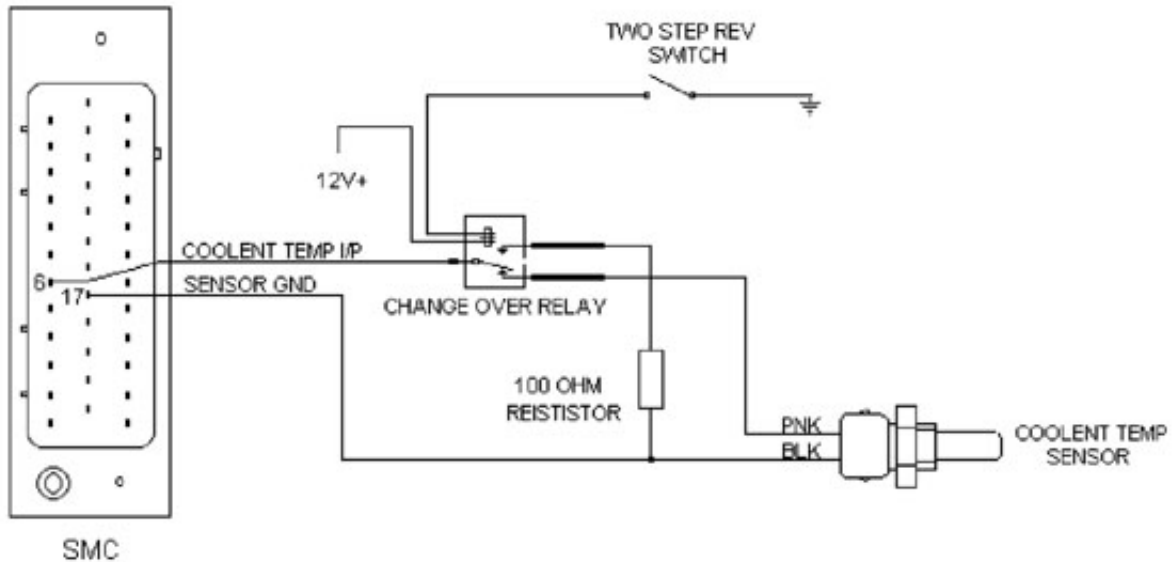## *SMC Launch Control*

This type of launch control is designed to get fast starts in all types of racing. The method uses one resistor to get the ECU to se the coolant temperature as 127 degrees. (260 Fahrenheit).

SMC

When button is pressed the ECU will see the coolant temperature as 127 degrees (260 Fahrenheit).

Adjust rev limit, in this example launch is set at 5000 rpm.

Rev limit commence (0 .. 30000) Rpm

Coolant temp(Deg C)				Attr 30.00%
0.0	60.0	119.0	120.0	
7600	7600	*7600	5000	

You can also set up the "Ign Mod1 Temp" table to add a mild type of anti-lag (for turbo engines) to increase boost pressure.

Ign mod1 temperature (-25.0 .. 25.0) Degrees

LOAD(%)	Coolant temp(Deg C) Diff:-25.0			
		0.0	60.0	119.0	120.0
0.0		0.0	0.0	0.0	*-25.0

If additional fuel is required with the anti-lag then setup the "Warm up Enrichment Mul" table as follows. (In this exemple 20% more fuel is added)

W-U enrichment mul (1.000 .. 1.996) X

| LOAD(%)	Coolant temp(Deg C) Diff:0.199			
		-10.0	60.0	119.0	120.0
0.0		1.500	1.000	1.000	*1.199
100.0		1.398	1.000	1.000	*1.199

SMC Launch Control and anti-lag

A combination of above launch control and anti-lag is very effective in drag racing starts. This type of Launch with anti-lag is possible on all chip versions with anti-lag (all except 1.16). Anti-lag is setup as manual described (under section anti-lag) but the pwm table (except 1,99 that has its own table) uses TPS as load. The SMC launch control is only controlling the rpm and not ignition and fuel, as the first example. The anti-lag is controlling ignition retard and extra fuel.

User PWM table (0.0 .. 100.0) %

Throttle position(%)	Engine speed(Rpm)				Att
	0	2000	2200	4000	4500
0.0	0.0	0.0	70.2	70.2	60.0
30.0	0.0	0.0	70.2	70.2	50.2
35.0	0.0	0.0	0.0	0.0	0.0
100.0	0.0	0.0	0.0	0.0	0.0

Under start you should have throttle under 30% opening and when pressing above 31% during start the anti-lag is automatically disabled. If you need to limit the rev use the resistor as in first example and set up the rev limit table as follow. This method does require the button to be released under start to disable the revlimit.

Rev limit commence (0 .. 30000) Rpm

Coolant temp(Deg C) Diff:-3200				Attr:30.00%
0.0	60.0	119.0	120.0	
*8200	8200	8200	*5000	

When button is pressed the ECU will se the coolant temperature as 127 degrees (260 Fahrenheit). But ere do we ground the anti-lag input also.
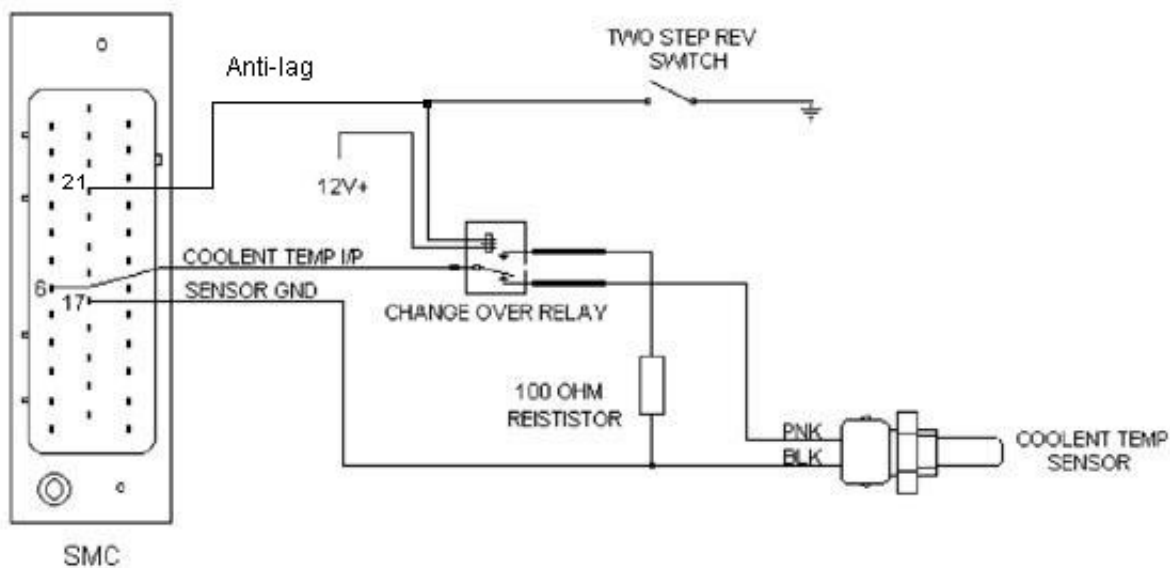
# SMC Automatically Launch Control and anti-lag for drag racing

You can use automatically launch control and anti-lag as in example above. Connect anti-lag output (that grounds) to the the relay that activates the launch control(rev limit). Set up the PWM table as follow, the anti-lag and launch control will then be activated (rpm above 2600) above 11% TPS and automatically disabled over 31% TPS. You do not have to release the button just floor it and it will be disabled!
Don't be stressed during racing - use automatically launch instead.

User PWM table (0.0 .. 100.0) %			
Throttle position(%)	Engine speed(Rpm)		Diff:-50.2
	2400	2600	4000
10.0	0.0	*0.0	*0.0
11.0	0.0	43.9	50.2
30.0	0.0	43.9	50.2
31.0	0.0	*0.0	*0.0

PWM table for ignition retard.

Anti-lag output will only ground above 2600rpm and when TPS is between 11-30%. (Where there are values above 0 in the table

Anti-lag output is controlling the launch control (rev limit).
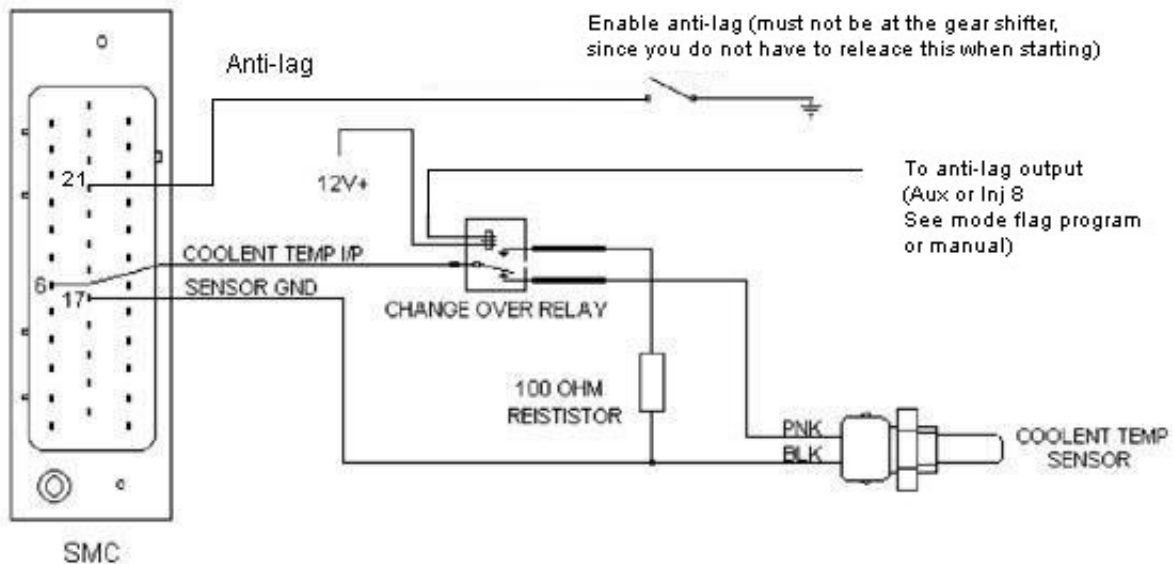
The anti-lag output (inj8 or aux output)only grounds when the pwm table has a value different from 0, when anti-lag is operating.

For help of setting the modeflags use Rays very nice modeflag.exe program.
Vid hjälp att sätta modeflags använd programmet modeflags.exe som finns att ladda ner.