

**ADCOM
POWERAMP
GFA-545**

WARNING

The following information is for your own safety and well being.
(required by Underwriters Laboratories, Inc. UL 1270, Sec. 65)

READ INSTRUCTIONS

All safety and operating instructions should be read before this unit is operated.

RETAIN INSTRUCTIONS

Retain this notice and the owners manual for future reference.

HEED WARNINGS

All warnings and cautions on the unit and in the owners manual should be adhered to.

FOLLOW INSTRUCTIONS

All operating and use instructions should be followed.

WATER OR MOISTURE

This unit should not be exposed to water or moisture. For example, near a bathtub, in a wet basement or near a swimming pool.

VENTILATION

This unit should be situated so that its location or position does not interfere with its proper ventilation. Be sure that at least $\frac{1}{2}$ " of space is provided above or below all ventilation holes.

HEAT

This unit should be placed away from other heat producing products and adequate ventilation should be provided.

AC ONLY

This unit should be connected to an AC outlet only. With the precautions described in the owners manual.

GROUNDING

Precautions should be taken for proper grounding as described in the owners manual.

AC CORD PROTECTION

The AC cord should be routed so that it is not likely to be walked on or pinched by items placed upon or against it. Please pay extra attention to cords at the plug, convenience outlet and the point where they exit from the unit.

CLEANING

The unit can be cleaned using a soft cloth dampened with a solution of liquid detergent and water. Under no circumstances should a lye solution or an abrasive cleaner such as scouring powder be used on any part of the unit.

NON USE PERIOD

The power cord should be unplugged from the AC outlet when the unit will not be used for an extended period of time.

OBJECT OR LIQUID ENTRY

Care should be taken so that objects do not fall and liquids are not spilled into the unit through ventilation holes.

DAMAGE REQUIRING SERVICE

The unit should be serviced by a qualified service agency when:

- A) The power supply cord or the plug has been damaged; or
- B) Objects have fallen, or liquid has been spilled into the unit; or
- C) The unit has been exposed to rain; or
- D) The unit does not appear to operate normally or exhibits a marked change in performance; or
- E) The unit has been dropped, or the enclosure damaged.

SERVICING

You should not attempt to service the unit beyond that described in the owners manual. All other servicing should be referred to a qualified service agency.

ADCOM GFA-545 OWNERS MANUAL

WELCOME

It is very important that you thoroughly read this owners manual before turning your ADCOM GFA-545 power amplifier on.

(For those in a hurry, please read Sections 1 — 5)

Your ADCOM GFA-545 represents the most advanced thinking in audio amplifier design. At 100 watts per channel, the GFA-545 offers an exceptional value; superior performance at a reasonable price. Some of the outstanding features of this product are:

- 100 watts per channel, 20Hz — 20kHz, into an 8 ohm load with both channels driven with less than 0.09% total harmonic distortion.

- The ability to drive very low impedance loads.

- Instantaneous Distortion Alert which indicates when distortion products are above the 1% level.

This manual has been written to anticipate the kind of questions you might encounter while enjoying the full benefits of your GFA-545 power amplifier. Please read it thoroughly to fully understand all of the features offered and how they can be used to maximize the performance of your audio system.

SECTION 1

WHAT TO DO WHEN YOU OPEN THE BOX

Before each GFA-545 left the factory, it was carefully inspected for physical imperfections as a routine part of ADCOM's systematic quality control. This, along with full electrical testing, should insure a product flawless in both appearance and performance. After you have unpacked the amplifier, inspect it for physical damage. Save the shipping carton and all packing materials as they are essential to reduce to a minimum the possibility of transportation damage should the product ever need to be shipped again. In the unlikely event that damage has occurred, notify your dealer immediately and request the name of the carrier so that a written claim to cover shipping damages can be initiated.

THE RIGHT TO ANY CLAIM AGAINST A PUBLIC CARRIER CAN BE FORFEITED IF THE CARRIER IS NOT NOTIFIED PROMPTLY AND IF THE SHIPPING CARTON AND PACKING MATERIAL ARE NOT AVAILABLE FOR INSPECTION. SAVE ALL PACKING MATERIALS UNTIL THE CLAIM HAS BEEN SETTLED.

SECTION 2

WHERE TO PUT IT (AND WHERE NOT TO!)

The GFA-545 utilizes large heat sinks to dissipate heat from the power transistors. The top and bottom panels of the amplifier have slots to allow air to circulate inside the amplifier. Adequate air circulation must be available to assure cool operation of the amp. Therefore, the GFA-545 should not be completely enclosed with other heat producing components, and adequate space around the amplifier should be maintained. We recommend at least 3 inches on the top and 1 inch on the sides and rear for air circulation. If the GFA-545 is going to be mounted in an enclosed cabinet, it is recommended that the back of the cabinet have vents to allow air to circulate around the amplifier. With these considerations in mind, the GFA-545 should perform quite happily in any reasonable environment. Of course, such normal considerations as protection from excessive dust and moisture should always be observed. The ADCOM GFA-545 power amplifier has been carefully designed with high quality components so that long term undiminished performance may be expected from the amp when it is operated in accordance with the instructions provided.

SECTION 3

WHERE (AND HOW) ALL THE WIRES GO

All connections are conveniently located on the rear panel of the GFA-545. Any suitable program

source, such as a control preamplifier may be used. ALL CONNECTIONS MUST BE MADE WITH THE AMPLIFIER UNPLUGGED AND THE AC POWER SWITCH OFF.

When making input signal connections, only high quality shielded (co-axial) audio cable should be used. The input jacks accept the standard two-conductor RCA-type phono plugs.

The line cord should be plugged into an AC outlet providing 120 volts AC, 50-60 Hertz.

Output connections from the GFA-545 can be made to any standard or electrostatic loudspeaker system.

When connecting speakers to the GFA-545, you should always use the largest wire size (lowest gauge number) that is available to you. We recommend at least 16 gauge, 2-conductor cord (zip cord) for distances up to 25 feet. For distances up to 50 feet, 14 gauge wire should be used. You may also wish to consider some of the commercially available speaker cables which have been specially designed to improve the connection between the power amplifier and the loudspeakers.

When connecting the speaker wires, **correct phasing** is required to obtain maximum bass response and to preserve a coherent sound when vocalists perform. The simplest way to insure proper phasing is to inspect the wire being used. Some form of coding is always employed, whether a ridge or groove on one edge or side of the wire, or the wires may be of different colors: one copper wire and one silver. Color coded wires are the easiest to use. For example, to connect a speaker to the left channel of the GFA-545, first connect the copper colored wire to the Left Channel positive (red) output terminal on the amplifier. Next connect the silver wire to the Left Channel negative (black) output terminal on the amplifier. Now connect the other end of the copper wire to the positive terminal of your Left speaker and the silver wire to the negative terminal. Follow the same procedure for connecting the Right speaker to the Right Channel of the amplifier. IT IS IMPERATIVE THAT THE POWER TO THE AMPLIFIER IS DISCONNECTED DURING THE HOOK UP PROCEDURE.

An alternate (but less reliable) method for checking proper phase response is to connect two speakers and then place them side by side. Play some mono program material with heavy bass content through the system. Now turn off the system, and reverse one pair of leads to one speaker. Turn on the system and play the same passage again. If the bass response has increased, leave the system as it is now. If it has diminished, turn off the system and rewire it as it was originally set up. When making loudspeaker connections care must be taken to avoid short circuits which will cause improper operation of the amplifier.

AMPLIFIER PROTECTION CIRCUIT

Your GFA-545 power amplifier is equipped with external and internal fuses which are designed to protect your loudspeakers from possible damage and also to protect the amp itself under all but the severest abuse of operating conditions. A thermal cutoff is also employed to protect the amplifier under high temperature conditions.

Because of the great amount of electrical energy stored in the capacitors, the design of the GFA-545 will allow music to remain audible for several seconds after the amplifier has been shut off. We suggest that you wait until the red power LED has stopped glowing before turning off your preamplifier and other audio equipment. This procedure will avoid turn-off transients from reaching your speakers.

SECTION 4

SAFETY WARNING

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL ONLY!

CAUTION: BURN-OUT OF THE OUTPUT STAGE BECAUSE OF FAILURE TO OBSERVE THE FOLLOWING PRECAUTIONS WILL VOID THE WARRANTY!

There is no such thing as absolute reliability or protection when amplifiers are abused. While the GFA-545 amplifier has been designed to operate reliably under normal conditions, it may not be impervious to gross abuse. There is one condition which must always be avoided: This condition is called RF Detection and because ADCOM amplifiers have extremely wide bandwidth, RF Detection will almost

certainly cause failure of the output devices if it occurs. Damage to, or failure of this equipment due to RF Detection is considered abuse, and is specifically excluded from the ADCOM warranty.

The following acts cause RF Detection and **MUST BE AVOIDED**:

- 1) Connecting the inputs or outputs while the amplifier is ON.
- 2) Using the "thumb test". It is a dangerous habit to connect cables to the inputs, touching the other end of the cable while the amplifier is on. This may not only cause amplifier failure but may destroy your loudspeakers due to the high power surge emitted from the amplifier.

It is essential to follow the procedure of completely hooking up your system before turning anything on! A few simple precautions will contribute to trouble free performance. Because of the high power of the GFA-545, ADCOM will not be responsible for any damage to speakers or other components due to their inability to handle the amplifier's power output or other misuse.

SECTION 5

WHY WE BUILT IT THE WAY WE DID

The ADCOM GFA-545 represents a departure from many of the other currently available amplifier designs. This departure is the result of a careful study of all known amplifier technology, circuits and parts. The major feature of the GFA-545 is its outstanding ability to drive virtually any speaker to high sound levels while maintaining the sonic integrity of the music.

The Instantaneous Distortion Alert is a unique distortion detection circuit which reads all forms of distortion — THD, IM, slew induced, and DC offset. Peak LEDs, one per channel, will glow when distortion is above 1% regardless of the load impedance or reactance. In use, the LEDs may occasionally flicker under high volume listening. If they glow brightly or are on most of the time that you are listening, you are overdriving your equipment and should turn down your volume control.

We consider the GFA-545 a truly significant contribution to the advancement of sound technology. To ensure that the quality of construction is on par with the quality of the sonics, (a much neglected area in many other amplifiers) the GFA-545 has been carefully developed with computer controlled metal fabrication techniques that maintain .005 of an inch tolerances throughout. Full electrical inspection of each and every circuit board, sub-assembly, as well as the finished amplifier, provide a mechanically and sonically superior product for your enjoyment.

SECTION 6

THE CARE AND FEEDING OF YOUR GFA-545

Great care has been taken by ADCOM to assure that your amplifier is as flawless in appearance as it is electronically. The front panel is high-grade anodized aluminum, chosen for its durability and beauty. If the front panel should become fingerprinted or smeared, it can be cleaned with a damp, soft cloth.

UNDER NO CIRCUMSTANCES SHOULD A STRONG OR ABRASIVE CLEANER SUCH AS SCOURING POWDER OR OVEN CLEANER BE USED ON ANY PART OF THE AMPLIFIER

The amplifier is protected by a line fuse on the rear panel. If the power is switched on and the small red LED on the front panel does not illuminate after a few seconds, shut off the amplifier, unplug the AC line cord from the power outlet, and check the AC line fuse. If the fuse has opened, replace it **ONLY** with a fuse of equal value.

REPLACEMENT WITH AN INCORRECT FUSE OR ONE OF A HIGHER RATING WILL NOT PROTECT THE AMPLIFIER AND WILL VOID THE WARRANTY.

If after replacing the fuse, it blows immediately, an electronic component failure must be suspected. No further attempts to replace the fuse or operate the amplifier should be made.

SECTION 7

IF YOU HAVE A PROBLEM OR QUESTION

ADCOM has a Technical Service Department to answer all questions pertinent to the installation

and operation of your unit. Please feel free to write or call us in the event of difficulty, and we shall endeavor to offer prompt advice. If your problem can not be resolved through our combined efforts, we may wish to refer you to an authorized repair agency, or we may prefer to authorize return of the unit to the factory. To aid us in directing you to a convenient service station, it would be helpful if you indicate which major city is accessible to your home.

Please address inquiries to:
ADCOM TECHNICAL SERVICE DEPT
11 ELKINS ROAD
EAST BRUNSWICK, N.J. 08816

Be sure to include the serial number of your unit, date of purchase and the name and address of the dealer. In the event that the unit must be returned, an authorization form and proper packing instructions will be forwarded to you. This authorization form should be returned with your unit to identify it and avoid unnecessary delays.

UNDER NO CIRCUMSTANCES SHOULD YOUR UNIT BE SHIPPED TO THE FACTORY WITHOUT PRIOR AUTHORIZATION, OR WITHOUT ORIGINAL CARTON AND FILLERS.

If the original shipping carton has been lost or discarded, or if the carton is not in good condition, a duplicate carton may be obtained from our Service Department for a nominal charge.

Always ship PREPAID via UPS or other recognized surface carrier. DO NOT SHIP VIA PARCEL POST, since the packing will not withstand rough mail handling. We are forced to refuse most Parcel Post shipments since they arrive in such poor condition. FREIGHT COLLECT SHIPMENTS CANNOT BE ACCEPTED.

SECTION 8

ADCOM PROTECTION PLAN (U.S.A. ONLY)

ADCOM offers the enclosed one year LIMITED WARRANTY. Please read the details carefully to fully understand the extent of the protection offered by the warranty, its limits, and what responsibilities are required of you in order to obtain its benefits.

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