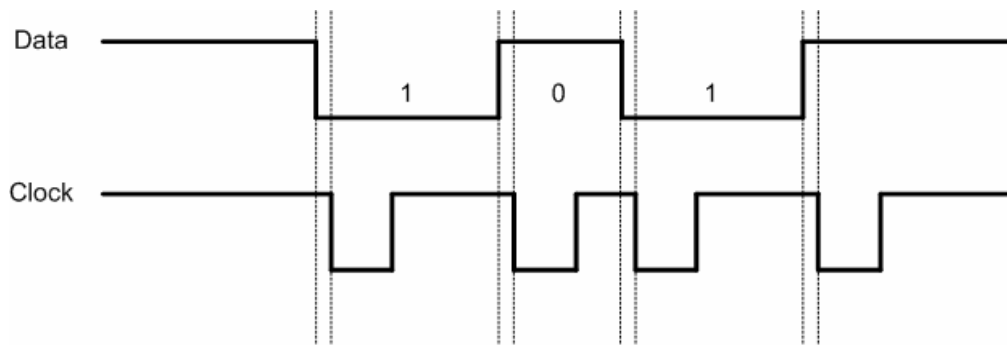


## Clock-and-Data to Wiegand Converter

**MA1485** is designed to convert clock-and-data to standard 26-bit Wiegand. When connected to a clock and data output reader, the last 8 digits of the encoded badge information is converted to a standard 26-bit Wiegand.

### 1. Input Clock-and-Data characteristics

The Clock-and-Data reader interface emulates a magnetic stripe track II reader output. The timing diagram is shown below.

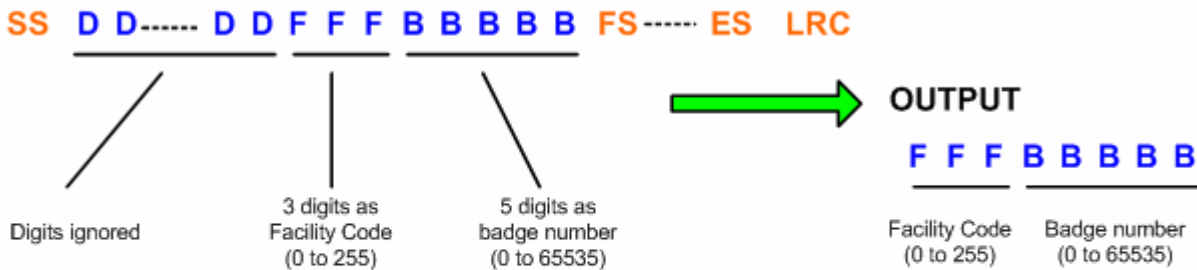


- The clock input is normally high, and goes low to indicate a data sample time.
- Data is valid at least 1 uS before negative edge of clock.
- A data input high level is a zero (0) value data bit, and a low level is a one (1) value data bit.

## 2. Conversion Format

### 2.1 Input Format

INPUT



**SS: Start sentinel 0xB**

**FS: Field separator 0xD**

**ES: End sentinel 0xF**

**LRC: Longitudinal redundancy check**

### 2.2 Output Format

26 bit standard Wiegand.

**P**FFFFFFFFBBBBBBBBBBBBBBB**P**  
**E**XXXXXXXXXXXX  
 XXXXXXXXXXXXXXX**O**

**P = Parity**

**F = Facility code, range from 0 to 255**

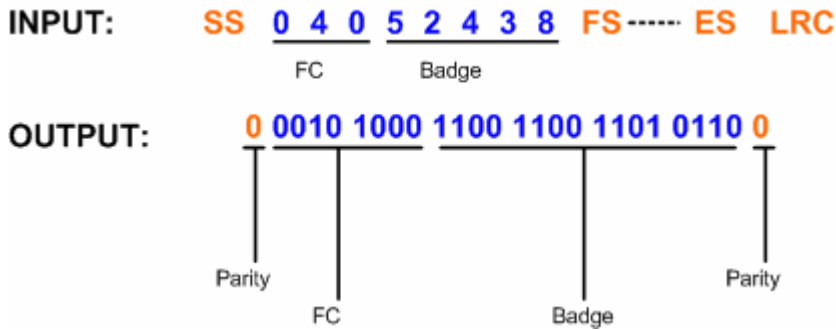
**B = Badge number, range from 0 to 65535**

**O = Odd parity**

**E = Even parity**

**X = Parity mask**

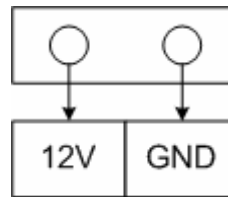
## 2.3 Example



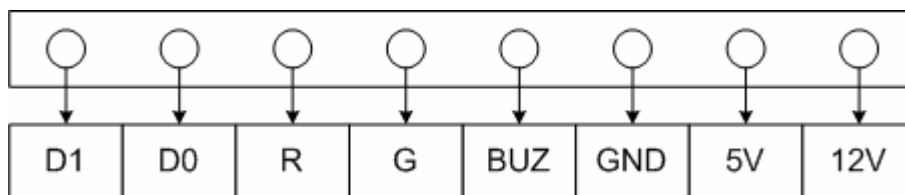
## 3. Connectors:

### 3.1 Connector J1

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



### 3.2 Connector J2



Connector J2 Port Assignment	
Designator	Description
D1	Clock input
D0	Data input
R	Wiegand D1 output
G	Wiegand D0 output
BUZ	Reserved
GND	GND
5V	5V Output
12V	12V Output

### 3.3 DB9 Male

DB9 Male Port Pin Assignment	
Designator	Description
1	Unused
2	Unused
3	Unused
4	Unused
5	Unused
6	Unused
7	Unused
8	Unused
9	Unused

