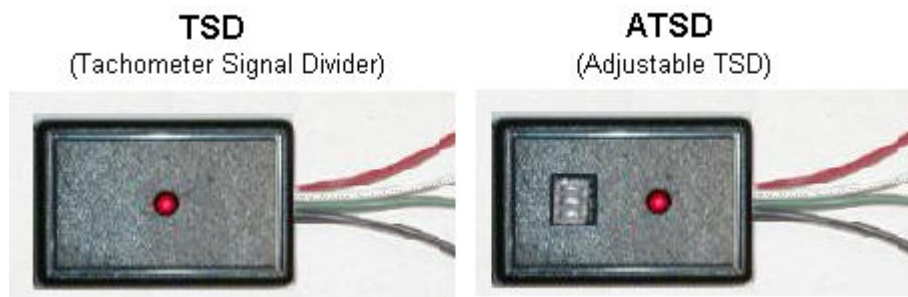


TSD **(Tachometer Signal Divider)** (Adapt any tachometer to work with any engine)

The TSD module is essential for anyone installing a new engine into a vehicle that was equipped with a tachometer designed for different number of cylinders. The TSD can also be used in multi-coil systems to work with a stock or aftermarket tachometer. It works by multiplying (or dividing) the input frequency of the tachometer signal and then sending out an adjusted signal to operate your tachometer accurately. The TSD module works with 0-5V signals as well as 0-12V type signals and converts the output to the standard (0-12V) type of signal to operate any tachometer. The TSD comes in two versions the standard (fixed multiplier or non-adjustable) and the ATSD (Adjustable-TSD) with up to 8 different possible settings. If ordering the standard version, the multiplier must be specified at time of purchase. If ordering the ATSD confirm your multiplier is one of the 8 settings, if not let us know and we will add your multiplier to it.



Features:

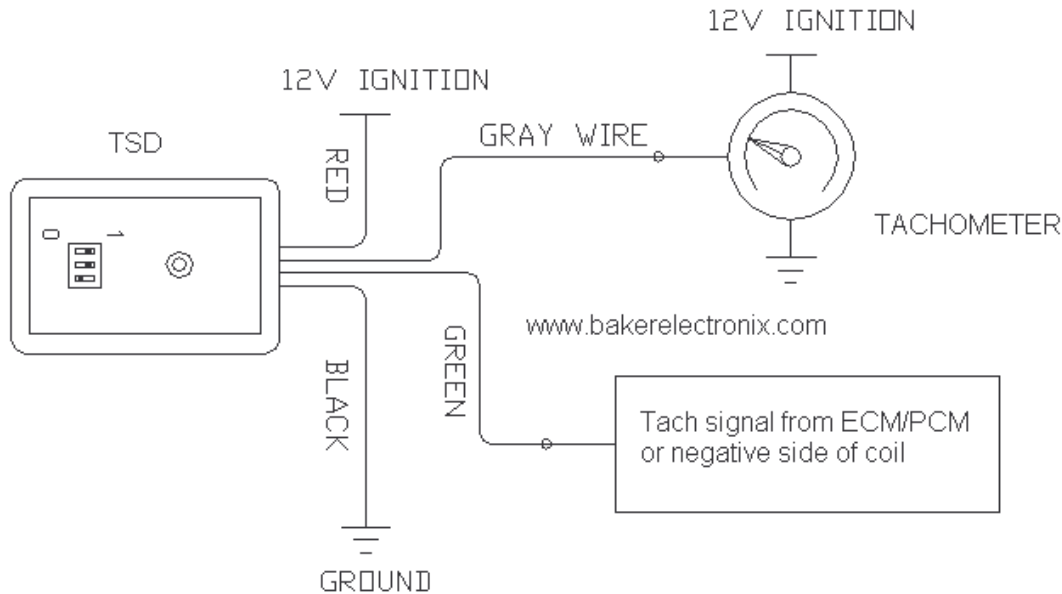
- Reverse voltage protection in the event of incorrect power connections
- Short circuit protection on all inputs and outputs to 12V or ground
- Waterproof
- Low current (5 - 15mA)
- Indicator LED to confirm operation and indicate mode
- Works from 8V to 25V supply voltage
- Light weight (1.1oz)
- Small package (2.12in. by 1.38in. by 0.58in.)
- 12 month warranty from date of purchase against manufacturer defects

TSD module wires:

- **Red:** 12V from ignition
- **Gray:** Tachometer signal output - connect to the tachometer input
- **Green:** Tachometer signal input - connect to signal from PCM/ECM
- **Black:** Ground

We recommend connecting the wires by using insulated crimps or soldering and using appropriate insulation, electrical tape or heat-shrink tubing. The 12V supply should be taken from a fused source. The TSD module should be installed in a location that does not exceed 65°C or 150°F.

ATSD (Adjustable Tachometer Signal Divider)



Normal operation:

When the ignition key is turned on the TSD's LED indicator will flash 1-7 times indicating it has been reset and what the multiplier is set to, then the LED will briefly flash once every 2 seconds to indicate it has power and is waiting for tach pulses. Once the engine has started the LED will flash once per engine revolution - so at 500RPM the LED flashes 500 times per min or 8.3 times per second. Please note it is hard to detect any flashing above 1,200 RPM, the LED will just appear dim above this point. If the engine stops or the tachometer signal stops the TSD module will reset and wait for the signal to start again.

LED Flashes	Switch Settings: (ATSD only)	Frequency Multiplication setting	
0*	000 (off, off, off)	x3	(4cyl engine to 12cyl tach) or (LS1 to 12cyl)
1	001 (off, off, on)	x1/2	(8cyl engine to 4cyl tach)
2	010	x2/3	(6cyl engine to 4cyl tach)
3	011	x3/4	(8cyl engine to 6cyl tach)
4	100	x1	(Only converts signal to 0-12V)
5	101	x4/3	(6cyl engine to 8cyl tach)
6	110	x3/2	(4cyl engine to 6cyl tach) or (LS1 to 6cyl)
7	111	x2	(4cyl engine to 8cyl tach) or (LS1 to 8cyl)

*For a switch setting of zero the LED will flash one long pulse on power up or reset.

Troubleshooting:

No tachometer needle movement while engine is running:

Check the LED on TSD module:

- If LED is off and never flashes: check power to TSD module
- If LED flashes about once every 2 seconds: Tachometer signal is missing, check connection to PCM
- If LED is on and flickering or dim: Signal from TSD is not getting to tachometer, check connection to tachometer.

Tachometer needle pulses a few times pauses then repeats:

This needle pulsing indicates the TSD module has detected an error and will continue to pulse the needle until the ignition key is cycled. Count the number of needle pulses between pauses to find the error number 1-12. Please Email us at bakerelectronix@verizon.net with this information.

For warranty service, questions, or comments regarding this or any of our products, please contact Baker Electronix at bakerelectronix@verizon.net.

Please do not call us with technical questions as we are better equipped to answer your questions by email and this also allows us to send you copies of documentation when applicable.