



Figure 1. NEC RISCstation 2000

## Specifications

### Processor

- MIPS RISC processor 75/150MHz

### Memory

- 16MB standard, expands to 384MB

### I/O Expansion Slots

- Three EISA bus master 32 bit slots

### Diskette Drive

- 1.44MB, 3.5" standard

### Integrated Features

- PS/2 Keyboard and mouse connector
- Two RS232C serial ports
- One Centronics parallel port
- Jaguar video board w/ 2 meg VRAM
- Fast SCSI-2 device connector
- FDD controller
- RJ45 10BaseT connector
- Write back cache
- Math coprocessor

### Optional Feature

- CD-ROM reader
- Dual Co-processor
- 2 Meg additional vRAM for Video card

### Internal Expansion Bays

- Up to three user accessible 5.25" drive bays
- Two internal 3.5" drive bays

### I/O Architecture (Bus s supported)

- EISA

### Power Supply

- 260 Watt

### Diagnostics

- Normal Post Diags performed on Power UP of system.
- NEC EISA Configuration Utility Diskette.
- Troubleshoot according to errors found during test.

### CMOS Access

- QAPlus/FE

## Tools and Software Requirements

- 1/4" Flat bladed screwdriver
- Phillips #2 head screwdriver
- Needle nose pliers
- Diags and formatted blank diskette
- Anti-static wrist strap

## Jumper/Switch Settings

### Connectors, Switches and Jumpers

Connector	Description
P1	Keyboard
P2	Mouse
P3 top	Parallel printer
P3 bottom	External SCSI-2
P5 top	Serial COM2
P5 bottom	Serial COM1
J2	Floppy diskette drive
J3	Jaguar video board /VLC
J4	Secondary processor board
J5	System reset
J6	Integrated Ethernet
J7	Diagnostic LED
J9	SCSI-2 devices
J10,J29,J30	EISA connectors
J11,J13	Fan
J14,J17,J18	Power supply
J15	Primary processor board
J19	Speaker
JA1,J16	Memory board
JA6	Power LED
JA7	Disk LED
U47	NVRAM/Battery module
U69	RTC/battery module

### Special Notice:

- SIMMs with silver connectors should be used.
- SIMMs are x by 36 bit with 72 pins ( x = 1,2,4,8 Meg)
- Don't place VRAM or SIMMs on a carpet/cloth surface.
- Maximum external SCSI-2 cable length is 6 ft.
- Label cables before removing them for proper reinstall.

## Removal Procedures

### Initial Steps

Before beginning removal complete the following steps:

1. Turn off the computer and any peripheral devices.
2. Disconnect AC power cord from outlet and system.
3. Disconnect all peripheral devices from the computer.
4. Discharge any static with the static strap to the unit.

### System Cover

How to open the systems access door:

1. Turn key in the system lock counter clockwise to unlock.
2. Remove four (4) screws that secure cover to the system.
3. Carefully slide cover to the back of the system a little.
4. Lift cover up and away from the unit to remove.

## Removal Procedures (Continued)

### Removing the processor boards

1. Perform initial removal steps and remove system cover as described before
2. Locate 3-1/2" device bay bracket just below power supply.
3. Remove three screws holding the bracket to rear of system.
4. Remove the remaining two screws on the side that are holding the bracket to the chassis
5. Locate on each end of the chassis support bar the two screws which secure the chassis support bar in place. One in front and the other to the back of the system.
6. Locate the primary processor board at J15 on system board
7. Open or release the card locks located at the end of the guides in which the processor board slides.
8. To remove pull primary processor card straight-out guides
9. To replace reverse the steps above

### To remove the secondary processor

1. Locate secondary processor board at J4 on system board
2. Repeat steps 7-9 above for the secondary processor board.

### Remove the System Board

1. Perform initial removal steps and remove system cover.
2. To remove the power supply, label and unplug the cables then unscrew the four screws holding supply from the rear of the chassis and the two screws from the top.
3. To remove the front panel, unscrew the four screws on the back of the panel's corners that hold panel to chassis.
4. To remove the 5-1/4" device bay bracket, first label then remove any cables attached to the devices. Next, unscrew the two screws on the top of the chassis and the three screws, (one screw on each side and one below the bottom device slot) in the front of the chassis.
5. To remove the 3-1/2" device bay bracket, which is located below the power supply, first label then remove any cables attached to the devices. Next, remove three screws holding the bracket to rear of system and the remaining two screws on the side that holds the bracket to chassis. Remove through side.
6. To remove Floppy drive bracket, first label then remove any cables attached to the floppies. Next, remove the three screws, (one on each side and one under the floppy), holding the drive's bracket to chassis. Pull drives forward and out.
7. To remove the chassis support bar, (below processors), remove two screws on each end toward the front/rear of chassis. Hold bar while loosening to prevent it falling.
8. To remove processor boards, follow steps listed above.
9. To remove the expansion boards, (memory, video) unscrew the support bracket screw on the end of the card. Next, gently rock card until card clears the slot on the system board. Remove and place aside.
10. To remove the card guide, press inward on its top and bottom holding tabs to release the card guide from position. Next, lift up then out to clear chassis.

11. Remove and label the cables connected to system board.
12. Remove the eight screws holding system board to the chassis. Screws are locatable by a 1/4" square metal area around the screw head on the system board.

## Field Replaceable Units

Memory	OEM Part	IBM Part
Memory Expansion Board	158-026159-000A	67H9673
4MB @ 1MB X 36 SIMM	158-082311-070	22H1978
8MB @ 2MB X 36 SIMM	158-082376-070	37H8533
16MB @ 4MB X 36 SIMM	158-082316-070	37H8534
32MB @ 8MB X 36 SIMM	158-082380-070	37H8547
VRAM, 2MB	158-053685-002	61H5786

Internal Hard Drive	OEM Part	IBM Part
540MB, SCSI-2 HD	158-053407-008	22H1991
1.0GB, SCSI-2 HD	158-050395-327	61H6054
2.0GB, SCSI-2 HD	158-050395-328	61H6055

Video Boards	OEM Part	IBM Part
Jaguar video board	158-050644-000	66H0416

Processor Boards	OEM Part	IBM Part
Processor Board, with CPU	158-026169-000A	67H9678

System Boards	OEM Part	IBM Part
System board	158-050708-000A	67H9717

CD-ROM Drives	OEM Part	IBM Part
CD-ROM, Multispin 3Xi	03377168	48H4398

Tape Drives	OEM Part	IBM Part
525MB SCSI-2 tape drive	158-050389-100	37H8553
2.0/8.0GB DAT tape drive	158-050389-200	37H8554

Diskette Drives	OEM Part	IBM Part
3.5", 1.44MB Floppy	158-050522-006	37H9316
5.25", 1.2MB Floppy	158-053476-000	22H1988

Cables	OEM Part	IBM Part
SCSI data cable-6 devices	158-050510-003	66H7468
Floppy signal cable	158-050561-000	55H1052

Miscellaneous	OEM Part	IBM Part
Battery 3.6v	158-082410-150	37H9311
RTC Battery 3.6v	158-082409-000	61H5781
Cover lock and key	158-050705-003	61H7417
Power supply (260w)	158-050552-000	37H8539
Fan	158-050580-000	37H8542
NEC PS/2 style mouse	158-050484-002	55H1100
Keyboard PS/2 style	158-050550-000	20H9481