

# Service Manual

Notebook Computer

CF-18

**TOUGHBOOK**

This is the Service Manual for  
the following areas.  
W ...for PCSC

**Model No. CF-18JHU80TW**

**⚠ WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

**Panasonic®**

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# WARNINGS

For U.K.

## **This apparatus must be earthed for your safety.**

To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring.

Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe.

For your safety, if you have any doubt about the effective earthing of the power point, consult a qualified electrician.

## **FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY**

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 3 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 3 amps and that it is approved by ASTA or BSI to BS 1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

**IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.**

**THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.**

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.


**Warning: THIS APPLIANCE MUST BE EARTHED.**

### **Important**

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  coloured GREEN or GREEN-and-YELLOW.

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured BLACK.

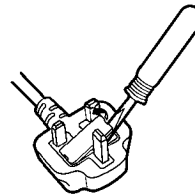
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured RED.

The mains plug on this equipment must be used to disconnect the mains power.

Please ensure that a socket outlet is available near the equipment and shall be easily accessible.

## **How to replace the fuse**

Open the fuse compartment with a screw-driver and replace the fuse.



### **Warnings**

- This equipment is not designed for connection to an IT power system.  
(An IT system is a system having no direct connections between live parts and Earth; the exposed-conductive-parts of the electrical installation are earthed.  
An IT system is not permitted where the computer is directly connected to public supply systems in the U.K.)
- Disconnect the mains plug from the supply socket when the computer is not in use.

This equipment is produced to BS800/1983.

## Safety precautions

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacture's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.

### Important Safety Instructions

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.
4. Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.

SAVE THESE INSTRUCTIONS

#### LITHIUM BATTERY ⚠

##### • CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the equipment manufacture.

Discard used batteries according to the manufacturer's instructions.

#### LITHIUMBATTERIES ⚠

##### Vorsicht!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Ersatz nur durch denselben oder einen vom Hersteller empfohlenen ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

#### PILE AU LITHIUM ⚠

ATTENTION: IL Y A DANGER D'EXPLOSION S' IL Y A REMPLACEMENT INCORRECT DE LA PILE. REMPLACER UNIQUEMENT AVEC UNE PILE DU MÊME TYPE OU D'UN TYPE RECOMMANDÉ PAR LE CONSTRUCTEUR. METTRE AU RÉBUT LES PILES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS DU FABRICANT.

## For U.S.A. / CANADA



A lithium ion battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

L'appareil que vous vous êtes procuré est alimenté par une batterie au lithium-ion. Pour des renseignements sur le recyclage de la batterie, veuillez composer le 1-800-8-BATTERY.

## Precautions (Battery Pack)

- Care should be exercised with regard to the following in order to avoid the possibility of overheating, fire or damage.



### **Avoid Heat**

Do not throw the battery pack into a fire or expose it to excessive heat.



### **Keep Articles Away**

Do not place the battery pack together with articles such as necklaces or hairpins when carrying or storing.



### **Do Not Disassemble**

Do not insert sharp objects into the battery pack, expose it to bumps or shocks, deform, disassemble, or modify it.



### **Do Not Short**

Do not short the positive (+) and negative (-) contacts.



### **Avoid Extreme Heat, Cold and Direct Sunlight**

Do not charge, use or leave the battery pack for extended periods where it will be exposed to direct sunlight, in a hot place (in an automobile on a sunny day, for example), or in a cold place.



### **Do Not Use With Any Other Computer**

The battery pack is rechargeable and was intended for the specified computer or charger. Do not use it with a computer other than the one for which it was designed.



### **Do Not Put into a Microwave**

Do not put the battery pack into a microwave oven or a pressurized chamber.



### **Discontinue Use**

Should the battery emit an abnormal odor, become hot to the touch, become discolored, change shape, or become in any way different from normal, remove it from the computer or charger and discontinue use.

- Do not touch the terminals on the battery pack. The battery pack may no longer function properly if the contacts are dirty or damaged.
- Do not expose the battery pack to water, or allow it to become wet.

- If the battery pack will not be used for a long period of time (a month or more), charge or discharge (use) the battery pack until the remaining battery level becomes 30% to 40% and store it in a cool, dry place.
- This computer prevents overcharging of the battery by recharging only when the remaining power is less than approx. 95% of capacity.
- The battery pack is not charged when the computer is first purchased. Be sure to charge it before using it for the first time. When the AC adaptor is connected to the computer, charging begins automatically.
- Should the battery leak and the fluid get into your eyes, do not rub your eyes. Immediately flush your eyes with clear water and see a doctor for medical treatment as soon as possible.

### **NOTE**

- The battery pack may become warm during recharging or normal use. This is completely normal.
- Recharging will not commence outside of the allowable temperature range (0 °C to 50 °C {32°F to 122 °F}). (Reference [Manual](#) "Battery Power") Once the allowable range requirement is satisfied, charging begins automatically. Note that the recharging time varies based on the usage conditions. (Recharging takes longer than usual when the temperature is 10 °C {50 °F} or less.)
- If the temperature is low, the operating time is shortened. Only use the computer within the allowable temperature range.
- The battery pack is a consumable item. If the amount of time the computer can be run off a particular battery pack becomes dramatically shorter and repeated rechargings do not restore its performance, the battery pack should be replaced with a new one.
- When transporting spare batteries inside a package, briefcase, etc., it is recommended that it be placed in a plastic bag so that its contacts are protected.
- Always power off the computer when it is not in use. Leaving the computer on when the AC adaptor is not connected will exhaust the remaining battery capacity.

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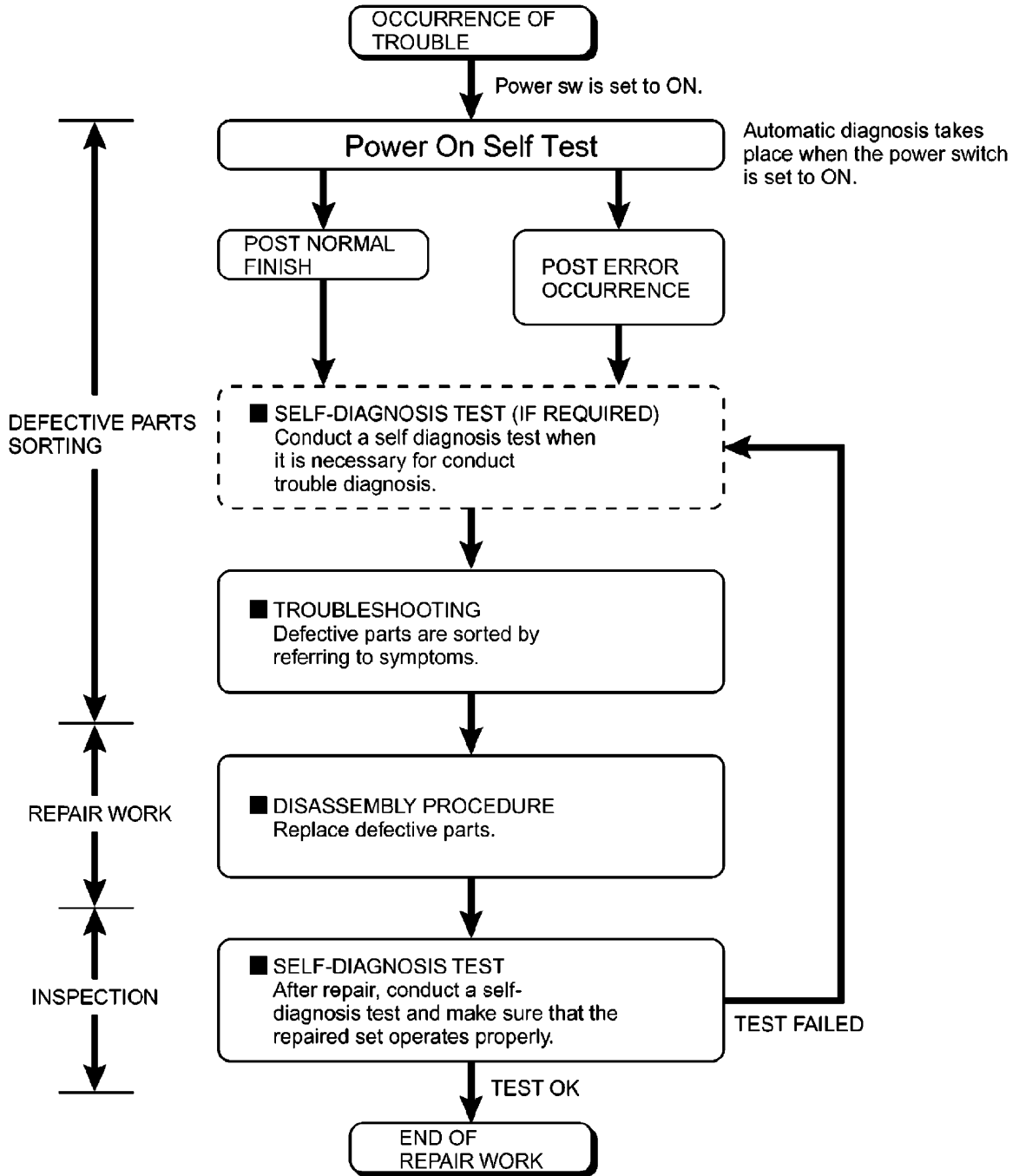
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# 1 Diagnosis Procedure

## Basic Procedures

The basic procedures for diagnosis, disassembly, and test of defective parts of a set to be repaired are summarized below. For details, refer to relevant pages in the Service Manual.

● Flow Chart



# 2 Power-On Self Test (Boot Check)

## Outline of POST

The set has a boot check function called POST (Power-On Self Test) in it. The condition of the main body is diagnosed by checking beep sound or error code.

- Start .....Test begins automatically when power switch is set to ON.
- Normal finish .....After memory checking, a beep sound is issued once and the set is placed into automatic stop.

Note: If no error occurs, nothing is displayed. (No display of OK, etc.)

## Error Diagnosis by Checking Beep Signal Sound

The beep sound is as follows:



(Length of bar shows length of sound.)

■ = long sound (about 0.4 sec.), ■ = short sound (about 0.2 sec.), Length between sounds is about 0.1 sec.

### ● Table of errors classified by beep sounds

Diagnosis	Beep signal sound	Error message
Main board	1(long sound)-2	BIOS ROM error
	1-2-2-3	BIOS ROM error
	1-3-1-1	RAM error
	1-3-1-3	Keyboard controller error
	1-3-4-1	RAM error
	1-3-4-3	RAM error
	1-4-1-1	RAM error
	2-1-2-3	BIOS ROM error
	2-2-3-1	Occurrence of unexpected offering

(Note) A beep sound is also issued in case of other I/O trouble.

## 3 List of Error Codes <Only when the port replicator is connected>

The following is a list of the messages that BIOS can display. Most of them occur during POST. Some of them display information about a hardware device, e.g., the amount of memory installed. Others may indicate a problem with a device, such as the way it has been configured. Following the list are explanations of the messages and remedies for reported problems. If your system displays one of except the messages marked below with an asterisk (\*), write down the message and contact Panasonic Technical Support. If your system fails after you make changes in the Setup menus, reset the computer, enter Setup and install Setup defaults or correct the error.

### **0200 Failure Fixed Disk**

Fixed disk in not working or not configured properly. Check to see if fixed disk is attached properly. Run Setup. Find out if the fixed-disk type is correctly identified.

### **0210 Stuck key**

Stuck key on keyboard.

### **0211 Keyboard error**

Keyboard not working.

### **0212 Keyboard Controller Failed**

Keyboard controller failed test. May require replacing keyboard controller.

### **0213 Keyboard locked - Unlock key switch**

Unlock the system to proceed.

### **0230 System RAM Failed at offset : *nnnn***

System RAM failed at offset *nnnn* of in the 64k block at which the error was detected.

### **0231 Shadow RAM Failed at offset : *nnnn***

Shadow RAM failed at offset *nnnn* of the 64k block at which the error was detected.

### **0232 Extended RAM Failed at offset : *nnnn***

Extended memory not working or not configured properly at offset *nnnn*.

### **0250 System battery is dead - Replace and run SETUP**

The CMOS clock battery indicator shows the battery is dead. Replace the battery and run Setup to reconfigure the system.

### **\*0251 System CMOS checksum bad - Default configuration used**

System CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS. The BIOS installed Default SETUP Values. If you do not want these values, enter Setup and enter your own values. If the error persists, check the system battery or contact Panasonic Technical Support.

### **0260 System timer error**

The timer test failed. Requires repair of system board.

### **0270 Real time clock error**

Real-time clock fails BIOS test. May require board repair.

### **\*0280 Previous boot incomplete - Default configuration used**

Previous POST did not complete successfully. POST loads default values and offers to run Setup. If the failure was caused by incorrect values and they are not corrected, the next boot will likely fail. On systems with control of **wait states**, improper Setup settings can also terminate POST and cause this error on the next boot. Run Setup and verify that the wait-state configuration is correct. This error is cleared the next time the system is booted.

### **0281 Memory Size found by POST differed from EISA CMOS**

Memory size found by POST differed from EISA CMOS.



**02D0 System cache error - Cache disabled**

Contact Panasonic Technical Support.

**02F0: CPU ID:**

CPU socket number for Multi-Processor error.

**02F4: EISA CMOS not writable**

ServerBIOS2 test error: Cannot write to EISA CMOS.

**02F5: DMA Test Failed**

ServerBIOS2 test error: Cannot write to extended DMA (Direct Memory Access) registers.

**02F6: Software NMI Failed**

ServerBIOS2 test error: Cannot generate software NMI (Non-Maskable Interrupt).

**02F7: Fail - Safe Timer NMI Failed**

ServerBIOS2 test error: Fail-Safe Timer takes too long.

***device address Conflict***

Address conflict for specified *device*.

**Allocation Error for: *device***

Run ISA or EISA Configuration Utility to resolve resource conflict for the specified *device*.

**Failing Bits : *nnnn***

The hex number *nnnn* is a map of the bits at the RAM address which failed the memory test.

Each 1 (one) in the map indicates a failed bit. See error 230,231 or 232 for offset address of the failure in System, Extended or Shadow memory.

**Invalid System Configuration Data**

Problem with NVRAM (CMOS) data.

**I/O device IRQ conflict**

I/O device IRQ conflict error.

**Operating System not found**

Operating system cannot be located on either drive A: or drive C:. Enter Setup and see if fixed disk and drive A: are properly identified.

**Parity Check 1 *nnnn***

Parity error found in the system bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????. Parity is a method for checking errors in binary data. A parity error indicates that some data has been corrupted.

**Parity Check 2 *nnnn***

Parity error found in the I/O bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????.

**Press <F1> to resume, <F2> to Setup**

Displayed after any recoverable error message. Press <F1> to start the boot process or <F2> to enter a Setup and change the settings. Write down and follow the information shown on the screen.

# 4 Diagnostic Test

## Diagnostic Test Procedure

### 4.1. Equipment

- (1) Test Computer ----- 1 unit
- (2) External Floppy Disk Drive (USB Port) ----- 1 unit
- (3) AC Adapter ----- 1 pc.
- (4) Loopback Plug (Serial Port Test for RS232C) [P/N: DFVV95C0067] ---- 1 pc.
- (5) Floppy Disk containing file DIAG ----- 1 pc.

### 4.2. Preparation

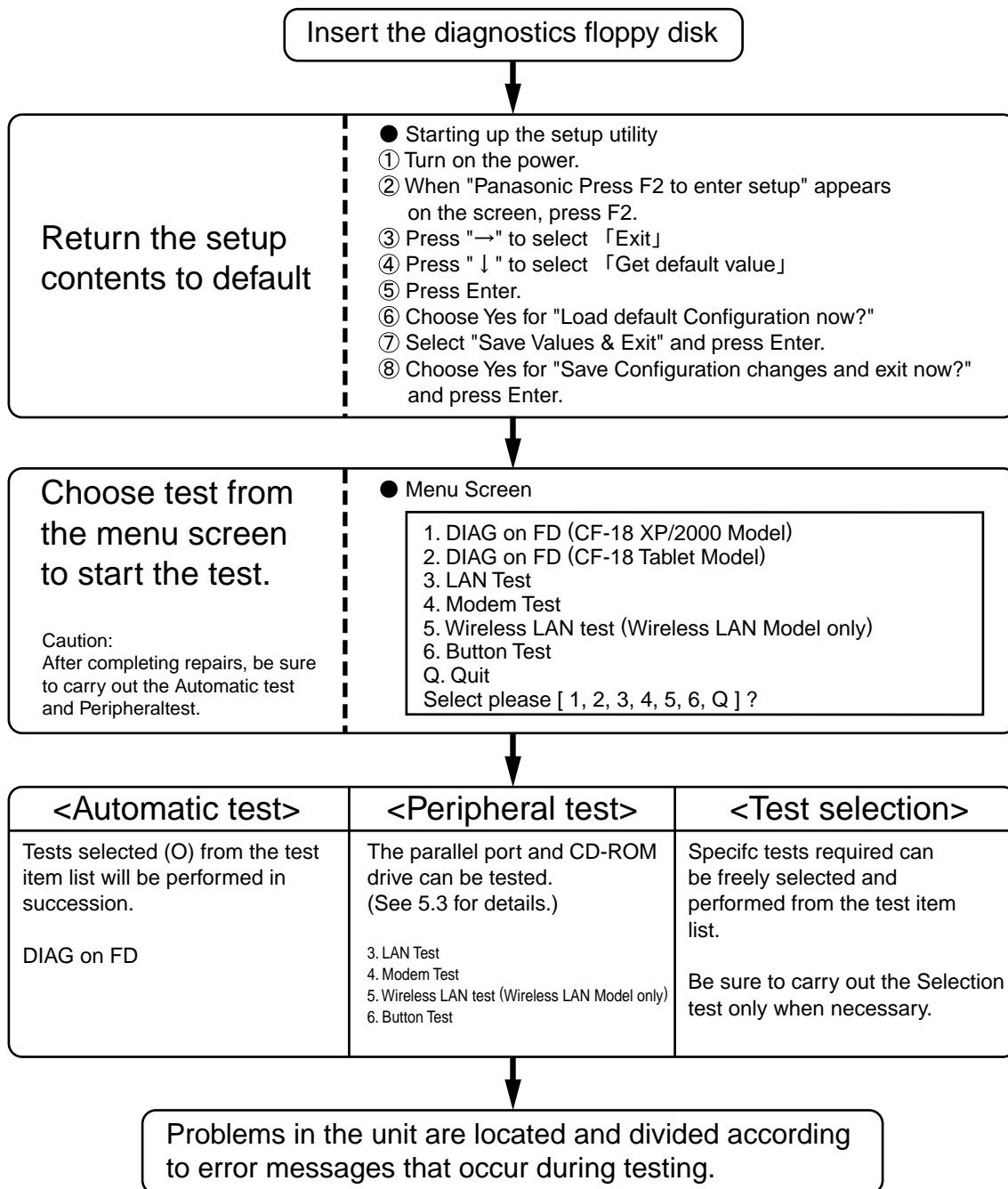
- (1) Connect the AC Adapter and External Equipments.
- (2) The System Setup should be set to the factory setting values by executing the "SETUP UTILITY" which can be invoked by F2 key at the POST.  
If not, the messages and items of the diagnostic test may not be displayed properly on the LCD.
- (3) The serial port must be enabled in the "SETUP UTILITY" in order to execute the "1st SERIAL PORT" test.
- (4) Connect the serial loopback plug.

# 5 Self Diagnosis Test

Floppy disk is Included for the self-diagnostic tests that should be performed before using this product.  
Important notice

1. System password  
If the password function has been turned on, you will need to ask the user for the password before performing the self-diagnostics.
2. FDD test  
Performing the FDD test will erase the contents of the floppy disk you insert into the drive. Use a formatted disk that has no contents or whose contents are not required. This product has a password function. However, if this function is turned on, the self-diagnostics tests will not work.

## 5.1. Outline of Self Diagnostic Tests



### 5.1.1 List of main test items

The Selection item displays the items selected under Automatic test. If you select Automatic test, these test items will be performed automatically. You can use Selection test to choose items from the menu screen that you want to have tested.

These items are shown below.

1		SPEAKER TEST	Speaker test	<input type="radio"/>
2		VESA MODE TEST	VESA mode test	<input type="radio"/>
3	CPU (CPU related)	A20 GATE TEST	Address A20 line	<input type="radio"/>
4		CACHE ON/OFF TEST	Cache memory on/off test	<input type="radio"/>
5		NPU OPERAND TEST	Floating point processor function test	<input type="radio"/>
6	RAM (Memory related)	RAM STANDARD TEST	Memory standard test	<input type="radio"/>
7	CONTROL (Control ICs on the main board, etc.)	DMA PAGE REG TEST	DMA page register test	<input type="radio"/>
8		DMA REGISTER TEST	DAM register test	<input type="radio"/>
9		DMAC TRANSFER TEST	DAM transfer test	<input type="radio"/>
10		PIC HALT INSTRUCTION TEST	Interrupt controller halt instruction test	<input type="radio"/>
11		PIC REGISTER TEST	Interrupt controller register test	<input type="radio"/>
12		RTC CMOS RAM TEST	Real time clock CMOS test	<input type="radio"/>
13		RTC TEST	Real time clock test	<input type="radio"/>
14		PIT CH0 TEST	interrupt timer CH0	<input type="radio"/>
15		PIT CH1 TEST	interrupt timer CH1	<input type="radio"/>
16		PIT CH2 TEST	interrupt timer CH2	<input type="radio"/>
17	IO (Input-output)	KEYBOARD REG TEST	Keyboard test	<input type="radio"/>
18		PS/2 MOUSE REG	Mouse registration test	<input type="radio"/>
19	COMMUNICATION	SERIAL WRAP TEST	Serial loop back (jig required)	—
20		SERIAL ALL INTERNAL TEST	Serial port interior test	<input type="radio"/>
21		PARALLEL REGISTER R/W	Parallel register R/W test	<input type="radio"/>
22	AUX (Auxiliary functions)	PCIC ALL TEST	PCIC test	<input type="radio"/>
23		Card Bus Reg	Card Bus register test	<input type="radio"/>
24		USB Reg	USB register test	<input type="radio"/>
25	VIDEO (Display related)	VGA ALL TEST	VGA test	<input type="radio"/>
26		SVGA RAM TEST	SVGA RAM test	<input type="radio"/>
27	DISK (FDD, HDD)	FD WT/RD/WP TEST	FD WT, RD WP test	—
28		HDD ALL TEST	Only HDD lead test selected	<input type="radio"/>
29	UNIQUE (Individual functions)	ECP REGISTER R/W	ECP register R/W test	<input type="radio"/>
30		EPP REGISTER R/W	EPP register R/W test	<input type="radio"/>
31		EXT. CMOS R/W TEST	Extension CMOS R/W test	<input type="radio"/>

	Test function settings	Test condition save/play	Following file command
		Test automatic execute	Test executed on run settings by selecting command
		Error display (Paging style)	Select displayed items Error, Log, Option

## 5.2. Automatic Test

Test execution

From the menu screen shown below For Celeron models Select and press Enter for DIAG on FD

```

1. DIAG on FD (CF-18 XP/2000 Model)
2. DIAG on FD (CF-18 Tablet Model)
3. LAN Test
4. Modem Test
5. Wireless LAN test (Wireless LAN Model only)
6. Button Test
Q. Quit
Select please [ 1, 2, 3, 4, 5, 6, Q ] ?

```

menu screen

### Speaker test, VESA test

The speaker test involves listening to music and choosing OK or Not okay. The VESA test involves looking at the display to see if it is satisfactory then choosing OK or Not okay.

### Serial loop back test

The Automatic test's initial settings are set so that the serial loop back test will be executed. Connect the serial loop back jig and then perform the test.

(This test is not executed on default mode)

### Diagnostics result

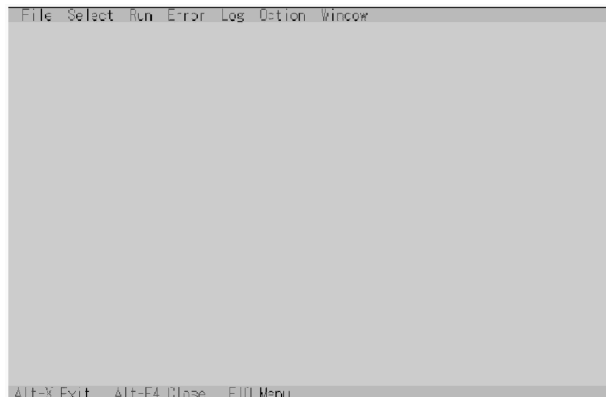
If no errors occur. The screen shows the word "Pass" in large letters.

If errors occur. The test is stopped when an error occurs and the error message is displayed.

For explanations of error messages, see Error Messages and Problem Categories (section 5.5).

### Quitting the test

At the screen shown below, simultaneously press the ALT and X keys.



Input screen

## 5.3. Peripheral Test

### Test execution

From the menu screen shown below, be sure to choose the following items and press Enter.

- |   |
|---|
| <ol style="list-style-type: none"><li>1. DIAG on FD (CF-18 XP/2000 Model)</li><li>2. DIAG on FD (CF-18 Tablet Model)</li><li>3. LAN Test</li><li>4. Modem Test</li><li>5. Wireless LAN test (Wireless LAN Model only)</li><li>6. Button Test</li><li>Q. Quit</li></ol> <p>Select please [ 1, 2, 3, 4, 5, 6, Q ] ?</p> |
|---|

menu screen

### 3. LAN Test

### 4. Modem Test

### 5. Wireless LAN Test

(Wireless LAN Model only.)

This test checks for internal LAN device.

Choose LAN test and press Enter.

## 5 .4. Test Selection

Starting up the input menu

1. From the menu screen shown below, choose Quit and press Enter.

```
1. DIAG on FD (CF-18 XP/2000 Model)
2. DIAG on FD (CF-18 Tablet Model)
3. LAN Test
4. Modem Test
5. Wireless LAN test (Wireless LAN Model only)
6. Button Test
Q. Quit
Select please [ 1, 2, 3, 4, 5, 6, Q ] ?
```

menu screen

2. When A: \DIAG appears, input "JDG\_184" and press Enter.
3. The input screen shown below will appear.  
To choose menu items, hold down "ALT" and press the selection key.

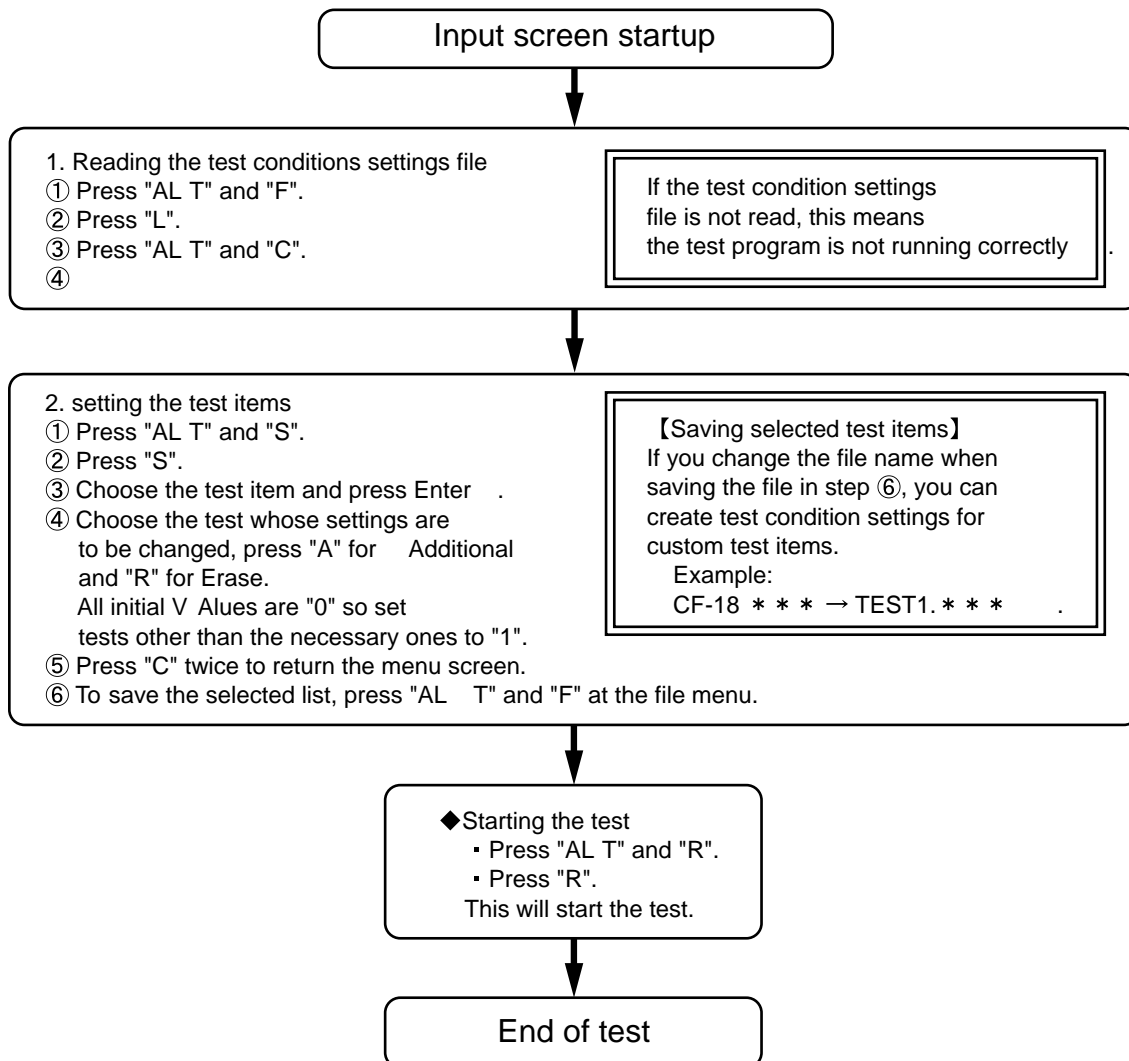
Example:

"ALT" + "F" brings up the File menu.



Input screen

### Order of test flow selection



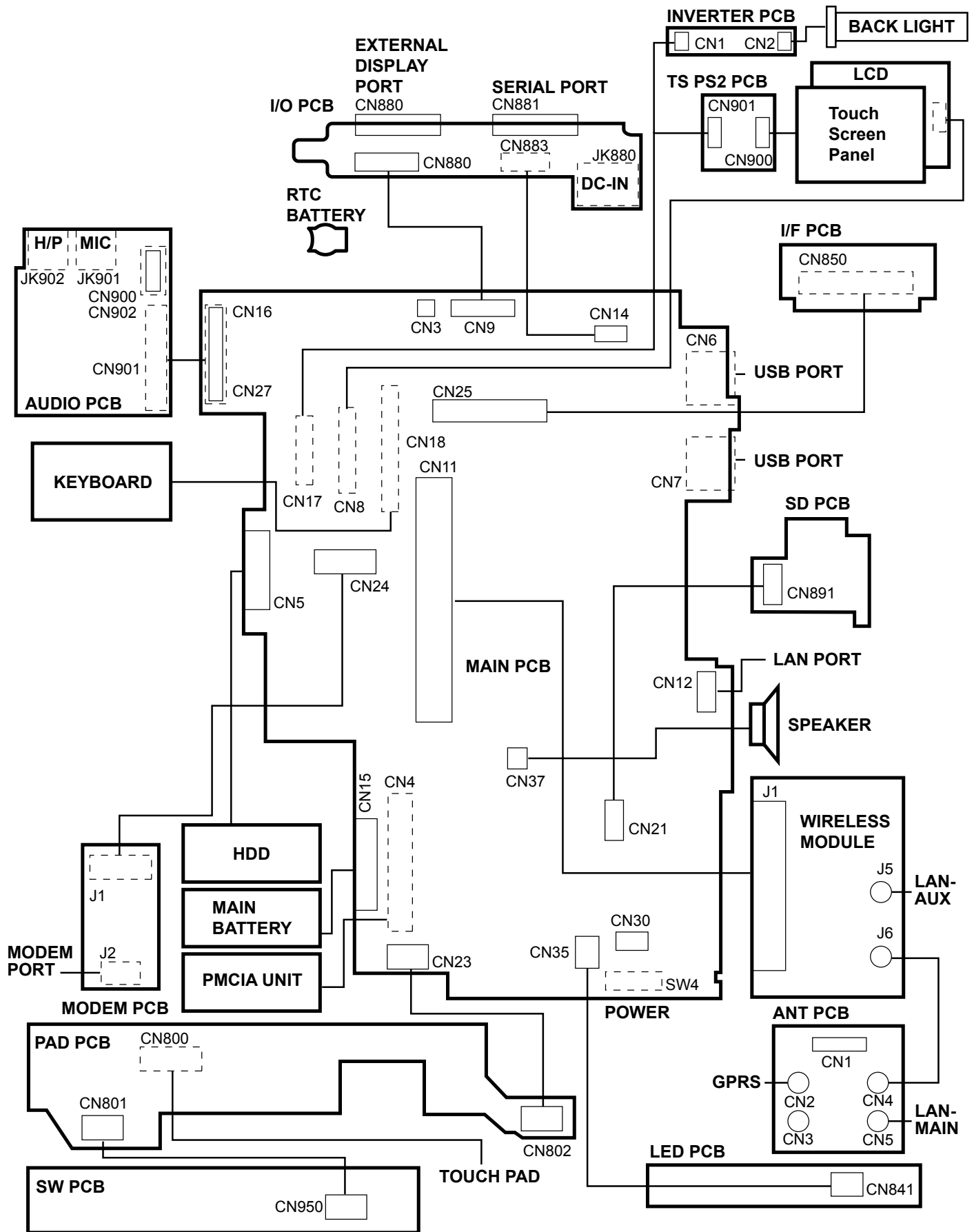
## 5.5. Error Messages and Troubleshooting

The table below explains the parts that may be faulty or damaged should an error message occur while performing the various test items of the self diagnostics program.

	Test classification	Screen display test items	Contents
1	CPU (CPU related)	A20 GATE TEST	Address 20 line
2		CACHE ON/OFF	Cache memory on/off
3		NPU OPERAND TEST	Floating point processor function
4	RAM (Memory related)	RAM STANDARD	Memory standard
5	CONTROL (Control ICs on the main board, etc.)	DMA PAGE REG TEST	DMA page register
6		DMA REGISTER TEST	DAM register
7		DMAC Transfer TEST	DAM transfer test
8		PIC HALT INSTRUCTION TEST	Interrupt controller
9		PIC REGISTER TEST	Interrupt controller
10		RTC CMOS RAM TEST	Real time clock CMOS
11			
12		SPEAKER TEST	Speaker
13		PIT CH0 TEST	Interrupt timer CH0
14		PIT CH1 TEST	Interrupt timer CH1
15	PIT CH2 TEST	Interrupt timer CH2	
16	IO (Input-output)	KEYBOARD REG TEST	Keyboard
17		PS/2 MOUSE REG	Mouse
18	COMMUNICATION	SERIAL WRAP TEST	Serial loop back (jig required)
19		SERIAL ALL INTERNAL TEST	Serial port
20		PARALLEL REGISTER R/W	Parallel register
21	AUX (Auxiliary functions)	PCIC ALL TEST	PCIC
		Card Bus REG	Card Bus port
		USB REG	USB port
22	VIDEO (Display related)	VGA ALL TEST	VGA
23		SVGA RAM TEST	SVGA RAM
24		VESA MODE TEST	VESA mode
25	DISK (FDD, HDD)	FD WT/RD/WP TEST	FD write/read/write protection
26		HDD ALL TEST	Only HDD lead selected
27	UNIQUE (Individual functions)	ECP REGISTER R/W	Parallel port
28		EPP REGISTER R/W	Parallel port
29		EXT. CMOS R/W TEST	Extension CMOS R/W test



# 6 Wiring Connection Diagram



## 7. Disassembly/Reassembly

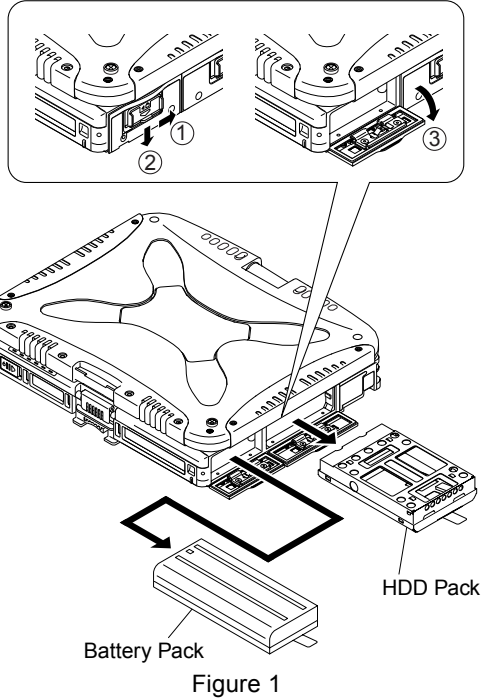
### NOTE:

Power off the computer. Do not shut down to the Suspend or Hibernation mode.

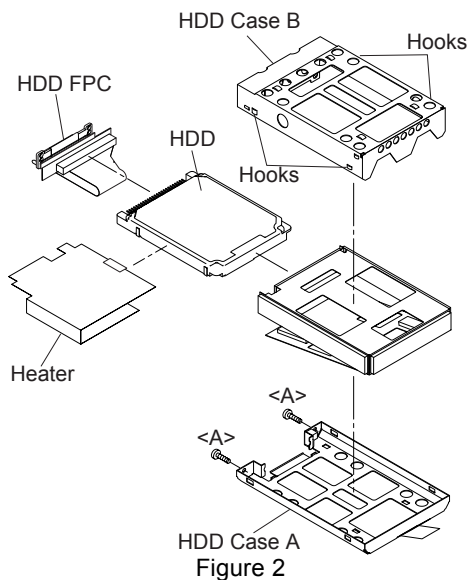
**Do not add peripherals while the computer is in the Suspend or Hibernation mode; abnormal operation may result.**

For the Screw tightening torque, please refer to [ 8. Exploded View].

### 7.1. Removing the Battery Pack and HDD Pack



1. Open the Battery Cover.
2. Remove the Battery Pack.
3. Open the HDD Cover.
4. Remove the HDD Pack.



5. Remove the two Screws. <A>
  6. Remove the HDD Case A and the HDD Case B.
  7. Remove the HDD.
- Screw <A>: DFHE5025XA

### 7.2. Removing the Touch Pad and Keyboard

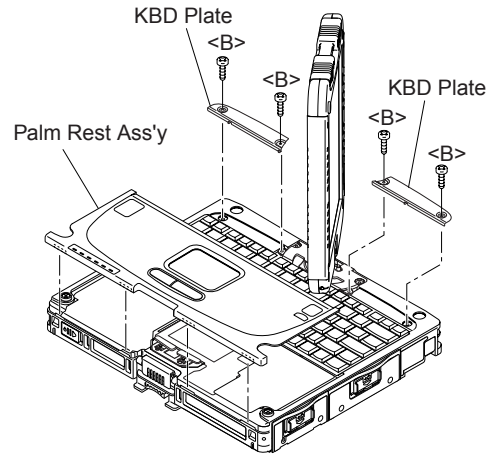


Figure 3

1. Remove the Palm Rest Ass'y.
2. Remove the four Screws. <B>
3. Remove the KBD Plate.

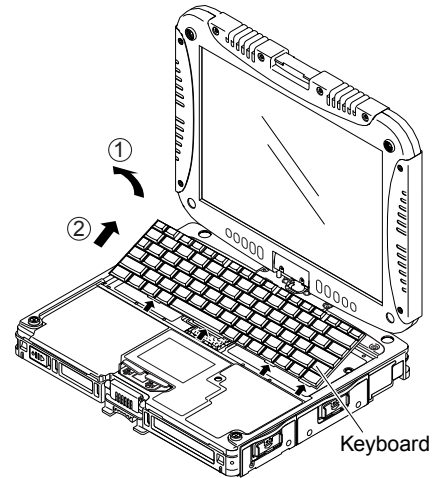


Figure 4

4. Remove the Keyboard.

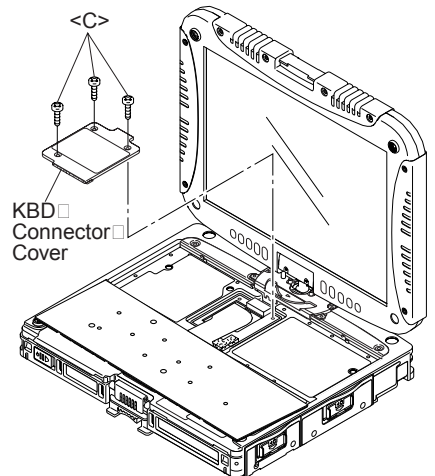


Figure 5

5. Remove the three Screws. <C>
6. Remove the KBD Connector Cover.

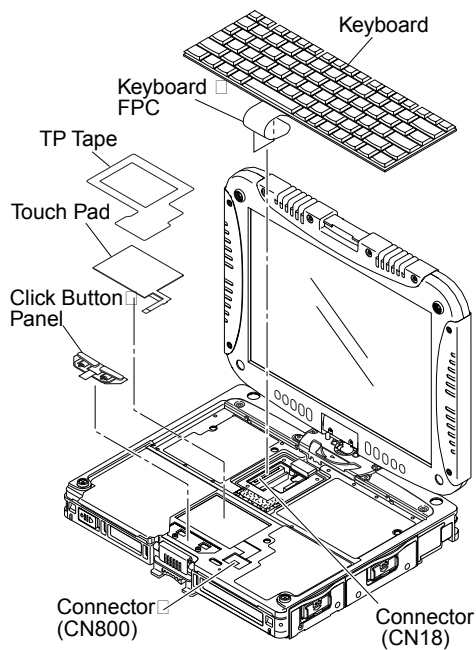


Figure 6

7. Disconnect the Cable from Connector (CN18).
  8. Remove the TP Tape.
  9. Disconnect the Cable from Connector (CN800).
  10. Remove the Touch Pad and Click Button Plate.
- Screw<B>: DRSB2+5FKL  
<C>: DFHE5025XA

### 7.3. Removing the Speaker

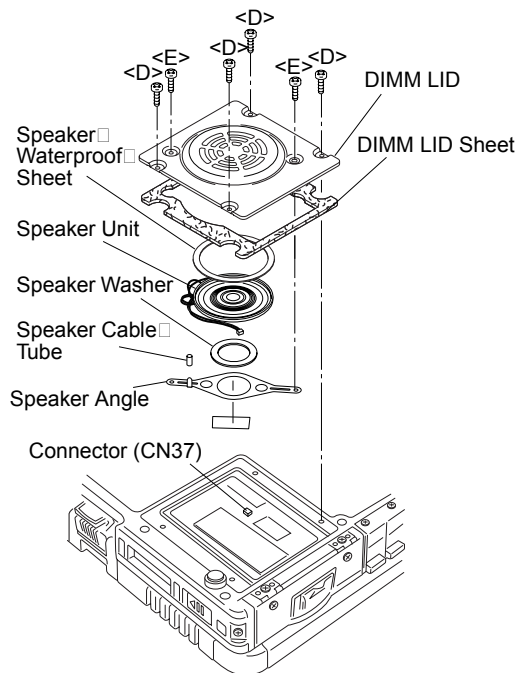


Figure 7

1. Remove the four Screws. <D>
  2. Disconnect the Cable from Connector (CN37).
  3. Remove the two Screws. <E>
  4. Remove the Speaker Angle.
- Screw<D>: DRQT2+D2FKL  
<E>: DRHM5025YA

### 7.4. Removing the Rear Cabinet

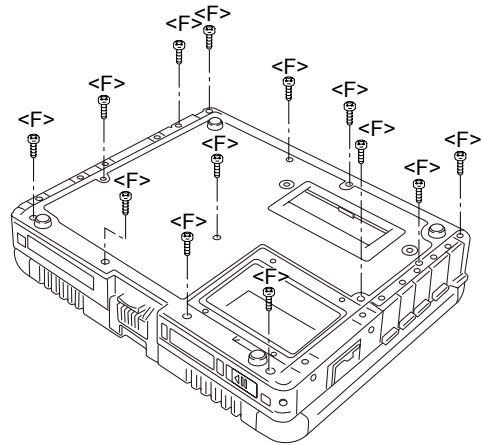


Figure 8

1. Remove the thirteen Screws. <F>
  2. Remove the Rear Cabinet.
- Screw<F>: DRHM0061ZA

### 7.5. Removing the DU Lid Unit

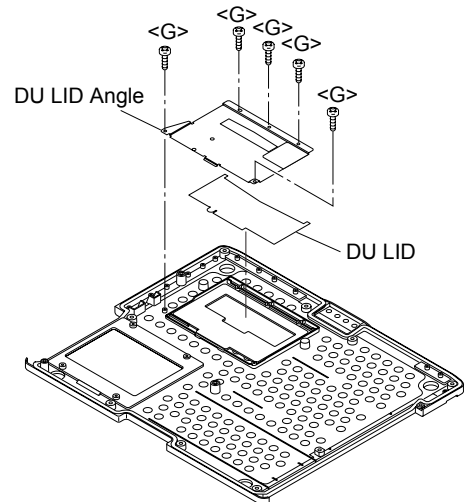


Figure 9

1. Remove the five Screws. <G>
  2. Remove the DU Lid Angle and DU Lid.
- Screw<G>: DRHM5025YA

## 7.6. Removing the Audio PCB

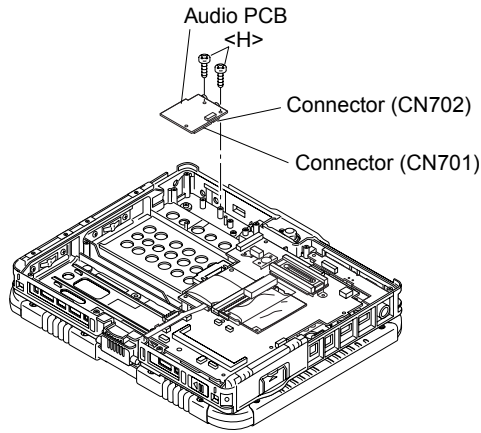


Figure 10

1. Remove the two Screws. <H>
2. Disconnect the two Cables from two Connectors (CN701, CN702).
3. Remove the Audio PCB.  
Screw<H>: DRSB2+5FKL

## 7.7. Removing the Wireless Module, Port PCB and Modem PCB

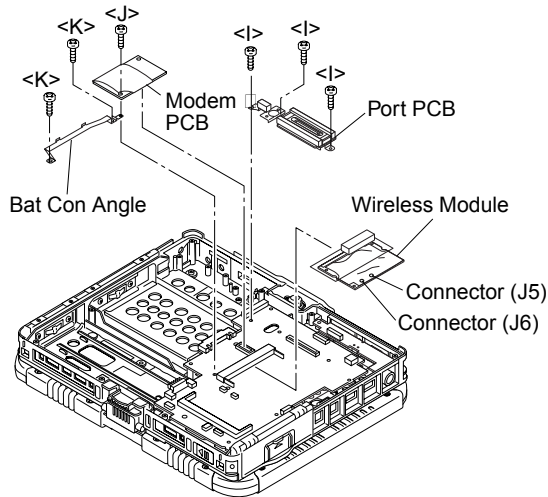


Figure 11

1. Disconnect the two Antenna Cables from two Connectors (J5, J6).
2. Remove the Wireless Module.
3. Remove the three Screws. <I>
4. Remove the Port PCB.
5. Remove the Screw. <J>
6. Remove the Modem PCB.
7. Remove the two Screws. <K>
8. Remove the BAT CON angle.  
Screw<I>: DRSB2+5FKL  
<J>: XSB2+4FNL  
<K>: DRSB2+5FKL

## 7.8. Removing Main PCB

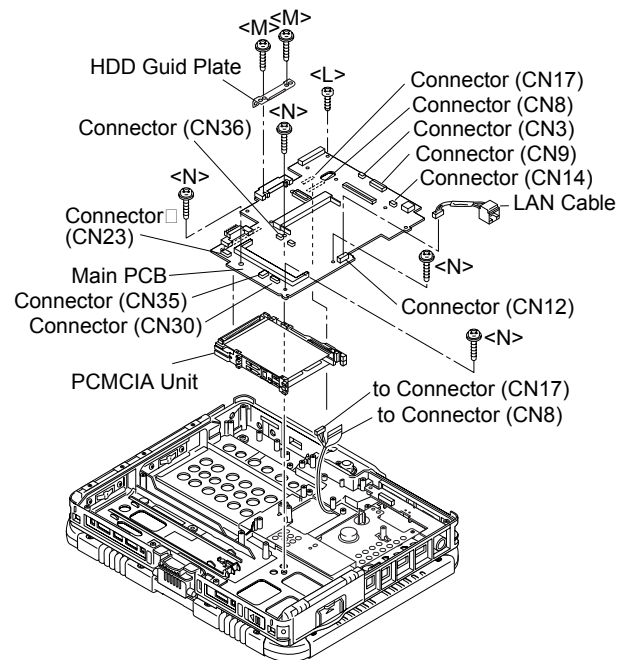


Figure 12

1. Disconnect the eight Cables from eight Connectors (CN3, CN9, CN12, CN14, CN23, CN30, CN35, CN36).
2. Remove the Screw. <L>
3. Remove the two Screws. <M>
4. Remove the four Screws. <N>
5. Remove the Main PCB.
6. Disconnect the two Cables from two Connectors (CN8, CN17).  
to Connector (CN17)  
to Connector (CN8)
7. Remove the PCMCIA Unit.  
Screw<L>: DRSB2+5FZL  
<M>: DXYN2+J12FNL  
<N>: DXYN2+J18FN

## 7.9. Removing PAD PCB and I/O PCB

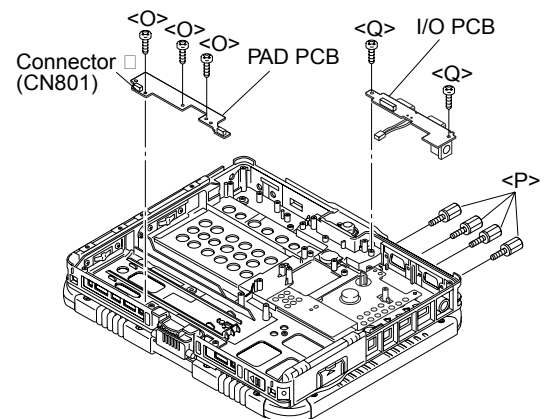


Figure 13

1. Disconnect the Cable from Connector (CN801).
2. Remove the three Screws. <O>
3. Remove the PAD PCB.
4. Remove the four Screws. <P>
5. Remove the two Screws. <Q>

- Remove the I/O PCB.  
Screw<O>: DFHE5025XA  
<P>: DFHE5058ZB  
<Q>: DRSB2+5FKL

## 7.10. Removing LED PCB and Switch PCB

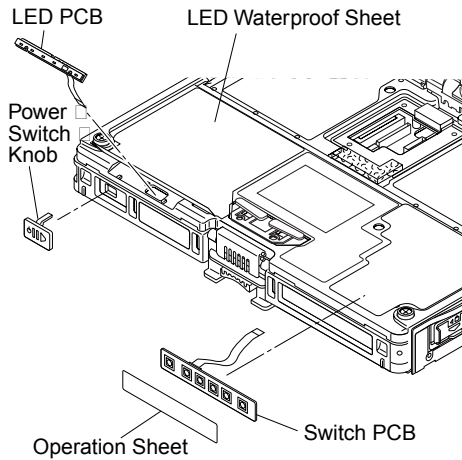


Figure 14

- Remove the LED Waterproof Sheet.
- Remove the LED PCB.
- Remove the Switch PCB.
- Remove the Power Switch.

## 7.11. Removing the CPU Heat Plate and Lithium Battery

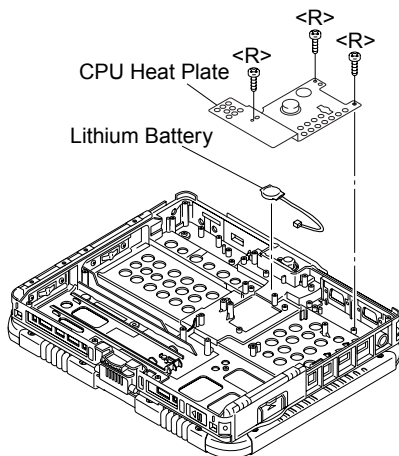


Figure 15

- Remove the three Screws. <R>
- Remove the CPU Heat Plate.
- Remove the Lithium Battery.  
Screw<R>: DFHE5025XA

## 7.12. Removing the Display unit

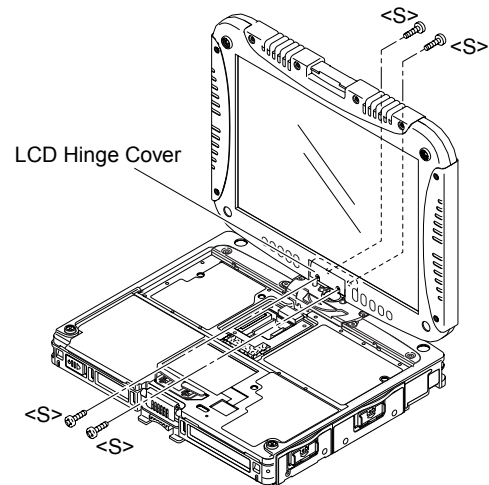


Figure 16

- Remove the four Screws. <S>
- Remove the LCD Hinge Cover.

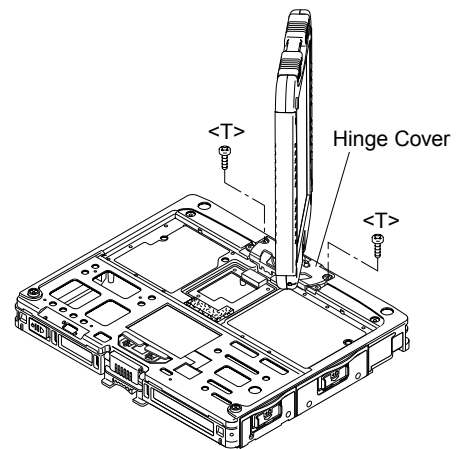


Figure 17

- LCD is half-rotated. Removes the two Screws. <T>
- Remove the Hinge Cover.

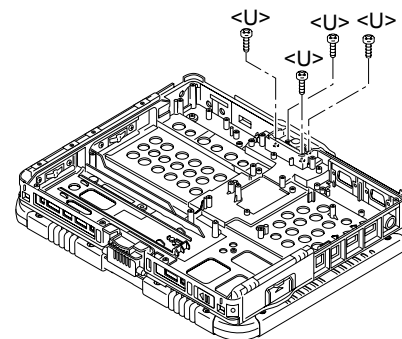


Figure 18

- Remove the four Screws. <U>
- Remove the Display Unit.  
Screw<S>: DFHE5025XA  
<T>: DRSB2+5FKL  
<U>: DXYN4+J8FNL

### 7.13. Removing Antenna Cover, Tablet Latch Cover and LCD Rear Case

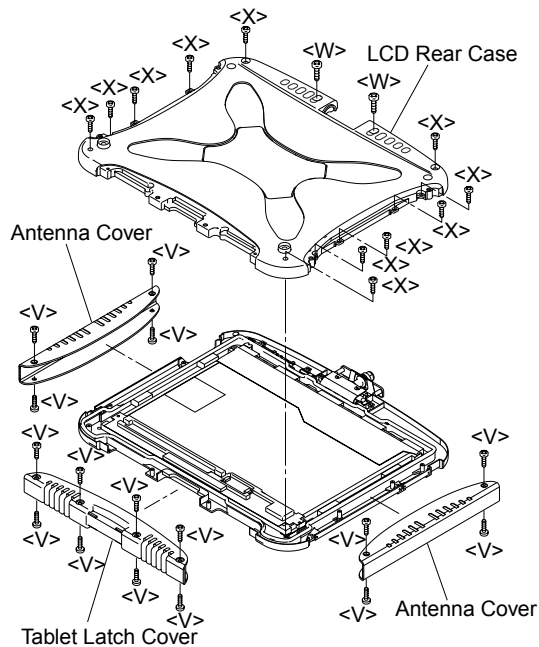


Figure 19

1. Remove the sixteen Screws. <V>
  2. Remove Antenna Cover and Tablet Latch Cover.
  3. Remove the two Screws. <W>
  4. Remove the eleven Screws. <X>
  5. Remove the LCD Rear Case.
- Screw<V>: DRQT26+D5FKL  
 <W>: DXYN3+J10FNL  
 <X>: DXYN2+J6FNL

### 7.14. Removing the LCD Hinge

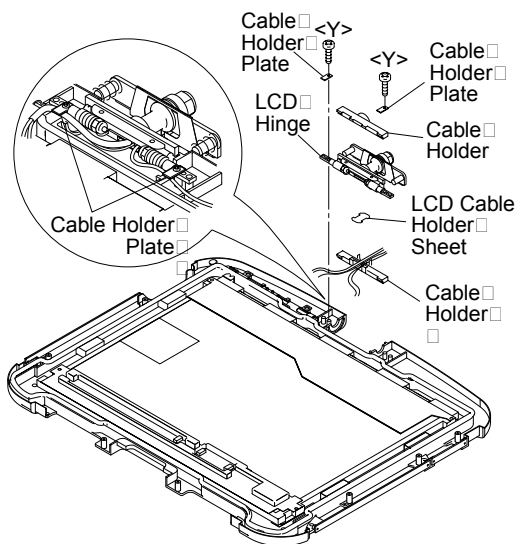


Figure 20

1. Remove the two Screws. <Y>
  2. Remove the Cable Holder Plate and LCD Hinge.
  3. Remove the Cable Holder.
  4. Remove the Cable Holder sheet.
- Screw<Y>: DXYN3+J8FNL

### 7.15. Removing Inverter PCB

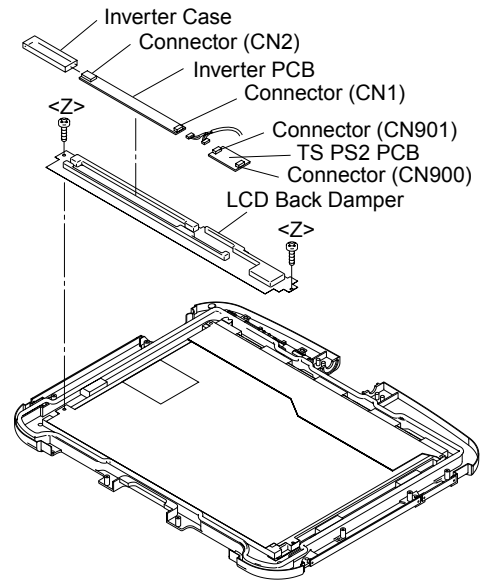


Figure 21

1. Disconnect the two Cables from two Connectors (CN1, CN2).
  2. Remove the Inverter Case and Inverter PCB.
  3. Remove the two Screws. <Z>
  4. Remove the LCD Rear Damper.
- Screw<Z>: DXHM0042ZA

### 7.16. Removing GPRS Antenna PCB, LAN1-BT PCB, LAN2-BT PCB and Pen Holder

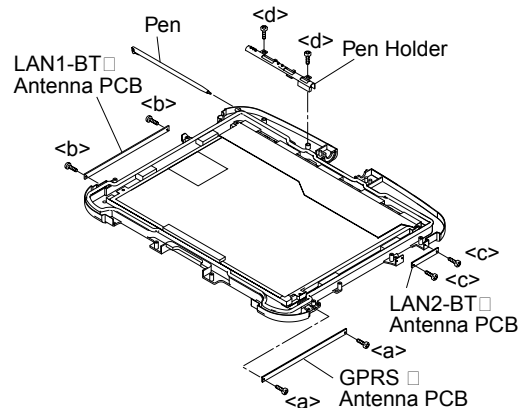


Figure 22

1. Remove the two Screws. <a>
  2. Remove the GPRS Antenna PCB.
  3. Remove the two Screws. <b>
  4. Remove the LAN1-BT Antenna PCB.
  5. Remove the two Screws. <c>
  6. Remove the LAN2 Antenna PCB.
  7. Remove the Pen.
  8. Remove the two Screws. <d>
  9. Remove the Pen Holder.
- Screw<a><b><c>: DFHE5025XA  
 <d>: DRHM5025YA

## 7.17. Removing Each Cover

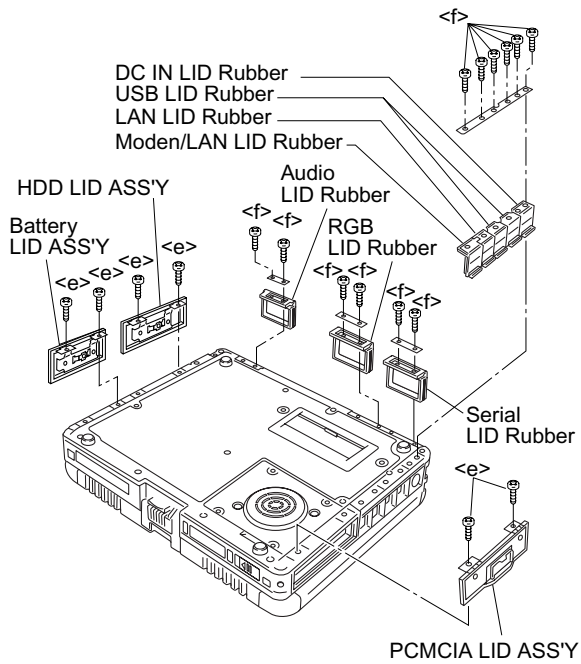
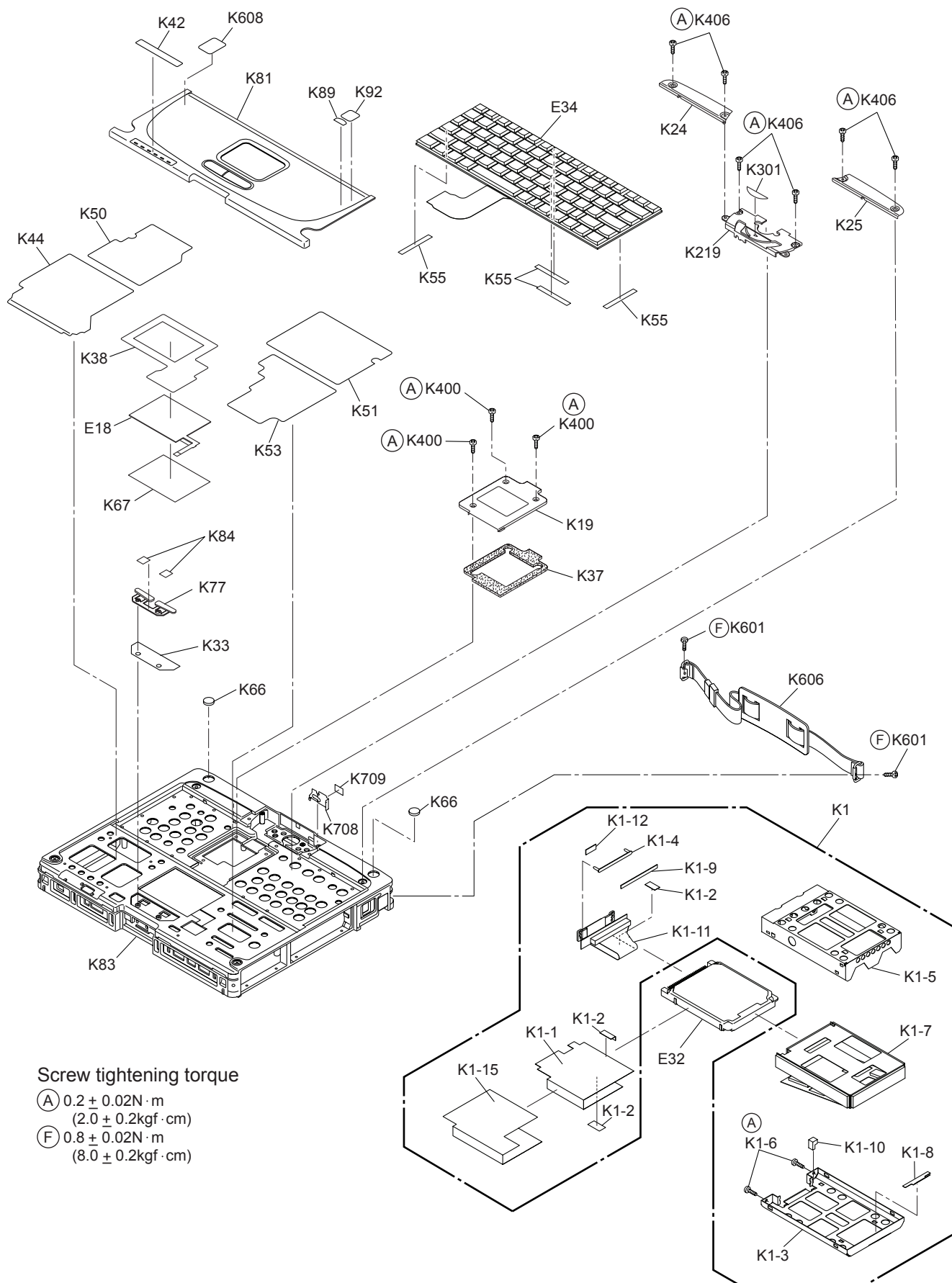


Figure 23

1. Remove the six Screws. <e>
  2. Remove the Battery LID ASS'Y, HDD LID ASS'Y and PCMCIA LID ASS'Y.
  3. Remove the twelve Screws. <f>
  4. Remove the Modem/LAN LID Rubber, LAN LID Rubber, USB LID Rubber, DC IN LID Rubber, Serial LID Rubber, RGB LID Rubber and Audio LID Rubber.
- Screw<e>: DRQT26+D3ZKL  
<f>: DRHM5025YA

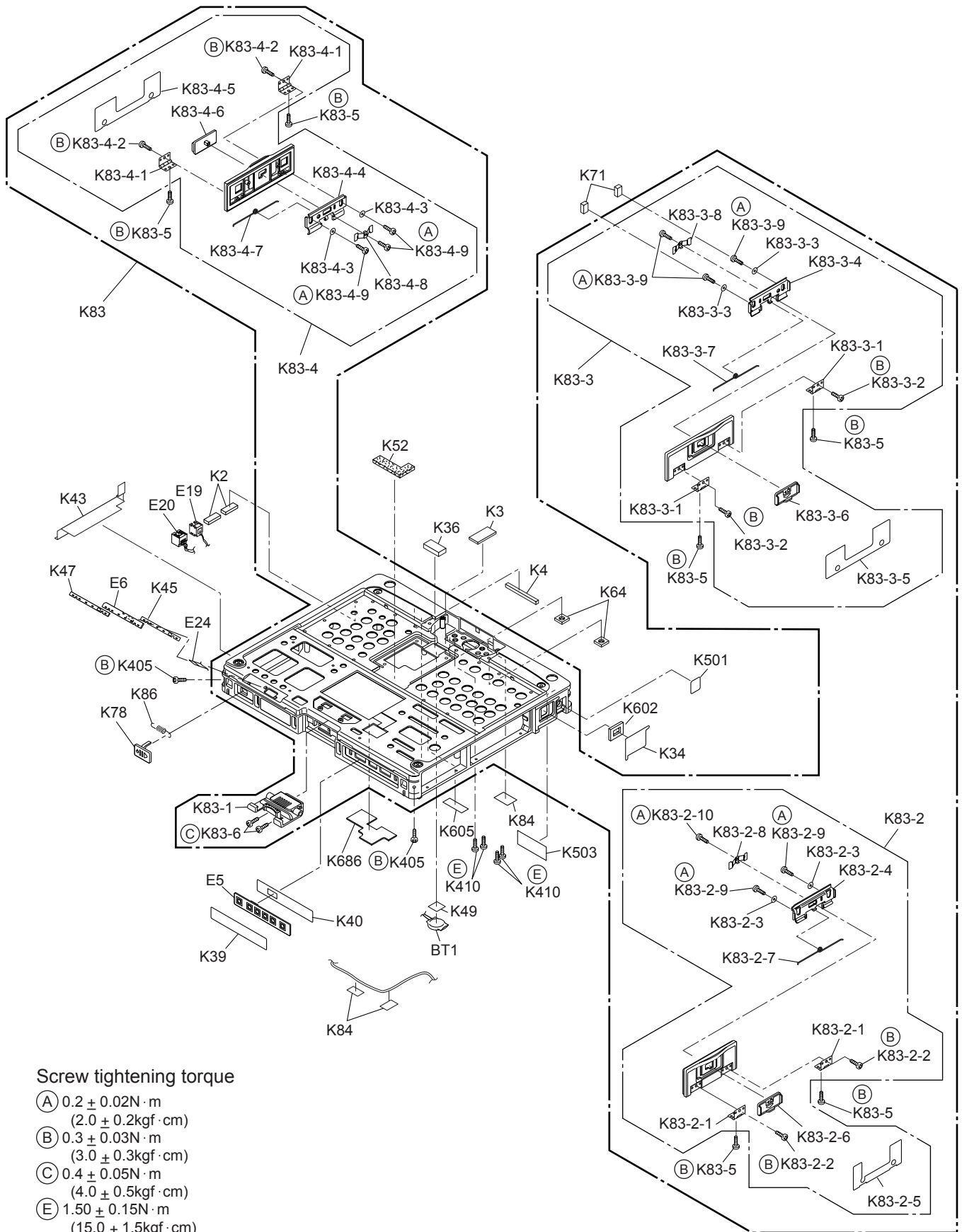
# 8 Exploded View



### Screw tightening torque

- (A)  $0.2 \pm 0.02 \text{ N} \cdot \text{m}$   
( $2.0 \pm 0.2 \text{ kgf} \cdot \text{cm}$ )
- (F)  $0.8 \pm 0.02 \text{ N} \cdot \text{m}$   
( $8.0 \pm 0.2 \text{ kgf} \cdot \text{cm}$ )



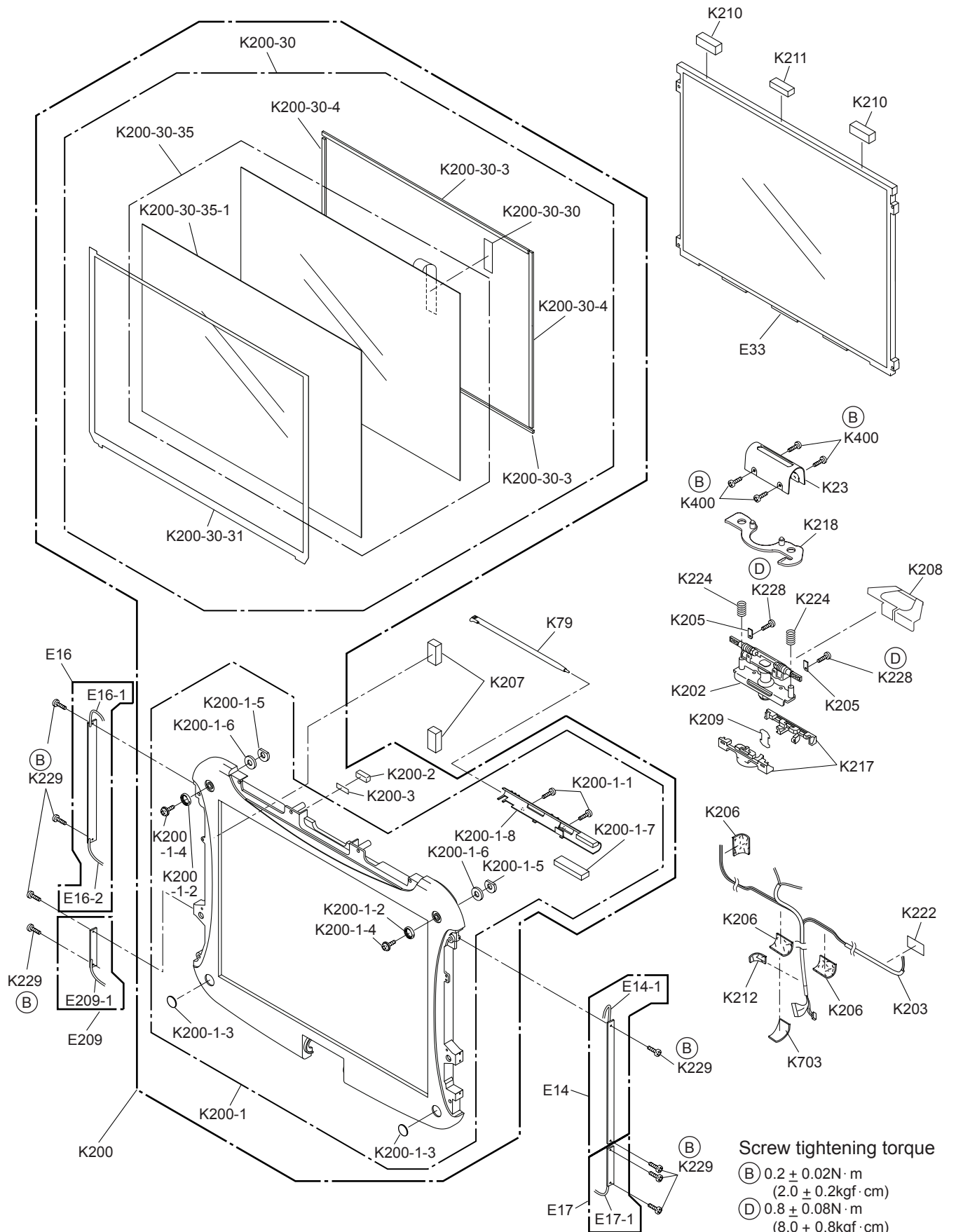


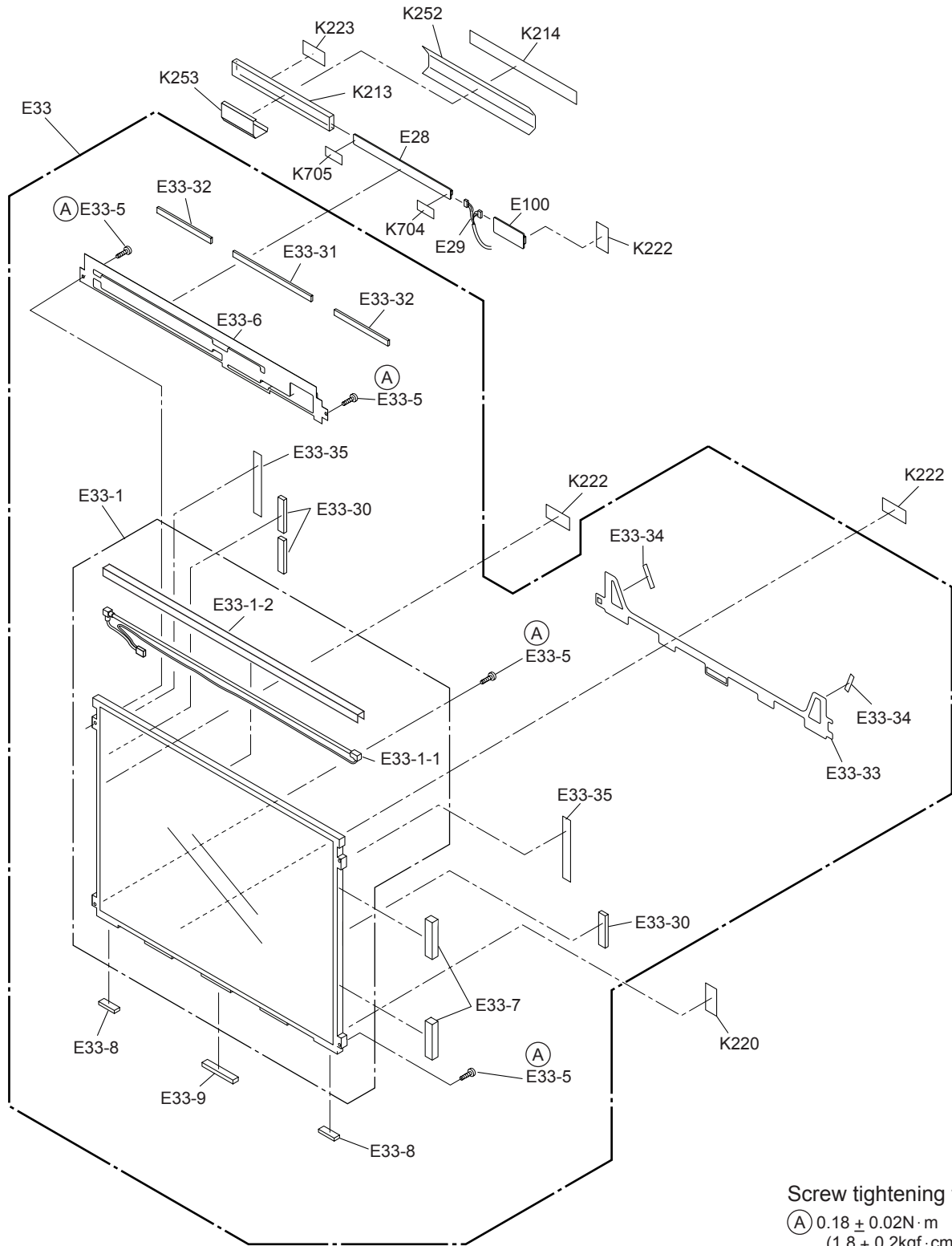
**Screw tightening torque**

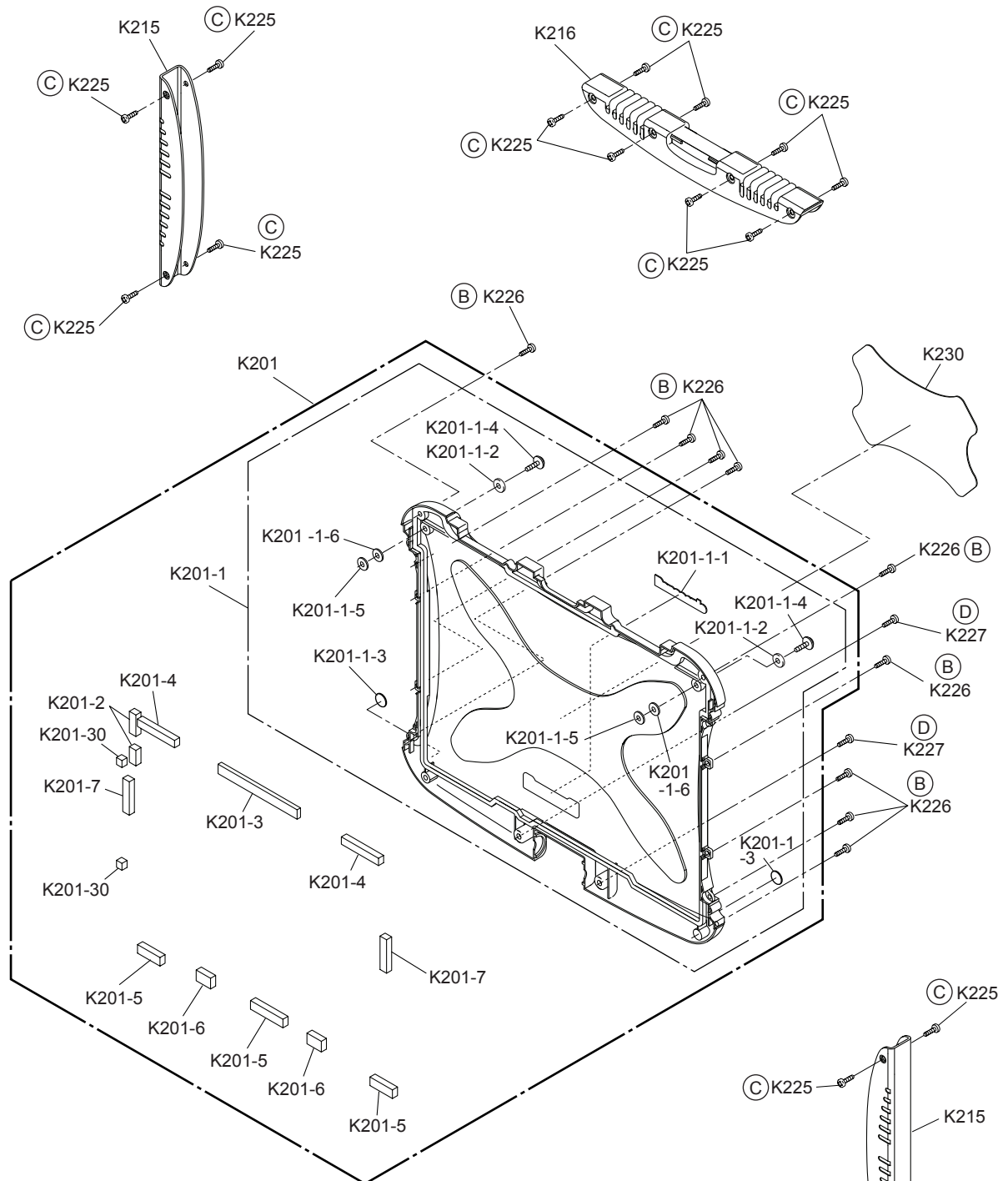
- (A)  $0.2 \pm 0.02\text{N} \cdot \text{m}$   
( $2.0 \pm 0.2\text{kgf} \cdot \text{cm}$ )
- (B)  $0.3 \pm 0.03\text{N} \cdot \text{m}$   
( $3.0 \pm 0.3\text{kgf} \cdot \text{cm}$ )
- (C)  $0.4 \pm 0.05\text{N} \cdot \text{m}$   
( $4.0 \pm 0.5\text{kgf} \cdot \text{cm}$ )
- (E)  $1.50 \pm 0.15\text{N} \cdot \text{m}$   
( $15.0 \pm 1.5\text{kgf} \cdot \text{cm}$ )












**Screw tightening torque**

- Ⓑ  $0.2 \pm 0.02\text{N} \cdot \text{m}$   
( $2.0 \pm 0.2\text{kgf} \cdot \text{cm}$ )
- Ⓒ  $0.3 \pm 0.03\text{N} \cdot \text{m}$   
( $3.0 \pm 0.3\text{kgf} \cdot \text{cm}$ )
- Ⓓ  $0.8 \pm 0.08\text{N} \cdot \text{m}$   
( $8.0 \pm 0.8\text{kgf} \cdot \text{cm}$ )

# 9 Replacement Parts List

**Note: Important Safety Notice**

Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

**CF-18JHU80TW**

REF.NO. and AREA	PART NO.	DESCRIPTION	RTL	Q'TY
<b>Main Block Unit</b>				
E1	DL3U1B471AAA	PCB, MAIN	RTL	1
E2	DL3U2B471AAA	PCB, AUDIO	RTL	1
E3	DL3U3B471AAA	PCB, I/O	RTL	1
E4	DL3U1B482AAA	PCB, PAD	RTL	1
E5	DL3U2B482AAA	PCB, SWITCH	RTL	1
E6	DL3U3B482AAA	PCB, LED	RTL	1
E11	DL3U4B482AAA	PCB, PORT	RTL	1
E12	DL3UPB237HAA	PCB, BLUETOOTH	RTL	1
E14	DL3U11490AAA	PCB, WIDE AREA ANTENNA	RTL	1
E14-1	DFJS834YA	GPRS CABLE, GRAY		1
E16	DL3U31490AAA	PCB, BT-LAN2 ANTENNA	RTL	1
E16-1	DFJS837YA	LAN MAIN CABLE, BLACK		1
E16-2	DFJS835YA	BT CABLE, BLUE		1
E17	DL3U41490AAA	PCB, LAN2 ANTENNA	RTL	1
E17-1	DFJS836YA	LAN SUB CABLE, WHITE		1
E18	N2EABEC00006	TOUCH PAD		1
E19	DFJS827YA	CABLE, MODEM		1
E20	DFJS828YA	CABLE, LAN		1
E22	DFJK08T024DB	FFC, SW		1
E24	DFJK10T053DB	FFC, LED		1
E25	DFJK12T034DB	FFC, PAD		1
E26	DFJK24T034DB	FFC, IO		1
E27	DFJK40T072CB	FFC, AUDIO		1
E28	 NOGB1J000018	INVERTER		1
E29	DFJS923YA	CABLE, LCD TS		1
E32	N3CAYYY00001	HDD		1
E33	DFWV08A0076	LCD UNIT ASS'Y		1
E33-1	DL3DW0180AAA	LCD ASS'Y		1
E33-1-1	A2CA00000056	LCD BACKLIGHT, CCFL		1
E33-1-2	DFHM0290ZA	REFLECTION ANGLE		1
E33-5	DXHM0042ZA	SCREW		4
E33-6	DFHR3C08ZA	LCD BACK DAMPER		1
E33-7	DFHR3B64ZA	LCD SIDE CUSHION A		2
E33-8	DFHR3506YA	LCD SIDE CUSHION C		2
E33-9	DFHR3507YA	LCD SIDE CUSHION D		1
E33-30	DFHR3453YA	LCD BACK CUSHION SIDE		3
E33-31	DFHR3570YA	LCD BACK CUSHION		1
E33-32	DFHR3571YA	LCD BACK CUSHION S		2
E33-33	DFHR3612ZA	LCD PWB SPACER		1
E33-34	DFHR3647YA	SPACER SHEET		2
E33-35	DFHR3648ZA	HOLDER SHEET B		2
E34	N2ABAJ000001	KEYBOARD, US		1
E35	N5HAZ0000013	MDC MODEM		1
E36	N5HZC0000013	WIRELESS LAN MODULE		1
E40	DFJK12U043DB	FFC, BT		1
E41	DFJK50T038DB	FFC, RF		1
E42	K1YYZZ000058	CARD BUS SOCKET		1

E100		DL3U5B482AAA	PCB, TS PS2	RTL	1
E150		DL3UP1282AAA	PCB, ANTENNA	RTL	1
E151		DFJS877YA	CABLE, ANTENNA		1
E206		DL3UPB281HBA	PCB, RF-BT	RTL	1
E208		DFJK13T024DB	FFC, PAD		1
E209		DL3U21490AAA	PCB, WIDE AREA AUX ANTENNA	RTL	1
E209-1		DFJS977ZA	CABLE, WIDE AREA AUX ANT. BROWN		1
E210		DL3U7B482AAA	PCB, SD	RTL	1
<b>Accessories</b>					
A1	⚠	CF-AA1623AM6	AC ADAPTOR		1
A2	⚠	K2CG3DR00003	AC CABLE		1
A3	⚠	DFJN5248ZA	MANUAL, CD-ROM		1
A4	⚠	CGR-B/6D8A	BATTERY PACK		1
A7		DFHS9017ZA	CLOTH ASS'Y		1
A25		DFQC9006ZB-0	SHOULDER BELT ASS'Y		1
A26		DFME0134ZA	TETHER		1
A34		DFJS981ZA	USB CABLE		1
A35		UJSJDYZ2391Z	COMBO DRIVE		1
A36		UJSJDLW060Z2	IF CABLE K		1
<b>Packing Material</b>					
P1		DFPK1147QA	CASE, PACKING		1
P3		DFPE0733YA	ACCESSORIES BOX		1
P4		DFPE0823ZA	ACCESSORY FIXED		1
<b>Mechanical Parts</b>					
K1		DFWV99A0106	HDD MOUNTING KIT		1
K1-1		L9DZAA000004	HEATER		1
K1-2		DFMX0383TA	INSULATION SHEET		3
K1-3		DFHM0280YA	HDD CASE A		1
K1-4		DFHM0313ZA	MDD GUIDE PIN PLATE		1
K1-5		DFHM9007ZA	HDD CASE B		1
K1-6		DFHE5025XA	SCREW		2
K1-7		DFHR3443XA	HDD DAMPER		1
K1-8		DFHR3589ZA	HDD CASE TAB		1
K1-9		DFHR3601ZA	HDD GUIDE PLATE SPACER		1
K1-10		DFHR3627YA	HDD CUSHION SPACER		1
K1-11		DL3UP1279BAA	FPC ASS'Y, HDD		1
K1-12		DFHP7124ZA	TAPE		1
K1-15		DFMX1207ZA	INSULATION SHEET, HDD HEATER		1
K2		DFHE0326XA	GASKET		2
K3		DFHE0519XA	GASKET E		1
K4		DFHE0811YA	GASKET		1
K5		DFHE0815ZA	CONDUCTIVE SHEET		1
K6		DFHG1209ZA	RUBBER, FOOT		4
K7		DFHG1630ZA-0	AUDIO LID RUBBER		1
K8		DFHG1632XA-0	DC IN LID RUBBER		1
K9		DFHG1638ZA-0	MODEM/LAN LID RUBBER		1
K10		DFHG1639ZA-0	USB LID RUBBER		2
K11		DFHG1641ZB-0	RGB LID RUBBER		1
K13		DFHG1660ZA-0	LAN LID RUBBER		1
K15		DFHG427YA	ANTENNA CAP		1
K16		DFHM0379ZA	CPU HEAT PLATE		1
K17		DFHM0276SA	DU CNT ANGLE		1
K18		DFHM0282YA	HDD GUIDE PLATE ASM		1
K19		DFHM0284XA	KB CNT LID		1
K20		DFHM0286YB	LID RUBBER PLATE A		1
K21		DFHM0288ZB	LID RUBBER PLATE C		1



K23	DFHM0296XA-0	LCD HINGE COVER	1
K24	DFHM0302YA-0	KBD PLATE (L)	1
K25	DFHM0303YA-0	KBD PLATE (R)	1
K26	DFHM0307YA	BAT CON ANGLE	1
K28	DFHM0311ZB	LID RUBBER PLATE B	2
K31	DFHR3262ZA	MODEM TAPE	2
K32	DFHR3301YA	MINI PCI CARD SHEET	1
K33	DFHR3438ZA	CLICK BUTTON SHEET	1
K34	DFHR3808ZA	GPS HOLE SHEET	1
K35	DFHR3445YA	HEAT DISSIPATION RUBBER	2
K36	DFHR3450ZA	KB CNT HOLE CUSHION	1
K37	DFHR3451ZB	KB CNT LID SHEET	1
K38	DFHR3474YA	TP TAPE	1
K39	DFHR3483SA	OPERATION SHEET	1
K40	DFHR3485ZA	OPERATION TAPE	1
K41	DFHR3487ZA	PORTRE SHEET	1
K42	DFHR3510ZA	LED SHEET	1
K43	DFHR3B11YA	SHEET, PCMCIA	1
K44	DFHR3512ZA	LED WATERPROOF SHEET	1
K45	DFHR3513ZA	LED PWB TAPE	1
K47	DFHR3536YA	LED LIGHT GUIDE SHEET	1
K49	DFHR3551YA	COIN BATTERY SHEET	1
K50	DFHR3581YA	KBD WATERPROOF SHEET L	1
K51	DFHR3582ZA	KBD WATERPROOF SHEET R	1
K52	DFHR3583ZA	KBD WATERPROOF SHEET C	1
K53	DFHR3584ZA	PALMREST SHEET R	1
K55	DFHP7106YA	TAPE	4
K56	DFHR3622ZA-0	DU STOPPER	1
K57	DFHR3623ZA	DU STOPPER A	1
K58	DFHR3624ZA	DU STOPPER B	2
K59	DFHR3625ZA	DU STOPPER C	2
K60	DFHR3626ZA	DU STOPPER D	1
K64	DFHR3636ZA	CABLE HOLD SHEET	2
K66	DFHR3642YA	LCD CUSHION SHEET	2
K67	DFHR3643ZA	TP BOTTOM TAPE	1
K71	DFHR3655YA	HDD CASE SPACER	2
K76	DFHR3677ZA	INSULATION SHEET	1
K77	DFHR6044XA	CLICK BUTTON PLATE	1
K78	DFHR6052XB-0	POWER SW KNOB	1
K79	DFHR9081ZA	PEN	1
K80	DFKE9078YA-0	DIMM LID ASSY SD	1
K80-1	L0AA04A00022	SPEAKER UNIT	1
K80-2	DFHM0275ZB	DIMM LID	1
K80-3	DFHM0298YA	SPEAKER ANGLE	1
K80-4	DFHR3439ZA	DIMM LID SHEET	1
K80-5	DFHR3471ZA	SP WATERPROOF SHEET	1
K80-6	DFHR3520ZA	SPEAKER WASHER	1
K80-7	DFHR3535ZA	SPEAKER CABLE TUBE	1
K80-8	DRHM5025YA	SCREW	2
K80-9	DFMX1070ZA	FDD INSULATION SHEET (2)	1
K80-10	DFHM0377YA	DIMM HEAT SINK PLATE	1
K80-13	DFMX1197ZA	SPEAKER INSULATION SHEET	1
K80-14	DFHR3C04ZA	DIMM CARD INSULATION SHEET	1
K80-15	DFHR3C05ZA	DIMM TIP INSULATION SHEET	1
K80-16	DFHR8509ZA	DIMM PLATE SPACER	1
K81	DFKE9065WA-0	PALM REST ASS'Y	1


K82	DFKM9030ZA-0	BOTTOM CASE ASS'Y	1
K82-1	DFHM0277YA	DU LID ANGLE	1
K82-2	DRHM5025YA	SCREW	5
K82-3	DFHR3441ZA	DU LID WATERPROOF SHEET	1
K82-4	DFHR6045ZA	DU LID	1
K83	DFKM9033WD-0	TOP CASE ASS'Y	1
K83-1	DFKE9073YA-0	TABLET LATCH ASS'Y	1
K83-2	DFKE9071ZA-0	BATT LID ASS'Y	1
K83-2-1	DFBH3030ZA	LID HINGE	2
K83-2-2	DRQT26+D3FKL	SCREW	2
K83-2-3	DFHM0310YA	WASHER	2
K83-2-4	DFHM0315YC	LID LATCH PLATE BATT	1
K83-2-5	DFHR3509YA	BAT COVER SHEET	1
K83-2-6	DFKE0799ZA-0	TABLE LATCH KNOB	1
K83-2-7	DFUN0068XA	LID KNOB SPRING	1
K83-2-8	DFUS0292ZB	LID KNOB SPRING PLATE	1
K83-2-9	DRHM5025YA	SCREW	2
K83-2-10	DXQT2+F3FNLT	SCREW	1
K83-3	DFKE9072ZB-0	HDD LID ASS'Y	1
K83-3-1	DFBH3030ZA	LID HINGE	2
K83-3-2	DRQT26+D3FKL	SCREW	2
K83-3-3	DFHM0310YA	WASHER	2
K83-3-4	DFHM0285XC	LID LATCH PLATE	1
K83-3-5	DFHR3508YA-0	HDD COVER SHEET	1
K83-3-6	DFKE0799ZA-0	TABLE LATCH KNOB	1
K83-3-7	DFUN0068XA	LID KNOB SPRING	1
K83-3-8	DFUS0292ZB	LID KNOB SPRING PLATE	1
K83-3-9	DRHM5025YA	SCREW	3
K83-4	DFKE9075XA-0	PCMCIA LID ASS'Y	1
K83-4-1	DFBH3030ZA	LID HINGE	2
K83-4-2	DRQT26+D3FKL	SCREW	2
K83-4-3	DFHM0310YA	WASHER	2
K83-4-4	DFHM0285XC	LID LATCH PLATE	1
K83-4-5	DFHR3588WA-0	PCMCIA COVER SHEET SD	1
K83-4-6	DFKE0799ZA-0	TABLE LATCH KNOB	1
K83-4-7	DFUN0068XA	LID KNOB SPRING	1
K83-4-8	DFUS0292ZB	LID KNOB SPRING PLATE	1
K83-4-9	DRHM5025YA	SCREW	3
K83-5	DRQT26+D3FKL	SCREW	6
K83-6	DXQT3+F4FNLT	SCREW	2
K84	DFMX0383TA	INSULATION SHEET	11
K85	DFHR7518ZA	H CABLE SHEET	3
K86	DFUQ0101YA	SW SPRING	1
K87	△ DFGT1088YA	RATED LABEL	1
K89	DFQT9675ZA	ENERGY STAR LABEL	1
K92	DFQT9948ZA	CENTRINO LABEL	1
K94	DFHM0279YA	GPS PLATE	1
K200	DFWV80A0354	LCD FRONT CABINET/TS PANEL ASS'Y	1
K200-1	DFKF9031ZA-0	FRONT CASE ASS'Y	1
K200-1-1	DRHM5025YA	SCREW	2
K200-1-2	DFHG1634YA-0	LCD CABINET CUSHION A	2
K200-1-3	DFHG1635ZA-0	LCD CABINET CUSHION B	2
K200-1-4	DFHM0319YA	LCD ELE PASS	2
K200-1-5	DFHM0321ZA	D WASHER	2
K200-1-6	DFHM0322ZA	SPRING WASHER	2
K200-1-7	DFHR3469ZA	PEN FRICTION SHEET	1

K200-1-8	DFHR6051ZE	PEN HOLDER	1
K200-2	DFHE0805ZA	MAGNET	1
K200-3	DFHP7149ZA	MAGNET TAPE	1
K200-30	DFWV84A0261	TOUCH SCREEN PANEL KIT	1
K200-30-3	DFHR3476ZA	SPACER A	2
K200-30-4	DFHR3477ZA	SPACER B	2
K200-30-30	DFHR3630ZA	TS FPC SPACER	1
K200-30-31	DFHR3674YA	TS TAPE	1
K200-30-35	DL3DV0180AAA	TS PANEL ASS'Y	1
K200-30-35-1	DFHR9071ZA	PROTECTION FILM	1
K201	DFWV80C0497	LCD REAR CABINET ASS'Y	1
K201-1	DFKM9032ZA-0	REAR CASE ASS'Y	1
K201-1-1	DFHR3468ZA-0	PANA BADGE	1
K201-1-2	DFHG1634YA-0	LCD CABINET CUSHION A	2
K201-1-3	DFHG1635ZA-0	LCD CABINET CUSHION B	2
K201-1-4	DFHM0319YA	LCD ELE PASS	2
K201-1-5	DFHM0321ZA	D WASHER	2
K201-1-6	DFHM0322ZA	SPRING WASHER	2
K201-2	DFHR3563YA	LCD REAR CUSHION C	2
K201-3	DFHR3564YA	LCD REAR CUSHION D	1
K201-4	DFHR3565YA	LCD REAR CUSHION E	2
K201-5	DFHR3566YA	LCD REAR CUSHION F	3
K201-6	DFHR3460YA	LCD REAR CUSHION A	2
K201-7	DFHR3461YA	LCD REAR CUSHION B	2
K201-30	DFHR3567YA	LCD REAR CUSHION G	2
K202	DFBH3029VA	LCD HINGE	1
K203	DFHE0814ZA	CONDUCTIVE SHEET	1
K205	DFHM0325ZA	CABLE HOLD PLATE	2
K206	DFHR3432ZA	ANT CABLE CUSHION	3
K207	DFHR3464WA	LCD SIDE CUSHION B	2
K208	DFHR3516ZA	PROTECT SHEET, SCREW	1
K209	DFHR3572YA	LCD CABLE HOLDER SHEET	1
K210	DFHR3573YA	LCD SIDE CUSHION E	2
K211	DFHR3574YA	LCD SIDE CUSHION F	1
K212	DFHR3614ZA	CABLE STOPPER TAPE	1
K213	DFHR3631YA	INVERTER CASE	1
K214	DFHR3A65ZA	INSULATION SHEET INV. CASE	1
K215	DFHR6193YA-1	ANTENNA COVER	2
K216	DFHR6106ZC-1	TABLET LATCH COVER	1
K217	DFHR6081ZA-0	CABLE HOLDER	2
K218	DFKE9059YA	LOCK PLATE ASSY	1
K219	DFKE9074ZA-0	HINGE TOP COVER ASSY	1
K220	DFMC0685ZA	CONDUCTIVE SHEET, LCD	1
K222	DFMX0383TA	INSULATION SHEET	4
K223	DFQT6077YA	CAUTION LABEL, LCD	1
K224	DFUQ0100ZA	LOCK SPRING	2
K225	DRQT26+E5FKL	SCREW	16
K226	DXYN2+J6FNL	SCREW	10
K227	DXYN3+J10FNL	SCREW	2
K228	DXYN3+J8FNL	SCREW	2
K229	DFHE5025XA	SCREW	8
K230	DFHR3472ZA-0	TOUGH BADGE	1
K252	DFMC0808ZA	INVERTER MIL COVER	1
K253	DFMC0816ZA	INVERTER MIL SHEET	1
K301	DFQT9869ZA-0	RELEASE LABEL	1
K400	DFHE5025XA	SCREW	13


K401	DRHM5025YA	SCREW	13
K402	DFHE5058ZB	SCREW, DSUB	4
K404	DRQT2+D2FKL	SCREW	4
K405	DXQT3+D4FKNL	SCREW	2
K406	DRSB2+5FKL	SCREW	16
K407	DXYN2+J12FNL	SCREW	2
K408	DXYN2+J18FNL	SCREW	3
K409	DRHM0061ZA	SCREW	13
K410	DXYN4+J8FNL	SCREW	4
K411	DRHM5117ZA	SCREW	2
K412	DRSB2+3FKL	SCREW	6
K414	XSB2+4FNL	SCREW	4
K500	DFHG1633ZB-0	RUBBER, SERIAL LID	1
K501	DFHR3539YA	SHEET, HEAD SET DUMMY	1
K503	DFHR3644ZA	TAPE, SIMM DUMMY	1
K504	DFQT6255ZA	LABEL, GPRS	1
K505	DFQT6275ZA	LABEL, FCC ID	1
K550	DFHR3488ZA	SHEET, EXT ANTENNA	1
K551	DFHE5108ZA	SCREW	2
K600	DFMY0419ZA	DIMM THERMAL RUBBER	1
K601	DRYN3+J6FKL	SCREW	2
K602	DFHR3809ZB	GPS HOLE SHEET B	1
K603	DFHR3964ZA	PCMCIA SHEET 2	2
K604	DFHR3969ZA	PCMCIA SHEET 3	1
K605	DFHR3937ZA	HDD CAB CUSHION	1
K606	DFQC9009ZC-0	STRAP BG ASS'Y	1
K607	DFHR8516ZA	FFC SPACER	1
K608	DFQT9974ZA	WINDOS XP LABEL (FOR NOTE)	1
K620	DFHR3741ZA	FFC CN STOPPER	2
K663	DFHR3741ZA	STOPPER, FFC CN	1
K671	DFHG1790ZA	BAT CUSHION	1
K685	DFMC0848YA	GASKET	1
K686	DFMX1200ZA	INS. SHEET, TOUCH PAD CARD	1
K687	DFMY0248YA	CPU HEATSINK RUBBER	1
K688	DFHM0378ZA	SD ANGLE	1
K689	DXQN2+A22FNL	SCREW	3
K690	DXSN2+18FNL	SCREW	1
K693	DFHR3859ZA	DC IN SHEET	1
K695	DFHR3B12ZA	SHEET, SD BOARD	1
K696	DFHR3B65ZA	CUSHION, HDD PACK	2
K697	DFHR3B84YA	SPACER, SD ANGLE (1)	1
K698	DFHR3B85ZA	SPACER, SD ANGLE (2)	2
K699	DFHR3B87ZA	SHEET, SD FFC	1
K702	DFHR8517ZA	CUSHION, HDD	2
K703	DFHE0915ZA	SHEET	1
K704	DFHR3C06ZA	INVERTER SHEET (1)	1
K705	DFHR3C07ZA	INVERTER SHEET (2)	1
K708	DFMD3125ZA	BACK PLATE, KENSINGTON 2	1
K709	DFHP7200ZA	TAPE, AHDESIVE	1
K718	DFHR6220ZA	DIMM HOLDER	1

# Replacement Parts List

Note: Important Safety Notice

Components identified by  mark have special characteristics important for safety.  
When replacing any of these components use only manufacturer's specified parts.

## CF-18JHU80TW

REF. NO and AREA	PART NO.	DESCRIPTION	Q'TY
<b>MAIN PCB</b>			
BT 1	 CR2032/S5W	RTC BATTERY	1
C 2	F1J0J106A016	CAPACITOR, 6.3V, 10µF	76
C 3			
C 4			
C 6			
C 7			
C 8			
C 11			
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C 341			
C 343			
C 348			
C 352			
C 353			
C 369			
C 392			
C 396			
C 692			
C 5	EEFCD0D151ER	CAPACITOR, 2V, 150μF	4
C 208			
C 214			
C 688			
C 9	F1G1C104A042	CAPACITOR, 16V, 0.1μF	154
C 10			
C 14			
C 18			
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C 399			
C 400			
C 430			
C 601			
C 607			
C 629			
C 635			
C 636			
C 50	F1G1E103A062	CAPACITOR, 25V, 0.01 $\mu$ F	28
C 166			
C 168			
C 169			
C 171			
C 174			



C 175 C 178 C 179 C 197 C 215 C 234 C 245 C 246 C 265 C 269 C 270 C 271 C 296 C 299 C 307 C 309 C 347 C 375 C 600 C 628 C 630 C 689			
C 55	F1G1H222A496	CAPACITOR, 50V, 2200pF	1
C 56 C 57 C 187 C 330 C 331 C 332 C 333	F1G1A104A014	CAPACITOR, 10V, 0.1µF	7
C 66 C 84 C 108 C 141 C 164 C 181 C 249 C 251 C 272 C 317 C 319 C 360 C 390	F1H0J1050022	CAPACITOR, 6.3V, 1µF	13
C 71 C 275 C 277 C 281 C 283 C 339 C 344	F1G1H102A496	CAPACITOR, 50V, 1000pF	20

C 378			
C 379			
C 380			
C 419			
C 420			
C 616			
C 623			
C 637			
C 638			
C 659			
C 666			
C 677			
C 684			
C 72	EEFCX0D331R	CAPACITOR, 2V, 330 $\mu$ F	8
C 73			
C 80			
C 81			
C 83			
C 650			
C 651			
C 652			
C 87	F1G1A474A018	CAPACITOR, 10V, 0.47 $\mu$ F	7
C 89			
C 90			
C 91			
C 93			
C 94			
C 95			
C 92	F1G0J224A001	CAPACITOR, 6.3V, 0.22 $\mu$ F	2
C 105			
C 101	EEFCD0D101ER	CAPACITOR, 2V, 100 $\mu$ F	4
C 653			
C 671			
C 693			
C 104	EEFCX0D221R	CAPACITOR, 2V, 220 $\mu$ F	1
C 110	F1H1A1050015	CAPACITOR, 10V, 1 $\mu$ F	22
C 113			
C 114			
C 119			
C 120			
C 125			
C 126			
C 129			
C 132			
C 133			
C 152			
C 153			
C 154			
C 155			
C 188			

C 194			
C 195			
C 244			
C 603			
C 640			
C 698			
C 799			
C 136	F1G1H3R3A543	CAPACITOR, 50V, 3.3pF	2
C 137			
C 142	F1G1H150A542	CAPACITOR, 50V, 15pF	3
C 143			
C 398			
C 172	F1G1H270A451	CAPACITOR, 50V, 27pF	2
C 173			
C 183	F1G1H1010005	CAPACITOR, 50V, 100pF	10
C 279			
C 387			
C 612			
C 641			
C 642			
C 643			
C 657			
C 668			
C 686			
C 186	F1G1H5R0A452	CAPACITOR, 50V, 5pF	2
C 189			
C 257	EEFUD0J151ER	CAPACITOR, 6.3V, 150µF	2
C 258			
C 294	F1G1H221A495	CAPACITOR, 50V, 220pF	12
C 295			
C 297			
C 298			
C 618			
C 619			
C 625			
C 661			
C 662			
C 674			
C 679			
C 680			
C 323	F1G1H6R0A452	CAPACITOR, 50V, 6pF	2
C 325			
C 327	F1L3D102A003	CAPACITOR, 2000V, 1000pF	1
C 337	F1H1H104A748	CAPACITOR, 50V, 0.1µF	17
C 606			
C 613			
C 615			
C 622			
C 655			
C 658			

C 665			
C 673			
C 675			
C 676			
C 683			
C 694			
C 695			
C 697			
C 699			
C 700			
C 355	F1J1E105A009	CAPACITOR, 25V, 1 $\mu$ F	5
C 356			
C 358			
C 359			
C 604			
C 374	F1G1C473A004	CAPACITOR, 16V, 0.047 $\mu$ F	4
C 632			
C 633			
C 634			
C 376	F1G1A683A014	CAPACITOR, 10V, 0.068 $\mu$ F	1
C 411	F1G1H100A544	CAPACITOR, 50V, 10pF	2
C 412			
C 608	EEFCX0J101R	CAPACITOR, 6.3V, 100 $\mu$ F	2
C 609			
C 611	F1L1E106A017	CAPACITOR, 25V, 10 $\mu$ F	9
C 626			
C 648			
C 649			
C 654			
C 669			
C 672			
C 687			
C 701			
C 614	F1H1H103A748	CAPACITOR, 50V, 0.01 $\mu$ F	2
C 624			
C 617	F1G1H220A542	CAPACITOR, 50V, 22pF	6
C 620			
C 660			
C 663			
C 678			
C 681			
C 621	F1J0J475A009	CAPACITOR, 6.3V, 4.7 $\mu$ F	4
C 646			
C 664			
C 682			
C 627	EEFCX0G151R	CAPACITOR, 4V, 150 $\mu$ F	1
C 639	F1G1H471A496	CAPACITOR, 50V, 470pF	1
C 644	F1G1H681A496	CAPACITOR, 50V, 680pF	1
C 645	F1J1E334A081	CAPACITOR, 25V, 0.33 $\mu$ F	1
C 656	F1H1H182A748	CAPACITOR, 50V, 1800pF	2

C 667			
C 670	EEFCD0G101ER	CAPACITOR, 4V, 100µF	1
C 685	F1H1E472A050	CAPACITOR, 25V, 4700pF	1
C 696	F1G1H152A496	CAPACITOR, 50V, 1500pF	1
C 702	F1K1E1060001	CAPACITOR, 25V, 10µF	2
C 703			
C 704	EEFCD0J470ER	CAPACITOR, 6.3V, 47µF	1
CF 1	D4CC1103A038	THERMISTOR	2
CF 6			
CN 2	K1MML0B00004	CONNECTOR	1
CN 3	K1KA02BA0014	CONNECTOR	1
CN 4	K1NAF0D00003	CONNECTOR	1
CN 5	K1KB50BA0001	CONNECTOR	1
CN 6	K1FB104B0055	CONNECTOR	2
CN 7			
CN 8	K1KA20AA0261	CONNECTOR	1
CN 9	K1MN24BA0059	CONNECTOR	1
CN 11	K1MMC4B00013	CONNECTOR	1
CN 12	K1KA08AA0266	CONNECTOR	1
CN 14	K1KA02B00247	CONNECTOR	1
CN 15	K1KA10B00213	CONNECTOR	1
CN 16	K1MN50AA0018	CONNECTOR	1
CN 17	K1KA11AA0267	CONNECTOR	1
CN 18	K1MN26AA0074	CONNECTOR	1
CN 20	K1MY04AA0041	CONNECTOR	1
CN 21	K1MN12AA0018	CONNECTOR	1
CN 23	K1MN13AA0018	CONNECTOR	1
CN 24	K1KB30A00171	CONNECTOR	1
CN 25	K1KAA0A00143	CONNECTOR	1
CN 27	K1MY40BA0098	CONNECTOR	1
CN 30	K1MN06AA0058	CONNECTOR	1
CN 35	K1MN10AA0018	CONNECTOR	1
CN 37	K1KA02AA0229	CONNECTOR	1
D 1	MA2J72900L	DIODE	4
D 2			
D 3			
D 11			
D 4	B0JDBE000002	DIODE	3
D 6			
D 625			
D 7	MA3J14700L	DIODE	3
D 8			
D 9			
D 10	B0JCPD000023	DIODE	3
D 600			
D 799			
D 12	B0KB00000044	DIODE	2
D 13			
D 601	B0ADDH000004	DIODE	3
D 602			

D 603			
D 604	MAZ81200ML	DIODE	1
D 605	MAZ81800ML	DIODE	1
D 606 D 622	MA3S132E0L	DIODE	2
D 608	B0JCQD000001	DIODE	1
D 609 D 611 D 626 D 628 D 629 D 631 D 632	B0JCMD000014	DIODE	7
D 610 D 627 D 630	B0JDAE000004	DIODE	3
D 612 D 613 D 614 D 615 D 617 D 618	MAZ80510ML	DIODE	6
D 616	MAZ80620ML	DIODE	1
D 619 D 621	MA2S111-TX	DIODE	2
D 620	B2ABAM000002	DIODE	1
D 624	DEDRB081L20	DIODE	1
D 623	B0JCCE000008	DIODE	1
F 1	 K5H502Z00003	FUSE, 5A	1
F 2 F 3 F 4 F 6	 K5H202Z00005	FUSE, 2A	4
IC 1	C2GBC0000263	IC, CPU	1
IC 2	C1DB00001476	IC, CHIP SET	1
IC 3	C1DB00001359	IC, CHIP SET	1
IC 4	C0JBZZ000327	IC, THERMAL SENSOR	1
IC 9	C0JBAZ002423	IC, CLOCK GENERATOR	1
IC 10 IC 13	C0DBZH000043	IC, USB POWER CONTROL	2
IC 11	C1DB00001182	IC, LAN CONTROLLER	1
IC 12	C3EBCG000100	IC, EEPROM	1
IC 14	C1DB00001159	IC, PERIPHERAL LSI	1
IC 15 IC 16 IC 17	C0EBE0000460	IC	3
IC 18	C2CBA0000003	IC, MICON	1
IC 19	C0CBCBC00137	IC, REGURATOR	1
IC 20 IC 33	C0JBAA000347	IC, 1 GATE LOGIC	5

IC 39			
IC 44			
IC 650			
IC 21	C0JBAS000215	IC, GATE LOGIC	1
IC 23	DA2205IDBLET	IC, BIPOLAR LOGIC	1
IC 24	C0JBAS000218	IC, LOGIC	3
IC 28			
IC 29			
IC 26	C0ZBZ0000978	IC	1
IC 27	C0JBAB000619	IC, GATE LOGIC	1
IC 30	C3FBLC000040	IC, FLASH MEMORY	1
IC 32	C0JBAC000338	IC, GATE LOGIC	2
IC 37			
IC 34	C0JBAA000348	IC, 1 GATE LOGIC	2
IC 36			
IC 35	C0JBAE000306	IC, GATE LOGIC	2
IC 41			
IC 38	C0JBAC000339	IC, LOGIC	1
IC 42	C1DB00001179	IC, LSI	1
IC 43	C0EBH0000457	IC	1
IC 60	C3ABSG000029	IC, DDR2 SDRAM	8
IC 61			
IC 62			
IC 63			
IC 64			
IC 65			
IC 66			
IC 67			
IC 600	C0ABZA000047	IC, AMP	1
IC 601	C0ABBA000093	IC, OP AMP	1
IC 602	C0DBAFH00029	IC	1
IC 603	C0JBAD000182	IC, LOGIC	1
IC 604	C0JBAB000622	IC, 1 GATE LOGIC	1
IC 605	C0DBEFH00002	IC, REGURATOR	1
IC 607	C0EBE0000333	IC	1
IC 608	C0DBDJH00009	IC, LINEAR	1
IC 610	C0DBALH00003	IC	3
IC 611			
IC 612			
L 1	G1C100Z00013	INDUCTOR	2
L 2			
L 3	G1C1R0Z00002	INDUCTOR	5
L 4			
L 5			
L 7			
L 8			
L 6	G1C91NM00001	INDUCTOR	1
L 9	J0JJC0000015	INDUCTOR	1
L 10	J0MAB0000116	INDUCTOR	4
L 11			



L 25			
L 26			
L 12	J0JHC0000074	INDUCTOR	4
L 13			
L 14			
L 15			
L 16	J0MAB0000169	INDUCTOR	2
L 17			
L 18	J0JDC0000045	INDUCTOR	2
L 21			
L 22	J0JDC0000045	INDUCTOR	3
L 27			
L 28			
L 600	DDAZS100MT3T	INDUCTOR	1
L 601	G1C100MA0106	INDUCTOR	1
L 602	G1C1R6Z00001	INDUCTOR	1
L 603	G1C4R7MA0106	INDUCTOR	2
L 605			
L 604	G1C220MA0077	INDUCTOR	1
L 606	G1C4R7MA0022	INDUCTOR	1
L 607	G1A160H00001	INDUCTOR	1
PA 1	K5J1AB000001	POLY SW	1
Q 1	UNR9214J0L	TRANSISTOR	12
Q 4			
Q 5			
Q 11			
Q 15			
Q 35			
Q 611			
Q 627			
Q 636			
Q 641			
Q 642			
Q 643			
Q 2	B1DHDC000028	TRANSISTOR	11
Q 3			
Q 8			
Q 14			
Q 16			
Q 19			
Q 22			
Q 24			
Q 26			
Q 31			
Q 625			
Q 6	B1MBBCA00003	TRANSISTOR	4
Q 7			
Q 9			
Q 10			
Q 12	B1CFFB000001	TRANSISTOR	2

Q 13			
Q 17	XP0421300L	TRANSISTOR	10
Q 21			
Q 25			
Q 612			
Q 617			
Q 618			
Q 619			
Q 621			
Q 623			
Q 626			
Q 23	B1DHFD000015	TRANSISTOR	2
Q 604			
Q 28	UNR9213J0L	TRANSISTOR	6
Q 29			
Q 30			
Q 34			
Q 607			
Q 620			
Q 32	XP0411300L	TRANSISTOR	2
Q 33			
Q 600	XP0421400L	TRANSISTOR	3
Q 601			
Q 602			
Q 603	B1CHRD000001	TRANSISTOR	2
Q 606			
Q 608	B1CFGD000003	TRANSISTOR	3
Q 634			
Q 638			
Q 609	B1MBEDA00017	TRANSISTOR	4
Q 610			
Q 633			
Q 635			
Q 613	DETA144EETL	TRANSISTOR	1
Q 614	B1DHFB000003	TRANSISTOR	3
Q 616			
Q 622			
Q 615	B1DBGD000006	TRANSISTOR	4
Q 631			
Q 639			
Q 640			
Q 628	B1CFGD000004	TRANSISTOR	3
Q 630			
Q 644			
Q 629	XP0450100L	TRANSISTOR	1
Q 632	B1DFGD000032	TRANSISTOR	1
Q 637	B1MBEDA00018	TRANSISTOR	1
Q 645	B1MBEDA00008	TRANSISTOR	1
R 1	ERJ2GEJ681X	RESISTOR, 1/16W, 680Ω	2
R 258			

R 2 R 15 R 16	ERJ2RKF27R4X	RESISTOR, 1/16W, 27.4Ω	3
R 4 R 17 R 18 R 35 R 36	ERJ2RKF54R9X	RESISTOR, 1/16W, 54.9Ω	5
R 5	ERJ2RKF39R2X	RESISTOR, 1/16W, 39.2Ω	1
R 6	ERJ2GEJ151X	RESISTOR, 1/16W, 150Ω	1
R 11 R 437 R 438	ERJ3GEY0R00V	RESISTOR, 1/16W, 0Ω	3
R 12 R 43	ERJ2RKF2000X	RESISTOR, 1/16W, 200Ω	2
R 13 R 14 R 27 R 29 R 31 R 32	ERJ2GEJ560X	RESISTOR, 1/16W, 56Ω	6
R 23 R 636 R 690 R 712 R 731	ERJ3GEYJ100V	RESISTOR, 1/16W, 10Ω	5
R 24 R 732	ERJ2RKF1001X	RESISTOR, 1/16W, 1KΩ	2
R 25	ERJ2RKF2001X	RESISTOR, 1/16W, 2KΩ	1
R 26 R 348 R 609 R 612 R 613 R 749	ERJ2GEJ562X	RESISTOR, 1/16W, 5.6KΩ	6
R 28	ERJ2GEJ750X	RESISTOR, 1/16W, 75Ω	1
R 33 R 39	ERJ2RKF2210X	RESISTOR, 1/16W, 221Ω	2
R 34 R 40 R 42	ERJ2RKF1000X	RESISTOR, 1/16W, 100Ω	3
R 37 R 38 R 62 R 231	ERJ2RKF24R9X	RESISTOR, 1/16W, 24.9Ω	4
R 41 R 110 R 111 R 112 R 113	ERJ2GE0R00X	RESISTOR, 1/16W, 0Ω	59

R 114  
R 115  
R 116  
R 117  
R 118  
R 119  
R 120  
R 121  
R 122  
R 123  
R 124  
R 125  
R 126  
R 127  
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R 311  
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R 332  
R 370  
R 371  
R 376  
R 393  
R 396  
R 410  
R 427  
R 428  
R 443  
R 455  
R 604  
R 700  
R 702

R 703			
R 706			
R 722			
R 753			
R 47	ERJ2RKF80R6X	RESISTOR, 1/16W, 80.6Ω	2
R 48			
R 49	ERJ2GEJ103X	RESISTOR, 1/16W, 10KΩ	54
R 145			
R 188			
R 189			
R 196			
R 219			
R 221			
R 224			
R 229			
R 242			
R 247			
R 283			
R 292			
R 293			
R 300			
R 303			
R 304			
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R 320			
R 347			
R 365			
R 372			
R 378			
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R 402			
R 411			
R 412			
R 431			
R 436			
R 457			
R 458			
R 461			
R 462			
R 464			
R 615			
R 635			
R 640			
R 641			
R 677			

R 707			
R 711			
R 715			
R 716			
R 721			
R 730			
R 735			
R 736			
R 741			
R 745			
R 50	ERJ2GEJ222X	RESISTOR, 1/16W, 2.2K $\Omega$	4
R 51			
R 294			
R 295			
R 52	ERJ2GEJ101X	RESISTOR, 1/16W, 100 $\Omega$	24
R 202			
R 225			
R 227			
R 241			
R 307			
R 330			
R 331			
R 344			
R 354			
R 397			
R 398			
R 399			
R 429			
R 430			
R 602			
R 603			
R 657			
R 658			
R 659			
R 662			
R 663			
R 664			
R 665			
R 53	ERJ2RKF1002X	RESISTOR, 1/16W, 10K $\Omega$	3
R 401			
R 643			
R 57	D1H82224A024	RESISTOR ARRAY	1
R 58	ERJ2RKF1501X	RESISTOR, 1/16W, 1.5K $\Omega$	1
R 59	ERJ2GEJ390X	RESISTOR, 1/16W, 39 $\Omega$	2
R 60			
R 61	ERJ2RKF2550X	RESISTOR, 1/16W, 255 $\Omega$	1
R 63	ERJ2GEJ100X	RESISTOR, 1/16W, 10 $\Omega$	17
R 315			
R 316			
R 632			

R 633 R 645 R 646 R 675 R 676 R 708 R 709 R 719 R 720 R 727 R 728 R 739 R 740			
R 64 R 66 R 68 R 70	ERJ2GEJ201X	RESISTOR, 1/16W, 200Ω	4
R 76 R 77 R 78 R 79 R 104 R 105 R 106 R 107	D1HG2208A001	RESISTOR ARRAY	8
R 80 R 81 R 82 R 83 R 84 R 85 R 86 R 87 R 88 R 89 R 90 R 91 R 92 R 93 R 94 R 95 R 96 R 97 R 98 R 99 R 100 R 101 R 102 R 103	ERJ2GEJ220X	RESISTOR, 1/16W, 22Ω	24
R 108	D1HA56080001	RESISTOR ARRAY	7

R 109 R 136 R 137 R 138 R 139 R 140			
R 147 R 148 R 166 R 169 R 273 R 280 R 321 R 335 R 366 R 381 R 382 R 451 R 459 R 460 R 686	ERJ2GEJ102X	RESISTOR, 1/16W, 1K $\Omega$	15
R 149 R 173	ERJ2GEJ2R2X	RESISTOR, 1/16W, 2.2 $\Omega$	2
R 150 R 151 R 152 R 153 R 154 R 155 R 192 R 193 R 194 R 195 R 349 R 350 R 351 R 352 R 446 R 447	ERJ2RKF49R9X	RESISTOR, 1/16W, 49.9 $\Omega$	16
R 163 R 164 R 165 R 175 R 176 R 178 R 179 R 180 R 182 R 183 R 184	ERJ2GEJ330X	RESISTOR, 1/16W, 33 $\Omega$	25



R 185			
R 186			
R 187			
R 190			
R 191			
R 218			
R 269			
R 270			
R 271			
R 272			
R 274			
R 275			
R 373			
R 374			
R 167	D1H83304A024	RESISTOR ARRAY	1
R 172	ERJ2RKF4750X	RESISTOR, 1/16W, 475Ω	1
R 174	ERJ2GEJ1R0X	RESISTOR, 1/16W, 1Ω	2
R 248			
R 198	D1H81034A024	RESISTOR ARRAY	9
R 217			
R 220			
R 222			
R 262			
R 407			
R 408			
R 452			
R 463			
R 216	ERJ2GEJ104X	RESISTOR, 1/16W, 10KΩ	27
R 276			
R 277			
R 278			
R 279			
R 282			
R 296			
R 297			
R 301			
R 302			
R 308			
R 313			
R 334			
R 336			
R 340			
R 343			
R 362			
R 364			
R 617			
R 619			
R 620			
R 621			
R 650			

R 651			
R 654			
R 656			
R 661			
R 230	ERJ2RKF22R6X	RESISTOR, 1/16W, 22.6Ω	1
R 232	DEARA8AJ103M	RESISTOR ARRAY	16
R 259			
R 260			
R 261			
R 369			
R 383			
R 384			
R 385			
R 386			
R 389			
R 390			
R 391			
R 403			
R 404			
R 405			
R 406			
R 233	ERJ2GEJ472X	RESISTOR, 1/16W, 4.7KΩ	3
R 699			
R 757			
R 236	ERJ2GEJ203X	RESISTOR, 1/16W, 20KΩ	1
R 237	ERJ2GEJ106X	RESISTOR, 1/16W, 10MΩ	1
R 238	ERJ2GEJ105X	RESISTOR, 1/16W, 1MΩ	8
R 353			
R 618			
R 649			
R 652			
R 660			
R 689			
R 694			
R 249	ERJ2GEJ121X	RESISTOR, 1/16W, 120Ω	2
R 250			
R 266	ERJ2GEJ473X	RESISTOR, 1/16W, 47KΩ	8
R 267			
R 268			
R 449			
R 616			
R 630			
R 670			
R 698			
R 284	ERJ2GEJ181X	RESISTOR, 1/16W, 180Ω	1
R 285	ERJ2GEJ221X	RESISTOR, 1/16W, 220Ω	7
R 286			
R 287			
R 288			
R 290			

R 291			
R 799			
R 289	ERJ2GEJ471X	RESISTOR, 1/16W, 470Ω	1
R 338	ERJ2GEJ334X	RESISTOR, 1/16W, 330KΩ	1
R 346	ERJ2RHD562X	RESISTOR, 1/16W, 5.6KΩ	1
R 355	EXBV8V750JV	RESISTOR ARRAY	1
R 356	ERJ2GEJ223X	RESISTOR, 1/16W, 22KΩ	5
R 357			
R 358			
R 359			
R 666			
R 367	D1H81024A024	RESISTOR ARRAY	2
R 368			
R 395	ERJ2RKF5602X	RESISTOR, 1/16W, 56KΩ	1
R 400	ERJ2RKF3901X	RESISTOR, 1/16W, 3.9KΩ	1
R 423	ERJ2GEJ153X	RESISTOR, 1/16W, 15KΩ	4
R 634			
R 710			
R 729			
R 601	D1ZZ00000046	RESISTOR, 1W, 5mΩ	2
R 701			
R 605	ERJ2RHD103X	RESISTOR, 1/16W, 10KΩ	2
R 608			
R 606	ERJ2RKF1003X	RESISTOR, 1/16W, 100KΩ	5
R 611			
R 638			
R 679			
R 688			
R 607	ERJ2RKF1503X	RESISTOR, 1/16W, 150KΩ	3
R 610			
R 750			
R 614	ERJ3GEYJ3R3V	RESISTOR, 1/16W, 3.3Ω	1
R 622	D1BDR1000002	RESISTOR, 1/8W, 0.1Ω	2
R 623			
R 624	D1BDR2700001	RESISTOR, 1/8W, 0.27Ω	1
R 625	ERJ2RKF1102X	RESISTOR, 1/16W, 11KΩ	2
R 800			
R 627	ERJ2RKF1302X	RESISTOR, 1/16W, 13KΩ	2
R 682			
R 628	D1BDR0220001	RESISTOR, 1/8W, 0.022Ω	6
R 629			
R 704			
R 705			
R 726			
R 743			
R 631	ERJ2GEJ474X	RESISTOR, 1/16W, 470KΩ	3
R 747			
R 797			
R 637	ERJ2RHD752X	RESISTOR, 1/16W, 7.5KΩ	1
R 639	ERJ2RKF2002X	RESISTOR, 1/16W, 20KΩ	2

R 733			
R 642	ERJ2RKF3002X	RESISTOR, 1/16W, 30K $\Omega$	1
R 644	ERJ2RHD102X	RESISTOR, 1/16W, 1K $\Omega$	1
R 647	D1BDR0330001	RESISTOR, 1/8W, 0.033 $\Omega$	6
R 648			
R 725			
R 742			
R 744			
R 758			
R 653	ERJ2GEJ684X	RESISTOR, 1/16W, 680K $\Omega$	1
R 655	ERJ2GEJ225X	RESISTOR, 1/16W, 2.2M $\Omega$	1
R 667	ERJ6GEYJ561V	RESISTOR, 1/10W, 560 $\Omega$	1
R 668	ERJ6GEYJ222V	RESISTOR, 1/10W, 2.2K $\Omega$	2
R 669			
R 673	ERJ2RKF1004X	RESISTOR, 1/16W, 1M $\Omega$	2
R 681			
R 674	ERJ2RHD223X	RESISTOR, 1/16W, 22K $\Omega$	1
R 678	ERJ2RHD333X	RESISTOR, 1/16W, 33K $\Omega$	1
R 680	ERJ2RKF5102X	RESISTOR, 1/16W, 51K $\Omega$	3
R 693			
R 717			
R 684	ERJ2RHD123X	RESISTOR, 1/16W, 12K $\Omega$	2
R 738			
R 685	ERJ2RHD222X	RESISTOR, 1/16W, 2.2K $\Omega$	1
R 687	ERJ2RHD132X	RESISTOR, 1/16W, 1.3K $\Omega$	1
R 691	ERJ2GEJ302X	RESISTOR, 1/16W, 3K $\Omega$	1
R 692	ERJ2GEJ154X	RESISTOR, 1/16W, 150K $\Omega$	2
R 695			
R 696	ERJ3GEYJ1R0V	RESISTOR, 1/16W, 1.0 $\Omega$	1
R 713	ERJ2RKF4701X	RESISTOR, 1/16W, 4.7K $\Omega$	1
R 714	ERJ2RKF1502X	RESISTOR, 1/16W, 15K $\Omega$	2
R 737			
R 718	ERJ2RKF2402X	RESISTOR, 1/16W, 24K $\Omega$	2
R 734			
R 723	D1BDR0470002	RESISTOR, 1/8W, 0.047 $\Omega$	1
R 746	ERJ2RHD104X	RESISTOR, 1/16W, 100K $\Omega$	1
R 748	ERJ2RHD3652X	RESISTOR, 1/16W, 36.5K $\Omega$	1
R 751	ERJ2RHD302X	RESISTOR, 1/16W, 3K $\Omega$	2
R 752			
R 754	ERA3YKB104V	RESISTOR, 1/16W, 100K $\Omega$	2
R 755			
R 756	ERA3YEB333V	RESISTOR, 1/16W, 33K $\Omega$	1
SW 1	K0D112A00096	SW	1
T 1	G5BYC0000010	TRANCE	1
X 1	H0J143500040	OSCILLATOR, 14.318MHz	1
X 2	H0J327200115	OSCILLATOR, 32.768KHz	1
X 4	H0J250500025	OSCILLATOR, 25MHz	1
X 5	H2D800400015	OSCILLATOR, 8MHz	1
<b>AUDIO PCB</b>			
C 900	F1G1H120A542	CAPACITOR, 50V, 12pF	1

C 901	F1G1H150A542	CAPACITOR, 50V, 15pF	1
C 902	F1G1C104A042	CAPACITOR, 16V, 0.1µF	7
C 905			
C 907			
C 909			
C 921			
C 923			
C 926			
C 903	F1J0J106A024	CAPACITOR, 6.3V, 10µF	4
C 914			
C 922			
C 924			
C 904	F1G1H102A496	CAPACITOR, 50V, 1000pF	4
C 908			
C 941			
C 942			
C 906	F1G1E103A062	CAPACITOR, 25V, 0.01µF	3
C 916			
C 918			
C 910	F1G0J224A001	CAPACITOR, 6.3V, 0.22µF	9
C 912			
C 915			
C 917			
C 925			
C 927			
C 928			
C 932			
C 934			
C 913			
C 919			
C 920			
C 933			
C 929	F1G1H1010005	CAPACITOR, 50V, 100pF	2
C 935			
C 930	F1G1H471A496	CAPACITOR, 50V, 470pF	1
C 936	EEFCD0J470ER	CAPACITOR, 6.3V, 47µF	3
C 939			
C 940			
C 937	F1H0J1050022	CAPACITOR, 6.3V, 1µF	1
CN 900	K1MN10BA0070	CONNECTOR	1
CN 901	K1MY40BA0098	CONNECTOR	1
D 900	B0JCMD000014	DIODE	1
IC 900	C1BB00000868	IC, AC97 CODEC	1
IC 901	C0CBCBC00130	IC, REGURATOR	1
IC 902	C1BB00000873	IC, AUDIO AMP	1
IC 903	C0ABBA000093	IC, OP AMP	1
JK 901	K2HC103B0197	JK	2
JK 902			
L 900	J0JDC0000045	INDUCTOR	2
L 901			

L 902 L 903	J0MAB0000174	INDUCTOR	2
Q 900	UNR9211J0L	TRANSISTOR	1
Q 901	XP0421300L	TRANSISTOR	1
R 900 R 901	ERJ2GEJ220X	RESISTOR, 1/16W, 22Ω	2
R 903	ERJ2GEJ101X	RESISTOR, 1/16W, 100Ω	1
R 905	ERJ2GEJ330X	RESISTOR, 1/16W, 33Ω	1
R 909 R 910 R 915	ERJ2GEJ103X	RESISTOR, 1/16W, 10KΩ	3
R 911 R 916 R 925	ERJ2GEJ473X	RESISTOR, 1/16W, 47KΩ	3
R 914 R 939	ERJ2GEJ472X	RESISTOR, 1/16W, 4.7KΩ	2
R 918 R 926 R 932 R 933 R 934 R 936	ERJ2GEJ103X	RESISTOR, 1/16W, 10KΩ	6
R 919 R 920 R 930	ERJ2GEJ273X	RESISTOR, 1/16W, 27KΩ	3
R 921	ERJ2GEJ471X	RESISTOR, 1/16W, 470Ω	1
R 922 R 923	ERJ2GEJ222X	RESISTOR, 1/16W, 2.2KΩ	2
R 924	ERJ2GEJ683X	RESISTOR, 1/16W, 68KΩ	1
R 927 R 931	ERJ2GEJ104X	RESISTOR, 1/16W, 100KΩ	2
R 928 R 929	ERJ2RKF1002X	RESISTOR, 1/16W, 10KΩ	2
R 935	ERJ2RKF223X	RESISTOR, 1/16W, 22KΩ	1
R 937 R 938	ERJ2GEJ102X	RESISTOR, 1/16W, 1KΩ	2
R 940	D1H81034A024	RESISTOR, ARRAY	1
X 900	H0J245500044	OSCILLATOR, 24.576MHZ	1
<b>I/O PCB</b>			
C 880	F1H1H104A748	CAPACITOR, 50V, 0.1μF	1
C 883	F1L1E106A017	CAPACITOR, 25V, 10μF	1
C 884 C 885 C 886 C 887 C 888 C 889 C 890	F1G1H330A542	CAPACITOR, 50V, 33pF	7
C 891	F1G1C104A042	CAPACITOR, 16V, 0.1μF	1
C 892	EZASCE101M	CAPACITOR ARRAY	2

C 893			
CN 880	K1MN24AA0018	CONNECTOR	1
CN 881	K1FA209BA004	CONNECTOR	1
CN 882	K1FB115BA014	CONNECTOR	1
CN 883	DFJS830YA	CONNECTOR	1
D 880	B0JCPD000023	DIODE	1
D 881	MA2J72900L	DIODE	1
JK 880	K2EZ2B000046	JK	1
L 880	J0JKC0000007	INDUCTOR	1
L 881	J0JCC0000186	INDUCTOR	7
L 882			
L 883			
L 884			
L 885			
L 886			
L 887			
PA 880	K5J1BB000001	POLY SW	1
R 881	D1BDR4700001	RESISTOR, 1/8W, 0.47Ω	1
R 882	ERJ2RKF75R0X	RESISTOR, 1/16W, 75Ω	3
R 883			
R 884			
R 885	ERJ2GEJ222X	RESISTOR, 1/16W, 2.2KΩ	2
R 886			
<b>PAD PCB</b>			
C 800	F1G1H681A450	CAPACITOR, 50V, 680pF	2
C 801			
C 802	F1G1E103A062	CAPACITOR, 25V, 0.01μF	1
C 803	F1G1C104A042	CAPACITOR, 16V, 0.1μF	2
C 804			
C 805	F1J0J1060004	CAPACITOR, 6.3V, 10μF	1
CN 800	K1MY04BA0104	CONNECTOR	1
CN 801	K1MN08AA0068	CONNECTOR	1
CN 802	K1MN13AA0018	CONNECTOR	1
IC 800	C0EBH0000457	IC	1
IC 801	C1DB00001417	IC, FLAT PAD CONTROLLER	1
Q 800	B1GKCFJN0004	TRANSISTOR	2
Q 801			
R 800	ERJ2GEJ273X	RESISTOR, 1/16W, 27KΩ	1
R 801	ERJ2GEJ822X	RESISTOR, 1/16W, 8.2KΩ	2
R 802			
R 803	ERJ2GEJ105X	RESISTOR, 1/16W, 1MΩ	1
R 804	ERJ2GEJ103X	RESISTOR, 1/16W, 10KΩ	2
R 805			
RA 800	D1H81034A024	RESISTOR ARRAY	1
SW 800	K0ZZ00000618	SW	2
SW 801			
SW 802	EVQPLDA15	SW	2
SW 803			
X 800	H2D400400012	OSCILLATOR, 4MHz	1
<b>SWITCH PCB</b>			

CN 950	K1MN08AA0068	CONNECTOR	1
LD 951	B3ACB0000105	LED	1
R 951	ERJ2GEJ221X	RESISTOR, 1/16W, 220Ω	1
SW 950	EVQPLDA15	SW	6
SW 951			
SW 952			
SW 953			
SW 954			
SW 955			
<b>LED PCB</b>			
CN 841	K1MN10AA0058	CONNECTOR	1
LD 840	B3AGB0000040	LED	1
LD 841	B3ABB0000210	LED	5
LD 842			
LD 843			
LD 844			
LD 845			
LD 846	B3ADB0000065	LED	1
<b>PORT PCB</b>			
C 851	F1J1A1050021	CAPACITOR, 10V, 1μF	3
C 852			
C 854			
C 855	J0MAB0000146	INDUCTOR	3
C 856			
C 857			
CA 851	J0HABC000004	CAPACITOR ARRAY	6
CA 852			
CA 854			
CA 857			
CA 858			
CA 859			
CN 850	K1KBA0A00102	CONNECTOR	1
CN 851	K1KAA0AA0244	CONNECTOR	1
L 850	J0MAB0000116	INDUCTOR	1
L 852	DDB5Z031J-L	INDUCTOR	2
L 853			
<b>TS PCB</b>			
C 900	F1G1C104A042	CAPACITOR, 16V, 0.1μF	4
C 907			
C 908			
C 909			
C 901	F1G1E472A062	CAPACITOR, 25V, 4700pF	3
C 905			
C 913			
C 902	F1G1E103A062	CAPACITOR, 25V, 0.01μF	1
C 903	F1G1H681A450	CAPACITOR, 50V, 680pF	2
C 906			
C 910	F1G1H560A451	CAPACITOR, 50V, 56pF	2
C 912			
C 911	F1J1A1050021	CAPACITOR, 10V, 1μF	1



CN 900	K1MN04B00073	CONNECTOR	1
CN 901	K1KA07BA0014	CONNECTOR	1
IC 900	C0EBH0000457	IC	1
IC 901	C1DB00001351	IC	1
Q 900	XP0431200L	TRANSISTOR	1
Q 901	UNR9113J0L	TRANSISTOR	1
Q 902	XP0431200L	TRANSISTOR	1
R 900 R 903	ERJ2GEJ102X	RESISTOR, 1/16W, 1K $\Omega$	2
R 901 R 904	ERJ2GEJ822X	RESISTOR, 1/16W, 8.2K $\Omega$	2
R 902	ERJ2GEJ303X	RESISTOR, 1/16W, 30K $\Omega$	1
R 905 R 906	ERJ2GE0R00X	RESISTOR, 1/16W, 0 $\Omega$	2
R 908 R 909	ERJ2GEJ103X	RESISTOR, 1/16W, 10K $\Omega$	2
X 900	H2D100500002	OSCILLATOR, 10MHz	1
<b>SD PCB</b>			
C 891	F1G1H330A451	CAPACITOR, 50V, 33pF	1
CN 890	K1NA09E00076	CONNECTOR	1
CN 891	K1MN12BA0059	CONNECTOR	1
D 890	B3ACB0000020	DIODE	1
Q 890	UNR9113J0L	TRANSISTOR	1
R 890	ERJ6GEYJ101V	RESISTOR, 1/10W, 100 $\Omega$	1
R 891	ERJ2GE0R00X	RESISTOR, 1/16W, 0 $\Omega$	1
R 892	ERJ2GEJ103X	RESISTOR, 1/16W, 1K $\Omega$	1

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