INSTRUCTION MANUAL

VOLTAGE REGULATED
POWER SUPPLY

MODEL 103

SERIAL NO. .....

KEPCO, INC.
131 - 38 Sanford Avenue
Flushing 55, New York

MULTIPLE POWER SUPPLY

MODEL 103

SPECIFICATIONS:

LINE INPUT -

VOLTAGE: 105-125 volts AC, 50-60 cycles.

POWER CONSUMPTION: 250 watts.

FUSE PROTECTION: 3 amperes.

DC OUTPUT -

Two "B" Supplies:

CONTINUOUSLY VARIABLE: From 0-300 volts.

CURRENT: 75 milliamperes each, 150 milliamperes when paralleled.

RIPPLE: Less than 30 millivolts RMS.

One "C" Supply:

CONTINUOUSLY VARIABLE: From -50 volts to +50 volts.

CURRENT: 5 milliamperes.

RIPPLE: Less than 10 millivolts RMS.

AC OUTPUT -

VOLTAGE: 6.3 volts AC.

CURRENT: Maximum 5 amperes.

FRONT PANEL CONTROLS: Power on-off switch; three DC output voltage controls.

OUTPUT TERMINATIONS: DC and AC voltage outputs are clearly marked on the front panel. The negative terminals of the B supplies are common. A binding post mounted on the rear of the chassis is available for grounding the case.

PRINCIPLES OF OPERATION: The two "B" supplies originate from a common power transformer and are each controlled by an electronic voltage divider circuit. These control circuits eliminate the need for heavy duty power potential dividers. The current drawn from each B supply flows through a 6Y6 tube rather than through a wire wound voltage divider, eliminating the difficulties usually encountered with heavy duty power potential dividers. The output voltage of each B supply is varied by changing the potential of the grids of the respective 6Y6 tubes. The small current in the grid control circuits minimize the wear on the variable controls. The Kepco electronic voltage divider circuit is unique in that a heavy load such as momentary shorting of the output terminals will not damage the components of the B supplies. The 6Y6 control tube limits the amount of current drawn by each B supply. The supplies are isolated from the chassis to allow grounding of the positive terminal if necessary, without affecting the C supply. The "C" Supply originates from an entirely separate power transformer and rectifying circuit. A resistor network allows a continuously variable voltage from -50 volts to +50 volts at 5 milliamperes. The C supply is isolated from the chassis. The Filament Supply furnishes 6.3 volts AC at 5 amperes, and is isolated from the chassis and all other voltages.

MAINTENANCE: The components of the Model 103 Multiple Power Supply have been selected and tested to provide long and trouble-free operating life. The only service necessary should be the replacement of vacuum tubes. The location of the tubes is clearly marked on the chassis. When it becomes necessary to replace a tube, slide the chassis from the cabinet after removing the four retaining screws on the bottom of the cabinet and the four screws holding the front panel to the cabinet.

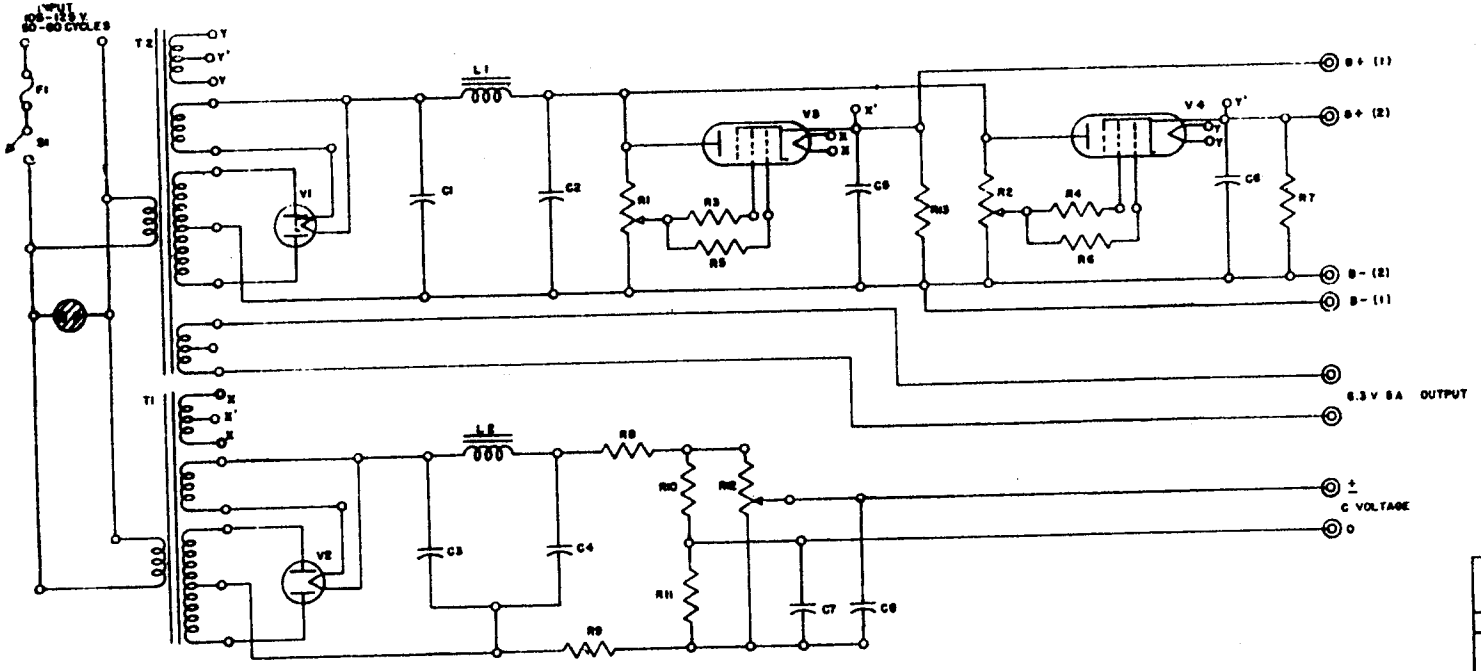
REPAIRS: Should any trouble develop in the instrument, it may be serviced with the aid of the schematic diagram. Major repairs, however, are usually handled by the factory.

Under no circumstances should the instrument be returned to the factory without proper authorization and shipping instructions. In any correspondence with the factory concerning the repairs, the type and serial number of the instrument must be given together with a description of the trouble encountered.

PARTS LIST
MODEL 103

(Drawing No. S103-01)

C1	- 16	MFD	600 WV
C2	- 16	MFD	600 WV
C3	- 2X20	MFD	450 WV (one section)
C4	- 2X20	MFD	450 WV (one section)
C5	- 16	MFD	600 WV
C6	- 16	MFD	600 WV
C7	- 2X20	MFD	150 WV (one section)
C8	- 2X20	MFD	150 WV (one section)
F1	- 3 Ampere Fuse		
L1	- Kepco Choke 100-222		
L2	- Kepco Choke 100-206		
PL1	- Pilot Light #44 Bulb		
R1	- 0.10	Meg	4 watt Pot. WW
R2	- 0.10	Meg	4 watt Pot. WW
R3	- 100	Ohm	1 watt
R4	- 100	Ohm	1 watt
R5	- 0.47	Meg	1 watt
R6	- 0.47	Meg	1 watt
R7	- 0.47	Meg	1 watt
R8	- 7500	Ohm	10 watt
R9	- 7500	Ohm	10 watt
R10	- 5000	Ohm	10 watt
R11	- 5000	Ohm	10 watt
R12	- 0.10	Meg	4 watt Pot. WW
R13	- 0.47	Meg	1 watt
S1	- SPST Switch		
T1	- Kepco Power Transformer 100-221		
T2	- Kepco Power Transformer 100-358		
V1	- 5V4G		
V2	- 5Y3GT		
V3	- 6Y6		
V4	- 6Y6G		



KEPCO LABORATORIES			
FLUSHING		NEW YORK	
ITEM	MODEL	DATE	DRAWING NO
MULTIPLE POWER SUPPLY	103	8-29-58	B-103-C1
	CK. BY N.K.	DR. BY [illegible]	SHEET 1 OF 1 SHEETS