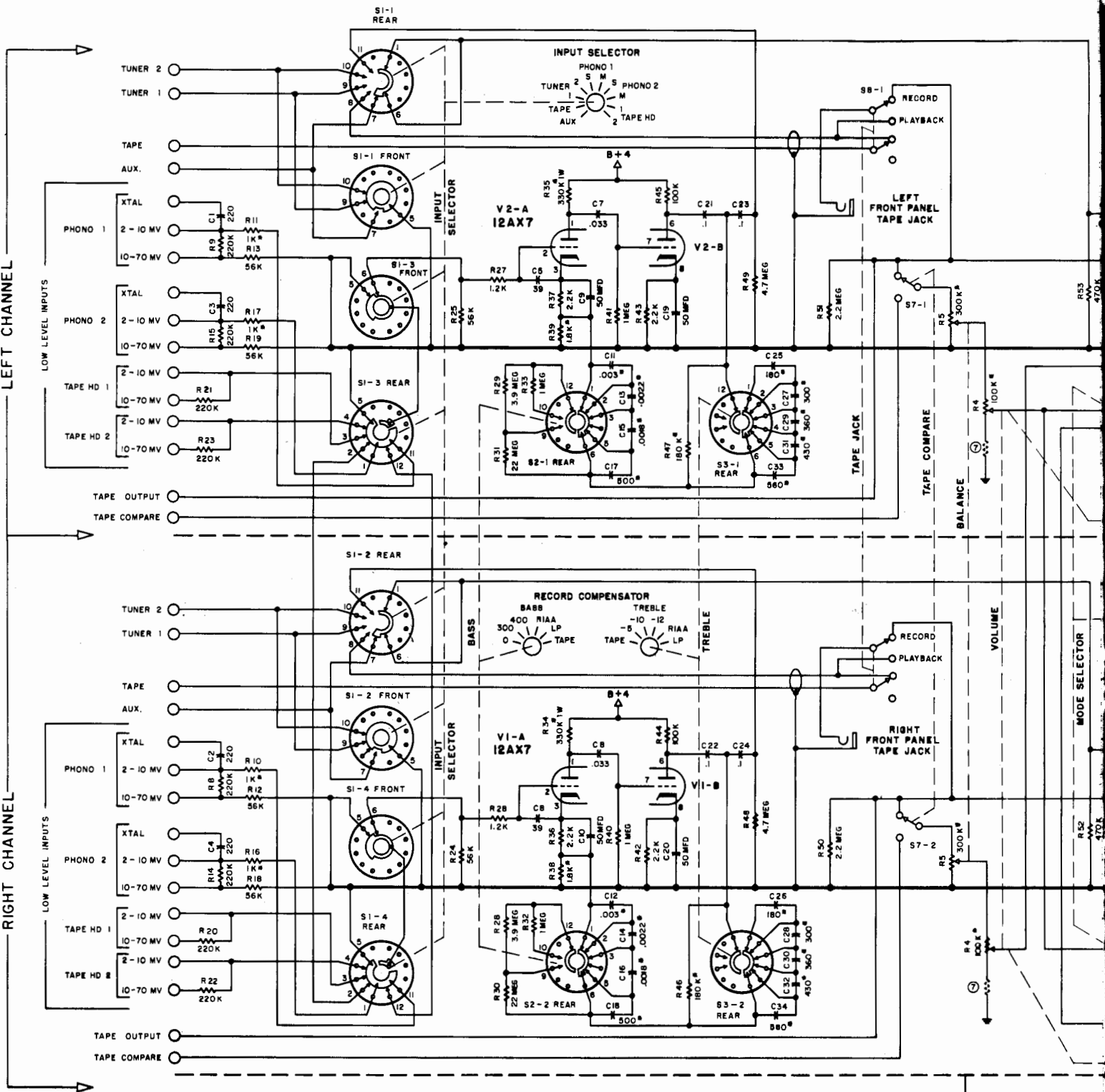


LEFT CHANNEL

RIGHT CHANNEL



- NOTES:**
- THIS SCHEMATIC APPLIES TO C80 PREAMPLIFIERS WITH SERIAL NUMBERS 81700 AND ABOVE.
  - ALL ROTARY SWITCHES ARE SHOWN IN THE EXTREME COUNTERCLOCKWISE POSITION.
  - ALL PUSHBUTTON SWITCHES ARE SHOWN IN THE "OUT" POSITION.
  - RESISTOR VALUES ARE IN OHMS,  $\pm 10\%$ ,  $\frac{1}{4}$  WATT EXCEPT AS NOTED.
  - CONDENSER VALUES ARE IN MFD FOR NUMBERS LESS THAN ONE, AND IN MMFD FOR NUMBERS GREATER THAN ONE.
  - IN SOME UNITS C104 MAY BE FOUND AS TWO SEPARATE 2000 MFD/15V CONDENSERS.
  - A RESISTOR IN SOME UNITS MAY BE USED AT THIS POINT TO ADJUST THE VOLUME CONTROL'S TRACKING CHARACTERISTIC. THE VALUE IS MATCHED TO THE PARTICULAR VOLUME CONTROL USED.

\* THESE COMPONENTS HAVE A CLOSE TOLERANCE ON THEIR VALUE, OR HAVE SPECIAL CHARACTERISTICS SUCH AS LOW NOISE OR A SPECIAL RESISTANCE TAPER.

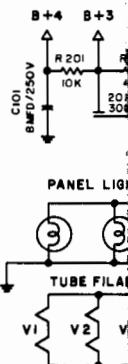
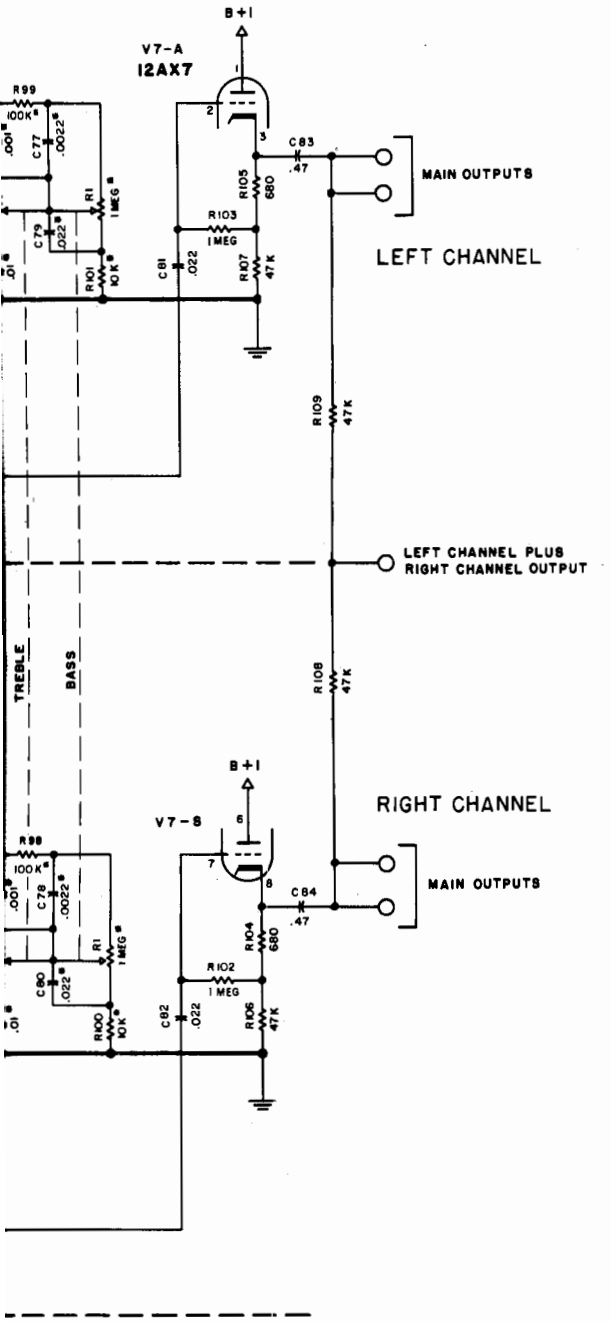




Table 1. C20 VOLTAGE AND RESISTANCE CHART  
(Schematic No. SC117-201)



Tube	Pin No.	DC Volts No. Signal	Resistance in Ohms Unit Off
12AX7 (V1)	1	146	130K*
	2	0	1M
	3	1.0	2.2K
	4	5.6	5
	5	-5.6	5
	6	110	360K*
	7	0	56K
	8	1.0	4K
	9	—	—
12AX7 (V2)	1	146	130K*
	2	0	1M
	3	1.0	2.2K
	4	5.6	5
	5	-5.6	5
	6	110	360K*
	7	0	56K
	8	1.0	4K
	9	—	—
12AU7 (V3)	1	64	120K*
	2	0	< 50
	3	2.4	1.8K
	4	5.6	5
	5	-5.6	5
	6	198	14K*
	7	62	1.1M
	8	120	100K
	9	—	—
12AU7 (V4)	1	64	120K*
	2	0	< 50
	3	2.4	1.8K
	4	5.6	5
	5	-5.6	5
	6	198	14K*
	7	62	1.1M
	8	120	100K
	9	—	—
12AX7 (V5)	1	104	330K*
	2	0	110K
	3	.7	1.8K
	4	5.6	5
	5	-5.6	5
	6	230	9K
	7	22	222K
	8	29	22K
	9	—	—
12AX7 (V6)	1	104	330K*
	2	0	110K
	3	.7	1.8K
	4	5.6	5
	5	-5.6	5
	6	200	31K*
	7	22	222K
	8	29	22K
	9	—	—
12AX7 (V7)	1	250	7K*
	2	20	1M
	3	70	47K
	4	5.6	5
	5	-5.6	5
	6	250	7K*
	7	20	1M
	8	70	47K
	9	0	0
6X4 (V8)	1	315 AC	580
	2	—	—
	3	6.3 AC	.1
	4	0	0
	5	—	—
	6	315 AC	560
	7	335	*

NOTES: 1. High impedance VTVM is used to measure operating voltages.  
 2. Resistance measured to gnd. (chassis)  
 3. \* Denotes pin 7 of V8 grounded for this test.  
 4. Control positions for tests are as follows:

- |  |           |
|--|-----------|
| MODE SELECTOR                          | STEREO    |
| BALANCE                                | 0         |
| PHASE                                  | 0         |
| H.F. FILTER                            | FLAT      |
| LOUDNESS                               | FLAT      |
| INPUT SELECTOR                         | TAPE HD 2 |
| BASS COMPENSATOR                       | 0         |
| TREBLE COMPENSATOR                     | TAPE      |
| BASS                                   | 0         |
| TREBLE                                 | 0         |
| RUMBLE FILTER, TAPE JACK, TAPE COMPARE | OUT       |
| VOLUME                                 | ON, CCW   |
| LOW FREQUENCY TRIM                     | 0         |

117 VOLTS  
60-60 CYCLES

MATERIAL	TITLE	PART NO.
	<b>SCHEMATIC</b>	
FINISH	McIntosh LABORATORY INC. 7 Chambers St. Binghamton, N. Y.	USED ON: <b>C20</b>
TOLERANCES - unless otherwise specified: = 1/4" Angles, 1/2" Flatness, 2.000 Diameters	SCALE: 5/16" BY "V" DATE: 5.7.62	DWG. NO.: SC117-201 APP: SAC