

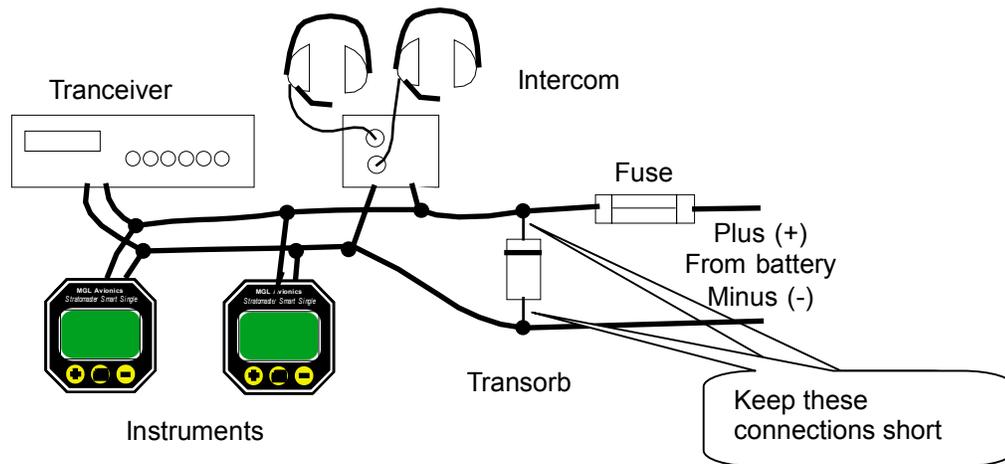
## Transorb power supply surge protection

MGL avionics recommends placement of a transorb surge protector in the power supply to any electronic equipment on board an aircraft. Transorbs are very effective protection for radios, instruments or intercom systems.

What is a transorb ? It is a small device with two terminals and it is polarized which means it needs to be fitted in such a way that the marked end (silver line) connects to the positive supply (usually +12V) and the unmarked side connects to minus or ground.

Transorbs work by clamping any excessive voltage to a certain limit. Transorbs available from MGL Avionics clamp at 33V. They do this by conducting anytime excessive voltage is present between the two terminals. For a short time, the transorb will absorb almost unbelievable amounts of power, should this be required. The transorb also reacts within a few billionth of a second making it far superior to any traditional solution.

In order to protect your electronic equipment correctly, it is required to install an inline fuse or fused circuit breaker. Choose a trip current that is sufficient for the supply of all your equipment and do take into account the current requirements of a radio if you are transmitting. We recommend that you create a power rail consisting out of DC plus and minus rails for your electronic equipment and protect this with a single transorb as shown. You can place the transorb close to your equipment. Ensure that you use very short wiring here as this will aid the speed at which your transorb will protect your electronics.



### Typical transorb installation, main circuit breaker (power switch) not shown for clarity.

Note the fuse inline to the positive supply. The fuse will blow if prolonged over voltage is present and the transorb is in danger of being destroyed as it has to absorb all excessive power, this way the transorb (and remainder of your equipment is safe). The transorb will also cause the fuse to blow should any voltage of reverse polarity be present – a very important protection for all your electronic equipment.

Supply your high current users such as lamps and solenoids from a separate power rail.