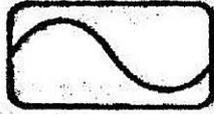


# Amber



AMBER ELECTRONICS, INC. P.O. BOX 2015 CHARLOTTESVILLE, VA 22902 TLX 901601 (804) 296-5696

Amber Technical Report # 00013

## S-70 : Turn-On Shock Reduction

( 0.1 $\mu$ F )

Two large filter capacitors ( 32,000 $\mu$ F each) provide high current output capability for the Series 70 Power Amplifier. These capacitors require a great deal of energy to "charge up" when the amplifier is initially turned on. This surge places an unusually large demand upon the AC line (hence the flicker of household lights) and also places a small strain on the filter capacitors themselves.

To reduce the magnitude of this turn-on surge, Amber has placed a high-voltage 0.1 $\mu$ F capacitor in parallel with the Series 70's power switch. This capacitor allows a small trickle of current to keep the filter capacitors slightly charged when the power switch is off. As a result, turn-on shock is greatly reduced and all circuit components are continuously run at a low current level. This actually extends component life expectancy because it is the voltage surge of turn-on which is most responsible for component deterioration. (It is for this reason that computer facilities are left powered 24 hours per day.) One by-product to note is that the power LED on the front panel will remain slightly aglow even with the amplifier turned off.

This power switch capacitor is standard on all bronze-faced Series 70 Amplifiers and can easily be fitted to later Series 70's either at the Amber factory or at your local Amber dealer.

Cary Lancaster  
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