PREFACE

This publication is a Service Manual covering the specifications, construction, theory of operation, and maintenance of the Brother facsimile equipment. It includes information required for field troubleshooting and repair—disassembly, reassembly, and lubrication—so that service personnel will be able to understand equipment function, to rapidly repair the equipment and order any necessary spare parts.

To perform appropriate maintenance so that the facsimile equipment is always in best condition for the customer, the service personnel must adequately understand and apply this manual.

This manual is made up of six chapters and appendices.

CHAPTER I. GENERAL DESCRIPTION
CHAPTER II. INSTALLATION
CHAPTER III. THEORY OF OPERATION
CHAPTER IV. DISASSEMBLY/REASSEMBLY AND LUBRICATION
CHAPTER V. MAINTENANCE MODE
CHAPTER VI. ERROR INDICATION AND TROUBLESHOOTING
Appendix 1. EEPROM Customizing Codes
Appendix 2. Circuit Diagrams

This manual describes the models and their versions to be destined for major countries. The specifications and functions are subject to change depending upon each destination.
## CHAPTER IV. DISASSEMBLY/REASSEMBLY AND LUBRICATION

### CONTENTS

1. DISASSEMBLY/REASSEMBLY

   1. Safety Precautions
   2. Tightening Torque List
   3. Preparation
   4. How to Access the Object Component
   5. Disassembly Order Flow

   1.1 Cover Stopper Link, Ribbon Shaft Stopper, ROM Cover, and Control Panel ASSY
   1.2 Disassembly of the Control Panel ASSY (Document pressure bar and chute cover ASSY)
   1.3 Disassembly of the Chute Cover ASSY (Paper pressure rollers, separation roller, paper feed roller 32, platen, registration sensor actuator, and lock bar & lock levers)
   1.4 Disassembly of the Control Cover Sub ASSY (ACF parts, ADF parts, panel rear cover, control panel PCB, FPC key, LCD, and keys)
   1.5 Handset Mount\(^1\), Dummy Mount\(^2\), Battery ASSY\(^3\), Sensor PCB, Cover Sensor Actuator, and Hook Switch Actuator\(^1\)
   1.6 Paper Ejection Roller, Document LF Roller, and Document Ejection Roller
   1.7 Head Protector, Recording Head ASSY, and Recorder Frame
   1.8 Drive Unit, Motor, and Arm HP Switch ASSY
   1.9 Speaker
   1.10 Lower Cover, Support Plate, and CIS Spring
   1.11 CIS Film and CIS Unit
   1.12 Document Pressure Rollers and Document Pinch Roller
   1.13 Bottom Plate, Main PCB, NCU PCB, Power Supply PCB, and Ribbon Sensor Actuator

2. LUBRICATION

   1. Separation roller and its gear and paper feed roller 32 and its gear
   2. Platen gear (Gear 24) and joint between gears 32 and chute cover ASSY
   3. Paper ejection roller, document LF roller, and document ejection roller
1. DISASSEMBLY/REASSEMBLY

Safety Precautions

To prevent the creation of secondary problems by mishandling, observe the following precautions during maintenance work.

(1) Unplug the power cord from the power outlet before replacing parts or units. When having access to the power supply, be sure to unplug the power cord from the power outlet.

(2) Be careful not to lose screws, washers, or other parts removed for parts replacement.

(3) When using soldering irons and other heat-generating tools, take care not to damage the resin parts such as wires, PCBs, and covers.

(4) Before handling the PCBs, touch a metal portion of the equipment to discharge static electricity; otherwise, the electronic parts may be damaged due to the electricity charged in your body.

(5) When transporting PCBs, be sure to wrap them in conductive sheets such as aluminum foil.

(6) Be sure to reinsert self-tapping screws correctly, if removed.

(7) Tighten screws to the torque values listed on the next page.

(8) When connecting or disconnecting cable connectors, hold the connector bodies not the cables. If the connector has a lock, always slide the connector lock to unlock it.

(9) Before reassembly, apply the specified lubricant to the specified points. (Refer to Section 2 in this chapter.)

(10) After repairs, check not only the repaired portion but also that the connectors and other related portions function properly before operation checks.
CHAPTER VI. ERROR INDICATION AND TROUBLESHOOTING

CONTENTS

1. ERROR INDICATION ............................................................................................... VI -1
   1.1 Equipment Errors ............................................................................................ VI-1
       [ 1 ] Error messages on the LCD .................................................................... VI-1
       [ 2 ] Error codes shown in the "MACHINE ERROR _ _" message ..................... VI-3
   1.2 Communications Errors .................................................................................. VI-5

2. TROUBLESHOOTING .............................................................................................. VI-12
   2.1 Introduction ...................................................................................................... VI-12
   2.2 Precautions ..................................................................................................... VI-12
   2.3 Checking prior to Troubleshooting .................................................................. VI-12
   2.4 Troubleshooting Procedures .......................................................................... VI-13
       [ 1 ] Control panel related ........................................................................... VI-13
       [ 3 ] Communications related ..................................................................... VI-14
       [ 5 ] Print-image related ............................................................................... VI-15
       [ 6 ] Others ................................................................................................. VI-16
1. ERROR INDICATION

To help the user or the service personnel promptly locate the cause of a problem (if any), the facsimile equipment incorporates the self-diagnostic functions which display error messages for equipment errors and communications errors.

For the communications errors, the equipment also prints out the transmission verification report and the communications list.

1.1 Equipment Errors

If an equipment error occurs, the facsimile equipment emits an audible alarm (continuous beeping) for approximately 4 seconds and shows the error message on the LCD. For the error messages, see [1] below. As one of the error messages, “MACHINE ERROR _ _” includes an error code which indicates the detailed error causes listed in [2].

To display an error code for the other latest error message or detailed message, make the equipment enter the maintenance mode and press 8 and 2 keys (for details, refer to Chapter V, Section 3.12).

[1] Error messages on the LCD

<table>
<thead>
<tr>
<th>Messages on the LCD</th>
<th>Probable Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHECK PAPER (NOTE 1)</td>
<td>The registration sensor detects that no recording paper is present.</td>
</tr>
<tr>
<td>TOP COVER OPEN</td>
<td>The cover sensor detects that the control panel ASSY is not closed.</td>
</tr>
<tr>
<td>DOCUMENT JAM</td>
<td>Document Jam</td>
</tr>
<tr>
<td></td>
<td>(1) The document length exceeds the limitation (400 or 90 cm) registered by firmware switch WSW16. (Refer to Chapter V, Section 3.5.)</td>
</tr>
<tr>
<td></td>
<td>(Both the document front and rear sensors stay ON even after the document has been fed by the registered length.)</td>
</tr>
<tr>
<td></td>
<td>(2) The document rear sensor detects no trailing edge of a document after the document has been fed by 400 cm.</td>
</tr>
<tr>
<td></td>
<td>(The document rear sensor stays ON even after the document has been fed when the document front and rear sensors were OFF and ON, respectively.)</td>
</tr>
</tbody>
</table>

NOTE 1: If a recording paper feeding or ejecting error occurs in the maintenance mode, this “CHECK PAPER” message will not appear on the LCD but some 4-digit error code listed on page VI-4 will appear instead.