

SureFly Tech

SureFly packs a lot of tech into a housing no bigger than a traditional magneto including:

Intelligent Timing Advance

For non-turbocharged engines, SureFly controls spark advance up to 38° before TDC as determined by manifold pressure and RPM (engine power setting). Each engine's base timing advance is read off the data plate and set into the SureFly Ignition Module or, "SIM" at installation. The timing advance schedule is hard set at the factory, when the SIM is manufactured, to provide the highest possible combustion efficiency.



No Mechanical Points

Not only are points and condensers a point of failure in magneto ignitions, so are rotors and caps as they carbon track and provide alternate paths to ground as resistance builds in the system. That's why SureFly utilizes none of these antiquated technologies. SureFly components are all solid state and industrial-grade electronics.

The result is zero maintenance, zero overhauls, no rebuilds, and no maintenance costs whatsoever! Nothing to wear. Nothing to maintain. Run it to 2,400 hours of SIM operation.

SPECS & DATA

Solid State Electronics
Minimal moving parts – input shaft, two sealed bearing, and oil seal
Wasted Spark system

Up to 38 degrees Ignition advance – RPM & MP based
Hall Effect sensors provide velocity and position input
Manifold pressure sensor range – 5-45 inHg
Operational temp range -35 to 250 F

Aviation spark plugs – gapped .016 to .032
Slick style harness – Shielded aviation harness
Input voltage 8.5-30.0 VDC*
Avg. Current @2700 600mA (4 Cyl.), 1.1A (6 cyl.)

No interval inspections
RPM range 0-3500
27mJ spark energy
Starting: Retards spark to TDC w/full spark energy

* A note on input voltage:

Installers have reported that a small number of 24V aircraft have noisy electrical systems that generate momentary voltages beyond 30 VDC. The SureFly SIM is engineered, approved and tested to perform between 8.5 VDC and 30 VDC. And actually, in practice, each SureFly SIM is proven and tested to perform between 5.5 VDC and 35.7 VDC. But with a small number of 24V aircraft, since the SureFly protection circuit is so much faster than some aircraft voltage regulators (normally limited to 32 VDC max), momentary aircraft electrical system inputs more than 35.7 VDC to the SIM will trigger the SIM's over-voltage protection circuit in order to protect the internal components from the high voltage. The operator may perceive this as engine "stumbling" in certain phases of ground or flight operation.

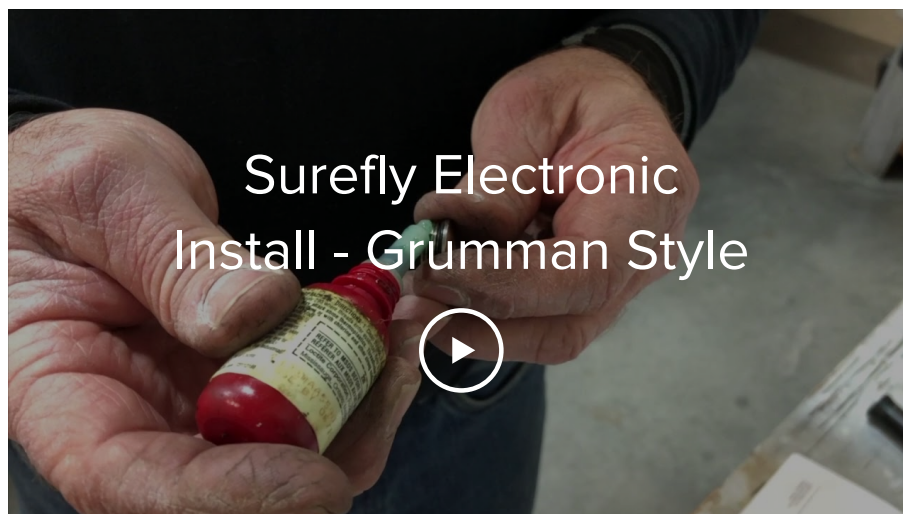
Aircraft electrical noise may be caused by any number of factors unique to each aircraft and/or phase of operation. To prevent this condition for any (and all) airframes, SureFly has developed and received approval for a power conditioner. The PC17V is a power conditioning module that is installed between the aircraft electrical system and the SureFly. The PC17V consistently provides 17 VDC to the SureFly SIM. Combined with a capacitor, this setup provides stable power to the SIM even in the worst cases making the SureFly SIM even more robust and compatible with all applicable airframes regardless of the cause of the aircraft's electrical noise. Speak to a SureFly technician to better understand if your particular 24V aircraft may perform best with the SureFly PC17V.

LOOKING FOR INSTALLATION & MAINTENANCE DOCS?

SureFly Ignition Module (SIM) installation and maintenance docs are split into 2 parts.
Follow instructions for **both** Engine **and** Airframe.
Start with Engine installation and continue with Airframe.

[ENGINE](#)

[AIRFRAME](#)



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