APPLIED WIRELESS ID

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Technical Reference

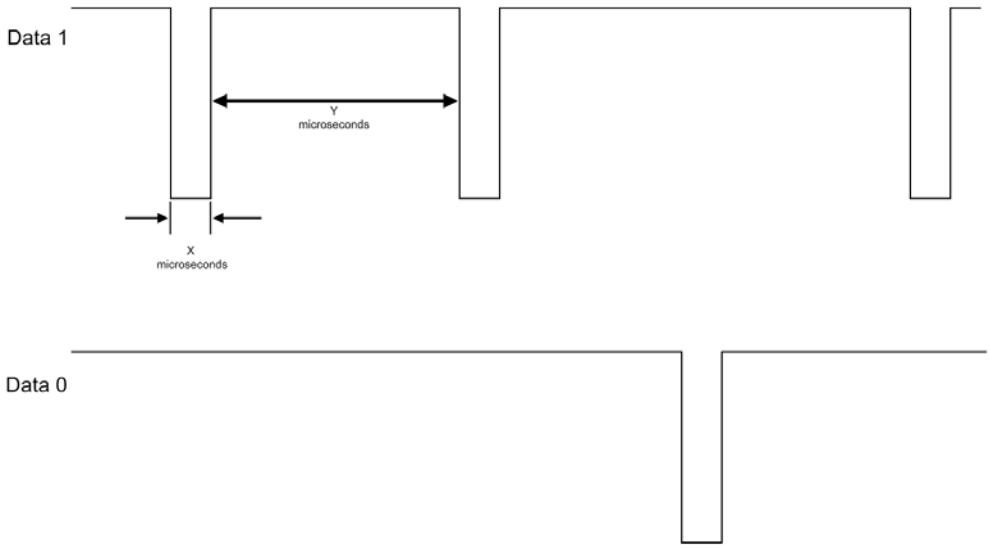
Wiegand Interface Specifications – Bit Assignments and Pulse Timing

Change History

Version	Date	Author	Comments
1.0	15 April 2009	L. Hickcox	First release.

All of AWID's readers, whether low-frequency (proximity) or ultra-high-frequency (long range for vehicles), have the industry-standard Wiegand electrical interface. This makes them suitable for direct connection to virtually every system for access control (AC) and for automated vehicle identification (AVI) worldwide, as an input peripheral device.

This interface is unusual when compared with other standards. The Wiegand interface separates the **Data-0** and **Data-1** pulses into two binary data lines – the familiar green and white color-coded wires in the cabling of almost every system. In addition, another wire serves as **Data-Common**. In proximity readers, this is the *black* wire (combining Data-Common and DC power negative). In the LR-2000 and LR-911 long-range readers, this is the *blue* wire.



AWID follows the industry standard for data pulses –

Pulse width ..... X ..... 100 microseconds
Interpulse spacing .... Y ..... 2000 microseconds (This applies to any two sequential pulses, either Data-1 or Data-0.)

In the industry-standard **26-bit-STD data format**, there are 26 of these data bits, either in the Data-0 line or the Data-1 line. In each time slot of this binary format, there is either a "0" bit or a "1" bit, but never both a "0" and a "1" at the same time. The total number of all "0" and "1" bits is 26. The details for the 26-bit format are –

Bit no. 1 ..... 1 bit ..... Even parity for bits no. 2 through 13 (Sum of bit values in bits 1-13 is an even number.)
Bits no. 2 to 9..... 8 bits ..... Data field for site code or facility code
Bits no. 10 to 25..... 16 bits .... Data field for credential's ID number or PIN
Bit no. 26 ..... 1 bit ..... Odd parity for bits no. 14 through 25 (Sum of bit values in bits 14-26 is an odd number.)

Most-significant-bit first.