

# DOCK



USER'S MANUAL



**Compsee, Inc.** A Subsidiary of McRae Industries, Inc. This Page Intentionally Left Blank



# DOCK USER'S MANUAL FIRST EDITION

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

CE

#### Copyright Acknowledgments:

All terms and names mentioned within this publication that are known to be registered trademarks and/or service marks have been appropriately designated. Due to today's changing corporate environment, Compsee, Inc. cannot attest to the accuracy of all of this information. Use of a specific term in this publication should not be regarded as affecting the validity of any trademark or service mark known to exist.

Compsee<sup>®</sup> and Apex III<sup>™</sup> are registered trademarks of McRae Industries, Inc.

 $Windows^{\textcircled{m}}$  and  $Microsoft^{\textcircled{m}}$  are registered trademarks of Microsoft Corporation.

Adobe<sup>®</sup> and Acrobat<sup>®</sup> are registered trademarks of Adobe Systems Inc.

#### <sup>©</sup>COMPSEE, INC. 2000, All Rights Reserved

All parts of this manual, including illustrations and specifications are the property of Compsee, Inc. The information contained herein may not be reproduced in whole or in part for any reason without express written authorization from Compsee, Inc.

The material contained in this manual is for informational purposes only and subject to change without notice.

COMPSEE, INC. and Apex III  $^{\text{TM}}$  are authorized trademarks of Compsee, Inc., Mt. Gilead, NC 27306.

Manual Number COAM30003, Rev 1.04

Model #		FL 32905-6065 3-2895 (FAX) 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. What is the size of your company? What is your application for the Apex III?		Individual Privately-Owned Company Corporation Under \$1 Million in Sales Greater than \$1 Million, less than \$10 Million in sales Greater		
ou must register this proc				Place Stamp Here

----- Front Side

This Page Intentionally Left Blank

## APEX III DOCK WARRANTY INFORMATION

#### Note to Purchaser

This warranty and license contains important information on the servicing and use of your new Apex III Dock and Power Supply.

### Limited Warranty

Compsee, Inc. warrants that for one year from date of purchase, the Apex III Dock 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 within this manual or other product specifications published by Compsee, Inc. In addition, Compsee, Inc. warrants for a period of one year from the date of purchase, that the Dock Power Supply (included in Kits only) shall be free from significant defects in material and workmanship.

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

#### Warranty Disclaimers

These warranties apply only to Apex III Dock and Power Supply purchased directly from Compsee, Inc. or from an authorized Value Added Reseller (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 prescribed Compsee products.

It should be noted that the above warranties only apply to Dock and Power Supply use *as specified* within this or other Compsee, Inc. documentation and when purchased directly from Compsee, Inc. or an authorized agent. Use of either of these products other than prescribed by this or other Compsee, Inc. documentation will void the product warranty.

COAM30003 Rev. 1.04 09/03/01

i

#### 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 being purchased.

## Warranty Limitations

ii

Failure to follow the below operational stipulations when using or caring for your Apex III Dock will negate the product warranty. Please review these items thoroughly before using your unit.

- □ Prior to operating the Dock, review the prescribed 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 Dock or Power Supply. No user serviceable parts are included in these units.
- ONLY Charge Apex III Battery Packs with an approved Compsee charging device. Use of any charging device or Battery Pack other than those approved by Compsee, Inc. can potentially damage the Apex III Portable Data Collection Terminal (PDT), Dock, External Charger, Power Supply, and/or Battery Pack.
- Do NOT spray cleaners directly on the unit 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 Dock or Power Supply using alcohol, acetone, mineral spirits or any other petroleum or alcohol based product. Damage to the unit can occur.
- Do NOT leave the Dock or Power Supply in the rain or direct sunlight or immerse the units in water or any other liquid. These units are designed for indoor use only.

COAM30003 Rev. 1.04 09/03/01

#### **Recommended Operational Tips**

- **Note:** Failure to heed the following recommendations, while not voiding the warranty, may result in degradation to the units operation:
- Do NOT clean the Dock or Battery Pack terminals with soap, abrasives, or any alcohol or petroleum based solution. Should the contacts require cleaning due to oxidation or corrosion buildup, clean gently using a standard pencil eraser. DO NOT press too hard as contact damage could occur.
- 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.
- Only use the Apex III Dock or Apex III External Charger for charging Apex III Battery Packs.
- □ Only use Compsee, Inc. approved cables and power supplies to connect your Apex III Dock or External Charger.
- □ 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; however, it is still recommended that the Battery Pack be fully discharged periodically to reset the internal gas gauge circuitry.*

COAM30003 Rev. 1.04 09/03/01

iii

COAM30003 Rev. 1.04 09/03/01

iv

# TABLE OF CONTENTS

1	APEX III DOCK BASICS	1-1
	General User Information	1-1
	Using This Manual	1-1
	Apex III Dock Characteristics	1-2
	Optional Accessories	
2	SAFETY	2-1
	Standard Safety Guidelines	
	Unit Specific Safety Notes	
	Battery Pack Safety	
	Product Conformity	
3	DOCK SETUP AND OPERATION	3-1
5	Apex III Dock Setup	
	Initial Setup Procedure	
	Apex III Dock Operation	
	Apex III Spare Battery Pack Charging	
	Installed Apex III PDT Battery Pack Charging	
	Apex III PDT/Battery Pack Notes	
	Battery Pack Life	
	Apex III PDT Communications	
4	TECHNICAL INFORMATION	4-1
	Associated Pinouts	
5	SUPPORT INFORMATION	
-	Associated Apex III Dock Part Numbers	
	Technical Support	
	Service And Repair	
	Return Material Authorization (RMA)	
	Specifications	
	User Unit Specific Information	
	Notes	

COAM30003 Rev. 1.04 09/03/01

v

COAM30003 Rev. 1.04 09/03/01

vi

## 1 APEX III DOCK BASICS

## **General User Information**

This manual provides information necessary to properly operate and maintain the Apex III Dock and Power Supply. Contained within this manual is a description of the unit's hardware; procedures for unpacking and verifying the unit's operating functions; operational instructions; Battery Pack charging instructions; guidelines for maintaining the Dock; and other useful information.

Before attempting to understand and operate new equipment, it is important for the user to gather the available information on the product. Whether you are a novice or a confident user with the added advantage of knowing electronics, this manual contains the information you need to become a proficient user of the Apex III Dock.

It should be noted that while this manual provides the user with the required information to operate and maintain the Apex III Dock, understanding the use and operation of the Apex III PDT will help the user to more fully comprehend the entire Apex III system capabilities and the integrated use of all of the Apex III line of products. It is therefore recommended that any user of the Apex III Dock also become familiar with the Apex III PDT operation (refer to the Apex III Portable Data Collection Terminal User's Manual). Additionally, the Apex III PDT Technical Reference Manual provides technical details pertaining to the Apex III PDT's configuration and technical operation.

## Using This Manual

Typographic conventions followed within this manual:

- □ **Bold Type** is used for headings and important sections throughout the manual.
- □ Important points and supplementary information are included as <u>Notes</u> throughout this manual. Note headings are printed throughout the manual using a <u>bold underlined typeface</u>.
- □ When referring to specific components, their titles or names will be shown as much as possible in the exact format as they appear on the parts themselves.

COAM30003 Rev. 1.04 09/03/01 1-1

- □ CAUTION ▲ and WARNING ▲ messages are provided within this manual, which if not observed could result in personal injury, equipment damage, or have an adverse affect on unit operation. CAUTION and WARNING messages are located within boxes with their headings in **bold** type.
- Procedures when specified should be followed in the order given unless otherwise noted. Failure to do so may result in damage or adversely affect the Dock, Power Supply, or Apex III Battery Pack.

## **Apex III Dock Characteristics**

The Apex III Dock and associated Power Supply are solid-state electronic devices that have been designed to be used specifically with the Apex III Battery Packs.

The full-functioned capabilities of your Apex III Dock allow simultaneous operations including:

- □ The charging of one (1) Apex III Battery Pack.
- □ Charging of the pre-installed Battery Pack within the Apex III PDT (slip-in charging capability).
- □ Infrared (IR) communications between the Apex III PDT and the Apex III Dock (RS-232 serial communications between the Dock and another serial device such as a PC).



ONLY CHARGE APEX III BATTERY PACKS WITH THE APEX III DOCK OR EXTERNAL CHARGER!

DO NOT attempt to charge any other type battery pack or batteries other than Apex III Battery Packs with your Apex III Dock or External Charger. Placing other types of battery packs or batteries into the battery charging slot could result in personal injury and/or damage to the unit.

COAM30003 Rev. 1.04 09/03/01

Your Apex III Dock includes the following features:

- □ Fast charging capabilities (2 hours maximum for a fully depleted Battery Pack –whether the Battery Pack is installed in the Apex III PDT or removed and placed in the available spare charging slot)
- □ Light Emitting Diode (LED) indicating lights to inform the user of the charging progress *or* state of communication
- □ Table top or wall mounting capability for ease of use and space saving area locating

## **Optional Accessories**

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

- □ Additional Battery Packs (Nickel Metal Hydride NiMH)
- Additional Apex III Docks Allows additional docking stations incorporating Infrared (IR) coupling, slip-in charging capabilities, and an additional charging slot for a spare Apex III Battery Pack. Capable of being mounted on the wall or desk.
- Apex III External Chargers Allows additional locations for simultaneous charging of two spare Apex III Battery packs (refer to the Apex III External Charger User's Manual for additional details).
- □ Additional Power Supplies (with or without an AC line cord)
- AC Line Cord Set
- Vehicle Lighter Adapter Cigarette lighter adapter cable for connecting the Dock or External Charger Power supply to a 12 VDC vehicle power source.
- Apex III Dock Serial Communications cable (see Associated Apex III Dock Part Numbers in this manual)
- □ Compsee Product Support CD (additional copies)
- □ Hard Copy (printed) of any Apex III PDT documentation manual.

COAM30003 Rev. 1.04 09/03/01 1-3

1-4

COAM30003 Rev. 1.04 09/03/01

## 2 <u>SAFETY</u>

## **Standard Safety Guidelines**

The Apex III Dock has been designed and manufactured to exacting standards for performance, reliability and safety. This product is electronic and electrical in nature and should therefore be used in accordance with the typical electrical safety guidelines listed below:



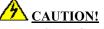
### DO NOT OPERATE THE APEX III DOCK IN A WET ENVIRONMENT!

DO NOT operate the Apex III Dock in any location that could result in the unit getting splashed, wet, or immersed in liquid. Operating the unit in these conditions could result in an Electrical Shock Hazard and damage to the unit.



DO NOT TAMPER OR OPEN THE UNIT CASE!

DO NOT tamper or operate the Apex III Dock if the case is perforated, broken, or loosely held together. Use of the product with the case broken, perforated, or loose could result in an Electrical Shock Hazard and/or damage to the unit.



#### DO NOT CLEAN THE CHARGING TERMINALS WITH THE UNIT PLUGGED IN!

DO NOT clean the Dock charging terminals with the unit plugged-in. DO NOT use any type of liquid or solvent to clean the terminals. ONLY use a standard pencil eraser to clean the terminals and DO NOT use excessive force. If an eraser will not clean the terminals, the unit should be repaired or replaced.

COAM30003 Rev. 1.04 09/03/01



## ONLY USE COMPSEE APPROVED METHODOLOGY!

DO NOT use any Apex III Dock for uses other than those specified by Compsee, Inc. Use of controls, adjustments, procedures, or methodology other than those specifically identified by Compsee, Inc. is strictly prohibited and will void the product warranty.

## **Unit Specific Safety Notes**

Certain warnings and precautions, in addition to the general safety, operational, and care instructions in this manual, are provided for safe operation of this product. These guidelines are listed below and should be followed as noted for safe and proper operation of the unit.



DO NOT OPERATE THE APEX III DOCK OR EXTERNAL CHARGER IN AN EXTERNAL ENVIRONMENT!

DO NOT operate the Apex III Dock or External Charger in any outside location where they could become exposed to the elements. *The Apex III Dock and External Charger have been designed for indoor use only!* Operating the units outside, exposed to the elements could result in an Electrical Shock Hazard and/or damage to the units.



### ONLY OPERATE THE APEX III DOCK IN CONJUNCTION WITH COMPSEE APPROVED POWER SUPPLY AND CABLES!

ONLY use Compsee, Inc. approved cables and Power Supplies with your Apex III products. Use of other charging or connection materials could result in inferior operation or damage to the unit. If variations in the cables or power supply are necessary for your installation, contact Compsee, Inc. and obtain approval for use of the materials in conjunction with your Apex III equipment.

COAM30003 Rev. 1.04 09/03/01

## Battery Pack Safety



ONLY CHARGE APEX III BATTERY PACKS!

DO NOT attempt to charge any other type battery pack or batteries other than Apex III Battery Packs with your Apex III Dock or Apex III External Charger. Placing other types of battery packs or batteries into the Dock or External Charger could result in personal injury and/or damage to the unit.



## ONLY USE COMPSEE, INC. APPROVED CHARGERS!

Only charge the Apex III Battery Packs in the Apex III Dock or the Apex III External Charger. DO NOT use chargers from other manufacturers. The Battery Pack warranty will be voided and Battery Pack Damage could occur.



DO NOT SHORT THE APEX III BATTERY PACK TERMINALS! DO NOT touch more than one Battery Pack terminal at a time with any electrical conductive material. An electrical short across the Battery Pack terminals could result in the sudden release of a large portion of the Battery Pack's energy causing the Battery Pack to overheat and leak.



## PROPERLY DISPOSE OF APEX III BATTERY PACKS!

Apex III PDT Battery Packs should be disposed of properly. DO NOT dispose of the Apex III Battery Pack in a flame or fire. An explosion may occur. Apex III Battery Packs are approved for disposal in a class 2 Landfill (normal trash); however, recycling the Battery Packs reduces the amount of raw materials consumption necessary to produce new Battery Packs and also reduces the total landfill usage within your area. We highly recommend that the Battery Packs be returned to the factory for recycling at the end of their useful life. Contact Compsee, Inc. for additional information.

COAM30003 Rev. 1.04 09/03/01

## **Product Conformity**

No user serviceable parts are included in the manufacture of your Apex III product. *Opening of the unit by unauthorized personnel will void the product warranty.* 

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.



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

COAM30003 Rev. 1.04 09/03/01

## 3 DOCK SETUP AND OPERATION

### Apex III Dock Setup

The Apex III Dock is a sophisticated electronic device that automatically maintains the installed Apex III PDT Battery Pack and a spare Battery Pack in a fully charged state. With it's integrated features, the Apex III Dock simultaneously allows a user or programmer to conduct Infrared (IR) communications between the Apex III PDT and the Dock (RS-232 serial communications between the Dock and an IBM compatible PC or other serial device). Refer to the Apex III PDT User's Manual and Apex III PDT Technical Reference Manual for detailed information on conducting communications.

To ensure proper Dock 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 installation of the unit.

#### **Initial Setup Procedure**

1. Remove the Apex III Dock from the packing carton and inspect the unit to ensure it is good physical condition after shipping.

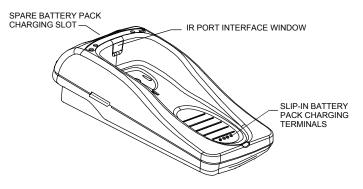


Figure 3-1: Apex III Dock (Frontal View)

COAM30003 Rev. 1.04 09/03/01 3-1

2. If you have ordered a Dock Kit (Kit 1 or 2 – refer to the Support Section of this manual for part numbers and description), remove the associated Power Supply, Communications Cable, and AC Line cable (if applicable) from the packing container (refer to Figure 3-2, Figure 3-3, and Figure 3-4).





Figure 3-2: Apex III Dock Power Supply

3-2

Figure 3-3: AC Line Cord (120 VAC Cord Shown)



Figure 3-4: Apex III Dock Communications Cable (10 Pin Phone Plug To DB-9)

- 3. Record the unit specific information on the page provided at the back of this manual (p. 5-5) for future reference before permanently installing your Apex III Dock.
- 4. Plug the female end of your AC Line cord into the Power supply connector (refer to Figure 3-5).

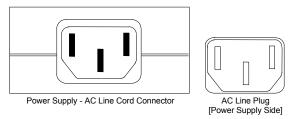


Figure 3-5: Power Supply AC Power Connection

COAM30003 Rev. 1.04 09/03/01

5. Plug the round male Power Supply DC voltage connector (cable permanently attached to Power Supply) into the DC voltage connector on the back of the Apex III Dock (refer to Figure 3-6).

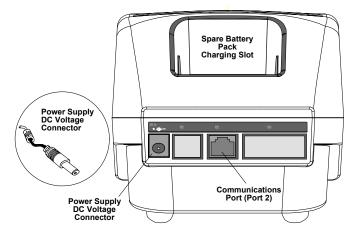


Figure 3-6: Apex III Dock (Rear View)

- **<u>Note</u>:** For a detailed description of the Dock connectors refer to the Technical Information section of this manual (p. 4-1)
- 6. To use the Apex III Dock for communications with the Apex III PDT, connect the 10 pin Phone Plug of the Compsee serial communications cable (PN 0227001) to Port 2 on the back of the Dock (refer to Figure 3-6 and Figure 3-7).



# Figure 3-7: Apex III Dock Communications Cable (10 Pin Phone Type Connector Required)

- 7. Connect the RS-232 (DB-9) connector on the other end of the communications cable to the Serial Port on an IBM based PC or other serial device (refer to your device specific User's Manual).
- 8. Plug the AC Line cord into an AC power receptacle (refer to Figure 3-8).

COAM30003 Rev. 1.04 09/03/01 3-3

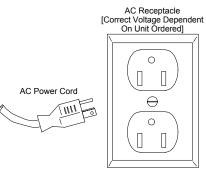


Figure 3-8: AC Power Connection

9. If the Apex III Dock is to be mounted in the vertical position (e.g. on a wall), remove the PDT Mounting Hook from within the Apex III PDT resting area (refer to Figure 3-9).

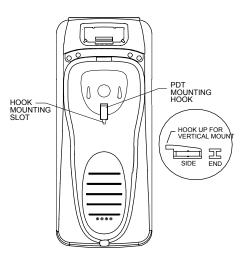


Figure 3-9: PDT Mounting Hook Location And Orientation (Top View Of Dock Shown)

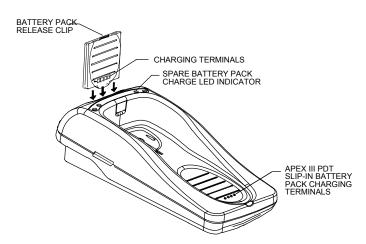
- 10. Flip the PDT Mounting Hook over and re-insert it into the slot to prevent the Apex III PDT from sliding downward during vertical mounting of the Dock (refer to Figure 3-9).
- 11. To use the Dock spare charging slot, insert an Apex III Battery Pack into the charging slot on the top rear of the Apex III Dock (refer to Figure 3-10, Warning, and Note).

COAM30003 Rev. 1.04 09/03/01



DO NOT attempt to charge any type battery pack or batteries other than Apex III Battery Packs with your Apex III Dock or External Charger. Placing other types of battery packs or batteries into the Dock or External Charger could result in personal injury and/or damage to the unit.

**Note:** For a proper connection, the Battery Pack must be placed in the charging slot with Release Clip facing upwards and the four side charging terminals (and ridges) facing towards the front of the unit.



#### Figure 3-10: Battery Pack Orientation (Left Side Battery Pack Insertion Shown)

12. To keep the *installed* Apex III PDT Battery Pack fully charged, simply place the Apex III PDT in the Dock and allow the unit to move to the foremost position. The Apex III PDT charging terminals will automatically align with those on the Dock (refer to Figure 3-10 and Figure 3-11).

COAM30003 Rev. 1.04 09/03/01



Figure 3-11: Apex III At Rest In Dock (Spare Battery Pack In Charging Slot)

3-6

COAM30003 Rev. 1.04 09/03/01

## **Apex III Dock Operation**

Before operating your Apex III Dock it is recommended that you thoroughly read the following detailed operational sequences.

The Apex III Dock and External Charger are equipped with a quick charge circuit allowing an Apex III Battery Pack to be fully charged from a full discharge condition within 2 hours.

## Apex III Spare Battery Pack Charging

- 1. Once an Apex III Battery Pack has been inserted into the Dock charging slot per the previous instructions (p. 3-5), the charging process will commence immediately and be controlled automatically by the unit. No additional action is required by the user, except for Battery Pack removal once the Battery Pack has been fully charged (the *SPARE Batt LED* will glow solid green see below).
- 2. Upon initial insertion of a Battery Pack into the unit, the *SPARE Batt LED* indicator light on the top rear of the unit will flash Red. After a short period of time (less than 15 minutes), the LED will solidly illuminate Red to indicate that the Battery Pack is being charged in the *fast mode*.
- 3. When the Apex III Dock senses that the Battery Pack charge state has reached approximately 92% charge, the *SPARE Batt LED* will change to solid Green to inform the user that the unit is charging the Battery Pack in the *trickle mode*. The trickle charging mode will continue until the Battery Pack is removed from the charger.
- **Note:** Since the Apex III Battery Packs use state-of-the-art 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; however, it is still recommended that the Battery Pack be fully discharged periodically to reset the internal gas gauge circuitry.*

COAM30003 Rev. 1.04 09/03/01

- 4. If your Apex III Portable Data Collection Terminal (PDT) is ready for another Battery Pack, simply remove the installed Battery Pack and replace it with a fully charged Battery Pack from the Dock spare charging slot or the External Charger (refer to the Apex III PDT/Battery Pack Notes section of this manual (p. 3-9) for details on when you should change the Apex III PDT Battery Pack).
- 5. Place the exhausted Apex III Battery Pack into the Dock charging slot as described in the Dock Initial Setup section of this manual (p. 3-5).

## Installed Apex III PDT Battery Pack Charging

- 1. The automatic charging feature of the Apex III Dock will charge the installed Apex III PDT Battery Pack when the unit is in the "*At Rest*" position allowing the user to minimize Apex III Battery Pack change-out. Refer to the Apex III PDT User's Manual for detailed instructions on the Apex III use and operation.
- 2. When the Apex III PDT is first placed in the Dock, the *PDT Batt LED* will flash Red. After a short period of time the LED will illuminate solid Red, indicating that the installed Apex III Battery Pack is being charged in the *fast mode* (this should not take more than 15 minutes).
- 3. When the Apex III Dock senses that the installed Apex III Battery Pack charge state has reached approximately 92% charge, the *PDT Batt LED* will change to solid Green to inform the user that the unit is charging the Battery Pack in the *trickle mode*. The trickle charging mode will continue until the Battery Pack is removed from the charger.
- **Note:** Since the Apex III Battery Packs use state-of-the-art 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; however, it is still recommended that the Battery Pack be fully discharged periodically to reset the internal gas gauge circuitry.*

COAM30003 Rev. 1.04 09/03/01

#### Apex III PDT/Battery Pack Notes

- **<u>Note</u>:** Refer to the Apex III PDT User's Manual for additional details on the Apex III PDT operation.
- 1. 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 PDT 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. 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.
- 2. It is recommended that the user place the Apex III PDT in "Suspend" and change to a fully charged Battery Pack or recharge the installed Battery Pack after receiving the "*Change Battery*" message. After charging the Battery Pack, pressing the "Suspend" button again will restore the Apex III PDT to the last operation performed. If unit operation is continued and the "*Battery Critical*" alarm occurs the Apex III PDT will shutdown and cannot be restarted. The installed Battery Pack must be replaced with a fully charged Battery Pack or the installed pack recharged in the Apex III Dock.

#### **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 Battery Pack's remaining 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.

COAM30003 Rev. 1.04 09/03/01 3-9

## **Apex III PDT Communications**

- **Note:** The Apex III Dock contains an Infrared (IR) transceiver, which converts a RS-232 signal (Rx) to Infrared light pulses or Infrared light pulses to a RS-232 signal (Tx). Pulses sent through the Dock IR Window are received by the Apex III PDT via the built-in IR port. No cable connection is required between the Apex III and the Dock.
- 1. Place the Apex III PDT in the Dock in the "*At Rest*" position (refer to the Initial Setup section of this manual).
- Note: The Compsee Product Support CD packaged with your Apex III PDT includes a copy of a DOS based File Transfer Utility program [dx.exe] and the Windows Transfer Utility (WXU) application. The WXU application is a Windows<sup>®</sup> based File Transfer Utility that assists users or developers in transferring files to or from the Apex III PDT. Refer to the Online Help Files included with both applications for usage information. In addition, you should become familiar with the communications parameters discussed within the Apex III PDT Technical Reference Manual (TRM - also included on the CD in Adobe<sup>®</sup> Acrobat<sup>®</sup> format). If your version of the Compsee Product Support CD does not contain a copy of either of these utilities or an updated edition of the Apex III-TRM, contact Compsee, Inc. Technical Support or download a copy from the Compsee, Inc. website at:

#### www.compsee.com.

- 2. Prepare the Apex III PDT and PC or other serial device being used for the communications process as described in the Apex III PDT Technical Reference Manual – included on the Compsee Product Support CD.
- 3. Begin the communications process with the Apex III PDT per the Apex III PDT Technical Reference Manual. Once the communications process has begun, the appropriate communications LED on the Apex III Dock (Tx or Rx) will flash indicating that the communications process is in progress.

COAM30003 Rev. 1.04 09/03/01

#### Notes:

- ➤ The *Tx LED* flashes Green when the Apex III PDT is *transmitting* to a serial device through the Dock.
- > The *Rx LED* flashes Red when the Apex III PDT is *receiving* a transmission from a serial device through the Dock.
- The LED flash rate is directly proportional to the rate of the communications process. The appropriate LED will flash slower when communicating at 9600 baud than at 115,200 baud.
- Supported baud rates for IR communication are 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200.
- When proper communications are in progress, the Dock LED's will flash in conjunction with the dual purpose DECODE and SCAN LED's on the Apex III PDT (see Apex III PDT User's Manual).
- 4. When the communications process has been completed (or stopped due to an error) the appropriate LED (Tx or Rx) will stop flashing.

COAM30003 Rev. 1.04 09/03/01

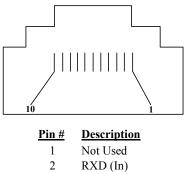
3-12

COAM30003 Rev. 1.04 09/03/01

## 4 <u>TECHNICAL INFORMATION</u>

## **Associated Pinouts**

The Apex III Dock comes standard with an onboard RS-232 connector located on the rear of the unit. The connector (designated Port 2) allows the serial connection from the Dock to the PC to be made with a 10-pin phone type connection. The connector is configured as shown in Figure 4-1.



1	Not Used
2	RXD (In)
3	TXD (Out)
4	Not Used
5	GND
6	Not Used
7	Not Used
8	Not Used
9	Not Used
10	Not Used

Figure 4-1: Dock RS-232 Serial Connector Pinout (Port 2)

The following pinout (Figure 4-2) illustrates the RS-232 Serial cable details for the communications cable connecting the Apex III Dock to the PC or other serial device.

COAM30003 Rev. 1.04 09/03/01

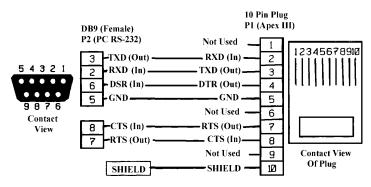


Figure 4-2: RS-232 To DB9 Cable (PN 0227001)

**Note:** Additional RS-232 cables are available from Compsee, Inc. These cables can be used in conjunction with the Apex III PDT and Apex III Dock for additional purposes. Contact Compsee, Inc. for additional information.

Figure 4-3 Illustrates the Dock input power voltage polarity within the Dock Power Supply connectors.



Figure 4-3: Power Supply Cable (Dock End) Voltage Key

COAM30003 Rev. 1.04 09/03/01

## 5 <u>SUPPORT INFORMATION</u>

## Associated Apex III Dock 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 and 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, serial cable and US 120 VAC cord)	COAA3DOCK1		
8	Apex III Dock Kit 2 (w/power supply, serial cable, no AC line cord)	COAA3DOCK2		
9	Apex III PDT Dock Hook	0220516		
10	Power Supply 9 VDC (no AC line cord)	0212014		
11	Cord Set, US, 120 VAC	0212013		
12	Vehicle Lighter Adapter (Cigarette lighter adapter cable for Dock/External Charger Power Supply	0228510		
13	Apex III Dock User Manual (Hard Copy)	COAM30003		

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

## **Technical Support**

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

Website: www.compsee.com

Phone: 1 800 768-5248

e-mail: support@compsee.com

Before calling, follow these guidelines:

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

COAM30003 Rev. 1.04 09/03/01 5-1

## 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 Dock 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 (see the following page for additional RMA information).

COAM30003 Rev. 1.04 09/03/01

## **Return Material Authorization (RMA)**

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:

- The unit Model Number
- The unit Serial Number
- An accurate description of the problem
- Your companies name
- When and how you wish to ship the unit
- A return address
- A contact person's name and telephone number

This information is necessary for us to complete an RMA for the product.

# **<u>Note</u>:** We CANNOT accept materials that are returned without an RMA number.

The RMA 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 Inc. are to be paid for by the user. Compsee will pay for the return shipping in the same manner that the equipment was originally shipped to the repair facility.

COAM30003 Rev. 1.04 09/03/01

## Specifications

5-4

Physical Dimensions			
Length: 11.18 in. (28.4 cm)			
Width: 4.50 in. (11.43 cm)			
Height: 4.75 in. (12.06 cm)			
Weight			
➢ Dock: 1.61 lbs.			
<ul> <li>Dock With Battery Pack: 1.85 lbs.</li> </ul>			
➢ Dock With Apex III PDT and Battery Pack: 2.99 lbs.			
Construction			
Industrial, high-strength polycarbonate/ABS-blend plastic, U/L rated @ 94 VO.			
Power Supply/ Battery Pack			
Rechargeable 1500 mAh NiMH Battery Pack			
□ Full charge within 2 hours after full discharge			
□ Apex III External Charger/Dock Power Supply			
> Input: $100 - 240$ VAC, $50 - 60$ Hz, $70 - 100$ VA,			
auto-ranging			
$\blacktriangleright \text{ Output: 9 VDC } (a, 4.0 \text{ A} (36 \text{ watts maximum}))$			
$\blacktriangleright \text{ Dimensions: } 4.62 \times 2.32 \times 1.25 \text{ in. } (118 \times 60 \times 32 \text{ mm})$			
➢ Weight w/120 VAC Line Cord: 1.22 lbs. ○ constitut Turner 228 F = 1229 F (20 C) = 508 C)			
<ul> <li>Operating Temp: 32° F - 122° F (0° C - 50° C)</li> <li>UL/CE Indoor Use Only</li> </ul>			
Communications			
RS-232/Infrared (IR) Communications			
<ul> <li>Serial Connection to PC via communications cable PN 0227001 (Included in Dock Kits)</li> </ul>			
□ Supported baud rates are 300, 600, 1200, 2400, 4800, 9600,			
Supported baud fates are 500, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200 baud.			
Environmental (External Charger Only)			
$\Box$ Operating Temp: 59° F to 104° F (15° C to 40° C)			
□ Storage Temp: $-4^\circ$ F to $15^\circ$ F ( $-20^\circ$ C to $70^\circ$ C)			
□ Chemical resistant			
Regulatory Approvals			
$\Box$ FCC (part 15, Class B)			
CE			

COAM30003 Rev. 1.04 09/03/01

## **User Unit Specific Information**

Record your Apex III Dock and Power Supply Model numbers, Serial Numbers, and Purchase Date in the space provided below for future reference:

Dock Model No.

**Dock Serial No.** 

**Dock Purchase Date:** 

**Power Supply Model No.** 

**Power Supply Serial No.** 

**Power Supply Purchase Date:** 

COAM30003 Rev. 1.04 09/03/01

**5** Support Information

Notes

5-6

COAM30003 Rev. 1.04 09/03/01

Notes

COAM30003 Rev. 1.04 09/03/01

COAM30003 Rev. 1.04 09/03/01

This Page Intentionally Left Blank

Compsee, Inc. Contact Information <u>www.compsee.com</u> 1 (800) 628-3888



COAM30003

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