

EXHIBIT B

IC card reader/writer

M-660A

M-670A

M-680A

Operations Manual

HITACHI**Caution & Warning**

Failure to do the following may result in a decrease in performance of the apparatus, trouble, breakage, deformation, discoloring, electric shock, smoke, burning, or other dangers.

**Warning**

- ⊘ Do not disassemble or modify the product.
- ⊘ Do not insert alien substances such as an iron plate, a plastic, paper. Do not insert an IC card that is out of the standard.
- ⊘ While ACCESS LED turns on red, do not remove IC card and an AC adapter.
- ⊘ When an abnormal smell, emission of smoke, fire or sound is found, pull up a AC outlet immediately and do not use them.
- ⊘ The AC adapter must use exclusive use AC adapter of the attachment.

**Caution**

- Do not use this apparatus in moist or dusty environments.
- Do not leave this apparatus in high temperature or high humidity environments and do not exposed to direct sunlight.
- Do not drop the products from the desk, and do not apply a strong shock.
- Do not insert the IC card with oil or dust to a Reader/Writer.
- Do not insert IC card upside down, do not insert IC card revers direction, especially embossed card.
- Do not extend the cable.
- Please do not wipe it with benzene and thinner, alcohol.
- Please do not use IC card which puts the seal and the label, etc.

CHANGES OR MODIFICATION NOT EXPRESSLY APPROVED BY THE MANUFACTURER FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does not cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

CONTENTS

1.Introduction	1
2.Packing List	1
3.Names	2
4.Operation	3
5.General Specifications	5
6.Outer dimensions	6

1.Introduction

M - 660A(670A,680A) is interface device for organization of IC card system with connecting to external facilities such as PC by RS-232C interface.

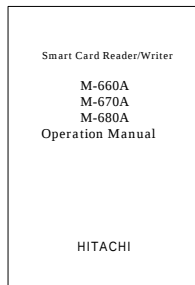
Before using this apparatus, read this manual and follow the instruction for proper operation.

2.Packing List

- 1)M-660A(or670Aor680A)the apparatus1
- 2)AC adapter1
- 3)Cable1
- 4)Operations manual1



M-660A(or 670A,680A)



Operations manual



AC adapter



Cable

3. Names

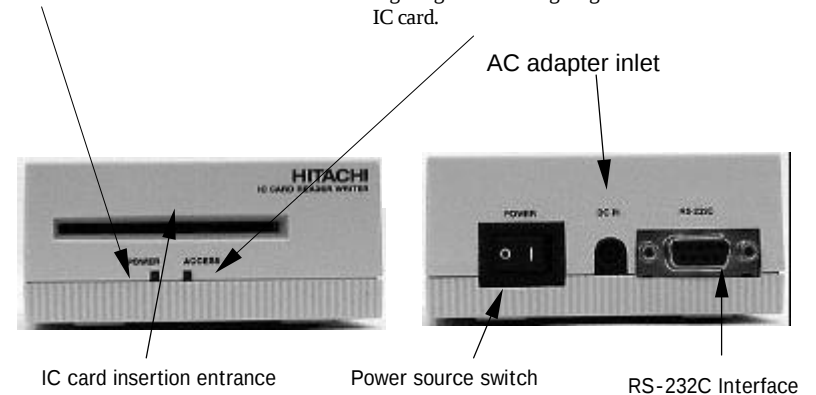
Names of each part are following.

POWER LED

Lighting while supplying the main body power supply

ACCESS LED

Lighting while energizing to IC card.

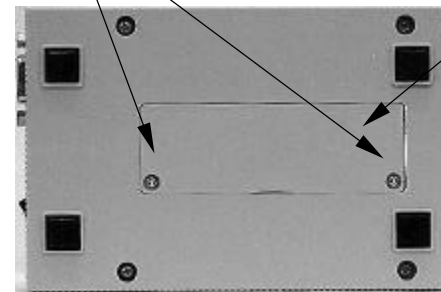


Screw for cover fixation

There is a SIM connector when this screw is removed.

SIM cover

(Only 670A and 680A are used.)



4.Operation

4.1 Connection

- 1)Connect the attached AC adapter to the “ DC IN ” of the back side of apparatus, make sure that “POWER” of the back side of the apparatus must be “ O ” .
- 2)Connect the attached RS-232C cable to “RS-232C” of back side of apparatus and serial interface of PC.

4.2 Power on (preparation of communication)

- 1)Set the “ POWER ” switch of back side of the apparatus to “ I ” side. Then, POWER LED light on. Preparation is finished.
If you put power on, when IC card is still inside, IC card will be ejected by automatic ejection. In that case remove IC card from the apparatus and power off. Power on again.

4.3 IC card insertion

Insert IC card with “ contact ” on the upper surface.
Since this apparatus is motor driven, if you insert IC card part of the way, it will be inserted automatically.
When the motor does not rotate, it is not ready, so do not insert IC card unreasonably.

4.4 Power off

After ejection of IC card, turn off the power switch. Power LED light off.

4.6 LED

- 1)The apparatus has 2 LED on the front. they have following functions.

POWER: Power source ON, OFF and error.

ACCESS: Communication with IC card.

- 2)LED status correspond to each indications.

NO	STATUS	POWER LED	ACCESS LED
1	Self check	●	●
2	LED test	○	○
3	Self check NG		
4	Power on	○	●
5	Accept card insertion	○	
6	Card activation OK	○	○
7	Card activation NG	○	
8	Card eject OK	○	●
9	Card jam		
10	Communication with IC card	○	○

0.5 sec

○ : on : blink ● : off

Note 1 : In case at error, LED keeps blink and partial command can be operated.

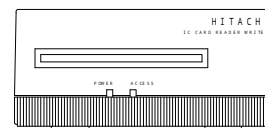
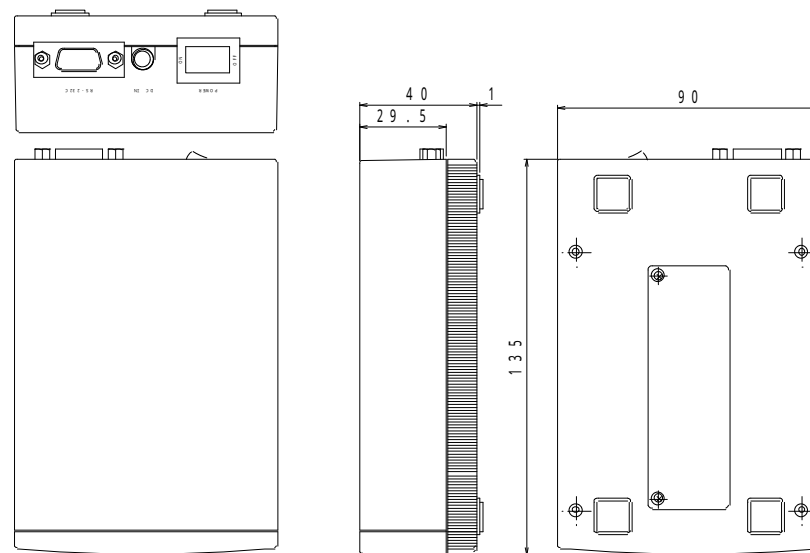
Note 2 : Jam can be solved after card ejection from the apparatus.

5. General Specifications

- | | |
|----------------------------|---|
| 1) Name | IC card Reader/Writer |
| 2) Model | M-660A, 670A, 680A |
| 3) Card insertion/ejection | Motor drive |
| 4) Acceptable IC card | IC card conforming to ISO7816 with "T=0", "T=1". Note : To Vpp control. The IC card must be warped or bent under 2mm. |
| 5) Host interface | Based on RS-232C interface, asynchronous |
| 6) Power supply | DC12V $\pm$ 10% 800mA Max. |
| 7) Durability | 250,000 passes |
| 8) Outer Dimensions | 90(W) $\times$ 135(L) $\times$ 41(H) (mm) |
| 9) Weight | About 260g |
| 10) Operating conditions | 0 ~ 40 30 ~ 85%RH (no condensation) |
| 11) Storage conditions | -10 ~ 50 30 ~ 90%RH (no condensation) |
| 12) AC Adapter | model: WL12100D (well electronics co., LTD)
(I/P: AC120V 60Hz 90mA, O/P: DC12V 1A) |

Note: Do not use in conditions in which condensation may form.
It may damage the drive.

6. Outer dimensions



Smart card Reader/Writer

M - 6 6 0 A Operations manual

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