

SCE Model 100

This power supply was designed as a drop-in replacement for the Raytheon High Voltage A2 module in the standard FAA Air Traffic Controller Display Console. The circuit is a conventional self-oscillating push-pull converter. The high voltage transformer output is voltage multiplied by 12 to produce 12KV. A divided-down feedback voltage controls a linear pass transistor which feeds the converter to maintain the output at 12KV. A separate focus multiplier and filter generate -2 KV which is shunt stabilized to -1200V. A grid voltage of 500V at low current is generated from the feedback string.

This Air Traffic Control Console is used throughout the world; SCE has provided well over 1000 replacement units.

SPECIFICATIONS

Electrical

Input:

- Voltage +22V, +100VDC nominal. Input voltages may vary +20% without affecting output
- Current 300mA nominal at +22V, with an internal current limit at 390mA

Output:

Anode:

- Voltage 12KV, adjustable from 11 to 13KV
- Current 150 μ A maximum
- Regulation +1% load, +1% line
- Ripple 12V p-p, maximum

Focus:

- Voltage -1200V
- Current 20 μ A maximum
- Regulation +1% load, +1 line
- Ripple 1V p-p, maximum

Focus:

- Voltage 400-600V (adjustable)

Environmental

- Operating Temperature 0°C to 71°C
- Humidity To 100% (fully sealed construction)
- Shock 20 G's
- Vibration 10 G
- Altitude to 100,000 ft.

Construction: Welded steel case and cover

- Size 3 $\frac{3}{4}$ " x 5" x 2 $\frac{3}{4}$ "
- Weight 4 lbs., max

- Connectors HV - Flying lead with J22 Anode Cup
- LV - Hermetic feedthrough solder terminals
- Marking Photo anodized aluminum label
- Potting Vacuum filled silicone