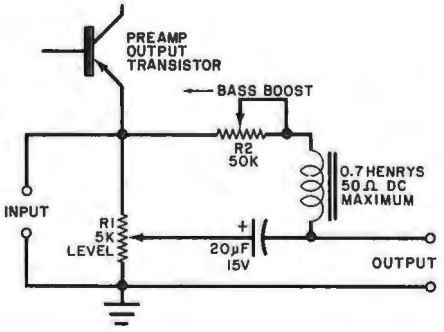
Hobby Scene

LOUDNESS CONTROL FOR AUDIO AMPS

Q. ***Could you explain the function of the Loudness control on many audio amplifiers? Is there an add-on circuit to realize this function?***—*Edward Cheung, London, Ontario*

A. Loudness controls are incorporated into audio amplifiers because the ear has a nonlinear response. At low volume levels, we do not hear bass frequencies as well as the highs. Accordingly, the loudness control compensates by boosting the bass so that it sounds as loud as the treble material. The circuit shown here will function as a bass-boost or loudness control when placed between the preamplifier output and amplifier input. Set *R2*, a 50-k, linear-taper potentiometer for maximum resistance. Adjust *R1*, the level control, so that the program material sounds as loud as the original and adjust the treble control on the preamplifier for proper tone balance. Now the program level can be reduced to the desired listening level and *R2* adjusted for the same acoustical bass response. With *R2* set for maximum bass boost and *R1* for a −40-dB output, the frequency response will agree to within 2 dB of the 55-phon Fletcher-Munson curve. Inductor *L1* can be derived by using the yellow and green leads on the secondary of an Argonne AR-128 (Lafayette 33 F 85358) audio transformer.



AM RADIO ANTENNA TERMINALS

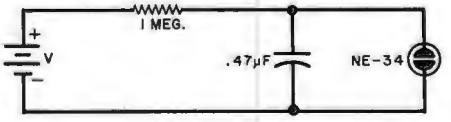
Q. ***I recently bought an old Silvertone radio at a garage sale. I am confused about the antenna terminals on the back of the set. There is a two-terminal strip and a ground lug underneath. One of the terminals is marked ANT and the lug is marked GND. I undersand what they signify, but the second terminal on the strip, marked DBL, mystifies me. What is the DBL terminal for?***—*Todd Gillespie, Barrington, Ill.*

A. This configuration is often found on older BC and shortwave receivers. If an unbalanced antenna, such as a random-length, end-fed wire is used, it is connected to the ANT terminal. A wire should then be run from the GND terminal to a good earth ground (a cold water pipe is fine). If a balanced antenna, such as a center-fed dipole is used, one lead of the balanced feedline (such as twinlead) should go to the ANT terminal, and the other lead to the DBL or *Doublet* (which is another name for a dipole) terminal. A good earth ground should be connected to the GND lug.

NEON BULB FLASHER

Q. ***I have an NE-34 neon light, and want to make a flasher circuit that will operate at about 2 Hz. Is there a simple way to do this?***—*David Bellevue, Wilmington, DE.*

A. A high-voltage battery and a simple RC circuit can be combined with your neon bulb to produce a flasher. The switching rate depends on the product of R and C, which in this case is about a half-second. The lamp will blink about twice each second. Use two NEDA 200, 67½-volt batteries in series as a voltage source.



Have a problem or question on circuitry, components, parts availability, etc? Send it to Hobby Scene, Popular Electronics, One Park Ave., New York, NY 10016. Though all letters can't be answered individually, those with wide interest will be published.