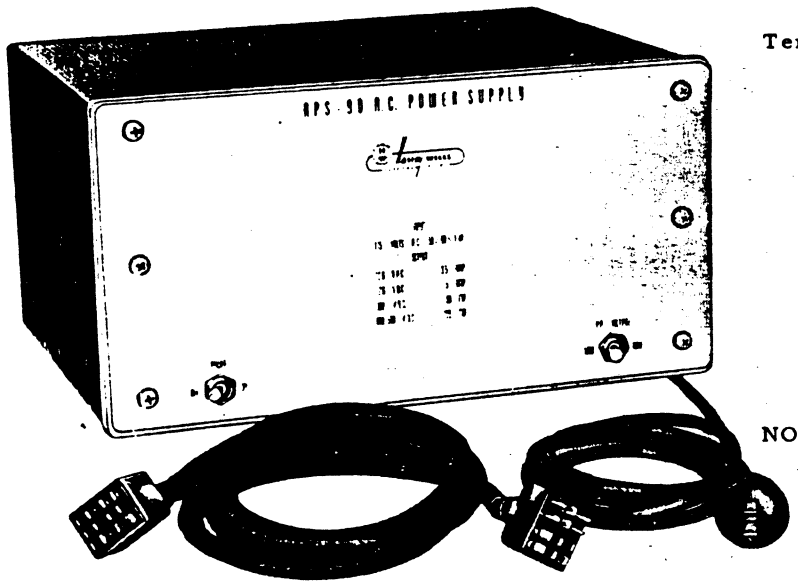
APS-90 A. C. POWER SUPPLY

HARVEY-WELLS ELECTRONICS, INC.

SOUTHBRIDGE, MASS., U. S. A.

Serial 1061



GENERAL

The APS-90 A. C. Power Supply has been designed specifically for use with the Harvey-Wells T-90 Bandmaster Transmitter for fixed station operation. It may also be used as an external source of filament, plate and control voltages for other equipment. The APS-90 operates with a nominal input voltage of 115 volts, 50-60 cycles, and provides all the necessary operating and control voltages for the T-90 Bandmaster Transmitter.

OPERATION WITH T-90 BANDMASTER TRANSMITTER

Connect the cable furnished with the APS-90 to the mating connectors on the rear of the APS-90 and the T-90 Bandmaster Transmitter. This places the power switch on the T-90 in the primary circuit of the filament transformer thereby permitting control of all filament and relay voltages from the transmitter position.

With the power switch of the T-90 Bandmaster Transmitter in "Off" position, plug in the A. C. cord and turn the POWER switch on the APS-90 to "On". Set the PA VOLTAGE switch to LOW and the operation and tuning may be controlled completely from the T-90 panel. After tune-up the PA VOLTAGE switch may be moved to HIGH if desired.

OPERATION AS AN AUXILIARY POWER SUPPLY

In order to control the outputs of the APS-90 when used with equipment other than the T-90 Bandmaster Transmitter, short-circuit terminals 11 and 12 at rear of the APS-90, and connect a SPST toggle switch between terminals 8 and 2 or 5 to break the plate power.

Terminal connections may then be used as follows:

Term	1	+300 VDC @ 100 ma
	2	Ground
	3	+500 or 600 VDC @ 225 ma
	4	12.6 VAC @ 3.5 A
	5	Ground (-12 VDC)
	6	N C
	7)	External Relay Use
	8(	+12.6 VDC @ 0.5 A
	9	N C
	10	N C
	11)	External Power
	12(	On-Off Control

NOTE:

The APS-90 provides filament voltage at 12.6 VAC. If it is desired to use this voltage to heat 6.3 V tubes, use a dropping resistor with a value equal to $\frac{6.3}{If}$.

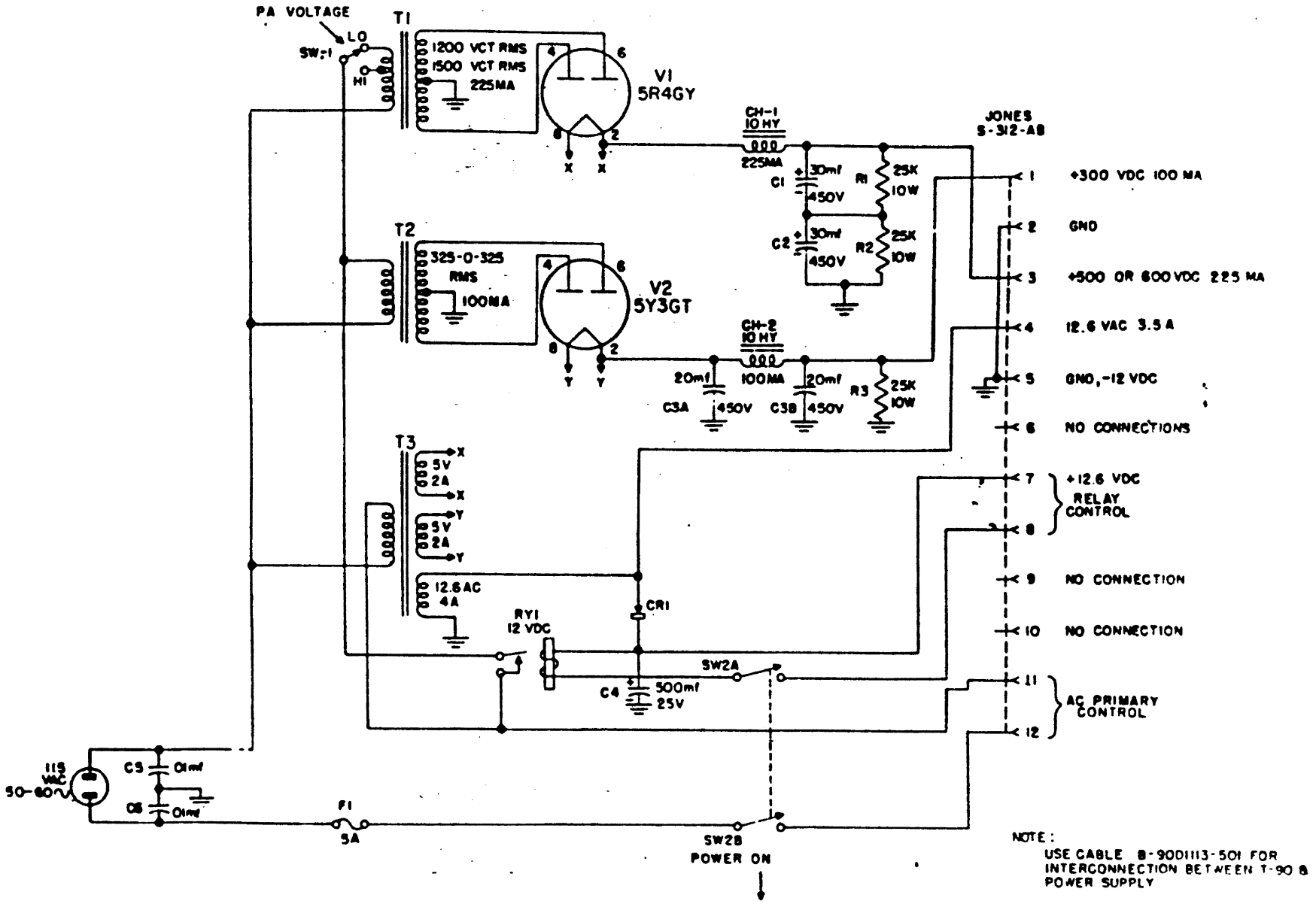
(If being the total parallel filament current of the tubes being used, not to exceed 3.5A.)

A 6.3 VDC relay may also be used providing a dropping resistor of the proper value in the circuit. The relay current should not exceed 0.4 amps in this case.

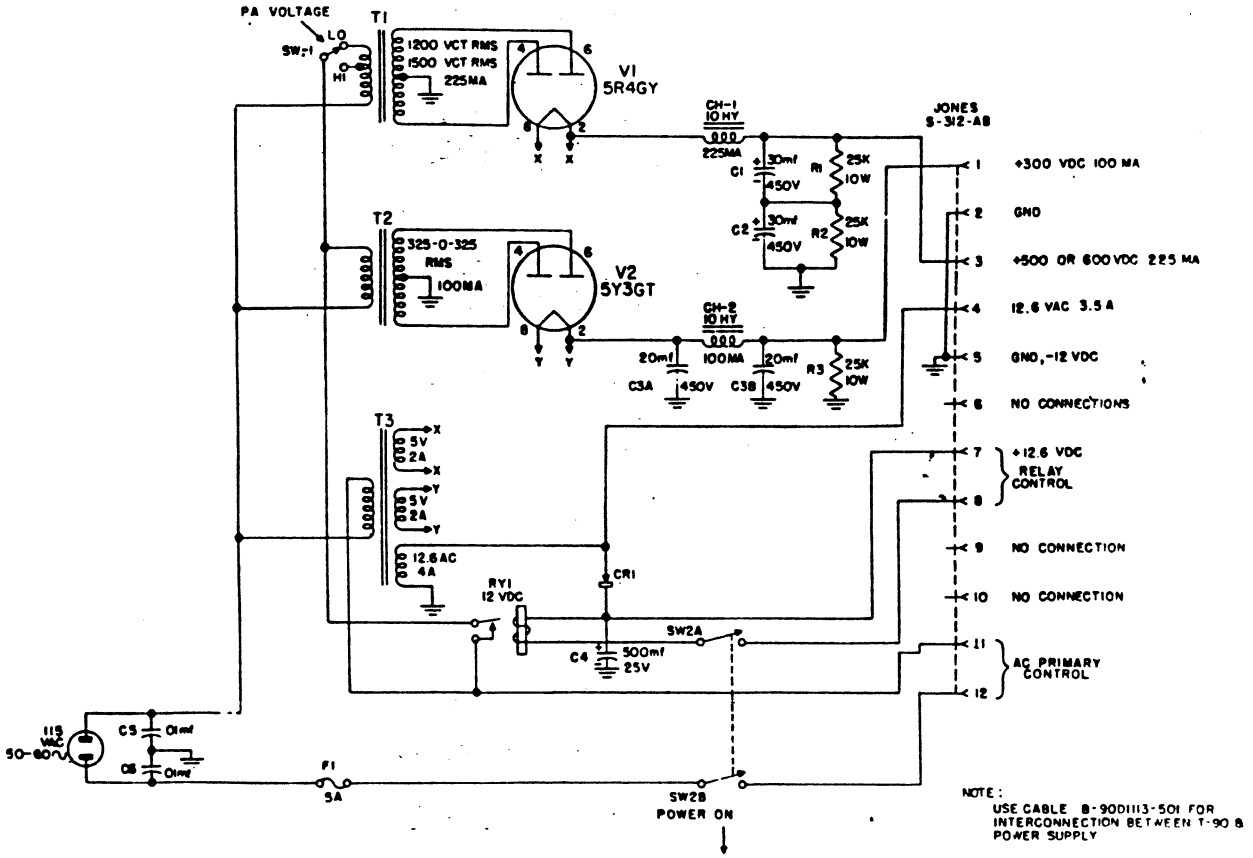
When connected in this manner, use the POWER switch on the APS-90 to control the heater power, and use the external switch to control the plate power. The PA VOLTAGE switch on the APS-90 will function in the normal manner.

APS-90 ELECTRICAL PARTS LIST

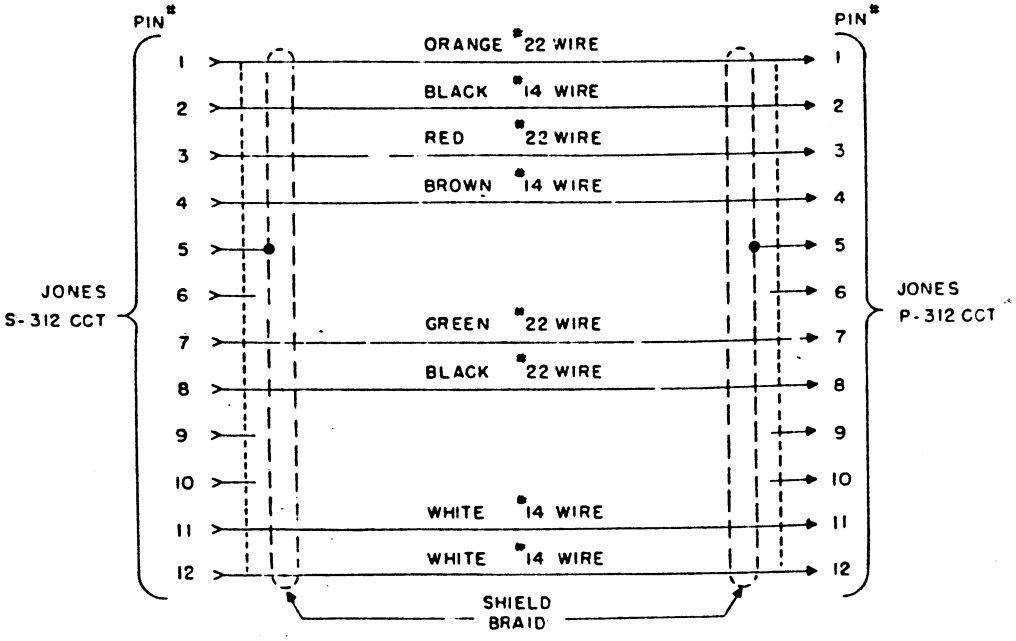
SYMBOL	DESCRIPTION	H-W PART NUMBER	QUANTITY
C1, C2	Capacitor, 30 ufd - 450 V elect.	A-1N3002-30R0	2
C3A, C3B	Capacitor, 20-20 ufd, 450 V (Dual)	B-1P3050-10	1
C4	Capacitor, 500 ufd - 25 V, Elect.	A-1N1008-500R0	1
C5, C6	Capacitor, .01 ufd, Disc	A-1K3025-14M	2
CH-1	Choke, High Voltage	B-12B1022-1	1
CH-2	Choke, Low-Voltage	B-12B1023-1	1
CR-1	Selenium Rectifier	A-50A1004-1	1
F1	Fuse, Type 3 AG, 5 amp	A-43A1002-1	1
R1, R2, R3	Resistor, 25K ohm, 10W wirewound	A-5C6252-253K	3
RY-1	Relay, 12 VDC	A-48B1006-2	1
SW-1	Toggle, Switch, SPDT	C-47B1004-3	1
SW-2	Toggle Switch DPST	C-47B1004-2	1
T1	High Voltage Power Transformer	C-9A1030-1	1
T2	Low Voltage Power Transformer	B-9A1029-1	1
T3	Filament Transformer	B-9B1007-1	1
V1	Tube, Vacuum, Type 5R4GY	5R4GY	1
V2	Tube, Vacuum, Type 5Y3	5Y3	1
	Connector, Jones S-312-AB	A-18E1001-12	1
	CABLE		
	Connector, Jones S-312-CCT	A-18F1001-12	1
	Connector, Jones P-312-CCT	A-17F1001-12	1
	Cable, Shielded	A-41A1016-1	6 ft.
	Cable Assembly	B-90D1113-1	1



SCHEMATIC DIAGRAM ADS-90 A.C. POWER SUPPLY



SCHEMATIC DIAGRAM APS-90 A. C. POWER SUPPLY



INTERCONNECTING CABLE ASSEMBLY B-900113-501
(FOR CONNECTING APS-90 AC POWER SUPPLY
TO THE T-90 TRANSMITTER)