



SERVICE INSTRUCTION

Document No. SI-920, Revision IR

Revision History

Revision:	Date:	Description:	Approved By:
IR	09/18/2020	Initial release.	RVC

1. General Description

The SureFly PC17V Power Conditioner is used to eliminate noise spikes from the SIM input power that may, in some aircraft with a 28V charging system, be large enough to trip the SIM's internal overvoltage protection causing a system reset. Resets of this nature may appear as engine "stumbles" or "rough running". The Power Conditioner is installed in series between the SIM battery fuse and the SIM power terminal.

The PC17V should be mounted near the SIM in the engine compartment. Holes are provided for mounting screws. The electrolytic capacitor should be mounted in the engine compartment near the SIM with provided Adel clamps.

2. Technical References:

The following documents may be referenced during the installation of the PC17V:

1. SureFly PC17V Service Instruction: SI-920 (this document),
2. FAA Advisory Circular 43.13-1b Acceptable Methods, Techniques, and Practices.

Copies of these documents may be found at www.surefly.aero/airframe

3. Installation Instructions

3.1. Mounting the PC17V:

Select a location in the aircraft engine compartment to mount the PC17V. Secure the PC17V to the mounting surface per AC43-13.

Secure the capacitor with Adel clamps near the SIM.

3.2. Wiring the PC17V:

The PC17V consists of a small metal heatsink and an external capacitor.

Wire the PC17V using MIL-W-22759 AWG14 or larger Tefzel insulated wire and PIDG crimp terminals, route all wires in such a manner as to avoid strain or chafing.

The connections on the PC17V are:

1. White Wire: Airframe power (battery +).
2. Black Wire: Airframe ground.
3. Red Wire: Conditioned power for SIM.

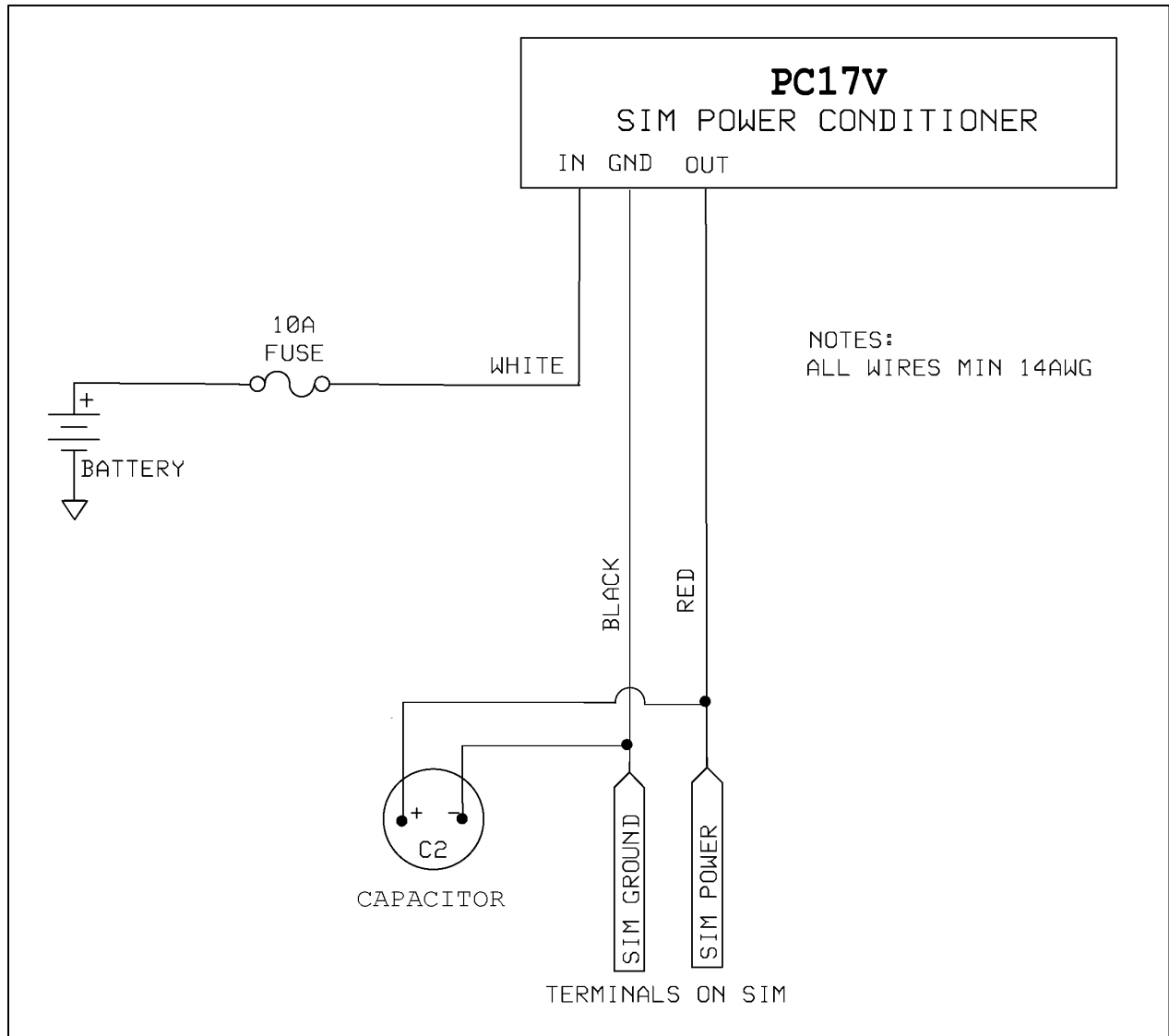
Cut the white wire from the battery to the SIM on the SIM side of the fuse. Use the provided butt connector to splice the PC17V white wire to the wire from the fuse.

Connect the black wire of the PC17V to the ground screw of the SIM. Cut the wire to size and use the provided crimp ring terminal.

Connect the red wire of the PC17V to the power terminal of the SIM. Cut the wire to size and use the provided crimp ring terminal.

Connect a red wire from the capacitor + terminal to the SIM power terminal. Connect a black wire from the capacitor – terminal to the SIM ground screw.

3.3. Wiring Diagram:



3.4. Wiring Illustration:

