

### MINIATURE, LOW LEVEL PLUG-IN AMPLIFIERS

**A Langevin Model AM-16 Solid State Plug-in Preamplifier**—Mike pre-mixing amplifier. Gain 45 db at 1 kc. Noise less than equiv. input -127 dbm, unweighted. Response (+14 dbm) =0.5 db, 20-20,000 cps. Harmonic generation less than 0.75%. 30-20,000 cps at +24 dbm, strapped for high power; 0.5% at +18 dbm, low power. Inputs 50, 150 and 600 ohms. Outputs 150 and 600 ohms; strapping on tray or cabinet. Gold-plated plug pins; all silicon transistors; no electrolytics or tubes. Size, \$135.00 1 1/4" w. x 10 1/2" l. x 1 1/2" h. Shpg. Wt., 2 lbs. Net Ea.

**Langevin Model TRY-6 Tray**—For AM-16. Net Each. \$15.00

**B Langevin Model AM-17 Solid State Program Amplifier**—Also monitor amplifier. Gain 57 db at 1 kc. Noise less than equiv. input -115 dbm, unweighted. Harmonic generation less than 1.0%. 30-20,000 cps at +24 dbm, strapped for high power; 0.5% at +18 dbm, low power. Inputs and outputs 150 and 600 ohms; strap on tray or cabinet for high or low power. Gold-plated pin plugs; all silicon transistors. Size, 4 3/4" w. x 12 3/4" l. x 1 3/8" h. Shpg. Wt., 6 lbs. Net Each. \$210.00

**Langevin Model TRY-23 Tray**—For AM-17 or PS-221 power supply (see below). Net Each. \$25.00

**C Langevin Model AM-5116-B Plug-in Preamplifier**—Provides 46 db max. gain for all uses up to +24 dbm bus level. Response, =0.5 db, 20-20,000 cps. Distortion, 0.2% at 1000 cps at +24 dbm (1% IM). Noise, -123 dbm. Input matches all sources. Output, 50/150/200/250/500/600 ohms, balanced, floating. Requires 6.3 v. AC/DC, 0.9 amp filament; 300 v. DC plate. Light gray, baked enamel finish. Size, 1 3/4" w. x 9 1/2" l. x 3 3/4" h. \$126.00 Shpg. Wt., 1 1/2 lbs. With tubes. Net Each.

**Langevin Model TRY-5216 Tray**—For use with above; complete with receptacle. Size, 1 1/2" w. x 9 3/4" l. x 3 3/4" h. Shpg. Wt., 1 lb. Net Each. \$10.50

**D Langevin Model AM-5117 Plug-in Program Booster or Monitor Amplifier**—Matching unit to preamplifier, above; same height. Provides 55 db gain. Input 20/150/600 ohms. Output 150/600 ohms. Input/output CT available. Response, =0.5 db, 30-15,000 cps. Distortion, below 1% rms total harmonic at 8 W. Noise, -115 dbm. Requires 1.2 amps, 6.3 v. AC/DC filament; 300 v. DC plate. Light gray, baked enamel finish. Size, 2 3/4" w. x 10 1/2" l. x 3" h. Shipping Weight, 5 lbs. With tubes. \$225.00 Net Each.

**E Langevin Model AM-5301 Leveline Plug-in Amplifier**—Matching compressor/limiter to preamplifier, above; same height. Range, 30 db. Can be used as automatic gain control in unattended remote line; or, strapped alternately for monitor. Distortion less than 0.5% total harmonic at +24 dbm; 1% at 6 watts. Response, =0.5 db, 20-20,000 cps. Gain, 53 db. Input 125-600 ohms, balanced. Output 150-600 ohms, balanced. Noise, less than -115 dbm. Attack time, 11 millisecond normal; adjustable to 100 μsec. Recovery, 0.5 sec in "dual" position; 3 sec, "average". Requires 1.5 amps, 6.3 v. AC or DC heaters; 90 ma, 300 v. DC as monitor; 50 ma as limiter. Light gray, baked enamel finish. Size, 2 3/4" w. x 10 1/2" l. x 3" h. Shpg. Wt., 5 lbs. Complete \$250.00 with tubes. Net Each.

**Langevin Model TRY-5017 Tray**—For AM-5117 or AM-5301 amplifiers; with plug receptacle. Size, 2 3/4" w. x 9 3/4" l. x 1 1/2" h. Shpg. Wt., 2 lbs. Net Each. \$24.00

### PLUG-IN POWER SUPPLIES

**F Langevin Model PS-221 Power Supply**—10 amps, 24 volts. Protection circuit trips off on overload or short protecting power supply and related amplifier; resets by shut-off of AC for 15 seconds. Use with TRY-23 tray, above. Shipping \$300.00 Weight, 55 lbs. Net Each.

**B Langevin Model PS-222 Power Supply**—3 amps, 24 volts with all the features of PS-221. Write for Price.

**Langevin Model TRY-7 Tray**—For PS-222. Net Each. \$13.50

**C Langevin Model PS-5208A Power Supply**—Delivers 90 ma, 300 v. DC and 3 amps, 6.3 v. AC. For use with TRY-5017 tray, listed above. Size, 2 3/4" w. x 10 1/2" l. x 3" h. Shpg. \$195.00 Wt., 7 lbs. With 5Z4 tube. Net Each.

**H Langevin Model PS-5208B Power Supply**—Delivers 210 ma, 300 v. DC and 6.5 amps, 6.3 v. AC. Uses TRY-5019 tray, below. Size, 7 3/4" w. x 9 3/4" l. x 3 3/4" h. Shpg. Wt., \$220.00 18 lbs. With two 5Z4 tubes. Net Each.

**Langevin Model TRY-5019 Tray**—For PS-5208, above; complete with plug and mounting hardware. Size, 7 3/4" w. x 9 3/4" l. x 1 1/2" h. Shpg. Wt., 2 lbs. Net Each. \$18.00

**Langevin Model MF-5010 Mounting Frame**—For use with plug-in amplifiers and power supplies in varied combinations. Typical array, seven TRY-5016 and two TRY-5017; one TRY-5019 and three TRY-5017. Fits in 3 1/2" rack multiple; covered by FP-5032 panel, below. Complete with hardware. Size, 19" w. x 13" d. x 3 1/2" h. Shpg. Wt., 6 lbs. Net Each. \$36.00

**Langevin Model FP-5032 Front Panel**—For MF-5010 frame; snaps in place. Formed of rustproof 16 ga. steel; dark gray, baked enamel finish. Size, 19" w. x 3 1/2" h. Shpg. Wt., 1/2 lb. Net Each. \$12.00

### POWER AMPLIFIERS

**I Langevin AM-138 Series 8-Watt Amplifiers**—Provide compact, low noise, low distortion, wide range, dependable performance in continuous duty. Self-contained power supply. Response, =1.5 db, 30-15,000 cps except AM-138SM, =1 db. Harmonic distortion, less than 2%. 50-15,000 cps at +39 dbm. Output transformer taps for 4/8/16/150/600 ohms. Supplied with tubes, Hubbel miniature AC plug receptacle, 4- and 10-pin Jones connectors and covers for input/output stages. Size, 3 3/4" w. x 12 3/4" l. x 5 1/4" h. Shipping Weight, 15 lbs.

Langevin Model	Source Impedance	Gain db	Noise db*	Net Each
AM-138SG	Lo-Z mike, 30/150/250/600 ohms	104†	-63	\$204.00
AM-138SK	Disk playback amplifier, 6800 ohms	753.†	-52	174.00
AM-138SL	Hi-Z mike or crystal pickup, 1 meg.	77†	-63	166.50
AM-138SM	Monitor bridging amp., 150/600/5K/20K	58†	-76	159.00

\*Below full output. †600 ohms input and output at 1 kc. ‡Bridging 600 ohms at 1 kc.

**J Langevin Model AM-128X Basic 20-Watt Amplifier**—Allows installation of any one or two of the 4 input panels shown below; permits user to form exact system needed, quickly and easily, without unnecessary extra costs. Load impedance, 2/8/16/32/50/600 ohms nominal. Output power, 43 W (20 W) output level. Total rms harmonic distortion, 50-15,000 cps, less than 2%. With tubes. Size, 7 3/4" w. x 18 3/4" l. x 7 3/4" h. \$270.00 Shipping Weight, 30 lbs. Net Each.

Langevin Model	Description	Gain db	Noise db*	Net Each
INP-A	Line level 600/35,000 ohms; vol. control, -20 dbm level	63†, 45†	-78	\$40.50
INP-B‡	Lo-Z, high gain 250 ohm bal./unbal. mike input	115§	-60	51.00
INP-E	Same as INP-B except hi-Z and unbal. input of 1 meg.	.....	-60	45.00
INP-H‡	Low-level mag. pickup; RIAA equalized for 33 1/3, 45 rpm	§	-55	49.50

\*Below full output. †Matching 600 ohms. ‡Adjustable. §With 250K ohm audio taper gain control and tube.

**Langevin No. MG-21A Modification Group**—For rack mounting Model AM-128X amplifier. Includes 7" x 19" mat panel, brackets to remount power switch, pilot light and volume controls. Shpg. Wt., 4 1/2 lbs. Net Each. \$30.00

**K Langevin AM-101, -3101 Series 50-Watt Amplifiers**—For dependable high power installations; runs cool and delivers full power in continuous duty cycle. Response, =2 db, 30-15,000 cps AM-101D; =2 db, 50-15,000 cps AM-3101B; =1.5 db, 50-15,000 cps AM-3101E. Distortion, less than 3% total rms, 100-8,000 cps at 50 W. Supplied complete with all required tubes.

Langevin Model	Inputs	Gain, db	Noise, db†	Net Each
AM-101D‡	Line level, 600/25K ohms	60*, 45†	-80	\$375.00
AM-3101B	Lo-Z, high gain, 30/250 ohms	104	-57	426.00
AM-3101E	Hi-Z, high gain, 1 meg.	75	-57	420.00

\*Matching. †Bridging. ‡Below full output. §Has conventional 25K volume control on input; others have electronic volume controls which can be removed.

**Langevin Model MG-7A Modification Group**—For rack mounting AM-101, -3101 amplifiers. Has 12 1/2" mat panel with escutcheon, switch, volume control remount brackets and other hardware. Shpg. Wt., 5 lbs. Net Each. \$27.00



### BROADCAST-QUALITY PROGRAM EQUALIZERS

**L** Langevin Model **EQ-252A Graphic Program Equalizer**—Provides precision quality equalization in recording, TV broadcast, and motion picture studio sound. Employs miniaturized, gold-plated etched circuitry in each of seven plug-in filter units; results in passive assembly requiring no tubes or power supplies. Only input and output connections are necessary. Sliding levers permit 8 db equalization and 8 db attenuation in 1 db steps at 50, 130, 320, 800, 2000, 5000 and 12,500 cps during the program with noise-free switching. Ultra-silent controls give quiet operation at -70 dbm through +24 dbm. Filter assemblies use sealed toroid coils for hum-free operation. Careful design assures  $\pm 1/2$  db accuracy. Overlap from one filter to the next gives combined flat output when levers are in straight line in any equalized or attenuated position. In zero position, each of all filters are flat (resistive only, 16 db loss) from input to output. Impedance: Standard 600 ohms in and out. Circuit: Bridged-T. Insertion Loss: 16 db. Distortion: Zero. No power required. Black matte escutcheon, engraved. Comes complete with mounting hardware and instructions. Size,  $3 1/2" \times 10" \times 5 3/8"$ . Shpg. Wt., **\$600<sup>00</sup>** 14 lbs. Net Each.

**Langevin Model TF-602C Line-to-Line Transformer**—To work into lower impedances than 600 ohms with above equalizer. Use one on input and one on output. Shpg. Wt.,  $3 1/2$  lbs. Net. **\$39.00**

**M** Langevin Model **EQ-255A Rotary Variable High Pass Filter**—Complete with knob and dial. Impedance, 500 to 600 ohms. Eleven positions: 70, 100, 250 and 500 cps; 1, 2, 3, 4, 5 and 7.5 kc as well as "off". No insertion loss; K circuit. Ship- **\$125<sup>00</sup>** ping Weight, 3 lbs. Net Each.

**N** Langevin Model **EQ-251A Program Equalizer**—Miniature program equalizer only  $1 1/2"$  wide. For corrective equalization in recording and reproduction of sound. Permits mounting adjacent to mixer controls; makes possible multiple installations of several units in close proximity. Improved design has two sliding levers for equalization and attenuation. Perpendicular sliding action functionally better than common rotary types; facilitates reading of knob positions. Adjustable in 2 db steps at specified frequencies; range, 12 db max. equalization to 16 db max. attenuation. Ideal for dubbing and frequency response corrections. Uses passive LCR bridged-T network and does not require power supply, tubes or additional connections. Can be inserted directly into a transmission line with only input and output connections. Two rotating cam switches provided on the front panel: Right switch gives high frequency equalization peaks at 3, 5, 10 or 15 kc; left switch gives low frequency equalization peak settings of 40 or 100 cps. Circuit: Bridged-T. Impedance: Standard, 600 ohms in and out. Insertion Loss: 14 db. No power required. Black matte escutcheon, engraved. Comes with mounting hardware and instructions. Chassis parts are nickel plated brass. **\$270<sup>00</sup>** Size,  $1 1/2" \times 3 1/2" \times 5 1/2"$ . Shpg. Wt., 3 lbs. Net Each.

**O** Langevin Model **EQ-255B Rotary Variable Low Pass Filter**—Complete with knob and dial. Impedance, 500 to 600 ohms. Eleven positions: 10, 8, 6, 5, 4, 3, 2 and 1 kc; 500 and 250 cps; "off". No insertion loss; K circuit. Shipping Weight, **\$135<sup>00</sup>** 3 lbs. Net Each.

### ROTARY AND STRAIGHT LINE STEREO PAN POTS

Pan pots are precision controls for positioning the source by intensity; employed to change the position of one section of the recording field to another. Either the two-channel or three-channel units can also be used to pick up a monophonic source and place it in any geometrical position in the final stereo recording or reproduction. Provides 16 steps for smooth transition throughout the audible range of control. Rate of attenuation is precise, and conforms to exact calculations governing angular displacement in the sound field with change in level. The circuit configuration of the two-channel units are ganged to permit -3 db point of each control to occur at zero degrees. For three-channel units, the point of -3 db occurs at 60° each side of zero or center. At either 120° position, the extreme opposite channel is at infinite attenuation. Pan pots are available with up to 360° fields, rotary or straight line types, ladder circuits.

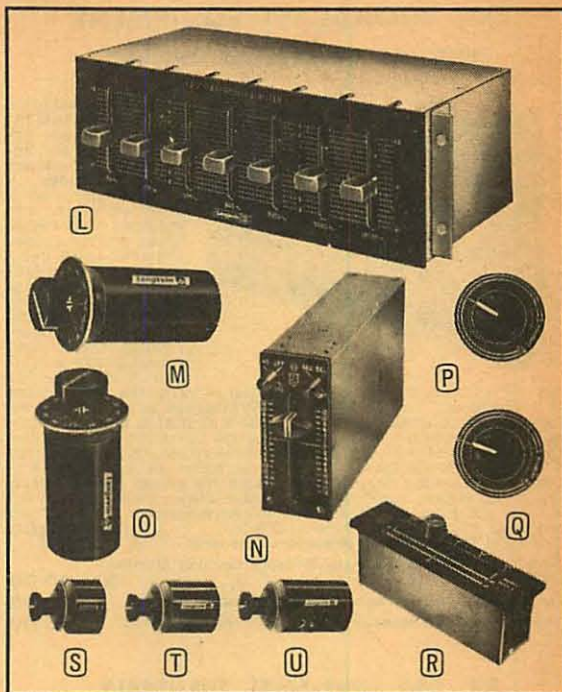
**P** Langevin Model **RPP-200T Rotary Pan Pot**—Rotary panoramic divider for mixing a single channel into two. Has "T" configuration with no insertion loss. Rotation 240°; -3 db at 0°. Special, geometrically accurate taper. Impedance, 600 ohms in and out. Size,  $2 1/4"$  dia. x  $1 1/4"$  lg. With K-108 knob **\$42<sup>00</sup>** and special dial. Shipping Weight, 1 lb. Net Each.

**Q** Langevin Model **RPP-300T Rotary Pan Pot**—Similar to Model RPP-200T, but for dividing a single channel into three. Size,  $2 1/4"$  dia. x  $2 1/4"$  lg. Shipping Weight, 1 lb. **\$72<sup>00</sup>** Net Each.

**Langevin Model D-111 Dial Plate**—Use with Model RPP-200T rotary pan pot. Engraved black on satin anodized aluminum; standard color code for geometry: Recordist left blue; **\$33<sup>00</sup>** right red. Size,  $2 1/4"$  dia. x  $1 1/4"$  thick. Net Each.

**Langevin Model D-112 Dial Plate**—For Model RPP-300T rotary pan pot. Same as D-111, but recordist left channel (blue), infinite attenuation at 0° center; right channel (red), opposite; and, center channel (white) is zero attenuation center and infinite attenuation at extreme right and extreme left. Net Each **\$3.30**

**Langevin Model K-108 Knob**—For use with any rotary pan pot above. Specify color when ordering: Black, red, white, blue, green or yellow. Size,  $2 1/4"$  dia. x  $1 1/4"$  h. Net Each. **\$2.50**



**R** Langevin Model **SPP-200T Straight Line Pan Pot**—For mixing one channel into two. Ladder type with 12 db insertion loss and 180° field. Location of -3 db point at 0°; 90° at extreme right and left. Sixteen steps used per section. For horizontal placement. Supplied with red knob. Size,  $6 1/4" \times 1 1/2" \times 2 1/2"$  d. **\$108<sup>00</sup>** Shpg. Wt., 1 lb. Net Each.

**Langevin Model SPP-300T Straight Line Pan Pot**—For mixing one channel into three. Ladder circuit with three-gang elements and 12 db insertion loss. Left range tapers from zero attenuation to infinite in center at 0°; right side of control is opposite. Center ganged control is zero attenuation at 0° with infinite attenuation at extreme right or left of center line. Same physical **\$162<sup>00</sup>** details as SPP-200T. Wt.,  $1 1/2$  lbs. Net Each.

**Langevin Model SPP-200T-EW Escutcheon**—For Model SPP-200T straight line pan pot. Engraved black on satin anodized aluminum. Recordist left track colored blue; right track, red; -3 db point is at 0° center; infinite attenuation at 90° each **\$45<sup>00</sup>** db of center. Size,  $7" \times 1 1/2" \times 1/8"$  thick. Net Each.

**Langevin Model SPP-300T-EW Escutcheon**—For use with SPP-300T pan pot. Same as SPP-200T-EW escutcheon but left channel (blue) infinite at 0° center; right (red) is opposite; and, center channel (white) is zero attenuation at center and infinite **\$55<sup>00</sup>** at extreme right and left. Net Each.

### ROTARY MIXER ATTENUATORS

**STU** Single, double and triple gang mixers for two-channel or three-channel stereo use supplied in two diameters. Printed circuit used for precision and uniformity. Solder terminals, rear. Sealed against dust, moisture and corrosion. Come with knob and dial; available with or without detents and cue position. Impedance, 600 ohms in and out; 150, 200, 250, 500 and 600 ohms available at no extra charge, some models. Single unit  $1 1/2"$  long; two-gang,  $3/4"$  long; three-gang,  $4"$  long. RMX-201, RMX-203 are  $1 1/2"$  and all others,  $2 1/4"$ . When Ordering: Specify if impedance other than 600 ohms and if detents are desired.

No. RMX-	No. Steps	Db/Step	Circuit	Loss	Net Each		
					Single*	2-Gang*	3-Gang*
201	20	2	Unbal. Lad.	6 db	\$22.50	\$ 40.50	\$ 59.00
203	32	1 1/2	Unbal. Lad.	6 db	36.00	67.50	98.00
205	45	1	Unbal. Lad.	6 db	48.00	91.50	135.00
202	20	2	Bal. Ladder	6 db	45.00	87.00	129.00
204	32	1 1/2	Bal. Ladder	6 db	60.00	117.00	174.00
209	45	1	Bal. Ladder	6 db	67.50	132.00	195.00
601	20	2	Bridged T	0 db	36.00	57.00	102.00
602	32	1 1/2	Bridged T	0 db	45.00	87.00	129.00
625	45	1	Bridged T	0 db	69.00	132.00	195.00
612	20	2	Potentiometer	.....	18.00	33.00	46.50
624	30	1 1/2	Potentiometer	.....	27.00	48.00	70.50
618	32	1 1/2	Potentiometer	.....	28.50	54.00	79.50

\*Prefix shown is single-gang type; for two-gang add suffix 2 when ordering (example: RMX2012); for three-gang, add suffix 3. If no knob is desired, so specify, and deduct **\$1.50** from price. If no dial desired, so specify and deduct **\$1.00** from price.

**Cue Circuits**—Use prefix **RMXQ-** to order (examples: RMXQ201, RMXQ2012, etc.). Add to Net per cue. **\$3.00**