

# POWER SUPPLIES

BY  
*Langevin*

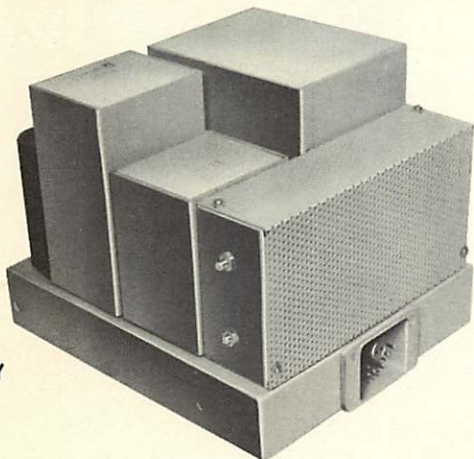
**BROADCAST AUDIO FACILITIES**

**TYPES 205-B, 206-A, 208-A**

## PLUG-IN TYPE 206-A<sup>B</sup>

### USES \_\_\_\_\_

The Langevin Type 206-A Power Supply is a PLUG-IN selenium cell rectifier type unit. It supplies 210 MA at 300 Volts maximum plate power; 6.3 volts at 8 amperes maximum filament power, and operates from a 105-125 volt, 60 cycle, AC source. This unit has been designed for use with the Langevin Types 116-A and 117-A PLUG-IN speech input amplifiers or equivalent.



TYPE 206-A  
POWER SUPPLY

### CIRCUIT FEATURES \_\_\_\_\_

Taps are provided on the secondary of the power transformer and on a voltage divider network so that output voltages can be adjusted from 270 to 330 volts.

Additional output terminals, connected to the voltage divider network supply 70 MA at 275 volts maximum for operating amplifiers at reduced plate voltage.

The ripple voltage on the Type 206-A is extremely low...less than 5 Millivolts at 300 Volts, full load; less than 1 millivolt at 275 volts, full load. This low ripple voltage makes the 206-A ideal for use with pre-amplifiers as well as line amplifiers.

Should it be desirable to bias the filaments of associated amplifying equipment to reduce hum, a special tap is provided on the voltage divider network which supplies a 12 volt positive potential.

### MECHANICAL FEATURES \_\_\_\_\_

A companion unit to the standard line of Langevin PLUG-IN speech input amplifiers, Types 116-A, and 117-A, the Type 206-A power supply utilizes a specially constructed Cannon Plug for all connections. This plug is provided with gold plated non-oxidizing terminals to insure a minimum of contact resistance.

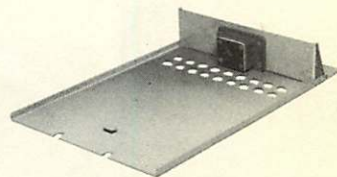
The chassis of the 206-A is constructed of 16 gauge, bonderized steel and is finished in light grey, baked-on enamel.

All transformers and chokes in Langevin power supplies have been designed and manufactured in the Langevin plant. They are carefully wound, vacuum varnish impregnated, baked, potted and encased in steel housings to insure continuous quality performance despite variations in temperature and humidity.

### MOUNTING \_\_\_\_\_

The 206-A Power Supply mounts on Type 19-A Mounting Tray (at right) which accomodates the plug receptacle and provides a channel for interconnecting wiring.

Two Type 19-A Mounting Trays will fit on a Langevin Type 10-B Mounting Frame which is standard for rack mounting Langevin PLUG-IN equipment. 8-3/4" of rack space over-all should be allowed when rack mounting this unit.



TYPE 19-A  
MOUNTING TRAY

(FOR COMPLETE ELECTRICAL AND MECHANICAL SPECIFICATIONS, SEE PAGE FOUR)



# POWER SUPPLIES

## PLUG-IN TYPE 208-A

### USES

When less power is required, the Langevin Type 208-A...a small PLUG-IN vacuum tube type power supply...is available. This unit provides 110 MA at 275 volts maximum plate power; 6.3 volts at 4.5 amperes maximum filament power and operates from a 105-125 Volt 60 cycle, AC source. It has been designed to supply power for Langevin Type 116-A, 117-A PLUG-IN speech input amplifiers or equivalent.

### CIRCUIT FEATURES

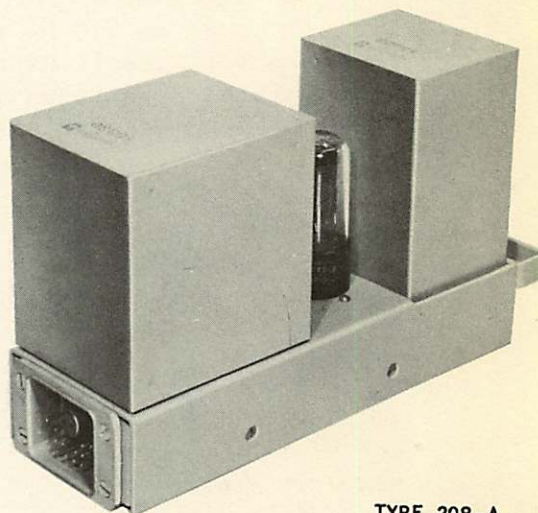
One of the main features of the Langevin Type 208-A is the extremely low ripple voltage...less than 10 Millivolts at 275 volts, full load. This factor makes the 208-A highly desirable for use with pre-amplifiers.

When less than a maximum load is applied to the 208-A, the maximum voltage of 275 volts can be maintained by changing connections on the secondary of the power transformer so that reduced voltage is applied to the plates of the rectifier tube.

### MECHANICAL FEATURES

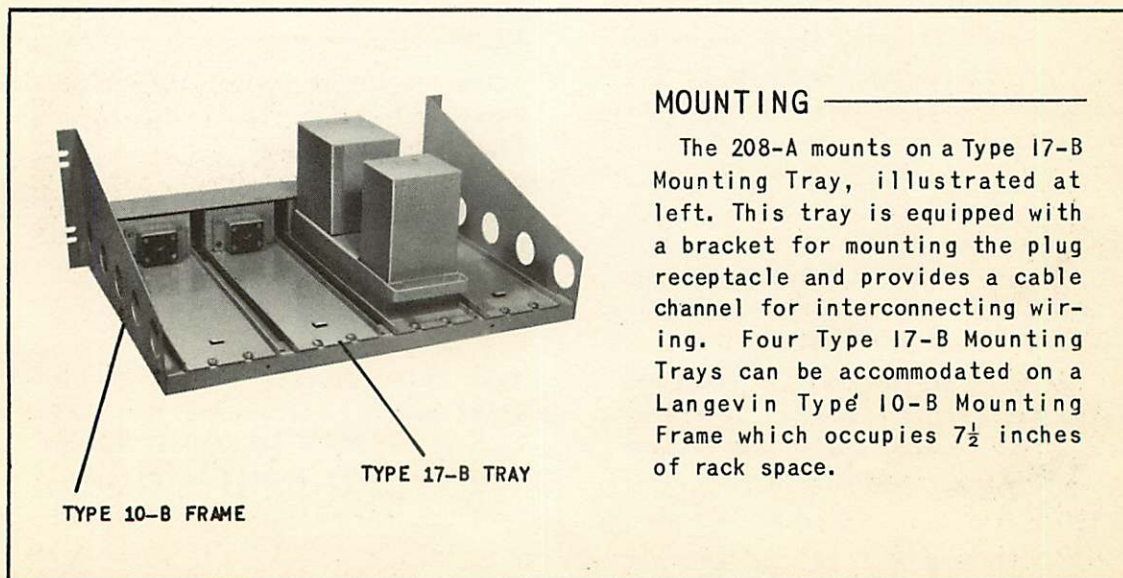
The Langevin Type 208-A power supply has been designed to occupy the same space and is built on the same size chassis as a Langevin Type 117-A PLUG-IN amplifier.

This power supply utilizes the same plug, specially designed by Cannon and used in all Langevin PLUG-IN speech input equipment, for all connections. The plug is equipped with gold plated, non-oxidizing connector pins which insure a minimum of contact resistance.



TYPE 208-A  
POWER SUPPLY

The chassis of the 208-A is constructed of 16 gauge steel which has been bonderized to prevent rust, and is finished in light grey baked-on enamel.



### MOUNTING

The 208-A mounts on a Type 17-B Mounting Tray, illustrated at left. This tray is equipped with a bracket for mounting the plug receptacle and provides a cable channel for interconnecting wiring. Four Type 17-B Mounting Trays can be accommodated on a Langevin Type 10-B Mounting Frame which occupies  $7\frac{1}{2}$  inches of rack space.

# POWER SUPPLIES

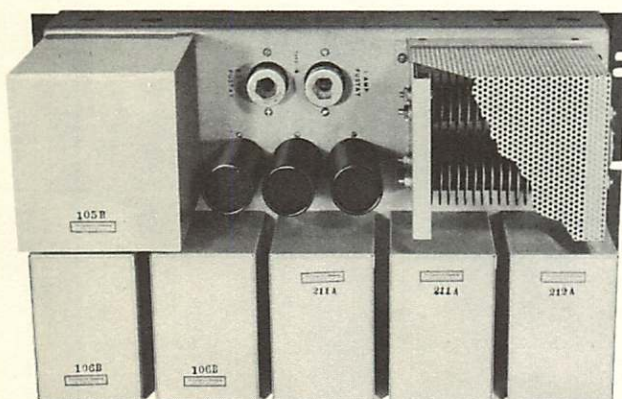
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## RACK MOUNT TYPE 205-B

### USES

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The Langevin Type 205-B Power Supply is a selenium cell rectifier type unit which provides a maximum of 425 MA at 300 volts for plate power, and two sources of 6.3 volts at 8 amperes each for filament power. This power supply has been designed for Langevin Line amplifiers and pre-amplifiers or equivalent.



TYPE 205-B  
POWER SUPPLY

### CIRCUIT FEATURES

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The 205-B operates from line voltages of 100 to 130, or 200 to 260 volts AC, 50 or 60 cycles. Taps are provided on the primary of the power transformers to adjust for various line voltages within these ranges. Also, plate voltages from 220 to 300 volts, at maximum current, can be selected by connecting proper taps on the secondary of the power transformer.

#### Three Section Filter

The 205-B is equipped with a three section filter. Power for line amplifiers is obtained by connecting to terminals which supply a maximum of 425 MA through only two sections of this filter. When pre-amplifier power is required, connections are made to include all three sections of the filter. The maximum power obtainable on the pre-amplifier connections is 150 MA (Maximum current drain is rated at 425 MA when both sets of power connections are in use.)

#### Ripple Voltage

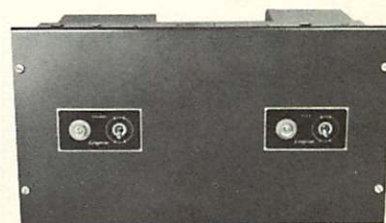
The ripple voltage through the three section filter for pre-amplifiers is less than 1 Millivolt at full load; through the two section filter, less than 25 Millivolts at full load.

Should it be desirable to bias the filaments of associated amplifier equipment, a separate tap is provided on a voltage divider which provides a 12 volt positive potential.

### MECHANICAL FEATURES

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As in the other power supplies in the Langevin standard line, the 205-B chassis is constructed of 16 gauge steel which has been bonderized, and finished in light grey baked-on enamel. In addition, it has been zincplated to insure good contact between unit and rack. It provides independent AC input connections to plate and filament transformers so that variac controls can be connected to provide fine voltage adjustments. All transformers are designed and manufactured in the Langevin plant.



TYPE 36-F  
MAT PANEL

### MOUNTING

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The 205-B can be rack or cabinet mounted. It is equipped with rack mounting flanges, and is furnished with a mat panel (Type 36-F) and escutcheon plates. It occupies only 10½ inches of standard equipment rack space. Should cabinet mounting be required, a Langevin Type 201-E cabinet is available on separate order.

# POWER SUPPLIES

## ELECTRICAL CHARACTERISTICS CHART

TYPE	RECTIFIER	AC LINE VOLTAGE AND FREQUENCY	PLATE SUPPLY		FILAMENT SUPPLY	60 and 120~ RIPPLE VOLTAGE	POWER CONSUMPTION
205-B	Selenium cell type	100 to 130 volts, 200 to 260 volts, 50 or 60 cycles	<u>2 section filter</u> 425 MA, max. @ 220 to 300V.	<u>3 section filter</u> 150 MA, max. @ 180 to 260V.	2 Trans-formers: 6.3V @ 8 amps - 6.3 V @ 8 amps	2 Section filter: less than 25 Milli-volts, full load - 3 Section filter: less than 1 Milli-volt, full load	350 VA at full load
			Total current drain - 425 MA, max. both sections				
206-A <i>B</i>	Selenium cell type	<del>105 to 125 volts, 60 cycles</del> <i>115/230V</i> <i>50-60 cps</i>	210 MA, max at 270 to 330 volts		6.3 volts @ 8 amps	Less than 1 Millivolt at 275 volts, full load - Less than 5 Milli-volts at 300 volts full load	170 VA at full load
208-A	Vacuum Tube Type 5Y3 GT	105 to 125 volts, 60 cycles	110 MA, max @ 275 volts		6.3 volts @ 4.5 amps	Less than 10 Milli-volts at full load	100 VA at full load

## MECHANICAL CHARACTERISTICS CHART

TYPE	MOUNTING	HEIGHT	WIDTH	LENGTH	FINISH	WEIGHT	SHIP. WEIGHT	REQUIRED ACCESSORIES
205-B	Rack or cabinet	10 1/4" occupies 10 1/2" rack space	8 3/4"	18 3/4"	16 gauge steel, zinc-plated, bonderized, baked-on grey enamel	52 lbs.	70 lbs.	Mat panel supplied. For cabinet mounting, order 201-E Cabinet.
206-A <i>B</i>	Plug-In	6 3/4"	7 3/4"	10"	16 gauge steel, bonderized, baked-on grey enamel finish	25 lbs.	30 lbs.	Plug Receptacle, 19-A Mounting Tray, 10-B Mounting Frame
208-A	Plug-In	5 3/4"	3 1/4"	10"	16 gauge steel, bonderized, baked-on grey enamel finish	13 1/2 lbs.	15 lbs.	Plug Receptacle, 17-B Mounting Tray, 10-B Mounting Frame

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