Hardware Manuals



100 mm USB HID Magnetic Stripe Swipe Card Read" consists of a high -performance multi-channel fully integrated magnetic stripe decoder chip at a low-profile magnetic read-head. This innovative, yet low-cost card reading solution offers many important advantages over the conventional less-integrated approach. 100 mm USB HID Magnetic Stripe Swipe Card Read" conform to industry specifications including ANSI/ISO Standards 7810, 7811 1⁄5, 7812 & 7813. It can read both Lo-Co card and Hi-Co cards.

Features

- **Low cost solution for triple track readers**: Available ISO TK1, 2 &3
- **Ultra-compact design**: Low-profile read head contains all needed circuits. Save space!
- **High noise immunity**: No more mill volt-level analog signals to route; no analog signals leave the shielded magnetic head! Withstands noisy PC monitors, cell phones, switching power supplies, etc.
- **High performance decoding**: New design reads badly damaged cards; compensates for poor head mounting
- **AGC (Automatic Gain Control)**: Reads cards from 30% - 200% of ISO 7811 amplitude standard
- No Windows driver needed! "MagStripe Card Reader Configuration Utility" fast and easy to use!

Specification

- **Reference Standards**: ANSI/ISO Standards 7810,7811-1⁄6, 7813
- **Recording Method**: Two-frequency coherent phase (F2F)
- **Decoding Method**:

  ISO: Track1 – IATA, Track2 – ATA, Track3 – THRIFT
- **Card Swiping Direction:** Bi-directional
- **Lift:**
  - Electronics: 125,000 hours
  - Head: 1,000,000 passes
- **Environment:**

- Operating Temp: 0 ~ + 55° C
- Storage Temp: -10 ~ + 55° C
- Humidity: 10 ~ 90 relative

- **Interface**: USB (HID -Keyboard Mode)
- Compatible with USB specification Revision 1.1
- Compatible with HID specification Version 1.1
- **MagStripe Card Reader Configuration Utility**: Support Microsoft Windows98/ME/2000/XP/Vista 32bit.
- **Power Supply**: DC 5V, though USB Interface Cable.
- **Power Consumption**: Less than 12mA maximum total current when no card is being swiped, less than 70 mA maximum total current at 5V while card is being swiped.
- **Card Swiping Speed**: Card speed through the unit may vary from3 ips to 100 ips (7 cm/s to 250 cm/s)
- **Dimensions**: L98.3 x W30.3 x H31.2 mm with cover

ISO			
IATA	%	Track 1, 210 bpi, 79 alphanumeric characters, 7 bits/char	?
ABA	;	Track 2, 75 bpi, 40 numeric characters, 5 bits/char	?
THRIFT	+	Track 3, 210 bpi, 107 numeric characters, 5 bits/char	?

The device's programmable configuration options affect the format of the card data.
The card data format for the default configuration is as follows:

%	Track 1 Data	?	;	Track 2 Data	?	+	Track 3 Data	?

Status Indicator

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.

STATUS	**GREEN LED**	**RED LED**	**BUZZER**
POWER ON	ON	ON	Be-
READY	ON	OFF	**X**
READ OK	BLINK 1 TIME	OFF	Be
READ ERROR	OFF	ON	Be- Be- Be-

Software Manuals

This part of the documentation describes the PC software used to configure the HID MSR reader supported by GIGA-TMS.

MagStripe Card Reader Configuration Utility

The **MagStripe Card Reader Configuration Utility** (**MCRCU**) is used to set up the output format of HID MSR reader

Installation

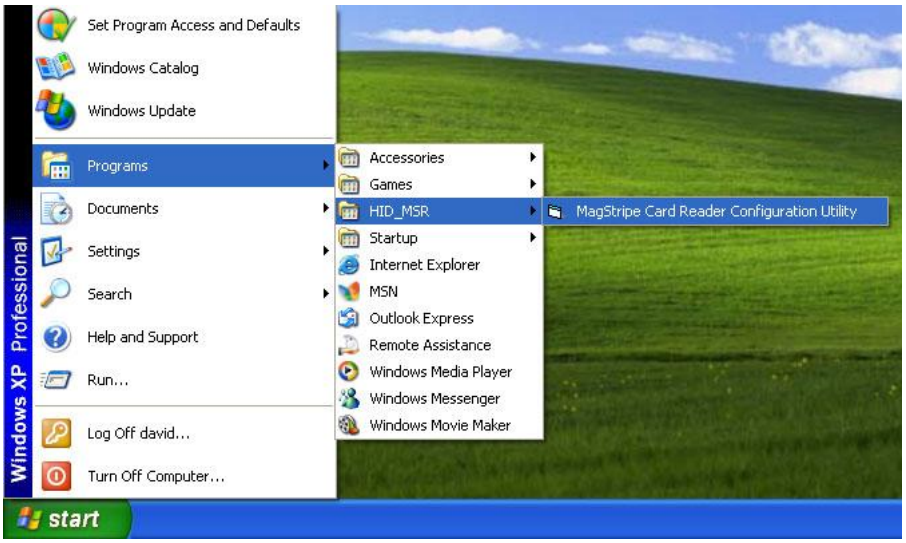
Below steps guide you how to install the MCRCU program.

- Insert the setup CD
- Run the **HID_MSR_PSW00003.exe** setup file that is located in the Software folder of CD.
- Follow the wizard to complete the installation.

Launching Program

Below steps guide you how to load the **MCRCU** program.

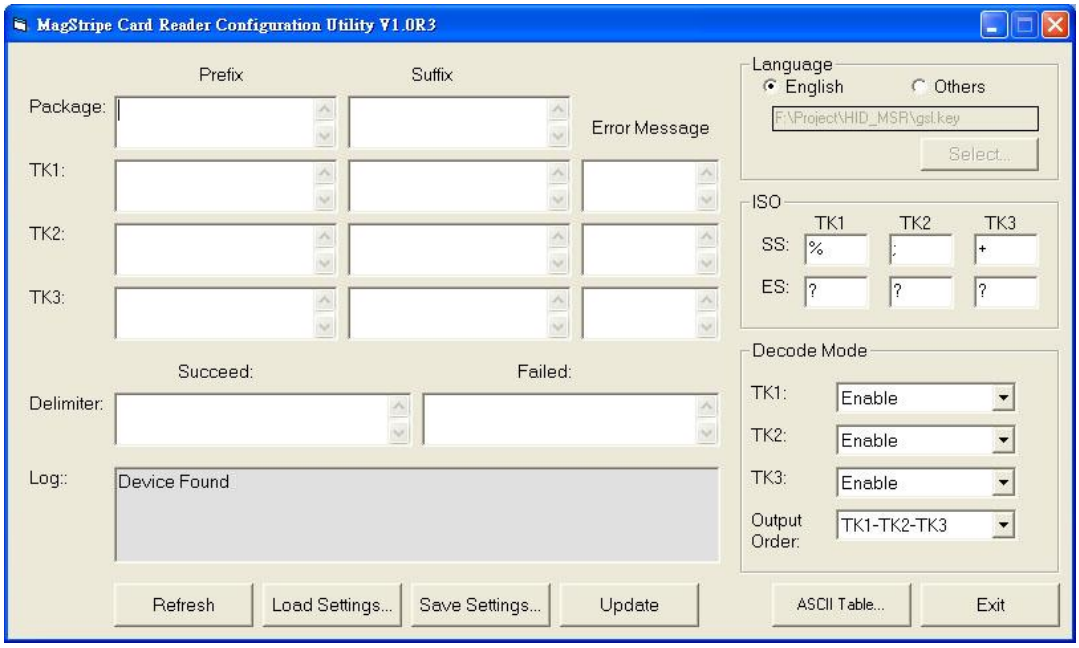
- From **Start/Programs**, click **HID_MSR** folder
- Click **MagStripe Card Reader Configuration Utility** to launch the program.



- **MCRCU** program will detect the connected reader. If detected, all the input text boxes will be enabled.
- If the reader has not been connected to PC yet, please connect the reader and then click **Refresh** to get connected.

Configuration

Below is the main window of **MCRCU** program.



For the settings, there are:

- **Language**: The language defines the code positions of the keyboard. Each language should use its own settings. Wrong language selected will cause the wrong character displayed.
- **Prefix/Suffix:** Defines the data string which you would like to append in front or end of the MSR data string.
- **Error Message:** Indicates which track number cause the error.
- **Delimiter**: Indicates the swipe result.
- **ISO:** Define start and end sentinel character.
- **Decode Mode:** Determines the way of outputting the three tracks data.

Shown below is the data structure of the output string for MSR.

PP	PR1	SS1	**TK1**	ES1	SU1	PR2	SS2	**TK2**	ES2	SU2	PR3	SS3	**TK3**	ES3	SU3	SU	DM

- **PP:** Prefix for package.
- **PR1:** Prefix for track 1.
- **SS1:** Start sentinel for track 1.
- **TK1:** Data for track 1, if error happens, using Error Message instead.
- **ES1:** End sentinel for track 1.
- **SU1:** Suffix for track 1.
- **PR2:** Prefix for track 2.
- **SS2:** Start sentinel for track 2.
- **TK2:** Data for track 2, if error happens, using Error Message instead..
- **ES2:** End sentinel for track 2.
- **SU2:** Suffix for track 2.
- **PR3:** Prefix for track 3.
- **SS3:** Start sentinel for track 3.

- **TK3:** Data for track 3, if error happens, using Error Message instead..
- **ES3:** End sentinel for track 3.
- **SU3:** Suffix for track 3.
- **SU:** Suffix for package.
- **DM:** Delimiter for the swipe result.

Prefix/Suffix

In default, the prefix and suffix settings are all keep blank. There are 4 kinds of prefix and suffix to be defined, which are:

- **Package:** For the prefix string, it is appended in the front of the whole MSR data. For the suffix, it is appended in the end of the whole MSR data. In most case, the suffix for package is always to be the "Enter" or "Tab" character. The max data length of the prefix and suffix for the package can be up to 127.
- **TK1:** For the prefix string, it is appended in the front of the start sentinel of track 2. For the suffix, it is appended in the end of the end sentinel of track 2. The max data length of the prefix and suffix for the TK1 can be up to 127.
- **TK2:** For the prefix string, it is appended in the front of the start sentinel of track 2. For the suffix, it is appended in the end of the end sentinel of track 2. The max data length of the prefix and suffix for the TK1 can be up to 127.
- **TK3:** For the prefix string, it is appended in the front of the start sentinel of track 3. For the suffix, it is appended in the end of the end sentinel of track 3. The max data length of the prefix and suffix for the TK1 can be up to 127.

ISO

This group defines the start and end sentinel for each track. The sentinel is always used to extract the track data from the whole MSR data string. The data length for each sentinel is fixed to one character. Because there is ISO standard that defining the start and end sentinel for the three tracks. For the compatible reason, please do not modify the default value if possible.

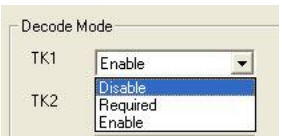
Decode Mode

For this group, it contains two kinds of settings, which are:

- Track Data Filtering: Determine which track to be, not to be output or needed to be output.
- Switch Output Order: Change the output order of track 1 ~ 3.

Track Data Filtering

Shown below is the filter setting for track 1. This provides a fool-proofing method in case of receiving unwanted or uncompleted track data.

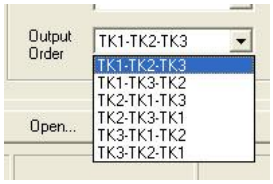


These three filter settings are:

- **Enable:** If selected, the data of specified track will be packaged in the MSR data string. If the specified track data is not decoded, it will leave blank in the MSR data string.
- **Required:** If selected, which means the output MSR data string must contain the specified track data. If the specified track data is not decoded, even MSR data string contains other track data, it will still not to be output.
- **Disable:** If selected, the data of specified track will not be packaged in the MSR data string. No matter it is decoded or not.

Switch Output Order

Show below is the selection of the three track data output order (sequence). The default order is Track 1–Track 2–Track 3.



There 6 orders allow to be selected. Please select one to fit your application needs.

Update Settings

Once complete the settings, click **Update** to update the settings to connected HID MSR reader.

Save Settings

To save the settings to a file, click **Save Settings**; specify the file name and location to be saved.

Load Settings

To load pre-saved settings, click **Load Settings**, specify the settings file, and then click OK to load into program.

ASCII Table

The ASCII table is used to enter the un-typed (by keyboard) characters.