ELECTRIMOTION INC.
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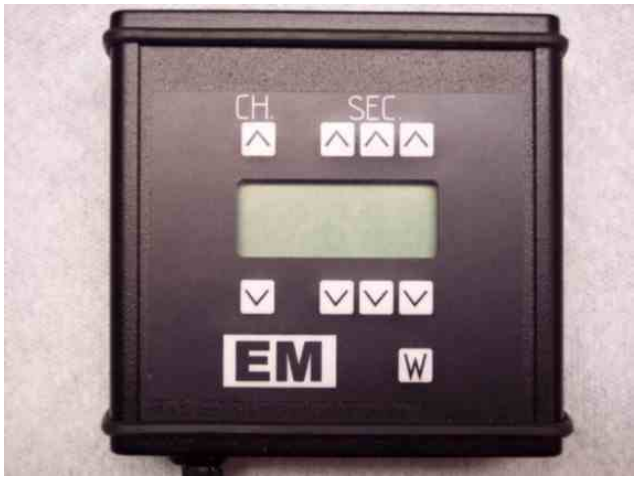
15 channel programmable event timer, with RPM and Pressure inputs.

***With Tachometer Feature**



Connections

Power Input connector: 2 pin plug (red-black) wires 9-16 volt input **RPM input: Purple wire**	**Start Switch connector:** (Blue – black) starts channels 1-8 (Green – black) starts channels 9-F Short wires together starts timer (blk wire is ground) This unit is ground to start.
Outputs: **22 pin conn:** R B 1 B 7 8 9 A B R B 2 3 4 5 R 6 F E D C Red=Pos Black=Neg	
Mounting: 10-32 screws—2.500” by2.000”	**Overall Dims:** 4.250” * 3.500” * 1.750”

Modes of operation:

- **Timer Mode** - Each channel of the timer can be programmed to turn **on** at a specific time and **off** at a specific time.
- **RPM Mode** - Each channel can be programmed to act as an RPM activated output that is active all the time. RPM channels can also be programmed to be active based on the on and off times for that channel.
- **Pressure Mode** - Each channel can be programmed to act as an Pressure activated output that is active all the time. Pressure channels can also be programmed to be active based on the on and off time for that channel.

When the timer is activated, the screen will go blank, this is by design so you can tell the timer has started. After 8 seconds it will return to the battery voltage screen.

Timer Operation:

Startup:

1. Connect unit to +12V
2. The display shows “0” in the channel digit. Channel 0 is the starting screen for the timer.
3. The display also shows the voltage (11.45v) that the unit read, 1 sec before resetting the last time it was triggered. This is used to give you an idea what load the system is putting on your batteries. (Fig. 1)
4. After a few seconds the display switches to reading the current battery voltage. (Fig. 2)
5. If an RPM signal greater than 200 RPM is connected, the timer will display the engine RPM instead of battery voltage. (Fig. 3)

Power on saved voltage

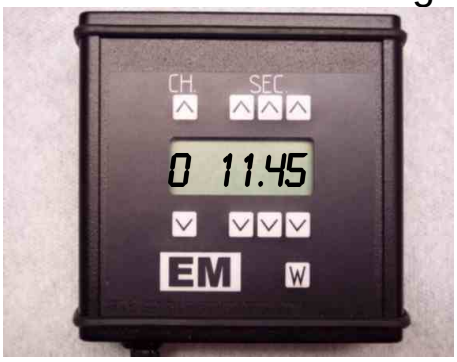


Fig. 1

Current battery voltage

Fig. 2

Current Motor RPM

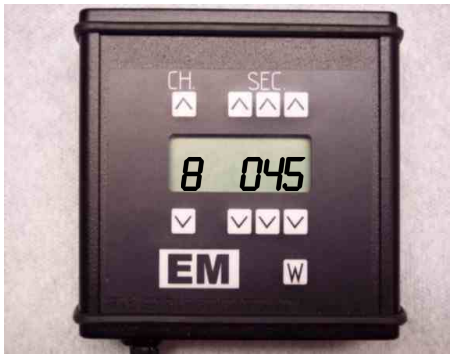


Fig. 3

The timer has 15 channels (1 – 9,A,B,C,D,E,F) that can be individually programmed to be activated by time, RPM or Pressure. As you press the “CH ∧” button you will see that the channel number changes every 3rd button press.

The first entry is the **“On time”**,
The second entry is the **“Activation mode”**,
The third entry is the **“Off time”**.

Each entry has a few special features that are explained in detail in the next sections.

Record Channel functions

	Time, RPM ,Pressure
1	
2	
3	
4	
5	
6	
7	
8	
9	
A	
B	
C	
D	
E	
F	

Timer operation (On time):

1. To enter the on time for channel 1, press “CH ∧” the display will show “1 0.10”, this indicates that channel 1 will activate 0.10 seconds from the time the timer is activated.

2. By pressing the any of the 6 sec buttons you can change the time that the channel is activated. (Fig. 3)

3. Press the “SEC ∨” button, the display changes to “1 on”. This indicates that channel 1 is always active. By pressing “SEC ∧” the timer returns to time entry mode. (Fig. 4) **WARNING! Do not use always active mode with Electric to Air solenoids. This can cause valve overheating and premature failure.**

Channel 1 active at 0.10 seconds

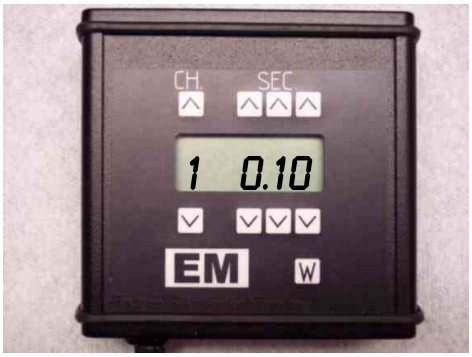


Fig. 3

Channel 1 always active

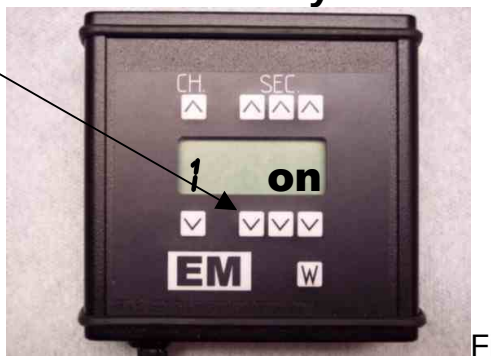


Fig. 4

4. As you change the on time, the display time value begins to blink. This indicates that you have not saved the value. Press the “W” button to save the time value.

WARNING: If your timer is configured for use with an MSD Six Shooter, you will find a 2 pin red amp connector at the end of one of the harnesses. This connector is a 12v power supply for the 8168 Timing Computer. Do Not plug the red connector into the 8168 2 pin amp connector with gray and black wires. This will cause both units to fail.

Record On times

1		**9**	
2		**A**	
3		**B**	
4		**C**	
5		**D**	
6		**E**	
7		**F**	
8			

Timer operation (Activation Mode):

1. Press “CH ∧” again, to enter the activation mode entry screen. The display will show “1 SEC”, the “SEC” indicates that channel 1 is time activated. Valid modes are SEC, r1, r2, P1, P2. r1 and r2 are RPM values, P1 and P2 are pressure values.

2. By pressing the middle “SEC ∧” button you can change the mode that activates the selected channel.

3. If you want the selected channel to be a Time activated channel choose SEC. (Fig. 5)

4. If you want the selected channel to be a Pressure activated channel choose P1 or P2. You will enter the Pressure values later. (Fig. 6)

5. If you want the selected channel to be an RPM activated channel choose r1 or r2. You will enter the RPM values later. (Fig. 7)

Time mode

Fig. 5

Pressure1 mode

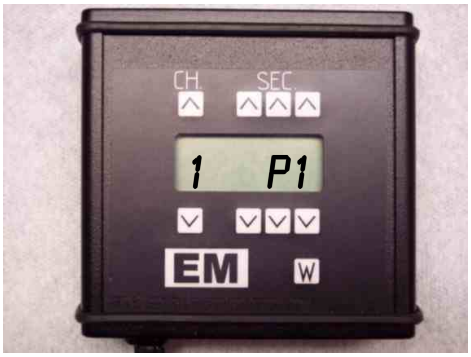


Fig.6

RPM1 mode

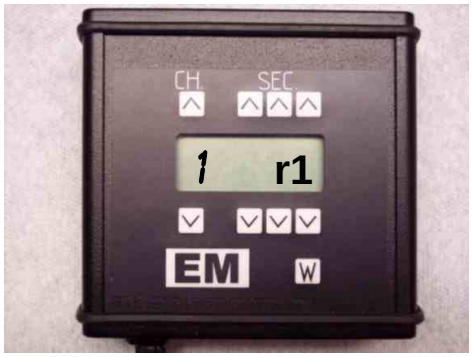


Fig.7

6. As you change the mode, the display begins to blink. This indicates that you have not saved the value. Press the “W” button to save the mode value. (Fig. 6)

Record Activation Mode

1		9
2		A
3		B
4		C
5		D
6		E
7		F
8		

Timer operation (Off time/channel):

1. Press “CH ∧” again, to enter the off time entry screen. The display will show “1 : 7.99”, the “:” indicates that this is an off time. Channel 1 will deactivate 7.99 seconds after the timer is activated. (Fig. 8)

2. By pressing any of the 6 sec buttons you can change the time that the channel is deactivated.

3. The timer has an off time special feature. In this special mode a channel can be programmed to turn off, when another channel comes on. To use this mode, press the left most “SEC ∧” button while the 7.99 is displayed. The off channel is selected by using the right most “SEC ∧” button. (Fig. 9)

Channel 1 off time mode
Channel 1 turns off at 7.99 seconds

Fig. 8

Channel 1 off channel mode
Channel 1 turns off when channel 6 comes on.

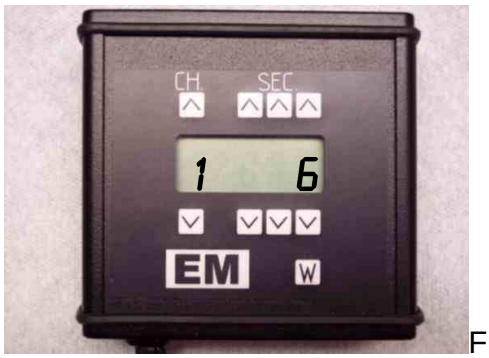


Fig. 9

4. As you change the time/channel, the display begins to blink. This indicates that you have not saved the value. Press the “W” button to save the off time/channel value.

Record off time/channel:

1		**9**	
2		**A**	
3		**B**	
4		**C**	
5		**D**	
6		**E**	
7		**F**	
8			

Timer operation (RPM settings):

1. Press “CH ∨” 3 times to get back to the “0 12.56” starting screen. (Assuming battery is 12.56V.)

2. Press “CH ∨” again and the display will read “r : 850”. The ”r :” indicates that this is the rpm value for any channels that are in “r2” mode. (Fig. 11)

3. Press “CH ∨” again and the display will read “r 800”. The “r “ indicates that this is the rpm value for any channels that are in “r1” mode. (Fig. 10)

4. The display “r 800” indicates the rpm value for mode “r1” is 8000 RPM. The RPM value can be changed with any of the 6 SEC buttons. The value on the screen multiplied by 10 indicates the set RPM.

RPM 1 mode

Any channels set to mode “r1” will turn on When the channel is activated **and** the RPM is > 8000

Fig. 10

RPM 2 mode

Any channels set to mode “r2” will turn on When the channel is activated **and** the RPM is > 8500

Fig. 11

5. As you change the RPM values, the display begins to blink. This indicates that you have not saved the value. Press the “W” button to save the RPM value.

Record RPM values:

r	**R1**	
r :	**R2**	

Timer operation (Pressure settings):

1. Press “CH ∨” again, the display will read “P : 160”. The ”P :” indicates that this is the pressure value for any channels that are in “P2” mode. (Fig. 13)

2. Press “CH ∨” again and the display will read “P 150”. The ”P” indicates that this is the pressure value for any channels that are in “P1” mode. (Fig. 12)

3. The display “P 150” indicates the pressure value for mode “P1” is 150 PSI. The pressure value can be changed with any of the 6 SEC buttons. 150 = 150PSI.

Pressure 1 mode

Any channels set to mode “P1” will turn on When the channel is activated **and** the Pressure is > 150psi

Fig. 12

Pressure 2 mode

Any channels set to mode “P2” will turn on When the channel is activated **and** the Pressure is > 160psi

Fig. 13

4. As you change the pressure values, the display begins to blink. This indicates that you have not saved the value. Press the “W” button to save the pressure value.

Record Pressure values:

P	**P1**	
P:	**P2**	