

Tach Using One Magneto and One Electronic Ignition

The μ Monitor tach input is unable to “watch” a mixed magneto and electronic ignition. The magneto advance is fixed and the EI varies, causing erratic readings. Here are some tips that will help:

1. Almost all EI systems have a low voltage output (compared to a magneto “P” lead pulse), that may not have enough drive to activate the μ Monitor input circuitry. The first requirement is to alter the input circuit to accept the lower voltages. You will need to find/purchase a 3.3K, one-quarter watt, five percent resistor. Radio shack will have. With the unit removed from the tray, remove the top and bottom cover. Locate R3 from the top and make sure you can find its two leads on the bottom of the unit. The resistor will be “tacked” across the two leads of R3. This will effectively lower the resistance of R3 from 22K to ABOUT 3K. This value will let all but the weakest EI tach input signals through and still protect from the higher voltage magneto input. Do this modification even if you are not going to try to hook up both the EI and magneto inputs to the μ Monitor.
2. If you are only going to input one signal, it should be the EI, as the magneto is just the backup anyway. You will lose the RPM when you switch to magneto only.
3. To watch both the magneto and the EI signals, you will have to have two toggle switches, one to ground/un-ground the magneto, and one to turn on the power on/off to the EI. If you are currently using a single-pole double-throw switch to control the EI on/off, then change to a double-pole double-throw switch. One pole is still for the EI on/off. The other pole switches the tach/mag signal for the monitor. The common terminal of the tachometer pole of the EI switch goes to the monitor magneto input. The switchable terminal that matches the ON position of the EI should be connected to the EI tachometer output. The switchable terminal that matches the OFF position of the EI connects to the “P” lead of the magneto THROUGH a .001 400 volt capacitor (two supplied with monitor). If the EI is off, the magneto pulse goes to the monitor and if the EI is on, the magneto signal is disconnected and the EI tachometer signal is connected to the monitor. Be sure to use non-shorting (break before make) switches. See drawing.

