casting. The Program Amplifier takes the output of a preamplifier, raises it to a higher power level, and feeds it into such diverse channels as program, line, transmitter input, recording amplifiers, monitoring amplifiers, and P.A. systems. The self-contained power supply will furnish power for as many as five preamplifiers. The left-hand meter measures the dc plate current of the 3 audio stages as well as the plate supply voltage of the unit. Five additional positions permit measuring external currents, such as in preamplifiers, when used with correct shunt values. The righthand instrument is a vu meter for measuring the 6M output. A vu switch allows measurements of output from 0 vu to +24 vu.* All tubes are accessible through a door in the front panel, and the dust cover slips off quickly to give access to all circuit components.

Specifications

Input impedance: 50/250/600 ohms.

Output impedance: 600 ohms (150 ohms available).

Number of channels: One.

Input level: —40 to —10 dbm*.

Output level: —10 to +24 dbm*.

Overall gain: 70 db. maximum.

Frequency response: 30-15,000 cps ±1.0 db.

Noise level: 65 db. below program level.

Distortion: Less than 1% at program level.

Power source: 115 volts ac, 50/60 cps.

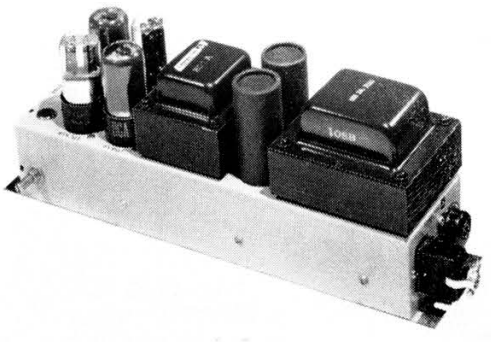

Fig. 25-14. Langevin type 130A monitor amplifier. (Courtesy Langevin)

Power available for external use:
6.3 volts ac CT @ 2.7 amps
Approx. 250 volts dc @ 50 milliamperes.

Tube complement: 6SL7, 6SN7, 2—1621, 5U4G.

Mounting: Standard 19″ rack.

Mounting dimensions: 10½″ h, 19″ w, 9½″ d.

Meters: One voltmeter and one vu meter.

Finish: Metallic gray.

Weight: 39½ pounds.

Collins Part No.: 520 2717 00.
Tubes: 520 2718 00.

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*dbm—reference level 1 mw, 600 ohms.

The Monitor Amplifier

The *Langevin* type 130A monitor amplifier, Fig. 25-14, has been designed as a small medium power amplifier for monitor use in Broadcast, FM, TV and Wired Music services. Performance characteristics and quality construction make it a dependable unit.

The 130A is completely self-contained, including power supply, Fig. 25-15, and all cannections to the unit are of the plug-in type. Input and output connections are made through a *Jones* plug: the power connection uses a miniature connector. Provision is made for the volume control to be mounted on the top, side or end of the chassis depending on the mechanical requirements of the individual installation.

The small size of the 130A amplifier permits mounting in consoles and cabinets or directly in the monitor speaker housing. Where several of the 130A amplifiers are required, as in a rack installation, as many as four may be mounted on a standard *Langevin* 10B Mounting Frame.

Specifications

Power output: 8 watts (plus 39 vu).

Distortion: Less than 3% at rated output from 50 to 15,000 cps.

Frequency response: Plus or minus 1.0 db. 30 to 15,000 cps.

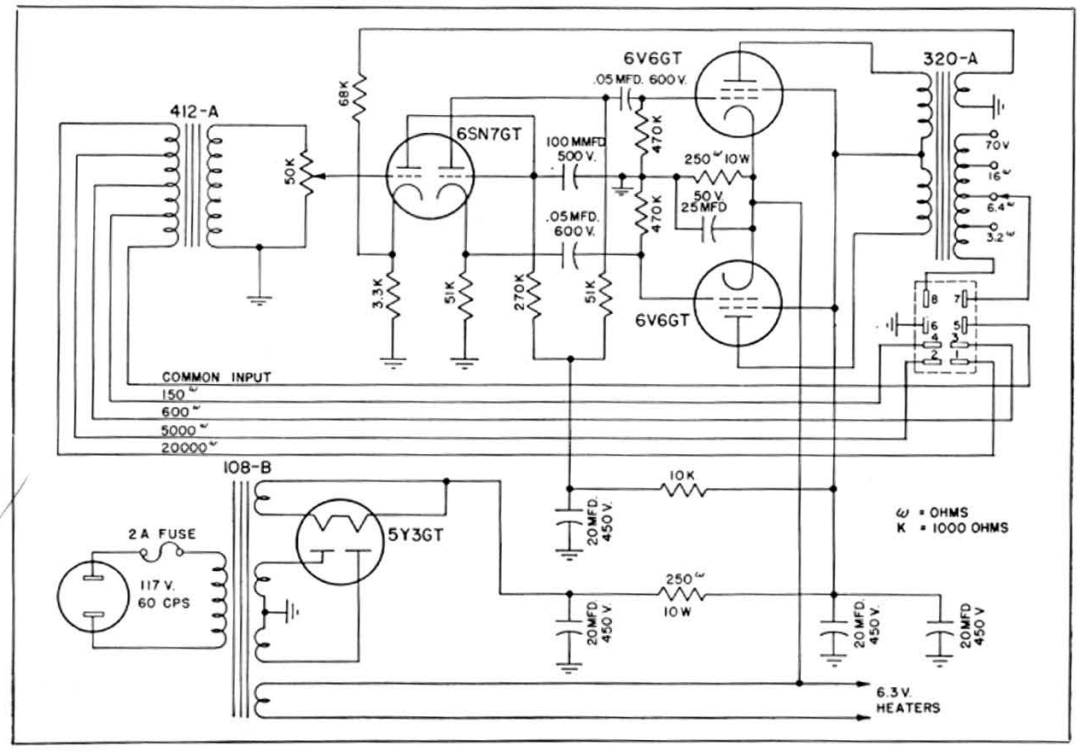

Fig. 25-15. Schematic of Langevin type 130A monitor amplifier.

Gain: 40.0 db with input matching line. 25.0 db with 20,000 ohms input across 600 ohm line or 5,000 ohm input across 150 ohm line.

Noise Level: Less than —30 dbm (unweighted) at output terminals.

Input Impedance: 150/600/5000/20,000 ohms.

Output impedance: 3.2/6.4/16 ohms/70 volt line.

Power requirements: 60 VA on 117v —60 cps line.

Tubes: 1-6SN7GT, 2-6V6 GT, 1 5Y3GT.

Size overall: 3⅛" x 13" x 5" high.

Weight: 9½ lbs. (approx.).

The Limiting Amplifier

The *Presto* 41-A amplifier, Fig. 25-16, is a program or line amplifier with peak limiting. The need for high average levels in disc recording to overcome the surface noise inherent in most pressing materials demands the use of some device to prevent high amplitude peaks from causing overcutting of grooves or

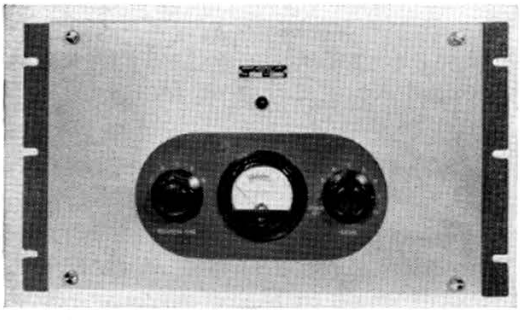

Fig. 25-16. Presto 41-A program or line amplifier with peak limiting. (Courtesy Presto)

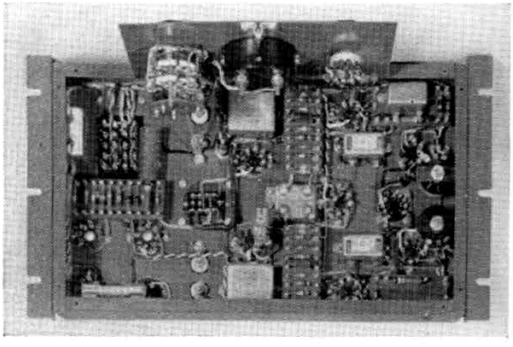

Fig. 25-17. Bottom view of the Presto 41-A peak limiting amplifier. (Courtesy Presto)