



**MobileStor
PowerBook Internal Hard Drive
with Installation Kit**

Installation Guide

**PowerBook G3 (1998-2000),
PowerBook G4 15-inch (Titanium, Aluminum)**



<http://www.mcetech.com>

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Introduction

Thank you for purchasing a new MCE hard drive upgrade solution for your PowerBook! We're sure that your new high-capacity hard drive will enrich your PowerBook computing experience.



Important Note: MCE strongly recommends that the installation of the new drive be performed by a qualified technician. The installation procedure involves disassembling the computer and exposing its sensitive electronics. This is a delicate process and, if not performed properly, can cause damage to the computer and the drive or injury to the installer. These installation instructions are given for those who understand and accept these risks. MCE will not be liable for any damage done to the computer, the person installing the drive, or to the drive itself as a result of an improper installation.

The new hard drive comes formatted and initialized with a Macintosh driver, but requires the installation of appropriate Mac OS operating system software for use in the PowerBook. See the PowerBook User's Manual for Mac OS operating system installation procedures.

If any difficulty is encountered during the installation of the hard drive, you may receive free technical support by sending an email to support@mcetech.com.

Introduction to PowerBook G3 (1998) Installation

This chapter details the procedure for installing an MCE hard drive upgrade kit into a PowerBook G3 (1998 release; a.k.a. Black keyboard G3, Wall Street, Main Street, PDQ).



Note: This section pertains to the PowerBook G3 model that has a white Apple logo on the outside of the top cover and a multi-colored Apple logo below the display.

MCE strongly recommends that the installation be performed by a qualified technician. The installation procedure involves disassembling the PowerBook and exposing its sensitive electronics. This is a delicate process and, if not performed properly, could cause damage to the PowerBook. These installation instructions are given for those who understand these risks. If performed correctly, these instructions will guide an individual step-by-step through a successful installation of the new hard drive.

The new hard drive comes formatted and initialized with a Macintosh driver, but requires the installation of appropriate Mac OS operating system software for use in the PowerBook. See the PowerBook User's Manual for Mac OS operating system installation procedures.

If any difficulty is encountered during the installation of the hard drive, you may receive technical assistance by calling (949)458-0800 within the United States or Canada, or by sending email to support@mcetech.com.

Installation Checklist

In addition to the new hard drive, the following items should also be found in this PowerBook hard drive upgrade kit:

- (1) Disposable Grounding Wrist Strap
- (1) MCE Standard/Phillips Combo Screwdriver
- (1) Torx T8 Screwdriver

Installation Procedure



Caution: Electro-Static Discharge (ESD) can easily damage electronic components. Before proceeding, ensure that you are discharged of static electricity by touching a grounded metal object and by properly securing the provided Disposable Grounding Wrist Strap.

Step 1: Place your PowerBook on a hard, flat surface.

Step 2: If your PowerBook is on, turn it off. If the unit appears to be off, make sure that it is not in Sleep mode.

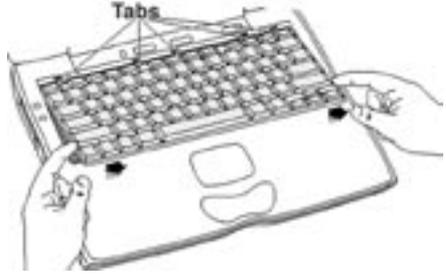
Step 3: Completely unplug all cables from the PowerBook and remove any batteries, media bay devices, and PC Card modules from it.

Step 4: Adjust the PowerBook's display so that it is at a 90-degree angle to its base.

Step 5: Reach into the expansion bays with each of your index fingers and locate the plastic keyboard release tabs on each side. They are ridged and are located on the underside of the palm rest. Slide the tabs toward the front of the computer until you see the bottom of the keyboard pop up slightly.

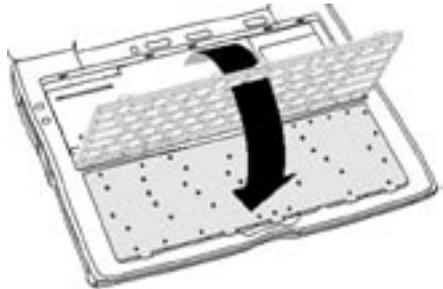


Step 6: Slide the keyboard about a half inch toward the front of the computer until the five metal tabs on the back of the keyboard clear the chassis.



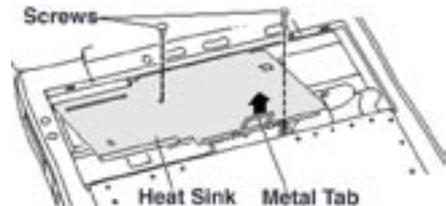
Caution: Do not put tension on or remove the ribbon cables connecting the keyboard to the logic board.

Step 7: Gently rotate the back of the keyboard towards the front of the system until it is resting upside down on the palm rest.

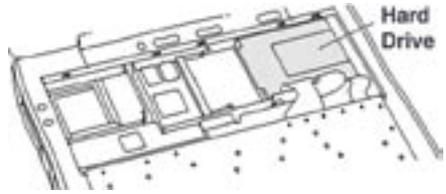


Caution: If the PowerBook was just in operation, the heat sink may be hot. If this is so, let it cool down.

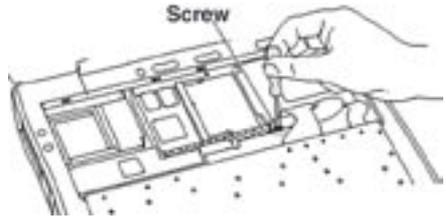
Step 8: Remove the two screws securing the internal heat sink in place. Lift the heat sink out of its compartment by gently but firmly pulling up on the small metal tab located on its front edge.



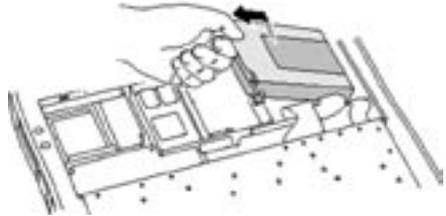
Step 9: Locate the original internal hard drive in the upper right corner of the system base unit.



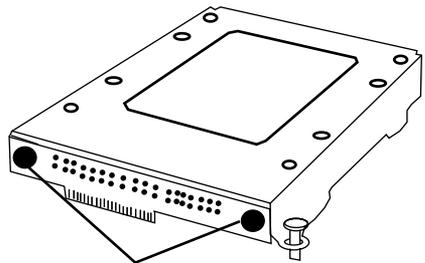
Step 10: Using the T8 Torx screwdriver, loosen the screw that secures the hard drive bracket in place, noting that the screw remains attached to the bracket - do not try to completely remove the screw from the bracket.



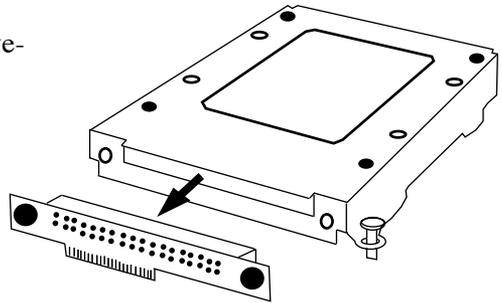
Step 11: Gently but firmly pull up on the tab located on the left side of the hard drive bracket to remove the bracket from its compartment in the computer's base unit.



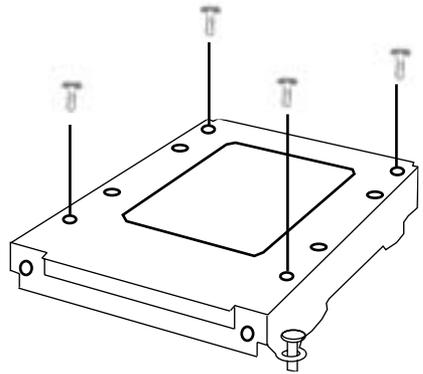
Step 12: Remove the two screws holding the the hard drive-to-logic board connector onto the bracket.



Step 13: Remove the hard drive-to-logic board connector board from the hard drive.



Step 14: Remove the four screws which hold the bracket onto the hard drive and then slip the hard drive out of the bracket.



• *Reverse the relevant previous steps to reassemble the computer.*

Congratulations on the installation of your new PowerBook hard drive upgrade!



Note: It is normal for usable hard drive capacities to be reduced by 5-7% upon initialization of the drive. Also, your drive ships preformatted and initialized, but does not include system software on it. If you have the appropriate hardware, such as the MCE Transport PC Card Hard Drive Kit or the MCE Transport Pro FireWire/USB Hard Drive Kit, you may transfer the data from the original internal hard drive to the new internal hard drive. If not, you may need to re-install your system software and other applications from the original disks or CD-ROM disc. Consult the manual(s) that came with your PowerBook for details.

Introduction to PowerBook G3 (1999) Installation

This chapter details the procedure for installing an MCE hard drive upgrade kit into a PowerBook G3 (1999 release; a.k.a. Bronze, Lombard).



Note: To distinguish this PowerBook G3 from other PowerBook G3 models, note that the computer has, among its other ports, two built-in USB ports () and one built-in SCSI port ()

MCE strongly recommends that the installation be performed by a qualified technician. The installation procedure involves disassembling the PowerBook and exposing its sensitive electronics. This is a delicate process and, if not performed properly, could cause damage to the PowerBook. These installation instructions are given for those who understand these risks. If performed correctly, these instructions will guide an individual step-by-step through a successful installation of the new hard drive.

The new hard drive comes formatted and initialized with a Macintosh driver, but requires the installation of appropriate Mac OS operating system software for use in the PowerBook. See the PowerBook User's Manual for Mac OS operating system installation procedures.

If any difficulty is encountered during the installation of the hard drive, you may receive technical assistance by calling (949)458-0800 within the United States or Canada, or by sending email to support@mcetech.com.

Installation Checklist

In addition to the new hard drive, the following items should also be found in this PowerBook hard drive upgrade kit:

- (1) Disposable Grounding Wrist Strap
- (1) MCE Standard/Phillips Combo Screwdriver
- (1) Torx T8 Screwdriver

Installation Procedure



Caution: Electro-Static Discharge (ESD) can easily damage electronic components. Before proceeding, ensure that you are discharged of static electricity by touching a grounded metal object and by properly securing the provided Disposable Grounding Wrist Strap.

Step 1: Place your PowerBook on a hard, flat surface.

Step 2: If your PowerBook is on, turn it off. If the unit appears to be off, make sure that it is not in Sleep mode.

Step 3: Adjust the PowerBook's display so that it is at a 90-degree angle to its base.

Step 4: Completely unplug all cables from the PowerBook and remove any batteries, media bay devices, and PC Card modules from it.

Step 5: If the keyboard is locked, unlock it by turning the keyboard lock screw counter-clockwise with a flat head screwdriver. Note that this keyboard locking screw is captured and should not be removed completely from its slot.



Step 6: Push the keyboard front of the PowerBook and gently lift so that the keyboard pops up from that end. Disengage the tabs on the bottom of the keyboard which secure it to the palm rest by holding the top corners of the keyboard and pulling them up and out.



Step 7: Carefully rotate the keyboard so that it lays face down on the PowerBook's palm rest, being careful not to pull on the ribbon cable attaching the keyboard to the logic board.

Step 8: Remove the heatsink by removing its three screws and pulling its handle up and out.



Note: The heat spreader on the top of the processor may come off and become attached to the bottom of the heat sink. Be sure that the heat spreader is properly placed on the processor before replacing the heat sink.

Step 9: Fold back the translucent plastic flap attached to the end of the hard drive and disconnect the hard drive connector from the logic board by very carefully prying it up with the end of a small



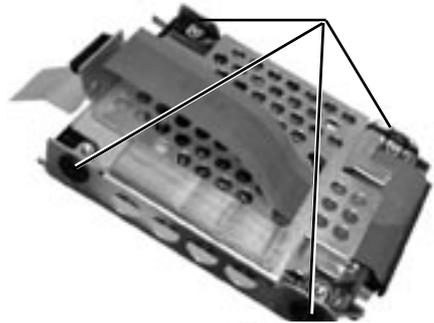
Step 10: Lift the plastic flap up to bring the end of the hard drive out of its compartment.



Step 11: Grasp the hard drive bracket by its sides and carefully pull the drive out of its compartment. You may have to gently but firmly jostle the drive from side to side to loosen it from its fasteners within the compartment.



Step 12: Remove the four screws from out of the black grommets at the side corners of the hard drive bracket using the Torx T8 driver.



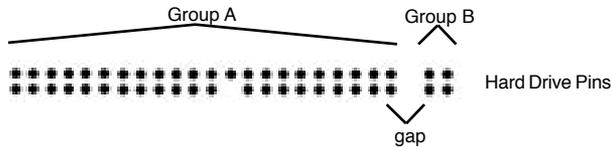
Step 13: Carefully lift the hard drive bracket away from the hard drive, routing the orange ribbon cable through the opening in the bracket.



Step 14: Carefully remove the ribbon cable connector from the hard drive.



Caution: Note that the ribbon cable connector does not attach to the “Group B” pins as indicated on the diagram below. The same is true when you re-attach the connector to the new drive.



- *Reverse the relevant previous steps to reassemble the computer.*

Congratulations on the installation of your new PowerBook hard drive upgrade!



Note: It is normal for usable hard drive capacities to be reduced by 5-7% upon initialization of the drive. Also, your drive ships preformatted and initialized, but does not include system software on it. If you have the appropriate hardware, such as the MCE Transport PC Card Hard Drive Kit or the MCE Transport Pro FireWire/USB Hard Drive Kit, you may transfer the data from the original internal hard drive to the new internal hard drive. If not, you may need to re-install your system software and other applications from the original disks or CD-ROM disc. Consult the manual(s) that came with your PowerBook for details.

Introduction to PowerBook 2000 Installation

This chapter details the procedure for installing an MCE hard drive upgrade kit into a PowerBook G3 (2000 release; a.k.a. FireWire, Pismo).



Note: To distinguish this PowerBook G3 from other PowerBook G3 models, note that this PowerBook has two built-in FireWire ports ()

MCE strongly recommends that the installation be performed by a qualified technician. The installation procedure involves disassembling the PowerBook and exposing its sensitive electronics. This is a delicate process and, if not performed properly, could cause damage to the PowerBook. These installation instructions are given for those who understand these risks. If performed correctly, these instructions will guide an individual step-by-step through a successful installation of the new hard drive.

The new hard drive comes formatted and initialized with a Macintosh driver, but requires the installation of appropriate Mac OS operating system software for use in the PowerBook. See the PowerBook User's Manual for Mac OS operating system installation procedures.

If any difficulty is encountered during the installation of the hard drive, you may receive technical assistance by calling (949)458-0800 within the United States or Canada, or by sending email to support@mcetech.com.

Installation Checklist

In addition to the new hard drive, the following items should also be found in the PowerBook hard drive upgrade kit:

- (1) Disposable Grounding Wrist Strap
- (1) MCE Standard/Phillips Combo Screwdriver
- (1) Torx T8 Screwdriver

Installation Procedure



Caution: Electro-Static Discharge (ESD) can easily damage electronic components. Before proceeding, ensure that you are discharged of static electricity by touching a grounded metal object and by properly securing the provided Disposable Grounding Wrist Strap.

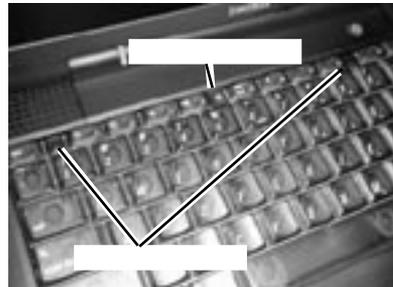
Step 1: Place your PowerBook on a hard, flat surface.

Step 2: If your PowerBook is on, turn it off. If the unit appears to be off, make sure that it is not in Sleep mode.

Step 3: Adjust the PowerBook's display so that it is tilted back as far as it will go.

Step 4: Completely unplug all cables from the PowerBook and remove any batteries, media bay devices, and PC Card modules from it.

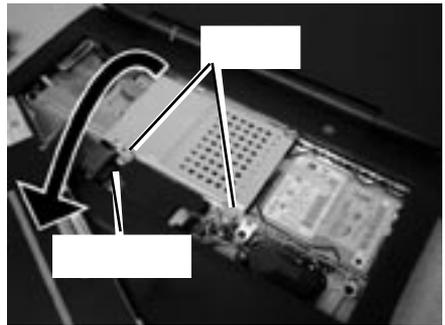
Step 5: If the keyboard is locked in place, unlock it by turning the keyboard lock screw counter-clockwise with a tiny flat head screwdriver. Note that this keyboard locking screw is captured and should not be removed from its slot.



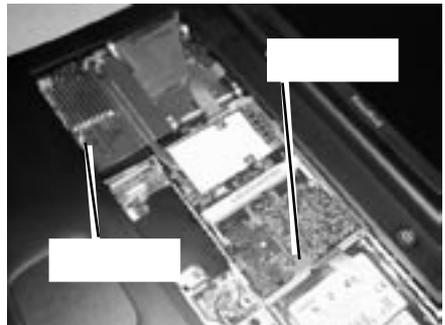
Step 6: Push the keyboard release tabs towards the front of the PowerBook and gently lift so that the keyboard pops up from that end. By holding the top corners of the keyboard and pulling them up and out, disengage the tabs on the bottom of the keyboard which secure it to the inside of the palm rest .



Step 7: Carefully rotate the keyboard so that it lays face down on the PowerBook's palm rest, being careful not to rip the ribbon cable attaching the keyboard to the logic board. Carefully disconnect the keyboard ribbon cable from the logic board.



Step 8: Remove the heat shield by removing its two screws and pulling it up and out. *Make sure it is not too hot before handling.*



Step 9: Remove the screw that secures the processor heat spreader in place.

Step 10: Remove the processor card from its logic board connector by pulling up on the its pull tab, which is the shorter of the two translucent tabs located to the left of the hard drive.





Note: When replacing the processor card, be sure to securely re-connect it to the logic board by carefully but firmly pressing down on its lower-right corner (if present, remove any memory card in the top memory slot before pressing, and re-attach it after processor card is seated securely).

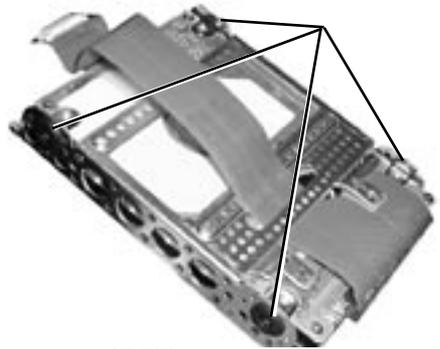
Step 11: Disconnect the hard drive ribbon connector from the logic board.

Step 12: Lift up the hard drive pull tab to bring the end of the hard drive out of its compartment.

Step 13: Grasp the hard drive bracket by its sides and carefully pull the drive out of its compartment. You may have to gently but firmly jostle the drive from side to side to loosen it from its fasteners within the compartment.

Step 14: Remove the four screws from out of the black grommets at the side corners of the hard drive bracket using the Torx T8 driver.

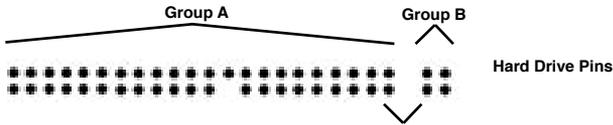
Step 15: Carefully lift the hard drive bracket away from the hard drive, routing the orange ribbon cable through the opening in the bracket.



Step 16: Carefully remove the ribbon cable connector from the hard drive.



Caution: Note that the ribbon cable connector does not attach to the “Group B” pins in the diagram on the next page. The same is true when you re-attach the connector to the new drive.



- *Reverse the relevant previous steps to reassemble the computer.*

Congratulations on the installation of your new PowerBook hard drive upgrade!



Note: It is normal for usable hard drive capacities to be reduced by 5-7% upon initialization of the drive. Also, your drive ships preformatted and initialized, but does not include system software on it. If you have the appropriate hardware, such as the MCE Transport PC Card Hard Drive Kit or the MCE Transport Pro FireWire/USB Hard Drive Kit, you may transfer the data from the original internal hard drive to the new internal hard drive. If not, you may need to re-install your system software and other applications from the original disks or CD-ROM disc. Consult the manual(s) that came with your PowerBook for

Introduction to PowerBook G4 Installation

This chapter details the procedure for installing an MCE hard drive upgrade kit into a PowerBook G4.

MCE strongly recommends that the installation be performed by a qualified technician. The installation procedure involves disassembling the PowerBook and exposing its sensitive electronics. This is a delicate process and, if not performed properly, could cause damage to the PowerBook. These installation instructions are given for those who understand these risks. If performed correctly, these instructions will guide an individual step-by-step through a successful installation of the new hard drive.

The new hard drive comes formatted and initialized with a Macintosh driver, but requires the installation of appropriate Mac OS operating system software for use in the PowerBook. See the PowerBook User's Manual for Mac OS operating system installation procedures.

If any difficulty is encountered during the installation of the hard drive, you may receive technical assistance by calling (949)458-0800 within the United States or Canada, or by sending email to support@mcetech.com.

Installation Checklist

In addition to the new hard drive, the following items should also be found in this PowerBook hard drive upgrade kit:

- (1) Disposable Grounding Wrist Strap
- (1) MCE Standard/Phillips Combo Screwdriver
- (1) Torx T8 Screwdriver

Installation Procedure



Caution: Electro-Static Discharge (ESD) can easily damage electronic components. Before proceeding, ensure that you are discharged of static electricity by touching a grounded metal object and by properly securing the provided Disposable Grounding Wrist Strap.

Step 1: Place your PowerBook on a hard, flat surface.

Step 2: If your PowerBook is on, turn it off. If the unit appears to be off, make sure that it is not in Sleep mode.

Step 3: Completely unplug all cable from the PowerBook and remove the battery and any PC Card module connected to it.



Step 4: Using the Phillips end of the MCE mini screwdriver, remove the eight screws from the base of the computer.



Step 5: Remove the base plate by sliding it towards the front of the computer about a half inch, releasing its inner latches, and then up and away from the main chassis.



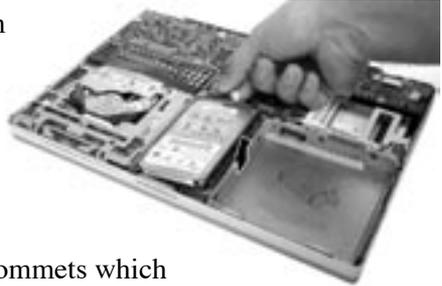
Step 6: Using the Torx T8 screwdriver, remove the two screws which secure the hard drive in place, located on the side wall of the battery bay.



Step 7: Disconnect the hard drive connector from the logic board.



Step 8: Remove the hard drive from its bay by first lifting the side of the hard drive from which the two screws were removed up and out, and then lifting the rest of the drive out of the bay.



Note: Two of the rubber grommets which secure and pad the drive may fall out of their eyelets on the side of the drive bay. If so, just put them back in place when you're ready to install the new drive in the bay.

Step 9: Remove the two screws remaining on the other side of the hard drive, and then remove the Mylar sheath. Note the orientation of the sheath in order to replace it properly.

Step 10: Carefully remove the hard drive connector from the drive's pins. You may need to *delicately* pry it using the flat end of the mini screwdriver.

Step 11: Reverse the preceding steps to install your new internal hard drive.

Congratulations on the installation of your new PowerBook hard drive upgrade!



Note: It is normal for usable hard drive capacities to be reduced by 5-7% upon initialization of the drive. Also, your drive ships preformatted and initialized, but does not include system software on it. If you have the appropriate hardware, such as the MCE Transport PC Card Hard Drive Kit or the MCE Transport Pro FireWire/USB Hard Drive Kit, you may transfer the data from the original internal hard drive to the new internal hard drive. If not, you may need to re-install your system software and other applications from the original disks or CD-ROM disc. Consult the manual(s) that came with your PowerBook for details.

Introduction to PowerBook G4 (FireWire 800) 15-inch Installation

This chapter details the procedure for installing an MCE hard drive upgrade into a PowerBook G4 (FireWire 800) 15-inch.



Important Note: MCE strongly recommends that the installation of the new drive be performed by a qualified technician. The installation procedure involves disassembling the computer and exposing its sensitive electronics. This is a delicate process and, if not performed properly, can cause damage to the computer and the drive or injury to the installer. These installation instructions are given for those who understand and accept these risks. MCE will not be liable for any damage done to the computer, the person installing the drive, or to the drive itself as a result of an improper installation.

The new hard drive comes formatted and initialized with a Macintosh driver, but requires the installation of appropriate Mac OS operating system software for use in the PowerBook. See the PowerBook User's Manual for Mac OS operating system installation procedures.

The installation kit includes several tools necessary for installing a hard drive into a PowerBook but does not contain some of the more specialized tools specific to the PowerBook G4 (FireWire 800) 15-inch installation, noted later in the Installation Checklist section.

If any difficulty is encountered during the installation of the hard drive, you may receive free technical support by sending an email to support@mcetech.com.

Installation Checklist

In addition to the new hard drive, the following items should also be found in this PowerBook hard drive upgrade kit:

- (1) Disposable Grounding Wrist Strap

- (1) MCE Standard/Phillips Combo Screwdriver
- (1) Torx T8 Screwdriver

You will also need the following tools to successfully install the drive:

- (1) 1.5mm Hex key (or Torx 6)
- (1) Pick tool with a ninety-degree bend at the end

Installation Procedure



Caution: Electro-Static Discharge (ESD) can easily damage electronic components. Before proceeding, ensure that you are discharged of static electricity by touching a grounded metal object and by properly securing the provided Disposable Grounding Wrist Strap.

Step 1: If your PowerBook is on or in Sleep mode, turn it off.

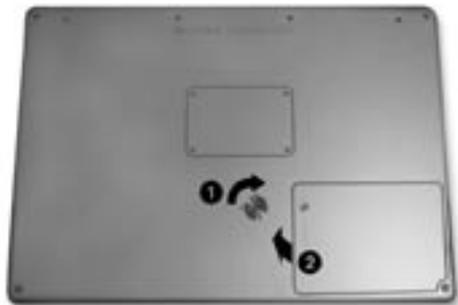


Caution: Always shut down the computer before opening it to avoid damaging its internal components or causing injury. After shutting down the computer, the internal components may be very hot. Let the computer cool down before continuing.

Step 2: Completely disconnect the power cord and all cables from the PowerBook.

Step 3: Place your PowerBook top down onto a soft cloth.

Step 4: Place a coin into the battery lock slot and twist it a quarter-turn clockwise. The edge of the battery closest to the battery lock will raise slightly. Remove the battery from its bay.



Step 5: Remove the four screws from the battery door and then remove the battery door and lay it aside.

Step 6: Remove the two screws inside the memory bay.

Step 7: Remove the two screws inside the battery bay.

Step 8: Remove the four screws along the back edge of the computer.



Step 9: Remove the three screws on each side of the computer starting with the screws closest to the back of the computer and working your way forward. **Note:** Be sure to replace these screws in this same order when closing the computer.



Step 10: Remove the two top screws on the back of the computer.



Step 11: Open the display and remove the two hex screws on the top rear corners, just above the computer's speaker grills using either a hex wrench or Torx 6 screwdriver.



Step 12: Pry the top part of the case from the bottom by running your fingernails or some other non-marking wedge along the seam that goes around the case, starting from the back and moving forward.



Important: There is a clip which secures the front of the top case to the bottom that must be released before the two halves will separate completely. The clip is behind the felt dust cover of the optical drive slot on the front of the computer, about an inch from the left edge of the slot (just behind the slit in the dust cover).



Step 13: Insert the pick tool into the optical drive slot behind the clip and carefully pull out to release the clip and the top case. You may need to carefully but firmly lift the front edge of the top cover to release it from the bottom case.



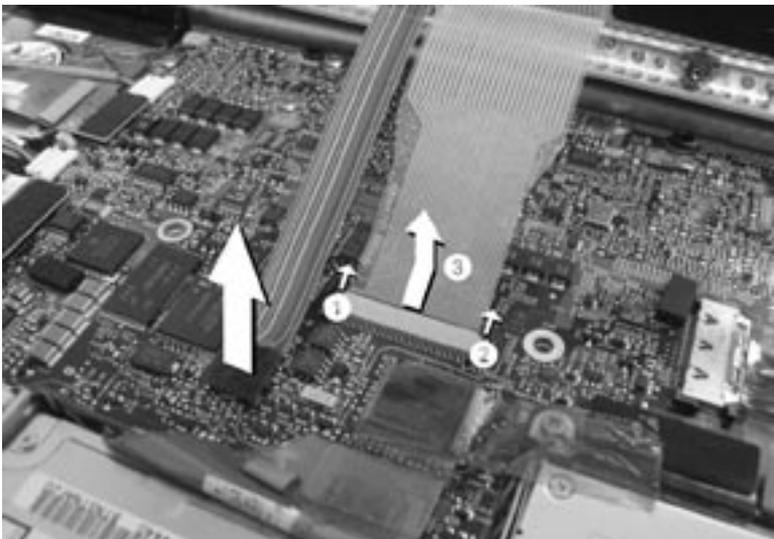
Step 14: Lift the front of the top case and gently lay it against the the display, careful not to strain the cables connected to the logic board underneath the top case.



Step 15: Disconnect the orange trackpad cable connector from the logic board by carefully prying it up with your fingernail.



Caution: The locking bar on the keyboard cable logic board connector is permanently attached and is not intended to separate from the connector. It is very fragile, so be extremely careful when handling it as breaking it will require replacing the entire logic board.



Step 16: Disconnect the keyboard cable from the logic board by carefully prying the locking bar loose on both sides of the cable and slipping the cable out from the connector.



Important: When reconnecting the keyboard cable, make sure that it is inserted into the logic board connector straight so as to ensure that the data lines in the cable line up with the appropriate paths on the connector.



Important: When reconnecting the keyboard cable, make sure that it is inserted into the logic board connector straight so as to ensure that the data paths in the cable line up with the appropriate points on the connector.

Step 17: Lift off the top case and carefully set it aside with the keyboard facing downward.

Step 18: Remove the two screws securing the bracket along the right edge of the hard drive.



Step 19: Lift the bracket out of its slot.

Step 20: Carefully peel back the orange tape covering the hard drive and its connector.



Step 21: Carefully disconnect the hard drive cable from the logic board by prying its connector upward using a fingernail.

Step 22: Remove the hard drive by carefully prying it up from the right side and lifting it out.



Step 23: Remove the logic board cable, plastic shield, rubber grommets, and side screws from the original internal hard drive and place them onto the new hard drive.



Step 24: Install the new hard drive into the PowerBook.

Step 25: Reverse the preceding steps to install your new internal hard drive.

Congratulations on the installation of your new PowerBook hard drive upgrade!



Note: It is normal for usable hard drive capacities to be reduced by 5-7% upon initialization of the drive. Also, your drive ships preformatted and initialized, but does not include system software on it. If you have the appropriate hardware, such as the MCE Transport Pro FireWire/USB Hard Drive Kit, you may transfer the data from the original internal hard drive to the new internal hard drive. If not, you may need to re-install your system software and other applications from the original disks or CD/DVD disc. Consult the manual(s) that came with your PowerBook for details.

Troubleshooting

This section offers general advice on common issues which arise during and after the installation of an MCE PowerBook internal hard drive upgrade kit. Also, keep in mind that MCE suggests using the latest version of Apple's Drive Setup utility to initialize, format and perform other hard drive functions for all MCE hard drive upgrade kits. This utility can be found on the CD-ROM disc of the latest release of Apple's Mac OS system software or at Apple's web site.

PowerBook will not start.

- Make sure that power is being supplied to the PowerBook by either its battery or its AC power adapter.
- Make sure that the battery is properly seated in its bay.
- If the battery needs recharging, plug the appropriate end of its AC adapter into a working outlet and the other end into the PowerBook. Let the battery charge for several minutes. The AC adapter should become warm after several minutes of being plugged in. If it is not, make sure that it is plugged in properly.
- If the AC adapter is plugged into a power strip or surge suppressor, make sure that this device is turned on.
- If you have an external keyboard or mouse attached, make sure that they are connected properly. (Note: Be sure that your PowerBook is off before connecting or disconnecting external keyboard or mouse.)
- Reset the PowerBook's Power Manager (ref. Apple Tech Info Library article #14449 at <http://til.info.apple.com/techinfo.nsf/artnum/n14449>).
- Re-do the installation, making sure that all recently installed hardware upgrades are securely seated and connected properly.

Disk icon with blinking question mark appears at startup.

- This generally indicates that the PowerBook cannot properly locate a volume from which it may load System software.
- Make sure that external peripherals are connected properly and are turned on.
- Make sure that any SCSI devices connected to the PowerBook do not have common ID numbers.
- Start the PowerBook with extensions turned off by pressing the Shift key on the PowerBook's keyboard while the PowerBook is starting up. If the

PowerBook now starts up, a software conflict is causing the condition. Determine which system components are conflicting and disable them.

- “Re-bless” the System Folder of the internal hard drive by booting from an external volume (CD-ROM, external hard drive, etc.) and double clicking on the System suitcase of the internal hard drive’s System Folder.
- Reset the PRAM by booting with the following keys depressed simultaneously: Command, Option, P, and R. After you hear the startup tone sound three more times, release these keys.
- Test and repair the internal hard drive by booting from an external volume and running the latest version of Apple’s Drive Setup utility program, found either on the CD-ROM of the latest release of Mac OS system software, or from Apple’s website.
- Re-do the installation, making sure that all recently installed hardware upgrades are securely seated and connected properly.
- Reinstall system software onto the internal hard drive.

A “Sad Mac” icon appears at startup.

- Make sure that external peripherals are connected properly and are turned on.
- Make sure that you are not trying to start the PowerBook from a volume (hard drive, CD-ROM disc, floppy disk, etc.) that does not have system software.
- Test and repair the internal hard drive by booting from an external volume and running the latest version of Apple’s Drive Setup utility program, found either on the CD-ROM of the latest release of Mac OS system software, or from Apple’s website.
- Re-do the installation, making sure that all internal parts, and especially their connectors, are securely seated and connected properly.
- Reinstall system software onto the internal hard drive.

PowerBook does not recognize the installed hard drive.

- Determine if the hard drive is spinning (you should be able to hear the drive first spin up during the boot process and then continue to spin while the computer is powered on).
- If the drive is not spinning, it is likely that either the drive itself or some other component or connector involved in the installation of the drive is not properly connected. Inspect all hardware involved in the installation of the drive to ensure that all connectors are secured properly.

- If the drive is spinning, do the following:
 - Boot from either a bootable CD or a bootable external drive and launch the most recent version of Apple's Drive Setup utility to see if the drive appears in the List of Drives window.
 - If the drive is listed, highlight the drive in the list and select the Mount Volumes (command-M) under the Functions menu.
 - If nothing happens, highlight the drive and select the Initialize button.
 - If the drive is not listed, the computer cannot properly communicate with the drive. Check to make sure that the drive is not misaligned on the PowerBook's internal hard drive connector such that it receives power, but cannot send or receive data properly.

If you have exhausted all of the troubleshooting recommendations outlined here and still have not resolved the problem with your new hard drive, you may receive technical assistance by calling (949)458-0800 or by sending an email to support@mcetech.com. Please provide the following information:

- Your name
- Invoice number
- Date of the invoice
- MCE part number
- PowerBook model
- Mac OS version number
- Description of the problem, including any relevant error messages

Since technical assistance representatives do not have access to invoice information, it is necessary that you have this information with you when contacting them.

Limited Warranty

This is your MCE Technologies, LLC (MCE) three year limited warranty. The original purchaser (Purchaser) must present a dated proof of purchase (Bill of Sale) to obtain warranty service.

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Non-defective purchases which are returned to MCE must be returned within thirty (30) days of purchase. For non-defective purchases which are returned or refused by the Purchaser, MCE will, at its discretion, issue a credit or refund for the purchase price of the goods, less all shipping charges incurred in the shipment and a restocking fee of no less than fifteen percent (15%) of the retail price of the goods.

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