

Simon Service Manual



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CONTACT NUMBERS



The Helpline Number for Customer Service Managers and Service and Shop Technicians is **1-800-99-SIMON.**

This Line Will be Available from 8am tp 8pm EST, Monday Through Friday. This Line Will handle All Calls and Will Offer a Voice Mail When Busy.



SIMON SPECIFICATIONS

Phone : 4 NAMS, 0.6 Watts

CPU : Custom 80C86 - Single Chip CPU

Memory : 1MB PSRAM
32K ROM (BIOS)
1MB ROM (2MB Compressed Applications)

Display : 640 x 200 STN Backlit LCD (CGA)

I/O : Digitizer - Resistive APA Film (Touch & Stylus)
Inking, Pointing Via Pen

Power : Rechargeable Ni-CD Clip on Packs
Lithium Coin Backup Battery
Battery Life: 1hr Talk / 8hr Standby

Slots : PCMCIA Type 1/2 Slot (Version 2.0)

Modem : V.22 Data & Full G3 Send/ReceiveFax (V.29, V.27ter)

S/W : Phone, Fax, Calendar, E-Mail, PIM Functions
DOS Based with Navigator Shell

Size : Handheld

Weight : Approx. 18 oz.

Ports : 33 Pin Connector (RJ-11, RS-232)

Accessories : Standard Battery, High Capacity Battery, Sequential Charger,
for Simon Stylus Set, PCMCIA Pager, Standard Telephone Connection,
1.8 MB Memory Card, 1 MB Memory Card, Cigarette Lighter Charger Adapter

WARRANTY ENTITLEMENT

Simon and Associated Accessories are Warranted to be Free of Defects in Material and Workmanship for a Period not to Exceed Twelve Months Following Purchase.

Simon System Unit

■ 30 Day Exchange

- Proof of Purchase

■ More than Thirty Days Since Purchase

- Serial Number Indicates Unit Manufactured Fifteen Months Ago or Less

Or

- Proof of Purchase Indicating Unit was Purchased Twelve Months Ago or Less.

Simon Accessories

- 30 Day Exchange

- Proof of Purchase

■ More than Thirty Days Since Purchase

- Proof of Purchase

■ More than Thirty Days Since Purchase

- "23-NNNN-MY"- MY=Date Code
- M: 1-9 Equals January to September
- M:A-C Equals October to December
- Y:E=1994, F=1995 ETC



SIMON SYSTEM UNIT 30 DAY EXCHANGE PLAN

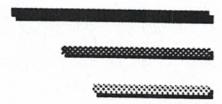


Main Process

- Customer Returns Simon System Unit to Point of Purchase
- This Process Covers Units that Are Defective as Defined in the Warranty and that Have Been Purchased Less Than Thirty One Days Ago
- Receipt is Checked to Verify Item Was Purchased Less Than Thirty One Days Ago
- Condition is Checked to Rule Out Physical Abuse
- Attempt is Made to Verify Item is Defective
 - If Not Defective, Return to Customer
 - If Defective, Return to BellSouth Distribution Center



THIRTY DAY EXCHANGE - SIMON



- Simons that are Defective During First Thirty Days
Can be Returned to the BSCC Distribution Center

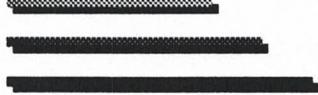
- Procedures to Return Simons Under Thirty Day Exchange
 - Verify that the Unit was Purchased Less than Thirty One Days Ago
 - Include the Narda Form Along with the Proof of Purchase when Shipping the Unit to the BSCC Distribution Center
 - Provide the Following Information on the Narda Form
 - Customer Name, Telephone Number, and Address and/or Shop Name, Shop I/d #, Contact Name, Telephone Number, and Return Address
 - Factory Model#
 - Mechanical Serial Number
 - Description of the Problem
 - Ship Unit to the Following Address by Second Day Air:
Warehouse Distribution Services Inc
Attn: Simon Department
700 Distribution Drive
Atlanta, GA 30336

IN WARRANTY SERVICE-SIMON

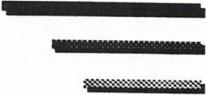
**Simons that are Defective During the Warranty Period
Can be Returned to the BSCC Authorized Service Center**

Procedures to Return Simons Under Warranty

- Verify Warranty Coverage by Serial Number and Date Code
 - Offer to Back-up User Data from their Simon
 - If User Desires Expedited Service Collect Additonal Fee
 - Offer Loaner Phone for the Customer to Use While Simon is out for Repair
 - Include the Attached Narda Form When Shipping the Unit to Mitsubishi
 - Provide the Following Information on the Narda Form
 - Customer Name, Telephone Number, and Address and/or Shop Name, Shop I/d #, Contact Name, Telephone Number, and Return Address
 - Factory Model#
 - Mechanical Serial Number
 - Description of the Problem
 - Ship Unit to the Following Address by Second Day Air
 - Mitsubishi Electronics
 - Attn: Service Dept.
 - 2001 Cherry Drive
 - Braselton, GA 30517
 - ASC Pays Shipping to Mitsubishi, Mitsubishi Pays Shipping to ASC
 - Mitsubishi Will Return to ASC a Repaired or Replacement Unit Within 10 Business Days of Receipt
-
-
-



OUT OF WARRANTY SERVICE-SIMON



**If it is Determined After Examining the Serial Number and Date Code
that the Unit is Out of Warranty the Following Procedures Will Apply**

- Send the Unit to Mitsubishi Using Shipping Procedures Outlined Below
 - Offer to back up User Data for their Simon
 - If User Desires Expedited Service Collect Additional Fee
 - Offer a Loaner phone for the User to use While Simon is out for Repair
 - Include the Attached Narda Form When Shipping the Unit to Mitsubishi
 - Ship unit to the Following Address by Second Day Air (We Pay When Shipping to Mitsubishi, they pay Shipping Back us)

Mitsubishi Electronics
Attn: Service Dept.
2001 Cherry Drive
Braselton, GA 30517

- Mitsubishi Informs the ASC what the Repair Charges will Be
- ASC Gets Authorization from the Customer to proceed with the Repair
- ASC Notifies Mitsubishi to proceed with Repair and Reference Narda Control Number for Authorization
- The Repaired Unit is Returned by Mitsubishi Within 10 Days
- Mitsubishi Bills ASC for Repair Charges
- ASC Pays Mitsubishi Invoice Within 60 Days of Receipt



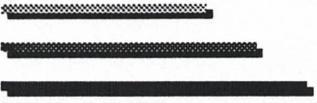
EXPRESS WARRANTY SERVICE

An Express Service is Available that Guarantees the Repair Center Will Complete the Repair and Ship the unit Back to the ASC Within Three Business Days of Receipt. This Will Allow the Authorized Service Center to Offer Five Business Days Expedited Service. Standard Service Requires the Repair Center to Repair Defective Units Within 10 Business Days Which Allows Us to Offer Fourteen Business Days Turnaround.

The Procedures outlined Below Must Be Followed if the Customer Elects to Use Expedited Service

- The Customer is Informed of the Additional Fees for this Service
- Customer is Informed it Will Take 5 Business Days to Repair the Unit
- The Narda Form is Completed and Faxed to Mitsubishi
- If the Unit is out of Warranty Mitsubishi Will notify Shop of Repairs Fees
- ASC Notifies Customer of Repair Charges
- Offer a loaner Phone to Customer
- Include Narda Form in Shipping Container
- Ship Unit (Overnight Delivery) to the Address Below:

Mitsubishi Electronics
Attn: Service Dept.
2001 Cherry Drive
Braselton, GA 30517

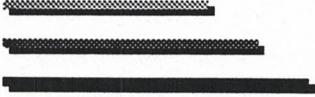


ACCESSORIES SERVICE PLAN

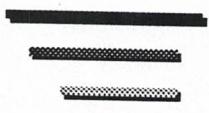


Accessories

- RJ11 - Connection as Corded Phone
- RS232 - Connection to Personal Computer
- Memory Card - 1MB
- Memory Card - 1.8MB
- Extended Life Battery
- Charger
- Standard Battery



IN WARRANTY SERVICE-ACCESSORIES



**■ Accessories that are Defective During the Warranty Period
Can Be Returned to the BSCC Distribution Center**

■ Procedures to Return Accessories Under Warranty

- Verify Warranty Coverage by Date Code or proof of Purchase
- If Item is Determined to be Defective Return to BSCC Distribution Center
- Include the Narda form Along with Proof of Purchase When Shipping the Unit

■ Provide the Following Information on the Narda Form

- Customer Name, Telephone Number, and Address and/or Shop Name, Shop I/d #, Contact Name, Telephone Number, and Return Address
- Factory Model#
- Description of the Problem
- Ship Unit to the Following Address

Warehouse Distribution Services Inc
Attn: Simon Department
700 Distribution Drive
Atlanta, GA 30336



PASSWORD OVERRIDE



- If a Customer Forgets their Password and Contacts Customer Service for Assistance they Should be Advised to Type in the Last Seven Digits of their Phone Number

- The Number Should be the Same as the One Selected for NAM 1

- If NAM 1 is (404) 999-9999, the Password Override Would be 9999999

- The Dash Should Never be Included (Numbers Only)

- These instructions Should be Used by Authorized Personnel Only

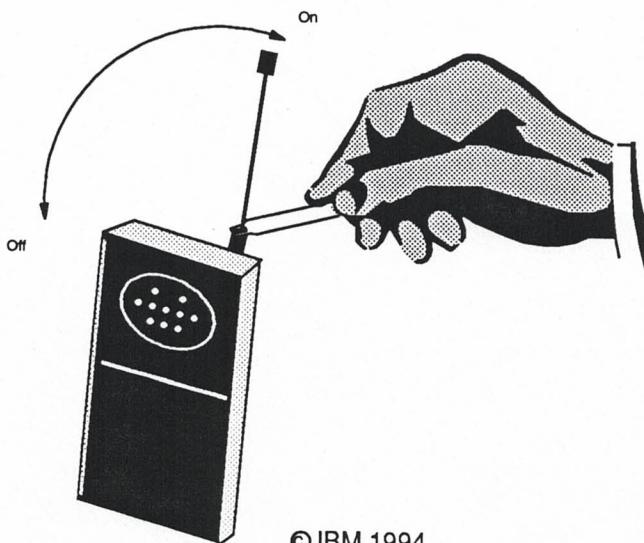
SIMON ANTENNA REPLACEMENT PROCEDURE

■ Make Sure that the Phone is Off

- If the Amber Light Near the Antenna is glowing this Indicates that Phone Power is on
- Press the Phone Icon on the Bottom of Any Simon Screen
- Press the "Phone Power" Button on the Phone Screen
- The Amber Light Should Go out. If it Does not Repeat the Process

■ Make Sure that the Unit is in Standby Mode

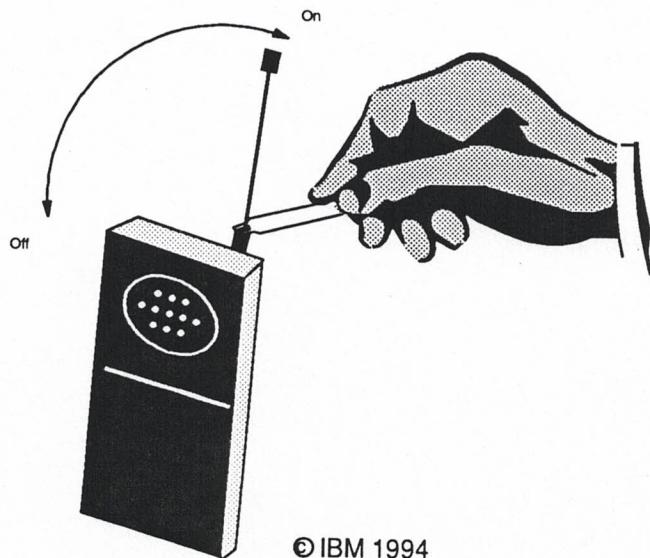
- If the Green Light Near the Antenna is Glowing this Indicates that the Unit is Not in Standby Mode
- Look for the Top Button on the Left Side as You Face the Unit and Slide it Towards the Top of the Unit
- The Green Light Should go Out. If it Does Not Repeat the Process



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SIMON ANTENNA REPLACEMENT PROCEDURE

- Pull the Antenna Up Until it is Fully Extended
- Place the Tool in the Slots on Either Side of the Antenna
- Rotate the Tool Counter Clockwise to Remove the Antenna
- Place a New Antenna Into Simon
- Place the Tool in the Slots on Either Side of the Antenna and Rotate Clockwise Until Finger Tight
- Simon is now Ready for Your Use





SIMON SERVICE

APPENDIX A

Diagnostics



DIAGNOSTICS

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OVERVIEW

This Program Will Perform Diagnostics for Simon. Simon is Composed of the Following Integrated Hardware:

- RF Deck (Cellular Phone)
- Cirrus Data/Fax Modem
- Type I/II PCMCIA slot
- VADEM VG-230 (Micro Computer with 8086 IBM-XT Compatible i/o)
- Touch Screen
- CGA 640 x 200 Compatible LCD Display
- External 33 Pin Connector to Allow for External Serial Connection, RJ11 Land Phone Connection, External Mike and Speaker Connection, and External IBM-XT Keyboard Connection.
- 4 Buttons (ON/OFF, System Reset, UP, and DOWN)

Simon Will Run the DOS 6.1 Operating System. All Applications Including These Diagnostics Will Use an Application Interface Called the Navigator, (NAV) to Handle User i/o.

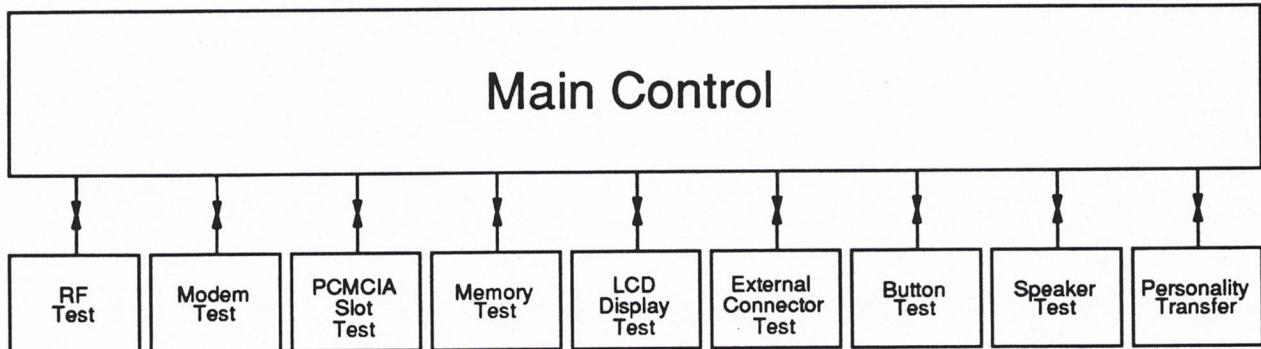
The Goal of These Diagnostics is to Detect Stuck at 1 or 0 Signal Faults, Unconnected (Floating) Signal Lines, and Failures Reported By the Self Diagnostic Capability of the Modem and RF Deck.

These Diagnostics are designed to Require as Little External Hardware. The Hardware that is Required Includes a Wrap Plug and PCMCIA RAM card. Limiting the External Hardware Required has the Advantage of Making These Diagnostics More Automatic and User Friendly But Has the Disadvantage of Only Being Able to Test Signal Paths that Have Some Sort of Feedback.

A Second Function of this Program is to Transfer the "Personality" of One Simon to a Second Simon. This Will Allow a Replacement Unit to be Given to a Customer Who Brings Their Unit in for Repair and Little to No Reprogramming Will Need to Be Done. The "Personality" of a Simon is defined to Be the RF Deck NAM Info (Registered Cellular Data), and User Entered Personal Planner Type Data.

The Program is Divided Up Into a Main Control Module, Several Test Modules, and a Personality Transfer Module. Each Test Module is Responsible for Testing a Particular Area of the Simon. The Main Control Module Will Be Used to Display a Main Menu to the User and Run the Various Tests Depending Upon User Input.

FUNCTIONAL DIAGRAM



Notes:

The Following Items are Tested By Applications Other Than These Diagnostics.

- The Touch Screen is not Tested By These Diagnostics. This is for Two Reasons. First, the Touch Screen Must Be Working in Order for the Diagnostics to Be Selected and Started. Second, the Touch Screen is Implemented with a Read Only Interface with No Self Diagnostic Ability.
- The Backlight Will Be Controlled By a Setup Application That Uses the Up and Down Buttons to Set the Levels. The User Will Be Able to Quickly Determine if the Backlight is Not Operating Properly.
- The LCD Screen Bias Will Be Controlled By a Setup Application That Uses the Up and Down Buttons to Set the Levels. The User Will Be Able to Quickly Determine if the LCD Screen Bias Control is Not Operating Properly.

Invocation of Advanced Diagnostics

To Access the Advanced Diagnostics, Enter the Key Sequence *#TST<SEND> from the PHONE Application Main Screen. This Will Bring Up a Submenu Which Allows Entry Into the Advanced Diagnostics or the Phone Service Mode.

MAIN CONTROL MODULE

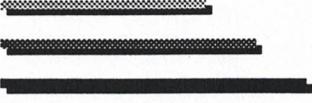
Basic Diagnostics

The Basic Diagnostics are Defined as Being the Diagnostic Tests Which DO Not Need Any External Hardware. These Consist of the RF Test, Modem Test (Excluding the Analog Loop Back Test Which Requires the Addition of the External Wrap Plug or An RJ11 Connector), Memory Test, Display Test, Speaker Test and Button Test. All of These Tests are Run in the Order Listed When the Test System Button on the Diagnostics Menu is Pressed.

The Test Phone Button Will Only Perform the RF Test. This Button Was Put in Place So a Customer Service Department Could Help the Customer Quickly Determine If a Problem Existed With the RF Deck Without Having to Run Through the Additional Tests.

Basic Diagnostics Main Menu

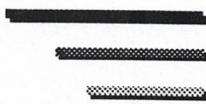
Diagnostics	mm/dd/yyyy hh:mm:ss
Test Phone	
Test System	
HELP	BACK

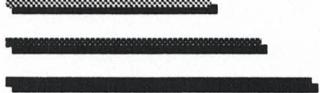


BASIC DIAGNOSTICS STATUS SCREEN

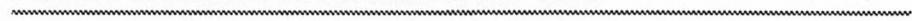
Test Status

Testing in Progress Please Wait

- This Screen Will be Displayed as the Basic Diagnostics are Being Executed.
The Basic Diagnostics Will Run the RF DECK TEST, MODEM TEST, MEMORY TEST,
LCD DISPLAY TEST, SPEAKER TEST, and Button test.
- 



ADVANCED DIAGNOSTICS



- The Following Figure Gives a Rough Idea what the Default Advanced Diagnostics Main Menu Will Look Like. The Boxes with X's Represent Boxes with Check Marks in Them. The Arrow Buttons Next to the LOOP ON TEST Text Represent Scroll Buttons that Will Cause the Number in the Box to Increment or Decrement from 1 to 99.

The Advanced Diagnostics are Meant to be Accessible Only to Service Personnel. The Idea is to have them Accessed Through the Phone App by Punching in a Set Sequence of Numbers and Digits.

Advanced Diagnostics Main Menu

ADVANCED TESTS	MM/DD/YY
	HH:MM:SS
<input checked="" type="checkbox"/> PF DECK TEST	
<input type="checkbox"/> MODEM TEST	
<input type="checkbox"/> EXTERNAL WRAP TEST	
<input type="checkbox"/> PCMCIA SLOT TEST	
<input checked="" type="checkbox"/> MEMORY TEST	
<input checked="" type="checkbox"/> DISPLAY TEST	
<input checked="" type="checkbox"/> SPEAKER TEST	
<input checked="" type="checkbox"/> BUTTON TEST	
 RUN TEST(S) 	<input type="checkbox"/> TIMES
RUN TEST(S)	
ADVANCED FUNCTION MENU	
HELP	BACK

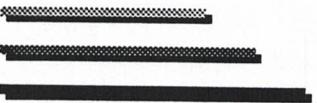
PC/2 Advanced Diagnostics Menu

If the Box Beside the Test is Checked Then That Test Will Be Run When the "RUN TEST(S)" Button is Pressed. The Test Will Be Executed in the Order That They Appear on the Screen. The Test Order Will Be Executed the Number of Times Indicated in the "RUN TEST X TIME(S)" Box. The Loop Count Can Be a Minimum of 1 and a Maximum of 99.

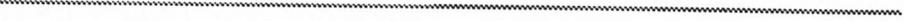
Three Tests are Not Checked by Default When the Main Menu is Initially Displayed. These are the MODEM TEST, PCMCIA SLOT TEST and the EXTERNAL WRAP TEST. This is Because the MODEM TEST Requires That an RJ11 DAA Connector be Hooked Up to the External Connector or the External Wrap Plug, the PCMCIA SLOT TEST Requires the User to Have a Formatted RAM Card Inserted in the PCMCIA Slot and the External WRAP TEST Needs to Have the Wrap Connector Attached. When the User Checks the Boxes for These Tests a Pop Up Will Be Used to Display What is Required for the Test to Complete Successfully.

If the User Wants to Transfer a Phones Personality from a RAM Card, and/or Reprogram the RF Deck With NAM Info Stored in User Memory, or Enter the Phone Service Mode Application, Pressing and Releasing the "Advanced Function Menu" Button Will Present the "Advanced Function" Menu Which Will Give the User Options to Read a Personality from a RAM Card, Program the RF Deck with the New Personality Information and Enter the Phone Service Mode Application.

The Bottom Four "Common" Buttons are Common to Every Application. They Function as Specified in the "User Interface Building Blocks" Document. The TOOL and PHONE Buttons will be Disabled. The User Will Need to "BACK" Out of the Diagnostics in Order to Access These.



ADVANCED DIAGNOSTICS STATUS STATUS SCREEN



ADVANCED STATUS

	STATUS
<input checked="" type="checkbox"/> PF DECK TEST	SUCCESS
<input checked="" type="checkbox"/> MODEM TEST	FAILURE
<input type="checkbox"/> EXTERNAL WRAP TEST	
<input type="checkbox"/> PCMCIA SLOT TEST	
<input type="checkbox"/> MEMORY TEST	
<input checked="" type="checkbox"/> DISPLAY TEST	TESTING
<input checked="" type="checkbox"/> SPEAKER TEST	
<input checked="" type="checkbox"/> BUTTON TEST	

PASS 1 OF 20

PC/2 Diagnostics Test Status Screen



ADVANCED DIAGNOSTICS STATUS STATUS SCREEN

The Test Status Screen is Designed to Allow the User to See the Status of the Current Tests Being Executed. The Check Boxes by Each Test Will Reflect the Selections the User Made on the Main Menu. These Boxes Will Not Be Selectable On this Screen. The Status Field to the Right of Each Test Will Contain One of Four Possible Pieces of Information:

- Blank, Indicating the Test Has Not Been Run.
- "TESTING" Indicating the Test is In Progress
- "SUCCESS" Indicating the Test Was Successful
- "FAILURE" Indicating the Test Returned an Error

If the Number of Times to Loop on the Test is Greater Than 1, Test Status From Previous Loops Will Remain on the Screen Until the Test is Run Again and Updated with New Information.

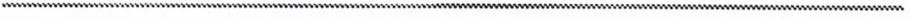
If the User Wishes to Halt the Test Loop Currently in Progress, They Must Press and Hold the "CANCEL" Button. This Button is Checked Periodically While a Test is Executed and in Between Each Test. When This Button is Pressed the User Will Be Returned to the Advanced Diagnostic Main Menu.

If an Error is Encountered While Testing, a Pop Up Will Be Displayed Giving the Error Code to the User and Allowing Them to Continue Testing or Return to the Advance Diagnostics Menu.

When the Last Selected Test of the Last Test Loop is Completed the Message "TESTING COMPLETED" Will be Displayed in Place of the "CANCEL" Button. When the User Presses this Button They Will be Returned to the Advanced Diagnostics Menu.



RF DECK DIAGNOSTICS



The RF Deck Has the Ability to Perform Self Diagnostics Whenever it is Powered On. It Also Has an AUDIT Command that Does the Same Checking as the Power on Test. The Following Sequence is Performed to Test the RF Deck.

- Get Current Power State of the RF Deck.
- Power Off the RF Deck.
- Wait 1 Second.
- Power on the RF Deck.
- Wait For One of the Following Responses From the RF Deck:
 - (21H) RF Deck Acknowledged, (This is Expected).
 - (5C - 5F) RF Deck Error Codes (Each Code Reports a Unique Error).
 - Timeout (No Response From RF Deck is Seen in 10 Seconds).
- Report an Error if One Occurred Giving the User the Option to Terminate or Continue.
- Send Audit Command (24H) to the RF Deck.
- Wait For One of the Following Responses From the RF Deck:
 - (21H) RF Deck, (This is Expected). Audit Response
 - (5C - 5F) RF Deck Error Codes (Each Code Reports a Unique Error).
 - Timeout (No Response From RF Deck is Seen in 10 Seconds).
- Report an Error if One Occurred Giving the User an Option to Terminate or Continue.
- If Initial State of RF Deck was Powered Down, Power Down the RF Deck.

The Above Sequence Will Test Out the Power Control Path to the RF Deck, the Integrity of the RF Deck's NAM and ESN Data (Via RF Deck Post) and the Communication Send/Receive Path to the RF Deck.



RF DECK DIAGNOSTIC ERROR CODES

The RF Deck Diagnostics Will Report the Following Error Codes to the User:

ERROR CODE Description

- 115C** The Power On Test for the RF Deck Returned ESN Checksum Error. This Error Indicates that the RF Deck is Defective and Should be Serviced.
- 115D** The Power On Test for the RF Deck Returned NAM Checksum Error. Attempt to First Restore the Phone NAM and Then Run the Diagnostics Again. If the Error Persists, Have the RF Deck Serviced.
- 115E** The Power Test for the RF Deck Returned Synthesizer Did Not Achieve Lock Error. This Error Indicates that the RF Deck is Defective and Should Be Serviced.
- 115F** The Power On Test for the RF Deck Returned an Off Power Status Condition. This Error Indicates that the RF Deck is Defective and Should Be Serviced.
- 12XX** The Power On Test for the RF Deck Returned Unexpected Status Information. XX Indicates the Status that Was Returned by the RF Deck. This Error Indicates that the RF Deck is Defective and Should be Serviced.
- 1300** No Response From the RF Deck After it Was Powered On. This Error Indicates that the RF Deck is Defective and Should be Serviced.
- 195C** The AUDIT Test for the RF Deck Returned ESN Checksum Error. This Error Indicates That the RF Deck is Defective and Should Be Serviced.
- 195D** The AUDIT Test for the RF Deck Return NAM Checksum Error. Attempt to First Restore the Phone NAM and Then Run the Diagnostics Again. If the Error Persists, Have the RF Deck Serviced.
- 195E** The AUDIT Test for the RF Deck Returned Synthesizer Did Not Achieve Lock Error. This Error Indicates That the RF Deck is Defective and Should be Serviced.
- 195F** The AUDIT Test for the RF Deck Returned an Off Power Status Condition. This Error Indicates that the RF Deck is Defective and Should be Serviced.
- 1B00** No Response from RF Deck to AUDIT Command. This Error Indicates That the RF Deck is Defective and Should be Serviced.
- 1C00** Error from BIOS When Trying to Send AUDIT Command. This Error Indicates that the RF Deck is Defective and Should be Serviced.

MODEM DIAGNOSTICS

The Following Tests Will Be Performed to Test Out the CIRRUS CL-MD1224/CL-MD1624 Serial Port/Modem Located at COM2 (I/O 2F8-2FF, IRQ 3).

Note: The MODEMON Line From the VG-230 Must Be Set Active in Order to Bring the Modem Out of Sleep Mode. The Modem is Turned Off After This Test.

■ Serial Port Register Test

The Read/Write Registers of the Serial Port Will Be Tested. This Verifies the Data Path and Address Selection of the CL-MD1224.

- 2FF All Bits (Scratch Register)
- 2FC Bits 4, 2, 1 & 0 (Modem Control Register)
- 2FB All Bits (Line Control Register)
- 2F9 All Bits (Divisor Latch MSB, Bit 7 of 2FB Must = 1)
- 2F8 All Bits (Divisor Latch LSB, Bit 7 of 2FB Must = 1)

■ Configuration Check

The Serial Port Will Be Configured at 2400 Baud and Set Up to Generate Interrupts When a Character is Received. An Interrupt Routine Will Be Set Up to Receive Data From the Receive Buffer. The Modem Will be Initialized by Resetting (ATZ), Turning Echo Commands Off (ATE0), Returning Numeric Responses (ATV0). If the Expected Responses Are Not Seen Then an Error Will be Reported.

The Modem Will Then Be Asked to Return Configuration Information (AT14). The Configuration Information Will Be Checked to Verify a 32K SRAM is Connected. If Not an Error is Reported.

This Test Verifies Not Only the Existence of the 32K SRAM But Also That the Modem Interrupt Line to the Processor is Working Correctly and Communication to the Modem Works Correctly.

■ Modem Loop Back Test.

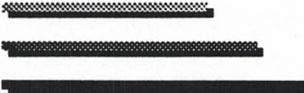
The Modem Will Be Placed in Direct Mode Operation (AT/N1), a 10 Second Loop Back Test (AT&T8) Will Be Performed for 1200 and 2400 Baud. This Will Verify the Communication Path Between the MD1224 and MD1624. It Will Also Verify the Circuitry Between the MD1624 Chip and the RJ11 Connector. What This Means is the RJ11 Connector (Or a Wrap Plug Look Alike) Needs to Be Connected to the External Connector in Order for this Test to Run Successfully.

Note: For Basic Diagnostics this Test Will Not Run.

Note: For Advanced Diagnostics the User Will be Informed That an RJ11 Connector or External Wrap Plug is Required to Perform the Loop Back Test.

Note: The Modem Does Not Support a 300 Baud Loop Back Test.

Note: Although the Modem Does Perform the Loop Test at Baud Rates Above 2400, Documentation Indicates 300, 1200 and 2400 are the Only Valid Modem Communication Rates and Therefore Only 1200 and 2400 Are Tested.



MODEM DIAGNOSTIC ERROR CODES



The Modem Diagnostics Will Report the Following Hexadecimal Error Codes to the User.

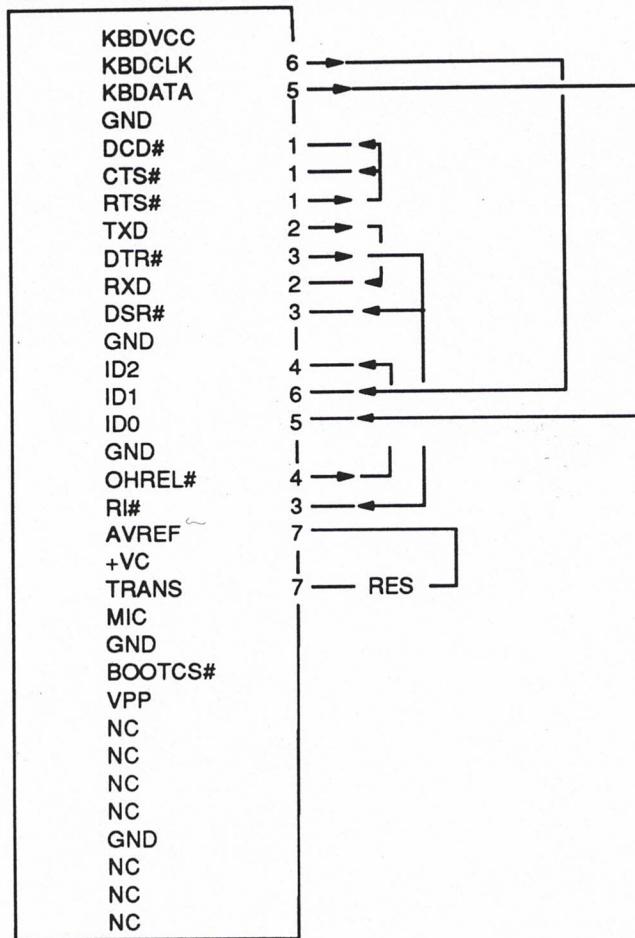
ERROR CODE Description

- 2101** The COM2 Serial Port Register Read/Write Test Failed.
 - 2210** A Timeout Error Occurred Sending a Command to Initialize the Modem.
 - 2211** A Timeout Error Occurred Waiting for the Modem to Respond to an Initialization Command.
 - 2212** An Unexpected Response was Returned From the Modem in Response to an Initialization Command.
 - 2301** The Modem Does Not Recognize the 32K SRAM Chip as Being Connected.
 - 2310** A Timeout Error Occurred Sending a Command to Check the Configuration.
 - 2311** A Timeout Error Occurred Waiting for the Modem to Respond to a Configuration Command.
 - 2312** An Unexpected Response was Returned from the Modem in Response to a Configuration Command.
 - 2402** The Modem Reported Errors Performing the 1200 Baud Analog Loop Back Test.
 - 2403** The Modem Reported Errors Performing the 2400 Baud Analog Loop Back Test.
 - 2410** A Timeout Error Occurred Sending a Command to Perform the Loop Back Test.
 - 2411** A Timeout Error Occurred Waiting for the Modem to Respond to a Loop Back Test Command. This Should Be Considered a Loop Back Failure.
 - 2412** An Unexpected Response was Returned From the Modem in Response to the Loop Back Test Command.
- 
- 
- 

EXTERNAL WRAP DIAGNOSTICS

Simon Has an External Connector That Contains Connections for an External Keyboard, COM1 Serial Connection, External phone Hookups, Connector ID Pins, and Power. The External Wrap Test Will Verify the Connection of as Many of These Lines as Possible When Using a Single Wrap Connector that Contains No External Logic.

The Wrap Connector Should Be Wired as Follows:



Notes:

- The AVREF and TRANS Lines Will be Verified if This Connector is Attached During the Modem Loop Back Test.
- The MIC Line is an Analog Line Whose Connection Will Need to be Verified by Some Other Means.
- VPP, KBVCC, GND and +VC Will Need to be Verified by Connection to an External Measuring Device.
- BOOTCS# is Used for Test and Will Not Be Tested by These Diagnostics.

EXTERNAL WRAP DIAGNOSTICS

The Following Test Will Be Run with the External Wrap Plug to Verify the External Connections:

1. COM1 Serial Test

The COM1 Serial Connection Will Be Switched From the RF Deck to the External Connector. The COM1 MCR Register Will Control the RTS# and DTR# Lines. The COM1 MSR Register Will Verify the Responses on the CTS#, DSR#, RI# and DCD# Lines. Data Will Be Wrapped From the Transmit Buffer to the Receive Buffer and Verified for Correctness.

Note: The COM1 (IRQ 4) Will Be Masked Off and the Interrupt Vector Captured Just Before Switching to the External Serial Port COM1 Will Be Set Back Up to It's Previous Operating State Just Prior to Switching Back to the RF Deck and Restoring Interrupt Service.

2. OHREL# to ID2 Test

This Test Will Toggle the Value of the OHREL# Line and Verify ID2 indicates That Value. The Value of the OHREL# Line is Controlled by the Modem Attached to COM2. (ATIII) is Used to Set OHREL# Active, and (ATH0) Will Set OHREL# Inactive. Communications with the Modem Will Need to Be Intact in Order for This Test to Occur. Most of the Routines From the Modem Test Will Be Used. I/O Location 171 (Assuming LPT1 Setup) Bit D3 Will Reflect the Value of the OHREL# Line.

3. Keyboard & ID0 & ID1 Test

ID0 and ID1 Are Connected to the GPIO0 and GPIO1 Pins of the VG230. The KBDCLK and KBDATA Lines Are Connected to Open Collector Drivers. In Order to Prevent Signal Contention the GPIO0 and GPIO1 Lines Are Configured as Inputs Only. The KBDCLK Line Can Be Forced Low and Allowed to Be Pulled Up to a High Condition, the KBDATA Line Cannot Be Manipulated By the VG230 and Therefore it Can Only Be Checked for a Pulled Up High Condition.

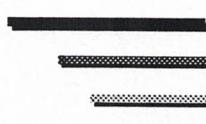


EXTERNAL WRAP DIAGNOSTICS

EXTERNAL WRAP DIAGNOSTIC ERROR CODES

The External Wrap Diagnostics Will Report the Following Error Codes to the User

ERROR CODE	Description
31XX	The Serial Test Failed. XX Indicates Which Signals Failed. A 1 in a Bit Position Indicates that Signal Failed. <ul style="list-style-type: none">■ bit 0 = CTS# Line Did Not Reflect RTS# Line■ bit 1 = DSR# Line Did Not Reflect DTR# Line■ bit 2 = RI# Line Did Not Reflect DTR# Line■ bit 3 = DCD# Line Did Not Reflect RTS# Line■ bit 4 = Data Wrap Test Failed
3201	External Signal ID2 Failed to Report a Low Signal
3202	External Signal ID2 Failed to Report a High Signal. Achieve Lock Error.
3203	External Signal ID2 Failed Both the High and Low Signal Test
3204	An Error Occurred Communicating to the Modem When Trying to Set the OHREL# Signal.
3301	External Signal ID1 Failed to Return the Expected Value
3302	External Signal ID0 Failed to Return the Expected Value



PCMCIA SLOT DIAGNOSTICS

This Test Opens Up a File on a Formatted RAM Card in the PCMCIA Slot Designated as Drive C, Writes Data to it, Close the File, Reopens the File, Verifies the Data, Closes the File and Deletes the File.

Note: There Must Be Enough Space on the RAM Card for a 1024 Byte File or an Error Will Be Returned.

Note: This Test Requires that the User Have a Formatted RAM Card and Drivers Installed Such that When the RAM Card is Inserted Into the PCMCIA Slot it Can Be Accessed as Drive C.

This Approach is Used Because it Does Not Require Any Specific External Hardware Other Than Some Type of RAM Drive Card and Appropriate Drivers.

PCMCIA Slot Diagnostic Error Codes

The PCMCIA Slot Diagnostics Will Report the Following Error Codes to the User

ERROR CODE	Description
4001	Error Writing Data to the RAM Card
4002	Error Reading Data From the RAM Card
4003	Data Miss-Compared Detected



MEMORY DIAGNOSTICS



This Test Calls a BIOS Interface that Will Run a Routine to Test the System Memory. The Interface to BIOS is INT 15h ah = A0 al = FE. Upon Return From the Interrupt AX Will Contain the Return Code. If ax = 0 Then the Memory Test Was Successful, Otherwise an Error Occurred.

Memory Diagnostic Error Codes

The Memory Diagnostics Will Report the Following Error Codes to the User

ERROR CODE	Description
-------------------	--------------------

non 0	Error Testing the Memory. (This Has Not Yet Been Further Defined)
--------------	---

LCD DISPLAY DIAGNOSTICS

The Goal of this Diagnostic is to Display Screens that the User Can Examine to Determine if There Are Any Areas of the Screen Permanently Turned Either On or Off, if the Screen is Off Center, or if Pixels on One Part of the Display Affect Pixels in Another Part

The Following Screens Will Be Displayed to the User:

- Blank Screen - If Any Pixels Are On Then the Screen is Not Working Properly
- Filled Screen - All Pixels Will Be On. If There Are Any Blank Areas Then the Screen is Not Working Properly
- Two Pixel Wide Border - If the Border On One Side of the Screen Looks Wider Than the Other Then There is a Problem with the Screen.
- 1/4 Screen Filled 3/4 Blank - This Divides the Screen Into 4 Quadrants. If Anything is Displayed in the 3 Quadrants that Are Supposed to Be Blank Then There is a Problem.

The User Will Be Informed Before Each Screen is Displayed What to Look for. After Viewing the Screen for 3 Seconds a Pop Up Will Ask the User to Either Continue Viewing the Screen, View the Next Screen, or End the Test. After the Last Screen Was Viewed, a Pop Up Asking if the User Noticed Any Problems with the Display. If He Responds Yes, an Error Will Be Returned.

LCD Display Diagnostic Error Codes

The Following Error Code Will Be Reported Depending if the User Reports a Problem with the LCD Display

ERROR CODE	Description
5001	User Reported Problem with the LCD Screen

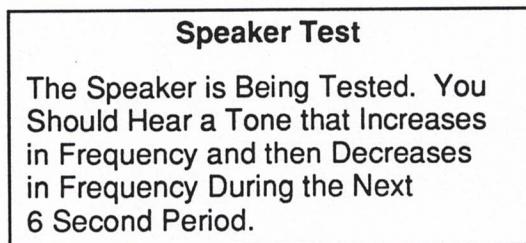
SPEAKER DIAGNOSTICS

The Speaker is Tested By Generating a Series of Audible Tones Starting at Approximately 500Hz to 7500Hz and Back Down to 500Hz. The Speaker Frequency is Controlled by Value in TIMER 2 Counter. The Timer 2 Counter is Loaded with the Value 1193180/Frequency. The Frequency Range of 0x13 to 0xFFFF is Allowed. Only Frequency's From 0x1F4 to 0x1D4C Are Heard Well. (500Hz to 7500Hz). The Step By Which the Timer Value is Changed and the Length of Time Between Steps Will Be Determined By Trial and Error. Initially a Step of 500 and Step Time of 200msecs Should Be Used. The Number of Steps Should Be 14.

The Speaker is Controlled in Two Ways. One is Through I/O Port 61h. Bit 1 of this Port Controls Whether the Speaker is On or Off (1 = On), Bit 0 of this Port Controls Whether Timer 2 is Enabled or Disabled (1= Enabled). Both of These Bits Will Be 1 When This Test is Running. The Initial State of I/O Port 61h Will Be Saved at the Beginning of this Test and Restored at the End.

Timer 2 Controls the Frequency of the Speaker. 0x13 Being the Highest Frequency Value and 0xFFFF Being the Lowest. The System Timers Are Located at I/O Ports 0x40 to 0x43. The VG-230 Emulates Intels 8254 Timer. Timer 2 is Placed in Timer Mode 3 (Square Wave Mode) with Read/Write Access to Both MSB and LSB ie Port 0x43 is Loaded with 0xB6. Port 0x42 is Then Used to Write the LSB then the MSB of the Frequency to the Timer.

The User Will See the Following Screen as the Speaker is Being Tested:



After this Test a Pop Up Will Ask the User if the Speaker Test Was Successful. If the User Reports No, then an Error Will Be Returned.

Speaker Diagnostic Error Codes

The Following Error Code Will Be Reported if the Speaker Test Fails

ERROR CODE	Description
6001	User Reported Problem with the Speaker

BUTTON DIAGNOSTICS

Simon Has 4 External Buttons, 2 of Which Can Be Tested. These Buttons Are as Follows:

- ON/OFF - Not Tested by These Diagnostics
- UP - Bit 5 of I/O 172 (0 = Pressed, 1 = Released)
- DOWN - Bit 4 of I/O 172 (0 = Pressed, 1 = Released)
- Reset - Not Tested by These Diagnostics

The UP and DOWN Buttons Can Be Examined to Determine if They Are Currently in the Pressed State or Currently in the Released State. The User Will See the Following Screen:

Button Test

Press the UP And DOWN Buttons on the Side of the Unit

UP

DOWN

Did the Buttons Highlight the Up and Down Boxes When Pressed?

Yes

No

Press OK to Continue

OK

Button Diagnostic Error Codes

The Following Error Code Will Be Reported if the Button Test Fails

ERROR CODE	DESCRIPTION
7001	User Reported Problem with the Buttons

*Move this
page after next
one*

PERSONALITY RESTORE

The Personality Restore Function is Accessed From the Personality Transfer Menu. This Function is Used to Unencrypt and Restore the Information Previously Backed Up with the Personality Backup Application.

Note: If the Files on the RAM Card Were Backed Up with the Backup Program in the Filer Then They Are Not in an Encrypted Format and They Should Be Restored Using the Restore Program of the Filer. After Doing This the RF Deck Can Be Reprogrammed by Selecting the RF Deck Restore Utility From this Menu.

The Personality Restore Function Performs as Follows:

- The User is Prompted to Insert the RAM Card in the PCMCIA Slot.
 - The Password of the Current is Read From the File 'phone.sta' on the B:Drive
 - Note:** The Password on the Current System MUST Be Identical to the Password of the System From Which the Backup Was Created.
 - The Password is Added Together and Truncated to 8 bits.
 - The File on the C:Drive Containing the Password is Read as a Binary File. As it is Read it is Xored with the 8 bit Password Sum. In this Way the Password From the Backed Up System Attempted to Be Extracted.
 - The Password of the Current System is Compared with the Password From the C:Drive. If They Do Not Match a Pop Up is Displayed to the User Indicating an Error.
 - If the Password Matched Then Each File is Copied From the C:Drive to the B:Drive Xoring Each Byte with the 8 bit Password Sum.
- Note:** Any Files On the Current Systems B:Drive of the Same Name Will Be Overwritten.

RF Deck Restore

Once a Phones Personality Data Has Been Transferred to the B:Drive of a New Phone, the RF Deck Needs to Be Programmed with the Users Phone Number and Cell Site Information From the Old Phone. This Information is Contained in the File 'phone.sta'. When this Option is Selected From the Personality Transfer Menu it Will Read the Phone Deck Information From the 'phone.sta' File and Program the RF Deck. If an Error Occurs When Programming or the 'phone.sta' File Cannot Be Found Then an Error Pop Up is Displayed.

The Phones NAM Info and Current Selected Features as Indicated in 'phone.sta' Are Reprogrammed Into the Phone.

PERSONALITY TRANSFER

The Personality of the Phone is Defined to Be All the User Data Files Stored on the B:Drive. This Includes the File 'phone.sta' Which Contains Information About the Password and Reprogramming the RF Deck.

The Personality Transfer Can Be Divided Up Into Three Components. These Being Personality Backup, Personality Restore, and RF Deck Restore. The Personality Backup Component is a Stand Alone Application Spawed From the Navigator. The Personality Restore and RF Deck Restore Components Are Accessed From the Personality Transfer Menu Which is Accessed From the Advanced Diagnostics Menu.

Personality Backup

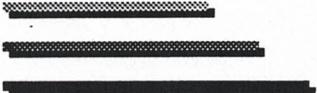
The Personality Backup is a Stand Alone Program. It Is Spawed to by the Navigator When the Following Sequence of Events Occur.

- The User Presses and Releases the System Reset Button
- As the System is Booting Up, the User Presses and Holds the UP and DOWN Buttons
- As the Navigator Initializes it Checks the Status of the UP And DOWN Buttons
- If Both Buttons Are Pressed the Navigator Spawns the Personality Backup Application by Calling Storm with an Argument of 2

There is No Guarantee that the Touch Screen or the LCD Display Will Be Working When the Backup Application is Called. For this Reason the Application Cannot Rely on User Input When Executing. Just After Starting the Application Will Beep the Speaker Twice. After the Transfer is Completed the Application Will Beep the Speaker Three Times to Indicate the RAM Card Can Be Removed. If an Error Occurs During the Transfer the Application Will Beep the Speaker 3 Times.

Because the User Will Not Have to Enter a Password in Order for this Backup to Be Created, Some Type of Simple Data Encryption Algorithm is Required. The Following Method Will Be Used.

- The Password for the Current Unit is Read From 'phone.sta'
- The Bytes of the Password Will Be Added Together and Truncated to an 8 bit Value
- Each File is Located on the B:Drive is Opened as a Binary File. A Corresponding File on the C:Drive is Opened as a Binary File.
- The Data From the Files on the B:Drive is Read in a Byte at a Time, Xnored with the 8 bit Password Value, and Written to the C:Drive



SIMON SERVICE

APPENDIX B

Advanced Dialing Sequences



SIMON ADVANCED DIALING SEQUENCES



■ *#* NAM

- Used for Nam Programming See Nam Programming Section Before Attempting to Use this Function.

■ *#* VER

Provides Information about Software Version Loaded into Simon. This is Helpful to Service Personnel only.
Operations- Press *#* VER(837) then Press Send.

- Result-

- Bios Internal VER:XX
- Bios Flash VER:XX
- S/W Version:X.XX
- MSG Card not Installed
Or
MSG Flash VER:XX
- MSG Micro VER:XXXXX
- Note: MSG Refers to Optional Messenger Pager Card
- Note: Above will be Displayed in Reverse Video Near the Top of the Screen.

ADVANCED DIALING SEQUENCES

■ *#* TST

- Places Simon in Test Mode and Allows for the Operation of Diagnostic Routines. This is for Service Personnel only.
- Refer to the Diagnostic Section of the Service Manual for Instructions.

■ *#* ERR

- This Function is for the Use of Service Personnel and Development. The User may be Requested by Service to Display the Error Log and Read the Contents to Support Personnel.
- Operations- Press *#* ERR(377) then Press Send.

■ *#* FIL

- This is for Use by Service Personnel only. It Allows the Service Technician to View Files on Simon. See PCLINK Documentation for Further Instructions.
- Operations- Press *#*FIL(345) then Press Send.

NAM PROGRAMMING

- **NOTE** - Pressing Enter in Any Field Which Already Contains Valid Data Will Step You to the Next Field
- Access the NAM Programming Function By Turning the Phone Off and Pressing "*#*NAM" (626). Press the "SEND" Button. The Antenna Can Be in the Lowered Position
- Select the Number of Phone Numbers You Wish Simon to Be Programmed for. Valid Entries are in the Range of 1-4. Press Enter. The Default is 1
- Enter the First Phone Number. This Must Be a Ten Digit Number Starting with the Area Code.
- Enter the System ID. This Number Will be Supplied By the Cellular Carrier and Valid Entries are in the Range of 00000 -> 32767.
- Enter the Local Use Value Supplied by Your Carrier. Valid Entries are 0 or 1.
- Enter the MIN-MARK Control Code. This is Supplied By Your Carrier and Valid Values are 0 or 1.

NAM PROGRAMMING (CON'T)

- Enter IPHC - Initial Paging Channel. This Value is Supplied By the Carrier. Valid Entries are 0001 -> 0799 or 0991 -> 1023.
- Enter ACCOLC - Access Overload Class. Acceptable Values are 00 -> 15. The Default is 00. The First Digit is Normally "0", and the Second Digit is Normally the Last Digit of the Phone Number. The Carrier Should Supply this Value for You.
- Enter GID Mark - Group ID Mark. This Value is Supplied by the Carrier but Defaults to 00. Valid Entries are 00 -> 15.
- Enter Roam Inhibit. 0=No Roam Inhibit and 1=Inhibit Roaming.
- Enter SID Lockout. The default is ***** Which Allows Access to All Systems. Valid Entries are in the Range of 00000 --> 32767
- At the Entry of the Last Field Press Done to Complete Process. The User May Also Press Enter to Move to the Next NAM to Be Programmed.

NOTE - If your Instructions Are not Successfully Transferred to the Telephone Portion of SIMON a Pop-Up Window Will Appear Indicating that Programming Was Not Successful. In that Case Have Your Carrier Verify the Instructions and Perform the Programming Again. Make Sure that the Unit is Either in a Charger or has a Fresh Battery When Attempting the Reprogramming Steps.



SIMON SERVICE

APPENDIX C

Service Link

SIMON SERVICE LINK

Simon Service Link (HH COMM)

Contents

- Functional Description
- Machine Requirements
 - Hardware
 - Software
- Installation
- Using HH Comm
- Using HH Comm Backup and Restore
 - HHBACKUP Command
 - HHRESTORE Command

HH Communications (HH COMM)

Functional Description

The Purpose of Simon's Service Link is to Allow BellSouth Service Centers to Back Up Customer Data.

That Portion of Simon's File System to Be Accessed is Either the User Data Partition of Simon's Flash Memory or an Optional PCMCIA File Memory Installed in Simon. In Both Cases, Simon's Data is Viewed as a DOS Drive. HH Comm Provides a File Redirect Capability. The Server Function Resides on Simon. The Desktop Client Can Redirect One of its Unused Drives to Access Simon for Both Read and Write Operations.

The HH Comm Package Was Developed to Address the Following 'General' Need:

- There is a Desire to Backup and Restore Data

Note: The HH Comm Function Does Not Assume Any Knowledge of the Internal Formats of the Simon Files. Other Programs - Not Necessarily Supplied with HH Comm - Are Required in Order to Generate or Update These Files.

Usage Note: While the Simon is Actively Connected to the PC, the User is Not Able to Make Use of Any of Simon's PIM or Phone Capabilities. Also, in this Mode the Low-Battery Warning Indication is Not Provided. It is Recommended that if the Simon is to Be Used in this Mode for an Extended Period, it Can Be Operated While Connected to the Battery Charger.

SIMON SERVICE LINK

Machine Requirements

The HH Comm Package Consists of a Special Serial Cable that Connects Between the Simon and the PC, and a 3.5" High Density Diskette Containing the Following:

- LINKPC.EXE (Device Driver File for PC)
- HHBACKUP.EXE (Simon Backup Program)
- HHRESTOR.EXE (Simon Restore Program)
- INSTALL.EXE (Installation Program)
- HHCOMM.TXT (This Document)

Hardware

The Following Hardware is Required to Use HH Comm with the Simon:

- IBM Compatible 286, 386, or 486 Personal Computing Containing:
 - a 3.5" High Density Diskette Drive
 - Enough RAM And HDD Space Available to Install LINKPC.EXE
(Approx 11KB RAM, and 9KB Disk)
 - Enough Additional Disk Space for Simon Data Files that May Be Transferred to or Created on the PC

Simon Serial Cable (Provided with HH Comm)

This is a Special Serial Cable that Plugs Into the Simon's I/O Port on One End and Into a PC's Serial Port on the Other End. This is Essentially a "Null Modem" Cable. It Provides a 9-Pin D Shell Connector to Be Attached to Either the COM1 or COM2 Port on the PC. If the PC Only Provides a 25-Pin Male Receptacle for the COM Port, a 9 to 25-Pin Adapter, Available at Most Computer Supply Stores, Will Also Be Required.

Software

- HH Comm Will Run in the Following Operating System Environments on the Desktop PC:
 - IBM DOS 5.02
 - IBM DOS 6.1/6.3
 - IBM DOS 6.0/6.2
 - MS Windows 3.1
 - MS Windows for Workgroups 3.11

HH Comm Provides a Client/Server Means of Redirecting Disk I/O From the Client to the Server.

The Server Support, Which Runs in the Simon, is Supplied as Part of the Base Simon. The Client Support, Which Runs in the PC, is Provided as DOS Program LINKPC.EXE. This Program Must Be Installed as a DOS Driver.

INSTALLATION

The Following Instructions Describe How to Install the HH Comm:

- Insert the Hand Held Communications Installation Diskette Into the Diskette Drive.
- At the DOS Prompt, Type D:\INSTALL [TARGET_DIRECTORY] and Press Enter Where,

D: is the Drive Name for the Diskette Drive (i.e. A:\INSTALL)

TARGET_DIRECTORY is the Name of the Directory to Install this Program in. The Default for this Option is \PCCKIT\APPS.

The Install Utility Will Create a Directory and Copy All of the Required Files From the Installation Diskette Into this Directory.

- Add C:\PCCKIT\APPS to the PATH Statement in AUTOEXEC.BAT
- To Your CONFIG.SYS File, Add the Following Line:
DEVICE=C:\PCCKIT\APPS\LINKPC.EXE /Brrrr /COMn
Where rrrr=4800, 9600, 19200, or 38400 (Baud Rate) and n=1 or 2 (COM Port)

BAUD RATE SELECTION: Choose a Higher Rate For Faster Data Transfer Performance. Only Choose a Lower Rate if Your Hardware/Software Configuration Experiences Problems (Such as Disk Errors) Transferring Data at the Higher Rate.

Be Careful to Specify the Parameters Exactly as Shown Above. Failure to Do So May Cause a Different Speed to Be Assigned, Without Any Warning Message Given.

If LINKPC Displays an Error Message When You Attempt to Install it, You May Have to Add or Edit the LASTDRIVE Statement in Your CONFIG.SYS File. Locate the Following Statement in the File:

LASTDRIVE=x

Edit this Line to Increase the Value of x by One Letter. If this Statement Does Not Exist, Add it and Use a Value of x Which is One Greater Than the Highest Disk Drive Letter that Your System Normally Uses. Make Sure This Statement Appears Earlier in Your CONFIG.SYS than the "DEVICE=" Statement You Added Earlier if You Installed LINKPC as a Device Driver.

PERFORMANCE NOTE: Some Disk Cache Programs, Such as SMARTDRV.EXE Supplied with DOS, Can Actually Degrade the Performance of the HH Comm. To Avoid this, Disable Disk Caching for the Drive that DOS Assigns to HH Comm. For Example, for SMARTDRV, You May Want to Code the Statement in Your AUTOEXEC.BAT as

C:\DOS\SMARTDRV.EXE d-

This Will Prevent SMARTDRV From Performing Any Caching to Drive "D". Refer to The Documentation that Was Provided with Your Disk Caching Software for Further Information About Disabling a Disk Drive.

After Installation is Complete, Re-Boot the System.

USING HH COMM

HH Comm Can Be Used to Access Simon's System Memory or Card Memory, Which is File Memory Contained on an Optional PCMCIA Card Inserted into the Simon.

Prior to Starting HH Comm, You Must Install the Serial Cable Between Simon and Your Desktop PC. This Cable Plugs Into Either Your COM1 or COM2 Port on the PC.

To Invoke HH Comm at Simon: From the Mobile Office Menu, Select Filer. At the Filer Menu, Select LINKPC. You Will Then Be Offered a Choice of Communication Speeds. Select the Same Speed You Have Chosen for LINKPC.EXE. Next, You Choose Which Memory to Link to. After Making this Selection, Simon is Ready for Communication with Your Desktop PC.

At Your PC, Verify the Connection to Simon by Using the DOS Command:

dir d:

at the DOS Prompt. (Substitute a Different Drive Letter for the "D" if One Was Assigned by LINKPC.)

**You Should See a Display of All the Files on Simon Memory to Which You Are Connected. Some of the Files Only Have Meaning to the Simon, and May Cause Configuration Information to Be Lost if Modified or Erased. Among Others, Your Display Should List Some Files With the Following Extensions:
.adr, .cal, .sta, .tod.**

You May Now Begin to Perform File Operations on the Redirected Drive. If You Plan to Use Windows for this, Start Windows at this Time.

NOTE: For Reliability Purposes, You Are Advised to Transfer Any Files From Simon to Your Desktop PC Before Processing Them with Any Other Programs or Editors. When Processing/Editing is Complete, Transfer the Updated Files Back to the Simon. This Will Ensure You Have a Clean Updated Copy of the File on Your Desktop PC in the Case of a Non-Recoverable Error During Transmission.

USING HH COMM BACKUP AND RESTORE

The HHBACKUP and HHRESTOR Commands Are Used to Backup and Restore All of the Data on Simon. The Data Can Be Backed Up From or Restored to Either System Memory or the Memory Card.

Both of These Utilities Have Been Designed So that They Do Not Require Input Parameters. When Either Utility is Executed Without Any Input Parameters, All of the Available Disk Drives on the PC Will Be Searched to Locate Simon's Disk Drive. When this Disk Drive is Found, the Backup and Restore Utilities Will Determine if it is System Memory or a Memory Card.

The Default Backup Directory is Determined Based Upon the Type of Hand-Held Communicator Disk Drive that is Currently Attached to the PC.

HHBACKUP COMMAND

The HHBACKUP Command is a DOS Program That Will Do a Full Backup of All Data on SIMON. All of the Files in System Memory or On a Memory Card Can Be Backed Up Into a Directory on the PC. The DOS XCOPY Command is Used to Copy All Files, Directories, and Subdirectories.

There Are Two Different Default Backup Directories. One is Used to Backup the Files From System Memory, and the Other Directory is Used to Backup the Files on a Memory Card. A Different Directory Can Be Specified When the HHBACKUP is Executed.

The Default Backup Directories are:

<u>DATA TYPE</u>	<u>DEFAULT BACKUP DIRECTORY</u>
SYSYEM MEMORY	C:\PCCKIT\BACKUP\SYSMEM
MEMORY CARD	C:\PCCKIT\BACKUP\MEMCARD\111111.111

Where, 111111.111 is the Disk Label on the PCMCIA Card.

If there is No Disk Label, NOLABEL is Used for the Directory Name.

If SIMON'S Files were not Backed up to the Default Directory, the Backup Directory Must be Specified as an Input Parameter for the HHRESTOR Command.

The Command Syntax for the HHBACKUP is:

HHBACKUP COMMAND SYNTAX

Usage: HHBACKUP [backup_dir][[/D | /O]

backup_dir-Directory name on PC where SIMON'S
Communicator Files Should be saved
(default: C:\PCCKIT\BACKUP\SYSMEM)

Options:

/O - Overlay the Files in the target backup directory if this
Directory Already Exists (Default).

/D - Delete the Target Backup Directory and All Sub-Directories
Before Backing Up SIMON'S Files.

CAUTION:

Using the Default Options, the Files From SIMON Will Be Backed Up Into the \PCCKIT\BACKUP\SYSMEM or \PCCKIT\BACKUP\MEMCRD, and Any Files That are Already in These Directories Will Be Overlaid With SIMON Files. Any Files That Were Deleted From the SIMON Will Still Be in the Backup Directory.

HHRESTOR COMMAND

- The HHRESTOR Command is a DOS Program that will Do a Full Restore of All Data Previously Backed up from a SIMON. The Files Can be Restored to Either System Memory or a memory Card from a Directory on the PC. The DOS XCOPY Command is Used to Copy All Files, Directories, and Subdirectories

The Default Directories to Restore the Data Files from are the Same Ones Used as Defaults for the HHBACKUP. One Directory Contains the System Memory Files, and the Other Contains the Memory Card Files.

The Default Backup Directories are:

<u>DATA TYPE</u>	<u>DEFAULT BACKUP DIRECTORY</u>
SYSYEM MEMORY	C:\PCCKIT\BACKUP\SYSMEM
MEMORY CARD	C:\PCCKIT\BACKUP\MEMCARD\111111.111

Where, 111111.111 is the Disk Label on the PCMCIA Card.
If there is No Disk Label, NOLABEL is Used for the Directory Name.

if SIMON'S Files were not Backed up to the Default Directory, the Backup Directory Must be Specified as an Input Parameter for the HHRESTOR Command.

The Command Syntax for the HHRESTOR is:

HHRESTOR COMMAND SYNTAX

Usage: HHRESTOR [backup_dir][/D I /O]

backup_dir-Directory name on PC where SIMON'S Communicator Files Should be saved
(default: C:\PCCKIT\BACKUP\SYSMEM)

Options:

/O - Overlay the Files on SIMON'S Disk Drive, Instead of Deleting All of the Files Before the Restore (default)
/D - Delete All of the Files on SIMON Disk Drive Before Restoring the Files