

SPC
20 MB Hard Disk

1-800-345-0824

Important:

Tecmar users change -P2 to -P4 in Autoexecbat.file.

Racore users change the memory base address jumper on J1 on the circuit board inside the sidecar to CC000 from C8000. This is discussed on page 35 of your Racore manual. If you don't have the manual, simply move the plastic jumper from the front two pins to the rear two.

Quadram users same as Racore.

Hotshot users may have a problem, call SPC for solution. (Only if you have a clock/calendar.)

Do not add the Turbo Nickel Express with Hotshot and SPC Diskitjr. You may blow your power supply. Check with SPC first.

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Installation Instructions for the SPC Diskitjr

Hard Drive System

Attach the sidcar containing the hard disk controller as per standard procedure. DO NOT overtighten the four brass screws. Press on the black plastic connectors at the rear of the sidcar to insure that the two cables are secure.

Power up the Diskitjr first and then the PCjr. You should be able to hear the disk drive spinning at a constant velocity after about 10 seconds. If the drive stops for any reason while power is on, call SPC immediately.

Create a bootable floppy (if one is not already available) and copy the files from the SPC Master disk to it. If you have a file called CONFIG.SYS it will be over-written. You may wish to combine the CONFIG.SYS files using EDLIN or other text-editor. Now type CTRL-ALT-DEL to re-boot the system, thus loading the hard disk device driver SHDIO.BIN in the CONFIG.SYS file.

You may now access drive C: (and D:, E:, etc. if the drive has been partitioned) and copy files from your floppy disks. Be careful not to exceed 96 files in the ROOT directory. Create sub-directories for different applications.

On your A: floppy you may wish to create an Autoexec.bat file which has the following:

```
C:
menu
```

This will load the "menu" program from the C: drive and speed up your system initialization. Many other instructions may be included in the Autoexec batch file. Check a DOS manual for ideas. Batch files may also be loaded on the C: drive as well.

The following procedures have **already been done** by SPC for your convenience. They are included below for your information only and need **NOT** be repeated by you. We recommend you read them if re-formatting or re-partitioning is desired. **Note:** The drive light will stay on continuously after the initial access, even if the drive is not being accessed. There is no cause for concern.

INTRODUCTION

The SPC Diskitjr Master diskette contains the utilities necessary to support the Diskitjr controller using any DOS operating system. Multiple drives may be supported on a single controller and drives may be configured with from one to eight partitions. SPC is currently supporting single-drive systems of 20, 30, and 40 Megabytes although higher capacities and customer-supplied drives are possible. The software also supports SPC's own REMEDY Removable Drive, the EXPORT Series, with 35 ms access speeds.

The SPC DiskItjr Master floppy contains the following files:

README.WS	installation notes (this file)
SHDFMT.COM	format and installation utility
SHDIO.BIN	installable hard disk driver
SPD.COM	hard disk power down utility
CONFIG.SYS	I/O driver initialization file
PHDISKS.CNF	hard disk drive definitions file
BACKUP.EXE	hard disk/floppy backup utility

SOFTWARE INSTALLATION

The procedures to follow will re-write some of the files on the floppy disk so that it will then be capable of bringing up the SPC hard disk automatically when you get to step 2.

1 - Run the hard disk format and installation program by typing:

shdfmt

When you see the line that says:

Hexadecimal base address of controller I/O ports [300]:,

type "320" followed by ENTER. The program will then display:

Testing Hard Disk Controller

If the controller "Fails to respond", it may be set at Port 300 instead of 320. If so, run SHDFMT again without changing "300". If the controller still fails to respond, power down and check the pins on the PCjr interface for straightness. If no problem is obvious, call SPC. If no error is detected, the program will display the following after about two seconds:

How many drives are attached to your Hard Disk Controller [1]:

Press ENTER.

Next you will see:

Disk configuration filename [PHDISKS.CNF]:

Press ENTER. A menu similar to the following should appear:

Drive Selection Menu

1	Lapine Titan
2	PTI PT225
3	PTI PT338
4	Fuji FK305-39
5	Fujitsu M2227
	etc.

Your drive type is a MINISCRIBE 8425.

Enter drive selection code for unit 0:

Type in the number corresponding to your hard disk drive. If your hard disk does not appear in the menu, call SPC for an equivalent drive model. Drives larger than 32 Megabytes have been partitioned into multiple logical units D, E, and possibly F. You should then see the following:

Update Hard Disk driver file (Y/N) [NO]:

Type ENTER. You will then see:

Update power-down driver file [Y/N] [NO]:

Press ENTER. The access light on the C: drive should go on and you should then see:

Commands:

BADSECTOR t h s	Add indicated sector to AST
CHANGE	Change removable disk cartridge
CLEARAST	Clear AST
DISPLAY	Display current parameters, bad sector list
DRIVE n	Select drive n for subsequent operations
DUMP t h s	Dump disk sector in hex
FORMAT lunit	Format logical disk(s)
INIT lunit	Initialize logical disk(s) for MS-DOS
SKEW n	Set system area skew value
RDCHK lunit	Read only test for bad sectors of logical disk(s)
WRTCHK lunit	Write/read test for bad sectors
HELP	Display this message
EXIT	Exit from this program

Note: lunit represents one or more logical unit numbers and may be specified by listing the desired units separated by spaces. ALL will cause all logical units to be processed.

Cmd:

This menu lists the commands possible at the main level in the program. A command may be entered whenever you see the "Cmd:" prompt. You may abbreviate commands by typing in only enough characters to differentiate commands beginning with the same characters. Thus DU will select DUMP and DI will select DISPLAY. You may redisplay the command menu at any time by typing HE, ENTER. You should now type:

clearast (cl)

This will format and check the AST (Alternate Sector Area) of the disk. After approximately 5 seconds, you should again see the "Cmd:" prompt. You should now enter

format all (fo all)

This will format all logical units (partitions) on the disk.

The program will then display:

Formatting logical drive 0...
Cyl: 0

and the number following Cyl: will increment (count up). If the drive has two logical units, you will see something like:

Formatting logical drive 1...
Cyl: 0 (counting)

The "Cmd:" prompt should appear following the formatting

It is optional, but we strongly recommend that you now check your hard disk for media defects by typing

wrtchk all

You will then see:

Checking logical drive 0...
Checking pattern # 1
Cyl: 0

This means that logical drive 0 is being tested with data pattern # 1, followed by three more data patterns. If any data errors are detected, a message will appear indicating that a bad block has been found and that the block has been placed into the AST (Alternate Sector Table). This entire sequence is then repeated for each remaining logical drive on the physical drive. After about 30 minutes (5 Mb.), you should again see the "Cmd:" prompt at the bottom of the screen. You should now initialize the directory area of the disk for use with MS-DOS by typing

initialize all (ini all)

You should then see:

Volume name for logical unit 0 [NO_NAME]:

You may now enter an up to 11 character name to be given to volume 0. Any characters beyond the first eleven characters entered will be ignored. If you press ENTER without entering a volume name, the volume will be named NO_NAME. If your drive has more than one logical drive, you will be prompted to enter a volume name for each subsequent drive. This completes the preparation of the hard disk drive, and you are now ready to exit from the program. Type:

exit (ex)

2 - NOW you may reboot from the floppy disk.

You should check the first logical drive of the first hard disk by typing:

chkdsk c:

You will see something like

```
Volume HD_0
created Jul 5, 1984 5:25p
33390592 bytes total disk space
    0 bytes in 1 hidden files
33390592 bytes available on disk
  262144 bytes total memory
  218720 bytes free
```

You should not, in any case, see any error messages! The other hard disks may be checked by entering "chkdsk d:", etc.

3 - Now try copying all of the files from the system disk to the hard disk. For example:

copy a:*. * c:

This should proceed as with a floppy to floppy copy, but should be faster due to the higher transfer rate of the hard disk. You will now be able to use your hard disk.

DEFINING NEW DISK DRIVES

The format program reads all drive definitions from a disk file whenever you select a drive. The default name of this disk file is PHDISKS.CNF. For a complete description of the function of this file, type the file "phdisks.all" (if present) to the screen or printer, or call SPC for assistance.

MISCELLANEOUS TOPICS

You should always type

tpd spd

before shutting down your hard disk. This places the hard disk heads over a special landing zone and minimizes the possibility of disk errors. On some drives this is unnecessary since the heads automatically unload on power down or loss. This is true for all Export Series drives.

SPC can be reached at (619) 693-8611. Thank you.