

# RS232-to-Wiegand Bidirectional Converter (MA1405)

**MaCaPS MA1405** is a RS232-to-Wiegand Bidirectional converter. The converter can automatically convert Wiegand input from 3-bit up to 42-bit to a formatted ASCII string. When the formatted ASCII string is used as input to the RS232 port of another MA1405 unit, the formatted ASCII string is reconverted to Wiegand format output.



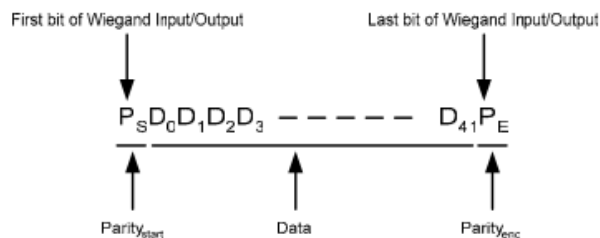
## 1 Specification:

### 1.1 Communications:

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

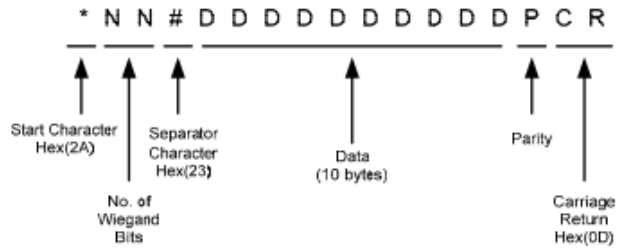
### 1.2 Wiegand Input/Output Format

The format of the Wiegand bit stream is shown as follows:



### 1.3 RS232 Input/Output Format

The format of the RS232 is in the form of 16-byte ASCII string (In Hex format) as follow:

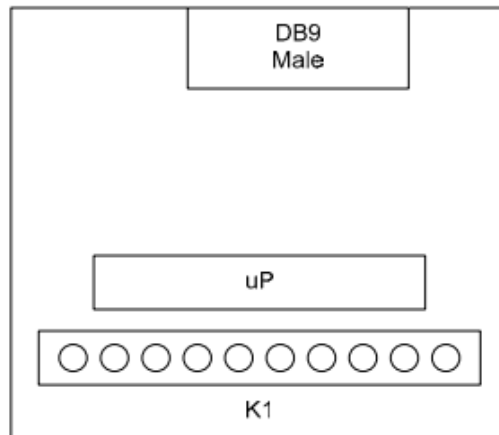


The Parity Character P is decoded as follows:

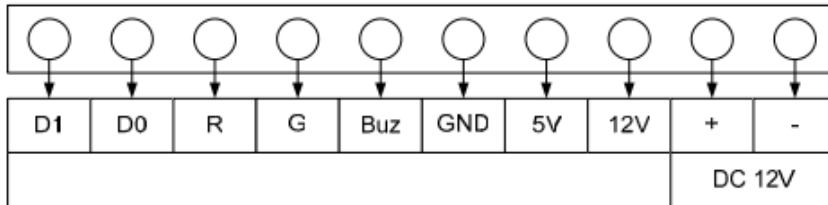
RS232 Side	Wiegand Side	
P	P <sub>S</sub>	P <sub>E</sub>
0	0	0
1	0	1
2	1	0
3	1	1

## 2 Pin Connectors:

The schematic of the MA1405 is shown in the following figure.



## 2.1 Connector K1



- D1: Wiegand Data 1
- D0: Wiegand Data 0
- GND: Ground
- 5V: 5V DC output
- 12V: 12V DC output
- +: Power Supply +12V In
- : Power Supply Ground

## 2.2 DB 9 Male

1. DCD Unused
2. TX data from converter
3. RX data from terminal
4. DTR Unused
5. Ground
6. DSR Unused
7. RTS Unused
8. CTS Unused



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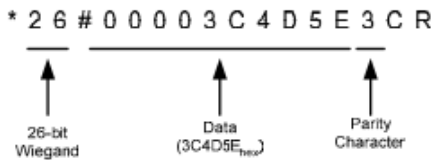
### 3 Example

#### 3.1 Wiegand-to-RS232

Input: Wiegand (26-bit)



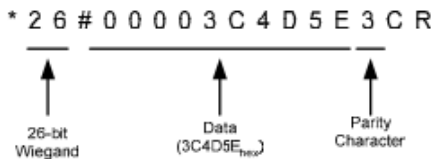
Output: 16-byte ASCII string from RS232 port



#### 3.2 RS232-to-Wiegand

This is a reversed process of Wiegand-to-RS232

Input: 16-byte ASCII string to RS232 port



Output: Wiegand (26-bit)

