

**Smart Operation Panel Type M10
Machine Code: D190
Field Service Manual**

November, 2013

Safety and Symbols

Responsibilities of the Customer Engineer

Customer Engineer

Maintenance shall be done only by trained customer engineers who have completed service training for the machine and all optional devices designed for use with the machine.

Reference Material for Maintenance

- Maintenance shall be done using the special tools and procedures prescribed for maintenance of the machine described in the reference materials (service manuals, technical bulletins, operating instructions, and safety guidelines for customer engineers).
- In regard to other safety issues not described in this document, all customer engineers shall strictly obey procedures and recommendations described the "CE Safety Guide".
- Use only consumable supplies and replacement parts designed for use of the machine.

Before Installation, Maintenance

Shipping and Moving the Machine

CAUTION

- Work carefully when lifting or moving the machine. If the machine is heavy, two or more customer engineers may be required to prevent injuries (muscle strains, spinal injuries, etc.) or damage to the machine if it is dropped or tipped over.
- Personnel moving or working around the machine should always wear proper clothing and footwear. Never wear loose fitting clothing or accessories (neckties, loose sweaters, bracelets, etc.) or casual footwear (slippers, sandals, etc.) when lifting or moving the machine.
- Always unplug the power cord from the power source before you move the product. Before you move the product, arrange the power cord so it will not fall under the product.

Power

WARNING

- Always disconnect the power plug before doing any maintenance procedure. After switching off the machine, power is still supplied to the main machine and other devices. To prevent electrical

shock, switch the machine off, wait for a few seconds, then unplug the machine from the power source.

- Before you do any checks or adjustments after turning the machine off, work carefully to avoid injury. After removing covers or opening the machine to do checks or adjustments, never touch electrical components or moving parts (gears, timing belts, etc.).
- After turning the machine on with any cover removed, keep your hands away from electrical components and moving parts. Never touch the cover of the fusing unit, gears, timing belts, etc.

Installation, Disassembly, and Adjustments

CAUTION

- After installation, maintenance, or adjustment, always check the operation of the machine to make sure that it is operating normally. This ensures that all shipping materials, protective materials, wires and tags, metal brackets, etc., removed for installation, have been removed and that no tools remain inside the machine. This also ensures that all release interlock switches have been restored to normal operation.

During Maintenance

General

CAUTION

- Before you begin a maintenance procedure: 1) Switch the machine off, 2) Disconnect the power plug from the power source, 3) Allow the machine to cool for at least 10 minutes.
- Avoid touching the components inside the machine that are labeled as hot surfaces.

Safety Devices

WARNING

- Never remove any safety device unless it requires replacement. Always replace safety devices immediately.
- Never do any procedure that defeats the function of any safety device. Modification or removal of a safety device (fuse, switch, etc.) could lead to a fire and personal injury. Always test the operation of the machine to ensure that it is operating normally and safely after removal and replacement of any safety device.
- For replacements use only the correct fuses or circuit breakers rated for use with the machine. Using replacement devices not designed for use with the machine could lead to a fire and personal injuries.

Lithium Batteries

WARNING

- Always replace a lithium battery on a PCB with the same type of battery prescribed for use on that board. Replacing a lithium battery with any type other than the one prescribed for use on the board could lead to an explosion or damage to the PCB.
- Never discard used batteries by mixing them with other trash. Remove them from the work site and dispose of them in accordance with local laws and regulations regarding the disposal of such items.

Power Plug and Power Cord

WARNING

- Before serving the machine (especially when responding to a service call), always make sure that the power plug has been inserted completely into the power source. A partially inserted plug could lead to heat generation (due to a power surge caused by high resistance) and cause a fire or other problems.
- Always check the power plug and make sure that it is free of dust and lint. Clean it if necessary. A dirty plug can generate heat which could cause a fire.
- Inspect the length of the power cord for cuts or other damage. Replace the power cord if necessary. A frayed or otherwise damaged power cord can cause a short circuit which could lead to a fire or personal injury from electrical shock.
- Check the length of the power cord between the machine and power supply. Make sure the power cord is not coiled or wrapped around any object such as a table leg. Coiling the power cord can cause excessive heat to build up and could cause a fire.
- Make sure that the area around the power source is free of obstacles so the power cord can be removed quickly in case of an emergency.
- Make sure that the power cord is grounded (earthed) at the power source with the ground wire on the plug.
- Connect the power cord directly into the power source. Never use an extension cord.
- When you disconnect the power plug from the power source, always pull on the plug, not the cable.

Safety Instructions for this Machine

Observance of Electrical Safety Standards

1. The machine and its peripherals must be installed and maintained by a customer service representative who has completed the training course on those models.

Safety and Ecological Notes for Disposal

1. Dispose of replaced parts in accordance with local regulations.
2. When keeping used lithium batteries in order to dispose of them later, do not put more than 100 batteries per sealed box. Storing larger numbers or not sealing them apart may lead to chemical reactions and heat build-up.

CAUTION

- The danger of explosion exists if a battery of this type is incorrectly replaced.
- Replace only with the same or an equivalent type recommended by the manufacturer. Discard used batteries in accordance with the manufacturer's instructions.

Symbols and Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

	Clip ring
	Screw
	Connector
	Clamp
	E-ring
SEF	Short Edge Feed
LEF	Long Edge Feed

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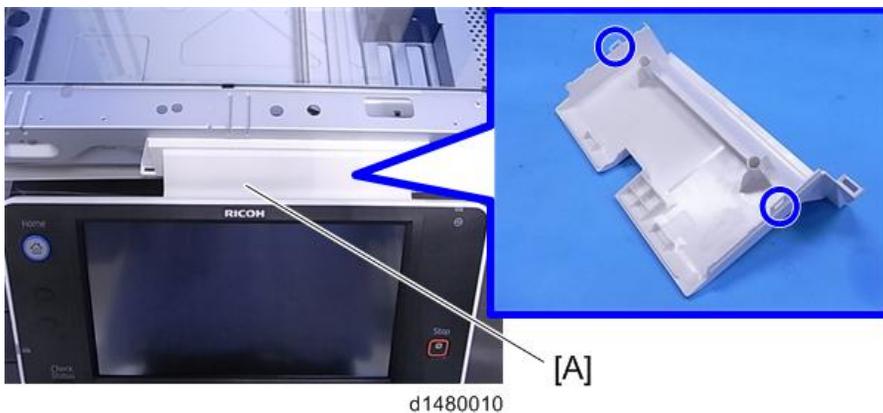
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1. Replacement and Adjustment

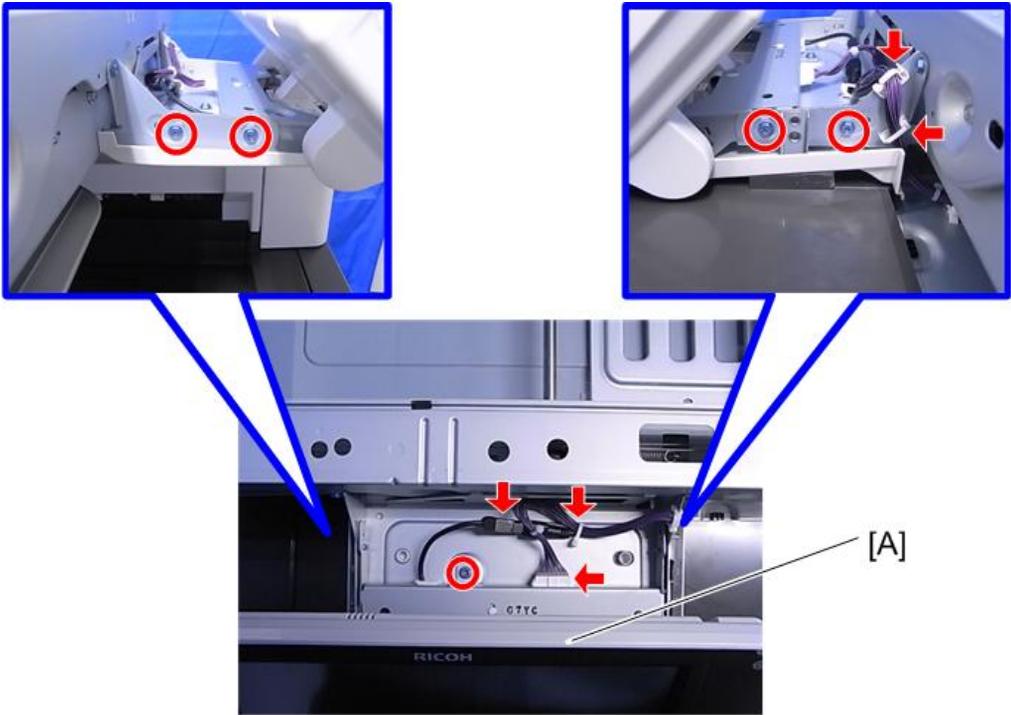
Operation Panel Unit

Operation Panel

1. Scanner front cover (Scanner Front Cover).
2. Operation panel upper cover [A] (hook x2)



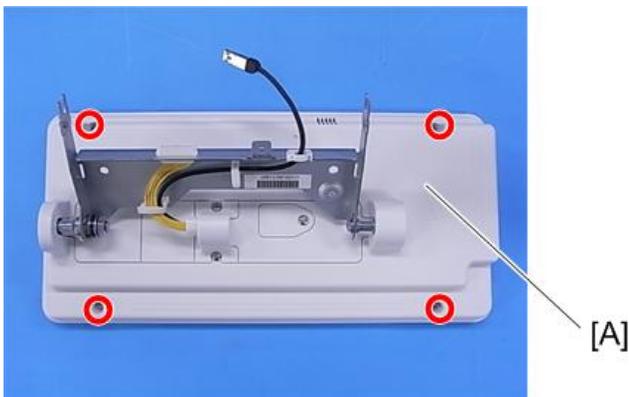
3. Operation panel [A] (⚙️×5, 📡×3, 📺×2)



d1480011

Power Control Board

1. Operation panel (page 7)
2. Operation panel rear cover [A] (⚙️×4, hook×4)



d1480012

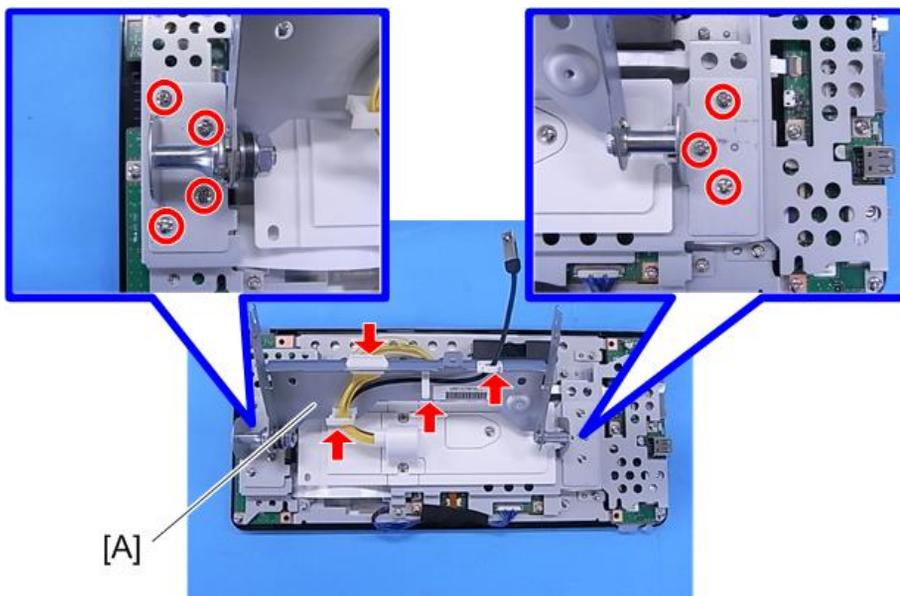
Note

- There are 4 hooks inside the operation panel. Before removing the operation panel rear cover, see the photos below.



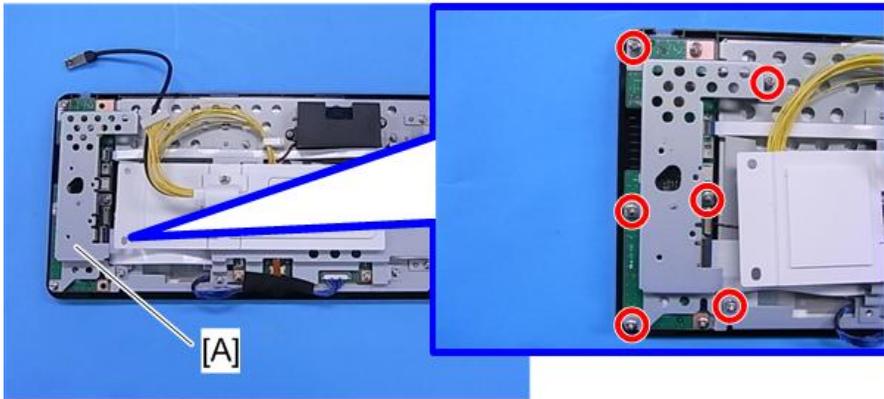
d1480013

3. Operation panel arm bracket [A] (⚙️×7, 🛠️×3, 📏×1)



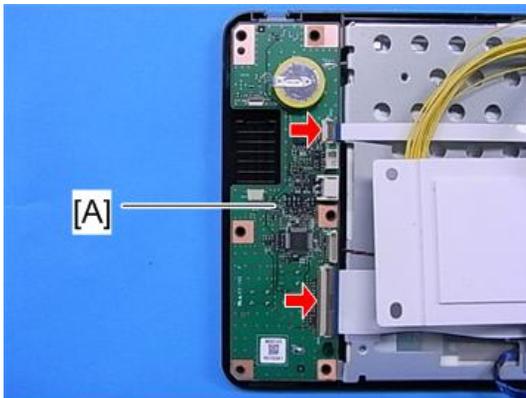
d1480014

4. Bracket [A] (🔩×6)



d1480015

5. Power control board [A] (🔌×2)

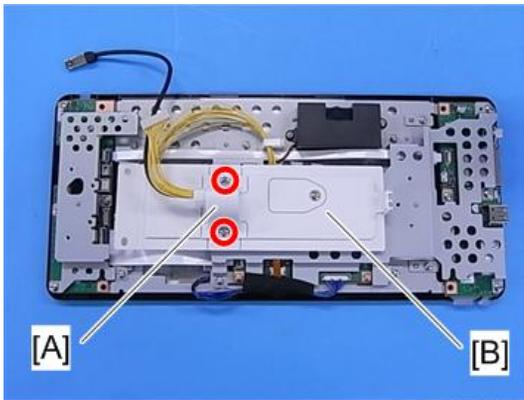


d1480016

Main Board

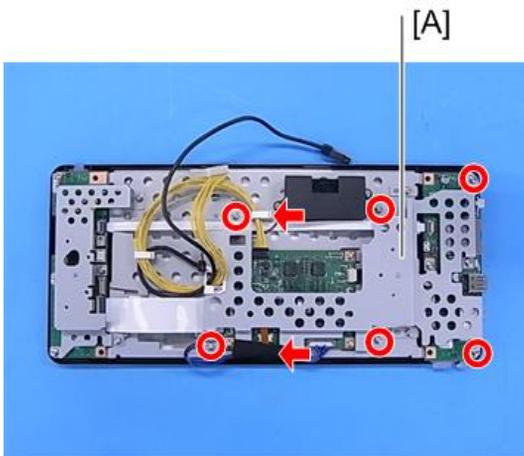
1. Operation panel (page 7)
2. Operation panel rear cover (page 8)
3. Operation panel arm bracket (page 8)

4. Remove the harness guide [A] and bracket cover [B] (⚙️×2).



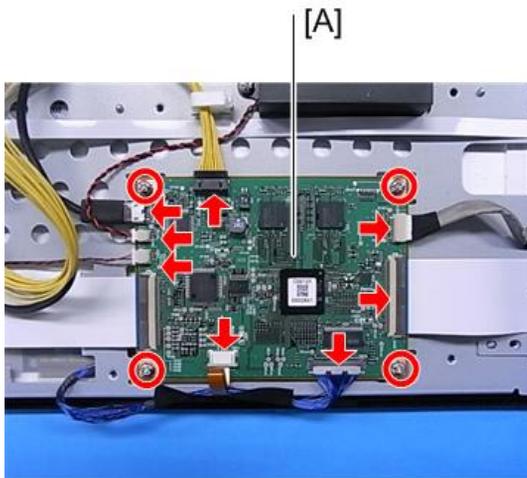
d1480017

5. Bracket [A] (⚙️×6, 📎×1, tape×1)



d1480018

6. Main board [A] (⚙️×4, 📡×1, 📶×7)



d1480019

I/O Board

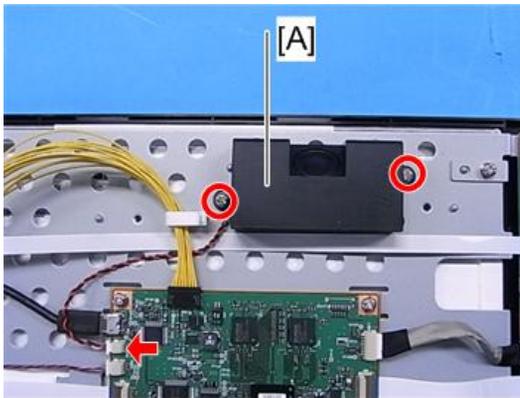
1. Operation panel (page 7).
2. Operation panel rear cover (page 8).
3. Operation panel arm bracket (page 8).
4. Remove the harness guide and bracket cover (page 10).
5. Bracket (page 10)
6. I/O board [A] (📶×3)



d1480020

Speaker

1. Operation panel (page 7)
2. Operation panel rear cover (page 8).
3. Operation panel arm bracket (page 8).
4. Remove the harness guide and bracket cover (page 10).
5. Bracket (page 10)
6. Speaker [A] (🔩×2, 📏×1)

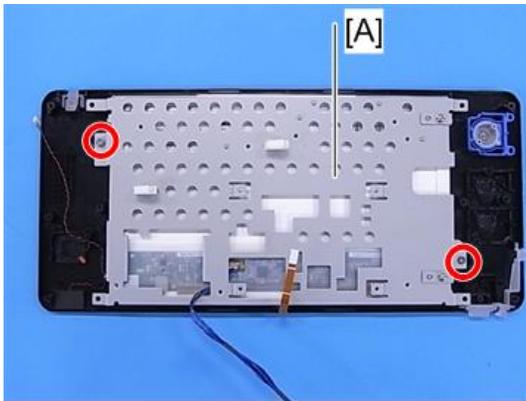


d1480021

LCD Panel

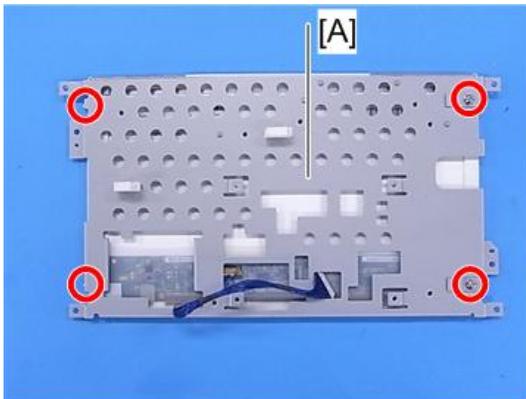
1. Power control board (page 8).
2. Main board (page 10)
3. I/O board (page 12)
4. Speaker (page 13)

5. Remove the LCD panel with the bracket [A] (⌀×2).



d1480022

6. Remove the bracket [A] from the LCD panel (⌀×4).



d1480023

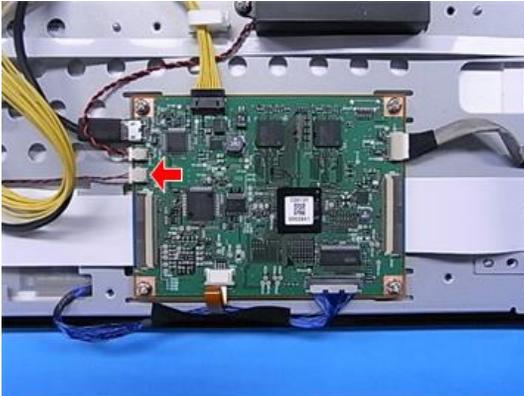
7. LCD panel [A] (□×1)



d1480024

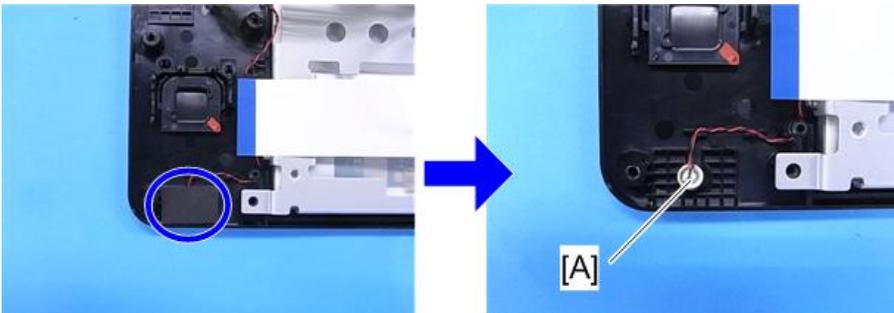
Microphone

1. Power control board (page 8).
2. Main board bracket (page 10)
3. Disconnect a connector.



d1480025

4. Microphone [A] (cushioning*1)



d1480026

2. System Maintenance

System Maintenance

Basic Operation

Switching the Power OFF before Performing Maintenance (before Disconnecting the Power Supply Plug)

1. Press the power switch while pressing the [STOP] key.
Continue pressing the [STOP] key until "Shutting Down" is displayed.

Note

- Shutdown can be performed in a short time even when the Quick Startup Mode is set.

Switching the Power OFF before Upgrading the MFP (Controller/Engine) Version

1. Press the power switch while pressing the [STOP] key.
Continue pressing the [STOP] key until "Shutting Down" is displayed.

Note

- When upgrading the Android screen firmware version, switch the power OFF by the normal procedure.

Reset Procedure If the Android Screen Freezes

CAUTION

- If reset is performed when the Android screen is in operation, data stored in the Android screen may be corrupted.

1. Press the reset button on the left side of the control unit in order to reboot the control unit.

Maintenance Modes

The different service modes and their roles are as follows.

* For security reasons, the specific methods for switching between service modes are not given here. Please check according to the usual procedure.

Mode	Application	Remarks
MFP SP mode	MFP (engine) <ul style="list-style-type: none"> Conventional SP mode 	Since a 10-keypad is used for mode shift, mode shift must be performed from a GW application.
Screen service mode	Android-specific screen service mode <ul style="list-style-type: none"> Android application installation and version update Screen self-diagnosis check 	Idem
Recovery mode	Android OS maintenance <ul style="list-style-type: none"> OS update Full data format 	-

Version Update

Android firmware (OS) version update is performed from recovery mode.

↓ Note

- If Quick Startup is set, it is not possible to shift to recovery mode. It is necessary to perform either shutdown from Normal Startup Mode, or shutdown by the power OFF procedure prior to maintenance (before disconnecting the power supply plug).

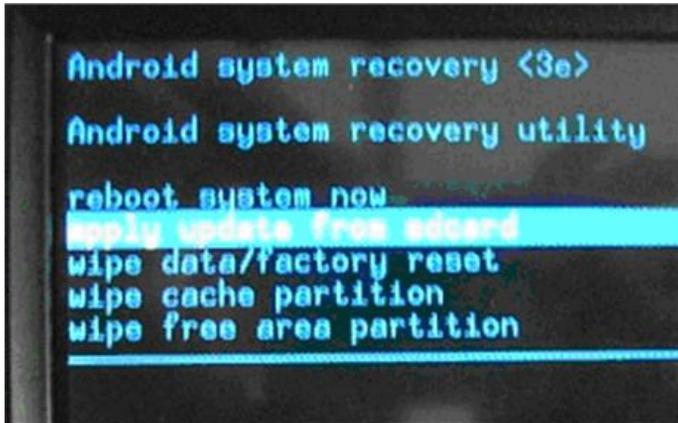
↓ Note

- If extended security for firmware update is set to "prohibit", it is not possible to shift to recovery mode. (System Settings>Administrator Tools>Extended Security is displayed in log-on screen for machine administrator)
- If firmware update is required with the above settings, ask customer (machine administrator) to request a change of the setting.

1. Turn off the main power.
2. Insert the SD card in the control unit SD slot, and start the recovery mode.
3. Select "apply update from sdcard.", and press [Home] key.

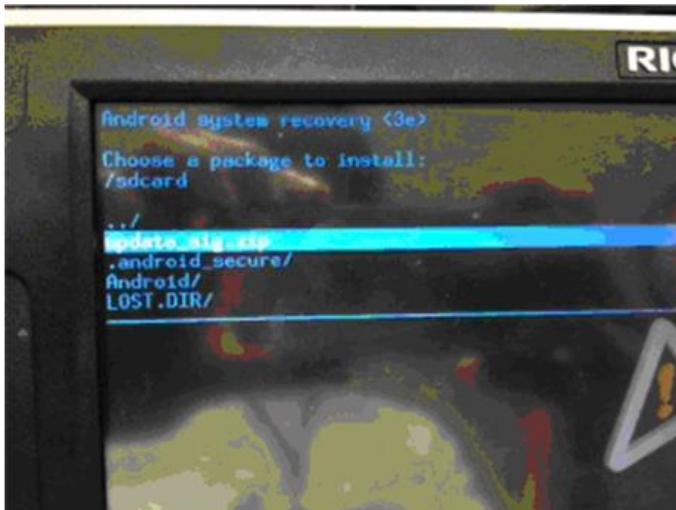
↓ Note

- Screen operations are as follows.
- OK: [HOME] key.
- UP: [Return] key.



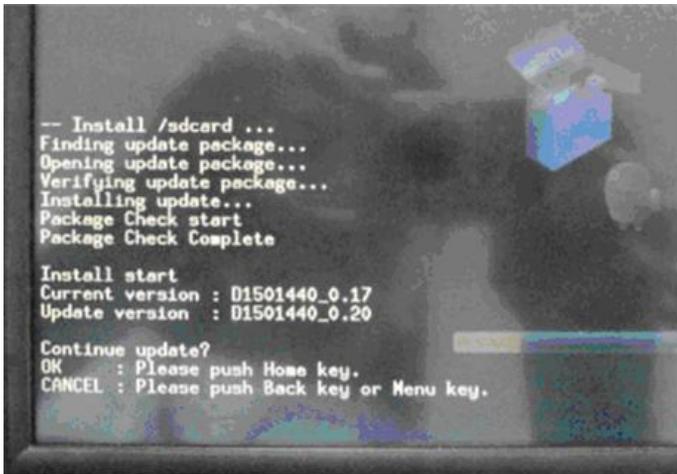
d1480001

4. Select "update.sig.zip", and press the [HOME] key.



d1480002

5. The installation screen is displayed.



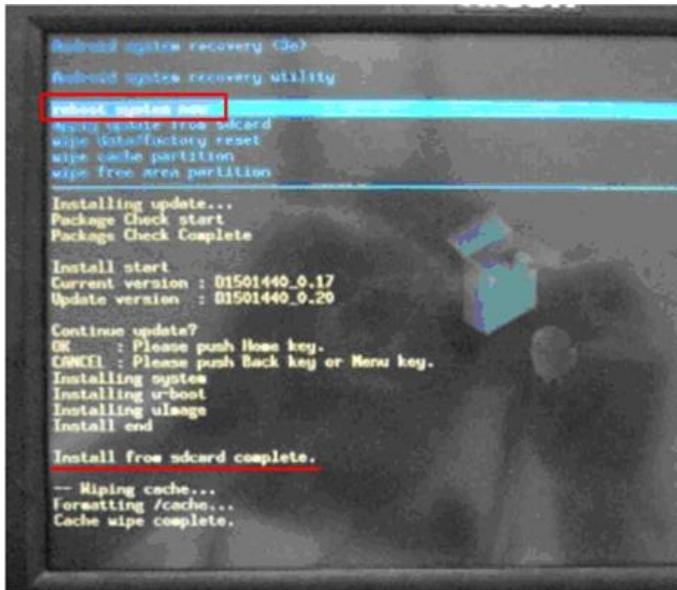
d1480003

6. The current version of the firmware, and the update version of the firmware in the SD card are displayed. Check that the version is correct.

7. When "Continue Update?" is displayed, press OK ([HOME] key).

8. Version Update is started.

9. When "Install from SD card complete." is displayed, select "reboot system now", press the [HOME] key, and perform a system reboot.



d1480004

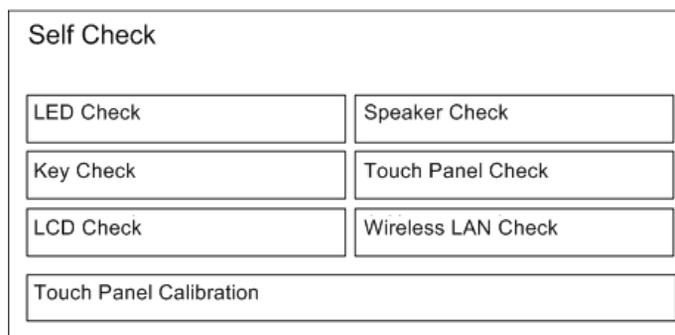
Application Installation/Version Update

1. Shift to screen service mode.
2. Set a version update SD card in the screen SD slot.
3. Select "Application" → "Install" → "Install from SD card", and start installation.
4. Select the application for which the version is to be updated, and press the "Install Button".
5. The version update result is displayed.
6. Check the version update result, and press down the "Panel reboot" button.

2

Self-Diagnosis

The following menus can be performed as self-diagnosis functions of the control unit. Either Japanese or English can be displayed.



w_d1462660

1. LED Check

The following control unit LED can be changed over between all on/all off.

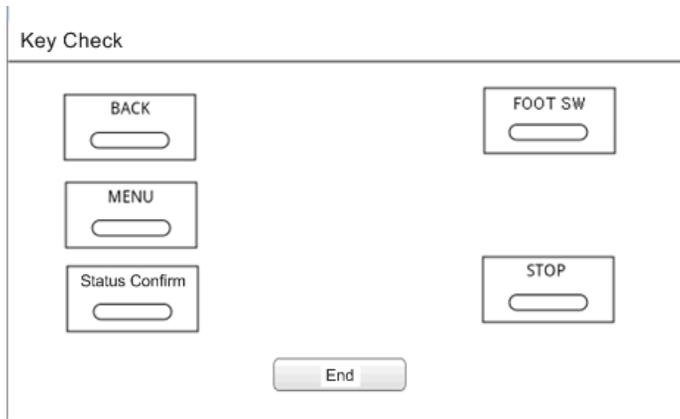
- Data in
- USB access
- HOME
- Status check (When lit, R->G->B->R->G->B is repeated at 500 ms intervals)
- BACK/MENU
- FAX
- SD access

2. Key check

Check pressing hard keys other than the [HOME] key on the control unit. When a key is depressed, the corresponding key displayed on the control unit is shown highlighted.

If a foot switch is fitted, while the switch is depressed, the "FOOT SW" column is highlighted.

When the [End] key is depressed, the display returns to the self-diagnosis top screen (the Return key works as a key check, so it cannot be used as a key to return to the self-diagnosis top screen).



w_d1462661

3. LCD Check

Whenever the screen is touched, the display cycles through All-white -> All-black -> All-green -> All-blue -> End in full screen view, and the display status of each color is visually verified.

By cycling through all the colors, the LCD check is completed, and the display returns to the self-diagnosis top screen.

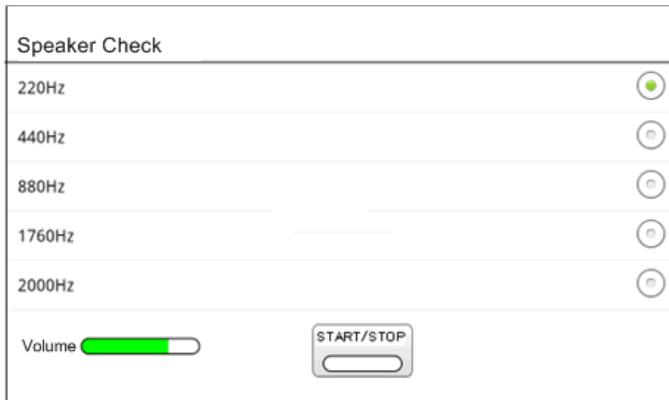


d1462662

4. Speaker check

The following standard sounds are generated according to the button instructions on the screen.

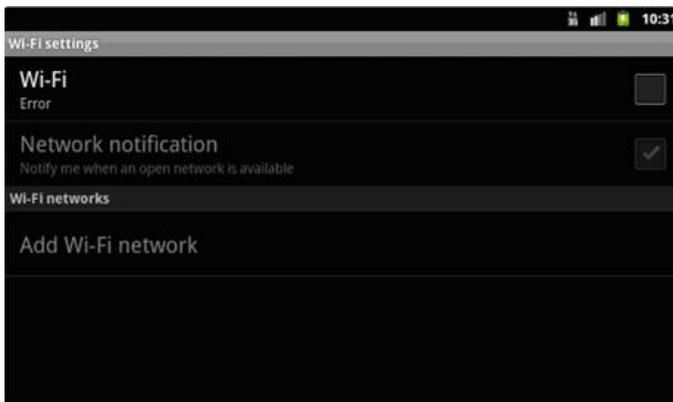
- Frequency: 220 Hz, 440 Hz, 880 Hz, 1760 Hz, 2000 Hz
- Sound volume: 16 levels from minimum to maximum
- Sounds standard sound by START/STOP toggle switch



w_d1462663

5. Wireless LAN check

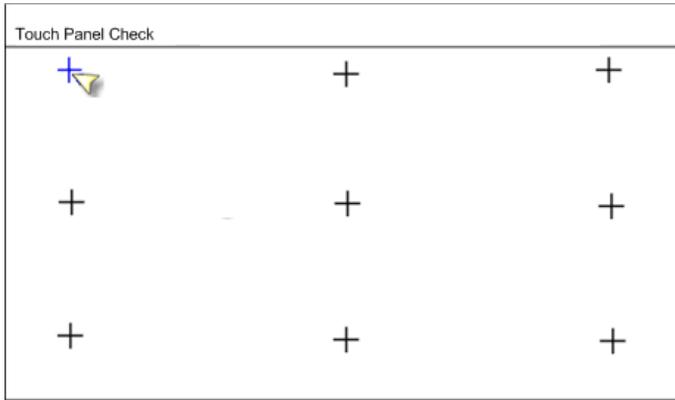
Changes to a screen for searching wireless LAN access points with Android as standard, and a communication status check is displayed.



d1462664

6. Touch panel check

Displays the difference of a detection coordinate value from the nearest reference point relative to a standard 9 points on the screen.



w_d1462665

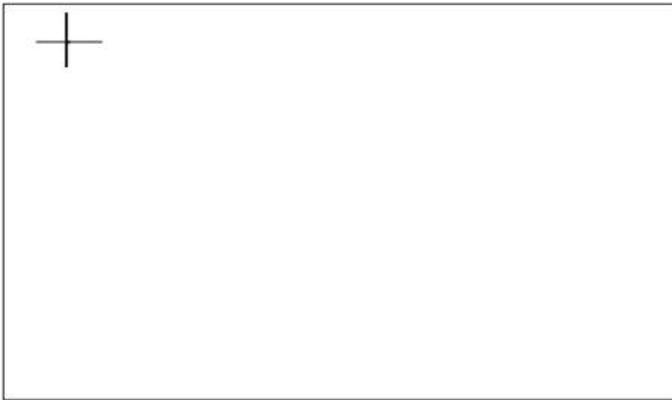
7. Touch panel calibration

Perform a touch-panel calibration, and set a value.

One + mark after another is displayed at locations (5 points) required for calibration. Press the center point.

When input of 5 points is complete, a display for set/reset appears.

- OK: Press Menu key
- Retry: Press Back key



d1462666

When it is desired to set the current value, the operation is completed by pressing the "Menu" key, and the display returns to the self-diagnosis screen.

To repeat the setting, or to stop touch panel calibration, press the Return key.

When the Return key is pressed, a + mark is displayed in the first position for performing calibration.

When this display appears, by pressing the Return key again, the display returns to the self-diagnosis screen.

SP Mode List

Settings Menu List

Menu level			Description
Level 1	Level 2	Level 3	
Application	Install from SD card (installation of application).		Update by installing application from SD card.
	Installation / update / activation		Activation can be performed using a SD card.
Storage	(SD card) Sum total capacity		When SD card is inserted, display the sum total capacity.
	(SD card) Free space		Display the free space when SD card is inserted.
	Erase the data in the SD card.		Erase the data in the SD card.
	(Internal storage) free space		Display the free space of the internal storage.
Voice input/output	Setting of text read-aloud	Play back a sample	Play back a short sample of speech synthesis with the present setting.
		Always use your own settings (ON/OFF).	When not using the speech synthesis setting of each application and using the setting of this screen, switch ON.
		Default engine (engine: Select)	A dialog for setting the text read-aloud application to be used is displayed (when having installed plural text read-aloud applications).
		Install speech data	Select from the SD card, and install speech synthesis data.

Menu level			Description
Level 1	Level 2	Level 3	
		Audio speed (speed: 5 selection levels)	Select audio speed.
		Language	
		Engine	
Terminal information	Terminal state	wi-fi MAC address (display)	
		Interface setting	
		wi-fi setting	
		Device IP address	
	Legal information (display)		
	Firmware version list		
Device setting	Server setting	Port number (input: 1-65535)	
	Control unit self- diagnosis	-	Perform self-diagnosis of control unit.

Recovery Menu

Menu	Description
Reboot system now	System reboot (used to come out of recovery mode)
apply update from sdcard	Android firmware (OS) version update
wipe data/factory reset	Full format
wipe cache partition	-
wipe free area partition	-

MEMO