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:

```
* N N # D D D D D D D D D D P C R
```

The Parity Character P is decoded as follows:

<table>
<thead>
<tr>
<th>RS232 Side</th>
<th>Wiegand Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>P_S</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

2 Pin Connectors:

The schematic of the MA1405 is shown in the following figure.
2.1 Connector K1

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>D0</td>
<td>R</td>
<td>G</td>
<td>Buz</td>
<td>GND</td>
<td>5V</td>
<td>12V</td>
</tr>
<tr>
<td>+</td>
<td>-</td>
<td>12V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
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)

* All specifications are subject to change without any notice.