

Tempest 4 (T4) User Guide All Ignition models

For use with all T4 Ignitions

Selecting a Timing Curve

Proper engine timing is crucial to proper engine performance and service life. An ignition timing curve must be correctly designed to support the engine configuration and the type of riding you plan to do.

 **Severe engine damage is possible if an incorrect ignition timing curve is used.**

Curve Set Overview

Your T4 Ignition can contain up to 4 user-installed curves. These four curves are referred to as a ‘**curve set**’, however, more than one curve is considered a curve set. The user can design and download single curves or curve sets using the Curve Devil software. Once a curve set is loaded into the T4 ignition you may select which curve from that set to use. DIP switches are provided for this purpose, see Figure 1.

Be sure the proper curves are installed before operating the engine.

If you have questions about curves and curve sets, please call Advent for assistance, or visit our web site at www.adventignitions.com.

Using the Curve Devil

The T4 ignition is configured using the PC based Curve Devil application software. With this powerful program the user can develop engine timing curves, several types of rev limiters, up to three relay circuits and many other ignition functions.

The Curve Devil connects to the T4 ignition using a standard “A-Male” to “B-Male” type connector. This is the same type of connector that would be used to connect a printer, plotter, scanner, etc to your PC. An adapter is also supplied with your T4 ignition that converts the “B-Male” end of the USB cable into a “B-Female”. This is required because the T4 has a “B-Male connector. This is not a standard connection configuration but was done for a specific purpose.

The B-Male USB connector on your T4 ignition allows for a small hole in the electrical box for the connector to pass through and it is a more robust connector shape than the A-Male. The A-male is a larger connector and therefore requires a larger hole and the flat shape is more susceptible to damage because it is easy to deform the large flat sides.

Do not lose the B-Female to B-Female adapter, they are not a common product that would be available at your local computer store.

Selecting the Curve

Switches 1 and 2 are used to select the timing curve. The label on the ignition shows the switch settings guide in Figure 1.

Note about selecting curves with the switches

If a single curve is installed the selection switches have no effect, curve 1 will be selected regardless of the switch positions.

If fewer than 4 curves are installed setting the switches to an unused timing curve position will default to the curve ONE.

Example: 2 curves installed, and curve 3 or 4 is selected by the switches.
Curve 1 will be the active curve.

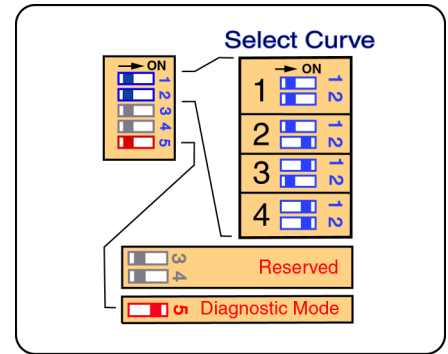


Figure 1

Switches 3, 4, and 5

These switches are for future use and must be in their OFF position for proper ignition operation.

If switch 5 is turned ON the engine will start once and will not be able to be restarted until the switch is turned OFF. Also with switch 5 ON the battery will discharge over a few hours even with the engine not running.

LED Indicators

Two LED indicators are provided on the T4 ignition. They are used as diagnostic tools and to indicate different operating modes of the ignition.

1. When the ignition is properly connected to a computer as would be the case when re-programming the L2 will flash slowly.
2. When the ignition is actually being programmed L2 will flash faster.
3. During the verify portion of the programming cycle the LED will flash slowly.
4. During engine cranking L2 will be ON and L1 will flash at a slow rate
 - If L2 down not turn ON this indicates a wiring problem with the battery connection
 - If L1 does not flash as the engine cranks this indicated a problem with the Crank Position Sensor wiring.



Be sure switches 3, 4 and 5 are OFF before programming or operating the engine.

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