

**TOSHIBA**

# SERVICE HANDBOOK GD1080/1090

FACSIMILE (FOR DP4500/3500)



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# GENERAL PRECAUTIONS REGARDING THE INSTALLATION AND SERVICE FOR DP4500/3500 AND GD1080/1090

The installation and service should be done by a qualified service technician.

## 1. Transportation/Installation

- When transporting/installing the copier, employ two persons and be sure to use the positions as indicated below.

The copier is quite heavy and weighs approximately 73kg (161lb), therefore pay full attention when handling it.



- Be sure to use a dedicated outlet with AC 115V or 120V/15A (220V, 230V, 240V/10A) or more for its power source.
- The copier must be grounded for safety.  
Never ground it to a gas pipe or a water pipe.
- Select a suitable place for installation.  
Avoid excessive heat, high humidity, dust, vibration and direct sunlight.
- Also provide proper ventilation as the copier emits a slight amount of ozone.
- To insure adequate working space for the copying operation, keep a minimum clearance of 80 cm (32") on the left, 80 cm (32") on the right and 10 cm (4") in the rear.

## 2. Service of Machines

- Basically, be sure to turn the main switch off and unplug the power cord during service.
- Be sure not to touch high-temperature sections such as the exposure lamp, the fuser unit, the damp heater and their periphery.
- Be sure not to touch high-voltage sections such as the chargers, high-voltage transformer, IH control circuit, exposure lamp control inverter, inverter for the LCD backlight and power supply unit. Especially, the board of these components should not be touched since the electric charge may remain in the condensers, etc. on them even after the power is turned OFF.
- Be sure not to touch rotating/operating sections such as gears, belts, pulleys, fan, etc.
- Be careful when removing the covers since there might be the parts with very sharp edges underneath.
- When servicing the machines with the main switch turned on, be sure not to touch live sections and rotating/operating sections. Avoid exposure to laser radiation.
- Use suitable measuring instruments and tools.
- Avoid exposure to laser radiation during servicing.
  - Avoid direct exposure to the beam.
  - Do not insert tools, parts, etc. that are reflective into the path of the laser beam.
  - Remove all watches, rings, bracelets, etc. that are reflective.

### 3. Main Service Parts for Safety

- The breaker, door switch, fuse, thermostat, thermofuse, thermistor, etc. are particularly important for safety. Be sure to handle/install them properly.

### 4. Cautionary Labels

- During servicing, be sure to check the rating plate and the cautionary labels such as “Unplug the power cord during service”, “Hot area”, “Laser warning label” etc. to see if there is any dirt on their surface and whether they are properly stuck to the copier.

### 5. Disposition of Consumable Parts/Packing Materials

- Regarding the recovery and disposal of the copier, supplies, consumable parts and packing materials, it is recommended to follow the relevant local regulations or rules.

### 6. When parts are disassembled, reassembly is basically the reverse of disassembly unless otherwise noted in this manual or other related documents. Be careful not to reassemble small parts such as screws, washers, pins, E-rings, star washers in the wrong places.

### 7. Basically, the machine should not be operated with any parts removed or disassembled.

### 8. Precautions Against Static Electricity

- The PC board must be stored in an anti-electrostatic bag and handled carefully using a wristband, because the ICs on it may become damaged due to static electricity.

**Caution: Before using the wristband, pull out the power cord plug of the copier and make sure that there are no uninsulated charged objects in the vicinity.**

**Caution :** Dispose of used batteries and RAM-ICs including lithium batteries according to the manufacturer's instructions.

**Attention :** Se débarrasser de batteries et RAM-ICs usés y compris les batteries en lithium selon les instructions du fabricant.

**Vorsicht :** Entsorgung des gebrauchten Batterien und RAM-ICs (inklusive der Lithium-Batterie) nach Angaben des Herstellers.

**1. ERROR CODES**

**2. SELF-DIAGNOSIS MODE**

**3. TROUBLESHOOTING**

**4. PRECAUTIONS FOR  
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# 1. ERROR CODES

## 1.1 Transmission/Reception Journal and Error Code List

The transmission journal is shown below. The error code list and status code list are available in the following pages. The reception journal is output in the same form.

TRANSMISSION JOURNAL		TIME	: MM-DD-YY TIME						
		TEL NO.1	: XXXXXXXXX						
		TEL NO.2	: XXXXXXXXX						
		NAME	: X X X X X X X						
NO.	FILE NO.	DATE	TIME	DURATION	PGS	TO	DEPT	MODE	STATUS
001	001	12.01	09:00	00:55	2	ABCD		G3 xxx	OK xx

Status code ————

Error code ————

## [A] Error code list

If an error has occurred during communication, an error code is indicated below "STATUS" on the transmission/reception journal.

Take the appropriate action referring to the following list.

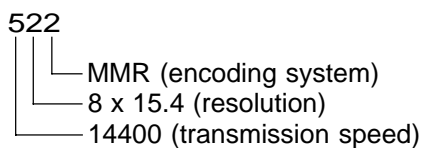
Error code	Content	Situation and corrective action
00	Normal	
11	Paper jam	Remove the jamming paper.
12	Original jam	Remove the jamming document and retransmit it.
13	Door is open	Close the doors securely and retransmit the document.
20	Power failure	A power failure occurred during transmission or reception, and the transmission/reception data were lost. Attempt the transmission/reception again.
30	(Reset)	Communication was stopped by the FC key.
33	Polling error	Polling was not performed because the polling document was not found. Check the polling document on the other side and attempt the polling again.
42	Memory full	The memory became full during reception. (The pages normally received are printed out.) Check the remaining memory space and attempt the reception again.
50	Line is busy	Transmission is not made because the line is busy. Attempt the transmission again. As the number of the redialings are increased, the possibility for successful transmission is increased.
53	Security mismatch in relay or mail box transmission	Check your security code and system password of the other side as well as your own.
B0	Initial signal not detected	NSF/DIS cannot be detected. Check the receiver and attempt the transmission again.
B1	Terminal constants not compatible	DIS/NSF that cannot be handled by the sender was received. The receiver received NSS/DCS other than those declared by DIS/NSF. Check the transmission/reception functions, and attempt the communication again.
B2	Reception of DCN (Phase B)	DCN was received in the phase B.
B3	DCS/DTC not detected	DCS/DTC cannot be detected.
B4	Training error	The sender performed fall-back but the transmission was not made. After the reception of FTT, the receiver received a time-out or DCN. Adjust the transmitter attenuator, link equalizer, etc. and retry the communication.
B5	CFR not detected	A training signal was sent out but CFR cannot be detected. Adjust the transmitter attenuator, link equalizer, etc. and retry the transmission.
C0	Image signal carrier not detected	A carrier was not detected on the receiving side. Adjust the transmitter attenuator, link equalizer, etc. and retry the transmission.
C1	High speed signal not detected	High-speed signals were not detected on the receiving side. Adjust the transmitter attenuator, link equalizer, etc. and retry the transmission.
C2	Image signal carrier disconnected	Carrier disconnection was detected after the image signal was detected.
C3	1st EOL not detected	1st EOL was not detected after the high-speed signal was detected.
C4	EOL not detected	EOL cannot be detected on the receiving side. Or decoding is not possible with MMR.
D0	Post message not detected	A post message cannot be detected. Retry the communication. MCF, RTP, RTN, PIN and PIP cannot be detected on the sending side. MPS, EOM and EOP cannot be detected on the receiving side.
D1	Reception of DCN	DCN was received.
D2	Poor image quality	Quality of the received image is poor. Retry the transmission.
E0	Image memory error	Hardware is defective.

Error code	Content	Situation and corrective action
E8	HDD error	Hardware is defective.
F0	Software trouble	Software is defective.
F1	Hardware noise	Hardware is defective.

**[B] Status code list**

Mode	Transmission speed	Resolution	Encoding system
0	2400	8 x 3.85	MH
1	4800	8 x 7.7	MR
2	7200	8 x 15.4	MMR
3	9600		JBIG
4	12000	16 x 15.4	
5	14400		
6	16800		
7	19200		
8	21600	300 x 300	
9	24000		
A	26400		
B	28800		
C	31200		
D	33600		
E			
F			

[Example of the indication of a status code]





## 1.2 Error Messages

Error messages are not displayed for the background jobs (memory transmission and memory reception). See the reception/transmission report for the details of the errors.

If an original jam during the direct transmission or recording paper jam during printing occurred, error messages are displayed like when original jam occurred in the copier.

Error messages and corrective actions

Error	Symptom	Message	Remarks
Memory full	Communication was interrupted because the memory became full.	MEMORY OVERFLOW	Message displayed only during the memory input. It is not displayed during the memory reception
Line is busy	Redialing was attempted for the specified number of times but the line is still busy.		Job information is stored in the memory when the final retry is finished.
Initial signal not detected	DIS is not detected	COMMUNICATION ERROR	
Terminal constants not compatible	Received DIS unable to be handled Received DCS which is beyond the capability of the receiver		
Training error	Fall-back is not made successfully. Became time-out after FTT was sent out	COMMUNICATION ERROR	
CFR not detected	CFR (FTT) is not detected	COMMUNICATION ERROR	
Image signal carrier not detected	Image signal carrier cannot be detected		
Image signal not detected	High-speed signal cannot be received by the receiver		
EOL time-out	EOL timer exceeded by 13 seconds		
Post message not detected	Post message is not detected	COMMUNICATION ERROR	
Poor image quality	TX: Received RTN/PIN/ERR RX: Transmitted RTN/PIN/ERR	COMMUNICATION ERROR	
Image memory error	Memory is abnormal during the memory communication		
Software overdrive	WDT communication terminated due to software overdrive	COMMUNICATION ERROR	
Hardware noise	Communication terminated due to software overdrive caused by hardware noise	COMMUNICATION ERROR	

## 2. SELF-DIAGNOSIS MODE

There are two types of the self-diagnosis mode for the fax operation.

- Mode 03, 05 and 08: Some items are added to the modes 03, 05 and 08 of the PPC self-diagnosis function when the optional fax unit is installed.
- Mode 13 and 1\*: These two modes are newly added to the machine when the fax unit is installed. Started up by turning ON the power while pressing the specified keys are being pressed.

The followings are the modes which are added to (or extend) the PPC self-diagnosis function.

Mode	Keys to be pressed to enter each mode	Function	Display
Test mode	[0]+[3]+[POWER]	Output check (modem test, dialing test, CML test)	100% C test mode
Adjustment mode	[0]+[5]+[POWER]	Adjustment of the various items	100% A test mode
Setting mode	[0]+[8]+[POWER]	Setting the destination	100% D test mode
Fax function mode	[1]+[3]+[POWER]	Setting functions of the various items	100% F test mode
Fax clearing mode	[1]+[*]+[POWER]	Initialization of the various memory areas (user registration area, system setting area, image data area)	100% CL test mode
Trace list output mode	Digital keys on the list output screen (Do not enter the self-diagnostic mode)	Outputs the protocol trace list, dump list and function setting list	Fax screen

Turn ON the main switch (power) while pressing two digital keys (ex: "0" and "5") simultaneously to enter each mode.

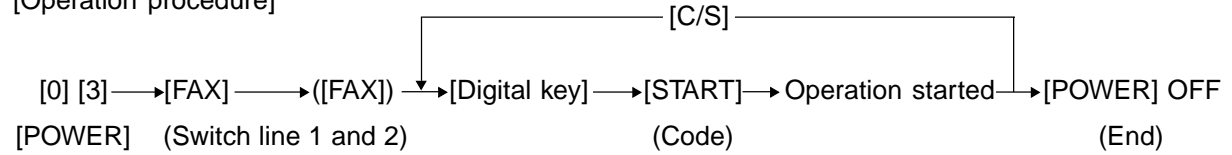
**Note :** To finish the self-diagnosis mode, turn the power OFF and then back ON. Do not cancel the mode using the keys "0" and "9".  
(A malfunction may be caused because the start-up process is not performed properly.)

## 2.1 Test Mode (03)

The modem test output, dialing test output and CML test output are performed in the test mode (03).

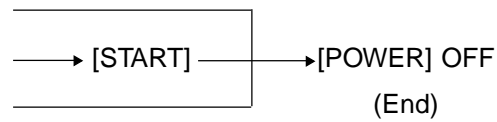
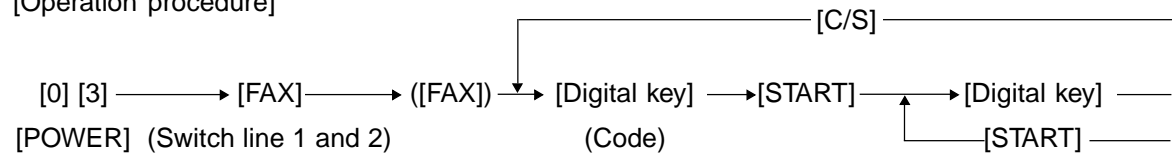
### (1) Modem test/CML test

[Operation procedure]



### (2) Dialing test

[Operation procedure]



Test code list

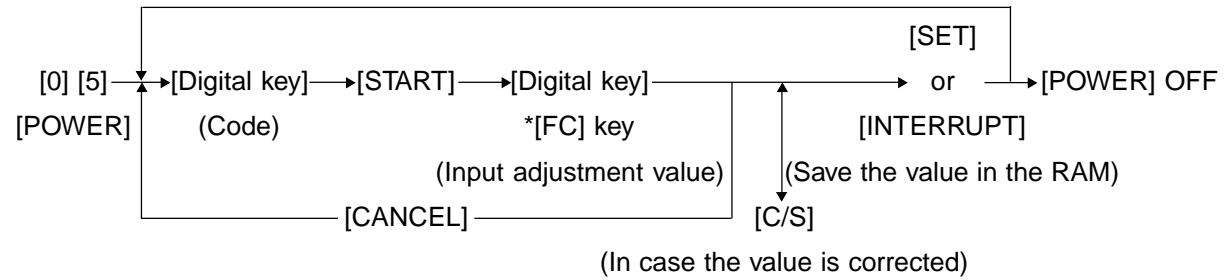
<b>Code</b>	<b>Element</b>	<b>Test</b>
301	Fax	Modem test 2100 Hz
302	Fax	Modem test 14.4 kbps (V.17)
303	Fax	Modem test 9.6 kbps (V.29)
304	Fax	Modem test 4.8 kbps (V.27)
305	Fax	Modem test 300 BPS
306	Fax	Modem test 1850 Hz
307	Fax	Modem test 1650 Hz
308	Fax	Modem test 1100 Hz
309	Fax	Modem test 462 Hz
310	Fax	Modem test 1300 Hz
311	Fax	Modem test 33.6 kbps (V.34)
312	Fax	Modem test 28.8 kbps (V.34)
313	Fax	Modem test 24.0 kbps (V.34)
314	Fax	Modem test 16.8 kbps (V.34)
315	Fax	Dialing test 10PPS (Tested with the digital keys) (The dial number corresponding to the key which was pressed is kept outputting on the circuit. The pressed key is displayed on the control panel.)
317	Fax	Dialing test PB (Tested with the digital keys) (The dial number corresponding to the key which was pressed is kept outputting on the circuit. The pressed key is displayed on the control panel.)
318	Fax	Modem test 12.0 kbps (V.17)
319	Fax	Modem test 7.2 kbps (V.29)
320	Fax	Modem test 2.4 kbps (V.27ter)
322	Fax	CML test: Turning ON the CML relay

## 2.2 Adjustment Mode (05)

Parameter setting for the fax image processing is performed in the adjustment mode '05'.

(1) Setting parameters for the fax image processing

[Operation procedure]



\* “-” can be entered with the [FC] key.

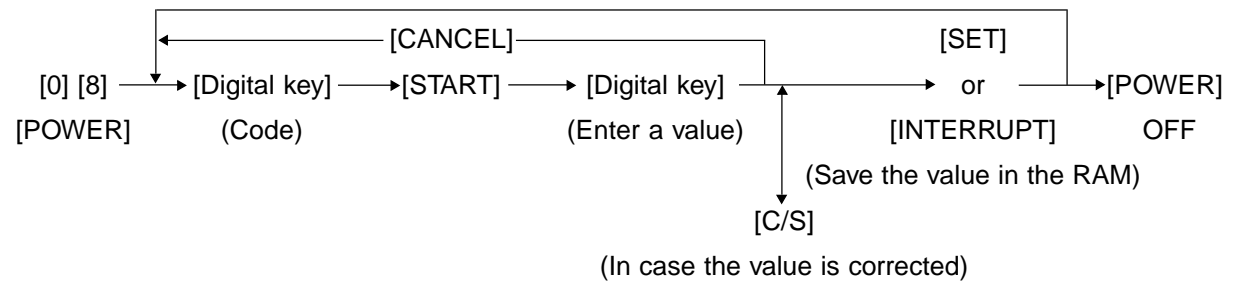
Adjustment codes for the image processing parameters

Code	Element	Adjustment item	Mode	Image quality mode	Default	Acceptable value
700	Density	Adjustment of the threshold value for the digitization Center value	Fax	Text	120	0~255
701	Density	Adjustment of the threshold value for the digitization Lighter step value	Fax	Text	20	0~255
702	Density	Adjustment of the threshold value for the digitization Darker step value	Fax	Text	20	0~255
710	Density	Manual-density fine adjustment Error diffusion, Center value	Fax	Photo	128	0~255
714	Density	Manual-density fine adjustment Error diffusion, Center value	Fax	Text/ photo	128	0~255
715	Density	Manual-density fine adjustment Error diffusion, Lighter step value	Fax	Photo	12	0~255
719	Density	Manual-density fine adjustment Error diffusion, Lighter step value	Fax	Text/ photo	20	0~255
720	Density	Manual-density fine adjustment Error diffusion, Darker step value	Fax	Photo	25	0~255
724	Density	Manual-density fine adjustment Error diffusion, Darker step value	Fax	Text/ photo	20	0~255
725	Density	Auto-density fine adjustment Error diffusion	Fax	Photo	128	0~255
729	Density	Auto-density fine adjustment Error diffusion	Fax	Text/ photo	128	0~255

## 2.3 Setting Mode (08)

The destination is set in the setting mode (08).

[Operation procedure]



Code	Element	Adjustment item	Mode	Image mode	Default	Acceptable value
701	Fax	Destination 1: Asia      2: Australia      3: Hong Kong 4: U.S.A      5: Germany      6: Great Britain 7: Italy      8: Belgium      9: Holland 10: Finland      11: Spain      12: Austria 13: Switzerland      14: Sweden      15: Denmark 16: Norway      17: Portugal      18: France 19: Greece      20: Poland      21: Hungary 22: Czech Rep.      23: Turkey      24: South Africa	Fax	ALL	AU: 2 UC: 4 EUR: 5	

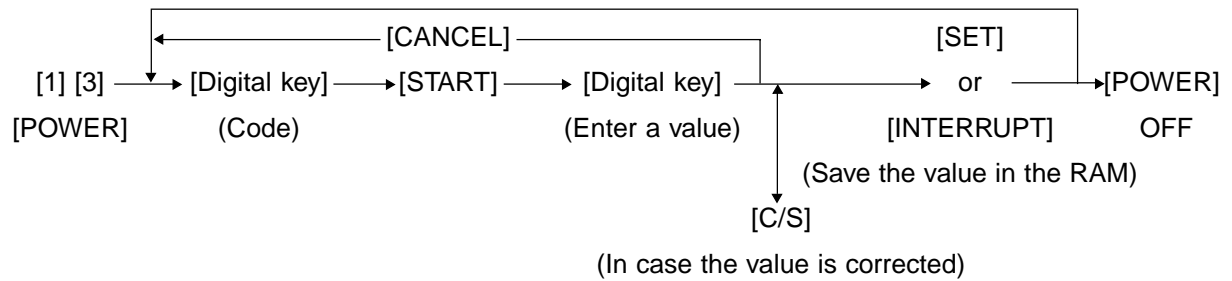
## 2.4 Function Mode (13)

Various functions are set in the function mode (13).

### (1) Procedure to set the functions

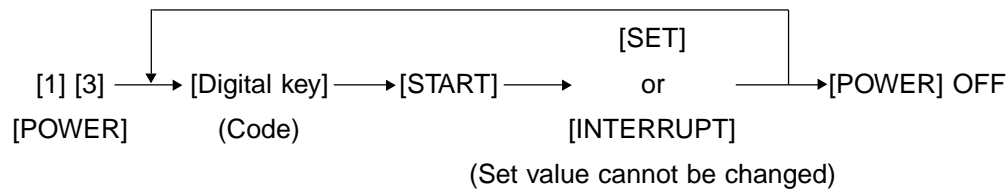
Enter a code using the digital keys and change the set value.

[Operation procedure]



### (2) Procedure to confirm the set value

[Operation procedure]





Function code list (100-999)

100-299 Adjustment within the dialing standards

Code	Adjustment	Function	Setting	Default																				Code			
				AS	AU	HK	US	DE	GB	IT	BE	NL	FI	ES	AT	CH	SE	DK	NO	PT	FR	GR	PL		HU	CZ	TR
100	DTC frequency (PSTN) (Line 1)	Set the dial tone frequency to be detected for the PSTN.	0: 300-600Hz 1: 300-650Hz 2: 390-550Hz 3: 400-450Hz 4: 350-480Hz 5: 300-500Hz 6: Reserved 7: Reserved	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	100	
101	DTC time (PSTN) (Line 1)	Set the time for a tone sounds to be determined as dial tone for the PSTN.	0: 2sec 1: 800ms 2: 400ms 3: 1sec 4: 1.3sec 5: 1.8sec 6: 2.5sec 7: 500ms	0	0	0	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	101
102	LCC allowed gaps (PSTN) (Line 1)	Set the interruption time for the PSTN to be ignored during LCC.	0: OFF 1: 50ms 2: 100ms 3: 200ms	0	0	0	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	102
103	DTC allowed gaps (PSTN) (Line 1)	Set the interruption time for PSTN to be ignored during DTC.	0: OFF 1: 70ms 2: 160ms 3: 240ms	0	0	0	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	103
104	DTC/LCC for PSTN (Line 1)	Select which is to be used for the PSTN, DTC or LCC.	0: BZT(DTC/LCC) 1: LCC 5sec 2: DTC only 3: FRN(DTC/LCC) 4: DTC(JPN) 5: NO DTC&LCC	5	5	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	104	
105	DTC time out (PSTN) (Line 1)	Set how long the dial tone detection is performed.	0: 20sec 1: 10sec 2: 8sec 3: 15sec 4: 3.3sec	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	105	
106	DTC frequency (PABX) (Line 1)	Set the dial tone frequency to be detected for PABX.	0: 300-600Hz 1: 300-650Hz 2: 390-550Hz 3: 400-450Hz 4: 350-480Hz 5: 300-500Hz 6: Reserved 7: Reserved	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	106
107	DTC time (PABX) (Line 1)	Set the time for a tone sounds to be determined as dial tone for the PABX.	0: 2sec 1: 800ms 2: 400ms 3: 1sec 4: 1.3sec 5: 1.8sec 6: 2.5sec 7: 150ms	0	0	0	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	107
108	LCC allowed gaps (PABX) (Line 1)	Set the interruption time for the PABX to be ignored during LCC.	0: OFF 1: 50ms 2: 100ms 3: 200ms	0	0	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0	108
109	DTC allowed gaps (PABX) (Line 1)	Set the interruption time for the PABX to be ignored during DTC.	0: OFF 1: 70ms 2: 160ms 3: 240ms	0	0	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0	109
110	DTC/LCC for PABX (Line 1)	Select which is to be used for the PABX, DTC or LCC.	0: BZT(DTC/LCC) 1: LCC 5sec 2: DTC only 3: FRN(DTC/LCC) 4: DTC(JPN) 5: NO DTC&LCC	5	5	5	2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	110
111	DTC time out (PABX) (Line 1)	Set how long the dial tone detection is performed.	0: 20sec 1: 10sec 2: 8sec 3: 15sec 4: 3.3sec	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	111	
112	BTC frequency (Line 1)	Set the busy tone frequency to be detected for the PSTN and PABX.	0: Not detected 1: 300-600Hz 2: 350-550Hz 3: 300-500Hz 4: 300-700Hz	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	112	
116	Dial T1 timer (Line 1)	Set the time to wait for a response from the receiver after dialing is completed.	0: 60sec 1: 35sec 2: 90sec 3: 55sec 4: 115sec	0	3	0	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	116	
117	Dial stop after T1	In case of T1 time-out (no response from the receiver) during the automatic dialing, redialing is not performed and it is determined that the transmission is terminated due to error.	0: OFF 1: ON	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	117	

Code	Adjustment	Function	Setting	Default																				Code					
				AS	AU	HK	US	DE	GB	IT	BE	NL	FI	ES	AT	CH	SE	DK	NO	PT	FR	GR	PL		HU	CZ	TR	ZA	
125	Dial information (Line 1)	Set the definition of the DP dial. Normal: n Shift: n+1 Reverse: 10-n n=Dial No.	0: Normal 1: Shift 2: Reverse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	125
127	Internal retry	When dialing is interrupted because any of the settings for DTC/LCC is not satisfied during redialing, that redialing is ignored since it is considered as an internal retry.	0: OFF 1: ON	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	127
128	Redialing counter	Set the number of redialings.	0: No retry 1: 1 redialing ⋮ 14: 14 redialings	5	2	4	5	3	4	3	3	5	3	3	1	4	5	4	9	3	5	4	3	3	3	5	5	128	
129	Time for a pause (Line 1)	Set the time for a pause when it is inserted between the dial numbers.	0: 0sec 1: 1sec 2: 2sec 3: 4sec 4: 3.3sec 5: 10sec	4	2	2	4	2	2	3	2	0	2	2	2	0	2	2	2	1	2	4	4	4	4	4	4	129	
132	Interdigit pause (Line 1)	Set the interval between digits for DP dialing.	0: 900ms 1: 550ms 2: 700ms 3: 800ms	0	0	2	3	0	3	3	2	2	0	1	3	3	2	2	2	2	0	3	3	0	0	0	0	132	
135	Redialing interval (Line 1)	Set the interval between redialings.	0: Default (3 min) 1: 1min ⋮ 15: 15min	3	1	3	1	0	0	3	2	2	0	2	2	2	1	0	0	1	3	3	3	3	3	3	3	135	
137	DP make/break ratio (Line 1)	Set the make/break ratio for DP dialing.	0: 60/40(10PPS) 1: 67/33(10PPS) 2: 63/37(10PPS) 3: 50/50(10PPS) 4: 67/33(20PPS)	1	1	1	0	0	1	0	1	0	0	1	0	0	0	1	0	1	1	0	1	0	0	1	1	137	
138	MF timing (Line 1)	Set the ON/OFF timing of MF signals. Do not set the value "4" for the function code 138 and 268 to ensure minimum time of the MF signal duration ruled in TBR21 (Requirement 4.8.2.4, 4.8.2.5)	0: 80/80ms 1: 70/70ms 2: 70/150ms 3: 60/60ms 4: 80/100ms 5: 150/50ms 6: 150/240ms	2	0	2	4	4	0	0	1	1	0	2	0	0	1	2	0	0	0	4	0	3	1	2	2	138	
139	DTC RX ATT (PSTN) (Line 1)	Set the reception level when the dial tone is detected for the PSTN.	0: -24dBm 1: -27dBm 2: -30dBm 3: -33dBm 4: -36dBm 5: -39dBm 6: -42dBm 7: -45dBm	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	139	
140	DTC RX ATT (PABX) (Line 1)	Set the reception level when the dial tone is detected for the PABX.	0: -24dBm 1: -27dBm 2: -30dBm 3: -33dBm 4: -36dBm 5: -39dBm 6: -42dBm 7: -45dBm	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	140	
141	MF TX-ATT (Line 1)	Set the attenuator value for the MF signal.	0: 0dB 1: -1dB ⋮ 15: -15dB (Value decreased one by one)	3	6	5	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	141

Code	Adjustment	Function	Setting	Default																				Code		
				AS	AU	HK	US	DE	GB	IT	BE	NL	FI	ES	AT	CH	SE	DK	NO	PT	FR	GR	PL		HU	CZ
142	International DTC frequency	Select the frequency range for the dial tone of the first pause to be detected.  Select the frequency range for the dial tone to be detected after dialing the second international dial access code.	00: No detection 01: 300Hz-600Hz 02: 300Hz-650Hz 03: 390Hz-550Hz 04: 400Hz-450Hz 05: 350Hz-480Hz 06: 300Hz-500Hz 07: France Dual Tone (not used)  10: No detection 11: 300Hz-600Hz 12: 300Hz-650Hz 13: 390Hz-550Hz 14: 400Hz-450Hz 15: 350Hz-480Hz 16: 300Hz-500Hz 17: France Dual Tone (not used)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142
143	International dial access code(Line 1)	Sets the international access code.	Numeric value of 3 digits (Default setting: 4 digits)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	143
149	ATT control (Line 1)	Setting for the receiver attenuator.	0: OFF 1: -3dB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	
150	BTC ON time (Line 1)	Sets time that a busy-tone signal is output to be determined it is ON.	0: 80-650ms 1: 450-550ms 2: 200-650ms 3: 400-600ms 4: 120-550ms 5: 420-610ms 6: Reserved 7: Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150	
151	BTC OFF time (Line 1)	Sets time that a busy-tone signal is not output to be determined it is OFF.	0: 80-650ms 1: 450-550ms 2: 200-650ms 3: 400-600ms 4: 160-600ms 5: 170-700ms 6: 380-630ms 7: 150-470ms	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	151	
152	MF dial levels	Set the difference between the high output and low output of the MF signal.	0: 0dB 1: -1dB   4: -4dB (Value decreased one by one)	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	152	
153	Intermittent DTC function	Setting for intermittent DTC function.	0: OFF 1: ON	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	153	
200	Exchange type (Line 1)	Select the exchange type.	0: PSTN 1: PABX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	
201	Dial selection (Line 1)	Select the access type for the PABX.	0: Not defined 1: Local/Distant 2: Access Digit	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	201	
203	Dialer type (Line 1)	Select the dial type.	0: DP 1: MF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	203	
206	Local/distant dial (Line 1)	Enter an access code designated for the access type selected for the function code 201. Local: 2 digits Distant: 2 digits Access Digit: 3 digits	Numeric value of 3 digits (4 digits for the default setting)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	206	
210	Exchange type (Line 2)	Select the exchange type.	0: PSTN 1: PABX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	210	
211	Dial selection (Line 2)	Select the access type for the PABX.	0: Not defined 1: Local/Distant 2: Access Digit	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	211	
213	Dialer type (Line 2)	Select the dial type.	0: DP 1: MF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	213	
216	Local/distant dial (Line 2)	Enter an access code designated for the access type selected for the function code 211. Local: 2 digits Distant: 2 digits Access Digit: 3 digits	Numeric value of 3 digits (4 digits for the default setting)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	216	

Code	Adjustment	Function	Setting	Default																				Code		
				AS	AU	HK	US	DE	GB	IT	BE	NL	FI	ES	AT	CH	SE	DK	NO	PT	FR	GR	PL		HU	CZ
220	DTC frequency (PSTN) (Line 2)	Set the dial tone frequency to be detected for the PSTN.	0: 300-600Hz 1: 300-650Hz 2: 390-550Hz 3: 400-450Hz 4: 350-480Hz 5: 300-500Hz 6: Reserved 7: Reserved	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	220
221	DTC time (PSTN) (Line 2)	Set the time for a tone sounds to be determined as dial tone for the PSTN.	0: 2sec 1: 800ms 2: 400ms 3: 1sec 4: 1.3sec 5: 1.8sec 6: 2.5sec 7: 500ms	0	0	0	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	221
222	LCC allowed gaps (PSTN) (Line 2)	Set the interruption time for the PSTN to be ignored during LCC.	0: OFF 1: 50ms 2: 100ms 3: 200ms	0	0	0	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	222	
223	DTC allowed gaps (PSTN) (Line 2)	Set the interruption time for the PSTN to be ignored during DTC.	0: OFF 1: 70ms 2: 160ms 3: 240ms	0	0	0	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	223	
224	DTC/LCC for PSTN (Line 2)	Select which is to be used for the PSTN, DTC or LCC.	0: BZT(DTC/LCC) 1: LCC 5sec 2: DTC only 3: FRN(LCC/DTC) 4: DTC(JPN&USA) 5: NO DTC&LCC	5	5	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	5	224	
225	DTC time out (PSTN) (Line 2)	Set how long the dial tone detection is performed.	0: 20sec 1: 10sec 2: 8sec 3: 15sec 4: 3.3sec	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	225	
226	DTC frequency (PABX) (Line 2)	Set the dial tone frequency to be detected for the PABX.	0: 300-600Hz 1: 300-650Hz 2: 390-550Hz 3: 400-450Hz 4: 350-480Hz 5: 300-500Hz 6: Reserved 7: Reserved	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	226
227	DTC time (PABX) (Line 2)	Set the time for a tone sounds to be determined as dial tone for the PABX.	0: 2sec 1: 800ms 2: 400ms 3: 1sec 4: 1.3sec 5: 1.8sec 6: 2.5sec 7: 150ms	0	0	0	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	227	
228	LCC allowed gaps (PABX) (Line 2)	Set the interruption time for the PABX to be ignored during LCC.	0: OFF 1: 50ms 2: 100ms 3: 200ms	0	0	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0	228	
229	DTC allowed gaps (PABX) (Line 2)	Set the interruption time for the PABX to be ignored during DTC.	0: OFF 1: 70ms 2: 160ms 3: 240ms	0	0	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	0	229	
230	DTC/LCC for PABX (Line 2)	Select which is to be used for the PABX, DTC or LCC.	0: BZT(DTC/LCC) 1: LCC 5sec 2: DTC only 3: FRN(LCC/DTC) 4: DTC(JPN&USA) 5: NO DTC&LCC	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	230	
231	DTC time out (PABX) (Line 2)	Set how long the dial tone detection is performed.	0: 20sec 1: 10sec 2: 8sec 3: 15sec 4: 3.3sec	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	231	
232	BTC frequency(Line 2)	Set the busy tone frequency to be detected for the PSTN and PABX.	0: Not detected 1: 300-600Hz 2: 350-550Hz 3: 300-500Hz 4: 300-700Hz	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	232	
236	Dial T1 timer (Line 2)	Set the time to wait for a response from the receiver after dialing is completed.	0: 60sec 1: 35sec 2: 90sec 3: 55sec 4: 115sec	0	3	0	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	0	0	236	
245	Dial information (Line 2)	Set the definition of the DP dial. Normal: n Shift: n+1 Reverse: 10-n n=Dial No.	0: Normal 1: Shift 2: Reverse	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	245	
247	Internal retry (Line 2)	When dialing is interrupted because any of the settings for DTC/LCC is not satisfied during redialing, that redialing is ignored since it is considered as an internal retry.	0: OFF 1: ON	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	247	

Code	Adjustment	Function	Setting	Default																								Code
				AS	AU	HK	US	DE	GB	IT	BE	NL	FI	ES	AT	CH	SE	DK	NO	PT	FR	GR	PL	HU	CZ	TR	ZA	
249	Time for a pause (Line 2)	Set the time for a pause when it is inserted between the dial numbers.	0: 0sec 1: 1sec 2: 2sec 3: 4sec 4: 3.3sec 5: 10sec	4	2	2	4	2	2	3	2	0	2	2	2	0	2	2	2	1	2	4	4	4	4	4	249	
262	Interdigit pause (Line 2)	Set the interval between digits for DP dialing.	0: 900ms 1: 550ms 2: 700ms 3: 800ms	0	0	2	3	0	3	3	2	2	0	1	3	3	2	2	2	2	0	3	3	0	0	0	0	262
267	DP make/break ratio (Line 2)	Set the make/break ratio for DP dialing.	0: 60/40(10PPS) 1: 67/33(10PPS) 2: 63/37(10PPS) 3: 50/50(10PPS) 4: 67/33(20PPS)	1	1	1	0	0	1	0	1	0	0	1	0	0	0	1	0	1	1	0	1	0	0	1	1	267
268	MF timing (Line 2)	Set the ON/OFF timing of MF signals. Do not set the value "4" for the function code 138 and 268 to ensure minimum time of the MF signal duration ruled in TBR21 (Requirement 4.8.2.4, 4.8.2.5)	0: 80/80ms 1: 70/70ms 2: 70/150ms 3: 60/60ms 4: 80/100ms 5: 150/50ms 6: 150/240ms	2	0	2	4	4	0	0	1	1	0	2	0	0	1	2	0	0	0	4	0	3	1	2	2	268
269	DTC RX ATT (PSTN) (Line 2)	Set the reception level when the dial tone is detected for the PSTN.	0: -24dB 1: -27dB 2: -30dB 3: -33dB 4: -36dB 5: -39dB 6: -42dB 7: -45dB	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	269
270	DTC RX ATT (PABX) (Line 2)	Set the reception level when the dial tone is detected for the PABX.	0: -24dB 1: -27dB 2: -30dB 3: -33dB 4: -36dB 5: -39dB 6: -42dB 7: -45dB	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	270
271	MF TX-ATT (Line 2)	Set the attenuator value for the MF signal.	0: 0dB 1: -1dB ⋮ 15: -15dB (Value decreased one by one)	3	6	5	3	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	271	
272	International DTC frequency (Line 2)	Select the frequency range for the dial tone of the first pause to be detected.  Select the frequency range for the dial tone to be detected after dialing the second international dial access code.	00: No detection 01: 300Hz-600Hz 02: 300Hz-650Hz 03: 390Hz-550Hz 04: 400Hz-450Hz 05: 350Hz-480Hz 06: 300Hz-500Hz 07: France Dual Tone (not used)  10: No detection 11: 300Hz-600Hz 12: 300Hz-650Hz 13: 390Hz-550Hz 14: 400Hz-450Hz 15: 350Hz-480Hz 16: 300Hz-500Hz 17: France Dual Tone (not used)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	272
273	International dial access code (Line 2)	Set the international access code.	Numeric value of 3 digits (Default setting: 4 digits)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	273	
279	ATT control (Line 2)	Setting for the receiver attenuator.	0: OFF 1: -3dB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	279	
280	BTC ON time (Line 2)	Set the time range for the busy tone on-time.	0: 80-650ms 1: 450-550ms 2: 200-650ms 3: 400-600ms 4: 120-550ms 5: 420-610ms 6: Reserved 7: Reserved	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	280
281	BTC OFF time (Line 2)	Set the time range for the busy tone off-time.	0: 80-650ms 1: 450-550ms 2: 200-650ms 3: 400-600ms 4: 160-600ms 5: 170-700ms 6: 380-630ms 7: 150-470ms	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	281
282	MF dial level balance (Line 2)	Set the difference between the high output and low output of the MF signal.	0: 0dB 1: -1dB ⋮ 4: -4dB (Value decreased one by one)	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	282	
283	Intermittent DTC function (Line 2)	Setting for intermittent DTC function.	0: OFF 1: ON	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	283	

300-699 Adjustments for switching function specifications

Code	Adjustment	Function	Setting	Default																				Code		
				AS	AU	HK	US	DE	GB	IT	BE	NL	FI	ES	AT	CH	SE	DK	NO	PT	FR	GR	PL		HU	CZ
309	RDC function	Set the remote diagnosis configuration function.	0: OFF 1: ON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	309
312	CI history hold time (Line 1)	Set the time for the CI history to remain.	0: 5sec 1: 8sec 2: 14sec	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	312
313	CI detection frequency range (Line 1)	Set the frequency range for CI detection.	0: 12-80Hz 1: 16-55Hz 2: 20-55Hz 3: 22-55Hz	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	313
317	Handling of negative answer	Set whether the RTN received is handled as abnormal (NG) or normal when the data are slightly abnormal. Abnormal: DOC is transmitted to stop the communication. Normal: Next page is transmitted normally.	0: Abnormal 1: Normal	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	317
325	TX attenuation value (V.17)(Line 1)	Set the modem transmission level for communication other than V.34. The smaller the value, the higher the transmission level becomes. If errors occur frequently or training is not sent, the transmission level should be changed.	0: 0dB 1: -1dB : 15: -15dB (Value decreased one by one)	10	13	10	10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	325
328	Cable equalizer (V.17)(Line 1)	Set the equalizer value which has frequency characteristics. For the long-distance communication, it is recommended to set a large value.	0: 0dB 1: -4dB 2: -8dB 3: -12dB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	328
331	Echo protection delay (high speed) (V.21)	Set if a delay (500ms) is inserted before sending the V.21 signal and timing is shifted to avoid the line echo.	0: OFF 1: ON (500ms)	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	331
335	Modem speed initial value	Set the initial modem speed to be declared by DIS/DCS.	0: 2400bps 1: 14.4Kbps (V.17) 4: 4800bps 5: 12Kbps (V.17) 8: 9600bps 9: 9600bps (V.17) 12: 7200bps 13: 7200bps (V.17)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	335
338	Forcible line monitoring	Select the line to monitor.	0: OFF 1: Line 1 2: Line 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	338
339	CI-ON determine time (Line 1)	CI ON-satiable time.	0: 175ms 1: 125ms 2: 800ms 3:145ms	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	339
340	CI-OFF determine time (Line 1)	CI OFF-satiable time.	0: 650ms 1: 350ms 2: 175ms 3:90ms	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	340
346	Recording width capacity declaration	Select either one of the followings to declare the maximum recording width to the other party when the specified paper size is not available; the largest paper in the other cassette or the cassette for the largest paper.	0: Paper 1: Cassette	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	346
349	Relay station printing function	Set if document can be printed on the relay station.	0: OFF 1: ON	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	349

Code	Adjustment	Function	Setting	Default																				Code		
				AS	AU	HK	US	DE	GB	IT	BE	NL	FI	ES	AT	CH	SE	DK	NO	PT	FR	GR	PL		HU	CZ
350	High speed carrier-OFF detection timer	Set the time to determine the carrier signal is stopped completely.	0: 1.5sec 1: 6sec (FTZ)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	350
351	Off-hook alarm	Set the volume of the alarm sounded when the handset has been left off the cradle even though the communication is finished.	0: Level 0 (Min.) ; 7: Level 7 (Max.)	0	0	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	351
355	Memory transmission report	Set whether the memory transmission report is output or not. Also, select the output conditions.	0: OFF 1: On Error (BZT) 2: ALWAYS 3: On Error 5: On Error (BZT/W) 6: Always (W) 7: On Error (W)	7	7	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	355
356	Multi address transmission report	Set whether the multi-address transmission report is printed or not. Also, select the output condition.	0,1: OFF 2: Always 3: On error 6: Always (with the sent document on) 7: On error (with the sent document on)	7	7	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	356
359	Multi polling report	Set whether the multi-polling transmission report is printed or not. Also, select the output condition.	0,1: OFF 2: Always 3: On error	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	359
362	Result report printout for relay hub station	Set whether the relay multi-address transmission report is printed or not. Also, select the output condition.	0,1: OFF 2: Always 3: On error 6: Always (with the sent document on) 7: On error (with the sent document on)	7	7	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	362
365	Printing function for relay station (reception report)	Set whether the relay multi-address reception report is printed or not.	0: OFF 1: ON	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	365
367	F-code acceptance list	Set whether the acceptance list is printed when the data are sent into the confidential box or bulletin board or not. Also, select the output condition.	0: OFF 1: Remote ON, local OFF 2: Remote OFF, local ON 3: ON	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	367
368	Journal auto-output	Set whether the journal is output automatically or not.	0: OFF 1: ON	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	368
370	Communication result on journal (OK/NG)	Select whether the communication result (OK/NG) is reported on the transmission journal or not.	0: Not reported 1: Reported	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	370
371	Communication result on journal (error code)	Select whether the communication error code is reported on the transmission journal or not.	0: Not reported 1: Reported	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	371
372	CI detection counter setting for auto-RX (Line 1)	Set the CI counter value for the machine to enter the automatic reception mode.	0: Once 1: Once ; 15: 15times (Value increased one by one)	1	4	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	372
373	Speaker volume (monitor tone)	Set the speaker volume for on-hook status or protocol monitor.	0: Level 0 (Min.) ; 7: Level 7 (Max.)	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	373
375	Discard parameter on printing	Set the data length to be discarded when the received data exceed the effective recording length.	0: 0mm (No elimination) 1: 10mm 2: 18mm 3: 22mm 4: 34mm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	375
377	Printing mode	Set if the received document is reduced automatically to appropriate recording size.	0: Auto-Reduction 1: No Reduction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	377

Code	Adjustment	Function	Setting	Default																				Code		
				AS	AU	HK	US	DE	GB	IT	BE	NL	FI	ES	AT	CH	SE	DK	NO	PT	FR	GR	PL		HU	CZ
378	Discard printing	Select if the discard printing is performed.	0: OFF 1: ON	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	378	
379	Maximum reduction rate	Set the maximum reduction rate in the vertical direction.	0: 90% 1: 75%	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	379
382	Reception information on received document	Set if the receiver information is printed on received document.	0: OFF 1: ON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	382
389	RX mode (PSTN)	Select the receiving mode.	0: TEL 1: FAX 2: TEL/FAX 3: Code not used	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	389
391	ECM function	Set if the ECM communication is performed.	0: OFF 1: ON	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	391	
394	Recovery transmission retaining time	Set the time for the HDD to retain data when the transmission was terminated due to an error.	0: OFF 1: 1hour ; 24: 24hours	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	394	
430	TX attenuation value (V.17) (Line 2)	This value is to set the modem transmission level for communication other than V.34. The smaller the value, the higher the transmission level becomes. If errors occur frequently or training is not sent, the transmission level should be changed.	0: 0dB 1: -1dB ; 15: -15dB (Value decreased one by one)	10	13	10	10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	10	430
433	Cable equalizer (V.17) (Line 2)	Set the equalizer value which has frequency characteristics. For the long-distance communication, it is recommended to set a large value.	0: 0dB 1: -4dB 2: -8dB 3: -12dB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	433
501	Communication control in case PPR is received four times	Set how the communication is controlled when the 4th PPR is received during the ECM transmission.	0: EOR transmitted 1: CTC (communication terminated after the 4th 2400 bps PPR) 2: CTC (EOR transmitted after the reception of the 4th 2400 bps PPR)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	501
509	Modem speed for overseas communication (except V.34)	Set the initial modem speed for overseas communication.	0: 9600bps 1: 7200bps 2: 4800bps 3: Undefined	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	509
510	Position of header for transmission information	Select the position where the header is inserted.	2: Inside 3:Outside	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	510	
511	Transmission information at header	Setting for the header insertion.	0: Not inserted 1: Inserted	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	511	
512	Threshold for error image	After receiving a document with more error lines than this threshold level, the machine transmits the RTN signal to the sender.	0: 5% 1: 10% 2: 15% 3: 25%	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	512	
517	Regular Reduction	Set if the regular reduction printing (A3→B4 or A4, B4→A4 or B5) is performed.	0: OFF 1: ON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	517	
518	Duplex printing	Set if duplex printing for received documents is performed.	0: OFF 1: ON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	518	



Code	Adjustment	Function	Setting	Default																				Code				
				AS	AU	HK	US	DE	GB	IT	BE	NL	FI	ES	AT	CH	SE	DK	NO	PT	FR	GR	PL		HU	CZ	TR	ZA
519	Paper selection for received fax document	Select which one has priority over the other, A4 series or LT series, to print the received document when these two series are mixed in a cassette.	0: A4 series 1: LT series	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	519	
564	Control channel speed (Line 1)	Select the control channel speed for the V.34 communication.	0: 1200bps 1: 2400bps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	564	
565	Fall-back condition for transmitter (No. of PPR reception) (V.34 Line 1)	Set the number of the PPR reception for fall-back condition in the V.34 transmission.	0: Once 1: Twice ⋮ 10: 11time	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	565	
566	Fall-back condition for receiver (No. of PPR reception) (V.34 Line 1)	Set the number of the PPR transmission for fall-back condition in V.34 reception.	0: Once 1: Twice ⋮ 10: 11time	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	566	
567	TX attenuation value (V.34) (Line 1)	Set the modem transmission attenuation level for the V.34 communication. The smaller the set value, the higher the transmission level becomes. If errors occur frequently or training is not sent, the transmission level should be changed.	0: 0dB 1: -1dB ⋮ 15: -15dB (Value decreased one by one)	10	13	10	10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	10	567
569	Initial modem speed for V.34 communication	Set the initial modem speed for V.34 communication.	0: V.34 not installed 6: 14.4kbps(V.34) 9: 21.6kbps(V.34) 12: 28.8kbps(V.34) 14: 33.6kbps(V.34)	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	569	
571	SUB/SEP/PWD functions	Setting for SUB/SEP/PWB communication.	0: OFF 1: ON	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	571	
574	Coding capability (communication capability)	Set the coding capability to be declared to the other side during communication.	0: MH 1: MH/MR 2: MH/MR/MMR 3: MH/MR/MMR/JBIG	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	574	
575	Reception end tone timing	Set the timing to sound the reception end tone.	0: OFF 1: When printing is completed 2: When reception is completed	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	575	
576	V.34 symbol rate (Line 1)	Set the initial value for the symbol rate for V.34 communication. Maximum modem speed for each setting are as follows. 2400: 21600bps, 2800: 26400bps 3000: 28800bps, 3200: 31200bps 3492: 33600bps	0: 2400 1: 2800 2: 3000 3: 3200 4: 3429	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	576	
577	V.34 fall-back method (Line 1)	Set the number of steps in which the modem speed is fall-backed.	0: 1step 1: 2steps 2: 3steps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	577	
578	Recovery transmission	Set whether the recovery transmission is performed or not.	0: OFF 1: ON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	578	
580	Protocol type	Select the type of the T.30 procedure. DTS is only for Germany.	0: ITU-T 1: DTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	580	
581	Batch transmission	Setting for the batch transmission.	0: OFF 1: ON	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	581	
584	Alternation output	Setting for the stagger discharge.	0: OFF 1: ON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	584	

Code	Adjustment	Function	Setting	Default																				Code		
				AS	AU	HK	US	DE	GB	IT	BE	NL	FI	ES	AT	CH	SE	DK	NO	PT	FR	GR	PL		HU	CZ
585	Search function for receiver name on transmission journal	Set if the search function for the receiver name on the transmission journal is used.	0: OFF 1: ON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	585
586	Communication end tone volume	Set the volume of the communication end tone.	0: Level 0 (Min) ↓ 7: Level 7 (Max)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	586
587	Communication end tone sounding time	Set how long the communication end tone sounds.	0: OFF 1: 0.5sec 2: 1.0sec 3: 1.5sec 4: 2.0sec 5: 2.5sec 6: 3.0sec 7: 3.5sec 8: 4.0sec 9: 4.5sec 10: 5.0sec	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	587
592	Report for client PC	Set if the communication result is reported to the client PC.	0: Not reported 1: Reported	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	592	
601	CI history hold time (Line 2)	Set the time to keep the CI history.	0: 5sec 1: 8sec 2: 14sec	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	601	
602	CI detection frequency range (Line 2)	Set the frequency range for CI detection.	0: 12-80Hz 1: 16-55Hz 2: 20-55Hz 3: 22-55Hz	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	602
605	CI-ON determine time (Line 2)	CI ON-satiable time.	0: 175ms 1: 125ms 2: 800ms 3: 145ms	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	605	
606	CI-OFF determine time (Line 2)	CI OFF-satiable time.	0: 650ms 1: 350ms 2: 175ms 3: 90ms	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	606	
607	CI detection counter setting for auto-RX (Line 2)	Set the CI counter value for the machine to enter the auto-reception mode.	0: Once 1: Once ↓ 15: 15times (Value increased one by one)	1	4	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	607	
610	Control channel speed (Line 2)	Select the control channel speed for the V.34 communication.	0: 1200bps 1: 2400bps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	610	
611	Fall-back condition for transmitter (No. of PPR reception) (V.34 Line 2)	Set the number of the PPR reception for fall-back condition in the V.34 transmission.	0: Once 1: Twice ↓ 10: 11times	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	611	
612	Fall-back condition for receiver (No. of PPR reception) (V.34 Line 2)	Set the number of the PPR reception for fall-back condition in the V.34 reception.	0: Once 1: Twice ↓ 10: 11times	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	612	
614	V.34 symbol rate (Line 2)	Set the initial value for the symbol rate in the V.34 communication. Maximum modem speeds for each setting are as follows. 2400: 21600bps, 2800: 26400bps 3000: 28800bps, 3200: 31200bps 3492: 33600bps	0: 2400 1: 2800 2: 3000 3: 3200 4: 3429	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	614	
615	V.34 fall-back method (Line 2)	Set the number of steps in which the modem speed is fall-backed.	0: 1step 1: 2steps 2: 3steps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	615	
616	TX attenuation value (V.34) (Line 2)	Set the modem transmission attenuation level for the V.34 communication. The smaller the set value, the higher the transmission level becomes. If errors occur frequently or training is not sent, the transmission level should be changed.	0: 0dB 1: -1dB ↓ 15: -15dB (Value decreased one by one)	10	13	10	10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	10	616

900-999 Adjustment of system setting

Code	Adjustment	Function	Setting	Default																				Code		
				AS	AU	HK	US	DE	GB	IT	BE	NL	FI	ES	AT	CH	SE	DK	NO	PT	FR	GR	PL		HU	CZ
926	Paper width declaration in paper empty state	Select either size, A4 or B4, to declare the paper size when "0: Paper" has been selected for the code 346 and papers in every cassette are run out.	0: A4 1:B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	926
930	Fax document output tray	Select the bin/tray onto which the received document is discharged.	0: Receiving tray 1: Finisher 1st bin 2: Finisher 2nd bin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	930
931	Night time memory printing	Select if the document received in the night-time reception mode should be printed immediately or after the night-time reception mode is cancelled.	0: Printed immediately 1: Printed later	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	931
940	UI display for Tx ATT	Set whether the [Tx ATT] icon is displayed in the Phone Book registration screen or not.	0: OFF 1: ON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	940
944	Error code reservation for protocol trace list (Line 1)	Enter an error code decimally to print out the protocol trace list not for each communication but only for that specific error.	0-255: Error code	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	944
953	Time display	Select the format to display the date.	0: Y/M/D 1: M/D/Y 2: D/M/Y	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	953
954	Page scan limit timer	Set the maximum interval between pages manually placed.	0: Not used 1: 10sec ⋮ 15: 150sec	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	954
955	Return loss setting	Select the NCU termination circuit.	0: AS 1: AU 2: Others 3: EUR	0	1	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	955
956	RDC security function	Set if the security function for RDC is used.	0: OFF 1: ON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	956
957	Display of RDC security		0: Not displayed 1: Displayed (▶ chapter 2.6)	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	957
958	RDC security code		Decimal number of 20 digits	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	958
961	Protocol trace reservation error code (Line 2)	Enter an error decimal code of the error which needs to be reported on the protocol trace list.	0-255: Error code	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	961
962	FCC type for TTI format		0: OFF 1: ON	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	962
963	UI display for automatic order operation	Error "0" when performing the setting operation for the automatic order. Return it to "1" when the setting is finished.	0: Not displayed 1: Displayed (▶ chapter 2.7)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	963
964	Threshold value for automatic order	Enter this value when making an automatic order. Sets the differential value for the total counter to judge the emptiness of the toner after the cartridge is replaced.	1~65535	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	964
970	DTS format of address for transmission/reception journal		0: OFF 1: ON	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	970

## 2.5 Fax Clearing Mode (1\*)

Various fax memories are initialized in the fax clearing mode (1\*).

### [A] Memory Areas

- (1) User registration area (NVRAM)
  - 1) ID registration area
  - 2) Phone book registration area
  - 3) Group registration area
  - 4) Program registration area
  
- (2) Image data area (HDD, NVRAM)
  - 1) Transmission file
  - 2) Reception file
  - 3) Image data file management area
  
- (3) System setting area (NVRAM)
  - 1) Settings in the function mode (13) Areas 100 ~ 999
  - 2) Home position
  - 3) Journal area
  - 4) Error count area

## **[B] Types of Initialization**

### (1) Clearing All

- 1) User registration area (NVRAM)  
Initialized so that there are no data stored.
- 2) Image data area (HDD, NVRAM)  
Initialized so that there are no data stored.
- 3) System setting area (NVRAM)  
Values are reset to the default settings.

### (2) Clearing the non-user area

- 1) User registration area (NVRAM)  
Not initialized.
- 2) Image data area (HDD, NVRAM)  
Initialized so that there are no data stored.
- 3) System setting area (NVRAM)  
Values are reset to the default settings.

### (3) Clearing the image data area

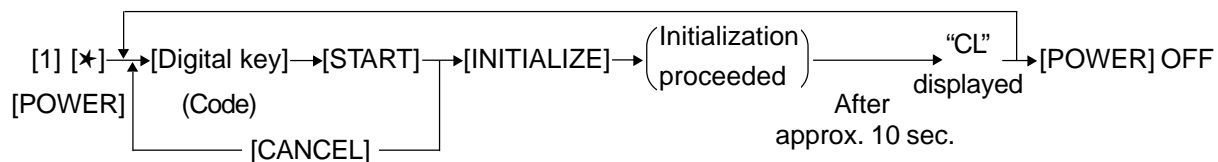
- 1) User registration area (NVRAM)  
Not initialized.
- 2) Image data area (HDD, NVRAM)  
Initialized so that there are no data stored.
- 3) System setting area (NVRAM)  
Not initialized.

### (4) Clearing the system setting area

- 1) User registration area (NVRAM)  
Not initialized.
- 2) Image data area (HDD, NVRAM)  
Not initialized.
- 3) System setting area (NVRAM)  
Values are reset to the default settings.

When the machine is started in one of the self-diagnosis modes, the machine is occupied by the mode until the power is turned OFF. In this case, the recovery processing for the fax operation is not performed.

[Operation procedure]



\* When “CL” is displayed instead of the set number, that indicates that the machine is in the standby mode.

Initialization codes for the fax

Code	Element	Contents	Mode	Image quality mode	Default
100	MAINT	Clearing all	Fax	ALL	—
101	MAINT	Clearing the non-user area	Fax	ALL	—
102	MAINT	Clearing the image data area	Fax	ALL	—
103	MAINT	Clearing the system setting area	Fax	ALL	—

**Note 1:** It takes about 20 seconds until the digital keys become operable after the power has been turned ON while [1] and [\*] are pressed simultaneously.

**Note 2:** Before performing the initialization, confirm that the destination value is correct in the Setting Mode (08) described in the chapter 2.3.

If the initialization is performed with the wrong destination setting, the default value of the function mode is changed to that for the wrong destination.

## 2.6 Setting the RDC Password

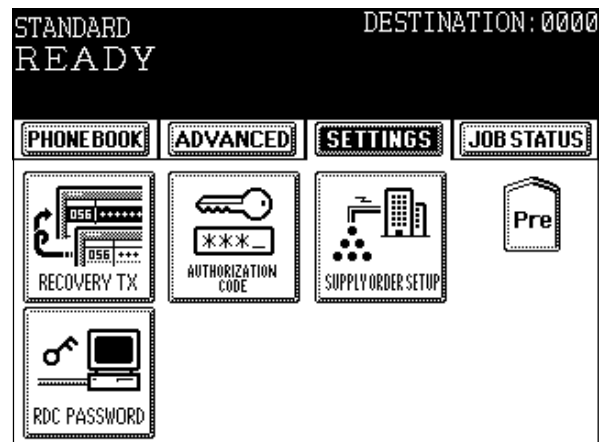
The procedure to set the security password necessary to perform the RDC communication is described in this section.

<<Operation procedure>>

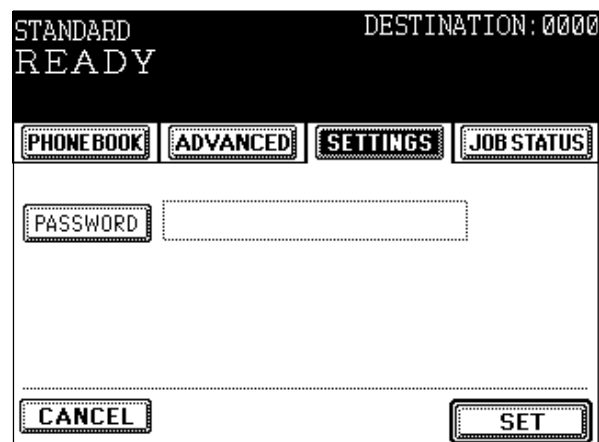
- (1) Turn ON the power while [1] and [3] are pressed simultaneously to enter the function mode. Set the value for the code "957" to "1".
- (2) Turn OFF the power and back ON.
- (3) Register a RDC password.

- a. Press the [SETTINGS] icon to enter the setting/registration menu.

Press the [NEXT] icon and then [RDC PASSWORD] icon.



- b. Press the [PASSWORD] icon, and enter a password to be registered in the number entry screen.



- (4) Turn OFF the power, then back ON while "1" and "3" are pressed simultaneously to enter the function mode (13) again.
- (5) Set the value for the code "957" to "0", then turn OFF the power.

\* The security function becomes effective when the value for 13-956 is set to "1".

## 2.7 Automatic Order for Supplies

New toner cartridges are automatically ordered when the remainder of the purchased cartridges becomes low. Register the following items to use this function.

### Customer information

- DESTINATION: Enter the toner supplier's phone (FAX) number
- CUSTOMER NO.: Enter the customer number.
- CONTACT NAME: Enter the name of the person in charge of the order.
- TEL NUMBER: Enter the phone number of the person in charge of the order.
- SHIP TO NAME: Enter the name of the person who will receive the toner cartridge.
- SHIP TO ADR: Enter the address to where the toner will be shipped.

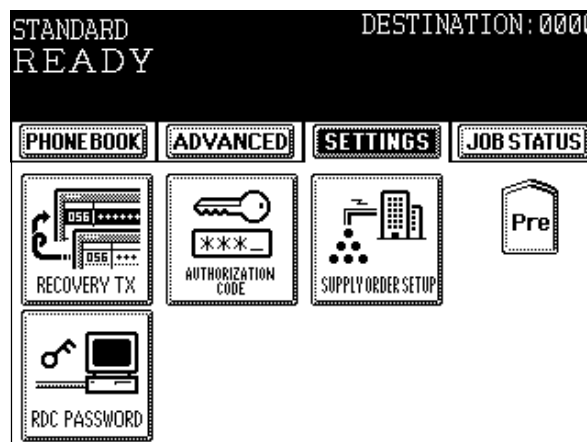
### Order information

- PART NUMBER: Enter the part number of the toner to be ordered.
- CONDITION: Register the number of the toner cartridges consumed before ordering.
- QUANTITY: Enter the number of the toner cartridges to be ordered at one time.
- AUTO ORDER: Set whether the toner is to be automatically ordered or not (ON/OFF).

### <<Procedure>>

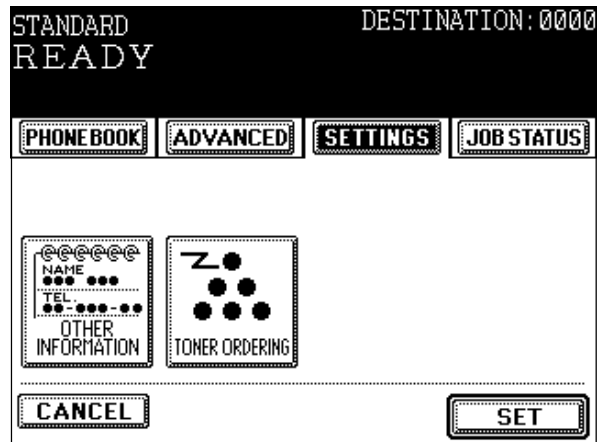
- (1) Turn ON the power while pressing "1" and "3" simultaneously. Enter the value "1" for the code "963".
- (2) Turn OFF the power and back ON.
- (3) Register the customer information.

- a. Press the [SETTINGS] icon to enter the setting menu. Press the [NEXT] icon then [SUPPLY ORDER SETUP] icon.

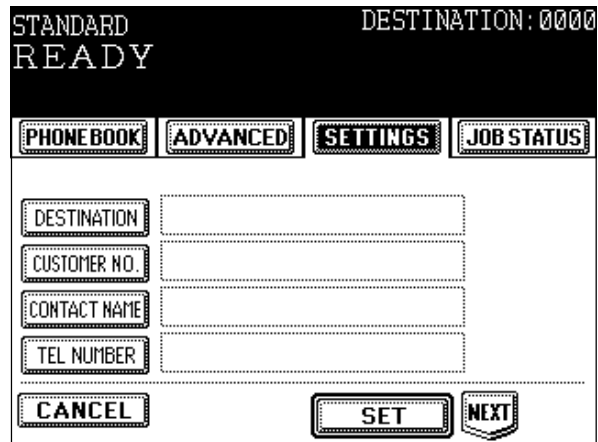




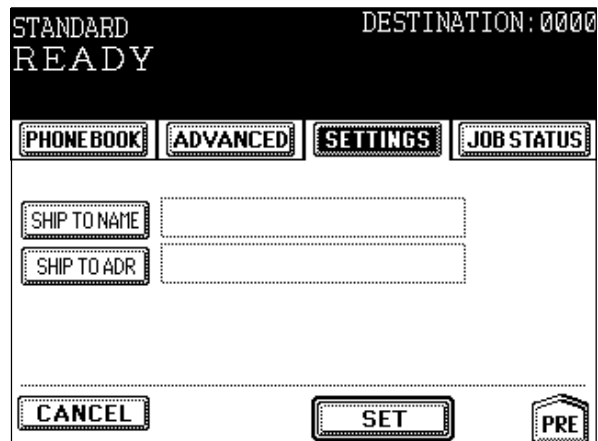
- b. Press the [OTHER INFORMATION] icon.



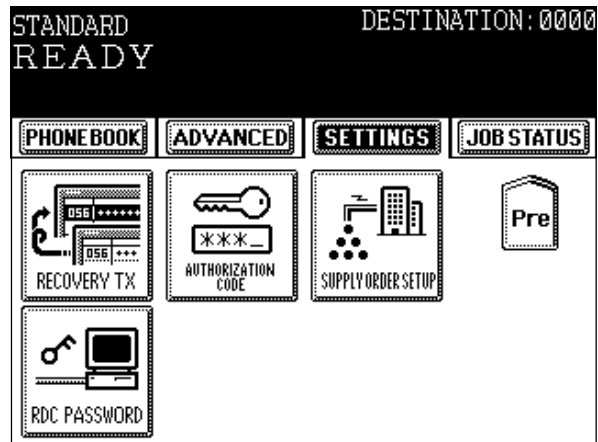
- c. Press the [DESTINATION] icon, and either select the supplier from the phone book or enter the phone number with the digital keys.
- d. Press the [CUSTOMER NO.] icon, and enter the customer number with the digital keys.
- e. Press the [CONTACT NAME] icon, and enter the name of the person in charge in the character entry screen.
- f. Press the [TEL NUMBER] icon, and enter the telephone number of the person in charge with the digital keys.
- g. Press the [NEXT] icon.



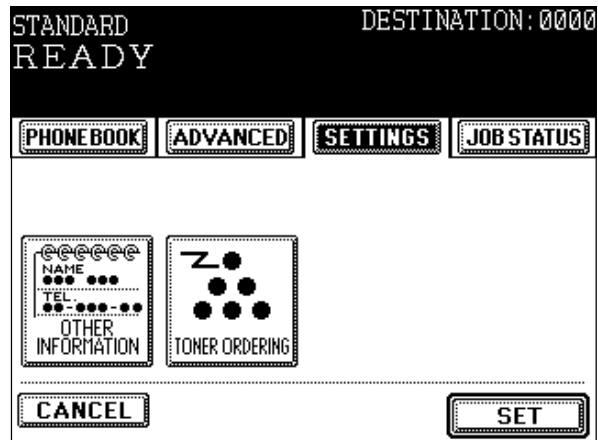
- h. Press the [SHIP TO NAME] icon, and enter the name of the person who will receive the toner cartridges in the letter entry screen.
- i. Press the [SHIP TO ADR] icon, and enter the address to where the toner cartridges are to be delivered in the letter entry screen.
- j. Check the entered information, then press the [SET] icon if it is correct.



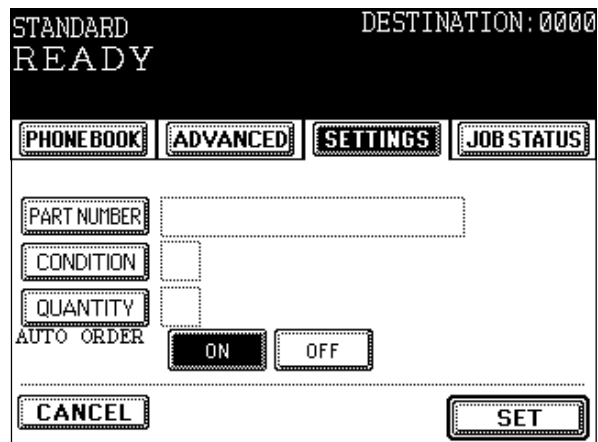
- (4) Make an toner order
- a. Press the [SET] icon to enter the setting menu. Press the [NEXT] icon then the [SUPPLY ORDER SETUP] icon.



- b. Press the [TONER ORDERING] icon.

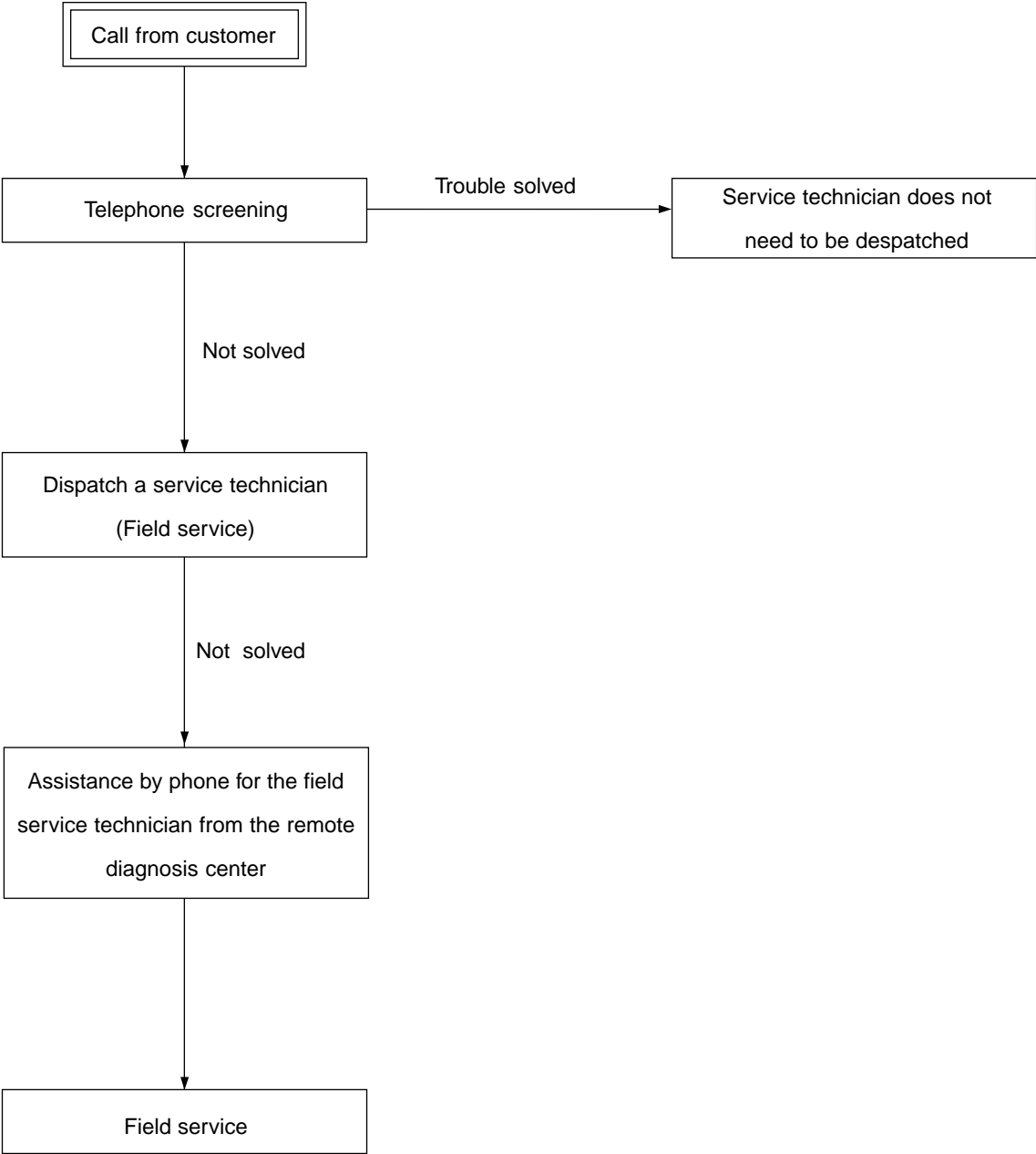


- c. Press the [PART NUMBER] icon, and enter the part number with the digital keys.
- d. Press the [CONDITION] icon, and enter the number of the toner cartridges consumed before ordering.
- e. Press the [QUANTITY] icon, and enter the number of the cartridges to be ordered with the digital keys.
- f. Press [ON] (or [OFF]) icon for the AUTO ORDER.
- g. Check the settings and press [SET] icon if they are correct.

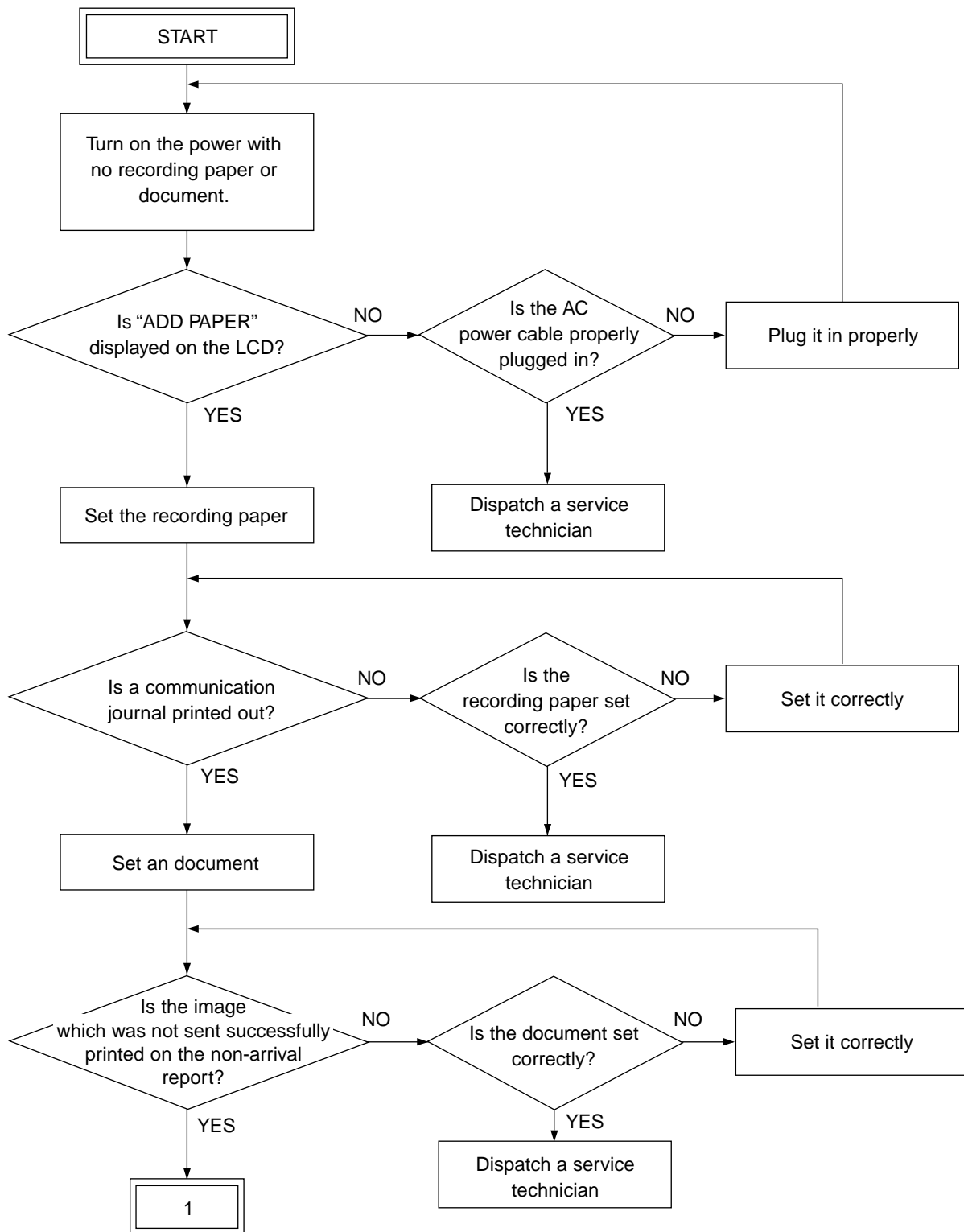


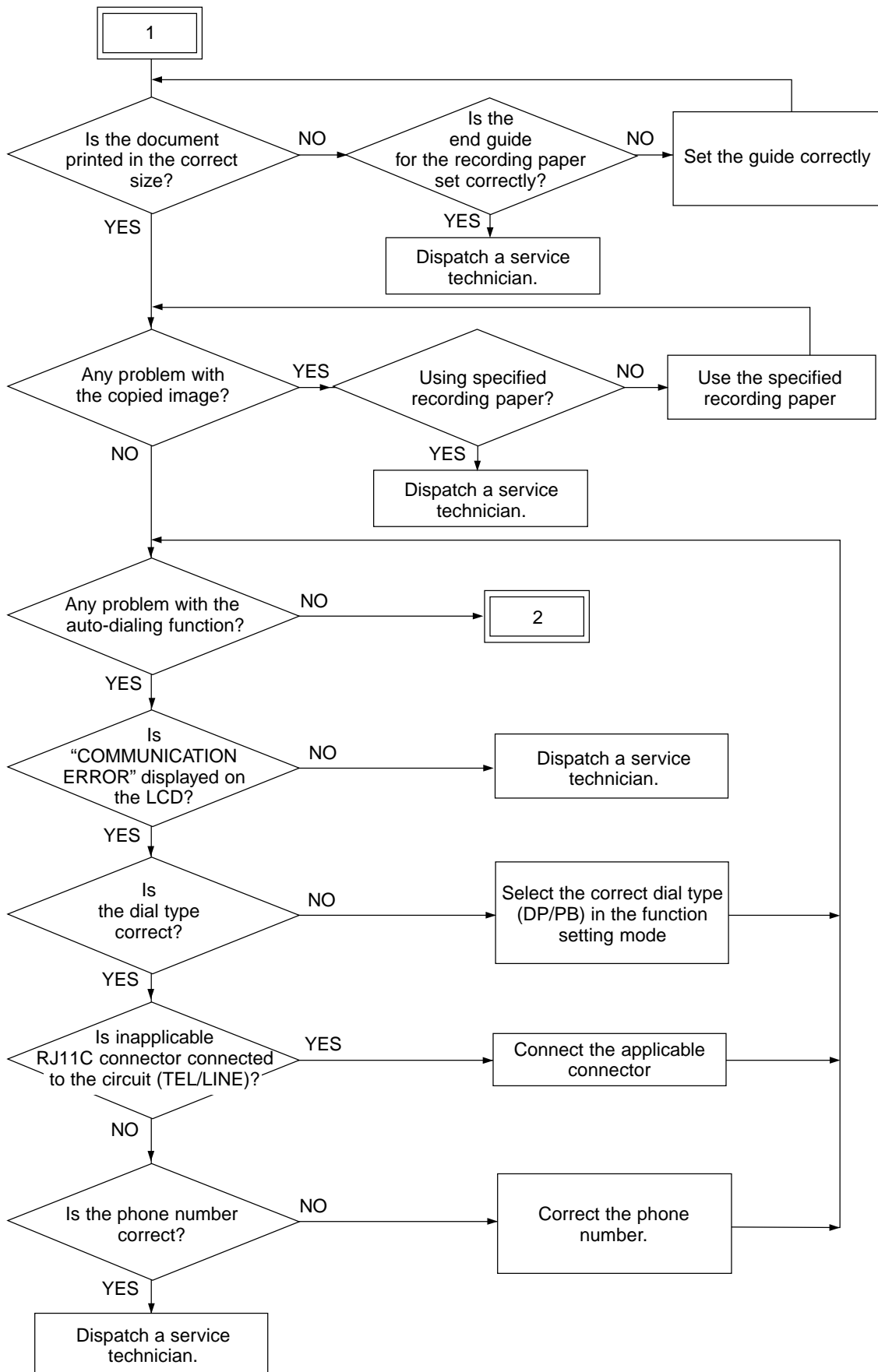
- (5) Turn OFF the power, then back ON while "1" and "3" simultaneously are pressed.
- (6) Enter the value "0" for the code "963", and turn OFF the power.

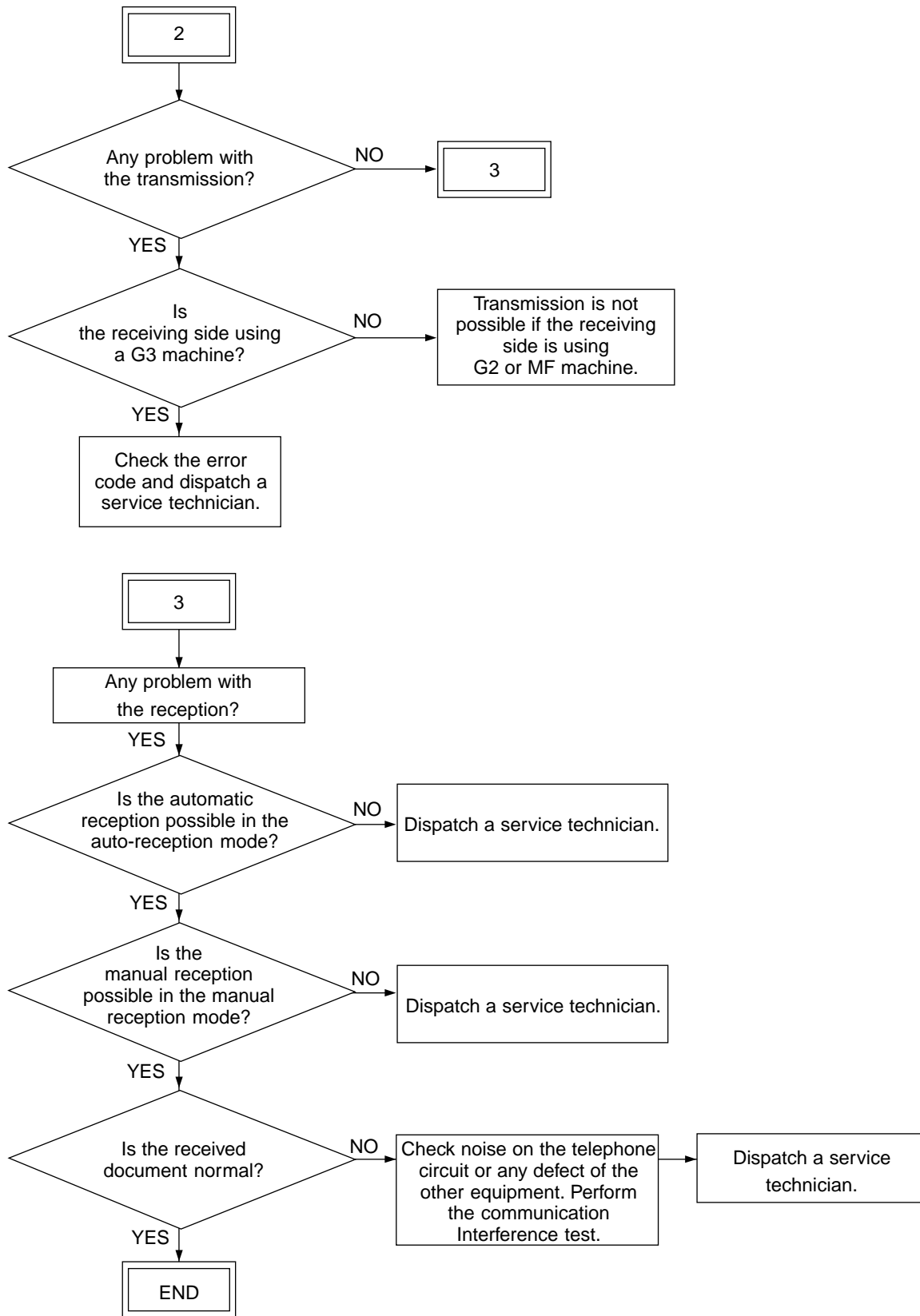
### 3. TROUBLESHOOTING



### 3.1 Flow Chart for Recommended Telephone Screening







## 3.2 Error Analysis Flow

### (1) Self-Diagnosis Function

Service technicians can figure out the contents of the error with the following information:

- Indication on the control panel
- Error code on the transmission/reception journal

### (2) Preparation for the diagnosis

Service technicians should output the phone book/group number information and function list for maintenance. Confirm that no received document data are stored in the memory by checking the Memory RX LED and reservation list.

Turn OFF the power and check the following items before starting the diagnosis.:

- Is the power cable properly plugged in?
- Are all the connectors securely connected?

**Notes:** • Before replacing the parts, confirm that there is no data to be transmitted or no received document in the memory. Turn OFF the power and unplug the power cable.

- Do not touch the terminal of the connectors. Otherwise, a poor connection may be caused.

### 3.3 Lists Required When Problem has Occurred in the Field

Output the following lists when problem occurs in the field. They are described in the order of the priority the most important one come first in this section. It is not necessary to output these lists immediately after the trouble has occurred, but they must be prepared for any kind of trouble regarding the fax operation.

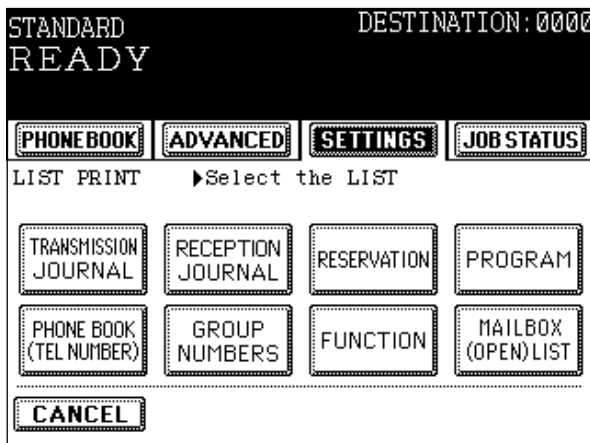
#### [Precaution]

**Disconnect the telephone line to stop the communication when trouble occurs. Since the only last communication is reported on the protocol trace list, if the telephone line is not disconnected immediately after the trouble has occurred, next communication might come in before the line is disconnected and be printed out instead of the communication in question.**

**Do not turn OFF the power before printing the protocol trace list and memory dump list. Otherwise, the information will be lost.**

[Outputting a trace list] (in the trace list output mode)

In the list output screen with no list selected, press the digital keys designated for each list referring to the table in the next page, then press the [START] key.





Item No.	List	Digital keys to be pressed
1	Protocol trace list (Line1)	[*][#][*][*][3][1][1]→[START]
2	Protocol trace list (Line2)	[*][#][*][*][3][1][2]→[START]
3	Error count list (Transmission/reception) (Line 1)	[*][#][*][*][3][2][1]→[START]
4	Error count list (Transmission/reception) (Line 2)	[*][#][*][*][3][2][2]→[START]
5	Function list for maintenance	[*][#][*][*][3][3]→[START]
6	Memory dump list (system)	[*][#][*][*][3][4] →[*][1][*][5][8][0][*][1][*][3][5][0] →[2][0][0][0]→[START]
7	Memory dump list (board) (Values to be entered for address and size vary depend on the type of trouble)	[*][#][*][*][3][5]→[Address (8 digits)] →[Size (4 digits)]→[START]
8	All lists (protocol trace lists for 2 lines,error count lists for 2 lines,function list and memory dump list for system and board)	[*][#][*][*][3][7] →[*][1][*][5][8][0][*][1][*][3][5][0] →[2][0][0][0]→[START]
9	Supply order form	[*][#][*][*][3][8]→[START]

**Note :** Enter the HEX address and the size referring to the following table.

Character to be entered	Key to press
0	0
1	1
2	2
⋮	⋮
9	9
A	*0
B	*1
C	*2
D	*3
E	*4
F	*5

(1) Memory dump list (board)

- Command/status information between the CPU controlled by the fax board and the CPU of the copier is reported.

MEMORY DUMP LIST		ROM VER	
		TIME	: 11-13-'00 09:00
		TEL NO.1	:
		TEL NO.2	:
		NAME	:
ADDRESS	HEX DATA	ASCII	
0xB0080000	0001020304050607	08090A0B0C0D0E0F	
0xB0080010	3031323334353637	38393A3B3C3D3E3F	0123456789ABCDEF

(2) Memory dump list (System)

- Command/status information between the CPU controlled by the fax board and the CPU of the copier is reported.

(3) Protocol trace list

- Fax protocols for one communication to which an error has occurred are reported.

PROTOCOL TRACE LIST (LINE 1)		ROM VER		
		TIME	: 11-13-'00 09:00	
		TEL NO.1	:	
		TEL NO.2	:	
		NAME	:	
TIME	S/R	FCF DATA	FIF DATA	ASCII
0035	R	NSF	00000912096d303030FF	m0000
0035	R	CSI	38312020202020202020	81
0035	R	DIS	00000000 01110011 10010111 00100000	

(4) Error count list

- The fax communication error history: Frequency of the occurrence of a particular error can be checked.

ERROR COUNT LIST (LINE 1)		ROM VER	
		TIME	: 11-13-'00 18:44
		TEL NO.1	: 01234567890123456789
		TEL NO.2	:
		NAME	:

TRANSMISSION	STATUS	HISTORY	ACTUAL
		11-03-'00 12:00- 11-10-'00 12:15	11-10-'00 12:16
	00	980/1000	95/50
	33	0/1000	0/50
	99	5/1000	2/50

ERROR COUNT LIST (LINE 1)		ROM VER	
		TIME	: 11-13-'00 09:00
		TEL NO.1	:
		TEL NO.2	:
		NAME	:

TRANSMISSION	STATUS	HISTORY	ACTUAL
		11-03-'00 12:00- 11-10-'00 12:15	11-10-'00 12:16
	00	980/1000	95/50
	33	0/1000	0/50
	99	5/1000	2/50

(5) Function list for maintenance

- Settings for the self diagnosis (mode (13)) for the fax operation are output.

FUNCTION LIST FOR MAINTENANCE				ROM VER	
				TIME	: 11-13-'00 09:00
				TEL NO.1	:
				TEL NO.2	:
				NAME	:

CODE NO	DATA	CODE NO	DATA	CODE NO	DATA	CODE NO	DATA
116	1	505	1	707	2	909	3
303	15						

(6) Supply order form

SUPPLY ORDER FORM	
DATE & TIME	: 08-21-'00 11:01
CUSTOMER NUMBER	: 12345678901234567890
SHIP TO NAME	:
SHIP TO ADDRESS	:
CONTACT NAME	:
CONTACT TEL NUMBER	: 0123-456-7890
<hr/>	
TONER CARTRIDGE	
PART NUMBER	: TONER CARTRIDGE
QUANTITY	: 0

(7) Transmission journal

- Transmission records for 40 communications are listed. Occurrence conditions of the communication errors can be checked with information such as the time when the communication took place, error codes, etc. Error code "50" indicates that the other party's line of the other side is busy (talking). If this error occurs frequently, it can be decreased somewhat by increasing the number of redialing attempts. Also, it can be checked if the communication fails with a particular address.

(8) Reception journal

- Reception records for 40 communications are listed. Occurrence conditions of the communication errors can be checked with the information such as the time when the communication took place, error codes, etc. Also, it can be checked if the communication fails with a particular address.

(9) Function list

- FAX function list in the list output menu in the screen for the fax operation is output. The default settings of the resolution during the data transmission can be checked.

Symptoms (describe as specific as possible) \_\_\_\_\_

### 3.4 Other Information Required for Error Analysis

The following information is also needed to analyze the malfunction (especially a communication error).  
Check the circles below if they are applicable.

(1) If the error is cleared or not.

- Cleared by turning ON/OFF the power.
- Cleared by performing "Clearing the image data area (1\*-102)".

**Note :** Image data are erased by this operation.

- Cleared by replacing the board.
- Not cleared.

(2) Frequency of occurrence

- Frequently (occurring daily or always)
- Sometimes (about once a week)
- Only once

(3) When a communication error is occurring, turn ON the circuit monitor for the line 1 or 2 (13-338), and check the condition of the FAX communication with the tone from the speaker.

**Note :** Turn OFF the circuit monitoring function after the checking is finished (13-338: 0).

- Signals from the transmitter and that from the receiver clash.  
→ Check the model name of the other party's machine.
- Noise occurring on the circuit.  
→ Ask the telephone (or telecommunications) company if the line condition is normal.
- Busy tone is heard from the other party during the communication.  
→ Ask by phone if the other party's machine has any problem. If it does not, check its model name.
- Others (describe condition): \_\_\_\_\_)

(4) Condition of the machine when the problem occurred

a. Display

Control panel:

- Copying operation screen
- Fax operation screen
- Printing operation screen
- Energy saver screen
- "Auto power off" screen

Describe the items displayed on the control panel in detail : \_\_\_\_\_

Status of LEDs:

- MEMORY RX ON
- "Communicating" ON
- Power ON

b. State of the machine

Availability of the recording paper:

- 1<sup>st</sup> cassette (size = )  No paper  Paper present  
2<sup>nd</sup> cassette (size = )  No paper  Paper present  
3<sup>rd</sup> cassette (size = )  Not installed  No paper  Paper present  LCF  
4<sup>th</sup> cassette (size = )  Not installed  No paper  Paper present  LCF

c. Conditions of RADF (this information is needed for transmission error)

- Originals have been all discharged  
 Abnormal (original jam, etc.)  
 Others (be as specific as possible): \_\_\_\_\_ )

d. Condition/state of the communication

- Transmission error  
 Reception error  
 ECM mode  
 G3 mode

Image errors such as stream image or interrupted image occur in the G3 mode when the noise occurs on the line. These are liable to occur since the line condition differs depending on each communication.

If the same errors occur to the image which was resent, they can be decreased by reducing the transmission speed of the sending side.

- Communication cannot be made with a particular number.  
(Information of the other side's machine: \_\_\_\_\_ )

If the communication is impossible with a particular number, it is considered that the other party's machine has broken down or has been busy (there is no response) because the recording papers have run out and the memory is full. Check the condition of the terminal of the other side.

If there is no problem with the terminal, check the model name since there is a possibility that that particular type of the machine has caused the problem.

Original size =  A3  B4  A4  B5  A5

Size of the received document =  A3  B4  A4  B5  A5

Resolution =  NORMAL (8\*3.85)  FINE (8\*7.7)  U-FINE (16 or 8\*15.4)

Error occurred to the \_\_\_\_\_ st/nd/rd/th sheet out of \_\_\_\_\_ sheets.

e. Condition of the circuit connection

- Connected directly with the public telephone circuit.
- Connected via a local exchange device or the main equipment.
  - Is any other equipment connected besides this unit?
  - Does the ring tone sound normally (rings for one second and stops for 2 seconds)  
(If it is not normal, the reception may not be started.)
- Circuit switching device
  - Are the circuit settings (DP10, DP20, PB) of the circuit switching device the same as those for this unit?
- Connection via an ISDN circuit terminal adaptor
  - Is the circuit number of the terminal adaptor correct? Is it the same number as that for the fax assigned to the other device (ex. data modem)?
  - Does the noise from the terminal adaptor affect the line? (Connect the TA with your machine and ground it to check.)

Configuration of the units

(Illustrate the units connected to your machine such as the telephone lines, exchange system, telephones, modems, etc.)

- f. Settings of the automatic energy saving and automatic power off
  - Auto-clearing (08-204) =
  - Automatic energy saving (08-205) =
  - Automatic power OFF (08-206) =



## 4. PRECAUTIONS FOR INSTALLATION OF FAX UNIT

### 4.1 Installation of Fax Unit

After unpacking and installing the fax unit following the unpacking/setup instructions, be sure to perform "Clearing all" described with the same instructions. The unit is not turned ON without this operation.

[Operation procedure]

Perform the following operation after setting the country/region in 08-201 and 701.

[1] [★] [POWER] → [100] → [START] (It takes about 20 seconds for the digital keys to be operable after the power is turned ON.) (It takes about 10 seconds until the display changes from '100' to 'CL'.)

[About FAX clearing mode/"Clearing all"]

When "Clearing all" is performed, the following operations are performed:

- Data in the phone book, ID registration, transmission/reception journal, memory transmission jobs, received data storing information stored in the NVRAM IC on the SYS board and HDD are erased. The system setting area and Fax function setting area are initialized (the settings are reset to the default values.)

## 4.2 Country/Region Code

Set the country/region code after the installation of the fax unit is finished.

**NOTE:** All data stored in the SRAM are erased when the country/region code is set/changed.

### Setting the country/region code

- (1) Turn ON the power while pressing [0] and [8] simultaneously.
  - (2) Enter "701" with the digital keys, and press [START].
  - (3) Enter a code with the digital keys, and they press the [SET] icon or the [INTERRUPT] key.
- (▶ 2.3 Setting mode (08))

Country/Region	Code
AS	1
AU	2
HK	3
US	4
DE	5
GB	6
IT	7
BE	8
NL	9
FI	10
ES	11
AT	12
CH	13
SE	14
DK	15
NO	16
PT	17
FR	18
GR	19
PL	20
HU	21
CZ	22
TR	23
ZA	24

- Country/region setting using the FG harness on the NCU board

These country/region require code setting on the NCU using the FG harness.

All other countries/regions have only W1 connection on the board.

DE	GB	NL	IT	AT	BE	CH	SE	DK	NO	FI	PT	FR	ES	GR	IE	ZA	SG	HK	AU	NZ
W2	W2	W2	W1	W2	W2	W2	W2	W1	W2	W1	W2	W2	W2	W2	W2	W2	W2	W2	W2	W2

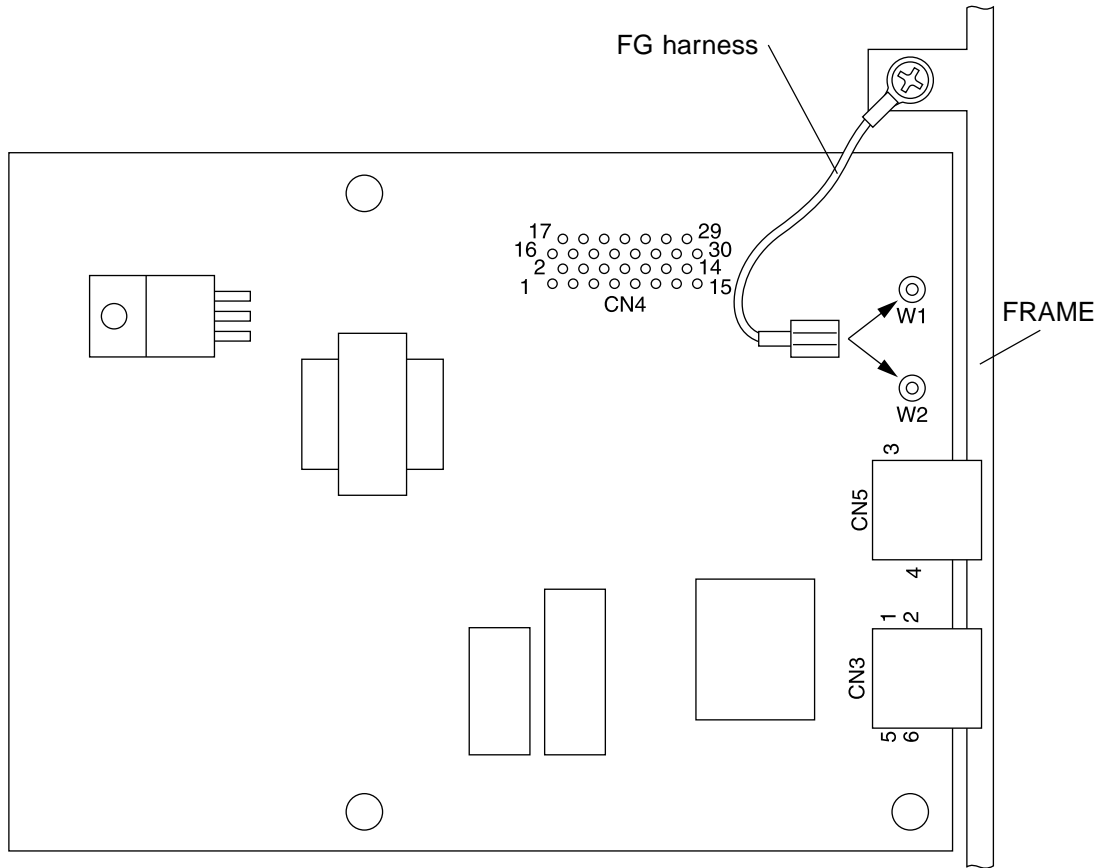


Fig. 4.2-1

## 5. UPDATING THE FIRMWARE

The firmware installed in this machine can be updated to the latest version or reinstalled if operations cannot be done properly due to damaged data, by using the download board.

<<Caution>>

Firmware is not installed in the FAX board provided as a service part. Be sure to install the firmware when the FAX board is replaced in the field.

- \* The version of the firmware to be installed should be compatible with the other firmware installed in the machine.

<<Update procedure>>

- (1) Print out the following lists before updating the firmware so as to reconfigure the unit to the same settings later.
  - Function list for maintenance
  - Function list
  - Phone book number information
  - Group number information
  - Program information
- (2) Before turning OFF the power, check the "MEMORY RX" LED, mailbox/relay box report and reservation list to confirm that there is no reception data, F-code data and memory transmission data respectively since there is possibility that data can be lost when the power is turned OFF.
- (3) Update the firmware following the <<Procedure>> in the next page.
- (4) Be sure to erase data in the memory by performing the "Fax clearing mode/Clearing the image data area" before performing any operation after the firmware update is finished. Otherwise, the firmware may not work correctly.

<<Operation procedure>>

Perform the following procedure after setting the country/region in 08-201 and 701.

[1][\*][POWER]→[102]→[START]

- (5) If the machine does not work properly after (4), perform the "Fax clearing mode/Clearing all".

<<Operation procedure>>

Perform the following procedure after setting the country/region in 08-201 and 701.

[1][\*][POWER]→[100]→[START]

**Note:** The ID information and data registered in the "Phone book number information", "Group number information" and "Program information" are erased so that these information need to be entered again referring to the lists printed out in (1).

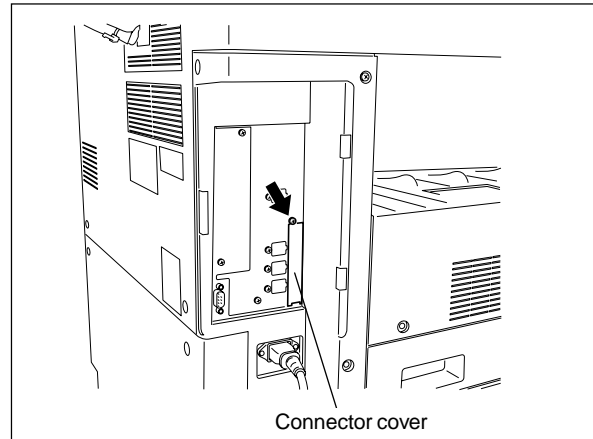
(▶ chapter 2.5)

(Procedure)

- (1) Mount the ROM on the download board (PWA-DLM-320).

**Note:** Pay attention to the direction of the ROM when it is mounted.

- (2) Take off the option cover of the copier. Remove one screw and take off the connector cover.



- (3) Connect the download board with the connector of the fax control board (FAX board).
- (4) Turn ON the power while pressing [0] and [8] simultaneously (The downloading is automatically started).
- (5) Turn OFF the power when the LED on the download board starts to flash. Disconnect the download board.
- (6) Output the protocol trace list and check the version of the ROM.