

Model: Model T-C1		Date: 20-Apr-04	No.: RB174001
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Please apply the following revisions to your Service Manuals. This bulletin contains the revised pages only, which have been posted to the RISSN server along with a separate full-manual version.

RISSN server files:

<Filename>

- * Reference Pages: Model_T-C1_Manual_ReferencePage.pdf
- * Complete Version: Model_T-C1_Manual_Final2.pdf

<Revised Pages>

Section	Page	Correction
TABLE OF CONTENTS	iii	Some section numbers and page numbers have been corrected.
5. SERVICE TABLES	5-3	A note has been added to "SYSTEM SETUP".
		Contents of "Clear All Memory" have been revised.
	5-6	Contents of "CLEAR ALL MEMORY" have been updated.
	5-7	Contents and password in "CLEAR COUNT" have been corrected.
	5-8	Page number has been shifted (see "Table of Contents" revisions for details).
	5-10	5.4 FIRMWARE DOWNLOAD Part of description revised; note added.
	5-11	5.4.2 RE-PROGRAMMING PROCEDURE AFTER DOWNLOADED has been deleted.
5-12 to 5-13	5.5 ENGINE TEST MODE Section number has been changed: 5.6 → 5.5	
PARTS CATALOG	6	Part No. (15-1) has been changed: B1749740 → B1749744. See MB174001 for details.
	12	(Same as above)

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TECH MODE

5.2 TECH MODE

5.2.1 HOW TO ENTER SERVICE MODE

The technician can examine the machine and do different tests in service (tech) mode. This will help show the cause of a malfunction.

The machine operates correctly in Tech mode.

Do this procedure to go into the Tech mode:

Menu → # → 1 → 9 → 3 → 4 in sequence.

The LCD shows "T". Then the machine goes into service (tech) mode.

While in Tech mode, the machine continues to do all normal operations.

Do this procedure to go back to user mode:

Menu → # → 1 → 9 → 3 → 4

Or turn the power off, then on.

5.2.2 SETTING UP THE SYSTEM IN TECH MODE

Function	Item	Contents
01. SYSTEM DATA	DIAL MODE	TONE / PULSE
	MODEM SPEED	33.6 / 28.8 / 14.4 / 12.0 / 9.6 / 4.8 (K bps)
	ERROR RATE	5% / 10%
	SET TX LEVEL	09-15
	SILENCE TIME	12 sec. / Unlimit / OFF
02. SYSTEM ID	The same as User Mode	☛ 5.1
03. DATE & TIME	The same as User Mode	
04. SYSTEM SETUP	The same as User Mode	See Note, ☛ 5.1
05. MEMORY CLEAR	CLEAR ALL MEMORY	Select country code
06. DELAY TX	The same as User Mode	☛ 5.1
07. MEMORY TX	The same as User Mode	
08. PRIORITY TX	The same as User Mode	
09. POLLING	The same as User Mode	
10. ADD/CANCEL	The same as User Mode	
11. GROUP DIAL	The same as User Mode	

Service Tables

Note: You can also see these extra features on the LCD in Tech Mode only.

* ID_COPY [On] / [Off]

* AUTO POSITION [X] / [Y]

These features are not available on this model at this time. Do not change these settings. Otherwise, the machine may not work correctly.

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5.2.4 MEMORY CLEAR

CLEAR ALL MEMORY

Use this function to reset the system to the defaults that were set at the factory.

This function resets the system to the initial values when the machine does not work correctly. Values are set to the default values. The machine will not keep data set by the user. **This procedure does not clear the counter data values.**

Procedure

1. Set the [CLEAR ALL MEMORY] in tech mode from 05. Memory Clear.
2. Press the ENTER button.
3. The country name will show. You can see all available countries when you scroll by pressing "◀" or "▶"
 - North America default (USA/Canada)

Note: You cannot change the default country values.

4. Press the ENTER button. This clears the memory. **Then it changes it to the country code that you set.**

Note: Do this procedure after you replace the main board. If you do not do this procedure, the system will not operate correctly.

5.2.5 MAINTENANCE

CLEAN DRUM

Use this feature to remove toner particles that stay in the OPC drum unit.

Use this feature when print quality becomes unsatisfactory or when marks or specks show on the printout. Use this feature one time or more until the printout is clean.

The machine automatically pulls in a sheet of paper and prints out. Toner particles that stay on the OPC drum surface are fused to the paper.

NOTIFY TONER LOW

If this feature is enabled, when the toner becomes low, a message will be sent to a specified contact point, for example, the service company. To enable this feature, select ON. Then, when the machine asks, input the name and the number of the contact point, the customer's fax number, the model name, and the serial number.

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TECH MODE

SWITCH TEST

Use this to test all keys on the operation panel. The LCD window shows the result when you push a key.

MODEM TEST

Use this to hear different transmission signals to the telephone line from the modem and to check the modem. If no transmission signal sound is heard, the modem part of the main board does not operate correctly.

SRAM TEST

Use this to test the machine's SRAM. The LCD shows the result.
The LCD shows << O K >> if the memory operates correctly.

DRAM TEST

Use this to test the machine's DRAM. The LCD shows the result.
The LCD shows << O K >> if the memory operates correctly.

ROM TEST

Use this to test the machine's ROM. The LCD shows the result and the software version.

Example:

- FLASH VER: 6.04
- ENGINE VER:7.00

PATTERN TEST

Use this to make sure that the printer mechanism operates correctly.

These patterns are printed:

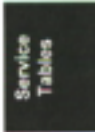
- Pattern-1 ~ Pattern-7
- QA Pattern-1 ~ QA Pattern-4

CLEAR COUNT

This clears the counters stored in system memory. These counters are shown in the System Data List (printed in Tech mode). Type password "1934" and press Enter to go into the menu.

You can 'clear' and 'edit' the 'Total Page Counts'. You cannot edit the other counters. You can only clear the other counters.

Notes: You cannot erase the 'Current Drum Page Counts' with this service tool. This is cleared using the "NEW DRUM" function (menu 12. Maintenance).



TECH MODE

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ANSWER ON CNG

This function sets the number of CNG tones that the machine must detect before it goes into receive mode from the AUTO mode or ANS/FAX mode.

ADJUST SHADING

This function tests the CCD (Charge Coupled Device). Do this when unsatisfactory scanning or copying is reported.

Procedure

1. Select [ADJUST SHADING] in tech mode.
2. Press the Enter key. An image will be scanned.
3. After the scan, a CCD Shading Profile (like the one shown to the right) will be output.
4. If the printed image is not the same as the image, the CCD does not operate correctly.

Make sure that the cover is closed when you test the CCD.



FLASH UPGRADE

This function is used to update the system firmware. There are 2 procedures: Local and Remote.

More information can be found in the firmware upgrade section (➡ 5.4).

PROGRAM DIAL

Use this to set parameters for a specific dialed location (which must be in the one touch or speed dial phone books). These parameters override the default settings to let the machine make calls to destinations with known line problems.

REMOTE TEST

Use this to make available of RDC (Remote Diagnostic Control) access.

FIRMWARE DOWNLOAD

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5.4 FIRMWARE DOWNLOAD

You can use the remote control panel to upgrade the machine firmware. Connect the machine to a PC through parallel or USB cable before you do the firmware upgrade procedure.

It is very rare to lose data and settings after the program has downloaded. However you should print out the system data list in tech mode before you start the download procedure. This will let you re-program settings that may get lost.

5.4.1 LOCAL MACHINE UPDATE

RCP (Remote Control Panel) mode

This procedure is used when the machine is connected with a parallel port or USB port to a PC. The machine uses the RCP (Remote Control Panel) software to upgrade the firmware.

1. Connect the PC and the printer with a parallel cable or a USB cable.
2. Start the RCP and select the Firmware Update tab. The current firmware version and emulation version are shown.
3. Keep the firmware file on the PC, in a path near the root of C:, for example C:\TEMP. Use the "Browse" button to get the firmware file to update the machine.
4. Click the update button. The firmware file automatically goes to the printer. The printer is initialized when the update is finished. Make sure that these show on the LCD display when you download the new firmware:
 - 1) DATA RECEIVING (USB) / COPY/B FILE LPT1 (PARALELL)
 - 2) PC TO DRAM IS OK
 - 3) FLASH IS ERASING
 - 4) FLASH PROGRAMMING
 - 5) CHECKSUMMING
 - 6) DOWNLOAD OK
 - 7) Warming up Please wait...
5. Click the refresh icon. Then make sure that the version number shown agrees with the new firmware.

Note: Country code

The country code will not change after you download the new firmware.

To get the system data list

Use this procedure to make sure that the firmware was correctly upgraded.

1. Go into TECH mode. Then get the system data list.
2. Make sure that the correct firmware version is shown on the system data list.
 - Example: Firmware Version: 6.04
Engine Version: 7.00
Emulation Version: PCL6 3.26 01-05-2004

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FIRMWARE DOWNLOAD

5.4.2 RECOVERY PROCEDURE

The machine will not operate if the update procedure did not work correctly. At this time, do these steps:

1. Turn the power off and then on.
2. Do the steps in the download procedure from step 4 again.

The machine will start the upgrade procedure again.

5.4.3 REMOTE MACHINE UPDATE

This function uses one fax machine installed with the most recent firmware. It upgrades one or more other remote machines of the same type with the telephone network.

How to update firmware by remote fax

1. Use a fax machine with the most recent firmware, to prepare it to send the upgrade.
 - Select "Remote" in Flash Upgrade of the Data Setup menu in Tech mode.
Tech Mode → Data Setup → Flash Upgrade (☛ 5.2.3)
2. Put in the telephone number of the fax machine to upgrade. (You can upgrade several fax machines at the same time). At this time, put in the telephone number for each machine.
3. Then press the enter button. This will send the firmware file to each of the set fax machines. (It will be 10 or 15 minutes to send the file to each machine.)

CAUTION: 1) The sending and receiving fax machines must be the same model.
2) The sending fax must be set up in ECM mode. The receiving machine memory must be set to 100%. If not, the upgrade will fail.

ENGINE TEST MODE

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5.5 ENGINE TEST MODE

The engine test mode gives functions to test the engine condition. It tests the condition of each device and shows the result of the test on the LCD. The tests are in 6 groups (0-5). The functions of the tests are shown below.

5.5.1 TO ENTER THE ENGINE TEST MODE

Press MENU, #, 1, 9, 3, 1 in sequence. When the LCD briefly shows 'Engine Test Mode', the machine is in the service (tech) mode.

NOTE: It may cause damage to the machine if a test is done for a long time.

5.5.2 DIAGNOSTIC

- Ten key pad '0 - 7' to enter each test
- "<" or ">" to select the setting; Example) "1: On" or "2: Off"
- "^" to move to the next test
- "Mode/Enter" to execute the selected test
- "Menu" to return to the main menu
- "Clear/Stop" to exit the engine test

No.	Engine Test	Remark
0	Motor TEST	1: On, 2: Off
	PTL TEST	1: On, 2: Off
	Fan TEST	1: On, 2: Off
	Fuser TEST	1: On, 2: Off If its temperature is lower than the Standby (160 C), the fuser is on, but if it is higher than the Standby, the fuser is off.
1	LSU Motor TEST	1: On, 2: Off
	LSU Hsync TEST	1: On, 2: Off
	LD TEST	1: On, 2: Off
	LSU Operation	1: On, 2: Off
	LSU ERROR INFO	1: On, 2: Off
	LSU VALUE CAL	1: On, 2: Off
2	Feed Sen TEST	Check: Check FEED Sensor Display Next: Next Sensor Check
	Exit Sen TEST	Check: Check EXIT Sensor Display Next: Next Sensor Check
	Cover Sen TEST	Check: Check COVER Sensor Display Next: Next Sensor Check
	1'st Empty TEST	Check: Check 1'st PAPER Empty Sensor Display Next: Next Sensor Check
	MP Empty TEST	Check: Check MP PAPER Empty Sensor Display Next: Next Sensor Check
	BIN-F Sen TEST	Check: Check BIN FULL Sensor Display Next: Next Sensor Check

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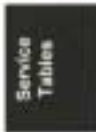
ENGINE TEST MODE

No.	Engine Test	Remark
3	1'st Sol TEST	1: On, 2: Off
	MP Sol TEST	1: On, 2: Off
	Duplex Sol TEST	1: On, 2: Off
4	MHV TEST	1: On, 2: Off (-1450 V)
	DevBias TEST	1: On, 2: Off (-450 V)
	THV EN/NEG TEST	1: On, 2: Off
	THV On (2000V)	1: On, 2: Off (1300 V)
5	THV Trig. TEST	1: On, 2: Off
	CRU ERR CHECK	1: Check: Check fuse status 2: Next
6	NEW OPC CHECK	1: Check: Check if the OPC is new or old 2: Next
	ALL FUNCTION TEST	For all test (No 0~4), push up key
7	FUSER DEBUG	1: On, 2: Next
	DEBUG VAL CLR	1: Yes, 2: Next
	ERROR INFORM	1: On, 2: Next
	TONER DEBUG	1: On, 2: Next

5.5.3 STATUS PRINT

When the function is enabled, a group of parameters are printed at the bottom of each page. This shows the print engine condition. This is not necessary for service use.

This function stays on when you go out of Engine Mode. Make sure to set it off before you go out of Engine Mode.



Parts Catalog

PLATEN ASSEMBLY

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Index No.	Part No.	Description	Q'ty	B174 17
1	B1749538	PLATEN COVER ASS'Y - ADF	1	O
2	B1749539	SCALE - SUB DIRECTION	1	O
3	B1749540	SCANNER COVER	1	O
4	B1749541	HOLDER - PLATEN GLASS	3	O
5	B1749542	PLATEN GLASS	1	O
6	B1749543	TIMING BELT - SCANNER	1	O
7	B1749544	SPRING - TIMING BELT	1	O
8	B1749547	PCB - SCANNER BOARD	1	O
9	B1739606	SCANNER MOTOR	1	O
10	B1749557	CCD HOLDER	1	O
11	B1749558	SCANNER BASE - OP-PORT	1	O
12	B1739601	SENSOR LEVER	1	O
13	B1749565	CCD UNIT	1	O
14	B1749566	FLAT CABLE - CCD	1	O
15	B1749739	OP-PORT ASS'Y - NA	1	O
15-1	B1749740	ONE TOUCH KEY SHEET - ENGLISH - MB001 DELETED	1	O
15-1	B1749744	ONE TOUCH KEY SHEET - ENGLISH - MB001 ADDED	1	O
16	B1749741	ONE TOUCH KEY SHEET - FRENCH	1	O
16	B1749742	ONE TOUCH KEY SHEET - SPANISH	1	O
16	B1749743	ONE TOUCH KEY SHEET - PORTUGUESE	1	O

Parts Catalog

FUSER ASSEMBLY

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Part No.	Description	Section and Index No.
B1749678	PAPER PICK-UP ROLLER ASS'Y	8-1
B1749681	SOLENOID - PICK-UP	8-2
B1749684	ACTUATOR - PAPER PICK-UP	8-3
B1749688	HOLDER - FRICTION PAD	8-4
B1749689	HOLDER - PICK-UP ACTUATOR	8-5
B1749691	FRICTION PAD	8-6
B1749693	PAPER PICK-UP SENSOR	8-7
B1749694	RUBBER FOOT - ML80	9-1
B1749698	FRONT COVER - DUMMY	9-2
B1749699	MONITOR SPEAKER	9-3
B1749700	COOLING FAN - LASER UNIT	9-4
B1749703	TONER SENSOR - TX	10-1
B1749704	QUENCHING LAMP	10-2
B1749706	LENS - TONER SENSOR	10-3
B1749706	LENS - TONER SENSOR	12-1
B1749707	PAPER FEED AND END SENSORS	10-4
B1749709	RUBBER - PAPER PICK-UP : RIGHT	10-5
B1749710	RUBBER - PAPER PICK-UP : LEFT	10-6
B1749714	STEPPING MOTOR - M49SP-2K	11-1
B1749717	SOLENOID - DUPLEX	11-2
B1749720	STEPPING MOTOR - M4PSP-2NK	11-3
B1749725	MICRO SWITCH	12-2
B1749726	EXIT SENSOR	12-3
B1749727	TONER SENSOR	12-4
B1749730	JOINT HARNESS - THERMISTOR	12-5
B1749731	TERMINAL HOUSING	12-6
B1749732	TERMINAL - FUSING	12-7
B1749733	CAP - CONNECTOR L	12-8
B1749734	CAP - CONNECTOR U	12-8
B1749737	FUSING UNIT	13-1
B1749738	ADF RUBBER KIT	3-10
B1749739	OP-PORT ASS'Y - NA	2-15
B1749740	ONE TOUCH KEY SHEET - ENGLISH - MB001 DELETED	2-15-1
B1749741	ONE TOUCH KEY SHEET - FRENCH	2-16
B1749742	ONE TOUCH KEY SHEET - SPANISH	2-16
B1749743	ONE TOUCH KEY SHEET - PORTUGUESE	2-16
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