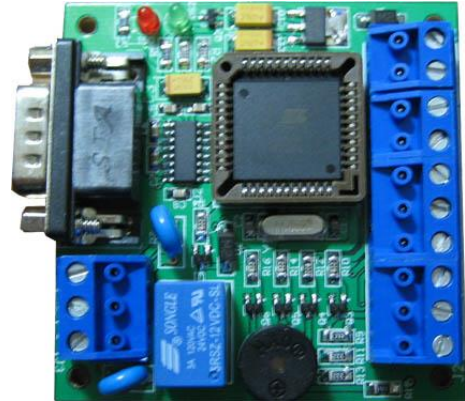


Wiegand to RS232 Converter

MA1455 is a Wiegand to RS232 converter. When Wiegand data is received, the MA1455 will automatically convert the Wiegand data from 3-bit up to 50-bit to a formatted ASCII string on the RS232 port. In a reverse process, when the formatted ASCII string is used as input to the RS232 port of the converter, the converter can convert the formatted ASCII string to Wiegand data format and output on the Wiegand data line port.



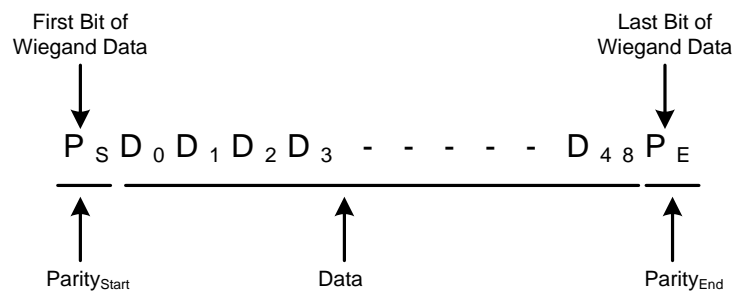
1. Specification

1.1 Communications:

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

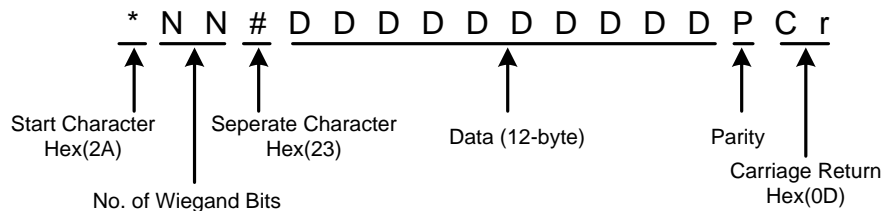
1.2 Wiegand Data Format

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 18-byte ASCII string (In Hex Format) as follow.



The Parity Character P is defined as follow.

RS232 Side	Wiegand Side	
P	P _S	P _E
0	0	0
1	0	1
2	1	0
3	1	1

1.4 Command Data

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

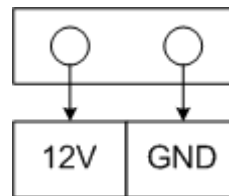
2. Connectors:

There are total 3 pluggable connectors and one DB9 male connector located on the MA1405 board serving different functions as described below.

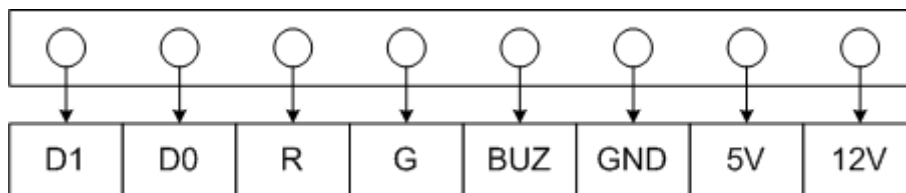
Connector Symbol	Description
J1	9V – 12V DC Power Supply
J2	Wiegand Reader Port
J3	Relay Output

2.1 Connector J1

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



2.2 Connector J2

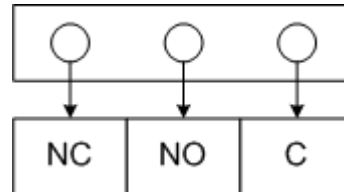


Connector J2 Port Assignment	
Designator	Description
D1	Wiegand Data 1
D0	Wiegand Data 0
R	To Reader Red LED
G	To Reader G LED
BUZ	To Reader BUZ
GND	To Reader Ground

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

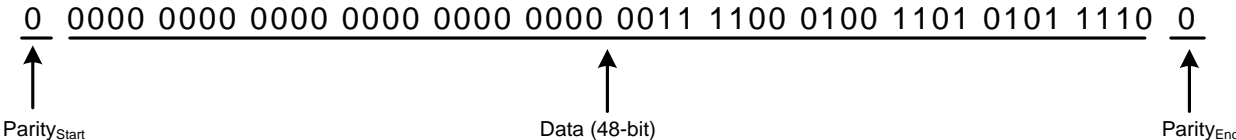
DB9 Male Port Pin Assignment	
Designator	Description
1	Unused
2	TX data to terminal
3	RX data from terminal
4	Unused
5	Ground
6	Unused
7	Unused
8	Unused
9	Unused



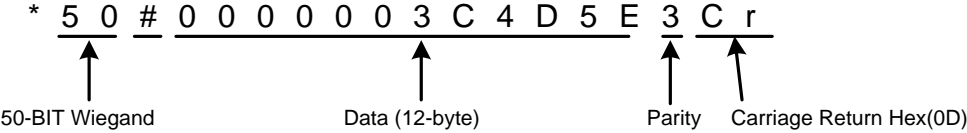
3. Conversion Example

3.1 Wiegand to RS232

Input: Wiegand (50-bit)

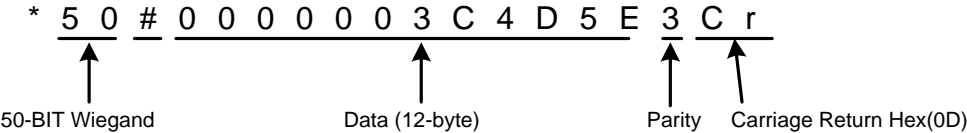


Output: 18-byte ASCII string on RS232 port



3.2 RS232 to Wiegand

Input: 18-byte ASCII string on RS232 port



Output: Wiegand (50-bit)

