VERSAKEY™

POS Keyboard

Quickstart Manual

CE

IDTECH®
Value through Innovation

FCC WARNING STATEMENT

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

FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following conditions: this device may not cause harmful interference and this device must accept any interference received, including interference that may cause undesired operation.

CANADIAN DOC STATEMENT

This digital apparatus does not exceed the Class B limits for radio noise for digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.
Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de las classe A prescrites dans le Réglement sur le brouillage radioélectrique édicté par les ministère des Communications du Canada.

CE STANDARDS

Testing for compliance to CE requirements was performed by an independent laboratory. The unit under test was found compliant to Class B.

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Section 1
INTRODUCTION

The ID TECH VersaKey is a full-sized, full-function keyboard with the standard enhanced layout. The 104/109-keys layout provides separate keys for the numerical pad, control, and function keys. The VersaKey has Typematic keyboard operation with a good tactual feel. Included is a reader for MagStripe cards. There are four LEDs to indicate keyboard function status. Many country specific keyboard layouts are available.

The VersaKey features a full function MagStripe Reader for input of magnetic stripe card data. The MagStripe reader data output is versatile; the output is configurable to provide the card data in the format required by the application. The reader operation is like typing the MagStripe data from the keyboard. Track configurations are available for reading tracks 1 & 2 or all 3 tracks on ISO 7811 compliant cards. The reader & keyboard share a common communications output.

The VersaKey magnetic card reader has full data editing capabilities. The reader is fully programmable using a Configuration Utility Software available at the ID TECH website (http://www.idtechproducts.com). The data can be formatted with preamble & postamble (a.k.a. prefix and suffix). Terminator characters can be added to match the format expected by the host application. In addition, complex data editing routines can be stored in the reader that further modifies the data before it is output to the host.

The VersaKey provides a USB (keyboard) or PS/2 communication output. This output is conveniently shared between the keyboard and the MagStripe reader. For the USB model, a two-port USB Hub is included and can be used for Scanners or PIN pads. Plug ‘n Play operation is standard.

Both the keyboard and the reader are industry proven. The keyboard provides more than 20,000,000 key operations; the reader has an operational life greater than 1,000,000 swipes. The VersaKey meets FCC Class B & CE regulatory requirements. ESD immunity is greater than 15KV with no damage to the circuits.

Section 2
INSTALLATION & OPERATION

The VersaKey has a single cable equipped for either a USB/Keyboard or a PS/2 communication connection. Both the keyboard scan codes and the reader data are transmitted through the cable. The computer typically has only one PS/2 (standard keyboard connection); this must be used for the PS/2 configured VersaKey. The computer may have several USB connection ports; any of these ports can be used to connect the USB keyboard.

To install the VersaKey, close any open applications and Shut Down the computer. Determine the VersaKey connection type and locate the appropriate connection receptacle on the computer. Securely install the cable connector into the computer receptacle. Re-start the computer.

When the VersaKey is powered, it performs a self test and initiation sequence with the computer. During the self test the MagStripe reader will beep. The power LED will light to indicate power is applied. The LEDs will show the status of the Scroll Lock, Num Lock, & Caps Lock functions. In MagStripe reading operation, the reader will beep when a card is read correctly.

Test the keyboard with normal use in a text editor like Word. Also test the reader by swiping a magnetic stripe card through the reader. A beep will also sound to indicate a good read on each magnetic track, as appropriate. If all three tracks have been read successfully, the reader will beep three times.

Magnetic stripe data read by the reader is transmitted such that the data appears to be coming directly from the keyboard. This makes the reader a data source and completely transparent to the computer application software. In other words, magnetic stripe data is formatted by the reader based on the needs of the application; the formatted data is sent through the keyboard interface to the application.

Section 3
READER CONFIGURATION

The magnetically encoded data on the magnetic stripe can be decoded (read) by magnetic card readers. The stripe data has a fixed format defined by the ISO standards. The ISO fixed format is not always convenient or useful for card reading applications. The solution is for the card reader to decode the stripe data and then arrange the data into useful format and content. The reader-formatted data is transmitted from an intelligent communication interface.

The VersaKey Reader is an intelligent magnetic stripe reader, which provides extensive formatting capability. In addition, characters can be added to the formatted data. The added characters form either a prefix or a suffix to the magnetic stripe data. To support the formatting capability, ID TECH provides easy to use Configuration Utility software.

The operating systems supported are Windows 98, Windows ME, Windows 2000, and Windows XP.

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

DEFAULT SETTINGS

The reader is shipped from the factory with the default settings already programmed. See Appendix A. The reader has been factory programmed with the least restricted settings, thus making the reader ready to read most standard format magnetic stripe cards.

Section 4
SPECIFICATION KEYBOARD

MECHANCIAL

Keyswitch	
Total Travel	4.0 + 0.5 mm
Operating Force	50 + 7g
Keyboard Housing	
Color	Black or Cream White
Size	469.9 mm (L) x 203.9 mm (W) x 42.8 mm (H)
Material	ABS
Cable Information	
Jacket Material	PVC jacket with Aluminum Shielding
Length	1.5 M (5ft.) Overall
PC Connector	PS/2 or USB
Drop	610 mm (24”) Drop: 1 corner, 2-sidelines, 3-sides
Vibration	60 Hz/sec 3 mm amplitude X,Y,Z each axis at 2 hours
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-20°C to 40°C (- 4°F to 104°F)

ELECTRICAL

Power Requirement	+5.0 VDC ±10%, 60ma Max
Industry Requirements	FCC class B and CE

RELIABILITY

Operating Life	20,000,000 keystrokes
ESD Immunity	0KV to 8 kV min, without data loss. 8KV to 15 kV min, will function after reset
MTBF	More than 60,000 power on hours

Section 5
SPECIFICATION READER

Number of tracks	Track 1 & 2 or Track 1, 2 & 3
Compatibility	ISO 7810 and 7811-1 through -6 cards. Reads AAMVA driver license cards.
Communications	Decoded track data sent through Keyboard communications cable.
Output data formatting	Default card data output format or customized data output format is programmable through PC configuration utility. See Appendix A for default settings.
Operating Life	1,000,000 card swipes
Card speed range	3 to 60 IPS (Inches Per Second)
Audio beeper	Indicates error free card data reading

Section 6
TROUBLE SHOOTING

The data from the reader is not as expected.
The reader is shipped from the factory with the default settings already programmed. See Appendix A for the Default Settings. The default settings can be customer modified by using the MagSwipe Configuration Utility. See Section 3.

The reader does not output data.
The reader will beep when power is applied to the VersaKey. The reader will also beep for each track correctly read from a magnetic stripe. Use a known good credit card to test the reader operation. Insure that a text input application (such as Windows Notepad) is open and selected during the test.

The keyboard does not function with the computer.
If the power indicator LED is off, the keyboard may not be fully connected to the computer. Check the connections. Check that the computer power is on. If the power indicator LED is on and the VersaKey is a USB type, the driver may not be loaded properly on the computer. Check the Device Manager in Hardware Properties of the computer. The driver is a standard windows driver for operating systems Windows 98SE and later.

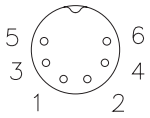
Appendix A
MAGNETIC STRIPE DEFAULT SETTINGS

Function	Default Value
Beep Volume	High
Inter-Character Delay	2 ms
Track Selection	Any Track
Data Output Format	ID TECH Format (See Appendix C)
Track Separator	See Appendix C
MSR Reading	Enable
Decoding Method	Decoding in Both Directions
Terminator ID	ENTER
Polling Interval	1 ms (USB)

Appendix B
CONNECTOR PIN ASSIGNMENTS

PS/2 Connector, 6 pin DIN

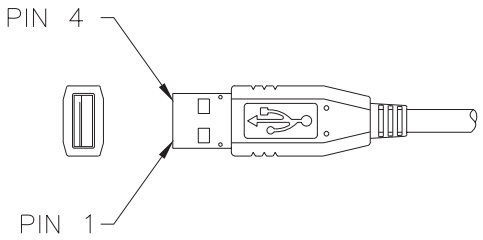
Connector Pin	Signal
2	Not Used
4	+5 V
6	Not Used
1	Data
3	Ground
5	Clock



Viewed from cable end

USB, 4 pin USB plug

Connector Pin	Signal
1	+5 V
2	- Data
3	+ Data
4	Ground



Appendix C
MAGNETIC STRIPE DATA OUTPUT FORMAT

The Reader is shipped from the factory with the following magnetic stripe default settings already programmed:

Magnetic Track Basic Data Output Format
Track 1: <SS1><T1 Data><ES><TS>
Track 2: <SS2><T2 Data><ES><TS>
Track 3: <SS3><T3 Data><ES><Terminator>

where: SS1(start sentinel track 1) = %
SS2(start sentinel track 2) = ;
SS3(start sentinel track 3) = ; for ISO,
% for AAMVA
ES(end sentinel all tracks) = ?
<TS> = <ENTER> key
Terminator = <ENTER> key

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 that separates data tracks.

Terminator: A designated character that comes at the end of the last track of data in order to separate card reads.

LRC: Check character, following end sentinel. (The reader will verify it when decoding, but this will not be sent as part of the data.)

Appendix D
KEYBOARD LAYOUT

North American Typical Format

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80074502-001 Rev. A R01/06 #442