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Preface

This service and reference manual contains the technical information necessary to set up, maintain, troubleshoot, and repair the NEC Versa™ Series MediaDock audio system. It also provides hardware and interface information for users who need an overview of the system design. The manual is written for NEC-trained customer engineers, system analysts, service center personnel, and dealers.

The manual is organized as follows:

Section 1 — Technical Information, provides an overview of the hardware and interface components. System specifications are listed including MediaDock dimensions, environment, safety compliance, and power consumption.

Section 2 — Setup and Operation, takes the user from unpacking to setup and operation. The section includes a description of operating controls, setting parameters and accessing the NEC bulletin board system (BBS).

Section 3 — Options, provides the user with installation procedures for MediaDock options.

Section 4 — Troubleshooting and Repair, includes maintenance, troubleshooting, disassembly and reassembly, and illustrated parts breakdown information. NEC service and spare parts ordering information is also provided. Included is a list of NEC service and information telephone numbers that provide access to the NEC Bulletin Board System (BBS), FASTFACTS, and Technical Information Bulletins.

Appendix A — Software Setup for Customized Disks, provides information for using the MediaDock in conjunction with a hard disk other than the one that shipped with the Versa system.

Appendix B — System Files, contains CONFIG.SYS and AUTOEXEC.BAT sample files. The examples reflect the contents of the files after the MediaDock setup utility is run.

An **Index** is included for convenience.

Abbreviations

A	ampere	DMAC	DMA controller
AC	alternating current	DOS	disk operating system
AT	advanced technology (IBM PC)	DRAM	dynamic RAM
ACU	automatic configuration utility	D/S	docking station
Amp	amplifier	EPROM	erasable and programmable ROM
BBS	Bulletin Board System	F	Fahrenheit
BCD	binary-coded decimal	FAX	facsimile transmission
BCU	BIOS Customized Utility	FCC	Federal Communications Commission
BIOS	basic input/output system	FG	frame ground
bit	binary digit	FM	frequency modulation
bpi	bits per inch	Fn	Function
bps	bits per second	FRU	field-replaceable unit
BUU	BIOS Upgrade Utility	GB	gigabyte
C	centigrade	GND	ground
Cache	high-speed buffer storage	HDD	hard diskdrive
CAM	constantly addressable memory	HEX	hexadecimal
CAS	column address strobe	HGA	Hercules Graphics Adapter
CD-ROM	compact disk-ROM	Hz	hertz
CGA	Color Graphics Adapter	IC	integrated circuit
CGB	Color Graphics Board	ID	identification
CH	channel	IDE	intelligent device electronics
clk	clock	IDTR	interrupt descriptor table register
cm	centimeter	IMR	Interrupt Mask register
CMOS	complementary metal oxide semiconductor	in.	inch
COM	communication	INTA	interrupt acknowledge
CONT	contrast	IPB	illustrated parts breakdown
CPU	central processing unit	IRR	Interrupt Request register
CRT	cathode-ray tube	ISA	Industry Standard Architecture
DAC	digital-to-analog converter	ISR	In Service register
DACK	DMA acknowledge	I/O	input/output
DC	direct current	ips	inches per second
DIP	dual in-line package	IRQ	interrupt request
DLAB	Divisor Latch Address bit	ISA	industry standard architecture
DMA	direct memory access		

K	kilo (1024)	QFP	quad flat pack
k	kilo (1000)	RAM	random-access memory
KB	kilobyte	RAMDAC	RAM digital-to-analog
kg	kilogram	RAS	row address strobe
kHz	kilohertz	RGB	red green blue
kV	kilovolt	R	read
lb	pound	RTC	real-time clock
LED	light-emitting diode	R/W	read/write
M	mega	S	slave
mA	milliamps	SIMM	single inline memory module
max	maximum	SOF	silver package
MB	megabyte	SOP	silver package
MFM	modified frequency modulation	SW	switch
Mhz	megahertz	TAC	Technical Assistance Center
Mic	microphone	TSC	Technical Support Center
MIDI	musical instrument digital interface	TTL	transistor/transistor logic
mm	millimeter	tpi	tracks per inch
ms	millisecond	UART	universal asynchronous receiver/transmitter
NASC	National Authorized Service Center	V	volt
NC	not connected	Vdc	volts, direct current
NDP	numeric data processor	VESA	video electronics standards association
NMI	Non-maskable Interrupt	VFO	variable frequency oscillator
ns	nanosecond	VGA	Video Graphics Array
NSRC	National Service Response Center	W	watt
PAL	programmable array logic	W	write
PC	personal computer	μf	microfarad
PCB	printed circuit board	μPD	microprocessor
PFP	plastic flat package	μs	microsecond
PIO	parallel input/output	Ω	ohm
pixel	picture element		
p-p	peak-to-peak		
PPI	programmable peripheral interface		
PQFP	plastic quad flat package		
PROM	programmable ROM		

Contents

Preface	ix
Abbreviations	xi

Section 1 Technical Information

Hardware Overview.....	1-2
Chassis	1-2
Sound Board	1-4
Power Amplifier Board.....	1-6
Speakers.....	1-6
CD-ROM Reader.....	1-7
Cables.....	1-7
MediaDock Chipset	1-7
Digital Interface.....	1-8
Analog Interface	1-9
I/O Address Map	1-9
Interrupt Level Assignments	1-10
Specifications	1-12

Section 2 Setup and Operation

Unpacking the System	2-1
Environment	2-1
Hardware Setup.....	2-1
Connecting the Versa.....	2-2
Powering On.....	2-5
Disconnecting the Versa	2-6
Powering Off	2-6
Software Setup.....	2-9
Running the ACU	2-10
Running the ACU for the Versa M.....	2-10
Running the ACU for the Versa V	2-11
Running the ACU for the UltraLite Versa, Versa E, and Versa P	2-12
Creating a Start-Up Diskette.....	2-13
Running the MediaDock Setup Utility.....	2-14

Software Use.....	2-15
Choosing a Configuration	2-16
Using the Audio Switcher Utility.....	2-16
Using DOS-Based Programs.....	2-19
Changing the Volume	2-19
Changing IRQ and DMA Settings	2-20
MediaDock Controls	2-21
MediaDock Connectors	2-22
Versa Battery Charging	2-23
CD-ROM USE.....	2-23
CD Loading.....	2-25
Audio CDs	2-26
Adding the CD Audio Option	2-26
Playing Audio CDs	2-27
CD Care	2-27
Emergency Eject.....	2-28

Section 3 Options

Headphones or External Speakers.....	3-1
Connecting Headphones	3-2
Connecting External Speakers.....	3-2
External Microphone	3-2

Section 4 Troubleshooting and Repair

Service	4-1
Technical Support.....	4-2
Product Information	4-2
Ordering Information from FastFacts	4-3
Maintenance	4-4
Cleaning the System's Exterior.....	4-4
Cleaning the System's Interior.....	4-4
Precautions.....	4-4
Troubleshooting	4-6
Diagnosing and Solving Problems.....	4-6
Remote Technical Support.....	4-7
NEC Communications Assistant	4-7

Disassembly and Reassembly	4-8
Top Cover Assembly	4-9
Sound Board	4-12
Power Amplifier Board.....	4-14
Assembly Handle, Right Latch, Left Latch.....	4-16
CD ROM Reader.....	4-18
High-Range Speakers	4-20
Mid-Range Speakers.....	4-23
Illustrated Parts Breakdown.....	4-24

Appendix A Software Setup for Customized Disks

System File Modification	A-1
Modifying the CONFIG.SYS File	A-1
Modifying the AUTOEXEC.BAT File	A-3

Appendix B System Files

CONFIG.SYS	B-1
AUTOEXEC.BAT	B-2

List of Figures

1-1	MediaDock (Shown Connected to Versa P).....	1-1
1-2	MediaDock Front and Side View	1-2
1-3	MediaDock Rear and Side View	1-3
1-4	Locating Sound Board Connectors	1-4
1-5	Audio Subsystem.....	1-5
1-6	Locating Power Amplifier Board Connectors.....	1-6
2-1	Connecting the AC Adapter.....	2-2
2-2	Opening the Versa Expansion Port Cover	2-3
2-3	Stowing the Expansion Port Cover	2-3
2-4	Aligning the Versa and the MediaDock.....	2-4
2-5	Securing the Docking Lever.....	2-4
2-6	Turning Power On	2-6
2-7	Turning Power Off.....	2-7
2-8	Releasing the Docking Lever	2-8
2-9	Pressing the Release Buttons.....	2-8

2-10	Locking Latch During Release	2-9
2-11	Versa M Audio Switcher Welcome Screen.....	2-17
2-12	Audio Switcher Dialog Box	2-18
2-13	MediaDock Controls.....	2-21
2-14	MediaDock I/O Connectors	2-22
2-15	CD-ROM Reader Controls and Indicators.....	2-24
2-16	Pressing the Stop/Eject Button.....	2-25
2-17	Loading a CD into the Reader.....	2-25
2-18	Wipe a Disc from the Center and Toward the Edge.....	2-17
2-19	Opening the Dust Door.....	2-28
2-20	Emergency Eject Hole Behind the Dust Door.....	2-18
3-1	Headphone Port on the MediaDock Base.....	3-2
3-2	Microphone Port.....	3-3
4-1	Removing the Top Cover Screws.....	4-9
4-2	Removing Bottom Screws	4-10
4-3	Removing Docking Cable Screw	4-11
4-4	Locating Sound Board Connectors	4-12
4-5	Removing the Sound Board Screws	4-13
4-6	Unplugging the Red/Black Speaker Cable	4-14
4-7	Removing the Power Amplifier Board Screws.....	4-15
4-8	Removing Assembly Handle Screws.....	4-16
4-9	Locating the Left Latch and Torsion Spring	4-17
4-10	Removing CD ROM Cables	4-18
4-11	Removing the CD ROM Screws	4-19
4-12	Disconnecting the Speaker Cable	4-20
4-13	Removing the Yellow Clasp Connectors	4-21
4-14	Removing the MediaDock Handle.....	4-21
4-15	Removing Mid-Range Speaker Screws	4-22
4-16	Removing Speaker Cables from Mid-Range Speakers	4-23
4-17	Removing the Mid-Range Speaker Screws.....	4-23
4-18	Versa Series MediaDock Parts Breakdown	4-26

List of Tables

1-1	MediaDock Chip Types and Technologies	1-7
1-2	Digital I/F Specifications.....	1-8
1-3	Analog I/F Specifications.....	1-9
1-4	I/O Address Map	1-9
1-5	Interrupt Level Assignments	1-10
1-6	MediaDock Specifications.....	1-12
2-1	I/O Connector Descriptions	2-22
4-1	NEC Service and Information Telephone Numbers	4-1
4-2	Problems and Solutions.....	4-6
4-3	MediaDock Disassembly Sequence	4-8
4-4	Versa Series MediaDock Field-Replaceable Parts*	4-24

Section 1

Technical Information

The NEC Versa™ MediaDock™ offers the user the finest quality sound system available for laptop multimedia presentations. The MediaDock works with the following NEC Versa laptop models, providing an excellent way to integrate sound with video:

- NEC UltraLite Versa Series computer
- NEC Versa E Series computer
- NEC Versa V Series computer
- NEC Versa M Series computer
- NEC Versa P Series computer.

NOTE: If a model that does not appear on the above list is connected to the MediaDock, the laptop displays a configuration error.

Figure Section 1-1 MediaDock (Shown Connected to Versa P)

HARDWARE OVERVIEW

The following subsections discuss hardware design and functionality.

Chassis

The MediaDock consists of a base unit that houses audio components. It easily connects to Versa notebook computers via a 198-pin docking connector. The MediaDock's design includes a protective hood to cover the connector. Additional front and side features include NEC's double-speed CD-ROM reader (CDR-250), system locking latches and release buttons, and four Altec Lansing stereo speakers.

Figure Section 1-2 shows these features.

Figure Section 1-2 MediaDock Front and Side View

Rear and side MediaDock components are shown in Figure Section 1-3. These include the Volume Control lever, and Tone Control lever. For information on using these controls, see Section 2, Setup and Operation. Standard I/O connectors also shown here include the head-phone port, microphone port, line in and line out ports, and the power port.

Figure Section 1-3 MediaDock Rear and Side View

Sound Board

The sound board (G8SEA) is installed in the rear section of the MediaDock chassis. Sound board connectors include the docking cable connector (J4), IDE cable connector (J5), line-out cable connector (J7), and the power amplifier cable connector (J9).

Figure Section 1-4 Locating Sound Board Connectors

The board integrates the ESS *AudioDrive*® ES688S sound chip. The chip provides 16-bit stereo, a 5 channel mixer and stereo inputs for line in, CD-ROM, and music synthesis. The sound board includes a Yamaha OPL3 musical instrument digital interface synthesizer (MIDI) and offers up to 44 Khz sampling frequency.

It provides Creative Labs Sound Blaster™ and Sound Blaster PRO™ compatibility. It also supports Windows Sound System™ Version 2.0. The sound subsystem is outlined in Figure Section 1-5.

Figure Section 1-5 Audio Subsystem

Power Amplifier Board

The power amplifier board is installed in front of the CD ROM reader in the chassis. The board supplies dynamic sound power to the high-range and mid-range speakers. It connects to the speakers via a red and black dual sound cable. The power amplifier board houses the tone and volume controls, as well as the headphone and microphone ports.

Board connectors include two red speaker connectors, see Figure Section 1-6. These provide a solid connection to all four Altec Lansing speakers.

Figure Section 1-6 Locating Power Amplifier Board Connectors

Speakers

The MediaDock uses four Altec Lansing stereo speakers. Two of the speakers output high-range sound, and two speakers output mid-range and bass sounds. The high-range speakers are embedded in the MediaDock handle. The mid-range speakers are situated below the MediaDock handle. The speakers connect to the power amplifier board via a red and black dual speaker cable.

CD-ROM Reader

The sound system contains a standard NEC CDR-250 dual-speed CD-ROM reader. The CD-ROM reader lets the user access data and play audio CDs. It uses an IDE interface and is assigned to the next available drive letter. The CD-ROM reader is compatible with Kodak Multisession Photo CDs™ and standard audio CDs.

CD-ROM specifications include the following.

- 680 MB capacity
- 333,000 blocks/disc
- 2048 bytes/blocks
- 300 kilobytes (KB) per second data transfer rate
- Burst transfer rate, PIO mode 2
- 380 milliseconds (ms) access time
- 286 KB memory buffer

Cables

The MediaDock ships with four cables. These include the IDE cable, power cable, line out cable, and speaker cable. The IDE cable provides an interface for the CD ROM reader. The CD ROM power cable carries electrical power from the sound board to the CD ROM. The CD ROM line out cable routes audio from the CD ROM through the MediaDock. The dual speaker cable is attached via connectors to the power amplifier board, providing exceptional sound quality.

MEDIADOCK CHIPSET

Refer to Table Section 1-1 for a quick summary of the chip types used in the system. See the Abbreviations section at the beginning of this manual for a translation of chip technologies.

Table Section 1-1 MediaDock Chip Types and Technologies

Chip	Manufacturer	Description	Technology
ES688 <i>AudioDrive</i> ®	ESS Technology	Sound Integrated Circuit	100-pin PQFP
YMF262-M	Yamaha	Frequency Modulator (FM) Synthesizer	24-pin SOP

Table Section 1-1 MediaDock Chip Types and Technologies

Chip	Manufacturer	Description	Technology
YAC512-M	Yamaha	FM Digital to Analog Converter (DAC)	16-pin SOP
TDA7284	SGS-Thomson	Mic in Amp	14-pin DIP/SO

DIGITAL INTERFACE

Refer to Table Section 1-2 for a list of digital interface specifications.

Table Section 1-2 Digital I/F Specifications

Item	Media Dock
Address	2x0H-2xFH (Programmable)
	220H - 22FH (Default)
	230H -23FH
	240H - 24FH
	250H - 25FH
	388H - 38BH (MIDI)
IRQ	1ch (Programmable)
	IRQ 5 (Default)
	IRQ 7
	IRQ 9
	IRQ 10
DMA	1ch (Programmable)
	DMA 0
	DMA 1 (Default)
	DMA 3

ANALOG INTERFACE

Refer to Table Section 1-3 for a list of analog interface specifications.

Table Section 1-3 Analog I/F Specifications

Output	Parameter	Specification
Internal Speaker	Output Level	4 Watts Per Channel
	Output Impedance	8 Ohms
	Frequency Response	20 Hz to 20 KHz
Headphone	Output Level	4 Watts Per Channel
	Output Impedance	8 Ohms
	Frequency Response	20 Hz to 20 KHz
Line Out to D/S	Output Voltage Level	1 Vrms
	Rated Load Impedance	47 Kohms
	Frequency Response	20 Hz to 20 KHz
External Mic In	Input Level	25 m Vrms
	Frequency Response	200 Hz to 12 KHz
	Input Impedance	5.0 Kohms
	Input Bias	2.2 V thru 10 Kohms
	Auto Level Control	+20 dB to +100 dB
Line In (External)	Input Level	2 Vrms
	Rated Load Impedance	10 Kohms
	Frequency Response	2 Hz to 20 KHz
Line In from CD-ROM	Input Level	2 Vrms
	Rated Load Impedance	7.5 Kohms
	Frequency Response	2 Hz to 20 KHz

I/O ADDRESS MAP

Refer to Table Section 1-4 for the MediaDock I/O address map.

Table Section 1-4 I/O Address Map

Address	Function
0170 -0177H	IDE Controller (Secondary)
01F0 - 01F7H	IDE Controller (Primary)
0220 - 022FH	Sound Controller (Primary)
0230 - 023FH	Sound Controller (Secondary)
0240 - 024FH	Sound Controller (Secondary)
0250 -025FH	Sound Controller (Secondary)

Table Section 1-4 I/O Address Map

Address	Function
0376H	Alternate HDD, Control and Status (Secondary)
0377H	Alternate HDD, Digital Input Register (Secondary)
0388 - 038BH	FM Synthesizer
0C10H	Docking Station Control Register
0C11H	Reserved
0C18H	ISA Function/Slot Control Register
0C19H	Serial EPROM Control
1C10H	Sound, Power Control Register
1C18 - 1C19H	Reserved

INTERRUPT LEVEL ASSIGNMENTS

Refer to Table Section 1-5 for the MediaDock I/O address map.

Table Section 1-5 Interrupt Level Assignments

Interrupt	Assignment
IRQ0	Not Used
IRQ1	Not Used
IRQ2	Not Used
IRQ3	Not Used
IRQ4	Not Used
IRQ5	Sound Controller
IRQ6	Not Used
IRQ7	Sound Controller
IRQ8	Not Used
IRQ9	Sound Controller
IRQ10	Sound Controller
IRQ11	IDE
IRQ12	Not Used
IRQ13	Not Used

Table Section 1-5 Interrupt Level Assignments

Interrupt	Assignment
IRQ14	IDE
IRQ15	IDE

SPECIFICATIONS

Table Section 1-6 provides a complete list of the MediaDock specifications.

Table Section 1-6 MediaDock Specifications

Item	Specification
Chassis Configuration (Size)	Width: 11.6 in. (88.9 mm) Depth: 13 in. (330.2 mm) Height: 3.5 in. (88.9 mm) Weight: 6.3 lb (2.85 kg)
Sound System Features	<ul style="list-style-type: none"> — Soundblaster compatible sound subsystem — ESS 688 sound chip — Yamaha OPL3 MIDI sequencer — Four Altec Lansing speakers — Stereo right and left channels — On board mixer — Internal power amp controlled by external control panel — Wave Audio compatible A/D D/A converter — Up to 44 KHz sampling frequency, 16-bit (CD-quality)
Power	100 to 240 Vac at 50 or 60 Hz Output Voltage — 13.0 V (0 A, 1.7 A, 2.8 A) 13.0 V (4.1 A, 2.4 A, 0 A)
Panel Controls	Latch Release Button Volume Control Tone Control Docking Lever
Connector Support	Expansion Port — connects to Versa expansion connector Microphone-in Port — accepts a standard microphone jack (records only in mono) Headphone-out Ports — two external ports, one on the CD ROM reader, one on the side of the MediaDock Audio-in Port — connects to a stereo amplifier or external CD player Audio-out Port — connects to external speakers, amplifier

Table Section 1-6 MediaDock Specifications

Item	Specification
CDR-250 Dual-Speed CD-ROM Reader	<p>Data Capacity — 680 MB</p> <p>Total Number of Blocks — 333,000 blocks/disc</p> <p>Data Blocks — 2048 bytes/blocks</p> <p>Data Transfer Rate — 300 kilobytes (KB) per second</p> <p>Burst Transfer Rate — PIO mode 2</p> <p>Access Time — 380 milliseconds (ms)</p> <p>Memory Buffer — 286 KB</p>
Standard Software	<p>MediaDock Setup utility</p> <p>Windows® 3.1 drivers</p> <p>Versa M Audio Switcher utility</p> <p>Wave recording and playback utility</p> <p>Mixer utilities</p> <p>MIDI playback utility</p> <p>Software Dynamics Media Maestro multimedia software</p>
Recommended Environment	<p>Temperature: 41° to 95°F (5° to 35°C)</p> <p>Relative Humidity: 20% to 80% (No condensation)</p>
Administrative Compliance	<p>UL 1950</p> <p>CSA C22.2 No. 950 (D3)</p> <p>TUV EN60950: 1988</p> <p>C.R.C., c.1374</p> <p>DE 0871/6.78,</p>

Section 2

Setup and Operation

This section provides setup and operation information for the MediaDock. This includes cabling, power-on verification and using the Automatic Configuration Utility (ACU).

UNPACKING THE SYSTEM

Find an area away from devices that generate strong magnetic fields (electric motors, transformers, etc.). Place the shipping carton on a sturdy surface and carefully unpack the system. The carton contents include the MediaDock, AC adapter, AC power cord, software diskettes, and user documentation.

Environment

Use the MediaDock in a location that meets the following environmental conditions:

- Temperature: 41°F to 95°F (5°C to 35°C)
- Humidity: 20% to 80% (noncondensing)

Store the MediaDock in a location that meets the following conditions:

- Temperature: -4°F to 122°F (-20°C to 50°C)
- Humidity: 10% to 85% (noncondensing)

HARDWARE SETUP

The AC adapter and power cable that came with the unit provide power to the MediaDock and the Versa. Connect the MediaDock AC adapter and power cable as follows:

NOTE: Make sure to plug the AC adapter and power cable into the MediaDock before docking the Versa.

1. Position the MediaDock on a flat surface.
 2. Attach one end of the AC adapter to the MediaDock power port.
 3. Connect one end of the power cable to the connector on the AC adapter.
-

4. Attach the other end to a wall outlet.

Figure Section 2-1 Connecting the AC Adapter

CAUTION: Disconnecting the plug, the AC adapter, or the power cord while the MediaDock and Versa are running, results in a system crash.

Use the procedure that follows to connect the Versa to the MediaDock.

Connecting the Versa

Attach the Versa to the MediaDock with the following steps.

CAUTION: Versa power *must be off* when connecting and disconnecting it to the MediaDock.

Also, make sure all Versa port covers are securely closed before connecting the computer to the MediaDock. Open and stow the expansion port cover as instructed in the following procedure.

1. Turn off Versa power.
-

2. Verify that the AC adapter that came with the MediaDock is connected to the MediaDock and AC power.
3. On the back of the Versa, open the expansion port cover and slide it underneath the expansion port.

Figure Section 2-2 Opening the Versa Expansion Port Cover

Figure Section 2-3 Stowing the Expansion Port Cover

4. Push the MediaDock docking lever all the way to the back of the unit.
-

5. Align the Versa over the MediaDock and lower it into place. Press down on the Versa until the locking latches click to secure the Versa in position.

Figure Section 2-4 Aligning the Versa and the MediaDock

6. Pull the docking lever to the front of the MediaDock. Check that the lever is as far to the front as it can go.

Figure Section 2-5 Securing the Docking Lever

To verify that the connection is made, open the Versa LCD panel and check the battery status LCD. The LCD should show that the battery is charging. If it does not, verify that the AC adapter and power cable are connected properly to the MediaDock. Then pull the docking lever forward again.

The Versa is now docked. Please note the following.

- To use the MediaDock, the AC adapter must be connected. The adapter powers both the MediaDock and the Versa connected to it. The MediaDock cannot run on the Versa batteries.
- The first time you connect the Versa and MediaDock, you need to set up the Versa software to recognize the MediaDock and CD-ROM. Refer to “Software Setup” later in this section for information.

Powering On

The Versa power button turns power on and off to both the MediaDock and the Versa.

Turn power on as follows:

1. Connect the AC adapter to the MediaDock and dock the Versa as described in the two preceding sections.
 2. Open the LCD, locate the power button on the Versa.
-

3. Slide the power button towards the front of the unit, hold it briefly, and release it. (For details, see the *NEC Versa series Service and Reference Manual*.)

Figure Section 2-6 Turning Power On

Disconnecting the Versa

Disconnect the Versa and MediaDock as follows.

Powering Off

The Versa power button turns power off to both the Versa and MediaDock.

CAUTION: Be sure that active applications are closed, and data is saved before powering off the Versa. Failure to do so can result in data loss.

Turn power off as follows:

1. Locate the power button on the Versa.
2. Slide the power button towards the front of the unit, hold it briefly, and release it.

Figure Section 2-7 Turning Power Off

Remove the Versa from the MediaDock as follows.

CAUTION: Turn off Versa power before disconnecting the Versa and MediaDock. Keeping power on can damage the Versa, the MediaDock, or both.

3. Turn off Versa power and close the Versa LCD.
-

4. Push the docking lever all the way to the back of the MediaDock.

Figure Section 2-8 Releasing the Docking Lever

5. Press both release buttons to unlock the locking latches on the front of the unit.
Once the latches are released, the Versa pops up a little.

Figure Section 2-9 Pressing the Release Buttons

The following figure shows the mechanics of the locking latch.

Figure Section 2-10 Locking Latch During Release

6. Lift the Versa up and off the MediaDock.

SOFTWARE SETUP

The first time the MediaDock is used with the Versa, the Versa's software needs to be re-configured to recognize the MediaDock.

Setting up the software using the following steps creates a configuration called "MediaDock". When the Versa is not docked, you can specify the original Versa configuration, called "Mobile."

Complete the following before setting up dual configurations:

- Check that the MS-DOS level 6.0 is installed in the Versa. If the system is running an earlier version of MS-DOS, upgrade to Version 6.0 or higher
- Run the ACU to enable the MediaDock
- Create a Start-Up Diskette
- Run the MediaDock Setup utility.

NOTE: Run software setup on each hard disk that will be used with the MediaDock.

Running the ACU

Use the instructions in the section that is appropriate for the system as follows.

- **Versa M System** —
Go to “Running the ACU for the Versa M.”
- **Versa V System** —
Go to “Running the ACU for the Versa V.”
- **All Other Versa Systems** —
Go to “Running the ACU for the UltraLite Versa, Versa E, and Versa P.”

Running the ACU for the Versa M

This section describes running the ACU for Versa M users. Start at step 1 or 2 depending on the system as follows.

- If you use your Versa M with an NEC Docking Station or Docking Station II that has an optional IDE hard disk or a diskette drive installed, start with step 1.

NOTE: Using a docking station with this type of configuration changes the Versa ACU settings. Therefore, you must follow this ACU setup each time you use the MediaDock after using a docking station configured with an optional IDE hard disk or diskette drive.

- If the user plans to operate the Versa M with a docking station that has other options but no IDE drive or diskette drive, start with step 2.
- If the user does not plan to use the Versa M with an NEC Docking Station or Docking Station II, start with step 2.

Proceed to the appropriate step for the Versa M.

1. Before docking the Versa on the MediaDock, disable the optional drive as follows.
 - Power on the Versa. When the cursor changes to a blinking block, press **F1** to access the ACU.
 - From the main ACU screen, press **X**.
 - Use the down arrow to select “Load Defaults and Exit” and press **Enter**. Press **Enter** again to update your system.
-

- Shut off system power after boot up. Restart the system and press **F1** when the cursor changes to a blinking block to go back into the ACU.
 - From the main ACU screen, press **T** to access the time and date screen.
 - Enter the appropriate time and date. Press **Enter** to accept the new time and date and return to the main ACU screen.
 - Press **X**. Select “Exit and Save Changes” and press **Enter**.
 - Press **Enter** at the prompt to update your system. Once boot up completes, exit Windows and turn off system power.
2. Connect the MediaDock to the AC adapter and an outlet, and dock the Versa.
 3. Power on and boot up the Versa.
 4. When the cursor changes to a blinking block, press **F1** to access the ACU.
 5. From the main ACU screen, press **D** to access the Drives menu.
 6. From the Disk Drive Settings screen, press the down arrow or **i** to move the cursor to the selection arrow next to “IDE Hard Disk Interface.”
 7. Press **Alt-↓**. Four options appear.
 8. Use the cursor down arrow to select “Internal/Docking Station” and press **Enter**.
 9. Press **Enter** again to exit the Drive menu and return to the main ACU screen. Press **X**.
 10. Select “Exit and Save Changes” and press **Enter**. Press **Enter** at the prompt to update your system.

To continue, go to “Start-Up Diskette Creation” later in this section.

Running the ACU for the Versa V

This section describes running the ACU for Versa V users.

1. Connect the MediaDock to the AC adapter and an outlet, and dock the Versa.
 2. Power on and boot up the Versa.
 3. The cursor changes to a blinking block. From the main ACU screen, press **P** twice to access power management options.
 - Press **Alt-↓** to access power management settings.
 - Use the down arrow to select “Off.” Press **Enter** twice to return to the main ACU screen.
-

CAUTION: Disable power management through the ACU when using the Versa V. If power management features are enabled and the system is not used for the established time-out periods, the Versa V goes into Sleep mode. When the Versa V is docked on the MediaDock and enters Sleep mode, the system locks up.

4. From the main ACU screen, press **D** to access the Drives menu.
5. From the Disk Drive Settings screen, press the down arrow or **i** to move the cursor to the selection arrow next to “IDE Hard Disk Interface.”
6. Press **Alt-↓**. Four options appear.
7. Use the cursor down arrow to select “Internal/Docking Station” and press **Enter**.
8. Press **Enter** again to exit the Drive menu and return to the main ACU screen. Press **X**.
9. Select “Exit and Save Changes” and press **Enter**. Press **Enter** at the prompt to update your system.

To continue, go to “Start-Up Diskette Creation” later in this section.

Running the ACU for the UltraLite Versa, Versa E, and Versa P

Follow these steps to run the ACU for the UltraLite Versa, Versa E, and Versa P.

1. Connect the MediaDock to the AC adapter and an outlet, and dock the Versa.
 2. Power on and boot up the Versa.
 3. When the cursor changes to a blinking block, press **F1** to access the ACU.
 4. From the main ACU screen, press **D** to access the Drives menu.
 5. From the Disk Drive Settings screen, press the down arrow or **i** to move the cursor to the selection arrow next to “IDE Hard Disk Interface.”
 6. Press **Alt-↓**. Four options appear.
 7. Use the cursor down arrow to select “Internal/Docking Station” and press **Enter**.
 8. Press **Enter** again to exit the Drive menu and return to the main ACU screen. Press **X**.
 9. Select “Exit and Save Changes” and press **Enter**. Press **Enter** at the prompt to update your system. To continue, go to the next section.
-

Creating a Start-Up Diskette

A start-up diskette lets you boot your computer with your current configuration. Errors in system files can sometimes keep the system from booting up.

Create a start-up diskette as follows. (For details, see the MS-DOS user's guide that came with the Versa.)

1. If your system is in Windows, exit Windows.
2. From the DOS prompt (C:>), type the following command to format a diskette in drive a: using the **/s** option. Press **Enter** after typing the command. (If you are using a different diskette drive, use the correct drive letter.)

```
format a: /s
```

3. At the prompt, insert a blank diskette and press **Enter** to begin formatting.
4. Once the diskette is formatted, enter a volume name and press **Enter** or press **Enter** to skip naming the volume.
5. Type **N** when prompted to format another diskette and press **Enter**.
6. While the diskette is still in the drive, type the following and press **Enter** to copy the CONFIG.SYS file to the diskette.

```
copy c:\config.sys a:\*.*
```

7. Type the following and press **Enter** to copy the AUTOEXEC.BAT file to diskette.

```
copy c:\autoexec.bat a:\*.*
```

8. Remove the diskette from the drive, label it, and store it in a safe place.
9. Continue as follows:
 - If the hard disk drive is not the one that came with the Versa, and you have not reformatted the hard disk or reloaded the operating system, go to the next section, "MediaDock Setup Utility."
 - If you are using a hard disk other than the one that came with the Versa, or the operating system has been reinstalled, go to Appendix A.

NOTE: Use the software setup instructions in Appendix B under the following circumstances:

- A hard disk drive other than the one that came with your Versa is installed
 - The hard disk drive is reformatted or the operating system is reloaded.
-

Running the MediaDock Setup Utility

This section describes how to use the MediaDock Setup utility. While running the utility, use the following options:

- To stop the installation, press **Esc**.
- To accept default settings, press **Enter**, click “OK,” or click “Continue” at the prompts.
- To change settings, follow the on-screen instructions.

Before running the MediaDock Setup utility, make sure to enable the MediaDock through the ACU. This procedure is described earlier in this section, “Running the ACU.”

Run the MediaDock Setup utility as follows.

1. Type **win** and press **Enter** to open Windows.
2. Close any Windows applications that may be running (for example, CardView).
3. Insert the first MediaDock Setup diskette into the drive.
4. From the Windows Program Manager, access the File pull-down menu and select “Run”.
5. Type **a:winstall** and press **Enter**.
6. Respond to the utility prompts as follows:
 - Click “OK” to continue after reading the ACU reminder screen.
 - Click “OK” or press **Enter** to continue with the setup after reading the MediaDock Setup Utility introduction screen.
 - Specify the disk drive on which to install the software. Press **Enter** or click “OK” to accept the default drive c:.
 - Specify the subdirectory in which to install the software. Press **Enter** or click “OK” to accept the default subdirectory MEDIADOK. The utility copies the required software into the specified subdirectory.
7. If you are using a Versa P, exit Windows and reboot your system to activate the CD-ROM. The Versa P and MediaDock are now ready to use together.

If you are using an UltraLite Versa, Versa E, Versa M, or Versa V, proceed as follows at the prompt:

- Remove the setup diskette, insert Audio Applications diskette 1 into the drive, and press **Enter**.
-

- The first audio screen tells you to close any applications that are running. If you followed the instructions given here, you already closed open applications. Just click “Continue” to proceed.

If you did not follow these instructions, click “Exit.” Go back to the beginning of this section, “MediaDock Setup Utility,” and start over.

8. When prompted, select installation operations in the following order.
 - Driver installation
 - Click the “Driver Installation” button.
 - At the prompt, select “Automatic Board Configuration.”
 - At the next prompt, click the “Install Software” button to install the audio software.
 - Software installation
 - Press **Enter** or click “OK” to accept the default directory PCAUDIO for loading the audio software.
 - Press **Enter** again to create the directory.
 - Choose “Complete Installation” for the type of installation to follow.
 - At the prompt, insert Audio Applications diskette 2 into the drive and press **Enter**.
9. At the prompt, click “Restart Windows” to reboot Windows (this activates the MediaDock audio).
10. Exit Windows and press the Power button to reboot the system and activate the CD-ROM drivers.
11. See the following sections for operation information.
 - See “MediaDock Setup Software” for information about using MediaDock software.
 - See “CD-ROM Use” for information about using CDs in the MediaDock.

Software Use

This section describes how to use the software that the MediaDock Setup utility loads in the Versa.

- At start up, the Versa lets you choose a configuration to use. See “Choosing a Configuration” for instructions.
 - Versa M users can use either the MediaDock sound system or the Versa sound system. See “Using the Audio Switcher Utility” later in this section for more information.
-

- Some programs run from MS-DOS instead of Windows. Use the information under “Using DOS-Based Programs” to enable and control MediaDock sound from MS-DOS applications.

Choosing a Configuration

After setting up the MediaDock software, your Versa boot-up differs from its original procedure. The new boot up sequence lets you choose which configuration to use.

Use the new boot up procedure as follows:

1. Power on the Versa. A menu similar to the following is displayed.
 1. MEDIADOCK
 2. MOBILE
 3. DOCKED
2. Enter the appropriate number for the configuration you want to use as follows:
 - MediaDock — Use this configuration when you dock the Versa on the MediaDock.
 - Mobile — Use this configuration to use the Versa by itself.
 - Docked — Pick this configuration to use the Versa docked on an NEC Docking Station or NEC Docking Station II. (This option may not appear, depending on your system configuration.)

Using the Audio Switcher Utility

Follow these steps to use the Versa M Audio Switcher utility.

NOTE: If the MediaDock sound system is selected and the Versa is not docked, run this utility to switch to the Versa M sound system.

To select the MediaDock sound system, make sure the Versa is docked and power is on.

1. From the Windows Program Manager, double click on the Versa M Audio Switcher Utility program group.
-

2. Double click on the audio switcher icon. A Versa M Audio Switcher Welcome screen similar to the following appears.

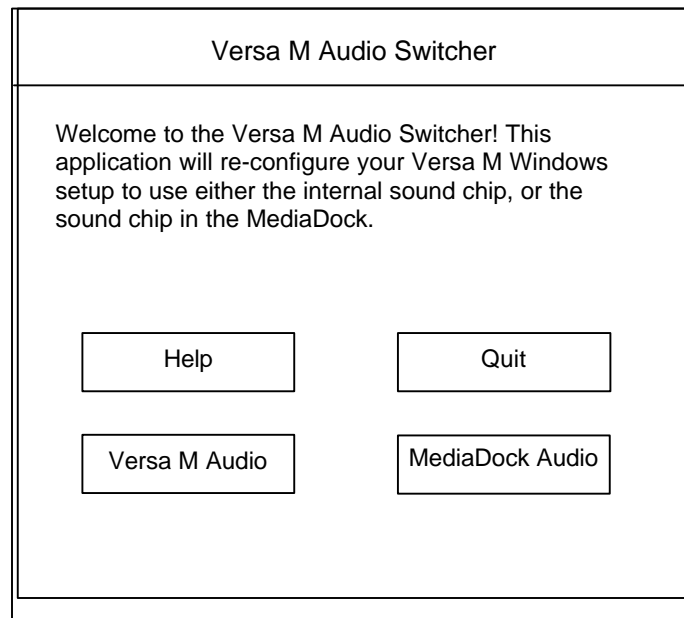


Figure Section 2-11 Versa M Audio Switcher Welcome Screen

3. From the screen, click the button for the appropriate audio system.
 - The Versa M button selects the computer's audio.
 - The MediaDock button selects the MediaDock audio.
-

4. A dialog box similar to the following appears and identifies the sound system selected.

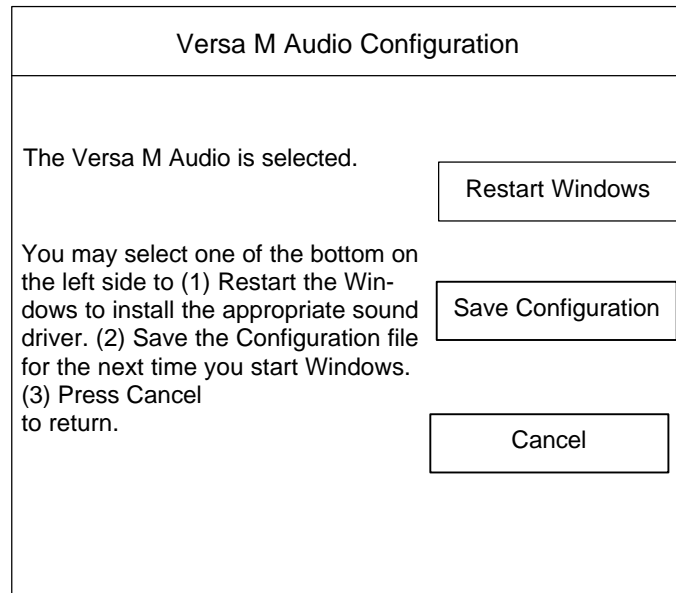


Figure Section 2-12 Audio Switcher Dialog Box

5. The three buttons shown give you the following options.
- **Restart Windows** — Click this button to activate the chosen audio system immediately. The system restarts Windows and activates the sound system.
 - If you select Versa M audio under docked conditions, the Versa M audio drivers load, but the sound system does not work. Once you undock the Versa M, the sound system functions.
 - If you select the MediaDock sound system and are not docked, two error messages appear. They let you know the ESS hardware is not present.
 - **Save Configuration** — Click this button to change the audio sound system to be used the next time Windows restarts. This button saves the new configuration but does not engage it until Windows restarts.
 - **Cancel** — Click this button to return to the Welcome screen without making or saving any changes. The sound system that was active when you opened the utility remains active.

NOTE: The new sound system selection is not active until you restart Windows.

Using DOS-Based Programs

Two sound control utilities are stored on your hard disk drive when you run the MediaDock Setup utility. When using applications that run from MS-DOS, you may need to change these sound settings.

The following two utilities adjust the speaker volume and change the DMA and IRQ addresses.

- **ESSVOL.EXE** — allows you to increase or decrease the volume of the sound coming from the MediaDock.
- **ESSCFG.EXE** — allows you to change the DMA and IRQ settings if your application requires you to do so.

Only change these settings if you try to run a DOS-based application and you get no sound or poor sound from the MediaDock.

Changing the Volume

Change speaker volume settings as follows.

1. From the DOS prompt, type the following and press **Enter** to change to the MEDIADOK directory.

```
cd \mediadok
```

2. Display the current sound settings by typing the following and pressing **Enter**.

```
essvol
```

The screen displays the current volume settings.

3. To change a volume setting, type the following:

- The command **essvol** followed by the space.
 - The code for the setting to change followed by a colon
 - **/v**: changes the master volume
 - **/l**: changes the line volume
 - **/w**: changes the wave volume
 - **/m**: changes the mic volume
 - **/c**: changes the CD volume
 - **/s**: changes the synthesizer volume.
 - A number between 0 and 15 as the new setting.
-

The following example decreases the master volume to 3 and increases the wave volume to 14:

```
ESSVOL /V:3 /W:14
```

When you finish using the DOS-based application, you do not need to reset the volume settings for Windows. At boot up, Windows specifies its own settings.

Changing IRQ and DMA Settings

Before changing these settings, check the documentation that came with the MS-DOS based application. If the documentation indicates that the application requires special settings, proceed as follows.

1. From the DOS prompt, type **cd mediadok** and press **Enter** to change to the MEDIADOK directory.
2. To display the current IRQ and DMA settings, type **esscfg** and press **Enter**.

The screen displays the current settings and the following four options from which to choose.

- 1) Set new IRQ channel
 - 2) Set new DMA channel
 - 3) Display current settings
 - 4) Quit
3. To change a setting, type the number that appears in front of the option and press **Enter**.
Specify a new setting from the options displayed.
 4. When done, select **4** to quit and use the DOS-based application.

MEDIADOCK CONTROLS

The following describes MediaDock controls, see Figure Section 2-13.

- **Volume Control** — Controls the volume of the sound produced by the MediaDock. Pull the lever towards the front of the MediaDock to decrease sound; back to increase sound.
- **Tone Control** — Controls the treble and bass balance on the MediaDock. Pull the lever toward the front of the unit to increase the bass; push the lever back to increase treble.
- **Locking latches and release buttons (one per side)** — These latches secure the Versa to the MediaDock. The release buttons unlock the Versa for separate use.
- **Handle** — The sturdy MediaDock handle lets the user carry the MediaDock with the Versa connected. It also acts as a wrist rest when using the Versa keyboard.
- **Docking Lever** — The docking lever controls the connection between the MediaDock and the Versa. Pulling the lever to the front of the MediaDock when a Versa is seated in the base unit plugs the docking connector into the Versa expansion port.
- **Air Vents** — MediaDock air vents allow air to circulate inside the unit. This keeps the internal components cool and protects from overheating.

Figure Section 2-13 MediaDock Controls

MediaDock Connectors

Figure Section 2-14 and Table Section 2-1 show connectors used in the MediaDock.

Figure Section 2-14 MediaDock I/O Connectors

Table Section 2-1 I/O Connector Descriptions

I/O Connector	Function
Stereo Headphone	Connects to a 3-pin mini-jack headphone set.
Microphone In	Connects to a 3-pin mini-jack microphone.
Line out	Connects to a 3-pin mini-jack CD ROM or stereo amplifier. Connect this port to a Line in port on another audio system to play or record.
Line in	Connects to a 3-pin mini-jack CD ROM or stereo amplifier. Use a cable to connect to the Line out port on the other audio system to record or play.
Docking	This 198-pin connector provides an interface for the optional NEC Versa Series Docking Station II or optional port replicator.
Power	This connector provides an interface for the AC adapter. The AC adapter is then connected to a wall outlet via the AC power cord.

NOTE: When the headphone port is in use, the MediaDock speakers are disabled.

VERSA BATTERY CHARGING

The AC adapter charges the Versa battery. Simply dock the Versa on the MediaDock and connect the AC adapter. As long as the MediaDock and Versa are *not* powered on, the Versa battery charges.

NOTE: No charging occurs if the MediaDock and Versa are powered on. The battery status indicators or LCDs may indicate that the battery is charging, however, it is not. Charging *only* occurs when the Versa is docked, the MediaDock is connected to AC power, and Versa power is turned off.

CD-ROM USE

The MediaDock ships with the CDR-250, NEC's dual-Speed CD-ROM reader. The CD-ROM reader is assigned the next available drive letter.

NOTE: The CD-ROM reader only works when the MediaDock is connected to AC power, the Versa is docked, and the Versa is powered on.

Use the CD-ROM reader to load and start programs or from a compact disc (CD). Also, use the CD-ROM reader to play audio CDs (see "Playing Audio CDs" in this section). The Dual-Speed CD-ROM reader is fully compatible with Kodak Multisession Photo CDs™ and standard audio CDs.

The CD-ROM reader operates at different speeds depending on whether the CD you are using contains data or music. This allows you to get your data faster and to see smoother animation and video.

Dual-Speed CD-ROM features are shown in Figure Section 2-15. Descriptions of these features follow.

Figure Section 2-15 CD-ROM Reader Controls and Indicators

- 2X speed lamp — shows that the reader is reading data at double speed.
- CD busy lamp — lights during data read operations. Do not eject the CD or turn off the MediaDock when the indicator is lit.
- Stop/eject button — ejects or retracts the CD tray. Press this button when power is on to insert a CD into or remove a CD from the reader.

CD Loading

To insert a CD into the Dual-Speed reader, follow these steps.

1. Press the stop/eject button. A CD tray emerges from the reader door.

Figure Section 2-16 Pressing the Stop/Eject Button

2. Put the CD, printed side up, into the circular impression in the tray.

Figure Section 2-17 Loading a CD into the Reader

3. Press the stop/eject button again. The reader automatically pulls in the tray.

To remove a CD, simply press the stop/eject button and remove the CD when the tray slides out. Press the stop/eject button again to close the reader door.

Audio CDs

Before playing audio CDs for the first time, add the drivers as an audio option instructed in the next section “Adding the CD Audio Option.”

Once you add the option, you need only refer to the section “Playing Audio CDs” to play audio.

Adding the CD Audio Option

Add the “CD Audio” option to the Media Player’s Device list as follows.

1. Press the Stop/Eject button and insert an audio CD into the tray. Press the button again so the tray retracts into the reader.
2. From the Program Manager, select the Main program group. Double click the Control Panel icon.
3. Double click the Drivers icon and select “Add”.
4. Scroll through the list of drivers and highlight **[MCI] CD Audio**. Click “OK.”
5. If you see the prompt that the mcicda.driv is already on the system, select “New.”
6. Click “OK” in the CD ROM drive detection window. Click on the “Close” button to close the Drivers window.
7. Close the Control Panel.

You only need to add the CD Audio option once. After doing so, go to the next section to play audio CDs.

Playing Audio CDs

Follow these instructions to play audio CDs. (For more details, see the Windows user's guide.)

1. Insert a CD into the tray. Press the Stop/Eject button to open and close the tray.
2. From Windows, double click on the Accessories program group.
3. In Accessories, highlight and double click on the Media Player icon.
4. From the Device drop down menu, select "CD Audio."
5. From the media player control panel that appears, click on the play button.

CD Care

When handling CDs, keep the following guidelines in mind.

- Avoid scratching or soiling the side of the disc that has no printing or writing on it. This is the data side of the disc.
- Do not write on or apply labels to either side of the disc.
- Keep the disc away from direct sunlight or high temperatures.
- Clean fingerprints or dust from the disc by wiping it with a soft cloth.

CAUTION: Avoid using benzene, paint thinner, record cleaner, or static repellent to clean a CD.

Figure Section 2-18 Wipe a Disc from the Center and Toward the Edge

Emergency Eject

Use the following procedure to manually remove a disc from the CD-ROM reader if the eject function is disabled by software or a power failure occurs.

1. Turn off Versa power and unplug the MediaDock.
2. Manually open the dust door.

Figure Section 2-19 Opening the Dust Door

3. Locate the Emergency Eject hole.

Insert a steel pin (a stiff, straightened paper clip can be used) into the eject hole. Press the pin firmly until the disc tray emerges.

Figure Section 2-20 Emergency Eject Hole Behind the Dust Door

Section 3

Options

This section provides installation procedures for the following MediaDock optional equipment:

- headphones
- external speakers
- microphone.

NOTE: Use the ports on the MediaDock when connecting these options. MediaDock ports are easy to access.

Headphones or External Speakers

Follow these steps to connect headphones or external speakers to the MediaDock.

NOTE: When you use the headphone port, speakers in the MediaDock are disabled. The figure in the following section shows headphones being connected. External speakers are connected to the same port.

Connecting Headphones

Connect headphones as follows.

1. Locate the headphone port on the MediaDock base.

Figure Section 3-1 Headphone Port on the MediaDock Base

2. Insert the headphone jack into the port.

Connecting External Speakers

Connect external speakers as follows.

1. Check the instructions that came with the speakers to set up the speaker cables.
2. Locate the headphone port on the MediaDock and plug in the speaker cable.
3. Follow the directions that came with the speakers to connect them to AC or battery power. (The MediaDock does not provide operating power to external speakers.)

External Microphone

Follow these steps to connect an external microphone to the MediaDock.

1. Locate the microphone port on the MediaDock base.
-

Figure Section 3-2 Microphone Port

2. Insert the microphone jack into the port.
3. Turn on Versa power if it is not already on.

NOTE: You can record only mono sound when using a microphone for recording with the MediaDock. If you experience audio feedback during use, move the microphone away from the MediaDock.

Section 4

Troubleshooting and Repair

This section provides information on maintaining, troubleshooting and repairing the NEC Versa series MediaDock.

SERVICE

NEC service and information telephone numbers are listed in Table Section 4-1.

Table Section 4-1 NEC Service and Information Telephone Numbers

Service	Call
To order NEC spare parts	In the U.S., call 1(800) 632-4525
To order options in the U.S.	Local Sales Office
To access the NEC Electronic Bulletin Board System (BBS)	1(508) 635-4706 (see "BIOS Update Utility" in Section 2)
To down load files - provides software drivers and the latest ROM BIOS for flash ROM computer systems	1(508) 635-4706 (see "BIOS Update Utility" in Section 2)
NEC Service	In the U.S., call 1(800)632-4525
Listen to the automated attendant and select the appropriate menu to reach one of the following departments.	
Information Center - literature, dealer locations, sales leads, response to ads	
NASC (National Authorized Service Centers) Administration - new dealer service authorization/warranty claims	
NSRC (National Service Response Center) - questions other than products, spare parts or technical support	
Service Contracts	
TSC (Technical Support Center) - technical support for everyone else	
FastFacts™ - automated service that sends the latest information about NEC products to the fax machine 24 hours a day	In the U.S., call 1(800) 366-0476 Outside the U.S., call 1(708) 860-9500, Ext. 2621
Canadian Inquires	1(416) 795-3554

Technical Support

NEC Technologies Technical Support Center (TSC) provides an E-mail service for Internet users besides the support listed in Table Section 4-1. Technical questions regarding NEC Technologies products can be sent over the Internet system to TSC. The Internet address is as follows:

tech-support@nectech.com.

If it is more convenient, questions may also be faxed to TSC. TSC's fax number is:

(508) 635-4666

Along with the complete product name and question(s), be sure to include your name and fax number or Internet address, so that an expert can respond to the question.

It would also help to include your telephone number in case TSC can not get their answer to you. TSC will reply to all questions received by Internet or fax within one business day.

Product Information

NEC FastFacts is a automated electronic information service used to obtain up-to-date product application notes, installation procedures, troubleshooting tips, data sheets, technical information bulletins, price lists, and other information.

Information can be obtained from the FastFacts service 24 hours a day, 7 days a week. Using a touch-tone telephone call the FastFacts number, order the desired information through the automated attendant, and FastFacts will automatically fax the information.

Catalogs are available that list the documents and the document numbers. Current catalogs include:

- Catalog 1, Monitors, Graphics Boards, and Data Projector Products
- Catalog 2, CD-ROM Hardware and Software, Printers, and Disk Drive Products
- Catalog 3, Laptop, Desktop, and Server Computer Products
- Catalog 9, Price and Configuration Index.

A catalog of all current technical information bulletins can be ordered by requesting document number 72842228.

Ordering Information from FastFacts

Order information from FastFacts as follows.

1. Check that the fax machine is on.
2. Locate the document part number.
3. Using a touch-tone telephone, call 1-800-366-0476 (U.S. and Canada only).

For international use, enter the international long distance access number, the U.S. country code, the U.S. telephone number, and the U.S. extension (01-708-860-9500 extension 2621).

4. Listen to the instructions provided by the automated attendant.

Press **1** to skip the FastFacts introduction and jump to the automated instructions for ordering a document or catalog.

Press **2** for an introduction to FastFacts, followed by the automated instructions for ordering a document or catalog.

5. When asked by the automated attendant, enter your fax number and telephone number.

For international use, first enter the international long distance access number (011), your country code, your area code or city code, then your fax number.

The information requested will automatically sent to your fax machine. Please wait for document before calling to order more documents. If FastFacts attempts to send the second order before the first order is completed, the order could be canceled. After three tries, FastFacts assumes that the line is busy and will not process the order.

MAINTENANCE

This subsection contains general information for cleaning and checking the MediaDock.

The unit requires cleaning and checking at least once a year and more often if operating in a dusty environment. No other scheduled maintenance is required.

WARNING: Disconnect the AC adapter before performing any maintenance. Voltage is present inside the MediaDock even after the system is turned off.

Cleaning the System's Exterior

Use the steps below to clean the outer surface of the system.

1. Power off the system. Unplug all cables connected to the system.
2. Wipe the outside of the MediaDock, with a soft, clean cloth. Remove stains with a mild, liquid detergent like a common household cleaner. Do not use solvents or strong, abrasive cleaners on any part of the system.

Cleaning the System's Interior

When servicing the inside of the system, remove dust and other foreign particles from the inside of the system unit as follows.

1. Remove the top cover using the disassembly and reassembly procedures later in this section.
2. Dust or vacuum (with a rubber-tipped nozzle) the inside of the system unit. Use care to avoid damaging or dislodging any components and cables.
3. Inspect all cables connectors for damage. Ensure that connectors are seated properly before replacing the cover.

Precautions

Follow these precautions when using and storing the MediaDock.

- Do not use or store the MediaDock in direct sunlight or near radiant heat sources for an excessive length of time. Heat from these sources can raise the internal temperature of the unit and damage its parts.
 - Avoid dusty environments.
 - Do not cover the air vents or put anything near enough to them to block air circulation.
-

- Do not use or store the MediaDock near chemicals.
 - Avoid excessive vibration and shock. Dropping the MediaDock or knocking it over can cause serious damage.
 - Keep the MediaDock away from machinery that generates strong electric or magnetic fields.
 - Do not place any heavy objects on the MediaDock. It is designed to support the Versa, nothing heavier.
 - Make sure the Versa is securely connected to the MediaDock before attempting to pick up the MediaDock. Be sure the locking latches and docking lever are appropriately locked and positioned.
-

TROUBLESHOOTING

This subsection provides information that helps isolate and repair system malfunctions at the field level. Step-by-step instructions on diagnosing and solving system hardware problems are provided first.

Diagnosing and Solving Problems

Table Section 4-2 summarizes problems that may develop during MediaDock operation and lists (in sequential order) suggested corrective actions.

Table Section 4-2 Problems and Solutions

Problem	Corrective Action
No power	<ol style="list-style-type: none"> 1. Check that the Versa is connected properly to the MediaDock. 2. Make sure that Versa power is turned on and the electrical outlet is working. 3. Check that the docking lever is pulled all the way forward.
The docking lever does not pull forward when trying to dock the Versa.	<ol style="list-style-type: none"> 1. Remove the Versa from the MediaDock and check that the Versa expansion port cover is opened and stored properly.
No sound from MediaDock Speakers	<ol style="list-style-type: none"> 1. Check the volume control and adjust accordingly. 2. Make sure the headphones are not plugged in. MediaDock speakers will not output sound to the speakers when headphones are in use. 3. If the system is the Versa M, the sound system is disabled during software setup. Complete the software setup and use the Versa M Audio Switcher to activate sound as described in Section 2, Setup and Operation.
Sound stops abruptly.	<ol style="list-style-type: none"> 1. If using a Versa V, check that power management features are disabled through the ACU. See Section 2, ACU Setup for the Versa V.
The CD ROM reader is not recognized.	<ol style="list-style-type: none"> 1. Verify that MediaDock parameters are set on the hard disk drive in use. See Section 2, Setup and Operation. 2. Use the System Configuration Utility (SCU) to check that the docking configuration is selected on the Versa.

Table Section 4-2 Problems and Solutions

Problem	Corrective Action
Error at boot up.	<p>1. If the hard disk drive that came with the Versa is being used, see Section 2, Setup and Operation to make sure parameters are set correctly.</p> <p>2. If a customized hard disk drive is being used, see Appendix B to make sure that the parameters are set correctly.</p>

Remote Technical Support

Remote Support Session allows the customer engineer to diagnose the system from a Technical Support Center computer. Use of this utility requires the connection of a modem to a telephone line.

Follow these steps to prepare the system for remote support. A modem must be installed in the system and connected to a telephone line.

1. With the system power off, insert the NEC Hardware Utilities diskette into the diskette drive.
2. Turn on system power. A menu appears.
3. Type **2** to select “Remote Support Session”. The screen displays “Wait Dial-In Set” and a message indicating that the system is waiting for the remote dial-in.

NOTE: Do not touch the keyboard while waiting for the remote dial-in.

4. To cancel the remote dial-in, remove the diskette and simultaneously press **Ctrl Alt Del**.

NEC Communications Assistant

The NEC Communications Assistant file provides information on possible solutions to communications problems. The file includes an indexed list of troubleshooting tips and techniques on telecommunications topics such as:

- modem “HotSwapping”
- LAN reconnection
- Token-Ring configuration management.

DISASSEMBLY AND REASSEMBLY

This subsection contains step-by-step disassembly procedures for the system. Reassembly is the reverse of disassembly. Each procedure is supported by a simplified disassembly illustration to facilitate removal. The detailed exploded-view diagram and parts lists for the system unit are shown later in this subsection.

Required tools include a Phillips-head screwdriver. For complete disassembly of the system unit, follow the disassembly order listed in Table Section 4-3. To reassemble, follow the table in reverse order.

Table Section 4-3 MediaDock Disassembly Sequence

Sequence	Part	See Page
1	Top Cover Assembly (includes plungers (2), docking cable)	4-9
2	Sound Board (G8SEA)	4-12
3	Power Amplifier Board	4-14
4	Assembly Handle	4-16
5	Left Side Latch, Right Side Latch	4-16
6	CD-ROM Reader	4-18
7	High-Range Speakers	4-20
8	Mid-Range Speakers	4-23

When disassembling the system unit, follow these general rules.

- Turn off and disconnect all power and all options, including the AC adapter (if connected) and primary battery pack (see the procedures that follow).
 - Do not disassemble the system into parts that are smaller than those specified in the procedure.
 - Label all removed connectors. Note where the connector goes and in what position it was installed.
-

Top Cover Assembly

The top cover assembly includes two plungers, and the docking cable. Remove the top cover assembly as follows.

1. Orient the MediaDock in the working position (with the top cover assembly facing you).
2. Remove the four screws on the top cover assembly.

Figure Section 4-1 Removing Top Cover Screws

3. Turn the MediaDock over to access the bottom of the unit. Remove the five screws securing the top cover to the bottom of the chassis.

Figure Section 4-2 Removing Bottom Screws

4. Lift up the top cover assembly. Note that the docking cable attaches the top cover assembly to the sound board.
-

5. Remove the screw securing the docking cable to the sound board (G8SEA).

Figure Section 4-3 Removing Docking Cable Screw

6. Lift off and remove the MediaDock top cover assembly.
-

Sound Board

Remove the sound board (G8SEA) as follows.

1. Remove the top cover assembly as previously described.
2. Disconnect the following cables from the sound board.
 - IDE cable (from connector J5 on the sound board)
 - Line-out cable (from connector J7 on the sound board)
 - power cable (from connector J9 on the sound board).

Figure Section 4-4 Locating Sound Board Connectors

3. Remove the seven screws that secure the sound board to the chassis. Lift out the sound board and remove it.

Figure Section 4-5 Removing the Sound Board Screws

Power Amplifier Board

Remove the power amplifier board as follows.

1. Remove the following as previously described:
 - top cover assembly
 - sound board.
2. Unplug the speaker cable from the red connectors on the power amplifier board.

Figure Section 4-6 Unplugging the Red/Black Speaker Cable

3. Remove the three screws that secure the power amplifier board to the chassis. Lift out the board and remove it.

Figure Section 4-7 Removing the Power Amplifier Board Screws

Assembly Handle, Right Latch, Left Latch

Remove the MediaDock handle as follows.

1. Remove the top cover assembly as previously described.
2. Remove the two screws that secure the assembly handle to the chassis. Lift the handle up, and remove it.

Figure Section 4-8 Removing Assembly Handle Screws

Remove the right and left latches situated near the assembly handle as follows.

NOTE: When removing the latches, handle the torsion springs very carefully.

3. Locate the left latch. Lift the left latch and torsion spring out of the plastic insert.
Repeat the procedure for the right latch and torsion spring.

Figure Section 4-9 Locating the Left Latch and Torsion Spring

CD ROM Reader

Remove the CD ROM reader as follows.

1. Remove the top cover assembly as previously described.
2. Disconnect the following cables from the CD ROM and the sound board:
 - IDE cable (from connector J5 on the sound board)
 - Line out cable (from connector J7 on the sound board)
 - power cable (from connector J9 on the sound board).

Figure Section 4-10 Removing CD ROM Cables

3. Remove the four screws that secure the CD ROM reader to the chassis. Lift up and remove the CD ROM reader.

Figure Section 4-11 Removing the CD ROM Screws

High-Range Speakers

Remove the high-range speakers as follows.

1. Remove the following as previously described:
 - top cover assembly
 - assembly handle
 - CD ROM reader.

2. Disconnect the red and black speaker cables from the red connectors on the power amplifier board.

Figure Section 4-12 Disconnecting the Speaker Cable

3. Remove the yellow clasp connector that attaches the red and black speaker cable to the mid-range speakers.

Figure Section 4-13 Removing the Yellow Clasp Connectors

4. Remove the two screws that secure the MediaDock handle to the base assembly. Lift off the handle.

Figure Section 4-14 Removing the MediaDock Handle

5. Remove the two screws that secure each high-range speaker to the MediaDock handle. Lift each high-range speaker out of the handle insert.

Figure Section 4-15 Removing Mid-Range Speaker Screws

Mid-Range Speakers

Remove the mid-range speakers as follows.

1. Remove the following as previously described:
 - top cover assembly
 - assembly handle
 - CD ROM Reader.
2. Remove the yellow clasp connectors that attach the red and black speaker cables to each mid-range speaker.

Figure Section 4-16 Removing Speaker Cables from Mid-Range Speakers

3. Remove the two screws securing each mid-range speaker to the base assembly. Lift out each mid-range speaker.

Figure Section 4-17 Removing the Mid-Range Speaker Screws

ILLUSTRATED PARTS BREAKDOWN

This subsection contains the illustrated parts breakdown (IPB) and NEC part numbers for the MediaDock.

Table Section 4-4 lists NEC part numbers.

NOTE: In the U.S., call 1(800) 632-4525 to order NEC spare parts. To order options in the U.S., call your local sales office.

Table Section 4-4 Versa Series MediaDock Field-Replaceable Parts*

Item	Description	Part Number
1*	Rubber Foot (Front)	158-050778-009
2	Latch (Left Side)	158-050778-005
3	Torsion Spring (Left)	158-095134-084
4	NEC CD ROM Reader 250 (white) CD Bezel (gray), Mdock (Not shown in IPB figure)	89M74701 03992188
5	IDE Cable	158-050836-000
6	Audio Cable Assembly	158-050782-000
7	Power Cable Assembly	158-050781-000
8*	Sound Board (G8SEA)	158-026185-000A
9	Docking Cable Assembly	158-050826-000
10	Plungers (2)	158-030674-000
11	Knob Arm	158-030673-000
12	Top Cover Assembly	158-050779-000
13	Plunger Springs (2)	158-095130-279
14	Power Amplifier Board	158-050778-002
15	Slide Switch Covers (Tone and Volume)	158-050778-007
16	AC Power Cord	808-741299-001A
17	Mid-Range Speakers	158-050778-016
18	Torsion Spring (Right)	158-095134-264
19	Latch (Right Side)	158-050778-006
20	P52 AC Adapter	808-891664-011A
21	High-Range Speakers	158-050778-014

* This data was prepared March 1995. For an up-to-date listing of spare parts, please call FastFacts (800) 366-0476 and order document number 42181142

Table Section 4-4 Versa Series MediaDock Field-Replaceable Parts*

Item	Description	Part Number
22	MediaDock Logo Plate	158-030660-001
23	Assembly Handle	158-050778-003
24	Base Assembly	158-050778-000

*Recommended Spares.

Figure Section 4-18 Versa Series MediaDock Parts Breakdown*

* This data was prepared March 1995. For an up-to-date listing of spare parts, please call FastFacts (800) 366-0476 and order document number 42181142

Appendix A

Software Setup for Customized Disks

Use the setup procedures in this section under the following circumstances:

- You are using a hard disk other than the one that came with the Versa.
- You loaded or reloaded the operating system on the hard disk.

In addition to the procedures in Section 2, software setup for customized drives requires that you modify the CONFIG.SYS and AUTOEXEC.BAT system files. After these files are modified, return to Section 2 and run the MediaDock Setup utility as described.

SYSTEM FILE MODIFICATION

Instructions for modifying the CONFIG.SYS and AUTOEXEC.BAT files follow.

Modifying the CONFIG.SYS File

The MediaDock Setup utility creates a second configuration for use with the MediaDock. The utility locates labels in the CONFIG.SYS file and loads information below the label. Modify the CONFIG.SYS file to insure that the correct labels are in place.

The procedure that follows creates four labels that are essential to MediaDock setup. Simply follow the instructions in the order presented. (If a label already exists in your file, you do not need to re-enter it.) For details, see the MS-DOS user's guide that came with the Versa.

After completing the procedure, the file will contain information similar to that shown in the following example. Bold type represents text entered during the following procedure.

```
[COMMON]
DOS=HIGH,UMB
FILE=30
BUFFERS=10
STACKS=9,256
DEVICE=C:\DOS\HIMEM.SYS
DEVICE=C:\EMM386.EXE NOEMS X=D000-FCFF I=B000-B7FF
DEVICE=C:\DOS\SETVER.EXE
SHELL=C:\DOS\COMMAND.COM C:\DOS /P
[MENU]
MENUITEM=MOBILE, Mobile Configuration
```

```
MENUITEM=MEDIADOCK, MediaDock Configuration
MENUDEFAULT=MOBILE,15
[MEDIADOCK]
[MOBILE]
```

NOTE: Final configuration file contents reflect the software and hardware loaded on or attached to your system. Therefore, the file will probably differ from the one shown here.

Modify the CONFIG.SYS file as follows.

1. At the DOS prompt, type the following and press **Enter**.

```
edit config.sys
```

2. Type the following and press **Enter** to create a new first line in the file.

```
[COMMON]
```

This specifies that the information under the heading is common to all configurations, including Mobile and MediaDock. The file begins with DOS and memory information, device definitions, and software execution commands. See the following example:

```
[COMMON]
DOS=HIGH,UMB
FILE=30
BUFFERS=10
STACKS=9,256
DEVICE=C:\DOS\HIMEM.SYS
DEVICE=C:\EMM386.EXE NOEMS X=D000-FCFF I=B000-B7FF
DEVICE=C:\DOS\SETVER.EXE
SHELL=C:\DOS\COMMAND.COM C:\DOS /P
```

3. Create a Menu section as follows:

- Scroll to the end of the list. Create another label by typing in the following and pressing **Enter**.

```
[MENU]
```

- Under the Menu label, enter the following information to create a start-up menu. (Press **Enter** at the end of each line.)

```
MENUITEM=MOBILE, Mobile Configuration
MENUITEM=MEDIADOCK, MediaDock Configuration
```

- Specify the default configuration and how many seconds the system waits before using it.

```
MENUDEFAULT=MOBILE,15
```

- “menudefault” specifies the default configuration, which is Mobile. Specify the MediaDock configuration by replacing “Mobile” with “MediaDock”.
- “15” defines how many seconds elapse before the system activates the default configuration. Fifteen seconds gives you time to select between configurations when the system boots up.

The menu section created should look similar to the following:

```
[MENU]
MENUITEM=MOBILE, Mobile Configuration
MENUITEM=MEDIADOCK, MediaDock Configuration
MENUDEFAULT=MOBILE,15
```

4. Create a MediaDock and Mobile section by typing the following and pressing **Enter** after each.

```
[MEDIADOCK]
[MOBILE]
```

5. Press **Alt-f** to access the file menu, then **x** and **y**. At the prompt, press **Enter** to save now.

Appendix B contains a sample CONFIG.SYS file.

Modifying the AUTOEXEC.BAT File

The MediaDock Setup utility also locates labels in the AUTOEXEC.BAT file and loads information below the label.

Once this procedure is completed, the AUTOEXEC.BAT file contents should look similar to the following. Bold text represents the material entered during this procedure.

```
@ECHO OFF
PROMPT $p$g
SET PATH=c:\DOS;C:\WINDOWS;C:\NECUTILS;C:\CRYSTAL
SET TEMP=C:\TEMP
IF NOT EXIST VERSION. GOTO SETUP
CLS
TYPE VERSION
:SETUP
C:\DOS\SMARTDRV.EXE
LOADHIGH C:\DOS\DOSKEY
```

```
SET MOUSE=C:\MOUSE
C:\MOUSE\NECMOUSE
goto %CONFIG%
:MOBILE
:MEDIA DOCK
:END
```

Modify the AUTOEXEC.BAT file as follows.

1. From the DOS prompt, type the following and press **Enter**.

```
edit AUTOEXEC.BAT
```

2. Scroll to the end of the file and position your cursor after the last line. If you locate the line “:END”, position your cursor at the front of the line right before the colon.
3. Type the following and press **Enter** after each line:

```
goto %CONFIG%
:MOBILE
:MEDIA DOCK
```

4. Press **Alt-f** to access the file menu, then **x** and **y**. At the prompt, press **Enter** to save now.

Appendix B contains a sample AUTOEXEC.BAT file.

5. To continue software setup, go to “Running the MediaDock Setup Utility” in Section 2.

Appendix B

System Files

This appendix provides samples of a CONFIG.SYS and an AUTOEXEC.BAT file. The files shown reflect the contents of files after the MediaDock Setup utility is run.

The contents of system files depend on the system's software and hardware configuration. Because of this, the samples shown here probably differ from the one on your Versa. Use these samples as guidelines.

CONFIG.SYS

```
[COMMON]
DOS=HIGH,UMB
FILES=30
BUFFERS=10
STACKS=9,256
DEVICE=C:\DOS\HIMEM.SYS
DEVICE=C:\EMM386.EXE NOEMS X=D000-FCFF I=B000-B7FF
DEVICE=C:\DOS\SETVER.EXE
SHELL=C:\DOS\COMMAND.COM C:\DOS /P
rem =====CardSoft(TM) 3.1 PCMCIA Drivers =====
rem == If PCMCIA Cards are not used in your system, these drivers
rem == can be remarked to save system memory area.
rem =====
DEVICEHIGH=C:\CARDSOFT\SSCIRRUS.EXE
DEVICEHIGH=C:\CARDSOFT\CS.EXE
DEVICEHIGH=C:\CARDSOFT\CSALLOC.EXE
rem == The next line is only needed for PCMCIA Hard drives
DEVICEHIGH=C:\CARDSOFT\ATADRV.EXE
pause
rem == The next 2 lines are only needed for SRAM cards
DEVICEHIGH=C:\CARDSOFT\MTSRAM.EXE
DEVICEHIGH=C:\CARDSOFT\MTDDRV.EXE
DEVICEHIGH=C:\CARDSOFT\CARDID.EXE
INSTALL=C:\CARDSOFT\CS_APM.EXE

[MENU]
rem =====
rem The following is a menu which will allow you to choose separate
```

```
rem configurations for Mobile or Docked.
rem =====
MENUITEM=MOBILE, Mobile Configuration
MENUITEM=MEDIADOCK, MediaDock Configuration
rem =====
rem Change the following default value to reflect the most appropriate
rem setting. The default timer is set to 0, modify this parameter to the
rem appropriate value for your usage. i.e. 5 = 5-second delay
rem =====
MENUDEFAULT=MOBILE,15
MENUCOLOR=1,3
[MOBILE]
rem =====
rem Add any drivers, etc. to this section which are unique to the Mobile
rem Configuration.
rem =====
DEVICEHIGH=C:\DOS\POWER.EXE
[MEDIADOCK]
rem =====
rem Add any drivers, etc. to this section which are unique to the MediaDock
rem Configuration.
rem =====
device=c:\cdrom\nec_ide/sys /d:miscd001 /V
lastdrive=z
[COMMON]
rem =====
rem Add any drivers, etc. to this section which are common to both
rem configurations.
rem =====
```

AUTOEXEC.BAT

```
@ECHO OFF
PROMPT $p$g
SET PATH=C:\DOS;C:\WINDOWS;C:\NECUTILS;C:\CRYSTAL
SET TEMP=C:\TEMP
IF NOT EXIST VERSION. GOTO SETUP
CLS
TYPE VERSION
:SETUP
C:\DOS\SMARTDRV.EXE
```

```
LOADHIGH C:\DOS\DOSKEY
SET MOUSE=C:\MOUSE
C:\MOUSE\NECMOUSE
rem =====MENU=====
rem The following statement will obtain values from the CONFIG.SYS file
rem for Mobile or MediaDock configurations.
rem =====
goto %CONFIG%
:MOBILE
rem =====
rem Add any drivers, etc. to this section which are unique to the Mobile
rem Configuration.
rem =====
:MEDIADOCK
rem =====
rem Add any drivers, etc. to this section which are unique to the MediaDock
rem Configuration.
rem =====
c:\necutils\less.com
c:\cdrom\mscdex /d:MSCD001 /m:10
set blaster=A220 I5 D1 T4
\necutils\BACKLITE FULL
echo .
goto END
:END
rem WIN
```

Index

A

- Analog interface specifications, 1-9
- Audio Switcher utility, 2-16
 - cancel button, 2-18
 - restart Windows button, 2-18
 - save configuration button, 2-18
- use, 2-16

B

- Base control, 2-21

C

Cables

- ide cable, 1-7
- line out cable, 1-7
- power cable, 1-7
- sound cable, 1-7

Care

- CD, 2-27

CD ROM reader, 1-7

CD ROM use, 2-23

CD-ROM

- emergency eject, 2-28
- indicator lamps, 2-24
- use, 2-26

CDs

- care, 2-27
- ejecting, 2-24
- emergency eject, 2-28
- inserting, 2-24, 2-25
- removing, 2-26

Charging the Versa battery, 2-23

Chassis, 1-2

- front and side features, 1-2
- rear features, 1-3

Cleaning the MediaDock

- exterior, 4-4
- interior, 4-4

Connecting

- external speakers, 3-2
- headphones, 3-1
- microphone, 3-2

Connecting the AC adapter, 2-1

Connecting the Mediadock, 2-3

Connecting the Versa, 2-2

Connector descriptions, 2-22

Controls, 2-21

Creating a start-up diskette, 2-13

Creative labs sound blaster, 1-5

D

Diagnosing and solving problems, 4-6

Digital interface specifications, 1-8

Disassembly guidelines, 4-8

Disconnecting the Versa, 2-6, 2-7

Docked configuration, 2-16

Docking lever, 2-4, 2-21

DOS-based programs, 2-19

changing the volume, 2-19

DMA settings, 2-20

IRQ settings, 2-20

Drive assignment, 2-23

Dual configuration setup, 2-9

Dual-Speed reader

emergency eject, 2-28

using, 2-26, 2-28

E

E-mail, 4-2

Emergency eject, 2-28

Environmental conditions, 2-1

ESSCFG.EXE, 2-19

ESSVOL.EXE, 2-19

External speaker connection, 3-2

F

FastFacts, 4-2

Fax number

First-time use, 2-5

H

Handle, 2-21

Hardware overview, 1-2

Hardware setup, 2-1

Headphone connection, 3-1

I

I/O address map, 1-9
Interrupt level assignments, 1-10

L

Laptop models, 1-1
Locking latches, 2-21

M

MediaDock
 controls, 2-21
MediaDock chipset, 1-7
MediaDock configurations, 2-16
MediaDock handle, 1-6
MediaDock I/O connectors, 2-22
MediaDock parts list, 4-24
MediaDock software setup, 2-9
MediaDock specifications, 1-12
Microphone connection, 3-2
Mobile configuration, 2-16

N

NEC communications assistant, 4-7

O

Options, 3-1

P

Power amplifier board, 1-6
Power amplifier board connectors, 1-6
Power cable, 2-1
Powering off, 2-6, 2-7
Powering on, 2-5
Precautions, 4-4
Proper connection, 2-5

R

Release buttons, 2-8
Remote technical support, 4-7
Running the MediaDock setup utility, 2-14
Running the ACU
 all other systems, 2-10
 for the Versa M, 2-10
 for the Versa V, 2-10

S

Setup and operation, 2-1
Setup utility, 2-14
Software setup, 2-9
Sound board (G8SEA) description, 1-4
Sound board connectors, 1-4
Sound board connectors, 1-4
Sound control utilities, 2-19
Speakers, 1-6
Start-up configuration choices, 2-16
Start-up diskette, 2-13
Storage environment, 2-1
Storage precautions, 4-4

T

Technical information, 1-1
Technical support, 4-2
 e-mail, 4-2
Telephone numbers, 4-1
Tone control, 2-21
Treble control, 2-21
Troubleshooting
 E-mail, 4-2
 fax, 4-2
 telephone numbers, 4-1
Troubleshooting and Repair, 4-1
Turning off power, 2-6
Turning on power, 2-5

U

UltraLite Versa ACU, 2-12
Undocking the Versa, 2-7
Unpacking, 2-1
Unpacking the system, 2-1
Usage precautions, 4-4
Using the audio switcher utility, 2-16
Using the MediaDock software, 2-15

V

Versa battery charging, 2-23
Versa connection, 2-2
Versa E ACU, 2-12
Versa M ACU, 2-10
Versa M Audio Switcher utility, 2-16
Versa P ACU, 2-12

Versa P disassembly sequence, 4-8

Versa V ACU, 2-11

Volume control, 2-21

W

Wrist rest, 2-21
