



Turbo Dynamics Arctic Cat Z1 turbo ECU programs description

ECU stages from 1 to 4	ECU program description
<p>Eco Trail 91 program</p>  <p>Safe on 87 octane 91 octane recommended 200-221HP For trail riding with superb fuel economy</p>	<p>This ECU program makes the Arctic Cat Z1 turbo an exciting machine to ride and at the same time, one that is very good on fuel. This is the map you want to use when driving in areas where fuel is scarce or when riding in tighter trails. This is a very safe map that will tolerate 87 octane but run stronger on 91 octane.</p> <p>Operating instructions: This map is always the lowest map in the 4 stage program. Turn the switch counterclockwise to the last position and that is the Eco Trail Map.</p> <p>This program is to be used for general trail riding and short blast of high speed. It is not intended for lake racing or holding full throttle for a very long time (AKA railroad track or Lake/River riding at 120mph+ for a long time)</p> <p>Enjoy the superb fuel economy and the additional 15-20HP over the stock map.</p>
<p>Power Trail 91 Program</p>  <p>91 octane required 250-260HP For aggressive trail riding Most powerful 91 oct map</p>	<p>The PowerTrail 91 octane map is designed for the aggressive trail rider in mind. With superb throttle response and exhilarating acceleration this map will get your attention and get your blood pumping. Very powerful map that will pull your skis up past 120mph. It runs only on fresh 91 octane and we provide a knock light to detect any possible bad quality fuel or to let you know when to slow down to keep the reliability up.</p> <p>Operating instructions: This map is usually # 2 right after the Eco trail map. It is to be used for aggressive trail riding and corner to corner acceleration and short burst of top speed. This is not a map to take on a lake or railroad bed and hold for a long time. It is meant for maximum burst of power for up to 2000feet at full throttle</p> <p>250-260HP: Good on fuel when not going full throttle with incredible pull on acceleration, best map for max MPH for short burst of top speed.</p>



ECU Program	ECU program description
<p data-bbox="94 384 410 422">Lake Race 91 octane</p>  <p data-bbox="71 732 433 879">91 octane fuel required 230-245HP For top speed runs Lake racing and longer high speed operation</p>	<p data-bbox="459 384 1528 527">The Lake Race 91 map was created to allow for long pulls on the lake to sustain high speed for longer than the powertrail program. This is the map of choice when running a railroad bed at above 100mph sustained. It runs richer in fuel and less boost pressure to allow safer operation under sustained high speed.</p> <p data-bbox="459 573 1487 678">Because it is a rich running program it is not the best choice for general trail riding as it tends to use more fuel than the other programs we have available. Especially when full throttle often.</p> <p data-bbox="459 724 1487 829">With this program, you get 230-245HP on 91 octane. If you like to ride 125mph+ all the time, it would be wise to look at the methanol injection kits for extra protection and incredible performance</p>
<p data-bbox="94 919 410 957">Drag Racing Q16 fuel</p>  <p data-bbox="55 1270 451 1453">VP Q16 or C16 or equivalent Wastegate Shim to make over 300HP Can be used for Radar at 24psi or less (no wastegate shim)</p>	<p data-bbox="459 919 1523 1140">The drag racing program is a very aggressive map for maximum power and maximum turbo response and engine responsiveness. This program is so powerful, you might want to adjust your suspension lower and reduce weight transfer to the back. Re-Install suspension limiter blocks if you have removed them. At this power level the average rider should first practice with the pump gas maps until comfortable with 250HP+ power level. For those who will run this power level often, it is a recommended to get head studs.</p> <p data-bbox="459 1186 1533 1367">This program can also be used for radar top speed events as long as boost is kept under 24 psi, so no wastage shims for that type of racing. For radar events an A/F ratio gauge as well as an EGT gauge are recommended to monitor engine operation. Radars runs of 3000 to 4000' at 300HP are MUCH harder on the motor than short drag races. However with careful monitoring of fuel and EGTs no damage should occur on the motor.</p>



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94 Octane Drag



94 octane fuel required
265-276HP for maximum power
when drag racing on pump gas.
Not recommended for long wot
runs (top speed)

This is the most powerful pump gas program for the Z1 turbo. It can run on some quality 91 octane but you need 94 octane to extract the most out of it.

This map runs hotter than others, with higher EGTs and 21.5psi on pump gas, therefore, it is suited for short drag racing application (1000feet or less)

It is not recommended to use this program to achieve top speed, tempting as it is

Up to 280HP for drag racing use only.

This program will become a VERY safe map when using our advanced water/methanol kit which provides incredible cooling effect and heat quenching effect. The EGTs are dramatically reduced and maintained lower to protect the exhaust valves and turbocharger from the extra heat generated with this map. This is the map of choice for reliable sustained top speed runs but ONLY with our advanced water/methanol kit

Advanced TD methanol



TD Advanced Methanol Kit
required with 91 oct fuel
Makes up to 315HP with shims
280HP without shims
Safe for Top speed, Drag racing
and Trail riding (at 280HP)

The Methanol program can be used for all out drag racing (with shim of wastegate for 27psi+) as well as Top speed and very long throttle runs when boost is kept under 24 psi (no wastegate shim). It is extremely versatile because of the incredible cooling effect water/methanol provides. **Best of all, all you need to fill up the methanol tank is Blue - 40C (winter) windshield washer as it contains 35% methanol and 65% water.** According to our extensive methanol testing at Dynotech research, that mix actually provided the best power compared to higher pure methanol mixes.

This means you can fill the tank up at pretty much any gas station and provide full methanol benefit and race fuel octane level anywhere you ride.

This map provides up to 315HP with shims and 280HP at 8300RPM without shims which means this map will be faster on top speed and maintain full power for longer than the Q16 fuel map.