Hammerhead

HH3 User's Guide

WalkAbout Computers
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Main Office: 561-712-1200
Sales: 888-925-5226 or 614-882-0015
Tech Support: 888-872-1100 or 561-712-8787

WALKABOUT

Thank You!

We at WalkAbout Computers wish to thank you for purchasing the WalkAbout HAMMERHEAD 3 computer. Great care has been taken to provide you with a unique product designed to provide years of reliable service. The HAMMERHEAD 3 is the fifth generation of HAMMERHEAD rugged tablet computers. Each generation builds on the strengths of the previous generations to provide you with a state-of-the-art product designed to meet the real world needs of mobile users.

This guide provides basic information that you will need to take full advantage of your HAMMERHEAD 3 computer. The HAMMERHEAD 3 is a tool that is often configured to meet the precise needs of a specific application. As a result, there are many configuration options available and often, custom features are provided for large-scale applications. If you do not find illustrations identical to the equipment you have purchased or do not find needed information after having reviewed the User's Guide, please feel free to contact WalkAbout Customer Care toll-free at 888-872-1100. You may also wish to visit our web site at www.walkabout-comp.com for updated information.

This guide is intended to provide basic information on the features, operation, care, and maintenance of the HAMMERHEAD 3. It is not offered as a technical resource to deal with larger integration issues. WalkAbout and its many partners will be happy to work closely with you in resolving any challenges that you might face.

Elements of this guide are available electronically for those customers wishing to develop their own training or technical support materials. Requests for electronic copies can be made through the general information request link at the WalkAbout web site.

Again, the employees of WalkAbout Computers thank you for purchasing the WalkAbout HAMMERHEAD 3. We look forward to getting to know you and to assisting you in any way we can to make your use of the HAMMERHEAD 3 as rewarding as possible.

Notices

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Trademark Acknowledgments

Radio Frequency Emissions Statement

Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Subpart J, 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 and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on; the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from the receiver.
- Consult WalkAbout Computers at (888) 872-1100 for additional information and help.

Properly shielded, grounded cables and connectors have been provided with this equipment and must be used to insure proper functionality and compliance with FCC rules. Unauthorized changes or modifications could void the user's authority to operate the equipment. Replacement cables and connectors are available from:
> WalkAbout Computers
> 1501 Northpoint Parkway, Suite 103
> West Palm Beach, FL 33407

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

If necessary, the user should consult an experienced radio/television technician for additional suggestions. The user might find the following book prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems"

This booklet is available from the following:

Public Contact Branch Business	Consumer Assistance and Small
Room 725	Division - Room 254
1919 M St. NW	1919 M St. NW
Washington, DC 20554	Washington, DC 20554
(202) 634-1940	(202) 632-7000

Canadian Department of Communications Compliance Statement

This equipment does not exceed Class B limits per radio noise emissions for digital apparatus, set out in the Radio Interference Regulation of the Canadian Department of Communications.

Table of Contents

1 *Introduction*

Chapter

Your HAMMERHEAD 3 tablet computer gives you the power of a desktop computer, yet it also provides the portability and durability needed to gather and work with information in the field. The HAMMERHEAD 3 is designed for use on foot, in a vehicle, or in an office. It is ideal for highly mobile applications in the most demanding environments. Most users are from the utility, transportation, logistics/distribution, public safety, and field services industries. However, users from a wide range of other fields are continuously discovering the advantages of the HAMMERHEAD 3.

About This Manual

This manual is divided into the following chapters:

Chapter 1 – Introduction

This chapter covers unpacking and setting up your HAMMERHEAD computer system, describes the various features of the system, locates all the controls and exterior aspects of the design, and covers the various docking options available.

Chapter 2 – Hardware Operation

This chapter describes the basic operation of the HAMMERHEAD hardware.

- Turning the unit on and off
- Operating the Pen or Touch hardware
- Installing, removing and charging batteries
- Working with the removable hard drive
- Accessories and Options
  - ✓ Internal Display Heater
  - ✓ Installing or removing PCMCIA cards

Chapter 3 – Software Operation

This chapter describes how to use the HAMMERHEAD control programs HHUtility and HHVideo.

Chapter 4 – Frequently Asked Questions

Contains the most common questions from users regarding the HAMMERHEAD system.

Chapter 5 – Warranty Information

Explains coverage, terms and conditions of WalkAbout Computer's Limited Warranty and how to obtain warranty service.

Before You Begin

Your HAMMERHEAD 3 tablet computer includes the following items. When the computer is unpacked, confirm that all items are present. Contact your HAMMERHEAD 3 sales representative if any item is missing or damaged.

- HAMMERHEAD 3 Computer
- User's Guide

Most but not all systems will also include:

- AC adapter with power cord
- Port replicator or docking station

Microsoft Windows ('98 or 2000), Paragraph's Calligrapher handwriting recognizer, PenOffice control program and My-T-Pen onscreen keyboard program are installed on the HAMMERHEAD 3 at the factory and registered to you. WalkAbout Computers often pre-installs application software for its customers. In most cases user access to operating systems or other software is restricted.

Save the HAMMERHEAD 3 packaging, it might be needed for possible return shipments. The serial number will be on the box and on the bar code label; located on the right, front side of the product. Keep the serial number handy; it will be required should the unit need repairs.

Standard Features

Your HAMMERHEAD 3 includes the following features at a minimum:

- Fully sealed (vacuum tested) aircraft-grade aluminum housing
- Intel Mobile Pentium III 400 MHz processor
- At least 64 MB main memory
- 256K L2 cache
- 2 MB video memory
- 9.5" 640 x 480 backlit transflective LCD display for direct sunlight use or 10.4" 800 x 600 TFT active matrix color display
- Removable shock-mounted 10 GB or larger hard disk drive (optional flash drives)
- Type III PCMCIA expansion slot (two Type II devices)
- IrDA (Std 1.1) port
- Sound card for a variety of tonal alerts as well as voice input and synthesis
- Long-lasting 1800 mAh Li-Ion battery (dual battery option)
- Built-in light sensor for automatic backlight control
- HHUtility Control Program
- HHVideo Control Program for adjustable brightness and Automatic contrast adjustment
- Phoenix BIOS
- Microsoft Windows '98 (Windows 2000 optional)
- Calligrapher, PenOffice and My-T-Pen installed
- One pen stylus for use with electromagnetic proximity sensing digitizer (not included with touch-screen option)
- One year warranty on all parts and labor
- Direct line technical support by WalkAbout Computers technical support staff

Hardware Options

The following upgrades and add-ons are available:

- Hard drive
- Memory
- Touch screen on monochrome and color displays
- Color screen enhancement for outdoor viewing
- Wired and wireless LAN communications
- CDPD and public RF radio modem(s)
- 2nd antenna
- Integrated GPS receiver
- LCD and hard drive heater package (Windows 2000)
- Custom integration of components upon request
- Additional batteries

Exterior Features

Front View
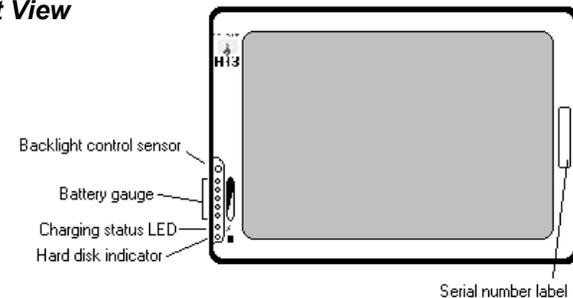
Battery Status Indicators:
This is the gauge for the battery, which indicates the approximate charge remaining. When all five lights are lit, the battery charge is full. As you use the battery, the lights will turn off from top to bottom, indicating the amount of charge that remains. Each light represents approximately 20% of the full charge.

Charge Status Indicator:
The charge status indicator is lit whenever external power is available. It blinks as the battery charges and remains a constant green when the batteries are fully charged. The indicator identifies a positive connection when the HAMMERHEAD 3 is in the docking station with an external

power source. The indicator will be green when external power is connected.

Hard Disk Drive Indicator:

The indicator flashes as the internal hard disk drive is accessed.

Backlight Control Sensor:

The backlight control sensor automatically turns the backlight off when adequate external light is available. Be sure it remains uncovered.

Right Side View

On/Off switch:

Turn the computer on by pressing the on/off switch once. When used to turn the HAMMERHEAD 3 off, the switch will cause the unit to automatically follow proper Windows shutdown procedures. The on/off switch can be set to toggle between other functions including an orderly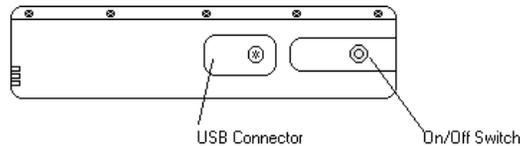 Microsoft Windows shutdown and a "doze" low power state. See SideSwitch Function in Chapter 3: Software Operation for more detailed instructions.

USB Connector:

The Universal Serial Bus is a hot swappable, daisy chainable serial port with a maximum speed of 12 Mbps. It can be used for devices like keyboards, mice, floppy drives, CD-ROM or DVD drives, cameras, modems, scanners, etc. The HAMMERHEAD 3 supports booting from bootable USB devices such as floppy drives and CD-ROM drives. Devices can be connected to the HAMMERHEAD 3 with the computer turned on, without requiring a reboot. There is a limit of 128 concurrent devices per USB port. The HAMMERHEAD 3 can supply up to .5 amps of current through the USB port. External USB hubs are available that will supply power to external devices without using the HAMMERHEAD 3's power supply.

Left Side View
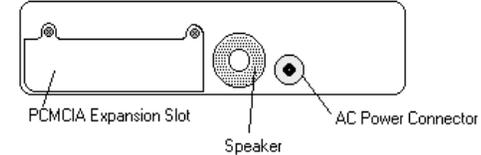
PCMCIA Expansion Slot:

The PCMCIA expansion slot is sealed behind a hatch plate held in place by two Phillips head screws. The hatch plate must be removed to access the PCMCIA slot. Several hatch plates are available that will accommodate various PCMCIA devices with features that extend beyond the housing of the computer. These hatch plates keep the unit as sealed as possible and are available for many frequently used PCMCIA devices. The PCMCIA compartment is sealed from the internal components of the HAMMERHEAD 3 to prevent dust and moisture from entering the computer. Cardbus cards are not supported. Forcing Cardbus cards in the PCMCIA expansion slot could cause damage.

Speaker:

There is a monaural speaker in the left side of the housing. The speaker will play windows sounds as well as post error codes.

AC Power Connector (15 volt input):

This connector allows the user to plug the AC power supply directly into the HAMMERHEAD 3 to charge and operate the unit. The unit may also be charged through a port replicator or docking station.

Back View
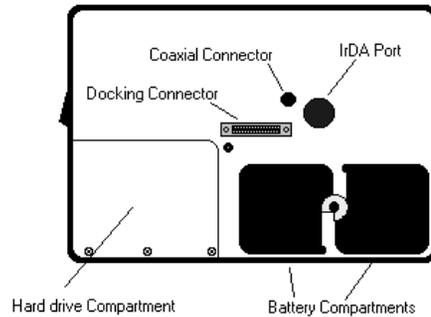
IrDA Port:
Industry standard 1.1 infrared communications port for use with other infrared equipped devices. The IrDA port is configured through the Microsoft Windows Control Panel or by double tapping on the IrDA icon located on the task bar in the lower right hand corner of the desktop.

Coaxial Connector:
Depending on the machine configuration, there may be a coaxial antenna connection on the upper right hand side of the housing. The coaxial connector will allow you to connect an external antenna to an internal radio or GPS solution.

Docking Connector:
The docking connector provides for all external communications with the unit. It connects to a port replicator or docking station.

Battery Compartments:
There are two battery compartments designed for convenient, hot swappable battery replacement while in the field. See the Batteries and Charging Procedures section of Chapter 2: Hardware Operation for instructions on changing batteries.

Hard Drive Compartment:
The hard drive compartment allows field upgrades or repairs without opening the HAMMERHEAD 3. Some customers may have IT Departments that will be trained to replace hard drives at the customer location. **You should not open the hard drive compartment without the proper training from WalkAbout Computers. Any tampering of the hard drive will result in a void warranty.**

Bottom View
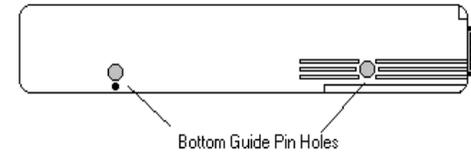
Bottom Guide Pin Holes:
The bottom guide pin holes are used to align the computer when placed in either a vehicle, desktop, or wall-mount docking station. Simply insert the computer onto the gauge ball guide pins and tilt the computer back until the docking connectors engage.

Connectivity

Most often connectivity with the HAMMERHEAD 3 is via the docking connector on the backside of the unit. Most units ship with a port replicator, DESKDOCK, or HAMMERDOCK vehicle dock that provides standard ports for communications, keyboard, and power supply. Port replicators and docking stations may be customized to your requirements and may not be configured exactly as described below.

Port Replicators

There are several variations of port replicators (flat, angled, custom, etc.) New connectivity options are constantly in development. The following features are available on the standard port replicator.
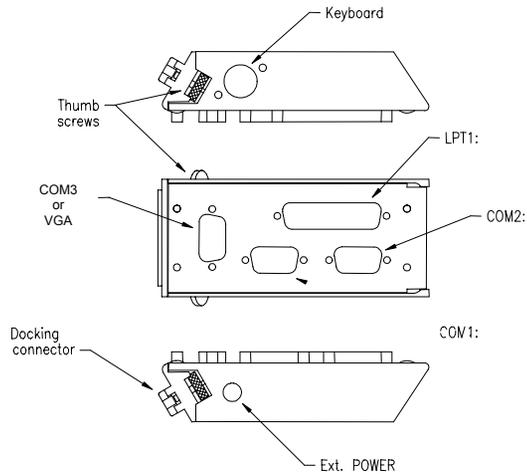
Male Docking   The male docking connector is inserted into the

Connector: female docking connector on the back of the computer to activate all ports in the port replicator.

Power: Connector for AC or DC power. Use only the power supplies provided especially for the HAMMERHEAD 3.

Keyboard: Industry standard 5 din PS2 style keyboard connector.

LPT 1:   Industry standard 25-pin Centronics compatible parallel connector.

COM 1:   Industry standard DB-9 serial connector.

COM 2:   COM 2 on most docking solutions is a full, nine-pin DB-9 serial connector, although only a subset of standard signals are supported.

Thumb   Thumbscrews secure a positive connection.
Screws: Insert the port replicator fully before engaging thumbscrews. Be careful not to over tighten thumbscrews.

The standard port replicator also doubles as a desktop stand for the HAMMERHEAD 3. Simply press the male docking connector on the port replicator into the female docking connector on the back of the unit. The connectors are correctly oriented and only fit in one direction. It is impossible to join them incorrectly. Make sure the connector is fully inserted confirming the port replicator fits snuggly against the back of the computer. Turn the thumbscrews in a clockwise direction to insure a reliable, positive connection. Do not over tighten. Do not connect the port replicator to the computer while power is attached to the port replicator. Attach the port replicator and then attach the power to the port replicator.

Flat port replicators and custom cable sets are available when connectivity is needed while the unit is mobile. External power should be connected to the port replicators after being firmly connected to the HAMMERHEAD 3. Some custom configurations provide access to ports in the computer housing.

Desktop Docking Station

FRONT VIEW

BACK VIEW
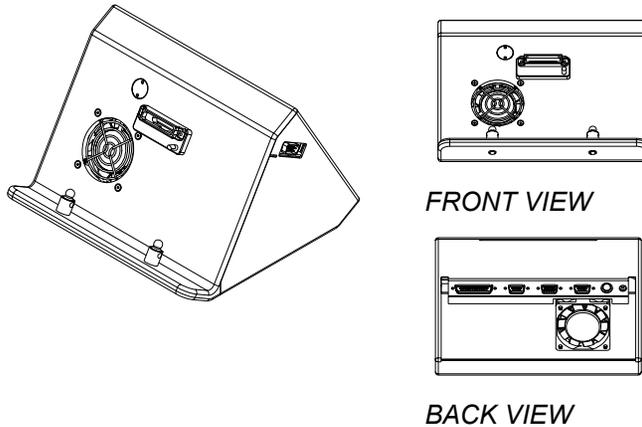
The Desktop Docking Station (DESKDOCK) provides complete connectivity and integrated options (e.g. LAN adapter, fax/modem, etc.) for using the HAMMERHEAD 3 on a desktop. The DESKDOCK offers the following connectors for the connection of external devices:

- *Two RS-232 serial ports (COM1 and COM2 – 3-wire serial)*
- *One Centronics-compatible parallel port/floppy interface*
- *One keyboard port*
- *Power connector*
- *One USB port*
- *One SVGA video port*

If the HAMMERHEAD 3 is equipped with video output capabilities one COM port can be used as a VGA port. If a DESKDOCK is equipped for communication with a network, the connection is made through the USB port.

Vehicle Docking

The HAMMERDOCK offers compact versatile mounting for a variety of automobiles. The one-piece aluminum body ensures sturdy docking with no adjustments. The HAMMERDOCK has tilt swivel functionality, a built-in keyboard tray, and a push button key lock. A break-out box with a 3-foot or 6-foot cable provides convenient installation for permanent connections.

SIDE VIEW   *FRONT VIEW*
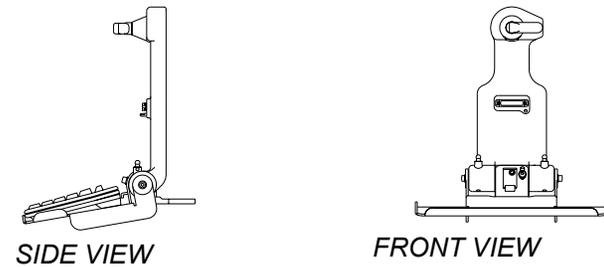
Noise reduction circuitry, surge protection, reverse polarity protection, and power conditioning circuitry are built into the HAMMERDOCK. In some cases a GPS receiver may also be included. Connectivity on the rear of the HAMMERDOCK includes a power connector, keyboard connector, and USB connector. Connectors in the "break out box" at the end of a 3' or 6' cable include 1 keyboard, 2 COM ports, 1 USB and 1 parallel port.

No adjustments are ever required to assure precision insertions of the docking connector. The tension of the tilt/swivel functions and the angle of the keyboard tray are the only adjustments available on the HAMMERDOCK. All tension adjustments are made at the time of installation with an Allen key provided with each docking system. The keyboard tray is removable.

The computer can be secured in position by turning down the spring-loaded red retention latch. Once the latch is turned completely down the push button lock can be depressed to prevent unauthorized removal. Security keys for fleet users are identical to eliminate logistic problems.

The HAMMERDOCK cannot be installed without a base to mount it in the vehicle. Contact WalkAbout for a current list of vehicle mount providers.

Chapter

2 *Hardware Operation*

Turning on the unit

All units are shipped ready for operation with a lithium ion battery freshly installed at the factory. Turn the computer on by pressing the on/off button on the upper right-hand side. The button is recessed to prevent accidentally turning the unit on or off. The HAMMERHEAD 3 will perform its self-check routines during the start up process. All units are configured at the factory to automatically boot to the Microsoft Windows Desktop unless a custom configuration has been requested.

Use and Care

The HAMMERHEAD 3 is a hardened field computer, but it is an electronic device and reasonable precautions should be taken:

- Avoid severe impacts, especially on the display glass.

- Don't throw the computer anywhere, even on the seat of a car.

- Don't subject the computer to extreme heat by placing it on the dashboard of a vehicle with the display facing the sun.

- Don't leave the computer in temperatures below -25°F.

- Don't pile tools or heavy objects on top of the computer.

- Don't place the unit on the hood or roof of any vehicle, as it might be left behind.

- Don't try to take the computer apart. Special tools are required to disassemble the computer.

- Don't use excessive force when inserting PCMCIA cards in the PCMCIA slots, as they may break.

- Don't use BIOS files interchangeably between color and monochrome units. This will result in system damage and the unit will have to be returned to technical support.

Pen Operations

The pen is the primary screen navigation and data entry tool for the HAMMERHEAD 3. ***Without a keyboard attached, the pen is the only means of communicating with the computer. Do not lose or misplace the pen***. The pen is usually tethered to its carrying case. Attaching the tether to one of the zippers on the carrying case with a split ring allows the tether to be anchored on either side of the computer. By shifting the position of the zipper, the tethered pen is convenient for right or left-handed users. All users are encouraged to purchase a spare pen as a backup.

The pen functions like a two-button mouse. There are two switches in the pen, one in the pen tip and another on the barrel of the pen. The tip switch performs the same functions as the left button on a mouse and the barrel switch performs like the right mouse button. Very few applications require the use of the pen's barrel button. *Do not depress the barrel switch when writing on the display; it will adversely affect handwriting recognition*. To activate the tip switch, simply press the tip of the pen against the display. This is similar to clicking the left button of a mouse. Double clicking is accomplished by double tapping with the pen. Move an icon by pressing the pen directly overhead and dragging it to the desired destination, keeping the pen in constant contact with the display. Attributes related to use of the pen (e.g. tap speed) can be adjusted in MS Windows' Control Panel in the Handwriting directory.

The HAMMERHEAD 3 utilizes a proximity-sensing electromagnetic digitizer. This component tells the computer the pen's exact position. The computer senses the pen as it nears the display and the cursor appears when the pen is approximately an inch away. This allows

visibility of the exact location of input before making actual contact with the display.

The location of the cursor on the display is the location of input regardless of the location of the pen tip. The cursor and the pen tip should be closely aligned when the pen is in contact with the display. If the pen and the cursor are out of alignment, realignment is accomplished by following the instructions provided in the pen directory of the MS Windows Control Panel. The pen will appear to be out of alignment if the display settings have been changed from 640 x 480 resolution or 800 x 600 for color displays. Confirm the display is on the appropriate setting before attempting to realign the pen.

Tapping the pen requires only light to moderate pressure. It is possible to damage the pen by pounding the tip against the display with force. Most problems using the pen are related to tapping speed and the tapping area size. Both of these functions can be adjusted and tested using the handwriting control software in the MS Windows Control Panel. The width of the line created by the pen is also defined in the Control Panel.

Pen Maintenance

The pen is powered by a 1.5 volt, alkaline, AAAA battery that can be purchased in retail stores. Replacement batteries are manufactured by several companies, the comparable part numbers follow:

> Eveready E96
> Varta 4061 101501
> Duracell AAAA battery
> Radio Shack 23-559

To replace the battery, unscrew the top and bottom sections of the pen at the silver ring just above the barrel switch. The battery is installed with the flat, negative (-) terminal entering the pen barrel first. The nominal voltage supplied to the pen electronics is 1.5 volts, but the pen will operate with the battery voltage in the range of 1.1 to 1.6 volts. The pen electronics will not be destroyed or compromised in any way if the battery is inserted in reverse.

Touch Operations

Touch Screen Operation

The touch screen replaces a mouse in normal Windows operation. Wherever you touch the screen with your finger or stylus, the computer interprets it as a mouse click. Due to the nature of the touch screen, it is sometimes hard to drag objects across the screen and it is also hard to move the pointer around the screen without selecting the object below the cursor. This should be taken into account when applications are being developed for touch screen devices.

In Windows 98, there is a right click button which can be moved around on the desktop while the control panel application for the ELO touch screen is open. The right click button emulates a right click with a standard mouse. To use this function, you click on the right click button, then click on what you want to right click with the stylus.

Caring for the Touch Screen

With minimal maintenance, the touch screen will last many years. When using the touch screen, you should not use an abrasive or metallic pointer. You can use your finger or a plastic tipped stylus, etc. The touch screen is easily scratched if an abrasive stylus is used. Be careful not to let sand or grit sit on the screen. Cleaning of the touch screen can be done with a regular plastic cleaner such as Plexus.

Batteries and Charging Procedures

Battery Status Indicators

The green LED's on the lower left front of the unit indicate the power status of the battery. At full charge, all five LED indicators will light. As the battery power availability decreases, the LED's will turn off from top to bottom. Each LED represents approximately 20% of the total charge. So if three LED's are lit, an estimated 60% of the total battery charge remains.

The last LED indicator will begin to flash when approximately three to five minutes of battery power remain. When the remaining battery power becomes critical, all data should be saved and the HAMMERHEAD 3 must be turned off or placed in the standby mode. Failure to do so may result in lost data! Replace one of the batteries with a fresh battery or recharge the unit. See *Installing New Batteries* below.

When the HAMMERHEAD 3 is turned off, the battery status indicators will also turn off after a delay of a few seconds. When the unit is placed in standby mode, the battery status indicators will remain lit as a reminder the unit is on standby.

Actual battery life is dependent on several factors including temperature, backlight requirements and computer usage. The use of power management may significantly extend this time.

Recharging Batteries

The HAMMERHEAD 3's batteries automatically fast charge any time the HAMMERHEAD 3 is connected to an external power source (AC or DC). When charging, the green charge indicator light will flash while the unit is recharging. When charging two batteries, the first battery will charge to 80% of full charge, then the second battery will charge to 80%. After both batteries reach 80%, the first battery will then charge the remaining 20%, after which the second battery will complete its recharging process. This method provides the best ratio of charge time to run time for short battery charge cycles.

When batteries are fully charged, the charge indicator light will stop flashing and remain a constant green.

Installing New Batteries

The HAMMERHEAD 3 has the capability to run on one or two batteries in the field. The unit does not require both batteries to run. The two-battery design allows users to hot swap batteries without turning the computer off. To install or replace a new battery, turn the round knob on the back of the unit. The knob holds the batteries in place and is designed so the batteries cannot be taken out at the same time. Simply turn the knob until the quarter piece exposes the corner of the battery that is to be replaced. A lip on the battery aids for easy removal. Install the new battery by placing it into the compartment and turning the knob to cover the edges of both batteries. When power runs down in one battery, a warning message will display to report the status of the charge in each battery.

Battery Use/Care

The HAMMERHEAD 3 uses long lasting lithium ion batteries that are *custom made* for WalkAbout Computers. Do not substitute any other batteries. Substituting batteries may result in a void warranty.

Lithium ion batteries are smart batteries that do not need to discharge then recharge to view the charge status on the computer. They have a low self-discharge rate and a long shelf life. Keep them dry and store them at room temperature. The battery is not considered hazardous waste by EPA regulations, however local regulations may require specific methods of disposal. We strongly encourage recycling. WalkAbout will be happy to recycle batteries for you. To order additional batteries, contact your area representative.

Charging Batteries

To recharge the battery using the AC adapter, plug the circular connector of the AC adapter into the AC connector in the HAMMERHEAD 3 or in the power supply port on the replicator. Charging begins automatically as the unit is docked when using a vehicle docking mount, desktop docking station or a wall mount docking station. The HAMMERHEAD 3 is fully functional as it charges. Using the unit as it charges will only slightly lengthen the recharging process. The HAMMERHEAD 3 requires at least 13 v DC for fast charging. Do not use any external power source other than the AC or DC adapters provided with the HAMMERHEAD 3; permanent damage to the battery or computer may occur.

Removable Hard Drive

Please contact WalkAbout technical support 888-872-1100 before removing the cover plate of the hard drive compartment. Any tampering of the hard drive will result in a void warranty.

Accessories and Options

The following accessories are available for the HAMMERHEAD 3:
- Shock absorbing, dockable carrying case
- Universal AC power adapter 110-250 volts, 50-60 Hz
- Port replicator, standard, flat or custom cable sets
- Vehicle cradles and mounting solutions
- Desktop docking station with communications options
- Infrared LAN adapter
- Additional batteries
- Battery charger
- Wired and wireless LAN communications
- CDPD and Public RF radio modem(s)
- Integrated differential ready GPS receiver
- Internal display & hard drive heater package
- External bar code reader/scanner
- External CD ROM (USB)
- External 1.44 MB 3.5"bootable floppy disk drive (USB)
- Keyboard(s)
- Portable printer
- Custom integration of components upon request

Heater Option

The HAMMERHEAD 3 supports an optional heater package including a LCD heater that greatly improves display readability in colder environments and a hard drive heater that prevents drive freezing. You can enable the heaters to automatically activate while your machine is running, booting or even while it is turned off. If enabled, the heaters will automatically activate each time the ambient temperature falls below a predetermined level.

PCMCIA Cards

PCMCIA cards can be purchased and inserted into the card slot by the user.

The PCMCIA compartment is sealed from the internal components of the HAMMERHEAD 3 to prevent dust and moisture from entering the computer. To insert the PCMCIA card, take off the hatch plate by removing the two Phillips screws that hold the PCMCIA hatch cover. The PCMCIA cards are inserted upside down (i.e. the up arrow on the card should point toward the back of the HAMMERHEAD 3). **Do not apply excessive pressure when loading cards.** They should slide in easily. Remove the card in the same manner. Cardbus cards are not supported. Forcing Cardbus cards in the PCMCIA expansion slot could cause damage.

Many PCMCIA devices require connections for communications (RJ-11 or RJ-45) or antenna for wireless activity (wireless modems, GPS) or some other external function. Most PCMCIA devices are too fragile for direct connections in field environments. In response, WalkAbout provides a variety of hatch plates with a milled cavity or "lump" containing combinations of connectors and the cable assemblies needed to connect to common PCMCIA devices. For example, a "lump" to accommodate a PCMCIA fax/modem and network connection includes a RJ-11 and RJ-45 connector. A "lump" for a CDPD modem and wire-line fax/modem would include an antenna mount and RJ-11. The "lumps" serve two purposes: 1) they provide for a sturdy and highly reliable connection not possible when connecting directly to a PCMCIA device, and 2) they maintain the

environmental integrity of the HAMMERHEAD 3 by fully sealing the PCMCIA compartment while providing the needed connectivity. "Lumps" are available only for those PCMCIA devices that have been tested and recommended by WalkAbout. Custom "lumps" may be available for large purchases.
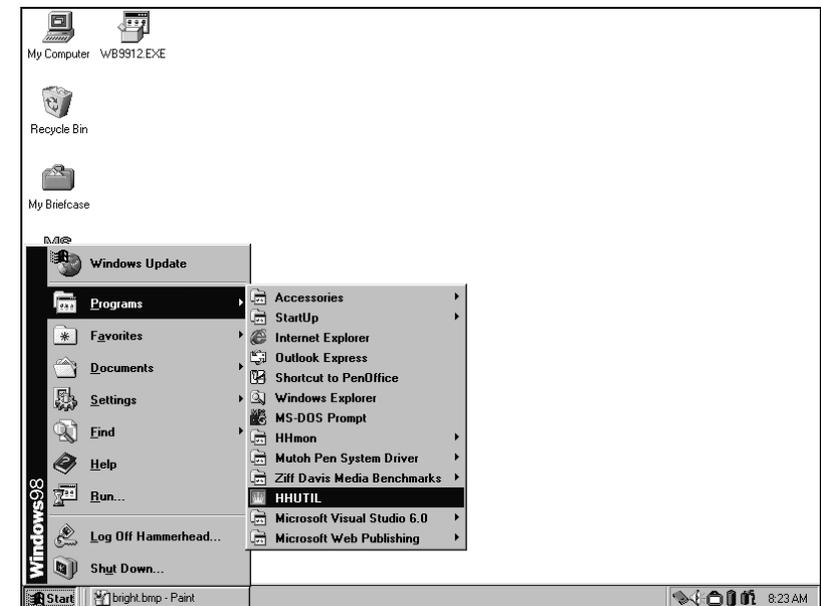
Chapter
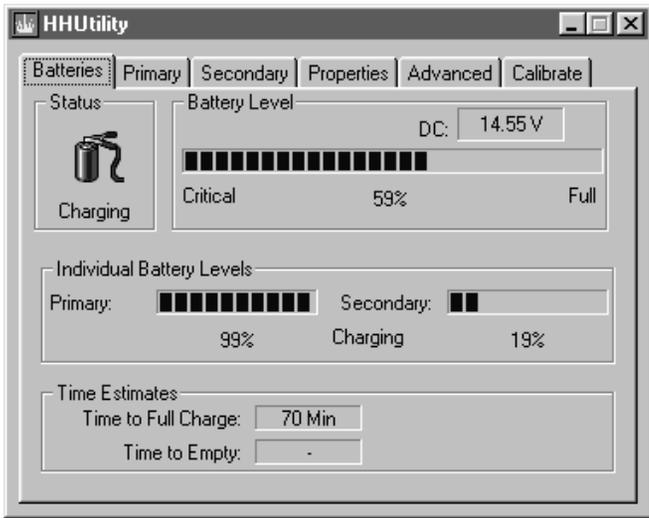
3 Software Operation

HHUtility Control Program

HHUtility is a program to allow you to set preferences on your HammerHead computer and to read more information about the state of the batteries.

The HHUtility program can be started from the Start Programs menu. Go to Start, Programs, HHUTIL.

Batteries Tab

Once you start the HHUtility program, the initial screen displays basic information about the charge of the batteries.

Status:	Shows you whether the batteries are Charging, Fully Charged, Discharging or Idle.
DC:	Displays the voltage of applied external power.
Battery Level:	Indicates the total remaining charge from the batteries. If there is one battery in the unit, this is the total charge remaining on that battery. If there are two batteries in the unit, this is the total charge remaining from a combination of both batteries.
Individual Battery Levels:	
Primary (inner) battery:	The percentage power available from the primary battery.
Secondary (outer) battery:	The percentage power available from the secondary battery.
Time Estimates:	
Time to Full Charge:	Estimated time to fully charge the charging battery.
Time to Empty:	Estimated time to discharge the active battery.

Primary Tab

This screen provides more detailed information about the Primary (inner) battery.
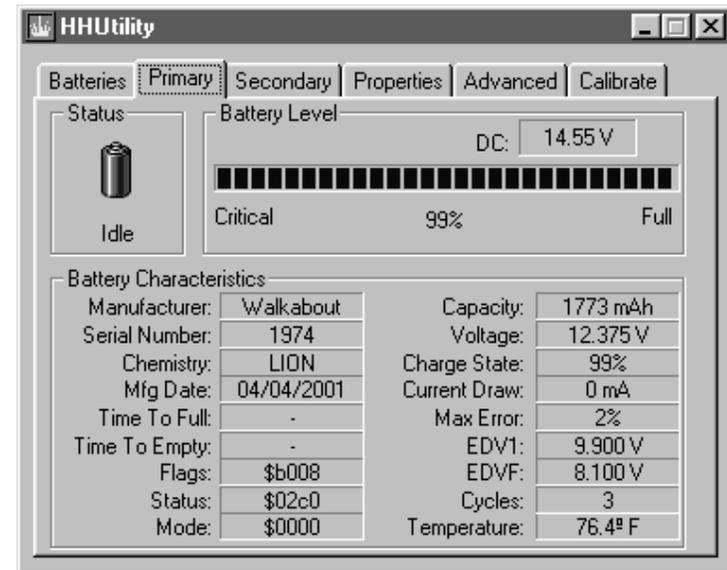
Status:	Shows you whether the battery is Charging, Discharging, Idle or Fully Charged.
DC:	Displays the voltage of externally applied power (nominally 15V).
Battery Level:	Indicates the total remaining charge from this battery.
Manufacturer:	The name of the battery manufacturer.
Serial Number:	An identification number of this battery.
Chemistry:	The type of chemicals used in this battery.
Mfg Date:	The date the battery was manufactured.
Time to Full:	If you are charging the battery, this box will display the estimated time to fully charge this battery.
Time to Empty:	If the battery is discharging, this box will show the estimated time to fully discharge this battery.
Flags:	Internal indicators of battery functions.
Status:	Internal indicators of battery functions.
Mode:	Internal indicators of battery functions.

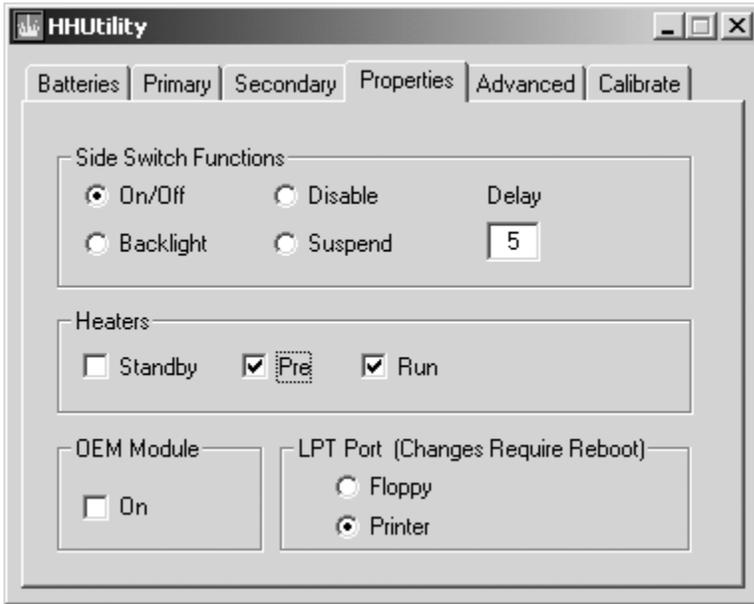|	
Capacity:	The estimated capacity of this battery when fully charged.
Voltage:	The voltage at the battery terminals.
Charge State:	The percentage power remaining in this battery.
Current Draw:	Positive is the charging current, Negative is the current being used.
Max Error:	Displays accuracy of the capacity and battery level estimates. A value greater than 2% indicates that the battery should be calibrated.
EDV1:	End Discharge Voltage - voltage when the computer will stop using the battery.
EDVF:	End DischargeVoltage Final – the voltage when the battery will disconnect itself.
Cycles:	The number of charge/discharge cycles the battery has experienced.
Temperature:	The temperature inside the battery. A temperature too high will cease charging to prevent damaging the battery. A temperature too low will decrease the battery capacity.

Secondary Tab

If you have two batteries installed, this screen provides more information about the Secondary (outer) battery.
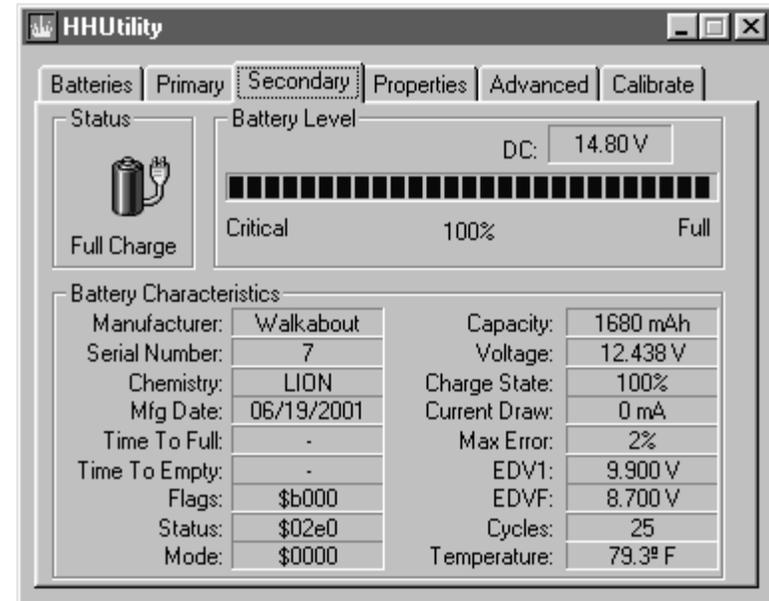
Refer to the table under the "Primary Tab" for more information on these indicators.

Properties Tab

This screen allows you to make changes to preset functions.

| Side Switch Functions: The side switch function controls the pushbutton switch on the side of the machine. NOTE: Only one selection can be made.	
On/Off:	This uses the side switch as a simple on or off function.
Backlight:	When selected, the side switch will turn the backlight on or off.
Disable:	When selected, the side switch will turn on the unit only. The side switch will be entirely disabled once the machine is running.
Suspend:	When selected, the side switch will toggle the unit in or out of suspend mode.
Delay:	The number represents the length of time required for the switch press to be recognized (approximately ½ second increments). If the switch is held down for less than this length of time, the action is ignored.

| Heaters (*optional feature*): This controls the LCD and Hard Drive heater functions for cold weather operation. Multiple selections may be made.	
Standby:	When enabled, causes the heaters to operate even if the unit is off. This avoids turn on delays if the unit is cold, but will only operate if external power is supplied from a stable AC source. (See Special Instructions for Cold Weather Operation on page 40.)
Pre:	When enabled, the heaters will active when the machine is first turned on. When cold, the machine may pre-heat for up to 15 minutes before proceeding to boot. In *extremely* cold weather, the machine may have to go through more than one cycle. If you are noticing long delays, you may want to change the setting to Standby. This feature will work only if external power is supplied from a stable AC source.
Run:	When enabled, allows the heaters to operate while the machine is running.
OEM Module:	When enabled, this activates power to an optional module.
LPT Port: Only one selection may be made. The unit must be restarted for a new selection to become active.	
Floppy:	Uses the LPT port as a floppy disk controller.
Printer:	Uses the LPT port as a printer controller.

Advanced Tab

This screen provides version information.
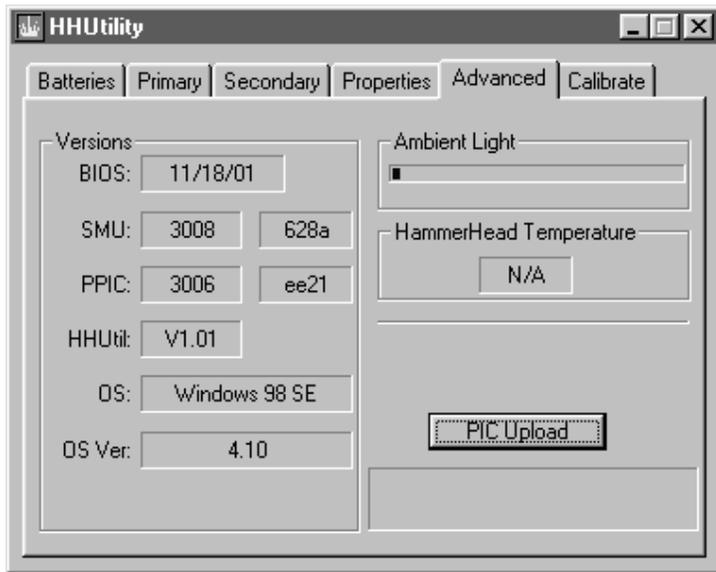
Versions:	
Bios:	The version of the system BIOS.
SMU:	The version number (3008) and check number (628a) of the SMU processor.
PPIC:	The version number (3006) and check number (ee21) of the PPIC processor.
HHUtil:	The version number of this program.
OS:	The type of operating system running in this unit.
OS Ver:	The version number of the operating system.
Ambient Light:	An indicator of the amount of light shining on the unit. This may be used on some systems to control the Auto-backlight function.
Hammerhead Temperature:	This indicates the internal temperature of the unit. On monochrome units this is used to adjust the contrast range of the display.
PIC Upload:	This is a utility for service personnel for upgrading software in the SMU and PPIC processors. It is normally disabled.

Calibrate Tab

Periodically, the batteries should be recalibrated. A calibration cycle should be performed whenever the **Max Error** is greater than 2%. You can determine the Max Error of the battery by looking in the Max Error box. The "Primary" column refers to the inner battery and the "Secondary" column refers to the outer battery. Only calibrate your batteries when they need it. Calibrating a battery unnecessarily will increase the cycle count and thereby reduce the battery life.
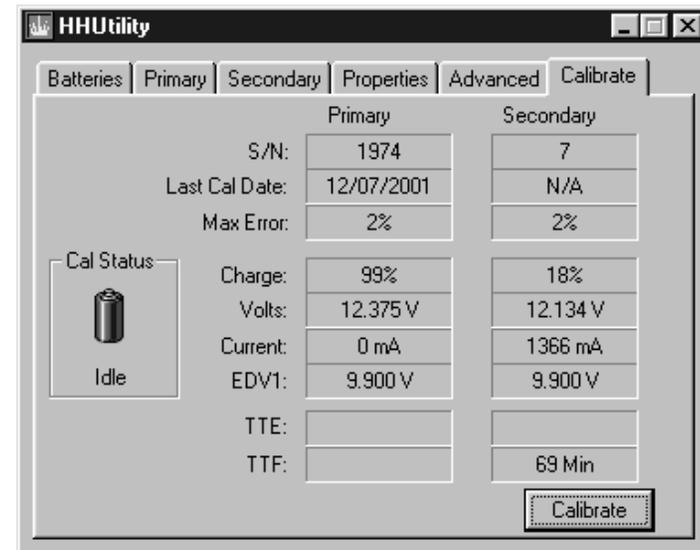
Cal Status:	Indicates of the state of the calibration cycle.
S/N:	The serial number of the battery in the Primary or Secondary position.
Last Cal date:	The date when a calibration cycle was last performed on the battery.
Max Error:	Indicates the accuracy of the Capacity and percentage charge of the battery. A calibration cycle should be performed whenever the **Max Error** is greater than 2%.
Volts:	The voltage at the battery terminals.
Current:	A positive number shows the current flowing into and charging the battery. A negative number shows the current flowing out of and discharging the battery.

EDV1	Shows End Discharge Voltage, which is the voltage at which the unit stops using the battery. The voltage must drop below this value as part of the calibration cycle.
TTE:	Time to empty, an estimate of the time to discharge this battery.
TTF:	Time to full, an estimate of the time to fully charge this battery.

Before calibrating your batteries, make sure your computer is hooked up to an AC Power supply.   You are now ready to press the Calibrate button at the bottom of the screen. You should only perform this function at a time when the unit is expected to be idle. This cycle must be performed without interruption and may take over 4 hours for each battery. During calibration, the batteries will be fully charged followed by a full discharge and then fully charged again. Do not change or remove batteries during this process. The battery calibration cycle will continue until competed but can be cancelled at any time should it be necessary to use the system.
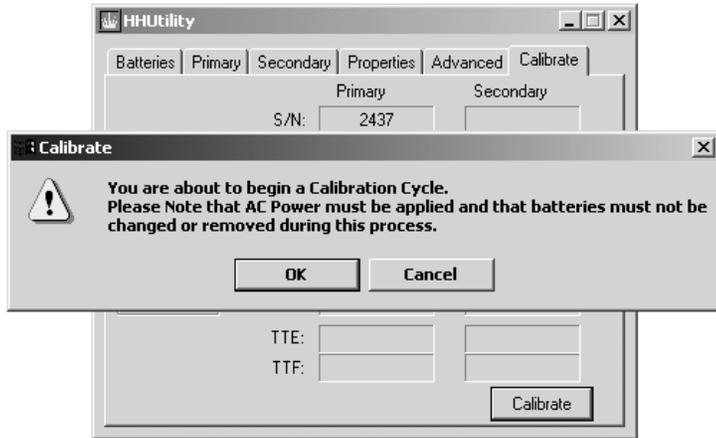
Special Instructions for Cold Weather Operation

If your computer is equipped with an *optional* heater for cold environments, you can change the settings by going to the HHUtility, Properties Tab and checking the buttons as shown below. The heaters will **only** operate when the power is supplied from a stable AC source, irrespective of the preset settings.

Standby: (Activates heater while computer is off)

> *Check this box if you want the heater to operate even when the machine is turned off.*

> If this option is checked, the LCD and Hard drive heaters will turn on each time the temperature falls below 32° F and the computer is turned off. The heaters will be activated long enough to bring the unit to 40° F. Maintaining the unit at 32° F will avoid the pre-heat delay when booting in a cold environment but can drain even a car battery if left on for long periods (such as over the weekend).

> **CAUTION**: The standby heaters will cause a current draw of 1.8A (@ 15v)) when operating. The cycle period will depend on the ambient temperature to maintain the unit above 32° F. An additional 1.0A will draw if the batteries are also charging. This can severely deplete a car battery if it is the source of external power.

Pre: (Activates heater while computer is booting)

> *Check this box if you want the heater to operate when the machine is first turned on.*

> If this option is checked, the LCD and Hard drive heaters will turn on when you boot your machine if the temperature is below 32° F. The heaters will operate for a time to bring the unit up to 32° F before the main system is activated. During this time, the LED display will blink in an alternating "police"

pattern while the unit is warming up. In *extremely* cold weather, the machine may have to go through more than one cycle before booting. If you need to bypass this pre-warming process, just hold in the side button for approximately 5 seconds (3 cycles of the LED flashes) and the machine will proceed to boot. If you continually experience long delays when booting, you may want to change the setting to Standby.

Run: (Activates heater while the computer is running)

>   ***Check this box if you want the heater to operate while the machine is running.***

If this option is checked, the LCD and Hard drive heaters will automatically activate each time the temperature falls below 52° F. The heaters will operate for a time to bring the unit up to 60° F, at which point they will shut off. This cycle will repeat each time the temperature falls below 52° F.

To see if the heaters are running, look under the properties tab in the Heaters section. If the heaters are running, "Heaters On" will appear to the right of the check boxes. (See below)
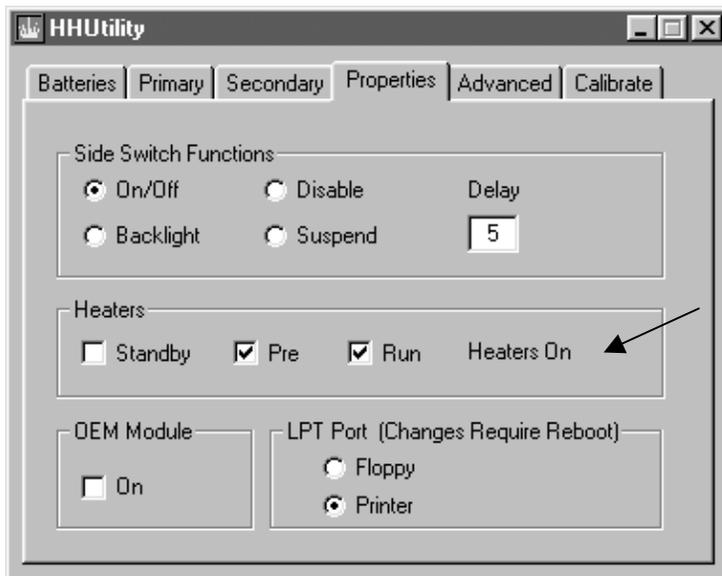
HHVideo

HHVideo is a system utility that automatically runs in the system tray and performs necessary system services. You can use HHVideo to adjust the brightness and contrast of your unit. Additionally, it provides icon images for the status of the batteries for quick reference and displays the percentage charge when the cursor hovers over the icons.

The program may be started from the Start Programs menu. Go to Start, Programs, StartUp, HHVideo.
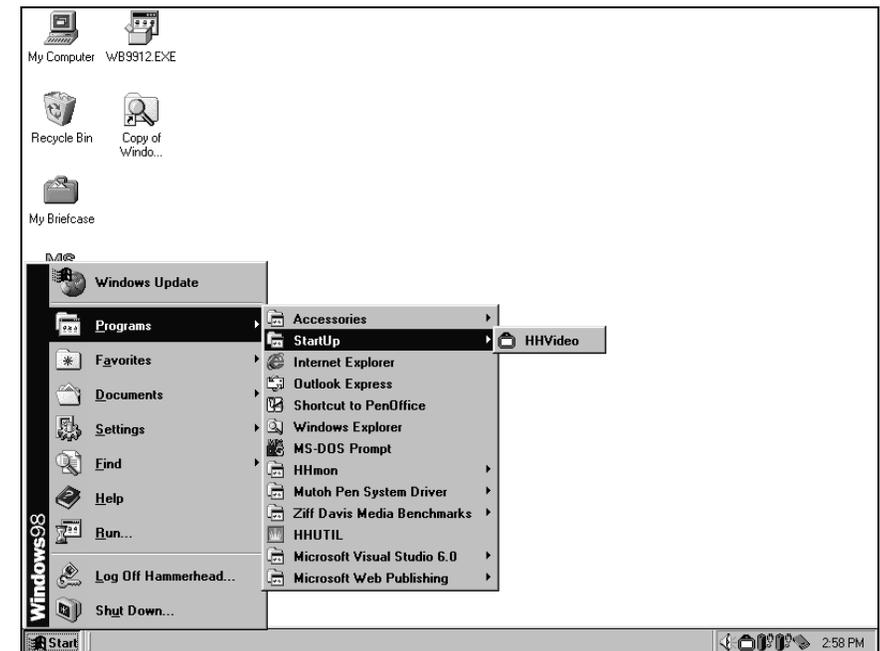
Accessing HHVideo from the System Tray

If the program is running, icons will appear in the system tray in the lower right corner of the screen.

Click on this icon to bring up the brightness control in color units and brightness/contrast controls in monochrome units.

If this icon is present, the battery is charging.

If this icon is present, the battery is discharging.

If this icon is present, the battery has been removed.

This icon indicates the battery is fully charged.

The left battery icon represents the Primary (inner) battery and the right icon represents the Secondary (outer) battery.

Hovering the cursor over the battery icon will display the remaining percentage charge.

For example, this System Tray indicates there is no Primary (inner) battery and the Secondary (outer) battery has 99% of its charge remaining.

Adjusting the brightness and contrast

Clicking on the [icon] icon will open the slider window for adjusting the intensity of the back light. This will help improve visibility when bringing the unit from inside to bright outdoor sunlight and vice versa.
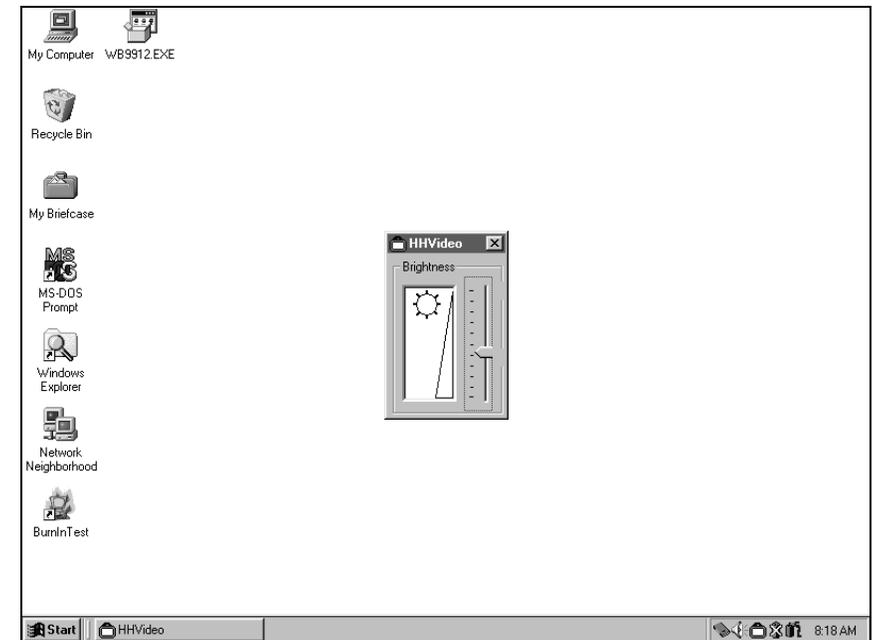
Using the cursor, click on the slider bar and drag the pointer upwards to reduce the back light intensity or downwards to increase the back light intensity.

On monochrome units, the contrast may also be adjusted and the function of Autobrightness enabled.

Autobrightness is a function that automatically turns the backlight on or off depending on ambient light conditions. A photo sensor located on the front of the unit monitors the amount of light falling on the display and turns the backlight off when a certain level of ambient light is available. This provides improved visibility and helps to prolong battery life when the unit is used in a sunny disposition. To activate Autobrightness, place a check in the Auto box.

Chapter 4 FAQ's

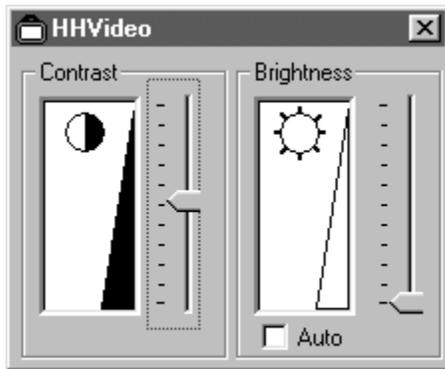Following is a list of common questions and answers that are presented to WalkAbout's telephone support technicians. If you don't see an answer to your question here, please contact Technical Support at 888-872-1100 and one of our Representatives will be able to help you.

What options are available for loading software into the HammerHead?

- USB Floppy Drive
- USB CD-ROM
- Local Area Network
- Direct Cable Connection

How do I install drivers for peripheral devices sold by WalkAbout?

- Device drivers for peripherals that WalkAbout distributes reside on the HammerHead where they can be installed as needed.

- Contact Technical Support for assistance on any of these installations at 888-872-1100.

How do I install drivers for peripheral devices not sold by WalkAbout?

- Device drivers for peripherals not distributed by WalkAbout will require loading via one of the options listed above.

- Contact WalkAbout Technical Support at 888-872-1100 for loading device drivers for any variety of peripheral that may need to be installed.

How can I manually toggle on or off the backlight?

- The HHUtility program supplied on your HammerHead, you can configure the sideswitch to toggle the backlight on and off. Please see Chapter 3 of this User's Guide for more detailed information.

How do I activate the "Screen Keyboard"?

- If you are using MS Pen services: From the Windows desktop, navigate through the Start Menu to the Program group named "Pen Services". Click on the icon for the screen keyboard in this group.

- If you are using My-T-Pen: From the Windows desktop, navigate through the Start Menu to the Program group named "My-T-Pen". Click on the icon for "My-T-Pen" in this group.

Can I activate the "Screen Keyboard" automatically when the unit boots?

- Yes, for MS Pen services, copy the screen keyboard shortcut into the startup group. For My-T-Pen, there is a configuration option in the My-T-Pen setup program to load at boot time.

How can Hand Writer Recognition be disabled?

- For MS Pen services, open the control panel applet for Hand Writer Settings. There is an option located under the Personal tab that will allow the user to set the time delay for "Switch from Ink to Text Selection". Set this adjustment to the extreme left (0.0 seconds) to disable Hand Writer Recognition.

- For Calligrapher, the handwriting recognition is only active when the calligrapher program is running.

How does the automatic contrast adjustment work?

- The HammerHead unit is manufactured with a thermal sensing circuit that is tied into the contrast adjustment of the LCD Display. This automatic adjustment is augmented with the ability for the end user to tailor the settings using the HHVideo

application. See Chapter 3 of this User's Guide for more detailed information.

What do I do if the unit locks up or freezes while under Windows?

- In the event that Windows locks up and you loose control of screen activity, you can depress and hold the side power button for a period of 15 seconds. This will force a "hardware shutdown".

- Note: Windows may restart in Safe Mode.
  - If you see a Boot Menu that suggests Safe Mode, depress the side button, which will shut down the unit.
  - Depress the side button again to turn the unit on. It will now boot the unit in Normal Mode.

How do I clean the champ connector on the back of the HammerHead?

- A non-metallic bristle brush can be used to sweep out any dust or foreign particles

How do I clean the glass on the face of the unit?

- On pen machines, a non-abrasive glass cleaner can be used to wash the display glass.

- On touch screen machines, a plastic cleaner such as 'Plexus' can be used to clean the display.

What do I do when the pen / touch panel gets out of alignment?

- If you are using MS Pen services: In the Windows Control Panel is an applet labeled Hand writer Settings (pen settings on some machines), which has the pen alignment utility. You may have to attempt alignment more than once to get the desired result.

- If you are using Pen with Calligrapher: From the Windows desktop, navigate through the Start Menu to the Program group named "Fine Point" ("Mutoh pen system driver" on some

units). In this group, click on the icon for "Recalibrate" and follow the onscreen instructions.

- If you are using Touch with Calligrapher: In the Windows Control Panel, open the ELO control panel applet. In the applet, click on the calibrate button and follow the onscreen instructions.

What if the pen still will not align?

- Check that the user has not altered the Windows Display settings to a screen resolution other than factory default. If so, adjust the setting to factory default, reboot the unit and attempt pen alignment.

- See supporting documentation for instructions on reinstalling the pen services software. This will typically cure problems with damaged support files that impact the pen function.

What can I do when the "Start" button disappears?

- In pen computing, it is not uncommon for the user to inadvertently resize the task bar so that it is not visible on the screen.

- First, attempt to recover the start button and task bar by moving around the edges of the display to see if you will get a double arrow. If you get a double arrow, simply drag the task bar to the size you need.

- If not, follow these directions (note: you will need a keyboard to perform this function. Do not attempt to use the pen during this process.

  1. Press the <CTRL>, <ESC> keys in combination to display the "Start" menu.
  2. Press the <ESC> button and the menu will disappear. You have now placed the focus on the "Start" button.
  3. Press <ALT>, <SPACEBAR> keys in combination to display a context menu.
  4. Use the cursor keys to navigate in the context menu and highlight "Size".

  5. Press <ENTER> and the pointer will move to the middle of the taskbar along the edge of the display and become a two-way arrow.
  6. Using the cursor key, size the task bar until it is the size you prefer.
  7. Press the <ENTER> key to set the task bar size.

- To avoid this problem in the future, try sizing the task bar to be larger than the default. This can be done at your discretion.

How long is the battery good for in the HammerHead unit?

- WalkAbout recommends replacing the HammerHead battery annually.

What factors can influence the life of the battery charge?

- PCMCIA devices require power and are known to shorten battery life.
- Constant reading and writing of the Hard Disk will shorten battery life.
- Old batteries will begin to exhibit signs of "charge memory" which results in shortened battery life.

What do I do when the battery discharges and will not charge in the unit?

- There are several fused circuits in the HammerHead designed to protect the core electronics. In the event that the unit will not initiate the charge cycle, there may be a blown fuse in the circuit.

Why doesn't the HammerHead boot after I replace the battery and place it on the Desktop Docking Station?

- When replacing the battery, the unit will perform a simple self-test by simultaneously lighting each LED on the front of the unit. You must allow this test to complete before introducing external power to the unit.

What Modem solutions does WalkAbout provide?*

- Xircom RealPort 10/100 Ethernet & Modem   Type II device
- Xircom Credit Card 56-GlobalACCESS^{TM}   Type II device

What networking solutions are available for use in the HammerHead?*

- USB Network Communications at a peak rate of 8 Mbps with a properly equipped Docking Solution. USB is only supported under Windows 98 and 2000.
- Infrared Network Communications at a peak rate of 4 Mbps with a properly equipped Docking Solution. Infrared is only supported under Windows 95.
- PCMCIA Type II 16 bit fixed wire network adapters.
- PCMCIA Type II 16 bit wireless network adapters

What PCMCIA fixed wire network solutions does WalkAbout provide?*

- Xircom RealPort 10/100 Ethernet & Modem   Type II device
- Xircom Credit Card 10/100 Ethernet   Type II device

What PCMCIA wireless network solutions does WalkAbout provide?*

- Proxim RangeLAN2 7401 2.4 GHz 1.6 Mbps Wireless LAN Adapter
- Lucent WaveLAN Orinoco 2.4 GHz 11 Mbps Wireless LAN Adapter
- Cisco Aironet 340/350 series Wireless LAN Adapters
- Sierra Wireless AirCard 300/350 series CDPD WAN Adapter

How can USB networking be utilized in the HammerHead?

- WalkAbout manufactures Desk Dock and Wall Rack solutions with USB network adapter that communicates to the HammerHead via the docking connection and connects to the network hub by way of standard network patch cabling.
- No network cable is connected directly to the HammerHead.
- USB functionality is only supported under Windows '98 & 2000.

* See www.walkabout-comp.com for modem and network solution updates.

What can Infrared be used for under Windows 98?

- Infrared printing is supported under Windows 98.

How can USB be utilized in the HammerHead?

- The HammerHead can be manufactured with a single USB connection on the side of the unit. This USB connection can be used for a wide variety of USB type devices.

What are WalkAbout Technical Support's hours of operation?

- WalkAbout staffs the Technical Support department Monday through Friday 8:00 AM to 8:00 PM Eastern Standard Time.

Warranty Information

The standard WalkAbout Computers Limited Warranty is valid for one year from the date of shipment. Extended warranty protection is available for up to three years.

WALKABOUT COMPUTERS
LIMITED WARRANTY

1. WHAT IS COVERED BY THIS WARRANTY

WalkAbout Computers, Inc. warrants for the duration of this limited warranty ("Warranty") that WalkAbout Computers' products, which are comprised of the HAMMERHEAD 3 family of products, all accessories to such Products manufactured or created by WalkAbout Computers ("Accessories"), and all replacement Products and Accessories repaired or replaced pursuant to the Warranty ("Replacement Products") are free from defects in material and workmanship under normal use and service subject to the terms and conditions set out below.

2. LENGTH OF WARRANTY

The Warranty is valid for a period of one (1) year for Products and Accessories, from the original date of sale from WalkAbout Computers and/or a WalkAbout Computers Authorized Reseller. During any such period, WalkAbout Computers will, at its option, either repair or replace with new or "like new" used parts of any of the Products, Accessories or Replacement Products sold by WalkAbout Computers which prove to be defective, provided that such Products or Accessories are returned in accordance with the terms of this Warranty.

3. TERMS AND CONDITIONS

(i)   This Warranty applies to the retail purchaser or lessee of Products and Accessories that have been properly installed, used and serviced according to the specifications provided and practiced by WalkAbout Computers.

(ii)   Damage due to abuse, accident, misuse, modification, misapplication, or damage as a result of shipment or improper service cancels all obligations of WalkAbout Computers under this Warranty.

(iii)   THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESSED OR IMPLIED, WARRANTIES OR CONDITIONS OF MERCHANTABLE QUALITY AND FITNESS FOR A PARTICULAR PURPOSE AND THOSE ARISING BY STATUTE OR OTHERWISE IN LAW OR FROM THE COURSE OF DEALING IN OR USAGE OF TRADE. SOME JURISDICTIONS DO NOT ALLOW THIS LIMITATION, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

(iv)   This Warranty and the statute of limitations shall run concurrently with any acceptance period. No suit, litigations, or action shall be brought based on the alleged breach of this Warranty or implied warranties more than two (2) years after the date of purchase in those jurisdictions allowing such a limitation, otherwise, no such action shall be brought more than two (2) years after the expiration of this Warranty.

4. HOW TO OBTAIN WARRANTY SERVICE

(i)   Immediately notify WalkAbout Computers or a WalkAbout Computers Authorized Reseller of problems encountered during the warranty period. As appropriate, WalkAbout Computers will provide a return merchandise authorization number (the "RMA" number) for the return of your Products, Accessories and/or Replacement Products.

(ii)   Label and/or include the following information with the Products/Accessories shipping container:
a)   your name, address and telephone number
b)   the RMA number received from WalkAbout Computers,
c)   a description of the problem, and
d)   proof of the date of original purchase from WalkAbout Computers, e.g., bill of sale or other evidence indicating the date of original purchase.

(iii)   Return the Products, Accessories and/or Replacement Products with the above mentioned information, transportation and insurance costs prepaid to WalkAbout Computers' warranty repair facility at the address noted below. WalkAbout Computers is not responsible for loss or damage, which may occur in transit.

(iv)   Once repaired or replaced under the terms specified in the Warranty, WalkAbout Computers will return ship, pre-paid, the Products, Accessories and/or Replacement Products to the originating party.

5. WHAT IS NOT COVERED

(i) This Warranty does not cover and WalkAbout Computers shall not be liable for any loss resulting from:

    a) parts and components of products, software and/or accessories not supplied by WalkAbout Computers,

    b) parts and components of Products, Accessories, and/or Replacement Products and software related thereto supplied, installed and/or distributed but not manufactured, created and/or assembled by WalkAbout Computers, for which WalkAbout Computers provides a warranty depot service only;

    c) damage to Products, Accessories and/or Replacement Parts caused by accident, fire, floods, or acts of God;

    d) improper use or care of the Products. Accessories and/or Replacement Parts or failure to use Product and/or Accessory as stipulated in the owners manual supplied by WalkAbout Computers;

    e) defects or damage caused by mishandling, misuse, improper testing or improper operation;

    f) defects or damage caused by adjustments, alterations or modifications of any kind;

    g) repair by someone other than WalkAbout Computers or a WalkAbout Computers Authorized Reseller for a defect or malfunction covered by this Warranty; and

    h) programming or service by anyone other than WalkAbout Computers or a WalkAbout Computers Authorized Reseller.

(ii) WalkAbout Computers is not responsible for and shall not be liable for transportation and insurance charges incurred in or damages resulting from transporting the Products, Accessories and/or Replacement Products to WalkAbout Computers for warranty service;

(iii) WalkAbout Computers shall not be responsible for consequential, special, incidental or contingent damages or expenses of any nature or kind whatsoever, including, without limitation, damages for any loss of revenue, profits, property, information or use of any kind, such damages and expenses are not recoverable under this Warranty, even if WalkAbout Computers has been notified of the possibility thereof. In any event, WalkAbout Computers' liability for any breach shall be limited to actual direct, provable damages not to exceed the amount originally paid to WalkAbout Computers for the Product and/or Accessories. These limitations apply to all causes of action, including breach of contract or negligence. Some jurisdictions do not allow the exclusion or limitation or certain remedies including damages, so the above exclusion or limitation may not apply to you.

(iv) WalkAbout Computers is not responsible for any third party software created for use in the integration and/or operation of any Products, Accessories and/or Replacement Products whether or not such third party software was installed by WalkAbout Computers. Maintenance and support service for third party software is the sole responsibility of the creator thereof.

6. ADDITIONAL INFORMATION

(i) The agents, dealers and employees of WalkAbout Computers are not authorized to make any modifications to this Warranty, or additional warranties binding on WalkAbout Computers about or for Products, Accessories and/or products sold or supplied by WalkAbout Computers. Additional statements, whether oral or written, except signed written statements from an officer of WalkAbout Computers, do not constitute warranties and should not be relied upon.

(ii) The Warranty gives you specific legal rights. You may also have other rights which vary from one jurisdiction to another.

(iii) For certain non-WalkAbout Computers products, product components, software and accessories supplied and/or distributed by WalkAbout Computers which are expressly warranted by the manufacturer of such products, WalkAbout Computers will provide a warranty depot service. Where applicable, information with respect to this service will be included.

7. COMPANY INFORMATION AND RETURN ADDRESS

All returns for warranty service should be made to:

WalkAbout Computers
1501 Northpoint Parkway, Suite 103
West Palm Beach, FL 33407
(888) 462-0300
(561) 712-0300

Customer Service

Toll-free technical support is available from 8:00 a.m. to 8:00 p.m. ET by calling (888) 872-1100. Please call this number to receive return merchandise authorization prior to returning any equipment for repairs of any type.

WALK**A**BOUT

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