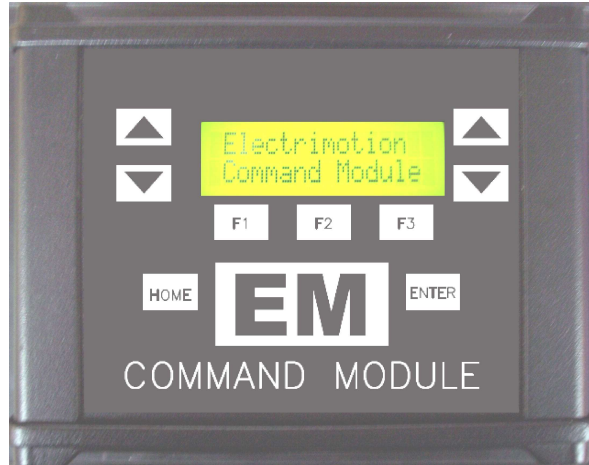


ELECTRIMOTION INC.
 1484 DALE FORD RD.
 DELAWARE, OH 43015
740.362.0251

EM Timing Controller

Lenco Start (2 Shift inputs) w/ built-in 2-Step Rev-Limiter



Connections

<p>Inputs : 2 pin plug (red-black) wires 9-16 volt input Purple Wire (Rpm output) To Tach</p> <p>Start wires: (Green) starts timing controller (Blue – Blk) 1-2 Shift Input (Yellow – Blk) 2-3 Shift Input</p>	<p>Controller starts when start (Green Wire) has 12v removed. Transbrake wire.</p> <p>2 Shift Inputs: Grounding Blue and Yellow wires starts shift retard. (Blk wire is Gnd) The shift inputs are ground to start.</p>																
<p>Timing Control</p> <table border="1" style="margin: auto;"> <tr> <td></td><td></td><td></td><td></td><td>GND</td><td></td><td></td><td></td> </tr> <tr> <td>TACH OUT</td><td>Ign Out</td><td></td><td></td><td>5v</td><td></td><td>Boost In</td><td>Trig In</td> </tr> </table>						GND				TACH OUT	Ign Out			5v		Boost In	Trig In
				GND													
TACH OUT	Ign Out			5v		Boost In	Trig In										
<p>Mounting: 10-32 screws—2.500” by2.000”</p>	<p>Overall Dims: 6.0 ” *4.5” 1.5”</p>																

Overview:

The Electrimotion Timing Controller is designed to control Ignition Timing on high performance racing vehicles.

- **The Electrimotion Timing Controller allows the users to build an ignition retard curve with 16 (Time and Degree) points and an Idle retard setting.**
- **The Timing Controller also has 2 shift inputs that will allow the user to pull out timing at the instant you shift. The timing will be ramped back in, in the ramp time that you enter.**
- **The Timing Controller has an analog (Boost) retard input that can be used to retard timing based on a 0-5v signal.**

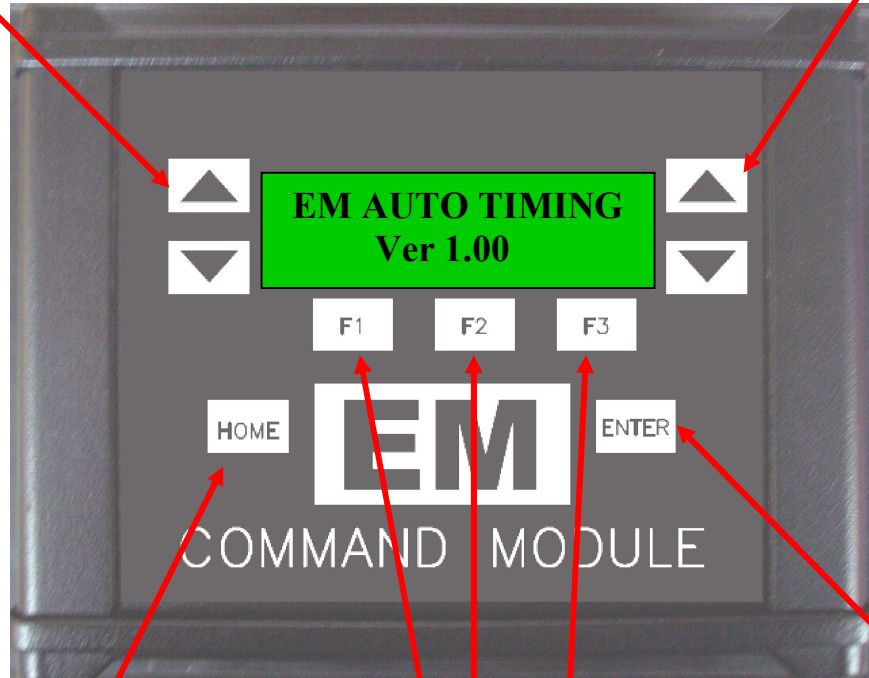
Button Functions:

Menu up and Down:

Used to select mode of operation.

Up and Down:

Used to select channel and also used to change data values



Home Button:

Returns unit to starting screen.

Function Buttons:

Used to enter the edit modes.

F1: Used to enter (time) edit mode.

F2: Used to enter (Degrees) edit mode.

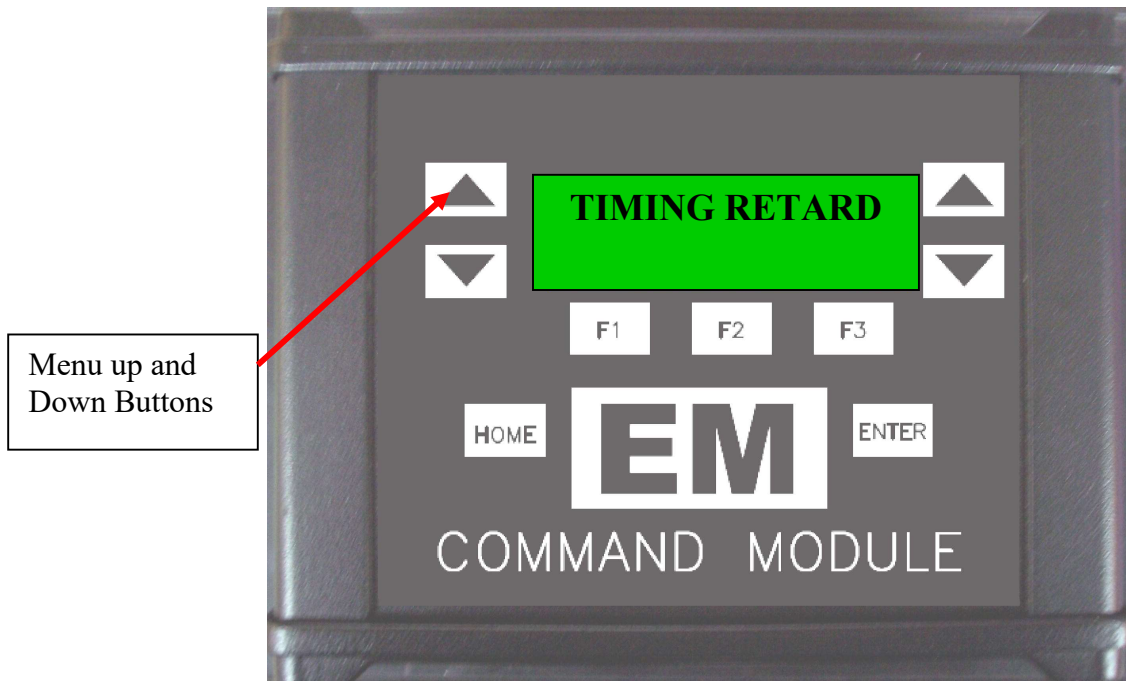
F3:

Enter Button:

Used to select menu.

Also, used to save an edited value.

Module Operation:



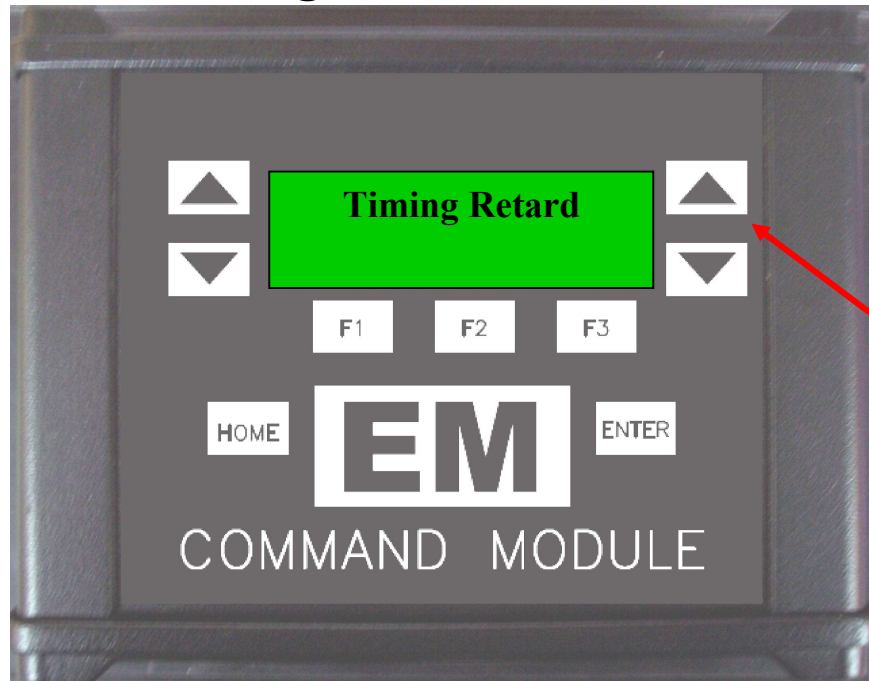
Main Menu:

By Pressing the Menu up button, you can cycle through the installed modules. Press the enter button to enter the selected menu item.

Main Menu items

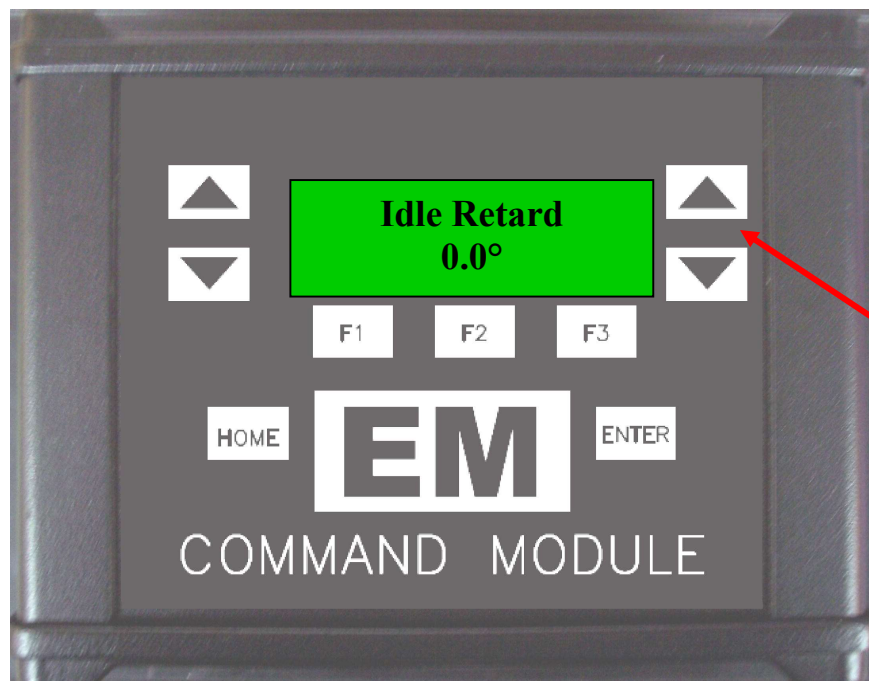
- **Timing Retard**
- **Battery Voltage (Displays current battery voltage)**

Timing Controller Mode:



Channel Up and
Down buttons

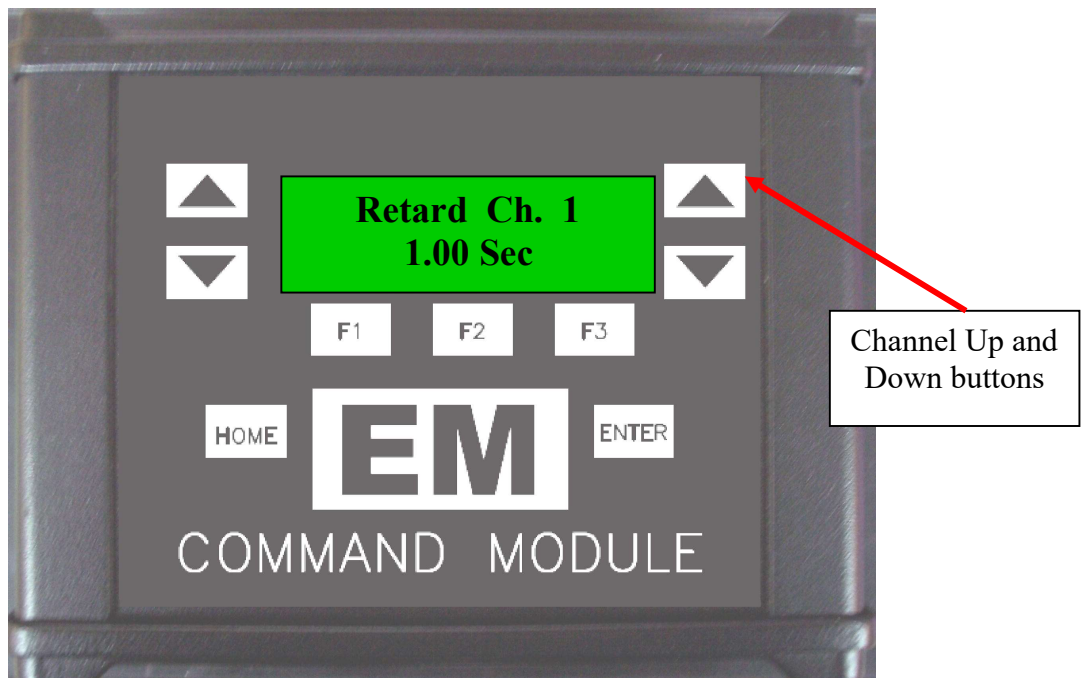
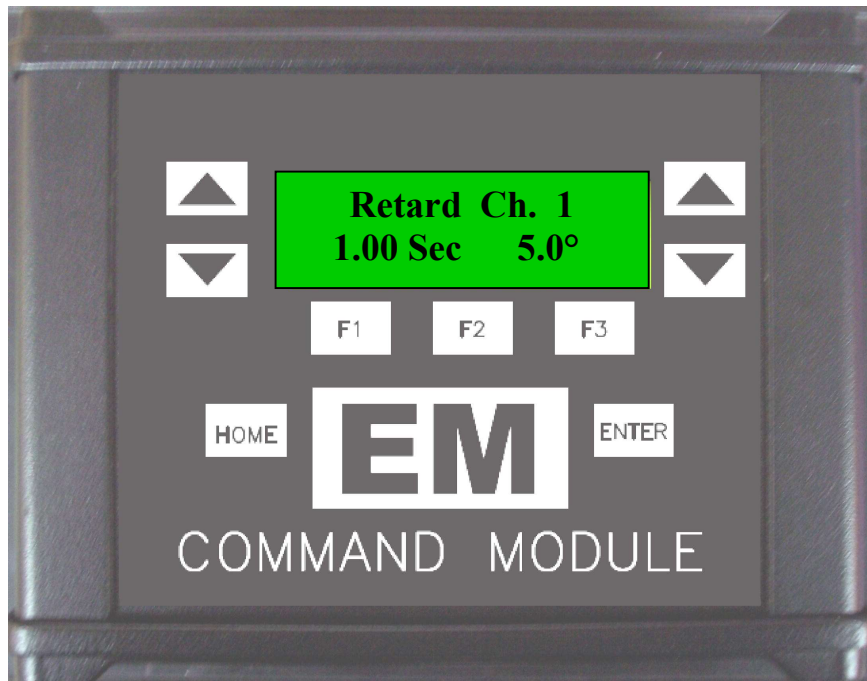
1. With the main menu at Timing Retard, press enter.
2. The Idle Retard will be displayed for you.



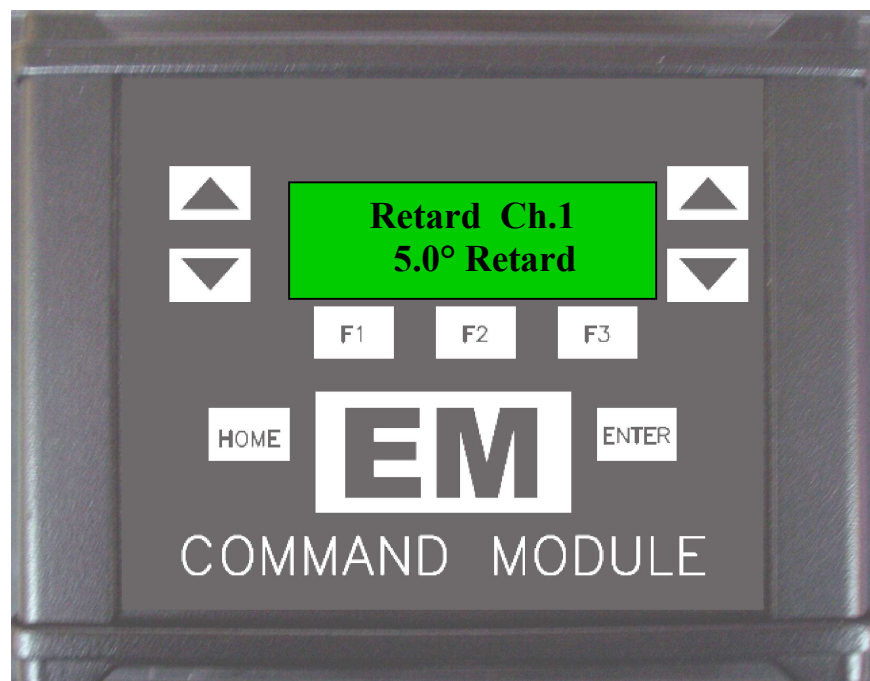
Channel Up and
Down buttons

3. By pressing the channel up and down buttons you can review the Idle Retard, and each of the time/retard points.
4. To edit a time, press the F1 button, the screen will change to a blinking time.

5. Now the channel up and down buttons will allow you to change the seconds digit of the time.
6. If you would like to change the tenths digit, press F2. If you would like to change the hundredths digit, press the F3 button.
7. To save the new time, press enter and the screen will stop blinking.



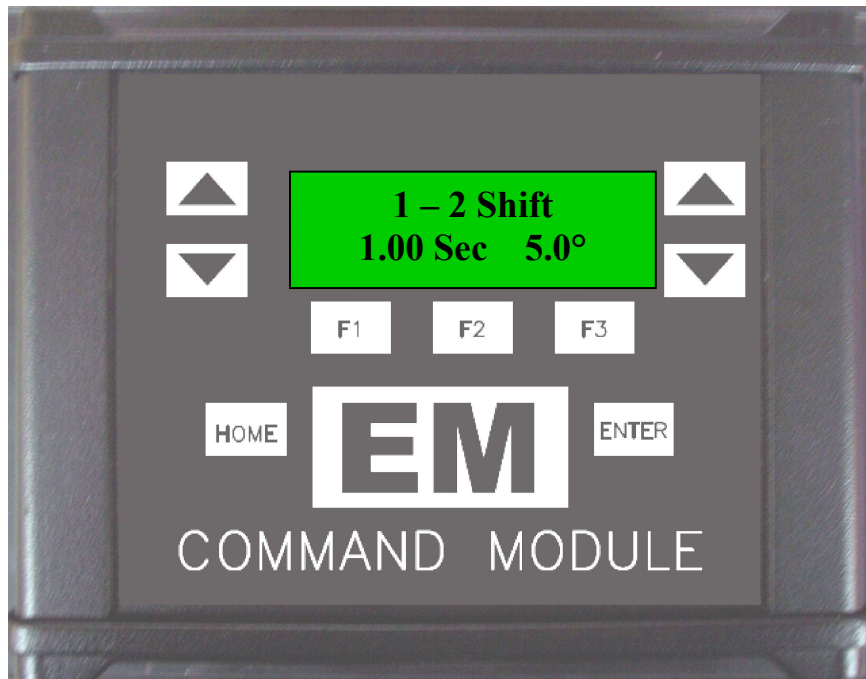
- 1. To edit a retard value, press the F2 button, the screen will change to a blinking retard value.**
- 2. Now the channel up and down buttons will allow you to change the retard value.**
- 3. After pressing F2 you will be able to edit the tens digit of the retard value, to change the ones digit, press F3 while in edit mode.**
- 4. To save the edited value, press enter and the screen will stop blinking.**



Shift Retard

1. To edit a shift retard value, press the channel up button, until the screen changes to the 1-2 or 2-3 shift retard screen
2. Using the F1 and F2 buttons you can change the time or retard values.
3. Now the channel up and down buttons will allow you to change the retard or time value.
4. To save the edited value, press enter and the screen will stop blinking.

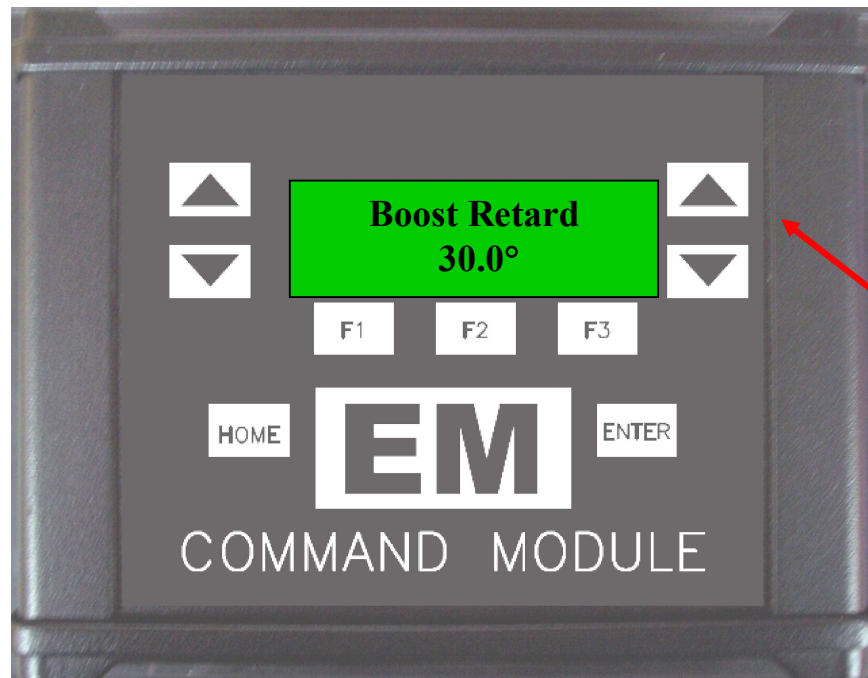
Shift retard:



Boost retard

1. To edit the Boost Retard value, press the channel up button, until the screen changes to the Boost Retard screen
2. Press the F2 button to enter the Boost Retard edit mode.
3. Now press F1 to edit the Tens digit, Press F2 to edit the ones digit or press F3 to edit the Tenths digit.
4. Channel up and down buttons allow you to change the Boost Retard value.
5. To save the edited value, press enter and the screen will stop blinking.

Boost retard:

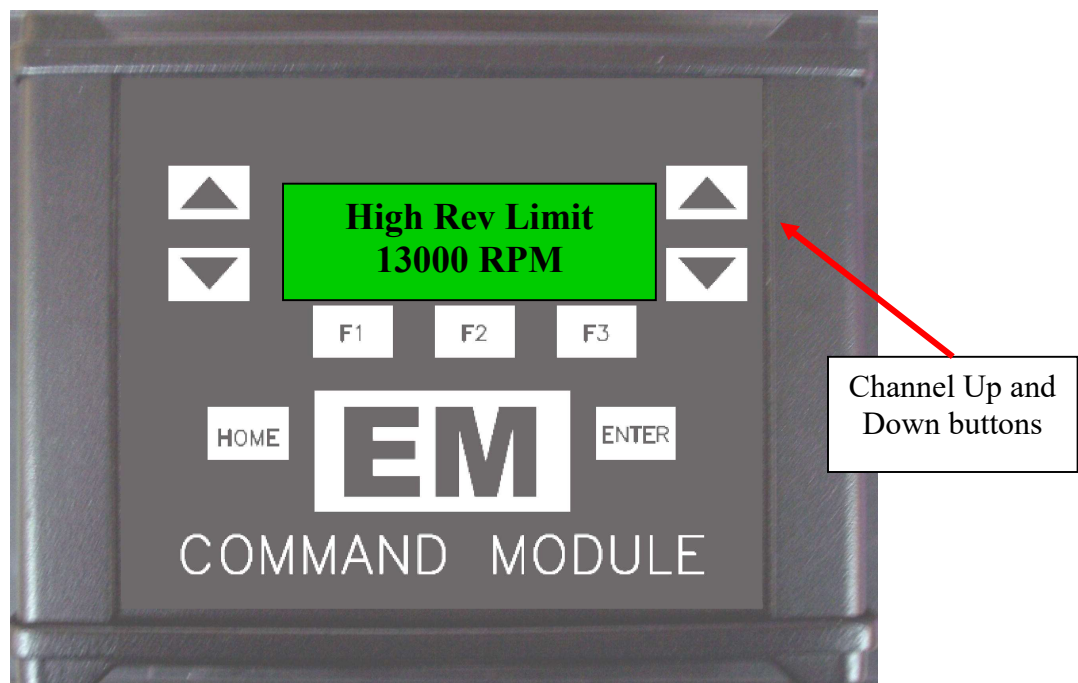


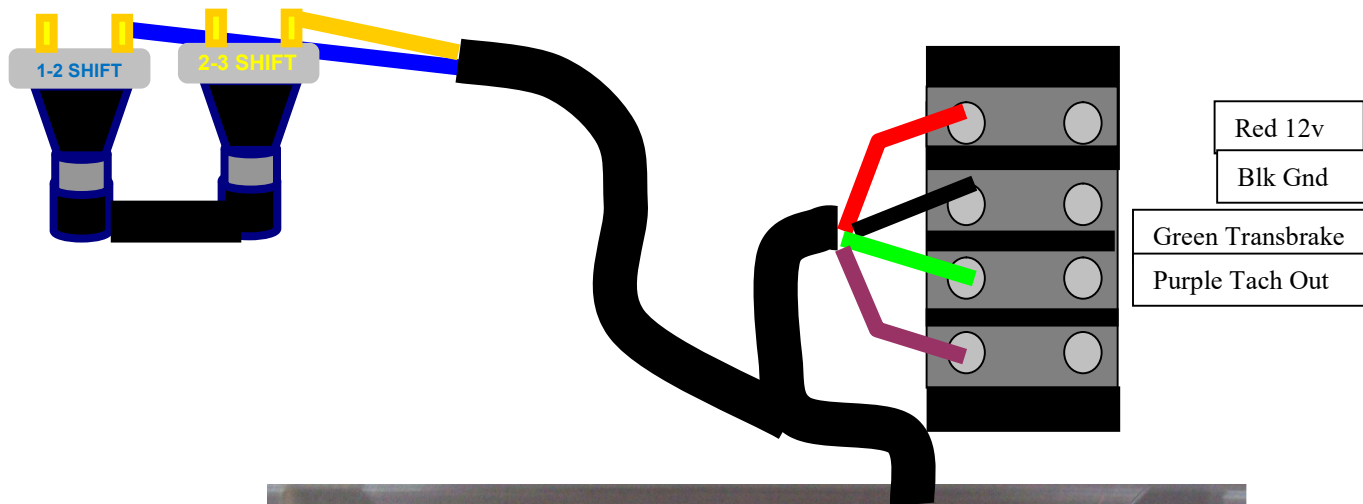
Channel Up and
Down buttons

Rev Limit

1. To edit the High Rev Limit value, press the channel up button, until the screen changes to the High Rev Limit screen
2. Press the F2 button to enter the High Rev Limit edit mode.
3. Now press F1 to edit the Thousands digit, Press F2 to edit the hundreds digit or press F3 to edit the Tens digit.
4. Channel up and down buttons allow you to change the Rev limit value.
5. To save the edited value, press enter and the screen will stop blinking.
6. **Launch Rev Limit and Launch Retard values are entered the same way. The Launch Rev limit and Launch retard values are active when the Transbrake is applied.**

High rev limit:

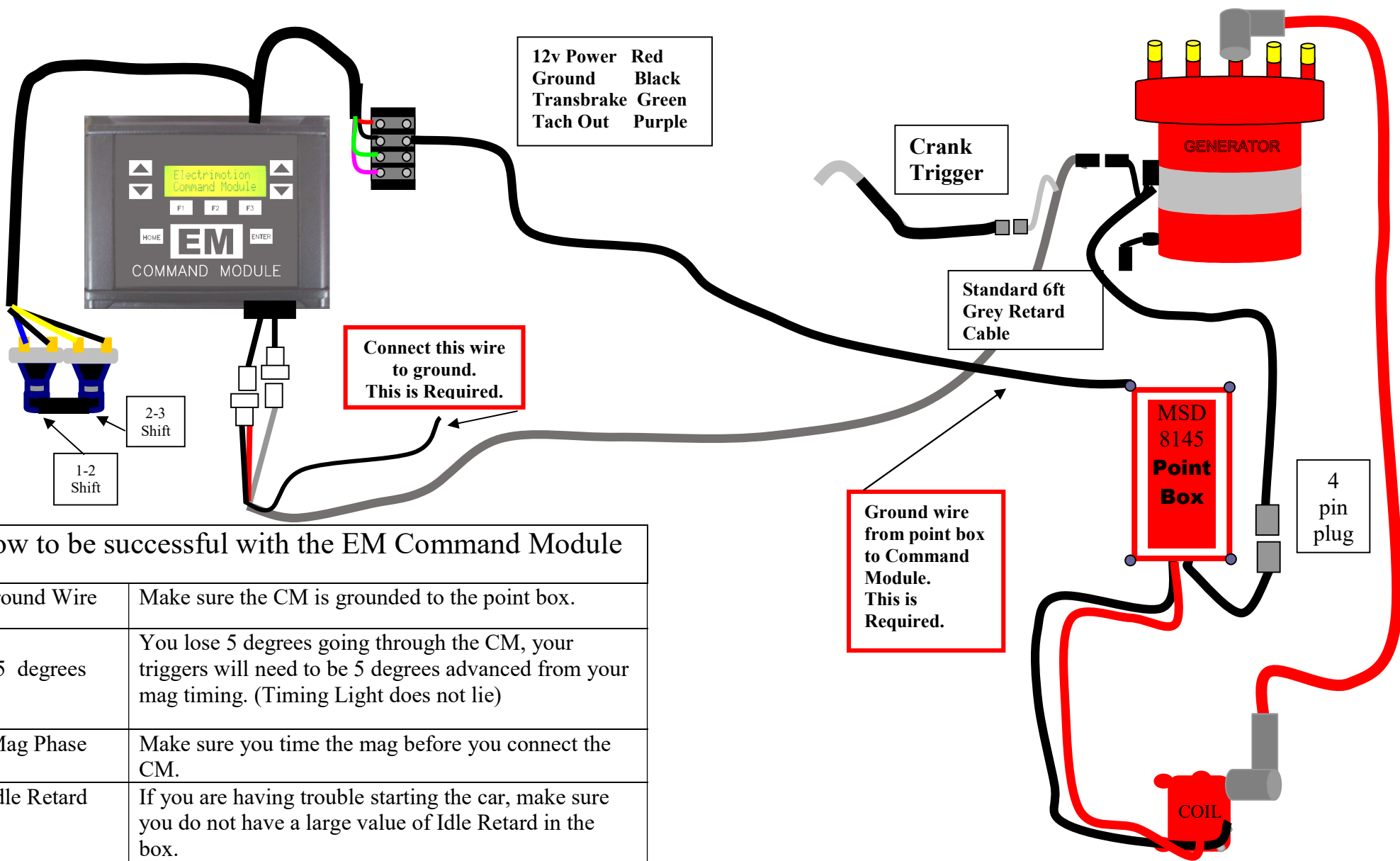




General Warnings:

IT IS THE RESPONSIBILITY OF THE PERSON INSTALLING ANY CONTROL SYSTEM COMPONENT OR KIT TO DETERMINE THE SUITABILITY OF THE COMPONENT OR KIT FOR THAT PARTICULAR APPLICATION. IF YOU ARE NOT SURE HOW TO SAFELY USE THIS COMPONENT OR KIT, YOU SHOULD NOT INSTALL OR USE IT. DO NOT ASSUME ANYTHING. IMPROPERLY INSTALLED OR MAINTAINED CONTROL SYSTEMS ARE DANGEROUS. IF YOU ARE NOT SURE, GET HELP OR RETURN THE PRODUCT. YOU MAY OBTAIN ADDITIONAL INFORMATION AND TECHNICAL SUPPORT BY CALLING ELECTRIMOTION AT (740) 362-0251, OR VISIT OUR WEB SITE AT WWW.ELECTRIMOTION.COM. USE OF ELECTRIMOTION TECHNICAL SUPPORT DOES NOT GUARANTEE PROPER INSTALLATION. YOU, OR THE PERSON WHO DOES THE INSTALLATION, MUST KNOW HOW TO PROPERLY USE THIS PRODUCT. IT IS NOT POSSIBLE OVER THE PHONE TO UNDERSTAND OR FORESEE ALL THE ISSUES THAT MIGHT ARISE IN YOUR INSTALLATION. LIABILITY ON DEFECTIVE MERCHANDISE OR MERCHANDISE NOT CONFORMING TO MANUFACTURER'S SPECIFICATIONS IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE ITEM. RACING EQUIPMENT MUST BE MAINTAINED AND SHOULD BE CHECKED REGULARLY FOR FATIGUE, DAMAGE, AND WEAR. DO NOT OPERATE ANY VEHICLE ON UNTESTED CONTROL SYSTEMS!

Typical System W/ Command Module Timing Controller



How to be successful with the EM Command Module

Ground Wire	Make sure the CM is grounded to the point box.
-5 degrees	You lose 5 degrees going through the CM, your triggers will need to be 5 degrees advanced from your mag timing. (Timing Light does not lie)
Mag Phase	Make sure you time the mag before you connect the CM.
Idle Retard	If you are having trouble starting the car, make sure you do not have a large value of Idle Retard in the box.
Retard Harness	The retard harness will plug in either way but only one way is correct, The Ground lead should be to the CM end.
General Wiring	Run all CM wiring as far as possible away from coil and plug wires to reduce RF interference.