



# **PRO-18c**

## **8 CHANNEL**

(AUTRONIC MULTIPLEXER)

## **CAPACITOR DISCHARGE**

## **IGNITION**

PLEASE REPORT ANY ERRORS  
SALES@MWIGNITIONS.COM

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1. Installation notes
2. Ignition coil information
3. Mounting dimensions
4. Connections and specifications
5. 8 cylinder direct fire ignition

# **CAUTION**

**THIS WIRING DIAGRAM IS  
APPLICABLE ONLY TO  
IGNITION SYSTEMS WITH THE  
SERIAL NUMBER PREFIX  
STARTING**

**49xxxx**

**USE OF INCORRECT DIAGRAM  
WILL VOID WARRANTY AND  
MAY DAMAGE UNIT**

# **INSTALLATION NOTES**

## **MOUNTING**

Do not mount the unit where it will be exposed to water or other liquids and ensure the bottom drain slots are unobstructed. For earlier units mount with connector end low. Select a location away from excessive heat and provide a cooling air supply if required. Use soft rubber (40 duro) mounts on all four corners to isolate from strong vibration.

## **IGNITION LEADS & SPARKPLUGS**

Straight metal wire ignition leads radiate electrical interference which may cause erratic operation of nearby electronic devices including the CDI. Carbon suppressed ignition leads are not capable of conducting the CDI energy without becoming damaged.

For best performance use spiral wound inductively suppressed metal core ignition leads such as those produced by Magnecor. Where possible use non resistor spark plugs to reduce energy loss.

## **WIRING & POWER SUPPLY**

Ignition system must be wired by engine ignition sequence not by engine cylinder number.

250mJ and larger Pro-Drag CDI systems must not be operated below 13V. Do not operate any CDI above 18V and when running from 16V batteries disconnect the CDI before recharging.

Do not use voltage boosters as they may limit CDI operation and performance will not increase when operated above 13.8V

Connect the CDI directly to the battery with the recommended gauge wire and fuse. All coil negative wires must be returned to the connector and not joined in the harness.

Use twisted pair wire for all power and coil connections. To comply with Australian EMC standards and for ultimate noise suppression use shielded twisted pair wire.

## **TRIGGER EDGE**

(NOT APPLICABLE TO RELUCTOR TRIGGER OR MULTIPLEX INPUT IGNITIONS)

All M&W CDI systems default to falling edge ignition, to select rising edge ignition connect the 'Trigger Edge' pin to the 'Signal Ground' pin.

Where the ecu contains an in built igniter or there is an igniter between the ECU and CDI it may be necessary to select rising edge ignition.

**FOR CORRECT OPERATION THE TRIGGER EDGE ON THE CDI MUST BE SET THE SAME AS THAT ON THE ECU.**

## **LED INDICATOR**

After initially applying power to the CDI the LED will illuminate for 1 second to indicate normal operation. Each consecutive trigger event will then cause the LED to flash briefly.

A repeated double flash of the LED indicates a possible faulty ignition coil, faulty wiring, low supply voltage or damage to the CDI.

## **TESTING**

CDI may be tested by momentarily grounding the inputs, this will cause the corresponding ignition coil to spark. Do not conduct this test without a grounded sparkplug installed.

## **CAUTION**

**DO NOT FIRE THE CDI WITHOUT A GROUNDED SPARK PLUG**

**DO NOT MAKE THE SPARK JUMP AN EXCESSIVE GAP**

**CHECK IGNITION TIMING AFTER COMPLETION**

# **IGNITION COILS**

## **CAUTION!**

DAMAGE TO THE IGNITION SYSTEM AND COILS MAY OCCUR IF RUN WITH AN EXCESSIVE SPARK GAP.

## **COP COILS**

COP (coil on plug) coils with built in drivers are not suitable for use with CDI ignition. Small COP ignition coils may overheat when used in direct fire cdi applications. Inductive COP coils must be wired reverse polarity.

## **COIL SELECTION**

Most inductive ignition coils will work with CDI systems. For best performance they must have very low primary resistance and inductance and a turns ration between 75 and 100 to 1.

For ultimate CDI ignition power use a CDI specific ignition coil such as our CDI COP pencil coils or Ferrite CDI coils.

## **FERRITE CDI COILS**

Be aware when buying ferrite coils from other suppliers who do not have the knowledge or experience to correctly prepare them for automotive use. Due to their fragile nature and poor quality control during manufacture it is easy to experience premature ignition coil failure and engine misfiring unless correctly assembled. All coils prepared by M&W are individually tested before sale.

**Note!** Ferrite CDI coils are for direct fire ignition only. For high performance distributor applications use either the Crane PS92 or MSD HVC2 coils.

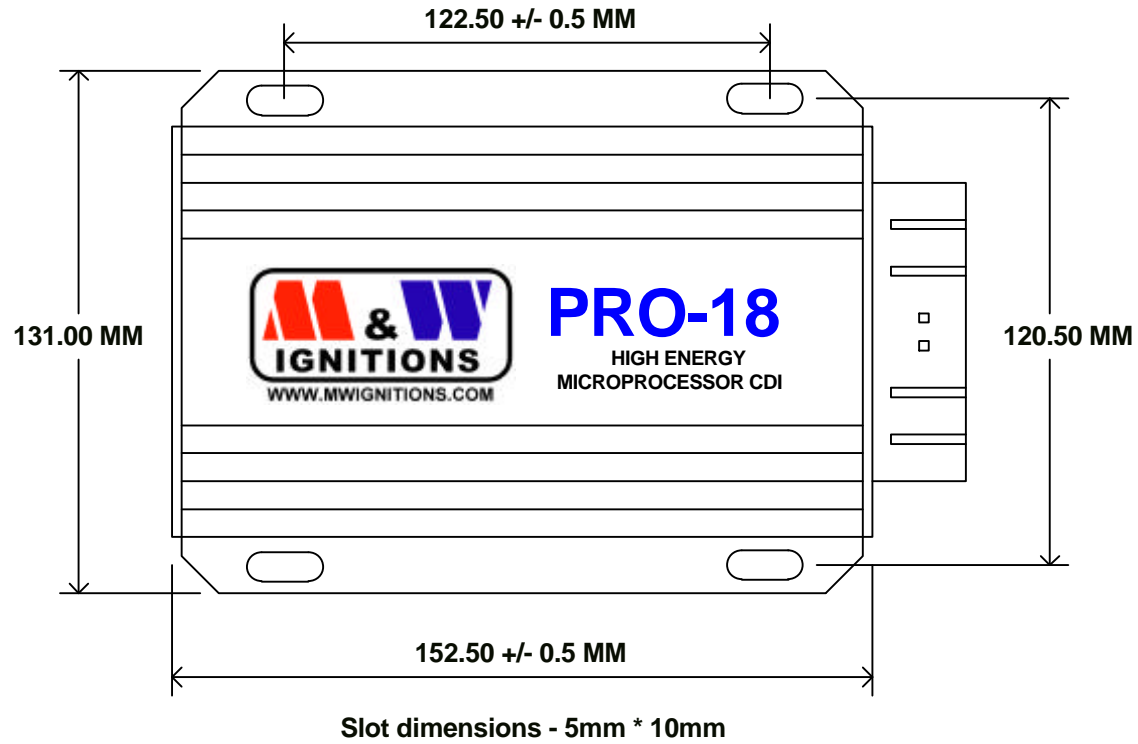
## **COIL POLARITY**

For correct operation inductive ignition coils should be wired with their polarity reversed.

**CAUTION!**  
**HIGH VOLTAGE**



DISCONNECT POWER BEFORE  
WORKING ON UNIT



Title				<b>MOUNTING DIMENSIONS</b>	
Size	Number	Revision			
A4	<b>PRO-18c S3</b>	1.0			
Date:	24-Oct-2007	Sheet 1 of	1		
File:	E:\M&W\Pro-18C_S3_Mounting dimensions	Drawn By:	M&W		

**CAUTION!**  
**HIGH VOLTAGE**



DISCONNECT POWER BEFORE  
WORKING ON UNIT

# M & W IGNITIONS

(C)1996 - 2007 M&W IGNITIONS

**KEEP ALL INPUTS WELL SEPARATED FROM COIL OUTPUTS**

1 +12V (Battery)	13 Ground (Battery)	25 IGNITION 2 (*6)
2 +12V (Battery)	14 Ground (Battery)	26 Ignition switch
3 IGNITION 1 (*5)	15	27
4	16 IGNITION 3 (*19)	28
5	17	29 IGNITION 4 (*33)
6 Tacho	18 Shield	30
7	19	31
8	20	32
9 Coil 7 +	21 Coil 7 & 8 -	33 Coil 8 +
10 Coil 5 +	22 Coil 5 & 6 -	34 Coil 6 +
11 Coil 3 +	23 Coil 3 & 4 -	35 Coil 4 +
12 Coil 1 +	24 Coil 1 & 2 -	36 Coil 2 +

\* DENOTES SM4 PIN NUMBER

VIEWED FROM BACK OF CONNECTOR



**TRIGGER EDGE**

Autronic trigger edge must be set to -VE EDGE (PULSE)

**SPECIFICATIONS**

Supply voltage = 13.8V DC negative ground  
 Operating voltage = +5.5V to +15V  
 Maximum supply current = 7.0A  
 Power off current < 700uA  
 Maximum ignition frequency = 1350 Hz  
 Coil primary voltage = 480V  
 Spark energy = 115 millijoules @ 800Hz  
 Trigger = 10mA multiplex input  
 Tacho = 12V, 25mA square wave  
 Maximum allowable case temperature = 105°C  
 Dimensions = 152L \* 110W \* 40H  
 Weight = 740gm

Title			AUTRONIC MULTIPLEX TRIGGER		
Size	Number		Revision		
A4	PRO-18c S3		1.2		
Date:	2-Jul-2008		Sheet 1 of	1	
File:	E:\M&W\Proj8C_S3_1.sch		Drawn By:	M&W	

**CAUTION!  
HIGH VOLTAGE**

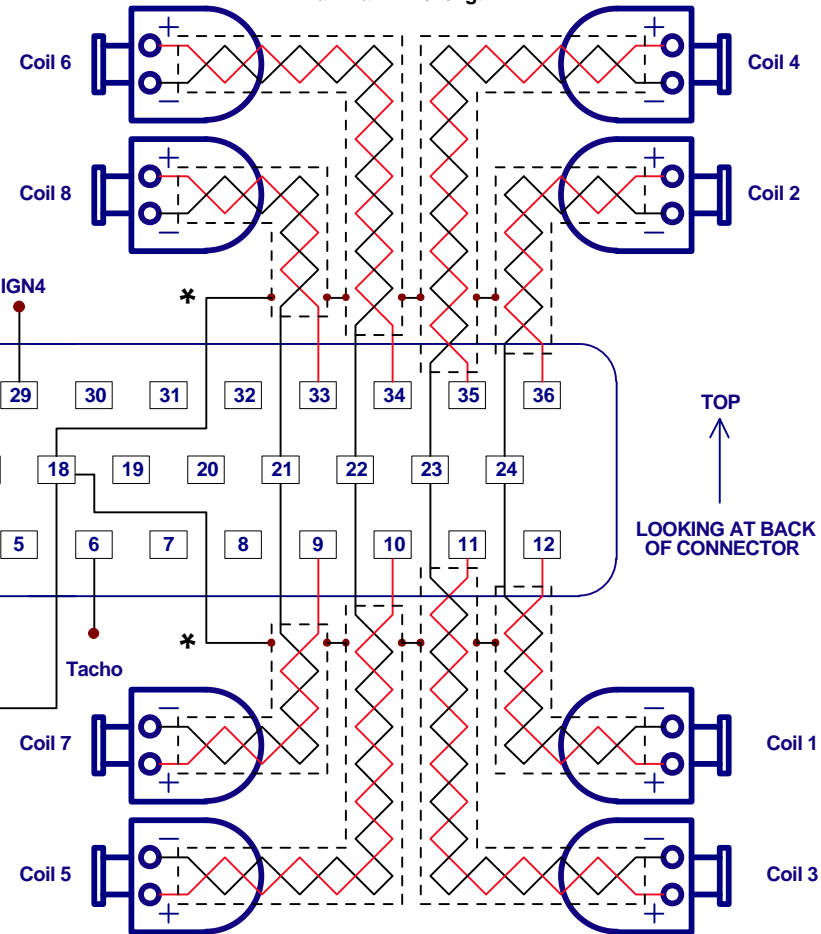


DISCONNECT POWER BEFORE  
WORKING ON UNIT

# M & W IGNITIONS

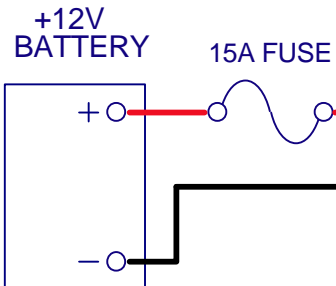
(C)1996 - 2007 M&W IGNITIONS

Note!  
Use 20 gauge wire  
Twist wires 1 turn in 20mm  
Maximum wire length 2M



TOP  
↑  
LOOKING AT BACK  
OF CONNECTOR

Note!  
Use 20 gauge wire with junction < 100mm  
from connector joined to 14 gauge for run  
to battery  
Twist wires 1 turn in 20mm  
Maximum length 2.5M



\* Shielded cables required for Australian EMC compliance

Title			EIGHT CHANNEL SEQUENTIAL IGNITION		
Size	Number	Revision			
A4	PRO-18c S3	1.1			
Date:	12-Dec-2007	Sheet 1 of	1		
File:	E:\M&W\Pro18C_S3_2.sch	Drawn By:	M&W		

**CAUTION!**  
**HIGH VOLTAGE**



DISCONNECT POWER BEFORE  
WORKING ON UNIT

# M & W IGNITIONS

(C)1996 - 2008 M&W IGNITIONS

IGNITION  
COIL

1

2

3

4

5

6

7

8

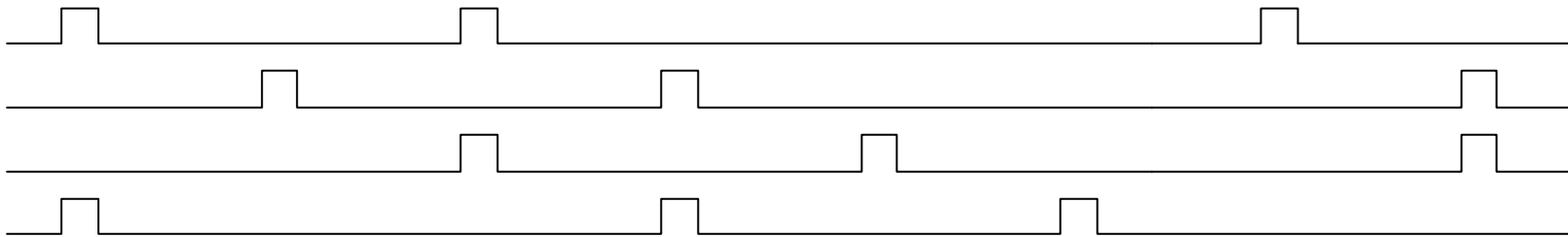


Ignition 1

Ignition 2

Ignition 3

Ignition 4



Title			AUTRONIC MULTIPLEX SIGNAL		
Size	Number	Revision			
A4	PRO-18c S3	1.1			
Date:	2-Jul-2008	Sheet 1 of	1		
File:	E:\M&W\Pro18C_S3_3.sch	Drawn By:	M&W		