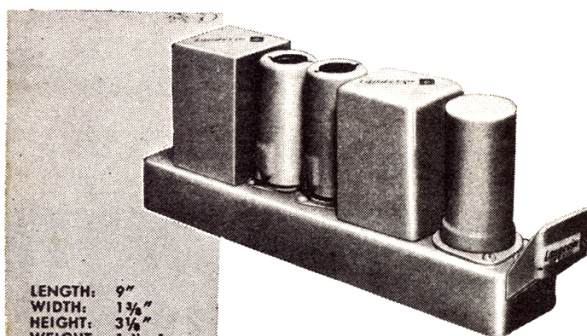


**THE *Amazing* 5000 SERIES
MINIATURIZED PLUG-IN
AMPLIFIERS
POWER SUPPLY**

BY *Langevin*

TYPE 5116 — 5117 AMPLIFIERS

TYPE 5206 POWER SUPPLY



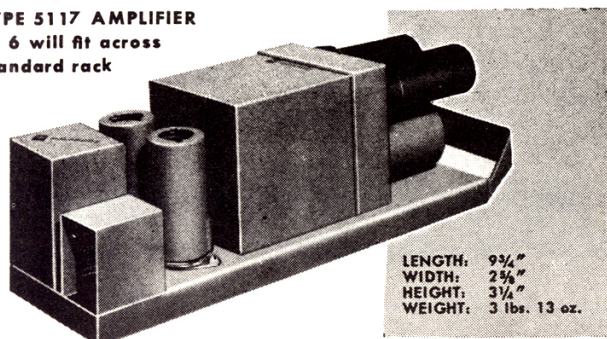
LENGTH: 9"
WIDTH: 1 3/8"
HEIGHT: 3 1/8"
WEIGHT: 1 lb. 1 oz.

TYPE 5116 AMPLIFIER

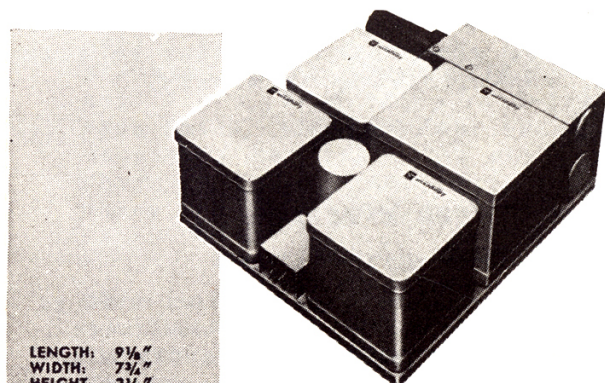
• 11 will fit across standard rack •

TYPE 5117 AMPLIFIER

• 6 will fit across standard rack



LENGTH: 9 3/4"
WIDTH: 2 5/8"
HEIGHT: 3 1/4"
WEIGHT: 3 lbs. 13 oz.



LENGTH: 9 1/2"
WIDTH: 7 3/4"
HEIGHT: 3 1/4"
WEIGHT: 17 lbs. 6 oz.

TYPE 5206 POWER SUPPLY

• 2 will fit across standard rack •

**ONLY 3 1/2" of PANEL SPACE
2 AMPLIFIERS
2 TUBE TYPES**

for Complete

**BROADCAST QUALITY
AUDIO FACILITIES**

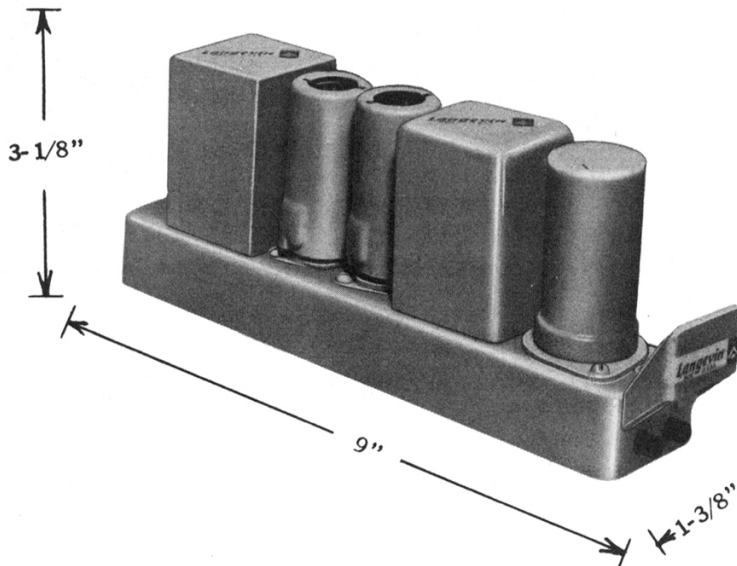
- PLUG-IN FOR EASY MAINTENANCE AND SERVICE CONTINUITY
- EXCEEDS FCC REQUIREMENTS
- THE SMALLEST HIGH PERFORMANCE AUDIO EQUIPMENT YET DEVELOPED
- IDEAL FOR CONSOLE USE
- COMPLETE TUBE METERING BUILT-IN WITHOUT EXTRA CHARGE

LANGEVIN MANUFACTURING CORPORATION • NEW YORK, N. Y.

Langevin



The equipment herein described is licensed under U. S. patents of the A. T. & T. Co. and the Western Electric Company.



TYPE 5116

Pre-Amplifier or Booster Amplifier

TYPE 5116 AMPLIFIER

GENERAL: The Type **5116** Amplifier is a MINIATURE PLUG-IN two stage, low noise pre-amplifier or booster amplifier for use in broadcast audio facilities, recording or sound systems. This unit is well adapted to use as a line amplifier for a remote installation, providing a line lead of plus 8 VU. Its low power drains makes battery operation practical.

ELECTRICAL CHARACTERISTICS

GAIN: 45 db (unloaded input transformer).

INPUT SOURCE IMPEDANCE: 30/150/250/600 Ohms. Center taps are available when strapped for 150 or 600 Ohms.

OUTPUT LOAD IMPEDANCE: 150 or 600 Ohms. Center tap is available when strapped for 600 Ohms.

OUTPUT POWER: +18 DBM (.063 watts) with less than 0.5% RMS total harmonic distortion over the range 50 to 15,000 cycles, and less than 1% at 30 cycles.

OUTPUT NOISE: Unweighted, equivalent to input signal of -120 to 124 DBM, depending upon input tube, over the band 30 to 15,000 cycles.

FREQUENCY CHARACTERISTICS: +0.5 db over the range 30 to 15,000 cycles.

EXTERNAL POWER REQUIREMENTS:

Filament: 6.3 volts at 0.3 amperes.

Plate: 275 volts DC, 6 Milliamperes.

TUBE COMPLEMENT: Two 5879's.

MECHANICAL SPECIFICATIONS

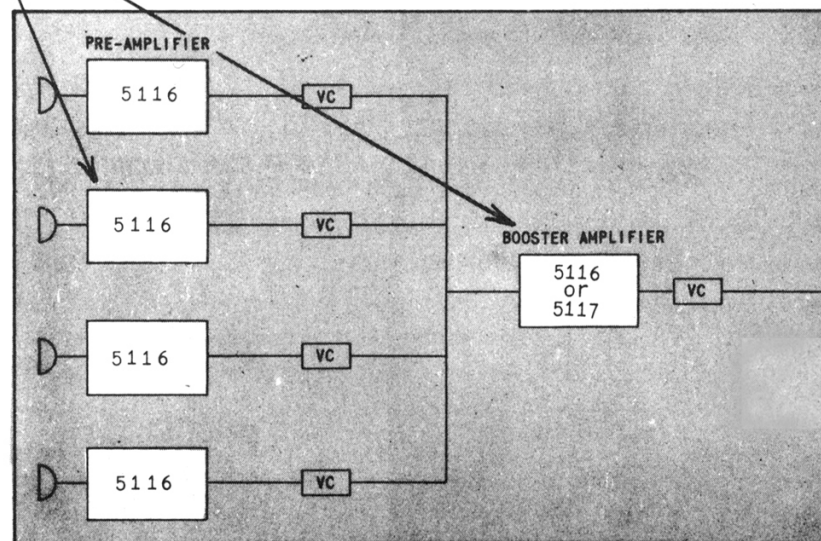
SIZE: Length - 9 inches
Width - 1-3/8 inches
Height - 3-1/8 inches

WEIGHT: 1 pound - 1 ounce

SHIPPING WEIGHT:

Domestic - 1-1/2 pounds
Export - 2 pounds

FINISH: Light gray baked enamel over 20 gauge bonderized (rustproofed) steel.



ADDITIONAL FEATURES

GOLD PLATED PLUGS

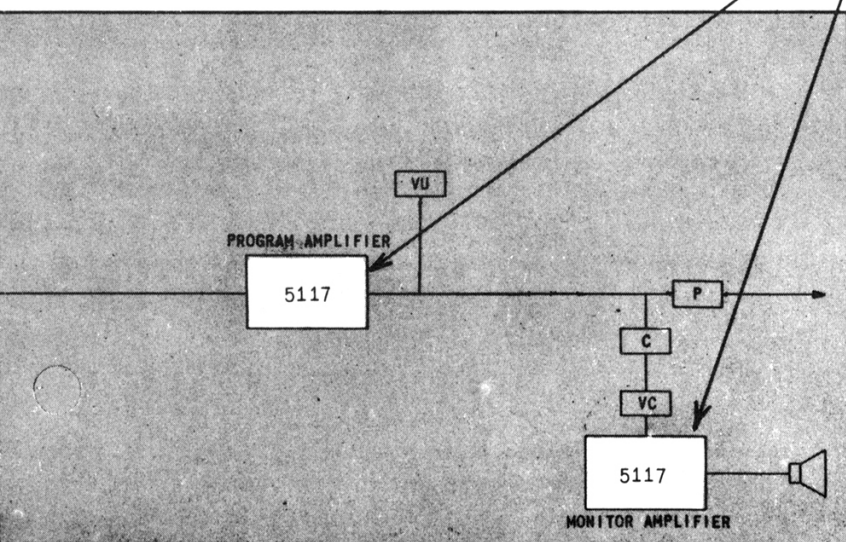
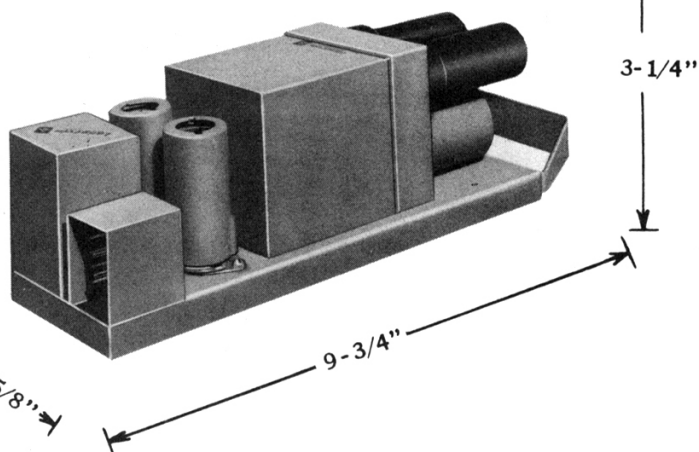
Both amplifiers are provided with the latest type MINIATURE PLUGS having gold plated, non-oxidizing terminals.

TUBE METERING

Tube metering facilities are included as standard equipment without extra charge. In the cathode of each tube in these amplifiers there is a precision resistor, which may be connected as a shunt for an external meter by merely depressing the appropriate push-button on the rear apron (handle end) of the chassis. There is one such push-button for each tube in the unit. One such external meter can serve any number of **5116** and **5117** Amplifiers.

TYPE 5117

Program, Booster or Monitor Amplifier



TYPE 5117 AMPLIFIER

GENERAL: The Type 5117 Amplifier is a MINIATURE PLUG-IN, two stage, push-pull, fixed gain unit intended for use as a program, monitor or booster amplifier in broadcast audio facilities, recording or sound systems.

ELECTRICAL CHARACTERISTICS

GAIN: 55 db

INPUT SOURCE IMPEDANCE: 30/150/250/600 Ohms. Center taps are available when strapped for 150 or 600 Ohms.

OUTPUT LOAD IMPEDANCE: 150 or 600 Ohms. Center tap is available when strapped for 600 Ohms.

OUTPUT POWER: +30 DBM (1 watt) with less than 0.5% RMS total harmonic distortion over the range 50 to 15,000 cycles and less than 1% at 30 cycles.

As a MONITOR AMPLIFIER, +39 DBM (8 watts) with less than 1% total RMS harmonic distortion over the range 50 to 15,000 cycles.

OUTPUT NOISE: Unweighted, equivalent to an input signal of -110 DBM or less, depending upon tubes, over the band 30 to 15,000 cycles.

FREQUENCY CHARACTERISTICS: ± 0.5 db over the range 30 to 15,000 cycles.

EXTERNAL POWER REQUIREMENTS:

Filament: 6.3 volts at 1.2 amperes.

Plate: 300 volts DC at 70 Milliamperes.

TUBE COMPLEMENT: Two 5879's, two 6V6's.

MECHANICAL SPECIFICATIONS

SIZE: Length - 9-3/4 inches
Width - 2-5/8 inches
Height - 3-1/4 inches

WEIGHT: 4 pounds

SHIPPING WEIGHT:

Domestic - 5 pounds
Export - 6 pounds

FINISH: Light gray baked enamel over 16 gauge bonderized (rustproofed) steel.

FEATURES AND ADVANTAGES

SMALL SIZE

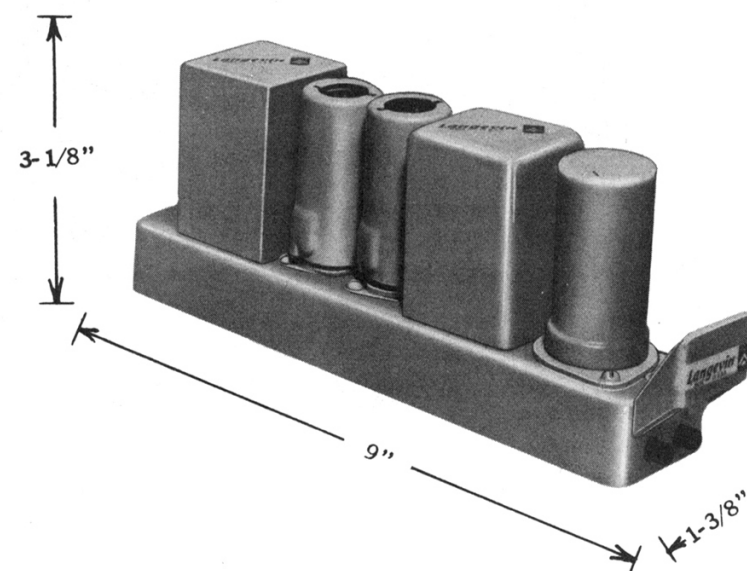
Rack space can be used to the fullest advantage with the new MINIATURE PLUG-IN amplifiers, as it is possible to mount 11 pre-amplifiers (Type 5116) or 6 Program amplifiers (Type 5117) in 3-1/2 inches of rack space. (See page four for mounting and accessory details). The physical size of these units, the smallest yet developed, makes them ideal for console installation.

MAINTENANCE ADVANTAGES

Plug-in amplifiers are easily removed from equipment racks or consoles for preventive maintenance checks at the service bench. Continuous studio operation is guaranteed with one or two spares always on hand.

OVERALL ECONOMY

Simplification of broadcast audio facilities to only these two types of amplifiers, using only two types of tubes, 5879's and 6V6's, results in savings from lower tube and amplifier inventories.



TYPE 5116

*Pre-Amplifier
or
Booster Amplifier*

TYPE 5116 AMPLIFIER

GENERAL: The Type **5116** Amplifier is a MINIATURE PLUG-IN two stage, low noise pre-amplifier or booster amplifier for use in broadcast audio facilities, recording or sound systems. This unit is well adapted to use as a line amplifier for a remote installation, providing a line lead of plus 8 VU. Its low power drains makes battery operation practical.

ELECTRICAL CHARACTERISTICS

GAIN: 45 db (unloaded input transformer).

INPUT SOURCE IMPEDANCE: 30/150/250/600 Ohms. Center taps are available when strapped for 150 or 600 Ohms.

OUTPUT LOAD IMPEDANCE: 150 or 600 Ohms. Center tap is available when strapped for 600 Ohms.

OUTPUT POWER: +18 DBM (.063 watts) with less than 0.5% RMS total harmonic distortion over the range 50 to 15,000 cycles, and less than 1% at 30 cycles.

OUTPUT NOISE: Unweighted, equivalent to input signal of -120 to 124 DBM, depending upon input tube, over the band 30 to 15,000 cycles.

FREQUENCY CHARACTERISTICS: ± 0.5 db over the range 30 to 15,000 cycles.

EXTERNAL POWER REQUIREMENTS:

Filament: 6.3 volts at 0.3 amperes.
Plate: 275 volts DC, 6 Milliamperes.

TUBE COMPLEMENT: Two 5879's.

MECHANICAL SPECIFICATIONS

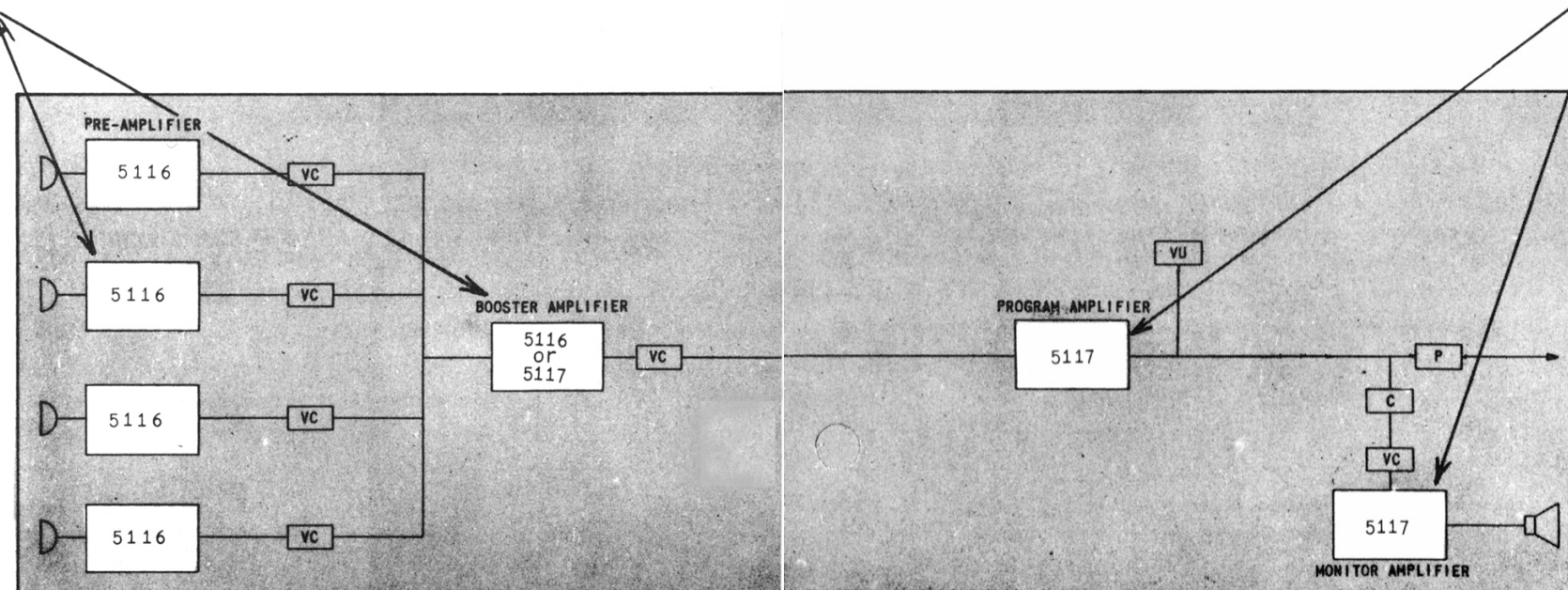
SIZE: Length - 9 inches
Width - 1-3/8 inches
Height - 3-1/8 inches

WEIGHT: 1 pound - 1 ounce

SHIPPING WEIGHT:

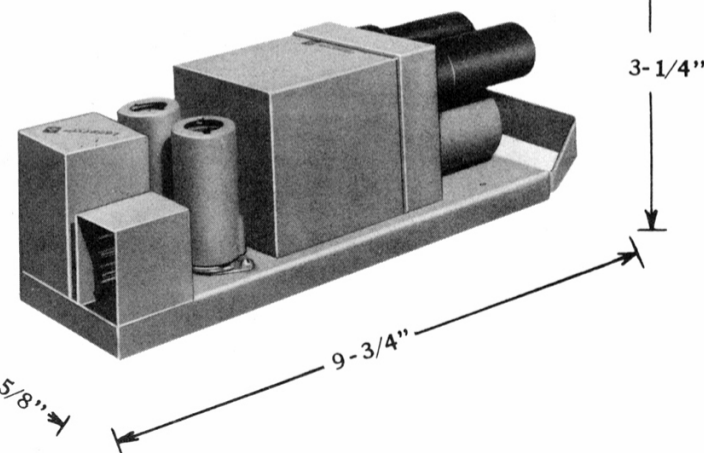
Domestic - 1-1/2 pounds
Export - 2 Pounds

FINISH: Light gray baked enamel over 20 gauge bonderized (rustproofed) steel.



TYPE 5117

*Program, Booster
or
Monitor Amplifier*



TYPE 5117 AMPLIFIER

GENERAL: The Type **5117** Amplifier is a MINIATURE PLUG-IN, two stage, push-pull, fixed gain unit intended for use as a program, monitor or booster amplifier in broadcast audio facilities, recording or sound systems.

ELECTRICAL CHARACTERISTICS

GAIN: 55 db

INPUT SOURCE IMPEDANCE: 30/150/250/600 Ohms. Center taps are available when strapped for 150 or 600 Ohms.

OUTPUT LOAD IMPEDANCE: 150 or 600 Ohms. Center tap is available when strapped for 600 Ohms.

OUTPUT POWER: +30 DBM (1 watt) with less than 0.5% RMS total harmonic distortion over the range 50 to 15,000 cycles and less than 1% at 30 cycles.

As a MONITOR AMPLIFIER, +39 DBM (8 watts) with less than 1% total RMS harmonic distortion over the range 50 to 15,000 cycles.

OUTPUT NOISE: Unweighted, equivalent to an input signal of -110 DBM or less, depending upon tubes, over the band 30 to 15,000 cycles.

FREQUENCY CHARACTERISTICS: ± 0.5 db over the range 30 to 15,000 cycles.

EXTERNAL POWER REQUIREMENTS:

Filament: 6.3 volts at 1.2 amperes.
Plate: 300 volts DC at 70 Milliamperes.

TUBE COMPLEMENT: Two 5879's, two 6V6's.

MECHANICAL SPECIFICATIONS

SIZE: Length - 9-3/4 inches
Width - 2-5/8 inches
Height - 3-1/4 inches

WEIGHT: 4 pounds

SHIPPING WEIGHT:

Domestic - 5 pounds
Export - 6 pounds

FINISH: Light gray baked enamel over 16 gauge bonderized (rustproofed) steel.

ADDITIONAL FEATURES AND ADVANTAGES

GOLD PLATED PLUGS

Both amplifiers are provided with the latest type MINIATURE PLUGS having gold plated, non-oxidizing terminals.

TUBE METERING

Tube metering facilities are included as standard equipment without extra charge. In the cathode of each tube in these amplifiers there is a precision resistor, which may be connected as a shunt for an external meter by merely depressing the appropriate push-button on the rear apron (handle end) of the chassis. There is one such push-button for each tube in the unit. One such external meter can serve any number of **5116** and **5117** Amplifiers.

SMALL SIZE

Rack space can be used to the fullest advantage with the new MINIATURE PLUG-IN amplifiers, as it is possible to mount 11 pre-amplifiers (Type **5116**) or 6 Program amplifiers (Type **5117**) in 3-1/2 inches of rack space. (See page four for mounting and accessory details). The physical size of these units, the smallest yet developed, makes them ideal for console installation.

MAINTENANCE ADVANTAGES

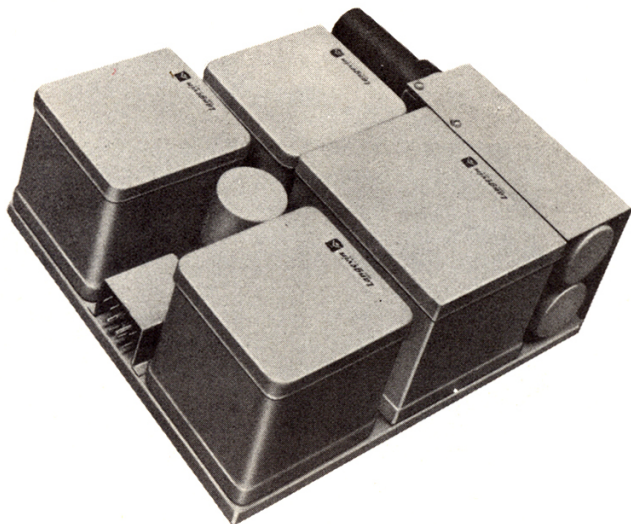
Plug-in amplifiers are easily removed from equipment racks or consoles for preventive maintenance checks at the service bench. Continuous studio operation is guaranteed with one or two spares always on hand.

OVERALL ECONOMY

Simplification of broadcast audio facilities to only these two types of amplifiers, using only two types of tubes, 5879's and 6V6's, results in savings from lower tube and amplifier inventories.

TYPE 5206 POWER SUPPLY

GENERAL



ELECTRICAL CHARACTERISTICS

LOAD CURRENT: 210 ma DC at 300 volts.

FILAMENT CURRENT: 6.5 amps AC at 6.3 volts.

RIPPLE: Less than 2 millivolts pre-amplifier supply, less than 10 millivolts-monitor amplifier supply.

RECTIFIER: Two Type 5Z4 tubes.

A Miniature Plug-in unit, especially designed for the 5000 series amplifier line.

One of these power supplies is capable of powering 22 **Type 5116** or 4 **Type 5117** amplifiers, or a proportionate combination of both. One such combination could be 10 **Type 5116** and 2 **Type 5117** amplifiers.

The same high manufacturing and performance standards which mark the 5000 series amplifiers have been applied to the 5206 power supply. Rectifier tube type used is well established as dependable and of long life.

MECHANICAL SPECIFICATIONS

SIZE: Length - 9-3/8 inches

Width - 7-3/4 inches

Height - 3-1/4 inches

WEIGHT: 17 pounds - 6 ounces

SHIPPING WEIGHT: Domestic - 19 pounds
Export - 20 pounds

FINISH: Light gray baked enamel over 16 gauge bonderized (rustproofed) steel.

5000 SERIES MOUNTING ACCESSORIES

Complete mounting accessories are available for the 5000 series. They consist of the 5016, 5017, and 5019 Mounting Trays for the 5116, 5117 Amplifiers and the 5206 Power Supply, respectively, and the 5010 Frame for standard rack mounting of these trays.

All trays are supplied with matching receptacle for the plug on the particular equipment unit being mounted. In addition, all trays have a locking clip preventing upward lifting of the unit while the plug is engaged, together with grounding tabs assuring a positive electrical ground.

The 5000 Series trays and frames are constructed of heavy gauge steel with light gray bonderized (rustproofed) finish.

SPECIFICATIONS

	5016 Tray	5017 Tray	5019 Tray	5010 Frame
Length	12 7/8"	12 7/8"	12 7/8"	13"
Width	1 1/2"	2 3/4"	7 7/8"	18 13/16"
Height	1 5/8"	2 1/4"	2 1/4"	3 3/8"
Net Weight	5 1/2 oz.	8 1/2 oz.	1 lb. 3 oz.	6 lb. 3 oz.
Shipping Weight - Domestic	3/4 lbs.	1 lb.	1 1/2 lbs.	7 lbs.
Shipping Weight - Export	1 lb.	1 lb. 6 oz.	2 lbs.	8 lbs.
Across Standard Rack	11	6	2	1
Some POSSIBLE COMBINATIONS 3-1/2" of Standard Panel Space	4 0 7	2 4 0	1 1 1	1 1 1
Some POSSIBLE COMBINATIONS 7" of Standard Panel Space	11 7 4	5 4 5	1 2 2	2 2 2

