



NATIONAL RADIO COMPANY

37 WASHINGTON STREET • MELROSE, MASSACHUSETTS

107--996

**NATIONAL AC 200
POWER SUPPLY**

NATIONAL AC 200 POWER SUPPLY

The AC-200 Power Supply is a conservatively rated supply capable of providing all necessary power to operate the National 200 Transceiver. The supply is equipped with a power plug and 6' cable so that it may be connected directly to the transceiver, with no other power connections required.

Referring to the schematic diagram, 117 or 234 VAC is supplied from the line cord through the power supply protection fuse. A pair of switching leads is connected through Pins 1 and 2 of the cable and plug. A bridge rectifier D1, swinging choke L1 and the filter capacitors C1 and C2 provide 700 volts dc to the final amplifier tubes in the transceiver. This high-voltage supply is capable of supplying 700 volts at 50 to approximately 300 ma. at better than 2% regulation from minimum to maximum load. In order to provide maximum efficiency in the supply, the low voltage dc is taken from the center tap of the high-voltage winding. The low-voltage dc from the center tap is filtered by choke L2 and capacitor C3. It is dropped and further filtered by resistor R6 and R9 and a filter capacitor inside the transceiver. This provides 280 volts at 200 ma. at terminal 9 of plug P1. Resistor R8 is a 30,000 ohm bleeder resistor to prevent shock hazard.

The output of the bias winding of T1 is rectified by diodes D2 and D3. This rectified output is filtered by the combination of resistor R7 and capacitor C4 and provides —80 volts at approximately 10 ma. for bias purposes to terminal 3 of the power plug P1.

NATIONAL AC 200 POWER SUPPLY RATINGS

INPUT:

117 or 234 VAC \pm 10%, 50-60 Hz
150 Watts receive
365 Watts CW transmit

OUTPUT:

High Voltage 700 VDC at 50 to 300 ma.
Low Voltage 280 VDC at 200 ma.
Bias Voltage —80 VDC at 10 ma.

DIMENSIONS

7 $\frac{3}{4}$."W x 6 $\frac{1}{2}$."H x 11."D

WEIGHT

21 pounds

ALL READILY AVAILABLE RESISTORS AND CAPACITORS ARE OMITTED FROM THE FOLLOWING PARTS LIST, BUT ARE COMPLETELY IDENTIFIED ON THE SCHEMATIC.

PARTS LIST

NATIONAL AC 200 POWER SUPPLY

DESCRIPTION	PART NUMBER
Plug, Jones, Female	A50828
Strain Relief Bushing	A50892-3
Capacitor, Electrolytic, 40 μ fd	C19458-7
450 VDCW	
Capacitor, Electrolytic, 40 μ fd	C19411-3
150 VDCW Tubular	
Capacitor, Electrolytic, 80 μ fd	C19411-4
450 VDCW Tubular	
Fuse Holder	A50862

Transformer, Power	C51325
Choke, Swinging	B52068
Choke, Filter	B52067
Switch, Transfer	B27662
Rectifier Bridge	A52116
Rectifier, Silicon, 500 PIV	A50874
Similar to 1N534	
Resistor, 7,500 ohms, 5 w \pm 10%	B17436-13
Resistor, 30,000 ohms, 5 w \pm 10%	B17436-14
Resistor, 660 ohms, 10 w \pm 10%	B17436-22
Line Cord	B22132-6
Cable, 7 — Conductor	B52065
Foot, Rubber	A50851



National AC 200 Power Supply Schematic