Apex III

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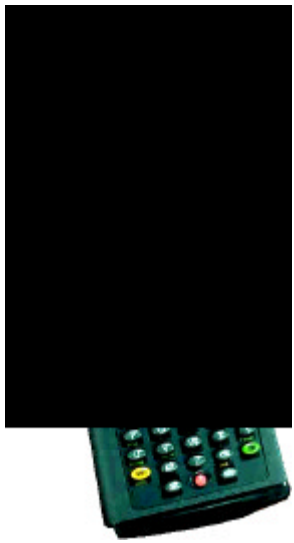
PORTABLE DATA COLLECTION TERMINAL



USER'S MANUAL

FIRST EDITION

Compsee

Compsee, Inc.
A Subsidiary of McRae Industries, Inc.

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PORTABLE DATA COLLECTION TERMINAL USER'S MANUAL

FIRST EDITION

Compsee, Inc.
A Subsidiary of McRae
Industries, Inc.

Manual Number COAM30001, Rev 1.02

Apex III Product Registration Card

Please complete this form and mail or FAX to :

Compsee, Inc.
2500 Port Malabar Blvd. NE
Palm Bay, FL 32905-6065
(321) 723-2895 (FAX)

Model #		Serial #	
Company Name		User's Name	
Address		City	
State		Country	
ZIP		Phone	
FAX		E-mail Address	
Purchased from		Date Purchased	
Please check the box that best describes your company		☐ Individual ☐ Privately-owned Company ☐ Corporation	
What is the size of your company?		☐ Under $1 Million in Sales ☐ Greater than $1 Million, less than $10 Million in sales ☐ Greater than $10 Million in sales	
What is your application for the Apex III?		☐ Warehousing ☐ Medical ☐ Government ☐ Retail ☐ Service ☐ Other (describe)	

You must register this product to receive product support

Reverse Side

Place Stamp Here

Compsee

2500 Port Malabar Blvd. NE
Palm Bay, FL 32905-6065 U.S.A.

Front Side

APEX III PORTABLE DATA COLLECTION TERMINAL WARRANTY INFORMATION

Note to Purchaser

This warranty and license contains important information on the servicing and use of your new Apex III Portable Data Collection Terminal (PDT).

Limited Warranty

Compsee, Inc. warrants that for one year from date of purchase, the Apex III Portable Data Collection Terminal shall be free from significant defects in material and workmanship and that it will operate satisfactorily under normal conditions of use and service, as more fully described in this manual or other product specifications published by Compsee.

Compsee's responsibility under this warranty is limited to repair or replacement of any part of the terminal which proves to be defective in normal use and service during the warranty period. Refer to the Service and Repair section of this manual for the equipment return procedure.

Program License

Your Apex III contains an operating system and BIOS in firmware which has been programmed by Compsee to enable the terminal to perform the functions described in the published specifications. Your purchase of the Apex III PDT includes a perpetual, non-exclusive, and transferable license to use the firmware operating system built into the Portable Data Collection Terminal.

The operating system can be modified or supplemented with application programs devised by others, such as a Value Added Reseller (VAR) from whom you may have purchased the terminal. All application software programs are the sole responsibility of their creators. The limited warranty applicable to the Apex III, does not include servicing for defects or performance problems caused by any third party implementation of programs originally manufactured by Compsee.

Warranty Disclaimers

These warranties apply only to Apex III Portable Data Collection Terminals purchased directly from Compsee, Inc. or from an authorized VAR of Compsee products. The warranties are void if apparent defects were caused by accident, neglect, misuse, alteration, or unauthorized attempts at adjustment or repair. Warranty service, as described herein, is the exclusive remedy of the purchaser against Compsee, Inc. for product defects or any other claim or liability in connection with the purchase or use of Compsee products.

> ***Warranty Note***
>
> THESE WARRANTIES ARE IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EVEN THOUGH COMPSEE, INC. MAY HAVE BEEN ADVISED OF THE INTENDED USE OF THE PRODUCTS BY PURCHASER.

Warranty Limitations

Prior to operating the terminal, review the following warranty limitations. Failure to adhere to the provisions of these limitations will void the product warranty.

DO NOT attempt to open or disassemble the Apex III case except as directed for a specific operation by this or other Apex III manuals (e.g. End Cap Removal). No user serviceable parts are included in the unit.

Charge the Battery Pack only with an approved Compsee charging device. Use of any charging device other than those specified by Compsee can potentially damage the Apex III or Battery Pack.

DO NOT spray cleaners directly on the keypad or use a saturated cloth for cleaning the unit. Only a lightly damp cloth should be used for wiping down the unit.

DO NOT clean the Apex III using alcohol, acetone, mineral spirits or any other petroleum or alcohol based product. Damage to the unit can occur.

DO NOT leave the unit in the rain or direct sunlight or immerse the unit in water or any other liquid.

Use only Compsee cables for data transfer purposes. Attachment of other cables may cause damage to the unit and/or the attachment device.

Recommended Operational Tips

Note: Failure to heed the following recommendations, while not voiding the warranty, may result in operational degradation or program/data loss.

DO NOT clean the Laser Window, Display Screen Window, or IR Window with soap, abrasives, or any alcohol or petroleum based solution.

DO NOT attempt to operate the Apex III PDT once it has powered down due to a low battery condition. When the Battery Pack is exhausted, leave the exhausted Battery Pack in the Apex III until you can either charge it in place by placing the Apex III in the Apex III Dock or swap out the Battery Pack with a fully charged Battery Pack. Information in volatile memory (RAM) will be preserved since the Apex III PDT is configured so that even with an exhausted Battery Pack enough energy is retained to maintain the information for an extended period of time. DO NOT leave the unit WITHOUT a Battery Pack for more than 5 minutes.

Apex III Battery Packs use Nickel Metal Hydride (NiMH) composition, they DO NOT succumb to memory (hysteresis) loss as do Nickel-cadmium (Ni-Cd) batteries. *Apex III Battery Packs can therefore be charged while in any state-of-charge and do not require full discharge prior to charging. It is still recommended that the Battery Pack be fully discharged periodically to reset the internal gas gauge circuitry*.

TABLE OF CONTENTS

1 APEX III BASICS

General User Information

This manual provides information necessary to properly operate and maintain the Apex III Portable Data Collection Terminal (PDT). Contained within this manual is a description of the unit's hardware and software; procedures for unpacking and verifying the unit's operating functions; operational instructions; Battery Pack charging and replacement instructions; guidelines for maintaining the APEX III; and other useful information.

Before attempting to understand and operate new equipment, it is important for the user to gather the available information. Whether you are a novice without any experience in using computers or a confident user with the added advantage of knowing DOS, this manual contains what you need to become proficient in operating the Apex III. Depending on the intended operation of your application program, additional resources may be necessary to program the unit, upload and download data to and from the unit, or print the bar codes that you would like to scan. The following is a list of additional resources:

Communications Software

The software necessary to interface the Apex III to a PC, it gives you the ability to upload or download data to or from the Apex III. Functions includes adding, changing, deleting or viewing data or programs in the unit's memory.

Your Apex III PDT comes with a pre-loaded communications utility program ***[a3cu.exe]***. Included on the Compsee Product Support CD is a Windows® based counterpart, the Apex III Communications Utility Application. Refer to the Apex III Technical Reference Manual for additional details on the use of this product.

In addition, a software communications package such as PROCOMMPLUS® loaded on your PC will work in conjunction with ***[transfer.exe]***. The Apex III Product Support CD provided with each unit contains additional upload/download software programs for your use including ***[remdisk.exe]*** and ***[transfer.exe]*** (for use primarily by developers).

Apex III Program Generator

Software specifically for use with the Apex III PDT designed to generate well structured, modular, and fully commented source code. The Program Generator's remote data collection program contains a communications module that handles data transfers to and from the host and the Apex III terminal.

The Compsee part number for the Apex III Program Generator is located in the Parts Section of this manual. The Program Generator application, can be ordered directly through your Value Added Reseller (VAR) or you can obtain additional information and product brochures by calling (407) 724-4321 or (800) 628-3888.

Using This Manual

Typographic conventions followed within this manual:

Bold Type is used for headings and important sections throughout the manual.

< > Angular brackets are used to enclose hard keys (keys whose name and function do not change) located on the Apex III, such as <FN> and <ENT>.

Important points and supplementary information are included as **Notes** throughout this manual. Note headings are printed throughout the manual using bold underlined typeface.

When two keys are listed together with the plus (+) sign (e.g. <FN> + <B>), this indicates that the user should press and hold the first key while pressing the second key.

When specific filenames along with their extension are addressed in the text they will be denoted by the use of bold italics and surrounded by brackets (e.g. ***[remdisk.exe]***). When referring to only the filename and not the extension (e.g. *remdisk*) the filename may be shown only in italics.

CAUTION  and **WARNING**  messages are provided within this manual, which if not observed, could result in equipment damage, data loss, or personal injury. **CAUTION** and **WARNING** messages are located within boxes and with their headings in bold.

Apex III PDT Characteristics

The Apex III Portable Data Collection Terminal (PDT) is a state-of-the-art electronics scanning device designed in an easy to hold, ergonomic format to facilitate source data collection in a broad range of environments and applications.

The full-functioned capabilities of your Apex III unit allow you to easily gather bar code or key-entered information, and download the information for use with your existing business applications.

Your Apex III PDT includes the following state-of-the-art features:

A 32 bit microprocessor operating @ 33 MHz

8 or 16 MB of Flash memory

4 MB of On-board RAM

A Graphical Display Screen (240 × 160 pixels) with user activated backlighting

Full alphanumeric keypad

A voice capable 8 ohm speaker

Symbol Wireless Spectrum 24 capabilities

The Apex III PDT can support Batch or Wireless operations via internal PC CARD slots (capable of simultaneously supporting two Type I or II devices or a single Type III device). These slots provide the user with numerous options for connectivity and memory expansion including, but not limited to network interface adapters, high speed modems (both wired and wireless), Flash Memory, and RAM cards.

The Apex III PDT is available with or without an integrated laser scanner. Available integrated laser options include Standard, Long Range, or Very High Density. An optional squeeze-lock connector provides tethered connectivity (2D Scanner, CCD, wand, etc.) in lieu of an integrated laser.

Data transmission to and from the Apex III can be accomplished via the built-in infrared interface or through the *optional* Serial End Cap (RS-232) Interface port.

Utilizing a DOS based operating system (Datalight ROM-DOS™ 6.22), the Apex III PDT supports DOS applications, graphic displays, and existing DOS user software.

An optional Windows® based Program Generator can be purchased to assist the user in implementing most of their basic data collection type applications.

The basic format for using the Apex III PDT with your application program is laid-out in the following table:

Step	Action/Result
1.	Create the application program on a PC using any DOS based environment or the optional Program Generator software.
2.	Upload the programs to the Apex III using the IR interface (when using the optional Dock), the optional Serial End Cap, or the internal RS-232 port.
3.	Power-up the Apex III and verify the proper boot sequence (This may include initiation of your application program depending on the way your programmer has set the program to start).
4.	Collect data by reading bar codes with the Apex III.
5.	Download the collected data directly to a mainframe or PC for processing via the IR interface (when using the optional Dock), optional Serial End Cap, or internal RS-232 port.
6.	Use the collected data in existing application programs including standard PC spreadsheet or database programs.

Table 1-1: Apex III Basic Use

Refer to the following illustration for a graphical representation of the process steps in the preceding table.

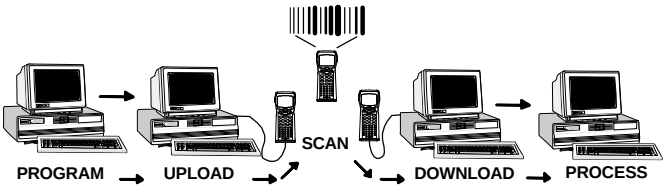


Figure 1-1: Basic Application Format

Information Entry

As shown in the preceding illustration, the Apex III can be used as a remote data collection device using a data collection program developed by your application programmer. Once the data collection program has been loaded into the unit (and started during booting or manually executed after boot-up), data can be collected with the Apex III. Three ways of collecting data with the Apex III are described below.

Scanning (Supported Symbologies)

The Apex III PDT is capable of reading and automatically discriminating between most of the major bar code symbologies in use today as defined by the Automatic Identification Manufacturers, Inc. (AIM) specifications. The bar code formats incorporated into your Apex III unit include:

Codabar	Identicode 2 of 5
Code 11	Industrial 2 of 5
Code 39 (standard)	JAN 8/13
Code 39 (full ASCII)	Matrix 2 of 5
Code 93	MSI Plessey
Code 128	PDF (via serial input only)
EAN 8/13	UPC-A/E
Interleaved 2 of 5	UPC/EAN (with 2 or 5 character supplemental)

Various scanning instructions and considerations are provided later in this chapter under the ***Checkout Procedure*** topic.

Manually Through The Keypad

During the data collection process, the Apex III may prompt you for additional information. Through the use of the keypad, the operator would then enter additional information such as quantity, price, location, etc.

Note: If the Apex III prompts you for additional information regarding data you are collecting, your application programmer has previously defined the Apex III unit to work this way. The terminal will not operate in this fashion until your company's application program has been loaded.

Systematically Through The Com Port

Information transfer for the Apex III can also be uploaded or downloaded from the host computer system to the unit through the Serial End Cap, Internal RS-232 port, or via the IR interface by using the optional Dock. It should be noted that only one of these methods can be used at a time.

Information Processing

The Apex III PDT allows the operator to store, process, and transmit acquired information. Application programs written to work in a DOS operating environment allow the unit to be customized for practically any portable data collection requirements. The built-in RS-232 Serial and IR interfaces provide for data communication transfer with other data processing equipment.

Unpacking And Inspecting For Damage

Warranty and Safety Notes

Prior to operating the Apex III, it is recommended that the user review the Warranty Limitations and Safety Precautions covered within this manual. When operating the Apex III with an integrated laser, failure to heed the recommendations and precautions described may result in exposure to hazardous laser radiation and possibly void the unit warranty.

Inspecting the Terminal

The Apex III is specially packaged to protect the unit during shipping and handling. Retain the shipping container and all packing materials for use in the event a return is necessary. These items should be used when returning the unit for service or repairs. If a new container is needed, contact Compsee at (407) 724-4321 or (800) 768-5248. Before contacting Compsee or one of our Value Added Resellers, carefully read the Technical Support section of this manual.

Upon receipt of your Apex III, immediately inspect the package contents for possible shipping damage. In the unlikely event that anything is damaged or missing, perform the following:

1. Return the package contents to their original carton, along with packing materials, and place them in the proper configuration.
2. Notify the delivering carrier of damages and request immediate inspection.
3. Contact the shipper.
4. Send a letter of intent to file a claim to the delivering carrier within 72 hours from the date of delivery.
5. Send a copy of the letter to the shipper. Only the consignee (the receiving party) can file a claim against the carrier for concealed damages.
6. Unpack the Apex III Portable Data Collection Terminal and all the accessories contained in the carton.
7. Assure that you have received all of the components listed on the enclosed packing slip.

Optional Accessories

The following items are available as optional accessories to the Apex III PDT (refer to the parts section of this manual for specific part numbers):

Additional Battery Packs (NiMH)

Serial End Cap (allows serial connection without End Cap removal)

Serial Interface Cable (Serial End Cap to DB-9)

External Charger (allows simultaneous charging of up to two Apex III NiMH Battery Packs)

Apex III Dock – A docking station which incorporates Infrared (IR) coupling, slip-in charging capabilities, and additional charging for a spare Apex III Battery Pack. Capable of being mounted on the wall or desk.

Additional Power Supplies (with or without AC line cord)

Apex III Program Generator Software – Assists a user in writing basic Apex III Application programs with little knowledge of programming.

Compsee Product Support CD

Hard Copy (printed) of the Apex III Portable Data Collection Terminal User's Manual

Apex III Set-up and Checkout

The Apex III Portable Data Collection Terminal is a sophisticated electronic piece of equipment. To ensure proper operation, superior performance, and a long service life we recommend that you follow the instructions put forth in this User's Manual. The following information is a guideline to be used during initial checkout of the unit.

Note: Your Apex III unit comes with a Battery Pack, which was fully charged at the factory. As with most rechargeable batteries, depending on when you received your unit and the time the Battery Pack was charged, the Battery Pack may no longer be in the fully charged state.

Initial Setup Procedure

1. It is recommended that the user read the *entire* User's Manual before proceeding with the Initial Setup procedure. This is especially true of Sections 2 through 4, which include the Safety and Operational information.

2. Insert the Apex III Battery Pack into the rear of the unit as per the Battery Charging section of this manual.

3. Press the red <Power> button on the bottom of the Apex III front panel.

4. Wait approximately 1.5 seconds, then verify the screen displays the boot sequence. e.g. BIOS information followed by an audible beep, message "Starting ROM-DOS…", configuration information, etc.

5. If your application program has been automatically loaded by ***[autoexec.bat]***, the screen will display a message referring to that application.

6. If no application program has been loaded, or one is loaded, and it is not configured to start automatically by the ***[autoexec.bat]*** program, then the screen will stop with the C-prompt as follows:

```
C:\>
```

Note: Your Apex III comes with a basic scanning program preloaded by Compsee. At this point the unit should be ready to scan bar codes. Refer to the following section for detailed scanning techniques before performing the following step.

7. Test the unit by pressing the <SCAN> button and reading the manual bar code on the back cover of this book or the bar codes in Appendix A.

Scanning Techniques

Following the scanning techniques presented below will ensure accurate and error-free scanning of most bar codes. Please be aware that worn, dirty, torn, or damaged bar code labels or imprints can adversely affect the scanning process and cause errors in your data.

Note: DO NOT aim the laser so the beam is exactly perpendicular to the bar code symbol. Symbols printed on a glossy surface can cause a reflection which can interfere with the scan read. Pointing the laser so the beam intersects the bar code at an angle will reduce the chance of the reflection interference.

- To begin the scanning process, place the Apex III unit so the laser window is slightly above or below the bar code.
- Make sure that the Apex III is a sufficient distance from the bar code so the laser extends beyond the outermost edges of the code. This will ensure that the entire code is "read" and the read is good.
- Press and hold the <SCAN> button on the front panel, then smoothly and evenly pass the laser completely over the bar code. The yellow Scan LED will illuminate.
- After successfully scanning a bar code and a good "read" occurs, the green Decode LED will illuminate and an audible beep will be heard.
- If the code does not read correctly try again. After you have performed the operation a few times it will become second nature.

Scanning Difficulties You Could Encounter

The following items can cause possible problems when attempting to scan a bar code:

The bar code being read must be supported and enabled on your Apex III PDT (for additional details, refer to the Apex III Technical Reference Manual).

The bar code character number must match the same number of characters as programmed into the Apex III.

Bar code labels must be clean, not smeared, and complete.

High gloss bar code labels can cause reflections, which interfere with a proper read (hold unit at a higher angle – non perpendicular to help prevent this from occurring).

Y2K Compliance

Compsee, Inc. has developed their products to ensure that you, the customer, can rest assured that our hardware and software products are Year 2000 compliant. To achieve this compliance and maintain compatibility with all customer applications, we provide our customers with vital information regarding products and software they have purchased from Compsee, Inc.

Datalight ROM-DOS™ complies fully with Y2K requirements and, unlike MS-DOS, makes corrections for a BIOS that is not Y2K compliant. Provisions for the year 2000 and beyond have been provided on every version of ROM-DOS™ after and including version 6.22, revision 2.50.03.

This information is subject to the Year 2000 Information and Readiness Disclosure Act. In the case of dispute, this Act may reduce your legal rights regarding the use of this information.

If additional Y2K information is required visit our Website at www.compsee.com or call our Technical Support line (see Technical Support – this manual).

2 SAFETY

Apex III Laser Safety

The Apex III Portable Data Collection Terminal is equipped with a light emitting laser device. The unit has been designed and manufactured to exacting standards for performance, reliability and safety. This product emits visible laser radiation, which can be harmful to the eyes if viewed directly.

Certain warnings and precautions, in addition to the operating and care instructions in this manual, are provided for safe operation of this product.

The integrity of the unit case is critical to the performance and safe operation of the product. *In the event that the case becomes broken, loose, cracked, or perforated, operation of the unit should cease immediately.* Only after authorized personnel have repaired the unit, should operation of the unit resume.

It is recommended that personnel using this device DO NOT look directly into the Scanner Beam while operating the device.

WARNING

DO NOT TAMPER WITH THE UNIT CASE

DO NOT operate the scanner if case is perforated, broken, or loosely held together. Use of the product with the case broken, perforated, or loose could result in damage to the eyes if laser light is viewed directly.

CAUTION

ONLY USE COMPSEE APPROVED METHODOLOGY

DO NOT use the Apex III unit for uses other than those specified by Compsee, Inc. Use of controls, adjustments, procedures, or methodology other than those specifically identified by Compsee, Inc. may result in hazardous laser light exposure.

CAUTION

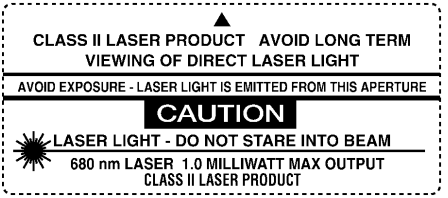
VIEWING SCANNER BEAM DIRECTLY IS NOT RECOMMENDED

The scanner contained in the Compsee, Inc. Apex III Portable Data Collection Terminal is a Class II laser device. It is a low power laser. Momentary viewing of the beam will not cause retinal damage. You are strongly cautioned against any direct viewing of the scanner output.

WARNING

FAILURE TO ADHERE TO WARNINGS, CAUTIONS, AND APPROVED PROCEDURES COULD RESULT IN EXPOSURE TO HARMFUL, VISIBLE LIGHT RADIATION

The following Caution Label is mounted on the Apex III Portable Data Collection Terminal to caution users of the possible effects of laser radiation.



The following exposure label is a reproduction of the label mounted inside the Apex III Portable Data Collection Terminal.

CAUTION - Laser Light when open.
DO NOT STARE INTO BEAM

Product Conformity

This product complies with the Code of Federal Regulations section 21 CFR 1040.10. No user serviceable parts are included in the manufacture. *Opening of the unit by unauthorized personnel will void the product warranty (except End Cap removal as noted in this or other Apex III manuals).*

Only Authorized personnel should attempt to repair or replace parts within this unit. Breaking of the unit seal, tampering, or repair by unauthorized personnel will void the unit warranty and could result in personnel injury or permanent damage to the unit.

WARNING

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 designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If the equipment is not installed and used in accordance with instructions published in this and other Apex III manuals, interference with radio communications may result. 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 (determined by turning the equipment ON and OFF), the user is encouraged to try to correct the interference by one or more of the following measures:

Reorientation or relocation of the receiving antenna.

Increasing the separation between the equipment and affected receiver.

Connecting the equipment to an outlet on a different electrical circuit than that of the affected receiver.

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

3 COMPONENT IDENTIFICATION

General Information

The Apex III Portable Data Collection Terminal uses a soft touch keypad design, which emulates all of the major functions found on a standard PC keyboard. Computer and calculator type features incorporated into the front keypad area allow the operator or application programmer to enter data, transmit data, or program the unit in the same manner as if they were operating a standard PC.

With its advanced technology, the Apex III is fully programmable and can be utilized for practically any data collection application.

Apex III Major Component Areas

Front Panel

Incorporated into the Apex III front panel are the following major components to assist the operator in performing their specific functional requirements:

Display Screen (LCD)

Power Control Button (Key - Red)

Numerical Key Area

Alphabetical Key Area

Function Key Area

Shift Button (Key - Yellow)

Second Function Button (Key - Green)

Cursor Buttons (Keys)

LED Indicators

The following illustration shows a frontal view of the Apex III unit and the orientation of the major functional areas incorporated into the unit's keypad area:

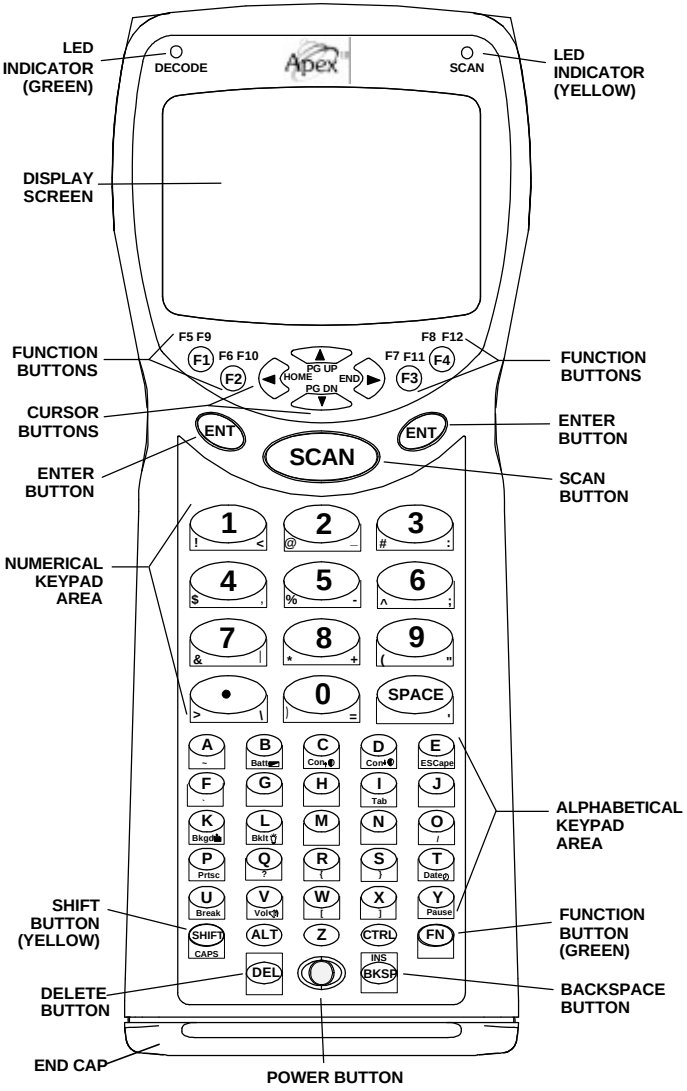


Figure 3-1: Apex III Front Panel Functional Area General Description

Serial Connection And PC Card Slots

The Apex III unit comes equipped with an RS-232 Serial connector for uploading and downloading information from or to a PC or other Serial device. The removable bottom End Cap exposes the PC Card slots (2), the RS-232 8-pin Molex connector (Molex 53261-0890), and the operational DIP switches.

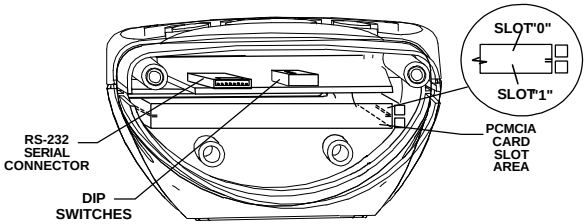


Figure 3-2: Apex III With End Cap Removed

Note: Serial communication using the RS-232 Serial connection can be half or full duplex. Serial communication using the IR Window must be half-duplex.

An optional Serial End Cap may be purchased and installed allowing the serial connection to be made without the End Cap being removed (replaces the standard End Cap). See the Optional Accessories section of this manual or contact your authorized Value Added Reseller (VAR) to find out more about this product.

Infrared Interface Window

An Infrared (IR) window located at the top of the Apex III (see illustration) provides a means of transmitting data via infrared light pulses to or from the optional Dock which can be purchased directly from Compsee or from your VAR. See the Optional Accessories section of this manual, and contact Compsee, Inc. or your authorized Value Added Reseller (VAR) to find out more about this product.

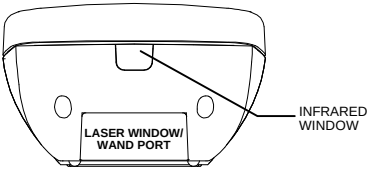


Figure 3-3: Apex III Infrared (IR) Window

Apex III Back Panel

The Apex III Back Panel is of stylish, yet ergonomically designed high impact plastic, contoured and textured to give the user a firm comfortable feel when holding the unit.

The Back Panel contains provisions for mounting the Apex III Battery Pack in a non-protruding format that fits the overall contour of the unit. This mounting format allows the battery charging terminals to be exposed for easy charging when the unit is slipped into the optional Dock.

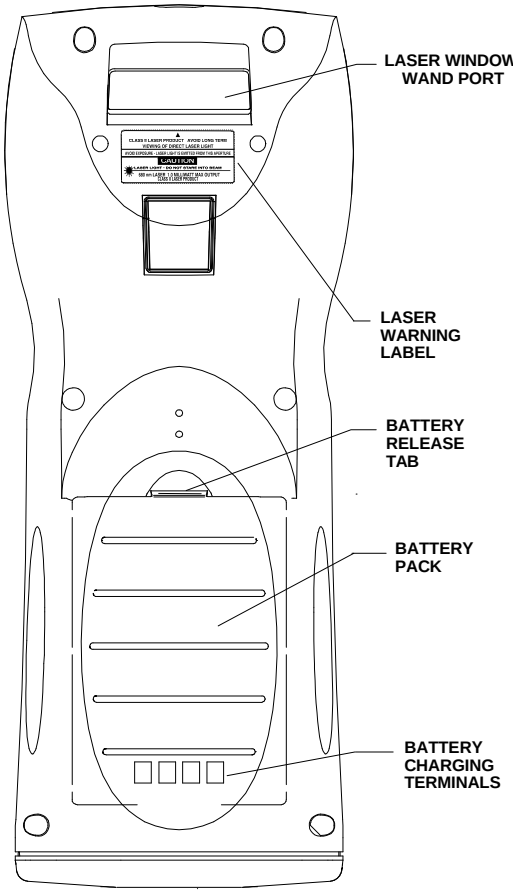


Figure 3-4: Apex III Back Panel Components

4 UNIT OPERATION

Front Panel Functional Area Description

Note: Key functions described herein are for those functions dedicated by factory hardware and BIOS software. Additional key functions may be programmed in by your application programmer and thus will not be described in this manual. If applicable, refer to your application program guidelines for these functions.

Display Screen (LCD): The LCD Display Screen, is a fully programmable graphics LCD with a 240 × 160 pixel display. The screen displays characters relating to either the scanned input or those keyed in via the front panel keypad. Messaging from the current running application program as well as messages informing the operator of the unit condition ("Change Battery", etc.) are displayed either by the program itself or when the correct function keys are depressed.

Power Control Key: Turns the Apex III unit ON or places the unit in the "Suspend" mode. When initially pressed, the key causes the unit to turn ON and perform a "Cold Boot" (runs through the initialization sequence and may automatically start your specific application program if setup by your application programmer).

When pressed a second time, the Power key places the Apex III in the Suspend mode (a low power mode where the display screen turns off, but information remains stored in memory). Pressing the Power key again when in the Suspend mode returns the unit to normal operation.

To completely shut the unit OFF, press and hold the FN key, then press the Power key (<FN> + <Power>).

Numerical Keys: Provides the operator or programmer the capability of inputting numerical information into the unit's memory or application program field. Pressing a number key inserts the number into the display field and moves the cursor one space to the right.

Alphabetical Keys (A – Z): Provides the operator or programmer the capability of inputting alphabetical information into the unit's memory or application program. Pressing an alphabetical key inserts the letter into the display field and moves the cursor one space to the right.

Function Keys (F1 – F12) Area: Allows the user to call up specific menus or macros for the program being run. Functions will vary depending on the use selected by the application programmer.

Shift (SHIFT) Key: Pressing and holding the <SHIFT> key allows access to the SHIFT character function of the front panel keys. In addition, program specific functions may also be initiated when the user holds the <SHIFT> key while pressing another key (setup by your application programmer). The SHIFT key and shift function character designations are colored "Yellow" to show their corresponding relationship.

Function (FN) Key: Pressing and holding the <FN> key allows access to the second function actions or characters displayed on the front panel key area. The Function (FN) key as well as the function character designations are colored "Green" to show their corresponding relationship.

Cursor Keys: Allows the operator or programmer to move the screen cursor in the direction of the cursor arrow pressed (Left, Up, Right, or Down).

LED Indicators:

Two Communication Function LED's are located directly above the Display Screen.

SCAN LED – The yellow SCAN LED indicates when the unit is in the SCAN mode and a scanning operation is in progress. The SCAN LED will be illuminated during this operation. Additionally, the LED blinks rapidly when a serial (IR or RS-232) message is being *received*.

DECODE LED - The green DECODE LED indicates when the unit has performed a "good read" of a bar code. Additionally, when a serial (IR or RS-232) *transmission* is in progress the LED blinks rapidly.

SCAN Key: Pressing the <SCAN> key energizes the Apex III laser when a scan application program has loaded. This allows the operator to scan bar codes.

Enter (ENT) Key: The <ENT> key performs the same function as an enter key on a PC or calculator. The key enters the information into the processor or application program.

Control (CTRL) & Alternate (ALT) Keys: The <CTRL> and <ALT> keys perform just as on a normal PC, providing auxiliary functions depending on the application program which has been loaded.

Backspace (BKSP) Key: Pressing the <BKSP> key causes the cursor to move left and delete a character to the left of the cursor's original position. Pressing <FN> + <BKSP> acts the same as the Insert key on a PC keyboard, toggling whether pressing any key inserts a character or overwrites any existing character to the right of the cursor.

Delete (DEL) Key: The <DEL> key as on a normal PC, deletes characters to the right of the cursor location. Each depression of the key deletes one character.

CTRL+ALT+DEL Keys: As on a desktop PC, pressing the <CTRL>, <ALT>, and <DEL> keys at the same time, causes the Apex III CPU (Central Processing Unit) to perform a warm boot. Any data stored in the system RAM memory will be lost.

SCAN + POWER Keys: Pressing the <SCAN> key and the <Power> key at the same time causes the unit to perform a cold boot. Initially during rebooting, the display screen will go blank for approx. 1.5 seconds.

Front Panel Key Legends

The following tables describe the key functions of the various keys incorporated into the Apex III front panel:

Table 4-1: Function Key Legend

	Main Function	SHIFT Function	2nd (FN) Function
Symbol/Color	**Black**	**Yellow**	**Green**
Symbol	F1	F5	F9
	F2	F6	F10
	F3	F7	F11
	F4	F8	F12

Table 4-2: Cursor Key Legend			
	Main Function	**SHIFT Function**	**2nd (FN) Function**
Symbol/ Color	**Black**	**Yellow**	**Green**
Symbol	◀	None	Home
	▲	None	Page Up
	▶	None	End
	▼	None	Page Down

Table 4-3: Numerical Key Legend			
	Main Function	**SHIFT Function**	**2nd (FN) Function**
Symbol/ Color	**Black**	**Yellow**	**Green**
Symbol	**0**	**)**	=
	1	**!**	<
	2	**@**	_
	3	**#**	**:**
	4	**$**	**,**
	5	**%**	-
	6	^	**;**
	7	**&**	|
	8	*****	+
	9	**(**	**“**
	SPACE	**none**	**‘**
		>	/

Table 4-4: Alphabetical Key Legend			
	Main Function	**SHIFT Function**	**2nd (FN) Function**
Symbol/ Color	**Black**	**Yellow**	**Green**
Symbol	**A, a**	**Changes letter case, when held while pushing the letter key**	~
	B, b		**Batt** (Battery condition)
	C, c		**Con** ↑ (Contrast -)
	D, d		**Con** ↓ (Contrast ¯)
	E, e		**ESCape**
	F, f		`

Table 4-4: Alphabetical Key Legend cont.			
	Main Function	**SHIFT Function**	**2nd (FN) Function**
Symbol/ Color	**Black**	**Yellow**	**Green**
Symbol	**G, g**	**Changes letter case, when held while pushing the letter key**	**None**
	H, h		**None**
	I, i		**Tab**
	J, j		**None**
	K, k		**Bkgd (screen background)**
	L, l		**Bklt (backlighting)**
	M, m		**None**
	N, n		**None**
	O, o		**/**
	P, p		**Prtsc (Print Screen)**
	Q, q		**?**
	R, r		**{**
	S, s		**}**
	T, t		**Date (date & time)**
	U, u		**Break**
	V, v		**Vol (Volume)**
	W, w		**[**
	X, x		**]**
	Y, y		**Pause**
	Z, z		**None**
	DEL	**None**	**None**
	BKSP	**None**	**INS**

Note: In addition to the previously shown functions, <FN> + <SHIFT> toggles the Caps Lock function.

Apex III Special Functions

Your Apex III Portable Data Collection Terminal includes several special features that operate as follows:

Battery Status Indication: The Battery Pack status can be called up at any time by pressing and holding the <FN> key and then the <B> key. A Battery Status display window will appear on the screen (refer to Call-up Battery Message section, p. 4-12).

Contrast Adjust: The display screen contrast can be manually adjusted by the operator. To *increase* the contrast, press and hold the <FN> key and then the <C> key. To *decrease* the screen contrast, press and hold the <FN> key and then the <D> key.

Screen Background: The display screen view can be inverted from normal (black on white) by pressing and holding the <FN> key and then pressing the <K> key. Performing the operation again toggles the display.

Backlighting: For areas of low light levels, the display screen includes a Backlight. Pressing and holding the <FN> key and the <L> key causes the light to illuminate. Performing the operation again toggles the function.

Date and Time Display: The operator can call up a display window showing the Date and Time simply by pressing and holding the <FN> key and the <T> key.

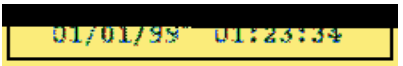


Figure 4-1: Date And Time Display

Volume Control: The Apex III includes a fully functional speaker and volume control adjustment for applications using sound and/or voice. By pressing and holding the <FN> key and then the <V> key, the unit's volume can be cycled through OFF-LOW-MED-HIGH.

CAPS Lock: To set the CAPS lock, press and hold the <FN> key, then press the <SHIFT> key. Repeating the operation removes the CAPS lock.

PC Card Installation

The Apex III can accept up to two PC Cards (either two Type I or II, or one Type III) for various purposes including network interface adapters, high speed modems, flash drives, RAM disks, or audio capabilities.

Card installation is accomplished by removing the End Cap and installing the card pins inward and the label side down. Note that hardware configuration requirements demand that Slot "0" (top) be filled to use Slot "1" (bottom).

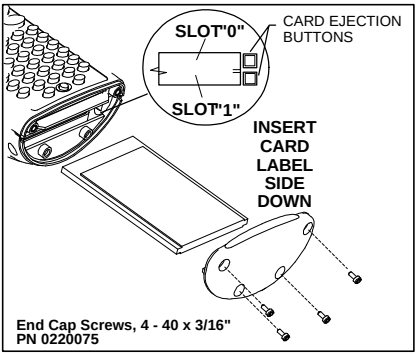


Figure 4-2: PC Card Installation

DIP Switch Positioning

The unit DIP Switches are located to the right of the internal RS-232 connection (refer to Figure 3-2). *Changing DIP Switch position is NOT recommended or necessary for normal operation.* If switch position inadvertently gets changed, the following illustration shows the correct position for normal operation (all switches OFF).

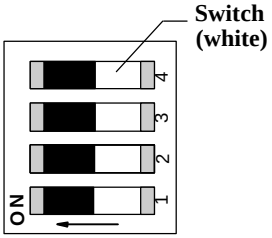


Figure 4-3: DIP Switch Positioning

Battery Charging And Battery Care

The Apex III comes with one Nickel Metal Hydride (NiMH) Battery Pack. The Battery Pack can be fully charged from the completely discharged state within 2 hours through the use of the optional Apex III Dock or External Charger. These items can be purchased separately to allow for greater flexibility with the user's specific requirements. Following is a brief description of these units and their capabilities.

Note: Since Apex III Battery Packs use NiMH composition, they DO NOT succumb to memory (hysteresis) loss as do Nickel-Cadmium (Ni-Cd) batteries. *Apex III Battery Packs can therefore be charged while in any state-of-charge and do not require full discharge prior to charging; however, it is still recommended that the Battery Pack be fully discharged periodically to reset the internal gas gauge circuitry.*

Apex III Dock

The Apex III Dock is a docking station incorporating space saving features such as an IR interface, slip-in charging capabilities, and a spare Battery Pack charging slot. The unit can be placed on a flat surface or conveniently wall mounted depending on your particular requirements.

With these features the Apex III Battery Pack can be charged without removal from the unit, and communications to the Apex III can be conducted while mounted in the Dock. By using the incorporated charging slot, a spare Battery Pack can be simultaneously charged ensuring a fully charged spare Battery Pack at all times.

See Dock Illustration Figure 4-4.

External Charger

The Apex III External Charger provides simultaneous charging for up to two Apex III Battery Packs. With its small size due to the piggyback design, this unit is convenient for placement in warehouse areas or areas where space is at a premium. Like the Apex III Dock, the External Charger can be either desk or wall mounted for convenient placement. Battery Packs must first be removed from the Apex III for placement in the charging unit.

See External Charger Illustration Figure 4-3.

Battery Pack Charging

Charging the Apex III Battery Pack is easily performed regardless of the battery charging method. Battery charging automatically occurs when a Battery Pack is inserted into a charging slot of the External Charger and/or Apex III Dock, or when the Apex III unit is inserted in the Dock (with a Battery Pack installed in unit).

Battery Pack Removal and Installation

Note: Refer to the Battery Message section of this manual for information on when to change the Battery Pack.

1. *Place the Apex III PDT in the Suspend mode, then remove* the Battery Pack by pressing inward on the Battery Pack Release Tab, pulling outward on the top of the Battery Pack, and removing the Battery Pack from the battery bay.
2. *Install* the Battery Pack in the Apex III PDT by placing the bottom of the Battery Pack into the battery bay. The holddown tab (not shown) will fit into the slot located at the bottom of the Battery Bay. Tilt the top of the Battery Pack towards the Apex III PDT until the Battery Pack Release Tab snaps into position, securing the Battery Pack.

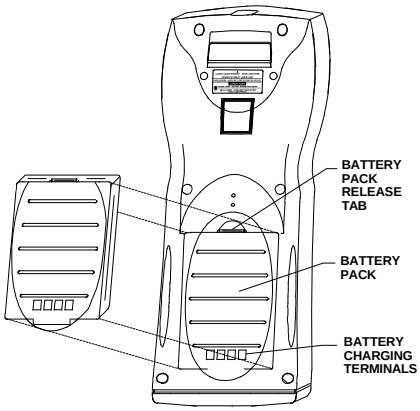


Figure 4-4: Apex III Battery Pack Removal

Charging A Battery Pack In A Charging Slot

Place the Battery Pack into the charging slot with the battery terminals facing downward (this will properly align both the inside and outside contacts for normal use and charging – refer to the External Charger Illustration - next page).

Note: DO NOT attempt to operate the Apex III PDT once it has powered down due to a low battery condition. When the Battery Pack is exhausted, leave the exhausted Battery Pack in the Apex III until you can either charge it in place by placing the Apex III in the Apex III Dock, or swap the Battery Pack with a charged Battery Pack. Information in volatile memory (RAM) will be preserved since the Apex III PDT is configured so that even with an exhausted Battery Pack enough energy is retained to maintain the information for an extended period of time. DO NOT leave the unit WITHOUT a Battery Pack for more than 5 minutes.

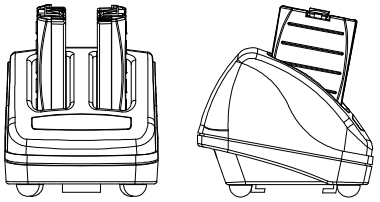


Figure 4-5: External Charger

To charge the Battery Pack in the Dock with the Battery Pack still installed in the unit: Place the Apex III in the normal position within the cradle. The battery charging terminals will self-align with the Battery Pack and the unit will charge automatically (see Dock illustration – next page).

To re-install the Battery Pack in the Apex III: Align the lower Battery Pack tab in the battery bay lower slot and press the upper portion of the Battery Pack inward until an audible click is heard (indicating the upper tab has engaged). The battery bay is the recessed area on the back of the Apex III where the Battery Pack resides during normal operation.

CAUTION

ONLY USE COMPSEE INC APPROVED CHARGING UNITS

ONLY charge the Apex III Battery Pack in the Apex III Dock or the Apex III External Charger. DO NOT use chargers from other manufacturers. Battery Pack Damage could occur.

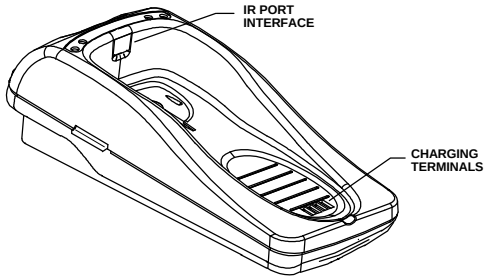


Figure 4-6: Apex III Dock

Note: To ensure proper operation of the Battery Pack gas gauge, the Battery Pack should occasionally be allowed to fully discharge. This ensures a full charge cycle and resets the circuit.

Battery Related Messages

Battery State Warnings

The Apex III is equipped with a Battery Warning alarm, which occurs when the unit's Battery Pack charge has been reduced to a low level. An audible alarm (beep) will be heard and a *"Change Battery"* warning will appear on the screen as follows:

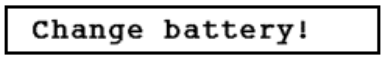


Figure 4-7: Change Battery Warning

When this warning appears it is recommended that the user change the Battery Pack shortly thereafter, since the Battery Pack will only provide sufficient power to run the unit for a short period of time.

If use is continued after receiving the "*Change Battery*" warning, a second alarm, "*Battery Critical*" will occur. An audible beep will be heard, the following message will appear on the screen, and the unit will shutdown.

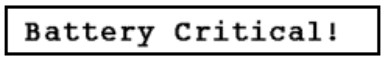


Figure 4-8: Critical Battery Indication

WARNING

We recommend that the user place the unit in "Suspend" and change to a fully charged Battery Pack or recharge the installed Battery Pack after receiving the *"Change Battery"* message. After this operation, pressing the "Suspend" button again will return the unit to the position of the last performed operation. When the *"Battery Critical"* alarm is received, the unit will shutdown and can NOT be restarted until the Battery Pack is replaced with a charged Battery Pack or the installed pack is recharged.

Call-up Battery Messages

In addition to the Battery Warning messages discussed previously, the Apex III is equipped with several messages relating to the Battery Pack status. Your Apex III Battery Pack is equipped with circuitry allowing the unit to communicate with the Battery Pack to determine related conditions. The user can access this information at any time by pressing and holding the <FN> key, then pressing the <B> key (<FN> + <B>).

When the unit is mounted in the Dock and the <FN> + <B> keys are pressed, the following message will be displayed on the view screen:

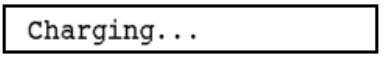


Figure 4-9: Charging Indication

When the Apex III unit is being used in the normal operating mode and the <FN> + <B> keys are pressed, the amount of battery charge remaining will be displayed as follows:

Figure 4-10: Remaining Charge Indication

If a communications error should occur between the Apex III unit and the battery state reading device in the Battery Pack, and the <FN> + <B> keys are pressed, the following message will occur:

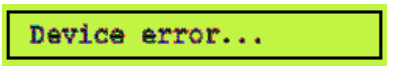


Figure 4-11: Battery Communications Error

If this message appears, first check to see if the Battery Pack is fully seated in the battery bay. If the message continues to occur, contact Compsee Technical Support.

5 HANDLING AND CARE

In General

Your Apex III unit is constructed of high impact ABS plastic for durability and light-weight handling. While the unit is sturdy in construction, dropping the unit could adversely affect the delicate electronic components housed within. It is therefore recommended that you handle the unit carefully to prevent dropping and undue shock.

The soft touch keys housed within the unit's front panel DO NOT require excessive pressure for proper operation. The use of continued excessive force during usage could result in damage to the individual keys and cause key failure.

Cleaning Instructions

The LCD Screen Window, IR Window, and Laser Window can be easily scratched which could adversely affect performance. Care should be taken when handling the unit, not to slide or lay these areas on sharp or rough surfaces. In addition, these areas should be kept clean and free of dust, dirt, or lubricants to promote error free operation. Only clean these areas with a soft cloth and a non-alcoholic cleaning solution such as an all-purpose glass cleaner.

CAUTION

Do NOT use solvents, alcohol, or petroleum based cleaners to clean the LCD Screen Window, IR Window, or Laser Window. Cracking or damage could result with a subsequent loss in operational capabilities.

For general cleaning, the rest of the unit can be wiped down with the same solution or a clean slightly damp cloth.

WARNING

DO NOT place or drop the unit into any liquid or solvent. Submerging the unit in any liquid can cause permanent damage to the electronic circuitry and Battery Pack, preventing the unit from operating properly or at all.

How to Care For Your Apex III

DO NOT place the unit on rough surfaces, which could scratch the Laser Window.

DO NOT allow the Display Screen Window, IR Window, or Laser Window to collect dirt or dust, get scratched or streaked.

DO NOT use excessive pressure when using the touch keypad on the front of the Apex III unit.

DO NOT submerge the Apex III unit in any liquid.

DO NOT drop the unit.

DO NOT clean the Display Screen Window, IR Window, or Laser Window with any alcohol or petroleum based cleaner or cleaner containing abrasives.

DO NOT charge the Apex III Battery Pack with chargers other than those designed for use with the Apex III. Use of these products could cause damage to the Battery Pack.

Store the unit in a clean dry location away from rain, moisture, or dampness.

Keep the unit from areas of excessive heat.

Keep the unit clean and free of dust, dirt, or liquid substances.

Battery Pack Life

Average Battery Pack life expectancy is 400 charge cycles, where a charge cycle encompasses the period of use to full depletion then full charge. After the 400 cycle period, the remaining Battery Pack capacity will be approximately 80%.

Avoid interruptions in usage by always keeping a spare Battery Pack on hand.

Alternate spare Battery Pack use so that all Battery Packs receive uniform use.

Battery Packs can lose approximately 1.1% of their charge per day sitting on the shelf. Therefore a fully charged Battery Pack not kept in the charging slot will require recharging in less than 100 days.

6 SUPPORT INFORMATION

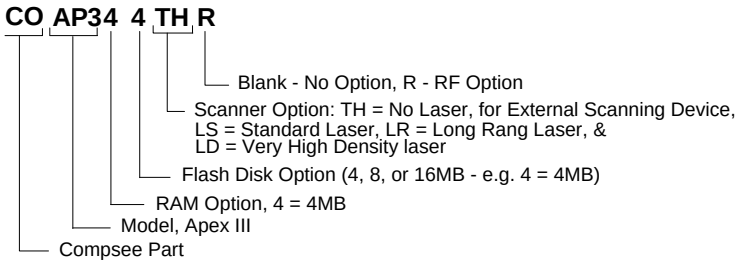
Apex III Associated Part Numbers

Apex III Associated Part Numbers		
No.	**Description**	**Part Number**
1	Cable, Apex II & III to PC RS-232 (DB-9)	0227001
2	Battery Pack, NiMH, 1500 mAh	0214501
3	External Charger (charging unit only)	COAA3CHRG
4	External Charger Kit 1 (w/power supply & US 120 VAC cord)	COAA3CHRG1
5	External Charger Kit 2 (w/power supply, no AC line cord)	COAA3CHRG2
6	Apex III Dock (docking station only)	COAA3DOCK
7	Apex III Dock Kit 1 (w/power supply & US 120 VAC cord)	COAA3DOCK1
8	Apex III Dock Kit 2 (w/power supply, no AC line cord)	COAA3DOCK2
9	Apex III Program Generator Software	COAA3PG0000
10	Power Supply 9 VDC (no AC line cord)	0212014
11	Cord Set, US, 120 VAC	0212013
12	Standard End Cap	0220508
13	Serial End Cap Kit (RS-232)	C0AA3SEC01
14	Lanyard (carrying strap)	0220521
15	Compsee Product Support CD	02MC142
16	User Manual (Hard Copy)	COAM30001
17	Technical Reference Manual (Hard Copy)	COAM30002

Note: Since the manual printing date, additional Part Numbers may be available. Call for details or check the Compsee, Inc. website at www.compsee.com.

Part Number Informational Breakdown

Example:



Technical Support

Technical Support on the Apex III unit is available from Compsee, Inc. through the following methods:

Via our Website: www.compsee.com

E-mail: support@compsee.com

Phone: 1 (800) 768-5248

Before calling please follow these guidelines:

- Refer to the appropriate sections of this manual to ensure you have correctly performed the operation or function in question.
- Have the unit Model No. and Serial No. in-hand (located in Battery Bay under Battery Pack).
- Have a complete description of the problem as well as any pertinent information on when it occurred.

Service And Repair

BEFORE returning any equipment for service please read ALL of the information within this section. This will preclude shipping errors or misunderstandings. Thank you!

Compsee provides U.S. service for its bar code products via a Service Center located at its manufacturing facilities in Mt. Gilead, North Carolina, USA 27306. Service outside the U.S. is provided through the use of International Authorized Service Centers. Check the Compsee Inc. website for the latest Authorized Service Center listing.

The Apex III carries a Limited 1 Year Warranty from the date of purchase. The specific warranty language is contained in the front of this manual.

Factory service is also available on a time and material basis. If you use this type of service agreement, you will be advised of a not-to-exceed price for repair when you request a Return Material Authorization (RMA) for the product.

Products may be returned for repair after obtaining a Return Material Authorization (RMA) from Compsee Customer Service. Call one of the following numbers to receive your Return Authorization

1-321-724-4321 or 1-800-628-3888

Before calling the Compsee Customer Service line you should have the following information in hand:

- Unit Model Number
- Serial Number
- Accurate Description of the Problem
- Company Name
- When and how the unit will be shipped
- Return Address
- Contact Person's Name and Telephone Number

This information is necessary for us to complete an RMA for the product. ***We CANNOT accept materials that are returned without an RMA number.*** This number will ensure that the problem described is corrected and the unit is repaired and returned in a timely fashion.

Normal Repair time is 10 days from receipt of the equipment.

Shipping Costs to Compsee are to be paid for by the user. Compsee will pay for return shipping in the same manner that the equipment was originally shipped to Compsee.

Specifications

Physical Dimensions

Length: 8.4 in. (21.34 cm)
Width: 3.8 in. (9.65 cm)
Depth: 1.8 in. (4.57 cm)
Weight (including Battery Pack)
- Without Laser: 18.1 oz. (513.14 g)
- With Laser/No Wireless: 18.6 oz. (527.31 g)
- Without Laser/Wireless: 20.1 oz. (569.84 g)
- Laser w/Wireless: 20.6 oz. (584.01 g)

Construction

Industrial, high-strength polycarbonate/ABS-blend plastic, U/L rated @ 94 VO.

Keypad

56-key, full alphanumeric, non-glare
4 dedicated function keys, 8 shifted (12 total)
Programmable foreign character set generator
Large Scan key
Large numeric keys

Display

Fully programmable graphic LCD
Backlight
Large 240 × 160 pixel LCD matrix
Standard format (10 × 30), up to 20 × 30 characters (selectable)

PC Card

2 slots –PC Card, user accessible (2 Type I or II, or one Type III)

Speaker

Voice capable
User adjustable volume. Software programmable for duration and pitch

Integrated Laser Scanner

Readable display while scanning
Scan rate of 36 ± 4 scans/sec
Indicators: Good read, Scan
Standard Laser Ambient Light Immunity
- Artificial Light: 450 ft-candles (4,844 lux)
- Sunlight Light: 10,000 ft-candles (107,640 lux)

Long Range & Very High Density Laser Ambient Light Immunity
- Artificial Light: 450 ft-candles (4,844 lux)
- Sunlight Light: 8,000 ft-candles (86,112 lux)

Specifications continued

Communications Infrared (up to 115 Kbps data transfer rate) RS-232 (internal connection or with optional Serial End Cap) XMODEM protocol provided between PDT & Dock (IR communications) High Speed UART (16550-compatible – supports up to 115 Kbps Serial transfer rate)
Microprocessor AMD Elan® AM486™ SC400, Low power 32-bit microprocessor w/System logic 8 KB L1 cache 33 MHz clock speed
Memory 8 or 16 MB Flash (DOS, Application, and Data storage) 4 MB RAM (for system operation and virtual disk data storage) PC Card support for up to 64 MB Linear Flash cards, 512 MB ATA Flash, & 64 MB RAM
Operating System/BIOS Operating System: Industry Standard Datalight ROM-DOS™ 6.22 BIOS: Phoenix Pico™ BIOS Version 4.05
Power Options Rechargeable 1500 mAh NiMH Battery Pack (400 charge duty cycle) Apex III Dock with IR interface and one fast charge Battery Pack charging slot Apex III External Charger (two fast charge Battery Pack charging slots)
Environmental IP-65 Compliant Operating Temp: 14° F to 122° F (–10° C to 50° C) Storage Temp: –4° F to 158° F (–20° C to 70° C) Drop Tested for (4) 4 ft. drops on concrete (all four corners) Chemical and splash resistant
Regulatory Approvals FCC (part 15, Class B) CDRH and IEC laser Class 2 CE

Specifications continued

Supported Symbologies

- Codabar
- Code 11
- Code 128
- Code 39 (full ASCII)
- Code 39 (standard)
- Code 93
- EAN 8/13
- JAN 8/13
- Identicode 2 of 5
- Industrial 2 of 5
- Interleaved 2 of 5
- Matrix 2 of 5
- MSI Plessey
- UPC/EAN (with 2 or 5 character supplemental)
- UPC-A/E

APPENDIX A - SAMPLE BAR CODES

The following sample bar codes can be used to test the Apex III unit upon initial receipt or during applications programming.

Code 3 of 9

Codabar

UPC-A

EAN-8

Sample Bar Codes continued

Code 128

Interleaved 2 of 5

Code 11

EAN-13

Compsee, Inc.
Contact Information

www.compsee.com

1 (800) 628-3888

Compsee, Inc.
A Subsidiary of McRae
Industries, Inc.