.

- * 4 Because volume management's format utility allocates 2 slices such as slice 0 and slice 2 on the new removal media before format slice 0 as a default setting, if you want to use the volume management to mount and access the media automatically after created file system on the MO media, the following sample slice form is recommended.

Sample-slices form for MO media.

-

Part	Tag	Flag	Cylinders	Size	Blocks
0	root	wm	0 - 5704	4.81GB	(5705/0/0) 8762880
1	unassigned	wu	0	0	(0/0/0) 0
2	backup	wu	0 - 5704	4.81GB	(5705/0/0) 8762880
3	unassigned	wm	0	0	(0/0/0) 0
4	unassigned	wm	0	0	(0/0/0) 0
5	unassigned	wm	0	0	(0/0/0) 0
6	unassigned	wm	0	0	(0/0/0) 0
7	unassigned	wm	0	0	(0/0/0) 0

4. Label the media and exit the format menu.

f) Label the media with the new partition table after you have finished allocating slices on the new media.

partition > label

Ready to label disk, continue? Yes

g) Quit the partition menu.

partition> quit

h) Verify the disk label.

format> verify

i) Exit the format menu.

format> quit

4) Create a File System

a) Create a UFS File System

1. If you are re-creating an existing UFS file system, unmount it.

2. Create the UFS file system.

newfs [-N] [-b size] [-i bytes] /dev/rdisk/device-name

-b ---- size Specifies the block size for the file system, either 4096 or 8192 bytes per block. The default is 8192.

-i ----- bytes Specifies the number of bytes per inode. The default varies depending on the disk size.

Caution – Be sure you have specified the correct device name for the slice before performing this step.

Example—Creating a UFS File System

The following example shows how to create a UFS file system on /dev/rdisk/c0t2d0s0.

```
# newfs /dev/dsk/c0t2d0s0
newfs: /dev/rdisk/c0t2d0s0 last mounted as /rmdisk/unnamed_rmdisk
newfs: construct a new file system /dev/rdisk/c0t2d0s0: (y/n)? y
/dev/rdisk/c0t2d0s0:      8237568 sectors in 5363 cylinders of 32 tracks, 48 sectors
                      4022.2MB in 87 cyl groups (62 c/g, 46.50MB/g, 5888 i/g)
super-block backups (for fsck -F ufs -o b=#) at:
 32, 95312, 190592, 285872, 381152, 476432, 571712, 666992, 762272, 857552,
 952832, 1048112, 1143392, 1238672, 1333952, 1429232, 1524512, 1619792,
 1715072, 1810352, 1905632, 2000912, 2096192, 2191472, 2286752, 2382032,
 2477312, 2572592, 2667872, 2763152, 2858432, 2953712, 3047456, 3142736,
 3238016, 3333296, 3428576, 3523856, 3619136, 3714416, 3809696, 3904976,
 4000256, 4095536, 4190816, 4286096, 4381376, 4476656, 4571936, 4667216,
 4762496, 4857776, 4953056, 5048336, 5143616, 5238896, 5334176, 5429456,
 5524736, 5620016, 5715296, 5810576, 5905856, 6001136, 6094880, 6190160,
 6285440, 6380720, 6476000, 6571280, 6666560, 6761840, 6857120, 6952400,
 7047680, 7142960, 7238240, 7333520, 7428800, 7524080, 7619360, 7714640,
 7809920, 7905200, 8000480, 8095760, 8191040,,,,
#
```

b) Create a UDF File System

1. If you are re-creating an existing UFS file system, unmount it.

2. Create the UFS file system.

```
# mkfs -F udfs device-name
```

Example—Creating a UDF File System

The following example shows how to create a UDF file system on `/dev/rdisk/c0t2d0s0`.

```
# mkfs -F udfs /dev/rdisk/c0t2d0s0
```

c) Create a PCFS File System

1. Create a PCFS file system with fdisk partition is recommended.

```
# fdisk /dev/rdisk/ device-name
```

```
# mkfs -F pcfs /dev/rdisk/ device-name
```

Note; using Windows system to make FAT system on the media is strongly recommended, since this step requires specific information that we can't figure it out yet.

5) Mount a File System

After any file system created on the media, MO drive can take advantage of the volume management improvements as follows;

- . mounting removable media automatically.
- . It enables you to access removable media without having to become superuser.
- . It allows you to give other systems on the network automatic access to any removable media on your local system

You can choose between manual mounting (without volume management) and automatic mounting (with volume management) of the media.

A) Manual Mounting

1. Create a mount point for the file system to be mounted, if necessary.

```
# mkdir /mount-point
```

There must be a mount point on the local system to mount a file system. A mount point is a directory to which the mounted file system is attached.

2. Mount the file system.

```
# mount [-o mount-options] /dev/dsk/device-name /mount-point
```

-o mount-options Specifies mount options that you can use to mount a UFS file

system. Or /dev/dsk/device-name Specifies the disk device name for the slice that contains the file system (for example, /dev/dsk/c0t2d0s0).

Example—Mounting a UFS File System (mount Command)

The following example shows how to mount /dev/dsk/c0t2d0s0 on the /files1 directory.

```
# mount /dev/dsk/c0t2d0s0 /files1
```

Unmount the file system

```
# umount /mount-point
```

B) Automatic Mounting

1. Restart Volume Management (vold)

1. Enter the volmgt start command.

```
# /etc/init.d/volmgt start
```

volume management starting.

2. Volume manager (vold) automatically mounting the media after a few seconds.

2. Access Information on the Media by using the File Manager or using following commands.

1. List the contents of the media to confirm the media is mounted

```
#ls /rmdisk
```

2. Access File Systems with the path of

```
# /rmdisk/rmdiskn.
```

Or access the raw data with the path of

```
# /vol/dev/aliases/rmdiskn
```

Note; This means any attempt to access removable media with device names such as /dev/rdisk/cntndnsn or /dev/dsk/cntndnsn will be unsuccessful.

3. Eject Removable Media

1. Make sure the media is not being used.

Remember, media is “being used” if a shell or an application is accessing any of its files or directories.

2. Eject the media.

eject rmdisk

Note:

- SUN System supports only 512 byte/sector MO media; you can use 2.3GB and 4.1GB media. If you would like using 1024 byte/sector or 2048 byte/sector media, please use proper device driver software for SUN system.

Installation Procedure on Silicon Graphics Systems

Test equipment:

The following procedure was confirmed with the following system and drive combination:

Host:	SGI O2 R5000, R10000, Indy
OS:	IRIX6.3 for O2, IRIX6.5 for Indy
Target:	RMO-S561

Installation:

1) Connection

- Attach the drive to the host using a proper SCSI cable.
- Set the Device Type 0 or 7.
- Set proper SCSI ID on the MO drive. (In this case, SCSI ID = 4)
- Set proper termination.

Note: The SCSI ID number should be unique for each SCSI devices. The "hinv" command in the maintenance mode of the SGI workstation is useful to determine SCSI ID numbers.

2) Login

- Turn on the MO drive and host computer.
- Log in as root.
- Confirm the connection of MO drive and UNIX Workstation with following command.

```
Port2# #hinv -c scsi
```

```
(Monitor display example) Optical disk : unit 4 on SCSI controller 1
```

3) Media Initialization

- Launch the Unix Shell and insert a cartridge into the drive
- Enter "fx-x" at the Unix Shell prompt

Format the media with following commands.

```
port0 3# fx -x [enter]
fx version 6.3, July xx, 1998
fx: "device name" = (dksc) [enter]
fx: ctlr# = (0) 1 [enter]
fx: drive# = (1) 4 [enter]
fx: lun# = (0)
..... . opening dksc (1,4,0)
... controller test. . . OK
.
.
```

```

.
.

---- please choose one (? for help, .. to quit this menu)----
[exi]t          [d]ebug/        [l]abel/        [a]uto
[b]adblock/    [exe]rcise/    [r]epartition/  [f]ormat
fx> f
fx/format: drive parameter to usr in formatting = (current) [enter]
*****WARNING*****
about to destroy data on disk dksc(1,4)! Ok? Yes [enter]
.
.

```

4) Repartition the media

Repartition the media from “root drive” to “option drive” with following commands.

```

---- please choose one (? for help, .. to quit this menu)----
[exi]t          [d]ebug/        [l]abel/        [a]uto
[b]adblock/    [exe]rcise/    [r]epartition/  [f]ormat
fx> r [enter]

---- partitions-----
part  type      cyls          blocks          Megabytes  (base+size)
  0:  xfs        6 + 7243      3072 + 3708416  1 + 1811
  1:  raw        7249 + 512    3711488 + 262144 1812 + 128
  8:  volhdr     0 + 6         0 + 3072        0 + 1
 10:  volume     0 + 7761      0 + 3973632    0 + 1940
capacity is 3973952 blocks

```

```

---- please choose one (? for help, .. to quit this menu)----
[ro]otdrive    [o]ptiondrive  [e]xpert
[u]srrootdrive [re]size
fx/repartition> o [enter]

fx/repartition/optiondrive: type of data partition = (xfs) [enter]
fx/repartition/optiondrive: create usr log partition? = (yes) [enter]

```

Warning: You will need to re-install all software and restore user data from backups after changing the partition layout.

Changing partitions will cause all data on the drive to be lost.

Be sure you have the drive backed up if it contains any user data.

Continue? **Yes [enter]**

Can't get drive geometry, assuming 64 sectors/track

Can't get drive geometry, assuming 8 heads

Unable to get device geometry, assuming default

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----- partitions-----

part	type	cyls	blocks	Megabytes	(base+size)
7:	xfs	6 + 7738	3072 + 3961856	1 + 1934	
8:	volhd	0 + 6	0 + 3072	0 + 1	
10:	volume	0 + 7761	0 + 3973632	0 + 1940	
15:	xfslog	7744+17	3964928 + 8704	1936 + 4	

capacity is 3973952 blocks

----- please choose one (? for help, .. to quit this menu)-----

[ro]otdrive [o]ptiondrive [e]xpert
[u]srrootdrive [re]size
fx/repartition> ..

5) Confirm the partition

Confirm the partition with following commands.

----- please choose one (? for help, .. to quit this menu)-----

[exi]t [d]ebug/ [l]abel/ [a]uto
[b]adblock/ [exe]rcise/ [r]epartition/ [f]ormat
fx> I [enter]

----- please choose one (? for help, .. to quit this menu)-----

[sh]ow/ [sy]nc [se]t/ [c]reate/
fx/label> sh [enter]

----- please choose one (? for help, .. to quit this menu)-----

[para]meters [part]itions [b]ootinfo [a]ll
[g]eometry [s]giinfo [d]irectory
fx/label/show> para [enter]

----- please choose one (? for help, .. to quit this menu)-----

[para]meters [part]itions [b]ootinfo [a]ll
[g]eometry [s]giinfo [d]irectory
fx/label/show> part [enter]

----- partitions-----

part	type	cyls	blocks	Megabytes	(base+size)
7:	xfs	6 + 7738	3072 + 3961856	1 + 1934	
8:	volhd	0 + 6	0 + 3072	0 + 1	
10:	volume	0 + 7761	0 + 3973632	0 + 1940	
15:	xfslog	7744+17	3964928 + 8704	1936 + 4	

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---- please choose one (? for help, .. to quit this menu)----

[p]arameters [p]artitions [b]ootinfo [a]ll
[g]eometry [s]giinfo [d]irectory
fx/label/show> .. [enter]

---- please choose one (? for help, .. to quit this menu)----

[s]how/ [s]ync [s]et/ [c]reate/
fx/label> .. [enter]

---- please choose one (? for help, .. to quit this menu)----

[e]xit [d]ebug/ [l]abel/ [a]uto
[b]adblock/ [e]xercise/ [r]epartition/ [f]ormat
fx> exit [enter]

6) Make a file system

Make a file system with following command.

port0 7# mkfs /dev/rdisk/dks1d4s7 [enter]

meta-data=/dev/rdisk/dks1d4s7	isize=256	agcount=8, agsize=61904 blks
data =	bsize=4096	blocks=495232, imaxpct=25
log =internal log	bsize=4096	blocks=1000
realtime =none	extsz=65536	blocks=0, rtextents=0

7) Mount the media

Mount the media and confirm the result.

(# **mkdir /mo [enter]** ← create mount point)

port0 8# mount /dev/dsk/dks1d4s7 /mo [enter]

port0 9# df /mo [enter]

File system	Type	blocks	use	avail	%use	Mounted on
/dev/dsk/dks1d4s0	xf	3700416	288	3700128	1	/mo

Note:

Do not use eject button, eject is available even media is mounted if **mediad** has no set. SGI system supports only 512 Byte/sector MO media, 1024, 2048, 4096 Byte/sector are not available.

Installation Procedure on HP Systems

Test equipment:

The following procedure was confirmed with the following system and drive combination:

UNIX Workstation:	HP9000/778
OS:	HP-UX B.11.00
Target:	RMO-S561
Test Media	512 byte/sec (9.1GB), 1024 byte/sec (9.1GB), 2048 byte/sec (8.6GB)
Peripheral Device type=	7

Installation:

1) Connection

- Connect MO drive and UNIX Workstation using proper SCSI cable.
- Set proper SCSI ID on the MO drive.
- Set proper termination.

2) Login

- Turn on the MO drive then the host computer, and insert a cartridge into the drive.
- Login as root.

3) Start SAM

sam &

4) Double click Discs and File Systems

5) Double click Disc Device

6) Highlight MO drive from Disk Device list

7) Select “configure” from Action bar and select “Using The Logical Volume Manager”

8) Select “A New Volume Group” and click OK

9) Click New Volume Group Name

Follow these steps to set up.

- Type New Volume Group Name and click OK
- Modify Default Volume Group Options allows changing following items.
 - Maximum Physical Extents
 - Maximum Logical Volumes
 - Maximum Physical Volumes
 - Physical Extents Size
- Make sure that MO drive is selected using Configure disk, and click OK.

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- Set up following items with “Define New Logical Volumes#.”
 - LV Name
 - LV size (multi-partitions are available depends on setting)
 - Mount directory
 - FSType (VxFS, HFS)
 - Access (Read/Write, Read only)
 - When to mount (Now, Every System boots)
 - VxFS option (Full Integrity for critical Metadata)
(Full Integrity for all Metadata)
- *Click Add to complete setting.

10) Click OK in the bottom left of the screen.

11) Exit “Define New Logical Volumes“and click Yes to save changes.

* After exit it shifts to mount immediately if “When to mount” is checked.

Installation Procedure on SCO Systems

Test equipment:

The following procedure was confirmed with the following system and drive combination:

Host:	PC-UNIX_SCO
OS:	UnixWare 2.1, UnixWare 7
Target:	RMO-S561

Installation:

1) Hardware Installation

- Attach the drive to the system using a SCSI cable.
- Set proper SCSI ID and termination.
- Set proper Functional Switch.

Note: Device type; Direct Memory Access Device Placing a jumper socket over the desired pair of pins A10/B10 turn "Direct Memory Access Device" function ON. (Please refer to Page 10-11)

- Turn on the drive and insert the media.

2) Turn on the power of the host system

3) Using "diskadd" command to mount the disk on the system

Note: The "diskadd" command is the type of conversation command. So it asks you some questions of to need the information under operation. Please refer to the online manual of UNIX_SCO on detail.

4) To unmount disk on the system

Note: It needs to operate the "umount " before the eject of MO media.

Appendix

Table1. Windows-compatible

OS	Windows 98/ME	Windows NT	Windows2000*1 /XP	Windows2000*1 /XP
Format file system	FAT16/32	FAT16/NTFS	FAT16/32	NTFS
9.1 GB media 512 Byte/sector	yes	yes	yes	yes
9.1 GB media 1024 Byte/sector	yes	yes	yes	yes
8.6GB media 2048 Byte/sector	yes	yes	yes	yes
9.1 GB media 4096 Byte/sector	yes	yes	yes	yes

*1: install windows 2000 service pack larger than 3.0 to support 4096 byte/sector sized media.

Table2. Solaris-compatible

Solaris OS	2.5.1	2.6	7	8	9
9.1GB media 512 Byte/sector	yes	yes	yes	yes	yes
9.1 GB media 1024 Byte/sector	x	x	x	x	x
8.6GB media 2048 Byte/sector	x	x	x	x	x
9.1 GB media 4096 Byte/sector	x	x	x	x	x

Table3. UNIX-compatible

OS	SGI Systems	HP Systems	SCO Systems
512byte/sector media	O	O	O
1024 Byte/sector	X	O	X
2048 Byte/sector	X	O	X

Table4. Media series

Capacity	Product Name	Sector Size
9.1GB	EM5-9100	512 Byte/sector
9.1GB	EM1-9100	1024 Byte/sector
8.6GB	EDM-8600	2048 Byte/sector
9.1GB	EDM-9100	4096 Byte/sector