Build a simple, soft-action muting switch

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The circuit in Figure 1 adds a soft muting switch with power-up/power-down muting to a line-level audio circuit. $R_4$, $C_1$, and JFET $Q_1$ quietly ground a signal in 100 to 200 msec when you close $S_1$ or release it when you open $S_1$. Potentiometer $R_2$, set to twice $Q_1$'s cutoff voltage, makes the on/off transition times roughly equal. $R_2$ and $D_3$ quickly discharge $C_1$ and mute the signal during power-down. For this process to work, the signal path should remain stable to below roughly one-third the normal supply voltages—below ±4V in this example. $Q_1$ can then finish muting. Making $Q_1$ a more tightly defined PN4392 can soften this requirement and allow muting of lower impedance signals. $R_3$ unloads $S_1$ from $R_2$, so that $D_3$ does not shorten the earlier transition times. $S_1$'s normally closed contact, resistor $R_5$, and dual-LED $D_2$ add an indicator light. $D_1$ raises the red LED's on-state threshold to indicate green when muting is off. Replacing $D_1$ with a short circuit causes the red LED to light. This scheme makes a more expensive DPDT (double-pole, double-throw) switch unnecessary, provides uninterrupted light as $S_1$ switches, and reduces the LED-current change for less noise (references 1 and 2).

References

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