

# **TROUBLE SHOOTING YOUR**

## **Double Dual Magnum 12vdc, Smart DDM Strobe and the Single Magnum Smart Strobe Systems.**

1. If the system is a new installation and doesn't work go over the installation instructions to insure everything was done correctly.
2. If the strobes were working and quit. The first thing to check is be sure the driver box is receiving power at a good level, at least 12 volts. Remember, even if you are powering the Smart Strobe model from your AC lighting coil it can be powered by battery for trouble shooting purposes. When using a battery polarity has to be observed (RED is positive and BLACK is negative).
3. If you have a Dual system (two lights) and neither light works plug one light in at a time and if one starts to work and one doesn't there is a short between the red and black (hot to ground) wires on the failed light.
4. If only one light is working, swap the plugs at the driver and if the failed light starts to work the problem is probably the driver and it should be returned to Kuntzleman Electronics.
5. In step 4, if the light still doesn't work the problem is in the plug, the wire out to that strobe head, the 3 butt splices at the head or the head itself. All lights have been tested before packaging so if this light has never worked and was not damaged in installation, check the pins in the plug. Make sure they are pushed all the way in and locked. If you installed the plugs, did you get good metal to metal connections at the pin? In other words did not crimp the plastic wire coating into the pin.
6. Continually testing with an Ohm meter can be performed on each wire from end to end. Pin #2 to pin #3 will read some resistance through the trigger coil mounted in the head. No continuity will be measured through the xenon gas tube (pins 1 to 2) there is no filament in the bulb. Be sure the pins are all the way into the nylon plugs and locked in place.
7. Voltage at the head can be checked between the RED pin #1 and BLACK pin #2. BE VERY CAREFUL HIGH VOLTAGE. The voltage should be near 400 VDC.
8. AFTER CHECKING items 2, 6, & 7 a small AM radio can be used as follows. Turn on and tune between two stations. Hold the radio near the strobe driver box. A clicking of the strobe trigger circuit should be heard. If not, then trouble is in the driver box and it should be returned to Kuntzleman Electronics for repair. If it is heard move the radio to near the strobe head, that same clicking will be heard and the problem is the bulb unit. New bulb units are available from Kuntzleman Electronics.
9. If all else fails call Kuntzleman Electronics, Inc. @ 610 326 9068

## Noise in Radio and / or intercom

Our strobe driver units are designed with filtering and internal shielding to keep radio interference to a minimum, however occasionally noise will be heard over the radio or intercom. This noise is almost always caused by the way the systems have been installed.

One must remember that noise does not always come from the power that is being supplied to your equipment. Especially if the radio has it's own power source (battery) and the strobe is powered by the aircraft battery. Installations vary greatly from aircraft to aircraft. Do both systems share the same power source? Is there an external antenna? How close is the antenna, radio, wires, etc. to the strobe driver box and wiring? If both systems are not sharing the same power, then where is the common thread? In most, if not all cases the problem is **GROUNDING**. The ground path is very, very important. The strobe circuit draws high current through the ground circuit. The radio, intercom, head set and mic circuits use that same ground so it is important that there is **NO** voltage drop between where all these grounds are connected. In other words lets say the strobe driver is getting negative battery or ground from a bus near the battery that is also grounded to the metal frame of the aircraft. The ground plane for the radio antenna is connected to the aircraft frame further back near the tail and radios are grounded near the cockpit to a screw in the frame. This array of connections can be a source of noise. The following list is intended to help in eliminating noise.

1. Power for the strobe system should be on the first fuse of the power bus. In other words the closest fuse to the battery. It is also very helpful to run **BOTH** the **POWER** and **GROUND** in a twisted pair all the way from the source to the strobe driver. In other words don't pick up ground for the strobe near the driver and the hot on a single wire from another location.
2. The strobe driver's metal case should be solidly connected with a ground strap or 16 ga. Wire to the aircraft ground system.
3. The audio ground and aircraft ground should be commonly connected only at **ONE SINGLE POINT**. Ground all the audio equipment; radio, mic, antenna, headphones, intercom, etc. to an "audio ground bus" (16ga. Or larger wire). Then connect that bus at one end only to the aircraft central grounding point, preferably near the poin the battery is grounded.
4. Do not run audio related wires next to power supply wires.
5. Shielded wire is not normally necessary, however if it is being used ground that shield at only **ONE** end. Usually the end closest to the source.

This list has been derived from the fixes that have worked for others. If you find something new please let us know at Kuntzleman Electronics and yours will be added to help someone else.