

EASYMAGTM Magnetic Stripe Reader

Keyboard WEDGE INTERFACE

Quickstart Manual



ID TECH
10721 Walker Street
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80003507-002

Rev. A R02/05

#434

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Value through Innovation

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DATA EDITING

The EasyMag has a data editing feature incorporated into its firmware. This feature allows the data read from the magnetic stripe to be sent to the host in the exact format expected by the host software, eliminating the need for modifications to the application software.

Full data editing instructions are contained in the ID TECH EasyMag Keyboard Wedge User's Manual (P/N: 80003507-001). The manual is available without cost on the ID TECH website (www.id-tech.net), or by returning the coupon below:

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10721 Walker Street
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Please send a copy of the following ID TECH manual:

EasyMag Keyboard Wedge User's Manual (P/N: 80003507-001)

Name: _____

Company: _____

Address: _____

City: _____

State: _____

Zip: _____

There is no charge for a single copy. There will be a charge of \$10.00 for each additional copy.

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DEFAULT SETTINGS TABLE

The EasyMag reader is shipped from the factory with the following default settings already programmed:

Magnetic Track Basic Data Format

Track 1: <SS1><T₁ Data><ES><ENTER>*
Track 2: <SS2><T₂ Data><ES><ENTER>*
Track 3: <SS3><T₃ Data><ES><ENTER>*

where: SS1(start sentinel track 1) = %
SS2(start sentinel track 2) = ;
SS3(start sentinel track 3) = ; for ISO, ! for CDL, % for AAMVA
ES(end sentinel all tracks) = ?

Keyboard Wedge Communication Default Settings

Terminal type: IBM PC/AT
Intercharacter delay: 2 ms
Language: US English

Start or End Sentinel: Characters in encoding format which come before the first data character (start) and after the last data character (end), indicating the beginning and end, respectively, of data.

Track Separator: A designated character which separates data tracks.

Terminator: A designated character which comes at the end of the last track of data, to separate card reads.

LRC: Check character, following end sentinel.

CDL: Old California Drivers License format.

**Note: The <ENTER> commands shown above for tracks 1 & 2 and 2 & 3 denote the default character for this position, the Track Separator position. The <ENTER> command shown for track 3 denotes the default character for this position, the Terminator position.*

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AGENCY APPROVED

Specifications for subpart B of part 15 of FCC rule for a Class A computing device.

LIMITED WARRANTY

ID TECH warrants this product to be in good working order for a period of one year from the date of purchase. If this product is not in good working order as warranted above, or should this product fail to be in good working order at any time during the warranty period, repair or replacement shall be provided by ID TECH.

This warranty does not cover incidental or consequential damages incurred by consumer misuse, or modification of said product. For limited warranty service during the warranty period, please contact ID TECH to obtain an RMA number and instructions for returning the product.

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SPECIFICATIONS

Power Requirements:	5 VDC +/-10% (50mV ripple maximum). Ground 0 VDC (GND). Chassis ground connected to GND and magnetic head case.
Operating Current:	About 30mA for decoded magnetic stripe (three tracks).
Operating Temperature:	32° F to 131° F (0° C to 55° C).
Storage Temperature:	-22° F to 158° F (-30° C to 70° C).
Relative Humidity:	Maximum 95% non-condensing.
Magnetic Head Life:	1,000,000 passes minimum.
Rail and Cover Life:	1,000,000 passes minimum.
Magnetic Stripe Recording Method:	Two-frequency coherent phase (F2F) compatible with ISO 7811, ANSI, AAMVA, and California DMV.
Maximum Number of Tracks:	3 tracks.
Read Rate:	Less than one error in 100,000 bits on cards conforming to ISO 7811 1-5 (not induced by operator error).
Swipe Speed:	3 to 60 inches per second, bidirectional.
Card Thickness:	.01 to .045 inches.
Slot Width:	.050 inches.
Dimensions:	Length: 5.22 inches (133mm). Width: 1.25 inches (32mm). Height: 1.6 inches (41mm).
Weight:	8 oz.
Cable Length:	5-foot straight cable.

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KEYBOARD INTERFACE PROBLEMS

Installation of the reader is generally trouble free, but there are some things to watch for if you are experiencing problems.

Do you have the proper cable?

Most modern computers and terminals use a PC/XT/AT-compatible keyboard. However, the cable connecting it to the keyboard port may have variations in either the signal pins or the connector itself. Make sure that you have the proper cable for the computer/terminal with which you are interfacing.

Does the keyboard work?

Since the data from the keyboard must pass through the reader, the cabling connections are correct if the keyboard is operational.

Can the host computer accept the data fast enough?

Some computers and terminals are expecting the data rate from the keyboard port to come in at a keystroke rate, and might not be able to accept it as fast as the reader is transmitting. Try adjusting the intercharacter delay to simulate the effects of keystroke delays.

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TROUBLESHOOTING

The EasyMag reader is easy to install and use. Most problems encountered can be attributed to:

- Incorrect Interface Cabling
- Incorrect Configuration Setup
- Bad Magnetic Stripe Quality

GENERAL PROCEDURES

The troubleshooting process can be simplified by following these simple diagnostic procedures.

1. The unit should emit one long beep when power is first applied. If it does not, then the unit is not receiving power.
2. Once it has been confirmed that the unit is correctly powered, try swiping a credit card. The LED will go off while decoding, then light green to indicate a “good read,” or red to indicate a “bad read.”
3. Once the unit has indicated a “good read,” then proceed to check the interface cabling connections.

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DESCRIPTION

The EasyMag™ magnetic stripe reader can read 1, 2, or 3 tracks of magnetic stripe information. In addition, it has full data editing capabilities.

When connected to the host computer as a keyboard wedge, the EasyMag is completely compatible with the host’s software. The decoded data appears to the host as if it were entered manually by the operator through the keyboard.

This unit is fully programmable through the keyboard. The data can be formatted with preamble/postamble and terminator characters to match the format expected by the host.

Power, when the reader is configured as a keyboard wedge, is obtained from the host. No separate power supply is required.

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Power, when the reader is configured as a keyboard wedge, is obtained from the host. No separate power supply is required.

HOST CONNECTIONS

The EasyMag reader is connected between the keyboard input port of the host computer and the keyboard itself using a “Y” adapter cable.

The “Y” cable has a 6-pin mini-DIN female on one end, and a 6-pin mini-DIN male on the other end.

To connect the reader to the host, turn the power off and disconnect the keyboard from the computer. Connect the keyboard to the female end of the “Y” connector. Then insert the male end of the “Y” cable into the keyboard port. This “wedges” the reader between the host and the keyboard.

To connect the reader to the host, turn the power off and disconnect the keyboard from the computer. Insert the male end of the “Y” cable into the keyboard port. Then connect the keyboard to the female end of the “Y” connector. This “wedges” the reader between the host and the keyboard.

Manually-entered data from the keyboard passes through the unit to the host, leaving the keyboard fully functional at all times.

Magnetic data “swiped” into the unit is transmitted to the host keyboard port, where it appears to the host as coming directly from the keyboard. This makes the reader, as a data source, completely transparent to the host’s application software. In other words, if it is expecting data from the keyboard, that same data can be entered via the EasyMag and make no difference to the host.

Since the host computer’s application software is expecting data to be input in a particular order and format, the reader’s output can be configured to simulate the keyboard-entered data stream by adding terminating characters and special preamble and/or postamble character strings to scanned data.

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CONFIGURATION

The EasyMag must be appropriately configured to your application. Configuration settings enable the reader to work with the host system. These settings are programmed into the reader through the keyboard. Once programmed, these configuration settings are stored in the reader’s non-volatile memory (so they are not affected by the cycling of power).

The EasyMag is shipped from the factory with the default settings already programmed. For a table of default settings, see the Default Settings Table. Instructions necessary to program the unit with custom settings are contained in the ID TECH EasyMag Keyboard Wedge User’s Manual (P/N: 80003507-001). This manual is available directly from ID TECH, or via the company’s Internet website.

OPERATION

The EasyMag magnetic stripe reader is easy to operate. Just follow these simple steps:

1. Make sure the reader is properly cabled and is receiving sufficient power. (See Troubleshooting if there is a cabling or power problem.)
2. To read a card, slide the card, in either direction, through the reader slot, with the magnetic stripe facing the magnetic head (LED side).
3. While swiping the card through the reader, the LED will go off.
4. Once the entire magnetic stripe has been read, the LED indicator will light up as green to signal a “good read.” If a good read is not obtained, the LED indicator will light up as red.
5. A beep will also sound to indicate a good read on each track. If all three tracks have been read successfully, the reader will beep three times.

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