

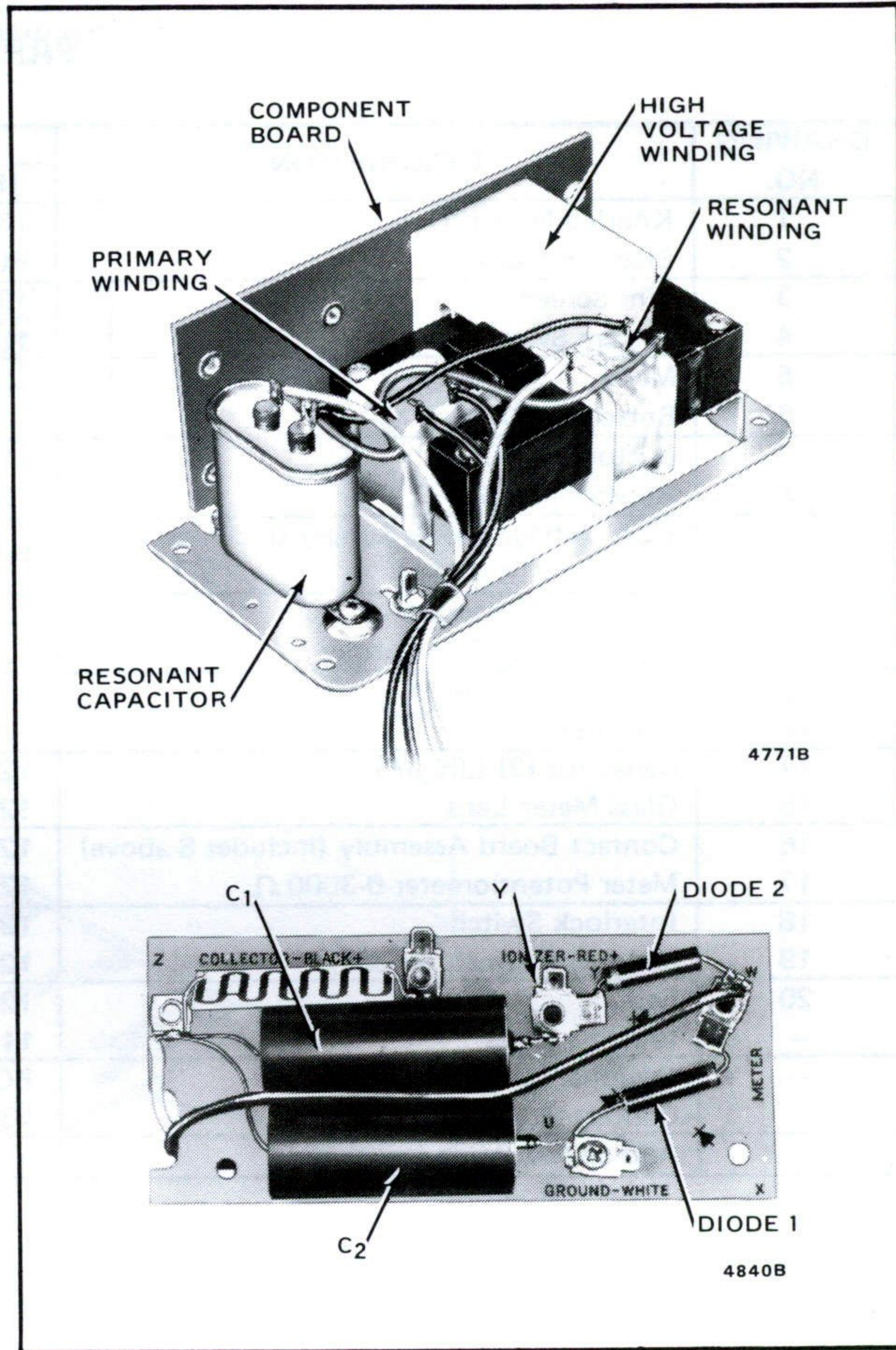
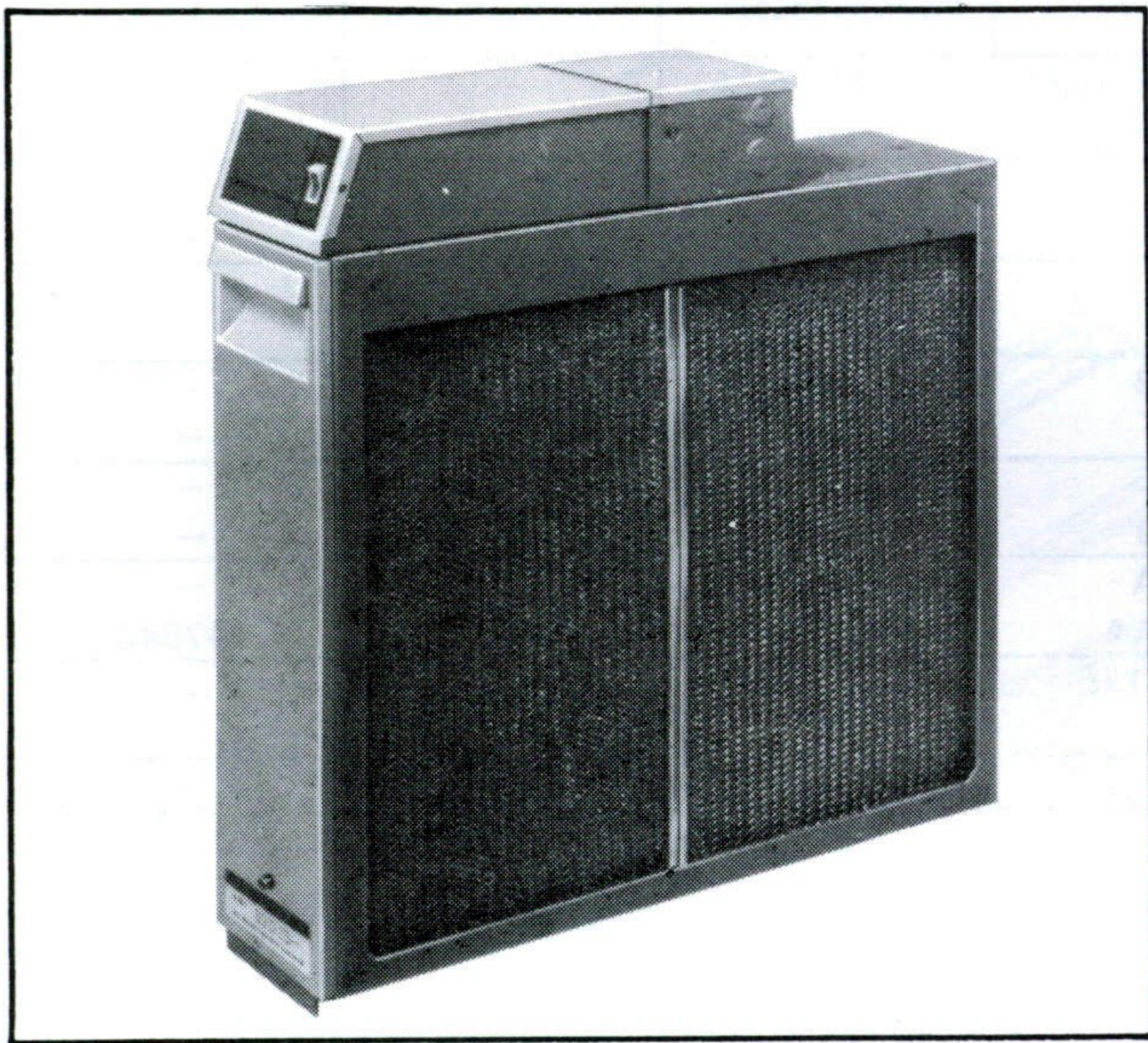
# F50A,B

## GENERAL DESCRIPTION

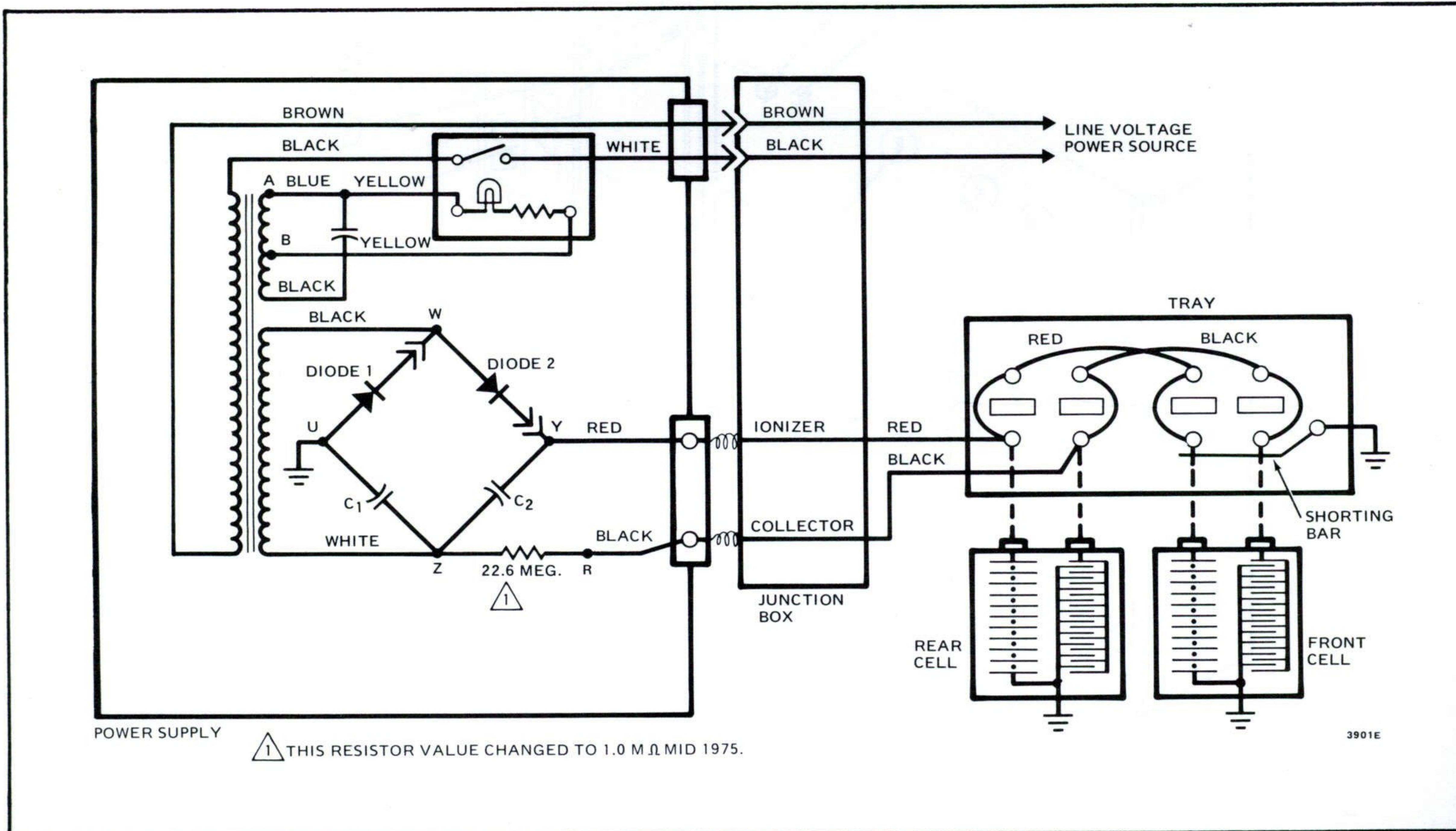
The F50 Electronic Air Cleaner replaced the F45 and F46 and was introduced in 1972 for use in central systems with capacities up to 2000 cfm. It uses the FC37A Electronic Cells.

## ACCESSORIES USED WITH F50

- 136377A Remote Power Supply Mounting Kit.



## INTERNAL SCHEMATIC DIAGRAM



**SERVICE AIDS**

- High voltage test meter—ac and dc.
- Spare diode (137073A) with alligator clip.

**PREPARATION**

1. Check to see that the electronic cells are clean, dry, and properly installed in the air cleaner cabinet.
2. To energize the air cleaner, turn on the system fan and turn air cleaner switch ON.

**NORMAL VOLTAGES**

	WITH CELLS	WITHOUT CELLS
Ionizer	7,500–8–500 Vdc	8,500–9,600 Vdc
Collector	3,000 Vdc minimum	3,500–4,800 Vdc
Transformer Secondary	—	3,200–4,100 Vac

**ELECTRICAL TROUBLESHOOTING**

Check out the electrical components of the F50 by observing the indicator light under various operating conditions. Follow the flow chart and refer to the instructions for checking components when indicated.

**CHECK ELECTRONIC CELLS**

When diagnostic checks indicate a possible problem in the electronic cells, inspect them carefully for any sign of mechanical damage. Check for short circuits from contacts to ground.

**CHECK VOLTAGE DOUBLER CIRCUIT**

1. Check voltage across each capacitor with opposite diode unplugged. If both capacitor and diode are good, the voltage will be over 3,500 Vdc.
2. Check diode by substitution and if the voltage still isn't right, replace the capacitor.

**CHECK HIGH VOLTAGE TRANSFORMER**

1. Disconnect black wire from the resonant capacitor.
2. Energize the air cleaner and measure resonant winding voltage.
  - a. If this voltage is over 150 Vac, the resonant capacitor is defective or the transformer secondary winding is open.
    - (1) De-energize the power supply and check for continuity of the secondary winding.
  - b. If this voltage is under 150 Vac, the transformer is defective and must be replaced.

