

S p e c i f i c a t i o n s

Item	Communication specifications
Model No .	ID-003

3 rd Edition

Approved By	Checked by	Person in charge

JAPAN CASH MACHINE ., LTD.

Dwg.No.	840-00-51
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②	/ /		Model No.	ID-003	Takeda	
Amended①	08/07/96	Page amendment	Drawing No.	840-00-51		
JAPAN CASH MACHINE CO., LTD.						Date 08/07/96

ID-003 Communication Specifications

1. Out line

This specifications describes specifications at the data level of interfacing between the ACCEPTOR and CONTROLLER. In regard to electrical connections and operation refer to the specifications manuals for each model.

ID-003 interface is a 2-way serial interface. Control over the status and operation of the ACCEPTOR is made by polling [STATUS REQUEST] and by command ([OPERATION COMMAND]) from the CONTROLLER and also setting and confirming of function scan be made.

2. Transmission specifications

- | | |
|-------------------------------|-------------------------------------------------------------------------------------------------------------|
| (1) Transmission method | Full duplex transmission |
| (2) Transmission speed | 9600 bps/19200 bps
(Depending on the model, setting by DIP switching is possible.) |
| (3) Synchronizing method | Asynchronous method |
| (4) Connection control method | Polling method |
| (5) Data format | Start bit 1
Data bit 8
Parity bit EVEN
Stop bit 1
X parameter None |

(6) Message format

SYNC	LNG	CMD	DATA	CRC
------	-----	-----	------	-----

- SYNC 1 byte : Message transmission start code [FCH] fixed
LNG 1 byte : Data length (Total number of bytes from SYNC to CRC)
CMD 1 byte : Command status
Data 0 to 250 byte : Data necessary for command (omitted by CND)
CRC 2 byte : Check code by CRC method
 Object Section to be from SYNC to end of DATA
 (Initial value = 0)

(7) Error control method Error detection

CRC method
CRC - CCITT
 $P(x) = X^{16} + X^{12} + X^5 + 1$

3. Transmission reception message format

Transmission and transmission reception message format is divided into the following five types.

(1) Polling format (COTROLLER → ACCEPTOR)

SYNC	LNG	CMD	CRC
------	-----	-----	-----

SYNC : [FCH]

LNG : [05 H]

CMD : [11H] (Status request)

CRC : Check code by CRC method

(2) ACK format (COTROLLER → ACCEPTOR / ACCEPTOR → COTROLLER)

SYNC	LNG	CMD	CRC
------	-----	-----	-----

SYNC : [FCH]

LNG : [05 H]

CMD : [50H]

CRC : Check code by CRC method

(3) Command format (COTROLLER → ACCEPTOR)

SYNC	LNG	CMD	DATA	CRC
------	-----	-----	------	-----

SYNC : [FCH]

LNG : Data length

CMD : Command

DATA : Data necessary for command (Omitted by CMD)

CRC : Check code by CRC method

(4) Response format I (COTROLLER → ACCEPTOR)

SYNC	LNG	CMD	CRC
------	-----	-----	-----

SYNC : [FCH]

LNG : Data length

SST : Status code

CRC : Check code by CRC

(5) Response format II (COTROLLER → ACCEPTOR)

SYNC	LNG	CMD	DATA	CRC
------	-----	-----	------	-----

SYNC : [FCH]

LNG : Data length

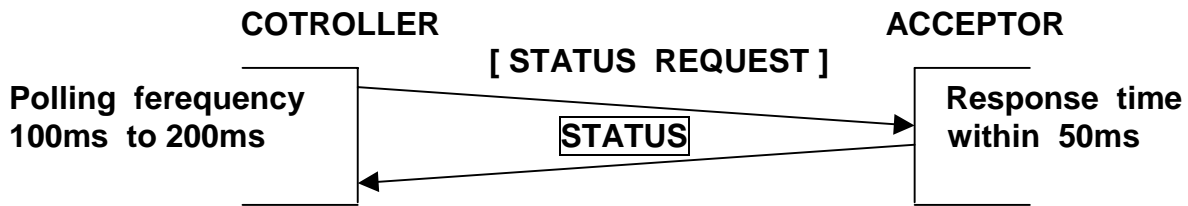
CMD : Response

DATA : Data necessary for command (Omitted by CMC)

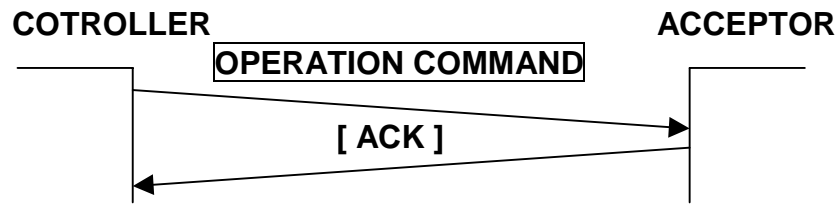
CRC : Check code by CRC method

4. Communication flow

(1) Transmission of STATUS REQUEST

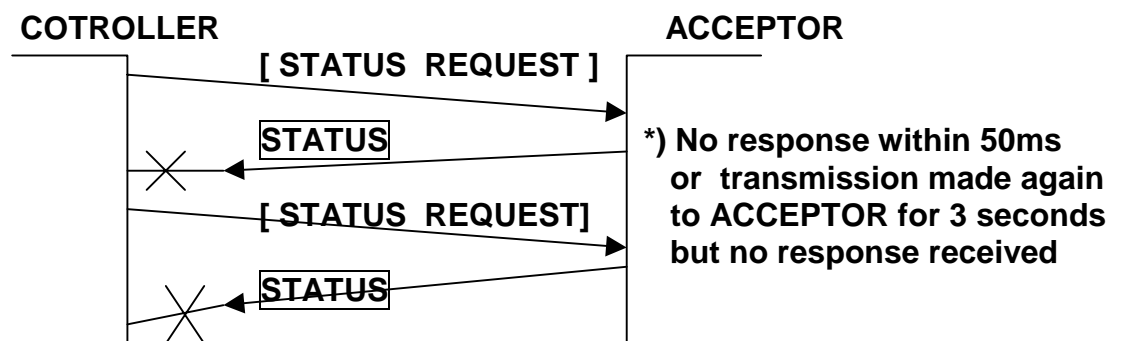


(2) Transmission command to ACCEPTOR



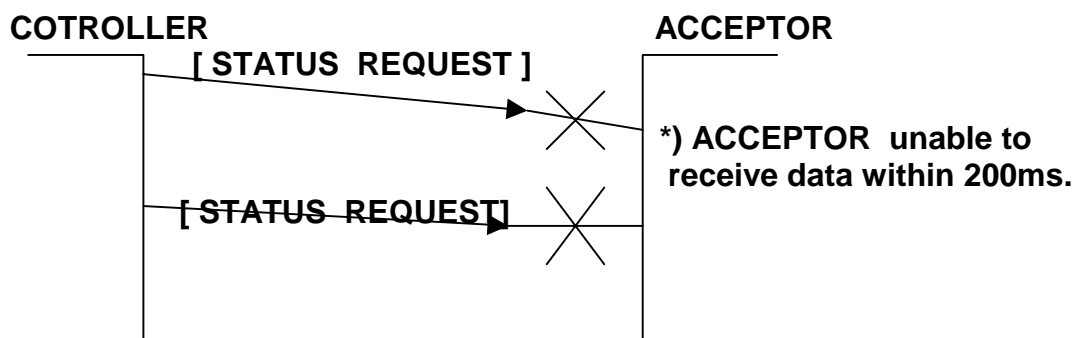
(3) Communication error 1

(Failure of communication system and power source OFF, failure etc. of acceptor.)

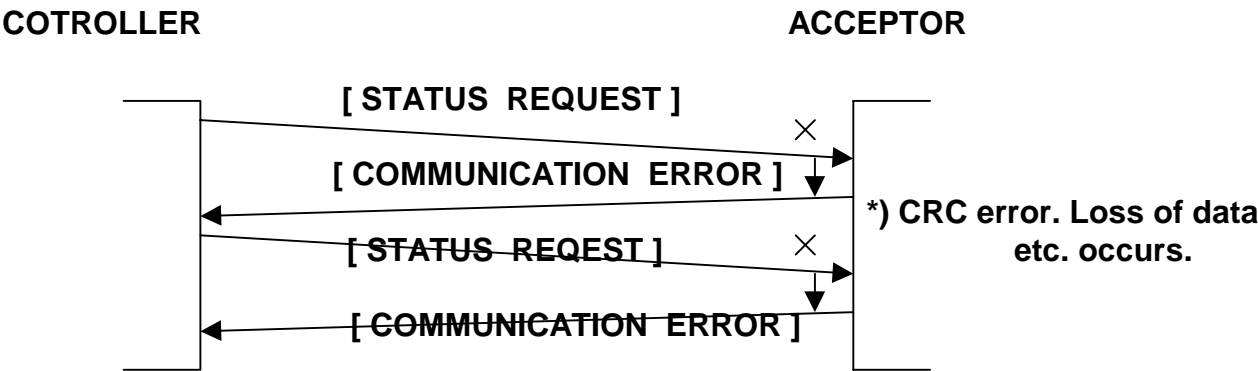


Communication error 2

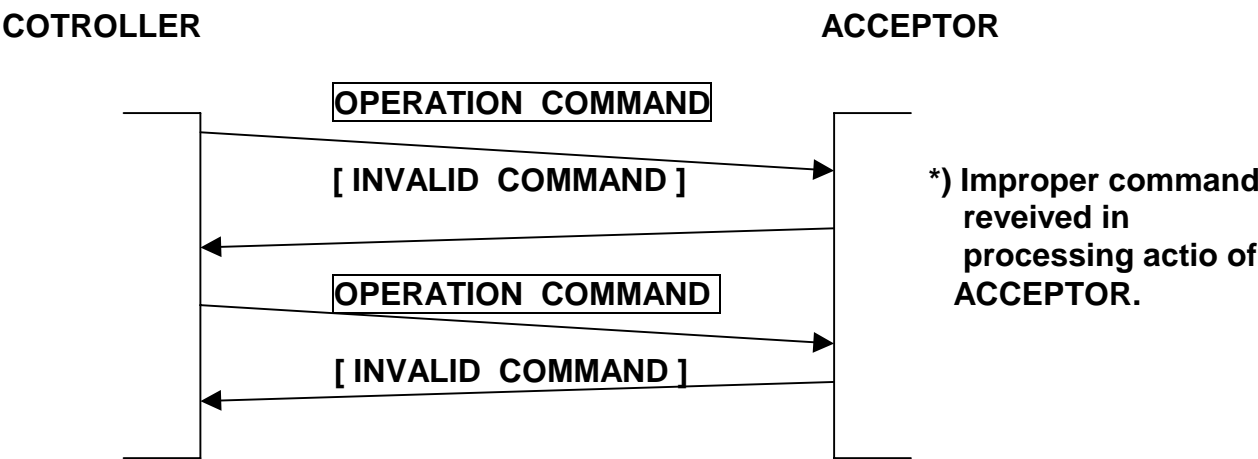
(Failure etc. of communication system)



Communication error③



Communication error④



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JAPAN CASH MACHINE., LTD.					Date	08/07/96

5 Command / response list

COTROLLER → ACCEPTOR		ACCEPTOR → CONTROLLER	
STATUS		STATUS	
STATUS REQUEST H	11 H	ENABLE (IDLING)	11H
		ACCEPTING	12H
		ESCROW	13H-DATA
		STACKING	14H
		VEND VALID	15H
		STACKED	16H
		REJECTING	17H-DATA
		RETURNING	18H
		HOLDING	19H
		DISABLE (INHIBIT)	1AH
		INITIALIZE	1BH
		POWER UP STATUS	
		POWER UP	40H
		POWER UP WITH BILL IN ACCEPTOR	41H
		POWER UP WITH BILL IN STACKER	42H
		ERROR STATUS	
		STACKER FULL	43H
		STACKER OPEN	44H
		JAM IN ACCEPTOR	45H
		JAM IN STACKER	46H
		PAUSE	47H
		CHEATED	48H
RESPONSE TO [VEND VALID]		FAILURE	49H+DATA
ACK	50 H	COMMUNICATION ERROR	4AH
OPERATION COMMAND		RESPONSE TO OPERATION COMMAND	
RESET	40H	ACK	50H
STACK-1	41H	INVALID COMMAND	4BH
STACK-2	42H		
RETURN	43H		
HOLD	44H		
WAIT	45H		
SETTING COMMAND		RESPOSE TO SETTING COMMAND	
ENABLE/ DISABLE (DENOMI)	C0H+DATA	ENABLE/ DISABLE (DENOMI)	C0H+DATA
SECURITY (DENOMI)	C1H+DATA	SECURITY (DENOMI)	C1H+DATA
INHIBIT (ACCEPTOR)	C3H+DATA	INHIBIT (ACCEPTOR)	C3H+DATA
DIRECTION	C4H+DATA	DIRECTION	C4H+DATA
OPTIONAL FUNCTION	C5H+DATA	OPTIONAL FUNCTION	C5H+DATA
SETTING STATUS REQUEST		SETTING STATUS	
ENABLE/ DISABLE (DENOMI)	80H	ENABLE/ DISABLE (DENOMI)	80H+DATA
SECURITY (DENOMI)	81H	SECURITY (DENOMI)	81H+DATA
INHIBIT (ACCEPTOR)	83H	INHIBIT (ACCEPTOR)	83H+DATA
DIRECTION	84H	DIRECTION	84H+DATA
OPTIONAL FUNCTION	85H	OPTIONAL FUNCTION	85H+DATA
VERSION REQUEST	88H	VERSION INFORMATION	88H+DATA
BOOT VERSION REQUEST	89H	BOOT VERSION INFORMATION	89H+DATA

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②	/	/	Command	Model No.	ID - 003	Takeda
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6. Command / response details

6-1 STATUS REQCEST (CONTROLLER → ACCEPTOR) Request form Request form CONTROLLER to ACCEPTOR on status of ACCEPTOR
By the [STATUS REQUEST] the CONTROLLER monitors operation status. R resetting from error status etc. of the ACCEPTOR .

Response : Status response

[11H] : STATUS REQUEST

11H

- a. Frequency of polling shall be 100 msec to 200 msec.
 - b. Response time of the ACCEPTOR shall be within 50 msec.
 - c. The CONTROLLER must resend the message in case a communication error response is received is not received within 200 msec.
- (Refer to 4- (3))

6-2 Status (ACCEPTOR → CONTROLLER)
Response in reply to [STATUS REQUEST] from the CONTROLLER
Express the present status of the ACCEPTOR which normally divided into normal status, power-up status and error status.

6-2-1 Normal status (ACCEPTOR → CONTROLLER)

(1) [11H] : ENABLE (IDLING)

11H

Bill accepting standby status and operation able status.

(2) [12H] : ACCEPTING

12H

Status in which bills are taken in and validating is being conducted.

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(3) [13H] : ESCROW

13H	DATA
-----	------

Status in which bill validation is completed and command from the CONTROLLER is awaited (The bill is held inside the ACCEPTOR)

[ESCROW DATA] (accepted denomination) of 1 byte is added.

If [STATUS REQUEST] cannot be received from the ACCEPTOR within 3 seconds while in the [ESCROW] status, and when an operation command from the CONTROLLER is not transmitted within 10 seconds after transmission, the bill is returned.

ESCROW DATA (Accepted denomination)

DATA	Denomination
61h	01
62h	02
63h	03
64h	04
65h	05
66h	06
67h	07
68h	08

*) The accepted denominations are described in the [DATA setting specifications] for each model.

(4) [14H] : STACKING

14H

Status in which bills are conveyed to the stacker and stored in accordance with OPERATION COMMANDS [STACK-1] and [STACK-2] from the CONTROLLER.
(Refer to 6-3, 7-2)

(5) [15H] : VEND VALID

15H

Confirming signal of bill acceptance

Against [VEND VALID], the ACCEPTOR holds its status until [ACK] is sent from the CONTROLLER.

The CONTROLLER conducts credit up by [VEND VALID]

(Refer to 7-2)

(6) [16H] : STACKED

16H

Status from the time bill is stored up to the time accepting of the next bill from [VEND VALID] becomes possible ([ENABLE] status)

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(7) [17H]: REJECTING

17H	DATA
-----	------

A status in which unacceptable bills as the result of bill validating by the ACCEPTOR or bills by an [INHIBIT] command from the CONTROLLER are returned (Refer to 7-3)

[REJECT DATA] (Description of rejection) of 1 byte is added.

REJECT DATA (Rejection description)

DATA	Description
71h	Insertion error
72h	Mag error
73h	Rejection action by remaining of bills etc. (ACCEPTOR head section)
74h	Compensation error/multimedia factor error
75h	Conveying error
76h	Denomination assessing error
77h	Photo pattern error 1
78h	Photo level error
79h	Return by inhibit/insertion direction, denomination error In case a command against escrow is not transmitted
7Ah	
7Bh	Operation error
7Ch	Rejection action by remaining of bill and such (stacker section)
7Dh	Length error
7Eh	Photo pattern error 2

(8) [18H] : RETURNING

18H

Against [ESCROW], a status in which a bill is returned by a [RETURN] command from The CONTROLLER (Refer to 7-4)

(9) [19H]: HOLDING

19H

Against [ESCROW], a status in which a bill is held inside the ACCEPTOR by A [HOLD] command from the CONTROLLER.

(10) [1AH] : DISABLE (INHIBIT)

1AH

A status in which acceptance of bills by the ACCEPTOR is inhibited by a [INHIBIT] Command from the CONTROLLER. (Refer to 7-5)

Also a status in which all acceptable denomination are in a disable status by [ENABLE/DISABLE] command or where all receiving directions are in an inhibit status by a [DIRECTION] command.

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②	/	/	6-2-1(7) Supplement added	Model No.	ID - 003	Takeda
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(11) [1BH] : INITIALIZE

1BH

Status in which the ACCEPTOR is conducting initialising action by [RESET] from the CONTROLLER.

The setting command from the CONTROLLER is effective only in this status.

(Refer to 7-1)

6-2-2 Power up status (ACCEPTOR --> CONTROLLER)

By the power supply ON status. the ACCEPTOR returns the following status.

Also, this status is held until is held a [RESET] command is sent from the CONTROLLER.

(Refer to 7-2)

40H

A status in which status inside the ACCEPTOR is normal with the ACCEPTOR power on

(2) [41h] : POWER UP WITH BILL IN ACCEPTOR

41H

A status in which bills remain in the ACCEPTOR head conveying section

(a return possible position)with the power supply on.

By a [RESET] command from the CONTROLLER, the returns the bill and

conducts initialising.

(3) [42H] : POWER UP WITH BILL IN STACKER

42H

A status in which bills remain in the stacker conveying section (a return possible position) with the power supply on.

By a [RESET] command for the CONTROLLER, the ACCEPTOR stores the bill and conducts intializing.

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②	/	/	Model No.	ID - 003	Takeda	
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6-2-3 Error status (ACCEPTOR --> CONTROLLER)

Method for releasing error status differs by model.

For details, refer to the [Specification manual] and [DATA setting specification manual] by model.

(1) [43H] : STACKER FULL

43H

A stacker box full condition (Refer to 7-6)

(2) [44H] : STACKER OPEN (STACKER BOX REMOVE)

44H

The stacker box full is open or the stacker box is not mounted.

(3) [45H] : JAM IN ACCEPTOR

45H

Jamming has occurred inside the ACCEPTOR

(4) [46H] JAM IN STACKER

46H

Jamming has occurred in the stacker conveying section.

An abnormal condition has developed at the time of stroing

(5) [47H] : PAUSE

47H

A condition in which the ACCEPTOR cannot operate because a second bill has

been inserted while the first bill is being stored or conveyed

(When the second bill is removed, conveying is started)

(6) [48H]CHEATED

48H

An action thought to be mischievous againnst ACCEPTOR has been committed.

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③	/	/			6-2-(3) Supplement added	Person in charge
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(7) [49H] : FAILURE

49H	DATA
------------	-------------

A status in which normal operation cannot be made because of a failure.
An abnormal condition, or incorrect setting of the ACCEPTOR.
[FAILURE DATA] of 1 byte are added.

[FAILURE DATA] (abnormal contents)

DATA	Contents
A2h	Stock motor failure
A5h	Transport (feed) motor speed failure
A6h	Transport (feed) motor failure
ABh	Cash box not ready
AFh	Validator head remove
B0h	BOOT ROM failure
B1h	External ROM failure
B2h	ROM failure
B3h	External ROM writing failure

(8) [4AH] : COMMUNICATION ERROR

4AH

An error has developed in the communication data (Refer to 4-(3)- ③)

(9) [4BH] : INVALID COMMAND

4BH

Command from the CONTROLLER is not valid. (Refer to 4- (3)- ④)

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6-3 OPERATION COMMAND (CONTROLLER → ACCEPTOR)

Operation from the (CONTROLLER to the ACCEPTOR

Response : ACK response

(1) [40H] ; RESET

40H

A command for resetting ACCEPTOR. The ACCEPTOR accepts this command regardless of its status.

After the power supply is turned on (power up station), transmission is required without fail.

(2) [41H] : STACK-1

41H

A bill in an escrow status is conveyed to the stacker section and stored.

The ACCEPTOR becomes in a [VEND VALID } status when a bill passes the stacker lever.

Valid only when in [ESCROW] status.

*) The position of STACK-1 may differ by model.

(3) [42H] : STACK-2

42H

A bill in an escrow status is conveyed to the stacker section and stored.

The ACCEPTOR becomes in a [VEND VALID } status when a bill is stored.

(pushed in position)

Valid only when in [ESCROW] status.

*) The position of STACK-2 may differ by model.

(4) [43H] : RETURN

43H

Return a bill in an escrow status.

Valid on when in [ESCROW] status.

(5) [44H] : HOLD

44H

A bill in an escrow status is made to be held for 10 seconds. For continued holding, resending of [HOLD] command is necessary.

Valid only when in [ESCROW] status.

#####			Item	Communication specification	Page	14/ 32
③	/	/	6-2-(2)&(3)		Person in charge	
②	/	/	Supplement	Model No.	ID - 003	Takeda
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6 [45H] : WAIT

[45H]

Status of ACCEPTOR is made to be held for 3 seconds. To continue holding this status, resending of a [WAIT] command is necessary.

6-4 ACK (Affirmative response)

[50H] : ACK

[50H]

[ACCEPTOR → CONTROLLER]

Response against an [OPERATION COMMAND] from the CONTROLLER

[CONTROLLER → ACCEPTOR]

Response against [VEND VALID] from the ACCEPTOR.

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6-5 SETTING COMMAND (CONROLLER → ACCEPTOR)

A command to set (change) function of the the ACCEPTOR by the CONTROLLER
Setting of each demination is made by the respective bits of data of 2 bytes to be added.

Receiving is possible only when ACCEPTOR is intialized. (However INHIBIT is excluded.)

(1) [C0h] : ENABLE/DISABLE

C0H	DATA
-----	------

Accepting by each denomation is set.

[ENABLE/DISABLE DATA] of 2 bytes are added. (Refer to 6-7- (1))

Response : ECHO BACK (ACCEPTOR → CONTROLLER)

C0H	DATA
-----	------

(2) [C1h] : SECURITY

C1H	DATA
-----	------

Accepting by each denomation is set.

[SECURITY DATA] of 1 byte IS added. (Refer to 6-7- (2))

Response : ECHO BACK (ACCEPTOR → CONTROLLER)

C1H	DATA
-----	------

(3) [C3h] : INHIBIT

C3H	DATA
-----	------

Status of ACCEPTOR is temporarily made acceptance inhibit.

[INHIBIT DATA] of 1 byte are added. (Refer tp 6-7-(3))

Response : ECHO BACK (ACCEPTOR → CONTROLLER)

C3H	DATA
-----	------

- INHIBIT can be accepted in any status.

Set during acceptance of bill	Retun bill and becomes in INHIBIT status
Set during validating of bill	
Set while in escrow status	
Set during storing of bill	After storing bill, becomes in INHIBIT status.
Set while in vend valid	

(4) [C4H] : DIRECTION

C4H	DATA
-----	------

Sets accepting direction of bill.

[DIRECTION DATA] of 1 byte are added. (Refer to 6-7-(4))

Response : ECHO BACK (ACCEPTOR --> COTROLLER)

C4H	DATA
-----	------

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③	/	/			6-5(3) Erroneous entry corrected	Person in charge
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(5) [C5h] : OPTIONAL FUNCTION

C5H

Set option function of ACCEPTOR.

[OPTIONAL FUNCTION DATE] of two bytes is added (Refer to 6-7- (7))

Response : ECHO BACK (ACCEPTOR --> CONTROLLER)

C5H	DATA
-----	------

#####			Item	Communication specification	Page	/ 32
③	/ /	6-5-(5) Command added			Person in charge	
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6-6 SETTING STATUS REQUEST (COTROLLER --> ACCEPTOR)

By a : [SETTING] command, the COTROLLER requests transmission of the set status of the ACCEPTOR.

(1) [80h] : ENABLE / DISABLE

80H

Transmission request for set acceptance status of acceptor by each denomination

Response : SETTING STATUS (ACCEPTOR → COTROLLER)
[ENABLE / DISABLE] command as well as status of accepting denominations set by DIP switches are added as [ENABLE / DISABLE DATA] of 2 bytes.

(Refer to 6-7-(1))

80H DATA

*) Settings of DIP switches are described in the [Specification manual] for each model.

(2) [81H] : SECURITY

81H

Request for transmission of set status of validating level by each denomination

Response : SETTING STATUS (ACCEPTOR --> COTROLLER)
[SECURITY DATA] of 2 bytes are added. (Refer to 6-7-(2))

81H DATA

(3) [83H] : INHIBIT

83H

Transmission request for set status of acceptance inhibit of the ACCEPTOR

Response : SETTING STATUS (ACCEPTOR -->CONTROLLER)
[INHIBIT DATA] of 1 byte are added. (Refer to 6-7-(3))

83H DATA

(4) [84H] : DIRECTION

84H

Request for transmission of set status of bill acceptance direction

Response : SETTING STATUS (ACCEPTOR -->CONTROLLER)
[DIRECTION DATA] of 1 byte are added. (Refer to 6-7-(4))

84H DATA

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(5) [88h] : VERSION REQUEST

88H

Request for transmission of ACCEPTOR MODEL ID VERSION

Response : SETTING STATUS (ACCEPTOR -->CONTROLLER)

[ASCII data of 36 bytes are added. (Refer to 6-7-(5))

88H	DATA
-----	------

(6) [89h] : BOOT VERSION REQUEST

89H

Request for transmission of BOOT VERSION of ACCEPTOR

Response : SETTING STATUS (ACCEPTOR -->CONTROLLER)

ASCII data of 4 bytes are added. (Refer to 6-7-(6))

89H	DATA
-----	------

(7) [85h] : OPTIONAL FUNCTION

85H

Request for transmission of status of [OPTIONAL FUNCTION]
command

Response : SETTING STATUS (ACCEPTOR -->CONTROLLER)

[OPTIONAL FUNCTION DATA] of 2 bytes are added. (Refer to 6-7-(7))

85H	DATA
-----	------

#####			Item	Communication specification	Page	/ 32
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②	/	/	Model No.	ID - 003		Takeda
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6-7 DATA (SETTING STATUS / SETTING COMMAND)

Data formats for SETTING STATUS AND SETTING COMMAND are described.
For details, refer to [DATA setting specifications] for each model.

(1) ENABLE / DISABLE DATA

COTROLLER → ACCEPTOR

C0h + DATA1 + DATA2
80h

ACCEPTOR → CONTROLLER

C0h + DATA1 + DATA2 [echo back]
80h + DATA1 + DATA2

	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
DATA 1	08	07	06	05	04	03	02	01

Denomination ↑

	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
DATA 2	08	07	06	05	04	03	02	01

0 : enable

1 : disable (default : 00h)

(2) SECURITY DATA

COTROLLER → ACCEPTOR

C0h + DATA1 + DATA2
80h

ACCEPTOR → CONTROLLER

C0h + DATA1 + DATA2 [echo back]
80h + DATA1 + DATA2

	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
DATA 1	08	07	06	05	04	03	02	01

Denomination ↑

	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
DATA 2	08	07	06	05	04	03	02	01

0 : normal

1 : security level high (default : 00h)

(3) INHIBIT / DATA

COTROLLER → ACCEPTOR

C3h + DATA(1byte)
83h

ACCEPTOR → CONTROLLER

C3h + DATA(1byte) [echo back]
83h + DATA(1byte)

	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
DATA	0	0	0	0	0	0	0	inh

0 : not inhibit

1 : inhibit (default : 01h)

(4) DIRECT DATA

COTROLLER → ACCEPTOR

C4h + DATA(1byte)
84h

ACCEPTOR → CONTROLLER

C4h + DATA(1byte) [echo back]
84h + DATA(1byte)

	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
DATA	0	0	0	0	04	03	02	01

0 : not inhibit

1 : inhibit

DIRECTION ↑

#####			Item	Communication specification	Page	20/ 32
③	/	/			Person in charge	
②	/	/	6-7 Supplement added	Model No.	ID - 003	Takeda
Amended ①	/	/		Drawing No.	840 - 00- 51	
JAPAN CASH MACHINE., LTD.					Date	08/07/96

(5) VERSION DATA

COTROLLER → ACCEPTOR

88h

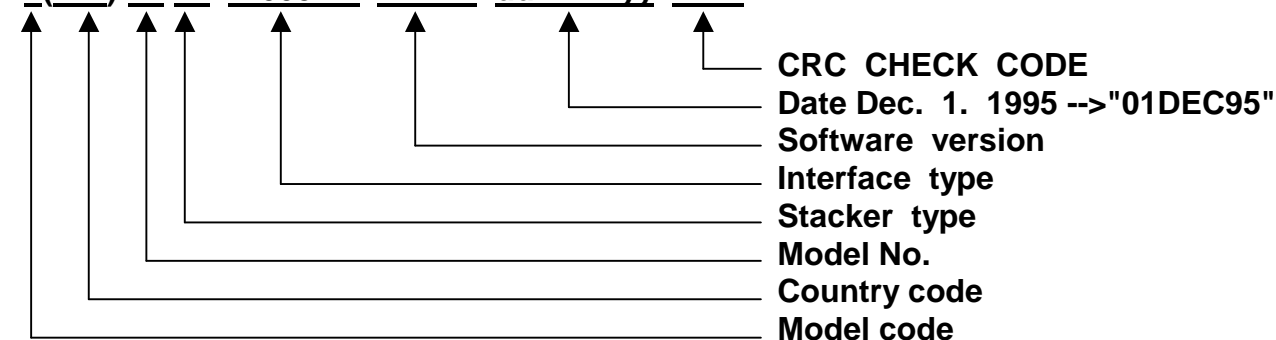
ACCEPTOR → CONTROLLER

88h + DATA

DATA

The ACCEPTOR responds to MODEL / ID / VERSION / CRS etc. by ASCII data.
Data length expresses the following meaning from the top, as
([LNG]-5) bytes (variable).

"x(xxx)-xx-xx ID003-xxvxxx-xx ddmmyy xxxx"



(6) BOOT DATA

COTROLLER → ACCEPTOR

89h

ACCEPTOR → CONTROLLER

89h + DATA(4byte)

DATA

The ACCEPTOR respond to the BOOT VERSION by 4 ASCII data.

"Bxx"

BOOT version

(7) OPTIONAL FUNCTION DATA

COTROLLER → ACCEPTOR

C5h + DATA1 + DATA2
85h

ACCEPTOR → CONTROLLER

C5h + DATA1 + DATA2 [echo back]
85h + DATA1 + DATA2

bit7 bit6 bit5 bit4 bit3 bit2 bit1 bit0
DATA 1

08	07	06	05	04	03	02	01
							OPTION

bit7 bit6 bit5 bit4 bit3 bit2 bit1 bit0
DATA 2

0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---

0 : enable

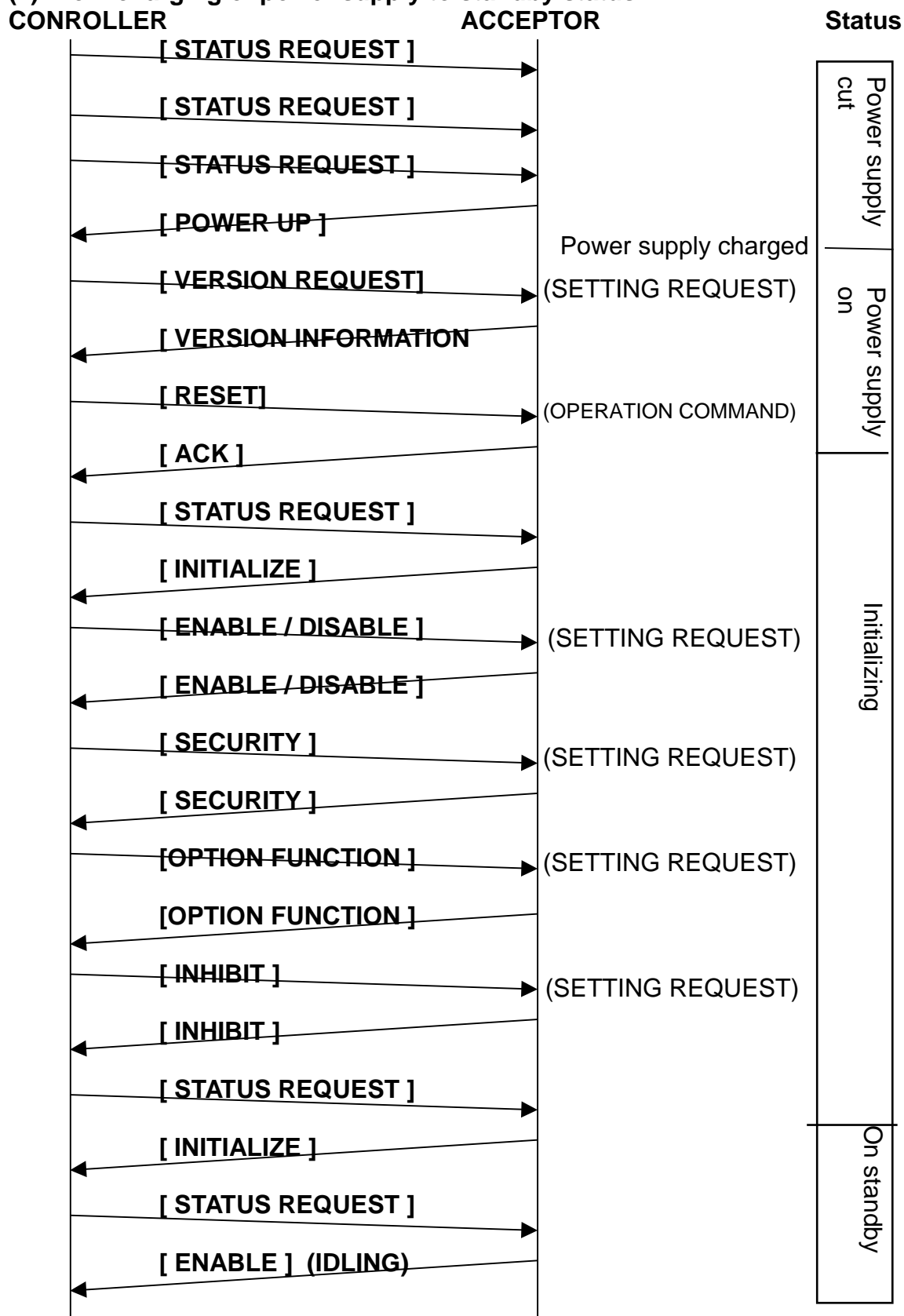
1 : disable (default : 00h)

#####				Item	Communication specification	Page	/ 32
③	/	/	6-7(7) Data Supplement			Person in charge	
②	/	/		Model No.	ID - 003	Takeda	
Amended ①	/	/		Drawing No.	840 - 00- 51		
JAPAN CASH MACHINE., LTD.						Date	08/07/96

7. Timing chart

7-1 POWER UP

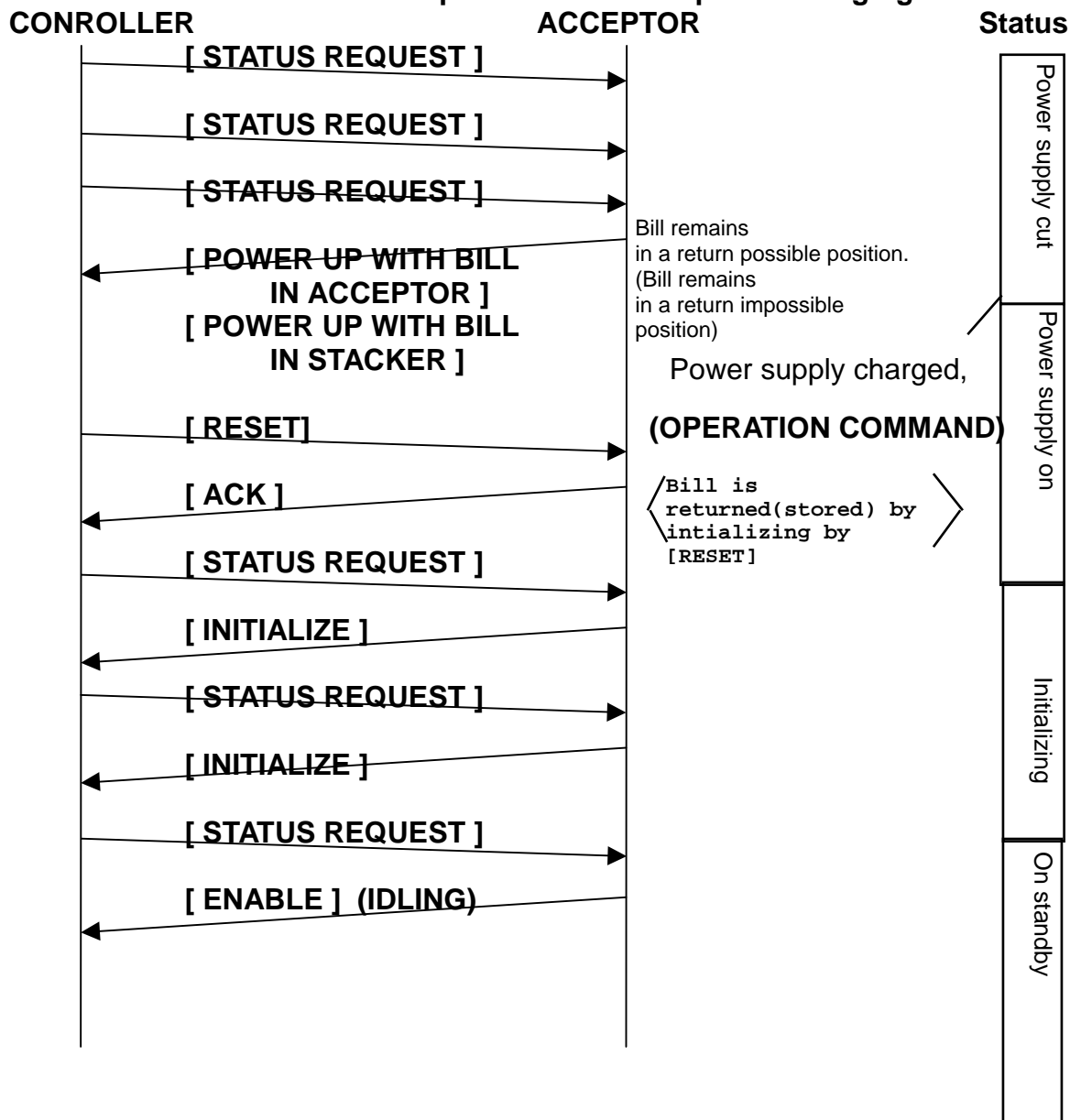
(1) From charging of power supply to standby status.



#####			Item	Communication specification	Page	22/32
3	/ /				Person in charge	
2	/ /		Model No.	ID - 003	Takeda	
Amended1	08/0796	7-1-(1) Commnd added	Drawing No.	840-00-51		
JAPAN CASH MACHINE CO., LTD.					Date	08/07/96

(2) From charging of power supply to standby status.

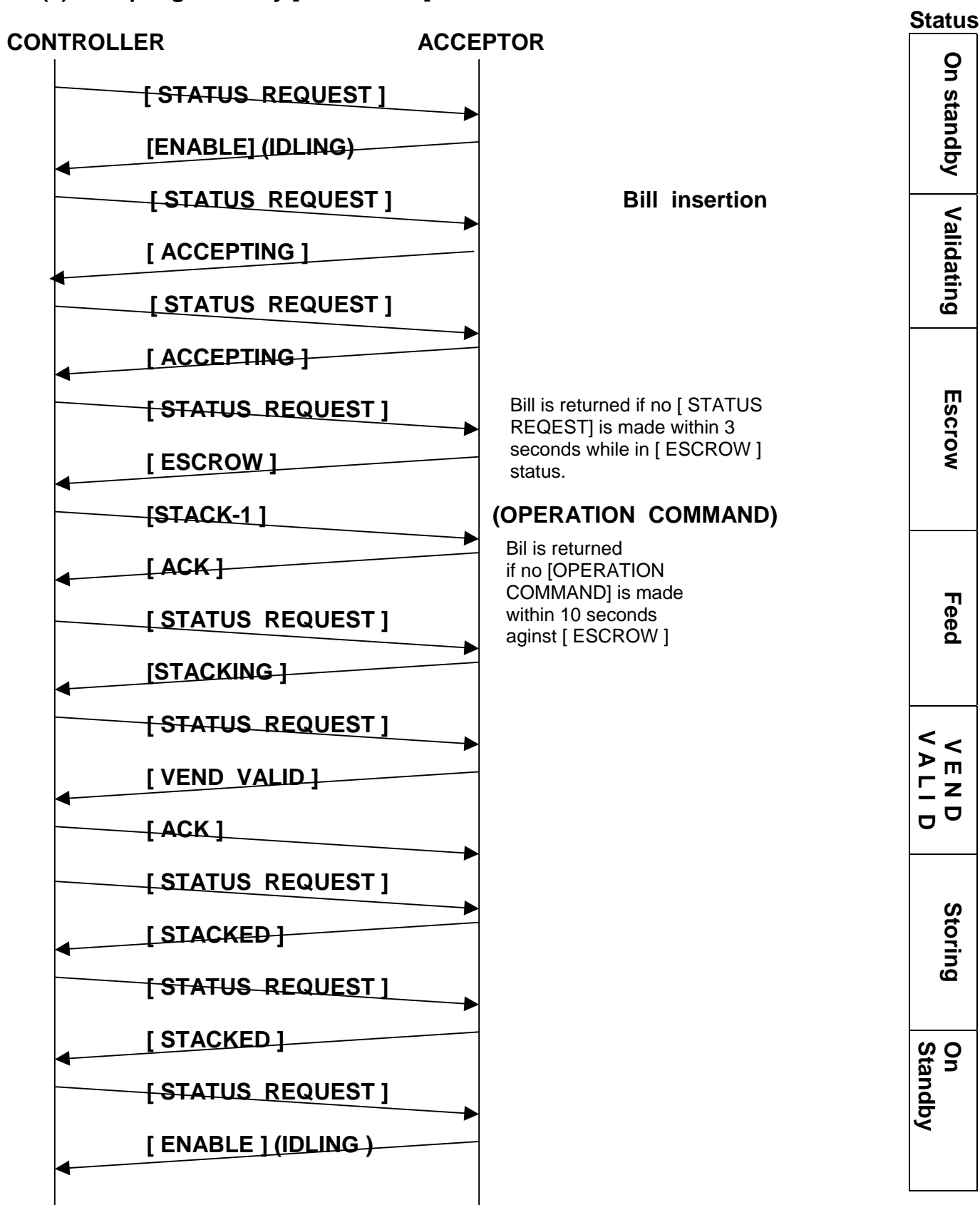
When bill remains inside the acceptor at the time of power charging



#####			Item	Communication specification	Page	23/32
3	/ /				Person in charge	
2	/ /		Model No.	ID - 003	Takeda	
Amended1	08/0796		Drawing No.	840-00-51		
JAPAN CASH MACHINE CO., LTD.					Date	08/07/96

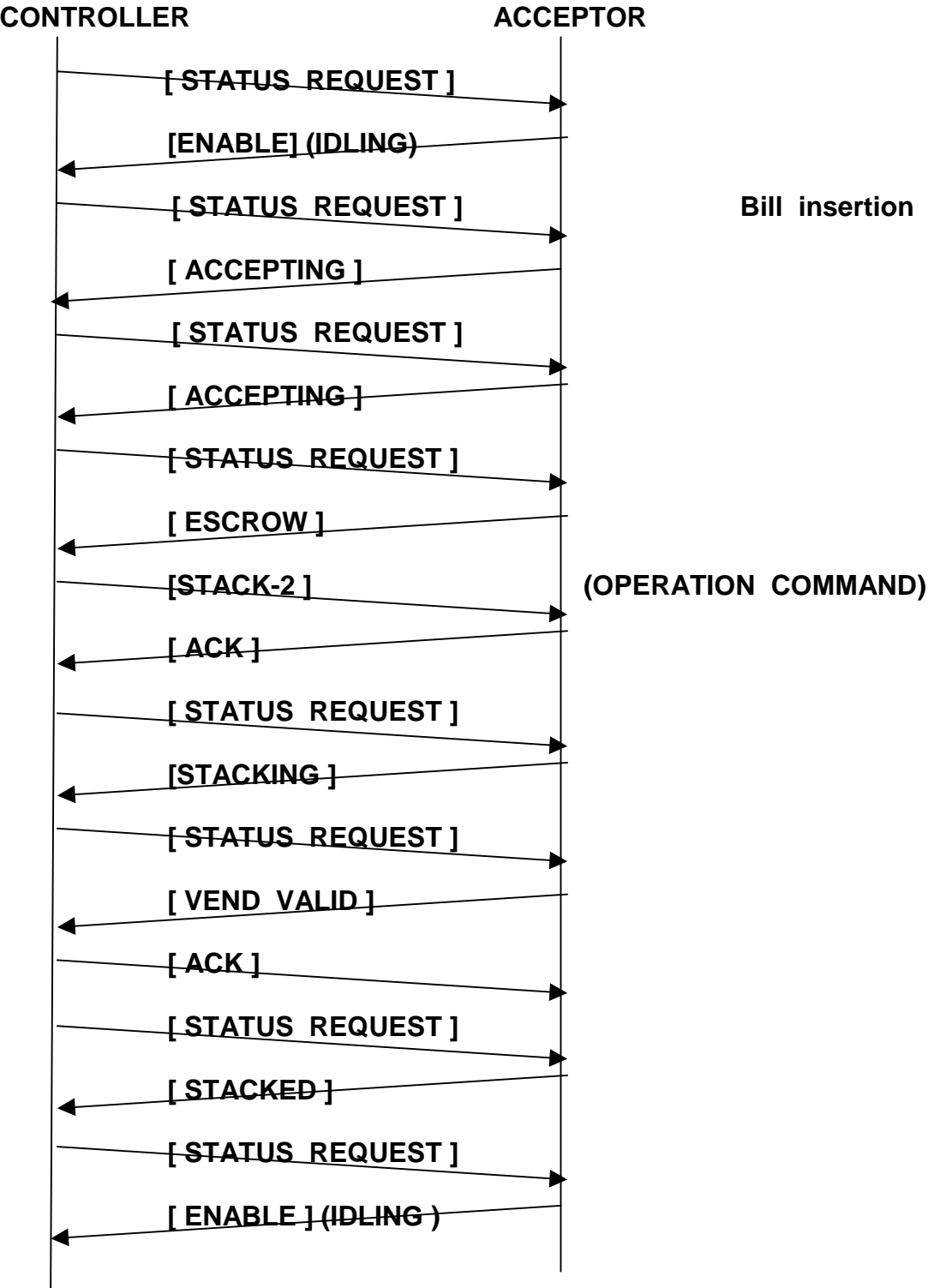
7-2 Accepting of bill

(1) Accepting of bill by [STACK - 1] command



#####			Item	Communication specification	Page	24 / 32
③	/	/			Person in charge	
②	/	/	Model No.	ID - 003	Takeda	
Amended ①	/	/	Drawing No.	840 - 00- 51		
JAPAN CASH MACHINE., LTD.					Date	08/07/96

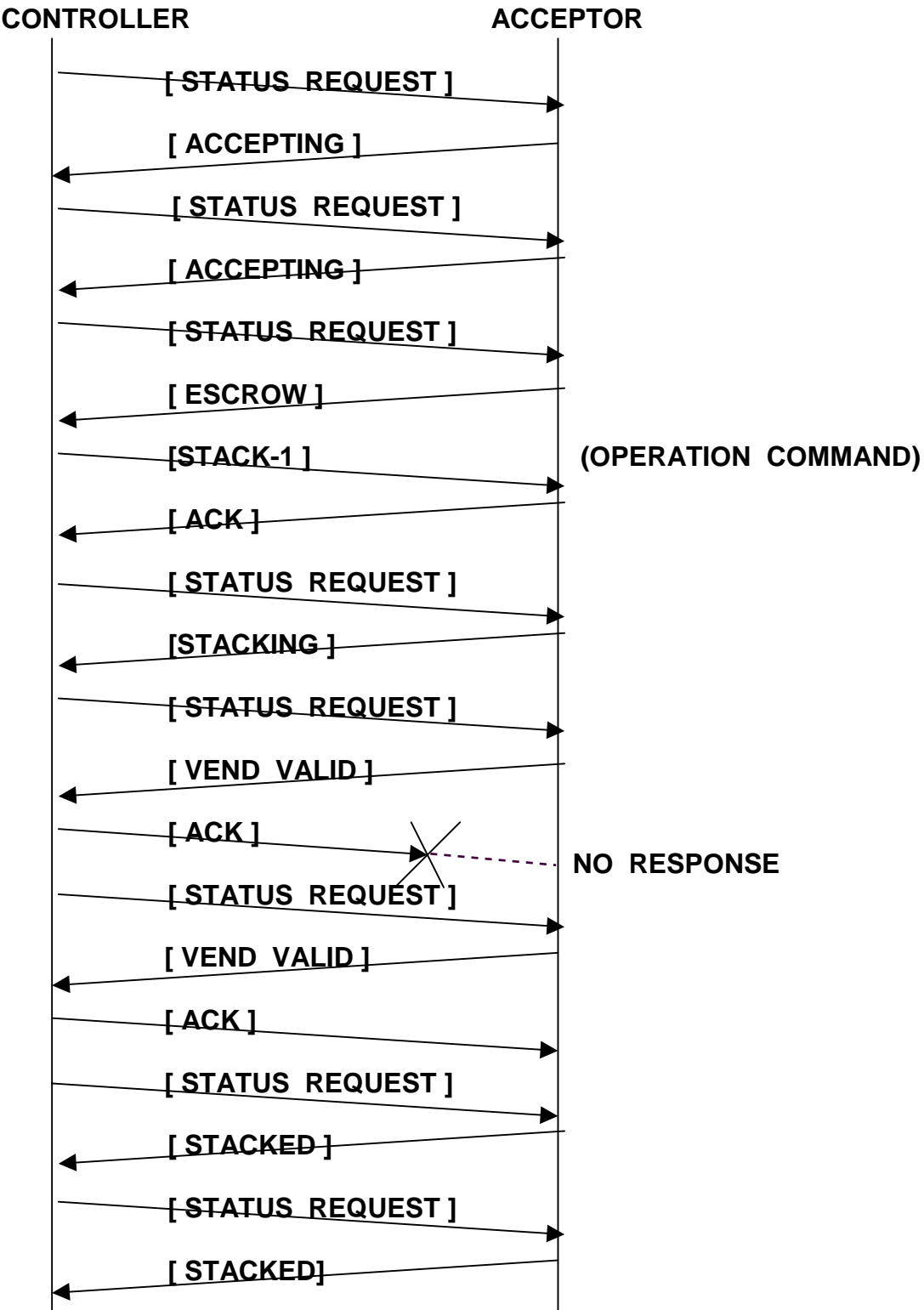
(2) Accepting of bill by [STACK - 2] command



On standby
Validating
Escrow
Feed
Storing
V E N D V A L I D
Storing
On Standby

#####			Item	Communication specification	Page	25 / 32
③	/	/			Person in charge	
②	/	/	Model No.	ID - 003	Takeda	
Amended ①	/	/	Drawing No.	840 - 00- 51		
JAPAN CASH MACHINE., LTD.					Date	08/07/96

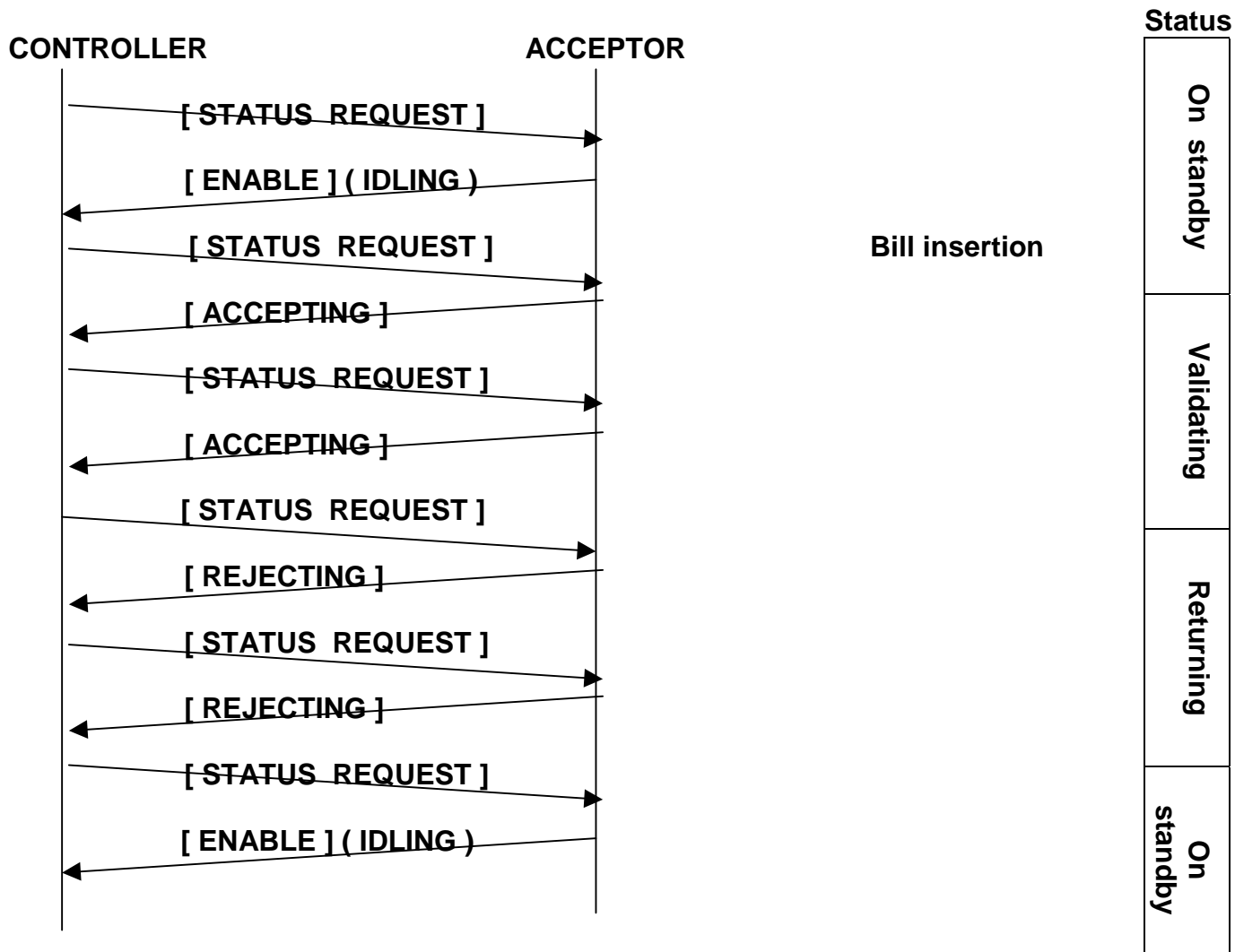
(3) Resending of [VEND VALID]



Validating
Escrow
Feed
VENDOR VALID
Storing

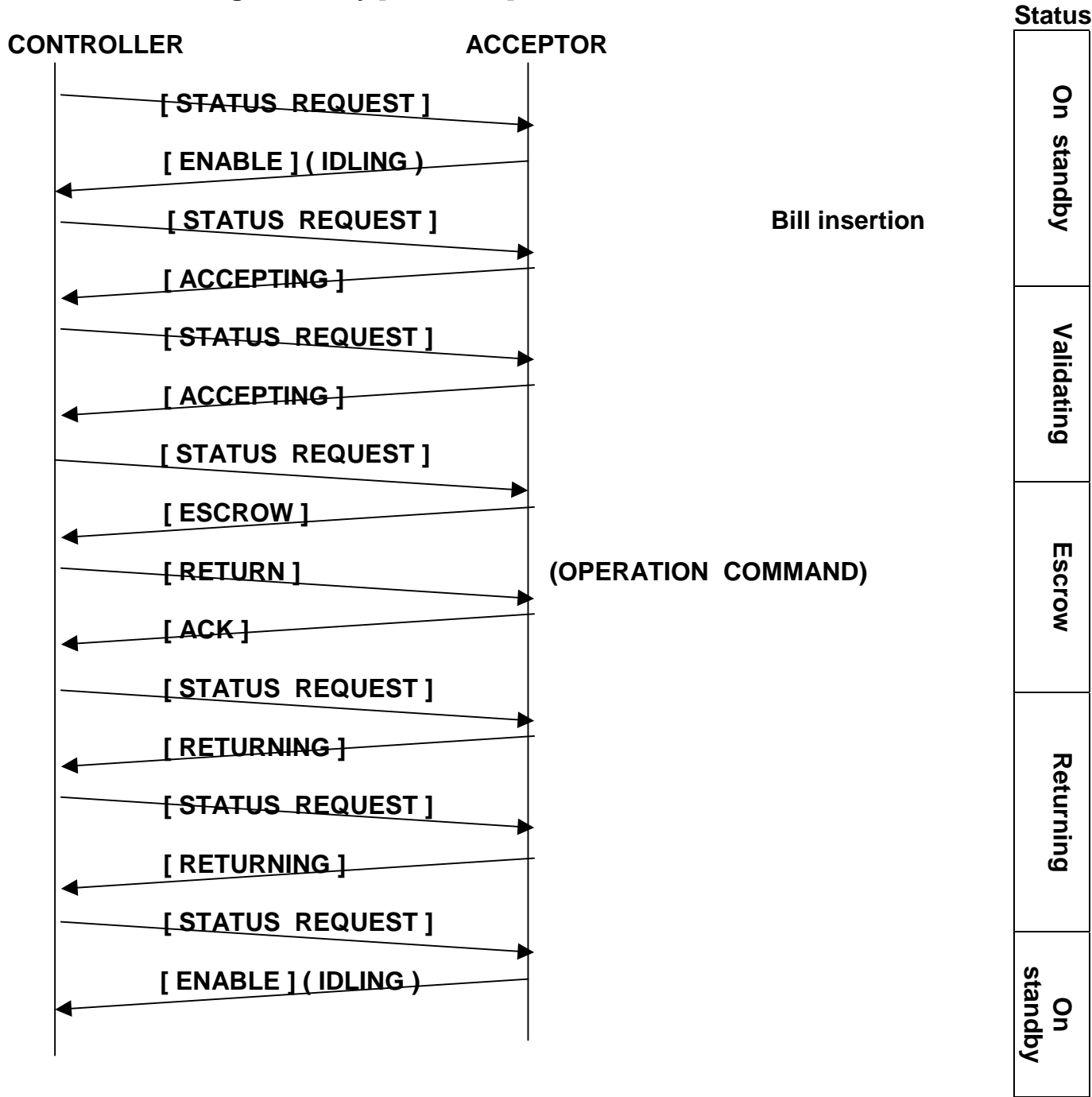
#####			Item	Communication specification	Page	26 / 32
③	/	/			Person in charge	
②	/	/	Model No.	ID - 003	Takeda	
Amended ①	/	/	Drawing No.	840 - 00- 51		
JAPAN CASH MACHINE., LTD.					Date	08/07/96

7 - 3 Return of bill by validating



#####			Item	Communication specification	Page	27 / 32
③	/	/			Person in charge	
②	/	/	Model No.	ID - 003	Takeda	
Amended ①	/	/	Drawing No.	840 - 00- 51		
JAPAN CASH MACHINE., LTD.					Date	08/07/96

7 - 4 Returning of bill by [RETURN] command

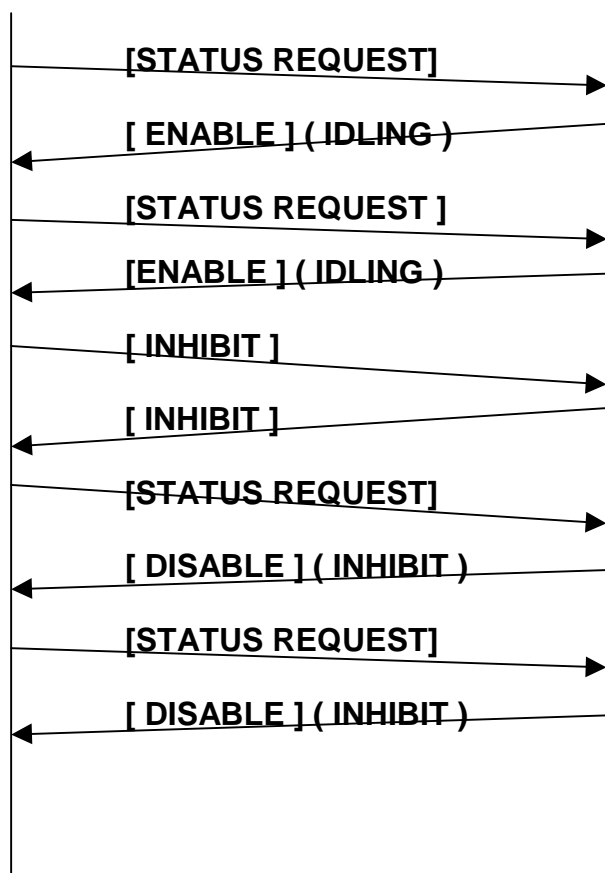


#####			Item	Communication specification	Page	28 / 32
③	/	/			Person in charge	
②	/	/	Model No.	ID - 003	Takeda	
Amended ①	/	/	Drawing No.	840 - 00- 51		
JAPAN CASH MACHINE., LTD.					Date	08/07/96

7- 5 Inhibit of accepting by ACCEPTOR

CONTROLLER

ACCEPTOR



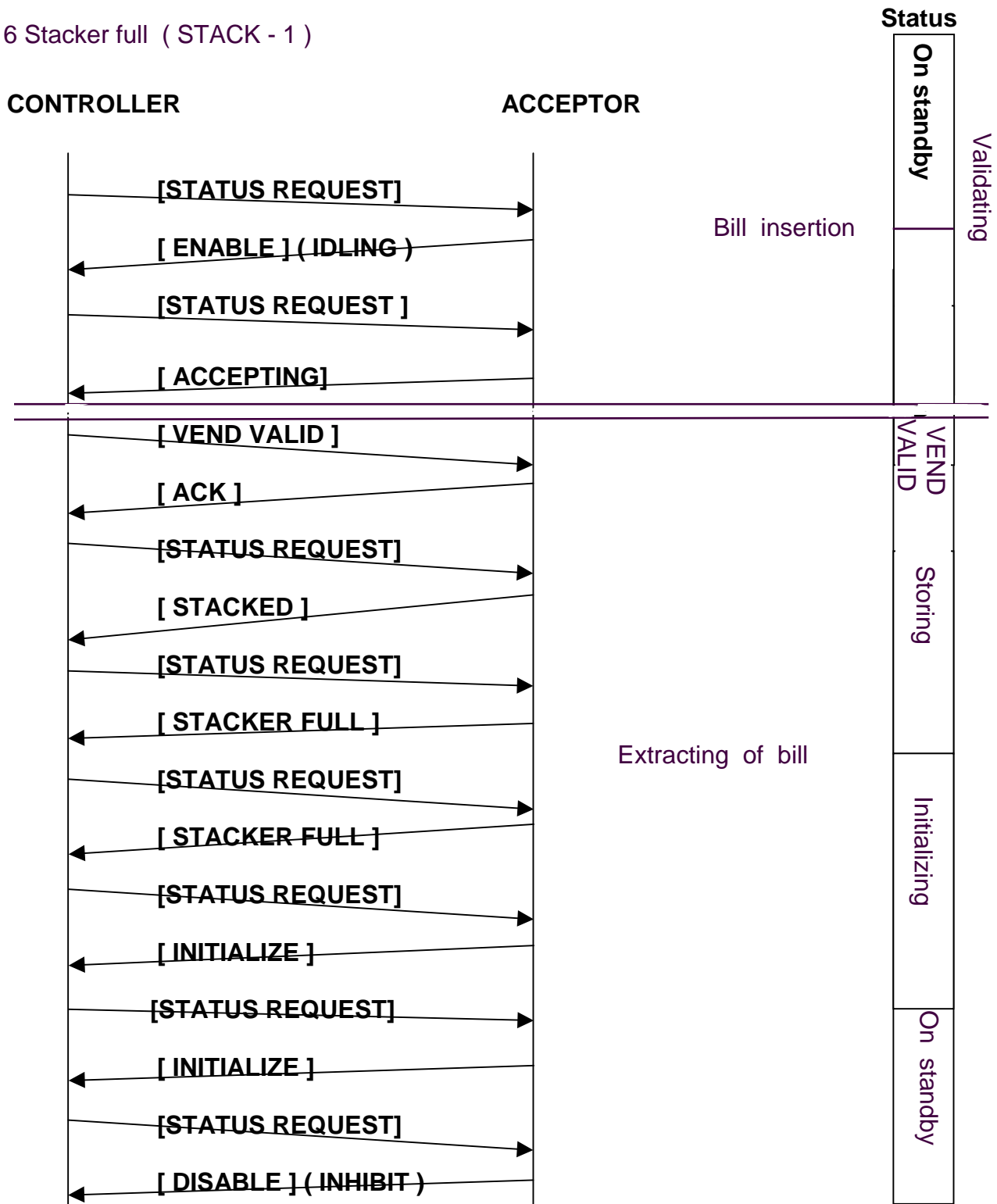
Status

On standby

inhibit

#####			Item	Communication specification	Page	29 / 32
③	/	/			Person in charge	
②	/	/	Model No.	ID - 003	Takeda	
Amended ①	/	/	Drawing No.	840 - 00 51		
JAPAN CASH MACHINE., LTD.					Date	08/07/96

7 - 6 Stacker full (STACK - 1)

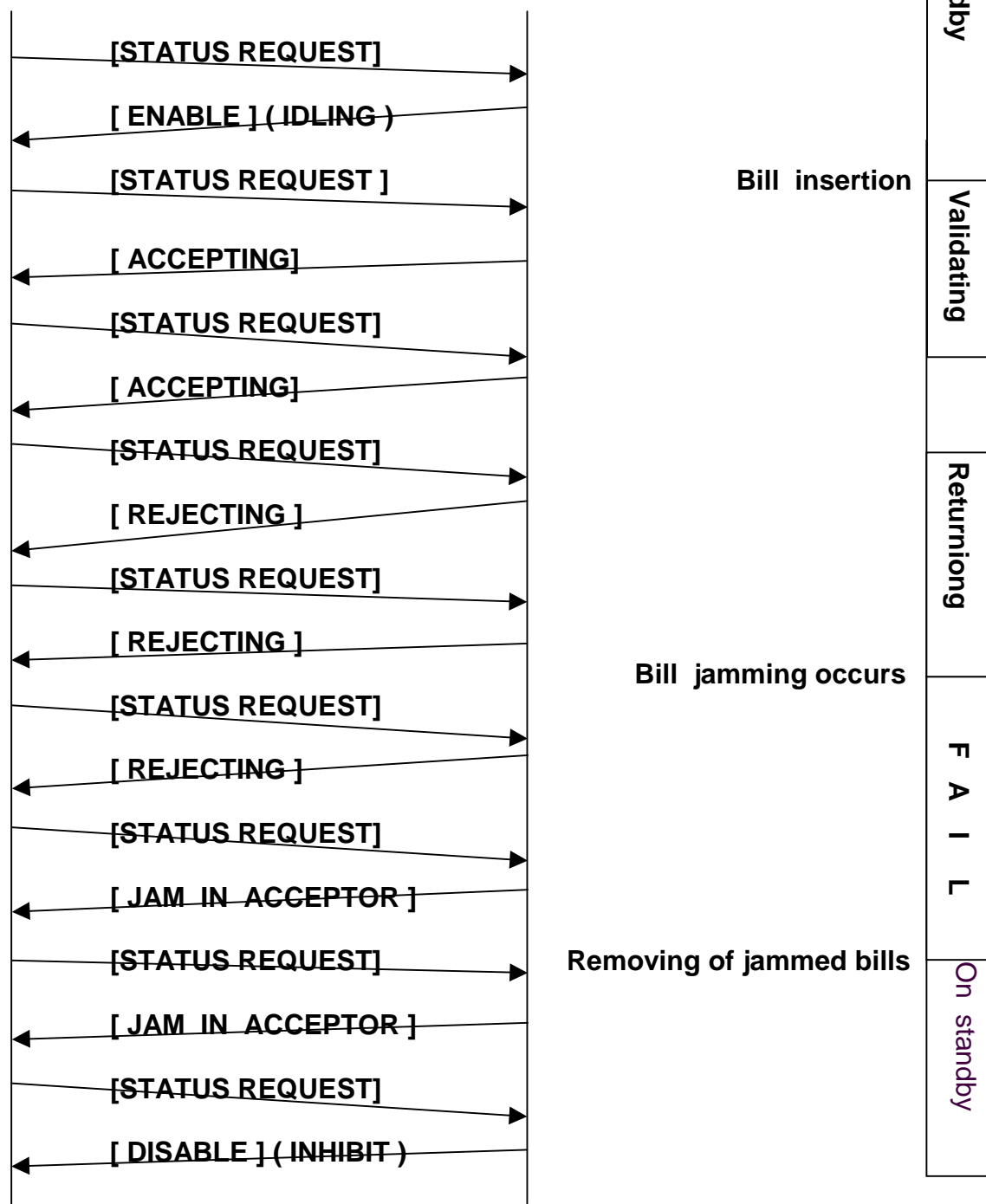


* Releasing method of [STACKER FULL] status differs by model.

#####			Item	Communication specification	Page	30 / 32
③	/ /	7-6 Supplement added, Erroneous entry corrected			Person in charge	
②	/ /		Model No.	ID - 003	Takeda	
Amended ①	/ /		Drawing No.	840 - 00 51		
JAPAN CASH MACHINE., LTD.					Date	08/07/96

Status

ACCEPTOR



#####			Item	Communication specification	Page	31 / 32
③	/ /				Person in charge	
②	/ /	7-7Erroneous entry corrected	Model No.	ID - 003	Takeda	
Amended ①	/ /		Drawing No.	840 - 00 51		
JAPAN CASH MACHINE., LTD.					Date	08/07/96

History of amendments

Edition	Date	Description of amendments
1	Jan. 16, 1996	First edition (attached data 1. Country code Table 1- 1)
2	Apr. 17, 1996	2(7), 6-2-1 (10, 6-6(1) supplement added. 6-7(1), 6-7(2) denomination "08" supplemented 6-7(5) check code by CRC supplemented, data length changed.
3	Aug. 7, 1996	Page amended 5, 6-5, 6-6(97), 7-1 (1) [OPTIONAL FUNCTION] command supplemented 6-7(7) [OPTIONAL FUNCTION DATA] supplemented 6-2-1 (3), 6-2-1 (7), 6-2-3, 6-3 (2), 6-7 supplement added. 6-5(3), 6-6(3), 6-6(4), 7-6, 7-7 erroneous entry corrected.

#####			Item	Communication specification	Page	32 / 32
③	/	/			Person in charge	
②	/	/	Amended, 3rd. edition	Model No.	ID - 003	Takeda
Amended ①	/	/		Drawing No.	840 - 00 51	
JAPAN CASH MACHINE., LTD.					Date	08/07/96