

FCC ID: MAU008

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# **A-320 SERIES NOTEBOOK OPERATOR'S MANUAL**

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P/N: 799001122001

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## Class B Regulations

### Federal Communications Commission Radio Frequency Interference Statement

#### NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are design to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

#### Please note:

1. The use of a non-shielded interface cable with this equipment is prohibited.
2. A shielded AC power cord must be used with this equipment.

## **Preface**

This is the A-320 Series Notebook Operation Guide.

### **Contents**

This manual contains information for personnel using the A-320 Series notebook computer. Readers should have a basic understanding of Windows 95/98 or any other operating system installed on the computer when reading this document. With the exception of the SETUP configuration program, which is part of the system firmware, this manual does not explain any of the software or devices used with the system. Supplemental manuals or text-based documents on the hard disk supply information about any software included with the system.

### **Audience**

All operators using the notebook in or out of the field should read and become familiar with this manual.

### **Organization**

This manual has three chapters.

Chapter 1 introduces the notebook pointing out its major features.

Chapter 2 explains daily operation.

Chapter 3 gives detailed information about configuring the notebook.

### **Supplemental Reading**

For further information about this computer and computing in general, use these references:

- A-320 Series Service Manual for detailed troubleshooting and repair instructions for serious hardware problems associated with the A-320 Series notebook.
- Various software manuals offer detailed instructions about individual programs run on the notebook.

## Specifications (reference only)

|                            | Standard                                                                                                                                                                                                                                                                                                                                                        | Optional                                                                                                                                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CPU</b>                 | Intel Pentium II/III 333, 400 MHz                                                                                                                                                                                                                                                                                                                               | Intel Pentium II/III 400MHz or more                                                                                                                                                                                                                                                                        |
| <b>RAM</b>                 | 128 MB                                                                                                                                                                                                                                                                                                                                                          | 128 MB or above                                                                                                                                                                                                                                                                                            |
| <b>Display</b>             | 1. 12.1-inch color LCD, 64K color TFT,super VGA<br>2. 13.3-inch color LCD, SVGA TFT/DSTN                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                            |
| <b>Input Devices</b>       | <ul style="list-style-type: none"> <li>87-key shower proof and dust-proof rubber keyboard</li> <li>Embedded two-button Track Pad</li> </ul>                                                                                                                                                                                                                     | Backlight option                                                                                                                                                                                                                                                                                           |
|                            |                                                                                                                                                                                                                                                                                                                                                                 | <b>Expansion Unit</b> <ul style="list-style-type: none"> <li>optional easy installed expansion unit (max. 20watts) for two 3/4 size ISA bus cards; or 3/4 size ISA bus card &amp; one CD-ROM (same module as the one in Bay 1)</li> </ul>                                                                  |
| <b>Communication ports</b> | <ul style="list-style-type: none"> <li>two RS-232C serial port</li> <li>One Centronics parallel port, support EPP/ECP</li> <li>One external monitor port</li> <li>One external PS/2 keyboard port</li> <li>One PS/2 mouse port</li> <li>One external power supply port</li> <li>One infrared port, IrDA compliance</li> <li>One 200-Pin docking port</li> </ul> |                                                                                                                                                                                                                                                                                                            |
| <b>Battery pack</b>        | <ul style="list-style-type: none"> <li>removable &amp; rechargeable main Ni-MH battery pack with the functions of on-line charge and hot swap (while Bay 1 or Bay 2 battery coexists), total 64 watts</li> </ul>                                                                                                                                                | <ul style="list-style-type: none"> <li>removable &amp; rechargeable Bay 1 Ni-MH battery pack in Bay 1, total 41watts</li> <li>removable &amp; rechargeable Bay 2 Ni-MH battery pack in Bay 2, total 41 watts</li> </ul>                                                                                    |
| <b>Power adapter</b>       | <ul style="list-style-type: none"> <li>AC: 100-240 V, 50-60 Hz , 54 watts</li> <li>Vout 22.5V, -2%~+3%, 2.4A, CV mode</li> <li>Vout 23.5V~10V, 2.1A~3.5A, , CP mode</li> </ul>                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>12-20 VDC direct input without charging function</li> <li>20-32 VDC external car adaptor/charger</li> </ul>                                                                                                                                                         |
| <b>Operating system</b>    |                                                                                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>Windows 95</li> <li>Windows NT</li> </ul>                                                                                                                                                                                                                           |
| <b>Temperature</b>         | <ul style="list-style-type: none"> <li>Operating: 0°C to +45°C</li> </ul>                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>Option: -20°C to +50°C (tested)</li> </ul>                                                                                                                                                                                                                          |
| <b>Storage devices</b>     | <ul style="list-style-type: none"> <li>removable shock proof damaged 2.5" IDE HDD, capacity &gt; 2.1GB</li> <li>optional removable 3.5" 1.44MB FDD, to install in Bay 1 internally</li> </ul>                                                                                                                                                                   | <ul style="list-style-type: none"> <li>removable shock proof damaged 2.5" IDE HDD, capacity &gt; 4.0, 6.4GB</li> <li>(swap with either CD-ROM module or Bay 1 battery pack); connected to parallel port with optional cable externally</li> <li>Optional CD-ROM module to be installed in Bay 1</li> </ul> |

# **A-320 Notebook Operator's Manual**

|                                                            |                                                         |  |
|------------------------------------------------------------|---------------------------------------------------------|--|
| <b>Open Size:</b><br><b>(With Rubber</b><br><b>Bumper)</b> | 310mm (31 cm) W<br>68mm (6.8 cm) H<br>255mm (25.5 cm) D |  |
| <b>Weight</b>                                              | 11.24 lbs (5.1kg)                                       |  |

## Chapter 1

### System Overview

#### 1-1 Introduction

A-320 Series notebook computer is a new generation notebook computer. It is a high-end rugged notebook computer which is an industrial notebook with some rugged features such as vibration, shock, drop and drip-proof. It is designed for using in vehicle or in the harsh environment.

The A-320 Series notebook computer implements the new technologies in the industrial market. Large display panel, high capacity hard disk drive, PCI bus and CD-ROM, etc. An Intel Pentium CPU with MMX is the heart of this notebook computer. This chapter introduces and explains the A-320 Series notebook and its computer parts.

#### 1-2 System Description

The A-320 Series computer is a compact fully portable notebook computer. It operates as a stand alone system for most applications.

It offers superior performance under harsh environmental and operating conditions. It is fully compatible with the IBM PC/AT standard.

#### 1-3 System Configuration

This section presents and explains possible notebook hardware configurations. Refer to the nameplate on the notebook bottom for that system's configuration.

##### 1-3.1 Standard Configuration

Table 1-1 lists the major common features of the standard A-320 systems.

The specifications in this table may be different from yours due to the optional items. Please refer to the detailed specifications including the standard and optional configurations on page d.

**Table 1-1 Standard A-320 Notebook Computer**

| Feature        | Description                                                                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU            | Intel Pentium II/III 333, 400 MHz or more                                                                                                                                         |
| Storage device | Removable 2.5-inch 6.4 GB hard disk drive ( or more )<br>Removable 3.5-inch 1.44 MB Floppy disk drive                                                                             |
| Display        | 1. 12.1-inch color LCD, 64K color TFT, super VGA<br>2. 13.3-inch color LCD, SVGA TFT/DSTN 800x600 resolution, integrated power conserve mode                                      |
| Power source   | Rechargeable removable Ni-MH battery ( or other type )                                                                                                                            |
| Keyboard       | 87key shower proof rubber keyboard, Embedded two button track pad                                                                                                                 |
| Expansion      | Two PCMCIA sockets (type II or one type III compatible)                                                                                                                           |
| I/O Devices    | One Parallel port, D-type 25-pin<br>One VGA External port, D-type 15 pin<br>Two Serial port , D-type 9 pin (COM1 & COM2)<br>One PS/2 Keyboard and One PS/2 mouse<br>One IrDA Port |

### 1-3.2 Options and Accessories

- External FDD
- EL-Backlight Keyboard  
The EL-Backlight keyboard function keys is Fn+F8.
- DVD
- LS120

#### 1-3.2.1 Carrying Bag

The carrying bag makes carrying the notebook and its peripherals easier. It has compartments for up to four diskettes, this manual, the power supply, and all notebook cables.

### 1-3.3 System Identification

The nameplate listing system information is at the bottom of the notebook. It contains:

- Factory configuration
- Model number
- Serial number

## 1-4 Unpacking

Use this checklist to make sure all items included with the notebook are present in good condition.

- Notebook computer
- Rechargeable battery pack
- AC adapter
- Power cord with a ferrite core
- Operation Manual
- PCMCIA diskette
- TRACKPAD diskette
- VGA Driver diskette

If any items are missing or damaged, please contact the supplier.

## 1-5 Notebook Features

Figures from 1-1 through 1-11 identify the major notebook parts, indicators, and controls.

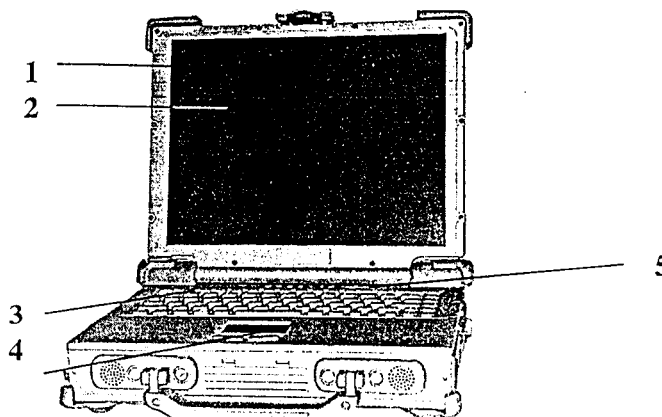


Figure 1-1 A-320 Notebook, Front View

### 1-5.1 Cover

The notebook cover (Item 1, Figure 1-1) houses the display unit and its control devices.

### 1-5.2 Display

The display have three types, one is 12.1" TFT 16 bit color LCD display (Item 2, Figure 1-1) is selected in A320-Series notebook computer. The resolution of this LCD display is 800 X 600 pixels (SVGA standard). But the connection mechanism from LCD display to motherboard is designed flexibly for different venders of LCD displays and different types. The other is 13.3" TFT 24 bit color LCD display , the resolution is 1024 X 768.

### 1-5.3 Power Switch

The power switch (Item 5, Figure 1-1) turns the notebook power on and off.

### 1-5.4 Keyboard

The keyboard ( Item 3, Figure 1-1), is the primary tool for typing data and commands into the notebook.

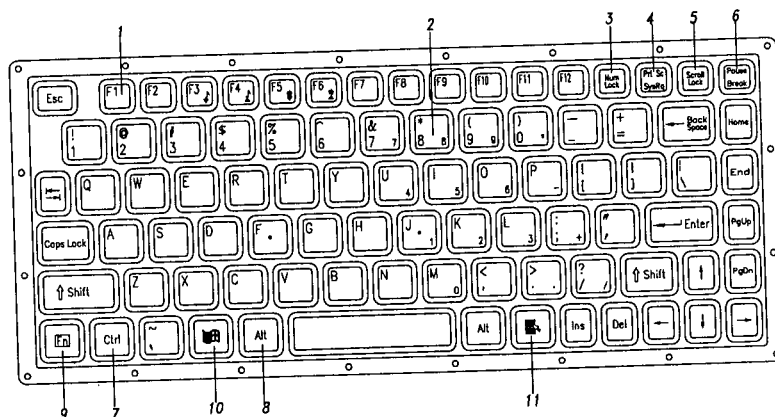


Figure 1-2 Rubber Keyboard

\* About others language keyboard refer to the Appendix A.

#### 1-5.4.1 Function Keys

The function keys give special commands defined by software. The notebook BIOS also uses function keys to set some configuration parameters.

The rubber keyboard has twelve function keys numbered from F1 through F12 (Item 1, Figure 1-2) and Fn (Item 9, Figure 1-2).

#### 1-5.4.2 Embedded Numeric Keypad

(Item 2, Figure 1-2) These keys act like calculator keys when the NUM LOCK light is on. When the numeric keypad is active, the notebook disables the alphabet keys doubling as numeric keypad keys.