KONICA MINOLTA

SERVICE MANUAL

FIELD SERVICE

FK-507

2008.12

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 2.0

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.
Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a specific section revised within text, △1 is shown at the left margin of the corresponding revised section.
  The number inside △1 represents the number of times the revision has been made.

- To indicate clearly a specific page that contains a revision or revisions, the page number appearing at the left or right bottom of the specific page is marked with ▲1 .
  The number inside ▲1 represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
  The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0:
  The revision marks for Ver. 2.0 are left as they are.

Date	Service manual Ver.	Revision mark	Descriptions of revision
2008/12	2.0	△1	Corresponded to a MAIN firmware version 21/ Error corrections
2008/06	1.0	—	Issue of the first edition

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Outline

1. Product specifications

A. Type

Memory capacity	64 MB	
Communication mode	G3/ECM	
Scanning resolution (main line x feed line)	8 x 3.85 line/mm 8 x 7.7 line/mm 8 x 15.4 line/mm 16 x 15.4 line/mm	
Data transmission rate	G3 / ECM: 2.4 Kbps to 33.6 Kbps	
Transmission rate	G3 / ECM: Image signal - 3 sec approx. (A4, V.34, 33.6 Kbps, JBIG)	
△1 Coding method	MH / MR / MMR / JBIG	
Applicable network	G3/ECM	Phone line, FAX communication network
Options	Stamp unit SP-503 Fax multi line ML-504	

B. List of functions

Function		bizhub C200
Speed	High speed scanning	O
	High speed printout	O (20 ppm/A4)
	ECM mode	O (3 sec approx./Std document)
	High speed half tone	O
Resolution	Super fine mode	O
	Half tone transmission	O
	Auto retransmission after error	O (ECM)
	Brightness control	O
	Smoothing	O
	Mixed mode (Text + Photo)	O
Operability	One-touch dialing	O (300 destinations)
	One-touch program dialing	O (30 destinations, # of one-touch dialing numbers)
	Auto re-dialing	O
	Transmission booking	O (64 destinations)
	Broadcast destination	O (210 destinations)
	Origination selecting	O (8 types)
	Destination retrieval	O
	LCD display	O (320 x 240)
	Operation	O (Analog touch panel)
	Disable copy function	O
	Universal design	O
	Enlarge display Specify display location	O
	Toner front access	O
Power source saving & utility functions	2-in-1 printout	O
	2-in-1 page transmission	O
	TX marker	O (Option)
	Automatic document feed (ADF)	O (70 sheets)
	Automatic selection of print paper size	O
	Password communication	O
	Quick scan transmission	O
	Priority transmission	O
	Insert destination	O
	Automatic pause for PSTN number	O
	Display communication result	O
	Record TSI information	O
	ID display/record	O (Received date and time record)
	Power source saving mode	O
	Print lamp	O
	Sound volume	O (Setup on screen; OFF/5 steps)
	ADF 2 sided transmission	O

	Function		bizhub C200
	Report functions	Activity report (TX/RX)	O
		Transmission report	O
		Incompleted transmission report	O (with document merge)
		Serial broadcast report	O (with document merge)
		Account list	O
		One-touch list	O
		Fax program list	O
		Bulletin board list	O
		Setting list	O
	Memory functions	Multi access	O (Interrupt key exists)
		Transmission booking document number	O (64 destinations)
		Retransmission	O (Destination changeable)
		Document retransmission	O
		Reception by memory	O
		Transmission management document number	O (48)
		Memory polling transmission	O
		Confidential transmission Confidential print	O (F code)
		Serial broadcast	O (210 destinations; Full dial broadcast 12 (Included number))
		Relay broadcast	O (F code)
		Automatic destination switching	O
1		Color → Black and White Fallback	O
		Multi copy	O (Sorting function)
1		Remote copy	O (F code)
		Quick memory transmission	O
		File backup	O (1H)
		Rotated Rx	O
	System configuration	Extra telephone	O (PB forwarding reception possible)* *PSTN (Port 1 only)
		Account track mode	O (50 accounts)
		Chain dialing	O
		Multi-port	O (Option)
		Inch/mm conversion	O
		Memory	O (File memory 512 MB)
		Paper feed cassette	O (3100 sheets max.)
		PC print	O
	Mutual connectivity	ITU-T G3/ECM	O

	Function		bizhub C200
1	Maintenance	Remote diagnostics (CSRC)	○ (Terminal Dispatch)
		Self diagnostics	○
		Counter per application	○
		In-file image data transmission	○
		Switch display of communication error code	○
		Change standard zoom ratio	○
		Adjust touch panel registration	○
		Adjust ADF zoom ratio (main/sub)	○
		Adjust ADF registration (main/sub)	○
		Adjust BS zoom ratio (main/sub)	○
		Adjust BS registration (main/sub)	○
		Check sensors	○
		Adjust document size sensor	○
		Adjust registration of printer engine (main/sub)	○
		Adjust mask of printer engine (main/sub)	○
		Adjust feeder loop of printer engine (main/sub)	○
		Test printing	○
		Paper through test	○
		Lock position	○
1	Network function	Internet Fax	○
1		IP address Fax	○ (B/W only)
1		Scan to E-mail	○
1		Scan to FTP	○
1		Scan to SMB	○
		Document forwarding / Archive distribution	○
1		IP relay	○
1		LDAP search	○
		Assistant tool for C200	○
1		Printer controller	○

Maintenance

2. Other

2.1 Disassembly/adjustment prohibited items

A. Paint-locked screws

NOTE

- **To prevent loose screws, a screw lock in blue or green series color is applied to the screws.**
- **The screw lock is applied to the screws that may get loose due to the vibrations and loads created by the use of machine or due to the vibrations created during transportation.**
- **If the screw lock coated screws are loosened or removed, be sure to apply a screw lock after the screws are tightened.**

B. Red-painted screws

NOTE

- **The screws which are difficult to be adjusted in the field are painted in red in order to prevent them from being removed by mistake.**
- **Do not remove or loosen any of the red-painted screws in the field. It should also be noted that, when two or more screws are used for a single part, only one representative screw may be marked with the red paint.**

C. Variable resistors on board

NOTE

- **Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.**

D. Removal of PWBs

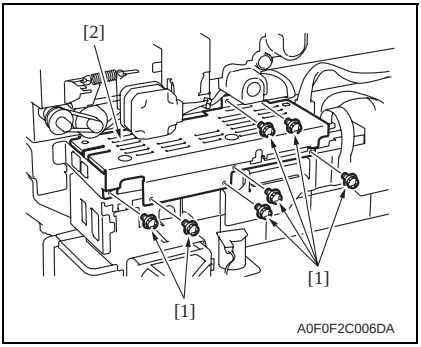
⚠ CAUTION

- **When removing a circuit board or other electrical component, refer to “Handling of PWBs” and follow the corresponding removal procedures.**
- **The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.**
- **Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.**

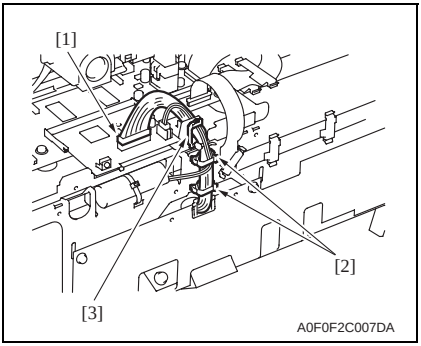
3. Disassembly/assembly

3.1 FAXU board (with G3 multi port option)

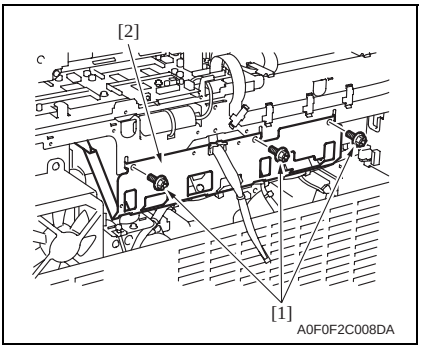
1. Remove the IR rear cover.
See P.46 of the main body service manual.



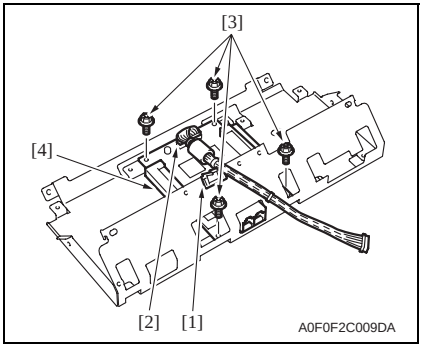
2. Remove seven screws [1], and remove the MFBU shield cover [2].



3. Disconnect the connector [1], and remove the cable from two wire saddles [2] and the edge cover [3].



4. Remove three screws [1], and remove the FAX mounting plate [2].



5. Remove the cable from the edge cover [1] of the FAX mounting plate.

6. Disconnect the connector [2], remove four screws [3], and remove the FAXU board [4].

NOTE

- **Connect the connector located on the ferrite core side to the FAXU board.**

3.2 Ni-MH battery replacement

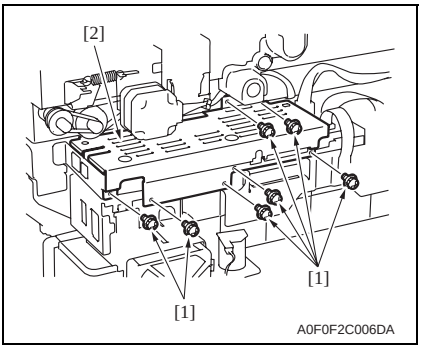
1. Check on the screen that the memory capacity still available for use reads 100%.

NOTE

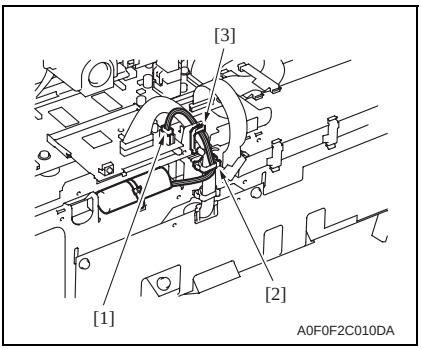
- **If the memory capacity does not read 100%, let the machine output contents of the memory or wait until the machine completes transmission.**

2. Turn OFF the main power switch.

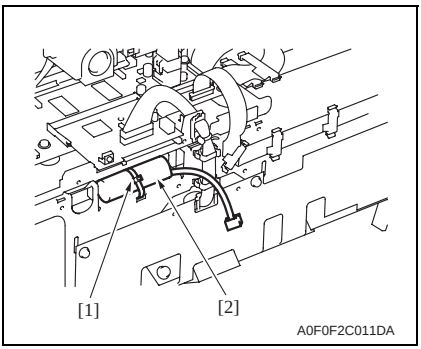
3. Remove the IR rear cover.
See P.46 of the main body service manual.



4. Remove seven screws [1], and remove the MFBU shield cover [2].



5. Disconnect the connector [1], and remove the harness from the wire saddle [2] and the edge cover [3].



6. Tie band [1] is cut with nippers, and the Ni-MH battery [2] is replace.

7. Turn ON the main power switch.

NOTE

- **After the Ni-MH battery has been replaced with a new one, be sure to turn ON the main power switch.**
- **Discard the used battery in accordance with the corresponding local regulations and NEVER discard it or let it discharge on the user's premises.**

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Adjustment/Setting

4. How to use the adjustment section

- “Adjustment/Setting” contains detailed information on the adjustment items and procedures for this machine.
- Throughout this “Adjustment/Setting,” the default settings are indicated by “ ”.

Advance checks

Before attempting to solve the customer problem, the following advance checks must be made. Check to see if:

- The power supply voltage meets the specifications.
- The power supply is properly grounded.
- The machine shares the power supply with any other machine that draws large current intermittently (e.g., elevator and air conditioner that generate electric noise).
- The installation site is environmentally appropriate: high temperature, high humidity, direct sunlight, ventilation, etc.; levelness of the installation site.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- The original glass, slit glass, or related part is dirty.
- Correct paper is being used for printing.
- The units, parts, and supplies used for printing (developer, PC Drum, etc.) are properly replenished and replaced when they reach the end of their useful service life.
- Toner is not running out.

⚠ CAUTION

- **To unplug the power cord of the machine before starting the service job procedures.**
- **If it is unavoidably necessary to service the machine with its power turned ON, use utmost care not to be caught in the scanner cables or gears of the exposure unit.**
- **Special care should be used when handling the fusing unit which can be extremely hot.**
- **The developing unit has a strong magnetic field. Keep watches and measuring instruments away from it.**
- **Take care not to damage the PC drum with a tool or similar device.**
- **Do not touch IC pins with bare hands.**

5. Utility Mode

5.1 Utility Mode function tree

- The function tree is shown to comply with the format displayed on the screen.

NOTE

- **The following function tree shows only the fax-related functions.**
- **Keys displayed on screens are different depending on the setting.**

Utility					Ref. page
User Settings	Display Settings	Default Screen			*
		Default Fax Screen			P.15
	Default Settings	Fax/Scan	Default Scan/Fax Settings		*
			File Type		*
User Management	Line Monitor Sound				P.15
	Memory RX ON/OFF				P.15
One-Touch/ Box Reg.	One-Touch				*
	Index				*
	Domain Name				*
	Bulletin				*
Admin.	System Settings	Output Settings	Print/Fax Output Setting	Printer	*
				Fax/E-Mail	*
	One-Touch/ Box Reg.	One-Touch			*
		Index			*
		Domain Name			*
		Bulletin			*
	Document Management	TX Forwarding			P.16
		RX Document	All Other Docs.	Password	P.16
				RX Doc. Settings	
				Forwarding Dest.	
			Network/G3	Password	P.16
				RX Doc. Settings	
				Forwarding Dest.	
			Reception user box	User Box Name	P.17
				Type	
				Number	
				Password	
				RX Doc. Settings	
				Forwarding Dest.	
				Remote Input Check	
	Fax Settings	Self-ID			P.17
		RX Functions	Reception Mode		P.17
			Numbers of RX Call Rings		P.17
		Password Communication			P.17

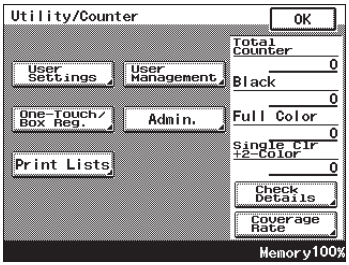
Utility				Ref. page
Admin.	Fax Settings	Self-Telephone # Information 1	Self-Telephone # 1	P.18
			PBX Connect. Mode 1	
			Dialing Method 1	
		Self-Telephone # Information 2	Self-Telephone # Info 2	
			PBX Connect. Mode 2	
			Dialing Method 2	
	TX Settings	TSI Registration		P.18
	RX Settings	Memory RX Timer Setting	Memory RX Time	P.18
			Memory Lock Password	P.18
		Delete User Box		P.19
	Report Settings	TX Report		P.19
		Activity Report		P.19
	Print Lists	Setting List		*
	Software Switch Setting			P.20
△1 Print Lists	TX Report			P.23
	RX Report			P.23
	Bulletin List			P.23
	One-Touch List			P.23
	Program List			P.23

*: For details, see the main body service manual.

5.2 Utility Mode function setting procedure

5.2.1 Procedure

1. Press the Utility/Counter key.
2. The Utility Mode screen will appear.



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5.2.2 Exiting

- Touch the [OK] key.

5.2.3 Changing the setting value in Utility Mode functions

- Use the [+] / [-] key to enter or change the setting value.
- Use the 10-key pad to enter the setting value.
  (To change the setting value, first press the Clear key before making an entry.)

5.3 Settings in the User Settings

5.3.1 Display Settings

A. Default Fax Screen

Functions Use	• To set the screen which is preferentially displayed when in fax mode.
Setting/ Procedure	• The default setting is “One-Touch”. “One-Touch” Search Direct Input Index

5.4 Settings in the User Management

5.4.1 Line Monitor Sound

Functions Use	• To set the volume of the line monitor sound that can be heard from the monitor speaker during fax transmission.
Setting/ Procedure	• The default setting is “3”. 0 (mute) to 5

5.4.2 Memory RX ON/OFF

Functions Use	• To allow the machine to produce a print temporarily even in the off mode. • A print control password is necessary to print data.
Setting/ Procedure	*1.* Touch [Memory RX ON/OFF]. *2.* If a password has been specified, enter the password for “Memory Lock Password” and touch [OK]. *3.* Touch [Lock OFF]. *4.* To halt the print cycle, touch [Lock ON] while the print cycle is being run. *5.* Touch [Temporarily Print] to resume the print cycle.

5.5 Settings in the Admin. (Administrator Management)

- The Admin. setting will be available by entering the administrator password (8 digits) set by the Admin. setting or Service Mode.
  (The administrator password is initially set to “12345678.”)

5.5.1 Document Management

A. TX Forwarding

Functions	• To set to forward received text to a destination that has been set by the administrator.
Use	• When forwarding received text to a destination that has been set by the administrator.
Setting/ Procedure	*1.* Touch [Document Management]. *2.* Touch [TX Forwarding]. *3.* Select the forwarding communication mode, and touch [Next]. *4.* Specify the forwarding destination, and touch [Next]. *5.* Check the forwarding destination, and touch [OK].

B. RX Document

(1) All Other Docs.

Functions Use	• Specify the reception method for documents that were received normally.
Setting/ Procedure	*1.* Touch [RX Document]. *2.* Touch [All Other Docs.]. *3.* Touch [Password] and register the password. New Password: Enter the new password to be used Confirm New Password: Re-enter the new password *4.* Touch [RX Doc. Settings], then select the desired processing type and touch [OK]. * If [Forward] or [Print & Forward] is selected, set the forwarding destination.

(2) Network/G3

Functions Use	• A different reception method can be specified for each line.
Setting/ Procedure	*1.* Touch [RX Document]. *2.* Touch [Network], [G3-1] or [G3-2]. *3.* If [YES] is selected for document management, set how the received document is to be handled. *4.* Touch [Password] and register the password. New Password: Enter the new password to be used Confirm New Password: Re-enter the new password *5.* Touch [RX Doc. Settings], then select the desired processing type and touch [OK]. * If [Forward] or [Print & Forward] is selected, set the forwarding destination.

(3) Reception user box

Functions Use	• A reception user box specifically for documents containing special information, such as Fcodes, can be created, and the reception method can be specified.
Setting/ Procedure	*1.* Touch the [RX Document]. *2.* Touch the button of the user box to be specified. *3.* Touch [User Box Name] and enter the user box name from the 10-key pad. (A maximum of 8 characters can be entered.) *4.* Touch [Type] and select the reception management type. *5.* Touch [Number] and enter in the number appropriate for the reception type from the 10-key pad. *6.* Touch [Password] and register the password. New Password: Enter the new password to be used Confirm New Password: Re-enter the new password *7.* Touch [RX Doc. Settings], then select the desired processing type and touch [OK]. * If [Forward] or [Print & Forward] is selected, set the forwarding destination. *8.* If F-codes are used, touch [Remote Input Check] and select whether remote input checking is enabled or disabled.

5.5.2 Fax Settings

A. Self-ID

Functions	• To register the name, telephone number, and other information of the local machine as an ID.
Use	• When the registered information is to be printed on journals and displayed on the panel of the fax machine on the receiving end.
Setting/ Procedure	*1.* Touch the [Self-ID]. *2.* Enter the local machine ID (up to 12 characters) and touch [OK].

B. RX Functions

(1) Reception Mode

Functions	• To set the reception mode of faxes.
Use	• When changing the reception mode of faxes.
Setting/ Procedure	• The default setting is “Auto”. “Auto” Manual

(2) Numbers of RX Call Rings

Functions	• To set the number of call rings heard before automatic reception is activated.
Use	• When changing the number of call rings heard before automatic reception is activated.
Setting/ Procedure	• The default setting is “1x”. 1 to 20

C. Password Communication

Functions	• To allow a fax to be received only when there is a match in the password that has previously been registered on the transmitter and receiver ends.
Use	• When using password reception.
Setting/ Procedure	• The default setting is “00”. “00” (Disabled) 01 to 99 (Enabled)

D. Self-Telephone # information

Functions Use	• To register information required for fax communication, including the telephone number of the local fax machine, whether or not a PBX is available, and the type of line.
Setting/ Procedure	*1.* Touch the [Self-Telephone # information]. *2.* Touch [Self-telephone #] and enter the telephone number. *3.* Touch the [PBX Connect. Mode]. [Extension]: If a connection is made via the PBX to the ordinary fixed line [Outside]: If a connection is made directly to the ordinary fixed line * If [Extension] is selected, enter the Outside Line. *4.* Touch the [Dialing Method]. [DP20]: 20 pps pulse dialing line [DP10]: 10 pps pulse dialing line [PB]: Tone dialing line

5.5.3 TX Settings

A. TSI Registration

Functions	• To set the name (of the sending party) to be notified to the recipient.
Use	• When changing the name (of the sending party) to be notified to the recipient.
Setting/ Procedure	• Up to eight different names can be registered. *1.* Touch the [TSI Registration]. *2.* Select the number, for which the sending party is to be registered. *3.* Enter the name of the sending party and touch [OK].

5.5.4 RX Settings

A. Memory RX Timer Setting

(1) Memory RX Time

Functions	• To set the time of day and the day of the week, at which printing of the received fax is to be started or stopped.
Use	• When a received fax is to be printed at a specific time specified without allowing it to be printed on the spot.
Setting/ Procedure	*1.* Touch the [Memory RX Timer Setting]. *2.* Touch the [Memory RX Time]. *3.* Make the necessary settings and touch [OK]. * Touch [OFF] if no settings are to be made.

(2) Memory Lock Password

Functions Use	• To set a password used for printing a fax received at a time not specified.
Setting/ Procedure	*1.* Touch the [Memory RX Timer Setting]. *2.* Touch the [Memory Lock Password]. *3.* Touch [New Password], then enter the password and touch [OK]. *4.* Touch [Confirm New Password], then enter the password a second time and touch [OK].

B. Delete User Box

Functions	• To delete a user box that has previously been registered.
Use	
Setting/ Procedure	*1.* Touch the [Delete User Box]. *2.* Select the private box to be deleted. *3.* Touch the [Yes].

5.5.5 Report Settings

A. TX Report

Functions	• To set the mode of output of the report used for confirming results of transmission.
Use	• When changing the mode of output of the report used for confirming results of transmission. • Setting is made individually for a single destination and two or more destinations.
Setting/ Procedure	<Single Dest> ON “If TX Fails” OFF <Broadcasting> ON “If TX Fails” OFF

B. Activity Report

Functions	• To select whether or not to print the activity report for every 50 transactions automatically.
Use	• When printing the activity report for every 50 transactions automatically.
Setting/ Procedure	• The default setting is “ON”. “ON” OFF

5.5.6 Software Switch Setting

Functions Use	• To specify the value (mode, bit, HEX) for software DIPSW to suit the purpose of the use, and to change the machine status. • Only software DIPSW available of setting by the user (administrator) are described here. • For details of the software DIPSW as well as software DIPSW which can be set by CE, refer to the “Service mode” or main body service manual.
Setting/ Procedure	*1.* Touch [Software Switch Setting]. *2.* Touch [Mode Selection], and enter the mode number (three digit number) using the 10-key pad. *3.* Touch [Bit Selection]. *4.* Set the cursor using the [←] or [→] key to specify the bit with 0 or 1 on the 10-key pad. (When setting in hexadecimal, press [HEX Selection] to enter using the 10-key pad or A to F key.) *5.* Touch [Apply]. *6.* Touch [OK].

A. List of the software switch settings for administrator

(1) For network settings

Mode	Setting item
356	• Specifying settings concerning the SMTP transmission timeout
357	• Specifying settings concerning the SMTP reception timeout
358	• Specifying settings concerning the POP3 reception timeout
361	• Specifying settings concerning Assistant tool for C200, SMTP transmission/reception and POP3 reception
364	• Specifying the setting for the POP Before SMTP time
1 365	• Specifying settings concerning the timeout for a FTP connection
367	• Specifying settings concerning the timeout for a DNS inquiry
372	• Specifying settings concerning the transmission interval for divided e-mail messages
1 376	• Specifying settings concerning the AppleTalk protocol
1 378	• Specifying settings concerning the IPP printing
380	• Specifying security settings for e-mail transmissions
383	• Specifying security settings for e-mail receptions
384	• Specifying settings concerning the network protocol
1 385	• Specifying settings concerning the SMB protocol
1 386	• Specifying settings concerning the TCP socket, NetWare
1 389	• Specifying settings concerning the encryption method for SSL and the SNMP protocol
1 390	• Specifying settings concerning the SNMP protocol
470	• Specifying settings concerning Assistant tool for C200

(2) For scan/fax settings

	Mode	Setting item
	000	• Specifying settings concerning the position of the transmission source information and concerning password communications
	001	• Specifying settings for inserting the recipient's name in the original
	002	• Specifying printing of the memory clear report and the report for a broadcast transmission
	004	• Specifying the storage time for failed transmission documents
	016	• Specifying whether or not a received date report is added and its format
1	023	• Specifying settings for the TWAIN operation lock time and the image in the results report
	024	• Specifying settings for administrator forwarding
	025	• Specifying settings concerning transmission if the memory becomes full
	028	• Specifying the maximum number of copies allowed with remote copying
	030	• Specifying settings for fax reception functions
	037	• Specifying the settings for selecting paper trays when faxes are received
	043	• Specifying settings for general subscriber lines
1	249	• Specifying settings for the number of rings until automatic reception (port 2)
	301	• Specifying settings for receiving long documents
	302	• Specifying the setting for selecting paper when printing received documents
	350	• Specifying settings concerning Internet faxing
	351	• Specifying transmission source information for IP address fax transmissions and IP relay operations
	352	• Specifying whether transmission source information is added when performing a IP relay operation, or when forwarding received documents
1	360	• Coding method for the receiver Internet fax capability (Network function, Mail mode)
	363	• Specifying settings concerning the from address in MDN/DSN reports
	366	• Specifying the default address input screen
	368	• Specifying settings concerning IP relay operations appearing in the activity report
	373	• Specifying settings concerning full mode functions with Internet faxing
	381	• Specifying the default setting for the coding method
	382	• Specifying settings concerning the communication results of IP relay operations
1	391	• File format, Coding format
	473	• Specifying the Job list screen given priority
	476	• Specifying settings concerning the direct input tab and broadcast transmissions
1	477	• Fax registration restriction and destination display, Setting confirmation screen for broadcast TX
	478	• Specifying settings concerning the use of the button for deleting, the display when a one-touch dial button is touched, and the default communication mode
	804	• Specifying settings for checked receiver transmissions

(3) For printer settings

Mode	Setting item
304	• Specifying the storage time for confidential documents

(4) For copy settings

Mode	Setting item
402	• Specifying settings for the main application
403	• Specifying settings for using copy mode operations
417	• Specifying whether or not the number of copies are limited
471	• Specifying how the screen for selecting an account appears in administrator mode
501	• Specifying settings for enlarge display mode
835	• Specifying the setting concerning public accounts

5.6 Settings in the Print Lists

5.6.1 TX Report

Functions	• The TX report can be printed.
Use	• To output the report provided a record of transmission jobs such as document number, start time, time, destination, mode, page, size to check it.
Setting/ Procedure	*1.* Touch [Print Lists]. *2.* Touch [TX Report]. *3.* TX report is output.

5.6.2 RX Report

Functions	• The RX report can be printed.
Use	• To output the report provided a record of reception jobs such as document number, start time, time, destination, mode, page, size to check it.
Setting/ Procedure	*1.* Touch [Print Lists]. *2.* Touch [RX Report]. *3.* RX report is output.

5.6.3 Bulletin List

Functions	• The bulletin list can be printed.
Use	• To output the document list registered on the bulletin boards to check it.
Setting/ Procedure	*1.* Touch [Print Lists]. *2.* Touch [Bulletin List]. *3.* Bulletin list is output.

5.6.4 One-Touch List

Functions	• The one-touch list can be printed.
Use	• To output the registered one-touch list to check it.
Setting/ Procedure	*1.* Touch [Print Lists]. *2.* Touch [One-Touch List]. *3.* One-touch list is output.

5.6.5 Program List

Functions	• The program list can be printed.
Use	• To output the selected program content to check it.
Setting/ Procedure	*1.* Touch [Print Lists]. *2.* Touch [Program List]. *3.* Touch the fax program that wants to output. *4.* Program list is output.

6. Service Mode

6.1 Service Mode function setting procedure

NOTE

- **Ensure appropriate security for Service Mode function setting procedures. They should NEVER be shown to any unauthorized person not involved with service jobs.**

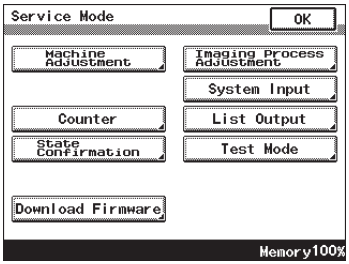
A. Procedure

1. Press the Utility/Counter key.
2. Touch [Check Details].
3. Press the following keys in this order.
   Stop → 0 → 0 → Stop → 0 → 1

NOTE

- **When selecting [CE Authentication] under [Security Settings] available from Service Mode, authentication by CE password is necessary.**
  Enter the 8 digits CE password, and touch [END].
  (The initial setting for CE password is "92729272.")
- **NEVER forget the CE password. When forgetting the CE password, it becomes necessary to replace the RAMU board with a new one and call responsible person of KMBT.**
- **The service code entered is displayed as "*."**

4. The Service Mode menu will appear.



A02FF3E517DA

NOTE

- **Be sure to change the CE password from its default value.**
- **For the procedure to change the CE password, see the Security Settings.**

B. Exiting

- Touch the [OK] key.

NOTE

- **When changing the setting value in service mode, make sure to turn main power switch off once and turn it on again.**

C. Changing the setting value in Service Mode functions

- Use the [+] / [-] key to enter or change the setting value.
- Use the 10-key pad to enter the setting value.
  (To change the setting value, first press the Clear key before making an entry.)

6.2 Service Mode function tree

- The function tree is shown to comply with the format displayed on the screen.

NOTE

- **The following function tree shows only the fax-related functions.**
- **Keys displayed on screens are different depending on the setting.**

Service Mode		Ref. page
System Input	Memory Clear	*
	Software Switch Setting	P.25 P.27
Counter	Fax Connection Error	*
List Output	Protocol Trace	P.26
State Confirmation	Machine Configuration	*
Fax Settings	Self-Telephone #	P.26

*: For details, see the main body service manual.

6.3 Settings in the System Input

6.3.1 Software Switch Setting

Functions Use	• To change the status of each function by setting values (mode, bit, HEX) for soft switch of the machine as necessary. • Refer to the corresponding item on [Admin.] for the list of the soft switches available of setting by the user (administrator). See P.20
Setting/ Procedure	*1.* Call the Service Mode on the screen. *2.* Touch [System Input] → [Software Switch Setting]. *3.* Touch [Mode Selection], and enter the mode number (three digit number) using the 10-key pad. *4.* Touch [Bit Selection]. *5.* Set the cursor using [←] or [→] key, and set the bit with 0 or 1 on the 10-key pad. (When setting in hexadecimal, press [HEX Selection], and enter on the 10-key pad or A to F keys.) *6.* Touch [Apply]. *7.* Touch [OK].

A. Software Switch

Mode	• Each parameter is expressed as a three-digit number. Use the keypad to type in the value.
Bit	• The bits are the eight numbers that represent the parameter status. By specifying a binary number (0 or 1) for each of the bits (0 through 7), settings for each parameter can be specified.
HEX	• Specify a setting for each mode as a hexadecimal number (0 through 9 and A through F). Bit setting “0011 0000” is expressed as the hexadecimal setting “30.” • Specify the status of each parameter by using either bits or hexadecimal values.

6.4 Settings in the List Output

6.4.1 Protocol Trace

Functions	• To produce an output of a protocol information during fax transmission.
Use	
Setting/ Procedure	*1.* Call the Service Mode on the screen. *2.* Touch [List Output] → [Protocol Trace]. *3.* Press the start key to print the report.

6.5 Settings in the FAX Settings

6.5.1 Self-Telephone

- It is displayed only when bit2 for the mode 043 is set to “1” by the following setting: [Service Mode] → [System] → [Software Switch Setting].

Functions	• To register the telephone number of the local fax machine.
Use	
Setting/ Procedure	*1.* Touch [Self-Telephone #]. *2.* Select the key for the self-telephone # to be regist. *3.* Enter the self-telephone # from the 10-key pad, and touch [OK].

7. Soft Switch

7.1 Soft Switches Disclosed to Users (Screen Setting)

Utility					Mode	bit
User Settings	System Settings	Language Selection			820	7 to 2
		Measurement Unit Setting				
		Paper Tray Setting	Priority Tray		408	7 to 4
			Auto Tray Switch ON/OFF		403	1
			No Matching Paper in Tray Setting		409	0
			Paper Type/Size Setting			
		Auto Color Level Adjustment			400	5 to 3
		Dehumidify Scanner				
	Display Settings	Default Screen			493	1, 0
		Default Fax Screen			476	5, 4
	Default Settings	Copy				
		Fax/Scan	Default Scan/Fax Settings			
			IP Relay Dest. Selection		382	2 to 0
			File Type	Full Color	391	7, 6
				Gray Scale	391	5
				Black	391	4
	Copier Settings	Small Originals			424	3
		Auto Zoom for Combine			403	7
		Auto Sort/Group Selection			412	3
	Printer Settings	Basic Settings	PDL Setting		440	7, 6
			Number of Copies		442	7 to 0
			Original Direction		441	3, 2
			A4/A3 <--> LTR/LGR Auto Switch			
			Document Hold Time		457	7 to 0
		Paper Settings	Paper Tray		441	7 to 4
			Paper Size		440	5 to 0
			2-Sided Print		443	7
			Bind Position		443	6, 5
		PCL Settings	Font #		444	7 to 1
			Symbol Set		445	7 to 2
			Font Size		447 448 449 450 451	7 7 to 0 3 to 0 7 to 0 5 to 0
			Line/Page		446	7 to 0
			CR/LF Mapping			
		Print Reports	Configuration Page			
			PCL Demo Page			
			PCL Font List			

Utility					Mode	bit
User Settings	Printer Settings	Print Reports	PS Font List			
User Management	Confirmation Beep				492	7 to 5
	Alarm Volume				492	4 to 2
	Line Monitor Sound				493	7 to 5
	Job Complete Beep				494	4 to 2
	Panel Cleaning					
	Dehumidify					
	POP3 RX					
	Memory RX ON/OFF				038	1
One-Touch/ Box Reg.	One-Touch					
	Index					
	Domain Name					
	Bulletin					
Admin.	System Settings	Power Save Settings	Auto Reset		448	7 to 0
			Low Power Mode Settings		489	7 to 0
			Sleep Mode Settings		490	7 to 0
			LCD Back-Light OFF		491	7 to 0
			Enter Power Save Mode		883	3
		Output Settings	Print/Fax Output Setting	Printer		
				Fax/E-Mail	301	0
			Output Tray Setting	Copy	305	2
				Printer	305	0
				Network	309	0
				Fax (Port 1)	305	1
				Fax (Port 2)	309	1
		Language (I/O)			821	7 to 2
		Date & Time Setting	Date & Time Setting			
			Time Zone		354	7 to 2
			Daylight Saving Time			
		Expert Adjustment	AE Level Adjustment		400	5 to 3
			Density Adjustment	Thick Paper Image Density -Yellow		
				Thick Paper Image Density -Magenta		
				Thick Paper Image Density -Cyan		
				Thick Paper Image Density -Black		
				Black Image Density		

Utility					Mode	bit
Admin.	System Settings	Expert Adjustment	Image Stabilization	Initialize + Stabilization		
				Image Stabilization		
			Color Reg. Adjustment	Cyan		
				Magenta		
				Yellow		
			Gradation Adjustment	Copy		
				Printer (Gradation)		
				Printer (Resolution)		
⚠1			Printer Adjustment	Media Adjustment		
		Paper Size/Type Counter				
⚠1	One-Touch/Box Reg.	One-Touch				
		Index				
		Domain Name				
		Bulletin				
	Administrator Settings	Administrator Password				
		Activity Report E-Mail TX				
⚠1	Call Remote Center					
	Account Track	Authentication Settings	Account Track			
			Allow Print Without Auth.			
		Account Track Settings	Account Track Registration			
			All Counter Clear			
	Document Management	TX Forwarding				
		RX Document				
	Printer Settings	Timeout			455 456	7 to 0 1, 0
	Fax Settings	Self-ID				
		RX Functions	Reception Mode			
			Number of RX Call Rings			
		Password Communication				
		Self-Telephone # Information	Self-Telephone # 1			
			PBX Connect Mode 1		086	2
			Dialing Method 1		086	5, 4, 3
		Self-Telephone # Information 2	Self-Telephone # Info 2			
			PBX Connect Mode 2		116	2
			Dialing Method 2		116	5, 4, 3
⚠1	TX Settings	TSI Registration				
	RX Settings	Memory RX Timer Setting	Memory RX Time		038	1, 0
			Memory Lock Password			
		Delete User Box				
	Report Settings	TX Report			002	6, 5
		Activity Report			002	7

Utility					Mode	bit
Admin.	Print Lists	Setting List				
	Network Settings	Basic Settings	DHCP		355	4
			IP Address			
			Subnet Mask			
			Gateway			
			Network Board Set		355	7, 6, 5
		DNS Settings			361	0
		Machine Name				
		SMTP TX Settings				
		SMTP RX Settings				
		POP3 Settings				
		Scanner Settings	Activity Report		352	7
			RX Doc. Header Print		353	6
			E-Mail Header Text		353	7, 4
			Subject Registration			
			Division Settings	Binary Division	371	1
				Binary Division Size	351	7
			Gateway TX			
		LDAP Settings	Setting Up LDAP			
			Search Default Setting		387	5 to 3
		Frame Type Set				
		IP Relay Settings				
		RAW Port Number Settings				
	Software Switch Setting					
	Ping					
	Firmware Version					
	Security Settings	Function Mgmt Settings	Maximun Job Allowance			

7.2 List of Defaults

MODE	HEX (For U.S.)	HEX (For Europe)	Remark
000	30	20	TSI, Password, Memory TX *
001	00	00	Dest. insert
002	A8	A8	Reports *
003	43	43	Broadcast TX result report *
004	06	06	Memory time *
005	04	08	(Undefined)
006	00	00	(Undefined)
007	F0	F0	G3-1 non-selectable cassette
008	F0	F0	G3-2 non-selectable cassette
009	F0	F0	Network non-selectable cassette
010	F0	F0	Reports non-selectable cassette
011	00	00	(Undefined)
012	00	00	(Undefined)
013	05	01	Automatically switch destinations, Operation when INBOX forward fails
014	00	00	(Undefined)
015	8A	8A	Color, Resolution, Quality *
016	11	11	FLS-Legal switching, Reception date printing *
017	00	00	Select initial value of TSI *
018	46	46	Density setting, Background adjustment *
019	00	00	(Undefined)
020	40	40	Display reports
021	80	80	(Undefined)
022	00	00	Zoom ratio for TX *
023	38	38	TWAIN operation lock time, Set merge for report image *
024	D1	D1	Forward function button, Display caller ID, No receiving by other users *
025	40	40	Processing when memory overflow occurs
026	00	00	(Undefined)
027	04	04	Display ID, Secured comm., F code, 2in1 TX
028	63	63	Remote copy protocol, # of remote multi-copies *
029	00	00	(Undefined)
⚠1 030	D1	D0	Rotate TX, Rotate print, 2in1 RX, Print paper selection restriction, assign mixed mm/inch print papers *
031	A0	A0	Merge for multi-sheet report image, Merge for output format of report image, Binding for duplex TX *
032	00	00	(Undefined)
033	00	00	2-sided TX setting *
034	02	02	Overlap printing
035	03	03	RX by memory
036	00	00	(Undefined)

MODE	HEX (For U.S.)	HEX (For Europe)	Remark
037	F8	F8	Select FAX print paper cassette *
038	0A	0A	Setting stop/start printing *
039	00	00	(Undefined)
040	FE	FE	Binary coding, T.6 coding, JBIG, V.34JBIG
041	40	40	ECM mode, Audio response
042	3F	3F	Redialing interval
043	83	83	# of resending doc., Redialing non-answered call, No. of rings, TSI/CSI registration, PSTN port automatic selection *
044	82	82	RTN sending error trace threshold, TX special processing, T4 timer, Action against abnormal overseas communications, RTN reception processing, V.34 control channel retrain
045	10	20	Number of redialing times
046	28	28	Line holding guard timer, Symbol rate display, EQM value monitoring, Probing information monitoring
047	88	88	V.34 fallback tolerance
048	C7	C7	Set up MODEM standard, Redialing interval for broadcast TX
049	0D	0D	Transmission speed upper limit (TX)
050	0D	0D	Transmission speed upper limit (RX)
051	21	21	Declare RX print paper size
052	00	00	(Undefined)
053	48	48	Document processing when F-CODE reception fails
054	7A	7A	Silence detection time, History control of V.34 auto dialing, Demodulation method
055	02	02	Silence detection, Silence detection level
056	0C	0C	Select sending time of ANSam
057	19	19	Time that ANSam TX starts after line is blocked
058 | 069	3C | 1A	3C | 1A	(Undefined)
070	14	14	Pseudo-ringer sound
071 | 076	00 | 14	00 | 14	(Undefined)
077	60	60	Hook monitoring adjustment times during ringer
078	00	00	(Undefined)
079	02	02	(Undefined)
080	23	6E	Line connection time (PSTN1)
081	00	00	(Undefined)
082	34	34	Detect busy tone, Line monitoring, Detect line disconnection (PSTN1)
083	50	50	Hook monitoring cycle, Hook detection voltage (PSTN1)
084	14	28	PB sending lever (PSTN1)
085	90	C0	TX level (PSTN1)

MODE	HEX (For U.S.)	HEX (For Europe)	Remark
086	4C	4C	RX attenuator (PSTN1), DP speed, PB/DP switching, Internal/external line switching
087	90	90	Detect continuous ringer, Ringer detection frequency (PSTN1)
088	C0	C0	Process to be carried out when 2nd dialing tone timeout is detected, 1300 Hz reception sensitivity switching (PSTN1)
089	00	00	Posed insertion, Prefix # (PSTN1) *
090	00	00	(Undefined)
091	00	00	(Undefined)
092	70	70	Sending echo protection tone, Switch carrier frequency (PSTN1)
093	88	40	CED, Receive command echo (PSTN1)
094	0C	0C	AGC lock (PSTN1)
095	20	20	Digital TX/RX cable equalizer (PSTN1)
096	14	14	CI signal sending time (PSTN1)
097	14	14	TCF/NTCF sending level down, V.34 symbol rate (PSTN1)
098	46	46	CM signal sending start time, EQM threshold value (PSTN1)
099	88	88	V.34 symbol rate threshold value (PSTN1)
100 | 109	00 | 00	00 | 00	(Undefined)
110	23	6E	Line connection time (PSTN2)
111	00	00	(Undefined)
112	24	24	Detect busy tone, Detect line disconnection (PSTN2)
113	50	50	(Undefined)
114	14	28	PB sending lever (PSTN2)
115	90	C0	TX level (PSTN2)
116	4C	4C	RX attenuator, DP speed, PB/DP switching, Internal/external line switching (PSTN2)
117	90	90	Detect continuous ringer, Ringer detection frequency (PSTN2)
118	C0	C0	Process to be carried out when 2nd dialing tone timeout is detected, 1300 Hz reception sensitivity switching (PSTN2)
119	00	00	Posed insertion, Prefix # (PSTN2) *
120	00	00	(Undefined)
121	00	00	(Undefined)
122	70	70	Sending echo protection tone, Switch carrier frequency (PSTN2)
123	88	40	CED, Receive command echo (PSTN2)
124	0C	0C	AGC lock (PSTN2)
125	20	20	Digital TX/RX cable equalizer (PSTN2)
126	14	14	CI signal sending time (PSTN2)
127	14	14	TCF/NTCF sending level down, V.34 symbol rate (PSTN2)
128	46	46	CM signal sending start time, EQM threshold value (PSTN2)
129	88	88	V.34 symbol rate threshold value (PSTN2)

MODE	HEX (For U.S.)	HEX (For Europe)	Remark
130 | 211	00 | 02	00 | 02	(Undefined)
212	40	00	DP make rate (PSTN1)
213 | 231	00 | 05	00 | 02	(Undefined)
232	40	00	DP make rate (PSTN2)
233 | 248	00 | 51	00 | 51	(Undefined)
249	08	08	Ringer detection counts (PSTN2) *
250 | 287	08 | FF	08 | FF	(Undefined)
288	FF	FF	Insert dummy data before PIX
289 | 299	FF | 00	FF | 00	(Undefined)
300	41	41	Stamp, Trim print paper leading edge, Remote copy print order
301	19	15	Print image reduction, Division *
302	00	00	Print paper selection *
303	00	00	(Undefined)
304	00	00	Confidential document holding time, Print lamp lighting, etc. *
305	05	05	ADF density adjustment, Output pin *
306	00	00	(Undefined)
307	00	00	(Undefined)
308	00	00	Specify Imaging unit life stop, Normal stabilization, Specify next print color mode operation, Take data for image stabilization
309	00	00	Output tray setting *
310	00	00	(Undefined)
311	00	00	(Undefined)
⚠1 312	20	20	Setting printing area for ADF front side leading edge 1 (A)
⚠1 313	07	07	Setting printing area for ADF front side leading edge 2 (B)
314	21	21	Setting printing area for ADF front side posterior end 1 (C)
315	00	00	Setting printing area for ADF front side posterior end 2 (D)
⚠1 316	80	80	ACS parameter setting for ADF front side leading edge (2) *
317	10	10	ACS parameter setting for ADF front side posterior end (3) *
318	00	00	ACS parameter setting (1) for ADF front side center (1) *
⚠1 319	20	20	Setting printing area for ADF back side leading edge 1 (A)
⚠1 320	07	07	Setting printing area for ADF back side leading edge 2 (B)
321	21	21	Setting printing area for ADF back side posterior end 1 (C)
322	00	00	Setting printing area for ADF back side posterior end 2 (D)

	MODE	HEX (For U.S.)	HEX (For Europe)	Remark
1	323	80	80	ACS parameter setting for ADF back side leading edge (2) *
	324	10	10	ACS parameter setting for ADF back side posterior end (3) *
	325	00	00	ACS parameter setting for ADF back side center (1) *
	326	00	00	ACS Parameter setting for the book scanner *
	327	64	64	Main scan direction size detection threshold
	328	03	03	Wait time after lamp lights until main scan direction size detection starts
	329	19	19	Main scan direction size detection threshold
1	330	01	01	Wait time after cover closes until main scan direction size detection starts
1	331	60	60	Scan minimum value when cover is closed
1	332	80	80	Scan maximum value when cover is opened
	333	1E	1E	Re-shading interval (first time)
	334	3C	3C	Re-shading interval (since the second times)
	335 | 349	00 | 00	00 | 00	(Undefined)
	350	28	28	POP3 before SMTP TX, Document width/line density upper limit *
	351	1C	1C	Gateway transmission, IP address fax reception, SMTP reception *
	352	D0	D0	Notification of result, Add TSI for Gateway TX and forwarding *
	353	88	80	Text insertion, Header printing *
	354	38	60	Time zone *
	355	30	30	Switch 10M/100M, Switch full-duplex/half-duplex, DHCP *
	356	20	20	SMTP TX timeout *
	357	A0	A0	SMTP receive timeout *
	358	20	20	POP3 receiving timeout *
	359	00	00	Set re-trials for forwarding RX docs, Forced priority TX
1	360	80	80	Coding method for the receiver Internet fax capability (Network function, Mail mode) *
	361	F8	F8	DNS function *
	362	8A	8A	Intervals for calling on the network *
	363	40	40	SMTP expansion prohibited, Specify from address for DNS report *
	364	05	05	POP before SMTP time *
1	365	02	02	FTP timeout
	366	08	08	Priority address input for scan, Anonymous e-mail countermeasure, E-mail file name character restrict, File name year digit quantity *
1	367	00	00	Time of DNS inquiry timeout *
	368	82	82	Activity report, Activity report for scanner TX (TX), RX result management for IP relay sending machine *
	369	00	00	(Undefined)
	370	FF	FF	Additional # of TX re-trials
	371	40	40	Interval of retrials to be set for additional # of TX re-trials, Binary division, Page division *
	372	0F	0F	Transmission interval of size-divided e-mail file data *

MODE	HEX (For U.S.)	HEX (For Europe)	Remark
373	08	08	Full mode function, MDN correspondence *
374	50	50	NOTIFY setting
375	00	00	(Undefined)
376	00	00	NetWare, NDS/Bindery, AppleTalk *
377	FF	FF	Printer number for Nprinter/Rprinter mode *
378	FF	FF	IPP setting *
379	00	00	Edit data when forwarding received documents
380	3A	3A	APOP authentication, SMTP authentication, HTTP server, SSL *
381	80	80	IP relay function *
382	40	40	IP relay result timeout processing, Default station *
383	38	38	SMTP authentication reception *
384	FF	FF	TCP/IP, LPD, RAW port, FTP, SNMP *
385	C0	C0	Scan setting, print setting *
386	30	30	TCP Socket, NetWare *
387	00	00	LDAP
388	00	00	Ethernet frame type *
389	0C	0C	Coding method, Allow write, Allow discovery user *
390	A4	A4	Read security level, Write security level, PDF profile reception limitation, JPEG compression method *
391	00	00	File format, Coding format *
392 | 399	00 | 00	00 | 00	(Undefined)
400	10	10	Priority doc. mixed mode, Priority auto color level, Priority color *
401	00	00	2 colors, Mono color
402	04	04	Average density, Priority copy mode, Automatic function priority mode, Priority application, Neg./Pos. reverse *
403	00	00	Draft print zoom ratio, Sorting, AMS setting for tray selection, Copy function use *
404	4C	4C	Background adjustment, Glossy copy *
405	40	40	Character reproduction, document binding, frame erase *
406	00	00	Erase position (book separation), binding margin
407	00	00	(Undefined)
408	00	00	Default tray (print paper) *
409	04	04	Default 4-in-1 print order, Priority document quality, Non-matching specified feed trays *
410	00	00	(Undefined)
411	00	00	(Undefined)
412	08	08	Priority sort mode, Sort/group *
413	48	48	Copy density *
414 | 416	70 | 00	70 | 00	(Undefined)

	MODE	HEX (For U.S.)	HEX (For Europe)	Remark
	417	00	00	Set max # of copies *
	418 | 423	00 | 00	00 | 00	(Undefined)
	424	00	00	Small doc. *
	425	10	10	Select FLS size
	426	10	00	(Undefined)
	427	48	48	Brightness for color quality adjustment *
	428	48	48	Contrast for color quality adjustment *
	429	48	48	Saturation for color quality adjustment *
	430	48	48	Red for color quality adjustment *
	431	48	48	Green for color quality adjustment *
	432	48	48	Blue for color quality adjustment *
	433	48	48	Yellow for color quality adjustment *
	434	48	48	Magenta for color quality adjustment *
	435	48	48	Cyan for color quality adjustment *
	436	48	48	Black for color quality adjustment *
	437	60	60	Sharpness for color quality adjustment *
	438	00	00	(Undefined)
	439	00	00	(Undefined)
	440	0B	01	Set PCL, Paper size *
	441	80	80	Paper tray, Paper orientation *
	442	01	01	# of copies (least significant 8 bits) *
⚠1	443	20	20	Printing method, # of copies (most significant 2 bits) *
	444	00	00	Language code *
	445	78	4C	Symbol set *
	446	3C	40	# of lines *
	447	00	00	Unit of font size *
	448	30	30	Font size (Scalable) (least significant 8 bits) *
	449	00	00	Font size (Scalable) (most significant 4 bits) *
	450	E8	E8	Font size (Bitmap) (least significant 8 bits) *
	451	03	03	Font size (Bitmap) (most significant 6 bits) *
⚠1	452	80	80	Switch A4/Letter, feed cassette fixed/priority, CR/LF mapping, allow printing without account authentication *
	453	00	00	Set PostScript error print *
	454	03	03	(Undefined)
	455	3C	3C	Timeout set (least significant 8 bits) *
	456	00	00	Timeout set (most significant 2 bits) *
	457	05	05	Memory overflow waiting time *
	458	04	04	PC print job deletion operation, PC-FAX job deletion operation *

MODE	HEX (For U.S.)	HEX (For Europe)	Remark
459 | 469	00 | 00	00 | 00	(Undefined)
470	00	00	Set export extension, Simple format, PSDA use, Auto logout time *
471	01	00	Set user's list screen display and default screen *
472	00	00	(Undefined)
473	40	40	Set priority job list screen, Use of # for destination entry *
474	00	00	(Undefined)
475	00	00	(Undefined)
476	00	00	Destination display screen, Specify full-dial TX, Specify broadcast TX *
477	01	01	Fax registration restriction and destination display, Setting confirmation screen for broadcast TX *
478	82	02	Specify delete key operation, Display when pressing one-touch, Comm. mode initial value, Antidew processing, PB/DP auto detection key *
479	00	00	(Undefined)
480	00	00	Display file forwarding key, Sound patterns for alarm buzzer
481 | 484	00 | 00	00 | 00	(Undefined)
485	C0	00	Year/Month/Day display order
486	40	40	Daylight saving time activation switch
487	00	00	No sleep
488	01	01	Auto reset *
489	0A	0A	Low power mode *
490	14	14	Sleep mode *
491	01	01	LCD back-light OFF *
492	6C	6C	Sound volume setting (buzzer sound, alarm sound) *
493	64	68	Sound volume setting (monitor sound), Priority application screen *
494	0C	0C	Sound volume setting (completion sound) *
495 | 499	00 | 00	00 | 00	(Undefined)
500	00	00	Enlarge sound volume *
501	00	00	Screen reverse, Next screen display for enlarge display *
502	03	03	Key repeat starting time *
503	01	01	Key repeat interval *
504	03	03	Reservation completion screen display *
505	40	40	Buzzer sound *
506	00	00	Extend auto reset time *
507 | 511	00 | 00	00 | 00	(Undefined)
512	80	80	Dial tone detection

MODE	HEX (For U.S.)	HEX (For Europe)	Remark
513 | 517	64 | 01	64 | 0A	(Undefined)
518	D4	D4	Setting the voice message
519	00	00	Setting to allow/prohibit fax operation when detecting an error during voice message
520	01	01	Ringer detection counts (PSTN1)
521 | 767	1E | 0A	1E | 14	(Undefined)
768	0C	0C	Soft time adjustment value (V.17, V.27 ter)
769	07	07	Soft time adjustment value (V.29)
770	1C	C2	CFR-PIX interval
771	23	23	T1 timer for auto-TX
772	23	23	T1 timer for auto-RX
773	23	23	T1 timer for manual TX
774	23	23	T1 timer for manual RX
775	23	23	T1 timer for auto-TX of polling
776	23	23	T1 timer for manual TX of polling
777	07	07	PIX-Post command interval
778 | 803	00 | 01	00 | 02	(Undefined)
804	04	04	SF/SSF communication, Destination machine confirmation TX *
805	53	53	Special characters for destination machine confirmation TX
806 | 819	00 | 00	00 | 00	(Undefined)
820	04	04	Language code (for display)
821	04	04	Language code (for input/output)
822	00	00	(Undefined)
823	04	04	Language code (for input)
824 | 829	80 | 00	80 | 00	(Undefined)
830	50	60	Total counter count mode, Paper size considered as the large size
⚠1 831	00	00	Key counter
⚠1 832	00	00	Vendor + key counter, management device management setting
⚠1 833	00	00	Vendor message, PC print control with key counter
⚠1 834	00	00	(Undefined)
835	00	00	Public account *
836 | 879	00 | 00	00 | 00	(Undefined)

	MODE	HEX (For U.S.)	HEX (For Europe)	Remark
	880	70	10	Unit change, Consumable life reminder
	881	00	00	(Undefined)
	882	E0	E0	Warm-up mode *
	883	04	00	Power save setting, LCT paper size, Optional original size detection (Book scanner)
1	884	01	01	Fan control for the low-temperature warm-up
	885 | 900	E0 | 00	E0 | 00	(Undefined)
1	901	01	01	CS Remote Care: Line for send only, Dial mode
1	902	73	73	(Undefined)
1	903	0A	0A	(Undefined)
1	904	02	02	CS Remote Care transmission mode
1	905	03	03	CS Remote Care modem redial interval
1	906	0A	0A	CS Remote Care modem redial times
1	907	01	01	CS Remote Care redial for response timeout
1	908	06	06	CS Remote Care retransmission interval on E-mail error
1	909	0A	0A	CS Remote Care retransmission times on E-mail error
1	910	00	00	CS Remote Care time zone
1	911	20	20	Ring reception → Connect reception timer
1	912	40	40	Dial call end → Connect reception timer
1	913	00	00	(Undefined)
1	914	20	20	Line Connect → Send start-up message request time
1	915	1E	1E	Opposite party signal answer wait time
1	916	00	00	(Undefined)
1	917	00	00	(Undefined)
1	918	01	01	CS Remote Care ATTENTION display
1	919 | 929	00 | 00	00 | 00	(Undefined)
1	930	00	00	CS Remote Care Authentication, SMTP authentication information
1	931	05	05	CS Remote Care POP before SMTP time
1	932	20	20	CS Remote Care SMTP timeout
1	933	1E	1E	CS Remote Care POP3 server auto connection interval
1	934	20	20	CS Remote Care POP3 timeout
1	935	00	00	CS Remote Care APOP setting
1	936 | 940	00 | 00	00 | 00	(Undefined)
1	941	F0	F0	FIFO trigger level

	MODE	HEX (For U.S.)	HEX (For Europe)	Remark
⚠1	942 | 944	00 | 00	00 | 00	(Undefined)
⚠1	945	C1	C1	CS Remote Care Unit of the timer for awaiting toner empty restoration
⚠1	946 | 999	00 | 00	00 | 00	(Undefined)

7.3 List of Soft Switches

Utilità> ContrDett> Stop> 0> 0> Stop> 0> 1> SystemImput> SoftwareSwitchSetting

: Default settings of U.S.

: Default settings of Europe

: Default settings are common

MODE	Factory setting bit	
000	Bit: 7 6 5 4 3 2 1 0 0 0 1 1 0 0 0 0	HEX: 30 (For U.S.) HEX: 20 (For Europe)

Bit	Feature	Logic		Description
		0	1	
5	Specifies whether printing TSI on transmitted document is returned to ON or OFF after completing operations. <*>	OFF	**ON**	
4	Select position of TSI. <*>	**Out of Doc.**	**On the Doc.**	
3	Specifies whether confirming communication password at TX is returned to ON or OFF after completing operations. <*>	**OFF**	ON	
2	Confirm communication password at RX. <*>	**No**	Yes	
1	Specifies which TX method is returned to ON, memory-stored TX or quick scan TX, after completing operations. *	**Memory-stored**	Quick scan	Memory-stored TX includes quick memory TX.

NOTE

- **The features with (*) are settable by users. *: Screen setting <*>: Soft switch setting**

MODE	Factory setting bit	
001	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 0 0 0	HEX: 00

Bit	Feature	Logic		Description
		0	1	
0	Specify whether to insert a destination name on document to send.	**No**	Yes	

MODE	Factory setting bit	
002	Bit: 7 6 5 4 3 2 1 0 1 0 1 0 1 0 0 0	HEX: A8

Bit	Feature	Logic		Description	
		0	1		
7	Print communication activity report automatically for every 50 activities. *	No	**Yes**	"No" means manual print.	
6	Select when a result report should be printed. *	Bit 6-5: 00		No print	Specifies result reports for TX, incomplete TX, or broadcasting TX.
5		**01**		**Print for incomplete TX**	
		10		Always print	
		11		Not available	
3	Print memory clear report. <*>	No	**Yes**		
2	Log management of broadcast transmissions. <*>	**All together**	Individual		

NOTE

- **The features with (*) are settable by users. *: Screen setting <*>: Soft switch setting**

MODE	Factory setting bit	
003	Bit: 7 6 5 4 3 2 1 0 0 1 0 0 0 0 1 1	HEX: 43

Bit	Feature	Logic		Description	
		0	1		
7	Result report of broadcast transmissions. *	Bit 7-6: 00		No output	
6		**01**		**Output for incomplete TX**	
		10		Always output	
		11		Not available	

NOTE

- **The features with (*) are settable by users. *: Screen setting**

MODE	Factory setting bit	
004	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 1 1 0	HEX: 06

Bit	Feature	Logic		Description	
		0	1		
3 2 1	Selects holding time of incompleted TX document in memory. <*>	Bit 3-0: 0000		0 Delete file from memory immediately (No redialing function)	
0			0001	10 min	
			0010	20 min	
			0011	30 min	
			0100	40 min	
			0101	50 min	IC memory device
			0110	**1 hr**	
			0111	2 hr	
			1000	4 hr	
			1001	8 hr	
			1010	12 hr	
			1011	24 hr	
			1100	72 hr	
			Others	Not available	

NOTE

- **The features with (*) are settable by users. <*>: Soft switch setting**

MODE	Factory setting bit	
007	Bit: 7 6 5 4 3 2 1 0 1 1 1 1 0 0 0 0	HEX: F0

Bit	Feature	Logic		Description
		0	1	
7	Cassette-specified printing (G3-1: Tray 1)	Cannot print	**Can print**	
6	Cassette-specified printing (G3-1: Tray 2)	Cannot print	**Can print**	
5	Cassette-specified printing (G3-1: Tray 3)	Cannot print	**Can print**	
4	Cassette-specified printing (G3-1: Tray 4)	Cannot print	**Can print**	
3	Cassette-specified printing (G3-1: Bypass tray)	**Cannot print**	Can print	
0	Cassette selection per reception port	**Disable**	Enable	

MODE	Factory setting bit	
008	Bit: 7 6 5 4 3 2 1 0 1 1 1 1 0 0 0 0	HEX: F0

Bit	Feature	Logic		Description
		0	1	
7	Cassette-specified printing (G3-2: Tray 1)	Cannot print	**Can print**	
6	Cassette-specified printing (G3-2: Tray 2)	Cannot print	**Can print**	
5	Cassette-specified printing (G3-2: Tray 3)	Cannot print	**Can print**	
4	Cassette-specified printing (G3-2: Tray 4)	Cannot print	**Can print**	
3	Cassette-specified printing (G3-2: Bypass tray)	**Cannot print**	Can print	

MODE	Factory setting bit	
009	Bit: 7 6 5 4 3 2 1 0 1 1 1 1 0 0 0 0	HEX: F0

Bit	Feature	Logic		Description
		0	1	
7	Cassette-specified printing (Network: Tray 1)	Cannot print	**Can print**	
6	Cassette-specified printing (Network: Tray 2)	Cannot print	**Can print**	
5	Cassette-specified printing (Network: Tray 3)	Cannot print	**Can print**	
4	Cassette-specified printing (Network: Tray 4)	Cannot print	**Can print**	
3	Cassette-specified printing (Network: Bypass tray)	**Cannot print**	Can print	

MODE	Factory setting bit	
010	Bit: 7 6 5 4 3 2 1 0 1 1 1 1 0 0 0 0	HEX: F0

Bit	Feature	Logic		Description
		0	1	
7	Cassette-specified printing (Report: Tray 1)	Cannot print	**Can print**	
6	Cassette-specified printing (Report: Tray 2)	Cannot print	**Can print**	
5	Cassette-specified printing (Report: Tray 3)	Cannot print	**Can print**	
4	Cassette-specified printing (Report: Tray 4)	Cannot print	**Can print**	
3	Cassette-specified printing (Report: Bypass tray)	**Cannot print**	Can print	

MODE	Factory setting bit	
013	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 1 0 1	HEX: 05 (For U.S.) HEX: 01 (For Europe)

Bit	Feature	Logic		Description
		0	1	
2	Automatically switch destinations.	**OFF**	**ON**	You can register main addresses and 2ndary addresses with onetouch. You can send to 2ndary addresses when communication with main addresses is abnormal.
0	Select operation when INBOX forward failed.	Destroy document immediately	**Destroy document after printing**	Specify the action to be taken when INBOX forwarding has failed. (Failed means communications cannot be delivered. Communications means communication via FAX and E-mail.)

MODE	Factory setting bit	
015	Bit: 7 6 5 4 3 2 1 0 1 0 0 0 1 0 1 0	HEX: 8A

Bit	Feature	Logic		Description	
		0	1		
7	Color default value *	Bit 7-6:	00	Black	Specify default value of color when transmitting.
6			01	Gray scale	
			10	**Full color**	
			11	Not available	
5	Resolution default value *	Bit 5-3:	000	200 x 100 dpi	Specify default value of resolution when transmitting.
4			**001**	**200 dpi**	
3			010	300 dpi	
			011	400 dpi	
			100	600 dpi	
			Others	Not available	
2	Quality default value *	Bit 2-0:	000	Text	Specify default value of quality when transmitting.
1			001	Photo	
0			**010**	**Text/Photo**	
			011	Dot matrix	
			100	Map	
			Others	Not available	

NOTE

- **The features with (*) are settable by users. *: Screen setting**

MODE	Factory setting bit	
016	Bit: 7 6 5 4 3 2 1 0 0 0 0 1 0 0 0 1	HEX: 11

Bit	Feature	Logic		Description
		0	1	
7	Switch FLS-Legal	**FLS**	Legal	Switches the detected size.
5	Mail mode: Print date & time received <*>	**No**	Yes	
4	Mail mode: Position of printing date & time received <*>	Outside of document	**Inside of document**	Available when bit 5 of mode 016 is set to “Yes”
1	RX time stamp: Print date & time received <*>	**No**	Yes	
0	RX time stamp: Position of printing date & time received <*>	Outside of document	**Inside of document**	Available when bit 1 of mode 016 is set to “Yes” Used for G3 communications.

NOTE

- **The features with (*) are settable by users. <*>: Soft switch setting**

MODE	Factory setting bit	
017	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 0 0 0	HEX: 00

Bit	Feature	Logic		Description
		0	1	
3	Select initial value of TSI *	Bit 3-0:	**0000**	**TSI 1**
2			0001	TSI 2
1			0010	TSI 3
0			0011	TSI 4
			0100	TSI 5
			0101	TSI 6
			0110	TSI 7
			0111	TSI 8
			Others	Not available

NOTE

- **The features with (*) are settable by users. *: Screen setting**

MODE	Factory setting bit	
018	Bit: 7 6 5 4 3 2 1 0 0 1 0 0 0 1 1 0	HEX: 46

Bit	Feature	Logic		Description	
		0	1		
7	Density *	Bit 7-4:	0000	1 (Light)	Specify default value of density.
6			0001	2	
5			0010	3	
4			0011	4	
			0100	**5 (Standard)**	
			0101	6	
			0110	7	
			0111	8	
			1000	9 (Dark)	
			Others	Not available	
3	Background adjustment *	Bit 3-0:	0000	-6 (Light)	Specify default value of background adjustment.
2			0001	-5	
1			0010	-4	
0			0011	-3	
			0100	-2	
			0101	-1	
			0110	**0 (Standard)**	
			0111	+1	
			1000	+2 (Dark)	
			1001	Auto	
			Others	Not available	

NOTE

- **The features with (*) are settable by users. *: Screen setting**

MODE	Factory setting bit	
020	Bit: 7 6 5 4 3 2 1 0 0 1 0 0 0 0 0 0	HEX:40

Bit	Feature	Logic		Description
		0	1	
7	Displays # of reports.	**No**	Yes	"Yes" displays # of pages on phone line in addition to ordinary # of papers.
6	Trace protocol.	No	**Yes**	"Yes" prints result of protocol trace after completing communication. If next communication is proceeded before this printing, information on previous communication protocol will be deleted.
5	Display number of error lines/transmission speed.	**No**	Yes	"Yes" displays # of error lines/transmission speed on touch panel and outputs port for auto checking.
4	Select monitor interval for line.	**Phase A**	All phases	Specifies interval for monitoring phone lines for G3 communication.
3	Display error codes. (Reports)	**No**	Yes	"Yes" displays error codes (6 digits) in reports.

MODE	Factory setting bit	
022	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 0 0 0	HEX: 00

Bit	Feature	Logic		Description
		0	1	
5	Zoom setting default value for TX *	**Auto zoom**	No reduction	

NOTE

- **The features with (*) are settable by users. *: Screen setting**

MODE	Factory setting bit	
024	Bit: 7 6 5 4 3 2 1 0 1 1 0 1 0 0 0 1	HEX: D1

Bit	Feature	Logic		Description	
		0	1		
7	TX forwarding to administrator. <*>	Disable	**Enable**		
6	TX forwarding of scanner function to administrator. <*>	Disable	**Enable**	Valid when Mode 024 Bit 7 is set to "Enable."	
5	Report output when TX forwarding to administrator is set. <*>	Bit 5-4: 00		Not output	
4		**01**		**Output when TX fails**	
		10		Always output	
		11		Not available	
2	Select ID display order when receiving.	Bit 2-1:	**00**	**Expansion ID → TSI**	Determine the subject data priority displayed in the subject line for gateway transmission (*) when Report, Screen display and Network options are set to Yes. (*) When forward is specified in the user's "Document management" settings, and received facsimile is broadcast via E-mail.
1		01		TSI	
		Others		Not available	
0	Receive by memory.	No	**Yes**		

NOTE

- **The features with (*) are settable by users. <*>: Soft switch setting**

MODE	Factory setting bit	
025	Bit: 7 6 5 4 3 2 1 0 0 1 0 0 0 0 0 0	HEX: 40

Bit	Feature	Logic		Description
		0	1	
7	Memory overflow transmission mode	Bit 7-6: 00		Quit transmission
6		**01**		**Inquire (Quit TX for non-response and quick memory TX)**
		10		Inquire (Continue TX for non-response and quick memory TX)
		11		Not available

MODE	Factory setting bit	
027	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 1 0 0	HEX: 04

Bit	Feature	Logic		Description
		0	1	
7	Select ID display order: Specifies priority order of destination IDs for printing report/displaying on screen. Secure comm. with N-method	Bit 7-5:	**000**	**Pattern 1: 1→2→3→4**
6			001	Pattern 2: 3→4→1→2
5			010	Pattern 3: 3→1→2→4
			011	"CSI" → "called destination #" display order
			100	Pattern 4: 2→1→4
			Others	Not available
				1: Name registered in one-touch button or phone # of destination dialed (full dialing) 2: Destination phone # 3: Extended ID 4: Standard ID (# of TSI/CIG)
3	Secure comm. with N-method	**No**	Yes	
2	F code function	Disable	**Enable**	Used for G3 communications.
1	Assign non-reduction TX for 2in1 scan.	**No**	Yes	Specify whether 2in1 TX will be sent by A4 always or by size appropriate to receiver's capability.
0	Specify 2in1 TX	**No**	Yes	

MODE	Factory setting bit	
028	Bit: 7 6 5 4 3 2 1 0 0 1 1 0 0 0 1 1	HEX: 63

Bit	Feature	Logic		Description	
		0	1		
7	Select remote copy protocol.	**F code**	N method		
6	Select restricted number of prints of remote copy. <*>	Bit 6-0:	0000000	Not available (Same as 1 copy)	
5					
4			0000001	1 copy	
3			|		
2			**1100011**	**99 copies**	
1			Others	Not available (Same as 99 copies)	
0					

NOTE

- **The features with (*) are settable by users. <*>: Soft switch setting**

MODE	Factory setting bit	
030	Bit: 7 6 5 4 3 2 1 0 1 1 0 1 0 0 0 1	HEX: D1 (For U.S.) HEX: D0 (For Europe)

Bit	Feature	Logic		Description
		0	1	
7	Rotation TX *	No	**Yes**	
6	Rotate print of FAX RX. <*>	No rotate print	**Rotate print**	
4	Receive 2in1 page. (Valid for RX print) <*>	No	**Yes**	
3 2	Restrict print paper selection: Specifies unselectable print paper (including orientation) for FAX.	Bit 3-2:	**00**	**No B5S, A5S, and postcard**
			01	No A5S and postcard
			10	No postcard
			11	Not available
1 0	Assign mixed mm/inch print papers. (Priority set) (Valid for RX printing or report printing)	Bit 1-0:	**00**	**Select mm only**
			01	**Select inch only**
			10	Select both
			11	Not available

NOTE

- **The features with (*) are settable by users. *: Screen setting <*>: Soft switch setting**

MODE	Factory setting bit	
031	Bit: 7 6 5 4 3 2 1 0 1 0 1 0 0 0 0 0	HEX: A0

Bit	Feature	Logic		Description
		0	1	
7	Margin process for multiple copies of report with image merge.	No	**Yes**	Valid when “Set marge for report image. (MODE 023 Bit 3)” is set to “Yes.”
6	Assign output format for image marge report.	**Same as regular report**	Always A5 forma	1: Always output with A5 format regardless of the set status of print paper. This is valid when a cassette has A4 print paper and not A4S print paper.
5	Margin layout for 2-sided TX *	Top margin	**Left margin**	

NOTE

- **The features with (*) are settable by users. *: Screen setting**

MODE	Factory setting bit	
033	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 0 0 0	HEX: 00

Bit	Feature	Logic		Description
		0	1	
6	Initial setting of 2-sided TX *	**No 2-sided-TX mode**	2-sided TX mode	

NOTE

- **The features with (*) are settable by users. *: Screen setting**

MODE	Factory setting bit	
034	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 0 1 0	HEX: 02

Bit	Feature	Logic		Description
		0	1	
1	Overlap printing.	No	**Yes**	Valid only at RX printing. Overlapped print is fixed to 4 mm regardless of line density.

MODE	Factory setting bit	
035	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 0 1 1	HEX: 03

Bit	Feature	Logic		Description
		0	1	
1	RX by memory when reaching I/C lifetime.	No	**Yes**	
0	RX by memory when reaching toner empty.	No	**Yes**	

MODE	Factory setting bit	
037	Bit: 7 6 5 4 3 2 1 0 1 1 1 1 1 0 0 0	HEX: F8

Bit	Feature	Logic		Description
		0	1	
7	Select FAX paper cassette (1st cassette). <*>	No	**Yes**	
6	Select FAX paper cassette (2nd cassette). <*>	No	**Yes**	
5	Select FAX paper cassette (3rd cassette). <*>	No	**Yes**	
4	Select FAX paper cassette (4th cassette). <*>	No	**Yes**	
2	Select FAX paper cassette (Bypath). <*>	**No**	Yes	

NOTE

- **The features with (*) are settable by users. <*>: Soft switch setting**
- **If bits 7-4 and bit 2 all are set to "No," 1st cassette is forcibly selected.**

MODE	Factory setting bit	
038	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 1 0 1 0	HEX: 0A

Bit	Feature	Logic		Description	
		0	1		
3	Print restart timer after stopping.	Bit 3-2: 00		3 min	
2		01		5 min	
		10		**10 min**	
		11		20 min	
1	Manual setting of print stop/start. *	Stop	**Start**		
0	Print stop/start timer. *	**Does not function**	Function		

NOTE

- **The features with (*) are settable by users. *: Screen setting**

MODE	Factory setting bit	
040	Bit: 7 6 5 4 3 2 1 0 1 1 1 1 1 1 1 0	HEX: FE

Bit	Feature	Logic		Description
		0	1	
7	2-dim coding at TX. (Valid for G3 communication)	No	**Yes**	"No": MH "Yes": MH + MR
6	T.6 coding. (Valid for G3 communication)	No	**Yes**	"Yes": MH + MR + MMR Valid only when "2-dim coding at TM. (MODE 040 Bit 7)" is set to "Yes."
5	JBIG communication. (Valid for ECM communication)	No	**Yes**	
4	Third party's JBIG (ITU-T) communication. (Valid for ECM communication)	No	**Yes**	Valid only when "JBIG communication. (MODE 040 Bit 5)" is set to "Yes."
3	Proprietary JBIG (ITU-T) communication. (Valid for ECM communication)	No	**Yes**	Valid only when "JBIG communication. (MODE 040 Bit 5)" is set to "Yes."
1	JBIG capability at V.34 communication. (G3)	No	**Yes**	Valid only when "JBIG communication. (MODE 040 Bit 5)" is set to "Yes."

MODE	Factory setting bit	
041	Bit: 7 6 5 4 3 2 1 0 0 1 0 0 0 0 0 0	HEX:40

Bit	Feature	Logic		Description
		0	1	
6	ECM mode	No	**Yes**	"No": G3 "Yes": G3 + ECM
1	Audio response	**Disable**	Enable	

MODE	Factory setting bit	
042	Bit: 7 6 5 4 3 2 1 0 0 0 1 1 1 1 1 1	HEX: 3F

Bit	Feature	Logic		Description	
		0	1		
7	Select redialing interval 1.	Bit 7-4:	0000	Not available	
6			0001	1 min	
5			0010	2 min	
4			**0011**	**3 min**	
			0100	4 min	
			0101	5 min	
			0110	6 min	
			0111	7 min	
			1000	8 min	
			1001	9 min	
			1010	10 min	
			1011	11 min	
			1100	12 min	
			1101	13 min	
			1110	14 min	
			1111	15 min	
3	Select redialing interval 2.	Bit 3-0:	0000	Not available	
2			0001	1 min	
1			0010	2 min	
0			0011	3 min	
			0100	4 min	
			0101	5 min	
			0110	6 min	
			0111	7 min	
			1000	8 min	
			1001	9 min	
			1010	10 min	
			1011	11 min	
			1100	12 min	
			1101	13 min	
			1110	14 min	
			1111	**15 min**	

MODE	Factory setting bit	
043	Bit: 7 6 5 4 3 2 1 0 1 0 0 0 0 0 1 1	HEX: 83

Bit	Feature	Logic		Description
		0	1	
7	# of document resendings.	Bit 7-6: 00		0
6		01		1
		10		**2**
		11		3
4	Redialing when line is connected but no answer.	**No**	Yes	
3	No. of rings until transmission.	**Not restrict (0 to 20 times)**	Restrict (2 to 4 times)	Number of times for automatic reception calls.
2	TCI/CSI registration screen.	**User setting**	Service mode setting	Set self-telephone # information.
1	Select PSTN port automatically. Specify how to dial standard phone lines. <**>	No	**Yes**	When the system has 2 PSTN lines and one of them is used, you can use the other line by selecting “Yes.” If you have only 1 PSTN line or wish to use 2 lines for the extension and the external lines separately, select “No.”

NOTE

- **The features with (*) are settable by users. <*>: Soft switch setting**
  The feature with (**) is available only in a machine with a multi-port option.

MODE	Factory setting bit	
044	Bit: 7 6 5 4 3 2 1 0 1 0 0 0 0 0 1 0	HEX: 82

Bit	Feature	Logic		Description
		0	1	
7	Select threshold value for RTN sending error trace.	32 lines or more	**64 lines or more**	Specifies # of error lines as reference of sending RTN: • “32 lines or more”: MCF if error lines are 0 to 31 RTN if error lines are 32 or more • “64 lines or more”: MCF if error lines are 0 to 31 RTP if error lines are 32 to 63 RTN if error lines are 64 or more
6	Process TCF sending specially.	**No**	Yes	
4	Select T4 timer. (Action against line delay)	**3 sec**	4.5 sec	
3	Take an action against communication error from overseas. (Action against LMCD-OFF)	**No**	Yes	Select “No” unless bad line is experienced.
2	Take an action against communication error from overseas. (Action for fall back)	**No**	Yes	Select “No” unless bad line is experienced.
1	Process RTN RX failure.	No (discard as error)	**Yes (not as error)**	Changes high-speed signal sending timing: 0: DCF/TCF 80 ms, CFR/PIX 450 ms 1: DCF/TCF 250 ms, CFR/PIX 600 ms
0	Retrain V. 34 control channel.	**No (discard as error)**	Yes (answer)	

MODE	Factory setting bit	
045	Bit: 7 6 5 4 3 2 1 0 0 0 0 1 0 0 0 0	HEX: 10 (For U.S.) HEX: 20 (For Europe)

Bit	Feature	Logic 0	Logic 1	Description
7 6 5 4	Select number of redialings 1. (Number of auto redialing at 1st stage)	Bit 7-4: 0000	0	Specifies the number of redialing with the interval specified by “Select redialing interval 1 (MODE 042 Bit 7 to 4).”
			0001	**1**
			0010	**2**
			0011	3
			0100	4
			0101	5
			0110	6
			0111	7
			1000	8
			1001	9
			1010	10
			1011	11
			1100	12
			1101	13
			1110	14
			1111	15
3 2 1 0	Select number of redialings 2. (Number of auto redialing at the 2nd stage)	Bit 3-0: **0000**	**0**	Once redialing set by “Select number of redialing 1 (MODE 045 Bit 7 to 4)”, the system redials the number of times specified by this soft switch. Redialing interval follows “Select redialing interval 2 (MODE 042 Bit 3 to 0)” at the first time, and then follows “Select redialing interval 1 (MODE 042 Bit 7 to 4)” from the second time.
			0001	1
			0010	2
			0011	3
			0100	4
			0101	5
			0110	6
			0111	7
			1000	8
			1001	9
			1010	10
			1011	11
			1100	12
			1101	13
			1110	14
			1111	15

NOTE

- **If the first stage has been set [0000], the system proceeds to the second stage after 10 minutes without carrying out the first stage.**
- **If the first and the second stages have been set [0000], the auto redialing process will not be is carried out.**

MODE	Factory setting bit	
046	Bit: 7 6 5 4 3 2 1 0 0 0 1 0 1 0 0 0	HEX: 28

Bit	Feature	Logic		Description	
		0	1		
4	Call hold guard timer.	Bit 4-3: 00		1 hr	
3		**01**		**10 hr**	
		10		24 hr	
		11		72 hr	
2	Display symbol rate.	**No**	Yes	Symbol rates are 2400/2743/2800/3000/3200/3429. Rate of 2743 is not actually used.	
1	Observe EQM: Check modem & line statuses	**No**	Yes	Do not change the set value.	
0	Observe probing information. Check modem & line statuses.	**No**	Yes	Do not change the set value.	

MODE	Factory setting bit	
047	Bit: 7 6 5 4 3 2 1 0 1 0 0 0 1 0 0 0	HEX: 88

Bit	Feature	Logic		Description	
		0	1		
7	Select V. 34 fall back tolerance. (TX)	Bit 7-5: 000		0	
6		001		1	
5		010		2	
		011		3	
		100		**4**	
		Others		Not available	
4	Select V. 34 fall back tolerance. (RX)	Bit 4-2: 000		0	
3		001		1	
2		**010**		**2**	
		011		3	
		100		4	
		Others		Not available	

MODE	Factory setting bit	
048	Bit: 7 6 5 4 3 2 1 0 1 1 0 0 0 1 1 1	HEX: C7

Bit	Feature	Logic		Description	
		0	1		
7	Select modem capabilities.	Bit 7-6:	00	V.27 ter & V.29	Sets MODEM's function
6			01	V.33	
			10	V.17 & V.33	
			11	**V.17 & V.33 & V.34**	
5	Redial interval when resending document.	Bit 5-3:	**000**	**10 sec**	
4			001	30 sec	
3			010	60 sec	
			011	120 sec	
			100	180 sec	
			Others	Not available	
2	Allow V.34.	No	**Yes**	Set the same as "Allow V.8 (MODE 048 Bit 1)"	
1	Allow V. 8.	No	**Yes**	Set the same as "Allow V.8 (MODE 048 Bit 2)"	
0	Allow V.34 communication for extensions.	V.17	**V.34**	• Invalid, when MODE 048 Bit 2 is "0." • Invalid, when MODE 048 Bit 1 is "0."	

MODE	Factory setting bit	
049	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 1 1 0 1	HEX: 0D

Bit	Feature	Logic 0	Logic 1	Description	
4	Select upper limit of transmission speed. (TX)	Bit 4-0:	00000	2400 bps	• Need to disable “Allow V.34 (MODE 048 Bit 2)” by setting “No” for 2400 bps. • 16.8 kbps or faster are valid only when “Allow V.34. (MODE 048 Bit 2)” is enabled (Yes).
3			00001	4800 bps	
2			00010	7200 bps	
1			00011	9600 bps	
0			00100	12.0 kbps	
			00101	14.4 kbps	
			00110	16.8 kbps	
			00111	19.2 kbps	
			01000	21.6 kbps	
			01001	24.0 kbps	
			01010	26.4 kbps	
			01011	28.8 kbps	
			01100	31.2 kbps	
			01101	**33.6 kbps**	
			Others	Not available	

MODE	Factory setting bit	
050	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 1 1 0 1	HEX: 0D

Bit	Feature	Logic 0	Logic 1	Description	
4	Select upper limit of transmission speed. (RX)	Bit 4-0:	00000	2400 bps	• Need to disable “Allow V.34 (MODE 048 Bit 2)” by setting “No” for 2400 bps. • 16.8 kbps or faster are valid only when “Allow V.34 (MODE 048 Bit 2)” is enabled (Yes).
3			00001	4800 bps	
2			00010	7200 bps	
1			00011	9600 bps	
0			00100	12.0 kbps	
			00101	14.4 kbps	
			00110	16.8 kbps	
			00111	19.2 kbps	
			01000	21.6 kbps	
			01001	24.0 kbps	
			01010	26.4 kbps	
			01011	28.8 kbps	
			01100	31.2 kbps	
			01101	**33.6 kbps**	
			Others	Not available	

MODE	Factory setting bit	
051	Bit: 7 6 5 4 3 2 1 0 0 0 1 0 0 0 0 1	HEX: 21

Bit	Feature	Logic		Description	
		0	1		
7	Declare size of print paper for received document.	Bit 7-5: 000		Not available	Specifies declaration value of printing function for RX. "Auto" selects max size of printing paper, max size of loaded cassette, or max size of the last printing paper. "Auto including rotation" is equivalent to A4S (Letter S) set even if A4 (Letter) is selected by MODE 302 Bit 7.
6		**001**		**Auto**	
5		010		A4/Letter	
		011		B4/Legal	
		100		A3/11×17	
		101		Auto including rotation	
		Others		Not available	

MODE	Factory setting bit	
053	Bit: 7 6 5 4 3 2 1 0 0 1 0 0 1 0 0 0	HEX: 48

Bit	Feature	Logic		Description
		0	1	
6	Select received document operation when F code receiving has failed.	Do not destroy	**Destroy**	

MODE	Factory setting bit	
054	Bit: 7 6 5 4 3 2 1 0 0 1 1 1 1 0 1 0	HEX: 7A

Bit	Feature	Logic		Description	
		0	1		
7	Time to be detected as no sound.	Bit 7-4: 0000		Not available	
6		0001		1 sec	
5					
4		**0111**		**7 sec**	
		1010		10 sec	
		Others		Not available	
3	Control history of V.34 auto dialing.	No	**Yes**	Valid only when a receiver system has V.34 modulation.	
2	Modulation method for V.34 manual, quick scan TX.	**V.17**	V.34		
1	Modulation method for V.34 polling TX document.	V.17	**V.34**		
0	Modulation method for V.34 manual RX.	**V.17**	V.34		

MODE	Factory setting bit	
055	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 0 1 0	HEX: 02

Bit	Feature	Logic		Description	
		0	1		
6	Silence detection	**Do not detect**	Detect		
5	Silence detection level (cut-off frequency)	Bit 5-0: 000000		950 Hz	
4		000001		1000 Hz	
3		**000010**		**1050 Hz**	
2		000011		1100 Hz	
1		000100		1150 Hz	
0		000101		1200 Hz	
		Others		Not available	

MODE	Factory setting bit	
056	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 1 1 0 0	HEX: 0C

Bit	Feature	Logic		Description	
		0	1		
2	Select sending time of ANSam.	Bit 2-0: 000		2.0 sec	
1		001		2.5 sec	
0		010		3.0 sec	
		011		3.5 sec	
		100		**4.0 sec**	
		101		5.0 sec	
		110		6.0 sec	
		111		Not available	

MODE	Factory setting bit	
057	Bit: 7 6 5 4 3 2 1 0 0 0 0 1 1 0 0 1	HEX: 19

Bit	Feature	Logic		Description	
		0	1		
7	Select the time from when line is blocked to when ANSam (modified answer tone) TX starts.	Bit 7-0: 00000000		Not available	Specify the time from when line is blocked to when ANSam TX starts.
6		00000001		100 msec	
5					
4		**00011001**		**2500 msec**	
3					
2		11111111		25500 msec	
1					
0					

MODE	Factory setting bit	
070	Bit: 7 6 5 4 3 2 1 0 0 0 0 1 0 1 0 0	HEX: 14

Bit	Feature	Logic		Description
		0	1	
7	Pseudo-ringer sound (when optional FAX/TEL switch board & handset is installed)	Bit 7-0: 00001010		10 sec
6				
5			00010100	**20 sec**
4				
3		00111100		60 sec
2		Others		Not available
1				
0				

MODE	Factory setting bit	
077	Bit: 7 6 5 4 3 2 1 0 0 1 1 0 0 0 0 0	HEX: 60

Bit	Feature	Logic		Description
		0	1	
4	# of times of hooking monitoring during ringing	Bit 4-3:	**00**	**3 times**
3		01		5 times
		10		8 times
		11		12 times

MODE	Factory setting bit	
080 (PSTN1) 110 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 0 0 1 0 0 0 1 1	HEX: 23 (For U.S.) HEX: 6E (For Europe)

Bit	Feature	Logic		Description
		0	1	
7	Select time expected for line connection	Bit 7-0: 00000000		0 sec
6		00000001		0.5 sec
5				
4			00100011	**17.5 sec**
3				
2			01101110	**55 sec**
1				
0		01111000		60 sec
		Others		Not available

MODE	Factory setting bit	
082 (PSTN1)	Bit: 7 6 5 4 3 2 1 0 0 0 1 1 0 1 0 0	HEX: 34
112 (PSTN2)		HEX: 24

Bit	Feature	Logic		Description
		0	1	
5	Detect busy tone.	No	**Yes**	
4	Monitor line.	No	**Yes**	
3	Detect line disconnection. (inverted polarity)	**No**	Yes	

MODE	Factory setting bit	
083 (PSTN1)	Bit: 7 6 5 4 3 2 1 0 0 1 0 1 0 0 0 0	HEX: 50

Bit	Feature	Logic		Description	
		0	1		
7	Monitoring cycle of hooking	Bit 7-6: 00		12 msec	
6			**01**	**24 msec**	
		10		36 msec	
		11		48 msec	
5	Select upper limit of detecting as hooking (Adjustment of voltage detected as hooking)	Bit 5-3: 000		8 V	
4		001		11 V	
3			**010**	**14 V**	
		011		19 V	
		100		25 V	
		101		31 V	
		110		36 V	
		111		42 V	
2	Select lower limit of detecting as hooking (Adjustment of voltage detected as hooking)	Bit 2-0:	**000**	**3 V**	
1		001		5 V	
0		010		8 V	
		011		11 V	
		100		14 V	
		101		17 V	
		110		19 V	
		111		22 V	

NOTE

- **The upper limit (Bit 5 to 3) must be higher than the lower limit (Bit 2 to 0).**

MODE	Factory setting bit	
084 (PSTN1) 114 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 0 0 0 1 0 1 0 0	HEX:14 (For U.S.) HEX: 28 (For Europe)

Bit	Feature	Logic		Description	
		0	1		
5	Select PB sending level.	Bit 5-2:	0000	-1 dBm	
4			0001	-2 dBm	
3			0010	-3 dBm	
2			0011	-4 dBm	
			0100	-5 dBm	
			0101	**-6 dBm**	
			0110	-7 dBm	
			0111	-8 dBm	
			1000	-9 dBm	
			1001	-10 dBm	
			1010	**-11 dBm**	
			1011	-12 dBm	
			1100	-13 dBm	
			1101	-14 dBm	
			1110	-15 dBm	
			1111	-16 dBm	

MODE	Factory setting bit	
085 (PSTN1) 115 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 1 0 0 1 0 0 0 0	HEX: 90 (For U.S.) HEX: C0 (For Europe)

Bit	Feature	Logic		Description	
		0	1		
7	Select TX level.	Bit 7-4:	1000	-9 dBm	Specifies TX signal levels other than PB.
6			**1001**	**-10 dBm**	
5			1010	-11 dBm	
4			1011	-12 dBm	
			1100	**-13 dBm**	
			1101	-14 dBm	
			1110	-15 dBm	
			1110	-16 dBm	
			Others	Not available	

MODE	Factory setting bit	
086 (PSTN1) 116 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 0 1 0 0 1 1 0 0	HEX: 4C

Bit	Feature	Logic		Description	
		0	1		
7	Select RX attenuator.	Bit 7-6: 00		0 dB (-48 dBm)	• Signals controlled by this soft switch are 1300 Hz detection, PB tone detection, V29 & V27 ter, V21 signal detection, and all tonal signals. • Numbers within parentheses represent the minimum receiving sensitivity.
6			**01**	**5 dB (-43 dBm)**	
			10	10 dB (-38 dBm)	
			11	15 dB (-33 dBm)	
5	Select dial line speed (DP speed).	Bit 7-6:	**00**	**10 pps**	This is valid only when MODE 006 Bit5 set to "DP."
4			01	20 pps	
			10	16 pps	
			Others	Not available	
3	Select a line type (tone or pulse) for calling (switch PB/DP).	DP	**PB**	This feature is only available on PSTN 1.	
2	Select standard phone line connected with the system (extension/external line connection).	Extension connection	**External line connection**	This feature is only available on PSTN 1.	

MODE	Factory setting bit	
087 (PSTN1) 117 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 1 0 0 1 0 0 0 0	HEX: 90

Bit	Feature	Logic		Description	
		0	1		
7	Select detection time of continuous ringer.	Bit 7-6: 00		No detection	This feature is only available on PSTN 1.
6			01	1.8 sec	
			10	**3.0 sec**	
			11	10 sec	
5	Select frequency for ringer detection.	Bit 5-3: 000		10 to 27.5 Hz	This feature is only available on PSTN 1.
4			001	10 to 75 Hz	
3			**010**	**10 to 90 Hz**	
			011	10 to 200 Hz	
			Others	Not available	

MODE	Factory setting bit	
088 (PSTN1) 118 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 1 1 0 0 0 0 0 0	HEX: C0

Bit	Feature	Logic		Description
		0	1	
6	Select process mode at detection time out of 2nd dial tone.	Continues same operation as before detection even after time out	**Generates TX error at time out**	In logic “0,” the machine waits a few seconds before dialing a number, regardless of the presence of a 2nd dial tone. In logic “1,” the machine waits a maximum of 46 seconds for a 2nd dial tone to dial a number. If the dial tone is not detected, TX error is generated at time out. This feature is only available on PSTN1.
3	1300 Hz reception sensitivity switching.	**-28 dBm**	-36 dBm	When it is not possible to receive it by -28 dB, it changes to -36 dB.

MODE	Factory setting bit	
089 (PSTN1) 119 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 0 0 0	HEX: 00

Bit	Feature	Logic		Description	
		0	1		
7	Posed insertion	**Insert pause after prefix for external lines**	Insert pause after 1st dial		
6	Select method of detecting dial prefix for external lines.	**Dial # search method**	Pause search method		
5	Select prefix # for external lines. *	Bit 5-2:	**0000**	**0**	Valid only when “Select method of detecting dial prefix for external lines (MODE 089 Bit 6)” is set to “Dial # search method.”
4			0001	1	
3			0010	2	
2			0011	3	
			0100	4	
			0101	5	
			0110	6	
			0111	7	
			1000	8	
			1001	9	
			Others	Not available	

NOTE

- **The features with (*) are settable by users. *: Screen setting**

MODE	Factory setting bit	
092 (PSTN1) 122 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 0 1 1 1 0 0 0 0	HEX: 70

Bit	Feature	Logic 0	Logic 1	Description
7	Send V.29 echo protection tone.	**No**	Yes	
6	Send V.17 echo protection tone.	No	**Yes**	
5	Send V.33 echo protection tone.	No	**Yes**	
4 3	Select V.17 and V.33 carrier frequency.	Bit 4-3: 00		1800 Hz
		01		1700 Hz
		10		**1800 + 1700 Hz**
		11		Not available

MODE	Factory setting bit	
093 (PSTN1) 123 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 1 0 0 0 1 0 0 0	HEX: 88 (For U.S.) HEX: 40 (For Europe)

Bit	Feature	Logic 0	Logic 1	Description	
7 6	Select timing for starting CED sending.	Bit 7-6: 00		0 msec	Specifies time interval from line connection to starting sending CED. (7 sec is provided for the second dial.)
		01		**2000 msec**	
		10		**2500 msec**	
		11		7 sec	
5 4	Select CED frequency.	Bit 5-4:	**00**	**2100 Hz**	Specifies CED frequency, or to prohibit CED TX.
		01		1080 Hz	
		10		1300 Hz	
		11		Not available	
3	Process CED echo.	**No**	**Yes**	Specifies whether to process CED echo at the intervals of 500 ms between CED and initial identification.	
2	Process incoming command echo.	**No**	Yes	Specifies whether to process incoming echo at the intervals of 500 ms between when receiving an initial identification and when sending the incoming command.	
1 0	Control channel data rate.	Bit 1-0:	**00**	**1200 bps symmetry**	
		01		1200 bps asymmetry	
		10		2400 bps symmetry	
		11		2400 bps asymmetry	

MODE	Factory setting bit	
094 (PSTN1) 124 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 1 1 0 0	HEX: 0C

Bit	Feature	Logic		Description
		0	1	
3	Lock AGC in V.33 mode.	No	**Yes**	
2	Lock AGC in V.17 mode.	No	**Yes**	
1	Lock AGC in V.29 mode.	**No**	Yes	
0	Lock AGC in V.27 ter mode.	**No**	Yes	

MODE	Factory setting bit	
095 (PSTN1) 125 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 0 0 1 0 0 0 0 0	HEX: 20

Bit	Feature	Logic		Description	
		0	1		
7	Adjust digital TX cable equalizer.	Bit 7-6:	**00**	**0 dB**	
6			01	4 dB	
			10	8 dB	
			11	12 dB	
5	Adjust digital RX cable equalizer.	Bit 5-4:	00	0 dB	For V.29, actual value will be the sum of 4 dB and the specified value.
4			01	4 dB	
			10	**8 dB**	
			11	12 dB	

MODE	Factory setting bit	
096 (PSTN1) 126 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 0 0 0 1 0 1 0 0	HEX: 14

Bit	Feature	Logic		Description	
		0	1		
5	Select time for setting CI signal sending to ON.	Bit 5-4: 00		0.5 sec	Use this soft switch for error in V8 sequence.
4		**01**		**1.0 sec**	
		10		1.5 sec	
		11		2.0 sec	
3	Select time for setting CI signal sending to OFF.	Bit 3-1: 000		0.4 sec	Use this soft switch for error in V8 sequence.
2		001		0.8 sec	
1		**010**		**1.0 sec**	
		011		1.2 sec	
		100		1.6 sec	
		101		2.0 sec	
		Others		Not available	

MODE	Factory setting bit	
097 (PSTN1) 127 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 0 0 0 1 0 1 0 0	HEX: 14

Bit	Feature	Logic		Description	
		0	1		
7	Attenuate TCF/NTCF sending level.	**No**	Yes 3 dB	Specifies whether to attenuate sending level of TCF by 3 dbm, with the level of attenuation that is determined by MODE 085 Bit 7 to 4 (PSTN 1) or MODE 115 Bit 7 to 4 (PSTN 2).	
4	Select V.34 symbol rate.	Bit 4-2: 000		2400 Sym/S	
3		001		Not available	
2		010		2800 Sym/S	
		011		3000 Sym/S	
		100		3200 Sym/S	
		101		**3429 Sym/S**	
		Others		Not available	

MODE	Factory setting bit	
098 (PSTN1) 128 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 0 1 0 0 0 1 1 0	HEX: 46

Bit	Feature	Logic		Description	
		0	1		
7	Select start time of sending CM signal.	Bit 7-6:	00	0 sec	Use this soft switch for error in V8 sequence.
6			**01**	**1 sec**	
			10	2 sec	
			11	3 sec	
3	Select EQM threshold value.	Bit 3-0:	0000	-6	
2			0001	-5	
1			0010	-4	
0			0011	-3	
			0100	-2	
			0101	-1	
			0110	**0**	
			0111	1	
			1000	2	
			1001	3	
			1010	4	
			1011	5	
			1100	6	
			Others	Not available	

MODE	Factory setting bit	
099 (PSTN1) 129 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 1 0 0 0 1 0 0 0	HEX: 88

Bit	Feature	Logic		Description	
		0	1		
7	Select threshold value 1 for V.34 symbol rate.	Bit 7-4:	0000	-8	Specifies range of tolerance for V. 34 line characteristic distortion.
6			0001	-7	
5			0010	-6	
4			0011	-5	
			0100	-4	
			0101	-3	
			0110	-2	
			0111	-1	
			1000	**0**	
			1001	1	
			1010	2	
			1011	3	
			1100	4	
			1101	5	
			Others	Not available	
3	Select threshold value 2 for V.34 symbol rate.	Bit 3-0:	0000	-8	Specifies minimum tolerance level of S/N ratio in V.34.
2			0001	-7	
1			0010	-6	
0			0011	-5	
			0100	-4	
			0101	-3	
			0110	-2	
			0111	-1	
			1000	**0**	
			1001	1	
			1010	2	
			1011	3	
			1100	4	
			1101	5	
			Others	Not available	

MODE	Factory setting bit	
212 (PSTN1) 232 (PSTN2)	Bit: 7 6 5 4 3 2 1 0 0 1 0 0 0 0 0 0	HEX: 40 (For U.S.) HEX: 00 (For Europe)

Bit	Feature	Logic		Description	
		0	1		
7	DP make rate	Bit 7-6:	**00**	**33 %**	Specify the DP signal make ratio.
6			**01**	**40 %**	
			Others	Not available	

MODE	Factory setting bit	
249	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 1 0 0 0	HEX: 08

Bit	Feature	Logic		Description	
		0	1		
7	Specify the ringing count of auto receiving call (PSTN2) <*>	Bit 7-3:	00000	0	Specify the PSTN2 ringing detection count. The ringing count is the number of rings until the machine automatically starts receiving a call.
6			**00001**	**1**	
5			|	|	
4			10100	20	
3			Others	Not available	

NOTE

- **The features with (*) are settable by users. <*>: Soft switch setting**
- **Some machines cannot receive calls.**
  Care must be taken when you set the ringing count to 10 or more.
- **For PSTN1, refer to MODE 520.**

MODE	Factory setting bit	
288	Bit: 7 6 5 4 3 2 1 0 1 1 1 1 1 1 1 1	HEX: FF

Bit	Feature	Logic		Description	
		0	1		
7	Insert dummy data before PIX.	Bit 7-0:	00000000	Add 200 ms	• Specify period to transmit dummy data before transmitting PIX. • Add the period specified here to the first flag (EMC) and FILL (G3) of the image signal.
6			00000001	Add 300 ms (200 ms + 100 ms)	
5					
4					
3			00000011	Add 900 ms (200 ms +700 ms)	
2					
1					
0			**11111111**	**Add 200 ms**	
			Others	Not available	

MODE	Factory setting bit	
301	Bit: 7 6 5 4 3 2 1 0 0 0 0 1 1 0 0 1	HEX: 19 (For U.S.) HEX: 15 (For Europe)

Bit	Feature	Logic		Description	
		0	1		
7 6 5	Select upper limit of cut-off length after printing: When a received document is longer than the print paper and if the excess length is shorter than that specified here, it is cut off. If it is longer than that value specified with these bits, it is split into multiple pages. This feature is enabled when the following 2 conditions are satisfied: • When printing a received document • When bit 1 of this mode is 1 <*>	Bit 7-5:	**000**	**0 mm**	If the excess length is longer than specified here: <For reduction> • If Bit 1 is set to 0, it is reduced when fitting within the reduction percent range specified with Bits 4 to 2. <For division> • If Bit 1 is set to 0, it is divided when not fitting within the reduction ratio range specified with Bits 4 to 2. • If Bit 1 is set to 1, the excess length portion is divided.
			001	8 mm	
			010	12 mm	
			011	14 mm	
			100	18 mm	
			101	20 mm	
			110	24 mm	
			111	Not available	
4 3 2	Select upper limit of reduction ratio of received document: When a received document is longer that the print paper, it will be reduced to fit the paper with the upper limit specified with these bits. This feature is enabled when the following 2 conditions are satisfied: • When printing a received document • When bit 1 of this mode is 0 Example: The reduction is 100 to 90% when “90%” is specified. If the document will not fit within a printable range at the maximum reduction ratio specified here, the excess length portion is divided. <*>	Bit 4-2:	000	100 %	Reduction will not be proceeded if a received document is still longer than the print paper for a specified reduction.
			001	95 %	
			010	90 %	
			011	85 %	
			100	80 %	
			101	**65 %**	
			110	**60 %**	
			111	Not available	
1	Select cut off/reduction of received document: This bit specifies cutting off or reducing a received document that is longer than the print paper. (This feature is enabled when printing a received document.) <*>	**Reduction**	Cut off	This bit determines that the received document will be cut off with “Select upper limit of cut off length after printing (Bit 7 to 5)” or reduced with “Select upper limit of reduction ratio of received document (Bit 4 to 2).”	

Bit	Feature	Logic		Description
		0	1	
0	Printing specification of received document.	Start printing after receiving first page.	**Start printing after receiv-ing all pages.**	

NOTE

- **The features with (*) are settable by users. <*>: Soft switch setting**

MODE	Factory setting bit	
302	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 0 0 0	HEX: 00

Bit	Feature	Logic		Description	
		0	1		
7	Specify how to detect print paper. (Valid only when printing a received document) <*>	**From print paper**	From tray	"From print paper" detects print paper from actual print papers while "From tray" indicates print paper with a tray size or the last information on print paper regardless of actual print paper.	
6 5 4 3	Select size of print paper for received document. (Valid only when printing a received document) <*>	Bit 6-3:	**0000**	**Std method 1**	"Std method" determines an appropriate print paper for the length and the width of a print image. Method 1: Same width and no reduction. Method 2: Same width and minimum margin. Method 3: No reduction without considering width of paper. Method 4: Minimum margin without considering width of paper. "No wider width" will not take printer papers wider than the print image. No Wider Width 1: Same width and no reduction. Width 2: Same width and minimum margin. Width 3: No reduction without considering width of paper. Width 4: Minimum margin without considering width of paper. "Same width only" selects paper with the same width as the print image. Note. • Margin means the non-printed area. • Methods 2 to 4 are unavailable to users.
			0001	Std method 2	
			0010	Std method 3	
			0011	Std method 4	
			0100	No wider width 1	
			0101	No wider width 2	
			0110	No wider width 3	
			0111	No wider width 4	
			1000	Same width only	
			Others	Not available	

NOTE

- **The features with (*) are settable by users. <*>: Soft switch setting**

MODE	Factory setting bit	
512	Bit: 7 6 5 4 3 2 1 0 1 0 0 0 0 0 0 0	HEX: 80

Bit	Feature	Logic		Description
		0	1	
7	Detect dial tone (DT)	No	**Yes**	

MODE	Factory setting bit	
520	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 0 0 1	HEX: 01

Bit	Feature	Logic		Description	
		0	1		
4	Specify the ringing count of auto receiving call (PSTN1)	Bit 4-0: 00000		0	Specify the PSTN1 ringing detection count. The ringing count is the number of rings until the machine automatically starts receiving a call.
3		**00001**		**1**	
2					
1		10100		20	
0		Others		Not available	

Note:

- **Some machines cannot receive calls.**
  Care must be taken when you set the ringing count to 10 or more.
- **For PSTN2, refer to MODE 249.**

MODE	Factory setting bit	
768	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 1 1 0 0	HEX: 0C

Bit	Feature	Logic		Description	
		0	1		
7	Soft timer adjustment value between DCS and TCF in V.17 and V.27 ter	Bit 7-0: 00000000		Not available	
6		00000001		5 msec	
5					
4		**00001100**		**60 msec**	
3					
2		11111111		1275 msec	
1					
0					

MODE	Factory setting bit	
769	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 1 1 1	HEX: 07

Bit	Feature	Logic		Description
		0	1	
7	Soft timer adjustment value between DCS and TCF in V.29	Bit 7-0: 00000000		Not available
6		00000001		5 msec
5				
4		**00000111**		**35 msec**
3				
2		11111111		1275 msec
1				
0				

MODE	Factory setting bit	
770	Bit: 7 6 5 4 3 2 1 0 0 0 0 1 1 1 0 0	HEX: 1C (For U.S.) HEX: C2 (For Europe)

Bit	Feature	Logic		Description
		0	1	
7	Interval between CFR and PIX	Bit 7-0: 00000000		Not available
6		00000001		5 msec
5				
4		**00011100**		**140 msec**
3				
2		**00011100**		**970 msec**
1				
0		11111111		1275 msec

MODE	Factory setting bit	
771	Bit: 7 6 5 4 3 2 1 0 0 0 1 0 0 0 1 1	HEX: 23

Bit	Feature	Logic		Description
		0	1	
7	T1 timer for automatically sending packets	Bit 7-0: 00000000		Not available
6		00000001		1 sec
5				
4		**00100011**		**35 sec**
3				
2		11111111		255 sec
1				
0				

MODE	Factory setting bit	
772	Bit: 7 6 5 4 3 2 1 0 0 0 1 0 0 0 1 1	HEX: 23

Bit	Feature	Logic		Description
		0	1	
7	T1 timer for automatically receiving packets	Bit 7-0: 00000000		Not available
6		00000001		1 sec
5				
4		**00100011**		**35 sec**
3				
2		11111111		255 sec
1				
0				

MODE	Factory setting bit	
773	Bit: 7 6 5 4 3 2 1 0 0 0 1 0 0 0 1 1	HEX: 23

Bit	Feature	Logic		Description	
		0	1		
7	T1 timer for manually sending packets	Bit 7-0:	00000000	Not available	
6			00000001	1 sec	
5			|		
4			**00100011**	**35 sec**	
3			|		
2			11111111	255 sec	
1					
0					

MODE	Factory setting bit	
774	Bit: 7 6 5 4 3 2 1 0 0 0 1 0 0 0 1 1	HEX: 23

Bit	Feature	Logic		Description	
		0	1		
7	T1 timer for manually receiving packets	Bit 7-0:	00000000	Not available	
6			00000001	1 sec	
5			|		
4			**00100011**	**35 sec**	
3			|		
2			11111111	255 sec	
1					
0					

MODE	Factory setting bit	
775	Bit: 7 6 5 4 3 2 1 0 0 0 1 0 0 0 1 1	HEX: 23

Bit	Feature	Logic		Description
		0	1	
7	T1 timer for automatically sending polling packets	Bit 7-0: 00000000		Not available
6		00000001		1 sec
5				
4		**00100011**		**35 sec**
3				
2		11111111		255 sec
1				
0				

MODE	Factory setting bit	
776	Bit: 7 6 5 4 3 2 1 0 0 0 1 0 0 0 1 1	HEX: 23

Bit	Feature	Logic		Description
		0	1	
7	T1 timer for manually sending polling packets	Bit 7-0: 00000000		Not available
6		00000001		1 sec
5				
4		**00100011**		**35 sec**
3				
2		11111111		255 sec
1				
0				

MODE	Factory setting bit	
777	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 1 1 1	HEX:07

Bit	Feature	Logic		Description
		0	1	
7	Interval between PIX and post command	Bit 7-0: 00000000		Not available
6		00000001		45 msec
5				
4		**00000111**		**75 msec**
3				
2		11111111		1315 msec
1				
0				

MODE	Factory setting bit	
804	Bit: 7 6 5 4 3 2 1 0 0 0 0 0 0 1 0 0	HEX: 04

Bit	Feature	Logic		Description
		0	1	
7	Restrict SF/SSF communication (TX).	**No**	Yes	Enables/Disables TTC high resolution transmission and SF/SSF transmission function. When this feature is disabled, the calling machine sends - DCS stating that it does not provide SF in response to DIS from called terminal in the outside network, or - NSS stating that it does not provide SF in response to NSF from called terminal in the internal company network.
6	Restrict SF/SSF communication (RX from other company's system).	**No**	Yes	Enables/Disables TTC high resolution reception. When this feature is disabled, the called machine sends - 32-bit DIS stating that it does not support SF, or - NSF stating that it supports SF. (This makes SF communication possible between the calling party in the internal company network.)
4	Destination machine confirmation transmission. <*>	**Not confirm**	Confirm	Set whether the machine is to execute destination machine confirmation transmission if a destination machine confirmation transmission-use special character string is not included in the dialed number.

Bit	Feature	Logic		Description	
		0	1		
3	Destination machine confirmation transmission CSI comparison digits. <*>	Bit 3-0:	0000	Not available	• If the dialed number does not match the digit quantity specified with this setting, compare with all digits of the dialed number. • If comparing with the verification number, compare with all digits of the verification number regardless of this setting.
2			0001	1 digit	
1			0010	2 digits	
0			0011	3 digits	
			0100	**4 digits**	
			0101	5 digits	
			0110	6 digits	
			0111	7 digits	
			1000	8 digits	
			1001	9 digits	
			1010	10 digits	
			Others	Not available	

Note

- **The features with (*) are settable by users. <*>: Software switch setting**
- **Explanation of destination machine confirmation transmission**

Bit 7 setting	Special character existence/absence	Confirmation subject dial number
"0" Not confirm	Exists (S)	Dial number
	Exists (SS)	(no function)
	Exists (S) + verification number	Verification number
	Absent	(no function)
"1" Confirm	Exists (S)	Dial number
	Exists (SS)	(no function)
	Exists (S) + verification number	Verification number
	Absent	Dial number

Note

- **Special character is within ( ).**

MODE	Factory setting bit	
805	Bit: 7 6 5 4 3 2 1 0 0 1 0 1 0 0 1 1	HEX: 53

Bit	Feature	Logic		Description	
		0	1		
7	Destination machine confirmation transmission special characters	Bit 7-0:	01000001	A	"H," "P," and "T" are unavailable.
6			01000010	B	
5			|		
4			01000110	F	
3			01000111	G	
2			01001001	I	
1			01001010	J	
0			|		
			01001110	N	
			01001111	O	
			01010001	Q	
			01010010	R	
			01010011	**S**	
			01010101	U	
			01010110	V	
			|		
			01011001	Y	
			01011010	Z	
			Others	Not available	

Troubleshooting

8. Troubleshooting

8.1 Diagnosis by alarm code

- This section shows diagnoses of system troubles by alarm codes and their remedies.
- The default setting for diagnostic codes is “Do not display codes.” If you experience errors frequently, setup the soft switch (MODE 020) to display diagnostic codes. Then follow communication error codes tables for troubleshooting.
- Communication error codes tables shows communication error codes. Each of them is displayed in 6 digits on reports.
  Codes 00 to B4 indicate the upper 2 digits. Adding internal 4 digits to them to display 6 digits on the panel and a report.
  Communication reports (TX and RX) print out diagnostic codes for up to 50 activities. Any codes older than those activities cannot be printed.

NOTE

- **Before you proceed with a remedy according to the tables, make sure that the power source cable and the connectors are connected properly.**

- Setting up diagnostic code display

MODE 020	
Bit3	Meaning
0	Do not display codes.
1	Displays codes.

NOTE

- **See section “Soft Switch List” for setting up soft switches.**

8.2 Communication error codes

NOTE

- **Cause - Re: Remote, Li: Line, Lo: Local**

8.2.1 Errors in operations

Code	Description	Cause	Re	Li	Lo	Remedy
00	• Received DIS but no document in local terminal • Polling Reception is requested • Software failure at time of connection	Error in operation			o	Reload a document and retry TX.
		Error in operation at remote end	o			Ask to reload a document and retry TX.
01	• Document pulled out during transmission. • Document size was too small	Error in operation			o	Reload a correct document and retry TX.
02	• Illegal dialing operation (Example; dialing * or # with DP setting)	Error in setting up			o	Check the soft switch (MODE 086 Bit5 & MODE 116 Bit 5).
		Error in registration			o	Check the registered one-touch dialing number.
03	• Mismatched TX password	Sender's password and receiver's are not matched.	o		o	Check the group password of both sides.
04	• Mismatched RX password	Sender's password and receiver's are not matched.	o		o	Check the group password of both sides.
05	• Mismatched password while polling	Incorrect password was entered for setting up polling.			o	Check the status of the remote machine and the local password.
06	• Remote system has no relay function	Failure in remote machine	o			Check the status of the remote machine.
07	• Remote system has no confidential communication function	Failure in remote machine	o			Check the status of the remote machine.
09	• Incompatibility (Example; no document in local system while polling RX) • TX failure due to mismatch of communication type and/or transmission speed	Error in operation on remote side	o			Ask the remote end to reload the document again.
		Transmission speeds are set to 4800/2400 bps. Remote machine has only V.29.	o		o	Check the soft switch (MODE 049 Bit 4 to 0).
						Check the maximum transmission speed for each one-touch dialing (only for registration in maintenance features).
10	• Error in F code TX	Failure in remote machine	o			Check the status of the remote machine.
11	• Error in F code RX	Failure in remote machine	o			Check the status of the remote machine.

8.2.2 Terminal alarm

Code	Description	Cause	Re	Li	Lo	Remedy
45	• Memory overflow or nearly full	Memory overflows or nearly full			O	Reset the terminal alarm and ask the remote end for resending.
46	• Document jamming	Feeding is not working continuously.			O	Reload a document.
		Jamming in a long document or in the middle of a page (Feeding is not completed even if feeding exceeds 1 m.)			O	Reload a document.
47	• "No print paper" or "Side cover opened" were detected	Out of print paper			O	Load print paper.
		Side cover was opened while RX			O	Close the side cover.

8.2.3 Communication errors (TX)

Code	Description	Cause	Re	Li	Lo	Remedy
33	• Protocol failure in V.34 sequence	Failure in remote machine	O			Try another remote machine.
		Line failure		O		Try another line.
70	• Busy tone while waiting for initial identification signal • Timeout or modem failure while detecting 2nd dialing tone • Cannot dial due to dialing/ringing conflict • T1 timeout while waiting for initial identification signal when FAX signal is not detected	Failure in remote machine	O			Try another remote machine.
		Line failure		O		Try another line.
71	• T1 timeout while waiting for initial identification signal after FAX signal is detected • Detected reverse polarity while waiting for initial identification signal	Failure in remote machine	O			Try another remote machine.
		Line failure		O		Try BACK to BACK communication.
72	• Received DCN in phase B while waiting for commands other than DCN	Interruption or failure in remote machine	O			Check the remote system and retry TX.

Code	Description	Cause	Re	Li	Lo	Remedy
74	• Received DIS or DTC 3 times while waiting for response to TCF • No response even after sending TSI/DCS and TCF 3 times • Received FTT twice even TCF has lowest speed	Failure in remote machine	O			Try another remote machine.
		Line failure		O		Try another line.
		Failure in FAXU board			O	Replace FAXU board
		Failure in MFBU board			O	Replace MFBU board
76	• Reverse polarity while waiting for signal other than initial identification	Failure in remote machine	O			Check the remote system and retry TX.
		Line failure		O		If same error is experienced several times, set the soft switch to (MODE 082 Bit 3) 0.
77	• No response to post message (T4 timeout) • 5 minute timeout in RNR, RR sequence (T5 timeout)	Failure in remote machine	O			Try another remote machine.
		No RTC detection in remote machine (line failure)		O		Try another line.
78	• Received DCN while waiting for response to post message	Interruption or failure in remote machine	O			Check the status of the remote machine and retry TX.
79	• Received PIP for post message (For response to EOP or PPS-EOP, communication is normal even though error code is displayed)	Failure in remote machine	O			Check the status of the remote machine.
7A	• Received RTN for post message (where RTN reception is regarded as communication failure) • Retry out of resending error • PPR frame error	Failure in remote machine	O			Check the status of the remote machine.
		Line failure		O		Check the line.
		Failure in TX level			O	Check TX level.
7C	• Received CRP 3 times for TCF • Received CRP 3 times for post message • Received CRP 3 times for DTC of polling reception	Failure in remote machine	O			Try another remote machine.
		Line failure		O		Try another line.
7D	• RX command error (without cutting off carrier)	Failure in remote machine	O			Check the status of the remote machine.
7F	• No remote machine response after changing mode (T1 timeout)	Failure in remote machine	O			Check the status of the remote machine.
8F	• Received PIN for post message	Failure in remote machine	O			Check the status of the remote machine.

8.2.4 Communication errors (RX)

Code	Description	Cause	Re	Li	Lo	Remedy
33	• Protocol failure in V.34 sequence	Failure in remote machine	O			Try another remote machine.
		Line failure		O		Try another line.
91	• T1 timeout while waiting for initial identification signal	Failure in remote machine	O			Try another remote machine.
		Line failure		O		Try another line.
92	• Received DCN while waiting for commands other than DCN in phase B	Interruption or failure in remote machine	O			Check the status of the remote machine and retry TX.
95	• Detected low speed flag followed by 10 sec. timeout while waiting for detection of image signal carrier (HMCD ON)	Failure in remote machine	O			Try another remote system.
		Line failure		O		Try another line.
96	• Carrier disconnected for 15 seconds while receiving G3 image signal	Error in remote machine	O			Ask for resending.
		Failure in remote machine	O			Try another remote machine.
		Line failure		O		Try another line.
97	• T2 timeout while waiting for post message • T2 timeout while waiting for DCN after receiving last page • No response from remote system after changing mode (T2 timeout)	Error in remote machine	O			Try another remote machine.
		Accidental RTC detection (line failure)		O		Try another line.
98	• Received DCN while waiting for command other than DCN in phase D	Interruption or failure in remote machine	O			Ask for resending.
99	• Received PRI-Q as post message (Communication is regarded as normal even with error message)	Failure in remote machine	O			Check the status of the remote machine.
9A	• Cannot decode line correctly for 35 seconds while receiving ECM image signal	Failure in remote machine	O			Try another remote machine.
		Line failure		O		Try another line.
		Failure in FAXU board			O	Replace FAXU board
		Failure in MFBU board			O	Replace MFBU board
9C	• Received CRP 3 times while waiting for initial identification signal	Failure in remote machine	O			Try another remote machine.
		Failure in FAXU board			O	Replace FAXU board
		Failure in MFBU board			O	Replace MFBU board
		Line failure		O		Try another line.

Code	Description	Cause	Re	Li	Lo	Remedy
9D	• RX command error (without cutting off carrier)	Failure in remote machine	O			Check the status of the remote machine.
9F	• Interrupted page reception by EOR-Q or EOR-PRI-Q signal from sender in ECM procedure (next page may be received completely because ECM procedure runs continuously)	Failure in remote machine	O			Try another remote machine.
		Line failure		O		Reduce the initial transmission speed and try resending.

8.2.5 Malfunction

Code	Description	Cause	Re	Li	Lo	Remedy
B0	• Power source off	Power source switch was turned off			O	None.
		Power source failure			O	None.
		Defective power source supply unit			O	Replace the power source supply unit.
B2	• System failure (Examples; image data conversion failure and error in sequence timing)	Warm restart switch was pressed			O	None.
		Failure in FAXU board			O	Replace FAXU board
		Failure in MFBU board			O	Replace MFBU board
		Line failure		O		Check line noise and reception level.
B4	• Modem failure	Document was not loaded for polling reception in V.34 mode	O			Check the document loaded in the remote side.
		Line failure		O		Check line noise and reception level.
		Failure in FAXU board			O	Replace FAXU board
		Failure in MFBU board			O	Replace MFBU board
B5	• Modem failure (modem failure in V.8 sequence at RX)	Line failure		O		Check line noise and reception level.
		Failure in FAXU board			O	Replace FAXU board
		Failure in MFBU board			O	Replace MFBU board
B6	• Modem failure (modem failure in V.8 sequence at RX)	Line failure		O		Check line noise and reception level.
		Failure in FAXU board			O	Replace FAXU board
		Failure in MFBU board			O	Replace MFBU board
B7	• System failure (Examples; image data conversion failure, error in sequence timing)	Warm restart switch was pressed			O	None.
		Failure in FAXU board			O	Replace FAXU board
		Failure in MFBU board			O	Replace MFBU board
		Line failure		O		Check line noise and reception level.

8.2.6 Internet Fax transmission / Scan to E-mail

Error code	Possible cause	Action to be taken
E4DXXX	The machine cannot connect to a mail server as the SMTP server address has not been set.	Set an SMTP server address.
E5AXXX	The machine cannot transmit the document as the DNS settings are incorrect.	Check the DNS settings.
E5DXXX	The machine cannot transmit the document with the E-mail address or the destination E-mail address because it has not been specified or is incorrect.	Check the settings and the destination E-mail address.
E6FXXX	Transmission was attempted and data was too large to be transmitted.	The document may not be transmitted even if the loading of data is successful. Set the quality to Fine or Standard and try again.
E7XXXX	SMTP authentication failed.	Confirm SMTP authentication account and password.
EAXXXX	A LAN cable has not been connected, or you failed to communicate with the SMTP server. You tried to transmit the document to an incorrect destination address. (The protocol error on SMTP)	Check if the LAN cable has been correctly connected, if the SMTP server is ready for communication, if the network settings such as subnet mask setting are correct, or if the E-mail address of the destination is correct.
EAX212	SMTP authentication required.	Enable SMTP authentication settings.
EABF4F	The machine has invalid settings for POP3 before SMTP.	Check the POP server settings for administrator maintenance.
EABF50	The machine failed to authenticate POP3 before SMTP.	Check the account and the password of POP3.

8.2.7 Internet Fax reception

Error code	Possible cause	Action to be taken
E40XXX	The machine cannot connect to a mail server as the POP3 server address has not been set correctly. The machine cannot connect to a mail server as the server has failed.	Check the POP3 server address. Check that the POP3 server is operating normally.
E50XXX E51XXX E52XXX	The machine cannot receive a document as the POP3 User Name or Password has not been set or is incorrect.	Check the settings.
E60XXX E61XXX	The data received in POP3 cannot be printed. A mail with an attached file whose format is not TIFF-F, a mail whose text contains a line exceeding 1000 characters, or mail of large data size is received. A mail with no data is received.	Confirm with the sender.
E7XXXX	APOP authentication failed.	Confirm POP3 account and password.
ECXXXX	A LAN cable has not been connected, or failed to communicate with the POP3 server. The User Name or Password has not been registered in the server. They are different from the settings in the machine. (The protocol error on POP)	Check if the LAN cable has been correctly connected. Check if the POP3 server settings are correct.

8.2.8 IP address Fax transmission

Error code	Possible cause	Action to be taken
E5AXXX	The machine cannot transmit the document as the DNS settings are incorrect.	Check the DNS settings.
E6FXXX	Transmission was attempted and data was too large to be transmitted.	The document may not be transmitted even if the loading of data is successful. Set the quality to Fine or Standard and try again.
E7XXXX	SMTP authentication failed.	Confirm SMTP authentication account and password.
EAXXXX	A LAN cable has not been connected, or you failed to communicate with the SMTP server. You tried to transmit the document to an incorrect destination address.	Check if the LAN cable has been correctly connected, if the SMTP server is ready for communication, if the network settings such as subnet mask setting are correct, or if the E-mail address of the destination is correct.
EAX212	SMTP authentication required.	Enable SMTP authentication settings.

8.2.9 IP Relay

Error code	Possible cause	Action to be taken
E4FFFE	The fixed time passed without confirmation of transmission by the relay machine. (Result notification was not received from the IP relay machine within the fixed time.)	Confirm whether the other party received.
E53XXX	The machine cannot transmit the document by gateway transmission because the destination E-mail address is incorrect.	Confirm with the sender.
E65XXX	The data that could not be sent by gateway transmission was going to be sent. A mail with an attached file whose format is not TIFF-F, a mail whose text contains a line exceeding 1000 characters, or mail of large data size was going to be sent.	Confirm with the sender.
E7XXXX	SMTP authentication failed.	Confirm the IP relay settings.
EBXXXX	The machine could not receive the transmitted data for the gateway transmission.	Check whether the mail server is in the state that it can communicate. Check the network settings.
FFF003	Awaiting result notification of IP relay.	Wait until the IP relay machine completes transmission.

8.2.10 Full mode communication

Error code	Possible cause	Action to be taken
E4FFFC	The fixed time passed without confirmation of reception by the destination machine. (MDN response was not received within the fixed time.)	Confirm whether the other party received.
E4FFFD	The administrative quantity for awaiting results has been exceeded.	Confirm whether the other party received.
E4FFFF	An abnormality was notified by the MDN/ DSN response.	Resend the document.
FFF001	The destination machine correctly received. (Received MDN response.)	Unnecessary

8.2.11 Scan to FTP transmission

Error code	Possible cause	Action to be taken
ED0101	User name length error.	Confirm whether the length of the user name is at least one character and not greater than the maximum length.
ED0102	Password length error.	Confirm whether the length of the password is at least one character and not greater than the maximum length.
ED0103	Server address is illegal.	Confirm whether the IP address of the FTP server is at least one character.
ED0201	Socket generation error.	Confirm the settings.
ED0202	Connection timeout.	Confirm whether the machine can be connected.
ED0203	DNS error.	Confirm the DNS settings.
ED0204	Server cannot be used.	Confirm whether the FTP server at the TX destination is started.
ED0205	Other timeout.	Confirm the connection status and settings.
ED0301	TX error.	Confirm the settings.
ED0302	RX error.	Confirm the settings.
ED0303	Communication timeout.	Confirm whether the connection is disconnected.
ED0304	Other socket communication error.	Confirm the settings.
ED0401	Render malfunction.	
ED0501	Suspension due to suspension request.	Re-send the suspended job.
EDFFFF	Other malfunction.	Confirm the connection status and settings.

8.2.12 Scan to SMB Transmission

Error code	Possible cause	Action to be taken
EE09C6	No response by destination PC.	Confirm the address, server existence, and network condition.
EE09C7	Login failed.	Confirm whether the user name and password are correct.
EE09C8	No destination folder.	Confirm whether the specified folder is correct.
EE09C9	Disk is full.	Confirm whether capacity is available on the disk of the TX destination (SMB).
EE09CA	Command timeout.	Re-send.
EE09CB	No access authority.	Confirm whether the TX destination folder is shared.
EE09CF	Lower module is not initialized.	Re-start the machine.
EE0AC0	Render error.	

8.3 Diagnosis by symptoms

- Possible causes of various problems and their remedies are shown below. Carry out troubleshooting according to this table.

Symptom	Item No.	Cause	Remedy	
Received image is stretched with ADF	1	Printed image is excessively stretched in the copy mode? **NOTE** • **The following causes may be possible (improper document handling): special paper such as very thick paper, non-carbon print paper, carbon print paper.**	YES	Go to item 2.
			NO	Failure in remote terminal (improper document handling, error in the transmission unit of the remote terminal).
	2	Is an image received from the service center also stretched?	YES	Go to item 3.
			NO	Go to item 5.
	3	Any improvement after replacing MFBU board?	YES	Replace MFBS board.
			NO	Go to item 4.
	4	Any improvement after replacing the printer control board?	YES	Replace the printer control board.
			NO	Go to item 5.
	5	Is the contact of feed roller gears OK?	YES	Go to item 6.
			NO	Replace the feed roller gear unit.
	6	Any paper dust on feed rollers or pick-up rollers?	YES	Clean up rollers.
			NO	Go to item 7.
	7	Is the pulling out force of feed rollers normal?	YES	Replace the machine.
			NO	Replace the leaf spring.
Received image is shrunk too much.	1	Printed image is excessively shrunk in the copy mode?	YES	Go to item 2.
			NO	Failure in the remote terminal (improper document handling, error in the transmission unit of the remote terminal).
	2	Is an image from the service center also shrunk?	YES	Go to item 4.
			NO	Go to item 3.
	3	Any improvement after checking the reading unit?	YES	END
			NO	Go to item 4.
	4	Any improvement after replacing MFBU board?	YES	Replace MFBU board.
			NO	Go to item 5.
	5	Any improvement after replacing the printer control board?	YES	Replace the printer control board.
			NO	Replace the machine.
Received image is too light or faded.	1	Is copied image or a test image also too light or faded? **NOTE** • **The following causes may be possible (improper setting of document contrast): a document with small blue characters or file lines**	YES	Go to item 2.
			NO	Failure in the remote side (improper setting of document contrast, improper document handling, poor line condition, and error in the transmission unit of the remote terminal).

Symptom	Item No.	Cause	Remedy	
Received image is too light or faded.	2	Any improvement after replacing the imaging unit?	YES	Replace the imaging unit.
			NO	For details see main service manual “Image quality problem”.
Received image is squeezed	1	Are characters of copied image or a test image also squeezed? Improper setting of document contrast: Received image of small characters or blue copies with “contrast” switch set “Darker”. Error in remote machine: The following causes are possible: A. Failure in board of scanner unit B. Improper adjustment of optical focus C. Dew on optical lenses (Proceed antidew procedure.)	YES	Failure in the remote side (improper setting of document contrast, and error in the transmission unit of the remote terminal).
			NO	Go to item 2.
	2	Any improvement after replacing the imaging unit?	YES	Replace the imaging unit.
			NO	For details see main service manual “Image quality problem”.
Clock malfunctions	1	Improper operation?	YES	Refer User’s Guide for operation.
			NO	Go to item 2.
	2	Any improvement after replacing RAMU board?	YES	Replace RAMU board.
			NO	Go to item 3.
	3	Any improvement after replacing MFBU board?	YES	Replace MFBU board.
			NO	Replace the machine.
Neither “Sending” nor “Receiving” are displayed.	1	Is an alarm message on screen?	YES	Correct the failure and reset the alarm.
			NO	Go to item 2.
	2	Is the external telephone on hook?	YES	Go to item 3.
			NO	Set the external telephone off-hook then press the communication switch.
	3	Are you printing something such as report?	YES	Proceed to communication after completing print jobs.
			NO	Go to item 4.
	4	Any improvement after replacing operating panel?	YES	Replace operating panel.
			NO	Go to item 5.
	5	Any improvement after replacing the cable between operating panel and BCRU board?	YES	Replace the cable between operating panel and BCRU board.
			NO	Go to item 6.
	6	Any improvement after replacing FAXU board?	YES	Replace FAXU board.
			NO	Go to item 7.
	7	Any improvement after replacing MFBU board?	YES	Replace MFBU board.
			NO	Replace the machine.

Symptom	Item No.	Cause	Remedy	
Cannot go to “Sending” nor “Receiving” modes	1	Is the password checked?	YES	Go to item 2
			NO	Go to item 3.
	2	Is the password correct?	YES	Disable password check and Go to item 3.
			NO	Match the password.
	3	Try to communicate with the service center. Same problem? Possible causes: A. Fax/Scan button is not pressed. B. Both systems are in the transmission (or reception) mode.	YES	Go to item 4.
			NO	END Possible causes are line trouble, trouble or improper operation in the remote terminal, or the remote FAX is not connected.
	4	Are the transmission level and equalizer of the service center set properly?	YES	Go to item 5.
			NO	Set them properly.
	5	Did you check the mode (TX or RX) of the remote side?	YES	Go to item 6.
			NO	Confirm it by phone.
	6	Any improvement after replacing MFBU - FAX cable?	YES	Replace MFBU - FAX cable.
			NO	Go to item 7.
	7	Any improvement after replacing FAXU board?	YES	Replace FAXU board.
			NO	Go to item 8.
	8	Any improvement after replacing MFBU board?	YES	Replace MFBU board.
			NO	Go to item 9.
	9	Any improvement after replacing operating panel?	YES	Replace operating panel.
			NO	Go to item 10.
	10	Any improvement after replacing the cable between operating panel and MFBU board?	YES	Replace the cable between operating panel and MFBU board.
			NO	Replace the machine.
Automatic reception disabled	1	Did you select the automatic reception mode?	YES	Go to item 2
			NO	Select the automatic reception mode.
	2	Is the external telephone in on-hook status?	YES	Go to item 3.
			NO	Set the external telephone on-hook.
	3	Any improvement after replacing MFBU - FAX cable?	YES	Replace MFBU - FAX cable.
			NO	Go to item 4.
	4	Any improvement after replacing FAXU board?	YES	Replace FAXU board.
			NO	Go to item 5.
	5	Any improvement after replacing MFBU board?	YES	Replace MFBU board.
			NO	Go to item 6.
	6	Any improvement after replacing operating panel?	YES	Replace operating panel.
			NO	Go to item 7.
	7	Any improvement after replacing the cable between operating panel and BCRU board?	YES	Replace the cable between operating panel and BCRU board.
			NO	Replace the machine.

Symptom	Item No.	Cause	Remedy	
Cannot send dial number from 10 key pad	1	Is the external telephone in on-hook status?	YES	Go to item 2
			NO	Set the handset on-hook.
	2	Is the line type specified correctly?	YES	Go to item 3.
			NO	Specify the line type (MF, 10, 20 PPS) correctly.
	3	Did you enter by 10-key full dialing?	YES	Go to item 5.
			NO	Go to item 4.
	4	Did you register the phone number?	YES	Go to item 5.
			NO	Register the phone number.
	5	Any improvement after replacing MFBU - FAX cable?	YES	Replace the MFBU - FAX cable.
			NO	Go to item 6.
	6	Any improvement after replacing FAXU board?	YES	Replace FAXU board.
			NO	Go to item 7.
	7	Any improvement after replacing MFBU board?	YES	Replace MFBU board.
			NO	Go to item 8.
	8	Any improvement after replacing operating panel?	YES	Replace operating panel.
			NO	Go to item 9.
	9	Any improvement after replacing the cable between operating panel and BCRU board?	YES	Replace the cable between operating panel and BCRU board.
			NO	Replace the machine.
Cannot monitor communication	1	Is the sound volume switch OFF?	YES	Select a sound volume switch other than OFF.
			NO	Go to item 2
	2	Is S/W SW set line monitoring?	YES	Go to item 3.
			NO	Set S/W SW.
	3	Any improvement after replacing the speaker?	YES	Replace the speaker.
			NO	Go to item 4.
	4	Any improvement after replacing FAXU board?	YES	Replace FAXU board.
			NO	Go to item 5.
	5	Any improvement after replacing MFBU board?	YES	Replace MFBU board.
			NO	Go to item 6.
	6	Any improvement after replacing operating panel?	YES	Replace operating panel.
			NO	Go to item 7.
	7	Any improvement after replacing the cable between speaker and BCRU board?	YES	Replace the cable between speaker and BCRU board.
			NO	Replace the machine.

Symptom	Item No.	Cause	Remedy	
Image memory (memory stored for TX image) is not backed up.	1	Proceed to the following procedure. Is the image memory backed up? A. TX: Disconnect the line cable and proceed a quick memory transmission. Turn OFF the power switch while waiting for the answer. Turn ON the power and check if data is stored in the image memory. B. RX: Turn OFF the power switch while proceeding memory reception without printing paper. Turn ON the power again and check if data is stored in the image memory.	YES	Normal
			NO	Go to item 2
	2	Is the connector of BCRU board connected?	YES	Go to item 3.
			NO	Connect the connector.
	3	Is the battery voltage appropriate? (1.2 V or more)	YES	Go to item 6.
			NO	Go to item 4.
	4	Is the battery full charged? (Approx. 24 hr)	YES	Go to item 5.
			NO	Charge the battery.
	5	Any improvement after replacing the battery?	YES	Replace the battery.
			NO	Go to item 6.
	6	Any improvement after replacing MFBU board?	YES	Replace MFBU board.
			NO	Go to item 7.
	7	Any improvement after replacing RAMU board?	YES	Replace RAMU board.
			NO	Replace the machine.

8.4 Troubleshooting of network function

8.4.1 Error indications (Icons): POP3 reception anomalies

Item No.	Condition	Possible cause	Action to be taken
1	When the icon is displayed at the bottom of the operation screen.	Failed to receive a document using POP3.	Confirm that the POP3 user name, POP3 password, and POP3 server address are correctly specified in [Admin.] - [Network Setting].

8.4.2 Internet Fax Transmission / Scan to E-mail

Item No.	Condition	Possible cause	Action to be taken
1	Transmission is unsuccessful.	The connection has some defects.	Check the LAN cable. (whether it is Category 5 type) Check the LED indicator and connection at the network hub or switch.
		The user tried to transmit a document, even though the E-mail address has not been registered yet.	Register the E-mail address.
		The required settings have not been registered in the machine.	Make the required network settings.
		The LAN cable is disconnected.	Replace the LAN cable.
		Other unknown causes.	Check the error details in the [Type] menu of [Job List], and refer to the error code.
2	The document can be transmitted, but the image is not displayed on the terminal unit or PC at the destination.	The destination machine does not support the function for processing the transmitted image.	Retry the transmission using a size/quality/coding system supported by the destination machine.
		The document was transmitted without inserting a transmission document text.	Depending on the mailing software, it may not be possible to view the attached file when a mail with only the attached file and no text is received. In such a case, insert text into the document to be transmitted and retry.
		The TX mode is mistakenly set to PC E-mail.	Change the TX mode to internet fax.
3	Transmission cancellation has failed.	It may take some time to cancel an internet facsimile transmission.	Wait for a while until it is canceled.

8.4.3 IP address Fax Transmission

Item No.	Condition	Possible cause	Action to be taken
1	Transmission is unsuccessful.	The connection has some defects.	Check the LED indicator and connection at the network hub or switch.
		The volume of the image data is so large that the recipient is timed out.	• Ask the recipient to delay the time until the time-out occurs. • Reduce the volume of the image data and retry.
		The required settings have not been registered in the machine.	Make the required network settings.
		The LAN cable is disconnected.	Replace the LAN cable.
		Other unknown causes.	Check the error details in the [Type] menu of [Job List] and refer to the error code.
2	Cannot receive.	Domain is not set correctly.	Confirm “DNS Settings” of “Network Settings”.

8.4.4 Internet Fax reception

Item No.	Condition	Possible cause	Action to be taken
1	The reception function does not work.	The connection has some defects.	Check the LED indicator and connection at the network hub or switch.
		The automatic check for receipt is set to OFF.	Set an interval between automatic checks.
		The required settings have not been registered in the machine.	Make the required network settings.
		The same POP3 User Name is used for another E-mail software or for another user.	The same POP3 User Name should not be used elsewhere, or for other E-mail software.
		The LAN cable is disconnected.	Replace the LAN cable.
2	Documents are received but not printed out.	Data that is not supported is attached, or a mail with no data is received.	Ask the sender to send the document in TIFF-F or text file format.
		The printing of the received document was not specified.	To print a received document, specify Print in received document handling process.
		Memory full	Print the stored documents to reduce the memory usage, and then ask the sender to retransmit.
		Other unknown causes	Check the error details in the [Type] menu of [Job List] and refer to the error code.
3	The machine receives (print) data in binary code.	Data in a format other than MIME is attached or a mail is received via a server that does not support MIME format.	When the format of the attached data is other than MIME, binary codes are printed out as they are in the text. (This is not a machine failure.) Ask the sender to send the data in the MIME format.

Item No.	Condition	Possible cause	Action to be taken
4	The machine receives the same document repeatedly.	The size of the mail is so large that the connection with the server is timed out before the document reception is completed.	• Delete the mail in question from the server by receiving it alternatively via a PC. • Ask the sender to reduce the mail size and retry.
5	Transmission cancellation has failed.	It may take some time to cancel an internet facsimile reception.	Wait for a while until it is canceled.

8.4.5 IP Relay

Item No.	Condition	Possible cause	Action to be taken
1	This machine does not receive the data.	Required software settings are not set completely.	Make the required network settings.
		Transmission data is too large to be transmitted and the fax has not been received because of restriction of a server.	Make data size small by reducing the number of pages, and retransmit.
2	Fax is not transmitted from this machine.	Communication mode of the gateway transmission is not set correctly.	Touch [Allow] for Gateway TX and set communication mode correctly.

1 8.4.6 Scan to FTP

Item No.	Condition	Possible cause	Action to be taken
1	Cannot send with Scan to FTP.	Refer to communication error codes.	Check the details of the communication error in the [Type] menu of [Job List] and refer to error codes.
		The LAN cable is broken.	Replace the LAN cable.
		No destination directory.	Create the directory.
		User Name or Password is incorrect.	Confirm the settings.

1 8.4.7 Scan to SMB

Item No.	Condition	Possible cause	Action to be taken
1	Cannot send with Scan to SMB.	Refer to communication error codes.	Check the details of the communication error in the [Type] menu of [Job List] and refer to error codes.
		The LAN cable is broken.	Replace the LAN cable.
		No destination directory.	Create the directory.
		Read-only directory.	Make it writable.
		User Name or Password is incorrect.	Confirm the settings.
		The access is limited by the firewall.	A Windows PC may be set with a firewall. Change the setting.

8.4.8 Assistant tool for C200

Item No.	Condition	Possible cause	Action to be taken
1	The Assistant tool for C200 cannot be connected.	No IP address is set to the machine.	Set an IP address.
		The wrong URL setting in browser.	Enter the IP address of the machine in URL.
		The wrong settings in browser.	For some network configurations, connection settings may be required to access the machine. For more information, consult with the network administrator.
		If proxy setting is done in browser and the proxy server does not identify the IP address of this machine, Assistant tool for C200 screen cannot be displayed.	In the proxy setting of the browser, add the IP address of this machine in the exception column not using the proxy server.
		The LAN cable is disconnected.	Replace the LAN cable.
2	Login fails.	Login operation was previously done by using a different user name and password and the previous login credentials are cached by the browser.	Some browsers hold the user name and password once login succeeds. Close the browser and start it again.
3	Screen is not displayed properly.	The browser size is too small.	Increase the browser size.
		Font size is wrong.	Set proper font sizes for PC and browser.
4	Items not included in device configuration are displayed.	Items not included in device configuration will become invalid at registration. This does not affect the actual registration.	–
5	Half-sized dots are displayed on the screen.	Some browsers display them.	–
6	Part of deleted characters remains on the screen.	Operations may be different for some browsers.	Update the display or reload it in the browser.
7	Digits of the input/display area and available number of characters are different.	For some browsers, the input area can be scrolled. If not, it does not affect the actual registration.	–
8	Some characters cannot be registered or displayed.	Some OS cannot register or display certain characters.	–
9	The Assistant tool for C200 cannot register or display the space character.	Space entered at the end of a word may become invalid.	–

Item No.	Condition	Possible cause	Action to be taken
10	Input data is cleared when a registration error occurs.	For some browsers, items displayed with “*” such as password may be cleared.	–
11	Entered data is cleared when a registration error occurs	Depending on the browser, items displayed with “*” including passwords may be cleared.	–
12	When clicking [Apply] or [Log-out], the page is not refreshed, however “Cannot open page.” is displayed	Depending on the browser settings, it may be displayed.	If using Internet Explorer, click [Tools] - [Internet Options] - [General], and set “Temporary Internet Files” to [Confirm Pages].
13	When refreshing the browser display, although you have not logged out, “Administrator is logged in” is displayed.	Depending on the browser settings, it may be displayed.	If using Internet Explorer, click [Tools] - [Internet Options] - [General], and set “Temporary Internet Files” to [Confirm Pages].

8.4.9 Others (Network device related)

Item No.	Condition	Possible cause	Action to be taken
1	When the power switch is on, [ERROR!!] displays on the touch panel screen.	Failure in PKG connection Unit error	Reattach MEMU/1 or MEMU/2. Replace MEMU/1 or MEMU/2.
2	“Registering in network. Other operations halted. Please wait”. is displayed.	Administrator is logging in from the Assistant tool for C200.	Wait until the administrator finishes the operation and logs out. In case that the administrator has closed the browser without logout operation, ask the administrator to log out from the Assistant tool for C200.

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