

Lamp Buzz With Solid State Incandescent Dimmers

Overview

A solid-state dimmer is an electronic switch that rapidly turns the current on and off 120 times per second to produce the dimming effect. This rapid switching can cause incandescent lamp filaments to vibrate, resulting in a buzzing noise. Lamp buzz is generally noisiest at mid-range (50%) dimming level.

Some lamps are noisier than others when dimmed, depending on the physical characteristics of the lamp filament. Lamps of higher wattage (100W and above) tend to produce a louder buzz. Therefore, use a lower wattage lamp whenever possible to reduce lamp buzz.

Other factors that affect perceived noise level of lamp buzz are:

- Pitch of lamp buzz
- Type of light fixture
- Ambient noise level of room
- Surrounding surfaces/finishes
- Relative proximity of light fixture to ears
- Individual sensitivity to noise

Recommendations

- Use lower wattage lamps (100W or less) whenever possible
- Selecting another brand of lamp can sometimes reduce lamp buzz
- Use a physically smaller lamp
- Upgrade to a specification grade dimmer

Worldwide Technical and Sales Assistance

If you need assistance call the toll-free **Lutron Hotline:**

(800) 523-9466 (U.S.A., Canada, and the Caribbean)
Other countries call (610) 282-3800

Lamp Debuzzing Coils (LDCs)

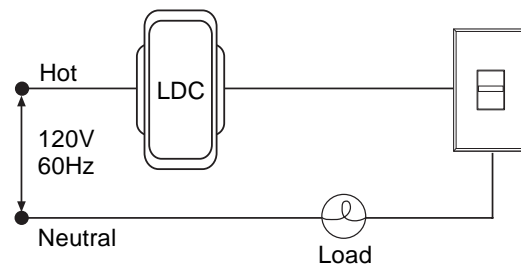
The most effective way to reduce lamp buzz is to install a lamp debuzzing coil (LDC) into the lighting circuit. When an LDC is wired in series with the dimmer, it slows down the in-rush of current during the rapid switching cycle of the dimmer. As the current inrush is slowed down, the lamp filament vibration and lamp buzz are reduced.

Lutron has two LDC models available to help reduce lamp buzz. The type of LDC required depends on the total wattage of the dimmer's lighting load. Listed below are the model numbers and their respective capacities. **Note:** For loads under 600W, call the toll-free **Lutron Hotline:** 1-800-523-9466.

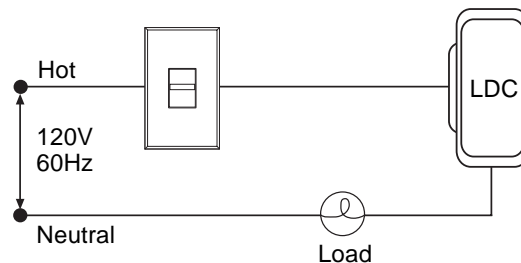
Model	Rated Capacity
LDC-10-TCP	600-1200W
LDC-16-TCP	1201-1920W

LDCs may be wired in series with the dimmer on its line side or load side. Each dimmer requires its own LDC.

Line Side Installation



Load Side Installation



During normal operation, LDCs may make an audible buzz and, therefore, should be mounted in an area where the noise will not be objectionable (e.g., an electrical closet, a basement, or above a drop ceiling). The LDCs are UL listed and thermally protected. For further information, see our Lamp Debuzzing Coil specification sheet, P/N 360-212.

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Need additional assistance? Call the Lutron Technical Assistance Hotline 1-800-523-9466