

INTRODUCTION

This Instruction Sheet is intended for use by the System Manager or other computer operations personnel. It tells you:

- the differences between the 8560 and the 8561;
- how to create a backup of the 8561; and
- how to reinitialize TNIX and reload software from backups (performing a system generation).

NOTE

This Instruction Sheet assumes that your 8561 has been properly installed, as described in the 8560/8561 MUSDU Installation Guide. This Instruction Sheet also assumes that you are familiar with the 8561's TNIX operating system, as described in the 8560 MUSDU System Users Manual and 8560 MUSDU System Reference Manual.

8560/8561 DIFFERENCES

Table 1 summarizes differences between the 8560 and 8561. (There are two versions of the 8560, distinguished by serial number.)

Table 1
8560/8561 Differences

	8560 SN B039999 & below	8560 SN B040000 & up	8561
Internal disk mass storage capacity	35.6M bytes	35.6M bytes	13.6M bytes (35.6M bytes optional)
External disk(s) mass storage capacity (8503 Disk Expansion Units)	up to 106.8M bytes (35.6M bytes/disk)	up to 106.8M bytes (35.6M bytes/disk)	up to 106.8M bytes (35.6M bytes/disk) with the 35.6M byte option
Maximum system memory	256K-bytes	1024K-bytes	1024K-bytes
Disc Controller	PMS	LASPMS	LASPMS
Number of users supported	4 (8 optional)	4 (8 optional)	2 (4 or 8 optional)

HOW TO PERFORM A BACKUP ON THE 8561

When you first receive your 8561, you must:

1. install it,
2. verify that it is operating correctly, and
3. create a full backup of the 8561.

The first two steps are described in your 8560/8561 MUSDU Installation Guide. This procedure tells how to create a full backup of the 8561.

1. Log into the "root" account on the system console:

```
login: root
      [you may be asked for a password]
```

2. Make sure that you are the only person logged into your 8561.

3. Determine how many formatted, double-density, double-sided flexible disks you will need in order to perform a full backup of your 8561. To do this, open the flexible disk drive's door, then enter the following `dump` command to determine how many disks you will need:

```
# dump 0 /dev/rhd0
```

```
[ several messages are displayed before dump
  prints the following message ]
```

```
dump: estimated 16259 blocks on 9 volume(s)
```

```
[ according to this example, you should have
  9 formatted disks available before
  starting the backup procedure ]
```

```
.
.
.
```

```
[ several error messages are displayed because the
  flexible disk drive door is open ]
```

(To format a flexible disk, cover the disk's write-protect slot, insert the disk into the disk drive, then type the `format` command.)

4. To start the backup procedure, insert a formatted disk into the disk drive, then type the following command:

```
# dump 0u /dev/rhd0
```

The `dump` command will guide you through the backup process, asking you to insert new disks into the disk drive when necessary. If an additional disk is necessary, `dump` prints the following message:

```
dump: change volumes, current inode = XXX
      [ XXX is the starting inode number
        of the next volume. ]
```

Before inserting the new disk into the disk drive, label it with the following information:

- date
- dump level (0)
- volume number (the first disk is volume 1, the second is volume 2, and so on)
- starting inode number (the starting inode number for volume 1 is "0")

Once you have labeled the disk with the above information, insert it into the disk drive, close the drive's door, then press the RETURN key.

HOW TO REINITIALIZE TNIX AND RELOAD SOFTWARE FROM BACKUPS

This procedure tells how to:

- reinitialize TNIX for an 8561 with a 13.6M-byte internal disk; and
- reload software from backups or from the Tektronix-supplied distribution disks.

NOTE

If the disk capacity of your 8561's internal disk is 35.6M bytes, do NOT perform this procedure. Instead, perform the "System Generation" procedure described in the System Maintenance section of your 8560 MUSDU System Users Manual.

Perform this procedure only when it is not possible to recover from a serious system crash. (Normally, the stand-alone syschk program can repair most file-related problems that can cause a system crash.)

1. Insert the Standalone Utilities Disk into the flexible disk drive and close the drive's door.
2. Make sure that the DC and AC POWER switches are in the ON position.
3. Move the RUN/HALT switch to the RUN position.
4. Toggle the RESTART switch. Within one minute, the following message appears on the system console:

fbr filename to boot> *

FORMAT
* ~~RESTART~~ LCR7
O LCR7

5. Execute the stand-alone mkboot command:

fbr filename to boot> mkboot
boot successfully copied
Exit called

6. Execute the stand-alone mkfs command:

fbr filename to boot> mkfs
mkfs arguments: 24360
mkfs: isize = 7792
Exit called

7. Execute the stand-alone restor command:

```
fbr filename to boot> restor <CR>
```

```
restor arguments: <CR>
```

```
[ When restor asks you to "Mount volume 1",
  remove the Standalone Utilities Disk from the
  disk drive, insert volume 1 of your most recent
  level-0 dump into the disk drive, then press
  the RETURN key. (If you do not have a level-0
  dump of your system, use the Tektronix-supplied
  distribution disks instead.)]
```

```
restor: Mount volume 1 <CR>
```

```
.
.
.
```

When restor finishes copying all files from volume 1 of the dump set to your root filesystem, it asks you to mount the next volume of the dump set (if there is another volume in the dump set). Insert the specified volume into the disk drive, then press the RETURN key. When restor finishes copying all files in the dump set to your root filesystem, the following message is displayed on your terminal:

```
restor: end of dump
Exit called
```

goto → 10

*for basic
set of UNIX
system discs*

8.

NOTE

Perform this step ONLY if you are restoring your system from a level-0 dump of your system instead of the Tektronix-supplied distribution disks.

If you (or someone else on your staff) have been making incremental backups, perform the following steps:

- a. Restore the lowest-level incremental backup that is more recent than the level-0 backup. For example, if level 1, 2, and 3 backups have been performed since the latest level-0 backup, restore the most recent level-1 backup. (Refer back to step 7 for details.)
- b. Restore the next-higher-level incremental backup that is more recent than the previous incremental backup restored. Repeat this step until all incremental backups that meet this condition have been restored.

The following algorithm shows how to perform a restore operation involving one level-0 backup and one or more incremental (levels 1--9) backup sets:

```

level := 0;
restore(level);
last_level := level;

for level := 1 to 9 do
  begin
    if (date_of(level) > date_of(last_level)) then
      begin
        restore(level);
        last_level := level;
      end
    end
  end
end

```

9. Reinsert the Standalone Utilities Disk back into the disk drive, close the drive's door, then toggle the RESTART switch.
- 10.

NOTE

Perform this step **ONLY** if you are restoring your system from the Tektronix-supplied distribution disks instead of a level-0 dump of your system.

Execute the `cvt` command:

```

fbr filename to boot> cvt <CR>
cvt arguments: -w <CR>
swplo 24360 <CR>
swplo 24360
nswap 2250 <CR>
nswap 2250
^D      [type a CTRL-D]
system has XXX bytes left
Exit called

```

11. Execute the `syschk` command:

```

fbr filename to boot> syschk
syschk arguments: -bw

```

12. Remove the Standalone Utilities Disk from the disk drive, then toggle the RESTART switch.

13.

NOTE

Perform the following steps ONLY if you are restoring your system from the Tektronix-supplied distribution disks instead of a level-0 dump of your system.

Put the 8561 into single-user mode by typing "y" when the following message is displayed:

Do you want to remain single-user (y or n)? y

14. Examine the /etc/ttys file and see if the number of lines in the /etc/ttys file corresponds to the number of HSI ports on your 8561. For example, if your 8561 has two HSI ports, the /etc/ttys file should contain two lines similar to the following lines (the first two characters of each line may differ):

```
12tty0
12tty1
```

If there are two HSI ports on your 8561, type:

```
# cp /etc/ttys2 /etc/ttys
```

When you have ensured that the number of HSI ports on your 8561 corresponds to the contents of the /etc/ttys file, resume normal operations:

- a. Type CTRL-D
- b. Put the 8561 into multi-user mode by typing "n" when the following message is displayed:

Do you want to remain single-user (y or n)? n

MANUAL CHANGE INFORMATION

At Tektronix, we continually strive to keep up with latest electronic developments by adding circuit and component improvements to our instruments as soon as they are developed and tested.

Sometimes, due to printing and shipping requirements, we can't get these changes immediately into printed manuals. Hence, your manual may contain new change information on following pages.

A single change may affect several sections. Since the change information sheets are carried in the manual until all changes are permanently entered, some duplication may occur. If no such change pages appear following this page, your manual is correct as printed.