

Service Manual

Canon BW

Voice Guidance Board-A1

Canon

Feb 22 2005

Application

This manual has been issued by Canon Inc. for qualified persons to learn technical theory, installation, maintenance, and repair of products. This manual covers all localities where the products are sold. For this reason, there may be information in this manual that does not apply to your locality.

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Caution

Use of this manual should be strictly supervised to avoid disclosure of confidential information.

Symbols Used

This documentation uses the following symbols to indicate special information:

Symbol	Description
	Indicates an item of a non-specific nature, possibly classified as Note, Caution, or Warning.
	Indicates an item requiring care to avoid electric shocks.
	Indicates an item requiring care to avoid combustion (fire).
	Indicates an item prohibiting disassembly to avoid electric shocks or problems.
	Indicates an item requiring disconnection of the power plug from the electric outlet.
 Memo	Indicates an item intended to provide notes assisting the understanding of the topic in question.
 REF.	Indicates an item of reference assisting the understanding of the topic in question.
	Provides a description of a service mode.
	Provides a description of the nature of an error indication.

The following rules apply throughout this Service Manual:

1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.

In the diagrams,  represents the path of mechanical drive; where a signal name accompanies the symbol, the arrow  indicates the direction of the electric signal.

The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.

2. In the digital circuits, '1' is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low". (The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (*) as in "DRMD*" indicates that the DRMD signal goes on when '0'.

In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.

All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins and be able to identify and isolate faults in the machine."

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Chapter 1 Functions

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1.1 New Function

1.1.1 Overview

0009-6725

Background of Product Development

The audio guide on the control panel has been designed to assist people with no sight or limited sight in keeping with the provisions of the Disabilities Act.

Care has also been taken so that people in general may take advantage of the function for extra help without feeling anything out of the ordinary. In this sense, the function is expected to add to the ease of use of the machine for general and handicapped users alike.

Flow of Voice Generation

The machine's digital voice consists of discrete signals generated by controller system files stored on its hard disk. These signals are sent from the controller board to the audio board by way of a PCI bus in appropriate sequence. When they reach the audio board, the signals are merged so that each segment has a specific duration. The result is then subjected to digital-to-analog conversion and sent to the speaker after volume control.

Slide Switch (SW1) on the Voice Guidance Board-A1

The slide switch (SW1) on the Voice Guidance Board-A1 is provided as a means of switching frequencies (33 MHz/66 MHz) to suit the transfer speed of the PCI bus. It is important for the switch setting to suit the transfer speed so that the voice will be free of interruption. If you inadvertently moved the slide, be sure to put it back to its correct position. For the iR6570/5570, the frequency must be set to 33 MHz.

1.1.2 Using the Function

0009-6726

Preparing the Machine for Audio Guide Mode

For details, see the instructions on installation. The following is an outline of the work.

1. Make sure that the machine is off, and fit the Voice Guidance Board-A1 into the PCI bus.
(Be sure there is at least 512 MB of memory.)
2. Connect the speaker to Line-Out of the Voice Guidance Board-A1, and turn on the machine.

To check to see if the machine has recognized the presence of the Voice Guidance Board-A1,

Start service mode (by pressing the User Mode key, the 2 and 8 keys at the same time, and then the User Mode key once again).

Then, make the following selections: COPIER>DISPLAY>ACC-STS

If the notation 'Voice Board' is indicated in PCI1 through PCI3, the machine has recognized the presence of the board.

1.1.3 Changing the Language

0009-6727

Make the following selections in user mode: common setup>change display language.

If the setting is 'OFF', change it to 'ON' and select Japanese for Japanese screens and voice guide or English for English screens and voice guide.

Chapter 2 Installation

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2.1 Points to Note About Installation

2.1.1 Points to Note About Installation

0009-3147

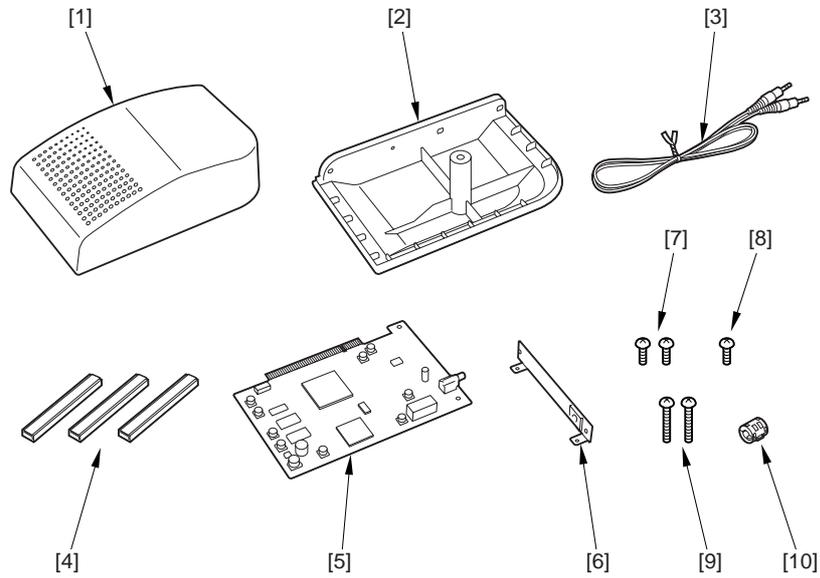


Before starting to install the Voice Guidance Kit-A1, be sure that the Expansion Bus C-1 has properly been installed.

2.2 Checking components

2.2.1 Checking the Contents

0009-3553



F-2-1

T-2-1

[1]	Speaker unit (upper)	1 pc.
[2]	Speaker unit (lower)	1 pc.
[3]	Cable	1 pc.
[4]	Cord guide	3 pc.
[5]	Voice Guidance Board	1 pc.
[6]	Voice Guidance Board Face Plate	1 pc.
[7]	Binding screw (M3X6)	2 pc.
[8]	Binding screw (M4X6)	1 pc.
[9]	Binding screw (M4X40)	2 pc.
[10]	ferrite core	1 pc.

2.3 Installation procedure

2.3.1 Turning Off the Host Machine

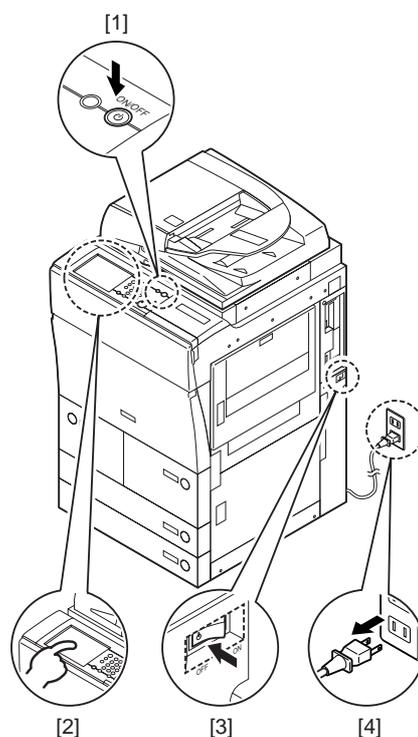
0009-4375



Turning Off the Main Power

When turning off the main power, be sure to go through the following in strict sequence to protect the machine's hard disk:

1. Hold down on the power switch on the control panel for 3 sec or more.
2. Operate on the touch panel according to the shut-down sequence indicated so that the main power switch may be turned off.
3. Turn off the main power switch.
4. Disconnect the power cable (for the power outlet).

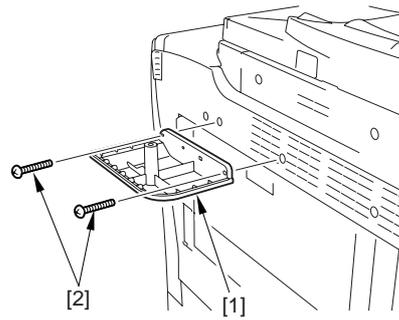


F-2-2

2.3.2 Mounting the Speaker Unit

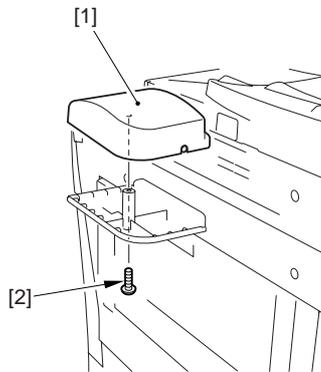
0009-3367

- 1) Mount the speaker unit lower cover [1] to the machine's right cover using the 2 included screws (M4X40) [2].



F-2-3

- 2) Mount the speaker unit upper cover [1] to the speaker unit lower cover you mounted in step 1); then, secure it in place from under with the included screw (M4X6) [2].

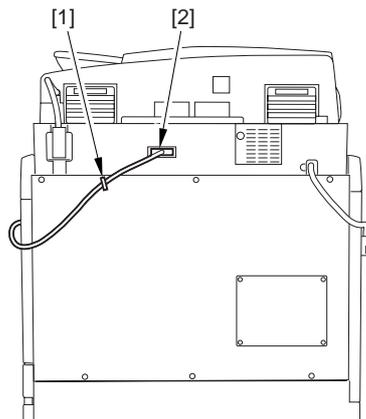


F-2-4

2.3.3 Mounting the Voice Board

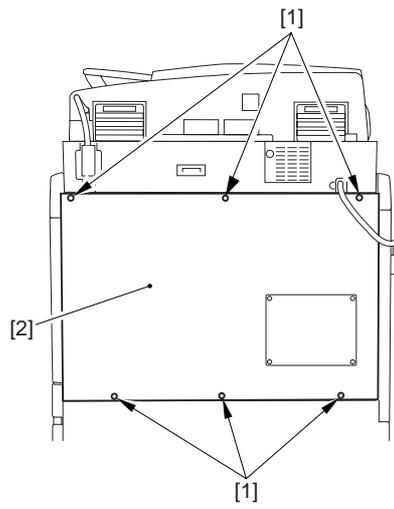
0009-3381

- 1) Open the cable clamp [1], and disconnect the reader communications cable [2].



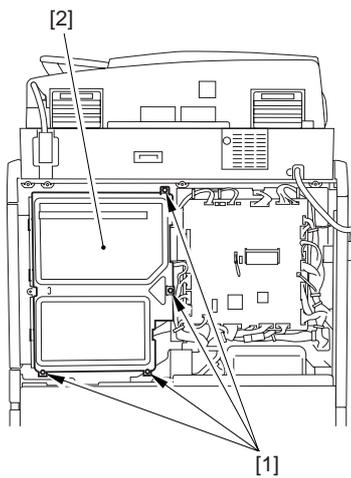
F-2-5

- 2) Remove the 6 screws [1], and detach the upper rear cover [2].



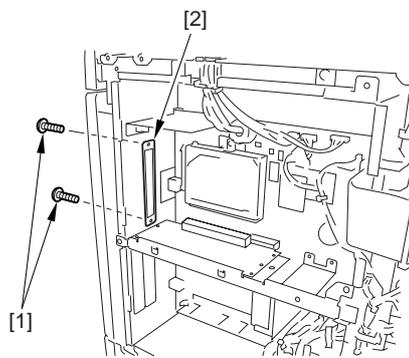
F-2-6

3) Remove the 4 screws [1], and detach the main controller box cover [2].



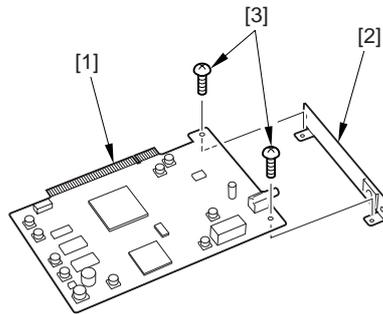
F-2-7

4) Remove the 2 screws [1], and detach the face plate [2].



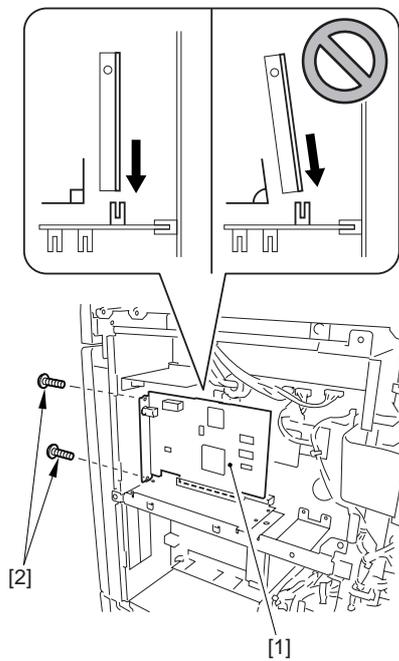
F-2-8

5) Mount the voice guidance board face plate [2] to the voice guidance board [1] using the 2 included screws [3].



F-2-9

6) Mount the voice board [1] to the Expansion Bus-C1, and secure it in place with 2 screws [2].

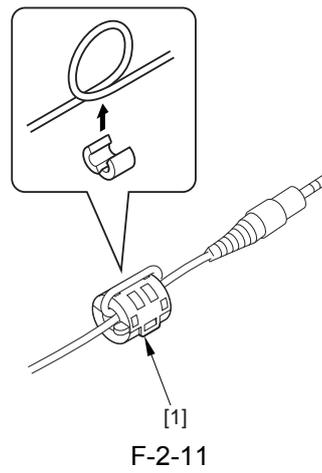


F-2-10

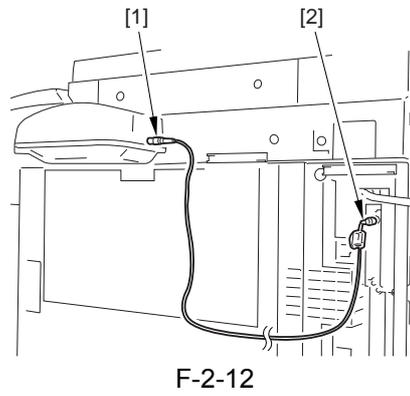


Be sure that the PCB is perpendicular to the connector.

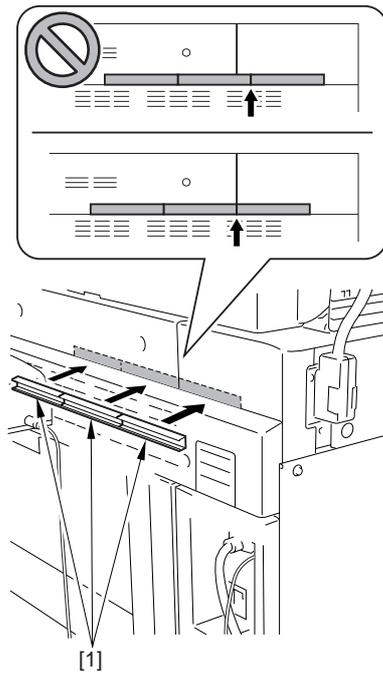
7) Fit the ferrite core [1] to the cable.



8) Connect the belt to the speaker [1] and the voice board [2].

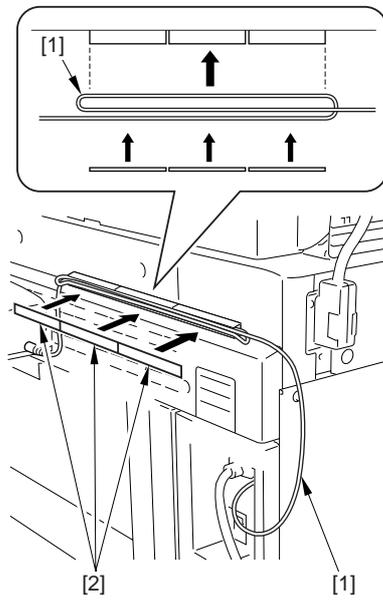


9) Mount the 3 cable guides [1] to the reader unit as shown.



F-2-13

10) Arrange the cable [1] using the cable guide [2] making sure it is free of excess slack.



F-2-14



Be sure that the excess around the bend of the cable is 1 cm of the cable guide.



Take care to avoid biting of the wire when opening and closing the manual feed tray or the right door.

- 11) Mount the main controller box cover using 4 screws.
- 12) Mount the upper rear cover using 6 screws.
- 13) Route the reader unit communications cable through the cable clamp, and close the clamp.
- 14) Connect the reader unit communications cable.
- 15) Connect the power cable (for the power outlet) of the host machine.

2.3.4 Making Settings After Installation

0009-5234

To make use of the Voice Guidance Kit-A1 after turning on the host machine, you need to make the following settings in user mode:

Additional Function> system setting> Voice Guide management> Use Voice Guide

1) Select [OK].

2) Press [OK].

default : OFF

- To check that the voice board is recognized by the machine, make the following selections in service mode
service mode

COPIER> DISPLAY> ACC-STS> PC11 to PCI3

If 'voice board' is indicated for PCI1 through PCI3, the board is correctly recognized by the machine.

2.3.5 Checking the Operation

0009-6038

- To Enable

1) Hold down the Reset key 3 sec or more.

2) See that the copy count on the screen is enclosed in red, indicating 'Voice Guidance' is ready for use.

- To Disable

1) Hold down the Reset key for 3 sec or more.

Chapter 3 Maintenance

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3.1 Troubleshooting

3.1.1 The voice guide fails even when the Reset key is held down

0009-6728

The voice guide fails even when the Reset key is held down.

Step 1. Is the Focus indicated when the Reset key is held down?

\$ Yes ->

Is the speaker connected correctly?

Is the speaker (not the headset) selected in user mode? (audio setup>speaker/headset)

\$ No ->

Go to step 2.

Step 2. Is 'set voice' enabled (ON) in user mode? (system administrator setup>set voice)

\$ Yes ->

Replace the audio board, or suspect other cause.

\$ No ->

Enable it (ON).

\$ There is no menu. ->

Is the board connected correctly and is the memory at least 512 MB?

To see if the board is connected correctly,

In service mode, make the following selections: COPIER>DISPLAY>ACC-STS>PCI1 through 3.

Feb 22 2005

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