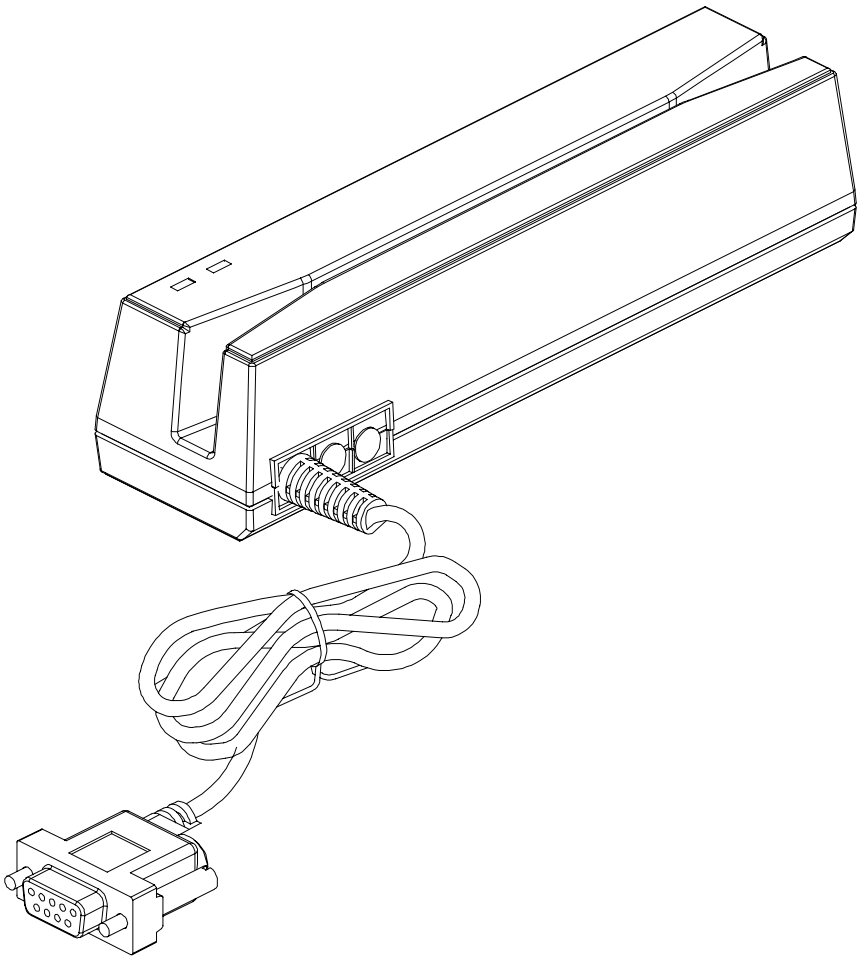
MSR 400 Series



Magnetic card reader
User's Manual

Contents

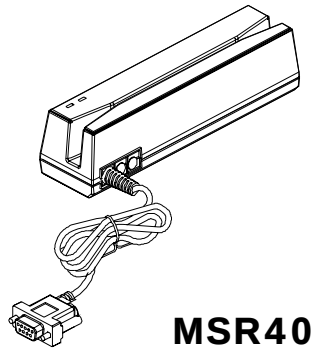
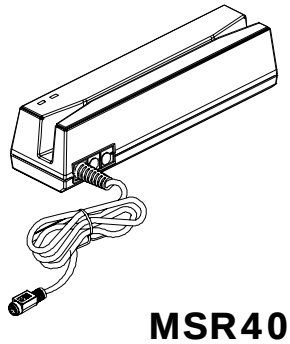
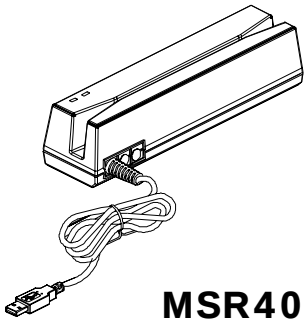
FCC COMPLIANCE STATEMENT

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

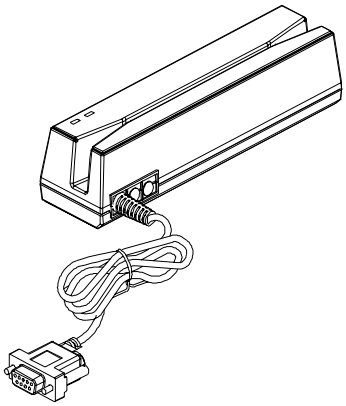
NOTE : The specification is subject to change without notice.

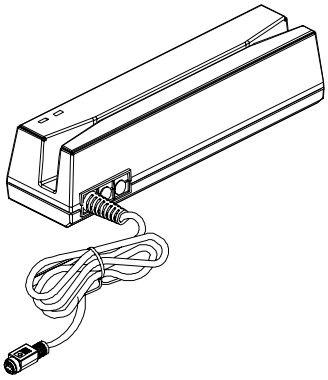
Information

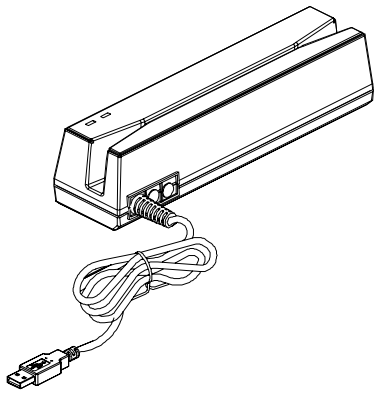
MSR400 Series Magnetic Swipe Reader

MACHINE TYPE	FUNCTION
 **MSR400R-00**	MC 123 · JIS 123 · BEEP · RS-232
 **MSR400K-00**	MC 123 · JIS 123 · BEEP · KEYBOARD
 **MSR400U-00**	MC 123 · JIS 123 · BEEP · HID
Option Function	IBM 123 · USB · AAMVA 123 · iBUTTON

■ Standard Package

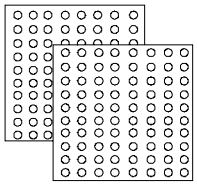




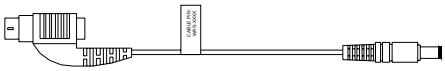


Main unit
(MSR400R/MSR400K/MSR400U)

Software Disk
(DISK5296)

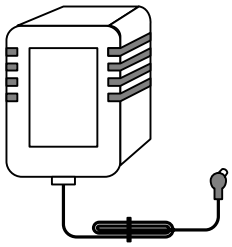


Velcro Pack
(M09-P601-036)
(M09-P602-036)



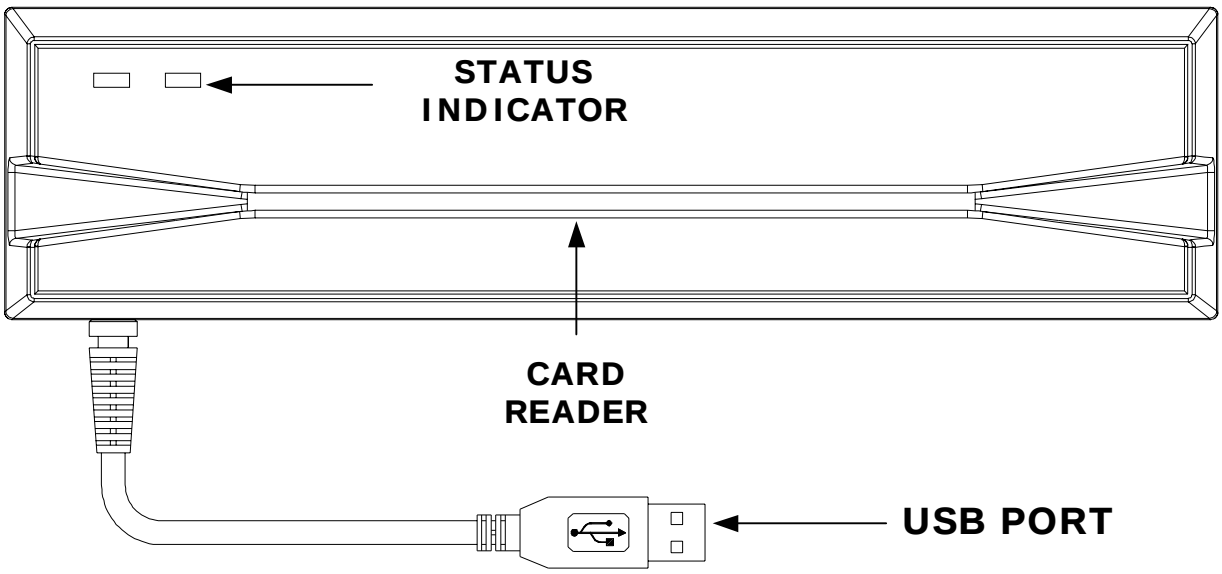
WAS-1536
(only for MSR400R)

■ Optional



Power Adaptor
DC5V/120VAC (APR-1024)
or DC5V/230VAC (APR-1010)

Technical And Operational Description



- **CARD READER**
  Swipe the card through the entire length of the slot to read.

- **ERROR INDICATOR (Red color)**
  When encountering erroneous input, defective card, misread, or incorrectly encoded data, the device will turn on the ERROR indicator .

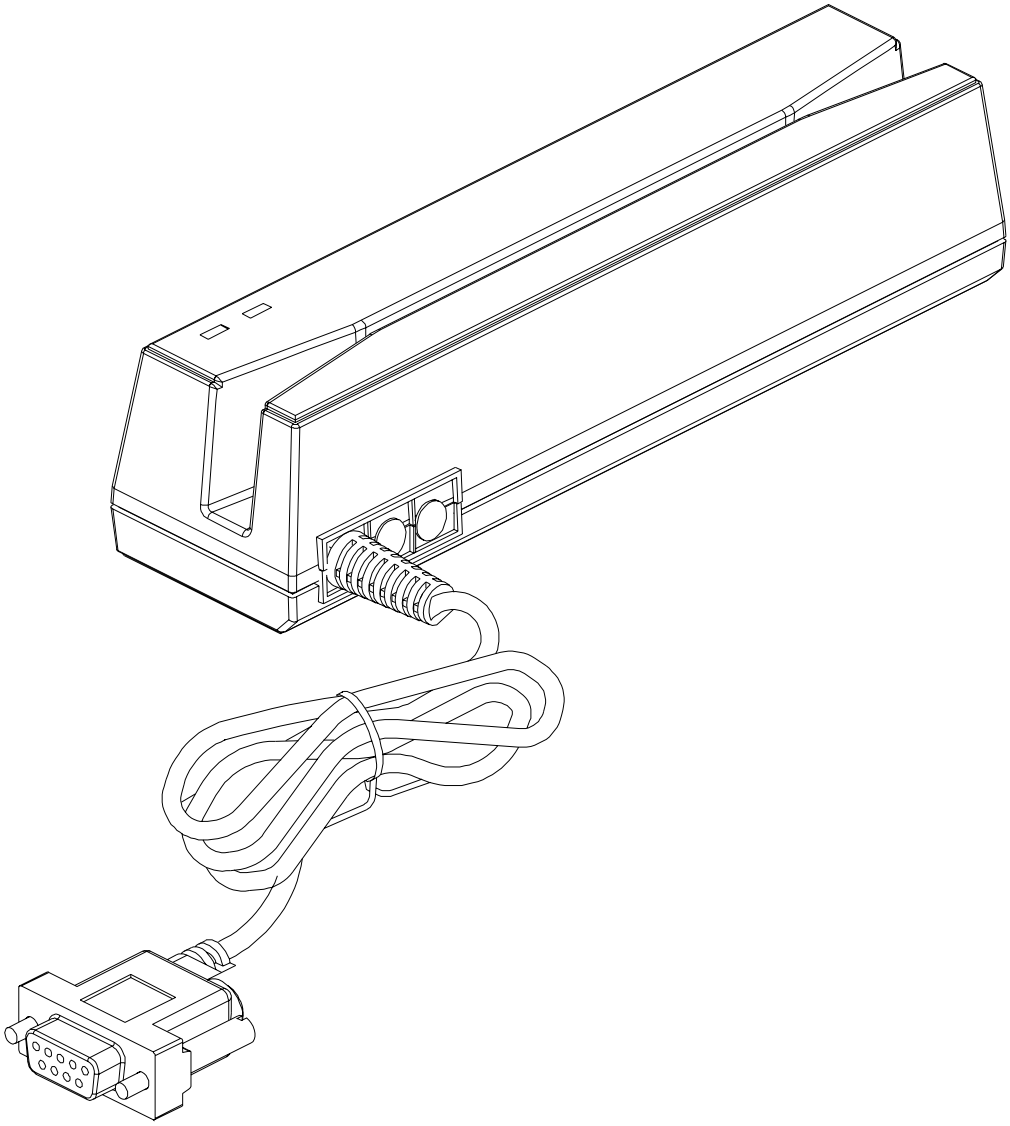
- **READY INDICATOR (Green color)**
  Indicating the reader is ready to accept new inputs.

■ Display Information

STATUS	GREEN LED	RED LED	BUZZER	READ CARD
POWER ON	BLINK 2 TIMES	BLINK 2 TIMES	Be-Bu-Be-Bu	X
READY	ON	OFF	X	O
READ OK	BLINK 1 TIME	OFF	Be	X
READ ERROR	OFF	ON	Be-Bu-Bu	X

Connections

MSR400R

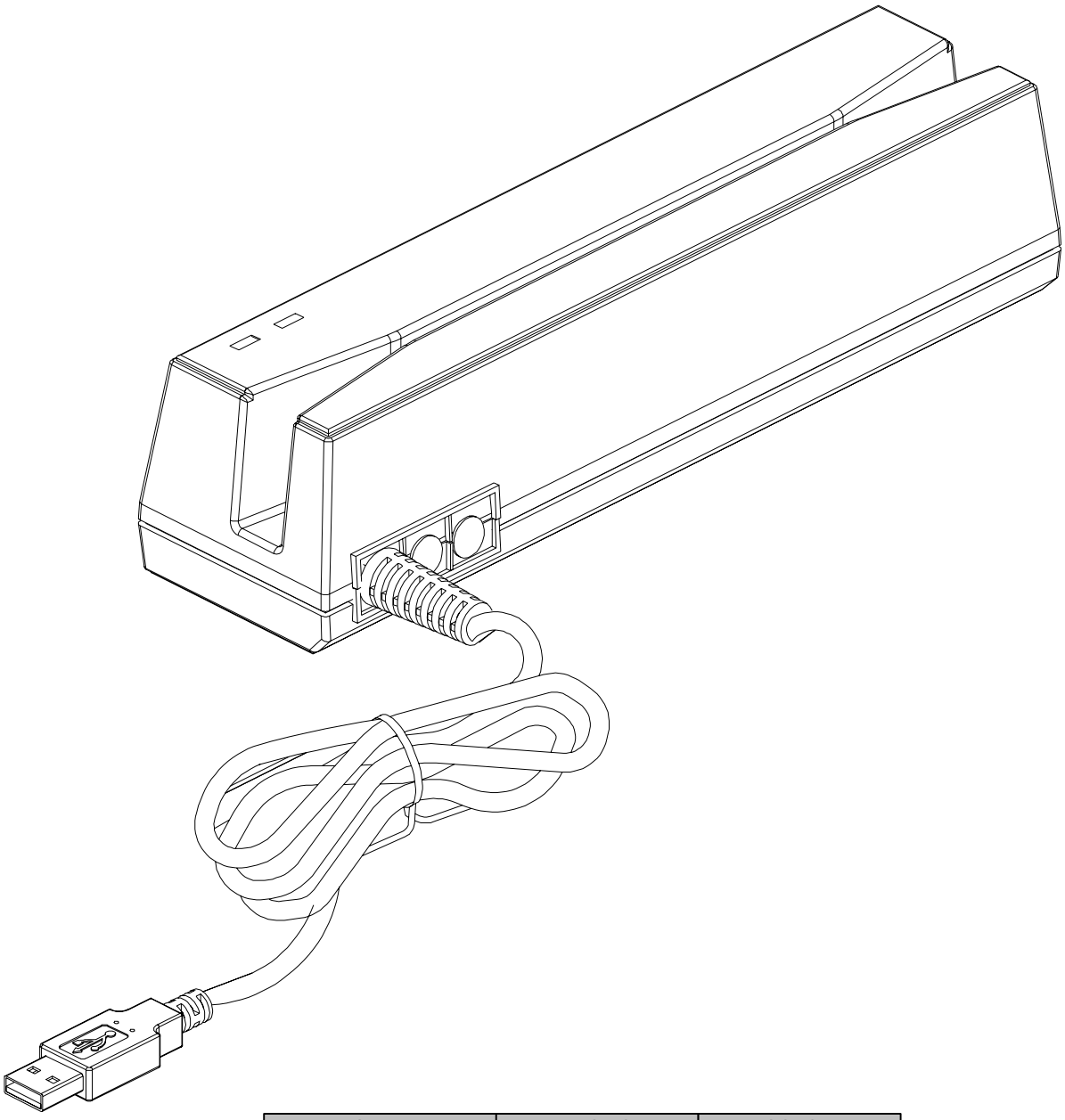


DSB 9P FEMALE PIN *	FUNCTION	COLOR
8	RTS	BLUE
7	CTS	PURPLE
3	RX	YELLOW
2	TX	WHITE
5	GND	BLACK
DC JACK	VCC	RED

MSR400U

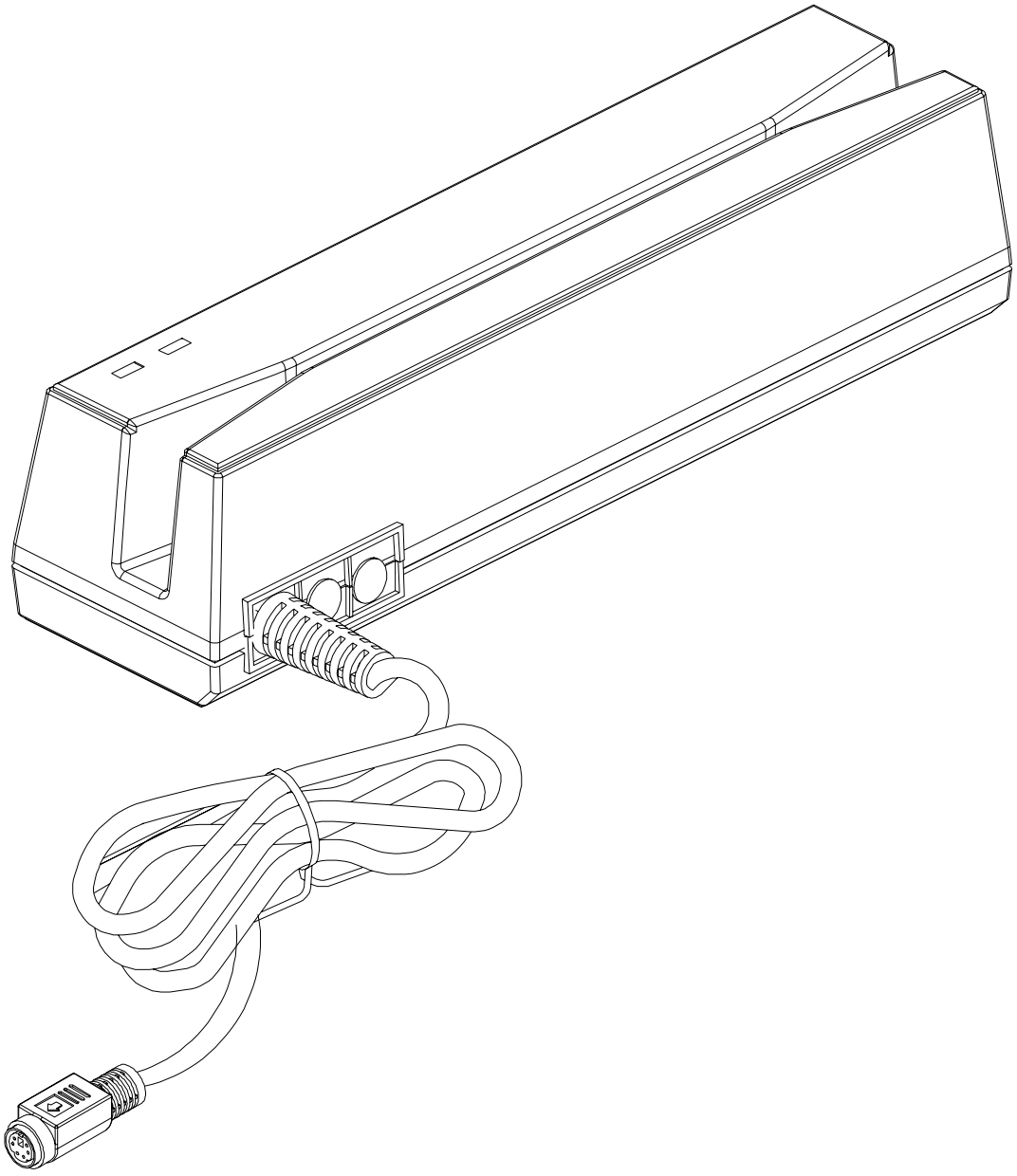
USB Human Interface Device (HID)

Universal Serial Bus (USB)



USB PIN	FUNCTION	COLOR
4	GND	BLACK
3	D+	GREEN
2	D-	WHITE
1	VCC	RED

MSR400K



PS/2 MALE PIN	FUNCTION	COLOR	PS/2 FEMALE PIN	FUNCTION	COLOR
1	PC_DATA	WHITE	1	KB_DATA	BLUE
2	---	---	2	---	X
3	GND	RED	3	GND	RED
4	VCC	YELLOW	4	VCC	YELLOW
5	PC_CLK	BLACK	5	KB_CLK	PURPLE
6	---	---	6	----	YELLOW

Card Data Format

CARD DATA STRING

TRACK 1	TRACK 2	TRACK 3

SS	*TRACK1 DATA*	ES	SS	*TRACK2 DATA*	ES	SS	*TRACK3 DATA*	ES

%	*TRACK1 DATA*	?	;	*TRACK2 DATA*	?	+	*TRACK3 DATA*	?

TRACK 1

%	CARD ID	?

1. SS is the start sentinel (%).
2. ES is the end sentinel (?).
3. Card Id up to 76 alphanumeric data characters.

Track 1 IATA	
Bits Per Inch	210
Bits Per Character	7
Alphanumeric Characters	79

TRACK 2

;	CARD ID	?

1. SS is the start sentinel (;).
2. ES is the end sentinel (?).
3. Card Id up to 37 numeric data characters.

Track 2 ABA	
Bits Per Inch	75
Bits Per Character	5
Numeric Characters	40

TRACK 3

+	CARD ID	?

1. SS is the start sentinel (+).
2. ES is the end sentinel (?).
3. Card Id up to 104 numeric data characters.

Track 3 Thrift	
Bits Per Inch	210
Bits Per Character	5
Numeric Characters	107

Note: Track 3 can read both ISO TK3 format and ISO TK1 format.

■ Option

iBUTTON DATA STRING:

STATUS	DS1990A 48-Bit Serial Number

STATUS

61 : iButton Press
75 : iButton Release

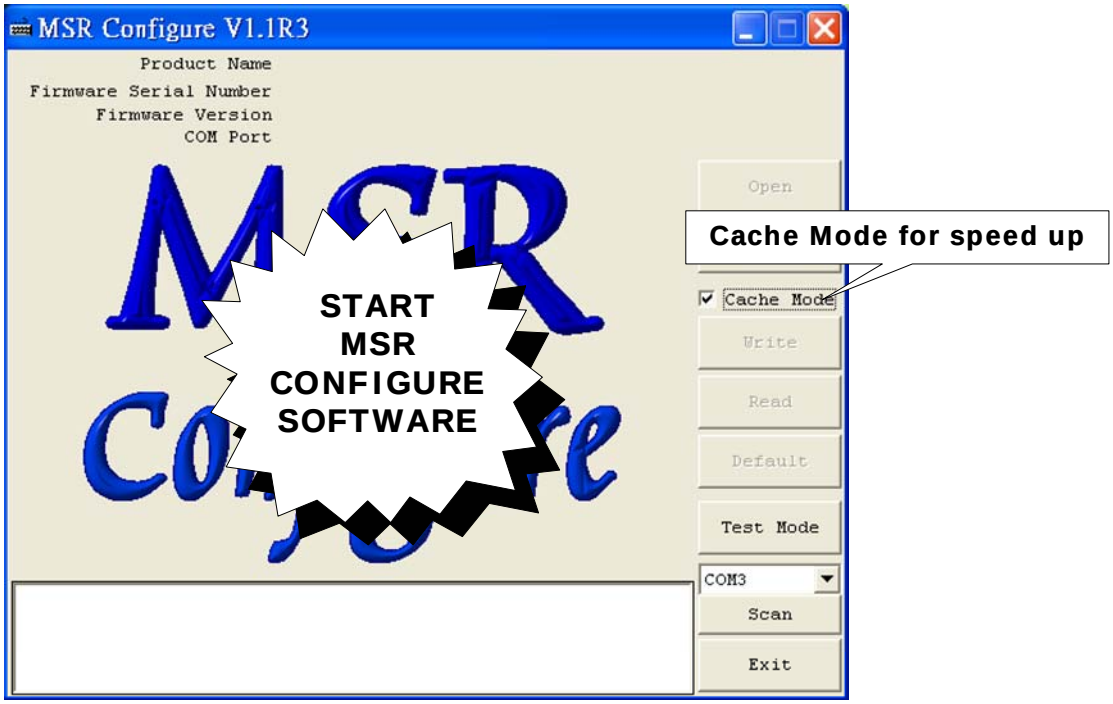
a	@	**DS1990A 48-Bit Serial Number**	**?**

u	@	**DS1990A 48-Bit Serial Number**	**?**

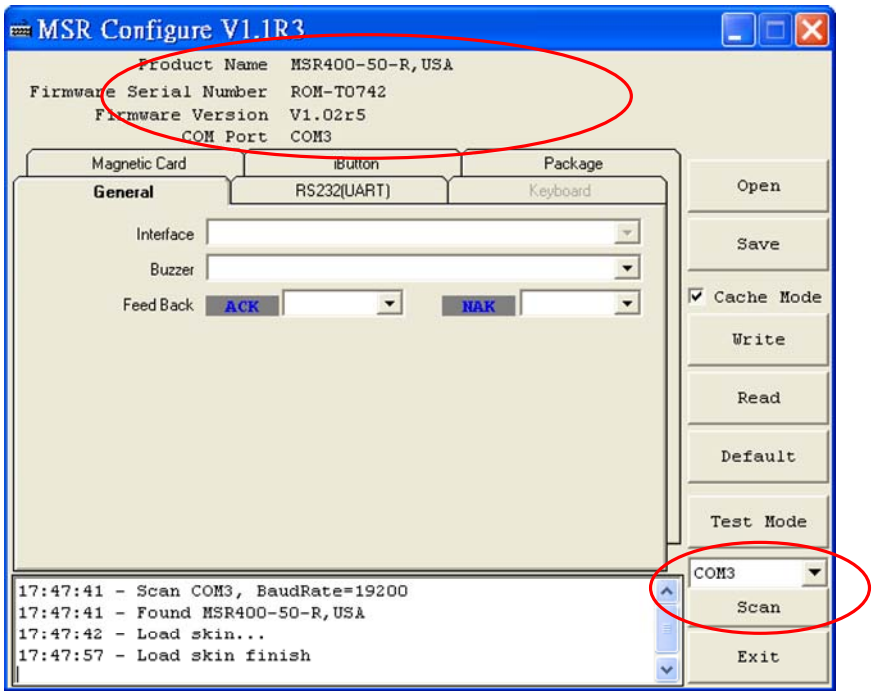
Demo Software

Apply the bundled disk no. 5296 to begin with the demo software.

STEP 1 : Run MSR Configure



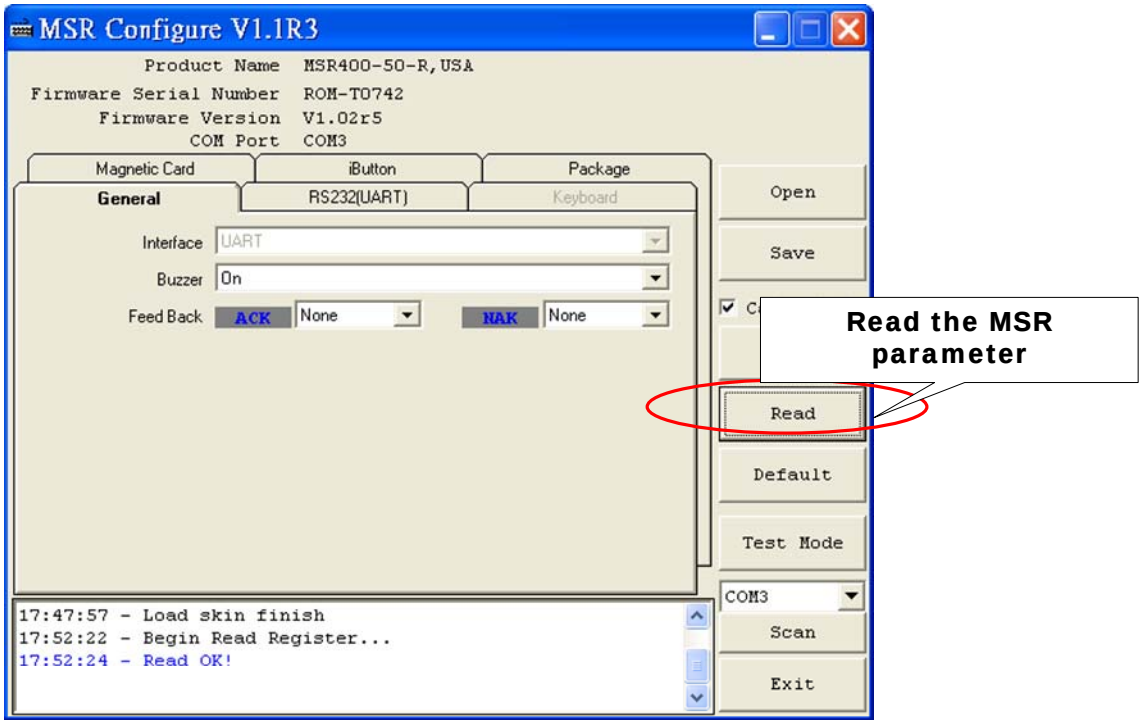
STEP 2 : Choose PS/2 or COM port and press “Scan” ,connect the MSR400 reader.



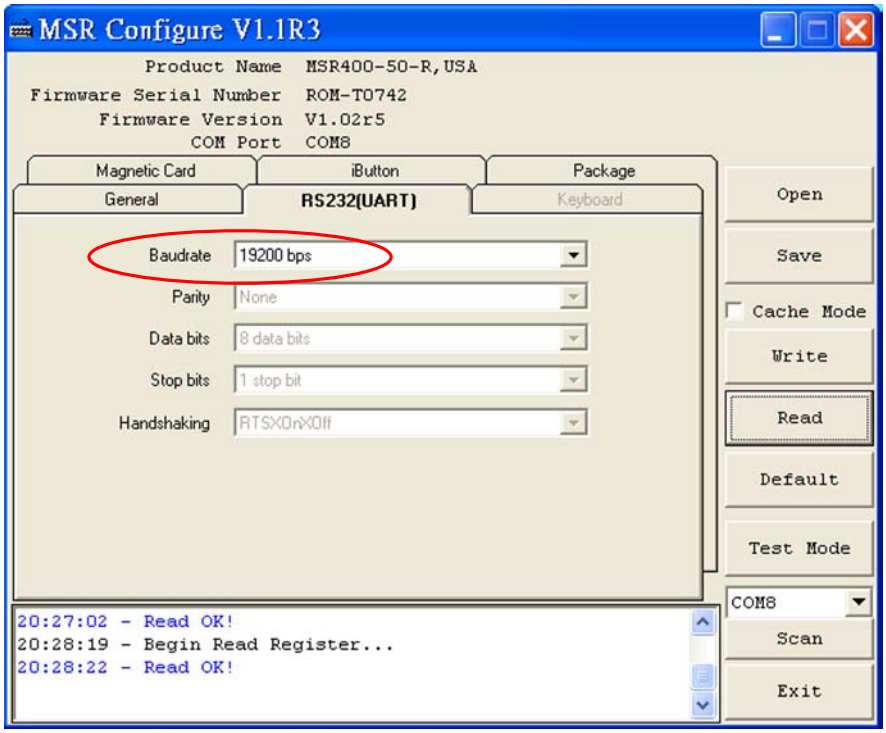
STEP3 : Click “Read” ,scan the MSR400 reader parameter.

General :

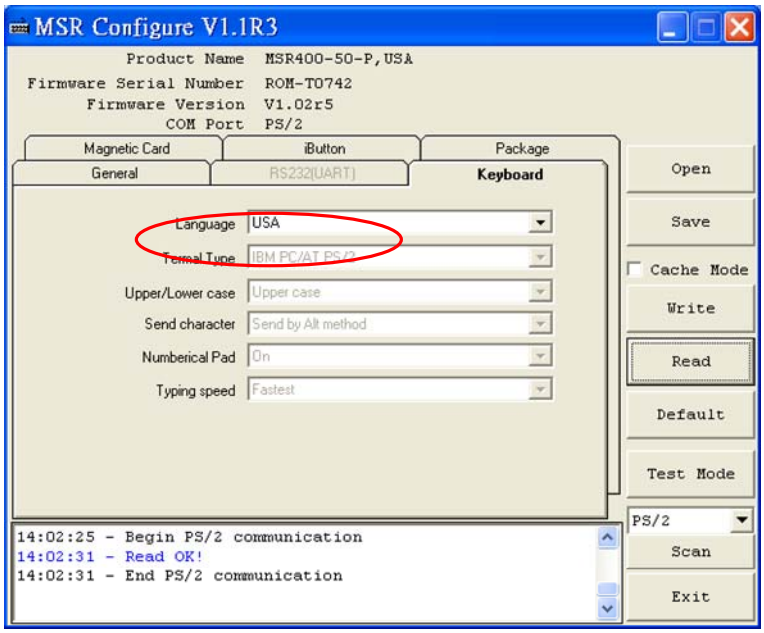
Interface : MSR Interface is being detected.
Buzzer : Choose buzzer enable or disable.
Feed Back : Set MSR output data ,waiting for feedback from the terminal.
Show ‘Error’ message if no reaction from MSR



RS232(UART) : Setting MSR communication parameter ,when RS232 and serial USB enable .



Keyboard : Setting MSR language ,when keyboard enable .



Package : Setting MSR & iButton data output package .

Data Format :

FS	+	MSR TK1+TK2+TK3 Data or iButton Data	+	Checksum	+	FE0	+	FE1

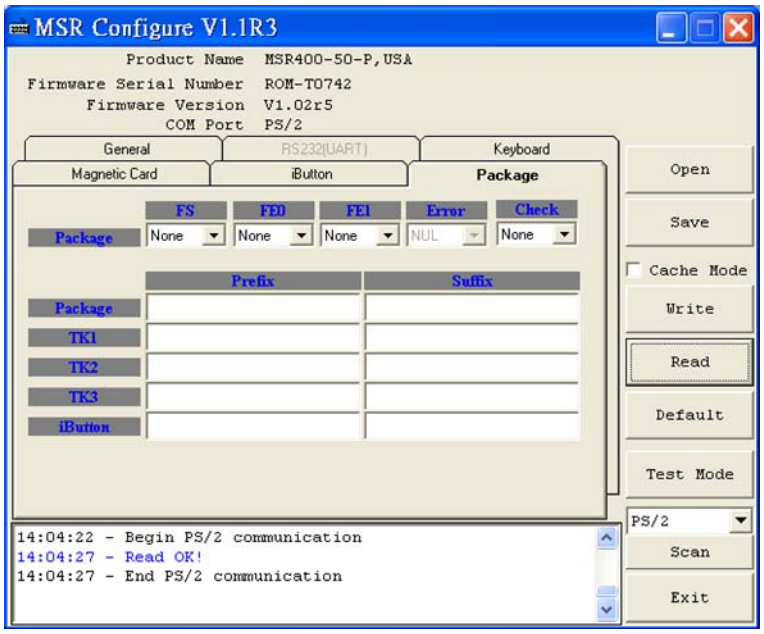
MSR Data Package :

Prefix	+	MSR Data Package	+	Suffix

iButton Data Package :

Prefix	+	iButton Data Package	+	Suffix

FS : Package leading character.
FE0 : Package ending character.
FE1 : Package ending character.
check : Bit check up.

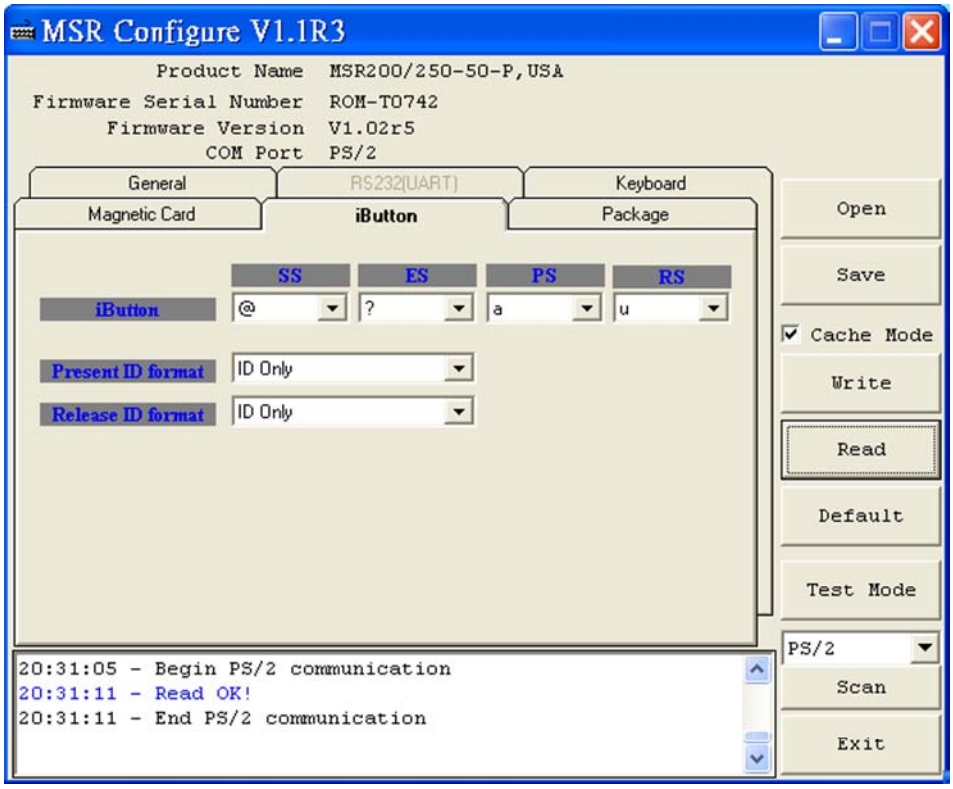


iButton : Set iButton data format .

Data format :

SS	+	PS or RS	+	Family code	+	ID	+	CRC	+	ES

SS : Start Sentinel
ES : End Sentinel
PS : iButton present prompt character.
RS : iButton Release prompt character.
Present ID format : Set present iButton output ID format .
Release ID format : Set release iButton output ID format .
Family Code : Terms for iButton series.



Magnetic Card : Set MSR data format and data output parameter .

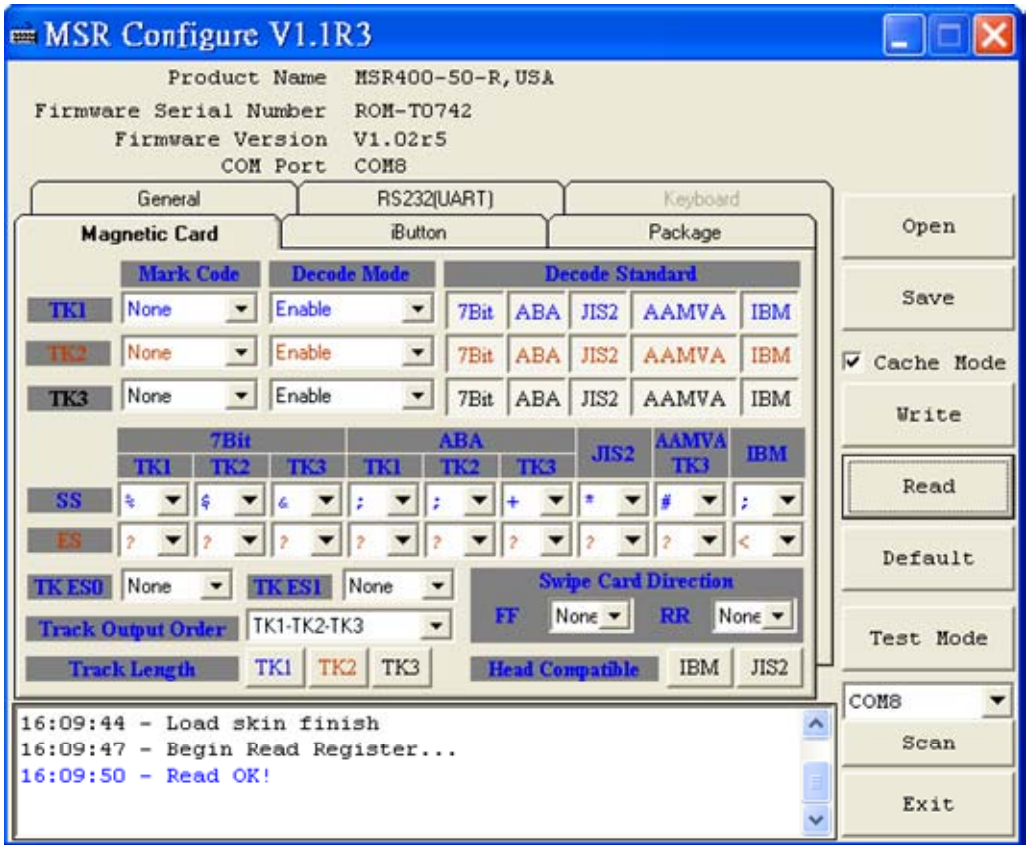
Data format :

SS	+	TK1 DATA	+	ES	+	SS	+	TK2 DATA	+	ES	+	SS	+	TK3 DATA	+	ES

MSR package :

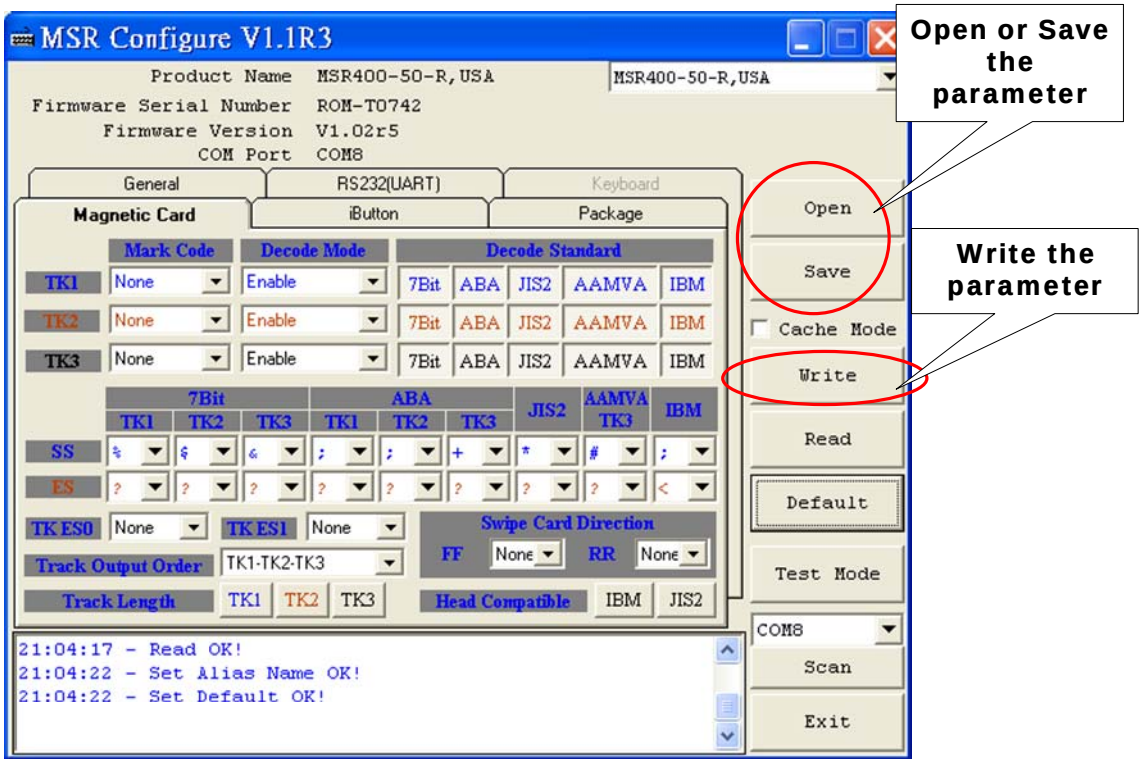
FF/FR	+	Mark Code	+	Data Format	+	TK ES0	+	TK ES1

Mark Code : Leading character to set up output data.
Decode Mode : To decode magstripe data.
Decode Standard : To decode magstripe format.
7Bit : 7 Bits Per Character data.
ABA : 5 Bits Per Character data .
JIS2 : JIS2 data format.
AAMVA : AAMVA data format .
IBM : IBM data format .
SS : Start Sentinel
ES : End Sentinel
TK ES0 : Ending prompt character .
TK ES1 : Ending prompt character .
Track Output Order : To set up track data in turn.
Track Length : To set up track data length.
Swipe Card Direction : To set up prompt character for direct/reverse side card swipe prompt character.
FF : To set up direct side cardswipe prompt character.
RR : To set up reverse side cardswipe prompt character.
Head Compatible : To set up the decoding work for IBM or JIS2 data output at one time only.



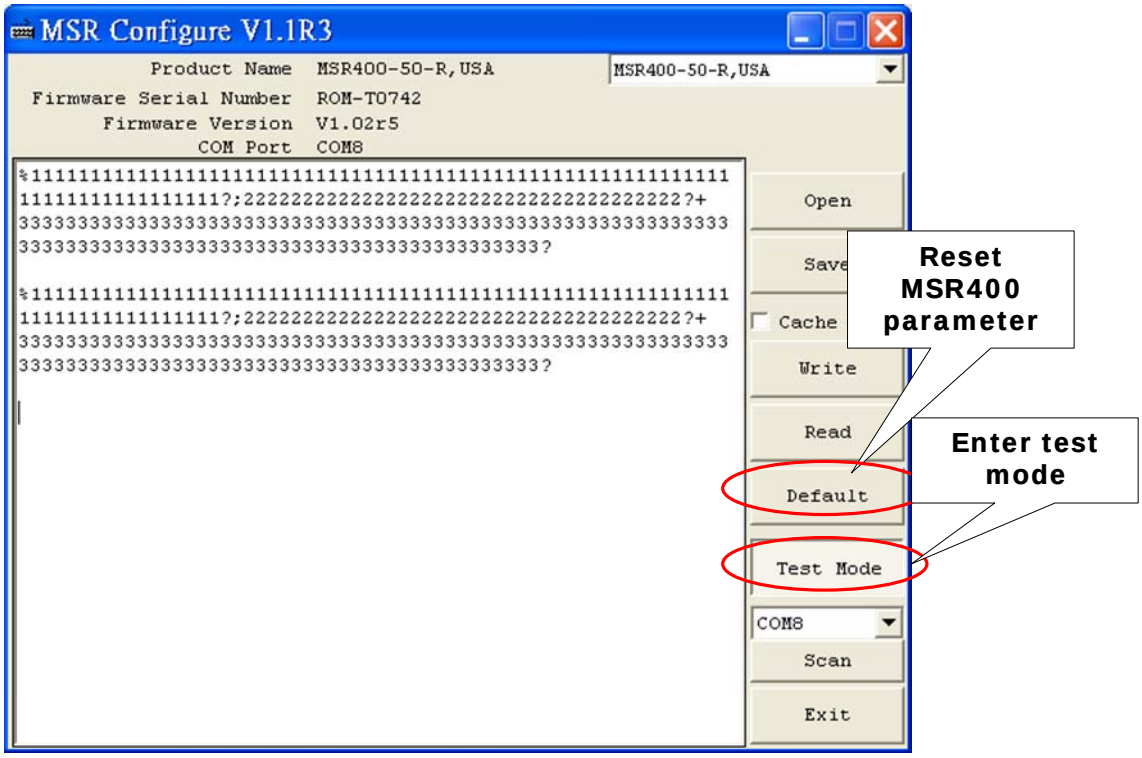
STEP4 : Click “Write” ,write the parameter to MSR400 reader .
Click “Open or Save” open or save your choose parameter to file.

PS. Same as to when MSR400 reader is in RS232 interface mode, Keyboard function will be in disable mode.When MSR400 reader is in Keyboard function, RS232 interface will be in disable mode.

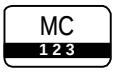


STEP5 : Click “Test Mode” can test the MSR400.

STEP6 : Click “Default” can reset MSR400 parameter.



Specifications

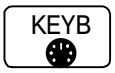


Magnetic Stripe Card :
TRACK 1 / IATA / 210 bpi / 79 Alphanumeric Characters
TRACK 2 / ABA / 75 bpi / 40 Numeric Characters
TRACK 3 / Thrift / 210 bpi / 107 Numeric Characters

RS232 Interface :
RS232 , Half-Duplex , 8N1 , 1200~19200 bps

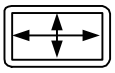
USB Interface :
RS232 , Half-Duplex , 8N1 , 1200~19200 bps

USB to PS/2 Interface :
Human interface for PS2

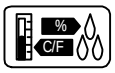


PS/2 Interface :
PC keyboard interface , Scan code

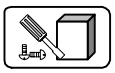
Power Supply :
DC 5V, 300mA



Dimensions :
D 171 x W 44.5 x H 42 mm



Environment :
Operating Temp : 0 ~ 55 Deg.C
Storage Temp : -10 ~ 55 Deg.C
Humidity : 10 ~ 90 % relative



Mounting :
Portable or Any surface