

circuits

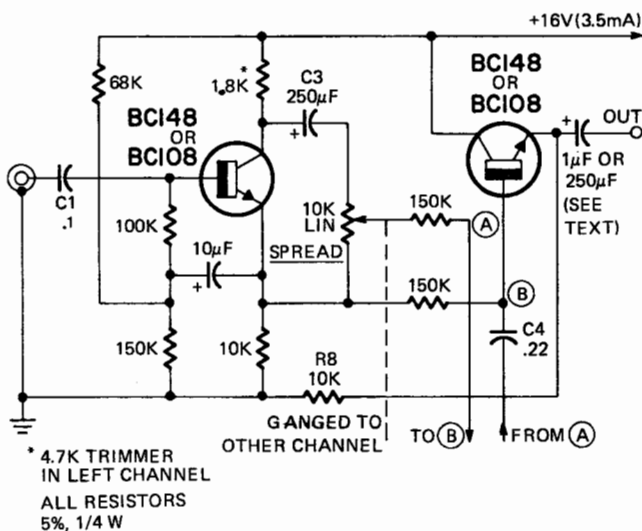
STEREO WIDTH CONTROL

If you are sometimes bothered by insufficient spread from some stereo material, this simple device (Mullard's *Sound-Source Width Control*) may be the answer. The diagram shows the circuit of one of the two almost identical channels. (In one channel the input collector load resistor is a preset 4700-ohm trimmer resistor.)

Circuit gain is 0.5, input impedance is 750,000 ohms, output impedance 47,000 ohms and response is 20 Hz to 20,000 kHz at 3-dB points. Total distortion is less than 0.1% for 0.5 volt output and about 0.15% for 1.0 volt out.

The output blocking capacitor can be 1 μ F when working into a load of at least 10,000 ohms. For lower load impedances, use a 250- μ F blocking capacitor.

The sound-source width control is connected in the



stereo signal path where the signal level is 0.25 to 1.0 volt as between preamp and main amplifier, between tape output and tape-monitor jacks, or between two tape recorders. A 4-pole double-throw switch can be used to take the width control out of operation or you can simply mark the position of the SPREAD control where the normal stereo affect is not affected. Here is how it's done:

- 1—Connect the device to a stereo system.
- 2—Disconnect the right-channel output from the main amplifier or replace the right speaker with a dummy load.
- 3—Feed a signal into the right channel only and turn up the volume control until you hear a reasonably loud signal from the left channel.
- 4—Adjust the SPREAD control for minimum volume from the left speaker. Mark this position and make sure that the control setting is not changed any more.
- 5—Turn off the sound source. Connect the right channel and disconnect the left channel.
- 6—Feed a signal into the left channel and turn up the volume for a moderate signal from the right speaker.
- 7—Adjust the 4700-ohm trimmer for minimum output.

This completes the set-up operation. The SPREAD control now gives a mono effect at one end of its range, ordinary stereo in the "null" position located in Step 4 and extra-wide stereo at the other end of its range.

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