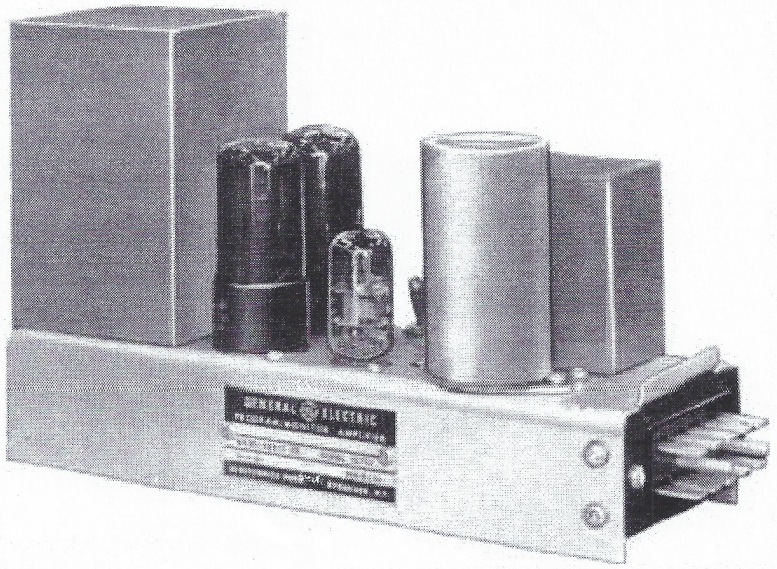
Plug-in Program/Monitoring Amplifier

Type BA-12-C



Plug-in program/monitoring amplifier, Type BA-12-C

FEATURES

- **Small, compact design. Four of these amplifiers can be mounted in seven inches of rack space**
- **Plug-in construction with point-to-point wiring makes maintenance extremely easy**
- **Only two tube-types used**
- **Easy removal for servicing. Uses Jones "2400" series plug**
- **Chassis punched for addition of bridging controls and metering switches**
- **No shock hazard. Voltage is applied to the unit only when plugged into a mating source and when so plugged in, no voltage is exposed**
- **Fulfills all medium and high-level audio system requirements. Toggle switch allows selection of 56- or 71-db gain**

WHERE TO USE

The General Electric Type BA-12-C, plug-in program/monitoring amplifier is a high fidelity, compact, fixed gain, plug-in audio unit, recommended for use as a program, line, monitoring or isolation amplifier.

DESCRIPTION

The General Electric Type BA-12-C plug-in program/monitor amplifier is a dual-purpose amplifier. By means of a switch, located on the chassis top, this amplifier may be instantly changed from a line amplifier to an 8-watt monitor amplifier.

With the switch set in low position, the amplifier serves as a program or line amplifier. In this position the amplifier has a gain of 56 db. With an output level of +30 dbm, the distortion is less than one-half of one percent with a maximum input of −26 dbm.

When the switch is in the high position, the amplifier may be used as a monitor amplifier with a gain of 71 db. In this application an output level of +39 dbm (8 watts) is possible with a distortion figure of less than 3 percent at maximum input level of −32 dbm.

Electrically the Type BA-12-C amplifier consists of a 5879 pentode input stage plus a triode-connected 5879 used as a split-load phase inverter and two 6V6 tubes in the push-pull output stage. Feedback from a tertiary winding on the output transformer is fed to the cathode of the first stage. For high-gain applications, the "HI" position of the switch decreases the feedback by 15 db.

Holes are provided on the chassis for installation of an accessory Type FA-35-G bridging volume control and two tube metering switches if such are desired.

The Type BA-12-C amplifier is equipped with a male, 10-pin "2400" series Jones plug for mating use in the General Electric Type BC-11-A console. It may also be mounted on an accessory Type FA-22-E tray with mating receptacle for rack use. When so mounted, the tray and amplifier combination is usually mounted on a Type FA-23-A standard cabinet-rack mounting shelf (accessory). Power can then be obtained from a rack-mounted Type BP-10-B power supply.

MECHANICAL SPECIFICATIONS

DIMENSIONS

Depth	10¾ inches	Width	3½ inches
Height	5¾ inches	Weight	6 lbs

MOUNTING

Each Type BA-12-C amplifier mounts on a Type FA-22-E tray. Four of these trays mount on one Type FA-23-A shelf, occupying seven inches (four rack units) of cabinet space.

Plug-in Program/Monitoring Amplifier

Type BA-12-C

OPERATING CONDITIONS

Maximum ambient temperature:	113 F (45 C)
Maximum relative humidity:	95 percent

SAFETY PROVISIONS

Voltage is applied to the unit only when it is plugged into a mating source and when so plugged, no voltage is exposed.

ELECTRICAL SPECIFICATIONS

Type of Circuit

Consits of a 5879 pentode input stage plus a triode connected 5879 used as a split-load phase inverter and two Type 6V6 tubes as the push-pull output. Feedback is used from a tertiary winding on the output transformer to the cathode of the input stage. For high gain applications, a switch is provided to decrease the feedback by 15 db.

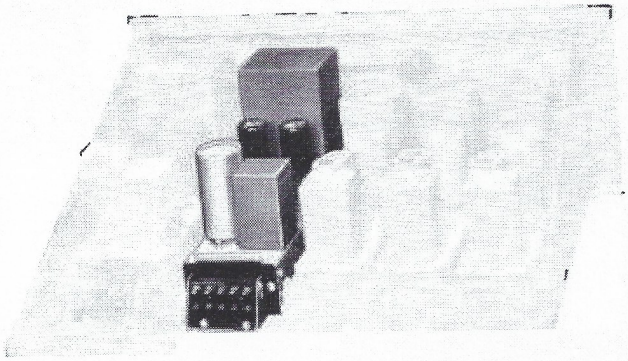
PERFORMANCE

Program Amplifier (low gain position)

Frequency Range:	50–15,000 cps. ±1 db
Gain:	56 db
Output Level and Distortion	+30 dbm (1 watt) ½ percent or less distortion (maximum input —26 dbm)
	+39 dbm (8 watts) 1 percent or less distortion (maximum input —17 dbm)
Output Noise:	Less than —60 dbm

Monitoring Amplifier (high gain position)

Frequency Range:	50–15,000 cps. ±1½ cb
Gain:	71 db



Plug-in program/monitoring amplifiers, Type BA-12-C plug plug-in pre-amplifiers, Type BA-1-F mounted in broadcast shelf, Type FA-23-A

Output Level and Distortion:	+39 dbm (8 watts) 3 percent or less distortion (maximum input —32 dbm)

For high level loudspeaker applications, the Type BA-12-C can be modified to give 15 watts output by using Type 6L6 or 5881 tubes, and increasing the B+ supply voltage.

SIGNAL INPUTS

Input Impedance:	Unloaded transformer
Source Impedance:	600/150 ohms; 600 ohms as shipped

POWER INPUTS

Filaments:	1.2 amps at 6.3 volts a-c
Bias:	Biased at +20 to +50 volts d-c
B+ Requirement:	88 ma at 300 volts d-c (at 8 watts output)

OUTPUTS

Output impedance, 600/150 ohms; 600 ohms as shipped.

TUBE COMPLEMENT

2 Type 5879 (input and phase inverter)
2 Type 6V6 (push-pull output)
(Type 6L6 or Type 5881 tubes may be used to obtain higher power output when desired)

HOW TO ORDER

When ordering, please specify:

Type BA-12-C plug-in program/monitoring amplifier (requires an external power supply).

ACCESSORIES

Type FA-22-E tray, for mounting Type BA-12-C.

Type BP-10-B plug-in power supply, for BA-1-F's and/or BA-12-C's. (Type BP-10-B uses 200 watts at 110 volts a-c and will supply power for 25 Type BA-1-F pre-amplifiers or three Type BA-12-C program/monitoring amplifiers.)

Type FA-23-A shelf, for monting plug-in units with trays. (Type FA-23-A occupies seven inches (four units of rack height) in a Type PR-1-A Cabinet Rack and will accommodate six pre-amps, Type BA-1-F, with trays, four Type BA-12-C program/monitoring amplifiers, with trays or two Type BP-10-B power supplies, with trays.)

Type FA-35-G, bridging volume control. (Bridging volume control for use with Type BA-1-F and Type BA-12-C amplifiers. It is designed to convert a 600-ohms amplifier input to a 10,000-ohm balanced-bridging service and may be used in line levels up to +40 dbm.)