Apple Technician Guide

iPad

iPad and iPad Wi-Fi + 3G

Updated: 2011-10-27

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iPad

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Manual Updates

26-27 October 2011

- Corrected broken links

24 October 2011

- Basics>Software Information: Added iOS 5 information and link.
- Troubleshooting>General Troubleshooting:
  - Added "Backup User Data" topic, use iCloud or to iTunes to backup
  - Inserted iPad Quick Service Guide (VMI) after the Visual Mechanical Inspection heading
  - Updated the Common Troubleshooting Procedures table: reordered Quick Fixes and created links to Quick Fix topics

07 December 2010

- Troubleshooting:
  - Added Input/Output Symptom Charts category
  - Moved iTunes/Sync Issues from Connectivity Symptom charts to Software Symptom Charts

30 November 2010

- Entire manual>Removed references and updated iPhone OS to iOS.

Basics

- Overview>Technical Resources: Added reference to iPad User Guide for iOS 4.2 Software
- Hardware Information>Physical Controls: Changed "Screen rotation lock" reference in graphic and table to "Mute button" and revised Mute button function in table.
- Software Information: Added new topic "iOS 4.2 Software Update" and supporting links.
- Overview>Sensors: Added topic "Screen Rotation Lock with iOS 4.2."
- Removed iTunes 9.1 references and updated to iTunes 10.1.

General Troubleshooting

- Sensors: Added topic "Screen Rotation Lock with iOS 4.2."
- Removed iTunes 9.1 references and updated to iTunes 10.1.
- Removed Audio and Headphone Symptoms from Connectivity chapter.
- Added Input/Output Symptom Chapter, added Audio and Headphone Symptoms.

Views

- External Views: Updated "External Buttons and Controls" graphic reference "B" to "Mute Button."

22 June 2010

- General Troubleshooting>Visual Mechanical Inspection> Excessive Damage or Disassembled Unit> Added damage "as result of altering the case" to the list of damages

not covered under warranty or eligible for OOW paid service; also added photo example of painted case
- General Troubleshooting>Visual Mechanical Inspection> Screen and Glass Inspection> Added link to cleaning guidelines in article "How to clean Mac products"

27 May 2010
- General Troubleshooting>Connectivity Symptom Chart> Updated symptom "Cannot Connect to Cellular Data Network on iPad Wi-Fi + 3G

18 May 2010
- Basics>Hardware Information> Added new topics: Liquid Contact Indicators, Micro-SIM Tray, and Removing the Micro-SIM card.
- Take Apart> Added procedures for: Micro-SIM Tray and Micro-SIM Card

06 May 2010
- General Troubleshooting>Visual Mechanical Inspection> Added photograph samples of cracked screens, water damage, dings, and scratches.

30 April 2010
- Basics>Hardware Information> Added new section "Micro-SIM Card."
- General Troubleshooting>Connectivity Symptom Chart> Added new symptom "Cannot Connect to Cellular Data Network on iPad Wi-Fi + 3G."
- General Troubleshooting>Visual Mechanical Inspection> Updated section to clarify procedures and policy.

08 April 2010
- General Troubleshooting>Visual Mechanical Inspection> Updated Screen and Glass Inspection section and added images of activated Liquid Contact Indicators.
- General Troubleshooting>Dents/Surface Damage Inspection>Added link to graphic of the dent tool (922-8022) and animated graphic of using the dent tool.

03 April 2010
- iPad Apple Technician Guide released

27 January 2010
- Product introduced

Feedback

We want your feedback to help improve this and future Technician Guides!

Please email any comments to: **smfeedback2@apple.com**

Apple Technician Guide

Basics

iPad

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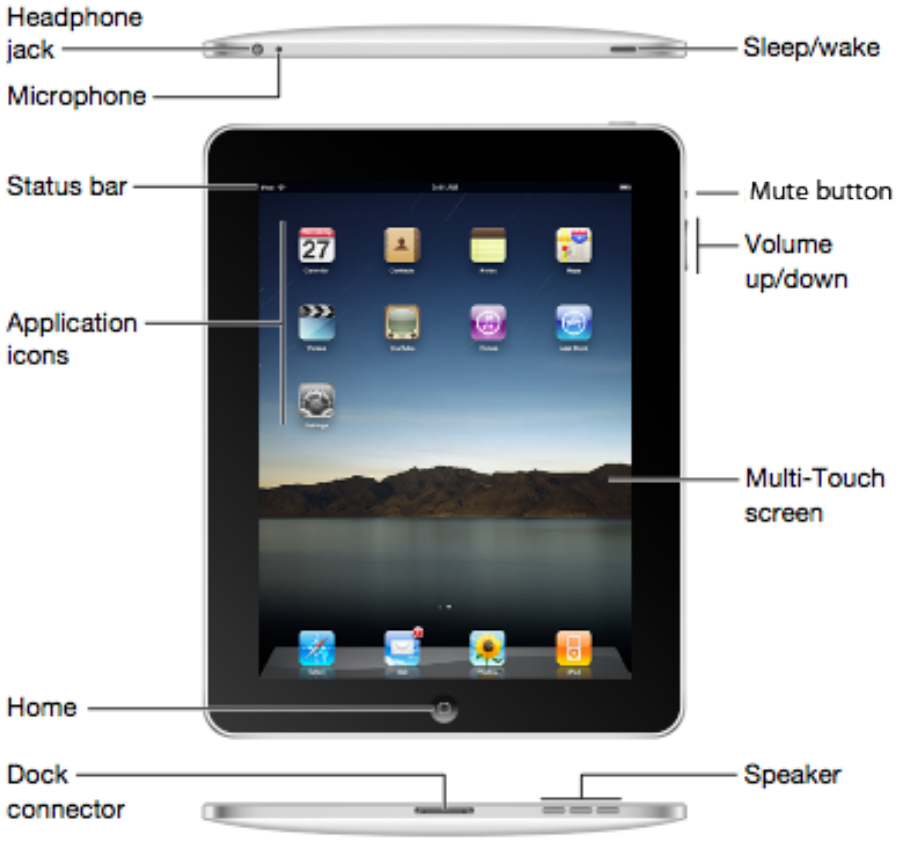
Overview



Introducing the iPad, a revolutionary device for browsing the web, reading and sending email, enjoying photos, watching videos, listening to music, playing games, reading e-books and much more.

Identifying Features

- a high-resolution, 9.7-inch LED-backlit IPS (in-plane switching) display
- Multi-Touch screen for the larger iPad surface
- built-in Wi-Fi 802.11n and Bluetooth 2.1 + EDR technology
- built-in 25-watt-hour rechargeable lithium-polymer battery
- up to 10 hours* of battery life on a single charge
- 3G cellular data access for iPad WiFi + 3G models
- powerful and efficient A4 chip designed by Apple
- Flash storage: 16GB, 32GB, 64GB
- 30-pin connector for docking and charging
- built-in speaker
- ultra thin (.5 inches/13.4mm)
- weight: 1.5 pounds/0.68 kg (Wi-Fi model) and 1.6 pounds/0.73 kg (Wi-Fi + 3G model)

* Battery results depend on settings, usage, and many other factors. Actual results may vary.

System Requirements

To use iPad, you need:

- Mac or a PC with a USB 2.0 port and one of the following operating systems:
  - Mac OS X version 10.5.8 or later
  - Windows 7, Windows Vista, or Windows XP Home or Professional with Service Pack 3 or later
- iTunes 10.1 or later, available at **www.apple.com/itunes/download**
- An Apple ID
- Broadband Internet access

iPad Technical Specifications

Refer to:

- iPad – Technical Specifications: **http://support.apple.com/kb/sp580**

Technical Resources

Other documents, procedures, and resources are needed and available from the following:

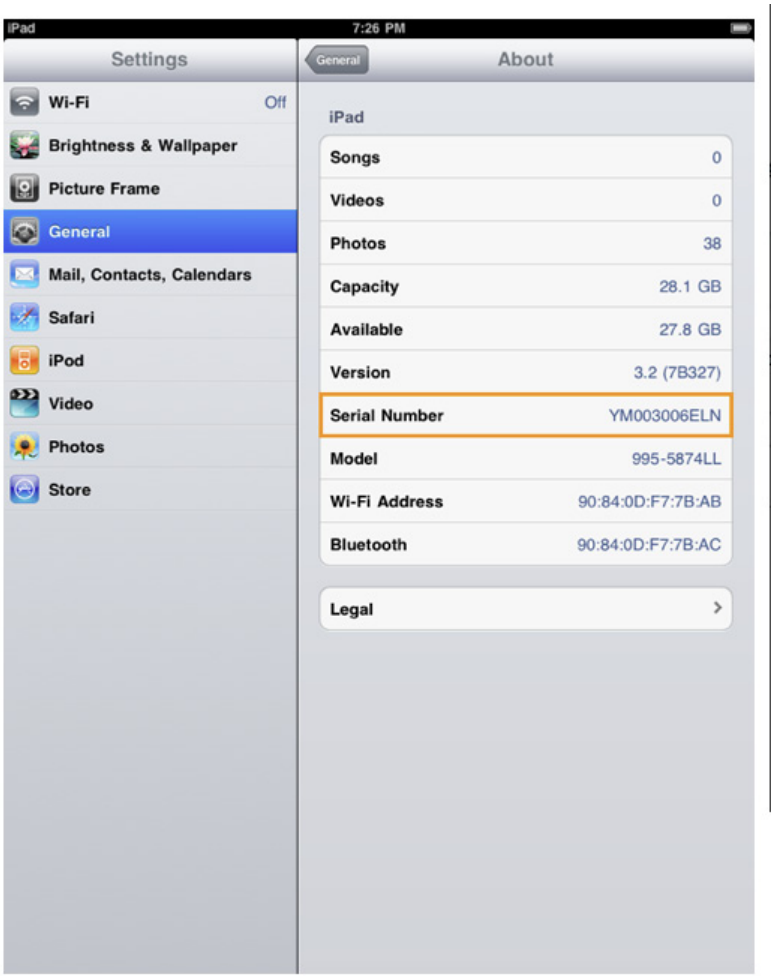
- **iPad Support Page**: Offers information, guides, assistants, and troubleshooting tips for iPad support topics.
  - **http://www.apple.com/support/ipad/**
- **iPad User Guide for iOS 5.0 Software**
  - Online at **http://manuals.info.apple.com/en_US/iPad_User_Guide.pdf**
- **iPad User Guide for iOS 4.2 Software**
  - Online at **http://manuals.info.apple.com/en_US/iPad_iOS4_User_Guide.pdf**
- **iPad User Guide for iOS 3.2**:
  - Online at **http://manuals.info.apple.com/en_US/ipad_ios3_user_guide.pdf**
- **Syncing iPad and other iTunes topics, refer to the iTunes "How-to" page:**
  - **http://www.apple.com/itunes/how-to**

Locating the Serial Number

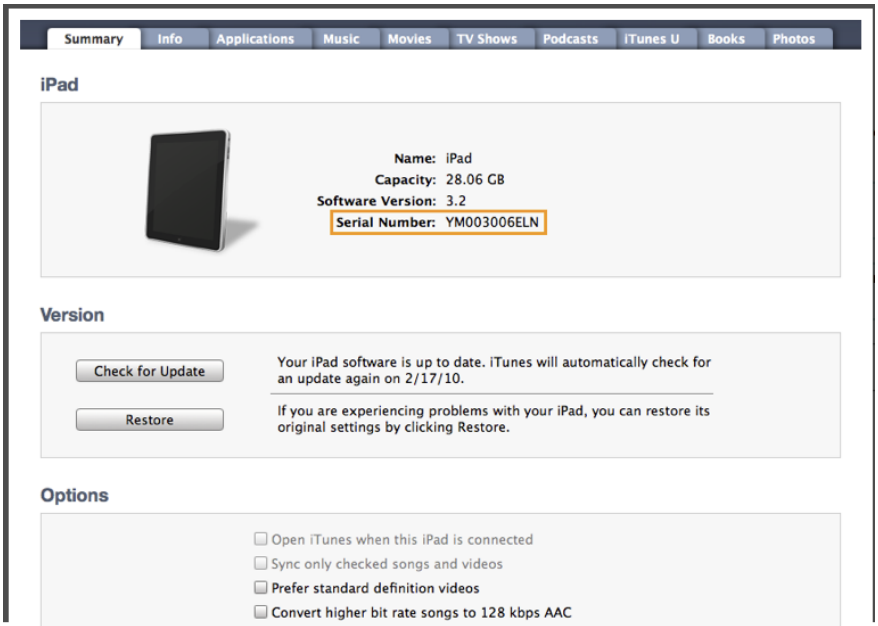
The serial number can be found on the iPad retail box, on the customer's original receipt and in the following locations:

On the back of the device

On iPad's "About" screen



On iTunes Summary panel



iPad Accessories

Included with iPad are:

- Dock Connector to USB Cable
- 10W USB Power Adapter
- SIM eject tool (Wi-Fi + 3G model only)
- Documentation

Additional Accessories (not included):

- iPad Case
- iPad Dock
- iPad Keyboard Dock (no pairing required)
- Camera Connection Kit (Camera Connector and SD Card Reader)
- iPad Dock Connector to VGA Adapter
- Apple In-Ear Headphones with Remote and Mic
- Apple Wireless Keyboard
- Apple Composite AV cable
- Apple Component AV cable

Accessory resources:

- To order the correct Apple accessory for iPad refer to this article: **http://store.apple.com/us/browse/home/shop_ipad/ipad_accessories**
- Refer to this article for information on using Bluetooth headsets and keyboards with iPad: **http://support.apple.com/kb/HT4111**

Hardware Information

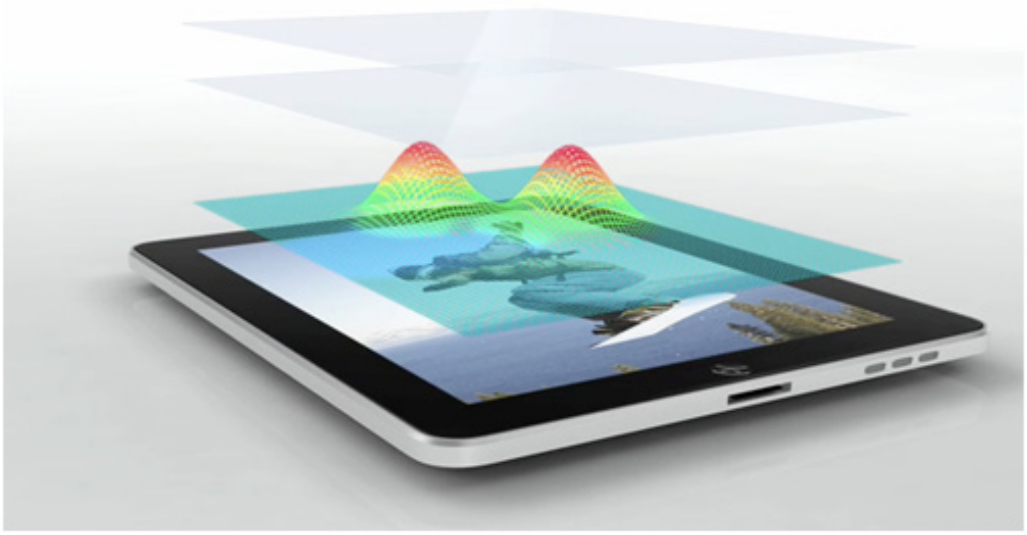
Physical Controls

Physical Controls	Function
Home button	Press the Home button to: • return to the main Home screen • wake iPad
Sleep/Wake button	Press the Sleep/Wake button to: • place iPad in standby mode and lock the Multi-Touch display • wake iPad, and then slide arrow to unlock iPad
Mute button	• In iOS 3.2 the Mute button was a screen rotation lock • Beginning with iOS 4.2, the Mute button functions as a silence switch for notifications and system sounds. It doesn't mute all audio (mainly system sounds, alerts, sound effects, etc). Music and video will still play in Apple apps (third party may vary).
Volume controls	• Press the controls to turn the iPad volume up or down. Adjusting the volume affects only the output currently in use. iPad uses icons to indicate which volume output is being adjusted.

Multi-Touch Display

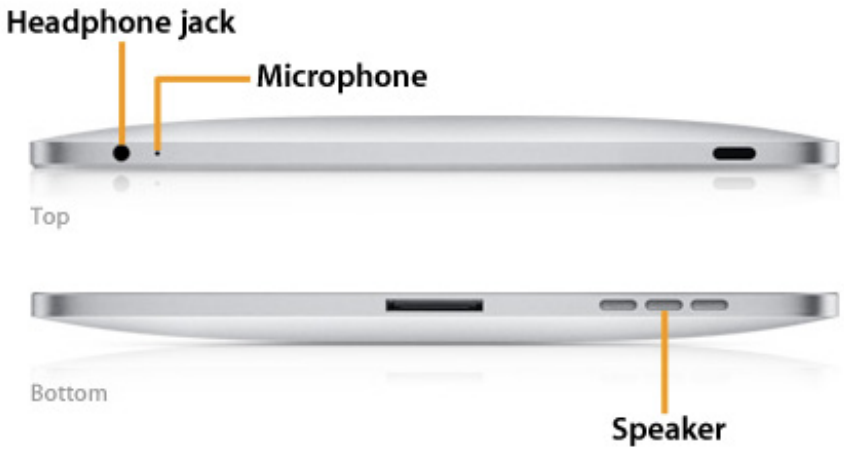
The Multi-Touch screen technology has been completely re-engineered for iPad to suit the larger display and includes:

- A high-resolution, 9.7-inch (diagonal) LED-backlit widescreen display with IPS technology.
  - 1024-by-768-pixel display resolution at 132 pixels per inch
  - IPS (in-plane switching) technology offers a wide, 178° viewing angle
- An extremely responsive Multi-Touch panel with over 1,000 sensors for Multi-Touch gesture precision.
- Fingerprint-resistant oleophobic coating that makes it easy to wipe oils from the display.



Audio

iPad has multiple audio input and output options, as described below:



InPut/Output	Function
Speaker	The speaker produces rich, full sound perfect for watching a movie or listening to music. It has three grilles to protect the built-in speaker.
Headphone jack and built-in microphone	The headphone jack supports compatible stereo headphones/headsets with microphone. **Note**: iPad does not ship with headphones

Wireless Connectivity

With iPad you can use the following wireless technologies and Location Services.

iPad Model	Wireless and Cellular

Wi-Fi	• Wi-Fi (802.11a/b/g/n)
	• Bluetooth 2.1 + EDR technology
	  • Provides short-range wireless connectivity with compatible accessories and devices such the Apple Wireless Keyboard, Bluetooth stereo headsets and headphones, and peer-to-peer connectivity for App Store applications.
	  • For information on Bluetooth supported profiles, refer to iPhone, iPad, iPod touch: supported Bluetooth profiles, http://support.apple.com/kb/HT3647

iPad Model	Wireless and Cellular
Wi-Fi + 3G model	• Wi-Fi (802.11a/b/g/n) • Bluetooth 2.1 + EDR technology • With an active, supported cellular data plan (sold separately) you can connect to the Internet via quad-band GSM/EDGE or tri-band UMTS/HSDPA • GPS capability • Applications use GPS, Wi-Fi, and cellular network signals—known collectively as Location Services—to locate the current position of your iPad

Sensors

Accelerometer Sensor with iOS 3.2

Detects iPad positioning, movement, and tilt, switches between portrait and landscape modes, and functions as the tilt controller for applications and games that utilize this hardware component.

Use the screen rotation lock switch on the right side of the iPad to lock the screen in portrait or landscape mode. If the display is locked, an indicator appears in the status bar (second graphic).

The lock indicator appears next to the battery indicator, in the top right corner. of the display.

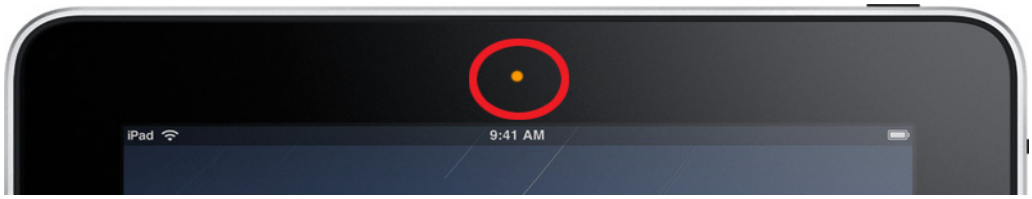
Screen Rotation Lock with iOS 4.2

Beginning with iOS 4.2, the screen rotation lock is enabled via the screen orientation lock control. Double-click the Home button, then place your finger on one of the icons at the bottom of the screen and swipe to the right. The screen orientation lock, brightness slider, and iPod controls appear.

For more information on enabling rotation lock, refer to **http://support.apple.com/kb/HT4085:** iPad: Understanding screen rotation lock.

Ambient Light Sensor

The ambient light sensor detects light levels at the current location and adjusts the brightness of the Multi-Touch display. The approximate location of the ambient light sensor is circled and marked in orange:



Troubleshooting Notes:

- Make sure the ambient light sensor is not being blocked or covered. Screen brightness can be affected by a screen protector, especially if it covers the ambient light sensor.
- The ambient light sensor can be defeated using the Settings application.
- The iBooks application includes a screen brightness slider that overrides the iPad screen brightness (but only when iBooks is running). **Note**: There is a slight delay of a few seconds before the screen adjusts to ambient light (this is by design, it is not intended to be instantaneous).
- Isolate applications that might modify the screen brightness on the iPad and if unsure what application might be the cause, **restore** the iPad to see if it fixes the problem (restoring the iPad will remove all 3rd party applications from the device and reset the unit back to factory default settings).

Liquid Contact Indicators

To help determine if an iPad has been in contact with liquid, two liquid contact indicators (LCIs) are installed on the iPad at the following locations:

- At the bottom of the headphone jack
- In the 30-pin connector port (requires holding the product at a 45 degree angle to view)

Use a lighted otoscope to look into the headphone jack and 30-pin connector slot for activated LCIs. They turn red on contact with liquid.

Refer to Kbase article **http://support.apple.com/kb/HT4086** for more information on liquid damage.

Micro-SIM Card

For cellular data, iPad WiFi + 3G uses a micro-SIM card. Changing cellular data carriers for an iPad WiFi + 3G requires changing the mico-SIM card.

Note: iPhone SIM cards are not compatible with iPad WiFi + 3G and are physically larger than iPad micro-SIM cards.

Micro-SIM Service Strategy

Micro-SIM cards are replaceable by the cellular carrier. If iPad WiFi + 3G requires a SIM replacement, refer the customer to the carrier.

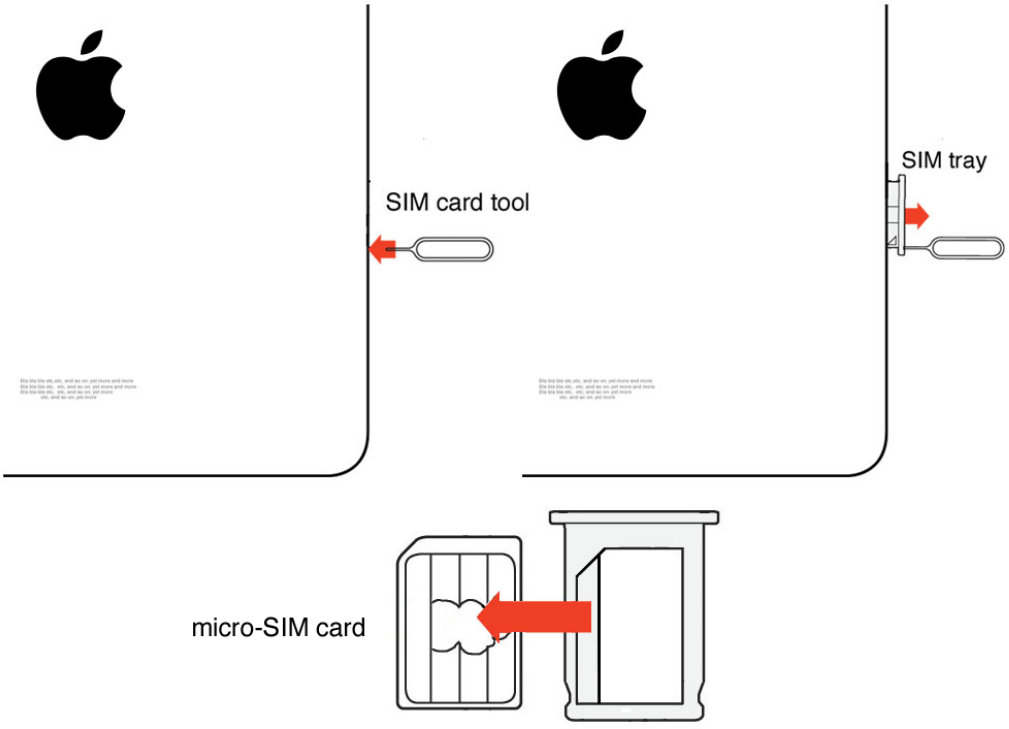
Micro-SIM Tray

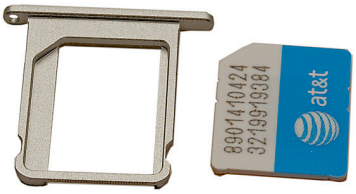
The SIM tray is available as a service part, 922-9553.

Removing the Micro-SIM Card

When troubleshooting iPad WiFi + 3G connectivity, you may need to remove the micro-SIM card to check for damage or other issues. To remove the card, do the following:

1. Insert the end of the SIM eject tool into the hole on the SIM tray.
2. Press firmly and push the tool straight in until the tray pops out. (If you don't have a SIM eject tool, you can use the end of a paper clip.)
3. Pull out the SIM tray and remove the micro-SIM card from the tray.





Software Information

iOS 5

The iOS 5 software update (released in October 2011) makes iPad even more powerful, innovative, and fun to use. For more iOS 5 information refer to **http://www.apple.com/ipad/ios/**

A few features of iOS 5 are:

- iMessage
- Notification Center
- Newstand
- Reminders
- Twitter
- Safari PC Free
- Mail
- Calendar
- Game Center
- Wi-Fi Sync
- AirPlay Mirroring
- Multitasking Gestures
- Accessibility

Important: Updating a device to iOS 5 requires you to restore the device using the latest version of iTunes. Before restoring the device, iTunes creates a backup, and then restores the device from that backup. Do not interrupt this process.

iOS 4.2

The iOS 4.2 software update (released in November 2010) for iPad added several new features for iPad including support for the following:

- Multitasking support for third-party apps
- Folders to better organize and access apps
- Mail improvements
- Game Center
- AirPrint
- AirPlay

For more information refer to:

- iOS: Using AirPlay: **http://support.apple.com/kb/HT4437**
- iOS: AirPrint 101: **http://support.apple.com/kb/HT4356**
- iOS 4: About multitasking: **http://support.apple.com/kb/HT4211**
- iPad User Guide for iOS 4.2 software at **http://manuals.info.apple.com/en_US/iPad_iOS4_User_Guide.pdf**

iOS 3.2

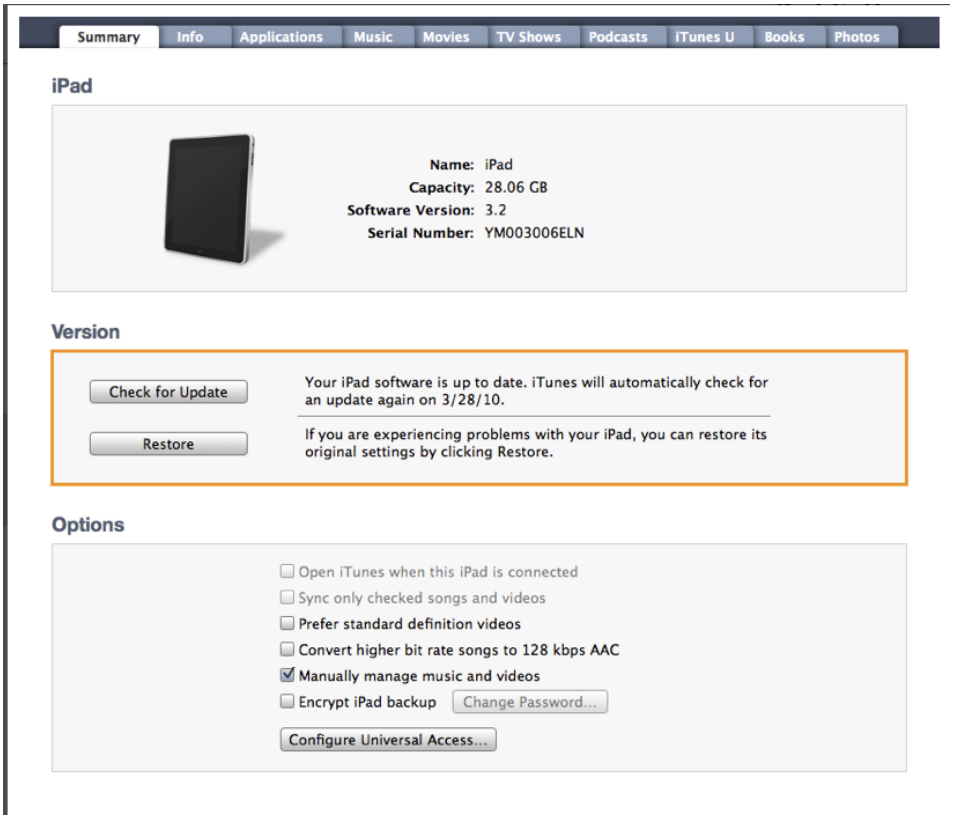
iPads built before the release of iOS 4.2 software update (released in November 2010) used iOS 3.2, designed specifically for iPad. iOS on iPad shared many similarities, such as basic settings, features, and functionality with iOS on iPhone and iPod touch.

- iOS 3.2 was designed to work only with iPad and was not supported on iPhone or iPod touch.
- iOS 3.2 original release date 2010-04-03

Update and Restore iOS on iPad

Use the iTunes Summary pane (graphic shows original software version 3.2) to check for software updates and restore iPad. Always update to the latest iOS.

- The update and restore process is identical with other iOS devices.



For the currently installed version of iOS, check the:

- **iTunes Summary pane**
- **iPad About screen**

Set up and Sync Content

Setting up iPad

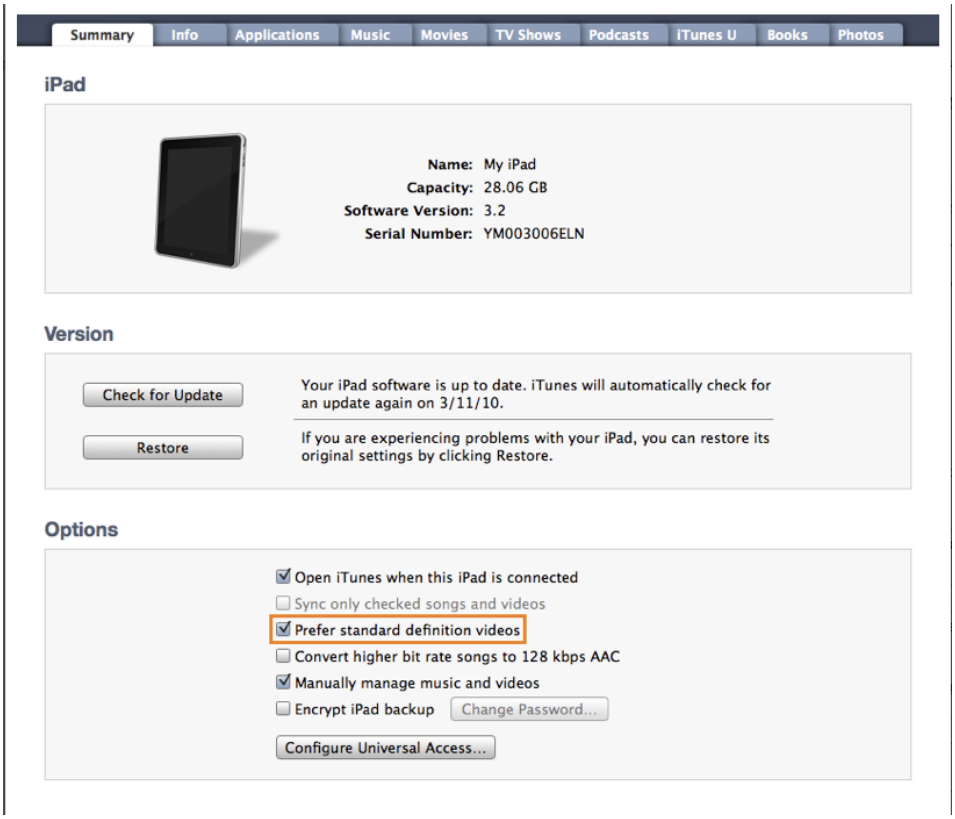
Before you can use iPad, you must set it up using iTunes:

1. Download and install iTunes 10.1 (or later) from http://www.itunes.com/download.
2. Connect the device to a USB 2.0 port on your Mac or PC using the Dock Connector to USB cable.
3. Complete the onscreen instructions until iTunes displays the setup dialog.
4. Check or uncheck the checkboxes to automatically sync songs, videos, applications, or photos to iPad, and then click Done.

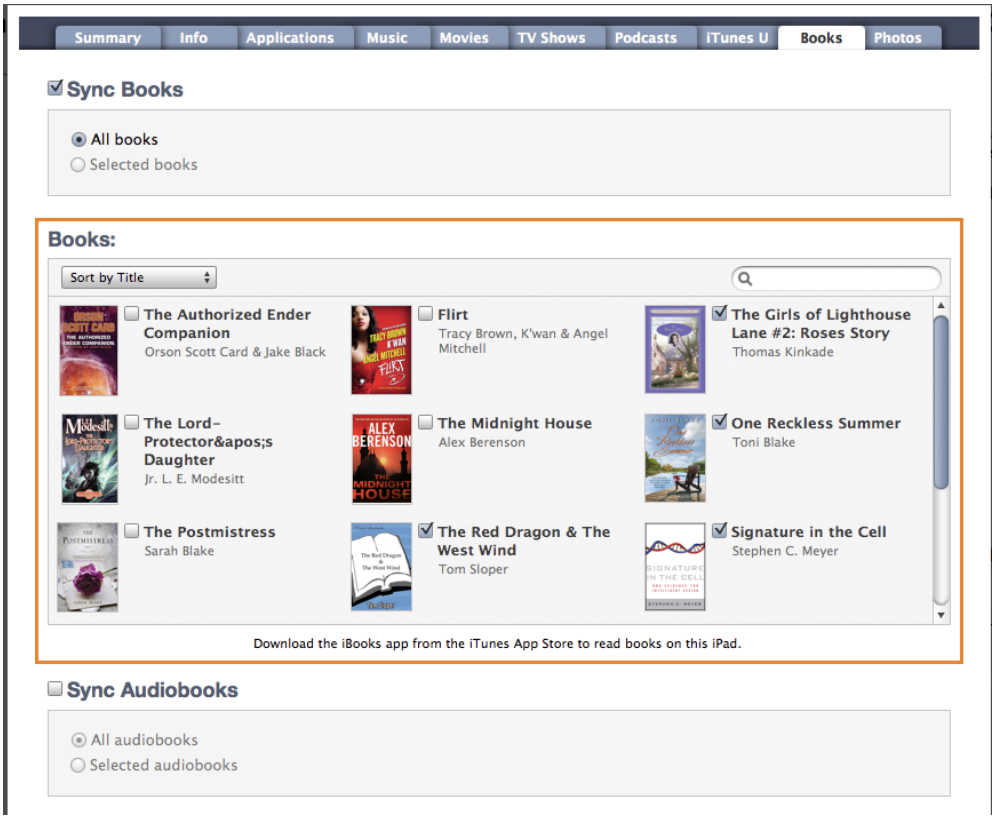
Syncing Content

Set up and sync content to iPad in iTunes the same way you would iPhone or iPod touch. The iTunes Summary (below) and Books pane (next page) contain some differences that are exclusive to iPad.

- iTunes Summary pane: Checking "Prefer standard definition videos" on the Summary pane chooses standard definition over high definition formats when syncing video content to iPad.



- Books pane: Use the Books section on the Books pane to select your syncing options for audio books, iBooks from the iBookstore, and e-books in ePub format downloaded from the Internet. **Note**: The books available for sale through the iBooks app will only be available for US customers or customers who have a US Store account.



For more information on syncing, refer to Kbase article: **Syncing iPad, iPhone, or iPod touch with iTunes.**

Apple Technician Guide

Troubleshooting

iPad

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General Troubleshooting

Tools

To use and test iPad, you will need the following:

- Visual mechanical inspection instructions: iPad Quick Service Guide
- Latest software updates installed:
  - Use iTunes to install the latest version of the iOS software
  - iTunes version 10.1 or later
- Wi-Fi network
- Dock
- 30-pin to USB cable (iPod/iPhone 30-pin USB cable is interchangeable)
- Keyboard Dock
- iPad 10W USB Power Adapter
- Camera Connection Kit (Camera Connector and SD Card Reader)
- SD (Secure Digital) memory card for testing purposes
- iPhone stereo headset
- Anti-static brush
- Anti-static tweezers
- Compressed-gas duster (difluoroethane only) with straw nozzle
- SIM eject tool or a paper clip, No. 1 size (not jumbo)
- Soft-bristle toothbrush
- Micro-fiber cloth
- Lighted otoscope or 4x lighted magnifying glass (to check for Liquid Contact Indicator activation, and for dirt, debris, or corrosion)
- Dent tool (922-8022)

Backup User Data

Before troubleshooting a user's device, verify that the data is backed up to iCloud or to iTunes on the user's computer.

Learn more about iCloud at **www.apple.com/icloud**.

Important: To avoid syncing a user's device to a test computer, go to iTunes > Preferences > Devices and select "Prevent iPods, iPhones, and iPads from syncing automatically".

Apple Support articles:

- **HT4137: How to back up your data and set up as a new device**
- **TS2529: iTunes: "Backup could not be saved on the computer" alert message**

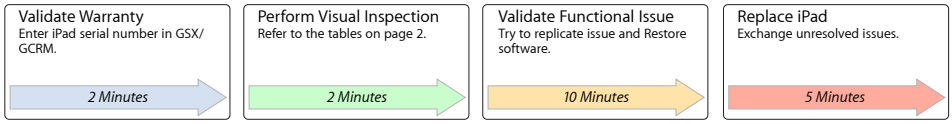
Visual Mechanical Inspection

Use the iPad Quick Service Guide to perform a visual mechanical inspection before troubleshooting to identify conditions and causes that may affect warranty coverage. The iPad Quick Service Guide is also available via GSX and AppleCare Service Source.

Quick Service Guide

iPad Service - Quick Service Guide

This guide should be followed to determine warranty validation and to identify conditions that may affect warranty coverage on the iPad. It is a four-step process that can be performed in approximately 20 minutes.



IMPORTANT: Advise the user that the troubleshooting and replacement process can take 20 minutes.

Step 1 - Validate Warranty

To determine if an iPad or Apple-branded accessory is eligible for warranty service, follow the on-screen instructions to enter the iPad serial number at: **www.apple.com/support/oss** or enter the serial number in GSX/GCRM . You can find the serial number etched onto the back of the iPad, on the customer's original Apple receipt (or 3rd party reseller receipt), on the iPad retail box, on the iPad "About" screen, and on the iTunes Summary panel.

Step 2 - Perform Visual Inspection

- Visually inspect the iPad using the Service Classification tables on page 2.
- Visual damage may affect warranty coverage and related charges.

Step 3 - Validate Functional Issue

If none of the issues described in the Visual Damages – Service Classification tables below exist, validate that the issue that prevents the device from operating according to specifications is present. Try to replicate the issue described by the user, then follow the steps below to restore* the iPad.

* **Important**: Restore deletes all media and data and resets all settings. Before performing the Restore process, make sure the customer has backed up iPad.

- Make sure the iPad has sufficient charge. If it does not power on, charge the iPad for at least 20 minutes with a 10W USB adapter.
- If the software restore is successful, attempt to repeat the functional issue again.

Step 4 - Replace iPad

- Replace the iPad ONLY if a functional issue still exists or if the software restore fails.

Important Information

- The iPad warranty covers failures caused solely by manufacturing defects, regardless of accidental or liquid damage.
- Cosmetic blemishes caused by use are NOT covered by the iPad warranty.
- Damage caused by material or foreign objects in the ports is NOT covered under the iPad warranty but may be eligible for Out-of-Warranty (OOW) Paid Service.
- An iPad that has failed due to liquid damage may be eligible for OOW Paid Service.
- Certain other damage is INELIGIBLE for OOW Paid Service, including catastrophic damage caused by abuse such as the device separating into multiple pieces and inoperability caused by unauthorized modifications.

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iPad Service - Quick Service Guide

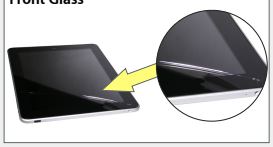
Visual Damage - Service Classification Tables

The tables below provide guidance on whether an iPad with certain physical visual damage qualifies for Covered or Paid Service.

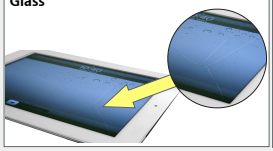
Minor

Covered Service: If the damage for which the customer is seeking service is described below, whether or not accidental or liquid damage is present, the repair is a Covered Service.

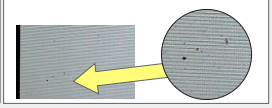
Single Fracture to Front Glass



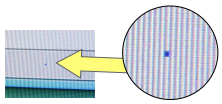
Hairline Two-Leg Fractures to Cover Glass



Debris Under Display Glass
Refer to the following article:
http://support.apple.com/kb/HT4044



Bright or Dead Pixels
Upon user claim only
Refer to the following article:
http://support.apple.com/kb/HT4044



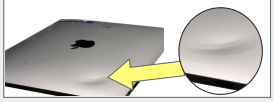
Repairable

Paid Service: If the damage for which the user is seeking service is described below, the repair is classified as out-of-warranty Paid Service.

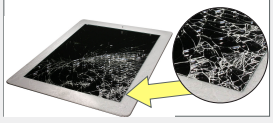
Liquid Damage

See "Liquid Damage" section on next page.

Dent(s) - Failure caused by accidental damage is not covered. Use tool to measure if a dent is in excess of 1mm.

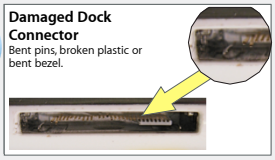


Multiple Fractures to Front Glass

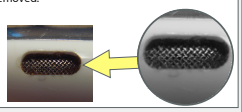


Any LCD Display Fractures
Under the glass cover

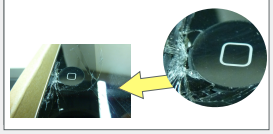
Damaged Dock Connector
Bent pins, broken plastic or bent bezel.



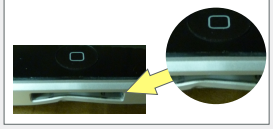
Damage to Speaker
Cannot be cleaned or foreign material that cannot be removed.



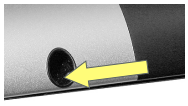
Extreme Abrasion, Button Damage from Drop or Puncture Holes



Bent Enclosures
Including minor separation of the enclosure or damage to the 30-pin dock connector housing.



Damage to Audio Port



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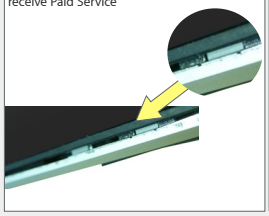
iPad Service - Quick Guide

Not Repairable

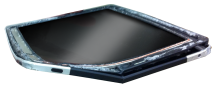
No Service: If the damage for which the user is seeking service is described below, the repair is ineligible for warranty coverage or out-of-warranty paid service.

Disassembled Unit or Missing Parts
Must be assembeled and a complete unit to receive Paid Service



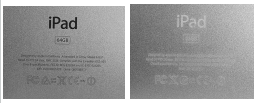
Catastrophic Damage or Unauthorized Modifications

Including units that are destroyed or forcibly separated into multiple pieces or inoperability caused by unauthorized modifications.



Non-OEM Parts, Products, or Rear Housing
Refer to the following article about modified devices:
http://support.apple.com/kb/HT4737

Authentic Etching | Counterfeit Etching



Liquid Damage

What to do if an LCI on an original iPad is triggered, or there are signs of liquid damage on the iPad 1 or iPad 2.

- If there is clear evidence of liquid present under the screen or coming from the audio port or dock connector, deny coverage. The device is ineligible for warranty coverage or out-of-warranty paid service.
- If there are other signs of liquid damage such as corrosion on ports, but there is no liquid present under the screen or coming out of the audio port or dock connector, the device may be eligible for out-of-warranty paid service.
- If the Liquid Contact Indicator on a customer's iPad 1 is active, ask the customer if the product has been in contact with liquid, and if so, did the issue with the product occur at or soon after the event.

  a. If the customer confirms that the issue with the product occurred at or soon after the event, the product is not eligible for warranty coverage or, (if applicable), AppleCare Protection Plan, but may be eligible for out-of-warranty paid service.

  b. If the customer denies that the product was in contact with liquid or denies that the issue with the product occurred at or soon after the event, the product may be eligible for warranty coverage if the functional issue is validated.

The iPad Warranty does not cover damage cause by contact with liquid. Refer to the following article:
http://support.apple.com/kb/HT4086

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Warranty Coverage

Apple covers defects in materials and workmanship on the iPad under normal use for a period of ONE (1) YEAR from the date of retail purchase by the original end-user purchaser.

Issues Not Covered Under the Warranty

This warranty does not apply to:

- Damage caused by use with non-Apple products
- Damage caused by accident, abuse, misuse, liquid, fire, earthquake or other external causes
- Damage caused by operating the product outside the permitted or intended uses described by Apple
- Damage caused by service (including upgrades and expansions) performed by anyone who is not a representative of Apple or an Apple Authorized Service Provider (AASP);
- A product or part that has been modified to alter functionality or capability without the written permission of Apple
- Consumable parts, such as batteries or protective coatings designed to diminish over time, unless damage has occurred due to a defect in materials or workmanship
- Cosmetic damage, including but not limited to scratches, dents and broken plastic on ports;
- An Apple serial number has been removed or defaced

Specific examples of failures or damage not covered under the warranty include:

- Damage caused by intentional separation, opening, or disassembly of enclosure
- Damage or operational failure caused by the removal and re-insertion of external and internal screws or parts
- Damage caused by punctures or holes in the outer case
- Cracked glass or LCD resulting from external cause (see "Service Classification Tables for Visual Damage")
- Damage or failure caused by external force
- Damage or failure caused by liquid
- Damage or failure caused by wet or dry chemicals (such as gasoline, acid, corrosives), dust, soil, or foreign matter
- Damage or failure caused by external heat or fire (internal heat damage is covered unless as a result of an external cause)
- Cosmetic damage from external causes, including dents, abrasions, scratches on case, discoloration, cracking, peeling of metal or plastic parts of enclosure

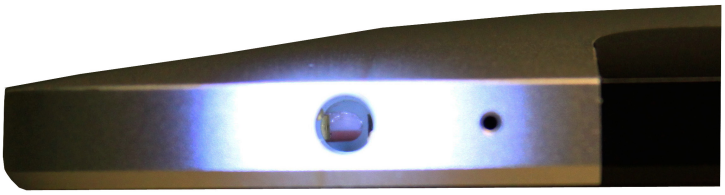
Liquid Damage

Damage caused by liquid contact is excluded from coverage under Apple's one-year limited warranty or AppleCare Protection Plan, but may be eligible for out-of-warranty paid service. To help determine whether an iPad that is affected by liquid contact is eligible for service, follow these guidelines:

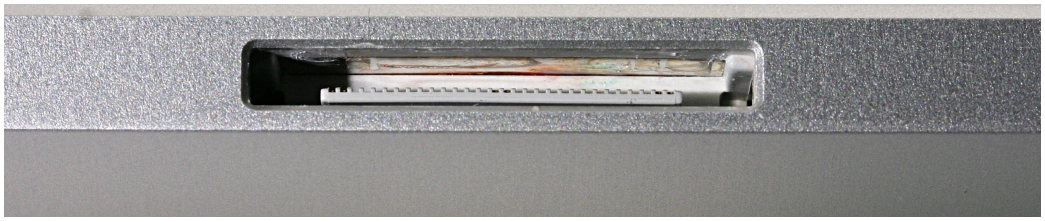
1. If there is clear evidence of liquid present under the screen or coming from the audio port or dock connector, deny coverage. The device is ineligible for warranty coverage or out-of-warranty paid service.
2. If there are other signs of liquid damage such as corrosion on ports, but there is no liquid present under the screen or coming out of the audio port or dock connector, the device may be eligible for out-of-warranty paid service.
3. If the Liquid Contact Indicator on a customer's iPad (original model) is active, ask the customer if the product has been in contact with liquid, and if so, did the issue with the product occur at or soon after the event.
    - If the customer confirms that the issue with the product occurred at or soon after the event, the product is not eligible for warranty coverage, but may be eligible for out-of-warranty paid service.
    - If the customer denies that the product was in contact with liquid or denies that the issue with the product occurred at or soon after the event, the product is eligible for warranty coverage.

Location of Liquid Contact Indicators

The LCIs on iPad are in two locations as illustrated below. You may need to use an otoscope or loupe and a bright light to view. You will notice a red patch at the bottom of the connector housing if the indicator has been triggered. The first LCI is at the bottom of the audio jack:



The second LCI is attached to the top of the dock connector. When triggered it will look like a thin red line in the gap at the back of the connector housing. The iPad screen should be facing up and held the iPad at a 45-degree angle to see it:



Debris in Ports

1. Use a lighted otoscope or magnifying glass to inspect the following for lint or other debris that may be causing issues:
   - Headset jack
   - Dock connector
   - Microphone and speaker
2. Remove debris, if possible, using an ESD brush.

If inspection indicates damage due to debris, follow these guidelines:

- Resulting non-operation, malfunction, damage, or cosmetic damage is NOT covered under warranty.
- Resulting non-catastrophic damage is eligible for OOW paid service.

Screen and Glass Inspection

Apple's policy is to replace products showing defects that are not the result of obvious external cause.

Note: If initial inspection shows streaks or smudges on the glass, clean it following guidelines in article HT3226, "**How to clean Mac products**."

Visually inspect for crack(s) on screen or glass, and follow these guidelines:

- A product exhibiting a single hairline crack without visible damage to the enclosure is eligible for covered (warranty or APP) repair service.
- A product exhibiting multiple cracks or a single crack with visible damage to the enclosure is eligible for OOW paid repair service.

Single hairline cracks with no enclosure damage:

Multiple cracks with dings on corners:

Dents/Surface Damage Inspection

Note: Failure caused by accidental damage is not covered. Use the dent tool to measure if a dent is in excess of 1mm.

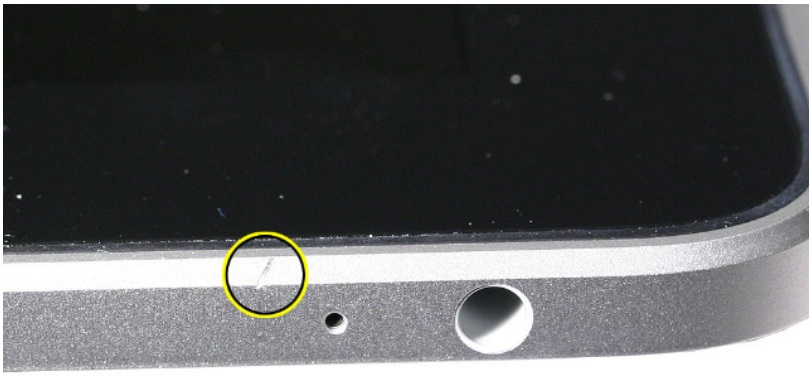
Use dent tool* (922-8022) to check and verify the surface enclosure for dent damage. For a single dent, place the dent tool with the 1mm needle in the dent hole. For units with more than one dent, where the 1mm needle will not lie flat in the deepest dent, use the 0.33mm needle on the second deepest dent.

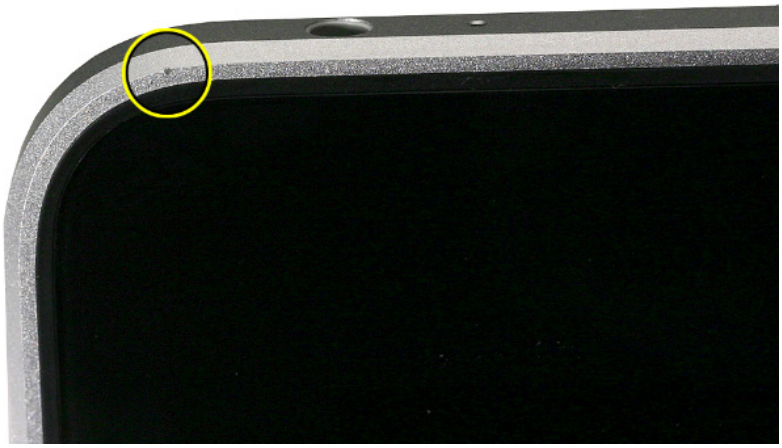
- If the tool lies flat on the surface (no rocking), do not exchange the product under warranty. The product may be eligible for OOW paid service.
- If the dent tool does not lie flat, process the warranty claim as normal, including, if necessary, replacing the product.

* For more information on the iPad/iPod dent inspection tool, refer to **Measurements** and **Demonstration of Tool**.

Surface dent, a result of obvious abuse:

Surface scratches:





Side or Corner Dents

- If the product has no more than one dent of 4mm length or less, process the warranty claim as normal, including, if necessary, replacing the product.
- Do not exchange under warranty a product with multiple dents, dents greater than 4mm in length, or a dent that causes the plastic ring around the glass surface to deform. The product may be eligible for OOW paid service.

Corner dent:

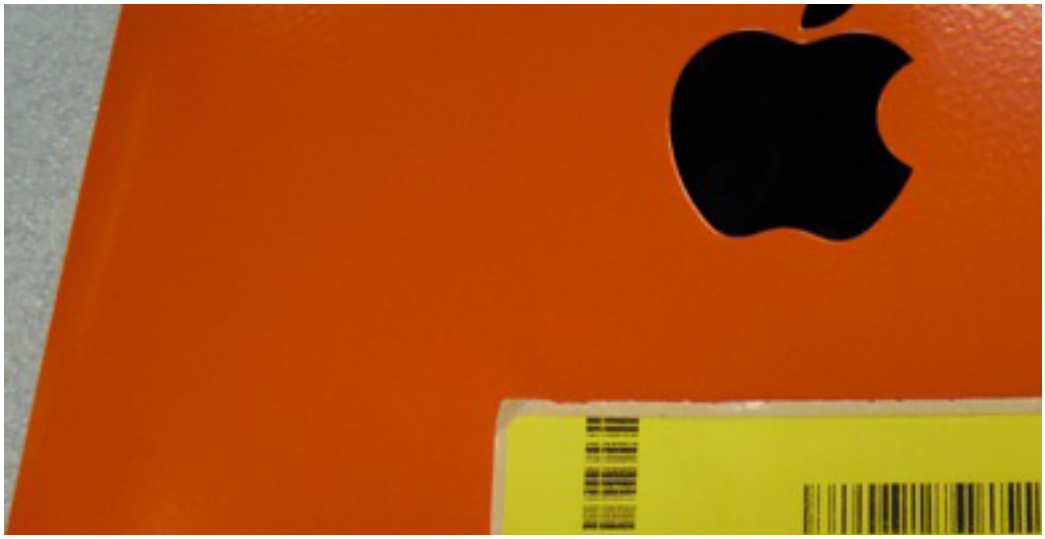
Corner dent resulting in multiple cracks:

Excessive Damage, Altered Case, or Disassembled Unit

Any product that exhibits excessive damage caused by abuse or has been damaged as a result of altering the case or disassembling the unit is not covered under warranty and is not eligible for OOW paid service.

Excessive damage:

Altered (painted) case:



Common Troubleshooting Procedures

When troubleshooting, attempt the quick fixes in the order listed. This table is a summary of these common procedures; see detailed information on the following pages.

IMPORTANT: These steps are not effective for all iPad issues. Apply only the steps necessary to isolate and resolve the issue.

Quick Fix	Action
Update to Latest Software	Make sure the iPad has the latest software updates. Use the latest version of iTunes (www.itunes.com/download) to check for the latest iOS. Connect the device to the computer, go to iTunes > (Device) > Summary and click the "Check for Update" button.
Charge Battery	Connect to a known-good power outlet using the included USB cable and 10W USB Power Adapter to charge the battery. Do not charge via the computer port. **Note**: The iPad 30-pin USB cable is interchangeable with the iPod/iPhone 30-pin USB cable.
Restart	A restart forces the device to close all open files and powers off all hardware components. 1. Press and hold the Sleep/Wake button until a red slider appears. 2. Slide your finger across the slider to turn off iPad. 3. To turn iPad on, press and hold the Sleep/Wake button until the Apple logo appears.
Reset	**Perform a reset ONLY if unable to do a restart.** Press and hold both the Sleep/Wake button and the Home button for at least ten seconds, until the Apple logo appears.
Force Quit an App	Press and hold the Sleep/Wake button on top of iPad for a few seconds until a red slider appears, then press and hold the Home button until the app quits.
Erase All Content and Settings[1]	Erases all user content and settings. From the Home screen choose Settings > General > Reset > Erase All Content and Settings. If possible, try this before a Restore since it is much faster.
Restore[1]	Erases all software and data, and then installs a fresh copy of iOS. Connect the device to the computer, go to iTunes > (Device) > Summary and click the "Restore" button.
Recovery Mode Restore[1]	Recovery mode loads only the firmware drivers necessary for iTunes to recognize the device. See See instructions on the following pages.
Device Firmware Update (DFU) Restore[1]	Device Firmware Update allows you to perform a restore when **all** other attempts to restore the device fail. See instructions on the following pages.

[1]WARNING: This will delete all user data and settings on the device. A backup should be done prior, if saving content is important to the user.

Charge Battery

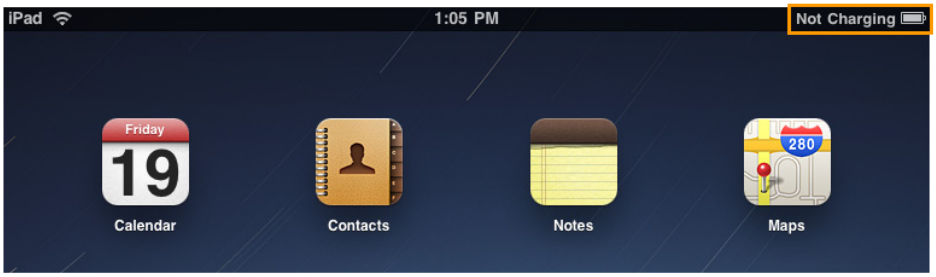
The iPad must have a sufficient battery charge to proceed with troubleshooting. A low battery condition can be the cause of many issues.

If the iPad has any of the following symptoms, it should be connected to an Apple USB Power Adapter to charge for up to 10 minutes:

- will not power on
- black screen
- shows the "battery trap" image (left)
- low battery charge

IMPORTANT: Only use a known good 10W USB Power Adapter when charging iPad from a power outlet. While the Apple USB Power Adapter or iPod USB Power Adapter may appear to be compatible, their power output is not sufficient to charge the device. **Note**: The iPad 30-pin USB cable is interchangeable with the iPod/iPhone 30-pin USB cable.

Do not charge iPad with the computer port. If iPad is connected to a source that does not provide enough power to sufficiently charge the device, the notification "Not charging" appears next to the battery indicator in the status bar (top right corner).
Refer to the following article for more information on charging the iPad battery:
http://www.apple.com/batteries/ipad.html



If either of these screens are present, keep iPad connected so it continues charging.

Restart

A restart forces the device to close all open files and powers off all hardware components. And, a restart safely closes active applications and processes, preserving any data in the process.

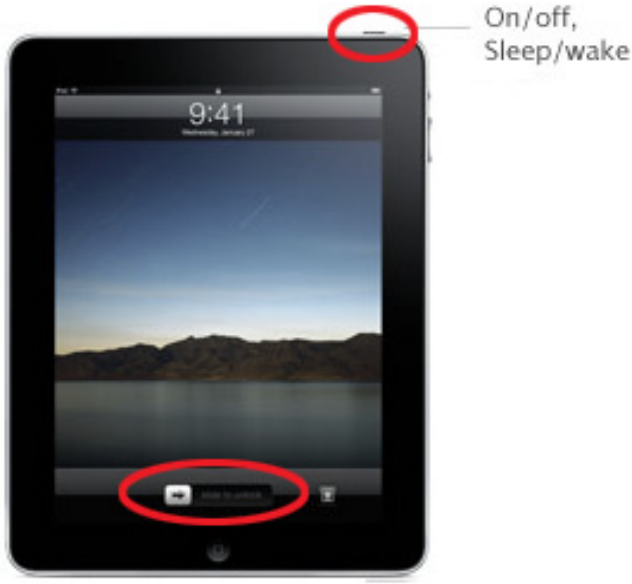
A restart can quickly resolve a wide range of issues, including:

- Apps unexpectedly quit.
- Battery life is shorter than expected.
- Hardware is not performing as expected.
- Interface or apps are slow to respond.
- iTunes does not recognize or sync with the device.

Procedure:

1. Press and hold the Sleep/Wake button until a red slider appears.
2. Slide your finger across the slider to turn off iPad.
3. To turn iPad on, press and hold the Sleep/Wake button until the Apple logo appears.

Note: If you cannot restart the device because it is unresponsive, a reset, is an appropriate troubleshooting step.



Reset

If the device is unresponsive and restart does not work, the next option is to reset it.

IMPORTANT: Perform a reset ONLY if unable to do a restart.

Key Points:

- Reset only when you can't restart the device normally.
- A reset removes all power for a fraction of a second to power off the device.
- A reset does not close open files or save data before the device powers off.
- A reset can potentially cause file or operating system damage, requiring a restore.

Procedure:

1. Press and hold both the Sleep/Wake button and the Home button for at least ten seconds, until the Apple logo appears.

Force Quit an App

This procedure forces an app to quit that is not responding to input or doesn't perform as expected. This is a good **first** troubleshooting step.

Procedure:

1. From the Home screen, double-click the Home button to display recently used apps.
2. Tap and hold the app until a red minus appears. Tap the red minus to quit the app.
3. Tap on the Home screen to continue.

Also refer to the following Apple Support articles:

- **TS1702: iOS: Troubleshooting applications purchased from the App Store**
- **HT4211: iOS 4: Understanding multitasking**

Erase All Content and Settings

Erase is a quick way to get back to factory settings. It will delete all user content and settings, but it does not reinstall iOS like a restore will do.

WARNING: This will delete all user data and settings on the device.

Procedure:

1. From the Home screen choose Settings > General > Reset > Erase All Content and Settings.

   Also see Apple Support article **HT2110: iOS: Understanding 'Erase All Content and Settings'.**

If Erase All Content and Settings does not resolve an issue, proceed to do a Restore (see next page).

Restore

A restore completely erases the device and reinstalls a fresh copy of iOS.

WARNING: This will delete all user data and settings on the device.

Key Points

- A restore erases all user content, settings, and iOS files, and then reinstalls only iOS.
- A restore is time-consuming, especially if you have to download the restore package.
- If iTunes displays an alert with an error code, see Apple Support articles **TS3694: iTunes: Specific update-and-restore error messages and advanced troubleshooting** and **TS1275: iOS: Resolving update and restore alert messages** before continuing.
- When the restore is complete, test the device before restoring a backup or syncing content.
- **Note**: Do not set up as a new device, as this can erase previous backups. Copy or rename the backup folder before proceeding; location of this folder is listed in Apple Support article **HT1414: iTunes: Backing up, updating, and restoring your iPhone, iPad, or iPod touch software**.

Procedure:

1. Connect iPad to a computer running the latest version of iTunes.
2. In the left column under Devices, click on the iPad name, then go to the Summary panel and click the Restore button.

Recovery Mode Restore

If iTunes cannot detect the device, or a specific restore error appears, check cable connections. If the issue persists, consider forcing the device into recovery mode.

WARNING: This will delete all user data and settings on the device.

If you cannot restore a device, even when using recovery mode, service or replacement may be the appropriate option.

Key Points

- Recovery mode loads only the firmware drivers necessary for iTunes to recognize the device.
- To force recovery mode, power off the device, and then connect it to a USB port on the computer while holding down the Home button.
- If the device does not power off, try a **Reset** to power it off.
- If iTunes displays an alert with an error code, see Apple Support articles **TS3694: iTunes: Specific update-and-restore error messages and advanced troubleshooting** and **TS1275: iOS: Resolving update and restore alert messages**.

Note: In certain situations, an device will automatically go into recovery mode after an update or restore issue. If the device is already in recovery mode, attempt to restore using iTunes.

Procedure:

Use the following steps to place a device into recovery mode. If the device is already in recovery mode, start at step 6.

1. Disconnect the USB Cable from the iPad, but leave the other end of the cable connected to the computer's USB port.
2. Turn off the device: Press and hold the Sleep/Wake button for a few seconds until the red slider appears, then slide the slider. Wait for the device to turn off.
   - If you cannot turn off the device using the slider, perform a Reset: press and hold the Sleep/Wake button and Home button at the same time. When the iPad turns off, release the buttons. Press and hold the Home button while reconnecting the USB cable to the iPad. Continue holding the Home button.

3. While pressing and holding the Home button, reconnect the USB cable to the device. When you reconnect the USB cable, the iPad should power on.
   Note: If you see the "battery trap" image at left, let the device charge for at least 10 minutes to ensure the battery has some charge, and then repeat step 2.

4. Continue holding the Home button until you see the "Connect to iTunes" screen at left. When this screen appears you can release the Home button:
5. If necessary, open iTunes. You should see the following "recovery mode" alert:

6. Use iTunes to restore iPad.

IIf you don't see the "Connect to iTunes" screen, try these steps again. If you see the "Connect to iTunes" screen but the device does not appear in iTunes, refer to Apple Support articles:

- **TS1591: iOS: Device not recognized in iTunes for Mac OS X**
- **TS1538: iOS: Device not recognized in iTunes for Windows**

If you decide not to do a restore, you may be able to escape by resetting the device.

DFU Restore

Device Firmware Update (DFU) Restore allows you to perform a restore when **all** other attempts to restore the device fail. **DFU Restore is only necessary if:**

- the device won't turn on
- the device won't go into recovery mode
- the device won't charge

WARNING: This will delete all user data and settings on the device.

Procedure:

Timing is critical--use a watch to time the steps below!

1. Charge the device for at least **5 minutes**, then connect to iTunes. If the device is not detected, open iTunes and move to step 2.
2. Press **Home + Power (Sleep/Wake) button**s together and hold down for **8 seconds** and then release the On/off button.
3. Continue to press the **Home** button until you see the "Recovery Mode" message in iTunes, which may take up to **30 seconds.**

Note: In DFU Mode the device's **screen is blank**.

If you did not get the "Recovery Mode" message in iTunes or the device's screen is not blank/black, repeat **all** steps paying careful attention to your timing.

If you decide not to do a restore, you may be able to escape by resetting the device.

Sensors

Accelerometer Sensor with iOS 3.2

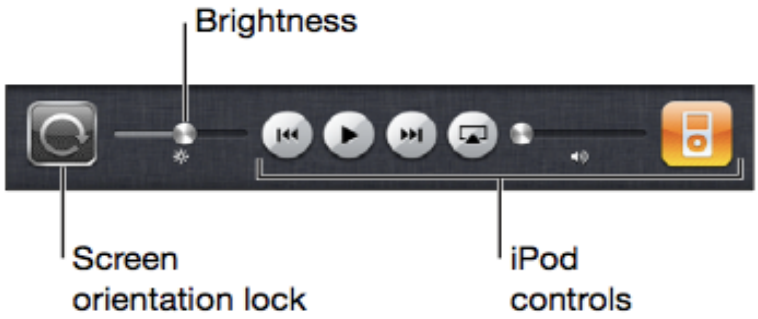
Detects iPad positioning, movement, and tilt, switches between portrait and landscape modes, and functions as the tilt controller for applications and games that utilize this hardware component.

Use the screen rotation lock switch on the right side of the iPad to lock the screen in portrait or landscape mode. If the display is locked, an indicator appears in the status bar (second graphic).

The lock indicator appears next to the battery indicator, in the top right corner of the display.

Screen Rotation Lock with iOS 4.2

Beginning with iOS 4.2, the screen rotation lock is enabled via the screen orientation lock control. Double-click the Home button, then flick the bottom of the screen from left to right. The screen orientation lock, brightness slider, and iPod controls appear.

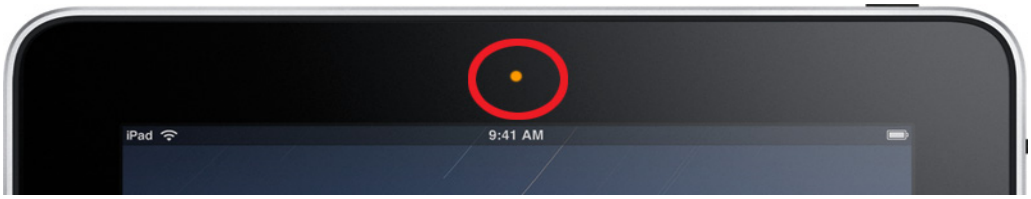


For more information on enabling rotation lock, refer to **http://support.apple.com/kb/HT4085:** iPad: Understanding screen rotation lock.

Ambient Light Sensor

The ambient light sensor detects light levels at the current location and adjusts the brightness of the Multi-Touch display.

The approximate location of the ambient light sensor is circled and marked in orange:



Troubleshooting Notes:

- Make sure the ambient light sensor is not being blocked or covered. Screen brightness can be affected by a screen protector, especially if it covers the ambient light sensor.
- The ambient light sensor can be defeated using the Settings application.
- The iBooks application includes a screen brightness slider that overrides the iPad screen brightness (but only when iBooks is running). **Note**: There is a slight delay of a few seconds before the screen adjusts to ambient light (this is by design, it is not intended to be instantaneous).
- Isolate applications that might modify the screen brightness on the iPad and if unsure what application might be the cause, **restore** the iPad to see if it fixes the problem (restoring the iPad will remove all 3rd party applications from the device and reset the unit back to factory default settings).

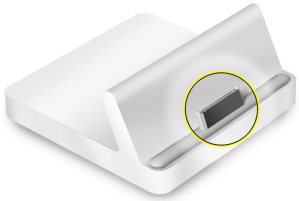
Symptom Charts

Power Issues

Select a symptom from the list:

- Dead Unit / Battery Issues
- Intermittent Power
- Frozen iPad
- Battery Will Not Charge
- Battery Life Too Short
- Burnt Smell / Odor

Dead Unit, Battery Issues



Symptom	Quick Check
No Power / Dead Unit • Will not power on • Not charging from power adapter • Charge icon does not show fully charged • Low battery charge • Battery completely drained • Black screen	**1.** Check the Sleep/Wake and Home buttons. Are they damaged, preventing the device from powering up? **2.** Visually inspect iPad for any damage. **3.** Check the 30-pin port for debris or corrosion. **4.** Check 10W USB power adapter. If you see the "not charging" text next to the battery icon, the 10W USB adapter or connection is not providing enough power to charge the iPad. Test with a known good 10W USB power adapter. **5.** Check USB cable. Remove USB hubs. Plug iPad directly into computer's USB port. Test with known good cable. **Note**: The iPad 30-pin USB cable is interchangeable with the iPod/iPhone 30-pin USB cable. **6.** Make sure the iPad has the latest software updates - Use iTunes to check for the latest version of the iOS **7.** Charge iPad battery • Connect to a power outlet and charge with known good iPad 10W USB Power Adapter for 10 minutes **8.** Reset: • Press and hold the Sleep/Wake button and the Home button at the same time for at least 10 seconds, until the Apple logo appears. **9.** Restore: • Restore iPad with iTunes. (This restores the iOS) • Click on Restore in the Summary tab • If you can't Restore, go to **Recovery Mode** • If you can't Recover the iPad go to next step **10.** Perform **Device Firmware Update Restore.** **11.** Go to Deep Dive.

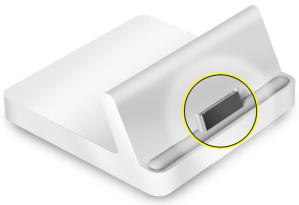
Deep Dive

Check	Result	Action	Code
1. Refer to the iPad battery page in the **iPad User Guide**. Issue resolved?	Yes	Educate customer on battery performance and charging battery.	
	No	Go to step 2.	
2. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F7A**

Intermittent Power

Quick Check

Possible Causes:



Symptom	Quick Check
• iPad won't stay powered on • iPad powers on, then crashes • Display appears, then iPad shuts down • Unable to power on with Sleep/Wake button • Unexpected power off	**1.** Check for interference from a third-party accessory (case or other accessory). **2.** Check the Sleep/Wake and Home buttons. Are they damaged, preventing the device from powering up? **3.** Visually inspect iPad for any damage. **4.** Check the 30-pin port for debris or corrosion. **5.** Check applications. Try removing the suspect application. **6.** Probe whether the customer charges iPad using the 10W USB Power Adapter or another power source. Other USB adapters will not provide enough power to charge iPad. **7.** Charge iPad battery • Connect to a power outlet and charge with iPad 10W USB Power Adapter for 10 minutes **8.** Make sure the iPad has the latest software updates • Use iTunes to check for the latest version of the iOS. **9.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. Slide your finger across the slider to turn off iPad. • Turn iPad on by pressing and holding the Sleep/Wake button until the Apple logo appears • If you can't Restart, Reset the iPad. **10.** Reset: • Press and hold the Sleep/Wake button and the Home button at the same time for at least 10 seconds, until the Apple logo appears. **11.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Remove the application and re-download using iTunes on a supported computer. Note: You will need the customer's computer.	Yes	Note: If the issue occurs only when using a third-party application, remove content and report a problem. Issue resolved, go to step 2	
	No	If application continues to crash, consult application developer.	
2. Restore iPad. Do not load any third party applications. Verify the intermittent shutdown continues to occur.	Yes	Intermittent shutdown continues. Go to step 3.	
	No	Issue resolved.	
3. Verify if the intermittent shutdown symptom only occurs when disconnected from 10W USB power adapter or computer.	Yes	Go to **Battery Life Too Short.**	
	No	The iPad continues to intermittently shutdown when connected to 10W USB power adapter. Go to step 4.	
4. Verify if the shutdown can be reproduced with another known good iPad using the same steps.	Yes	This may be a software bug and should be reported to Technial Service Provider Support (TSPS).	
	No	Go to step 5.	
5. Ensure iPad has been restored and set up as new without third party applications. Verify iPad continues to intermittently shut down.	Yes	Replace iPad. • Check warranty coverage. • Check for out-of-warranty repair option.	**F7A**
	No	Restart troubleshooting from step 1.	

Frozen iPad

Possible Causes:

Symptom	Quick Check
• iPad frozen at Apple logo • Does not return to Home screen after pressing Home button • Does not wake from sleep after pressing Sleep/Wake button • Unable to "Slide to Unlock" or "Slide to Power Off"	**1.** If there's no video, verify that it has enough charge to turn on. Connect iPad to the 10W USB Power Adapter with the Dock Connector to USB Cable. Charge for at least 10 minutes. **Note**: The iPad 30-pin USB cable is interchangeable with the iPod/iPhone 30-pin USB cable. **2.** If the screen displays a red battery icon, let it continue to charge until it turns on. **3.** Check applications. If a single application is not responding or freezes when it opens, force it to close: • Press and hold the Sleep/Wake button until the red slider appears. When the red slider appears, release the Sleep/Wake button • Instead of dragging the red slider, press and hold the Home button for six seconds • If the device does not return to the Home screen, see the steps below to restart. **4.** Check if a third party case is being used and causing the iPad to overheat and freeze. **5.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. Slide your finger across the slider to turn off iPad. • Turn iPad on by pressing and holding the Sleep/Wake button until the Apple logo appears **6.** Reset: • Press and hold the Sleep/Wake button and the Home button at the same time for at least 10 seconds, until the Apple logo appears. **7.** Restore: • Restore iPad with iTunes. • If you can't restore, go to Recovery Mode **8.** Perform Device Firmware Update Restore

Deep Dive

Check	Result	Action	Code
Is issue caused by accidental damage?	Yes	• The issue is not covered under warranty. • Check for out-of-warranty repair option.	
	No	• Covered if under warranty • Check for out-of-warranty repair option.	**F7A**

Battery Will Not Charge

IMPORTANT: The USB port on a computer or other compatible accessories with charging capability may not provide enough power to sufficiently charge iPad. This means that either it may take unusually long to fully charge iPad, or the device may not charge at all. Additionally, the battery gauge is approximate.

Quick Check

Possible Causes:

Symptom	Quick Check
• Battery will not charge • Battery charge icon does not show fully charged • Not charging from 10W USB power adapter	**1.** Probe whether the customer charges iPad using the 10W USB Power Adapter or another power source. Other USB adapters will not provide enough power to charge iPad. **2.** Perform a visual inspection. Check cables, Dock, 30-pin connector are clean and free of defects. **3.** Charge iPad battery • Connect to a power outlet and charge with iPad 10W USB Power Adapter for 10 minutes **4.** Check iPad has the latest software updates • Use iTunes to install the latest version of the iOS software **5.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. Slide your finger across the slider to turn off iPad. • Turn iPad on by pressing and holding the Sleep/Wake button until the Apple logo appears • If you can't restart the device - Reset iPad. Press and hold the Sleep/Wake button and the Home button at the same time for at least 10 seconds, until the Apple logo appears.

Deep Dive

Check	Result	Action	Code
1. Verify using a known good 10W power adapter and USB cable resolves the issue.	Yes	Isolate the faulty component and replace.	
	No	Go to step 2.	
2. Is issue caused by accidental damage?	Yes	• The issue is not covered under warranty. • Check for out-of-warranty repair option.	
	No	• Covered if under warranty • Check for out-of-warranty repair option.	**F5A**

Battery Life Too Short

It's easy to confuse a power-consumption issue for one that requires a replacement. Apple's advanced chemistry and Adaptive Charging technology deliver up to 1,000 charge cycles without a significant decrease in battery capacity over a typical five year lifespan.**
Note: The iPad battery is not removable or user-replaceable. Apple offers a battery replacement service for iPad.

**A properly maintained iPad battery is designed to retain 80 percent or more of its original capacity during a lifespan of up to 1,000 recharge cycles. Battery life and charge cycles vary by use and settings.

Quick Check

Possible Causes:

Symptom	Quick Check
• Battery runs out of power very quickly • Short play time • Short battery life • Does not hold charge	**1.** Refer to "Charging the Battery" in the iPad User Guide. **2.** Gather details on device usage. Check Settings. Common factors that affect battery life include: • Cellular data • Wi-Fi • Bluetooth • Equalizer • Brightness • Temperature • Software version • Fetch Data/Push • Location Services • Low or no service areas (Wi-Fi + 3G model only) • Third-party applications **3.** Check the status bar indicator. It reflects the remaining battery life, including battery percentage. Turn on the battery percentage indicator using Settings > General (Wi-Fi models) or Settings > General > Usage (Wi-Fi + 3G models). **4.** Check that the iPad 10W USB Power Adapter is being used to charge the iPad. **5.** Charge the battery. **Important:** Battery and charge indicators can fluctuate briefly when you connect the device to power or wake it from sleep. If this occurs, wait a few seconds, and then check again. Battery percentage can remain at 99% with a full charge. This is expected behavior and does not indicate a battery or hardware issue. **6.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Run battery performance tests: • Reset All Settings • Turn off Wi-Fi and Bluetooth (Wi-Fi models only) • Enable Airplane Mode (Wi-Fi + 3G models only) • Set Brightness to 100% • Disable Auto-Lock in Settings menu • Play a video and set it to repeat Issue solved?	Yes	Return device to customer.	
	No	Device not performing within spec. Go to step 3.	
2. Check power adapter, dock, and 30-pin connector port for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Go to step 2.	
3. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F3A**

Burnt Smell / Odor

Quick Check

Possible Causes:

Symptom	Quick Check
Burnt Smell / Odor iPad emits an odor or smell of smoke.	Disconnect the iPad from the iPad Dock, iPad Keyboard Dock, computer, or iPad 10W USB power adapter.

Deep Dive

Check	Result	Action	Code
1. Are accessories, USB cable, and 30-pin connector on iPad burnt or damaged?	Yes	Determine which object (cable, dock, iPad, etc.) is producing the smell and replace it or inform customer to discontinue using it until it's determined to be safe. Check any third party accessories for a burnt smell.	
	No	Verify iPad functions with known-good accessories, USB cable. Go to step 2.	
2. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F9A**

Uncategorized Symptom

Quick Check

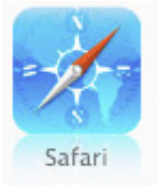
Symptom	Quick Check
Uncategorized Symptom Unable to locate appropriate symptom code	Verify whether existing symptom code applies to the issue reported by the customer. If not, document reported symptom and send feedback to smfeedback@apple.com stating that a suitable symptom code could not be found.

Connectivity Issues

- Wi-Fi Not Functioning
- Cannot Connect to Cellular Data Network on iPad WiFi + 3G

Wi-Fi Not Functioning

Possible Causes:



Symptom	Quick Check

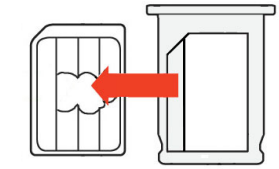
• Unable to connect to a Wi-Fi network
• Unable to locate a nearby Wi-Fi network
• Unable to access the internet
• Can't join network
	1. Check iPad has the latest software updates
	  • Use iTunes to install the latest version of the iOS software
	  • **Use iTunes version 10.1 or later**
	2. Check that possible third party iPad case not interfering with antennas. Remove third party case and check Wi-Fi again.
	3. Verify Wi-Fi is enabled and that you are connected to a Wi-Fi network. Tap Settings > Wi-Fi. If Wi-Fi is off, turn it on by tapping the on/off icon. On iPad Wi-Fi+3G, verify Airplane Mode is not enabled.
	4. Check the Wi-Fi signal strength in the status bar or Wi-Fi menu. The more bars the stronger the signal.
	5. Move closer to Wi-Fi router or hotspot.
	6. Locate and tap the Wi-Fi network you want to join.
	  • If the Wi-Fi network is not displayed on iPad as an available option, it may be a "closed" or "private" network. This requires entering the name to join.
	7. Check connection by using Safari to open a web page.
	8. If you could previously connect to the network, you might try "forget this network" to erase any network settings for that wi-fi hotspot, and try connecting again.
	9. Restart:
	  • Press and hold the Sleep/Wake button until a red slider appears. Slide your finger across the slider to turn off iPad.
	  • Turn iPad on by pressing and holding the Sleep/Wake button until the Apple logo appears
	  • If you can't restart the device -**Reset** iPad.
	10. Reset network settings: Settings > General > Reset > Reset Network Settings
	11. Go to Deep Dive

Deep Dive

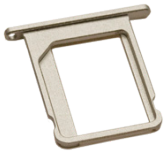
Check	Result	Action	Code
1. Restore iPad with iTunes. **Note:** This will delete all media and data. All settings will be reset as well. If possible, sync iPad with iTunes before restoring to back up your most recent data and settings	Yes	Connect iPad to computer. In the left column under Devices, click on your iPad, then click on Restore in the Summary tab Fixed? Return iPad to customer. If no, go to step 2.	
	No	Go to step 2.	
2. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F5C**

Cannot Connect to Cellular Data Network on iPad Wi-Fi + 3G

Possible Causes:



Micro-SIM Card



Symptom	Quick Check
• Able to connect to a Wi-Fi network, but unable to connect to a 3G, EDGE, or GPRS cellular data network on iPad Wi-Fi + 3G • "SIM not supported" error message	**1.** Restart iPad Wi-Fi + 3G: • Press and hold the Sleep/Wake button until a red slider appears. Slide your finger across the slider to turn off iPad. • Turn iPad on by pressing and holding the Sleep/Wake button until the Apple logo appears. • If you can't restart the device, reset it. **2.** Reset network settings: Settings > General > Reset > Reset Network Settings **3.** Verify APN settings. Settings > Cellular Data >APN Settings **4.** Verify micro-SIM is detected and ICCID is displayed. Check network settings: Settings > General > ICCID **5.** Remove and reseat micro-SIM, check ICCID again: Settings > General > ICCID **6.** Verify that micro-SIM is not locked. Settings > Cellular Data > SIM PIN **7.** Verify Airplane Mode is not enabled: Settings > Airplane Mode > Off **8.** Go to Deep Dive

Deep Dive

Check	Result	Action	Code
1. Inspect SIM tray. Does tray fail to insert fully or show signs of breakage?	Yes	Replace SIM tray (922-9553). Go to step 2.	
	No	Go to step 2.	

2. Remove micro-SIM card and check for debris, corrosion, or damage. Does the card or tray exhibit signs of debris, corrosion, exposure to liquid, or damage?	Yes	- If there is debris, remove it. Go to step 3. - If there is corrosion or signs of exposure to liquid, refer to **Liquid Damage** in General Troubleshooting. - If card is damaged, refer customer to his/her cellular carrier for replacement card.	
	No	Go to step 3.	
3. Reinstall original micro-SIM card. Can iPad Wi-Fi + 3G connect to cellular network?	Yes	Issue resolved.	
	No	Go to step 4.	
4. Is issue caused by accidental damage? (See **Visual Mechanical Inspection**.)	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	The issue is covered if under warranty. Check for out-of-warranty repair option. Refer customer to his/her cellular carrier for replacement card.	**F5C**

Display Issues

Select a symptom from the list:

- Bad Video/Poor Image
- Multi-Touch Screen Not Responding
- Ambient Light Sensor Issue
- Cracked Display
- Display Rotation Not Working

Bad Video/Poor Image

Quick Check

Symptom	Quick Check
• No video • Distorted video • Pixel anomalies • No backlight • Display won't respond • Rainbow effect • Poor image • Bad contrast • Horizontal/Vertical lines • White screen	**1.** Verify iPad has the latest software updates • Use iTunes to install the latest version of the iOS software **2.** Try rotating the iPad to confirm if it's a media, display, pixel, or software issue. **3.** For pixel anomalies, refer to **About LCD display pixel anomalies** article. **4.** Charge iPad battery. Connect to a power outlet and charge with iPad 10W USB Power Adapter for 10 minutes **5.** Restart (next step) and verify the issue occurs consistently on multiple screens to rule out a software-related issue. **6.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. • Slide your finger across the slider to turn off iPad. • To turn iPad on, press and hold the Sleep/Wake button until the Apple logo appears **7.** Reset: • Press and hold both the Sleep/Wake button and the Home button at the same time for at least ten seconds, until the Apple logo appears. **8.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Restore iPad with iTunes. (This restores the iOS.) **Note:** This will delete all media and data. All settings will be reset as well. If possible, sync iPad with iTunes before restoring to back up your most recent data and settings	Yes	Connect iPad to computer. In the left column under Devices, click on your iPad, then click on Restore in the Summary tab. Return iPad to customer. If no, go to step 2.	
	No	Go to Step 2	
2. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	**F1B**
	No	Covered if under warranty Check for out-of-warranty repair option.	**F4A**

Multi-Touch Screen Not Responding

Quick Check

Symptom	Quick Check
• Multi-Touch is slow to respond • Isolated areas not responding • Slider to turn on/off not responding • Erratic response to touch • Home button not waking iPad • Display turns on briefly, and a battery icon flashes	**1.** Clean iPad screen. **2.** Rule out environmental causes by checking for gloves, styluses, and protective films or cases. **3.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. • Slide your finger across the slider to turn off iPad. • To turn iPad on, press and hold the Sleep/Wake button until the Apple logo appears. **4.** Verify iPad has the latest software updates • Use iTunes to install the latest version of the iOS software **5.** Test: Launch the Maps application. • Double-tap each corner of map, then the center to verify it zooms in everywhere you tap • If a specific area is affected in another app, note location, and verify touch functionality for that location in the Maps app. **6.** Toggle the screen rotation lock switch and rotate iPad to landscape mode. Repeat Map application touch screen test. **7.** Reset: • Press and hold both the Sleep/Wake button and the Home button at the same time for at least ten seconds, until the Apple logo appears. **8.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	F1B
	No	Covered if under warranty Check for out-of-warranty repair option.	**F2B**

Ambient Light Sensor Issue

Quick Check

Possible Causes:

Symptom	Quick Check
• The screen does not dim or brighten appropriately with change in lighting conditions	**1.** Verify iPad has the latest software updates • Use iTunes to install the latest version of the iOS software **2.** Remove third party screen protector or case and check again. Verify nothing is blocking the sensor. **3.** Verify that the Brightness setting (Settings > Brightness & Wallpaper) is set to Auto-Brightness ON, and that the Brightness level is set near the middle of the slider. **4.** Press the Home button to return to the Home screen, then press the Sleep/Wake button to lock iPad. **5.** Test the sensor: • In a bright light environment, cover the top third of iPad display to block light, then press the Sleep/Wake button or the Home button to wake iPad. Slide the slider to unlock iPad. • Notice brightness of the screen and application icons; they should be dimmed. • Uncover top of the display and in a few moments the display will brighten. **6.** Charge iPad battery • Connect to a power outlet and charge with iPad 10W USB Power Adapter for 10 minutes **7.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. • Slide your finger across the slider to turn off iPad. • To turn iPad on, press and hold the Sleep/Wake button until the Apple logo appears **8.** Reset: • Press and hold both the Sleep/Wake button and the Home button at the same time for at least ten seconds, until the Apple logo appears. **9.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Restore iPad with iTunes. **Note:** This will delete all media and data. All settings will be reset as well. If possible, sync iPad with iTunes before restoring to back up your most recent data and settings	Yes	Connect iPad to the computer. In the left column under Devices, click on your iPad, then click on Restore in the Summary tab. Return iPad to customer. If no, go to step 2.	
	No	Go to Step 2	
2. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F2C**

Cracked Display

Quick Check

Symptom	Quick Check
• Cracked LCD • Cracked Cover Glass	**1.** Determine whether there is a safety issue, such a glass fragments. Do not perform procedures that can be a safety risk to you or the customer. **2.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F1B**

Display Rotation Not Working

Quick Check

Symptom	Quick Check
• Display rotation stopped working **Note**: Beginning with iOS 4.2, the screen rotation lock is enabled via the screen orientation lock control. Double-click the Home button, then place your finger on one of the icons at the bottom of the screen and swipe to the right. The screen orientation lock, brightness slider, and iPod controls appear.	**1.** For more information on enabling rotation lock, refer to http://support.apple.com/kb/HT4085: iPad: Understanding screen rotation lock. **2.** Charge iPad battery **3.** Connect to a power outlet and charge with iPad 10W USB Power Adapter for 10 minutes **4.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. Slide your finger across the slider to turn off iPad. • Turn iPad on by pressing and holding the Sleep/Wake button until the Apple logo appears • If you can't restart the device -Reset iPad. Press and hold the Sleep/Wake button and the Home button at the same time for at least 10 seconds, until the Apple logo appears. **5.** Restore: • Restore iPad with iTunes. (This restores the iOS). • First make sure you are using the latest version of iTunes. • Connect iPad to computer. In the left column under Devices, click on your iPad, then click on Restore in the Summary tab. **6.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F2C (If sensor)** **or** **F2A (If button or switch)**

Uncategorized Symptom

Quick Check

Symptom	Quick Check
Uncategorized Symptom Unable to locate appropriate symptom code	Verify whether existing symptom code applies to the issue reported by the user. If not, document reported symptom and send feedback to **smfeedback@apple.com** stating that a suitable symptom code could not be found.

Software Issues

Applications Issues

Note: Updating an application requires the customer's computer and password to enter the iTunes account associated with that application.

Quick Check

Possible Causes

Symptom	Quick Check

• Unable to sync applications
• Application not working as it should
• Irregular behavior
• Application open and return immediately to Home screen
	1. Verify iPad has the latest software updates
	  • Use iTunes to install the latest version of the iOS software
	2. Verify application is compatible with iPad
	3. Update application. Open App Store and tap Updates. If updates are available, tap Update All.
	4. Sync iPad with iTunes.
	5. Restart:
	  • Press and hold the Sleep/Wake button until a red slider appears.
	  • Slide your finger across the slider to turn off iPad.
	  • To turn iPad on, press and hold the Sleep/Wake button until the Apple logo appears
	6. Remove application if still having issues.
	  • Touch and hold any application icon on the Home screen until the icons start to wiggle.
	  • Tap the "x" in the corner of the application you want to remove.
	  • Tap Delete to remove the application and all of its data from your iPad.
	  • Press the Home button to cancel or stop deleting applications.
	7. Reinstall application.
	  • Open the App Store on iPad and locate the application to reinstall
	  • Check if issue is resolved.
	8. Go to Deep Dive.

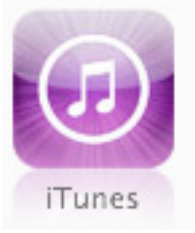
Deep Dive

Check	Result	Action	Code
1. Restore iPad with iTunes. **Note:** This will delete all media and data. All settings will be reset as well. If possible, sync iPad with iTunes before restoring to back up your most recent data and settings	Yes	Connect iPad to the computer. In the left column under Devices, click on your iPad, then click on Restore in the Summary tab. Return iPad to customer. If no, go to step 2.	
	No	Go to Step 2	
2. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F5A**

Cannot Add or Play a Song, Video, or Other Item

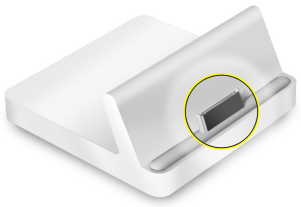
Quick Check

Possible Causes:



Symptom	Quick Check
• Cannot add or play a song, video, or other item • Possible corrupt song, video, or other media content	**1.** Verify iPad has the latest software updates • Use iTunes to install the latest version of the iOS software • Use iTunes version 10.1 or later **2.** Verfiy content in question plays correctly in iTunes. **3.** Could be a media issue, such as a non-supported format. • Using known good content, try re-importing/converting the song, video, etc. from the original source media and then sync to iPad. **4.** Charge iPad battery • Connect to a power outlet and charge with iPad 10W USB Power Adapter for 10 minutes **5.** Disconnect all other USB devices connected to the computer such as USB printer, USB scanner, etc. and then reconnect the iPad to see if it fixes the problem. **6.** Connect the iPad to a different computer (if available) to see if the problem still occurs. **7.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. Slide your finger across the slider to turn off iPad. • Turn iPad on by pressing and holding the Sleep/Wake button until the Apple logo appears • If you can't restart the device -Reset iPad. Press and hold the Sleep/Wake button and the Home button at the same time for at least 10 seconds, until the Apple logo appears. **8.** Restart computer and reconnect iPad. **9.** Restore iPad. • Restore iPad with iTunes. **10.** Go to Deep Dive

Deep Dive



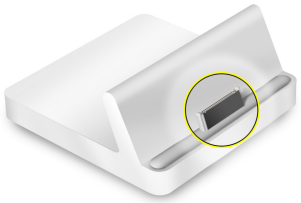
Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Go to step 2.	
2. Able to connect a known good USB cable to iPad?	Yes	Go to step 3.	
	No	Go to step 4	
3. Restore iPad with iTunes. **Note:** This will delete all media and data. All settings will be reset as well. If possible, sync iPad with iTunes before restoring to back up your most recent data and settings	Yes	Connect iPad to computer. In the left column under Devices, click on your iPad, then click on Restore in the Summary tab Fixed? Return iPad to customer. If no, go to step 4.	
	No	Go to step 4.	
4. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F5A**

iTunes/Sync issues

Symptom	Quick Check
• iPad is not recognized in iTunes • iPad not syncing	**5.** If using just the iPad 30-pin connector, ensure cable is attached securely to iPad. **6.** Connect iPad to a USB port that is built into the computer instead of the keyboard or an external USB hub. **7.** Try a different USB port on computer. **8.** Verify iPad has the latest software updates • Use iTunes to install the latest version of the iOS software • **Use iTunes version 10.1 or later** **9.** Charge the iPad. Connect iPad to a power outlet and charge with iPad 10W USB Power Adapter for 10 minutes **10.** Disconnect other USB devices from your computer and connect iPad to a different USB 2.0 port on your computer (not on your keyboard). **11.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. Slide your finger across the slider to turn off iPad. • Turn iPad on by pressing and holding the Sleep/Wake button until the Apple logo appears **12.** Download and install (or reinstall) the latest version of iTunes. For Windows, refer to: **Device not recognized in iTunes for Windows** and **How to restart the Apple Mobile Device Service (AMDS) on Windows.** **13.** Try connecting the iPad to another computer. **14.** Restart the computer and reconnect iPad. **15.** Check for third-party software conflicts. **16.** Go to Deep Dive

Possible Causes:

Deep Dive



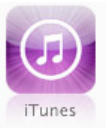
Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Go to step 2.	
2. iPad shows low-battery icon after 10 seconds.	Yes	Continue to charge for up to 10 minutes.	
	No	Go to step 3	
3. Restore iPad with iTunes. **Note:** This will delete all media and data. All settings will be reset as well. If possible, sync iPad with iTunes before restoring to back up your most recent data and settings	Yes	Connect iPad to computer. In the left column under Devices, click on your iPad, then click on Restore in the Summary tab. Return iPad to customer. If no, go to step 4	
	No	Go to step 5.	
4. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F5A**

Alert Messages

Alert Messages Appear on iPad Screen or iTunes

Quick Check

Possible Causes



Symptom	Quick Check
• "Use iTunes to Recover" window • Error messages on the iPad • Error message in iTunes	**1.** Read the alert to determine the issue. Many alerts provide additional information or links to resolve the issue **2.** Perform visual inspection: • Check for debris in dock • Check adapter connector **3.** Check iPad has the latest software updates • Use iTunes to install the latest version of the iOS software **4.** Charge iPad battery • Connect to a power outlet and charge with iPad 10W USB Power Adapter for 10 minutes **5.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. • Slide your finger across the slider to turn off iPad. • To turn iPad on, press and hold the Sleep/Wake button until the Apple logo appears **6.** Reset: • Press and hold both the Sleep/Wake button and the Home button at the same time for at least ten seconds, until the Apple logo appears. **7.** Recovery: • If you can't restore, go to **Recovery Mode** **8.** Go to Deep Dive.

Deep Dive

Check	Result	Action	Code
1. Check dock for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect USB cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Go to step 2.	
2. Able to connect a known good USB cable to iPad.	Yes	If needed, connect the iPad to a known good power adapter to charge for up to 20 minutes. Go to step 3.	
	No	Go to step 4.	
3. Restore iPad with iTunes. **Note:** This will delete all media and data. All settings will be reset as well. If possible, sync iPad with iTunes before restoring to back up your most recent data and settings	Yes	Connect iPad to computer. In the left column under Devices, click on your iPad, then click on Restore in the Summary tab. Return iPad to customer. If no, go to step 4.	
	No	Go to step 4.	
4. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F6A**

Uncategorized Symptom

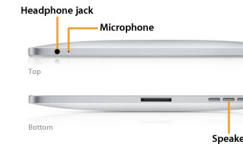
Quick Check

Symptom	Quick Check
Uncategorized Symptom Unable to locate appropriate symptom code	Verify whether existing symptom code applies to the issue reported by the user. If not, document reported symptom and send feedback to **smfeedback@apple.com** stating that a suitable symptom code could not be found.

Input / Output Issues

Audio Issues

Possible Causes:



Symptom	Quick Check
• No audio through headphones • Audio distorted • Sound from only one channel in headset • Microphone distorted • No sound from speaker **Important**: • With iOS 4.2 release the Screen Rotation Lock switch now functions as the Mute button. • With iOS 4.2, the screen rotation lock is enabled via the screen orientation lock control. Double-click the Home button, then place your finger on one of the icons at the bottom of the screen and swipe to the right. The screen orientation lock, brightness slider, and iPod controls appear. • The iPad speaker does not work when a headphone is inserted in the headphone jack.	**1.** Adjust volume setting with volume buttons • verify music/audio is not paused • check the Volume Limit setting (Settings > Music > Volume Limit) • make sure the Mute button (formerly the Screen Rotation Lock button in iOS 3.2) is set to the off position (red dot is not visible). **Note**: The Mute button does not mute all audio (mainly system sounds, alerts, sound effects, etc). Music and video will still play in Apple apps (third party may vary). **2.** Verify headset is pushed in all the way into connector. **3.** Verify "Mono Audio" option setting is not enabled (for those who don't require it). This setting forces stereo left and right channels to be mixed into both ears. • check Settings>General>Accessibility **4.** Make sure iPad case or plastic protective film is not covering speaker or microphone. Remove case / or protective film and test again. **5.** Check that the speaker grilles, headphone jack, and mic are not clogged with lint or other debris. **6.** Use a clean, small, dry, soft-bristled brush to clean out the holes and speaker grilles. **7.** Try known-good compatible headset. **8.** Use compressed-gas duster with the straw attached to blow out debris. **9.** Go to Deep Dive

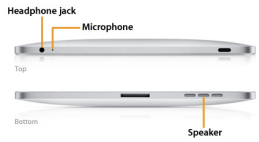
Deep Dive

Check	Result	Action	Code
1. Check headphone jack for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect headphone cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Go to step 2.	
2. Able to connect a known good headphone cable to iPad. Verify connector is pushed in all the way.	Yes	Connect to a power outlet and charge with iPad 10W USB Power Adapter for 10 minutes. Go to step 3.	
	No	Go to step 4.	
3. Restore iPad with iTunes.	Yes	Connect iPad to computer. In the left column under Devices, click on your iPad, then click on Restore in the Summary tab. Return iPad to customer.	
	No	Go to step 4.	
4. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty. Check for out-of-warranty repair option.	**F5D-Input** **F5E-Output**

Headphone Issues

Quick Check

Possible Causes:



Symptom	Quick Check

• No audio through headphones
• Audio distorted
• Sound from only one channel in headset
• Unable to listen to music
	1. Adjust volume setting with volume buttons
	  • verify music/audio is not paused
	  • check the Volume Limit setting (Settings > Music > Volume Limit)
	2. Verify headset is pushed in all the way into connector.
	3. Verify "Mono Audio" option setting is not enabled (for those who don't require it). This setting forces stereo left and right channels to be mixed into both ears.
	  • check Settings>General>Accessibility
	4. Make sure iPad case or plastic protective film is not covering speaker or microphone. Remove case / or protective film and test again.
	5. Check that the speaker grilles, headphone jack, and mic are not clogged with lint or other debris.
	6. Use a clean, small, dry, soft-bristled brush to clean out the holes and speaker grilles.
	7. Try known-good compatible headset.
	8. Use compressed-gas duster with the straw attached to blow out debris.
	9. Go to Deep Dive

Deep Dive

Check	Result	Action	Code
1. Check headphones port for debris, contamination, corrosion, or damage.	Yes	Clean or fix if possible. Go to step 2. If not safe to connect headphones cable, the issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Go to step 2.	

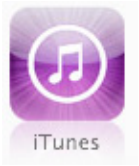
2. Able to connect a known good headphone cable to iPad. Verify connector is pushed in all the way.	Yes	Go to step 3.	
	No	Go to step 4.	
3. Restore iPad with iTunes.	Yes	Connect iPad to computer. In the left column under Devices, click on your iPad, then click on Restore in the Summary tab. Return iPad to customer.	
	No	Go to step 4.	
4. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F5E**

Photos and Videos Not Importing

Important: To some users, the Camera Connector's USB port may suggest the capability to import media from other devices, such as USB compatible mobile devices or printers with integrated SD card readers. iPad supports importing photos and videos from these devices.

Camera Connector

SD Card Reader



Symptom	Quick Check
• Photos not importing • Videos not importing	**1.** Check iPad has the latest software updates • Use iTunes to install the latest version of the iOS software • Use iTunes version 10.1 or later **2.** Ensure camera and/or video camera is turned on and supports Picture Transfer Protocol (PTP 1.0). **3.** Test again with known good SD card/camera/cable/SD Card Reader. Verify SD card be read on another device. **4.** Check Camera Connector or SD Card reader connections to the iPad dock connector. **Note**: The original iPod Camera Connector is not compatible with the iPad. **5.** Check USB cable connection to camera or if using SD Card reader; remove and reinsert SD card into SD Card reader. **6.** Restart computer. **7.** Charge iPad battery. Connect to a power outlet and charge with iPad 10W USB Power Adapter for 10 minutes. **8.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. Slide your finger across the slider to turn off iPad. • Turn iPad on by pressing and holding the Sleep/Wake button until the Apple logo appears • If you can't restart the device - Reset iPad. Press and hold the Sleep/Wake button and the Home button at the same time for at least 10 seconds, until the Apple logo appears. **9.** Go to Deep Dive

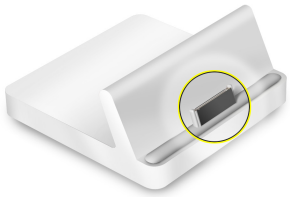
Deep Dive

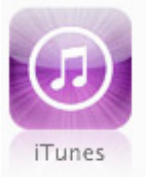
Check	Result	Action	Code
1. Note: Check camera/cards compatibility. Not all camera/cards will be compatible. Check Camera Connector or SD Card reader for debris, contamination, corrosion, or damage.	Yes	Directly connect a digital camera via USB (do not use hubs or other USB devices with the connector). Clean or fix if possible. Go to step 2. Check for out-of-warranty repair option.	
	No	Go to step 2.	
2. Able to connect a known good Camera Connector and/or SD Card reader and USB camera cable to iPad? Able to import photos and/or videos?	Yes	Issue resolved.	
	No	Go to step 3.	
3. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F5D**

Keyboard Dock/Standalone Dock Not Functioning

Quick Check

Possible Causes:





Symptom	Quick Check
• Keyboard dock not recognized • Typing issues • iPad does not charging while in dock • Powered speakers not working	**1.** Check iPad has the latest software updates • Use iTunes to install the latest version of the iOS software • **Use iTunes version 10.1 or later** **2.** Remove iPad Case when using Dock or Keyboard Dock. **3.** Ensure iPad is properly positioned and fully docked on connector. **4.** Check for a paired bluetooth keyboard. This could interfere with typing on the Keyboard Dock. • Disable bluetooth or unpair the wireless keyboard **5.** Charge iPad. Connect to a power outlet and charge with iPad 10W USB Power Adapter for 10 minutes. **6.** Ensure iPad is charging. **Important**: If Keyboard Dock/Standalone Dock is not connected to a power source using the 10W USB Power Adapter, the iPad is not charging. **7.** Try a known-good Keyboard Dock/Standalone Dock. **8.** If present, reseat audio cable on back of Keyboard Dock/Standalone Dock. **9.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. Slide your finger across the slider to turn off iPad. • Turn iPad on by pressing and holding the Sleep/Wake button until the Apple logo appears • If you can't restart the device - **Reset** iPad. Press and hold the Sleep/Wake button and the Home button at the same time for at least 10 seconds, until the Apple logo appears. **10.** Go to Deep Dive

Deep Dive

Check	Result	Action	Code
1. Verify USB cable connects firmly to iPad.	Yes	Clean or fix if possible. Go to step 2. Check for out-of-warranty repair option.	
	No	Go to step 2.	
2. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F9A**

Apple Wireless Keyboard Not Functioning

Quick Check

Possible Causes:

Symptom	Quick Check
• Keyboard not recognized • Certain applications not responding to typing	**1.** Ensure compatibility with iPad of accessory being used. Only the Apple Wireless Keyboard is supported. Refer to the **Apple Store** for supported Apple Wireless Keyboard. **2.** Verify iPad has the latest software updates • Use iTunes to install the latest version of the iOS software • **Download latest iTunes** **3.** Check Settings. Enable Bluetooth on iPad. Make sure the keyboard has been paired properly with the iPad and is not paired to another keyboard. **4.** Turn on the Apple Wireless Keyboard. **5.** Make sure Apple Wireless Keyboard has known good batteries installed and they are installed in correct orientation. **6.** Check for potential sources of inerference for wireless devices and networks. Refer to: **AirPort and Bluetooth: Potential sources of interference for wireless devices and networks** **7.** Ensure iPad is charging. **Important**: If Dock is not connected to a power source using the 10W USB Power Adapter, the iPad is not charging. **8.** Restart: • Press and hold the Sleep/Wake button until a red slider appears. Slide your finger across the slider to turn off iPad. • Turn iPad on by pressing and holding the Sleep/Wake button until the Apple logo appears • If you can't restart the device -**Reset** iPad. Press and hold the Sleep/Wake button and the Home button at the same time for at least 10 seconds, until the Apple logo appears. **9.** Go to Deep Dive

Deep Dive

Check	Result	Action	Code
1. Check that wireless keyboard is supported with iPad. Only the Apple Wireless Keyboard is supported. Supported? **Note**: The original Apple Wireless Keyboard (pre-2007) is not supported. If a customer attempts to pair an unsupported wireless keyboard with iPad, the pairing status eventually returns to "Not Paired" and without an alert.	Yes	Covered if under warranty Check for out-of-warranty repair option.	
	No	Go to step 2.	
2. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F5C**

TV Out/Video Out Not Functioning

IMPORTANT: Educate the customer that TV Out/Video Out does not support mirroring everything on iPad to a TV. The TV-out function only works in certain applications that support it, such as Videos, YouTube, Photos app Slide Shows, and Keynote slide shows.

Possible Causes

Symptom	Quick Check
• Unable to play content on television • Projector unable to display content	**1.** Ensure compatibility with iPad of accessory being used. **2.** Verify iPad has the latest software updates • Use iTunes to install the latest version of the iOS software **3.** TV-out requires the following hardware: • Refer to Knowledge Base **article HT1454: iPhone, iPad, iPod: TV out support** to determine compatibility. **4.** Verify cables are plugged into the appropriate input jacks on the TV, and correct input is selected using the TV's controls. • **Note**: When properly working, videos, YouTube and Keynote slide shows do not appear on iPad when appearing on the TV. Only the Photos app slideshows appear on the iPad. **5.** Charge iPad. Verify the Apple Component AV Cable and/or Apple Composite AV Cable USB connector is plugged into the 10W USB Power Adapter and it's charging iPad while you play content. **6.** **Restart:** • If you can't restart the device - **Reset** iPad. **7.** Restore: • Restore iPad with iTunes. (This restores the iOS.) • Connect iPad to computer. In the left column under Devices, click on your iPad, then click on Restore in the Summary tab. **8.** Go to Deep Dive

Deep Dive

Check	Result	Action	Code
1. Attempt to isolate issue to the component or composite cables (accessories). Issue resolved?	Yes	Check if covered if under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	
2. Is issue caused by accidental damage?	Yes	The issue is not covered under warranty. Check for out-of-warranty repair option.	
	No	Covered if under warranty Check for out-of-warranty repair option.	**F5E**

Uncategorized Symptom

Quick Check

Symptom	Quick Check
Uncategorized Symptom Unable to locate appropriate symptom code	Verify whether existing symptom code applies to the issue reported by the user. If not, document reported symptom and send feedback to **smfeedback@apple.com** stating that a suitable symptom code could not be found.

Apple Technician Guide

Take Apart

iPad

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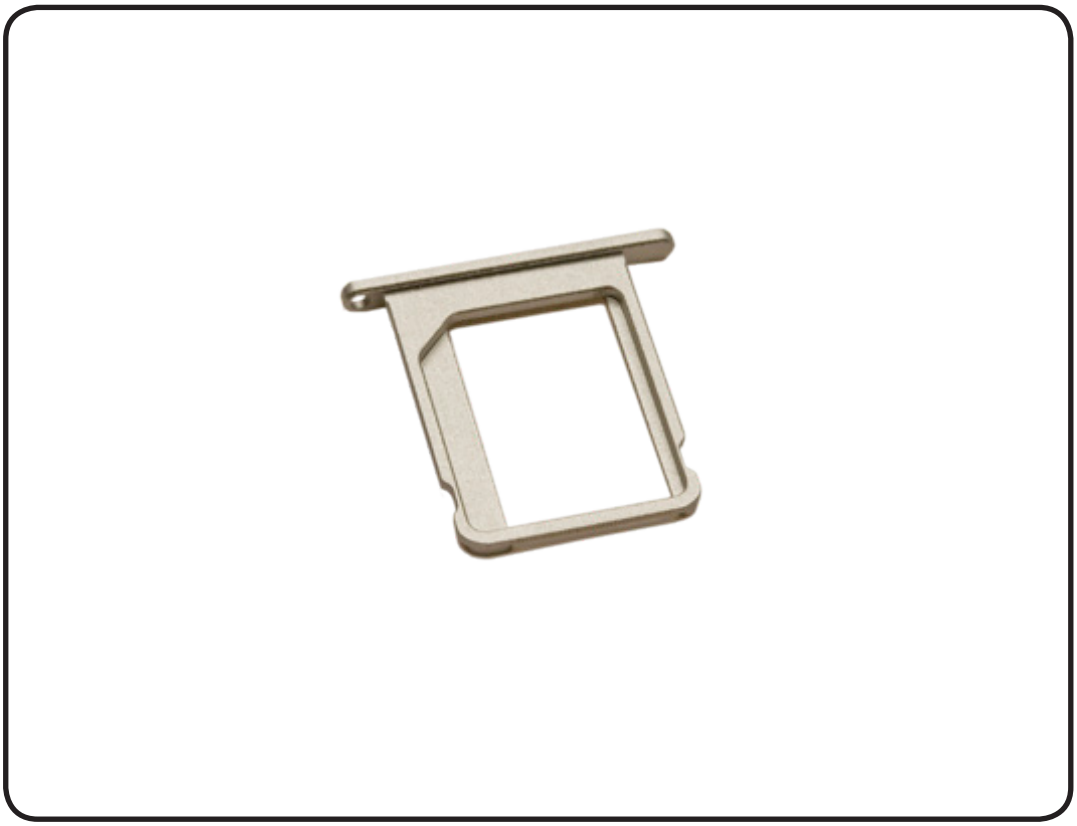
Micro-SIM Tray

First Steps

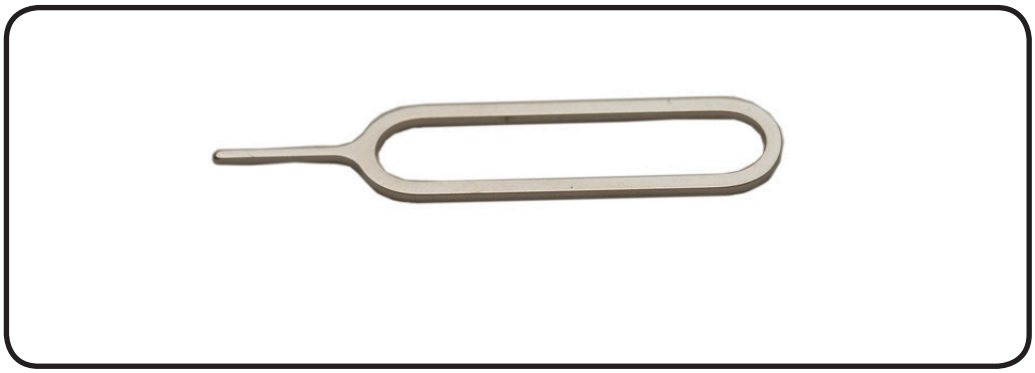
No first steps required.

Note: For cellular data, iPad Wi-Fi + 3G uses a micro-SIM card, also known as a third form factor (or 3FF). If you change cellular data carriers, you may need to remove the micro-SIM card.



Tools

- SIM eject tool or the end of a paper clip



Removal

1 Insert the end of the SIM eject tool into the hole on the SIM tray.

2. Press firmly and push the tool straight in until the tray pops out. (If you don't have a SIM eject tool, you can use the end of a paper clip.)

3 Remove micro-SIM card from tray.

Micro-SIM Card

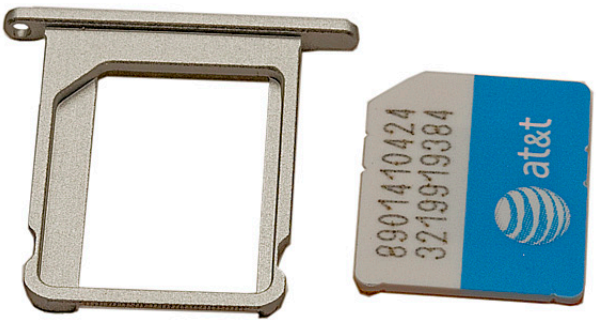
First Steps

Remove the micro-SIM tray.

Note: For cellular data, iPad Wi-Fi + 3G uses a micro-SIM card, also known as a third form factor (or 3FF). If you change cellular data carriers, you may need to remove the micro-SIM card.

Removal

Use your finger to remove the micro-SIM from the tray.



Service Source

Views

iPad

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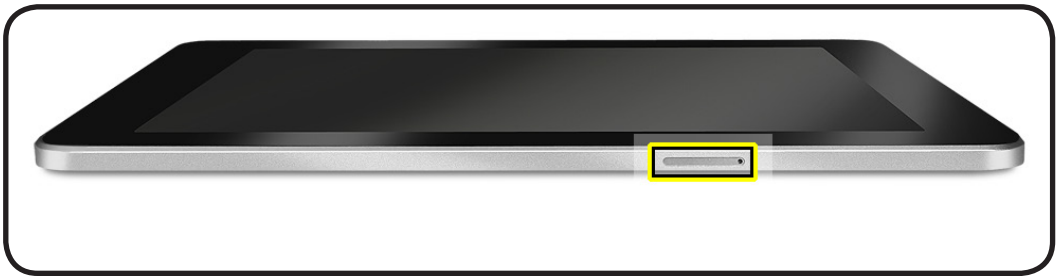
External Views

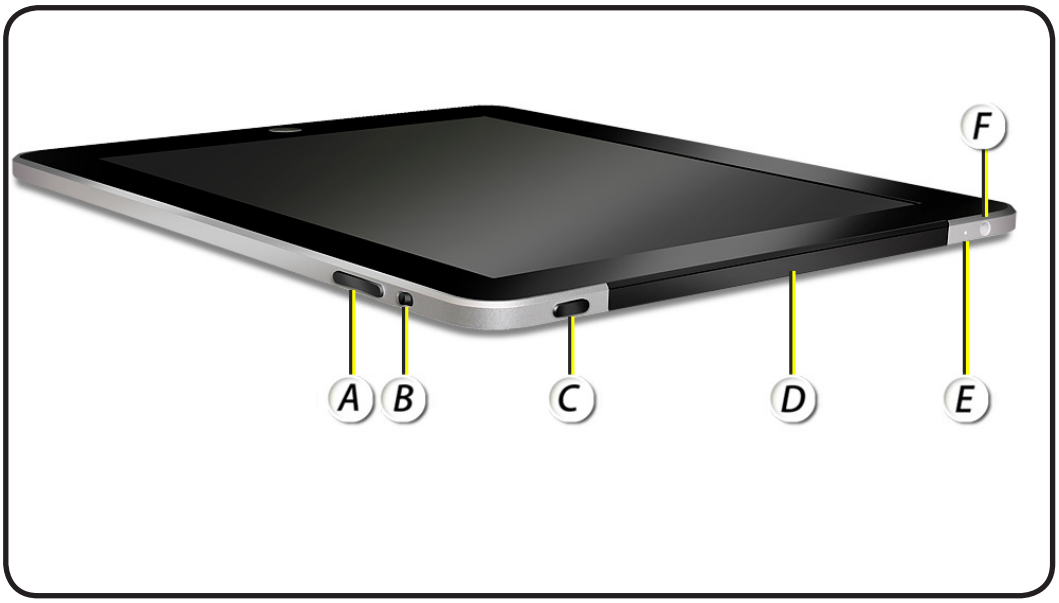
iPad Wi-Fi

iPad Wi-Fi + 3G

3G Model: Micro-SIM Card Tray



External Button and Controls

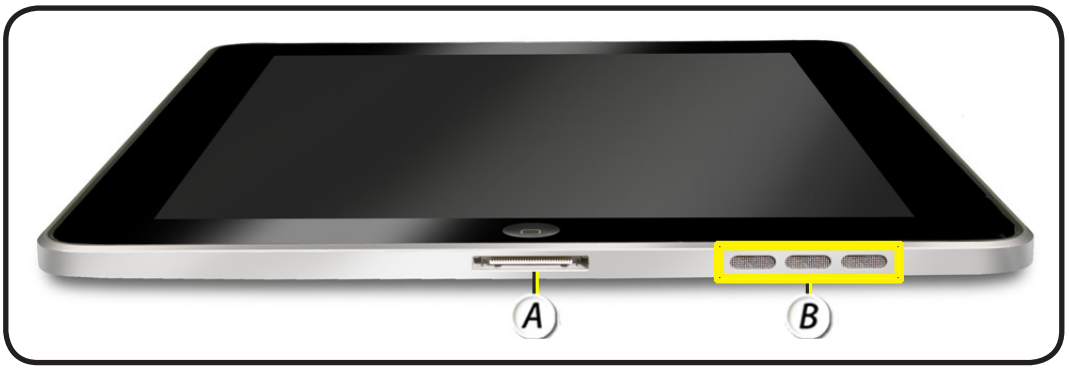


A - Volume controls
B - Mute button
C - Sleep/Wake button
D - 3G Antenna
E - Microphone
F - Headphone jack

Top View

A - Headphone jack
B - Microphone
C - Sleep/Wake button

Bottom View



A - 30-pin USB connector
B - Speaker

Connectors on Rear of iPad Dock

A - Analog audio jack
B - 30-Pin connector

Camera Connection Kit

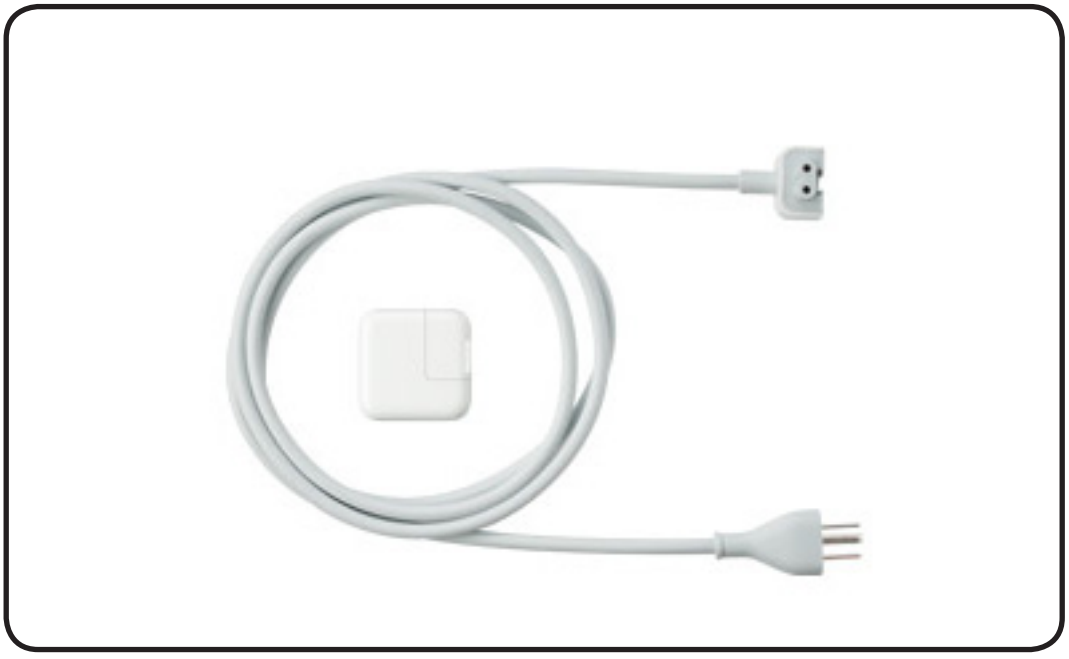
Camera Connector

SD Card Reader

Keyboard Dock

Standalone Dock

10W USB Power Adapter



Case: View 1

Case: View 2