

# **IntelliStripe 340<sup>TM</sup>**

## **DESKTOP MOTORIZED READER TECHNICAL REFERENCE MANUAL**

**Manual Part Number: 99875215-3**

**JUNE 2003**

**MAGTEK<sup>®</sup>**

**REGISTERED TO ISO 9001:2000**

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**REVISIONS**

<b>Rev Number</b>	<b>Date</b>	<b>Notes</b>
1	06 Mar 02	Initial Release
2	2 May 02	Section 1: Added JIS to Specifications
3	06 Jun 03	Front Matter: added ISO line to logo, changed Tech Support phone number, added new warranty statement.

### **Limited Warranty**

MagTek, Inc. warrants that the Product described in this document is free of defects in materials and workmanship for a period of one year from the date of purchase where the date of purchase is defined as the date of shipment from MagTek. During this warranty period, MagTek shall, at their option, repair or replace without charge for either parts or labor, any failure, malfunction, defect or nonconformity which prevents the product from performing in accordance with MagTek's published technical specifications and manuals.

This warranty does not apply to wear of the magnetic read head. This warranty shall not apply if the product is modified, tampered with, or subject to abnormal working conditions. This warranty does not apply when the malfunction results from the use of the Product in conjunction with ancillary or peripheral equipment where it is determined by MagTek that there is no fault in the Product itself.

Notification by the Customer to MagTek of any condition described above should be directed to the Customer's MagTek Sales Representative or to MagTek's Help Desk at (651) 415-6800. If the Product is to be returned from the Customer to MagTek, a returned material authorization (RMA) will be issued by MagTek. The Customer shall be responsible for shipping charges to MagTek, (20801 S. Annalee Ave., Carson, CA 90746). MagTek shall be responsible for shipping charges back to the Customer.

Repair or replacement as provided under this warranty is the exclusive remedy. This warranty is in lieu of all other warranties, express or implied.

### **FCC WARNING STATEMENT**

This equipment has been tested and found to comply with the limits for a Class A 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 own expense.

### **FCC COMPLIANCE STATEMENT**

This device complies with Part 15 Of The FCC Rules. Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference. And (2) 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 A 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 la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le 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 A.

### **UL/CSA**

This product is recognized per Underwriter Laboratories and Canadian Underwriter Laboratories 1950.

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**Figure 1-1. IntelliStripe 340**

## SECTION 1. FEATURES AND SPECIFICATIONS

The IntelliStripe 340, Desktop Motorized Reader, can read the mag-stripe data from financial cards and drivers licenses and is compatible with data format specifications: ISO (International Standards Organization), AAMVA, (American Association of Motor Vehicle Administrators), CDL (California Drivers License).

The Reader communicates with a Host via an RS-232 serial interface, and uses a proprietary MCP protocol and command set, which has been developed by MagTek. Windows Drivers for the MCP protocol are available and can support Win 95/98, NT, and Win 2000 operating systems.

### CONFIGURATION

Part numbers and descriptions for the basic configuration are as follows:

16050353	IntelliStripe 340, 3TK, C Bezel, RS232 Interface, Stripe Down, includes attached I/O cable.
16051412	I/O Cable, 7-pin connector connects to host 9-pin connector with 12V/Ground connector for Power Supply. (Supplied as part of 16050340 Assembly.)
64300080	Power Supply, 100V through 240V regulated with 2.5mm plug.
71100001	AC power cord, P/N is for use in North America. Other users must supply their own cord, or contact MagTek for international cords.

### STANDARD FEATURES

Standard features of the IntelliStripe 340 are as follows:

- Motorized transport
- RS232 interface
- Status LED
- Flash upgradable
- Supports all popular magnetic stripe track combinations
- Front Card Gate prevents coins, dust, moisture, and debris from entering the unit – gate resists opening except when ISO-size card enters the unit.

## **SOFTWARE ACCESSORIES**

The following Software Modules may be required and will assist in the development of application software. In addition, this software can provide an initial test platform for checkout of the IntelliStripe 340.

- **IntelliStripe Picture Demo with MCP Driver:**  
P/N 30037472 (CD) or P/N 99510015 (Web Release)  
This software will install both a Demo program and the MCP driver.  
The Demo program is useful for initial checkout of the Reader's functionality. The MCP driver is recommended for use as the communications interface on Windows based host systems. Application programmers can interface to the MCP driver via a MagTek defined API.
- **Source Code for Picture Demo Program:**  
P/N 30037436  
Visual Basic 6.0 source code for the Picture Demo program.  
This will be useful to Application Programmers, as it shows examples of how to interface with the MCP drivers and how to use the various commands.
- **MCP Utility Program:**  
P/N 30037442 (Floppy Disks) or P/N 99510020 (Web Release)  
This is a utility program that interfaces with the MCP driver, and allows engineers to send commands directly to the Reader per the defined MagTek Command Set. This is useful for gaining an understanding of the commands used with the Reader. (Note: This utility requires that the MagTek MCP drivers be previously installed.)

## **RELATED DOCUMENTS**

This document, P/N 99875216, is from a hardware perspective only. Other documents that cover the command set, communications protocol, and API (Application Program Interface) are as follows:

<b><u>Part Number</u></b>	<b><u>Title</u></b>
99875163	MCP, Serial Transport Protocol, Reference Manual
99875164	Communication Protocol, Driver Reference Manual
99875218	IntelliStripe 310, Command Reference Manual

## **MAGNETIC STRIPE READER**

The Reader can read up to three tracks of magnetic stripe card data. See IntelliStripe 310 Command Reference Manual, Part Number 99875218, for more details.



## **FLASH UPGRADABLE**

The unit's firmware is in-system Flash Upgradable. This allows the unit's firmware to be upgraded when required.

## **RS-232 INTERFACE**

The unit communicates to the host through an RS-232 interface. The device uses 8 data bits, 1 stop bit, even parity. The unit can automatically sync to baud rates 9600, 14400, 19200, 28800, 38400, and 57600. See MCP Driver Reference Manual, Part Number 99875164, and MCP Serial Transport Protocol Reference Manual, Part Number 99875163, for more details.

## **SPECIFICATIONS**

Specifications for the Reader are listed in Table 1-1. Overall dimensions of the unit are shown in Figure 1-2.

**Table 1-1. Specifications**

<b>DATA FORMAT SPECIFICATIONS</b>	
<b>Reader Configuration:</b>	<b>Data Format Specifications*</b>
Mag-Stripe Functions Track 1,2,3 only:	ISO/ANSI/AAMVA/CDL/JIS formats ISO 7810, 7811, JIS x 6302 Type 2
* ISO (International Standards Organization), ANSI (American National Standards Institute), AAMVA, (American Association of Motor Vehicle Administrators), CDL (California Drivers License), JIS (Japanese Industrial Standard)	
<b>OPERATIONAL</b>	
Card Speed:	10 IPS (25,4 cm/sec) typical
Recording Method:	Two-frequency coherent phase (F2F)
MTBF:	
Electronics:	125,000 hours
Head:	1,000,000 passes (500,000 Insertion Cycles)
SC Contacts:	1,000,000 passes
<b>ELECTRICAL</b>	
Input Voltage:	12.0 VDC $\pm$ 5%
Current:	1.5 A max 170 mA typical (with motor off)
<b>MECHANICAL</b>	
Dimensions:	
Length:	7.125" (181.0 mm)
Width:	4.56" (115.82 mm)
Height:	2.85" (72.40 mm)
Cable Length (16051412):	6' (1.83 m)
Power Supply Cable Length (64300080):	6' 4" (1.93 m)
Power Cord (North American 100-240V) (P/N 71100001):	7' 6" (2.28 m)
Weight:	
Reader with Cable:	2 lb 5.33oz (1.05 kg)
Power Supply:	6.4 oz (0.2 kg)
AC Cord:	6.4 oz (0.2 kg)

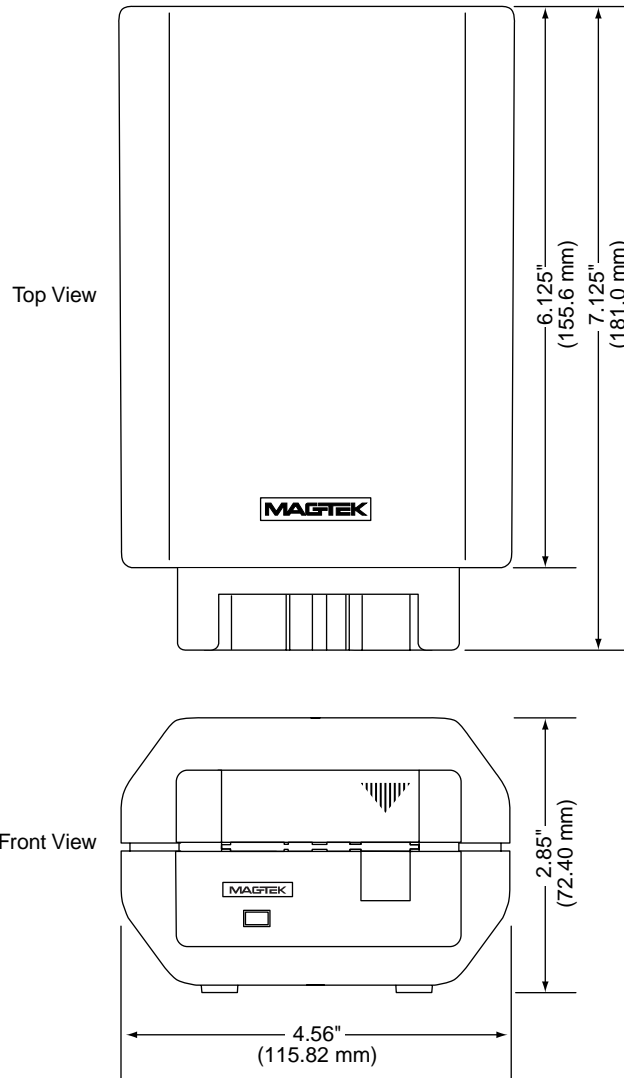
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**Section 1. Features and Specifications**

<b>ENVIRONMENTAL</b>		
Temperature	Operating: Storage:	32 °F to 122 °F (0 °C to 50 °C) -40 °F to 158 °F (-40 °C to 70 °C)
Humidity	Operating: Storage:	5% to 95% noncondensing 5% to 95% noncondensing
Altitude	Operating: Storage:	0 to 10,000 ft. (0 to 3,048 m) 0 to 50,000 ft. (0 to 15,240 m)

**IntelliStripe 340, Desktop Motorized Reader**

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**Figure 1-2. IntelliStripe 340 Dimensions**

## SECTION 2. INSTALLATION

The installation of the IntelliStripe 340 Desktop Motorized Reader consists of placing the unit on a flat surface, plugging the I/O connector into the host serial port, and plugging the Power Supply into the I/O cable and into a wall receptacle.

### COMPONENTS

Components of the unit for installation are shown in Figure 2-1.

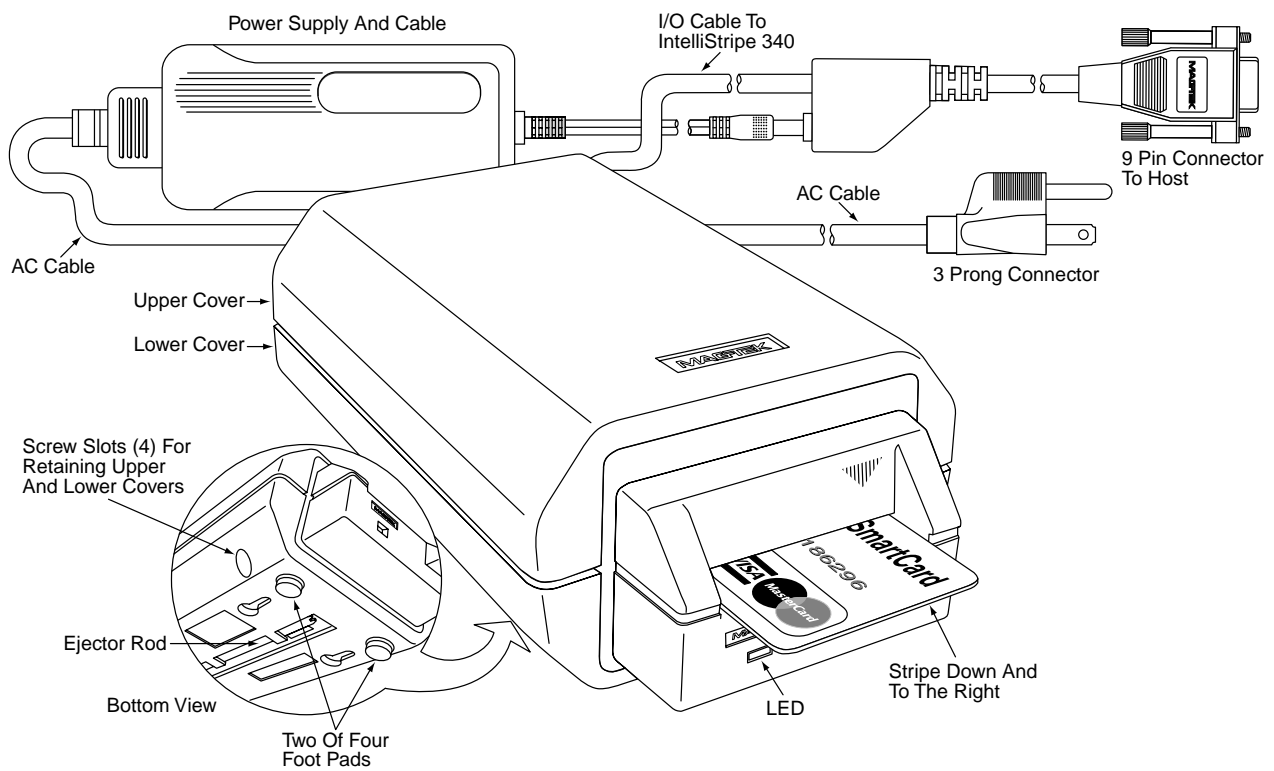


Figure 2-1. IntelliStripe 340 Components

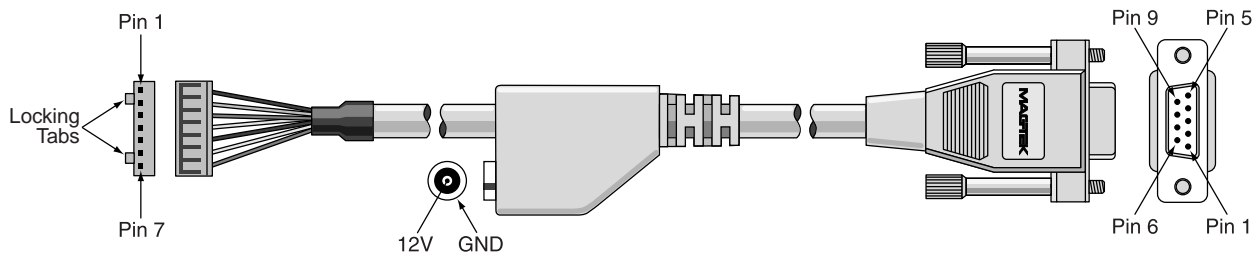
**PLACEMENT AND CABLE CONNECTIONS**

Refer to Figure 2-1, and place and connect the IntelliStripe 340 cabling as follows:

Ensure power to the PC is off.

1. Place the unit on a smooth flat surface convenient for operation.
2. Connect the 9-pin I/O connector to the PC.
3. Connect the 12 V power supply plug into the I/O cable.
4. Connect the AC cable into a wall receptacle.
5. Turn power on to the PC.

The I/O cable is shown in Figure 2-2 and the Pin List is shown in Table 2-1



**Figure 2-2. I/O Cable with Pin Locations, P/N 16051412**

**Table 2-1. Pin List for I/O Cable**

Molex 7 Pin (51055-0700)		DB-9 Female		2.5mm Power Jack	
Pin Number	Signal Name	Pin Number	Signal Name		
1	TXD	2	RXD		
2	+12V			CENTER PIN	+12V
3	PWR GND			SHELL	GND
4	RXD	3	TXD		
5	RTS	8	CTS		
6	CTS	7	RTS		
7	SIGNAL GND	5	GND		
		6	DSR		
		4	DTR		

The Power Supply, P/N 64300080, 100V–240V regulated, 12VDC, with 2.5 mm plug is shown in Figure 2-3. The AC power cord, P/N 71100001, is for use in North America. Other users must supply their own AC cord, or contact MagTek for international cords.

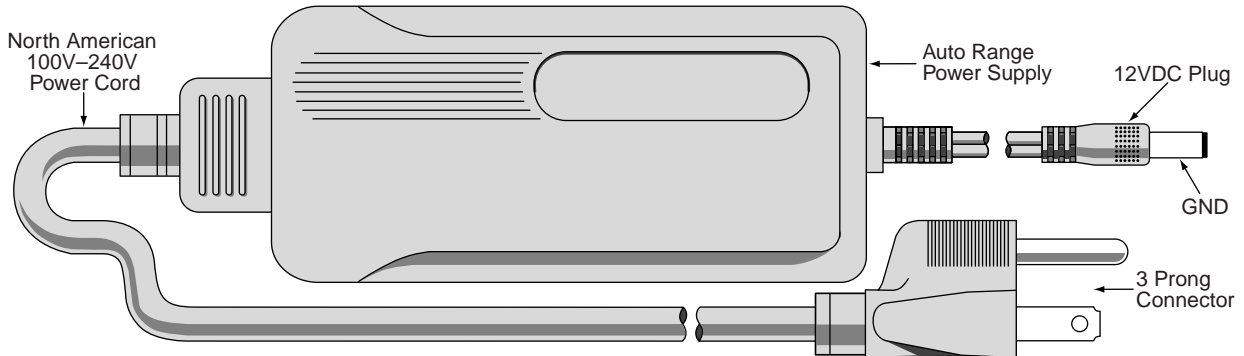


Figure 2-3. Power Supply and AC Cable.

## REAR PANEL

The Rear Panel is shown in Figure 2-4. The Cable, Tie Wraps, and Cable Clamps are installed in the factory.

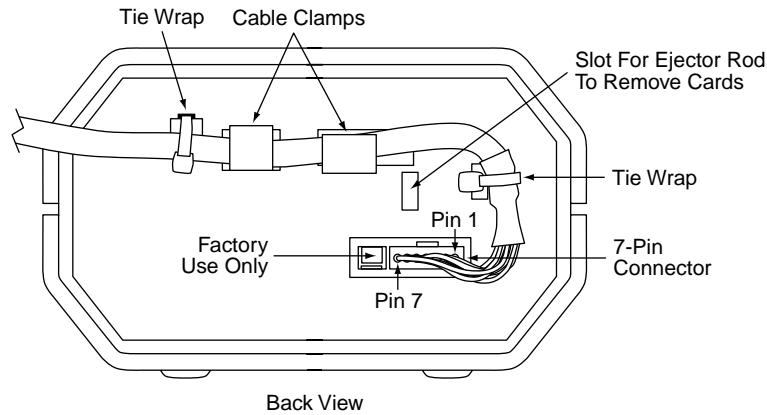


Figure 2-4. Rear Panel





## **SECTION 3. OPERATION AND MAINTENANCE**

The operation of the unit includes inserting and removing the card. Maintenance includes keeping the unit clean and removing jammed cards from the unit.

### **OPERATION**

The card is inserted with the magnetic stripe down and to the right as illustrated in Figure 2-1. Remove the card when unit ejects it. Perform any tasks on the PC as directed. The LED gives status or direction as defined by the institution.

### **MAINTENANCE**

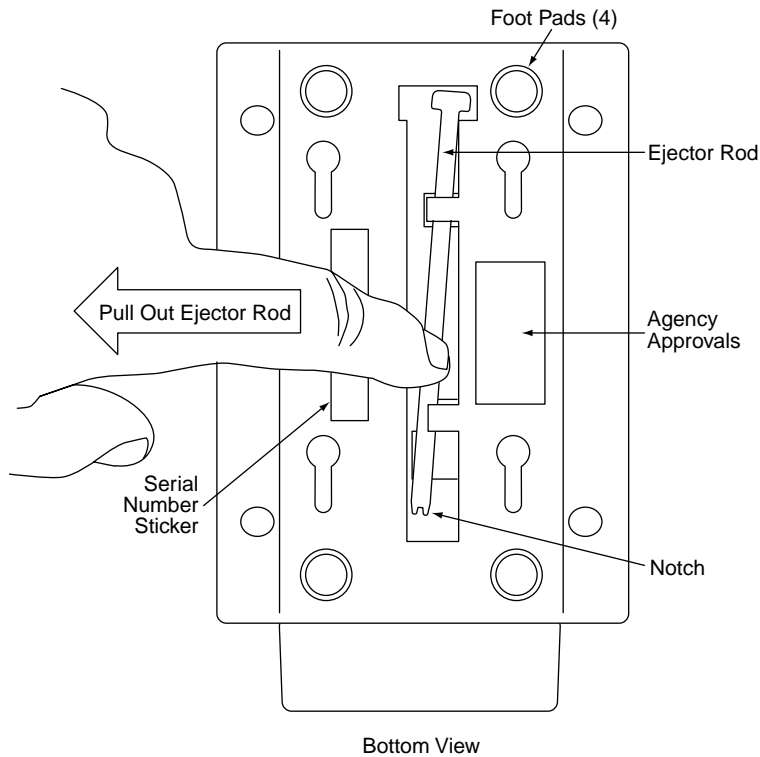
Preventive maintenance includes cleaning the unit periodically with a lint-free cloth. The cleaning schedule depends on how clean or dirty the environment is.

Corrective maintenance includes removing the card in case of power failure or card jam. In most cases, resetting the unit will cause the card to automatically eject the card. To reset the unit unplug the Power Supply connector (Figure 2-3) from the I/O connector and plug it back in.

If the card does not automatically eject, the card may be pushed out with a special tool, the Ejector Rod, which is located on the bottom of the unit. The Rod is inserted into a slot in the back of the unit, shown in Figure 3-1.

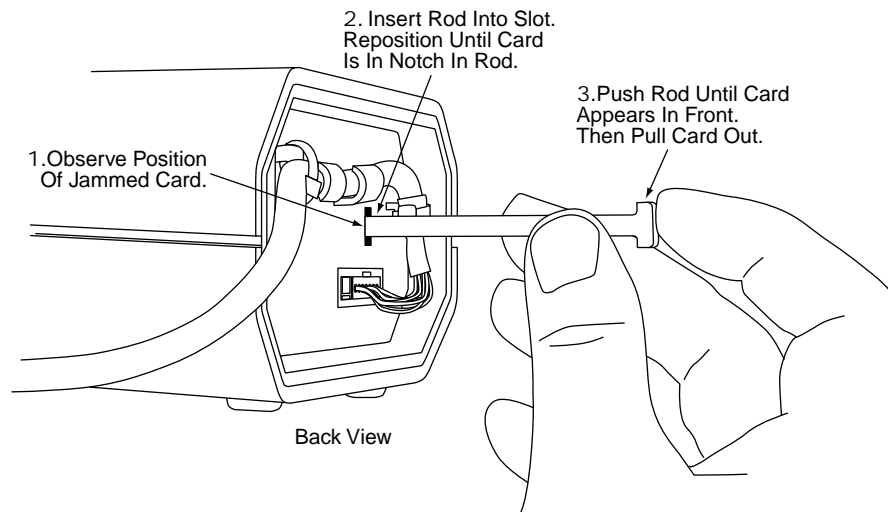
To remove a jammed card proceed as follows:

1. Remove the Ejector Rod by sliding it from under the retaining tabs as shown in Figure 3-1.



**Figure 3-1. Ejector Rod Removal**

2. Look into the slot in the back of the unit, shown in Figure 3-2, to see the jammed card. This will show the approximate position where the notch on the Ejector Rod will be inserted.



**Figure 3-2. Card Removal with Ejector Rod**

3. Insert the Rod into the slot as shown in Figure 3-2.
4. Reposition as required until the card is in the notch.
5. Push the Rod until the card appears in the front, then pull it out.
6. Replace the Rod as indicated in Figure 3-1.

