Power Supply Construction

Fig. 2 – Schematic diagram of the complete power supply. All resistors are 1/2 watt composition. C1 through C3 are solid tantalum capacitors. T1 and CR1 through CR4 are discussed in the text. R1 is a panel-mounted linear-taper potentiometer. S1 and S2 are spst toggle switches. The meters are Cal科技成果 DI-916 and DI-923. If the pass transistors are not used, the 22-ohm resistor between C1 and the regulator input to be omitted.

Although the output voltage may be adjusted with an externally mounted control within the range of 9 to 13 volts.

Circuit Description

The use of two transformers, rather than one, allows a certain degree of flexibility of operation, in that the supply may be used on either 117 or 235 volts ac with only minor differences in wiring. The dc voltage at point A is approximately 30. It is used as a series pass transistor. Its function is to drop the voltage at point A to the desired 12-volt-output value, and maintain that voltage over wide variations in the output load current. U2 is an integrated circuit voltage regulator which, with the aid of a few external components, is

Adjustment and Operation

The value of the 5600-ohm resistor may be changed to suit the builder. Lowering its value will decrease the maximum output voltage available. No other adjustment is necessary for operation of this power supply.

ANOTHER POWER SUPPLY