

Service Manual

Simplified

Notebook Computer

Model No. **CF-30 SERIES**

TOUGHBOOK

This is the Service Manual for the following areas.

E ...for U.K.

G ...for Germany

F ...for France

T ... for Italy

P ... for Spain

S ... for Sweden

L ... for Belgium

2 ... for UK

Model No. CF-30CTQAZ 1 2

1: Operation System

B: Microsoft® Windows® XP Professional

L: Microsoft® Windows® XP Professional MUI

2: Area

E /G /F /T /P /S /L /2: Refer to above area table

⚠ 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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WARNING

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.

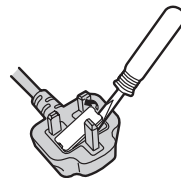
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured RED.

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 screwdriver 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.

LASER SAFETY INFORMATION

For U.S.A.

Class 1 LASER-Product

This product is certified to comply with DHHS Rules 21 CFR Subchapter J.

This product complies with European Standard EN60825 (or IEC Publication 825)

For all areas

This equipment is classified as a class 1 level LASER product and there is no hazardous LASER radiation.

Caution:

- (1) Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- (2) The drive is designed to be incorporated into a computer-based system or unit which has an enclosing cover. It should never be used as a stand alone drive.

Danger:

The serviceman should not remove the cover of drive unit and should not service because the drive unit is a non-serviceable part.

Please check DANGER label on PD-drive unit.

- Unplug the AC power cord to the equipment before opening the top cover of the drive.
When the power switch it on, do not place your eyes close to the front panel door to look into the interior of the unit.

LASER Specification

Class 1 level LASER Product

Wave Length: DVD 658±8 nm

CD 775~815 nm

Laser safety information is appropriate only when drive with laser is installed.

Safety precautions

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer'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.

Lithium Battery

Lithium Battery!

This computer contains a lithium battery to enable the date, time, and other data to be stored. The battery should only be exchanged by authorized service personnel.

Warning! A risk of explosion from incorrect installation or mis-application may possibly occur.

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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1 Specifications

Main Specifications

Model No.	CF-30CTQAZBE/CF-30CTQEZL2	
CPU	Intel® Core™ Duo Processor L2400 (1.66 GHz, 2 MB ¹ L2 cache, 667 MHz FSB)	
Chipset	Intel® 945GM	
Memory ^{**2}	512 MB (4096 MB Max.)	
Video Memory ^{**3}	UMA (128 MB Max.)	
Hard Disk Drive ⁴	80 GB	
Display Method	13.3 XGA type (TFT) with Touchscreen	
	Internal LCD ⁵	65,536/16,777,216 colors (800 × 600 dots/1024 × 768 dots)
	External Display ⁶	65,536/16,777,216 colors (800 × 600 dots/1024 × 768 dots/1280 × 768 dots/1280 × 1024 dots)
Wireless LAN ⁷	Intel PRO /Wireless 3945 ABG (802.11 a + b + g)	
Bluetooth™ ⁸	2.0 + EDR	
LAN	IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T	
Modem	Data: 56 kbps (V.92) FAX: 14.4 kbps	
Sound	WAVE and MIDI playback, Intel® High Definition Audio subsystem support, Monaural speaker	
Security Chip	TPM (TCG V1.2 compliant) ⁹	
Card Slot	PC Card	Type I or Type II x 1 (3.3 V: 400 mA, 5 V: 400 mA)
	ExpressCard	ExpressCard/34 ¹⁰ or ExpressCard/54 x 1
	SD Memory Card ^{**11}	x 1, Data transfer rate = 8 MB per second ^{**12}
	Smart Card ^{**13}	x 1
RAM Module Slot	200-pin, 1.8 V, SO-DIMM, DDR2 SDRAM, PC2-4200 Compliant	
Interface	USB port (4-pin, USB 2.0) x 3, Serial port (Dsub 9-pin male), Modem port (RJ-11), LAN port (RJ-45), External display port (Mini Dsub 15-pin female), Expansion Bus Connector (Dedicated 80-pin female), External Antenna Connector (Dedicated 50 coaxial connector), IEEE 1394a Interface Connector (4-pin x 1), Microphone Jack (Miniature jack, 3.5 DIA, Stereo), Headphone Jack (Miniature jack, 3.5 DIA, Impedance 32 Ω, Output Power 4 mW x 2)	
Keyboard / Pointing Device	87 keys / Touch Pad / Touchscreen (Anti-Reflection, Stylus (included) touch capable)	
Power Supply	AC adaptor or Battery pack	
AC Adaptor ^{**14}	Input: 100 V to 240 V AC, 50 Hz/60 Hz, Output: 15.6 V DC, 5.0 A	
Battery Pack	Li-ion 10.65 V, 8.55 Ah	
	Operating Time ^{**15}	Approx. 4 hours at set to maximum LCD brightness setting (typ: 1000 cd/m ²) Approx. 5 hours (typ: 500 cd/m ²) to Approx. 8 hours (minimum brightness) ^{**16} (Approx. 7 hours ^{**17})
Charging Time ^{**15}	Power on	Main Battery: Approx. 8.5 hours Main Battery + Second Battery: Approx. 12.5 hours
	Power off	Main Battery: Approx. 5 hours Main Battery + Second Battery: Approx. 8 hours
Clock Battery	Coin type lithium battery 3.0 V	
Power Consumption ^{**18}	Approx. 45 W ^{**19} / Approx. 70 W (Maximum when recharging in the ON state)	
Physical Dimensions (W × H × D) (including the carrying handle)	302 mm × 67.5 - 69.5 mm × 285 mm {11.9" × 2.7 - 2.8" × 11.3"}	
Weight (including the carrying handle)	Approx. 3.8 kg {Approx. 8.4 lb.}	
Operation Environment	Temperature: 5 °C to 35 °C {41 °F to 95 °F} Humidity: 30% to 80% RH (No condensation)	
Storage Environment	Temperature: -20 °C to 60 °C {-4 °F to 140 °F} Humidity: 30% to 90% RH (No condensation)	

Operating System	Microsoft® Windows® XP Professional Service Pack 2 with Advanced Security Technologies (NTFS File System)
Utility Programs	DMI Viewer, Microsoft® Windows® Media Player 10, Adobe Reader, PC Information Viewer, SD Utility, Icon Enlarger, Loupe Utility, Intel® Matrix Storage Manager, Intel® PROSet/Wireless Software ⁷ , Bluetooth™ Stack for Windows® by TOSHIBA ⁸ , Wireless Switch Utility, Hotkey Settings, Battery Recalibration Utility, Panasonic Hand Writing, InNeon TPM Professional Package ²⁰ , Recover Pro™ 6 ²⁰
	Setup Utility, Hard Disk Data Erase Utility ²¹ , PC-Diagnostic Utility

Wireless LAN <Only for model with wireless LAN>

Intel PRO / Wireless 3945 ABG (802.11 a + b + g)	
Data Transfer Rates ²²	IEEE802.11a: 54/48/36/24/18/12/9/6 Mbps (automatically switched) IEEE802.11b: 11/5.5/2/1 Mbps (automatically switched) IEEE802.11g: 54/48/36/24/18/12/9/6 Mbps (automatically switched)
Standards Supported	IEEE802.11a/IEEE802.11b/IEEE802.11g
Transmission method	OFDM system, DSSS system
Wireless Channels Used	IEEE802.11a: Channels 36/40/44/48/52/56/60/64/149/153/157/161/165 IEEE802.11b/IEEE802.11g: Channels 1 to 11
RF Frequency Band	IEEE802.11a: 5.18-5.32 GHz, 5.745-5.825 GHz IEEE802.11b/IEEE802.11g: 2.412-2.462 GHz

Bluetooth™ <Only for model with Bluetooth>

Bluetooth Version	2.0 + EDR
Transmission method	FHSS system
Wireless Channels Used	Channels 1 to 79
RF Frequency Band	2.402-2.48 GHz
Power Class	Class1

¹¹ 1MB = 1,048,576 bytes

²² You can physically expand the memory upto 4 GB, but the total amount of usable memory available will be less depending on the actual system configuration.

³ A segment of the main memory is allotted automatically depending on the computer's operating status. The size of the Video Memory cannot be set by the user.

⁴ 1GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB.

⁵ A 16,777,216 color display is achieved by using the dithering function.

⁶ Maximum resolution depends on the specifications of the external display.

⁷ Only for model with wireless LAN

⁸ Only for model with Bluetooth

⁹ For information on TPM, click [start] - [Run] and input "c:\util\drivers\tpm\README.pdf", and refer to the Installation Manual of "Trusted Platform Module (TPM)".

¹⁰ When using ExpressCard/34, the card slot cover cannot be closed.

¹¹ Operation has been tested and confirmed using Panasonic SD Memory Cards with a capacity of up to 2 GB. The transfer rate using the SD Memory Card slot on this computer is 8 MB per second. (This is a theoretical value, and differs from actual speeds.)

The transfer rate is 8 MB per second even if you use an SD Memory Card that supports high-speed transfer rates.

Operation on other SD equipment is not guaranteed.

This computer is not compatible with MultiMediaCards or SDHC Memory Cards. Do not insert these kinds of cards.

¹² Theoretical value and not the actual speed. The transfer rate does not become higher even if you use a card that supports the higher transfer rate.

¹³ Only for model with Smart Card slot

¹⁴ The AC adaptor is compatible with power sources up to 240 V AC adaptor. The computer is supplied with a 125 V AC compatible AC cord. ^{20-M-2-1}

¹⁵ Varies depending on the usage conditions.

¹⁶ Measured using BatteryMark™ Version 4.0.1

¹⁷ Measured using MobileMark™ 2005 (LCD brightness: 60 cd/m²)

¹⁸ Approx. 0.9 W when the battery pack is fully charged (or not being charged) and the computer is OFF.

Approx. 1.5 W when the Wake up from LAN has been enabled.

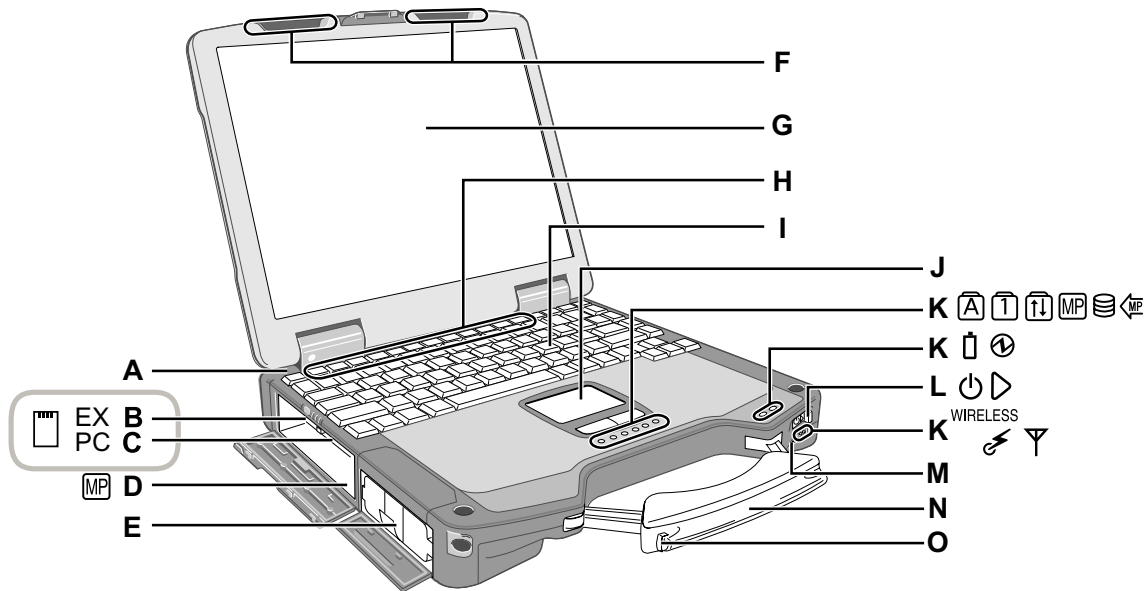
¹⁹ Rated power consumption ^{23-E-1}

²⁰ You need to install to use the feature.

²¹ The Product Recovery DVD-ROM is required.

²² These are speeds specified in IEEE802.11a+b+g standards. Actual speeds may differ.

2 Names and Functions of Part



A: Bluetooth Antenna

<Only for model with Bluetooth>

➔ *Reference Manual* "Bluetooth"

B: ExpressCard Slot

➔ *Reference Manual* "PC Card / ExpressCard"

C: PC Card Slot

➔ *Reference Manual* "PC Card / ExpressCard"

D: Multimedia Pocket

➔ *Reference Manual* "Multimedia Pocket"

E: Battery Pack

F: Wireless LAN Antenna

<Only for model with wireless LAN>

➔ *Reference Manual* "Wireless LAN"

G: LCD

<Only for model with touchscreen>

➔ *Reference Manual* "Touchscreen"

H: Function Key

➔ *Reference Manual* "Key Combinations"

I: Keyboard

J: Touch Pad

K: LED Indicator

: Caps lock

: Numeric key (NumLk)

: Scroll lock (ScrLk)

: Multimedia pocket device status or the second battery status

➔ *Reference Manual* "Multimedia Pocket"
"Battery Power"

: Hard disk drive status

: Power status of the multimedia pocket

: Battery status

➔ *Reference Manual* "Battery Power"

: Power status

(Off: Power off/Hibernation, Green: Power on, Blinking green: Standby)

: Wireless ready

This indicator lights when Wireless LAN, Bluetooth, and/or Wireless WAN are connected and ready. It does not necessarily indicate the On/Off condition of the wireless connection.

➔ *Reference Manual* "Wireless LAN" "Bluetooth" "Wireless Switch Utility"

: Wireless WAN status

<Only for model with wireless WAN>

➔ Refer to the instruction manual of the wireless device

L: Power Switch

M: Wireless Switch

➔ *Reference Manual* "Wireless Switch Utility"

N: Carrying Handle

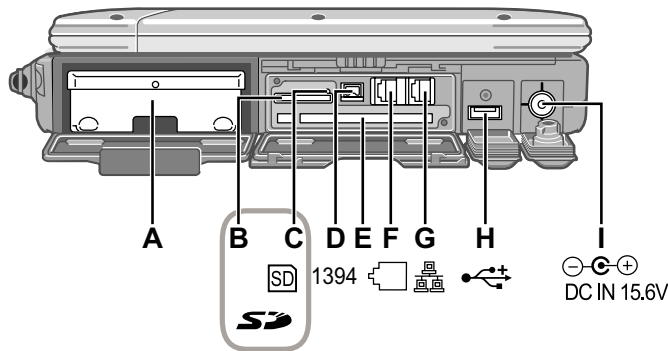
O: Stylus Holder



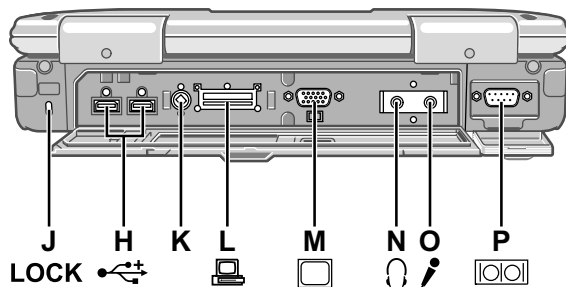
A lithium ion battery that is recyclable powers the product you have purchased. Please call 1-800-8-BATTERY for information on how to recycle this battery.

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.

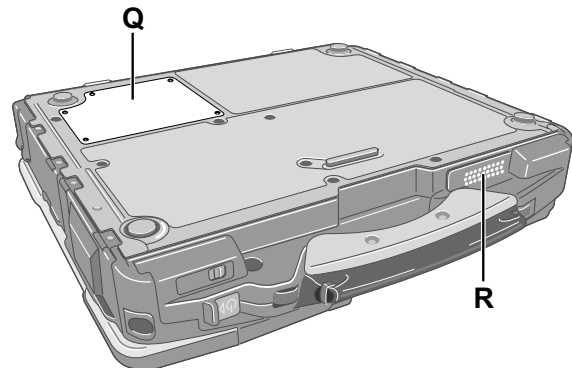
Right side



Rear side



Bottom



A: Hard Disk Drive

→ Reference Manual "Hard Disk Drive"

B: SD Memory Card Slot

→ Reference Manual "SD Memory Card"

C: SD Memory Card Indicator

(Blinking: During access)

→ Reference Manual "SD Memory Card"

D: IEEE 1394 Interface Connector

→ Reference Manual "IEEE 1394 Devices"

E: Smart Card Slot

<Only for model with Smart Card slot>

→ Reference Manual "Smart Card"

F: Modem Port

→ Reference Manual "Modem"

G: LAN Port

→ Reference Manual "LAN"

H: USB Port

→ Reference Manual "USB Devices"

I: DC-IN Jack

J: Security Lock

A Kensington cable can be connected.
For further information, read the manual that comes with the cable.

K: Ext Antenna Connector

L: Expansion Bus Connector

→ Reference Manual "Port Replicator"

M: External Display Port

→ Reference Manual "External Display"

N: Headphone Jack

You can connect headphones or amplified speakers. When they are connected, audio from the internal speakers is not heard.

O: Microphone Jack

A condenser microphone can be used. If other types of microphones are used, audio input may not be possible, or malfunctions may occur as a result.

When recording in stereo using a stereo microphone:

Double-click in the notification area, click [Options] - [Properties], and add a check mark for [Recording], click [OK] - [Options] - [Advanced Controls] - [Advanced], remove a check mark for [Mono Microphone], and then click [Close].

When using a monaural microphone with a 2-terminal plug:

With the settings outlined above, only audio on the left track will be recorded.

When monitoring the microphone audio using headphones, sounds on the left track cannot be heard, regardless of the above settings. This is a result of the computer's specifications, and is not a malfunction.

P: Serial Port

Q: RAM Module Slot

→ Reference Manual "RAM Module"

R: Speaker

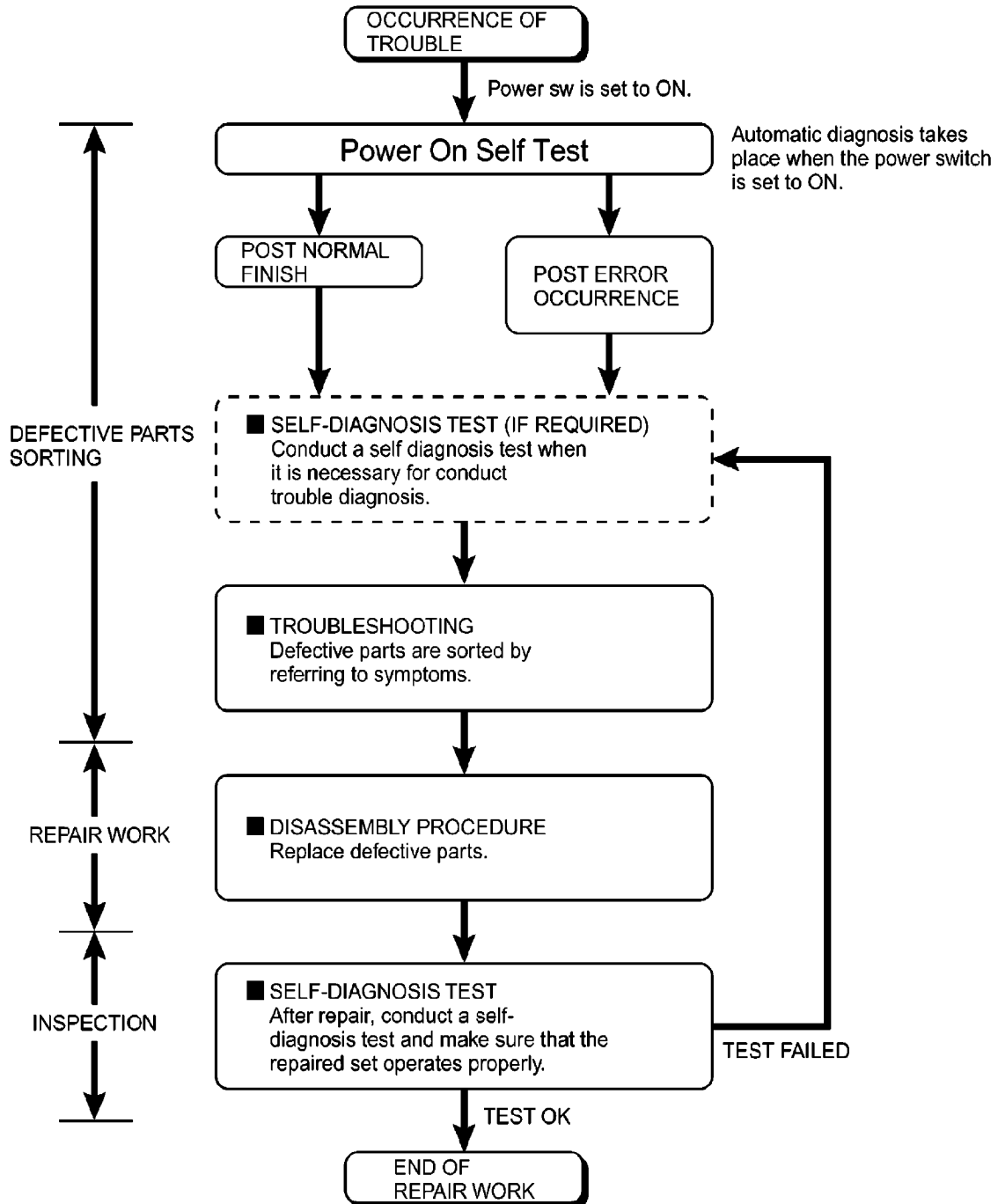
→ Reference Manual "Key Combinations"

4 Diagnosis Procedure

4.1. 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

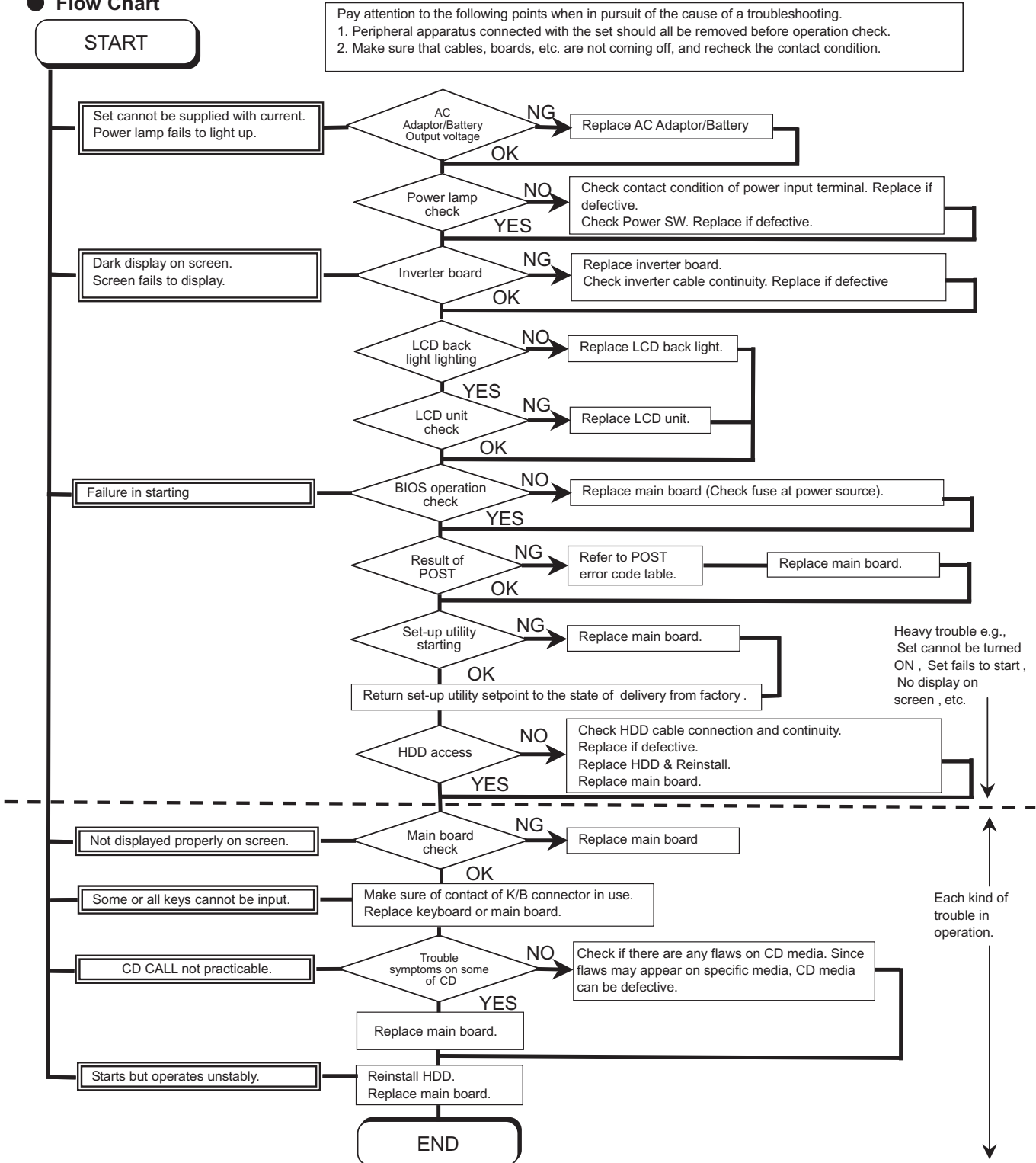


4.2. Troubleshooting

Please take note of the following two points with regard to troubleshooting:

1. Know-how of diagnosis upon occurrence of heavy troubles, e.g. Set cannot be turned ON, Set fails to start, No display on screen, etc.
2. Explanation of each trouble, mainly symptom of trouble in operation.

Flow Chart



5 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.

StartTest begins automatically when power switch is set to ON.

Normal finishAfter 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.

6 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.

7 Self Diagnosis Test

As for the self-diagnosis test(PC-Diagnostic utility) to use this model, a standard test and the enhancing test by the module of the main body building in are possible.

- Notes To skip BIOS password
Use <Ctrl>+<F10> key to skip BIOS password or authentication of fingerprint.
This key is only for entering DIAG mode. Not available to boot the computer.
If customer set "HDD Lock", the DIAG program cannot perform HDD test.
*This key is for service purpose only. Do not disclose this information to unrelated others.

1. Beginning of self-diagnosis test

1-1. Setting of content of setup

1. The power supply of the computer is turned on.
2. " F2 " is pushed on the screen of "Panasonic" while " press <F2 to enter Setup> " is displayed.
3. The setup utility starts and then takes notes of the content of the BIOS setup of present set.
4. " F9 " is pushed, " Yes" is selected on the screen of " Is the default value loaded? ", and " Enter" is pushed.
5. " F10 " is pushed.
6. " Yes" is selected on the screen of the setup confirmation, and " Enter" is pushed.
7. The computer starts automatically.

Attention

- If the device which can be set is set to "Invalidity" by "Advanced" or "Security" menu, becomes an error by "PC-Diagnostic utility".
(It is judged that the device which can be set to "Invalidity" by "Main" menu such as "Flat pad" is normal if the controller operates normally though sets to "Invalidity" by the setup.)
- In the model with built-in DVD of the USB connection, even if DVD is normal, becomes an error if legacy USB is set to "Invalidity"


1-2. When you execute an automatic test

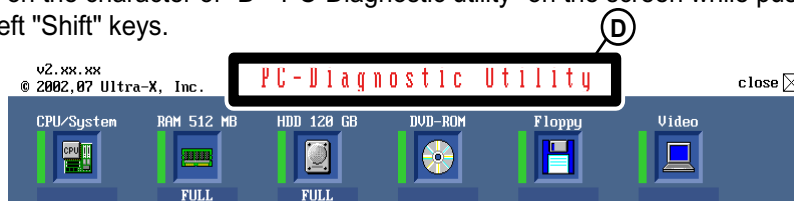
1. "Ctrl" + "F7" is pushed while the "Panasonic" start screen is displayed after the computer is started.
2. The test of all devices begins automatically by "PC-Diagnostic utility"'s starting.


Attention

- It is a test which the customer who bought PC can execute. (As for HDD, the enhancing test is also possible.)
- A flat pad does not work for a while after starting "PC-Diagnostic utility".
- The movement of a flat pad might become abnormal If after RAM begins from the CPU/System test, a flat pad will be operated in about 30 seconds. In that case, restarts pushing "Alt" + "Ctrl" + "Del" key. Or, please start "PC-Diagnostic utility" again after doing the power supply switch in the slide, and turning off the power supply.

1-3. When you execute the enhancing test

1. Please let me discontinue diagnosing clicking  to end an automatic test.
2. Please click on the character of "D" "PC-Diagnostic utility" on the screen while pushing both of right "Shift" and left "Shift" keys.



3. All devices which can select the enhancing test make the setting of the enhancing test possible.
4. The district device is made "FULL" display (enhancing test).
5. The test begins clicking .

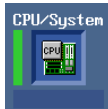
*Please refer to item 4 for the error result of each test and the division of the breakdown part.

2. Operation of PC-Diagnostic Utility

- Only the device which can be inspected on the entire screen is displayed.
- The item does not appear when the device of wireless LAN etc. is not physically connected.
- The movement of the item must use an arrow key or a flat pad.





- As for the device under the diagnosis, blue and yellow are alternately displayed at the left of the icon.
- The diagnosis result of the device greens at the left of the icon when it is normal, and becomes red when abnormal.



- When the test of all devices ends, the test result is displayed under the right of the screen.



- Please click  while diagnosing when being stop on the way by the time the test of all devices ends.
- Please click  when you restart "PC-Diagnostic utility".

*Each device is tested from the beginning, and it is not possible to restart on the way.

2-1. Selection of tested device

-To test only a specific device, "Test" and "Do not test" of each device can be selected.


-The device which can select the enhancing test changes in order of "The standard is tested" and "Do not test" whenever the device icon is clicked.



Start the standard test



Do not test

Please begin testing clicking  if the selection of the tested device ends.

2-2. "PC-Diagnostic utility" End method

When of "Close" on the right of the screen is clicked, the computer reactivates automatically. Or, the power supply switch is done in the slide and the power supply is turned off.

2-3. The content of the setup is returned to the setting of the user

1. Turned on the computer.
2. "F2" is pushed on the screen while "Press<F2>to enter Setup" is displayed of "Panasonic".
3. Push "F10", and on the screen of "Is the change in the setting preserved and do end?"and then "Yes" is selected, and "Enter" is pushed.
4. The computer reactivates automatically.
5. The end option is chosen by the start menu, and the power supply of the computer is turned off.

Standard at test time

All devices other than RAM and HDD ----- about 1 minute

RAM standard test ----- 1 - 2 minutes

HDD standard test ----- 2 - 3 minutes

HDD enhancing test (60GB) ----- about 40 minutes

Ex.The standard when the standard <all device> is tested becomes $1+2+3=6$ minutes.

- There is greatly a difference from RAM test when the memory is increased according to the performance of the memory occasionally.
- Moreover, when the main body of PC under the test is a high temperature, it occasionally takes time.
- There is greatly a difference from HDD according to the performance of the drive occasionally.

7.1. Test Item and Division of trouble

Test item	Standard	Enhancing	Content of standard test	Content of enhancing test	Place with possibility of breakdown
CPU / SYSTEM	○	—	CPU is shifted to protected mode, and "Violation of the paging", "Operation of the violation of a privileged instruction", and DMA, INT, TIMER, and the RTC operation are confirmed.	—	CPU / Main board
RAM	○	—	All memory space is tested in a special memory access pattern based on "R.S.T . technology".	—	Memory / Mainboard
HDD	○	○	The record area frequently accessed with Microsoft Windows XP to test in about two minutes regardless of points of HDD is emphatically tested.	All record area is tested.	HDD / Mainboard / Cable / Connector
MODEM	○	—	It is confirmed not to find abnormality in the AC97 modem controller.	—	MODEM/ Mainboard
Wireless LAN	○	—	It is confirmed not to find abnormality in the Wireless LAN modem controller.	—	Wireless LAN board / Connector / Mainboard
Sound *5	○	—			
USB	○	○ ^{*1}	It is confirmed not to find abnormality in the USB controller.	It is confirmed not to find abnormality in the wiring between the USB controller and the connector by confirming the connection of the USB equipment connected with the USB connector.	Mainboard / Connector
LAN	○	○ ^{*2}	It is confirmed not to find abnormality in the LAN controller.	It is confirmed not to find abnormality in the wiring between the controller and the connector by connecting to HUB with LAN cable.	Mainboard / Connector
PC Card	○	—	It is confirmed not to find abnormality in the CardBus controller.	—	Mainboard
SD	○	—	It is confirmed not to find abnormality in the SD controller.	—	Mainboard
Keyboard	○	○ ^{*3}	It is confirmed not to find abnormality in keyboard controller's keyboard interface.	The key is actually input, and the operation is displayed on the screen.	Mainboard / Keyboard
Touch Pad	○	○ ^{*4}	Whether keyboard controller's mouse interface operates normally is confirmed.	The operation is actually displayed on the screen by operating the touch pad.	Mainboard / Touch Pad
DVD-ROM	○	○ ^{*6}	The drive is normally reset, and it is accessible is confirmed.	It is confirmed to be able to read media normally.	Mainboard / Touch Pad

Test Item	Standard	Enhanced	Content of Standard Test	Content of Extend Test	The place with possibility of breakdown
Touch Screen	○	○	It is confirmed not to find abnormality in the USB connection of Touch Screen. This test cannot find abnormality of Touch Screen.	Perform Touch Screen functionality practically. Operator has to judge PASS/FAIL with test result.	Main board/ Touch Screen
Bluetooth	○		It is confirmed not to find abnormality in the connection of Main board and Bluetooth module.	—	Bluetooth cable
Wireless WAN	○	—	It is confirmed not to find abnormality in the connection of Main board and Wireless WAN module.	—	WWAN cable
Floppy	○	—	It is confirmed not to find abnormality in the legacy FD drive. This test cannot find abnormality of mechanical breakdown. (e.g., Head, Motor)	—	FD Drive/ Main board (Super I/O)/ FDD cable FDD connector
Video	○	—	It is confirmed not to find abnormality in access to VRAM with VESA. The PC which uses main memory as VRAM may fail with main memory failure.	—	Main board (Chipset, Graphic Controller)/ Memory
GPS	○	—	It is confirmed not to find abnormality in the connection of Main board and GPS	—	GPS cable
IEEE1394	○	—	It is confirmed not to find abnormality in the IEEE1394 controller.	—	Main board (IEEE1394 Controller)
Express Card	—	○	—	It is confirmed not to find abnormality in the wiring between Chipset and Express Card.	Main board (Chipset)/ Express Card Connector
Smart Card	○	—	It is confirmed not to find abnormality in the Smart Card controller.	—	Main board (Smart Card Controller)
Serial Port	○	○ *7	It is confirmed not to find abnormality of Super I/O UART function. This test cannot find lack of wiring between Super I/O and Serial Connector.	It is confirmed not to find abnormality in the wiring between Super I/O and Serial Connector. This test cannot find failure of cable characteristic and device problems.	Main board (Super I/O)/ Serial Connector
Parallel Port	○	○ *8	It is confirmed not to find abnormality of Super I/O parallel function. This test cannot find lack of wiring between Super I/O and Parallel Connector.	It is confirmed not to find abnormality in the wiring between Super I/O and Parallel Connector. This test cannot find failure of cable characteristic and device problems.	Main board (Super I/O)/ Parallel Connector

*1 Please connect the USB device with the port (USB connector) which wants to test before the tests.

*2 Please connect LAN port with LAN HUB with LAN cable before the tests.

*3 The operator actually inputs the key, and the operator judges PASS/FAIL of the test.

*4 The operator actually operates the mouse, and the operator judges PASS/FAIL of the test.

*5 It is not abnormal though the sound is emitted from the speaker while testing.

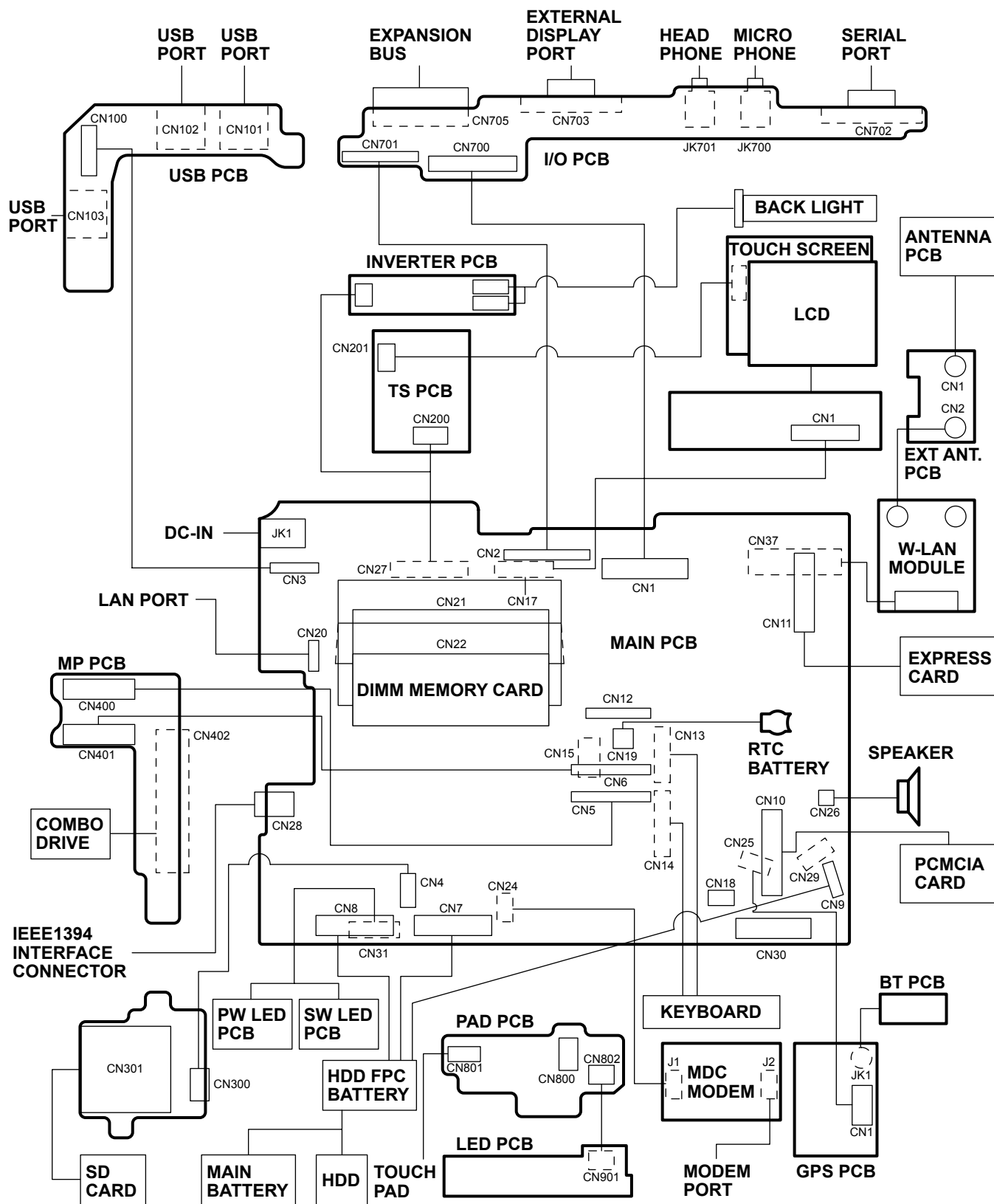
※ When the test result is PASS, trouble is thought by not hearing of the sound under the test from the speaker and the headphone by the wiring of the audio output system.

*6 Please set DVD/CD media in the drive before the tests.

*7 Please set a Special Loop Back Connector Tool at serial connector for Enhanced Test. (This Connector Tool is same as the one used before.)

*8 Please set a Special Loop Back Connector Tool at parallel connector for Enhanced Test. (This Connector Tools is same as the one used before.)

8 Wiring Connection Diagram



9 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.

9.1. Disassembly Instructions

9.1.1. Preparation

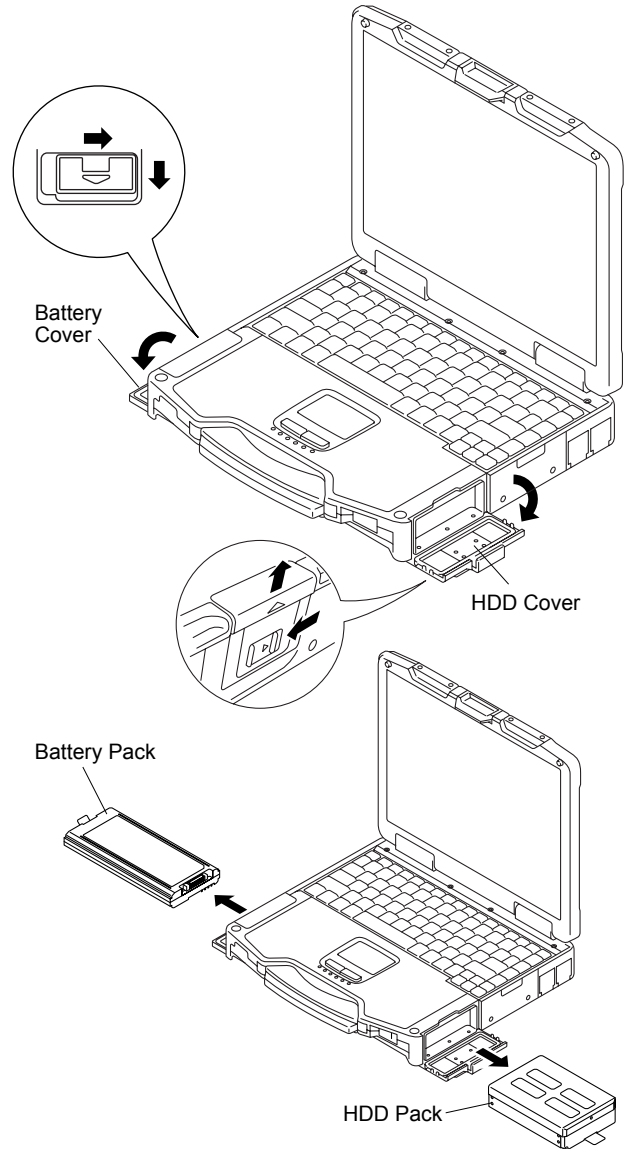
Before disassembling, be sure to make the following preparations.

- Shut down Windows and turn off the power.
- Disconnect the AC adaptor.
- Remove the optional DIMM memory card and PCMCIA card if they are connected.
- Remove other devices if they are connected.

Attention:

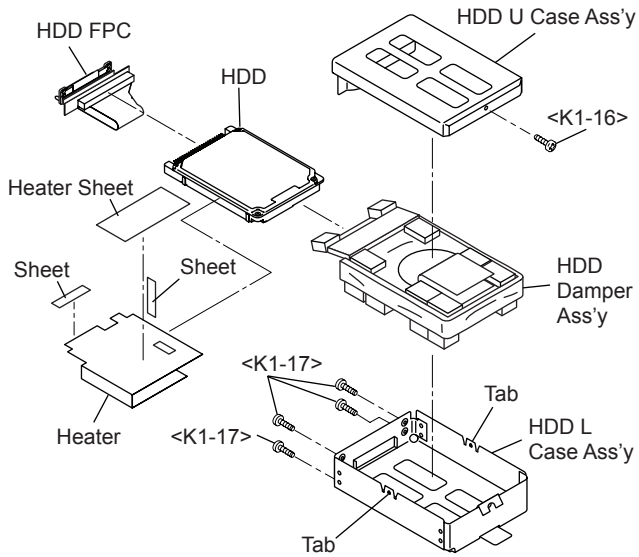
- Please execute writing BIOS ID when you exchange the Main Board.
- Parts (Sheet and rubber) etc. related various the Conductive Cloth and Heat Spreader cannot be recycled. Use new parts.

9.1.2. 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.

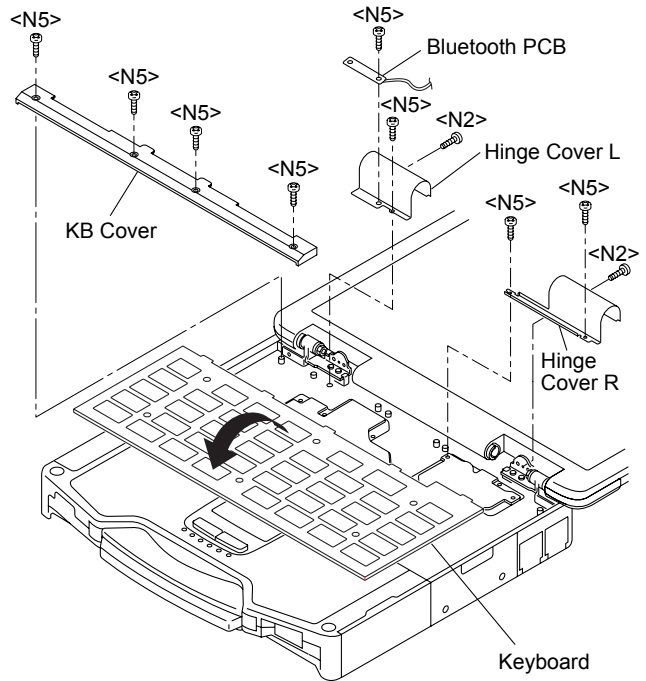
9.1.3. Removing the HDD



1. Remove the Screw. <K1-16>
2. Remove the 4 Screws. <K1-17>
3. Release the 2 Tabs, and remove the HDD U Case Ass'y and the HDD L Case Ass'y.
4. Remove the HDD Damper Ass'y.
5. Remove the 2 Sheets.
6. Remove the Heater and the Heater Sheet.
7. Remove the HDD FPC.

Screws <K1-16>: DFHE5025XA
 Screws <K1-17>: DRQT2+E8FKL

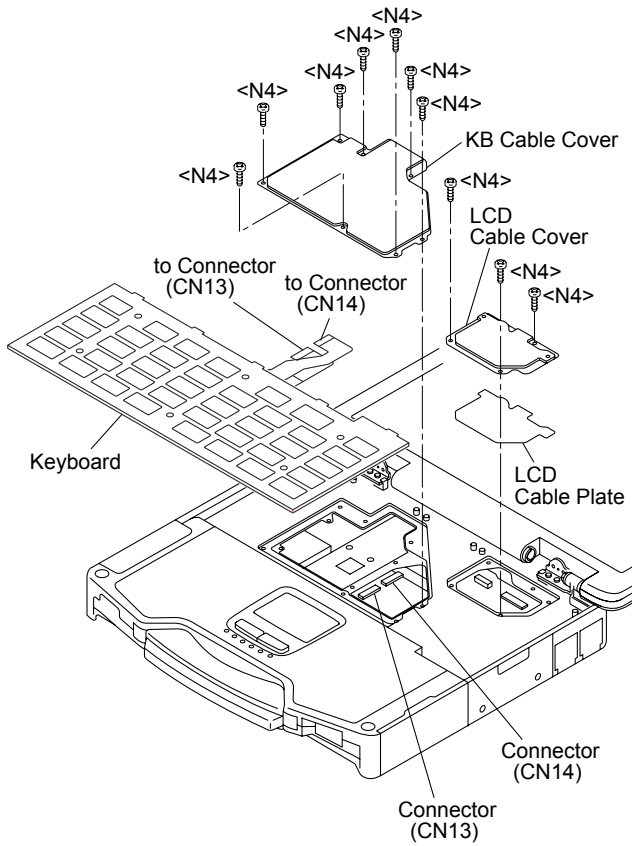
9.1.4. Removing the KB Cover, Hinge Cover L, Hinge Cover R and Keyboard



1. Remove the 4 Screws <N5>, and remove the KB Cover.
2. Remove the 2 Screws <N2> and the 4 Screws <N5>, and remove the Hinge Cover L,R.
3. Remove the Keyboard.

Screws <N2>: DRHM5054XA
 Screws <N5>: DRQT26+D4FKL

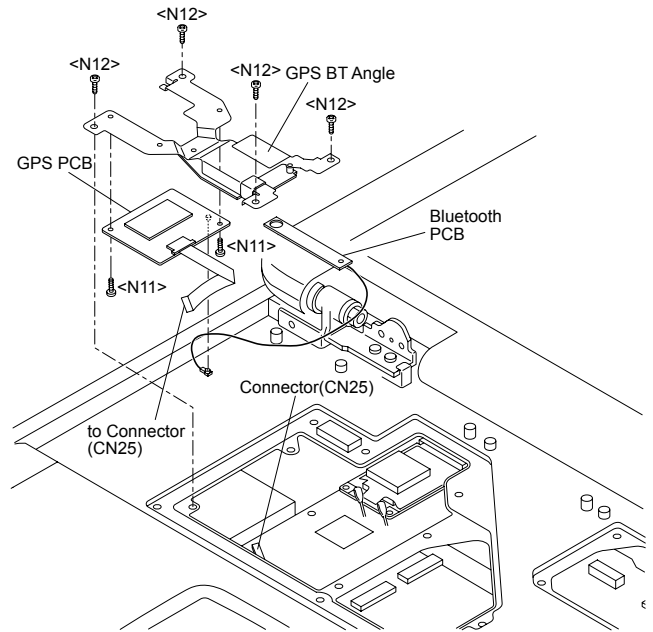
9.1.5. Removing the KB Cable Cover and LCD Cable Cover



1. Remove the 3 Screws <N4>.
2. Remove the LCD Cable Cover.
3. Remove the LCD Cable Plate.
4. Remove the 7 Screws <N4>.
5. Remove the KB Cable Cover.
6. Disconnect the 2 Cable from the 2 Connectors (CN13, CN14).
7. Remove the Keyboard.

Screws <N4>: DRQT26+D3FKL

9.1.6. Removing the GPS PCB and Bluetooth PCB

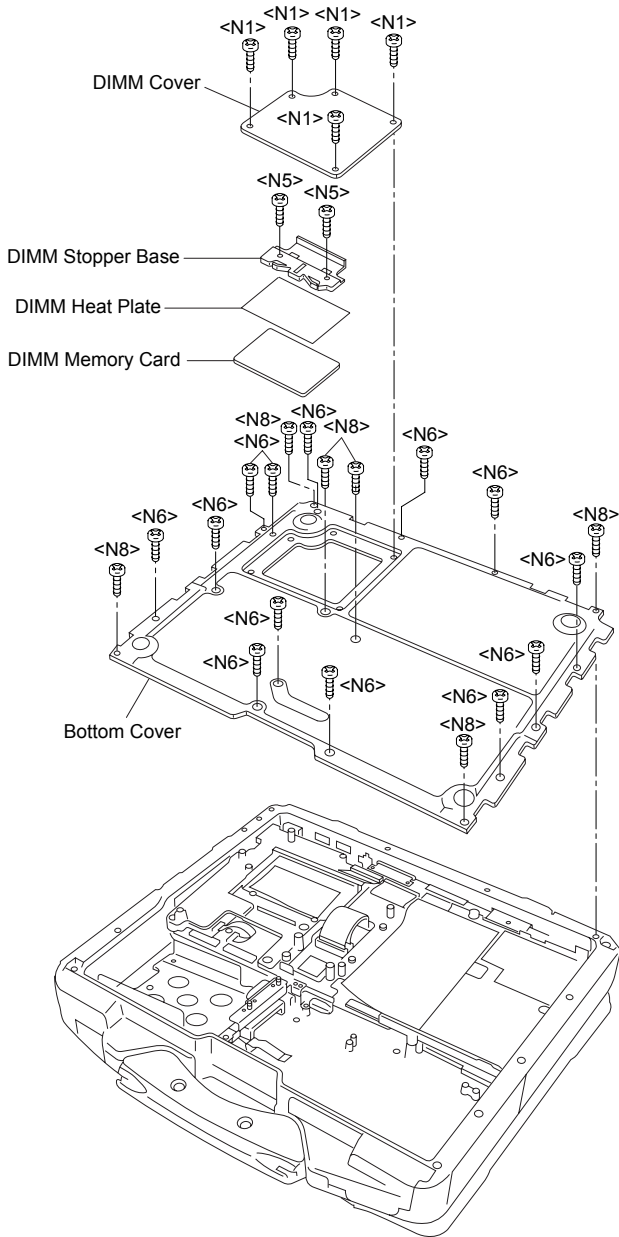


1. Disconnect the Cable from the Connector. (CN25)
2. Remove the 4 Screws. <N12>
3. Remove the 2 Screws. <N11>
4. Remove the Bluetooth PCB, GPS BT Angle and GPS PCB.

Screws <N11>: DFHE5025XA

Screws <N12>: DXQT2+F3FNL

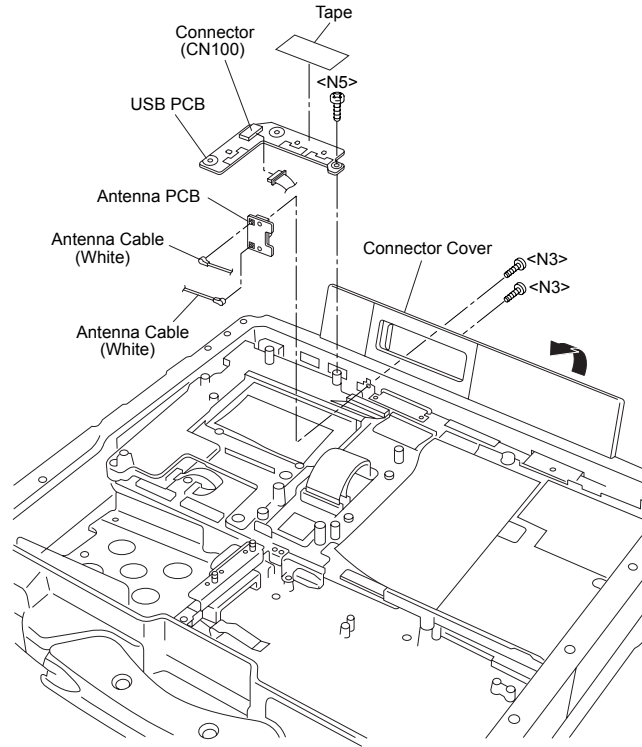
9.1.7. Removing the DIMM Cover and Bottom Cover



1. Remove the 5 Screws. <N1>
2. Remove the DIMM Cover.
3. Remove the 2 Screws. <N5>
4. Remove the DIMM Stopper Base.
5. Remove the DIMM Heat Plate.
6. Remove the DIMM memory card.
7. Remove the 6 Screws. <N8>
8. Remove the 13 Screws. <N6>
9. Remove the Bottom Cover.

Screws <N1>: DRHM0002ZA
 Screws <N5>: DRQT26+D4FKL
 Screws <N6>: DRQT26+E4FKL
 Screws <N8>: DRSB3+8FKL

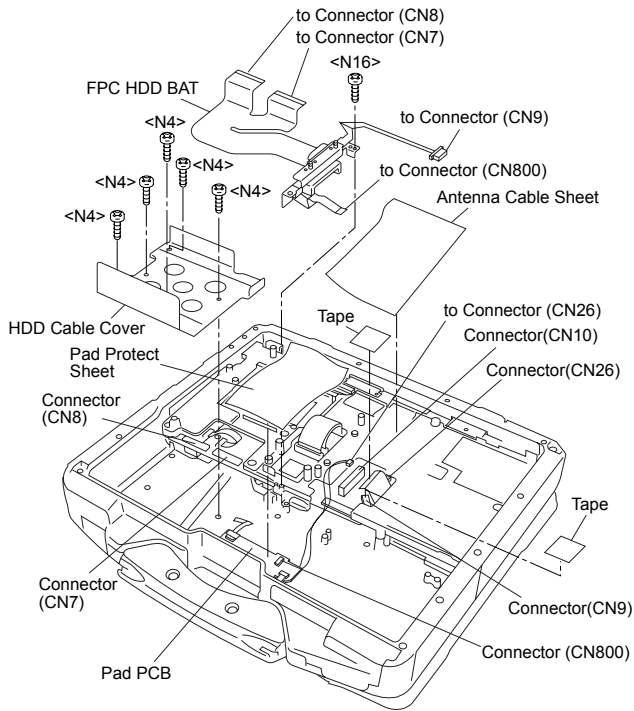
9.1.8. Removing the USB PCB and Antenna PCB



1. Remove the Screw. <N5>
2. Disconnect the Cable from the Connector. (CN100)
3. Remove the Tape.
4. Remove the USB PCB.
5. Open the Connector Cover.
6. Remove the 2 Screws. <N3>
7. Remove the 2 white Cables and remove the Antenna PCB.

Screws <N3>: DRQT2+G6FKL
 Screws <N5>: DRQT26+D4FKL

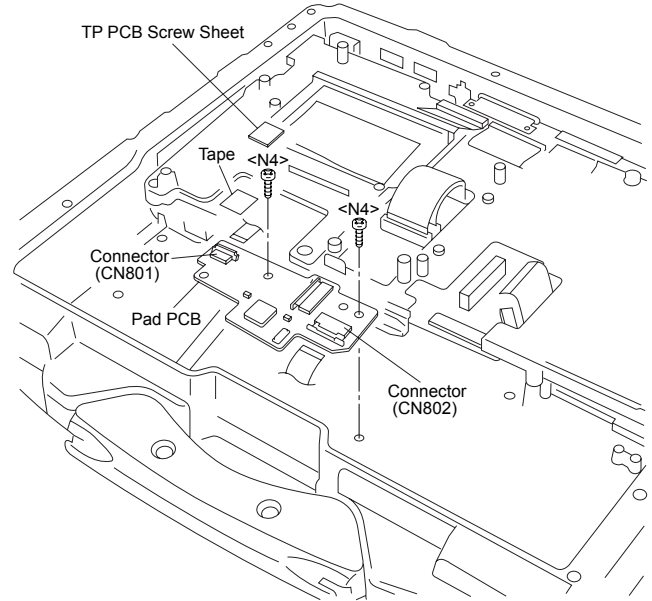
9.1.9. Removing the FPC HDD BAT



1. Remove the 5 Screws. <N4>
2. Remove the HDD Cable Cover.
3. Remove the Antenna Cable Sheet.
4. Remove the 2 Tapes.
5. Disconnect the 2 Cables from the 2 Connectors. (CN10,CN26)
6. Remove the Tape.
7. Disconnect the Cable from the Connector. (CN9)
8. Remove the Pad Protect Sheet.
9. Disconnect the Cable from the Connector. (CN800)
10. Disconnect the 2 Cables from the 2 Connectors. (CN7,CN8)
11. Remove the Screw. <N16>
12. Remove the FPC HDD BATT.

Screws <N4>: DRQT26+D3FKL
 Screws <N16>: DRQT26+E5FKL

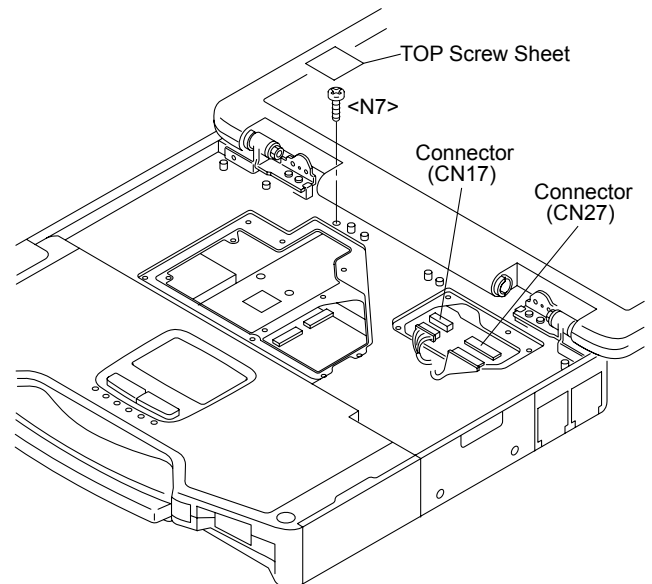
9.1.10. Removing the PAD PCB



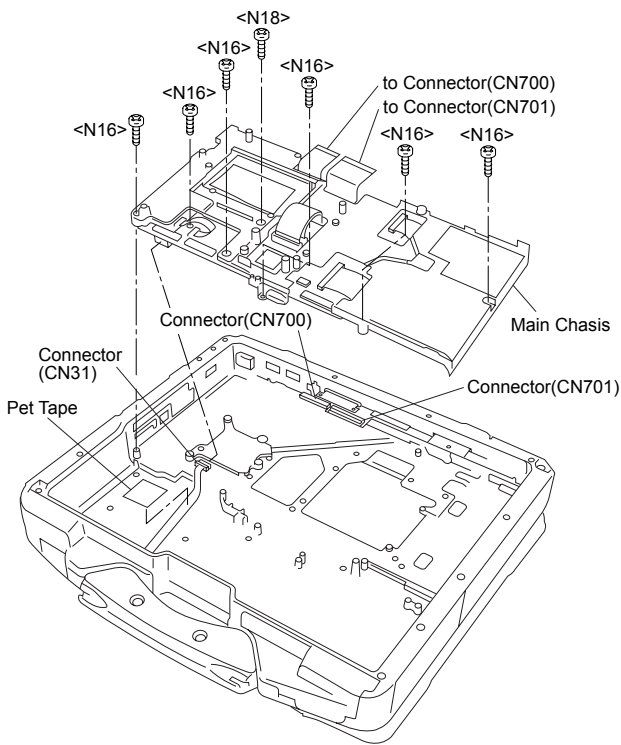
1. Remove the Tape and disconnect the Cable from the Connector. (CN801)
2. Disconnect the Cable from the Connector. (CN802)
3. Remove the TP PCB Screw Sheet.
4. Remove the 2 Screws. <N4>
5. Remove the PAD PCB.

Screws <N4>: DRQT26+D3FKL

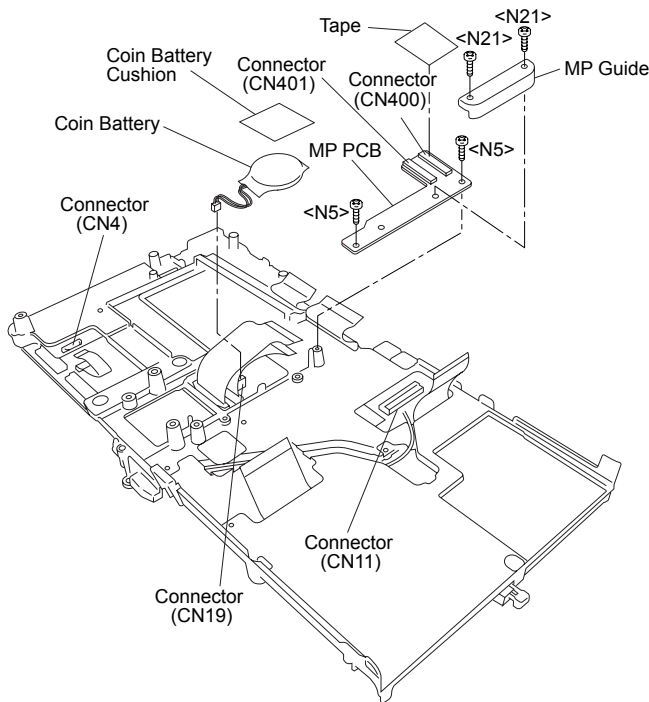
9.1.11. Removing the Main PCB



1. Remove the TOP Screw Sheet.
2. Remove the Screw. <N7>
3. Disconnect the 2 Cables from the 2 Connectors. (CN17,CN27)



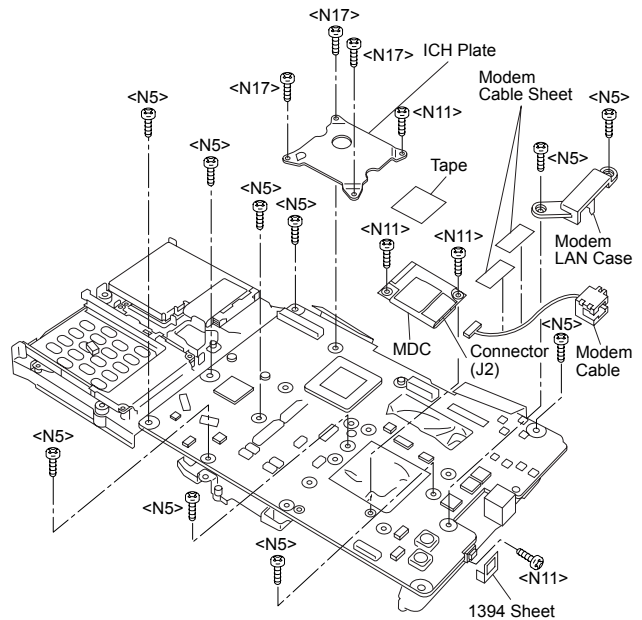
4. Remove the 6 Screws. <N16>
5. Remove the Screw. <N18>
6. Disconnect the 2 Cables from the 2 Connectors. (CN700,CN701)
7. Remove the Pet Tape and disconnect the Cable from the Connector. (CN31)
8. Remove the Main chassis.



9. Remove the Tape.
10. Disconnect the 2 Cables from the 2 Connectors.

(CN400,CN401)

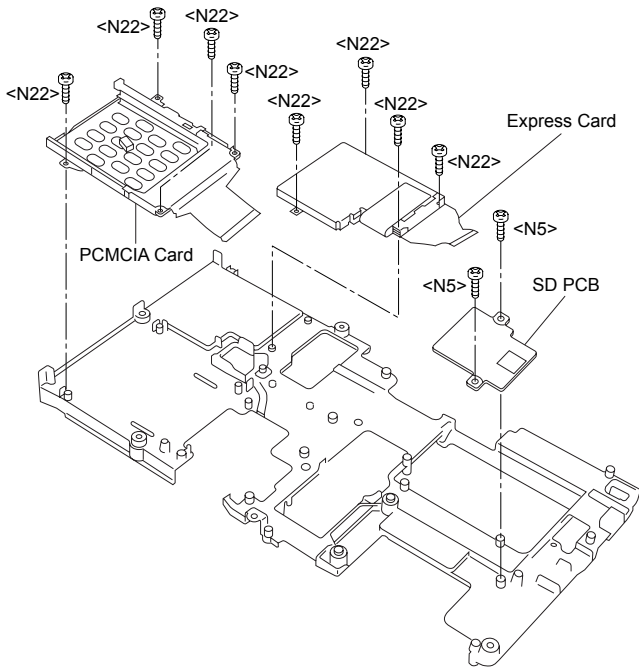
11. Remove the 2 Screws. <N5>
12. Remove the 2 Screws. <N21>
13. Remove the MP Guide.
14. Remove the MP PCB.
15. Remove the Coin Battery Cushion.
16. Disconnect the Cable from the Connector. (CN19)
17. Remove the Coin Battery.
18. Remove the Tape.
19. Disconnect the 2 Cables from the 2 Connectors. (CN4,CN11)



20. Remove the 3 Screws <N17> and the Screw. <N11>
21. Remove the ICH Plate.
22. Remove the 2 Modem Cable Sheets.
23. Remove the 2 Screws. <N5>
24. Remove the Modem LAN Case.
25. Remove the 1394 Sheet.
26. Remove the 2 Screws. <N11>
27. Remove the Tape.
28. Disconnect the Cable from the Connector (J2) and remove the MDC.
29. Remove the Modem Cable.
30. Remove the 7 Screws. <N5>
31. Remove the Screw. <N11>
32. Remove the Main PCB.

Screws <N5>: DRQT26+D4FKL
 Screws <N7>: DRSB26+10HKL
 Screws <N11>: DFHE5025XA
 Screws <N16>: DRQT26+E5FKL
 Screws <N17>: DRQT26+E6FKL
 Screws <N18>: DRSB26+8FKL
 Screws <N21>: DXQT2+E12FNL

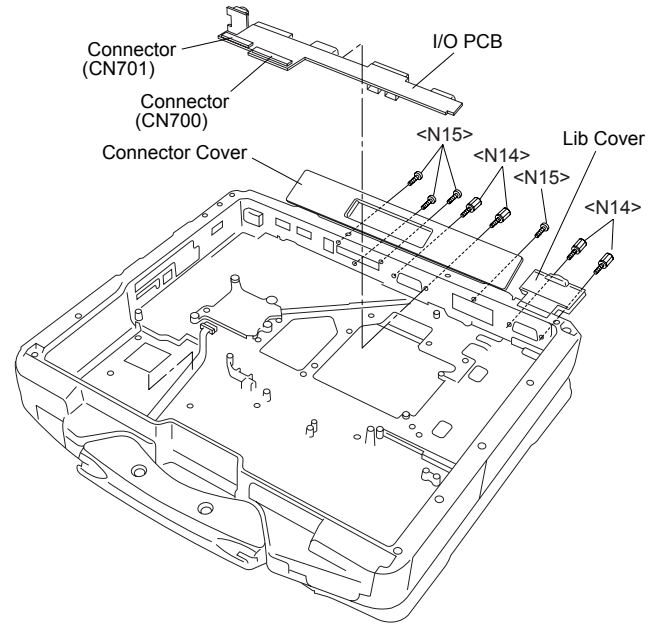
9.1.12. Removing the SD PCB, Express Card and PCMCIA Card



1. Remove the 2 Screws. <N5>
2. Remove the SD PCB.
3. Remove the 4 Screws. <N22>
4. Remove the Express Card.
5. Remove the 4 Screws. <N22>
6. Remove the PCMCIA Card.

Screws <N5>: DRQT26+D4FKL
Screws <N22>: DXQT2+G4FNL

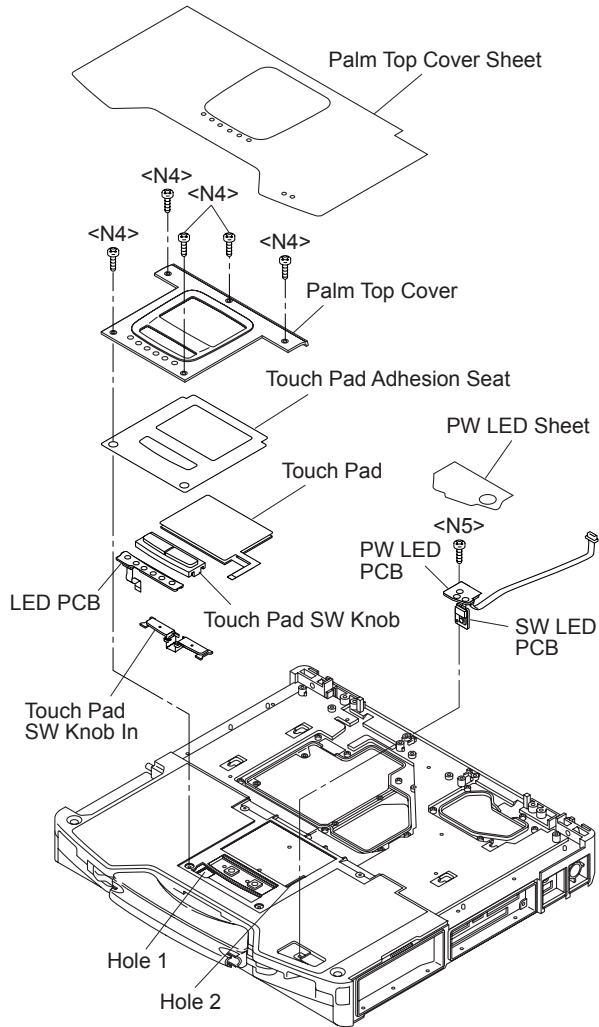
9.1.13. Removing the I/O PCB



1. Open the Connector Cover and Lid Cover.
2. Remove the 4 Screws. <N14>
3. Remove the 4 Screws. <N15>
4. Remove the I/O PCB.

Screws <N14>: DFHE5058ZB
Screws <N15>: DRHM5104ZA

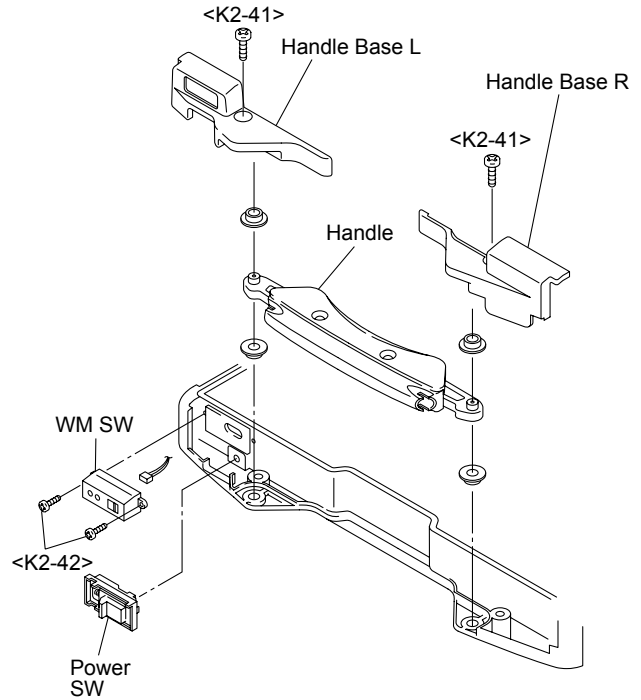
9.1.14. Removing the Palm Top Cover Sheet, Palm Top Cover, Touch Pad Adhesion Seat, Touch Pad, Touch Pad SW Knob, LED PCB and SW LED PCB



1. Remove the Palm Top Cover sheet.
2. Remove the 5 Screws <N4>, and remove the Palm Top Cover.
3. Remove the Touch Pad Adhesion seat.
4. Remove the Touch Pad.
5. Remove the Touch Pad SW knob and Touch Pad SW Knob in.
6. Remove the LED PCB.
7. Remove the PW LED Sheet.
8. Remove the Screw <N5>, and remove the SW LCD PCB.

Screws <N4>: DRQT26+D3FKL
 Screws <N5>: DRQT26+D4FKL

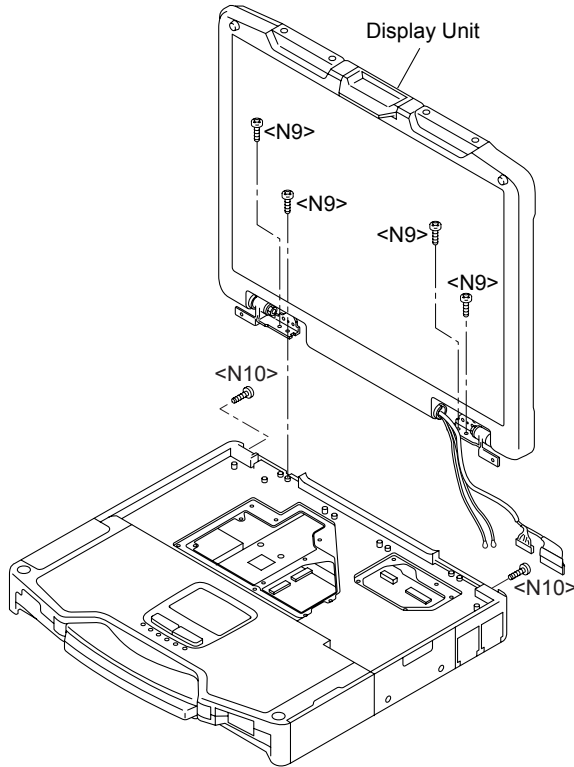
9.1.15. Removing the Handle and Power SW



1. Remove the 2 Screws <K2-41>, and remove the Handle Base L and R.
2. Remove the Handle.
3. Remove the 2 Screws. <K2-42>
4. Remove the WM SW and Power SW.

Screws <K2-41>: DRSN4+6FKLT
 Screws <K2-42>: DXQT26+D4NLT

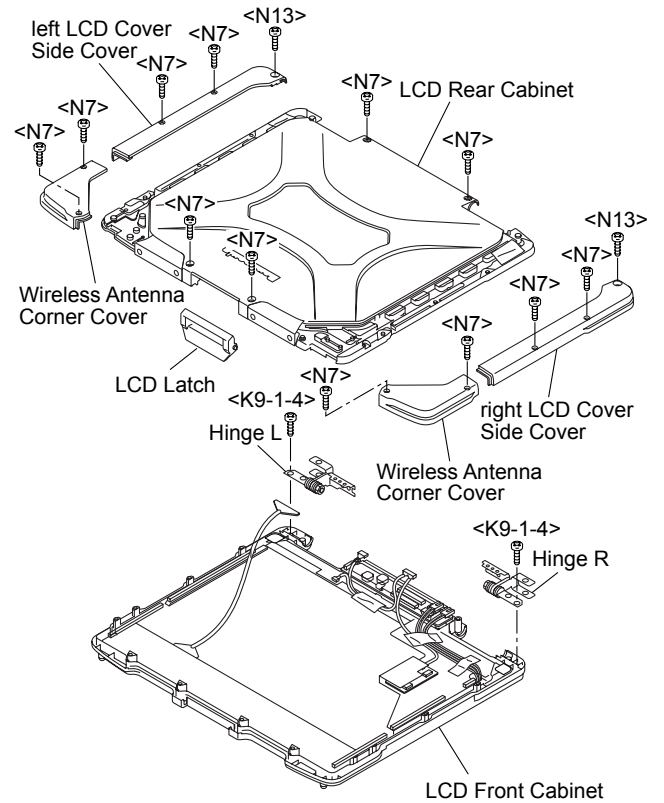
9.1.16. Removing the Display Unit



1. Remove the 2 Screws <N10> and the 4 Screws <N9>.
2. Remove the Display Unit.

Screws <N9>: DRYN4+J10FKL
 Screws <N10>: DXSB4+15FNLB

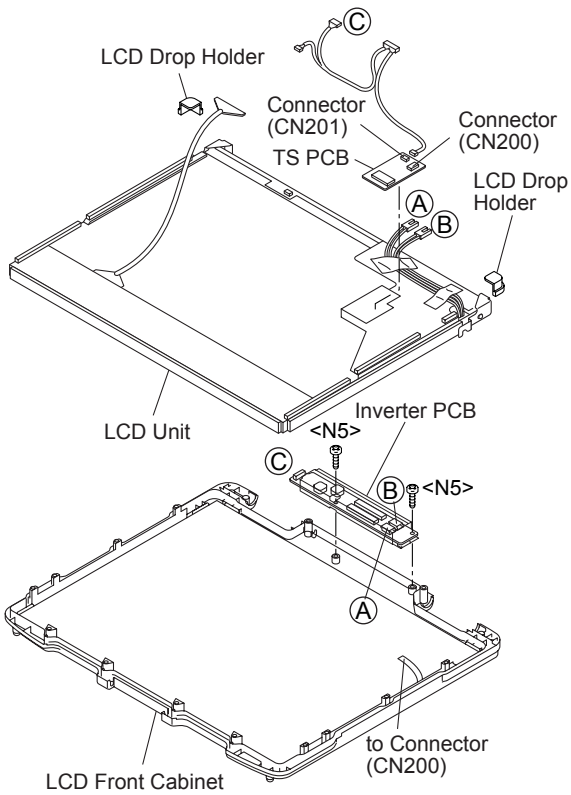
9.1.17. Removing the LCD Rear Cabinet, Hinge L and R



1. Remove the 4 Screws. <N7>
2. Remove the 2 Wireless Antenna Corner Covers.
3. Remove the 4 Screws <N7> and 2 Screws. <N13>
4. Remove the left and right LCD Cover Side Covers.
5. Remove the 4 Screws. <N7>
6. Remove the LCD Rear Cabinet.
7. Remove the LCD Latch.
8. Remove the 2 Screws. <K9-1-4>
9. Remove the Hinge L and R.

Screws <N2>: DRHM5054XA
 Screws <N7>: DRSB26+10HKL
 Screws <N13>: DRSB4+10FKL
 Screws <K9-1-4>: DRYN4+J10KLT

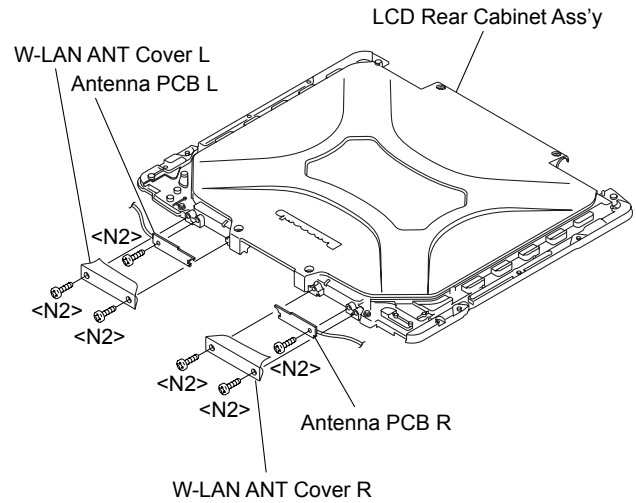
9.1.18. Removing the Inverter PCB, TS PCB and LCD Unit



1. Remove the 2 Screws. <N5>
2. Disconnect the 3 Cables from the 3 Connectors.
3. Remove the Inverter.
4. Disconnect the 2 Cables from the 2 Connectors. (CN200, CN201)
5. Remove the TS PCB.
6. Remove the 2 Drop Holders.
7. Remove the LCD Unit.

Screws <N5>: DRQT26+D4FKL

9.1.19. Removing the Antenna PCB L and R



1. Remove the 4 Screws <N2>.
2. Remove the W-LAN ANT Cover L and R.
3. Remove the 2 Screws. <N2>
4. Remove the Antenna PCB L and R.

Screws <N2>: DRHM5054XA

9.2. Reassembly Instructions

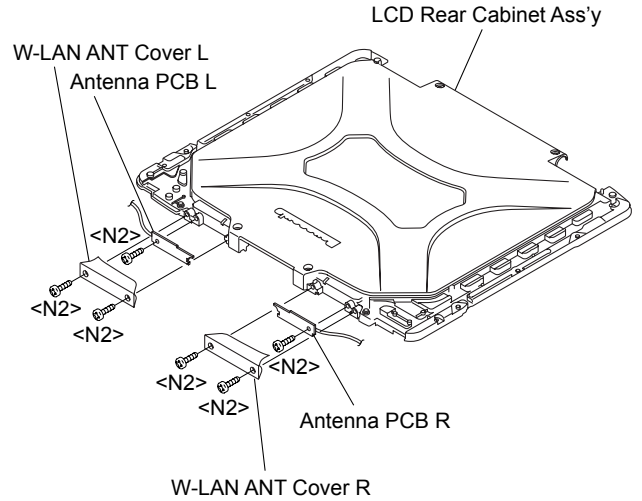
9.2.1. Attention when CF-30 series is repaired

- Please execute writing BIOS ID when you exchange the Main Board.
- Parts (Sheet and rubber) etc. related various the Conductive Cloth and Heat Spreader cannot be recycled. Use new parts.

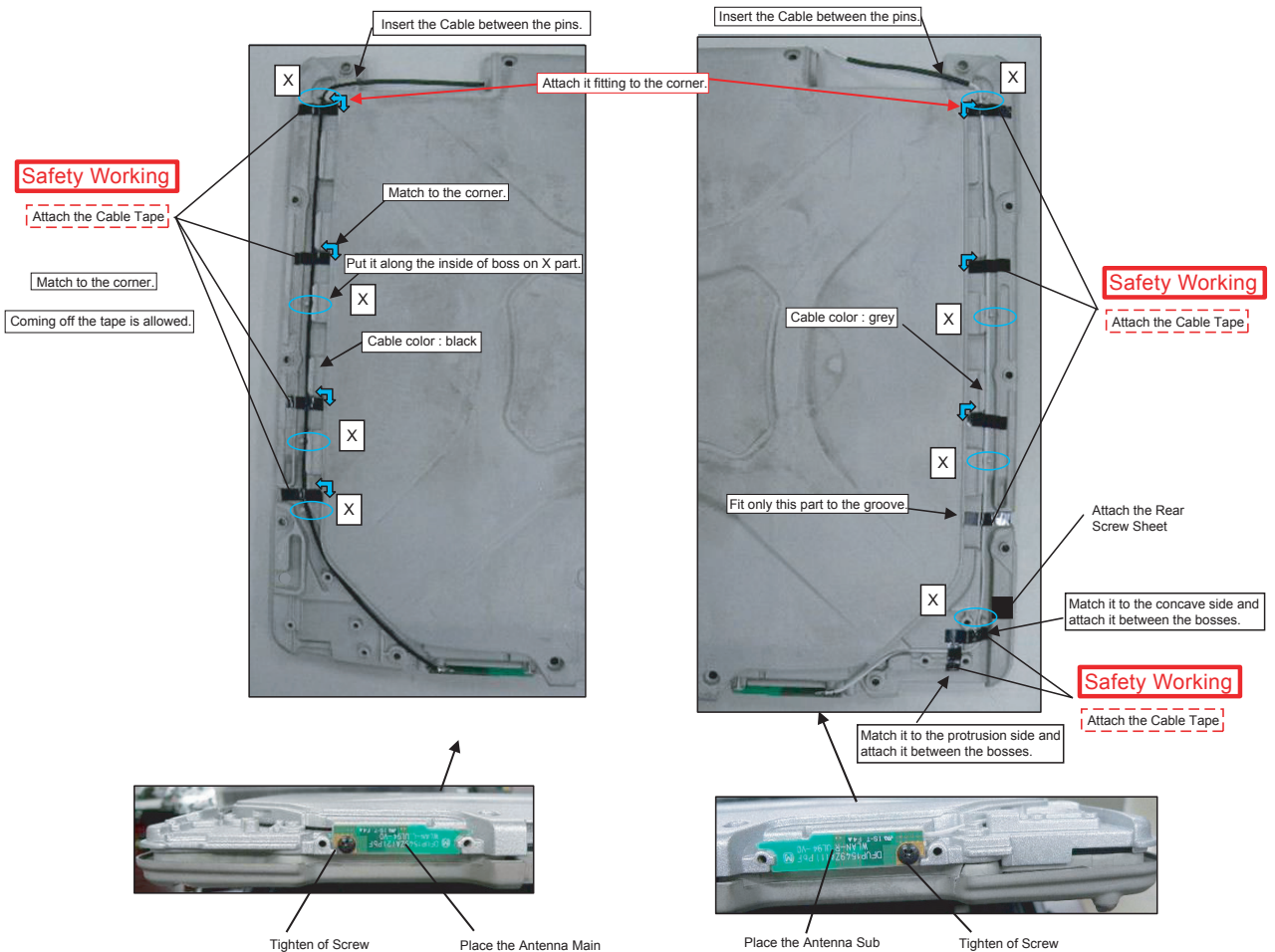
9.2.2. Setting the Antenna PCB L and R

1. Set the Antenna PCB L and R using the 2 Screws. <N2>
2. Fix the W-LAN ANT Cover L and R using the 4 Screws. <N2>

Screws <N2>: DRHM5054XA



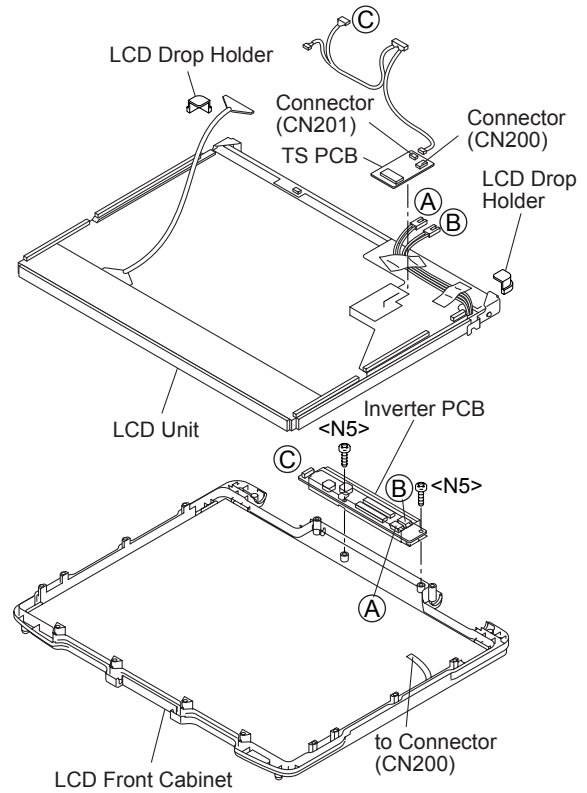
■ Arranging the Antenna L and R Cables



9.2.3. Setting the Inverter PCB, TS PCB and LCD Unit

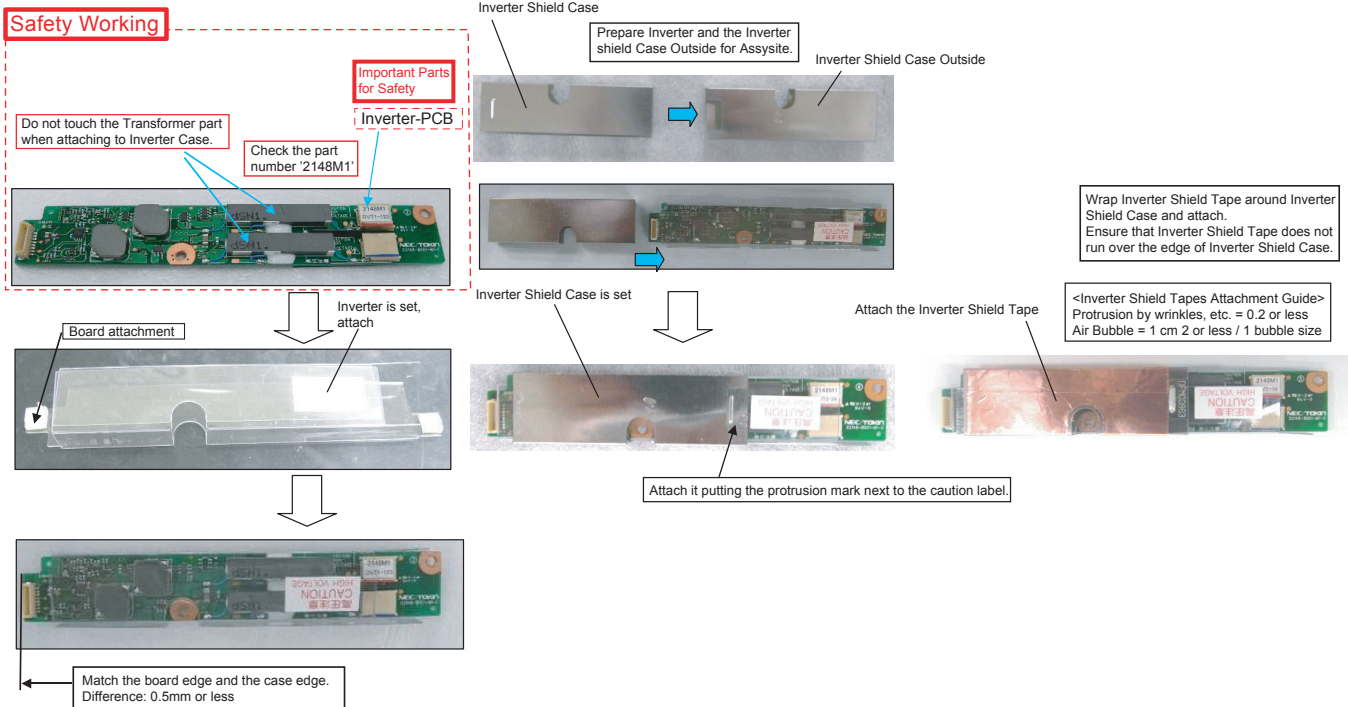
1. Set the LCD Unit to the LCD Front Cabinet in order.
2. Attach the 2 drop holders.
3. Connect the Cable to the Connector. (CN200,CN201)
4. Connect the 3 Cables to the 3 Connectors.
5. Fix the Inverter PCB using the 2 Screws. <N5>

Screws <N5>: DRQT26+D4FKL



■ Preparation of Inverter

- * Notes:
1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf)/cm²
 2. When handling Inverter-PCB, do not bend or add impact.



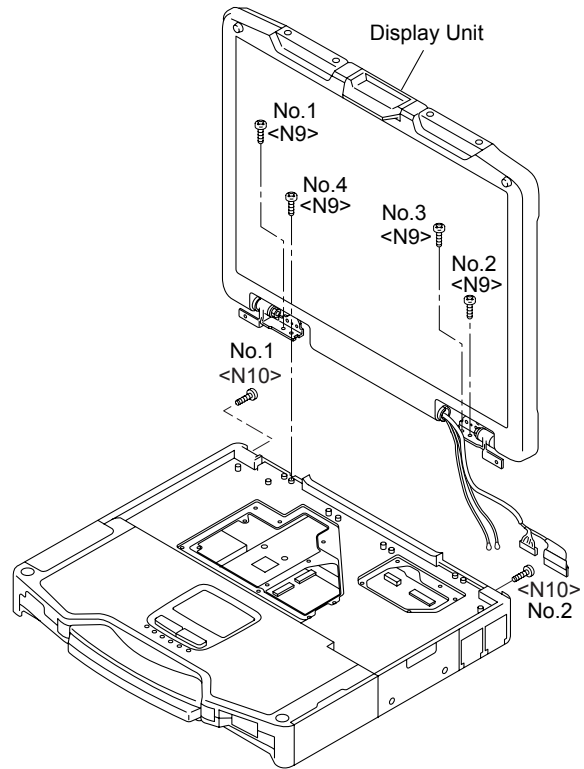
9.2.5. Setting the Display Unit

1. Fix the Display Unit using the 4 Screws. <N9> No1 to No4
2. Fix the Display Unit using the 2 Screws. <N10> No1, No2

Note:

- Tighten the Screws in the numbered order (No1 to No2).
- Tighten the Screws in the numbered order (No1 to No4).

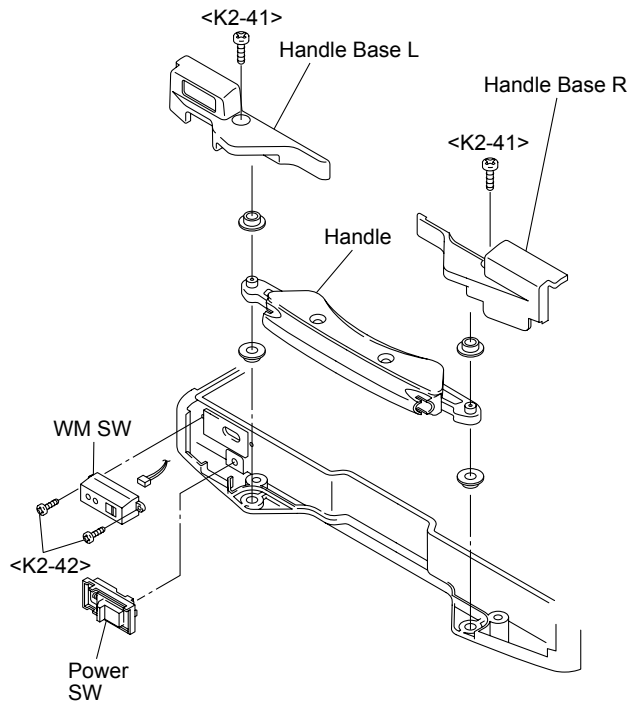
Screws <N9>: DRYN4+J10FKL
Screws <N10>: DXSB4+15FNLB



9.2.6. Setting the Handle and Power SW

1. Set the WM SW using the 2 Screws. <K2-42>
2. Set the Power SW.
3. Set the Handle.
4. Fix the Handle Base L and R using the 2 Screws. <K2-41>

Screws <K2-41>: DRSN4+6FKLT
Screws <K2-42>: DXQT26+D4NLT



9.2.7. Setting the Palm Top Cover Sheet, Palm Top Cover, Touch Pad Adhesion Seat, Touch Pad SW Knob, LED PCB And SW LED PCB

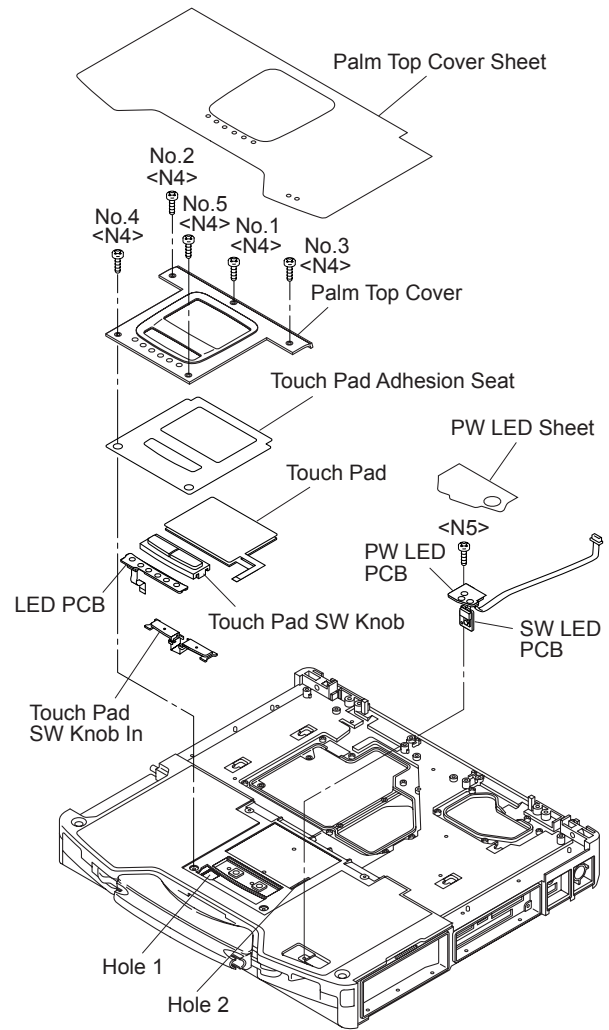
1. Set the SW LED PCB.
2. Attach the Power LED Packing Sheet to the LED Spacer Sheet.
3. Attach the LEDX6 Spacer Sheet on the SW LED PCB.
4. Fix the SW LED PCB using the Screw. <N5>
5. Attach the PW LED Sheet.
6. Pass the Cable of LED PCB through the hole 1 on the Top Cabinet, then set the LED PCB.
7. Attach the LES Spacer Sheet on the LED PCB.
8. Set the touch Pad SW Knob In and Touch Pad SW Knob
9. Attach the TP Bottom Tape to the Touch Pad.
10. Pass the Cables of the Touch Pad through the hole 2 on the Top Cabinet, set the touch Pad.
11. Attach the Touch Pad Adhesion Seat.
12. Fix the Palm Top Cover using the 5 Screws. <N4> No1 to No5
13. Attach the Palm Top Cover Sheet.

Note:

Tighten the Screws in the numbered order (No1 to No5).

Screws <N4>: DRQT26+D3FKL

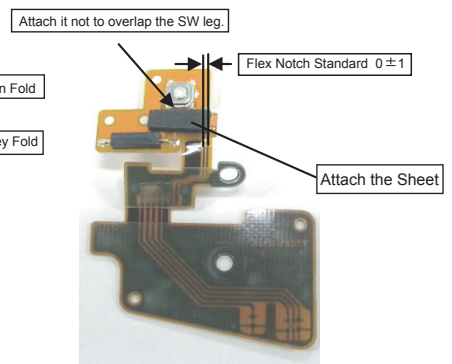
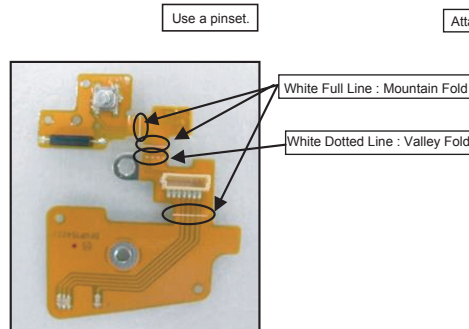
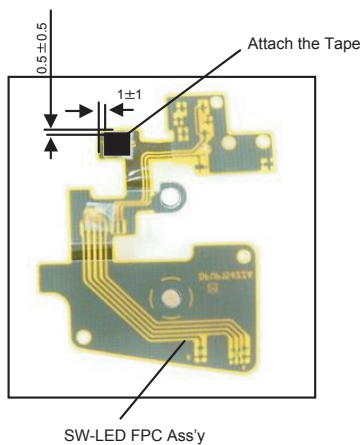
Screws <N5>: DRQT26+D4FKL



■ Preparation of SW LED FPC

* Notes:

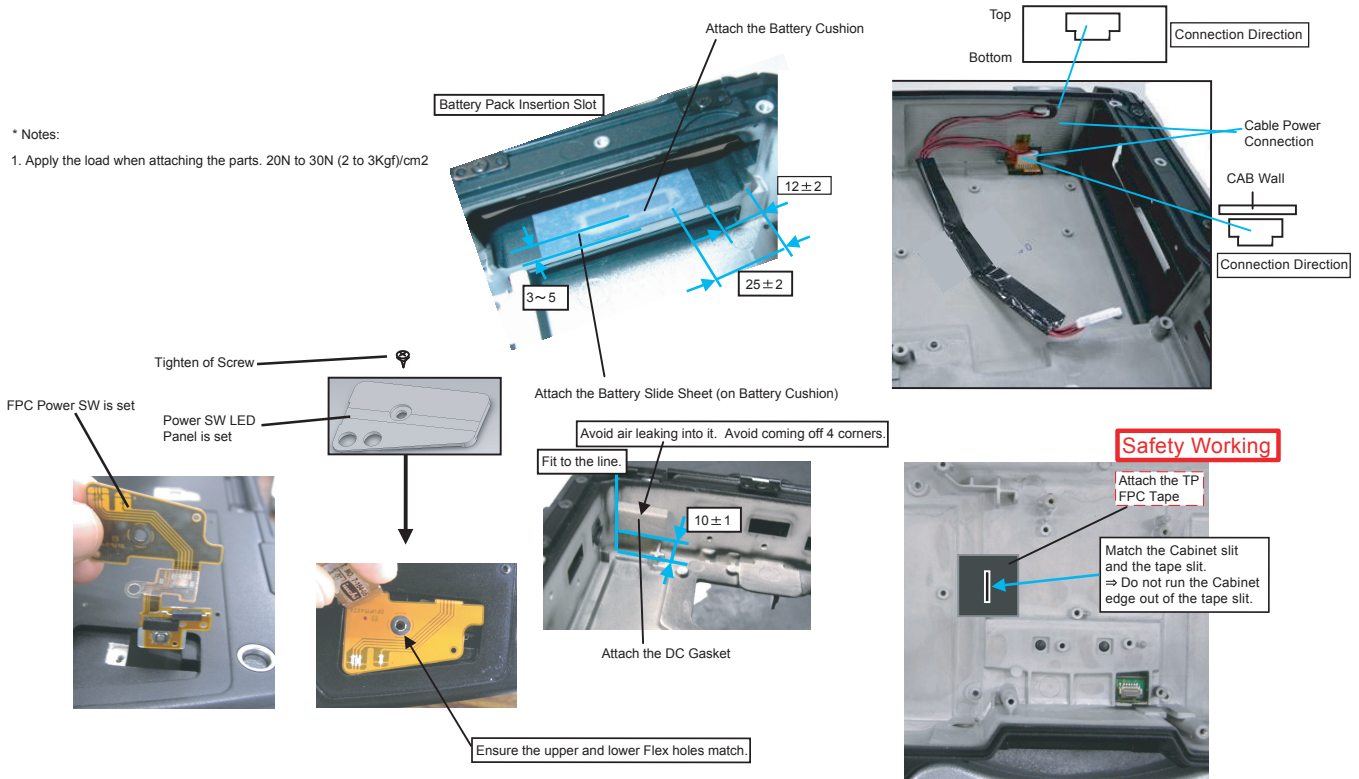
1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf)/cm²



■ Assembly of Power SW

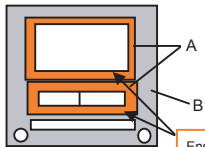
* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf)/cm²

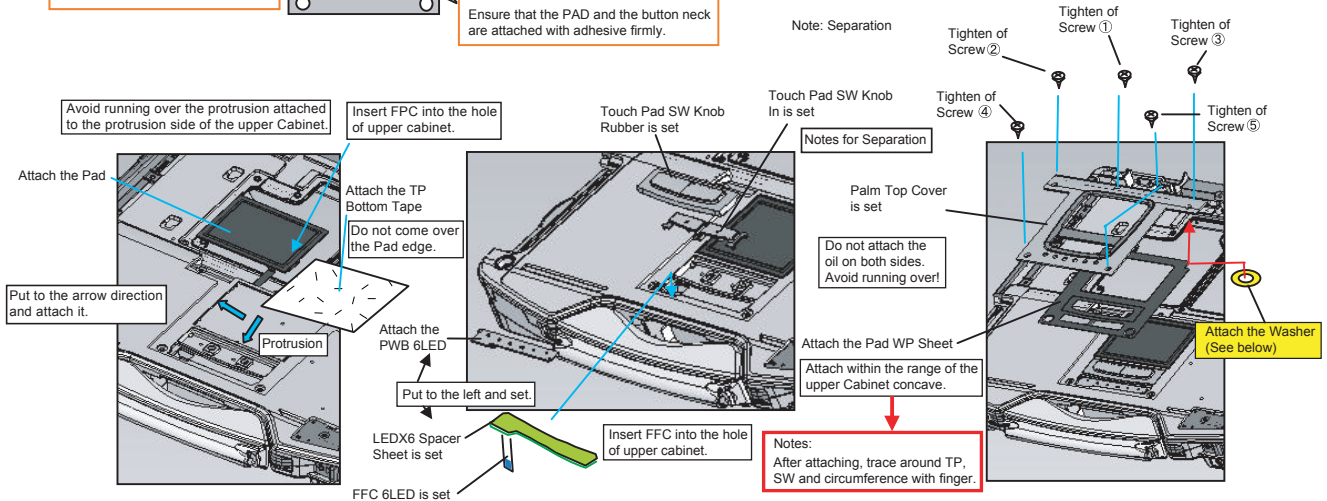


■ Assembly of Palm Top Cover

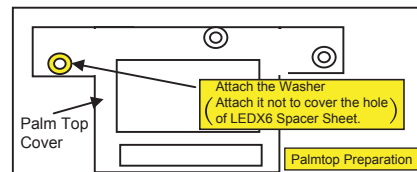
Using the pressure jig. Ensure the loads are applied equally. (Make sure the adhesive materials are attached closely on the whole side.)
Process the speaker lead wire not to put inside when applying the load.



Order of fixing
Screw ①→Screw ②→Screw ③
→Screw ④→Screw ⑤

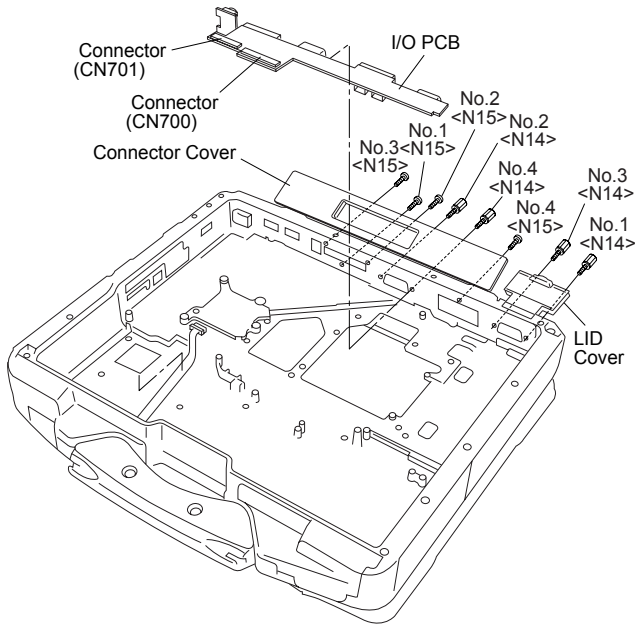


1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf)/cm²



9.2.8. Setting the I/O PCB

1. Open the Connector Cover and Lid Cover.
2. Fix the I/O PCB using the 4 Screws. <N15> No1 to No4
3. Fix the I/O PCB using the 4 Screws. <N14> No1 to No4



Note:

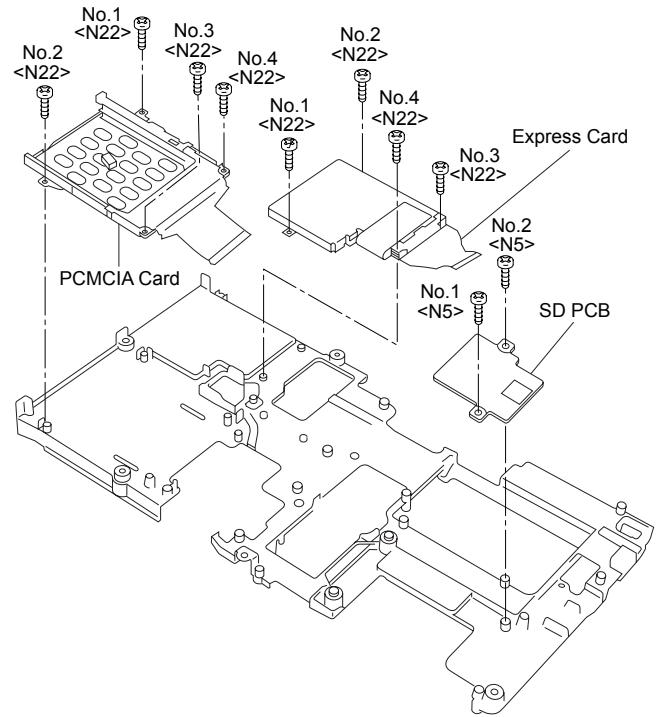
Tighten the Screws in the numbered order (No1 to No4).

Screws <N14>: DFHE5058ZB

Screws <N15>: DRHM5104ZA

9.2.9. Setting the SD PCB, Express Card and PCMCIA Card

1. Fix the PCMCIA Card using the 4 Screws. <N22>
2. Fix the Express Card using the 4 Screws. <N22>
3. Fix the SD PCB using the 2 Screws. <N5>

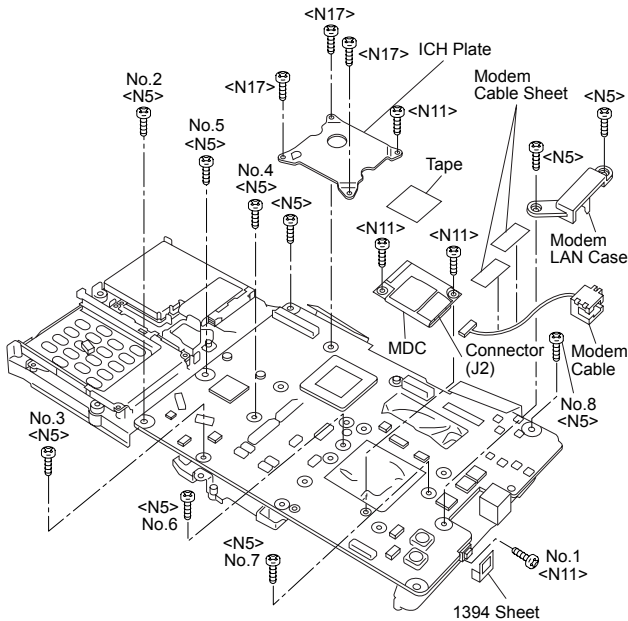


Screws <N5>: DRQT26+D4FKL

Screws <N22>: DXQT2+G4FNL

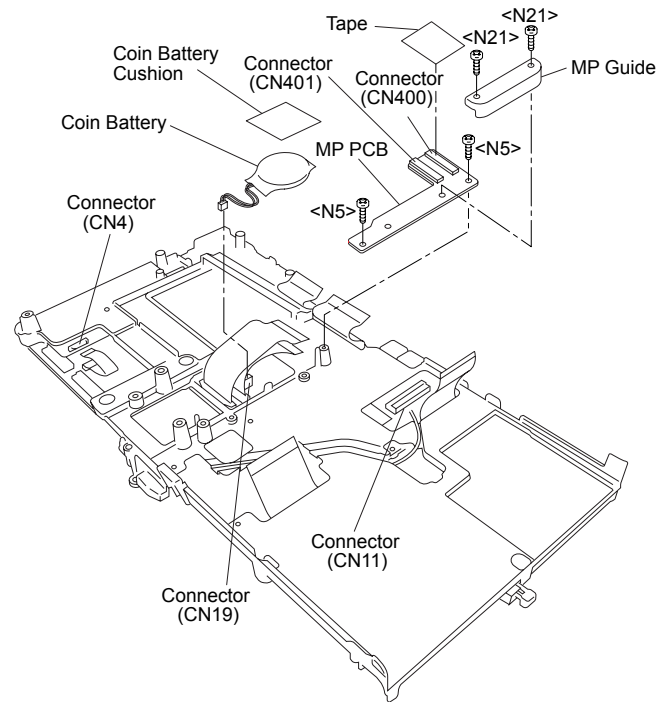
9.2.10. Setting the Main PCB

1. Fix the Main PCB using the 7 Screws <N5> and Screw <N11> No1 to No8.
2. Set the Modem Cable.
3. Connect the Cable to the Connector (J2) and fix the MDC.
4. Attach the Tape.
5. Attach the 1394 Sheet.
6. Fix the MDC using the 2 Screws. <N11>
7. Fix the Modem LAN Case using the 2 Screws. <N5>
8. Attach the 2 Modem Cable Sheets.
9. Fix the ICH Plate using the 3 Screws <N17> and Screw <N11>.

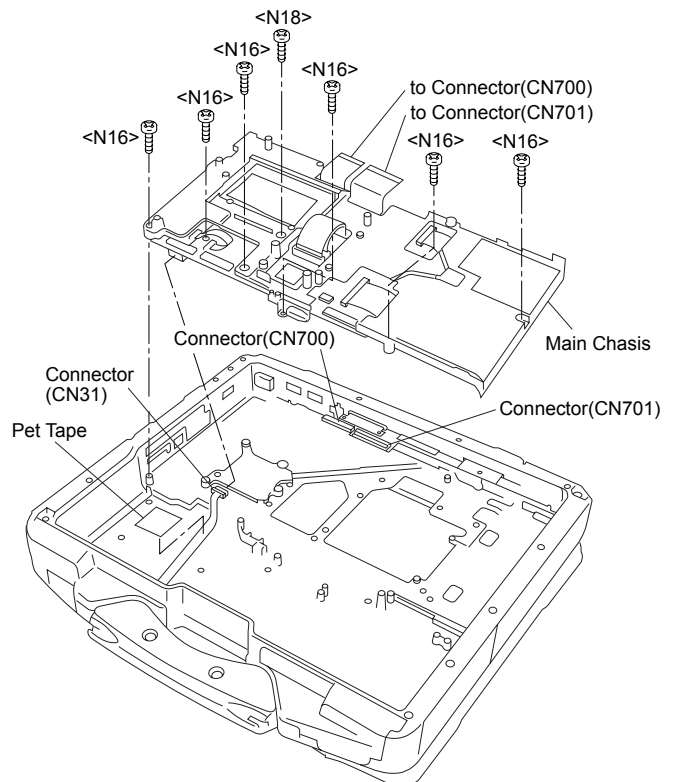


10. Connect the Cable to the Connector (CN4,CN11)
11. Attach the Tape.
12. Attach the Coin Battery.
13. Connect the Cable to the Connector. (CN19)
14. Attach the Coin Battery Cushion.
15. Fix the MP PCB and MP Guide using the 2 Screws <N5> and 2 Screws. <N21>
16. Connect the Cable to the Connector. (CN400,CN401)

17. Attach the Tape.

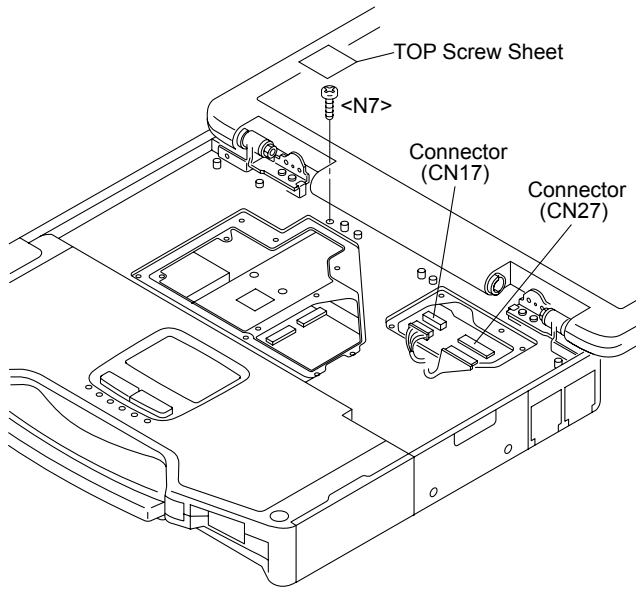


18. Set the Main Chassis on the Computer.
19. Connect the Cable to the Connector (CN31) and Attach the Pet Tape.
20. Connect the Cable to the Connector. (CN700,CN701)
21. Fix the Main Chassis using the 6 Screws <N16> No1 to No6
22. Fix the Main Chassis using the Screw. <N18>



23. Connect the 2 Cables to the 2 Connectors. (CN17,CN27)

- 24. Fix the Screw. <N7>
- 25. Attach the TOP Screws.



Note:

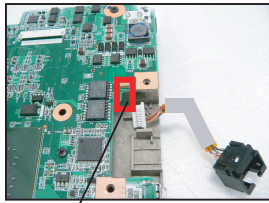
- Tighten the Screws in the numbered order (No1 to No8).
- Tighten the Screws in the numbered order (No1 to No6).

- Screws <N5>: DRQT26+D4FKL
- Screws <N7>: DRSB26+10HKL
- Screws <N11>: DFHE5025XA
- Screws <N16>: DRQT26+E5FKL
- Screws <N17>: DRQT26+E6FKL
- Screws <N18>: DRSB26+8FKL
- Screws <N21>: DXQT2+E12FNL

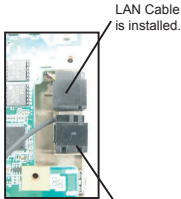
■ Assembly of LAN, Modem and MDC

* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf)/cm2

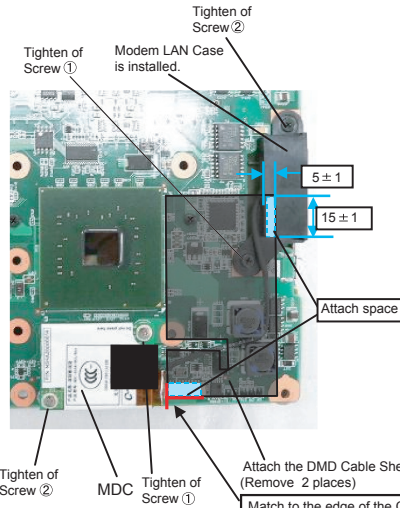


Pass the Cable to the back from the hole of the A side.



LAN Cable is installed.

Modem Cable is installed.



Tighten of Screw ①
Modem LAN Case is installed.
Tighten of Screw ②

5±1

15±1

Attach space

Tighten of Screw ②

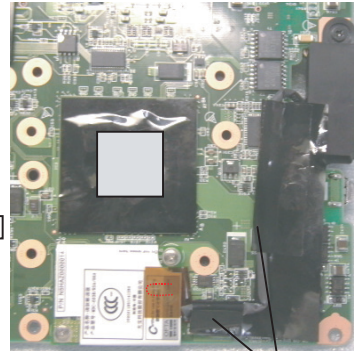
MDC

Tighten of Screw ①

Attach the DMD Cable Sheet (Remove 2 places)

Match to the edge of the Connector. ±1

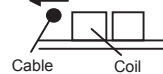
Order of fixing
Screw ①→Screw ②



Process the cable and cover with MDM Cable Sheet

Safety Working

Separate from the coil.

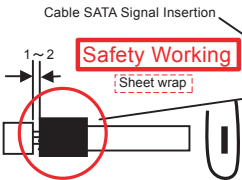


■ Assembly of Main PCB

* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf)/cm2

Insert the connector wrapped with the sheet into the connector on the board.

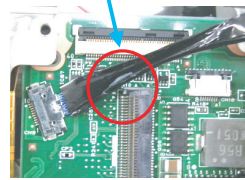


Cable SATA Signal Insertion

Safety Working

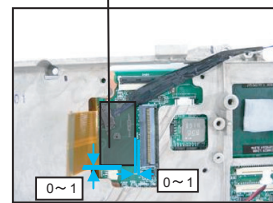
Sheet wrap

Bend the cable avoiding the connector.



Safety Working

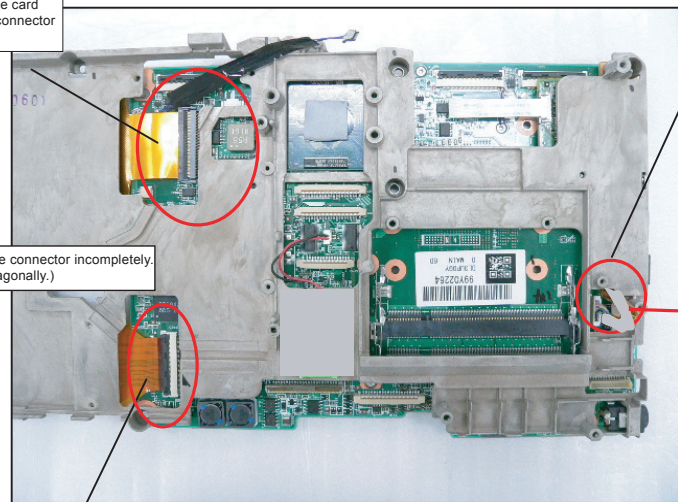
Attach the PET Sheet



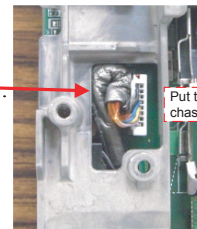
Insert the FFC of the card connector into the connector on the main board.

Do not insert the connector incompletely. (Note: Insert diagonally.)

Insert the FFC of the card connector into the connector on the main board.



Connect the LAN cable.



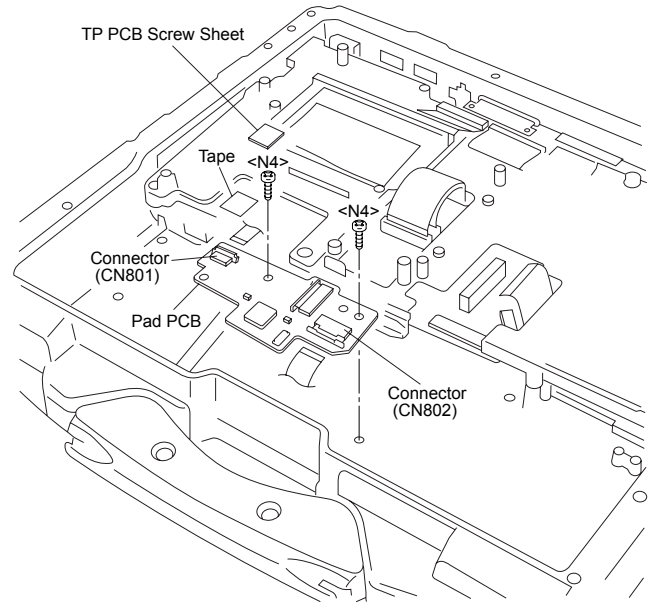
Put the cable in a U-shape into the intermediate chassis aperture next to the Connector.

Safety Working

9.2.11. Setting the PAD PCB

1. Fix the PAD PCB using the 2 Screws. <N4>
2. Attach the TP PCB Screw Sheet.
3. Connect the Cable to the Connector. (CN802)
4. Connect the Cable to the Connector (CN801) and attach the Tape.

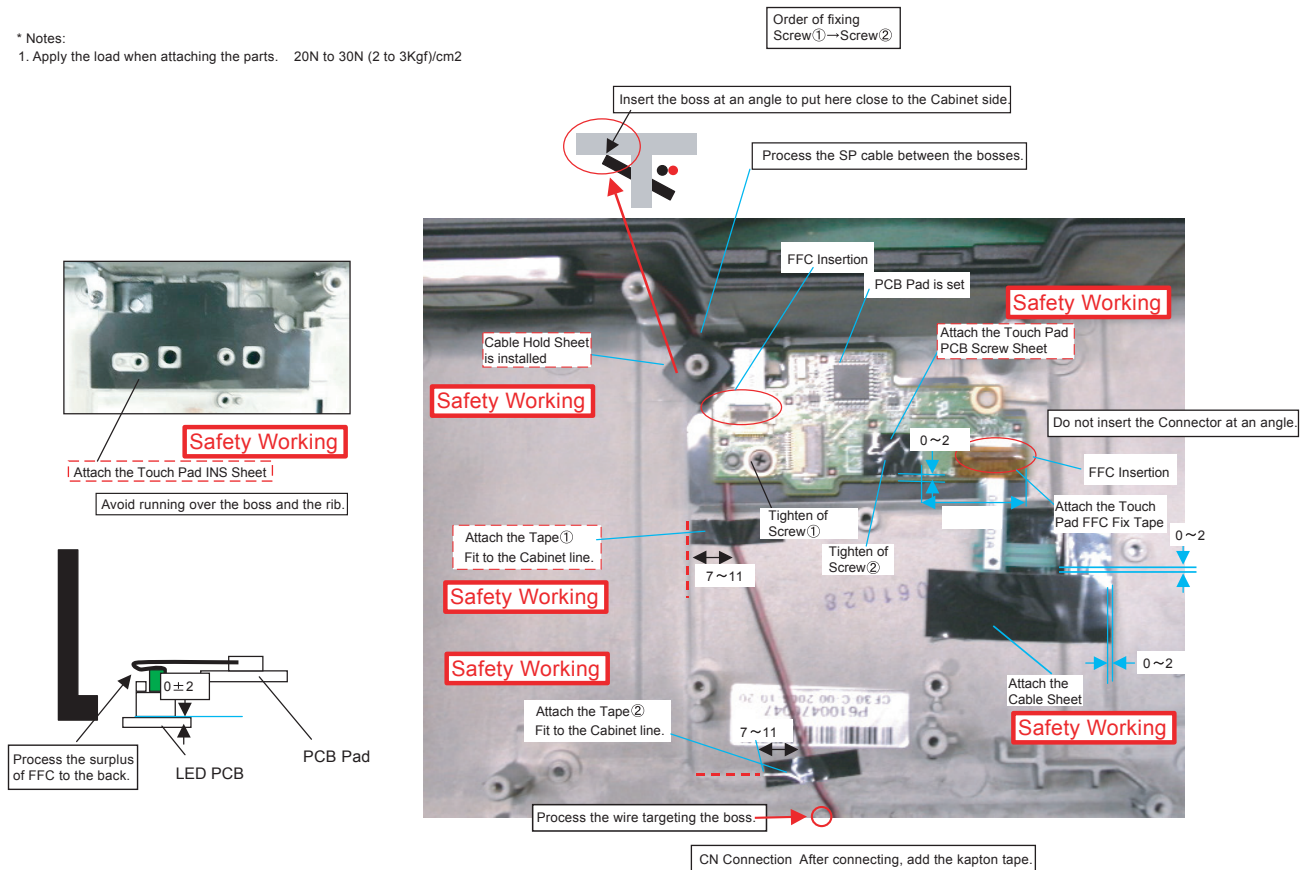
Screws <N4>: DRQT26+D3FKL



■ Assembly of PAD PCB

* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf/cm2)



9.2.12. Setting the FPC HDD BAT

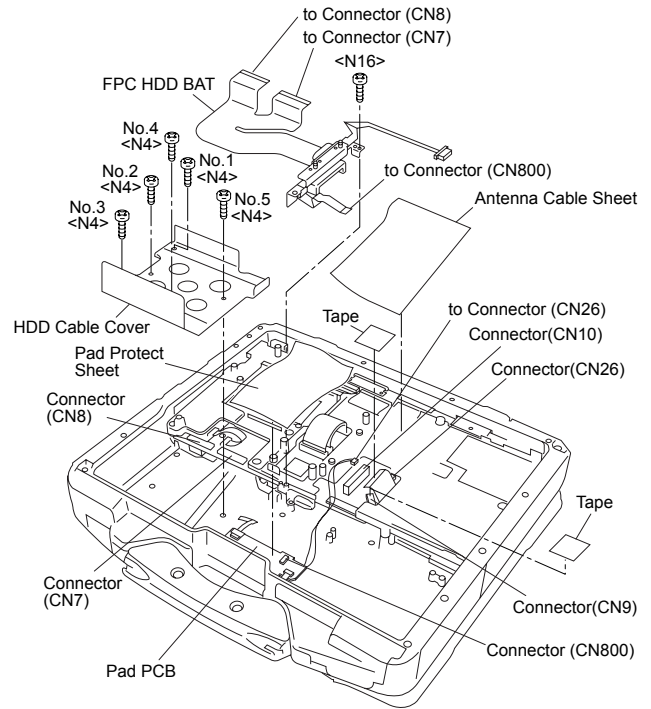
1. Fix the FPC HDD BAT using the Screw. <N16>
2. Connect the 2 Cables to the 2 Connectors. (CN7,CN8)
3. Connect the Cable to the Connector. (CN800)
4. Attach the PAD Protect Sheet.
5. Connect the Cable to the Connector. (CN9)
6. Attach the Tape.
7. Connect the 2 Cables to the 2 Connectors. (CN10,CN26)
8. Attach the Tape.
9. Attach the Antenna Cable Sheet on the Main PCB.
10. Fix the HDD FPC BAT using the 5 Screws. <N4> No1 to No5

Note:

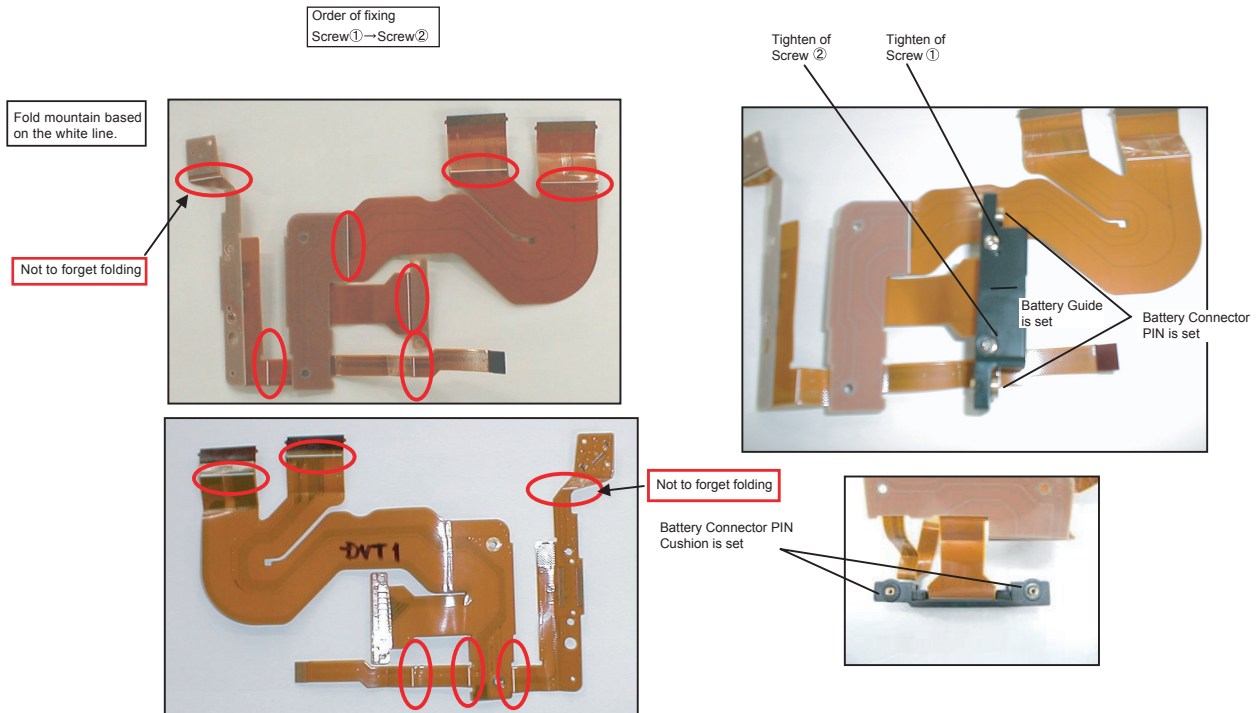
Tighten the Screws in the numbered order (No1 to No5).

Screw <N4>: DRQT26+D3FKL

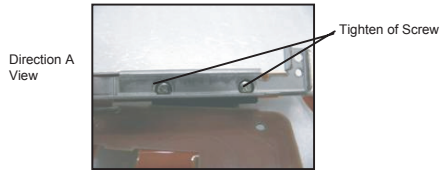
Screw <N16>: DRQT26+E5FKL



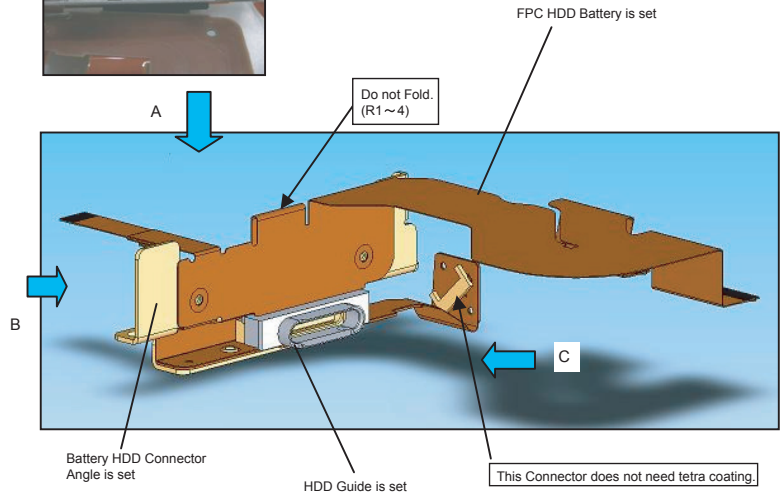
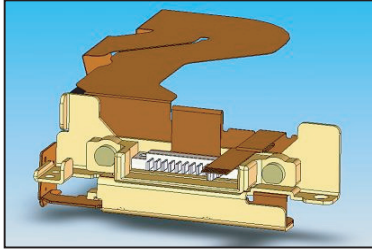
■ Preparation of HDD FPC ASSY



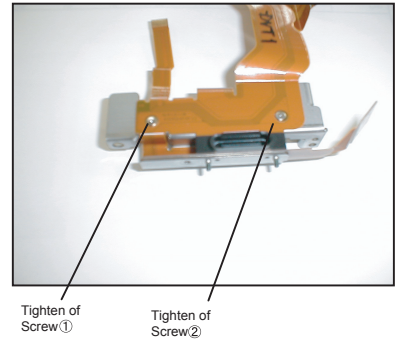
1. Set HDD Guide and fix with Screw.
2. Fix with Screw.
3. Apply tetra coating to each connector pin.

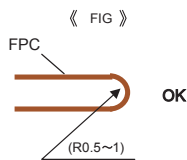
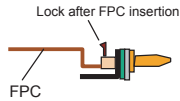
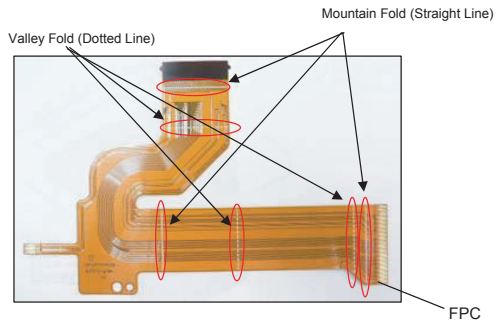
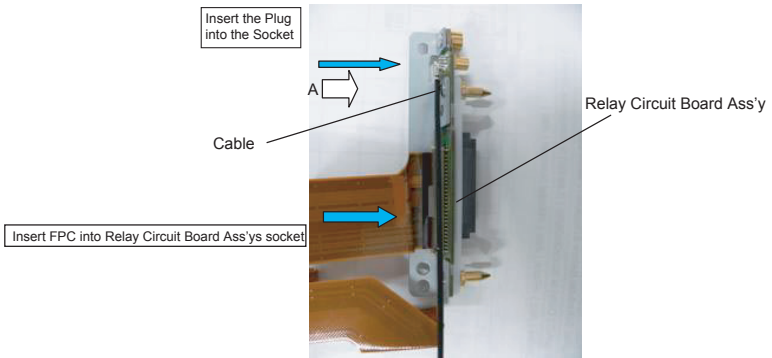
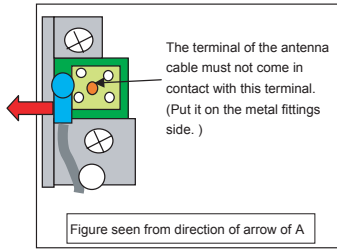


Direction B View



Direction C View



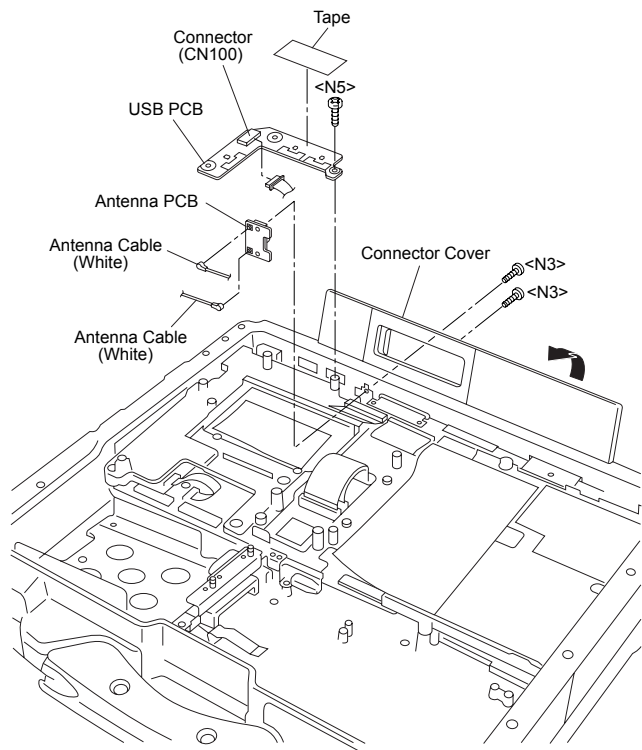


« The attention of folding » : Breakage countermeasure.
 1, The bending inside is R0.5~1
 2, Don't mistake a bending direction.
 Don't use a mistaken thing.

9.2.13. Setting the USB PCB and Antenna PCB

1. Open the Connector Cover.
2. Fix the Antenna PCB using the 2 Screws. <N3>
3. Connect the 2 white Cables.
4. Fix the USB PCB using the Screws. <N5>
5. Connect the Cable to the Connector. (CN100)
6. Attach the Tape.

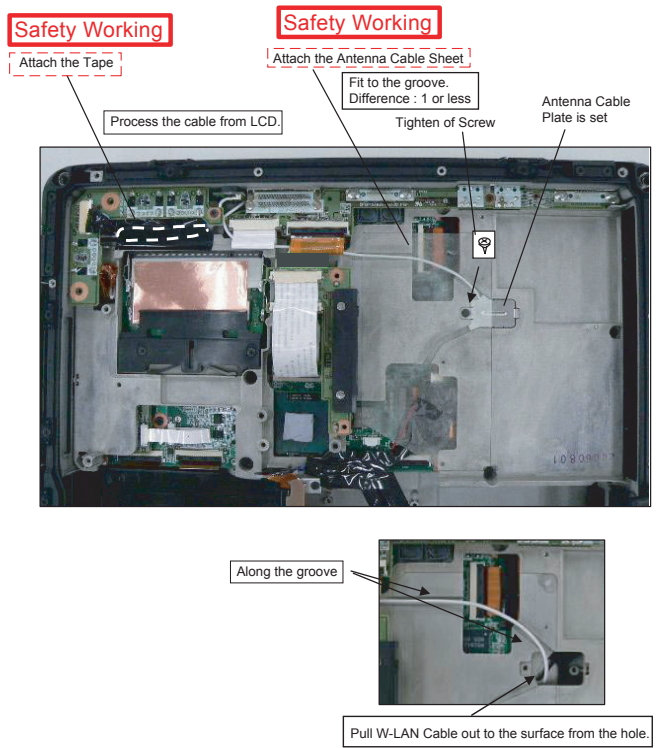
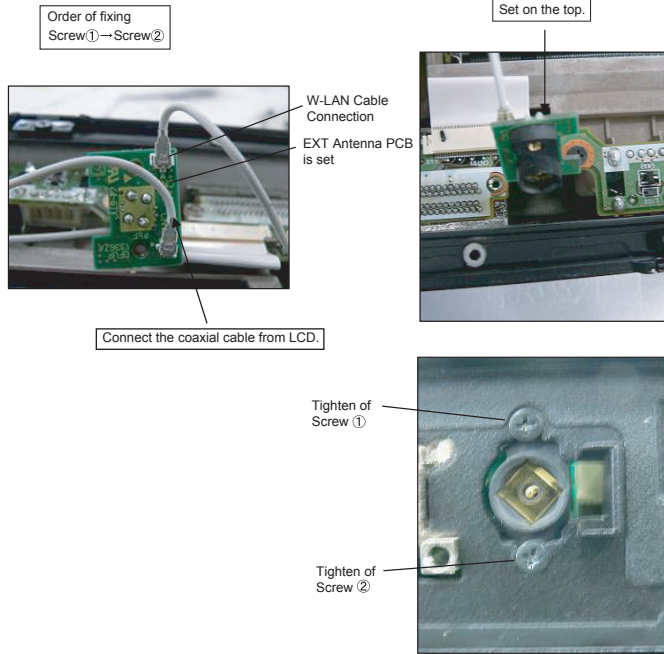
Screws <N3>: DRQT2+G6FKL
 Screws <N5>: DRQT26+D4FKL



■ Assembly of USB PCB and Antenna PCB

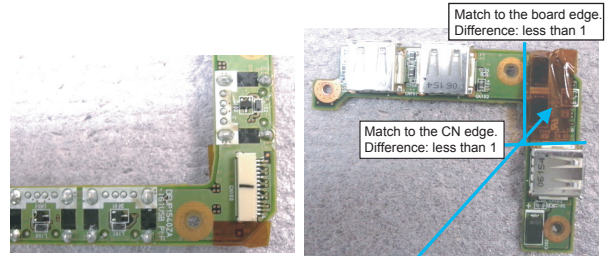
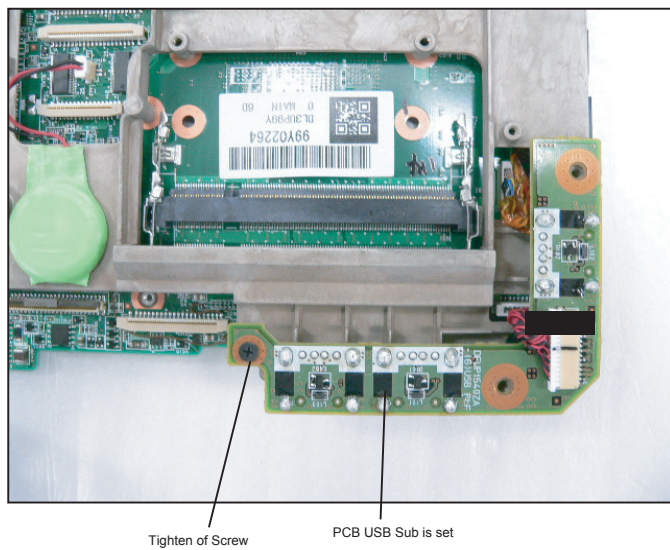
* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf)/cm²



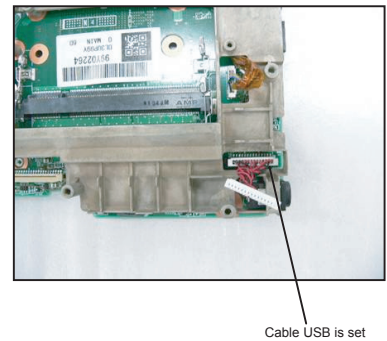
* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf)/cm²



Attach the kapton tape into CD Edge Sheet.

Safety Working



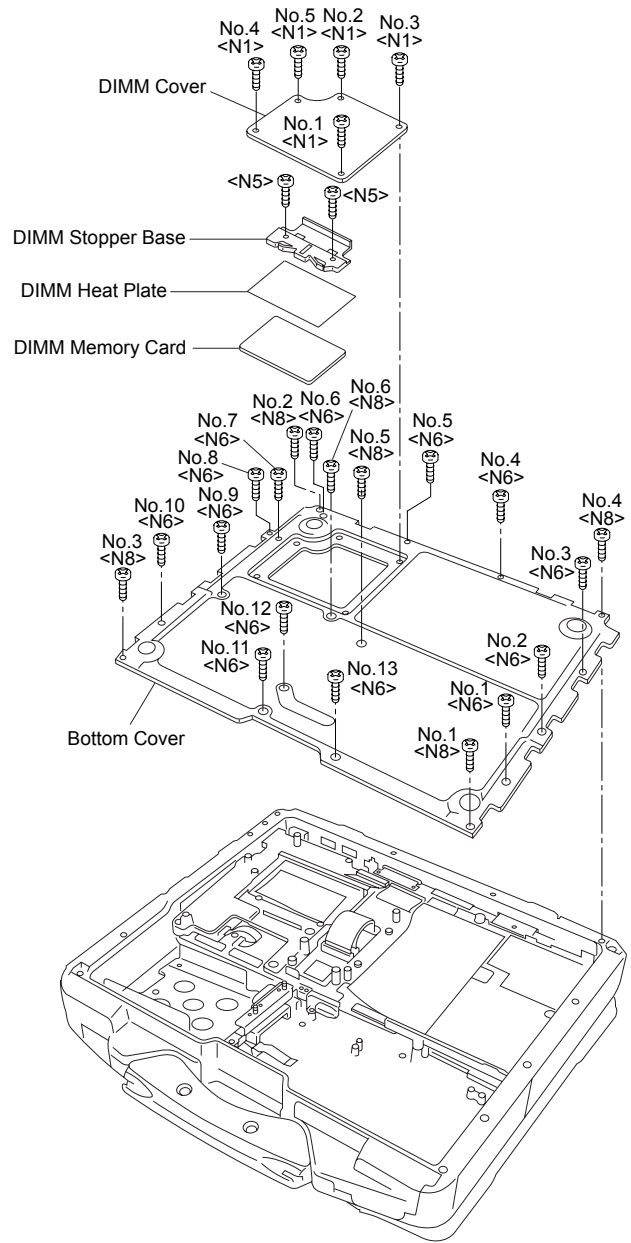
9.2.14. Setting the DIMM Cover and Bottom Cover

1. Set the Bottom Cover.
2. Fix the Bottom Cover using the 6 Screws. <N8> No1 to No6
3. Fix the Bottom Cover using the 13 Screws. <N6> No1 to No13
4. Set the DIMM memory card.
5. Attach the DIMM Heat Plate.
6. Fix the DIMM Stopper Base using the 2 Screws. <N5>
7. Fix the DIMM Cover using the 5 Screws. <N1>

Screws <N1>: DRHM0002ZA
Screws <N5>: DRQT26+D4FKL
Screws <N6>: DRQT26+E4FKL
Screws <N8>: DRSB3+8FKL

Note:

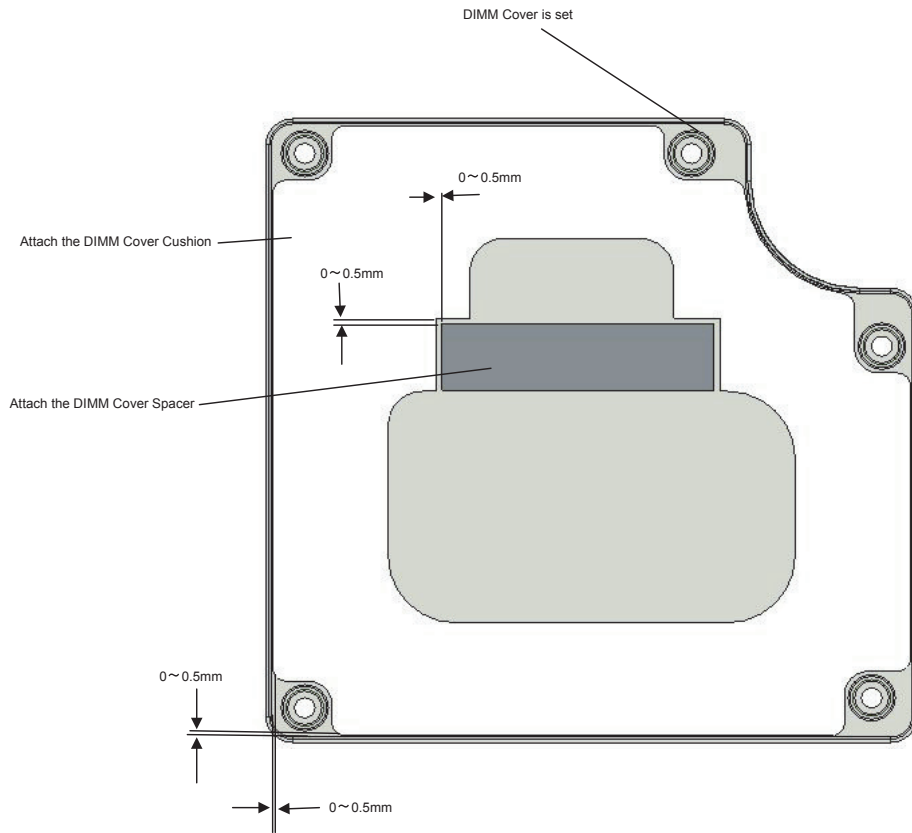
- Tighten the Screws in the numbered order (No1 to No6).
- Tighten the Screws in the numbered order (No1 to No13).
- Tighten the Screws in the numbered order (No1 to No5).



■ Preparation of DIMM Cover

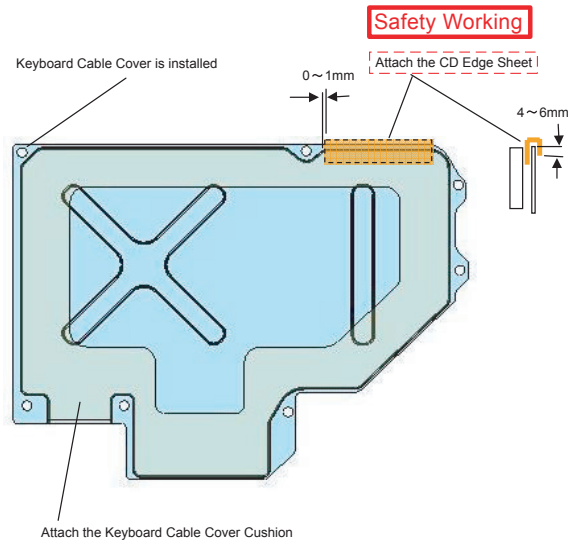
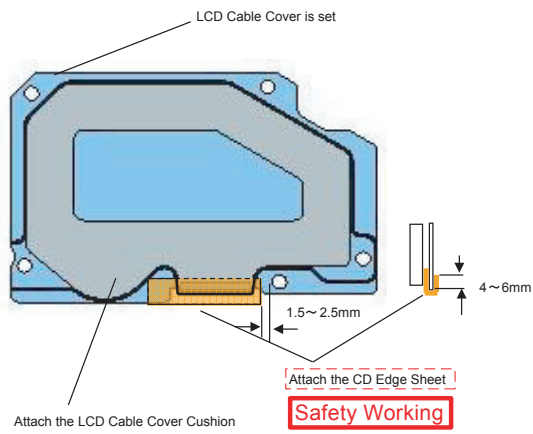
* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf)/cm²



* Notes:

1. Apply the load when attaching the attaching parts. 20N to 30N (2 to 3Kgf)/cm²



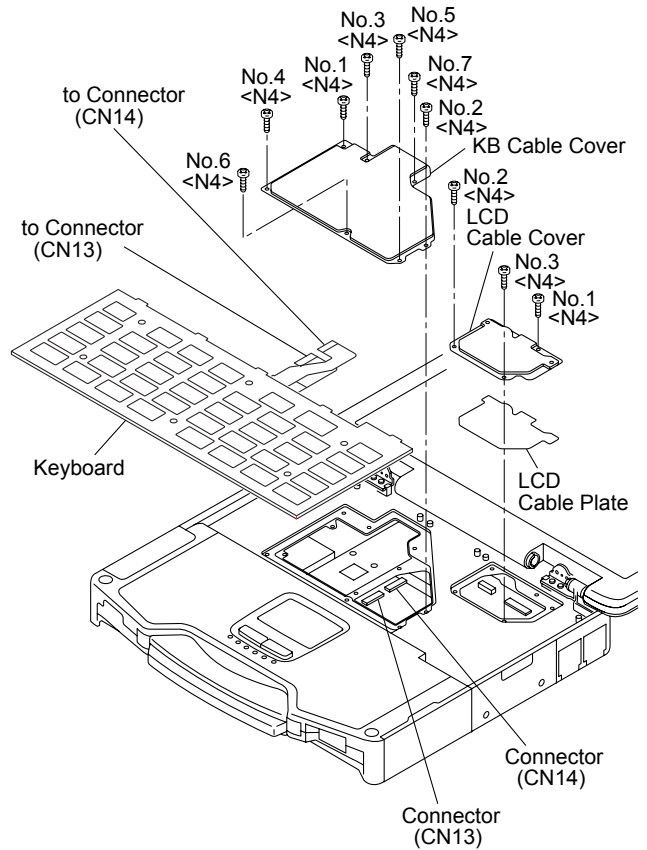
9.2.16. Setting the KB Cable Cover, Keyboard and LCD Cable Cover

1. Set the Keyboard onto the Computer.
2. Connect the 2 Cables to the 2 Cables. (CN13,CN14)
3. Fix the KB Cable Cover using the 7 Screws. <N4> No1 to No7
4. Set the LCD Cable Plate.
5. Fix the LCD Cable Cover using the 3 Screws. <N4> No1 to No3

Note:

- Tighten the Screws in the numbered order (No1 to No7).
Tighten the Screws in the numbered order (No1 to No3).

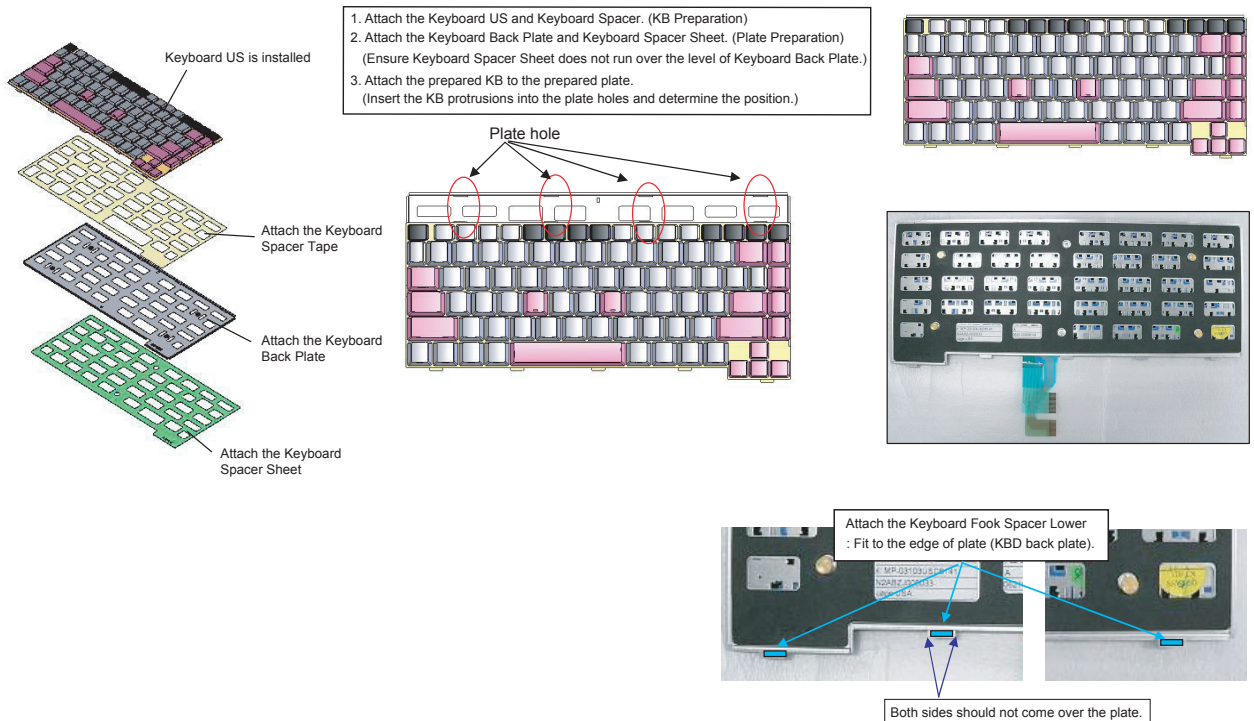
Screws <N4>: DRQT26+D3FKL



■ Arranging the Keyboard

* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf/cm2)



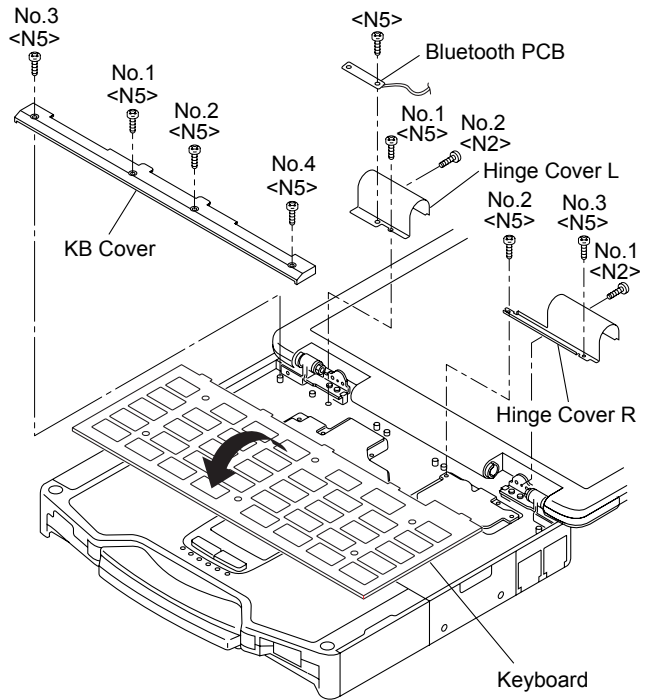
7.2.17. Setting the KB Cover, Hinge Cover L, Hinge Cover R and Keyboard

1. Insert the front hooks of the Keyboard to the Top Cabinet in order, and set the Keyboard.
2. Fix the Hinge Cover L and R using the 4 Screws <N5> No1 to No3
3. Fix the Hinge Cover L and R using the 2 Screws. <N2> No1, No2
4. Fix the Bluetooth PCB using the Screw. <N5>
5. Fix the KB Cover using the 4 Screws. <N5> No1 to No4

Note:

- Tighten the Screws in the numbered order (No1 to No4).
- Tighten the Screws in the numbered order (No1 to No3).
- Tighten the Screws in the numbered order (No1, No2).

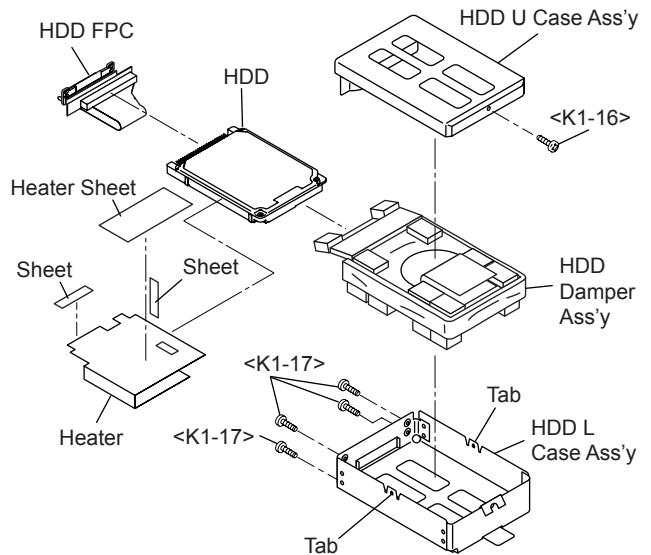
Screws <N2>: DRHM5054XA
Screws <N5>: DRQT26+D4FKL



7.2.18. Setting the HDD

1. Set the HDD FPC to HDD.
2. Attach the Heater to HDD.
3. Attach the Heater Sheet to the Heater.
4. Attach the 2 Sheets to HDD.
5. Attach the 6 HDD Forming MFYPC and the two HDD Terminal Plate Upper to the HDD Damper Ass'y.
6. Attach the six HDD Forming MFYPC and the two HDD Terminal Plate Upper to the HDD Damper Ass'y.
7. Set the HDD Damper Ass'y to HDD.
8. Attach the Side Cushion to the HDD L Case Ass'y.
9. Set the HDD U Case Ass'y and the HDD L Case Ass'y, and set the two Tabs of the HDD L Case Ass'y.
10. Fix the HDD U Case Ass'y and the HDD L Case Ass'y using the 4 Screws <K1-17> and Screw <K1-16>.

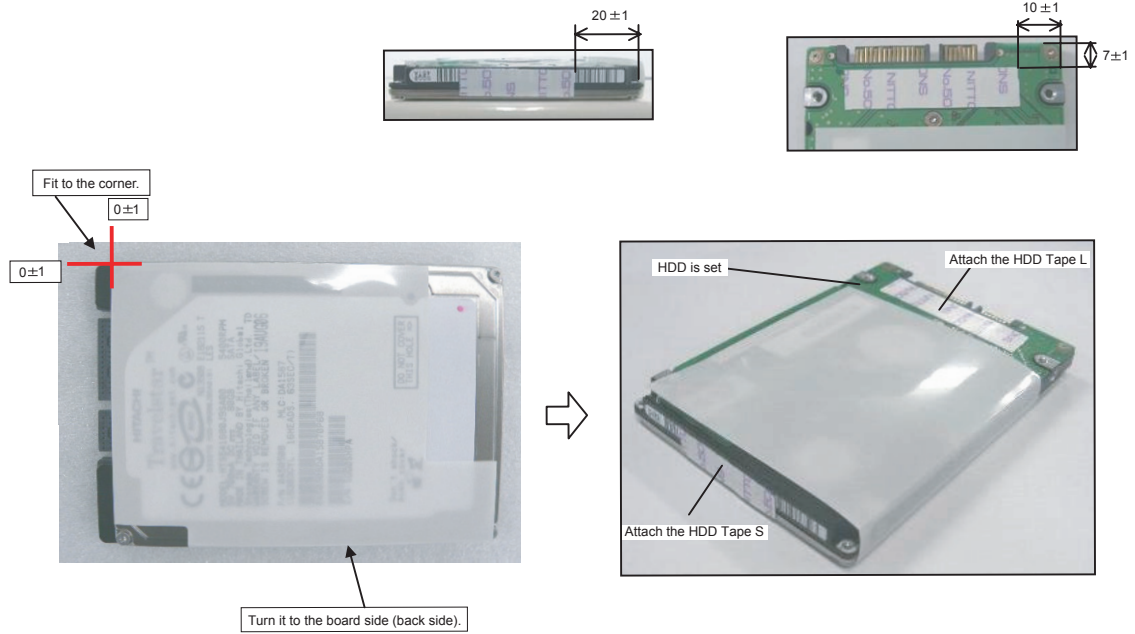
Screws <K1-16>: DFHE5025XA
Screws <K1-17>: DRQT2+E8FKL



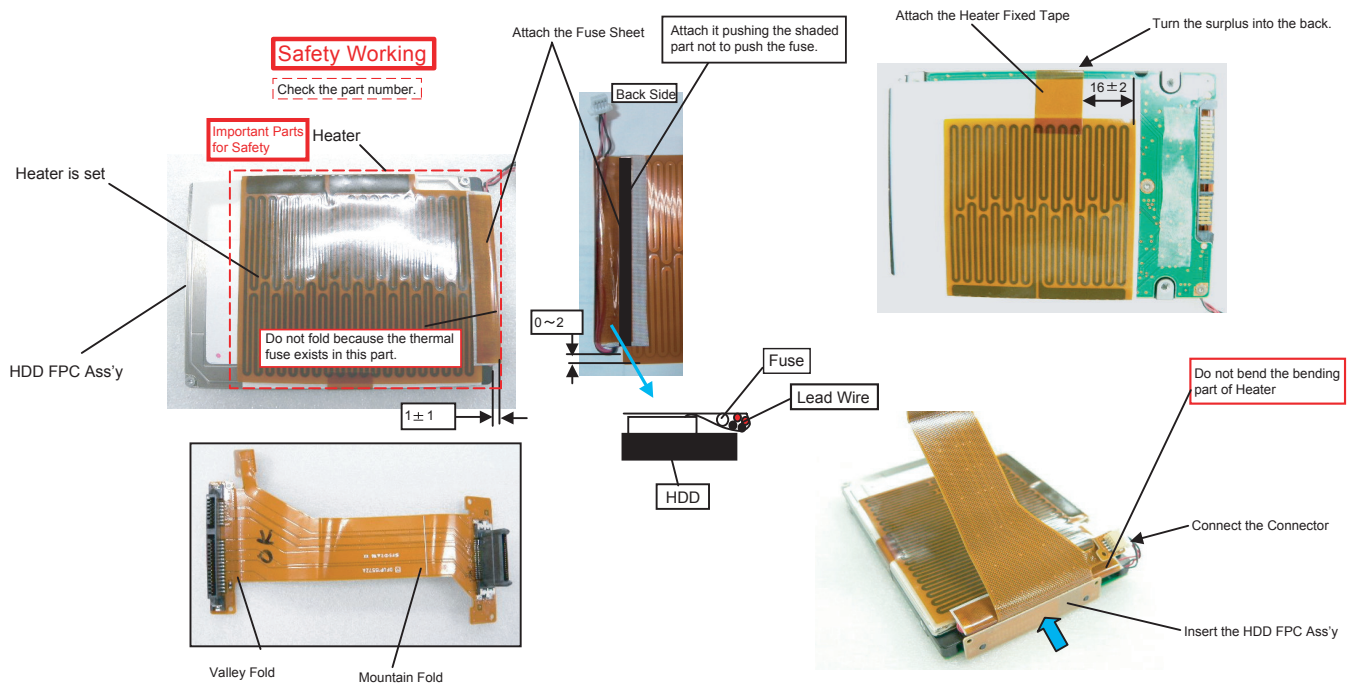
■ Preparation of HDD ASSY

* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf/cm²)



1. Do not gouge when inserting and removing the socket.
2. Do not drop HDD or add any impacts on it.
3. Insert CN into the end firmly.
4. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf/cm²)

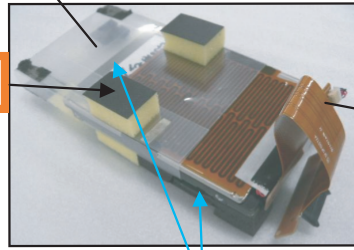


HDD Damper Ass'y

* Notes:

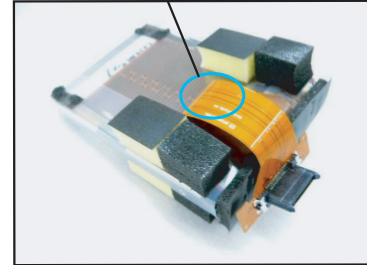
1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf/cm2)

Make sure the product with black sheet on the yellow sponge.



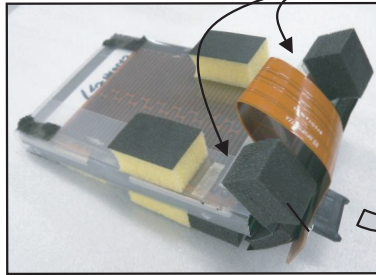
Fold the FPC from the board edge.

Push and bend



HDD Ass'y
HDD Set Insert after removing the Release Paper of the two-sided tape.

Remove the Release Paper on the back, close and attach it.

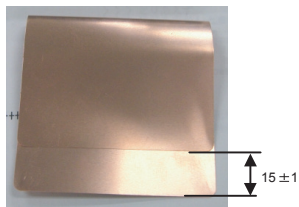
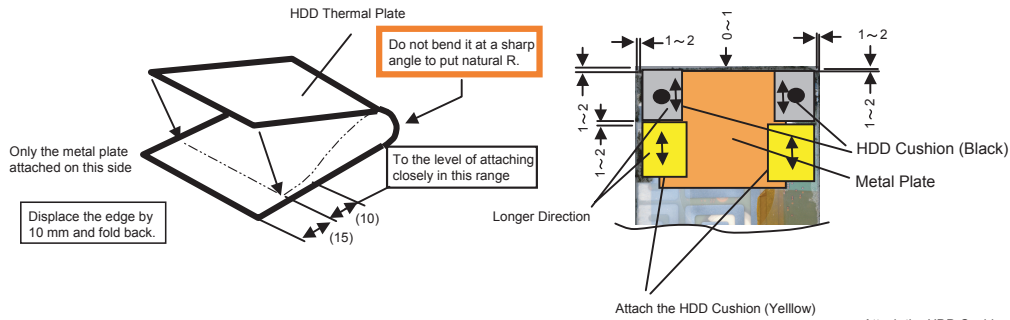


Attach it to HDD closely not to loosen.

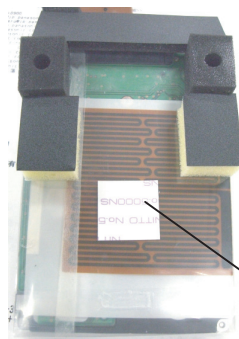
* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf/cm2)

When attaching HDD Cushion (Yellow) and HDD Cushion (Black), set the bending part of the metal plate up.



《Prepare the metal plate bend.》

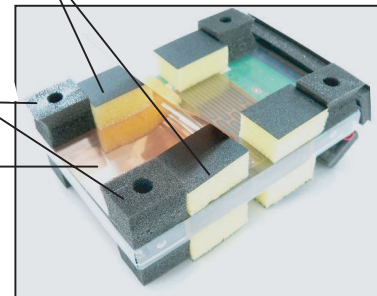


Attach the HDD Cushion (Black)

Attach the HDD Thermal Plate

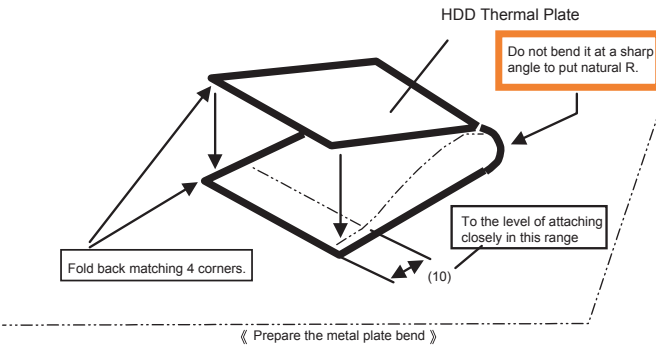
Remove the Release Paper

Attach the HDD Cushion (Yellow)

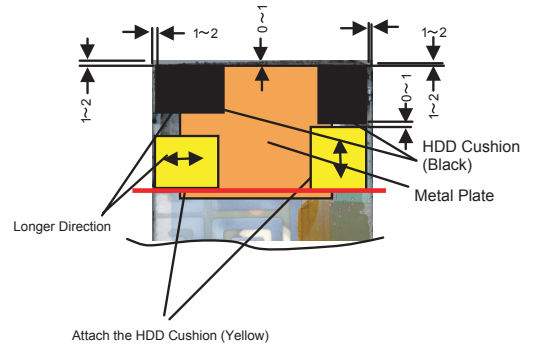


* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf)/cm²



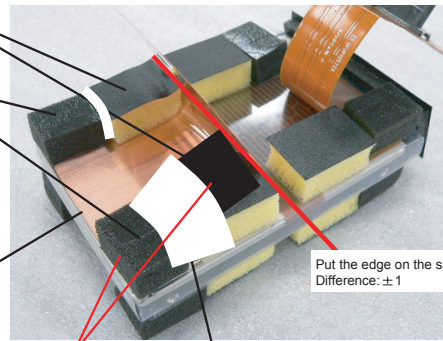
When attaching HDD Cushion Plate and HDD Cushion (Black), set the bending part of the metal plate up.



Attach the HDD Cushion (Yellow)

Attach the HDD Cushion (Black)

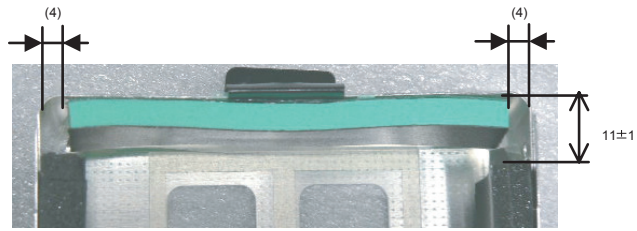
Attach the HDD thermal Plate



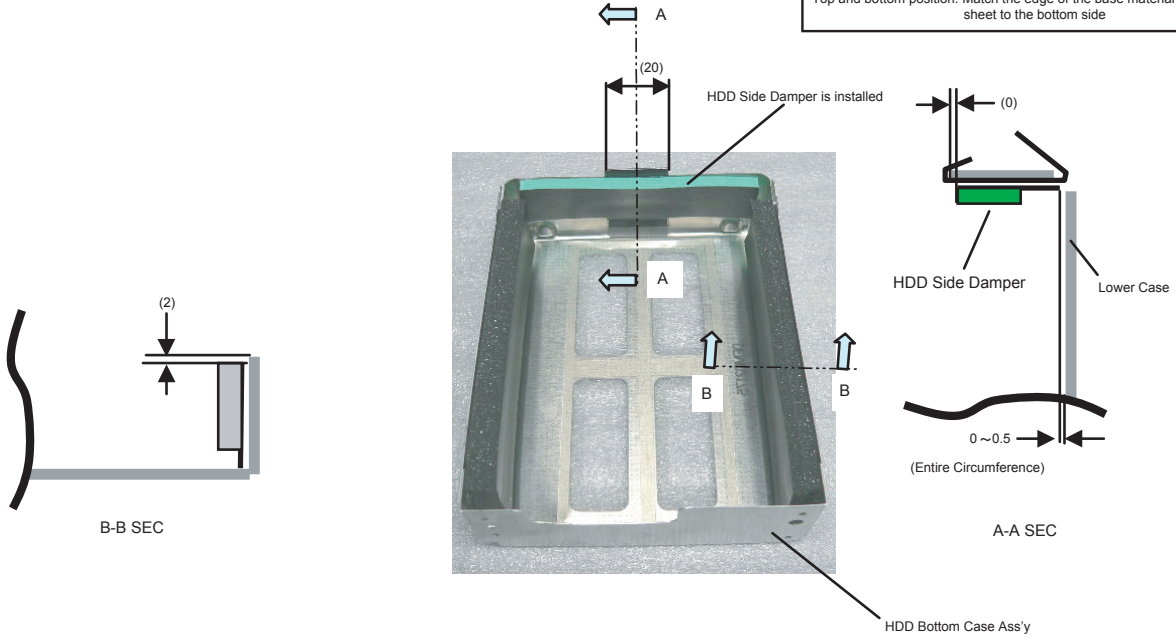
*Ensure the direction is right. (lateral) Keep the space to secure the air vent.

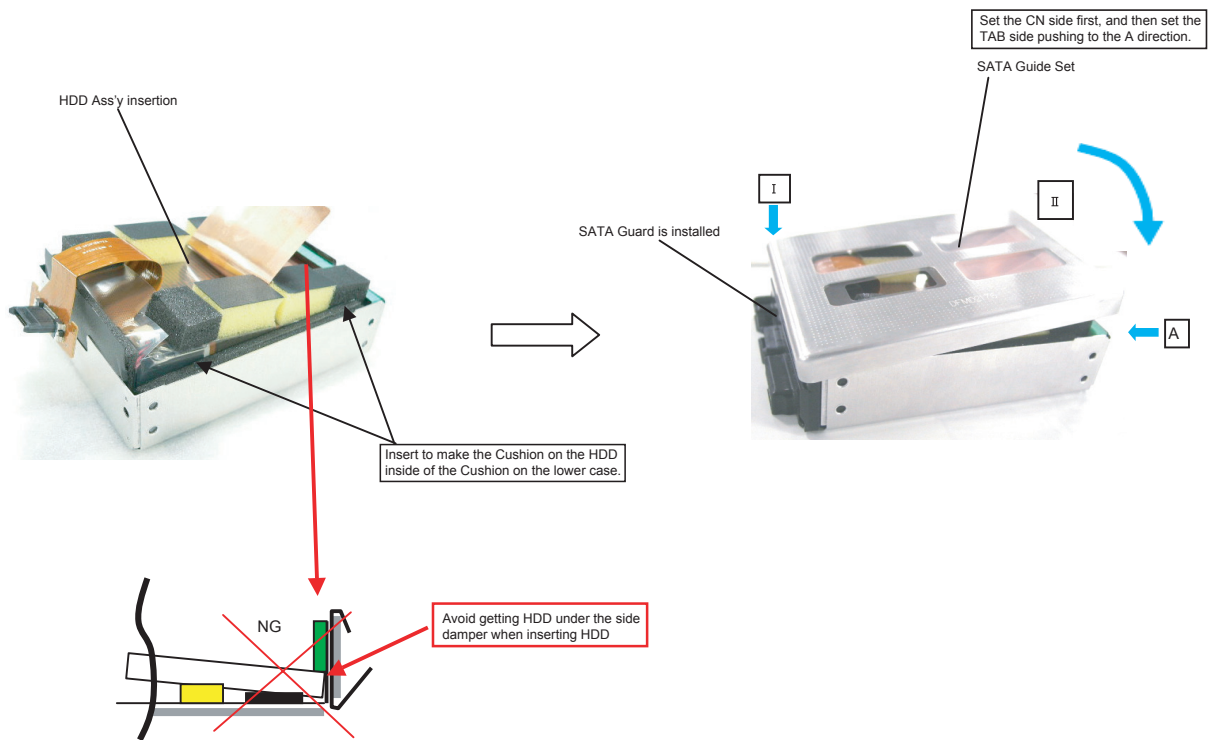
* Notes:

1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf)/cm²



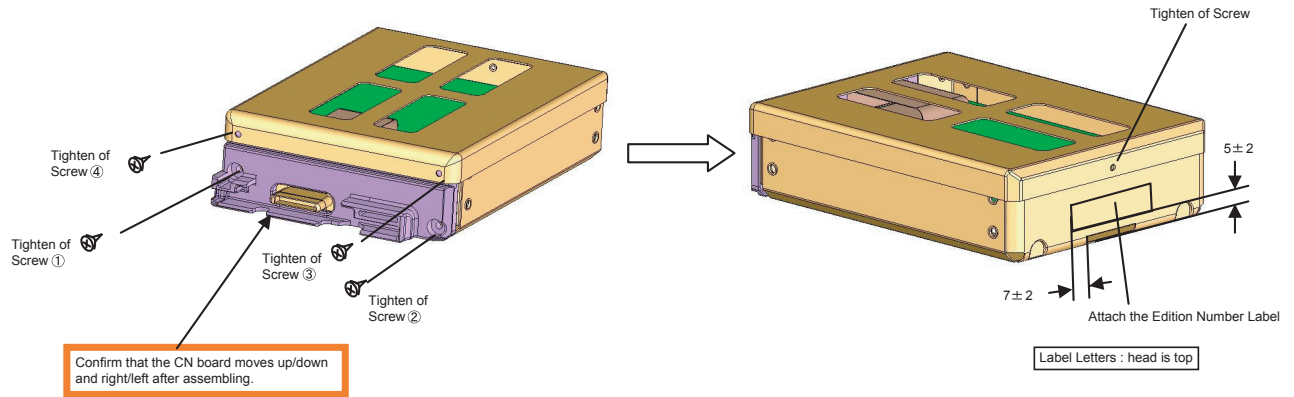
Right and left position: Match to the center
Top and bottom position: Match the edge of the base material transparent sheet to the bottom side





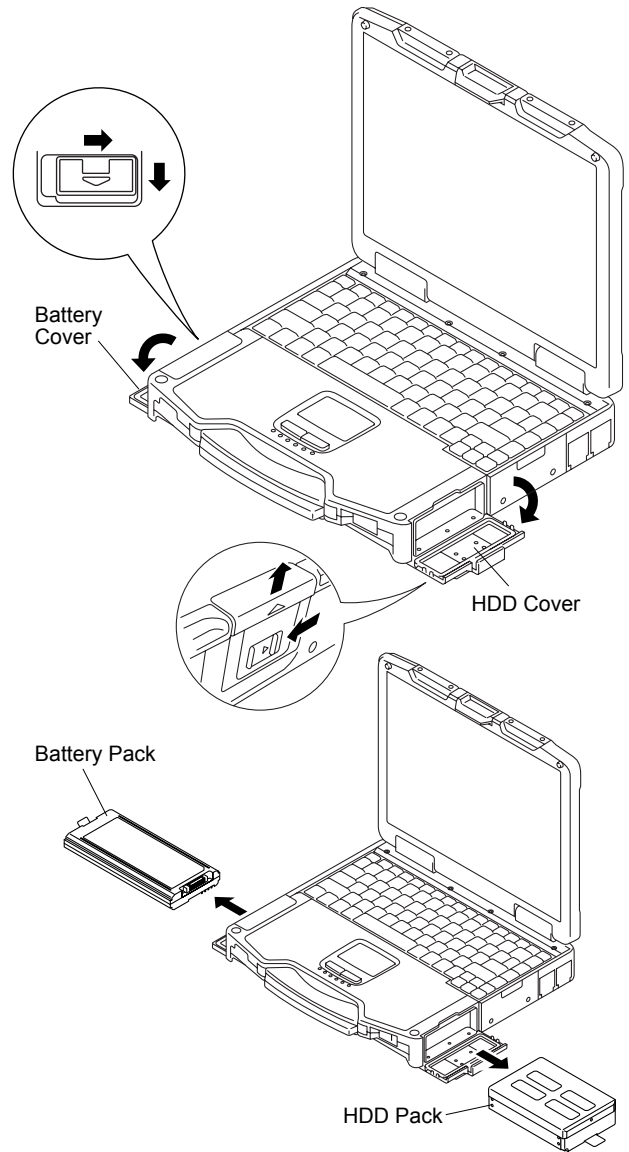
* Notes:
 1. Apply the load when attaching the parts. 20N to 30N (2 to 3Kgf/cm²)

Order of fixing
 Screw ①—Screw ②—Screw ③—Screw ④

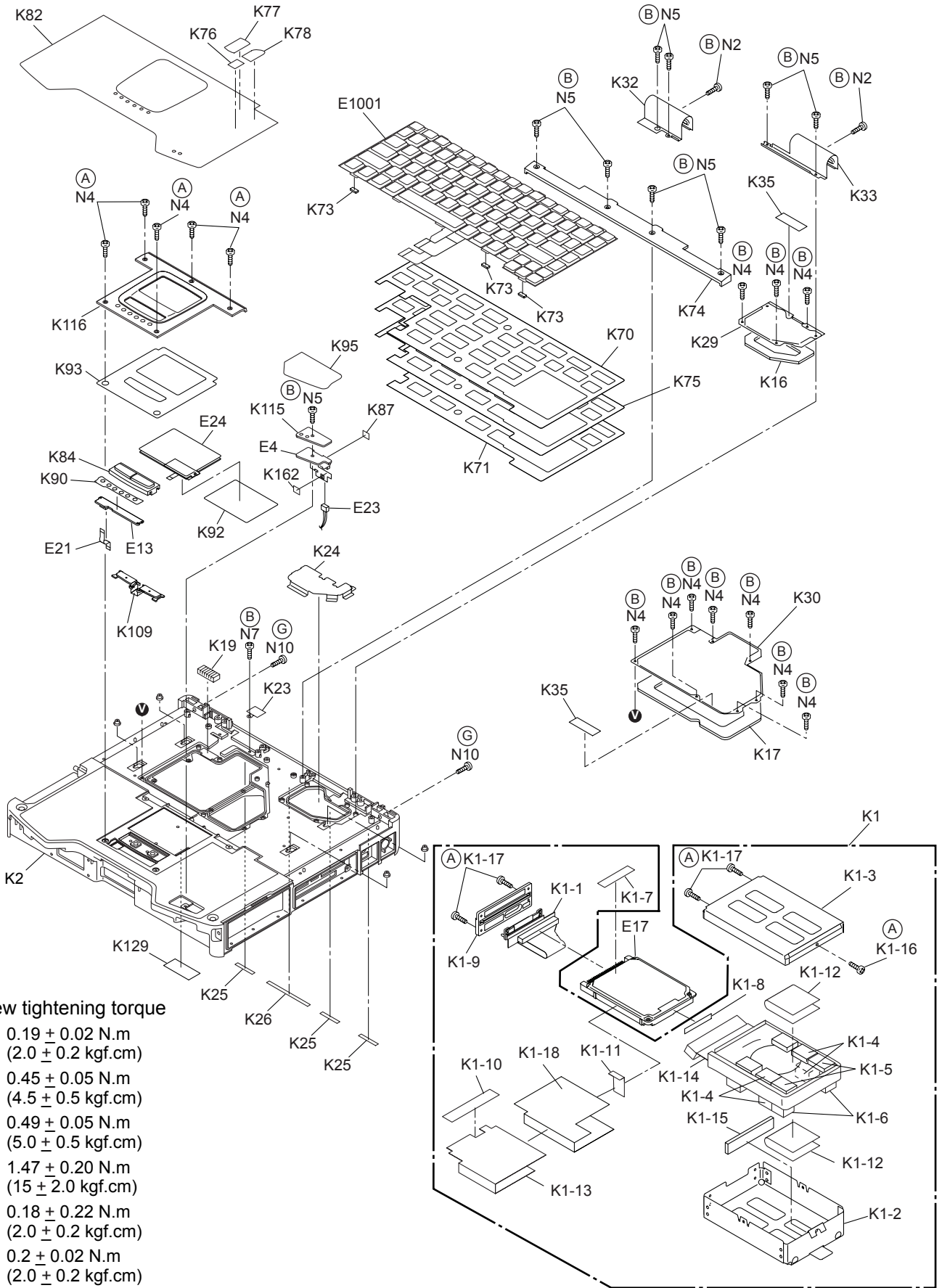


9.2.19. Setting the Battery Pack and HDD Pack

1. Set the HDD Pack.
2. Set the Battery Pack.

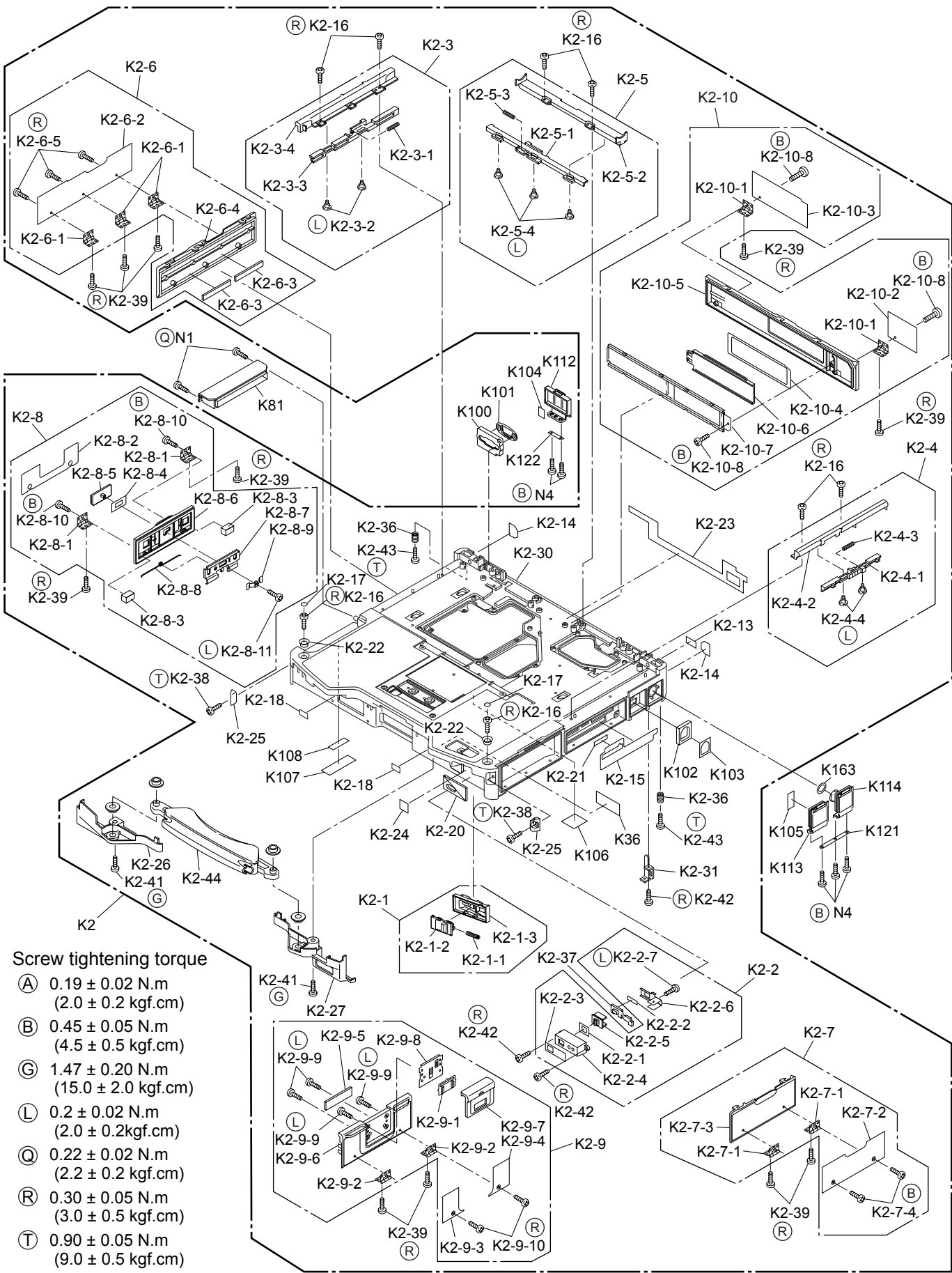


10 Exploded View

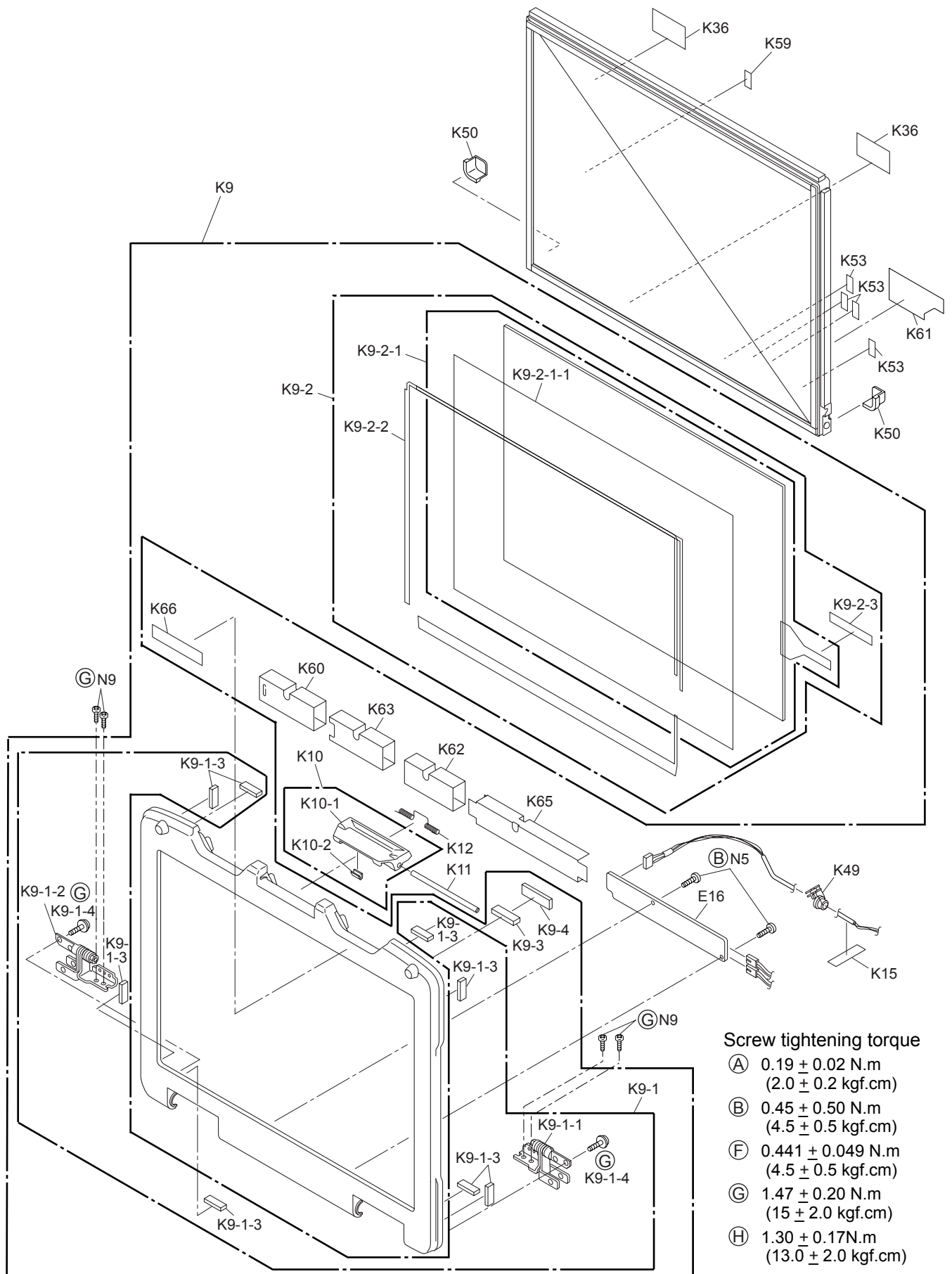


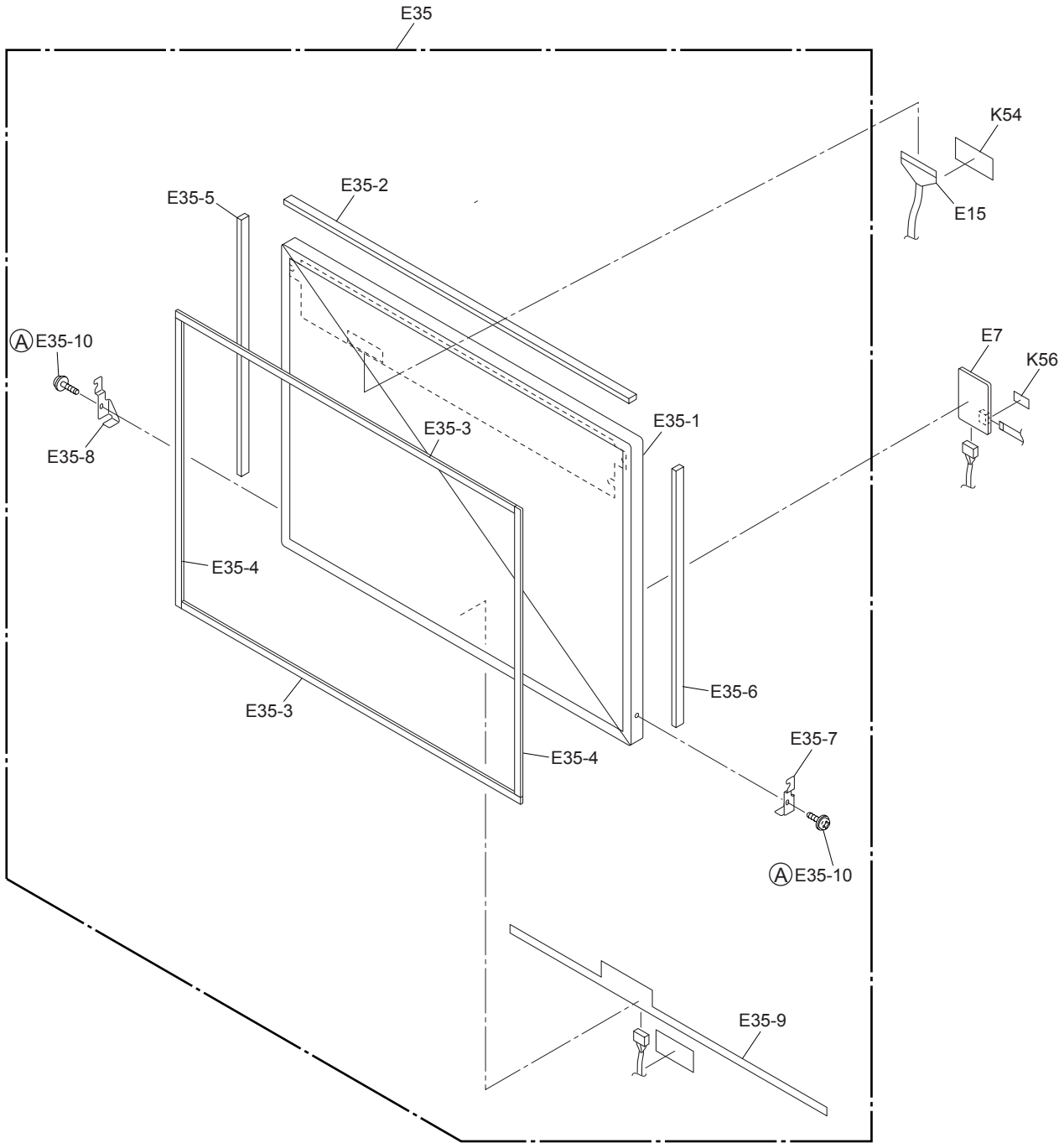
Screw tightening torque

- Ⓐ 0.19 ± 0.02 N.m
(2.0 ± 0.2 kgf.cm)
- Ⓑ 0.45 ± 0.05 N.m
(4.5 ± 0.5 kgf.cm)
- Ⓕ 0.49 ± 0.05 N.m
(5.0 ± 0.5 kgf.cm)
- Ⓒ 1.47 ± 0.20 N.m
(15 ± 2.0 kgf.cm)
- Ⓓ 0.18 ± 0.22 N.m
(2.0 ± 0.2 kgf.cm)
- Ⓖ 0.2 ± 0.02 N.m
(2.0 ± 0.2 kgf.cm)



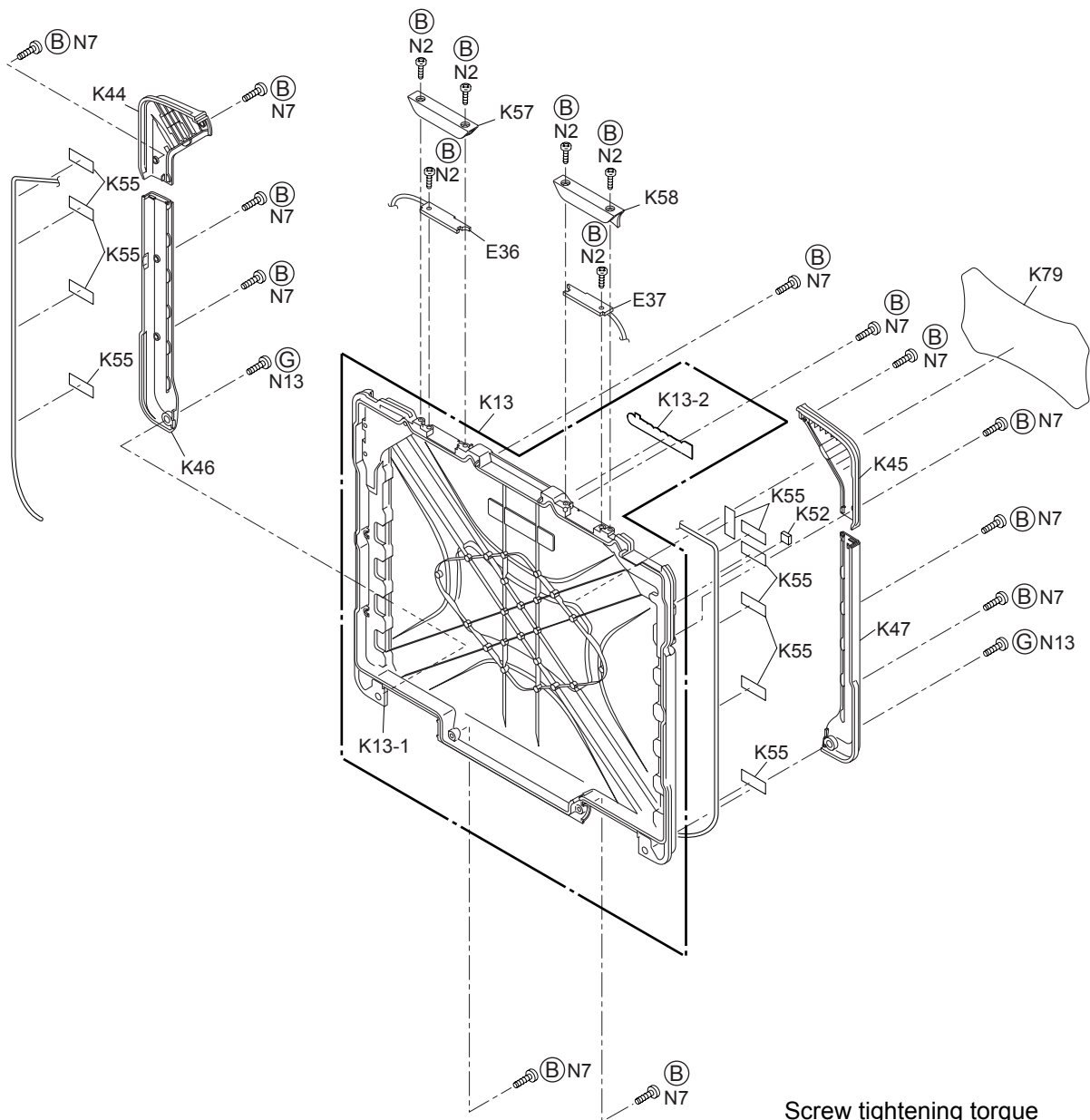
- Screw tightening torque**
- (A) 0.19 ± 0.02 N.m
(2.0 ± 0.2 kgf.cm)
 - (B) 0.45 ± 0.05 N.m
(4.5 ± 0.5 kgf.cm)
 - (G) 1.47 ± 0.20 N.m
(15.0 ± 2.0 kgf.cm)
 - (L) 0.2 ± 0.02 N.m
(2.0 ± 0.2 kgf.cm)
 - (Q) 0.22 ± 0.02 N.m
(2.2 ± 0.2 kgf.cm)
 - (R) 0.30 ± 0.05 N.m
(3.0 ± 0.5 kgf.cm)
 - (T) 0.90 ± 0.05 N.m
(9.0 ± 0.5 kgf.cm)





Screw tightening torque

- Ⓐ 0.19 ± 0.02 N.m
(2.0 ± 0.2 kgf.cm)
- Ⓑ 0.45 ± 0.05 N.m
(4.5 ± 0.5 kgf.cm)
- Ⓒ 0.216 ± 0.0196 N.m
(2.2 ± 0.2 kgf.cm)
- Ⓓ 0.314 ± 0.0196 N.m
(3.2 ± 0.2 kgf.cm)
- Ⓔ 0.49 ± 0.05 N.m
(5.0 ± 0.5 kgf.cm)




Screw tightening torque






- Ⓐ 0.19 ± 0.02 N.m
(2.0 ± 0.2 kgf.cm)
- Ⓑ 0.45 ± 0.05 N.m
(4.5 ± 0.5 kgf.cm)
- Ⓒ 0.216 ± 0.0196 N.m
(2.2 ± 0.2 kgf.cm)
- Ⓓ 0.314 ± 0.0196 N.m
(3.2 ± 0.2 kgf.cm)
- Ⓔ 1.47 ± 0.20 N.m
(15 ± 2.0 kgf.cm)
- ⓐ 0.49 ± 0.05 N.m
(5.0 ± 0.5 kgf.cm)

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-30CTQAZxx

REF. NO and AREA	PART NO.	DESCRIPTION	Q'TY
Main Block Unit			
E1	DL3UP1336BAA	PCB UNIT FOR EXT ANT	RTL 1
E2	DL3UP1354CAA	BT ANT CPB UNIT	RTL 1
E3	DL3UP1539AAA	MAIN PCB UNIT	RTL 1
E4	DL3UP1542AAA	P-SW LED FPC UNIT	1
E5	DL3UP1543AAA	HDD BAT FPC UNIT	1
E6	DL3UP1558BAA	BT 2.0 PCB UNIT	RTL 1
E7	DL3UP1580AAA	TOUCH PANEL CONTROLLER PWB	RTL 1
E8	DL3U11540AAA	IO PWB	RTL 1
E9	DL3U21540AAA	MP PWB	RTL 1
E10	DL3U31540AAA	PAD PWB	RTL 1
E11	DL3U41540AAA	SD PWB	RTL 1
E12	DL3U61540AAA	USB PWB	RTL 1
E13	DL3U71540AAA	LED PWB	RTL 1
E14	DFJK10U050BB	FFC	1
E15	DFJS1031ZA	LCD CABLE	1
E16	 N0GF2J000001	INVERTER	1
E17	 N3CAYYY00012	HDD	1
E18	N5ZZ00000119	PC2-4200 SODIMM 512M INFINEON 74MK2	1
E19	DFJS1049ZA	W-LAN CABLE	1
E20	 N5HZC0000020	WIRELESS LAN MODULE	1
E21	DFJK10T017BB	FFC	1
E22	DFJK40T030BB	FFC IO40	1
E23	DFJS1037ZA	CABLE POWER	1
E24	N2EABEC00006	TOUCHPAD	1
E25	BR-2330A/SF	LITHIUM COIN BATTERY	1
E26	DFJK12U050BB	FFC SD	1
E27	DFJK40U056BB	FFC MP OUTER	2
E28	DFJS1032ZA	MODEM CABLE	1
E29	DFJS1035ZA	CABLE SATA SIGNAL	1
E30	DFJS1036ZA	CABLE USB	1
E31	DFJS1046ZA	LAN CABLE	1
E32	K1NA26Z00001	CONNECTOR	1
E33	K1NA68Z00008	CONNECTOR	1
E34	 N5HAZ0000014	MODEM	1
E35	DFWV08A0090	LCD UNIT ASS'Y	1
E35-1	DL3DE0183AAA	LCD PREPARATION UNIT	1
E35-2	DFHG1926YA	LCD SIDE DAMPER(U)	1
E35-3	DFHG1927ZA	TS SPACER(L)	2
E35-4	DFHG1928ZA	TS SPACER(S)	2
E35-5	DFHG1882YA	LCD DMP L	1
E35-6	DFHG1883YA	LCD DMP R	1
E35-7	DFMD3130ZA	LCD HOLD PLATE L	1
E35-8	DFMD3131ZA	LCD HOLD PLATE R	1
E35-9	 L9DZYY000006	HEATER(LCD)	1
E35-10	DXYN2+C3FNL	SCREW	2
E36	N1ZYYY000005	WLAN MAIN ANTENNA	1
E37	N1ZYYY000006	WLAN SUB ANTENNA	1


E38	DFUP1565ZA	FPC	1
E1001 (E)	N2ABZJ000034	KEYBOARD UK	1
E1001 (G)	N2ABZJ000038	KEYBOARD GERMAN	1
E1001 (F)	N2ABZJ000037	KEYBOARD FRENCH	1
E1001 (T)	N2ABZJ000039	KEYBOARD ITALIAN	1
E1001 (P)	N2ABZJ000041	KEYBOARD SPANISH	1
E1001 (S)	N2ABZJ000040	KEYBOARD SWEDISH	1
E1001 (L)	N2ABZJ000035	KEYBOARD BELGIAN	1
Accessories			
A1	△ NCR-B/901A	LITHIUM ION BATTERY PACK	1
A2	△ CF-AA1653AM5	AC ADAPTOR	1
A3	DFHR6207ZA	PEN	1
A4	DFHS9017ZA	CLOTH, TOUCHPANEL	1
A5	DFME0148ZA	TETHER	1
A6	*AC CABLE		1
A7	*OPERATING INSTRUCTION MANUAL		1
A8	DFJS954ZA	MODEM CABLE	1
Note: About the parts which written " * " above, please order to Computer Products Europe (CPE) written below. Matsushita Electric (U.K.) Ltd. Computer Products Europe (CPE) TEL: +44-(0)29-20736170 FAX: +44-(0)29-20736250			
Packing Material			
P1	DFPH0064ZA	PACKING PAPER	1
P2	DFPP0143ZA	PROTECTION BAG	1
P3	DFPE0852ZA	MANUAL HOLDER	1
P4	DFPN0845ZA	DB CUSHION	1
P5	DFPK1202ZA	PACKING CASE(OVERSEAS)	1
Mechanical Parts			
K1	DFWV99A0114	HDD MOUNTING KIT	1
K1-1	DL3UP1557AAA	HDD PACK FPC UNIT	1
K1-2	DFMD8041YA	HDD L CASE ASS'Y	1
K1-3	DFMD8042YA	HDD U CASE ASS'Y	1
K1-4	DFHG1750YB	HDD CUSHION(YELLOW)	4
K1-5	DFHG1933ZA	FIX CORE CUSHION	2
K1-6	DFHG1934ZA	HDD FORMING M2	2
K1-7	DFHP7076ZA	DOUBLE SIDE TAPE B	1
K1-8	DFHP7101ZA	DOUBLE SIDE TAPE(7X30)	1
K1-9	DFHR6264ZA	SATA GUARD	1
K1-10	DFHR7900ZA	TAPE	1
K1-11	DFMX0634ZA	CD EDGE SHEET	1
K1-12	DFMY3143YA	HDD THERMAL PLATE UPPER	2
K1-13	△ L9DZYY000008	HEATER(HDD)	1
K1-14	DFHR8522YA	HDD DAMPER ASS'Y	1
K1-15	DFHR8523YA	HDD SIDE D ASS'Y	1
K1-16	DFHE5025XA	SCREW	1
K1-17	DRQT2+E8FKL	SCREW	4
K1-18	DFMX1266ZA	HDD INS SHEET	1
K2	△ DFKM8183WB-0	TOP CABINET ASS'Y	1
K2-1	DFBD9010ZA-0	POWER SW ASS'Y	1
K2-1-1	DFHR6251ZA-0	POWER SW FLAME	1
K2-1-2	DFHR6252ZA-0	POWER SW KNOB	1
K2-1-3	DFUQ0114ZA	POWER SW KNOB SPRING	1
K2-2	DFBD9011ZA-0	WIRELESS OFF SW ASS'Y	1
K2-2-1	DFHG1885YA	WM SW CUSHION	1
K2-2-2	DFHP7140ZAT	TAPE	1
K2-2-3	DFHR3D54ZA-0	WM SW SHEET	1

K2-2-4		DFHR6257ZA	WIRELESS SW CASE	1
K2-2-5		DFHR6258ZA-0	WIRELESS SW KNOB	1
K2-2-6		DFMD7B10ZA	WM OFF SW PLATE	1
K2-2-7		XTB2+4GFN	SCREW	1
K2-3	△	DFKE8185ZA-0	MP LATCH ASS'Y	1
K2-3-1		DFUQ0113ZA	SD LATCH SPRING	1
K2-3-2		DRHM0110ZAT	SCREW	2
K2-3-3		DFBD0190ZA-0	MP LATCH LEVER	1
K2-3-4	△	DFKE0861ZA-0	MP LATCH CASE	1
K2-4	△	DFKE8186ZA-0	SD LATCH ASS'Y	1
K2-4-1		DFBD0192ZA-0	SD LATCH LEVER	1
K2-4-2	△	DFKE0867ZA-0	SD LATCH CASE	1
K2-4-3		DFUQ0113ZA	SD LATCH SPRING	1
K2-4-4		DRHM0110ZAT	SCREW	2
K2-5	△	DFKE8187YA-0	CN LATCH ASS'Y	1
K2-5-1		DFBD0193ZA-0	CN LATCH LEVER	1
K2-5-2	△	DFKE0869YA-0	CN LATCH CASE	1
K2-5-3		DFUQ0116ZA	CN LATCH SPRING	1
K2-5-4		DRHM0110ZAT	SCREW	3
K2-6	△	DFKE8188ZA-0	MP COVER ASS'Y	1
K2-6-1		DFBH3051ZA	LID HINGE	3
K2-6-2		DFGE0139ZA-0	MP COVER SHEET	1
K2-6-3		DFHR3E55ZA	MP COVER CUSHON	2
K2-6-4	△	DFKE0860ZA-0	MP COVER	1
K2-6-5		DRQT26+D3KLT	SCREW	3
K2-7	△	DFKE8189ZA-0	SD COVER ASS'Y	1
K2-7-1		DFBH3051ZA	LID HINGE	2
K2-7-2		DFGE0140ZA-0	SD COVER SHEET	1
K2-7-3	△	DFKE0866ZA-0	SD COVER	1
K2-7-4		DRQT26+D3KLT	SCREW	2
K2-8	△	DFKE8190XA-0	BATT COVER ASS'Y	1
K2-8-1		DFBH3051ZA	LID HINGE	2
K2-8-2		DFGE0141ZA-0	BATT COVER SHEET	1
K2-8-3		DFHR3E56ZA	BATT COVER CUSHION	2
K2-8-4		DFHR3E59ZA	BATT LID KNOB SHEET	1
K2-8-5	△	DFKE0799ZA-0	LID KNOB	1
K2-8-6	△	DFKE0862XA-0	BATT COVER	1
K2-8-7		DFMD7B12ZA	BATT LATCH ANGLE	1
K2-8-8		DFUN0084XA	BATT LATCH SPRING	1
K2-8-9		DFUS0292ZB	LID KNOB SPRING PLATE	1
K2-8-10		DRQT26+D3KLT	SCREW	2
K2-8-11		DXQT2+F3FNLT	SCREW	1
K2-9	△	DFKE8191YA-0	HDD COVER ASS'Y	1
K2-9-1		DFBD0191ZA-0	HDD COVER LOCK KNOB	1
K2-9-2		DFBH3051ZA	LID HINGE	2
K2-9-3		DFGE0149ZA-0	HDD COVER SHEET L	1
K2-9-4		DFGE0150ZA-0	HDD COVER SHEET R	1
K2-9-5		DFHR3E57ZA	HDD COVER CUSHION	1
K2-9-6	△	DFKE0864YA-0	HDD COVER	1
K2-9-7	△	DFKE0865ZA-0	HDD COVER LID KNOB	1
K2-9-8		DFUS0311ZA	HDD COVER SPRING PLATE	1
K2-9-9		DRQT2+D25KMT	SCREW	4
K2-9-10		DRQT26+D3KLT	SCREW	2
K2-10	△	DFKE8192ZA-0	CN COVER ASS'Y	1
K2-10-1		DFBH3051ZA	LID HINGE	2
K2-10-2		DFGE0143ZA-0	CN COVER SHEET L	1
K2-10-3		DFGE0144ZA-0	CN COVER SHEET R	1

K2-10-4		DFHR3E58ZA	CN PACKIN-SLIDE	1
K2-10-5	△	DFKE0868ZA-0	CN COVER	1
K2-10-6	△	DFKE0875ZA-0	CN SLIDE COVER	1
K2-10-7		DFMD7B11ZA	CN WATER PROOF PLATE	1
K2-10-8		DRQT26+D3KLT	SCREW	3
K2-11		DFJS1030ZA	SP CABLE	1
K2-12		L0AA04C00012	SPEAKER	1
K2-13		DFGE0111YA-0	TOP LOOK SHEET	1
K2-14		DFGE0145ZA-0	REAR BELT COVER SHEET	2
K2-15		DFGL0153ZA-0	SD LABEL	1
K2-16		DFHE5121YA	SCREW	8
K2-17		DFHG1699ZA	LCD LOCK SHEET	2
K2-18		DFHG1891ZA	HANDLE ARM CUSHION	2
K2-19		DFHG1892ZA	SPEAKER CASE CUSHION	1
K2-20		DFHG1931ZA	WM SW CASE CUSHION	1
K2-21		DFHG1973ZAT	SD SHEET SPACER TW	1
K2-22		DFHM0419YA	LCD FOOT CAP	2
K2-23		DFHR3D56ZA-0	CN COVER SHEET	1
K2-24		DFHR3E66ZA	POWER SW CUSHION	1
K2-25		DFHR6291YA-0	FRONT BELT COVER	2
K2-26	△	DFKE0851ZA-0	HANDLE BASE L	1
K2-27	△	DFKE0852ZA-0	HANDLE BASE R	1
K2-28	△	DFKE0856ZA-0	SPEAKER CASE A	1
K2-29	△	DFKE0876ZA	SPEAKER CASE B	1
K2-30	△	DFKM0516XA-0	TOP CASE	1
K2-31		DFMD2170ZA	KENSINGTON PLATE	1
K2-32		DFMD2172ZA	HEAT PIPE ANGLE A	1
K2-33		DFMY0414ZA	CPU HEAR PIPE RUBBER	1
K2-34		DFMY5037ZA	HEAT PIPE UNIT A(TOP)	1
K2-36		DFUQ0102ZA	POTRE SPRING	2
K2-37		DFWP0145ZA	WIRELESS SW FPC	1
K2-38		DRHM0118ZAT	SCREW	2
K2-39		DRQT26+D3KLT	SCREW	15
K2-40		DRQT26+D5KLT	SCREW	4
K2-41		DRSN4+6FKLT	SCREW	2
K2-42		DXQT26+D4NLT	TW SCREW	3
K2-43		DXQT3+F4FNLT	SCREW	2
K2-44		DFKH8009ZA-0	HANDLE ASS'Y	1
K3	△	DFKF8170ZA-0	BOTTOM CAB ASS'Y	1
K3-1	△	DFKF0271ZA-0	BOTTOM CASE	1
K3-2		DFMD2172ZA	HEAT PIPE ANGLE A	1
K3-3		DFMD2173ZA	HEAT PIPE ANGLE B	1
K3-4		DFMY0414ZA	CPU HEAR PIPE RUBBER	1
K3-5		DFMY0437ZA	HEAT PIPE RUBBER B	1
K3-6		DFMY5038ZA	HEAT PIPE UNIT B(BTM)	1
K3-8		DRQT26+D3KLT	SCREW	5
K4		DFGE0087ZA-0	BOTTOM COVER SHEET D	1
K5		DFGE0138ZA	BOTTOM CASE SHEET	1
K6		DFHR3G28ZA	BTM ESD SPACER	1
K7		DFUS0296ZA	MP FINGER	1
K8		DFMC0406XA	GASKET FOR MP	1
K9		DFWV80A0367	LCD FRONT CABINET/TS PANEL ASS'Y	1
K9-1	△	DFKF8171YA-0	LCD FRONT ASS'Y	1
K9-1-1		DFBH1180ZA	HINGE ASS'Y R	1
K9-1-2		DFBH1181ZA	HINGE ASS'Y L	1
K9-1-3		DFHR3E61ZA	TS SIDE DAMPER PC	8
K9-1-4		DRYN4+J10KLT	SCREW	2


K9-2	DFWV84A0277	TOUCH SCREEN PANEL KIT	1
K9-2-1	DL3DV0183AAA	TOUCH SCREEN PANEL	1
K9-2-1-1	DFHR9068ZA	PROTECTIVE FILM	1
K9-2-2	DFHP7246ZA	TS FIXED TAPE	1
K9-2-3	DFHR3695ZA	TS FPC SPACER	1
K9-3	DFHE0843ZA	LCD MAGNET	1
K9-4	DFHG1929ZA	MAGNET CUSHION	1
K10	DFBS8003ZA-0	LCD LATCH ASS'Y	1
K10-1	DFBS0073ZA-0	LCD LATCH	1
K10-2	DFHR6313ZA	LCD LATCH SLIDER	1
K11	DFDF5024ZA	LCD LATCH SHAFT	1
K12	DFUN0083ZA	LCD LATCH SPRING	1
K13	DFWV80C0513	LCD REAR CABINET ASS'Y	1
K13-1	△ DFKM8184ZA-0	LCD REAR ASS'Y	1
K13-2	DFGB0131ZA-0	PANASONIC BADGE	1
K15	DFHE0890ZA	CONDUCTION SHEET	1
K16	DFHG1886ZA	LCD CABLE COVER CUSHION	1
K17	DFHG1887ZA	KBD CABLE COVER CUSHION	1
K18	DFHG1888ZA	DIMM COVER CUSHION	1
K19	DFHG1890ZA	ANT CABLE CUSHION	1
K20	DFHR3159ZA	TOP CASE SHEET	3
K21	DFHR3E98ZA	KB WP SHEET	1
K22	DFHR3E99ZA	ANT CABLE SHEET	1
K23	DFHR3F67ZA	TOP SCREW WP SHEET	1
K24	DFHR3F75ZA	LCD CABLE PLATE A	1
K25	DFHR3G26ZA	BOTTOM TOP SPACER SHEET A	3
K26	DFHR3G27ZA	BOTTOM TOP SPACER SHEET B	1
K27	DFHR6270ZA	DIMM STOPPER BASE	1
K28	DFHR6296ZA	DIMM COVER SPACER	1
K29	△ DFKE0857ZA-0	LCD CABLE COVER	1
K30	△ DFKE0858YA-0	KB CABLE COVER	1
K31	△ DFKE0859ZA-0	DIMM COVER	1
K32	△ DFKE0873ZA-0	HINGE COVER L	1
K33	△ DFKE0874ZA-0	HINGE COVER R	1
K34	DFMD2177ZA	ANTENNA CABLE PLATE	1
K35	DFMX0634ZA	CD EDGE SHEET	5
K36	DFMX0999ZA	RJ11 FIX CABLE SHEET	5
K37	DFMY0434YA	CPU HEAT RUBBER	1
K38	DFMY0438ZA	W-LAN HEAT RUBBER	1
K39	DFMY0439ZA	DIMM HEAT PLATE	1
K40	DFHR3E83YA	CABLE TAPE	2
K41	DFMD7B13ZA	GPS BT ANGLE	1
K42	DFMX1260YA	GPS INS SHEET A	1
K44	DFGX0457ZA-0	LCD CORNER COVER L	1
K45	DFGX0458ZA-0	LCD CORNER COVER R	1
K46	DFGX0459ZA-0	LCD CORNER SIDE COVER L	1
K47	DFGX0460ZA-0	LCD CORNER SIDE COVER R	1
K49	DFHG1881ZA	LCD CABLE BUSH	1
K50	DFHG1884ZA	LCD DROP HOLDER	2
K52	DFHG1942ZA	REAR SCREW SHEET	1
K53	DFHR3159ZA	TOP CASE SHEET	4
K54	DFHR3F07ZB	LCD CABLE WP SHEET	1
K55	DFHR3F49ZA	CABLE TAPE 5X18	10
K56	DFHR7968ZA	CDD SHEET	1
K57	△ DFKE0871ZA-0	W-LAN ANT COVER L	1
K58	△ DFKE0872ZA-0	W-LAN ANT COVER R	1
K59	DFMC0685ZA	LCD CONDUCTION TAPE	1

K60		DFMC0863ZA	INV SHIELD CASE	1
K61		DFMC0873ZA	INV MIL SHIELD	1
K62		DFMC0874YA	INV SHEILD TAPE	1
K63		DFMC0876ZA	INV SHIELD CASE OUTSIDE	1
K65		DFMX1241ZA	INVERTER CASE	1
K66		DFQT9664ZA-1	TOUGH BOOK LABEL(W)	1
K70		DFHP7261YA	KB SPACER TAPE	1
K71		DFHR3E65WA	KB SPACER SHEET	1
K73		DFHR3G46ZA	KB HOOK SPACER LOWER	3
K74		DFHR6260ZA-0	KB COVER	1
K75		DFMD7B05YA-0	KB BACK PLATE	1
K76		DFQT0045ZA	ENERGY STAR LABEL	1
K77		DFQT0046ZA	VISTA CAPABLE LABEL	1
K78		DFQT9981ZA	CENTRINO DUO LABEL	1
K79		DFGB0132ZA-0	TOUGH BOOK BADGE(SILVER)	1
K80	△	DFGT1214ZA	RATING SHEET MK1 CE	1
K81		DFGE0151ZA-0	WM COVER 30	1
K82		DFGP0201ZA-0	PALM TOP SHEET	1
K83		DFHE1037ZA	DC GASKET	1
K84		DFHG1901ZA-0	TOUCH PAD SW RUBBER	1
K85		DFHG370ZA	FOOT RUBBER	4
K86		DFHM0396ZA	BATT CN PIN	2
K87		DFHP7140ZA	DOUBLE SIDE TAPE CPU	1
K88		DFHR3445ZA	HEAT DISSIPATION RUBBER	2
K89		DFHR3591ZB	INSU SHEET CHIP SET	1
K90		DFHR3619ZA	LEDX6 SPACER SHEET	1
K91		DFHR3636ZA	CABLE HOLD SHEET	1
K92		DFHR3643ZA	TP BOTTOM TAPE	1
K93		DFHR3E67ZA	PAD WP SHEET	1
K94		DFHR3E93XA	1394 SHEET	1
K95		DFHR3E97ZA	P LED SHEET	1
K96		DFHR3F46ZA	ICH SHEET	1
K97		DFHR3F49ZA	CABLE TAPE 5X18	2
K98		DFHR3F60ZA	PC EDGE SHEET	1
K99		DFHR3F87ZA	PAD PROTECT SHEET	1
K100		DFHR3G02ZA	SERIAL COVER SPACER	1
K101		DFHR3G03ZA	SERIAL WP SHEET	1
K102		DFHR3G04ZA	USB COVER SPACER	1
K103		DFHR3G05ZA	USB WP SHEET	1
K104		DFHR3G09ZA	SERIAL INSIDE SPACER	1
K105		DFHR3G10ZA	USB INSIDE SPACER	1
K106		DFHR3G25ZA	TP FPC SHEET	1
K107		DFHR3G32ZA	BATTRY SLIDE SHEET	1
K108		DFHR3G41ZA	BATT CUSHION	1
K109		DFHR6064ZA	TOUCH PAD SW KNOB IN	1
K110		DFHR6246ZA	HDD GUIDE	1
K111		DFHR6247YA	BATT GUIDE	1
K112		DFHR6253ZA-0	SERIAL CN COVER	1
K113		DFHR6254ZA-0	USB CN COVER	1
K114		DFHR6255ZA-0	DC IN COVER	1
K115		DFHR6256ZA-0	POWER SW LED PANEL	1
K116		DFHR6259YA-0	PALM TOP COVER	1
K117		DFHR6295ZA	HDD CABLE COVER	1
K118		DFHR7953ZA	LAN SHEET	1
K119		DFHR8521ZA	BATT CN PIN CUSHION	2
K120		DFMD2171ZA-0	MIC JACK ANGLE A	1
K121		DFMD4066ZA-0	DC USB COVER PLATE	1

K122	DFMD4067ZA-0	SERIAL COVER PLATE	1
K123	DFMD4069ZA	ICH PLATE	1
K124	DFMD7B00ZA	BATT HDD CN ANGLE	1
K126	DFMX0702ZA	INSULATION SHEET	1
K129	DFMX1006ZA	CABLE SHEET	1
K130	DFMX1256ZA	TP INS SHEET	1
K131	DFHG1403YA-0	KB SUPPORT RUBBER	1
K132	DFHG1467ZA	LEAD SW CUSHION	1
K133	DFHP7275ZA	CN TAPE L	1
K134	DFHP7276ZA	CN TAPE S	1
K135	DFHR3E94ZA	DMD CABLE SHEET	1
K136	DFHR3F32ZA	MODEM CN SHEET	1
K137	DFHR3F59ZA	MAIN PCB SPACER	1
K138	DFHR3G11ZA	CN SHEET	1
K139	DFHR3G47ZA	USB SCREW COVER	1
K140	DFHR3G48ZA	USB SCREW COVER B	1
K141	DFHR6261ZA	MODEM LAN CASE	1
K142	DFHR6272ZA	MP GUIDE	1
K143	 DFKE0895ZA	MAIN CHASSIS	1
K144	DFMC0875ZA	MAIN CHASSIS SHIELD	2
K145	DFMC0880ZA	BUSTERAIDE 15X32	2
K146	DFMD7B22ZA	CN PLATE	1
K148	DFMX0635ZB	EDGE SHEET	2
K149	DFMX0702ZA	INSULATION SHEET	1
K150	DFMX0703ZA	MAIN INSULATION SHEET 2	1
K152	DFMX1270ZA	SATA CABLE SHEET	1
K153	DFMX1280ZA	EXP FPC SHEET	1
K155	DFQT9745ZA	BOARD LABEL	1
K156	DFHR3F51ZA	MIC JACK SHEET	1
K157	DFHR3F53ZA	IO PWB SHEET	1
K158	DFHR3F63ZA	IO PWB SHEET B	1
K159	DFMD7B09ZA	MIC JACK ANGLE B	1
K161	DFHP7118ZA	DOUBLE SIDE TAPE	1
K162	DFHR3G74ZA	PW SW CUSHION	1
K163	DFHR3G93ZA	DC-IN WP SHEET	1
N1	DRHM0002ZA	SCREW	7
N2	DRHM5054XA	SCREW	8
N3	DRQT2+G6FKL	SCREW	2
N4	DRQT26+D3FKL	SCREW	28
N5	DRQT26+D4FKL	SCREW	28
N6	DRQT26+E4FKL	SCREW	13
N7	DRSB26+10HKL	SCREW	13
N8	DRSB3+8FKL	SCREW	6
N9	DRYN4+J10FKL	SCREW	4
N10	DXSB4+15FNLB	SCREW	2
N11	DFHE5025XA	SCREW	10
N12	DXQT2+F3FNL	SCREW	4
N13	DRSB4+10FKL	SCREW	2
N14	DFHE5058ZB	SCREW	4
N15	DRHM5104ZA	SCREW	5
N16	DRQT26+E5FKL	SCREW	7
N17	DRQT26+E6FKL	SCREW	3
N18	DRSB26+8HKL	SCREW	1
N19	DRSN2+10FNL	SCREW	2
N20	DXQT2+D4FNL	SCREW	4
N21	DXQT2+E12FNL	SCREW	2
N22	DXQT2+G4FNL	SCREW	8

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-30CTQAZxx

REF. NO and AREA	PART NO.	DESCRIPTION	Q'TY
MAIN PCB			
C 1, 2, 3, 5, 6, 7, 10, 11, 12, 15, 16, 18, 19, 20, 22, 23, 25, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 47, 55, 56, 59, 63, 64, 66, 101, 103, 105, 107, 116, 118, 120, 122, 155, 185, 198, 199, 200, 215, 216, 223, 244, 252, 253, 258, 259, 274, 319,	F1J0J106A013	CAPACITOR, 6.3V, 10 μ F	68
C 4, 57, 61, 88, 160, 164,	EEFCX0D221R	CAPACITOR, 2V, 220 μ F	6
C 8, 9, 13, 17, 21, 26, 49, 50, 51, 52, 53, 54, 58, 60, 62, 65, 67, 68, 69, 70, 71, 73, 74, 75, 76, 78, 85, 89, 95, 96, 97, 98, 100, 102, 104, 106, 108, 111, 112, 113, 114, 117, 119, 121, 123, 124, 147, 148, 149, 150, 154, 156, 157, 159, 161, 162, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 186, 187, 204, 207, 209, 213, 217, 219, 222, 224, 225, 226, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 245, 246, 247, 248, 249, 250, 260, 263, 264, 265, 273, 276, 278, 279, 280, 281, 288, 289, 290, 291, 292, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 309, 315, 316, 317, 318, 320, 340, 345, 346, 347, 356, 360, 362, 363, 364, 366, 367, 368, 369, 370, 372, 373, 374, 387, 389, 390, 391, 392, 393, 394, 395,	F1G1C104A042	CAPACITOR, 16V, 0.1 μ F	190
C 45, 127, 128, 129, 130, 153, 158, 188, 189, 190, 191, 195, 197, 206, 266, 272, 275, 287, 350, 352, 353, 358, 359, 365, 375, 381, 388, 418, 459, 465, 497, 509, 514, 515, 519, 571,	F1G1E103A062	CAPACITOR, 25V, 0.01 μ F	38
C 48, 444, 477,	F1G1H222A496	CAPACITOR, 50V, 2200pF	3
C 72,	EEFCX0D331R	CAPACITOR, 2V, 330 μ F	1
C 77, 81, 82, 83, 84, 86, 90, 93, 109, 131, 132, 133, 134, 227, 314,	F1H0J1050022	CAPACITOR, 6.3V, 1 μ F	15
C 79, 80, 87, 125, 126, 575,	F1J0J4750019	CAPACITOR, 6.3V, 4.7 μ F	6
C 91, 92, 151, 152, 163, 165, 193, 196, 205, 212, 214, 221, 254, 255, 256, 257, 313, 327, 328, 339, 361, 466, 467, 543, 570, 581, 585, 586, 588, 589, 590,	F1H1A1050015	CAPACITOR, 10V, 1 μ F	31
C 135, 136,	F1G1H180A542	CAPACITOR, 50V, 18pF	2

C 141, 142, 143, 144, 145, 146, 210, 211, 269, 282, 321, 322, 323, 325, 326, 329, 330, 334, 344,	F1G1A104A014	CAPACITOR, 10V, 0.1µF	19
C 192,	F1G1H6R0A544	CAPACITOR, 50V, 6.0pF	1
C 194,	F1G1H5R00004	CAPACITOR, 50V, 5pF	1
C 208, 513,	F1G1C473A004	CAPACITOR, 16V, 0.047µF	2
C 218, 220,	F1G1H2R0A543	CAPACITOR, 50V, 2pF	2
C 251,	F1L3D102A003	CAPACITOR, 2000V, 1000pF	1
C 267, 268, 285, 286, 574,	F1G1H271A495	CAPACITOR, 50V, 270pF	5
C 283, 584,	F1H1A474A028	CAPACITOR, 10V, 0.47µF	2
C 284, 439, 460, 476, 479, 500, 507, 535, 538, 540, 542, 544, 545,	F1H1H104A748	CAPACITOR, 50V, 0.1µF	13
C 293, 294, 295, 296, 297, 527, 528,	F1J1E105A080	CAPACITOR, 25V, 1µF	7
C 308, 383, 384, 458, 483,	F1G1H1010005	CAPACITOR, 50V, 100pF	6
C 310, 311, 312, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 421, 423, 425, 433, 437, 438, 440, 461, 480, 482, 484, 487, 501, 504,	F1G1H102A496	CAPACITOR, 50V, 1000pF	33
C 324, 349, 445, 446, 464, 469, 485, 506, 577, 578,	F1J0J475A009	CAPACITOR, 6.3V, 4.7µF	12
C 332, 333, 337, 338, 341, 342, 343,	F1G0J224A001	CAPACITOR, 6.3V, 0.22µF	7
C 335, 336,	F1J0J226A048	CAPACITOR, 6.3V, 22µF	2
C 417, 419,	F1G1A683A014	CAPACITOR, 10V, 0.068µF	2
C 429, 442, 463, 478, 488,	F1G1H221A495	CAPACITOR, 50V, 220pF	5
C 431, 502,	F1G1H470A542	CAPACITOR, 50V, 47pF	2
C 432,	F1G1H151A495	CAPACITOR, 50V, 150pF	1
C 434,	F1H1H1830001	CAPACITOR, 50V, 0.018µF	1
C 435,	F1G1H561A496	CAPACITOR, 50V, 560pF	1
C 441, 510,	F1G1H331A496	CAPACITOR, 50V, 330pF	2
C 447, 556,	F1J1E334A081	CAPACITOR, 25V, 0.33µF	2
C 448, 449, 450, 456, 474, 491, 496, 511, 536, 546,	F1L1E106A017	CAPACITOR, 25V, 10µF	10
C 451, 452, 453, 454,	EEFSX0D331ER	CAPACITOR, 2V, 330µF	4
C 455, 492,	EEFCD0D151ER	CAPACITOR, 2V, 150µF	2
C 457, 486, 498,	F1H1C224A074	CAPACITOR, 16V, 0.22µF	3
C 462, 481, 505,	F1G1H220A542	CAPACITOR, 50V, 22pF	3
C 470, 472,	EEFCD0D101ER	CAPACITOR, 2V, 100µF	2
C 489,	F1G1H472A496	CAPACITOR, 50V, 4700pF	1
C 493, 494,	EEFCX0J101R	CAPACITOR, 6.3V, 100µF	2
C 503,	F1G1H471A496	CAPACITOR, 50V, 470pF	1
C 512,	EEFCD0G101ER	CAPACITOR, 4V, 100µF	1
C 517, 518,	EEFCX0G151R	CAPACITOR, 2V, 150µF	2
C 541,	F1G1H152A496	CAPACITOR, 50V, 1500pF	1
C 547, 548, 549,	DCUI1C106HDB	CAPACITOR, 16V, 10µF	3
C 557, 558,	F1G1H8R0A544	CAPACITOR, 50V, 8pF	2
C 582, 583,	F1G1H100A544	CAPACITOR, 50V, 10pF	2
CF 1, 2,	D4CC1103A038	THERMISTOR	2
CN 1,	K1MN50AA0018	CONNECTOR	1
CN 2, 5, 6,	K1MY40A00001	CONNECTOR	3
CN 3,	K1KA14AA0266	CONNECTOR	1
CN 4, 29,	K1MN12BA0134	CONNECTOR	2
CN 7, 8, 11, 30,	K1MY40BA0220	CONNECTOR	4
CN 9,	K1KY10BA0084	CONNECTOR	1
CN 10,	K1MN80BA0246	CONNECTOR	1
CN 12,	K1MN30AA0058	CONNECTOR	1
CN 13,	K1MY13BA0102	CONNECTOR	1
CN 14,	K1MY16BA0097	CONNECTOR	1
CN 15,	K1MY07BA0096	CONNECTOR	1
CN 16,	K1KA20Z00004	CONNECTOR	1
CN 17,	K1KA30BA0060	CONNECTOR	1
CN 18,	K1MN08BA0134	CONNECTOR	1

CN 19,		K1KA02AA0262	CONNECTOR	1
CN 20,		K1KA08AA0266	CONNECTOR	1
CN 21,		K1MYL0B00003	CONNECTOR	1
CN 22,		K1MYL0B00004	CONNECTOR	1
CN 24,		K1KY12A00004	CONNECTOR	1
CN 25,		K1MN10BA0134	CONNECTOR	1
CN 26,		K1KA02BA0014	CONNECTOR	1
CN 28,		K1FY104B0009	CONNECTOR	1
CN 31,		K1KA12BA0014	CONNECTOR	1
CN 37,		K1MY52BA0190	CONNECTOR	1
D 1, 2, 3, 6, 7, 19,		MA2J72900L	DIODE	6
D 4, 43, 45, 50,		B0JDBE000002	DIODE	4
D 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22,		B0ADCJ000041	DIODE	13
D 24, 46, 47, 48, 49,		B0JCPD000023	DIODE	5
D 25, 27, 29, 30, 32, 53,		B0JCMD000010	DIODE	6
D 26, 28, 31,		B0ADCJ000025	DIODE	3
D 33, 34, 35, 36, 37, 38,		MAZ80620ML	DIODE	6
D 39, 41, 42,		MA2S111-TX	DIODE	3
D 40,		B2ABAM000002	DIODE	1
D 44,		B0JDRE000007	DIODE	1
D 51,		MAZ81200ML	DIODE	1
D 52,		MAZ81800ML	DIODE	1
D 54,		B0KB00000044	DIODE	1
D 55,		MA3S132E0L	DIODE	1
F 1, 4, 7,	⚠	K5H502Z00003	FUSE, 5A, 32V	3
F 2, 5, 6, 8, 12,	⚠	K5H202Z00005	FUSE, 2A, 32V	5
F 3,	⚠	K5H402Z00003	FUSE, 4A, 32V	1
F 10,	⚠	K5H802300002	FUSE, 8A, 72V	1
F 11,	⚠	K5H123Y00001	FUSE, 12A, 65V	1
IC 1,		C2GBC0000304	CPU	1
IC 2,		C1CB00002360	IC, CHIPSET	1
IC 3,		C0JBZZ000388	IC, CLOCK GENERATOR	1
IC 4,		C1DB00001541	IC, CHIPSET	1
IC 5,		C1CB00002575	IC, LAN CONTROLLER	1
IC 7,		C0JBAB000832	IC, LOGIC	1
IC 11, 12, 13,		C0DBALH00003	IC	3
IC 14,		C0CBCAC00161	IC	1
IC 15,		C1CB00002540	IC, TEMPERATURE SENSOR IC	1
IC 16,		C0DBZYY00017	IC	1
IC 20,		C3EBFY000003	IC, EPROM	1
IC 21,		C0DBEFE00003	IC	1
IC 23,		C0DBZYY00019	IC, POWER MANAGEMENT SWITCH	1
IC 24,		DA2205IDBLET	IC, LOGIC	1
IC 25,		C0ZBZ0000978	IC	1
IC 27,		C3FBLY000024	IC, SPI FLASH MEMORY	1
IC 28,		C2CBJA000003	IC, MICON	1
IC 29,		C0CBCBC00181	IC	1
IC 30,		C1CB00002449	IC, AUDIO CODEC	1
IC 31, 86, 93,		C0JBAS000215	IC, GATE LOGIC	3
IC 32, 58, 59, 61, 62, 68, 69, 87, 108, 109,		C0JBAA000362	IC, LOGIC	10
IC 33,		C0ABZA000047	IC, AMP	1
IC 34, 35, 36,		C0EBE0000459	IC	3
IC 37, 78,		C0EBH0000457	IC	2
IC 38, 39,		C0DBZYY00026	IC, USB POWER SW	2
IC 40,		C0DBAYY00155	IC, DC/DC	1
IC 41,		C0DBEFH00002	IC, REGULATOR	1
IC 42,		C0EBE0000333	IC	1
IC 43, 44,		C0EBH0000336	IC	2
IC 45,		C0DBDJH00009	IC, LINER	1
IC 47,		C0JBAA000381	IC, LOGIC	1
IC 50,		C1CB00002328	IC, CARD BUS CONTROLLER	1
IC 51,		C1DB00001159	IC, PERIPHERAL LSI	1

IC 52,		C0CBCBC00137	IC, REGULATOR	1
IC 54, 63, 64, 66,		C0JBAA000345	IC, LOGIC	4
IC 55, 110,		C0JBAB000624	IC	2
IC 56,		C0JBAE000321	IC, LOGIC	1
IC 65, 72, 96, 101, 102, 107,		C0JBAB000621	IC, LOGIC	6
IC 67,		C1CB00002268	IC, SECURITY CHIP	1
IC 70,		C0ABBA000093	IC, OP AMP	1
IC 71,		C0JBAD000236	IC, LOGIC	1
IC 76,		C3EBDY000003	EEPROM	1
IC 77,		C1CB00002279	IC	1
IC 79, 80, 88,		C0JBAZ002836	IC, LOGIC	3
IC 83, 84,		C0JBAZ002837	IC, LOGIC	2
IC 85,		C0JBAC000367	IC, LOGIC	1
IC 92,		C1CB00002497	IC, USB HUB	1
IC 94, 95,		C0JBAZ002372	IC, LOGIC	2
IC 99,		AN12945A-VB	IC, AUDIO AMP	1
IC 100,		C0JBAC000363	IC, GATE LOGIC	1
IC 103, 104, 105,		C0JBAA000347	IC, 1 GATE LOGIC	3
IC 106,		C0JBAZ002387	IC, LOGIC	1
KJ 1,	⚠	K2EYB000001	JACK	1
L 1, 3,		G1C1R0MA0076	INDUCTOR	2
L 2,		G1C91NM00001	INDUCTOR	1
L 4, 5, 12,		J0JJC0000015	INDUCTOR	3
L 8, 9,		J0ZZB0000080	INDUCTOR, COMMON MODE FILTER	2
L 10, 11, 15, 16, 27,		J0JCC0000186	INDUCTOR	5
L 17,		G1CR56ZA0140	INDUCTOR	1
L 18, 19, 21,		G1C4R7MA0022	INDUCTOR	3
L 20,		G1C2R8MA0022	INDUCTOR	1
L 22,		DDAZS100MT3T	INDUCTOR	1
L 23,		J0JKC0000007	INDUCTOR	1
L 24,		G1A160H00001	INDUCTOR	1
L 25,		G1BYYYY00009	INDUCTOR	1
L 26,		J0MAB0000116	INDUCTOR	1
PA 5, 6,	⚠	D4FB1R100009	SWITCH	2
Q 1, 2, 36, 52, 53, 59, 66, 96, 123, 131, 135, 142, 144,		B1CFGD000004	TRANSISTOR	13
Q 3, 4, 16, 30, 31, 32, 33, 35, 37, 58, 69, 81, 82, 83, 85, 86, 87, 88, 89, 101, 102, 103, 104, 107, 108, 115, 119, 121, 138, 141,		UNR9213J0L	TRANSISTOR	30
Q 5, 14, 25, 75, 76, 90, 99, 111, 112, 134, 145,		UNR9113J0L	TRANSISTOR	11
Q 6, 9, 12, 20, 47, 49, 127,		B1DHDC000028	TRANSISTOR	7
Q 7, 10, 18, 34, 39, 94, 100,		XP0421300L	TRANSISTOR	7
Q 13,		2SB0766ARL	TRANSISTOR	1
Q 22, 23, 24, 48, 50, 64, 74, 77, 78, 91, 98, 109, 110, 117, 118, 120, 143, 146,		UNR9214J0L	TRANSISTOR	18
Q 26, 28, 38, 51,		B1DDED000004	TRANSISTOR, FET	4
Q 27, 65, 73, 80,		B1MBEDA00017	TRANSISTOR	4
Q 40, 41, 42, 43, 44, 45, 137, 140,		XP0411500L	TRANSISTOR	8
Q 54, 56, 60, 61, 67, 68, 71, 72, 84, 126,		B1DBGD000006	TRANSISTOR	10
Q 55, 57,		B1DFGD000032	TRANSISTOR	2
Q 62, 70, 93,		B1CFGD000003	TRANSISTOR	3
Q 79, 105, 106, 113, 114, 122, 124, 136,		B1CHRD000001	TRANSISTOR	8
Q 92, 97,		B1DHDD000031	TRANSISTOR, FET	2
Q 116,		XP0421400L	TRANSISTOR	1
Q 125,		B1DHFD000015	TRANSISTOR	1
Q 132,		UNR9211J0L	TRANSISTOR	1
R 1, 2, 26, 41, 42, 46, 106, 184, 185, 223, 247, 248, 303, 304, 342,		ERJ2GEJ102X	RESISTOR, 1/16W, 1KΩ	15
R 3, 83, 87, 575,		D1H85604A024	RESISTOR ARRAY	4

R 8, 9, 29, 31, 37,		ERJ2RKF1000X	RESISTOR, 1/16W, 100Ω	5
R 10, 406, 407, 444,		ERJ2RKF1001X	RESISTOR, 1/16W, 1KΩ	4
R 11,		ERJ2RKF2001X	RESISTOR, 1/16W, 2KΩ	1
R 13,		ERJ2RKF51R0X	RESISTOR, 1/16W, 51Ω	1
R 14, 16,		ERJ2RKF27R4X	RESISTOR, 1/16W, 27.4Ω	2
R 15, 17, 32, 33,		ERJ2RKF54R9X	RESISTOR, 1/16W, 54.9Ω	4
R 20, 24, 178,		ERJ2GEJ560X	RESISTOR, 1/16W, 56Ω	3
R 21, 47, 99, 100, 101, 102, 149, 154, 164, 177, 183, 201, 225, 234, 238, 243, 254, 255, 256, 259, 260, 262, 265, 272, 273, 276, 281, 282, 298, 299, 307, 308, 317, 343, 344, 345, 347, 353, 354, 359, 371, 378, 392, 396, 427, 432, 439, 448, 449, 450, 469, 475, 499, 500, 501, 532, 533, 554, 560, 570, 579,		ERJ2GEJ103X	RESISTOR, 1/16W, 10KΩ	69
R 23,		ERJ2GEJ680X	RESISTOR, 1/16W, 68Ω	1
R 25,		ERJ2GEJ240X	RESISTOR, 1/16W, 24Ω	1
R 27, 529, 530, 531, 539,		ERJ2GEJ562X	RESISTOR, 1/16W, 5.6KΩ	5
R 28, 30,		ERJ2RKF2210X	RESISTOR, 1/16W, 221Ω	2
R 34, 35, 79, 142, 173,		ERJ2RKF24R9X	RESISTOR, 1/16W, 24.9Ω	5
R 38, 600,		ERJ2RKF2000X	RESISTOR, 1/16W, 200Ω	2
R 40, 104, 109, 136, 150, 156, 161, 167, 194, 232, 233, 261, 275, 278, 279, 305, 306, 334, 386, 389, 393, 400, 404, 410, 411, 412, 430, 433, 435, 519, 521, 558, 567, 568, 571, 572,		ERJ2GE0R00X	RESISTOR, 1/16W, 0Ω	40
R 49, 117, 151, 152, 209, 228, 280, 284, 338, 339, 379, 408, 490, 491, 492, 493, 494, 495, 556, 580,		ERJ2GEJ101X	RESISTOR, 1/16W, 100Ω	20
R 67, 68,		ERJ2RKF80R6X	RESISTOR, 1/16W, 80.6Ω	2
R 71, 72, 131, 257, 264, 267, 293, 318, 370,		ERJ2GEJ330X	RESISTOR, 1/16W, 33Ω	9
R 73, 93, 96, 111, 132, 135, 182, 244, 349, 360, 574, 602, 610,		D1H81034A024	RESISTOR ARRAY	13
R 74,		ERJ2RKF1501X	RESISTOR, 1/16W, 1.5KΩ	1
R 75,		ERJ2RKF2550X	RESISTOR, 1/16W, 255Ω	1
R 76, 77, 78,		ERJ2RKF1500X	RESISTOR, 1/16W, 150Ω	3
R 80,		ERJ3GEYJ220V	RESISTOR, 1/16W, 22Ω	1
R 81, 82, 84, 85, 86, 88,		D1HA56080001	RESISTOR ARRAY	6
R 89, 90, 91, 92, 158,		ERJ2GEJ1R0X	RESISTOR, 1/16W, 1Ω	5
R 98, 436, 561,		ERJ2GEJ221X	RESISTOR, 1/16W, 220Ω	3
R 107, 424, 425, 441, 442, 453, 454, 466, 467, 479, 480, 565, 566,		ERJ2GEJ100X	RESISTOR, 1/16W, 10Ω	13
R 129, 165, 174, 189, 196, 221, 222, 239, 283, 311, 312, 315, 319, 323, 325, 326, 346, 362, 363, 365, 367, 368, 369, 382, 383, 384, 423, 440, 484, 526, 534, 535, 562, 563, 569,		ERJ2GEJ104X	RESISTOR, 1/16W, 100KΩ	37
R 130,		D1H84724A024	RESISTOR ARRAY	1
R 133, 179, 180, 181, 242, 249, 252, 253, 285, 286,		DEARA8AJ103M	RESISTOR ARRAY	12
R 137, 138,		ERJ2GEJ470X	RESISTOR, 1/16W, 47Ω	2
R 143,		ERJ2RKF22R6X	RESISTOR, 1/16W, 22.6Ω	1
R 155,		D1H81044A024	RESISTOR, 1/16W, 100KΩ	1
R 159, 160,		ERJ3GEYJ121V	RESISTOR, 1/16W, 120Ω	2
R 163, 206, 207, 208, 245, 309, 310, 376, 377, 503, 504, 548, 583,		ERJ2GEJ472X	RESISTOR, 1/16W, 4.7KΩ	13
R 168,		ERJ2GEJ203X	RESISTOR, 1/16W, 20KΩ	1
R 169,		ERJ2GEJ106X	RESISTOR, 1/16W, 10MΩ	1

R 170, 210, 485, 486, 487, 488, 489, 582,		ERJ2GEJ105X	RESISTOR, 1/16W, 1M Ω	8
R 175, 190, 197, 235, 320, 327, 328, 329, 348, 364, 465, 483, 524, 525, 537,		ERJ2GEJ474X	RESISTOR, 1/16W, 470K Ω	15
R 198, 199, 269, 270, 271, 277, 340, 341, 478, 576,		ERJ2RHD103X	RESISTOR, 1/16W, 10K Ω	12
R 200, 429, 477,		ERJ2RHD303X	RESISTOR, 1/16W, 30K Ω	3
R 211,		ERJ2RKF4871X	RESISTOR, 1/16W, 4.87K Ω	1
R 212, 213, 214, 215, 216, 217, 218, 219,		ERJ2RKF49R9X	RESISTOR, 1/16W, 49.9 Ω	8
R 220,		D1H87504A024	RESISTOR ARRAY	1
R 240,		ERJ2RHD3922X	RESISTOR, 1/16W, 39.2K Ω	1
R 250, 251,		DEARA8AJ472M	RESISTOR, 1/16W, 4700 Ω	2
R 268,		ERJ2RKF5602X	RESISTOR, 1/16W, 56K Ω	1
R 288, 351,		D1H84734A024	RESISTOR ARRAY	2
R 289,		ERJ2GEJ333X	RESISTOR, 1/16W, 33K Ω	1
R 292, 316,		ERJ6GEY0R00V	RESISTOR, 1/10W, 0 Ω	2
R 294,		ERJ2GEJ512X	RESISTOR, 1/16W, 5.1K Ω	1
R 296, 297, 474, 496,		ERJ2GEJ223X	RESISTOR, 1/16W, 22K Ω	4
R 301, 302,		ERJ2GEJ390X	RESISTOR, 1/16W, 39 Ω	2
R 313, 314, 332, 336, 398, 471, 506, 507,		ERJ2RHD104X	RESISTOR, 1/16W, 100K Ω	8
R 333, 335,		ERJ2RKD154X	RESISTOR, 1/16W, 150K Ω	2
R 337,		D1ZZ00000046	RESISTOR, 1W, 5m Ω	1
R 350, 464, 512, 516, 517, 522, 523, 581,		ERJ2GEJ473X	RESISTOR, 1/16W, 47K Ω	8
R 352,		D1H81014A024	RESISTOR ARRAY	1
R 355, 358, 557,		ERJ2GEJ181X	RESISTOR, 1/16W, 180 Ω	3
R 356, 357, 403,		ERJ2GEJ471X	RESISTOR, 1/16W, 470 Ω	3
R 372,		D1H81004A024	RESISTOR ARRAY	1
R 373, 445, 473,		ERJ2RHD203X	RESISTOR, 1/16W, 20K Ω	3
R 374, 375,		ERJ2GEJ222X	RESISTOR, 1/16W, 2.2K Ω	2
R 391,		ERJ2RKF5103X	RESISTOR, 1/16W, 510K Ω	1
R 394, 511,		ERJ2RKF4702X	RESISTOR, 1/16W, 47K Ω	2
R 395,		ERJ2RKF6801X	RESISTOR, 1/16W, 6.80K Ω	1
R 397,		ERJ2RKF1800X	RESISTOR, 1/16W, 180 Ω	1
R 399, 577,		ERJ2RKF5101X	RESISTOR, 1/16W, 5.1K Ω	2
R 401, 451,		ERJ2RHD472X	RESISTOR, 1/16W, 4.7K Ω	2
R 402, 415, 416,		ERJ3GEYJ1R0V	RESISTOR, 1/16W, 1 Ω	3
R 405,		ERJ2RHD222X	RESISTOR, 1/16W, 2.2K Ω	1
R 413,		ERJ3GEYJ101V	RESISTOR, 1/16W, 100 Ω	1
R 414, 417, 418, 545,		ERJ3GEY0R00V	RESISTOR, 1/16W, 0 Ω	4
R 419,		D1ZZ00000093	RESISTOR, 1W, 1m Ω	1
R 420, 421, 438, 462, 482,		D1BDR0330001	RESISTOR, 1/8W, 0.033 Ω	5
R 422, 437, 455, 456, 457, 458, 463, 481,		D1BDR0220001	RESISTOR, 1/8W, 0.022 Ω	8
R 426, 447, 468,		ERJ2GEJ153X	RESISTOR, 1/16W, 15K Ω	3
R 428, 443, 470,		ERJ3GEYJ100V	RESISTOR, 1/16W, 10 Ω	3
R 431, 446,		ERJ2RHD243X	RESISTOR, 1/16W, 24K Ω	2
R 452, 510,		ERJ2RHD153X	RESISTOR, 1/16W, 15K Ω	2
R 459, 460,		ERJ2RKF5601X	RESISTOR, 1/16W, 5.6K Ω	2
R 461,		ERJ2RKF1302X	RESISTOR, 1/16W, 13K Ω	1
R 472,		ERJ2RHD622X	RESISTOR, 1/16W, 6.2K Ω	1
R 476,		ERJ2RHD132X	RESISTOR, 1/16W, 1.3K Ω	1
R 497, 498,		ERJ6GEYJ222V	RESISTOR, 1/10W, 2.2K Ω	2
R 502, 505, 518, 520,		ERJ2GEJ564X	RESISTOR, 1/16W, 560K Ω	4
R 508, 509,		ERJ2RKF3302X	RESISTOR, 1/16W, 33K Ω	2
R 513, 514,		ERJ2GEJ3R3X	RESISTOR, 1/16W, 3.3 Ω	2
R 527,		ERJ3GEYJ562V	RESISTOR, 1/16W, 5.6K Ω	1
R 528,		D1BDR4700001	RESISTOR, 1/8W, 0.47 Ω	1
R 536,		ERJ2RKD114X	RESISTOR, 1/16W, 110K Ω	1
R 538,		ERJ2RHD3652X	RESISTOR, 1/16W, 36.5K Ω	1
R 540,		ERJ2GEJ154X	RESISTOR, 1/16W, 150K Ω	1
R 541, 542, 543,		D1BDR1000002	RESISTOR, 1/8W, 0.1 Ω	3
R 546,		ERA3EKB1623V	RESISTOR, 1/16W, 162K Ω	1

R 547,		ERA3EEB1692V	RESISTOR, 1/16W, 16.9KΩ	1
R 549, 550,		ERJ2RHD302X	RESISTOR, 1/16W, 3KΩ	2
R 551, 552,		D1BDR0680001	RESISTOR, 1/8W, 0.068Ω	2
R 586,		RL1220SR15F	RESISTOR, 1/8W, 0.15Ω	1
R 590,		ERJ2RKF1602X	RESISTOR, 1/16W, 16KΩ	1
R 598,		ERJ2RKF1202X	RESISTOR, 1/16W, 12KΩ	1
R 604, 605,		ERJ6GEYJ122V	RESISTOR, 1/10W, 1.2KΩ	2
R 611, 612,		D1H82214A024	RESISTOR, 1/16W, 220Ω	2
R 613, 614,		D1H83304A024	RESISTOR, 1/16W, 33Ω	2
R 615, 616,		D1H82204A024	RESISTOR, 1/16W, 22Ω	2
T 1, 2,		G5BYC0000015	TRANCE	2
X 1,		H0J143500058	OSCILLATOR, 14.318MHz	1
X 2,		H0J327200115	OSCILLATOR, 32.768KHz	1
X 3,		H0J250500076	XTAL	1
X 5,		H2D800400015	OSCILLATOR, 8MHz	1
X 6,		H0J245500083	XTAL	1
X 7,		H0J240500033	XTAL	1
ZA 1, 2, 5,		K1YGZZ000060	SPACER	3
ZA 3, 4,		K1YGZZ000065	SPACER	2
IO PCB				
C 700, 702, 718, 738, 739,		F1G1C104A042	CAPACITOR, 16V, 0.1μF	6
C 701,		F1H1H104A748	CAPACITOR, 50V, 0.1μF	1
C 703, 704, 705, 706, 707, 708, 709, 710, 741, 742,		F1G1H1010005	CAPACITOR, 50V, 100pF	10
C 712, 715,		F1G1H330A542	CAPACITOR, 50V, 33pF	2
C 736, 737,		F1G1H102A496	CAPACITOR, 50V, 1000pF	2
C 740		F1H1A1050015	CAPACITOR, 10V, 1μF	1
C 744, 745,		F1G1A104A014	CAPACITOR, 10V, 0.1μF	2
C 746,		F1G0J224A001	CAPACITOR, 6.3V, 0.22μF	1
C 748, 749,		F1G1H471A496	CAPACITOR, 50V, 470pF	2
C 750,		F1J0J106A013	CAPACITOR, 6.3V, 10μF	1
CN 700,		K1MY50BA0220	CONNECTOR	1
CN 701		K1MN40B00048	CONNECTOR	1
CN 702,		K1FA209BA004	CONNECTOR	1
CN 703,		K1FB115BA014	CONNECTOR	1
CN 705,		K1FY180BA001	CONNECTOR	1
F 701,	⚠	K5H802300002	FUSE, 8A, 72V	1
FL 703, 704, 705,		J0HAAC000059	FILTER	3
IC 700,		C0ABBA000093	IC, OP AMP	1
KJ 700, 701,		K2HC103B0197	JACK	2
L 700, 701, 702, 703, 704, 705, 706, 707,		DDB5Z021G-Y	INDUCTOR	8
L 711, 712,		J0JCC0000186	INDUCTOR	2
L 713, 714, 721, 722, 723,		J0JCC0000078	INDUCTOR	5
L 715, 716, 717, 718, 719,		DDB5Z021C-Y	INDUCTOR	6
PA 700,	⚠	D4FB1R100009	SWITCH	1
R 700, 701, 702,		ERJ2RKF1500X	RESISTOR, 1/16W, 150Ω	3
R 706, 719,		ERJ2GEJ472X	RESISTOR, 1/16W, 4.7KΩ	2
R 707, 708		ERJ2GEJ222X	RESISTOR, 1/16W, 2.2KΩ	2
R 709,		ERJ2GEJ683X	RESISTOR, 1/16W, 68KΩ	1
R 710,		ERJ2GEJ473X	RESISTOR, 1/16W, 47KΩ	1
R 711, 712, 716,		ERJ2GEJ103X	RESISTOR, 1/16W, 10KΩ	3
R 713, 714,		ERJ2GEJ104X	RESISTOR, 1/16W, 100KΩ	2
R 715,		ERJ2GEJ471X	RESISTOR, 1/16W, 470Ω	1
R 717, 718,		ERJ2GEJ221X	RESISTOR, 1/16W, 220Ω	2
R 720, 721,		ERJ3GEY0R00V	RESISTOR, 1/16W, 0Ω	2
MP PCB				
CN 400, 401		K1MN40B00048	CONNECTOR	2
CN 402,		K1KA62B00003	CONNECTOR	1
F 401,	⚠	K5H103300003	FUSE, 10A, 72V	1
PAD PCB				
C 803		F1G1C104A042	CAPACITOR, 16V, 0.1μF	1
C 800, 804		F1H1A1050015	CAPACITOR, 10V, 1μF	2
C 801, 802,		F1G1H681A496	CAPACITOR, 50V, 680pF	2

CN 800,		K1MN14BA0059	CONNECTOR	1
CN 801,		K1MY04BA0104	CONNECTOR	1
CN 802,		K1MN10BA0059	CONNECTOR	1
D 800,		DED1SS355T17	DIODE	1
IC 800,		C1DB00001417	IC, FLAT PAD CONTROLLER	1
Q 800, 801,		B1GKCFJN0004	TRANSISTOR	2
R 805, 806		ERJ2GEJ222X	RESISTOR, 1/16W, 2.2KΩ	2
R 800,		ERJ2GEJ224X	RESISTOR, 1/16W, 220KΩ	1
R 801, 803,		ERJ2GEJ822X	RESISTOR, 1/16W, 8.2KΩ	2
R 802,		ERJ2GEJ273X	RESISTOR, 1/16W, 27KΩ	1
R 804,		ERJ2GEJ105X	RESISTOR, 1/16W, 1MΩ	1
R 808,		D1H81034A024	RESISTOR ARRAY	1
SW 800, 801,		EVQPLDA15	SWITCH	2
X 800,		H2D400400012	OSCILLATOR, 4MHz	1
SD PCB				
C 300		F1G1A104A014	CAPACITOR, 10V, 0.1μF	1
CN 300,		K1MN12BA0134	CONNECTOR	1
CN 301,		K1NA09E00076	CONNECTOR	1
D 300,		B3ACB0000020	DIODE	1
R 300,		ERJ2GEJ101X	RESISTOR, 1/16W, 100Ω	1
USB PCB				
C 100, 101, 102,		EEFUD0J151ER	CAPACITOR, 6.3V, 150μF	3
CN 100,		K1KA14BA0014	CONNECTOR	1
CN 101, 102, 103,		K1FY104BA024	CONNECTOR, USB	3
D 100, 101, 102,		B0KB00000044	DIODE	3
L 100, 101, 102,		J0MAB0000116	INDUCTOR	3
L 103, 104, 105, 106, 107,		DDB5Z031J-L	INDUCTOR	6
LED PCB				
CN 901,		K1MN10AA0058	CONNECTOR	1
D 901, 902, 905, 906, 907,		B3ABB0000210	DIODE	5
D 903,		B3ADB0000065	DIODE	1
D 904,		B3AGB0000040	DIODE	1
P-SW PCB				
CN 1,		K1KA07AA0051	CONNECTOR	1
D 1,		B3ADB0000065	DIODE	1
D 2,		B3AGB0000040	DIODE	1
D 3,		B3ABB0000210	DIODE	1
SW 1,		K0ZZ00000620	SWITCH	1
SW 2,		EVQPLDA15	SWITCH	1
BAT FPC				
CN 4,		K1KY42B00001	CONNECTOR	1
CN 5,		K1KY10B00009	CONNECTOR	1
CN 7,		K1KY10BA0084	CONNECTOR	1
HDD PACK PCB				
CF 1,		D4CC1103A038	THERMISTOR	1
CN 1,		K1KY42A00001	CONNECTOR	1
CN 2,		K1MY22A00002	CONNECTOR	1
CN 3,		K1KA04BA0014	CONNECTOR	1
TOUCH PANEL PCB				
C 200, 201, 202, 203,		F1G1E472A062	CAPACITOR, 25V, 4700pF	4
C 204, 205, 206, 207,		F1G1H681A496	CAPACITOR, 50V, 680pF	4
C 208, 211, 212,		F1G1C104A042	CAPACITOR, 16V, 0.1μF	3
C 209,		F1G1E223A062	CAPACITOR, 25V, 0.022μF	1
C 210,		F1G1H102A496	CAPACITOR, 50V, 1000pF	1
C 213,		F1J0J475A009	CAPACITOR, 6.3V, 4.7μF	1
C 214,		F1G0J224A001	CAPACITOR, 6.3V, 0.22μF	1
C 216,		F1J0J106A013	CAPACITOR, 6.3V, 10μF	1
CN 200,		K1MN04BA0071	CONNECTER	1
CN 201,		K1KA06BA0014	CONNECTOR	1
IC 200,		COEBE0000460	IC	1
IC 202,		C1CB00002515	IC, TOUCHPANEL CONTROLLER	1
Q 200, 201,		XP0431400L	TRANSISTOR	2
Q 202,		UNR9113J0L	TRANSISTOR	1

Q 203,		UNR9213J0L	TRANSISTOR	1
R 200, 206,		ERJ2GEJ473X	RESISTOR, 1/16W, 47K Ω	2
R 203, 205, 207, 209, 210,		ERJ2GEJ102X	RESISTOR, 1/16W, 1K Ω	12
R 208,		ERJ2GEJ273X	RESISTOR, 1/16W, 27K Ω	1
R 213, 214, 215, 216,		ERJ2GEJ822X	RESISTOR, 1/16W, 8.2K Ω	4
R 218,		ERJ2GEJ512X	RESISTOR, 1/16W, 5.1K Ω	1
R 226,		DEARA8AJ473M	RESISTOR ARRAY	1
R 227, 228,		ERJ2GEJ270X	RESISTOR, 1/16W, 27 Ω	2
R 229,		ERJ2GEJ152X	RESISTOR, 1/16W, 1.5K Ω	1
X 200,		H2D600400005	OSCILLATOR, 6MHz	1
BLUETOOTH PCB				
C 1,		F1J0J106A016	CAPACITOR, 6.3V, 10 μ F	1
C 2, 4, 7, 11,		F1G1C104A042	CAPACITOR, 16V, 0.1 μ F	4
C 3, 5,		F1G1H102A496	CAPACITOR, 50V, 1000pF	2
C 6, 9,		F1G1E103A062	CAPACITOR, 25V, 0.01 μ F	2
C 8,		F1G1H270A542	CAPACITOR, 50V, 27pF	1
CN 1,		K1MN10BA0070	CONNECTOR	1
IC 1,		C0JBAZ002422	IC, FET SWITCH	1
IC 2,		N5HZZ0000040	BLUETOOTH MODULE	1
IC 3,		C0EBE0000460	IC	1
KJ 1,		K1QZA1AE0001	CONNECTOR	1
L 1, 2,		J0JJC0000015	INDUCTOR	2
L 4,		G1C5N6ZA0029	INDUCTOR	1
L 5,		J0MAB0000200	INDUCTOR	1
Q 1,		B1GBCFJN0037	TRANSISTOR	1
Q 2,		B1DHDC000028	TRANSISTOR	1
R 1, 2,		ERJ2GEJ104X	RESISTOR, 1/16W, 100K Ω	2