

## For your vintage Porsche applications, use TACH-ADAPT. It's the best Tachometer Adapter to correct tach problems caused by engine or ignition system modifications!

*Keep it simple! Avoid replacing or rebuilding your stock or vintage tachometer. Just use **TACH-ADAPT** to properly drive it from the new engine or new ignition system you installed.*



Installing a newer, bigger engine in your Porsche is always an exciting project, requiring considerable planning and detail. Sometimes overlooked (or at least deferred) is how to get the original tachometer to work right with the new setup. Over the years Porsche ignition systems evolved and changes were made in the tachometers to track those changes along the way. Early tachometers were designed to work with Kettering inductive-discharge ignition (coil, points & condenser). Later came a few adaptations to work with capacitive discharge ignition (CDI) and then later with high energy systems fired by Engine Control Units (ECU). If you drop a later model engine into an early 911 it's unlikely the original tachometer will work.

Consider running a late model 3.2 engine in a '70 911 chassis. The tach signal delivered from the engine is now a low-level signal, but the vintage tach wants to see a high-voltage trigger pulse. Conversely, a later tachometer expects to see a low-voltage signal, but when driven by a high-voltage pulse, it won't work, or may exhibit un-predictable "tach-bounce" behavior, or worse yet, it may be damaged! If you put an early 911 engine into a 912 or 914, a few of the original gauges may be usable, but not the tachometer. If the 4-cylinder tach responds at all, it will read exactly 1.5X faster with the new 6-cylinder engine. Finally, there is the wild scenario where a Chevy V8 finds its home in the Porsche body ... with an ignition system that is totally incompatible with the stock Porsche tachometer.

The typical solution is to have the original tach "re-built" by an outside service or to substitute a tach matched to the engine. However, most Porsche owners really want to preserve the look and feel of their original gauges. These applications and a desire to keep the original tachometer intact created the need for some kind of an "adapter" that could read the pulse rate from the new engine's ignition system and accurately output a corrected rate and pulse shape. Recognizing this need in my own conversion project, I developed the TACH-ADAPT product.

Simply stated, TACH-ADAPT fixes gross errors that occur when you try to use a tachometer with an engine or ignition system it was not designed for. Basically, TACH-ADAPT goes in-line with your tachometer signal to change and restore the proper voltage, pulse shape and pulse rate to your tachometer so it will read correctly. The small unit (2" x 1.5" x 1") easily mounts in the engine compartment or under the instrument panel. It has 4 connections: Ground, 12V, an input from the engine and an output to the tach. TACH-ADAPT accepts input from traditional points, electronic ignition, CDI and many Engine Control Modules. *Most important*, it avoids the hassle of the expensive alternative of tachometer replacement, and/or shipment to an outside specialty shop for permanent re-calibration. One user succinctly stated "TACH-ADAPT saved me a lot of grief!"

TACH-ADAPT is simple to set-up, works on 4, 6 or 8-cylinder engines and can provide an output signal to drive a 4, 6 or even an 8-cylinder tach. For example, a 4-cylinder Porsche 356C, 912 or 914 tach can be used with a

6 or 8-cylinder engine. Likewise a 6-cylinder Porsche 911 tach can be used with 4 or even 8-cylinder engines. A few dip-switch settings on the back of the unit offer combinations to convert the incoming pulse rate to the exact needed outgoing rate. An important (selectable) feature is its capability of “re-generating” that high voltage pulse needed by vintage tachometers that were originally designed to work with Kettering (coil points/condenser) type ignitions. For example, early 911, 912 (and 914) tachometers respond only to the high-voltage (~150V) “kick” that appears on the points/coil primary lead when the points open. There were also some interim solutions in the early 70’s when Porsche used a special “ballast” unit to tame and condition the direct high-voltage discharge output of the 3-pin CDI to work with the early tachs. Later tachometers respond only to a low level (~7Vpp) square wave signal derived from the 6-pin CDI “TD” pin, and ECU signals which TACH-ADAPT is also compatible with.

TACH-ADAPT differs from adapters offered by familiar aftermarket ignition manufacturers. Those products are add-ons which correct tach compatibility problems that occur when employing *their* ignition systems. TACH-ADAPT uniquely addresses tachometer mismatches associated with engine swaps where a different cylinder count and/or different type of ignition system comes into play.

TACH-ADAPT works with 12V systems and can often be used with 6V systems too. Note that it is *not* designed to make minor rpm corrections in a tachometer that’s already correctly paired to an engine but shows small accuracy errors due poor calibration. Please understand that few designs can be truly “universal” and there are possible compatibility issues that this product cannot always resolve, such as inconsistent or erratic pulse signals from the ignition system, faulty tachometers, etc. That's why the product is returnable if you are not satisfied!

TACH-ADAPT is manufactured by AshlockTech, Fullerton, CA. Bob is a fellow Porsche enthusiast, Engineer and independent electronic product-design consultant. Contact [Bob@AshlockTech.com](mailto:Bob@AshlockTech.com) . **Product is returnable for a full refund (excluding shipping costs) if user is not satisfied.**