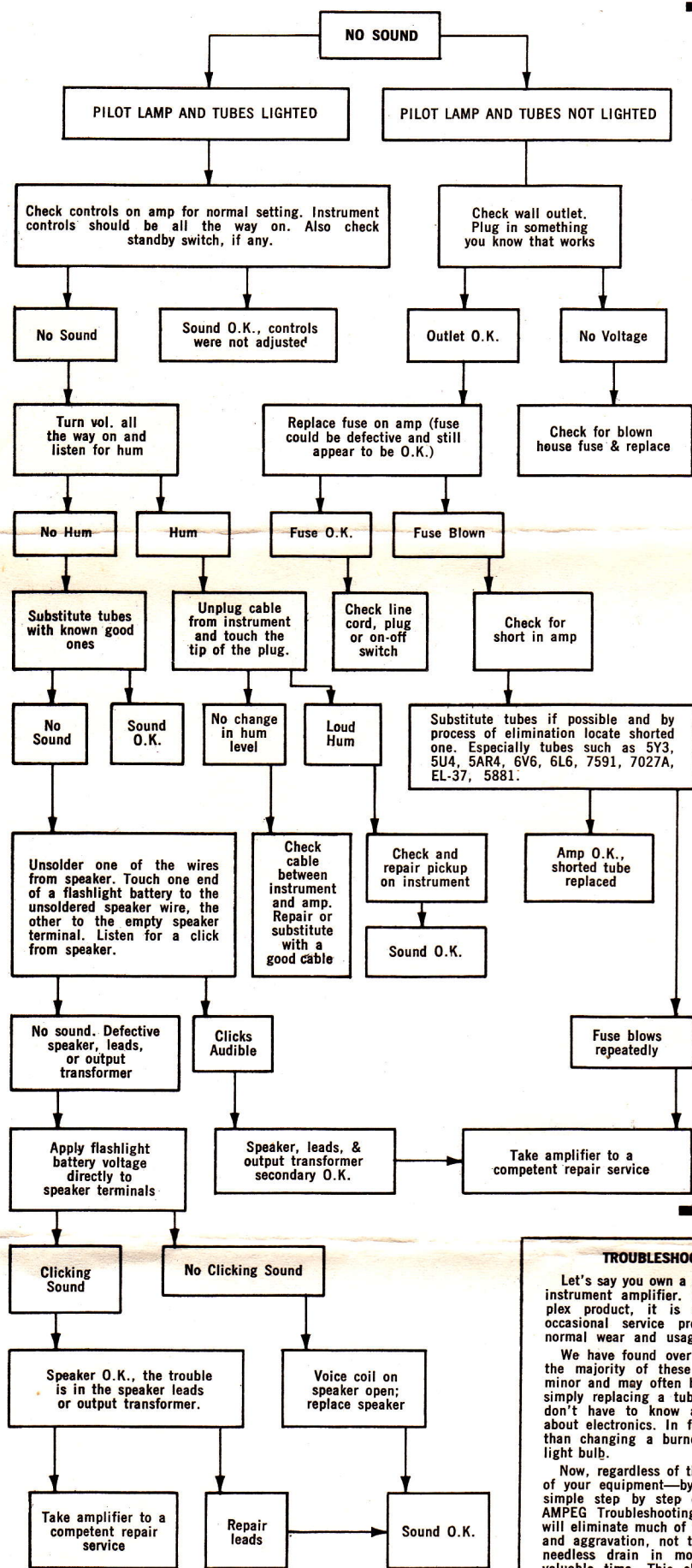


SB-12

TROUBLESHOOTING MUSICAL INSTRUMENT AMPLIFIERS

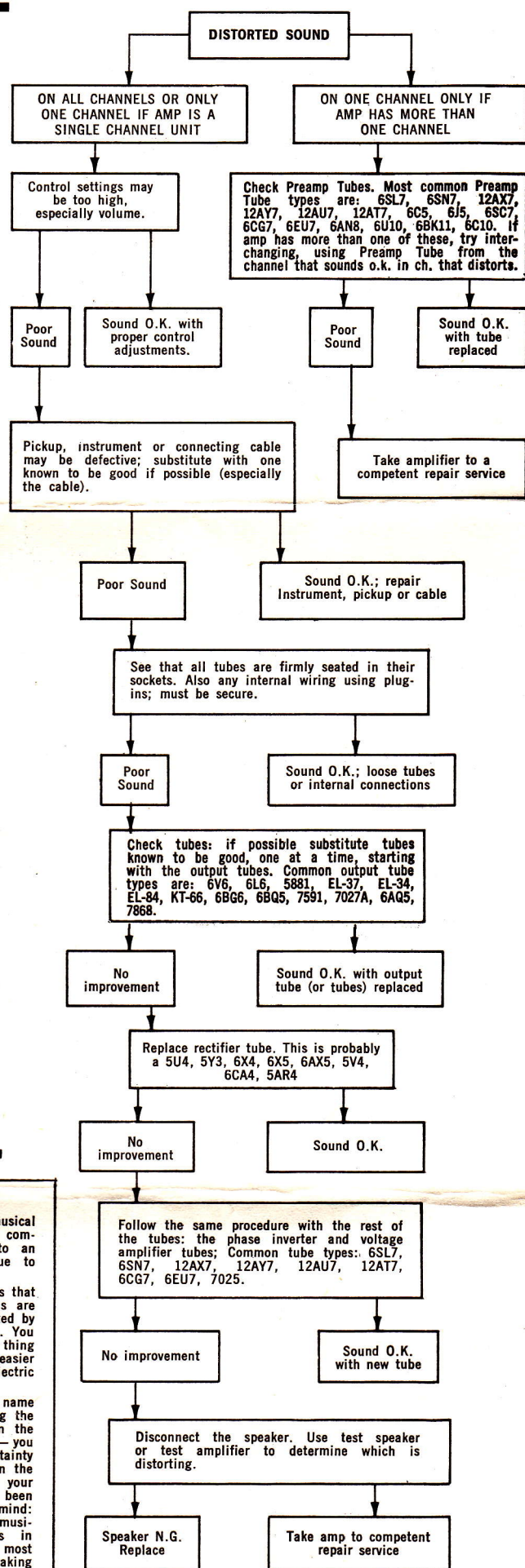


TROUBLESHOOTING

Let's say you own a quality musical instrument amplifier. Like any complex product, it is subject to an occasional service problem due to normal wear and usage.

We have found over the years that the majority of these problems are minor and may often be corrected by simply replacing a tube or two. You don't have to know a single thing about electronics. In fact, it's easier than changing a burned out electric light bulb.

Now, regardless of the brand name of your equipment—by following the simplest step by step outline in the AMPEG Troubleshooting Chart—you will eliminate much of the uncertainty and aggravation, not to mention the needless drain in money and your valuable time. This chart has been prepared with one thought in mind: to help you—the professional musician—obtain maximum results in sound and performance and most importantly, to keep you making good music.



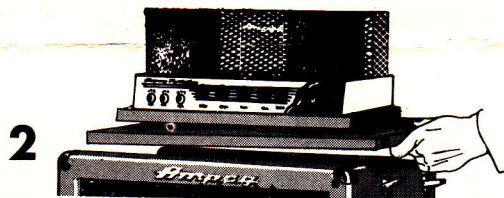
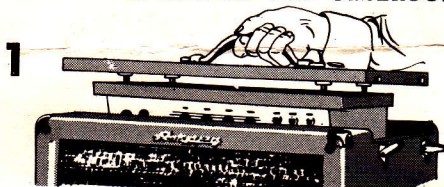


AMPEG PORTAFLEX AMPLIFIER
MODEL SB-12 (25 WATTS)

OPERATING INSTRUCTIONS

Take a few minutes to read the following instructions and fully acquaint yourself with our recommended procedures. You will be rewarded with many years of trouble-free performance.

1. Release the two cabinet clamps and withdraw the amplifier. Be certain all packing is removed from inside the cabinet.



2. Invert and reclamp the amplifier chassis. The control side may face in either direction. The cabinet clamps are the contact points for your speaker connection, eliminating the need for an external speaker cable. Therefore, be certain the clamps are securely fastened.
3. With all amplifier controls at zero, and switches off, plug the line cord into any 105-125 volt 60-cycle A.C. power source. DO NOT USE any other line voltage or severe damage will be done.
4. Flip the toggle switch. The lucite monogram panel on the control side of the tube cage will glow in a soft green light. (Incidentally, you may have your initials or a six-letter name engraved on this panel. Instructions will be found in your instruction envelope).
5. In order to diminish the 60-cycle hum that is present in all A.C. power lines, simply reverse the plug at the wall outlet. This is known as reversing the polarity.

Another common cause of hum is inadequate shielding or a poor ground connection in the microphone, pickup or cable. If the hum becomes louder when you plug in an instrument cable, it is likely to be coming from poor shielding in the cable or pickup. It is wise to have a spare cable.

TONE AND VOLUME CONTROL OPERATION:

We purposely leave numbers off the dials of Ampeg amplifiers to compel you to judge your setting by ear. The horizontal lines on the control panel may be used as indicators for the pointers of the control knobs, and are considered merely as reference points for future settings. Once you have the controls adjusted to your liking, you may always return to that setting. If you hear a slapping sound in the speaker, you have reached the point of overload. CUT BACK ON THE VOLUME!

If you should use more than one instrument with your SB-12, be prepared for a slight drop in volume, and readjust the volume and tone controls accordingly. Under some conditions, you may experience a small problem in obtaining proper balance of the pickup, or microphone, particularly when using a voice microphone or pickup without a volume control of its own. Experimenting will quickly determine the necessary volume settings.

WITH THE AMPEG UPRIGHT BASS, MODELS BB-4 AND BB-5

When using the Ampeg Bass with the SB-12 Portaflex, the most desirable settings are maximum bass and minimum treble. As a preliminary setting, turn the volume control to nine o'clock (let us consider the control knobs and their pointers similar to the face of a clock for the sake of description).

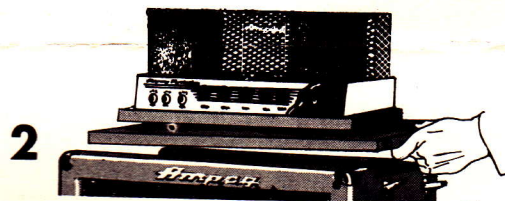
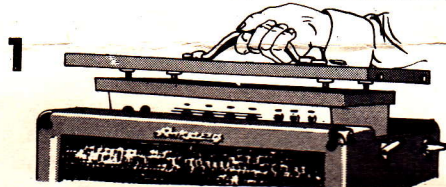
The tone control on your BB-4 on the G-string side of the pickup. The tone is generally more satisfactory when the tone control is turned completely counterclockwise, i.e. full bass.

The control on the E side of the pickup is the volume control. It is suggested that you leave the volume control turned completely clockwise, i.e. full volume.

Important: The volume setting (gain) should never quite reach or exceed the overload point of the speaker, as the cone can be quickly destroyed if overdriven.

Take a few minutes to read the following instructions and fully acquaint yourself with our recommended procedures. You will be rewarded with many years of trouble-free performance.

1. Release the two cabinet clamps and withdraw the amplifier. Be certain all packing is removed from inside the cabinet.



2. Invert and reclamp the amplifier chassis. The control side may face in either direction. The cabinet clamps are the contact points for your speaker connection, eliminating the need for an external speaker cable. Therefore, be certain the clamps are securely fastened.
3. With all amplifier controls at zero, and switches off, plug the line cord into any 105-125 volt 60-cycle A.C. power source. DO NOT USE any other line voltage or severe damage will be done.
4. Flip the toggle switch. The lucite monogram panel on the control side of the tube cage will glow in a soft green light. (Incidentally, you may have your initials or a six-letter name engraved on this panel. Instructions will be found in your instruction envelope).
5. In order to diminish the 60-cycle hum that is present in all A.C. power lines, simply reverse the plug at the wall outlet. This is known as reversing the polarity.

Another common cause of hum is inadequate shielding or a poor ground connection in the microphone, pickup or cable. If the hum becomes louder when you plug in an instrument cable, it is likely to be coming from poor shielding in the cable or pickup. It is wise to have a spare cable.

tone and volume control operation:

We purposely leave numbers off the dials of Ampeg amplifiers to compel you to judge your setting by ear. The horizontal lines on the control panel may be used as indicators for the pointers of the control knobs, and are considered merely as reference points for future settings. Once you have the controls adjusted to your liking, you may always return to that setting. If you hear a slapping sound in the speaker, you have reached the point of overload. CUT BACK ON THE VOLUME!

If you should use more than one instrument with your SB-12, be prepared for a slight drop in volume, and readjust the volume and tone controls accordingly. Under some conditions, you may experience a small problem in obtaining proper balance of the pickup, or microphone, particularly when using a voice microphone or pickup without a volume control of its own. Experimenting will quickly determine the necessary volume settings.

WITH THE AMPEG UPRIGHT BASS, MODELS BB-4 AND BB-5

When using the Ampeg Bass with the SB-12 Portaflex, the most desirable settings are maximum bass and minimum treble. As a preliminary setting, turn the volume control to nine o'clock (let us consider the control knobs and their pointers similar to the face of a clock for the sake of description).

The tone control on your BB-4 on the G-string side of the pickup. The tone is generally more satisfactory when the tone control is turned completely counterclockwise, i.e. full bass.

The control on the E side of the pickup is the volume control. It is suggested that you leave the volume control turned completely clockwise, i.e. full volume.

Important: The volume setting (gain) should never quite reach or exceed the overload point of the speaker, as the cone can be quickly destroyed if overdriven.

FOR ACOUSTIC BASS WITH THE AMPEG 800-S PICKUP

The Ampeg pickup (800-S) for acoustic string bass has neither volume nor tone controls. The control on the 800-S external microphone is a balance control for the inside and outside microphones, which gives the effect of a tone control. Therefore, all settings must take place at the amplifier. This acoustic pickup is far more sensitive to feedback (induced microphonics), so adjust the volume setting carefully.

FOR USE WITH GUITAR:

Treble and bass settings may be adjusted differently for the guitar. You may desire maximum treble and minimum bass, or any adjustment in between.

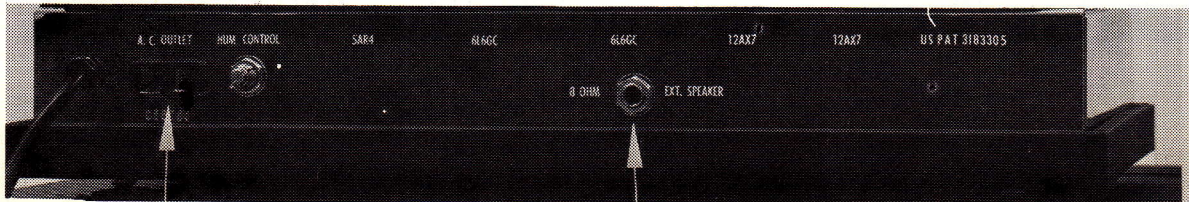
An important point to remember when adjusting control settings for the guitar, is to set the volume control of the guitar all the way up, reducing the amplifier's volume to the desired level. This will provide maximum fidelity. If you perform with the volume controls DOWN on the guitar and UP on the amplifier, you will not obtain the extreme highs.

FOR USE WITH ACCORDION:

When adjusting the amplifier control settings, be sure the volume controls on the accordion are off until all of the settings on the control panel of the amplifier are adjusted. The accordion uses an acoustic pickup, and is sensitive to feedback. You can destroy a speaker by allowing your SB-12 to develop a "loud squeal" (feedback). When you have what you believe is a workable setting on the amplifier controls, move away from the amplifier, and slowly turn up the accordion volume controls until you reach a satisfactory volume without feedback. If you have to readjust the amplifier, turn the volume control on the accordion down before walking back to the amplifier to reset your controls. In this way you will avoid the feedback or squealing problem.

If you have the Ampeg AM-5 accordion pickup with the stereo "Y" cord, for stereo input into the amplifier, put the treble phone jack into the amplifier input marked instrument, and the bass phone jack into the input marked bass. It is a good idea to identify the bass and treble input jacks with a piece of electrician's tape.

Most accordionists favor more bass, with minimum treble settings to mellow the metallic quality of the accordion reeds. Guitarists more often emphasize the crisp highs. For optimum sound and performance, the proper balancing of all controls is a critical factor. You will find it rewarding, if you take the time to adjust the controls slowly, and become thoroughly acquainted with the subtle tone colorations possible with the SB-12.



EXTENSION SPEAKER INFORMATION:

The SB-12 has an extension speaker output jack on the back of the chassis. To attach, simply plug a standard cable into the SB-12 extension speaker output jack, and the other end of the cable into your extension speaker. (A matching Ampeg extension speaker may be obtained through your authorized Ampeg dealer).

AUXILIARY OUTLET

For your convenience, there is a standard 110 volt A.C. plug outlet on the back of the SB-12. This is particularly useful when you are playing on a large stage and wish to separate the members of your group. Simply plug the amplifier into the outlet on the back of your SB-12.

TROUBLESHOOTING:

A complete wiring diagram (schematic) is pasted to the underside of the amplifier chassis. The most common trouble in instrument amplification may be found in the external connections. Loss of power (or gain), or unevenness of tone quality can usually be traced to faulty external cables. If the SB-12 is plugged in and you have neither pilot light, or sound, you may easily check the fuse, which is located on the control panel. Replace if necessary with a type AGC 3 amp fuse only.

For your convenience, we have included a list of our Authorized Ampeg Service Centers. If you should encounter any difficulty with your amplifier, in or out of warranty, please have repairs performed only by authorized Ampeg service centers.

CARE AND MAINTENANCE:

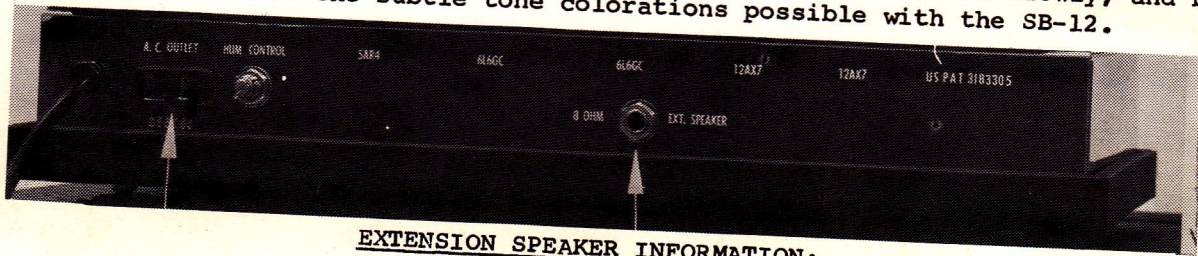
A dampened, soapy sponge will quickly clean the tough, durable vinyl covering of your PORTAFLEX SB-12. We find that Pledge is best for polishing chrome surfaces. The grill cloth may be tightened, if necessary, by a heat lamp or electric iron held several inches from the surface, and kept in motion, applying enough heat to shrink the grill cloth. The

FOR USE WITH ACCORDION:

When adjusting the amplifier control settings, be sure the volume controls on the accordion are off until all of the settings on the control panel of the amplifier are adjusted. The accordion uses an acoustic pickup, and is sensitive to feedback. You can destroy a speaker by allowing your SB-12 to develop a "loud squeal" (feedback). When you have what you believe is a workable setting on the amplifier controls, move away from the amplifier, and slowly turn up the accordion volume controls until you reach a satisfactory volume without feedback. If you have to readjust the amplifier, turn the volume control on the accordion down before walking back to the amplifier to reset your controls. In this way you will avoid the feedback or squealing problem.

If you have the Ampeg AM-5 accordion pickup with the stereo "Y" cord, for stereo input into the amplifier, put the treble phone jack into the amplifier input marked instrument, and the bass phone jack into the input marked bass. It is a good idea to identify the bass and treble input jacks with a piece of electrician's tape.

Most accordionists favor more bass, with minimum treble settings to mellow the metallic quality of the accordion reeds. Guitarists more often emphasize the crisp highs. For optimum sound and performance, the proper balancing of all controls is a critical factor. You will find it rewarding, if you take the time to adjust the controls slowly, and become thoroughly acquainted with the subtle tone colorations possible with the SB-12.



EXTENSION SPEAKER INFORMATION:

The SB-12 has an extension speaker output jack on the back of the chassis. To attach, simply plug a standard cable into the SB-12 extension speaker output jack, and the other end of the cable into your extension speaker. (A matching Ampeg extension speaker may be obtained through your authorized Ampeg dealer).

AUXILIARY OUTLET

For your convenience, there is a standard 110 volt A.C. plug outlet on the back of the SB-12. This is particularly useful when you are playing on a large stage and wish to separate the members of your group. Simply plug the amplifier into the outlet on the back of your SB-12.

TROUBLESHOOTING:

A complete wiring diagram (schematic) is pasted to the underside of the amplifier chassis. The most common trouble in instrument amplification may be found in the external connections. Loss of power (or gain), or unevenness of tone quality can usually be traced to faulty external cables. If the SB-12 is plugged in and you have neither pilot light, or sound, you may easily check the fuse, which is located on the control panel. Replace if necessary with a type AGC 3 amp fuse only.

For your convenience, we have included a list of our Authorized Ampeg Service Centers. If you should encounter any difficulty with your amplifier, in or out of warranty, please have repairs performed only by authorized Ampeg service centers.

CARE AND MAINTENANCE:

A dampened, soapy sponge will quickly clean the tough, durable vinyl covering of your PORTAFLEX SB-12. We find that Pledge is best for polishing chrome surfaces. The grill cloth may be tightened, if necessary, by a heat lamp or electric iron held several inches from the surface, and kept in motion, applying enough heat to shrink the grill cloth. The grill cloth may be cleaned by brushing occasionally with a soft bristle brush.

A good amplifier is a sensitive piece of electronic equipment. Treated with due respect and consideration, it should give you many years of trouble-free performance.

Copyright 1967, THE AMPEG CO., INC., BOX 515, LINDEN, NEW JERSEY

-030867- 1M
4010059

U. S. Patent No. 3183305



LINDEN, NEW JERSEY

Area Code (201) 925-6700

New York (212) WO 4-9298

AUTHORIZED SERVICE CENTERS FOR AMPEG EQUIPMENT

AMPEG—oriented technicians, trained to cope with problems unique to the amplified musician, are standing by. Contact the Center nearest you for either in—or out-of-warranty service. They share our aim for efficiency, promptness, economy and satisfaction.

To help you with any service problem you may encounter—no matter how minor—the following companies are at your service nationally:

AMPEG INC. Service Center
330 Dalziel Road
Linden, N. J.
(201) 925-6700

Smith's Radio & T.V.
Reid Street, East
Hamilton, Bermuda

Koss Sound
2177 North 37th Street
Milwaukee, Wisconsin
(414) 873-2340

All-Amp Service Co.
117 W. 48th Street
New York, New York
(212) 765-4345

Donald Stanley
8164 Rugby Avenue
Birmingham, Alabama
(205) 836-7044

Johnson Electronics
1205 Niles Street
St. Paul 16, Minn.
(612) 698-6091

Herb Jones Service Center
503 Schenectady Avenue
Brooklyn, N. Y.
(212) 774-6872

Sho-Bud Guitar, Inc.
416 Broadway
Nashville, Tennessee
(615) 256-0059

Electronics
337 North Waco Ave.
Wichita, Kansas
(316) 264-4590

Air Tel Service Center
2055 Front Street
East Meadow, L. I., N. Y.
(516) 485-6666

Maury's Fluorescent &
Appliance Service
962-3rd Street
Louisville, Kentucky
(502) 585-3141

Russ Bryan
915 South Eire
Tulsa, Oklahoma
(918) 939-5294

Mishlanie's Electronics
709 West Cooper Street
Utica, New York
(315) 732-3743

Maury's Fluorescent &
Appliance Service
3914 Frankfort Avenue
Louisville, Kentucky
(502) 585-3141

A. A. Kelly Electronics
4181 Manchester Avenue
St. Louis, Missouri
(314) 531-6095

Fairfield Audio Association
52 Chauncy Street
Boston, Mass.
(617) 426-4643

Maury's Fluorescent &
Appliance Service
367 Southland
Lexington, Kentucky
(606) 278-2301

Richard E. Tucker
440 N. 21st Street
Las Vegas, Nevada
(702) 382-0184

Marty Weiss—Audio Technician
7131 Saul Street
Philadelphia, Pa.
(215) 333-8616

Powersound by Parson
6844 W. 95th Street
Oak Lawn, Illinois
(312) 422-1034

Krebs Enterprises
4136 Lankershim Blvd.
N. Hollywood, Calif.
(213) 763-1824

Philip Polito Radio & T.V.
110 Sheridan Avenue
(Bellevue) Pittsburgh, Pa.
(412) 761-7004

Ralph Fischer
2837 Park Place
Evanston, Illinois
(312) 475-6781

Leo's Music Center
1601 Clay Street
Oakland, Calif.
(415) 452-3746

Boykin's Electronics
11th and "K" Street, N.W.
Washington, D. C.
(202) 737-1612

Ken Law Amp & Guitar Repair
Route 2—Box 88A
Hampshire, Illinois
(312) 683-3559

Empire Electronics
15220 First Avenue
Seattle, Washington
(206) 244-5200

Universal Electronics
3202 Delaware Avenue
Richmond, Virginia
(703) 648-2561

Electronic Music Corp.
560 East 200th Street
Euclid, Ohio
(216) 486-7343

H. E. Russell
4650 Balboa
Wichita Falls, Texas
(817) 692-6738

Allied Music Center
7600 N.W. 7th Avenue
Miami 50, Florida
(305) 759-8581

Kuciembra Service Co.
5657 Williamson Street
Dearborn, Michigan
(313) 581-5214

Hillcrest Electronics
4004 Highland Drive
Salt Lake City, Utah
(801) 277-4501