



Gooseneck Lamps & Accessories

Littlites® do not generate radio frequency interference, but they may provide a path for radio frequency noise that is generated inside modern digital consoles to be radiated outside the case. Therefore care and good design practice should be used when designing them in. Noise may originate in the switching power supply used to power the lamps, or in other microprocessor systems inside the case. CE certification requirements include RFI radiation and susceptibility tests, which are quite stringent.

Generally, similar grounding and filtering to that used to prevent RFI being radiated through other connectors such as power supply input and input and output cables also works for lamp connectors. Careful grounding of the lamp body connection as if it was a shielded cable, and ferrite beads and/or bypass capacitors on the power lines to the lamp are appropriate.

Since there are a number of types of lamp commonly used on consoles, we will address each separately.

"X" type lamps use an XLR type connector. 3-pin XLR lamps have pin 1 connected to the case of the lamp, and an isolated lamp circuit connected between pin 2 and 3. Grounding pin one and the case of body connection properly and wrapping both lamp leads several (5?) times through a ferrite core such as Fair-Rite part number 2643800502 has been effective in some products. Essentially, this creates a common mode choke, which filters out RFI and keeps it from being carried outside the chassis through the lamp wiring.

Ferrite beads in series with both lamp leads, bypass caps to ground, bead and bypass assemblies or small common mode chokes are other possible options.

"G" type lamps use BNC type connectors with the lamp circuit through the shell or body of the lamp. In some cases it is appropriate to connect the lamp receptacle to chassis ground and in some cases it should be isolated using an insulated base BNC or nylon insulating washers, and grounding separately. Remember that the lamp should be grounded to the chassis of the console to prevent any potentially hazardous potential voltage between them. Then a few turns of the center conductor through a ferrite core as above or a ferrite bead or two in series with the lamp circuit and possibly bypass capacitors or a capacitor and bead assembly would do the job.

These are suggestions for possible solutions. We do not guarantee their effectiveness, since every system is different.

Littlite, LLC

10087 Industrial Drive, P.O. Box 430, Hamburg, MI 48139-0430 U.S.A. 810-231-9373, FAX 810-231-1631

E-mail: sales@littlite.com www.littlite.com

Littlite and the Littlite logo are registered trademarks of CAE, Inc. for our brand of gooseneck lamps