MIM
"Series 1"

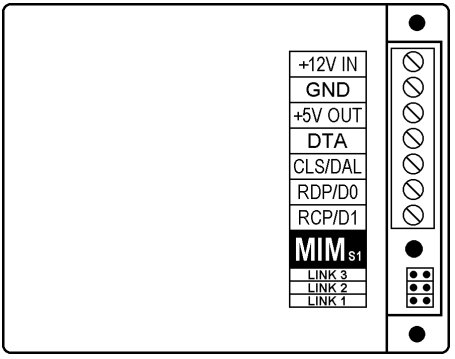
Magic Interface Module.

INTRODUCTION

The Magic Interface Module (MIM) can be used to convert commonly used data formats to either the Crow Magic or 26 bit Wiegand format.

FEATURES

- Converts from Wiegand, Crow Magic, Clock & Data (Magnetic Card) or Dallas iButton™ (commonly referred to as Silicon Key) format.
- Converts to Crow Magic or 26 bit Wiegand format (with site code 000 or 001, other site codes available).
- Compatible with new Crow Magic Series 4 decoders.



WARRANTY

The manufacturer will replace or repair this product if proven to be faulty (excluding accidental or malicious damage) under the 36 month warranty offered from the date of purchase.

As CROW ELECTRONIC ENGINEERING INC. or it's agents do not perform the final installation, inspection or training in the use of this product, they cannot be held liable for injury, loss, or damage directly or consequentially arising from the use or misuse of this product.

The software design of the CROW "MAGIC" is protected internationally.

Design improvement and specification changes are subject to change without notice. All designs are copyright protected.

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SPECIFICATIONS

Voltage:		10 to 15 Volts D.C.
Current:		25mA.
Dimensions:		3½" x 2¾" x 1" (88mm x 69mm x 25mm)
Weight:		4oz (115gms).
Wiegand:	Pulse Width	50µs
	Pulse Separation	2ms

TERMINAL DESCRIPTIONS

+12v The positive D.C. power input.

GND The Ground (or Negative) power input. This is also a common reference connection for all devices connected to the MIM. i.e. all devices connected to the MIM require their GNDs to be connected together.

+5V A 5 Volt D.C. power output for powering connected equipment (100mA. max.).

DTA Magic data input/output.

CLS/DAL The **C**ard **L**oaded **S**ignal (for Clock/Data readers) or Dallas iButton™ input.

RDP/D0 The **R**ead **D**ata **P**ulse input (for Clock/Data readers) or Wiegand Data 0 input/output.

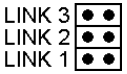
RCP/D1 The **R**ead **C**lock **P**ulse input (for Clock/Data readers) or Wiegand Data 1 input/output.

SETTINGS SUMMARY

Links	Input	Output
	26 bit Wiegand	Magic (Series 4 compatible only)
	Dallas iButton™	Magic (Series 4 compatible only)
	Track 2 format Clock/Data	Magic (Series 4 compatible only)
	Track 2 format Clock/Data	Magic (all Series)
	Magic	26 bit Wiegand with site code 000
	Dallas iButton™	26 bit Wiegand with site code 000
	Dallas iButton™	26 bit Wiegand with site code 001
	Magic	26 bit Wiegand with site code 001

IMPORTANT NOTE: The required operational mode of the MIM (as set by the links above) **MUST** be set **BEFORE** applying power to the unit.

Converting from WIEGAND to MAGIC Series 4



All links OFF

Note: This conversion can only be used when a Magic Series 4 decoder is being used.

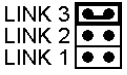
In this mode the MIM accepts standard 26 bit Wiegand data in on the RDP/D0 and RCP/D1 terminals. This data is then converted to Magic format and output on the DTA terminal. The actual Magic code output will be eight (8) digits long, with the first three (3) digits being the site code and the last five (5) digits being the user code.

Cabling requirements:

Wiegand Reader to MIM – Shielded cable – max 328 ft (100m).

MIM to Series 4 decoder – Unshielded cable – max 0.6 mile (1Km).

Converting from DALLAS iButton™ to MAGIC Series 4



Link 3 ON only

Note: This conversion can only be used when a Magic Series 4 decoder is being used.

In this mode the MIM accepts Dallas iButton™ data in on the CLS/DAL terminal. The unique identifier from the Dallas iButton™ is read and the last 32 bits of this data is kept. These 32 bits are then converted to Magic format and output on the DTA terminal. The actual Magic code will be eight (8) base 12 digits.

The method of calculating the Magic code generated by the MIM from a Dallas iButton™ is available upon request from Crow Electronic Engineering Inc.

Cabling requirements:

iButton™ Reader to MIM – Unshielded cable – max 328 ft (100m).

MIM to Series 4 decoder – Unshielded cable – max 0.6 mile (1Km).

Converting from CLOCK/DATA to MAGIC Series 4

Link 2 ON

In this mode the MIM accepts Track 2 format Clock/Data data on the CLS/DAL, RDP/D0 and RCP/D1 terminals. The CLS input ***MUST*** be used as the MIM will ignore all data on the RDP and RCP inputs until the CLS input is low. The CLS input must be taken high again after a read to enable the reading of the next data stream.

The MIM reads up to eight (8) digits from the data stream. The digits read are the ones directly before the first separator or end sentinel character. i.e. on a standard bank issue card the MIM will read the last eight (8) digits as embossed on the front of the card.

Cabling requirements:

Clock/Data Reader to MIM – Shielded cable – max 328 ft (100m).

MIM to Series 4 decoder – Unshielded cable – max 0.6 mile (1Km).

Converting from CLOCK/DATA to MAGIC

Links 2 & 3 ON

In this mode the MIM accepts Track 2 format Clock/Data data on the CLS/DAL, RDP/D0 and RCP/D1 terminals. The CLS input ***MUST*** be used as the MIM will ignore all data on the RDP and RCP inputs until the CLS input is low. The CLS input must be taken high again after a read to enable the reading of the next data stream.

The MIM reads up to seven (7) digits from the data stream. The digits read are the ones directly before the first separator or end sentinel character. i.e. on a standard bank issue card the MIM will read the last seven (7) digits as embossed on the front of the card.

Cabling requirements:

Clock/Data Reader to MIM – Shielded cable – max 328 ft (100m).

MIM to Series 4 decoder – Unshielded cable – max 0.6 mile (1Km).

Converting from MAGIC to WIEGAND

Link 1 ON or


Links 1, 2 & 3 ON

In this mode the MIM accepts Magic data in on the DTA terminal. This data is then converted to 26 bit Wiegand data and output on the RDP/D0 and RCP/D1 terminals. The site code generated by the MIM will be either 000 (Link 1 ON only) or 001 (Links 1, 2 & 3 ON). The user code will be the number sent to the MIM from the Magic device.

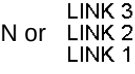
Note: If the number generated by the Magic device (eg. a MK-01 keypad) is equal to 0 or greater than or equal to 65535 then the user code will always be 65535 and the Magic device will respond with a "Blarp" (error) sound.

Cabling requirements:

Magic keypad to MIM – Unshielded cable – max 0.6 mile (1Km).

MIM to Wiegand Controller – Shielded cable – max 328 ft (100m).

Converting from DALLAS iButton™ to WIEGAND

Links 1 & 3 ON or


Links 1 & 2 ON

In this mode the MIM accepts Dallas iButton™ data in on the CLS/DAL terminal. The unique identifier from the Dallas iButton™ is read and the last 16 bits of this data is kept. The site code generated by the MIM will be either 000 (Links 1 & 3 ON) or 001 (Links 2 & 3 ON). The user code will be the last 16 bits of the Dallas iButton™'s unique identifier code.

Cabling requirements:

iButton™ Reader to MIM – Unshielded cable – max 328 ft (100m).

MIM to Wiegand controller – Shielded cable – max 328 ft (100m).

OTHER MAGIC MODELS AND ACCESSORIES

MD-01
Series 4
Magic single door access decoder.
400 programmable user codes.
1 x 5 Amp. 30 Volt Electric Latch Control relay.
1 x 1 Amp. 30 Volt alarm relay.
12 to 24 Volt D.C. or 16 to 24 Volt A.C. operation.

MD-02
Series 4
Magic dual door access decoder.
400 programmable user codes.
2 x 5 Amp. 30 Volt Electric Latch Control relay.
2 x 1 Amp. 30 Volt alarm relay.
12 to 24 Volt D.C. or 16 to 24 Volt A.C. operation.

MD-06
Series 3
Six (6) open collector logic outputs.
Timed or toggle operation.
125 programmable user codes.
12 Volt D.C. operation.

MK-01 Standard keypad encoder for any Magic decoder. Up to 10 per system allowed.

MK-02I Rugged metal, back lit, vandal and weather resistant keypad encoder for any Magic decoder. Suitable for outdoor usage.

MAGIC6 MD-06 decoder and MK-01 keypad packaged together.