

Installing Your



NCD19r Hardware

FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Manufacturer's Certificate of Conformity

It is hereby certified, that the NCD19r Network Display Station has been suppressed in accordance with the provisions of the BMPT-AmtsblVfg 243/1991. The correct operation of some equipment in accordance with the regulations may be subject to certain restrictions. Please observe the notices in the operating instructions.

The German Federal Office for Telecommunications Approvals has been notified of the placing on the market of this equipment and the right has been granted to test the series for compliance with the regulations.

Beshceinigung des Herstellers

Hiermit wird bescheinigt, daß das Netzwerk Display Station NCD19r in Übereinstimmung mit den Bestimmungen der BMPT-AmtsblVfg 243/1991 funk-entstört ist. Der vorschriftsmäßige Betrieb mancher Geräte (z. B. Meßsender) kann allerdings gewissen Einschränkungen unterliegen. Beachten Sie deshalb die Hinweise in der Bedienungsanleitung. Dem Bundesamt für Zulassungen in der Telekommunikation wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf die Einhaltung der Bestimmungen eingeräumt.

この装置は、第一種情報装置（商工業地域において使用されるべき情報装置）で商工業地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会（VCCI）基準に適合しております。

従って、住宅地域またはその隣接した地域で使用すると、ラジオ、テレビジョン受信機等に受信障害を与えることがあります。

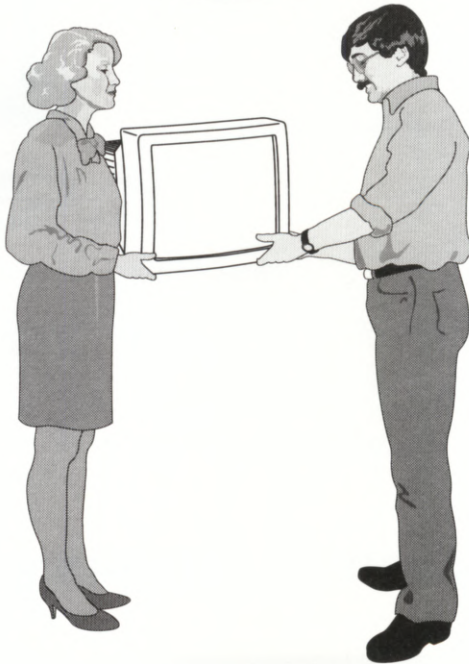
取扱説明書に従って正しい取り扱いをして下さい。

Network Computing Devices, Inc.
350 North Bernardo Avenue
Mountain View, CA 94043
Part Number 9300202

1. Before You Begin...



Unpacking

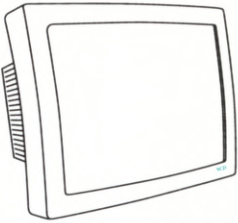


The NCD19r monitor is large and weighs nearly 40 pounds. To avoid physical injury when lifting the monitor, always use two people.



Supplied Equipment

EQUIPMENT CHECKLIST



**NCD 19r
Display Monitor**

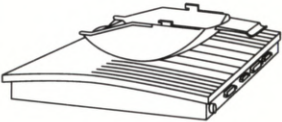
INCLUDED?

YES	NO
<input type="checkbox"/>	<input type="checkbox"/>



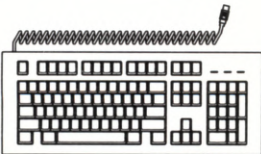
Power Cord

YES	NO
<input type="checkbox"/>	<input type="checkbox"/>



NCD 19r Base

YES	NO
<input type="checkbox"/>	<input type="checkbox"/>



Keyboard

YES	NO
<input type="checkbox"/>	<input type="checkbox"/>



Mouse

YES	NO
<input type="checkbox"/>	<input type="checkbox"/>



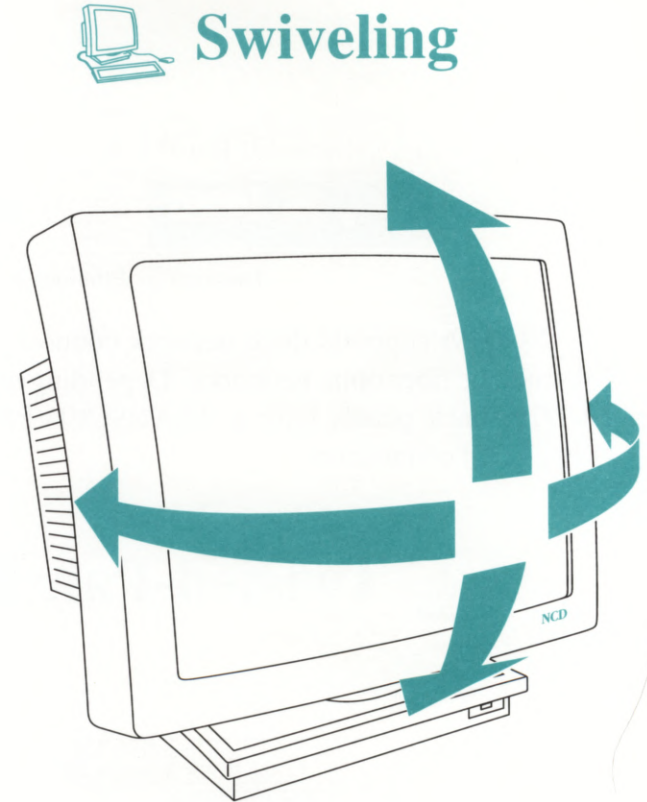
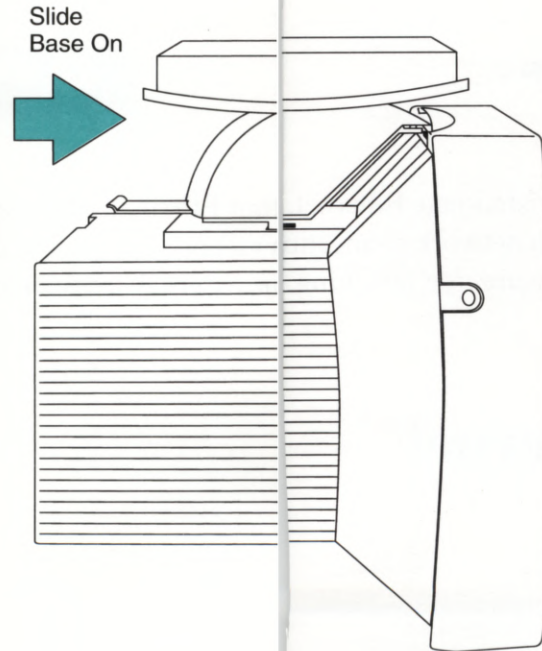
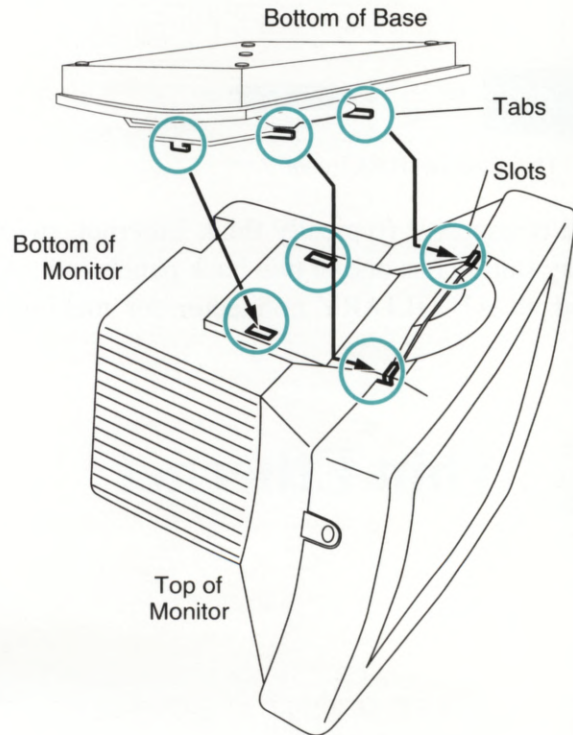
**Installing Your
NCD 19r
Hardware**

YES	NO
<input checked="" type="checkbox"/>	<input type="checkbox"/>

When you have unpacked the shipping cartons, make sure you have all of the above components. If any components are missing or appear damaged, contact NCD, or your authorized representative immediately.

2. Attaching the Monitor to the Base

Monitor Bottom Monitor on Base Swiveling



Before attaching the monitor and base, choose a site for the display station. The location should be large enough to accommodate the unit without crowding your workspace and should ensure proper ventilation. To attach the monitor to the base:

1. Turn the monitor and the base upside down so the top of the base connects to the bottom of the monitor.
2. Locate the tabs on the base and the slots on the monitor.
3. Insert the tabs (on base) into the slots (on monitor) then slide the base towards the monitor screen.
You will hear a click indicating that the base and the monitor are locked.

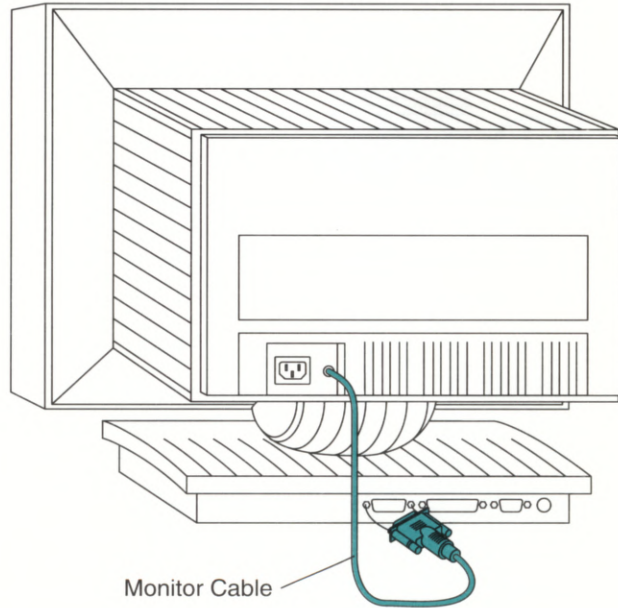
WARNING: Do not try to lift the unit by its base. The base cannot support lifting the weight of the monitor, which will be damaged if dropped.

4. Turn the unit rightside up and tilt and swivel the monitor until the screen is positioned for comfortable viewing.

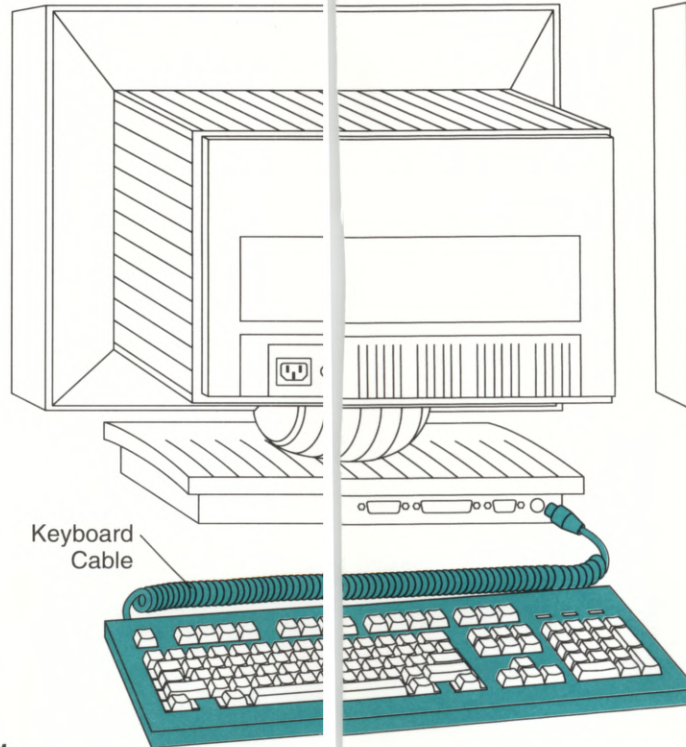
3. Connecting Monitor Mouse and Keyboard



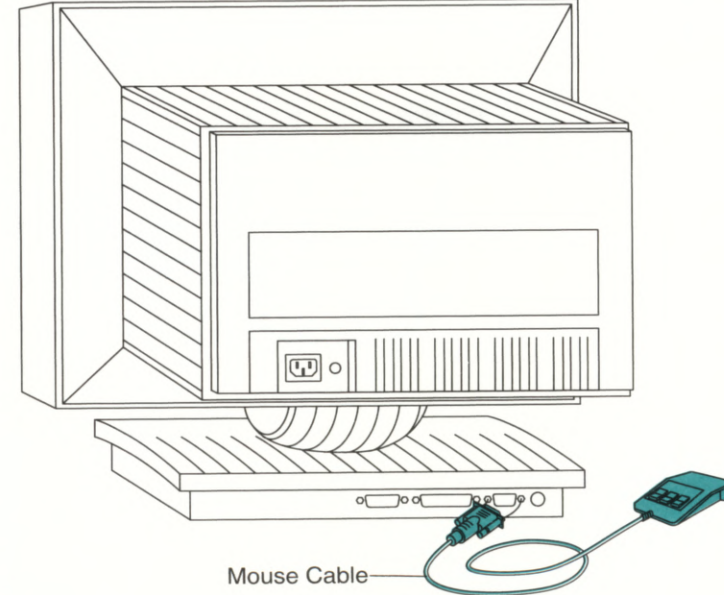
Monitor



Keyboard



Mouse



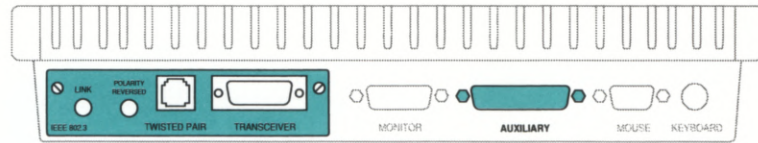
WARNING: Before connecting any cables, make sure the power cord is *not* connected.

1. Connect the monitor cable to the **MONITOR** connector on the base.
2. Connect the keyboard cable to the **KEYBOARD** connector on the base.
3. Connect the mouse cable to the **MOUSE** connector on the base.
4. Carefully tighten all retaining screws, especially on the **MONITOR** connector.

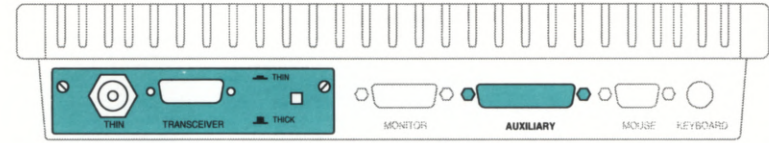
4. Connecting to a Network



Back Panels



Twisted-Pair Ethernet Back Panel

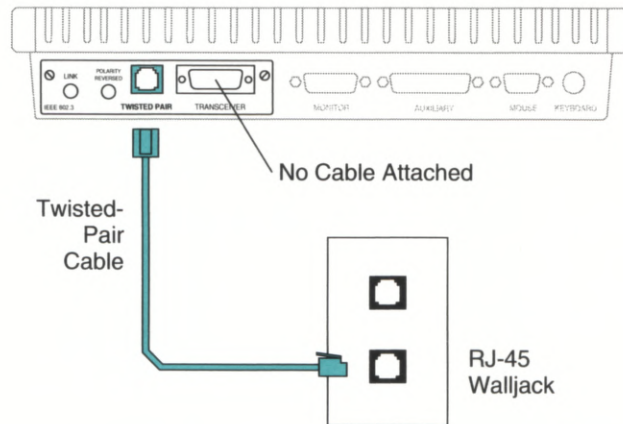


Thin Ethernet Back Panel

The NCD19r supports three network connections: twisted-pair Ethernet, thin Ethernet, and external transceiver (typically thick Ethernet, twisted-pair Ethernet, or fiber optic network). Depending on which network connection you are using, your display station has one of two back panels (above). Both NCD19r back panels have a TRANSCEIVER connector for attaching an external transceiver and an AUXILIARY connector for making a serial (RS-232 C) connection.



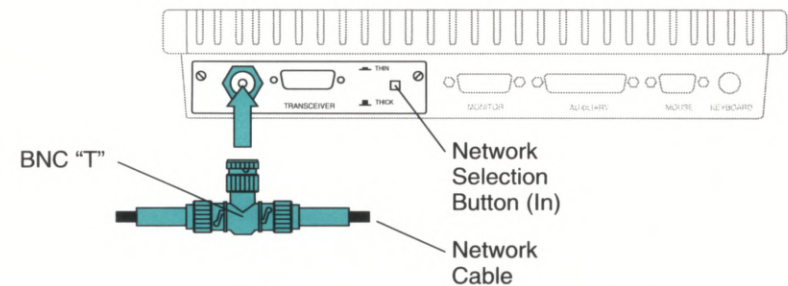
Twisted-Pair Ethernet



1. Make sure there is no connector attached to the TRANSCEIVER connector.
2. Connect one end of the twisted-pair cable to the connector on the base labeled TWISTED PAIR and the other end to the RJ-45 wall jack



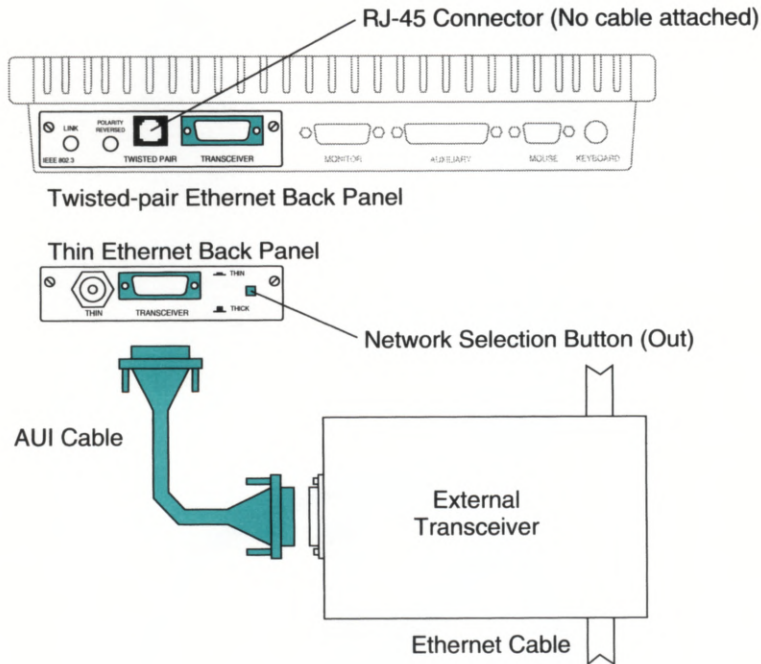
Thin Ethernet



1. Press in the Network Selection button for thin Ethernet connection.
2. Connect a BNC "T" that is attached to the network cable to the THIN connector on the base. Do not connect the network cable directly to the THIN connector.



External Transceiver



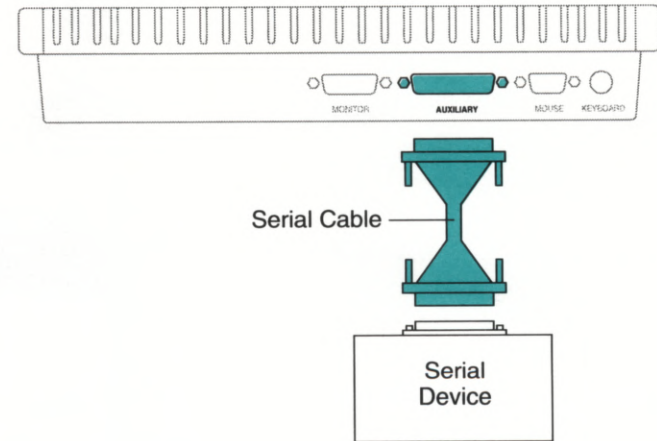
You can connect an external transceiver to either a Thin Ethernet back panel or to a twisted-pair Ethernet back panel.

1. If you have a twisted-pair Ethernet back panel, make sure there is no cable attached to the RJ-45 connector.
2. If you have a thin Ethernet back panel, make sure the Network Selection button is out (not depressed).
3. Connect one end of the Attachment Unit Interface (AUI) cable (available with the external transceiver) to the TRANSCEIVER connector on the base and the other end to the external transceiver itself.

Note: When using an external transceiver or multi-port transceiver, remember to turn on SQE on the transceiver.



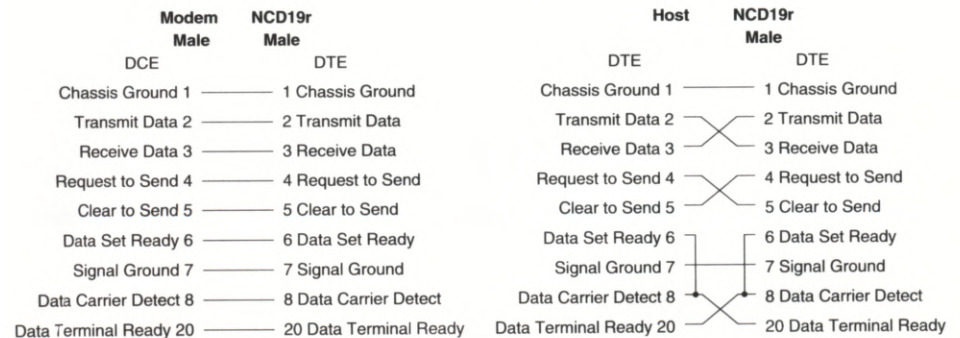
Making a Serial Connection



The NCD19r supports serial (RS-232 C) connection for XRemote, local client, or bi-directional I/O port connections.

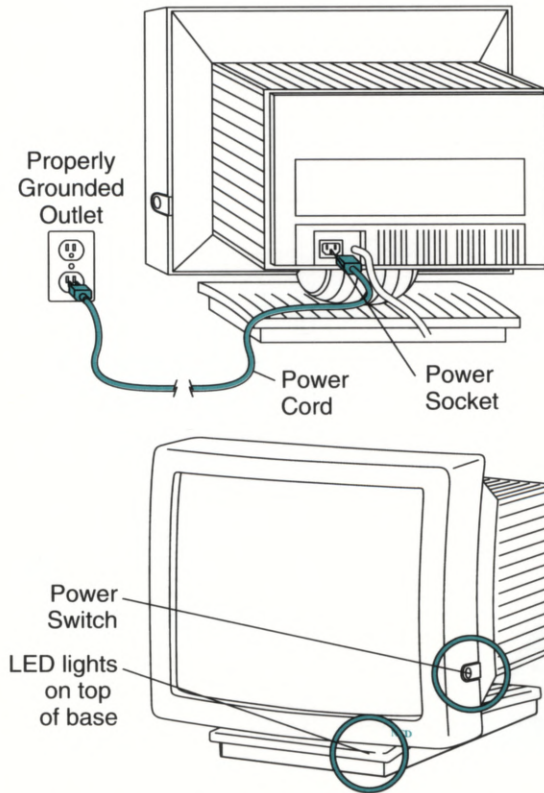
1. To attach a serial device, connect one end of the serial cable to the AUXILIARY connector on the base and the other end to the modem, host or peripheral.

The following pinout diagrams are for connecting the NCD19r to a modem or to a host. The NCD end of the cable should be a male DB25 connector. The modem or host end should match the equipment used.



5. Connecting AC Power, Controls, & Indicators

AC Power

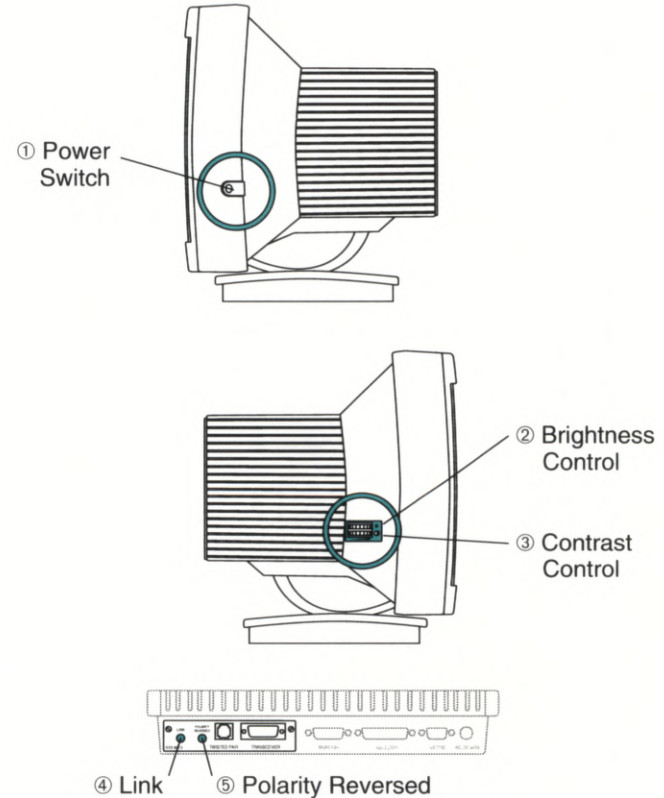


WARNING: Do not connect any power cords to the NCD19r unless the monitor, keyboard, and mouse are properly connected. Your NCD19r is equipped with a 3-wire grounding type plug, which is a plug having a third (grounding) pin. This pin will only fit a grounding type AC outlet. If you are unable to insert the plug into the outlet, contact a licensed electrician to replace the outlet with a properly grounded outlet. Do not defeat the purpose of the grounding plug.

1. Connect one end of the AC power cord to the power socket on the monitor and the other end to the wall outlet. The wall outlet should be installed near the equipment and should be easily accessible.
2. Press the Power Switch on the side of the monitor.

The NCD19r uses a universal power supply that can be connected to either 110V or 220V outlets. The display station automatically determines whether it is connected to 110 or 220 volts and adjusts itself accordingly.

Operating Controls



- ① The Power Switch applies power to the unit.
- ② The Brightness control adjusts the light level of the video display.
- ③ The Contrast control adjusts the intensity of characters on the screen.

Note: The twisted-pair Ethernet back panel has two status indicator lights, labeled ④ Link and ⑤ Polarity Reversed. The Link LED (green) lights when there is an active link established. The Polarity Reversed LED (red) lights when there is improper wiring of the twisted-pair cable. If you see the red light, contact your system administrator.

6. Hardware Specifications

Adding & Testing Memory

For information on adding memory to your NCD19r, refer to your *NCDware Advanced User's Manual*.

Display Monitor

Size:	19 inch, landscape
Resolution:	1280 by 1024 pixels
Dots per Inch:	100
Active Display Area:	339 x 271 mm (13.3 x 10.7 inches)
Refresh Rate:	70 Hz, non-interlaced
Phosphor:	Paperwhite (P193)

Hardware Architecture

Microprocessor:	33 MHz R3000
Cache:	8KB instruction cache, 1KB data cache
DRAM:	4.0 MB (standard), expandable to 20.0 MB
Memory Upgrades:	8-bit, 80ns, fast page mode industry standard SIMMs
NVRAM:	512 bytes of local configuration memory

Power

AC Voltage:	110/230 VAC (auto switching)
AC Frequency:	50/60 Hz auto-ranging
Consumption:	100 watts @ 115 VAC

Environmental Operating Range

Temperature:	10°C to 40°C
Humidity:	10% to 90% non-condensing
Altitude:	Up to 3,050 meters (10,000 feet)

Controls and Indicators

Display Monitor:	Power switch, brightness and contrast controls
Base Unit:	Power LED (all bases), Network Selection Button (thin Ethernet back panel only), Link LED, Polarity Reversed LED (twisted-pair back panel only)

Keyboard Indicators

N-97/N-97Kan:	Three configurable LEDs (Unlabeled, Caps Lock, and Network Activity)
N-101/N-102:	Three configurable LEDs (Num Lock, Caps Lock, and Unlabeled)
N-108LK:	Four configurable LEDs (Hold Screen, Lock, Compose, and Network Activity)

Input Devices

Keyboards:	97-key UNIX-style keyboard (N-97), 101-key keyboard (N-101), 101-key PS/2-compatible keyboard (N-101PS), 102-key international versions (N-102), 108-key LK401-compatible keyboard (N-108LK), 97-key Kana keyboard (N-97Kan)
Mouse:	3-button, standard serial interface, 9-pin "D" connector, 9600 baud or 1200 baud

Communications

Ethernet Modules:	IEEE802.3 - Two options: Built-in 10Base2 transceiver and 10Base5 AUI interface, or Built-in 10BaseT twisted-pair transceiver and 10Base5 AUI interface
Serial Port:	RS-232 C up to 38.4 Kbaud
Serial Port Usage:	XRemote (X over a serial line), local serial client (connection to non-X host), bi-directional I/O port printer attachment)

Physical Dimensions

Monitor & Base

Height:	17.5 inches (44.5 cm)
Width:	18.0 inches (45.7 cm)
Depth:	16.0 inches (40.6 cm)
Weight:	38.4 pounds (17.5 Kg)

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