

MR2000-2/MR2000-3/MR2000S-2/MR2000S-3/MR2000U-2/MR2000U-3

# MAGNETIC STRIPE READER

Rev.: B

## FEATURES:

- **Double or triple tracks** as indicated in MODEL IDENTIFICATION.
- Built-in **keyboard wedge** interface or **RS232** interface or **USB** interface as indicated in MODEL IDENTIFICATION.
- Built-in decoder
- Dual directional operation
- Interface cable included
- Heavy duty die-cast case

## SOME IMPORTANT NOTES:

### FCC NOTES

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with limits for a Class A digital device pursuant to subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures to correct the interference.

### WARRANTY LIMITS

Warranty will terminate automatically when the machine is opened by any person other than the authorized technicians. The user should consult his/her dealer for the problem happened. Warranty voids if the user does not follow the instructions in application of this merchandise. The manufacturer is by no means responsible for any damage or hazard caused by improper application.

The hardware utility program, including instructions for its use, is provided "AS IS" without warranty of any kind. Mustek Corp. further disclaims all implied warranties including without limitation any implied warranties of merchantability or of fitness for a particular purpose. The entire risk arising out of the use or performance of the software and documentation remains with you.

### ABOUT THIS MANUAL

This manual is written in an attempt with full strength to assist the user to utilize the stand-alone magnetic stripe reader MR2000 series of Posiflex POS products. This series of products provide excellent flexibility and reliability in application. This manual covers both operational and technical aspects of these units.

The manufacturer of the MR2000 series heartily apologizes to the user for reserving the right to change or to modify this manual without notice due to the rapid and constant progress and improvement on science and technology. The user may always obtain the most up to date information through our web site: <http://www.posiflex.com.tw> .

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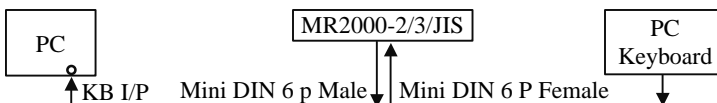
AN **ISO-9001** AND **ISO-14001** CERTIFIED MANUFACTURER

## MODEL IDENTIFICATION:

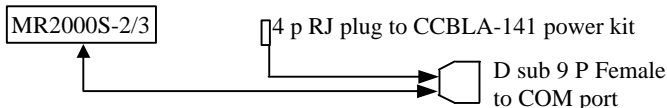
| MODEL NAME  | TRACKS APPLICABLE | INTERFACE    |
|-------------|-------------------|--------------|
| MR2000-2    | 1 & 2             | PS2 KB WEDGE |
| MR2000-3    | 1, 2 & 3          | PS2 KB WEDGE |
| MR2000-JIS  | JIS I + II        | PS2 KB WEDGE |
| MR2000S-2   | 1 & 2             | RS232        |
| MR2000S-3   | 1, 2 & 3          | RS232        |
| MR2000U-2   | 1 & 2             | USB          |
| MR2000U-3   | 1, 2 & 3          | USB          |
| MR2000U-JIS | JIS I + II        | USB          |

## SPECIFICATIONS:

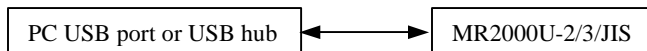
- Dimensions: 14.5 cm (L) X 3.7 cm (W) X 3.4 cm (H)
- Weight: 490 gm
- Rated voltage: 5 VDC
- Rated current: 100 mA max.
- LED: dual color -- green for good read or ready to read  
red for invalid read
- Cable connection for KB WEDGE models (MR2000-2/3/JIS)



- Cable connection for RS232 interface models (MR2000S-2/3)



- Cable connection for USB interface models (MR2000U-2/3/JIS)



- Reader specification

| Applicable card type  | ISO 7811            | JIS X 6302         |
|-----------------------|---------------------|--------------------|
| Card feed method      | Manual              |                    |
| Card feed direction   | Bi-direction        |                    |
| Read / write function | Read only           |                    |
| Card feed speed       | 5 to 55 inches/sec. | 100 ~ 1200 mm/sec. |
| Error rate            | Less than 0.5%      | Less than 0.1%     |

● **Card data format**

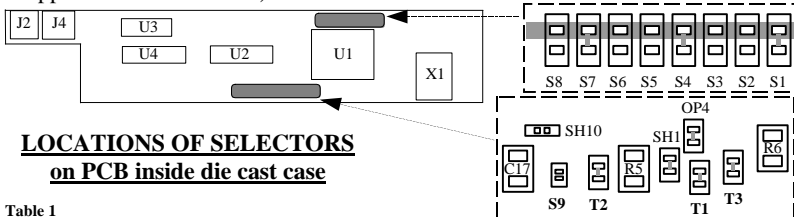
| Data standard                        | IATA                                     | ABA     | THRIFT                             | JIS I                     | JIS II    |
|--------------------------------------|--|---------|------------------------------------|---------------------------|-----------|
| Track used                           | Track 1                                  | Track 2 | Track 3                            | (Track 2)                 | Rear side |
| Applicable to models                 | MR2000-2/3<br>MR2000S-2/3<br>MR2000U-2/3 |         | MR2000-3<br>MR2000S-3<br>MR2000U-3 | MR2000-JIS<br>MR2000U-JIS |           |
| Recording method                     | F <sup>2</sup> F (FM)                    |         |                                    |                           |           |
| Recording density                    | 210 BPI                                  | 75 BPI  | 210 BPI                            | 75 BPI                    | 210 BPI   |
| Recording capacity characters / bits | 79 / 7                                   | 40 / 5  | 107 / 5                            | 40 / 5                    | 72 / 7    |

**Note:** Data format for track 3 of ISO cards includes those specific in AAMVA and CA DMV standards

● **Adjustable parameters:**

✓ **For MR2000-2/3 and MR2000S-2/3:**

Changing the status of each selector in the 2 dotted areas that are the enlarged images of the shaded areas on the control PCB determines parameters illustrated in following 2 tables. (S1 ~ S6 apply to MR2000S-2/3 only) (T3 applies to MR2000-3 and MR2000S-3 only) (for MR2000-2/3, software control is applicable and available)



**LOCATIONS OF SELECTORS**  
**on PCB inside die cast case**

Table 1

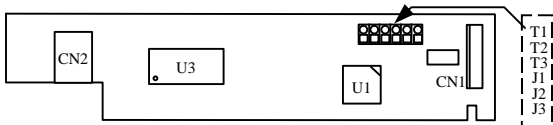
| SELECTION & FUNCTION | PARITY CHECK | PARITY | DATA BITS | ALT + NUM | LEADING & STOP CODE | TRACK 1  | TRACK 2  | TRACK 3  |
|----------------------|--------------|--------|-----------|-----------|---------------------|----------|----------|----------|
|                      | S4           | S5     | S6        | S7        | S9                  | T1       | T2       | T3       |
| <b>SHORT</b>         | OFF          | EVEN   | 7         | NO        | OFF                 | ENABLED  | ENABLED  | ENABLED  |
| <b>OPEN</b>          | ON           | ODD    | 8         | YES       | ON                  | DISABLED | DISABLED | DISABLED |
| <b>DEFAULT</b>       | SHORT        | OPEN   | OPEN      | SHORT     | OPEN                | SHORT    | SHORT    | SHORT    |

Table 2

| DEFAULT    | BPS       |       |      |      |      |      |     |     |     |
|------------|-----------|-------|------|------|------|------|-----|-----|-----|
|            | SELECT    | 19200 | 9600 | 4800 | 2400 | 1200 | 600 | 300 | 150 |
| <b>ON</b>  | <b>S1</b> | OFF   | ON   | OFF  | ON   | OFF  | ON  | OFF | ON  |
| <b>OFF</b> | <b>S2</b> | OFF   | OFF  | ON   | ON   | OFF  | OFF | ON  | ON  |
| <b>OFF</b> | <b>S3</b> | OFF   | OFF  | OFF  | OFF  | ON   | ON  | ON  | ON  |

✓ **For MR2000U-2/3**

Changing the jumper status indicated on the control PCB inside die cast case determines parameters illustrated in the table below. (for MR2000U-JIS, only J3 is applicable) (for MR2000U-2, T3 is not applicable)



| JUMPER FUNCTION STATUS | T1 TRACK 1 | T2 TRACK 2 | T3 TRACK 3 | J1 LEADING / STOP CODE | J2 RESERVED | J3 CARD TYPE |
|------------------------|------------|------------|------------|------------------------|-------------|--------------|
| SHORT                  | ENABLED    | ENABLED    | ENABLED    | DISABLED               | N.A.        | JIS II       |
| OPEN                   | DISABLED   | DISABLED   | DISABLED   | ENABLED                | N.A.        | ISO          |
| DEFAULT                | SHORT      | SHORT      | SHORT      | OPEN                   | OPEN        | OPEN         |

**Note 1:** To use the USB interface MSR in operating system without USB support, please set USB keyboard enabled in BIOS (CMOS) setup.

**Note 2:** Since this USB interface MSR works as a USB keyboard which is a normal HID (Human Interface Devices) in USB classification, no special driver shall be required.

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