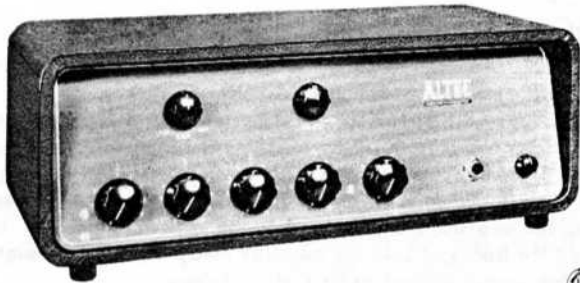


6-10-9
C.R.H.



342B AMPLIFIER

OPERATING INSTRUCTIONS



- NEW RELEASE
- REPRINT RELEASE WITH NO CHANGES
- REPRINT RELEASE WITH CHANGES



SPECIFICATIONS

Type:	4 Channel Mixer Amplifier
Gain:	115 db
Input Sensitivity:	.0023 volt rms for rated output
Power Output:	35 watts at less than 2% thd, @ 1000 cps 35 watts at less than 5% thd, 45-12,000 cps
Frequency Response:	±1 db, 20-20,000 cps
Input Impedance:	22,000 ohms, nominal
Source Impedance:	30/50 and 120/200 with 4722 Plug-in Transformer
Load Impedance:	4, 8, 16 ohms and 70 v (150 ohm) line
Output Impedance:	Less than 20% of nominal load impedance
Noise Level:	Equivalent input noise -123 dbm Output noise -30 dbm with master volume control at zero
Controls:	4 mixer, 1 master control; 1 bass, 1 treble control, 6 db boost, 10 db cut; all continuously variable, composition type.
Power Supply:	117 volts, 60 cps, 110 watts
External Power Available:	117 volt ac receptacle at rear of chassis
Tubes:	3—12AX7, 1—6CG7, 2—7027, 1—GZ34/5AR4
Dimensions:	7" H, 19 1/8" W, 8 1/8" D overall
Color:	Green
Weight:	22 lbs.
Accessories:	4722 Plug-in Transformer 12864 Assembly — plug-in phono equalizer 12210 Assembly — rack mounting adapter Cannon XLR-3-12 straight cord plug



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Specifications and components subject to change without notice. Overall performance will be maintained or improved.

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New York

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Litho in USA

Price \$0.14

CP-59-1K

GENERAL DESCRIPTION

The 342B Amplifier is a compact, high quality, 35 watt mixer amplifier, designed for portable or permanent public address applications. The unit provides a wide variety of input levels and impedances, with four mixing channels, master volume control, and separate bass and treble controls. DC operation of the heaters of the input tubes insures hum-free performance and eliminates the need for tube selection. The complete system is housed in a green leatherette covered cabinet.

INPUT CONNECTIONS

Input to each of the four channels is made by means of Cannon 3-pin XLR connectors. Pin #1 is the ground connection. An octal receptacle in each of the four channels provides the facility for easily accommodating any of the usual sources of program material. The amplifier has adapter plugs installed in each of these receptacles which provide for unbalanced high impedance inputs of either low or high level.

Low Level: (Microphone or equivalent) Connect to pins 1 and 3 of the XLR plug.

High Level: (Up to 10v. rms) Connect to pins 1 and 2 of the XLR plug.

Low Impedance Input: Accessory plug-in transformer #4722 may be installed to match any of the standard microphone impedances. Removing the adapter plug from the octal receptacle associated with the selected channel permits the 4722 transformer to be plugged in its place. Connect the speech line to pins 2 and 3 of the XLR connector and the shield to pin 1. As shipped, the 4722 transformer socket is connected for 120/200 ohms.

Phono Pickup Input: The use of the 12864 Assembly in either or both of channels 3 and 4 provides the RIAA playback characteristic necessary for variable reluctance cartridges. This assembly is installed by removing the adapter plug or 4722 transformer associated with the selected channel and replacing it with the 12864 assembly. Input connections are through pins 1 and 2 of the XLR connector.

OUTPUT CONNECTIONS

Output taps for loudspeaker loads of 4, 8 and 16 ohms, as well as a 70 volt line output, are provided.

Speaker Matching: The tap which most nearly equals the total speaker impedance should be used. Satisfactory results can be obtained with mismatches not exceeding $\pm 20\%$ of the tap value.

Use of 70 Volt Line: The constant voltage distribution system makes the connection to any number of speakers possible on a "required power" basis without regard for the impedances involved. In this system, each speaker has an associated transformer with multiple taps rated in terms of power. When connected to the 70 volt line, the transformer tap is chosen which will give the desired speaker power. The sum of the power in all speakers should equal or be less than the amplifier power rating.

CONTROLS

Individual gain controls for each channel provide simultaneous mixing of four program sources. A "master" gain control is common to all channels, as are the separate bass and treble controls which increase or decrease low and high frequency response. When the controls are positioned at the dots above the knobs, amplifier response is flat. Clockwise rotation from this point increases, and counter-clockwise rotation decreases the bass or treble.

VENTILATION

The cabinet design provides the necessary ventilation. Care should be taken to see that no large obstacle be placed closer than two inches from the rear of the cabinet. The air space between the cabinet and table which is provided by the rubber feet should remain open.

RACK MOUNTING

The 12210 Assembly is available to adapt the 342B Amplifier for rack mounting. It requires five units of rack space (8 $\frac{3}{4}$ "") and consists of a mounting shelf, two shims and a front mat. Installation is accomplished by fastening the shelf to the bottom of the 342B chassis by means of four screws through the slots in the shelf and in turn, mounting the whole assembly to the rack. The two shims are screwed to the rack rails per Fig. 1. Mount the front mat over the panel by means of screws through the four inserts provided on the shelf and shims.

MAINTENANCE

All circuitry is straightforward and the unit can be serviced by conventional voltage measurements using a DC voltmeter.

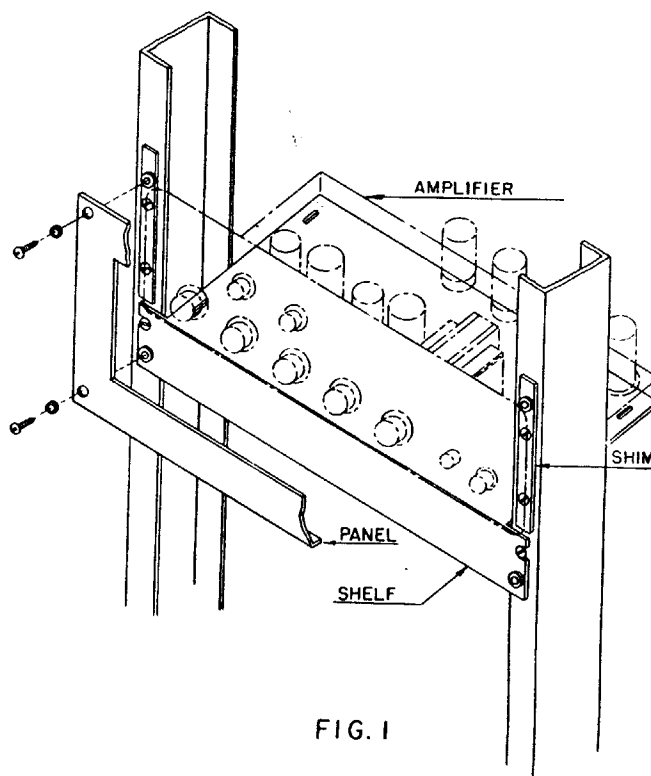
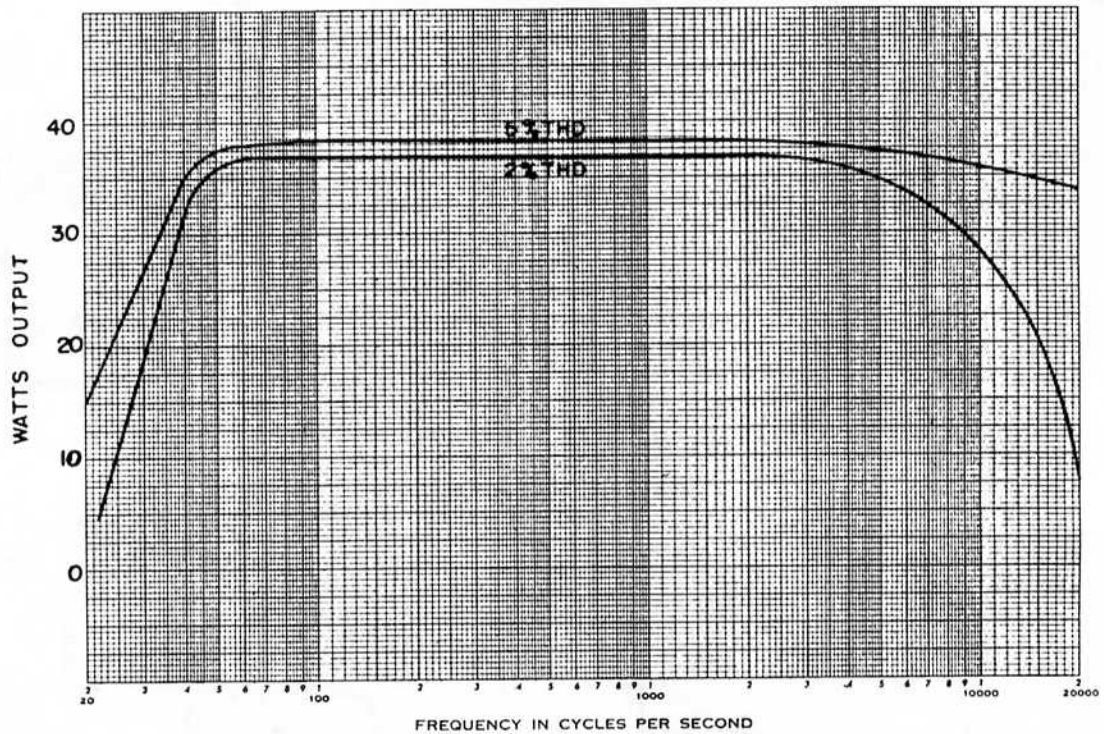


FIG. 1

342 B AMPLIFIER
FREQUENCY VS POWER AT SELECTED THD.



PARTS LIST

C1	Capacitor, 50 x 50 x 50 x 50 mfd, 5 v (Mallory FP20-20667)	R13*	Resistor, 220,000 Ω \pm 10%, 1 w
C2 thru C6	Capacitor, 0.047 mfd, 400 v (Micamold or Astron)	R14, R15, R17 R18, R40	Resistor, 470,000 Ω \pm 10%, 1/2 w
C7	Capacitor, 0.00068 mfd \pm 10%, 600 v (Erie 811-861)	R16*	Resistor, 22,000 Ω \pm 10%, 1/2 w
C8	Capacitor, 0.0025 mfd \pm 10%, 500 v (Erie 301x500)	R19	Resistor, 1800 Ω \pm 10%, 1/2 w
C9	Capacitor, 0.002 mfd \pm 10%, 500 v (Erie 811-202)	R20, R24, R27	Resistor, 100,000 Ω \pm 10%, 1 w
C10	Capacitor, 0.01 mfd \pm 10%, 200 v (Micamold or Astron)	R22	Resistor, 47,000 Ω \pm 10%, 1 w
C11, C19	Capacitor, 0.00025 mfd \pm 10%, 600 v (Erie 811-251)	R23	Resistor, 1200 Ω \pm 10%, 1/2 w
C12, C13, C14	Capacitor, 0.1 mfd, 400 v (Micamold or Astron)	R25	Resistor, 1 meg Ω \pm 10%, 1/2 w
C15, C22	Capacitor, 50 mfd, 50 v (CD BR505)	R26	Resistor, 1500 Ω \pm 10%, 1/2 w
C16	Capacitor, 40-40-20-20 mfd, 350-350-350-25 v (FP419.3, 85° C)	R28, R29	Resistor, 47,000 Ω \pm 1%, 1/2 w (dep. carbon)
C17	Capacitor, 40-40 mfd, 500 v (UP4450, 85° C)	R30, R31	Resistor, 100,000 Ω \pm 10%, 1/2 w
C18	Capacitor, 1000-1000 mfd, 15 v (Mallory WP200)	R32	Resistor, 1000 Ω \pm 10%, 1 w
C20	Capacitor, 0.015 mfd \pm 10%, 200 v	R33	Resistor, 150,000 Ω \pm 10%, 1/2 w
C21	Capacitor, 0.001 mfd \pm 20%, 3000 v (Erie HD-3-1000)	R34 thru R36	Resistor, 4700 Ω \pm 10%, 1 w
F1	Fuse, 2.5 amp, 250 v (Littelfuse 31202.5)	R37	Resistor, 220 Ω \pm 10%, 1 w
J1 thr J4	Connector (Cannon XLR-3-13)	R38	Resistor, 1 Ω \pm 10%, 1 w (wire wound)
P1 thru P4, P7	Potentiometer, (Altec 12178-1)	R39	Resistor, 27,000 Ω \pm 10%, 1/2 w
P5, P6	Potentiometer, (Altec 12179-2)	RS1	Rectifier, selenium (Radio Receptor selection 8Y1)
P8	Potentiometer, 5000 Ω (Melrain Type FFF-1)	RS2	Rectifier, selenium (Sarkes 4T 261C1-25)
PL1	Lamp, pilot (G.E. Mazda #44)	S1	Switch (Altec 12180-1)
R1 thru R4	Resistor, 180 Ω \pm 10%, 1/2 w	T1	Transformer (Altec 6192A)
R5 thru R8, R41	Resistor, 2700 Ω \pm 10%, 1/2 w	T2	Transformer (Altec 16597)
R9 thru R12, R21	Resistor, 220,000 Ω \pm 10%, 1/2 w	V1, V2, V3	Tube, vacuum (12AX7)
		V4	Tube, vacuum (6CG7)
		V5, V6	Tube, vacuum (7027A)
		V7	Tube, vacuum (GZ34/5AR4)

*Used on dummy plugs. Total of four required.

