NEC
RISCstation 2200

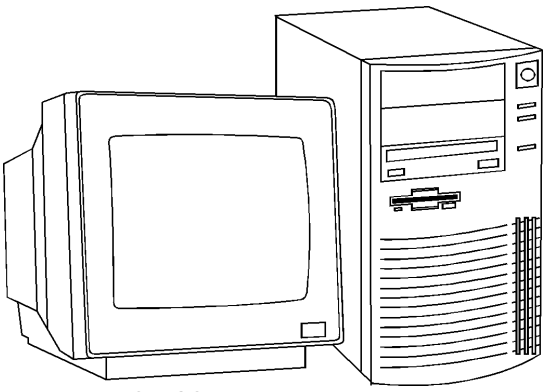

Figure 1. NEC RISCstation 2200

Specifications

Processor
- Single/dual R4400MC 100MHz external, 200MHz internal

Memory
- 16/32/64MB standard, expands to 512MB

I/O Expansion Slots
- **PCI Bus:** One bus mastering 32-bit EISA slot
  Two bus mastering 32-bit PCI slots
  One shared EISA/PCI slot.
- **EISA Bus:** Six 32-bit EISA bus master I/O slots.

Diskette Drive
- 1.44MB, 3.5'' standard

Integrated Features
- High performance graphics accelerator
- 10Base-T card
- FDD controller and local bus fast SCSI-2 controller
- PS/2 keyboard and mouse controller
- Two serial ports and One parallel port
- Audio output.

Internal Expansion Bays
- Three 5.25'' user accessible device bays
- One 3.5'' diskette drive
- Two 3.5'' internal device bays.

I/O Architecture (Bus s supported)
- EISA

Power Supply
- 350 Watt

Diagnostics
- Normal Post Diags performed on Power UP of system.
- For Advanced Diags use a PC Diagnostic Utility.
- Troubleshoot according to errors found during test.

CMOS Access
- QAPlus/FE

Tools and Software Requirements
- 1/4'' Flat bladed and Phillips #2 screwdriver
- T-15 Torx screwdrivers
- Needle nose pliers
- Diags and formatted blank diskette
- Anti-static wrist strap

Jumper/Switch Settings

Connectors, Switches and Jumpers

Connector	Description
P1	Ethernet
P2	Headphone and Microphone
P3	Line In / Line Out
P4 left	Parallel printer
P4 right	External SCSI-2
P5 left	Serial COM1
P5 right	Serial COM2
P6	Keyboard And Mouse
J2	Floppy diskette drive
J3	Speaker
J4	Power LED
J5	System reset
J10	SCSI Disk LED
J11,J12	Memory Board
J13,J14,J22	PCI connectors
J18,J19	Fan
J20,J21,J23	Power supply
J22	Video Board
J24,J25	EISA connectors
U110	NVRAM/Battery module
U138	RTC/battery module

Special Notices:
- 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.
- When installing non NEC hard drives make sure power consumption is below 9 watts to avoid excess heat and a limit to number of drives due to power over usage

Removal Procedures

Initial steps and cables
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 by grounding it.

System Cover
How to open the systems access door:
1. Turn key in system lock clockwise to unlock the access door.
2. Locate and remove the four screws (two screws on each side that secure the cover's lip to system's back edges)
3. Carefully slide cover to the back of the system a little.
4. Lift cover up and away from the unit to remove.

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Removal Procedures (Continued)

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, remove two screws on each end of the bar toward the front and rear of the chassis. Hold bar while loosening to prevent it falling.
8. 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.
9. Remove and label the cables connected to system board.
10. 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.
11. Lift system board by the edge to remove from chassis

Field Replaceable Units

Memory	OEM Part	IBM Part
4MB @ 1MB X 36 SIMM	158-082320-070	66H0596
8MB @ 2MB X 36 SIMM	158-082376-070	37H8533
16MB @ 4MB X 36 SIMM	158-082422-070	55H2429
32MB @ 8MB X 36 SIMM	158-082380-070	37H8547
Memory Expansion Board	158-053712-000	61H5784
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	158-050395-339	37H8997
2.0GB, SCSI-2 HD	158-050395-335	61H5791
4.0GB, SCSI-2 HD	158-050395-336	61H5785

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

Processor Boards	OEM Part	IBM Part
Processor board, with CPU	158-026160-000B	61H5779
Processor board, no CPU	158-026160-900A	61H5787
Processor with Heat-sink	158-050650-000	61H5788

I/O Boards	OEM Part	IBM Part
I/O board	158-026158-001B	61H5780

Controller Boards	OEM Part	IBM Part
EISA SCSI RAID array	158-053794-000	61H5789

System Boards	OEM Part	IBM Part
System board	158-026157-000D	61H5778

CD-ROM Drives	OEM Part	IBM Part
CD-ROM, Internal, 3Xi	89M26701	47H8370

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
5.25'', 1.2MB Floppy	158-053476-000	22H1988
3.5'', 1.44MB Floppy	158-050522-006	37H9316

Cables	OEM Part	IBM Part
SCSI cable, Ext., 3 devices	158-050511-001	66H7469
SCSI data cable, 5 devices	158-050510-002	66H7467
SCSI data cable, 2 devices	158-050548-000	66H7470
Video cable	158-050629-000	66H7486
Floppy signal cable	158-050561-001	66H7474

Miscellaneous	OEM Part	IBM Part
AC power cable	808-857649-101A	22H0531
NEC PS/2 style mouse	158-050484-002	55H1100
Battery 3.6v	158-082410-150	37H9311
RTC Battery 3.6v	158-082409-000	61H5781
Processor Fan (2)	158-050695-011	37H9312
Power supply (350 Watt)	158-050695-003	61H5782
Fan 12v with wire	158-050695-019	37H9315
Keyboard PS/2 style	158-050550-000	20H9481

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