



Operations Guide

Revision 1.2

April 19, 2004

P/N 90000610



FUJITSU

Preface

Thank you for purchasing the iPAD. Before using the iPAD, read this manual thoroughly so that you will be able to take full advantage of its functions.

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Using the iPAD

This manual contains important information required for using the iPAD safely. Before attempting to use the iPAD, read this manual carefully to ensure that you understand its contents. For safe operation of the product, pay particular attention to the section "Notes on Safety." Also keep this manual in a safe but convenient location for quick reference. Since Fujitsu takes every precaution to ensure that its products can be used safely without physical harm to users or damage to a product or peripheral equipment, use the iPAD only as instructed in this manual.

Changes:

- Add Prop 65 Warning
- Add Mercury warning

Regulatory and Safety Information - iPAD

Radio Frequency Interference Requirements – U.S.A.

This device has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the Federal Communications Commission Rules and Regulations. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial or residential environment. This equipment generates, uses, and radiates radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation. If the equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected
- Contact a Fujitsu Service Technician for assistance

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

Radio Frequency Interference Requirements – Canada

This device complies with RSS 210 of Industry & Science Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class B digital apparatus complies with Industry Canada Standard ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 d'Industrie Canada.

RF Devices

Fujitsu's RF products are designed to be compliant with the rules and regulations in the locations into which they are sold and are labeled as required. The majority of Fujitsu's RF devices are type approved and do not require the user to obtain license or authorization before using the equipment. Any changes or modification to Fujitsu equipment, not expressly approved by Fujitsu, could void the user's authority to operate the equipment.



FCC RF Exposure Guidelines

The radio module in this device has been evaluated under FCC Bulletin OET 65C and found compliant to the requirements as set forth in CFR Sections 2.1091, 2.1093, and 15.247(b)(4) addressing RF Exposure from radio frequency devices. The iPAD contains an internal low-power radio whose radiated output power is far below the FCC radio frequency exposure limits. Nevertheless, the iPAD shall be used in such a manner that the potential for human contact with the radio antenna during normal operation is minimized. The iPAD should be utilized/worn in accordance with the instructions for the device.

This device must not be collocated with any other antenna or transmitters.

Laser Devices

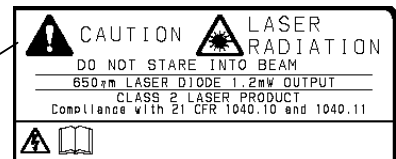
This product contains a Class 2 laser and complies with US 21CFR1040.10. These types of lasers use a low power visible light diode. Care should be taken to avoid staring directly into the light.

Laser power up to 1.2 mW at 650nm could be accessible in the interior.

“CAUTION – use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.”



Scanner Safety Labeling



Safety

This product has been certified with Underwriters Laboratories for use in the United States and Canada.



Using the iPAD in Mission Critical Situations

The iPAD is designed and manufactured for use in standard applications such as those for general office, personal, household use and intrinsically safe environments. It is not intended for specialized uses, such as atomic energy control systems, aeronautical or space systems, mass transportation control systems, medical devices for life support, or weapons firing control systems where particularly high reliability requirements exist, the pertinent levels of safety are not guaranteed, or a failure or operational error could be life threatening or result in physical injury (referred to hereafter as "mission-critical" use). Customers considering the use of the iPAD for mission-critical applications must have safety-assurance measures in place beforehand, and should consult a Fujitsu sales representative before proceeding.

Proposition 65 Guidelines

WARNING: Proposition 65 Guidelines

“**WARNING:** Handling the cord on this product or cords associated with accessories sold with this product, will expose you to lead, a chemical known to the state of California to cause birth defects or other reproductive harm. *Wash hands after handling.*”

Devices Containing Mercury

The iPAD LCD backlight contains a small amount of mercury which is considered a hazardous material relative to disposal. Please use an authorized Fujitsu Repair facility for replacement and disposal of the LCD.



Hg LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE, OR FEDERAL LAWS.

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1 Before Using the iPAD

1.1 Names of Parts

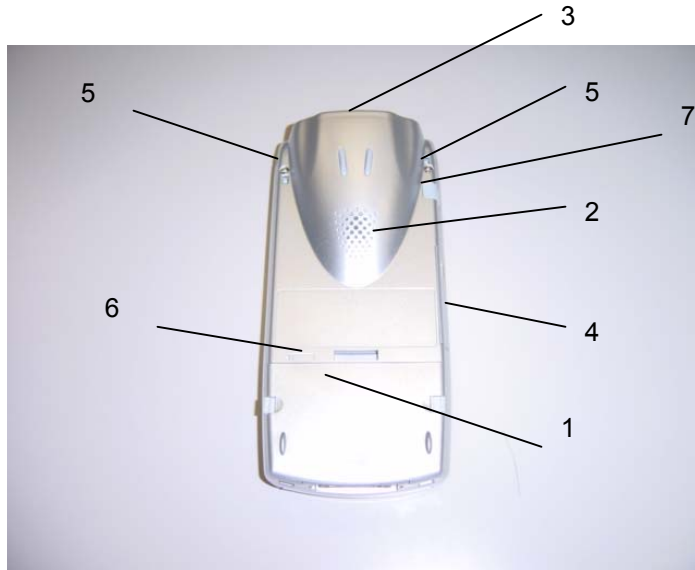
This section shows the location of parts and provides a brief description of the functionality.

Front View



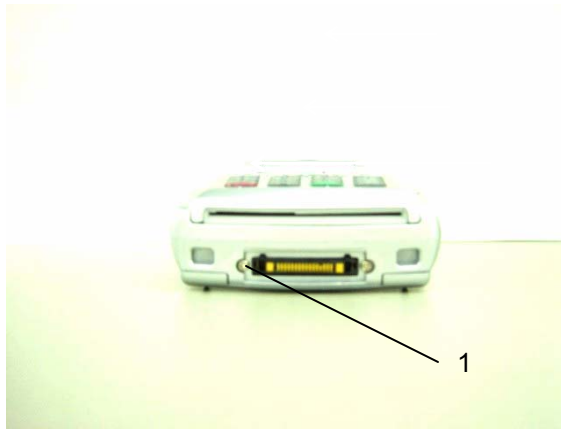
	Part name	Remarks
1	Magnetic card reader	Reads magnetic cards.
2	Trigger key	Used when the barcode scanner is used.
3	Microphone (built-in)	Used for speech input.
4	Operations section	See the Operations section on page 11.
5	Resistive-film touch panel LCD	Referred to as “touch panel” or “screen” in this manual.
6	LED	Lit during charging on the cradle or during reading by the scanner. It can also be lit by an application.
7	802.11b antenna (built-in)	Used during 11 Mbps wireless LAN communication.
8	Bar code scanner	Outputs the laser beam used to read a bar code.
9	Bluetooth wireless antenna (built-in)	Used during 1Mbps wireless PAN communication.

Rear View



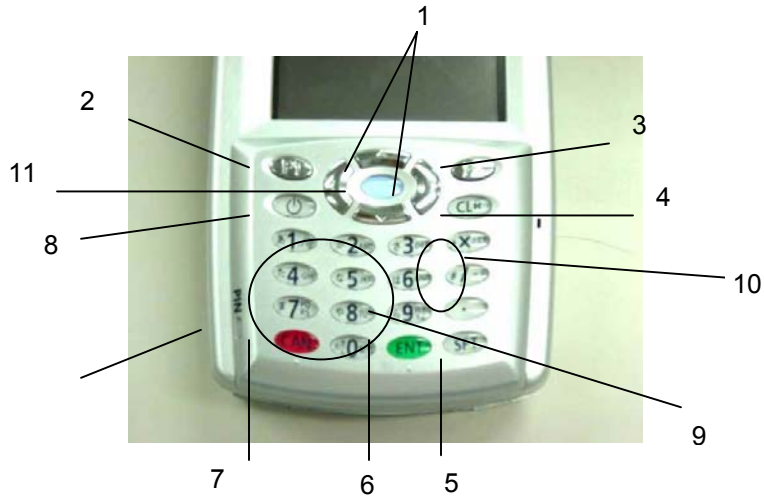
NO.	Part name	Remarks
1	Main battery compartment	Holds a lithium ion battery (main battery).
2	Speaker (built-in)	Outputs sound.
3	Bar code scanner	Outputs the laser beam used to read a bar code.
4	Compact flash slot	Compact flash slot for RF card or memory.
5	Strap hole	Means by which to attach a strap.
6	Reset switch	Used to forcibly terminate or restart the unit. * Do not use this switch during normal operation.
7	Headset jack	Accepts a 2.5 mm diameter plug.

Bottom View



NO.	Part name	Remarks
1	Cradle interface	Provides the contacts used to charge the iPAD or transfer data when it is mounted on the cradle (IPAD142-01)

Operations section



NO.	Part name	Remarks
1	Cursor key	Moves the cursor.
2	Function key 1	Invokes a function defined by an application.
3	Function key 2	Invokes a function defined by an application.
4	Clear key	[CLR] key in this manual.
5	Shift key	[SFT] key in this manual.
6	Enter key	[ENT] key in this manual.
7	Cancel key	[CAN] key in this manual.
8	Power key	–
9	Numeric/character keys	–
10	× / and . (decimal point) keys	–
11	Set key/Enter	–

Operating style

The iPAD is designed so that you can either hold it in one hand and operate it with your thumb or hold it in one hand and operate it with the other hand. These two styles are shown in Figures 1 and 2. Figure 3 demonstrates the iPAD while wearing the shoulder strap.

Figure 1



Figure 2



Figure 3



1.2 Batteries

1.2.1 Batteries

- Battery types

The iPAD has a main battery and a backup battery.

Main battery: The main battery is used to back up the contents of memory during normal operation and in suspend mode.

Backup battery: The backup battery is used to preserve the contents of memory if the main battery loses its charge or the main battery is being replaced.

- Guidelines on battery life

1. Main battery

As a guideline, the life of the main battery is either about 500 chargings and dischargings or two years.

The more a battery is used, the shorter the time it will last. The life of the main battery has expired if it loses its charge in a very short time after being fully charged. When this happens, replace the main battery with a new one.

Main battery life and its ability to hold a charge is affected by the ambient temperature and age. The battery life may be less than 500 charges and discharges if it is used or stored in very high temperatures or low temperatures for extended periods of time; or if the battery is more than two years old.

2. Backup battery

The backup battery is used temporarily to retain data while the main battery is being replaced.

The backup battery is embedded in the main unit and must be replaced by a factory authorized repair agency.

- Message screen

When the battery charge falls below a certain level, a message prompting you to recharge the battery appears on the LCD. This message must be cleared by the operator. You should recharge the main battery when you get a 'Low Battery' message.

- Checking the battery status

You can check the status of the battery and the remaining battery charge. (Reference Section 3.2, "Checking the Battery Status").

1.2.2 Charging the Main Battery

Charge the main battery the first time that you use it or when the battery charge is low.

You can charge the main battery with any of the following methods:

- Charging the main battery using the cradle
- Charging the main battery using two cradles
- Charging the main battery using a single-pack charger
- Charging the main battery using a single-pack charger and cradle

▲CAUTION

- Do not unplug the AC adapter before charging has been completed.
- Use only the cradle, AC adapter, and single-pack charger designed for the iPAD to prevent damage to the iPAD resulting from product differences such as voltage or current requirements.

Note

- It is best to charge a battery at room temperature (from 50°F to 86°F).
- The cradle, AC adapter, or single-pack charger may become slightly hot. This is not a malfunction.

■ Charging the main battery using the cradle

Using one cradle

Using the cradle, you can charge one battery installed in the iPAD. A cradle (CA05951-7139), with an AC adapter is required for this operation.



- (1) Connect the AC adapter to either of the cradle power connection ports.
- (2) Plug the AC adapter into a wall outlet.

- (3) Turn off the iPAD.
- (4) Insert the iPAD with the main battery installed into the cradle until you hear a click. Confirm the charge light indicator turns on.

➤ Charging starts.

During charging, the LED is on and is orange. When charging is completed, the LED changes to green.
The charging time is about 2.5 hours.

 Note 

- Gently mount the iPAD on the cradle to prevent malfunctioning of the iPAD and cradle.
- If the LED does not light, make sure that the iPAD is correctly mounted on the cradle.

☒ This completes the operation.

■ **Charging the main battery using using two cradles (IPAD142-01)**

Using two cradles, you can simultaneously charge two batteries, one in each of two iPAD units.

Two cradles (CA05951-7139), one AC adapter (CA05306-D500), and one daisychain cable (CA72001-1895) are required for this operation.



- (1) Using a daisychain cable, connect the AC adapter connection interface on the right of one cradle to the connection interface on the left of the second cradle. The cable can be connected to either of the two AC adapter connection interfaces provided on a cradle.
- (2) Connect an AC adapter to the unoccupied AC adapter connection interface on either of the cradles.
- (3) Plug the AC cable of the AC adapter into a wall outlet.

- (4) Turn off the iPAD.
- (5) Insert the iPAD units (with main batteries installed) into the cradles until you hear a click.
 - Charging starts.
 - During charging, the LED is on and is orange. When charging is completed, the LED changes to green.
 - The charging time is about 2.5 hours.

🔔 Note 🔔

- Gently mount the iPAD on the cradle to prevent malfunctioning of the iPAD and cradle.
- If the LED does not light, make sure that the iPAD is correctly mounted on the cradle.

☒ This completes the operation.

Removing the iPAD from a cradle

Remove the iPAD from the cradle as follows: Lightly hold the iPAD with one hand. Using the other hand, press the Eject button in the center of the cradle. When the iPAD is released from the cradle, hold it lightly and lift it.



Eject button

■ **Charging the main battery using a single-pack charger**

You can charge the main battery using a single-pack charger. Charging using this method requires a single-pack charger (CA05951-7080) and an AC adapter (CAS05306-D500).



Single-pack Charger

- (1) Connect the AC adapter to the single-pack charger.
- (2) Plug the AC cable of the AC adapter into a wall outlet.
- (3) Mount the main battery on the single-pack charger.

➤ Charging starts.

During charging, the pack charger LED is on and is orange. When charging is completed, the LED changes to green. The charging time is about 2.5 hours.

 **Note** 

- If the pack charger LED lights in red, the battery is faulty and cannot be charged. Replace the battery.

 **CAUTION**

- The LED will not light if the main battery is not correctly installed.

☒ This completes the operation.

■ **Charging the main battery using a single-pack charger and a cradle**

You can simultaneously charge main batteries mounted on a single-pack charger and in the iPAD mounted on a cradle.

A single-pack charger (CA05951-7080), cradle (CA05951-7139), AC adapter (CA05306-D500), and a daisychain cable (CA72001-1895) are required for this operation.



- (1) Using the daisychain cable, connect the AC adapter connection interface of the single-pack charger to either the left or right AC adapter connection interface on the cradle. The cable can be connected to either of the two AC adapter connection interfaces provided on the cradle.
- (2) Connect the AC adapter to the unused AC adapter connection interface on the cradle.
- (3) Plug the AC cable of the AC adapter into a wall outlet.
- (4) Turn off the iPAD.
- (5) Insert the iPAD with the main battery installed into the cradle until you hear a click.

➤ Charging starts.

During charging, the LED is on and is orange. When charging is completed, the LED changes to green.

The charging time for the two is about 2.5 hours.

Note

- Gently mount the iPAD on the cradle to prevent malfunctioning of the iPAD and cradle.
- If the LED does not light, make sure that the iPAD is correctly mounted on the cradle.

CAUTION

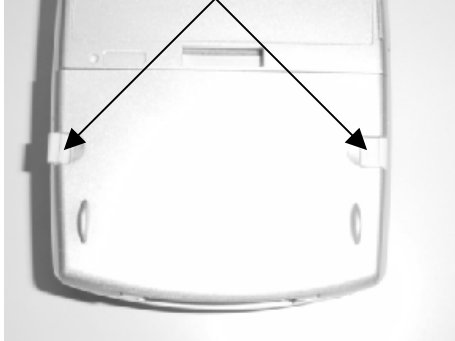
- The LED will not light if the main battery is not correctly mounted on a single-pack charger.

☒ This completes the operation.

1.2.3 Installing and Removing the Main Battery – (CA50601-1001)

■ Installing the main battery

- (1) On the rear of the iPAD, slide the battery lock switches on both sides of the lower part to the outside.



- (2) Slide down the battery cover to remove it.
- (3) Insert the main battery in the battery compartment.
In this step, make sure the black ribbon is outside and not covered by the battery.
- (4) Install the battery cover and slide it upward to lock it.
In this step, make sure that the black ribbon does not protrude from the cover.
- (5) Slide the battery lock switches inward to lock them.

▲ CAUTION

The iPAD can be turned on only when the battery lock switches have locked.

- ☒ This completes the operation.

■ Removing the main battery

- (1) Turn off the iPAD.
- (2) On the rear of the iPAD, slide the battery lock switches on both sides of the lower part to the outside.
- (3) Slide down the cover to remove it.
- (4) Pull the black ribbon to remove the battery.

▲ CAUTION

- Be sure to turn off the iPAD before replacing the main battery.
- Make sure that the backup battery has sufficient charge before replacing the main battery. The data in memory may be lost if you replace the main battery while the backup battery alarm message is displayed.
- While the main battery is being replaced, the backup battery preserves data in the

iPAD's memory.

When replacing the main battery, have ready a fully charged main battery and complete the procedure within ten minutes.

→ The life of the backup battery is significantly reduced if the iPAD is left with the main battery removed.

☒ This completes the operation.

1.2.4 Charging the Backup Battery

The backup battery is charged from the main battery. On initial set up of the iPAD please charge the batteries for at least 24 hours to insure a full charge to the back-up battery. (During normal operation, the backup battery is permanently charged as long as the main battery is installed.)

Even though the backup battery is charged, notify your maintenance representative if an alarm is frequently displayed.

⚠ CAUTION

- The backup battery is temporarily used to retain data while the main battery is being replaced. The life of the backup battery may be shortened if the iPAD is left with only the backup battery installed.
- Do not leave the iPAD in a state with the main battery removed.

📖 For Reference 📖

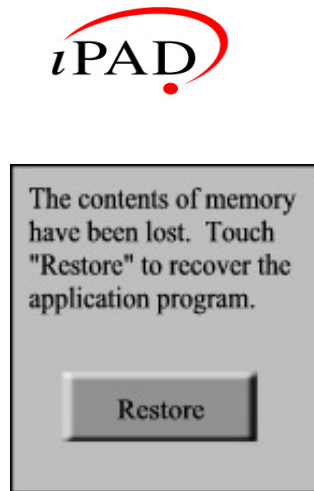
The following are the guidelines for the retention of data in memory while the iPAD is off (suspend mode):

- If both the main and backup batteries are fully charged: About 1 month
 - If the main battery is in the alarm state and the backup battery is fully charged: About 3 days
- The usage environment may affect these estimates.

2 Setup

The iPAD is shipped with the main battery removed and the backup battery disconnected to prevent discharge. When the iPAD is first powered on the operator will be informed the contents of memory have been lost. When "Restore" is pressed, the RAM memory will be restored from the \\flashdisk folder automatically.

The following screen will appear when the iPAD is powered on for the first time and these steps should be performed. The second time the iPAD is powered on the CE desktop will be displayed.



The iPAD supports an automatic restore function to guard against erasing of memory (RAM) caused by a dead battery or another reason (applications must have already been installed according to the standard installation procedure described in the "iPAD Systems Users Guide").

1. Press the Restore Button
2. The touch panel calibration screen appears.
Follow the instructions on the screen.
(Reference Section 3.5, "Calibrating the Touch Screen")
3. Date/Time Properties is activated.
For information about Date/Time Properties, see the "iPAD Systems Users Guide."
4. After the Date/Time Properties have been set, the restore tool program is automatically activated. After the application and operating environment have been restored, the iPAD will re-start after 5 seconds or can be started sooner by pressing the "Restart" button.

▲CAUTION

- The iPAD is not shipped with the main battery installed and charged. Perform setup either with the iPAD connected to the cradle or after you have charged the main battery and installed it in the iPAD. Reference Section 1.2, "Using the Battery")
- The backup battery is installed in the iPAD, but it has not been charged. To charge the backup battery, install a charged main battery in the iPAD. Reference Section 1.2.4, "Charging the backup battery")

3 Using the iPAD

3.1 Power on/off (suspend/resume)

3.1.1 Turning on the iPAD (resume mode)

With the power off, press the Power key until the LED lights in green.

➤ The iPAD is turned on, the screen light, and the LED goes off.

- Turning on the iPAD for the first time:
The initial installation screen appears when you turn on the iPAD for the first time or you initialize the system.
See the "iPAD System Users Guide" for information about performing setup.
- Turning on the iPAD after the first time:
The screen that was displayed when you stopped the last time is displayed.

▲ CAUTION

- During resume processing (the green LED is on), do not remove the main battery or press the Reset button. Either of these actions may cause the data in memory to be lost.

3.1.2 Turning off the iPAD (suspend mode)

With the power on, press the Power key.

➤ The screen turns black and the iPAD is turned off.

▲ CAUTION

- Do not unlock and remove the main battery from the iPAD until power has been turned off. Doing so may cause the data in memory to be lost.
- Do not turn off the iPAD in the following state: Data is being backed up or restored. (The hourglass icon is displayed.)

 For Reference 

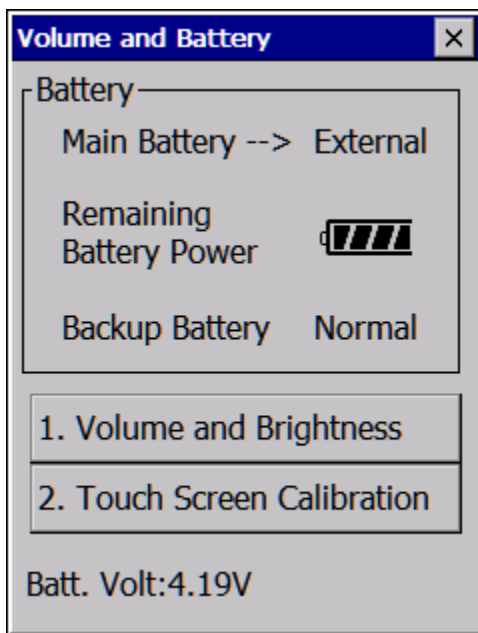
You can also turn off the iPAD as follows:

- Tap the [Start] button, then the [Suspend] button.
- When power is on, the iPAD has a function that automatically turns itself off if no action is performed for a certain length of time (automatic power-off function). For more information, see the "iPAD Systems Users Guide."

3.2 Checking the Battery Status

You can check the battery status.

While the iPAD is on, press the [ENT] key while holding down the [SFT] key. The [Volume and Battery] window opens.



Check the battery status in the [Battery] section.

The items in the [Battery] section have the following meanings:

1. Main battery
 - Status
 1. External power source
Indicates that the iPAD is mounted on the cradle.
 2. Normal
Indicates that the battery can be used.
 3. Insufficient charge
Indicates that the main battery charge is too low. Either charge or replace the main battery.

- Remaining battery charge
The current main battery charge is shown as one of five levels.

🔔Note🔔

- If [Insufficient charge] is displayed, the remaining battery charge is too low. Either charge the battery or replace it with a spare battery.
- If the charge is too low, a message is displayed on the screen and the iPad is automatically turned off after a while.

Either charge or replace the battery.

After checking the battery status, tap the [x] button on the window to close it.

☒ This completes the operation.

2. Backup battery

- Status
Indicates the backup battery status. The displayed status is one of the following:

(1) Normal

Indicates that memory backup is allowed.

(2) Insufficient charge

Indicates that the charge is not sufficient for memory backup. Charge the battery.

🔔Note🔔

- If [Insufficient charge] is displayed, the backup battery charge is too low. Charge the backup battery.

After checking the battery status, tap the [x] button on the window to close it.

☒ This completes the operation.

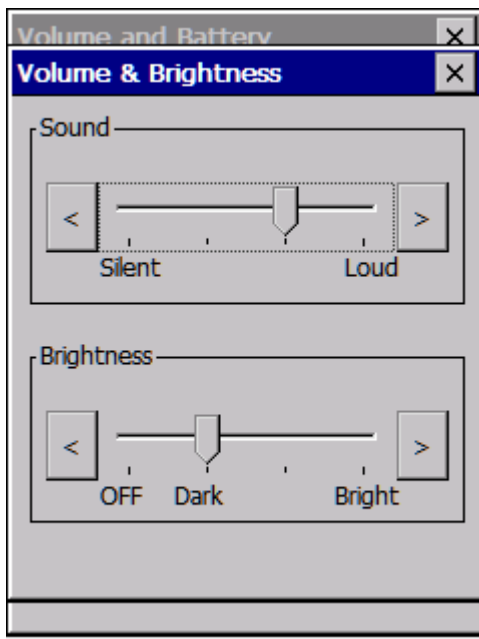
CAUTION

- The data in memory may be lost if you remove the main battery while the backup battery has an insufficient charge.

Reference: For information about charging the backup battery, see Section 1.2.4, "Charging the backup battery."

3.3 Adjusting the Volume

While the iPAD is on, press the [ENT] key while holding down the [SFT] key to bring up the [Volume and Battery] window. Next, tap [1. Volume and Brightness settings].



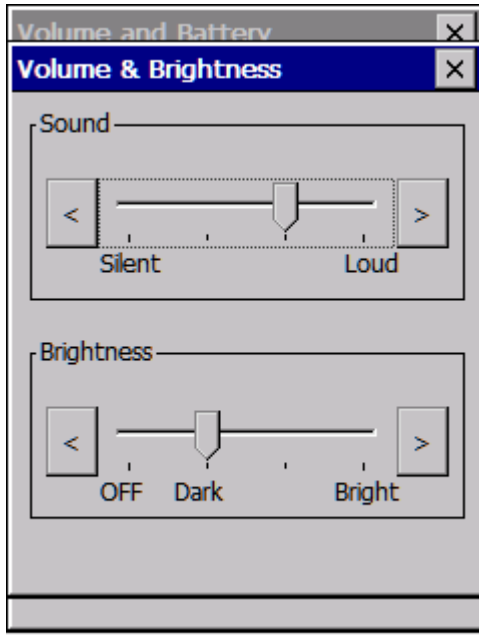
➤ The [Volume and Brightness] window opens.

- (1) In the [Sound] area, adjust the speaker volume.
- (2) Tap the and buttons to adjust the volume. The order of choices from the left is low, somewhat low, somewhat high, and high.
- (3) Tap the [X] button on the window to close it.

☒ This completes the operation.

3.4 Adjusting the Brightness of the Front Light

While the iPAD is on, press the [ENT] key while holding down the [SFT] key to bring up the [Volume and Battery] window. Next, tap [1. Volume and Brightness settings].



- (1) In the [Brightness] area, specify the brightness. Tap the and buttons to select the brightness level. The order of choices from the left is off, somewhat dark, somewhat bright, and bright.
 - (2) Tap the [X] button on the window to close it.
- This completes the operation.

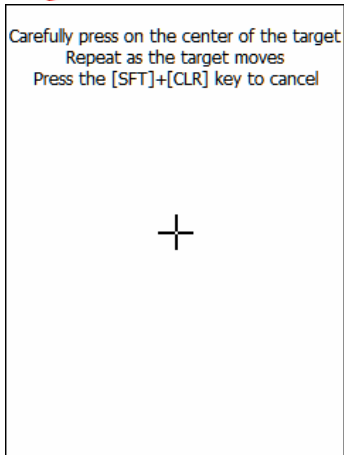
For Reference

- The front light automatically goes off if the remaining battery charge is too low.

3.5 Calibrating the Touch Screen

The coordinates on the touch panel are misaligned if the touch panel does not respond when you tap the screen and a location different from where you tapped is entered. If this situation occurs, calibrate the touch panel.

Perform touch screen calibration as follows: While the iPAD is on, press the [ENT] key while holding down the [SFT] key to bring up the [Volume and Battery] window. Next, tap [2. Touch Screen Calibration] key on the screen or press the [2] key to bring up the following touch screen calibration screen.



- (1) As directed on the screen, tap the center of the crosshairs (+) using a stylus. You will need to tap the center and the four corners of the screen.
- (2) After you have tapped all the correct locations, the crosshairs disappear and the message "Tap the screen to register save data" is displayed. Tap the screen to register the correction settings. To cancel the operation, press the [CLR] key while holding down the [SFT] key.

 **Note** 

- If you tap a location away from the crosshairs, you will be required to start the operation again from the beginning.
- Do not press the Power key while the touch panel correction tool is running. Doing so will nullify the touch panel correction settings, and the touch panel correction will have to be done again.
- If the battery loses its charge during touch panel correction, charge or replace the battery, then perform touch panel correction again.
- Use a stylus. Do not tap the screen with a pencil, ballpoint pen, or any other pointed object. Doing so may scratch or crack the screen.
- Do not touch the screen with your palm while you are tapping the screen.

 This completes the operation.

3.6 Virtual Keyboard

The screen keyboard is the keyboard that is displayed on the screen.

3.6.1 Displaying the Keyboard

Open and close the screen keyboard as follows:

- (1) To open the screen keyboard, press the [0] key while holding down the [SFT] key.
The screen keyboard appears on the lower part of the screen.
- (2) To close the screen keyboard, press the [0] key while holding down the [SFT] key, as you did to open it.
The screen keyboard disappears from the lower part of the screen.

☒ This completes the operation.

3.6.2 Inputting a Character

To input a character, tap the input field to make it ready for input (the cursor is displayed). When the field is ready for input, tap a character on the screen keyboard. The character is entered in the input field.

☒ This completes the operation.

3.6.3 Changing the Keyboard Type

There are two types of screen keyboard: keyboard small keys (Figure 1) and keyboard large keys (Figure 2).

(Figure 1)



(Figure 2)



You can change the keyboard type as follows:

- (1) Double-tap the [Input Panel] icon in [Control Panel].
- (2) When [Input Panel Properties] is displayed, select a keyboard type in [Current Input Method].
- (3) Tap the [OPTIONS] button.

(4) Select either large or small keys.

▲CAUTION

- The setting will not change if you close the screen by tapping the [×] button instead of using the [OK] button.

☒ This completes the operation.

3.7 Resetting the iPAD

3.7.1 Using the Reset Switch

Use the reset switch mainly to install an application or driver or change a setting.

- (1) If possible, save the data that you are working on.
- (2) Using a stylus, press the reset switch located on the left side of the rear of the iPAD.
- (3) The screen turns black, then the power is turned on again.



▲CAUTION

- If you reset the iPAD, any unsaved data or settings are lost.
- Do not use the reset switch while the iPAD is in operation (saving data or resuming operation).

Doing so may cause data in memory to be lost.

☒ This completes the operation.

3.7.2 Completely Resetting the iPAD

Completely reset the iPAD (“cold boot”) if it is not operating correctly or if you want to prevent deterioration of the main battery when storing the iPAD for a long period.

- (1) Turn off the iPAD
- (2) On the rear of the iPAD, slide the battery lock switches on both sides of the lower part to the outside.
- (3) Slide down the cover to remove it.
- (4) Pull the black ribbon to remove the battery.
- (5) Using the stylus, press the switch exposed when the battery is removed.



Reset / Cold Boot Switch

- All the data in memory is cleared, and memory is initialized.

CAUTION

- When you completely reset the iPAD, all of the data and information (Control Panel settings and installed applications) in its memory is lost

(except for the data in the flash disk area). See the "iPAD Systems Users Guide" to restore the applications.

- ☒ This completes the operation.

4 LED Indications

This chapter explains the LED indicators on the iPAD and on the single-pack charger.

4.1 iPAD LED

Equipment status	LED indication		Explanation
	Color	Indication	
iPAD is being turned on	Green	Lights and then goes off.	The iPAD is starting up (resuming operation). Do not operate the iPAD until the LED goes off.
Barcode is being read by the scanner	Green	Lights if the barcode is read correctly. (*1)	The LED can be made to light if the iPAD reads the Barcode correctly
Magnetic card being read by the reader	Green	Lights if the magnetic card is read correctly. (*1)	The LED can be made to light if the iPAD reads the magnetic card correctly.
Battery on the cradle is being charged	Orange	Lights.	The battery is being charged. The LED turns green when charging is complete.
	Green	Lights.	Charging is complete.
	Yellow	Lights.	A charging error has occurred. Either replace or charge the main battery again. (*2)

(*1) The LED can be made to go on by an application when a magnetic card is read by the reader or when the scanner correctly reads a barcode.

(*2) The LED is Yellow when the iPAD is powered on from a suspended state while in the cradle. This is not a charging error. The actual color is a Yellow/Green.

4.2 LED on the Single-Pack Charger during Charging

LED indication		Meaning
Color	Indication	
Orange	Lights.	The battery is being charged.
Green	Lights.	Charging is complete.
Red	Lights.	The main battery cannot be charged because it either is not correctly connected to the single-pack charger or is faulty. Either correctly connect the main battery to the single-pack charger or replace the main battery.

5 Wireless LAN (local area network)

The iPAD is designed to use an internal LAN radio as its primary means of communicating data when used as an end-node device within a wireless LAN.

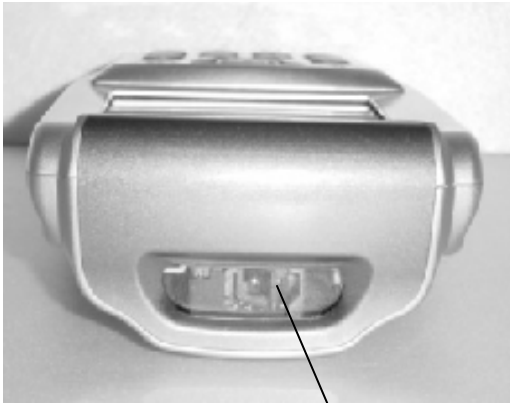
The iPAD is purpose built to use an 802.11b WiFi spread-spectrum radio that operates in the 2.4 GHz band. This does not require a license for operation. The iPAD requires a compact flash radio card. The integration of an 802.11b WiFi spread spectrum radio allows the iPAD to interactively communicate in real-time with its host/server environment via a wireless local area network.

In a store environment, the iPAD can communicate within a radius of 16 to 66 ft. (or greater) from a wireless LAN access point. (The range of communication may vary significantly depending on the environment of the facility. In a semi-open space, communication can occur from 98 to 164 ft. or greater)

CAUTION

- The iPAD may not be able to communicate if it is used near a microwave oven, security gate, or other device that generates noise.
- Use the iPAD away from a TV set, radio, or another wireless device.

6 Bar Code Scanner



Reading aperture of bar code scanner

6.1 Using the Bar Code Scanner

- (1) Aim the bar code scanner of the iPAD at a bar code.
- (2) Press either of the trigger switches on the two sides of the iPAD. A scanning beam passes through the reading aperture of the bar code scanner.
- (3) Run the scanning beam across the bar code.
- (4) The LED lights in green if the data has been read correctly. (Note: the application needs to set the LED to do this.)
- (5) The scanning beam automatically stops when reading is completed.
- (6) Release the trigger switch.



▲WARNING

- Do not look into the reading aperture while a scanning beam is being emitted. Doing so can injure the eyes.

🔔For Reference🔔

- A scanning beam stops in about one second if you continue to press the trigger key but no bar code is detected from the reading aperture.
- If a bar code cannot be read, try changing the direction of the scanning beam in relation to the bar code or the distance of the iPAD from the barcode.
- Note that if the scanning beam passes over more than one bar code, it cannot be determined which of the bar codes will be read.

6.2 Bar Code Specifications

Item	Specifications	
PCS value	0.25 or more (Value for a 650 nm laser beam)	
Resolution	0.13 mm	
Reading angle	Vertical direction: $\pm 65^\circ$ or less Horizontal direction: $\pm 60^\circ$ or less Rotation: $\pm 30^\circ$ or less	
Reading depth	Narrow bar width	Distance
	0.13 mm	5.6 to 12.7 cm
	0.19 mm	4.6 to 19.0 cm
	0.25 mm	5.08 to 24.6 cm
	0.33 mm	5.08 to 30.4 cm
	0.51 mm	* to 38.1 cm
	1.02 mm	* to 55.8 cm
	1.40 mm	* to 73.6 cm
Reading confirmed by:	LED indication (green)	

* The minimum reading distance is determined by the bar code label width and the reading depth.

6.3 Cleaning the Reading Aperture of the Bar Code Scanner

The reading aperture of the bar code reader must always be clean when it is used. Clean the reading aperture using a dry cloth or a cloth moistened with water or a diluted neutral detergent solution. Do not use alcohol, thinner, or other volatile solvent.

6.4 Bar Code Sample Chart

Use the sample chart to check whether the scanner is faulty.

Code 39



JAN standard



JAN abbreviated



UPC/E



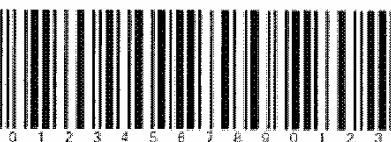
UPC/A



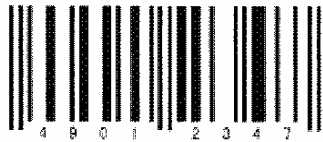
Code 128



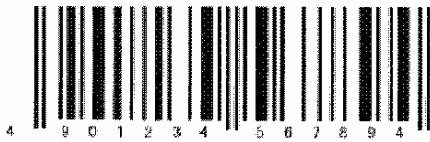
InterLeaved2of5



EAN-8



EAN-13



CAUTION

- This chart may become illegible due to age or improper handling of the User's Manual.

7 Magnetic Card Reader



- (1) After making sure of the orientation (magnetic stripe faces top of iPAD), insert a magnetic card.
- (2) Slowly move the magnetic card from left to right.

Note

- A magnetic card will not be read correctly if movement stops part way, the speed of movement changes, or the card is not moved parallel with the slot.
- The LED can be made to light by an application when a magnetic card is read correctly.

Cleaning the magnetic card reader

The magnetic card reader becomes contaminated with dirt and dust from use. Clean the reader using the cleaning card supplied as an accessory.

- Cleaning cycle: Clean the reader every month or whenever errors are frequent.
- Cleaning method: Insert the cleaning card (supplied) in the reader with the rough side (cleaning side) facing up. (Insertion is the same as for a magnetic card.)
- Replacement cycle: Replace the cleaning card (supplied at a cost) when it becomes contaminated.

If errors still occur after the reader has been cleaned, notify your Fujitsu maintenance representative.

CAUTION

- Before cleaning the reader, turn off the iPAD to guard against a possible malfunction.

8 Bluetooth

The iPAD can communicate with a server when used with a bluetooth station.

The wireless communication system used is spread-spectrum communication that uses the 2.4 GHz band. This system does not require a license for wireless communications.

In a store environment, the iPAD can communicate within a radius of 16 to 66 feet from the base station. (The range of communication that is possible varies significantly depending on the environment. In a semi-open space, communication is up to 98 to 164 feet.)

9 User Action in Response to Messages

If any of the following messages are displayed, take the action described in the following table.

Message	Cause	User response
Main battery alarm The front light is off.	The main battery charge is too low.	Either replace the main battery or charge the main battery using the battery charger or cradle. Reference: Section 1.2.2, "Charging the main battery" Section 1.2.3, "Installing and removing the main battery"
Backup battery alarm	The backup battery charge is too low.	Charge the backup battery. Reference: Section 1.2.4, "Charging the backup battery"
No application has been installed.	No application programs have been installed.	Press the [SFT] and [CAN] keys simultaneously to install application programs. Reference: "iPAD Systems Users Guide"
A power failure may have occurred.	The memory data was deleted because, for example, the battery charge was too low.	Press the [SFT] and [CAN] keys simultaneously to automatically recover the application programs. Reference: "iPAD Systems Users Guide"
An error was detected on the flash disk.	An error occurred in the system information storage area of the flash ROM.	Tap the [OK] button to initialize the flash ROM and then reinstall the application programs. Reference: "iPAD Systems Users Guide"

10 Troubleshooting

If you encounter any of the problems described in the following table while using the iPAD, take the indicated action before notifying your maintenance representative.

Problem	User response
<p>The iPAD cannot be turned on.</p>	<p>The main battery has no charge. Replace it with a charged main battery. Reference: Section 1.2, "Using Batteries" Alternatively, charge the main battery. Reference: Section 1.2.2, "Charging the main battery" If the main battery is completely dead, all the data and information in memory in the iPAD may be lost. If data has been lost, reinstall the applications again.</p>
	<p>The service life of the main battery has expired or the battery is faulty. Install a new main battery. Reference: Section 1.2, "Using Batteries"</p>
	<p>The main battery may not be correctly installed. Install the main battery correctly. Reference: Section 1.2.3, "Installing and removing the main battery"</p>
	<p>The battery lock switch may be unlocked. Reference: Section 3.7.2, "Completely resetting the iPAD"</p>
<p>The screen appears for a moment, then turns black when you press the Power key to turn on the power.</p>	<p>The main battery may have no charge. Replace it with a charged main battery. Reference: Section 1.2, "Using Batteries"</p>
<p>The speaker is silent.</p>	<p>The speaker may be set to "Low." Check the volume setting of the speaker. Reference: Section 3.3, "Adjusting the Volume"</p>
<p>The touch panel does not respond.</p>	<p>The coordinates on the touch panel may be misaligned. Perform touch panel correction. Reference: Section 3.5, "Calibrating the Touch Screen"</p>
<p>The front light is dark or turns black.</p>	<p>The main battery may have no charge. Replace it with a charged main battery. Reference: Section 1.2, "Using Batteries"</p>

11 Correctly Using the iPAD

11.1 Using the Main Battery

- To prevent deterioration, do not store the main battery for a long time when it is fully charged. For long-term storage, remove the battery from the iPAD when it is about 50% charged and store it at room temperature.
- If the battery has not been used for a long time, recharge it.
- Be careful not to short-circuit the battery terminals with a necklace or other metallic object.
- Do not heat the battery or throw it into a fire.
- Do not leave the battery in a car exposed to sunlight or in direct sunlight.
- Do not allow the battery to become wet.
- Do not apply a strong shock to the battery. Do not drop the battery.
- Using the iPAD at low temperatures (below 50°F)
 - At low temperatures (below 50°F), the iPAD does not operate as long as it does at room temperature. In an environment of 50°F, operating time is about 70% of that at room temperature, and in an environment of 32°F, it is about 50% (new battery used).
 - If operation in a low-temperature environment is possible, review charging procedures and operation.
 - In operation at low temperatures (below 50°F), replacing the battery with one that is only partially charged will result in a very short operating time. Be sure to replace the battery with a fully charged one.
 - Keep a spare battery warm until you use it by, for example, putting it in your pocket. If you warm a battery with a body warmer, be careful that the battery does not come into direct contact with the body warmer.
- If a message indicating that charging is required (battery status message) is displayed, promptly charge the battery or replace the battery with a spare battery.
- Be careful that no dust, sand, or other foreign matter enters the terminal section while you are using the iPAD. If any foreign matter gets in, completely remove it using a soft-tipped cotton swab or gauze, then repeat several times inserting the iPAD into the charger or device and then removing it.
- The iPAD may not charge if the terminals are dirty.
- Despite complete charging, the battery naturally discharges little by little as time passes. If possible, charge the battery again just before using it (within one or two days). Store the battery in as cool a place as possible and charge it at an ambient temperature of 50°F to 86°F. Doing so will increase the life of the battery.

11.2 Using the Backup battery

- Backup battery alarm message
A warning message appears in the center of the screen if the voltage of the backup battery drops or the backup battery is not connected. The programs and data in memory will be lost if you replace the main battery while this message is displayed. Immediately charge the backup battery.

Reference: For information about charging the backup battery, see Section 1.2.4, "Charging the backup battery."

11.3 Long-term Storage

Store the iPAD where it will not be exposed to vibration, dust, high and low temperatures, high humidity, and direct sunlight.

- Storing the iPAD with the programs saved
To avoid discharging of the main and backup batteries, charge the main battery once every week. Without charging, the programs and data in memory will be lost.
- Storing the iPAD without the programs saved
To store the iPAD without the programs saved, remove the main battery and completely reset the iPAD.

Reference: For information about removing the battery, see Section 1.2.3, "Installing and removing the main battery," and Section 1.2.4, "Charging the backup battery." For information about completely resetting the iPAD, see Section 3.7.2, "Completely resetting the iPAD."

11.4 Cleaning

- Clean the cover of the iPAD using a cloth moistened with a solution of water and neutral detergent or a dry cloth. If you use a damp cloth, be sure to wring it out thoroughly to prevent water from getting into the iPAD, causing a malfunction.
Do not wipe the iPAD using thinner, benzine, or other volatile solvents. Such materials can discolor the iPAD or erase printed characters.
- Wipe the display area of the iPAD using a cloth slightly moistened with water or a glass wipe with a very fine texture.
- Occasionally clean the cradle interface using a dry cotton swab or gauze. If the terminals become dirty, contact may be poor, causing the iPAD to turn off or to disable normal charging and communication.

11.5 Other precautions

- Do not disassemble or modify the iPAD.
- To prevent the iPAD from malfunctioning, do not leave the iPAD, even for a short time, where it is exposed to any of the following conditions:
 - Extreme heat (for example, car in sunlight with the windows closed)
 - Direct sunlight
 - Extreme cold
 - Dust
 - Strong vibration
 - Humidity
- Do not apply a strong shock to the iPAD. Do not drop the iPAD.
- Be careful not to expose the iPAD for long periods of time in a high-temperature environment (95°F or higher). Doing so may result in a low-temperature burn.

A Specifications

Item		Specification
Control section	CPU	32-bit RISC CPU
	Memory	ROM: 32 MB RAM: 64 MB Flash disk: 32 MB
	OS	WindowsCE. NET
Display section	Display type	3.5-inch TFT reflective color LCD
	Resolution	240 pixels wide by 320 pixels high (with 2D acceleration)
	Display lighting	High-intensity front light
Operations section		Touch panel (resistive-film type), trigger switches (bar code scanner input), power key, function keys, set key, cursor keys, clear key, numeric keypad, × key, / key, decimal-point (.) key, cancel key, enter key, and shift key.
External interface		Cradle I/F: USB client (for PC connection) Charge terminals
Scanner		JAN/EAN-13/8, UPC-A/E, CODE39/128, Interleaved $\Delta 2$ of $\Delta 5$ (ITF)
Audio		Speaker × 1 built-in, microphone × 1 built-in, headset connector (input/output)
Magnetic card reader		JIS I(ISO1/2), JIS II
Communications		SS wireless: IEEE802.11b compliant, DS system, 11 Mbps (built-in antenna) SS wireless: Bluetooth V1.1 compliant, 1Mbps, built-in antenna

Item		Specification
Power source	Main battery	Lithium ion battery (CA50601-1001) 1700mAh/3.7V
	Backup battery	Manganese dioxide lithium battery (not user replaceable)
	Operating time	About 7 hours (new battery, room temperature, wireless communication in progress for 10% of the time, and front light off)
		About 3 hours (new battery, room temperature, wireless communication in progress for 10% of the time, scanner reading once every ten seconds, and front light on at the "dark" setting)
	Charging	About 2.5 hours (single-pack charger) About 2.5 hours (cradle with the iPAD turned off)
Ambient conditions	Temperature	Operating: 32 to 104°F (no condensation) Storage: -4 to 140°F (no condensation)
	Humidity	Operating: 20 to 85% (no condensation) Storage: 8 to 95% (no condensation)
Dimensions		3.3(W) × 7.4(D) × 0.9(H) inches (protrusions excluded)
Weight		About 11.9 ounces (including main battery)

B Consumables

The following table lists the consumables that the user must replace.

Product name	Part number	Service life
Lithium ion battery for iPAD100-10	CA50601-1001	About 500 charges and discharges, or about two years.
MCR cleaning card	7737171	Replace cleaning card when errors continue to occur after the reader has been cleaned.

The main battery service life may be less than about 500 charges and discharges or two years depending on the ambient temperature and how the iPAD is used.

If you use the iPAD in a manner that is not standard use as specified by Fujitsu, components other than the consumables listed above may have to be replaced at the user's expense. For more information about standard use and components that may have to be replaced, consult your maintenance representative.

Order consumables from FTXS Supply Point at 1.800.538-8716.

C Accessories

Item	Quantity
Lithium ion battery	1
Strap with a stylus pen	1
Cleaning card	1
Drip-proof cover (for magnetic card reader)	1

D Options

Product name	Model	Specification overview
Cradle	iPAD142-01	Special cradle for the iPAD100-10. Unit that recharges the iPAD's battery. The charging time is about 3 hours. Provides USB type signal for interface to desktop PC.
Single-pack charger	CA05951-7080	Unit that charges the iPAD's lithium ion battery. An AC adapter is required for the charger. The charging time is about 2.5 hours.
AC adapter	CA05306-D500	AC adapter required to use a cradle or single pack charger.
Daisy chain cable	CA72001-1895	Cable that connects two cradles or connects a cradle and a single-pack charger
USB cable	CA05951-5525	Cable that connects the iPAD to a PC while the iPAD is in the cradle

E Warning Indications and Symbols

This user's manual uses warning indications and symbols to help users use the iPAD safely and to prevent personal injury and property damage.

This manual uses warning indications and symbols in the text to indicate safety conditions. The meaning of each indication and symbol is explained below.

Warning Indications



Indicates a hazardous situation that could result in personal injury if the user does not perform the procedure correctly.



Indicates a hazardous situation that could result in minor or moderate personal injury if the user does not perform the procedure correctly. Also indicates that damage to the product or other property could occur if the user does not perform the procedure correctly.

Warning Symbols



Indicates the possibility of injury from an electric shock.



Indicates a condition that requires caution and a specific action that must not be performed.



Indicates a condition that requires general caution.



Indicates the possibility of an electric shock or fire.



Indicates an action that is prohibited (prohibited action).



Indicates a required action.

F Notes on Safety

▲WARNING



- Do not damage the power cord when you use the AC adapter, single-pack charger, or cradle. Doing so may result in an electric shock or fire.



- Use only the specially designed cradle, AC adapter, and single-pack charger. If another item is used, differences in voltage or current can damage the iPAD.
- If the battery is not handled correctly, the iPAD may overheat, explode, or catch fire. Be sure to observe the following precautions:
 - Neither throw the battery into a fire nor heat it.
 - Connect the terminals correctly.
 - Do not connect the terminals using a wire or other metallic material.
 - Do not puncture the battery with a needle, hit it with a hammer, stomp on it, or otherwise apply a strong shock to it.
 - Do not disassemble or modify the battery.



- When using the laser scanner, do not direct the laser beam toward anyone's eyes. Doing so may injure the eyes.
- Do not look into the aperture of the laser scanner. Because a laser beam is emitted from the aperture, you may injure your eyes.

▲WARNING



- Do not use or leave the battery near a flame, fire, stove, or other source of heat, in direct sunlight, or in a car exposed to sunlight.
- Do not put the battery in a microwave oven or other hot container.
- Charge the battery only on the special cradle or single-pack charger.
- Do not charge the battery by directly connecting it to a wall outlet or cigarette lighter in a car.
- Do not charge the battery near a flame, fire or under a hot sun.



- If the iPAD generates heat, smoke, or an unusual smell or noise, turn off the power immediately and contact maintenance personnel. Failure to do so may result in an electric shock or fire.



- Do not modify the iPAD without permission. Doing so may result in an electric shock or fire.

CAUTION



- Turn off the iPAD before cleaning it.
- Do not clean the iPAD using a damp or chemically treated cloth, and do not use thinner or other volatile chemical. Doing so may cause the iPAD to malfunction.



- Do not remove the battery without turning off the iPAD.
- Do not unplug the AC adapter or single-pack charger until charging has been completed. Doing so may cause the battery to be improperly charged.
- Do not apply a strong shock to the iPAD. Do not drop the iPAD.
- Although the iPAD is resistant to breakage for ordinary operations (for example, putting it on a desk), Fujitsu recommends that users use a neck strap so that the iPAD cannot be accidentally dropped.
- Do not carry the iPAD in your hip pocket. Sitting down with the iPAD in your hip pocket may break the display unit.
- Because the fluorescent tubes in the liquid crystal display (LCD) used in the iPAD contain mercury, dispose of the LCD in accordance with any local laws and regulations.
- Dispose of the main battery in accordance with any local laws and regulations after insulating the battery terminals with tape or other means to prevent a short circuit.



- Always keep the magnetic card reader and magnetic cards clean. If dust, oil, or water gets on them, an error occurs or the magnetic head malfunctions or deteriorates.
- Do not lubricate the magnetic card reader.
- If you drop an object into the magnetic card reader slot, use tweezers or a similar means to extract it.
- Keep magnetic cards and the magnetic card reader away from magnets or magnetic objects. Magnetism will destroy data on a magnetic card.





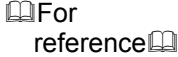



- Do not remove any component that is screwed on. Doing so may result in an electric shock, burns, or injury.



- For safety reasons, unplug the AC adapter and single-pack charger if they will not be used for a long time. Failure to do so may result in an electric shock or fire.

G Conventions Used in the Manual

Symbols

Symbol	Meaning
 Note 	Indicates a precaution or information you need to note. Be sure to read these items.
 For reference 	Indicates useful information.
Circled numbers (such as (1) and (2))	Indicates the steps, starting with (1), in a procedure.
	Indicates the result for an operation.
	Indicates the end of a series of operations.

Terminology

Term	Meaning
Tap	To press once somewhere on the screen of the iPAD
Double-tap	To press twice in succession somewhere on the screen of the iPAD