M&W Ignition Bus™

PULSE WIDTH TABLE			
Output #	Lower	Target	Upper
0	48	64	80
Null	81	<->	88
1	89	105	121
Null	122	<->	129
2	130	146	162
Null	163	<->	170
3	171	187	203
Null	204	<->	211
4	212	228	244
Null	245	<->	252
5	253	269	285
Null	286	<->	293
6	294	310	326
Null	327	<->	334
7	335	351	367
Null	368	<->	375
8	376	392	408
Null	409	<->	416
9	417	433	449
Null	450	<->	457
10	458	474	490
Null	491	<->	498
11	499	515	531
Null	532	<->	539
12	540	556	572

FIRE 0   FIRE 1   FIRE 2   FIRE 3   FIRE 4

+5/+12V

0V

64uS   105uS   146uS   187uS   228uS
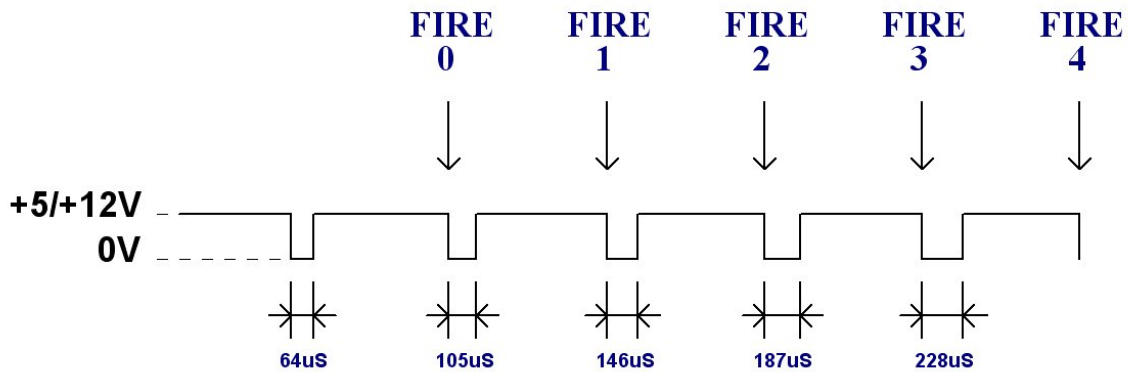
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The M&W ignition bus™ protocol is a single wire time domain multiplex protocol for firing up to 12 ignition channels using a single ecu output.

o Available on all street and drag race systems with the exception of those designed for Mazda rotary engines.

o Pulse width tolerance of +/- 16uS with an 8uS guard period to prevent cross firing.

o Calibration occurs on the first pulse received after power up to reduce errors from ECU to CDI clock frequency variation and drift.

o Maximum ignition frequency of 1,500Hz

o Firing occurs on the signal falling edge and the next cylinder to fire is defined by the time period to the following rising edge

o Ignition channels may be fired in any sequence.

o Rev limiting is implemented by selecting cylinder '0' from the timing table.

o CDI multiplex input must be driven by a low impedance push-pull circuit from ground to +5V or +12V.

o CDI inputs are pulled up to +12V via 4k7 resistor.

o This system is not compatible with either the Motec single wire IEX™ protocol or Haltech single wire IMS™ protocol.