

BURN ELIMINATOR FOR AUDIO XY OSCILLOSCOPE

AN XY oscilloscope is used in audio systems basically for two purposes. One is to plot the two stereo channel waveforms against each other, thus providing a measure of the separation achieved, and the other is to plot the output from the FM tuner against the a.g.c. output (before filtering) as a check against multipath reception. However, if the apparatus is left switched on for any length of time with no signal applied, or at any rate with a very low signal applied, the spot on the c.r.t. is bright enough to leave a burn mark on the screen. The circuit shown in Fig. 1 was devised to eliminate this.

Connection was made to one output of each of the deflection amplifiers by a 10M Ω resistor, the high value being to prevent any disturbance of the amplifiers. An emitter

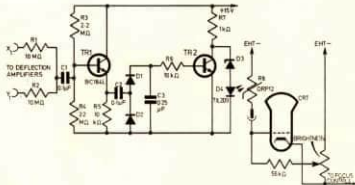


Fig. 1

follower drives a voltage doubling rectifier whose output causes the other transistor to conduct should any signal sufficient to deflect the c.r.t. beam be present. If no signal is present the 8.2V Zener conducts and the l.e.d. lights up, its current being limited by the collector resistor of the second transistor.

When the l.e.d. is illuminated, the l.d.r. goes low and drives the c.r.t. grid negative cutting off the beam. The circuit can be overridden with the brilliance control if required.

When experimenting with c.r.t. circuits extreme care should be taken, switching off and discharging the e.h.t. circuit each time before touching the circuit. The shaft of the brightness and focus controls should either be earthed (if the insulation of the pot can stand it) or be of non conducting material.

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