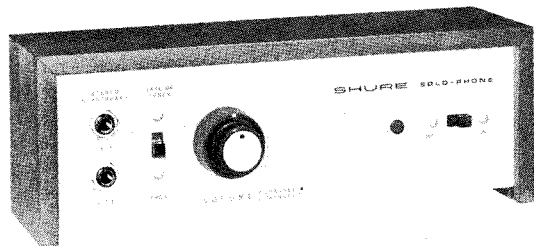


**SHURE**

222 HARTREY AVE., EVANSTON, IL. 60204 U.S.A.

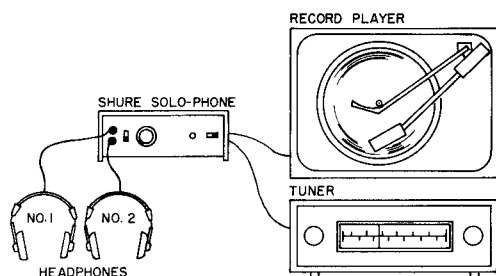
MICROPHONES AND ELECTRONIC COMPONENTS

® AREA CODE 312/328-9000 • CABLE: SHUREMICRO

DATA SHEET**MODELS SA-1 AND SA-2E SOLO-PHONE® STEREO HEADPHONE AMPLIFIERS**

The Shure Solo-Phone Stereo Amplifiers are designed specifically for high fidelity listening with headphones. They provide sufficient amplification and equalization to use any fine quality magnetic phono cartridge (such as the Shure Stereo Dynetic). Additional inputs are available to plug in a multiplex FM tuner or a tape playback unit. Figure A shows a typical arrangement using a turntable with a magnetic cartridge and a tuner or a tape recorder.

Although primarily designed for private high fidelity listening to records, FM, and tape, the Solo-Phones can be used for other applications.



TYPICAL SOLO-PHONE INSTALLATION

FIGURE A

- Headphone isolation amplifier (monitoring while tape recording, etc.)
- Transcribing disc recordings using tape recorder.
- Ceramic microphone amplifier (connect to magnetic cartridge input).
- Special installations for the hard-of-hearing.
- Ideal for practicing—in private by players and students of electronic organs.
- Enables music students and tape recording enthusiasts to monitor tape recordings.
- The Model SA-1 is listed by Underwriters' Laboratories, Inc. and listed by the Canadian Standards Association as certified.

INSTALLATION AND OPERATION

WARNING: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

A convenient switch on the front panel permits selection of program sources. Two stereo headphone jacks are provided on the front panel, *permitting two sets of stereo headphones to be used at the same time.*

An On-Off switch and pilot light are provided on the front panel. The Model SA-1 has a convenient

switched 120 volt ac outlet on the back panel for connecting the power cord of a record changer, tuner, or tape player. This outlet can supply up to 3 amperes.

1. For Phono operation connect the signal leads from the phono cartridge to the jacks on the back panel marked "Magnetic Phono Input."

For Tuner or Tape operation, connect the signal leads from the tuner or tape player to the jacks on the back panel marked "Tape or Tuner Input."

Attention must be given to the information in the phono, tape, or tuner equipment data sheets regarding their connections for "Right" or "Left" channel, phasing, and grounding. Ground leads from the metal parts of the phono, tape, or tuner equipment, and an external ground may be connected to the screw below the magnetic phono input terminals.

2. Plug the headphones into the jack on the front panel. Set the selector switch to the desired function. (Tape or Tuner, or Phono).

The volume control is a two-part control allowing separate adjustment of each stereo channel to achieve proper balance between channels. After each channel has been adjusted, simple over-all volume adjustments can be made by turning either part of the dual control.

3. Connect the Solo-Phone power line cord to the proper ac power outlet. (See Operating Voltage under Specifications.) Model SA-1 Solo-Phone comes with an attached standard two-conductor ac plug.

The Model SA-2E is supplied with a three-conductor power line cord, but no plug. The power line cord plug should be installed by qualified service personnel. The *brown* lead should be connected to the "live" or "hot" terminal of the plug and the *blue* lead to the neutral terminal of the plug. The *green/yellow* lead is the grounding conductor and should be connected to the ground or earth terminal of the plug.

In the Model SA-2E either operating voltage is selected by a switch on the back panel. A switch lock plate is provided to prevent accidental switching to the 120 VAC position. This Solo-Phone is shipped with operating voltage selector switch locked in the 210-240 VAC position. The lock plate can be moved from the locking position by loosening (do not remove) the screw holding the lock plate, rotating the lock plate 90°, and retightening the screw.

CAUTION: Do not connect power line cord of Model SA-2E into 210-240 volts when switched to 120 volts.

ACCESSORY CONNECTING PLUGS

Model PK-1, a package of six connecting plugs, is available. This package contains two phone plugs for connecting headsets and four phono plugs for connecting cables from turntables and tuners to the Solo-Phone.

SPECIFICATIONS

Gain and Frequency Response:

Frequency	Phono Function*	Tape or Tuner Function
100 Hz	+13 dB ± 3, -2 dB Ref: 1,000 Hz level	+3, -2 dB Ref: 1,000 Hz level
1,000 Hz	34 dB ± 3 dB 6 mV input produces 300 mV output	7 dB ± 3 dB 150 mV input produces 340 mV output
10,000 Hz	-14 dB ± 2 dB Ref: 1,000 Hz level	± 2 dB Ref: 1,000 Hz level

*Standard RIAA Equalization

Input Impedance:

Phono—47 kilohms
Tuner—250 kilohms

Range of Load:

The unit shall operate satisfactorily using any earphones with impedances of 4 to 200 ohms. For optimum results, use earphones of 4- to 16-ohm impedance.

Channel Separation:

40 dB minimum from 50 to 20,000 Hz

Total Harmonic Distortion:

Less than 1% driving both channels simultaneously to 8-ohm resistive load at 100 mV level.

Clipping Level:

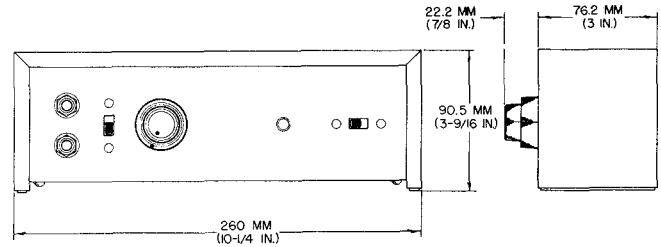
400 mV at 1,000 Hz and 8-ohm load.

Operating Voltage:

Model SA-1	108-132 volts	50/60 Hz
Model SA-2E	108-132 volts	50/60 Hz
	or	
	210-240 volts	50/60 Hz

See Paragraph on Installation and Operation.

Case Finish:
Satin Walnut.



OVERALL DIMENSIONS

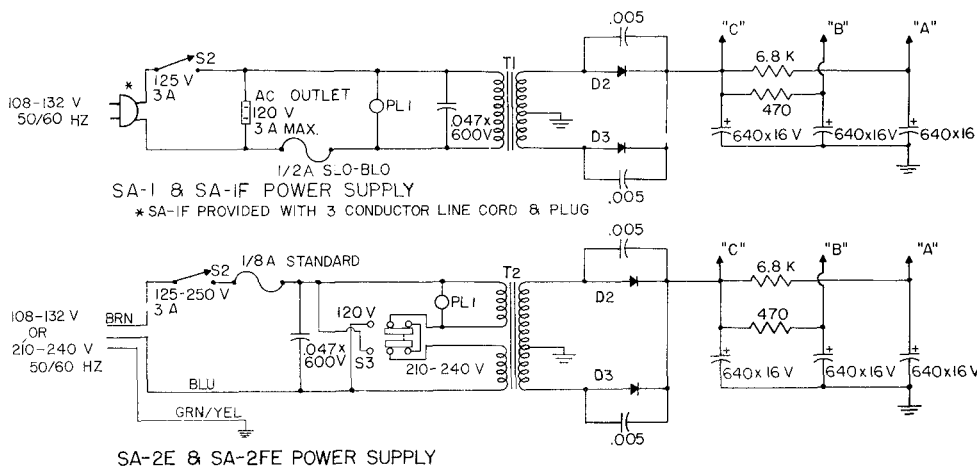
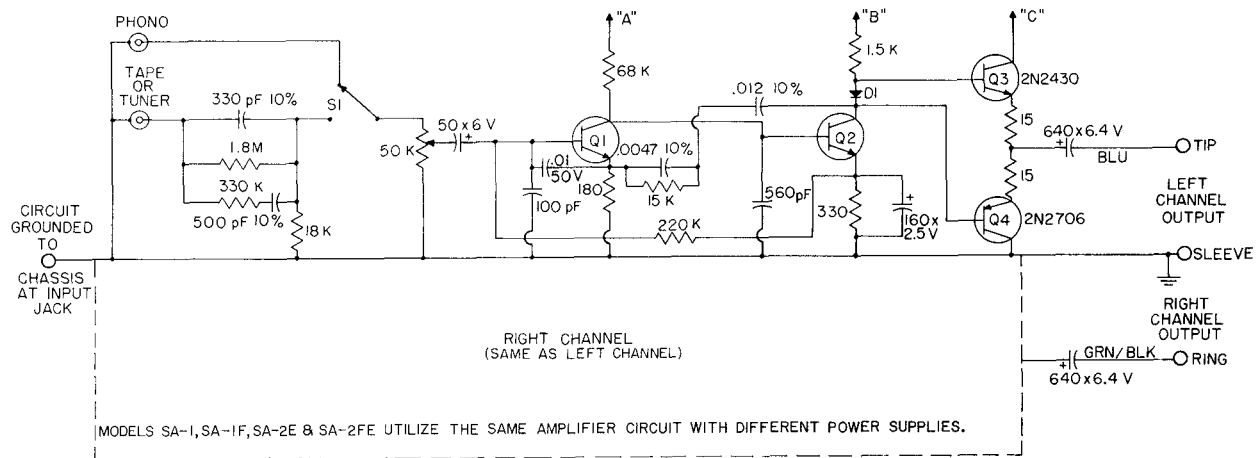
FIGURE B

GUARANTEE

This Shure product is guaranteed in normal use to be free from electrical and mechanical defects for a period of one year from the date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor.

SHIPPING INSTRUCTIONS

Carefully repack the unit and return it prepaid to the factory. If outside the United States, return the unit to your dealer or Authorized Shure Service Center for repair. The unit will be returned to you prepaid.



PART	DESCRIPTION	SHURE PART NO.	COMMERCIAL ALTERNATE
D1-D3	DIODE	RKC-79	1N4001
Q1-Q2	TRANSISTOR	RKC-9	2N5088
Q3-Q4	TRANSISTOR (MATCHED SET) (86A323 AND 86A322)	95A180 (2N2430 AND 2N2706)	2N2707 (2N2430 AND 2N2706)
T1	TRANSFORMER	51A251	NONE
T2	TRANSFORMER	51A211	NONE

- NOTES:
- ALL CAPACITORS IN MFD UNLESS SHOWN OTHERWISE AND WORKING VOLTAGES OVER 100 UNLESS SHOWN.
 - ALL RESISTORS 1/2 WATT 10%

SA-1 AND SA-2E SOLO-PHONE CIRCUIT DIAGRAMS