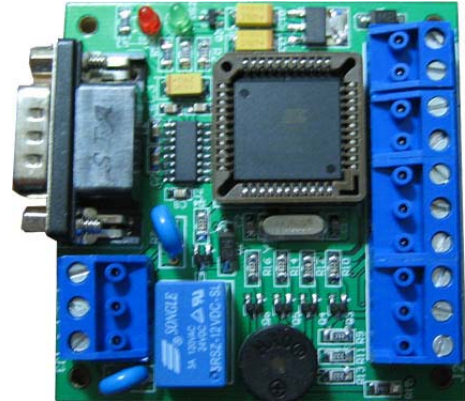


## Wiegand to RS232 Converter

**MA1400** is a Wiegand to RS232 converter. When Wiegand data is received, the MA1400 will automatically convert the Wiegand data from 24-bit up to 40-bit to a formatted ASCII string on the RS232 port.



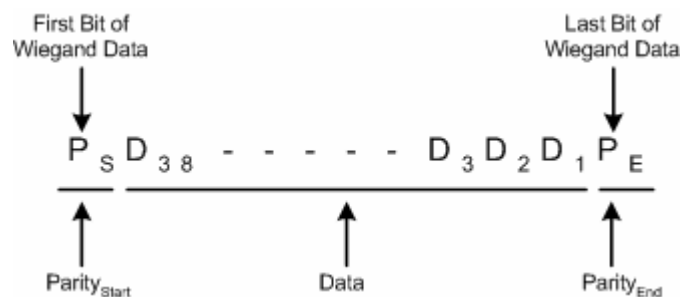
### 1. Specification

#### 1.1 Communications:

9600 BPS ASYNC, 8 bits, 1 Stop, No Parity.

#### 1.2 Wiegand Data Format

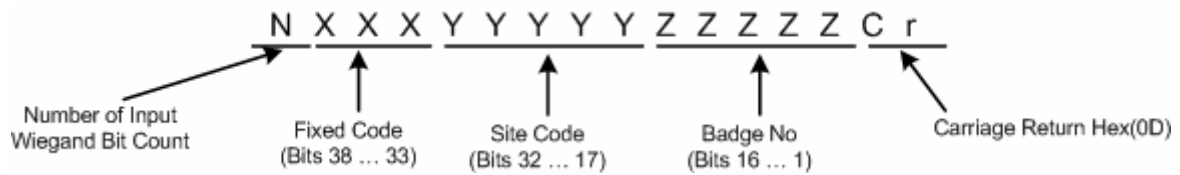
The format of the Wiegand data is shown as follows:



## 1.3 RS232 Data Format

The format of the RS232 data is in the form of 15-byte ASCII string as follow.

### 1.3.1 24-35, 37-40 Bits Wiegand



### 1.3.2 36 Bits Wiegand



The number of input Wiegand bit count N is represented as follows

<b>Character</b>	SP	!	“	#	\$	%	&	‘	(
<b>No. of Bits</b>	24	25	26	27	28	29	30	31	32
<b>Character</b>	)	*	+	,	-	.	/	0	
<b>No. of Bits</b>	33	34	35	36	37	38	39	40	

## 1.4 . Command Data

Command (4 Byte Hex Value)	Description
02 <sub>H</sub> 31 <sub>H</sub> 30 <sub>H</sub> 03 <sub>H</sub>	Turn on Reader Green LED
02 <sub>H</sub> 31 <sub>H</sub> 31 <sub>H</sub> 03 <sub>H</sub>	Turn off Reader Green LED
02 <sub>H</sub> 31 <sub>H</sub> 32 <sub>H</sub> 03 <sub>H</sub>	Toggle LED
02 <sub>H</sub> 32 <sub>H</sub> 30 <sub>H</sub> 03 <sub>H</sub>	Turn on Reader Buzzer
02 <sub>H</sub> 32 <sub>H</sub> 31 <sub>H</sub> 03 <sub>H</sub>	Turn off Reader Buzzer
02 <sub>H</sub> 33 <sub>H</sub> 30 <sub>H</sub> 03 <sub>H</sub>	Turn on Converter Status LED
02 <sub>H</sub> 33 <sub>H</sub> 31 <sub>H</sub> 03 <sub>H</sub>	Turn off Converter Status LED
02 <sub>H</sub> 34 <sub>H</sub> 30 <sub>H</sub> 03 <sub>H</sub>	Turn on Converter Relay
02 <sub>H</sub> 34 <sub>H</sub> 31 <sub>H</sub> 03 <sub>H</sub>	Turn off Converter Relay
02 <sub>H</sub> 35 <sub>H</sub> 30 <sub>H</sub> 03 <sub>H</sub>	Turn on Converter Buzzer
02 <sub>H</sub> 35 <sub>H</sub> 31 <sub>H</sub> 03 <sub>H</sub>	Turn off Converter Buzzer
02 <sub>H</sub> 36 <sub>H</sub> 30 <sub>H</sub> 03 <sub>H</sub>	Turn on Reader Red LED
02 <sub>H</sub> 36 <sub>H</sub> 31 <sub>H</sub> 03 <sub>H</sub>	Turn off Reader Red LED

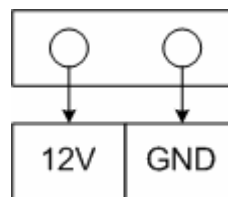
## 2. Connectors:

There are total 3 pluggable connectors and one DB9 male connector located on the MA1400 board serving different functions as described below.

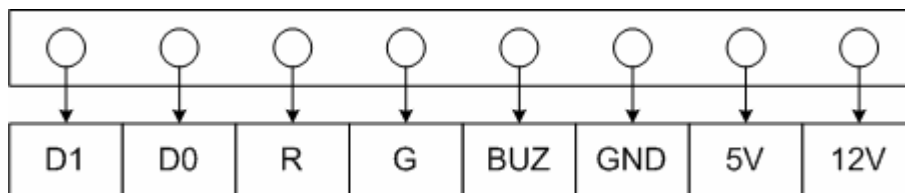
Connector Symbol	Description
J1	9V – 12V DC Power Supply
J2	Wiegand Reader Port
J3	Relay Output

### 2.1 Connector J1

Connector J1 Port Assignment	
Designator	Description
12V	12V DC Power Supply In
GND	Power Supply Ground



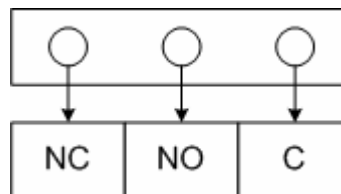
### 2.2 Connector J2



Connector J2 Port Assignment	
Designator	Description
D1	Wiegand Data 1
D0	Wiegand Data 0
R	To Reader Red LED
G	To Reader G LED
BUZ	To Reader BUZ
GND	To Reader Ground
5V	To 5V Reader Supply
12V	To 12V Reader Supply

## 2.3 Connector J3

Connector J3 Port Assignment	
Designator	Description
NC	Normally Open
NO	Normally Close
C	Common



## 2.4 DB9 Male

DB9 Male Port Pin Assignment	
Designator	Description
1	Unused
2	TX data to terminal
3	RX data from terminal
4	Unused
5	Ground
6	Unused
7	Unused
8	Unused
9	Unused

