

MODELS AV-38, AV-39

# STROMBERG-CARLSON CO.

### **VOLTAGE CHART**

Tube		Terminals							
†Symbol	Type	1	2	3	4	5	6	7	8
V1	6SC7	0	235	0	0	235	1.65	*6.3	*6.3
V2	6SC7	0	190	0	0	190	1.65	*6.3	*6.3
V3	6SC7	0	210	0	0	210	1.65	*6.3	*6.3
V4	6SC7	0	200	0	0	200	1.65	*6.3	*6.3
V5	6N7	0	*6.3	300	0	0	300	*6.3	6.5
V6	6SC7	0	235	. 0	0	.170	1.65	*6.3	*6.3
V7	6SC7	0	190	0	0	190	1.65	*6.3	*6.9
~V8	6X5GT/G	0	*6.3	‡315	8	‡315		*6.3	375

INPUT TRANSFORMERS — When installing input transformers in the Model AV-39, twist together the green, black, yellow and brown (primary) leads as far as wiring will permit. Also twist together the blue and red (secondary) leads. Wire as shown on amplifier schematic. The red lead must be grounded at the tube socket. After installation, loosen the mounting ring and rotate the transformer to the position of minimum hum. To insure proper grounding of the transformer case, tighten the mounting ring after adjustment.

No signal input. Power supply 117 volt, 60 cycle.

D.C. voltages measured to chassis using vacuum-tube voltmeter

†Symbol used on amplifier schematic.

‡A.C. voltages measured to chassis.

\*A.C. heater voltages measured between terminals indicated.

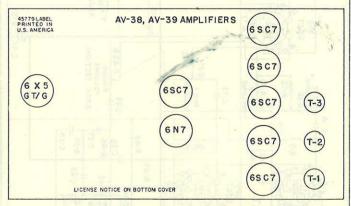
Variations of ±10% from above values may be obtained due to variations in tubes, resistors, etc.

## TUBE LOCATION CHART



Model AV-38 Pre-Amplifier

When enclosed in conduit, microphone lines may be run together, but never run any other type of wiring in the same conduit If the shield on the microphone line is used as the return conductor, it must be insulated throughout its length from contact with conduits, etc., and grounded only at the amplifier, through pin #1 of the microphone chassis connector. If a shielded twisted pair is used for a microphone line, it is preferable to insulate the shield from contact with conduits, etc., although it may not be necessary on short runs. In any case, the shield should be grounded at the amplifier only through pin #1 of the microphone chassis connector.





Model AV-39 Pre-Amplifier

#### **SPECIFICATIONS**

SIZE WITH COVER— $13\frac{1}{2}$ " wide, 11" deep,  $10\frac{1}{2}$ " high. Includes allowance for knobs.

WEIGHT-Net 18 lbs.

TUBES SUPPLIED-6-6SC7, 1-6N7, 1-6X5GT/G.

POWER SUPPLY-105-125 volts, 50-60 cps.

POWER CONSUMED-10 watts at 117 volts.

#### INPUTS-

Phonograph—One high-impedance input with low and high-gain input connections. The low-gain input connection provides equalization for crystal phonograph pickups. The high-gain connection provides a .25 megohm-impedance input without equalization.

Microphone-Three Microphone Inputs.

Model AV-38—Low-impedance for 30 to 50 ohm microphones. Input transformer wiring easily changed to provide 150 to 500 ohm input.

Model AV-39—High-impedance with provisions for installation of low-impedance input transformers.

CONTROLS—Three microphone; one phonograph; bass boost for phonograph only; microphone bass attenuator on back of chassis; treble attenuator for all inputs; on-off power switch; and on Model AV-38 only, meter range switch.

OUTPUT LEVEL METER—Supplied on Model AV-38 and available for installation on Model AV-39. 3 inch, square, black phenolic case. Buff colored dial, with buff, green and red-colored scale sections, marked "Low," "Normal" and "Excessive." Calibrated -20 to +3 db. with 0 db. equal to 1.945 volts rms. Effective A.C. resistance at 0 db. is 5,000 ohms ±10% at 400 cps. Accuracy ±2% at 0 db., ±5% at +3 db. and ±3% at points below 0 db. Response time .4 to .7 seconds with the overswing at 0 db. not to exceed .7 db. Frequency response from 25 to 16,000 cps. ±.5 db. from the 400 cps. value.

#### POWER GAIN-

Phonograph—High-gain input connection, 44 db. at 400 cps. based on 600 ohm source impedance or 62 db. based on 50,000 ohm source impedance. Equivalent input sensitivity .075 volts. Low-gain connection 42 db. based on 50,000 ohm source impedance. Equivalent input sensitivity .8 volts for rated output.

Microphone, Model AV-38—86 db. at 400 cps. based on 38 ohm input source impedance. This is equivalent to an input sensitivity of 121 microvolts for rated output.

Microphone, Model AV-39—89 db. at 400 cps. based on 50,000 ohm input source impedance. This is equivalent to an input sensitivity of 3.4 microvolts for rated output.

POWER OUTPUT—+18 VU (program level 18 db. above 1 milliwatt). This amplifier is capable of 63 milliwatts output at less than 2% total harmonic content measured at 100, 400, and 5,000 cps.

OUTPUT IMPEDANCE—600 ohms, center-tapped at 150 ohms. Three screw-type terminals provided for external connections. 600 ohms to monitor headphone jack.

FREQUENCY RESPONSE—With tone controls set for most nearly uniform amplifier response, the microphone response from 60 to 12,000 cps. varies less than +0 db. -3 db. from the 400 cps. value.

Using a 600 ohm source and the high-gain phonograph input, the frequence response from 60 to 12,000 cps. varies less than ±1.5 db. from the 400 cps. value.

For use with a light-weight crystal pickup cartridge, the low-gain phonograph input is equalized to provide the conjugate of the recording response curve in general use for phonograph records and for lateral transcriptions (NAB or Orthacoustic Standard).

TONE CONTROLS—The dual treble control decreases the high-frequency response of the amplifier to a maximum of 34 db. at 10,000 cps. on phonograph response and to a maximum of 17 db. on microphone response. The treble circuit provides a sharper than normal cut-off resulting in less attenuation of the middle-frequency range for the same reduction of high-frequency noise.

The microphone bass control provides bass attenuation on microphone-input circuits to a maximum of 17 db. at 50 cps.

The phono bass control increases the low-frequency response on the phonograph input circuit from an attenuation of 3 db. to a boost of 12 db. at 90 cps.

HUM LEVEL—Combined noise and hum level is at least 50 db. below rated output with tone controls set for most-nearly-uniform frequency response.

OUTPUT VOLTAGE REGULATION—Approximately 6 db. from full output load to no load.

FINISH—Glacier Gray over copper-plate.