

MG2400 series, MG2500 series Technical Reference

(MG2440, MG2450, MG2540, MG2550)

This manual provides technical information necessary for servicing the applicable product. Since the manual contains confidential information, limit the use of this manual within the sales companies.

Information on maintenance of the applicable product is given in the separate Simplified Service Manual. Please refer to it when necessary.

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Table of Contents

1. SERVICE MODE	3
1-1. Service Test Print.....	3
1-2. EEPROM Information Print	4
2. FAQ (POSSIBLE PROBLEMS AND CORRECTIVE ACTIONS)	6

1. SERVICE MODE

For details of each service mode, refer to the "Simplified Service Manual" of the applicable model. This section provides details of the Service Test Print and EEPROM Information Print.

1-1. Service Test Print

1) EEPROM information contents

On the Service Test Print (sample below), confirm the EEPROM information.

- Bottom area (Check 4 area):

- (a) Model name
- (b) Printer serial number (4 digits of alphabets + 5 digits of number)
- (c) Destination
- (d) ROM version (V#.###)
- (e) Main ink absorber counter value (D=###.#)

2) Print check items

On the service test print (sample below), confirm the following items:

- Check 1: Top of form accuracy, skewed paper feeding, left margin, and carriage (outermost) accuracy
- Check 2: Nozzle Check Pattern print (Ink must be ejected from all nozzles.)
- Check 3: Straight line accuracy (There must be no remarkable dot mis-alignment on a line.)
- Check 4: EEPROM information

3) Service test print sample (MG2400 series)

The image shows a service test print for an MG2400 series printer. It is divided into several sections for inspection:

- Check 1:** Top of form accuracy, skewed paper feeding, left margin, and carriage (outermost) accuracy.
- Check 2:** Nozzle Check Pattern print (Ink must be ejected from all nozzles.)
- Check 3:** Straight line accuracy (There must be no remarkable dot mis-alignment on a line.)
- Check 4:** EEPROM information.

The EEPROM information is printed as follows:

```
(a) MG2400 (b) SN=xxxx00001 (c) EMB V0.500 (d) ST=2013/04/08-09:58 LPT=2013/04/09-11:35
(e) D=002.0
DF=00049
ER(ER0=1300 ER1=1203 ER2=1000 ER3=5100 ER4=5011)
PC(M=000 R=000 T=001 D=000 C=001 I=001)
TPAGE(TTL=00009 COPY=00001)
CH_NEW_BK(ST4=00000 ST3=00000 MN=00001 XS=00000)
CH_NEW_CL(STD=00000 MN=00001 XS=00000)
CH_BK=001
CH_CL=001
IL(BK=03 Y=01 M=01 C=01)
P_ON(S=00009)
A_REG=1 M_REG=1
ASF_PAGE(All=00009 PP=00009 Photo1=00000 Photo2=00000 Photo3=00000
Matto=00000 PC=00000 EV=00000)
INK_OFF(BK=0 CL=0)
SC(TTL=00001 PC=00000 COPY=00000)
```

1-2. EEPROM Information Print

1) Printed items

Model name

Printer serial number (SN = Serial Number)

Destination

ROM version

Installation date & time (ST = Set Time)

Last printing time without any errors (LPT = Last Print Time)

Ink amount in the main ink absorber (% , D = Drain sheet)

Ink absorber life (in units of months, DF = Drain sheet Full)

Operator call/service call error record (the last five errors, ER0 = the last error, ER1 = the one before the last,, ER4 = the 4th before the last)

If the same errors occur successively, only the latest one is recorded.

Purging count (PC = Purge Count, M = Manual cleaning, R = deep cleaning, T = cleaning by Timer, D = cleaning by Dot count, C = cleaning at ink cartridge replacement, I = faulty termination)

Total print pages (TPAGE, TTL = total, COPY = copy)

New Black ink cartridge installation count (CH_NEW_BLK = the times new Black installed)

New Color ink cartridge installation count (CH_NEW_CLR = the times new Color installed)

Black ink cartridge removal / install-back count (CH_BLK = the times Black removed and installed)

Color ink cartridge removal / install-back count (CH_CL = the times Color removed and installed)

Remaining ink level (IL = Ink Level, BK=Black, Y=Yellow, M=Magenta, C=Cyan)

Power-on count (soft, P_ON = Power On)

Automatic print head alignment by user (A_REG)

Manual print head alignment by user (M_REG)

Rear tray feed pages (ASF PAGE, All = total, PP = plain paper, Photo1,2,and 3 = Photo Paper Plus Glossy, Matto = Matte photo paper, PC = postcard, EV = envelope)

Disabling of the remaining ink amount detection function (INK_OFF, BK = Black, CL = Color)

Total scan count (SC, TTL =total, PC = scanning from a computer, COPY = scanning at copying)

2) EEPROM InformationPrint sample (MG2400 series)

```
NG2400 SNXXXX00001.. ENS VO.500 ST:2013/04/08-09:58 LPT2013/04/09-11:35
O= 002.0
OF 00049
ER(ER0= 1300 ER1=1203 ER2=1000 ER3=5100 ER4=501
1) PC(II=000 R=000 L=001 O=000 C 001 1 001 )
TPAGE(TTL=00009 COPY=00001 )
CH_NEW_8K(ST4=00000 ST3=00000 NN=00001 XS=00000 )
CH_NEW_CL(STO=00000 IIN=00001 XS=00000 )
CH_8K=001
CH_CL=001
IL(8K=03 Y=01 N=01
C=01) P_ON($ 00009 )
A_REG=1 M_REG=1
ASF PAGE(All=00009 PP=00009 Photo1=00000 Photo2=00000 Photo3=00000
Matto=00000 PC=00000 EV=00000 )
INK_OFF(BK=0 CL=0)
SC(TTL=00001 PC=00000 COPY:00000 )

- EEPROM tr= lutlo= uu.l =
Address 0 of C NO I ea of i llo ol) oil ott U 14 IC ofr ote ott (0) II otI .. o) ( ?)
00000000 HH UU OUI Mlf OOM 0000 to00 0100 0000 C00e M00-0010 0000 to00 0100 A .t OIU (0) ote0 O.E. 0000 0000 IZ.
00000030 hio ototfen frH Hff ffff ffff Hff Hff Hff Hff fur iom H10 h10 u.c0 0000 0000 -00
00000060 OOM 0000 to00 M00 000.0000 $tq: t10 111 111 111 t01s ot0t OUt 01'01 HU 0110 0001 1000 ot0C OMO 0000 4:000 0000
00000090 0000 0000 0000-0000 0000 .000 0e00 un.... nlo n.u. C.. 0000 to00 0100 0000 0000 ---c
000000C0 ue ***
000000F0 )IC >=1 OOU 0000 Oif 0:1'0'1 0 otOL... 0001 0000 0100 0000 0000 0000 i0CI 00M 000. 1000 0000 OHO 0000 l0t0 K0C
0000120 U11 0000 0000 te00 0000 ooot I(Hf M00 Ofooot 0000 M00 0010 0000 tffJ 0100 00C0 C>ffH fhf tffJ 00. 0000 00C
0000150 00:10 0001 1110 te00 W... 0000 0000 0e00 001c: -- JUL 0100 0010 0000 fur tH -... 0000 fOU *U urc tS11 u0c
0000180 )U1 2111 011(0 U 01.: Oif III) a.00 00M ooot 0001 M00 100J 01U UH OUI 0000 ooot - , Uif IU01 0Zn U01 t10
00001B0 000 00) 000 (0) 000.0000.00 -- 00. 0000 -- 0. t0t0 00011
00001E0 --U Ute Uif "ULL... UJ OUI Oif 00SP HJ H00 Oif 0000 0000 1JOM 1111 0151 0M0 00M JJK Uif
0000210 --t1 U14001 1120 00C0 00U 00" $100 0010 0000 000 0000 --0 0000 0000 0000 0010 0000 0000 M00 -- HH //
0000240 HH OJO OHI 0000 JUt IOJO U)t JUO "" IUJ OOK t001 0111 OM OIU 000 *0000 00q 00ef 0001 MN ot.U lieII 0000
0000270 1000
00002A0 OOf O0x 0002 000'2 00.. 0000 0000 M00 0010 0001 0101 0100 OHCt-0001 0001 0011 00U t11 1-11 *NC Mfr IU t1 f
00002D0 OUt IOU 0000 0000 0000 0001 0001 0000 -- 0001 0000 etn 0000 -- 0000 to00 -- 000 0000 0000 0001 0001 0000 0000
0000300 0M0 0000 t000 M00 0000 0011 0000 M00 0000 0000 0000 0000 M00 0000 0000 0000 0000 0000 11000 M00 0010 0000 11001 0000
0000330 110M 000J 000) to00 OC*1 000t 0000 f0t00 0000 0000 0000 M00 0000 0000 0000 0000 0000 0000 0000 M00 0M0 00t0 0000 0000
0000360 0000 000t 0000 0000 0010 000t 0000 M00 0000 O.G. 0000 0000 -- 0001t 0000 0000 00C0 0000 0000 0000 .COO 110M 11000 0000
0000390 OW0 0000 0000 to00 0000 0001 0000 0000 0010 000e 0000 0000 --0 00e0. 0000 1000 --- 0000 0000 0000 0000 00t 0000 W00
00003C0 --000t 0000 0000 0000 0000 0000 0000 00M 0000 0000 M00 0000 0000 0011 M00 -- 110M 0001. 00000M 0000 M00
00003F0 M00 000. 1000 1000 0010 000t 0000 0000 0010 0001 0000 M00 M00 0001 0000 0000 M00 0010 0000 to00 et00 00M 0000 IC00
0000 0100 0001 0060 to00 e010 0001 0000 0000 0010 0001 0000 M00 i000 0000 0000 0000 --ct I0i0 00011 .000 0000 i0i0 0000 0000
0000 -- 0000 0000 11010 -- fffl ffft
```

2. FAQ (Possible Problems and Corrective Actions)

No.	* Function	Phenomenon	Condition	Cause	Corrective action	Possible call or complaint
1	A Setup	Smearing inside of the machine is smeared with ink mist		Due to ink mist attached to the inside of the machine	Using a dry cloth, wipe the inside of the tray, when necessary.	- Hands or clothes get smeared when replacing the ink cartridge or when removing the jammed paper.
2	B Print results	Smearing of the print side of the paper		When paper is curled, the edge of paper rises, causing the print head to rub against the printed surface of paper, resulting in smearing.	1. Correct the paper curl. 2. Recommend printing in the print quality assurance area.	- Smear on the printed side of paper - Cannot print properly. - Paper edge crease.
3	B Setup	Cover not fully opened, preventing ink cartridge removal or installation	The Paper Output Tray is open.	When the Paper Output Tray is open or its extension is extended, it prevents the Cover from open completely.	Close the Paper Output Tray before opening the Cover.	- Cannot remove the ink cartridge(s). - The Cover cannot be opened.
4	B Operability	“Cover open” error (three blinks of the Alarm lamp, error code 1203) not cleared	The Cover is opened during printing.	The Cover has the paper ejection mechanism. Opening or closing of the Cover during printing prevents proper paper ejection, thus the error is not cleared only by closing of the Cover.	i) Remove the paper, if any inside the machine, ii) close the Cover, and iii) press the Color or Black button. The error will be cleared and printing will be resumed with the next page.	- Printing does not resume after the Cover is opened or closed. - “Cover open” error is not cleared.
5	C Setup	- Misunderstanding that parts came off - “Packing material not removed” error (nine blinks of the Alarm lamp, error code 1890)	During removal of the packing material	- Since the color of the packing material is similar to the machine body color (see the photo below), users can misunderstand that the parts came off. - If the packing material is not removed, the error will occur at power-on.	Remove the packing material (and discard it) during setup.	- The parts came off. - “Packing material not removed” error

* Occurrence level:

A: The symptom is likely to occur frequently. (Caution required)

B: The symptom may occur under certain conditions, but likeliness is assumed very low in practical usage.

C: The symptom is unlikely to be recognized by the user, and no practical issues are assumed.

Packing material attached to the machine:



Packing Material to fix the carriage