



G.A.S. CO. EXPANDED 30,000 FT. FACILITIES

THOEBE

Thoebe is a solid-state preamplifier that shares much of the circuitry of Thaedra, GAS Company's top-of-the-line preamp. It is without doubt a state-of-the-art stereo component with sonic performance and features capable of satisfying the demands of both audiophiles and professionals. Thoebe enables the devotee of quality high-fidelity components to acquire Thaedra's level of performance at a lower cost.

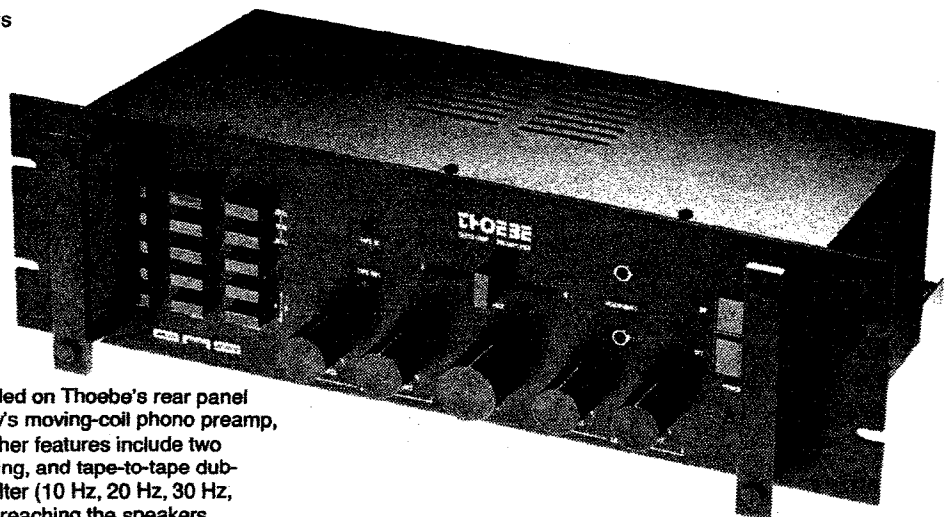
Thoebe's tone controls are located in the feedback loop of the high level amplifier. This eliminates the need for a tone amplifier and thus the tone-defeat switch. Since there is no tone amplifier in Thoebe, an extra stage of amplification is eliminated, along with any noise and distortion that might accompany it. When Thoebe's tone controls are set at the flat position they are electrically out of the circuit. The tone control turnover points—150 Hz (bass) and 5 KHz (treble)—are positioned for minimum phase shift at low and high frequencies. When used in conjunction with the low-filter switch positions, the controls make available a wide range of tonal alteration to correct for deficiencies in room acoustics, speaker response, and program material.

Since Thoebe utilizes only two stages of amplification between the phono inputs and the main outputs, with each stage individually servo-controlled, performance is raised by a whole order of magnitude. The success of this design is indicated by the extremely low distortion components above the 2nd and 3rd harmonic—below 0.005%.

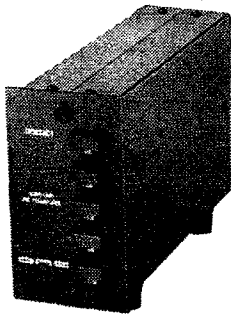
Thoebe has features which make it one of the most versatile preamplifiers available. DC coupling after the input isolation capacitors, fully-complementary symmetry, and servo-loop phono amplifier and line amplifier reduce distortion and balance the preamp's output. Thoebe is a highly powerful preamplifier, capable of delivering 1½ Watts, which can drive low (or high) impedance headphones, and passive crossovers (see page 3 for complete passive crossover design instructions). Included on Thoebe's rear panel is a jack for powering Goliath, GAS Company's moving-coil phono preamp, for use with moving-coil phono cartridges. Other features include two pairs of tape inputs with full monitoring, copying, and tape-to-tape dubbing facilities, a four-position low-frequency filter (10 Hz, 20 Hz, 30 Hz, and off) for preventing turntable rumble from reaching the speakers and wasting amplifier power, a 15-Ampere power switch, and a 15-dB muting control. Extremely flexible stereo-mode switching is also provided.

Thoebe is rack-mountable, with an attractive yet functional front panel array, and is an ideal companion unit for Son of Ampzilla power amplifier.

- Fully-complementary symmetry
- Four servo-amplifiers operating completely outside audio path to maintain DC interstage Voltages at zero in phono section and line amplifier
- DC coupling after input isolation capacitors
- Single-stage servo-loop line amplifier
- High output of 1½ Watts with 60 Ohm source impedance
- Four-position low frequency filter (10 Hz, 20 Hz, 30 Hz, off)
- Tone controls located in feedback loop
- Two fully-regulated power supplies
- Provisions for powering Goliath II
- Negligible Transient Intermodulation (TIM) distortion
- Four AC outlets on rear panel (3 switched, 1 unswitched)
- Gold-plated audio cables supplied
- 16 AWG nickel-plated steel chassis



GOLIATH II



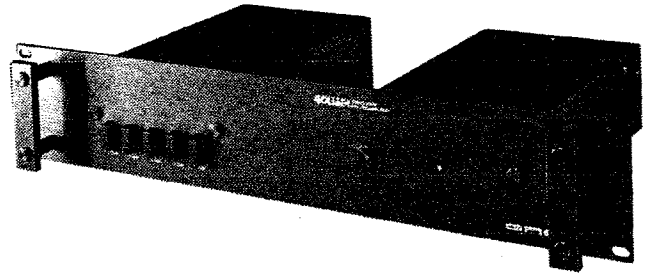
Announcing two more innovations in high fidelity sound reproduction from the Great American Sound Company: Goliath II and Powered Goliath II. Both are servo controlled, fully-complementary phono preamplifiers specifically designed for use with moving-coil phono cartridges.

The moving-coil design has many advantages over conventional magnetic cartridges. But the moving-coil cartridge has one disadvantage: an extremely low output signal, much lower than magnetic cartridges. Audiophiles wishing to use moving-coil cartridges with conventional phono preamplifiers have had to add step-up transformers or preamps to increase phono gain. These devices increase gain, but can introduce noise and distortion of their own which would spoil the outstanding sonic potentialities of the moving-coil design.

Great American Sound Company has solved these problems with Goliath II. Goliath II is an RIAA-equalized phono preamplifier with up to 70dB of gain. It is the same revolutionary moving-coil phono preamplifier found in Thaedra II that provides the extra gain required for moving coils with none of the added noise and distortion of step-up transformers or pre-preamps. Goliath II plugs into a high-level input—not the phono input. This not only reduces noise and distortion, it frees the phono inputs to accept standard magnetic cartridges.

Goliath's circuitry is fully-complementary and DC servo controlled. The gain is user-adjustable on the front panel in 3dB increments, from 58dB to 70dB, accommodating from the lowest to highest sensitivity phono cartridges. A power jack on Thoebe's rear panel supplies Goliath's power requirements. Panel height is matched to Thoebe.

SELF-POWERED GOLIATH II



For audiophiles desiring a self-powered version of Goliath, Great American Sound Company offers the self-powered Goliath II, which can be added to any stereo preamplifier. The circuitry is identical to Goliath II. It offers the same RIAA-equalized, fully-complementary, DC servo controlled performance, with front-panel gain adjustment from 58dB to 70dB in 3dB steps. It also plugs into a high-level input, thus offering an additional phono preamplifier function.

Specifications for Goliath II and Self-Powered Goliath II

Total Harmonic and IM Distortion at any level to rated power	0.01%
Signal-to-Noise—Phono, ref. 10mV—20Hz—20kHz	83dB
Gain—Adjustable from 58dB to 70dB	
Frequency Response—Phono departure from RIAA curve	±0.2dB
Frequency Response	20Hz—20kHz±0.1dB
Head Amp (MC) Signal-to-Noise	83dB
Head Amp (MC) Sensitivity	0.2mV
Dimensions: W x H x D/Weight:	2¼" x 5¼" x 8" / 5 lbs.
Metric Dimensions: W x H x D/Weight:	6cm x 13cm x 20cm / 2.3Kg.
Self-Powered Goliath II:	
Dimensions: W x H x D/Weight:	19" x 3.5" x 8" / 11 lbs.
Metric Dimensions: W x H x D/Weight:	48 cm x 9 cm x 20 cm / 5 Kg.

PASSIVE CROSSOVER DESIGN

Recently there has been much interest in bi-amplification and tri-amplification of multiple speakers or speaker systems to achieve lower distortion and more balanced sound. This usually entails inserting an active electronic crossover between the preamplifier and the power amplifiers to channel the frequency bands to their respective amplifiers. An alternative to this method is to utilize a passive crossover network, devoid of any electronics, which is driven directly by the preamplifier. Unfortunately, most preamplifiers have insufficient power output to drive passive crossovers directly. But, since Thaedra and Thoebe have been provided with unusually high power output (1½ Watts), they are able to drive passive crossovers easily.

The passive crossover network discussed here is *high-impedance*, and therefore should not be confused with the *low-*

impedance crossover network integrated into multi-driver speaker systems. Because these speaker crossovers are *low-impedance*, they cannot be driven by a preamplifier. If such a speaker system is to be used in a bi-amplifier or tri-amplifier operation, its crossover network must be disconnected.

Passive crossovers have many advantages over active crossover designs. They are quite simple to construct and very inexpensive (the crossover circuits shown here will cost a total of only a few dollars for all of the necessary parts). More importantly, the passive crossover cannot add I.M. distortion to the signal. In addition, the passive design results in no insertion loss, and allows the use of smaller, more-accurate components than speaker crossovers generally used.

In designing the passive network, the following diagrams apply:

LO-PASS NETWORK

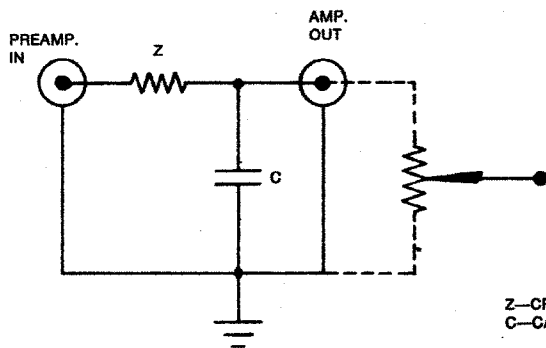
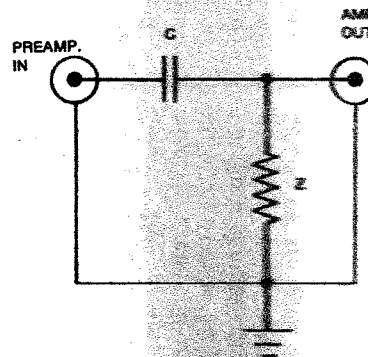


Fig. 1

Z—CROSSOVER IMPEDANCE
C—CAPACITANCE

HI-PASS NETWORK



The recommended impedance between the Thaedra or Thoebe preamplifier and the power amplifier is 2.2K Ohms. The corresponding values of capacitances at different frequencies to obtain a 6 dB-per-octave attenuation are derived from the formula:

$$C = \frac{1}{2\pi FZ}$$

F = Crossover Frequency
Z = Crossover Impedance (2.2K Ohms)

A chart has been prepared at the right showing the value of C to be used with typical crossover frequencies from 200 to 2000 Hz. For values of F between 20 and 200 Hz, the chart can also be used by finding the nearest corresponding multiple of the frequency under F and then *multiplying* the associated capacity C by 10 times. For values of F between 2KHz and 20KHz, find the nearest corresponding sub multiple of the frequency under F and then *divide* the associated capacity C by 10.

For example, if a 150Hz frequency is chosen for use with a sub woofer, look up 1500Hz in the F column of the chart. Opposite 1500 Hz, C is shown to be .047 uF. This value must be multiplied by 10 times, thus resulting in a 0.47 uF capacitor for use in this example.

The schematic for bi-amplification is at right (Fig. 2).

BIAMP

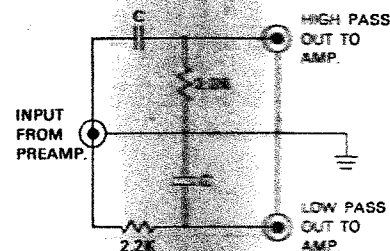


Fig. 2

CAPACITOR CHART FOR 6 DB-PER-OCTAVE CROSSOVERS FROM 200 TO 2000 HZ

F (frequency)	C (calculated)	C (nearest std. value)
200 Hz	265.25 uF	265 uF
250 Hz	212.20 uF	212 uF
300 Hz	173.63 uF	174 uF
350 Hz	144.14 uF	144 uF
400 Hz	122.52 uF	123 uF
450 Hz	106.70 uF	107 uF
500 Hz	93.78 uF	94 uF
550 Hz	83.14 uF	83 uF
600 Hz	74.38 uF	74 uF
650 Hz	67.12 uF	67 uF
700 Hz	61.04 uF	61 uF
750 Hz	55.90 uF	56 uF
800 Hz	51.46 uF	51 uF
850 Hz	47.58 uF	48 uF
900 Hz	44.14 uF	44 uF
950 Hz	41.04 uF	41 uF
1000 Hz	38.19 uF	38 uF
1100 Hz	34.42 uF	34 uF
1200 Hz	31.25 uF	31 uF
1300 Hz	28.63 uF	29 uF
1400 Hz	26.41 uF	26 uF
1500 Hz	24.49 uF	24 uF
1600 Hz	22.81 uF	23 uF
1800 Hz	20.47 uF	20 uF

TRIAMP WITH LEVEL CONTROLS

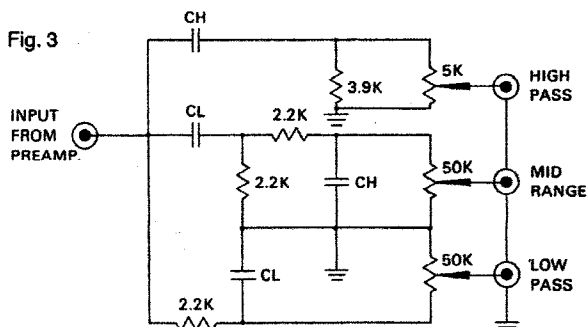


Fig. 3

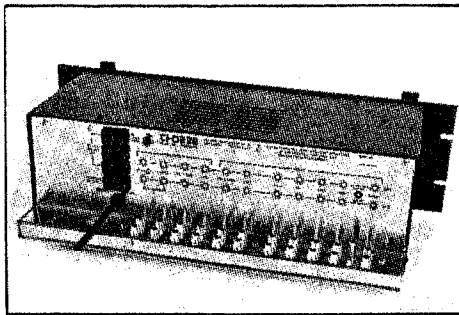
If it is necessary to change the level of one or more channels in a tri-amplified system, attenuator-type level controls can be included as

Can you beat this system?

Reprinted from UK magazine *Hi-fi Answers*, Oct. 1977.

You'd expect an American amp and speakers to be pretty big, not to mention expensive. Adding a Thorens TD160 Mk II and the new Ortofon M20FL brought the total cost of the system to over £2000. Jonathan Mills thought it was all worth it, though. Some of it, anyway . . .

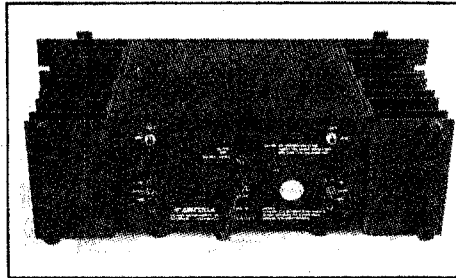
It was with considerable excitement that I trundled the various packages that contained this month's super system through my front door. The Dahlquist speakers I have heard several times before and always with enjoyable results. GAS (Great American Sound Co Inc) are, as their name suggests, a 'fun' company who name all their products rather than give them model numbers. I received 'Thoebe' and 'Son of Ampzilla', but Hayden Labs, the importers, are also introducing the 'Sleeping Beauty' moving coil cartridge and its booster amplifier 'Goliath'. Despite their light hearted attitude from the name aspect, GAS take a professional attitude to construction and enthusiastic approach to circuit design, listening tests taking prominence.



Connections

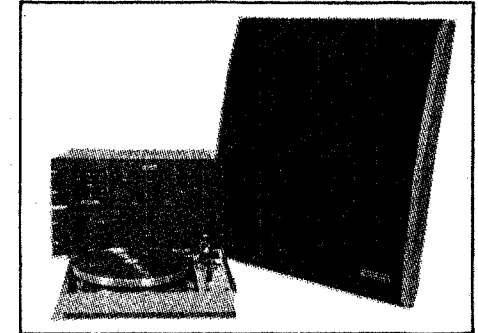
Thoebe has a veritable plethora of phono sockets on her back, all of which face upwards and are therefore very easy to get at. Half the switches you can see on the front panel control these inputs which include two phono, tuner, auxiliary and various methods of copying from one tape deck to another. The other buttons switch in 30Hz, 20Hz and 10Hz filters and control mute and mono/stereo functions. There is one large volume control with a slider balance control above it, and either side of it are bass and treble controls for each channel.

Although I do not like the inclusion of tone controls or filters on amplifiers, finding they add a grittiness to the sound when switched in, the bass and treble on the GAS amp turned out to be reasonably innocuous. They are obviously tailored for high quality speakers as they operate at the extremes of the audio range, the bass control affecting only the deep notes and the treble affecting cymbals rather than the midrange. Both tone controls and volume control have click stops allowing the listener to repeat certain settings at will.



The three high-pass filters are presumably there to avoid distress of bass units by record-warp modulations. Use of the 10Hz filter avoided blowing the 2A fuse in the Dahlquists on transients, but this fuse can be upgraded to 3A with safety. I mention this because the high pass filter causes a phase shift at low frequencies, which has effects higher up the range. This is particularly noticeable on piano, which becomes 'clearer' when the filter is switched out.

This is a subtle effect and is not meant as criticism of the amplifier — in fact I am glad the designer had the foresight to make the filters switchable. The amp has no high frequency filters, for which I am thankful, as in my experience these degrade the sound even further!



Thorens TD160 MkII, Dahlquist DQ10 plus Thoebe and Son of Ampzilla from GAS of California

Also on the rear are relay controlled outputs for two power amplifiers and, horror of horrors, three American type two pin power sockets of the unshrouded variety. These, combined with the lack of mains earth would probably make the British Standards people come out in a rash, and one wonders whether Thoebe would pass the British Safety requirements. Power is fed to the circuitry by push buttons on the front panel — one for on and one for off. Son of Ampzilla is powered from the switched socket on the rear, but the audio signal is not routed through until voltage levels have stabilised 35 seconds later. There are no controls on the power amp at all, the matt black metal case is only embellished by two power level meters. These are calibrated for 8 ohm speakers and, unfortunately, do not respond very well to peaks and only show average power levels. High frequency transient clipping occurred whilst the meters, which have a 0dB level of 80 watts, were still showing under 50 watts output. Speakers are connected via screw terminals on the rear of the amplifier allowing a good connection. There is no method of connecting or switching two pairs of speakers, GAS

having fallen in with the theory that any switch or relay contacts interfere with the sound quality. What is the point of having speaker cable of ultra-low resistance if switch contacts introduce more?

Happy combination

I am glad to say that Son of Ampzilla was really happy playing with the Dahlquists. Output power was high enough to generate a really deep bass and clean, high transients in anything but the largest mansions. Clipping occasionally occurred while reproducing drums at high levels with brass overlay, though this was relatively unobjectionable and was heard as grittiness rather than the painful distortion that some amplifiers generate.

The real test for transistor amplifiers, as far as I am concerned is the sound they give when reproducing classical string sections. Valve amps have the capability of keeping violins sweet at the top end whilst still reproducing the rasp of resin against gut. Transistor amps usually reproduce all of the rasp and none of the sweetness. Aided by the Ortofon, the amplifier can, in my estimation, join the select few that are capable of sounding both smooth and detailed, perhaps not as rounded as the Quad but then it packs more punch! The bass end was really tight and one wonders why Dahlquist bothered to bring out his sub-bass woofer (available as an extra) as organ pedal notes from the DQ1Qs shook the floor with ease.

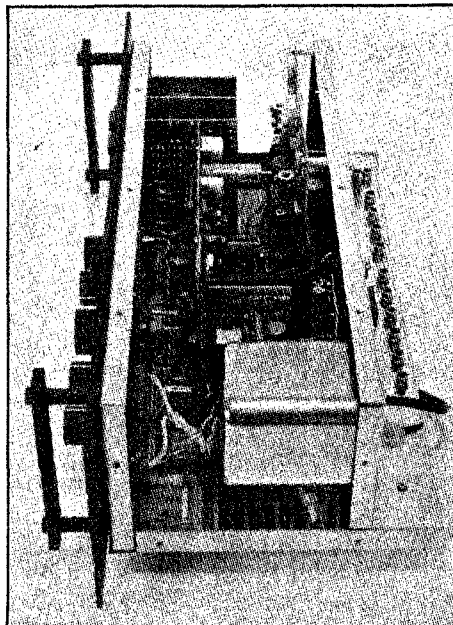
Thoebe on top of Son of Ampzilla. Actually, of course, they should both be put on a rack...



Ampzilla itself has the reputation in some quarters as having the most gutsy and tight bass end around. Son of Ampzilla follows in his father's footsteps

from what the soles of my feet and my stomach were telling me.

As for the DQ10s I find it really difficult to put into words how pleasant they were to listen to. Super smooth is probably the description that applies best, but there is also a touch of magic about them which makes them nice to come home to. In fact walking in the door after a hard day's work it is nice to think



Thoebe's internal organs. Standard of construction is superb. Rear views show input/output connections and Son of Ampzilla's massive heatsinks. No speaker switching is provided

of Thoebe and her partner sitting there just waiting to give me all that listening pleasure. It is a pity the Thorens lets the system down but if you want an alternative in the same price range try the Rega Planar 3 whose arm is perfectly happy with the Ortofon cartridge range.

Whether you think the sound this system offers is worth the money it costs should be decided by a demonstration, preferably in your own home. Personally if I had £700 to spend on speakers Dahlquists would head my shortlist and Thoebe and Son of Ampzilla would certainly draw a lot of my attention.

Sound Advice

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GREAT AMERICAN SOUND Thoebe Servo Loop Preamplifier. Serial no. A511174. Source: loan from private owner. Retail price is U.S. \$495. Manufactured by Great American Sound, 20940 Lassen St., Chatsworth, CA 91311.

This attractively styled preamp offers exceptionally accurate sound with more features than we would expect for its modest \$495 retail price. From a sonic standpoint, the Thoebe outperformed every other preamp except the Paragon 12.

Features the Thoebe has in abundance since one comes to expect minimum flexibility from a top-quality preamp as with the DB or Paragon E, both of which are priced at \$500 and do not offer tone controls, etc. We found the Thoebe's volume control to be poorly positioned and the horizontal slider for balance less convenient than a rotary switch.

The two spiffy relay switches for power had a nice feel to them. On the left of the front panel is a brace of 15 push button switches—5 for inputs including 2 phono, a handy stereo reverse, an interesting three-position low-frequency filter and a variety of tape and mode switches. Front panel jacks are provided for tape and headphones, which is handy.

We would characterize the sound of the Thoebe as extremely clean and open but tending toward the bright side, particularly in the upper mid-range. Bass was impressive—deep and well controlled with good definition. It was a close second to the Paragon 12 in this respect, and a shade better than the Rappaport. The Paragon had a little less punch in the mid-bass but was slightly better in definition.

Thoebe's imaging was excellent and equal to the Paragon and Rappaport. Transient response was exceptionally good, again, the equal of the best we have heard.

In the mid-range, the Thoebe had that richness in the lower mid-range area that gave body to the sound of a cello, a quality which we found missing in the SP-4. We were bothered by some smearing in the mid-range of the Thoebe as well as a bit of raspiness in the upper mid-range area. Neither quality was noticed on the Paragon 12.

Considered on balance, the Thoebe represents an excellent value. It offers close to the best performance we have heard from a preamp in this price level.

CREAM OF THE CROP

Preamplifiers:

Paragon 12

GAS Thoebe

Rappaport (I)

Levinson IC-9 (now MF-1)

THE BRIDGE

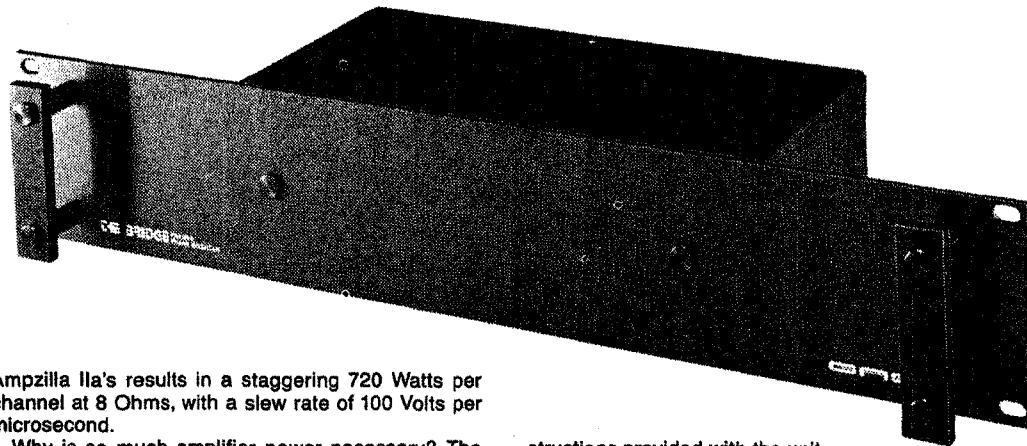
from the G.A.S. Co.

In keeping with its desire to market affordable and needed products for audio aficionados, Great American Sound Company introduces the Bridge. The Bridge offers a simple way to electrically couple two amplifiers into one in order to increase power output.

The Bridge contains a pair of 180° passive phase inverters which will combine two stereo power amplifiers into one amplifier with approximately quadrupled power output and a slew rate double that of the original individual amplifier. For example, two 40-Watt* Grandsons bridged result in an amplifier with 160 Watts per channel at 8 Ohms and a slew rate of 40 Volts per microsecond. Two 80-Watt* Son of Ampzillas bridged become one amplifier with more than 300 Watts per channel at 8 Ohms and a slew rate better than 70 Volts per microsecond. Bridging two 200-Watt

power (headroom), these transients will introduce distortion because the amplifier is clipping. If inefficient speakers are being used, the problem of inadequate headroom is further aggravated. Using the Bridge with an additional amplifier is an economical method of increasing this headroom. The Bridge offers great flexibility to those who wish to upgrade their stereo systems without investing in a higher-powered amplifier. The Bridge comes assembled on a 19-inch rack-mount panel.

NOTE: It is imperative that the two amplifiers being bridged are electrically identical, preferably the same make and model. Otherwise, bridging will not function correctly, and damage to speakers and one or both amplifiers might result. It is equally important that the user of the Bridge strictly adhere to the hook-up in-



Ampzilla IIa's results in a staggering 720 Watts per channel at 8 Ohms, with a slew rate of 100 Volts per microsecond.

Why is so much amplifier power necessary? The accurate reproduction of musical transients (the instantaneous "attack" or onset of a particular musical sound, such as a trumpet blast or cymbal crash) can require up to twenty times more power than the average musical signal. If an amplifier has inadequate

instructions provided with the unit.

*per channel at 8 Ohms.

SPECIFICATIONS

TRANSFORMER	Quadrafilar Wound	SIZE:	Utility 10 in x 3.5 in x 5.25 in 25.0 cm x 8.75 cm x 13.1cm
BANDWIDTH:	SOURCE: 600 Ohms: 5Hz-25KHz 50 Ohms: 0.1Hz-300KHz	Rack Mount	19 in x 4 in x 7 in deep 47.5 cm x 10 cm x 17.5 cm deep
DISTORTION	SOURCE: 50 Ohms: Less than .01% at 2V Output (100Hz-20KHz) Less than .04% (20Hz)	WEIGHT:	Utility 6 lbs/13.2 Kg Rack Mount 7 lbs/15.4 Kg
INSERTION LOSS:	Less than 0.1dB		

HIFI BUYER'S REVIEW

MAY 1978

VOLUME 1 NUMBER 5

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GAS

The oddly-named Thoebe preamplifier is made by the Great American Sound Company which is responsible for the Ampzilla series of power amplifiers. It measures 16 inches long by 6 1/2 inches deep and 5 inches high. Projecting from the rear, at the bottom, is a 1-inch extension on which are mounted the various input and output sockets. These are placed so the plugs are inserted vertically, which many people find more convenient than most conventional arrangements. The front panel extends 1 1/2 inches each side of the front so the unit can be mounted on a standard 19 inch rack. Styling is "all-black" with white lettering and the only touch of color comes from a tiny green indicator light.

Layout is unusual too, with the whole appearance dominated by a group of 15 push-buttons on the left-hand side arranged in three vertical rows. The first group selects the five inputs: phono 1, phono 2, tuner, aux 1 and aux 2. The next row has four buttons for two tape recorders, with dubbing, while the fifth is a mute switch to reduce the preamp's output by 15 dB. Row number three contains two low-frequency filters, stereo reverse, stereo and mono switches. The five rotary

controls at the bottom, the treble controls for a large one in the center.

All these controls are contact switches with five elements: there are five increments for the volume and 10 detents each on the four tone controls. The volume control is a pair of potentiometers for balance, and the tone controls are a pair of tape pots on the other side of the headphones. One is the power on-off switch, and the other is the indicator light. Purists (for whom this is designed) will claim that one of the controls are not in the circuit when the headphones are in the center position.

At the rear are three RCA type sockets—three switched for stereo and one unswitched for mono.

Under the headphones are two components — one is a pair of potentiometers are dispersed on the circuit boards and the other is the power transformer enclosed in a metal case from a block diagram in the review book, no circuit available, other than that a DC couple

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ach channel plus
nter for volume.
s use multi-con-
accurate resistor
21 steps in 2 dB
volume control
for lift and cut
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no less than 22
plus 4 ac out-
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uit details were
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complementary

arrangement is used throughout, and some kind of servo circuit is used to prevent drift. This can be a big problem with DC circuits as slight changes in the characteristics of one stage due to thermal effects and so on can upset the operating parameters of the whole amplifier.

The Thoebe is no lightweight as it turns the scales at 28 pounds, hence the two handles are functional as well as decorative!

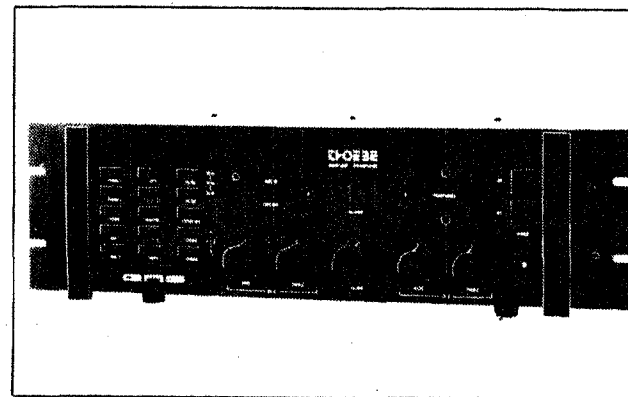
The first test was for voltage output and distortion with the results show in figure 1. THD was virtually immeasurable below 4 volts output and was only 0.3% at 13 volts! As most amplifiers need only one or two volts at most, there is a more than adequate margin. IM distortion was 0.005% at 3 volts output, falling to an infinitesimal 0.003% at 2 volts. Harmonic distortion did not increase significantly throughout the audio band so no graph is shown. Figure 2 shows the overall frequency response and the effect of the low frequency filters. One cuts at 20 Hz while the other cuts at 30 Hz, but depressing both buttons brings the turnover frequency down to 10 Hz which is rather surprising, but well, that's how they are labelled and it is absolutely correct.

The tone control characteristics can be seen in figure 2: note that the treble lift is deliberately curtailed at the highest frequencies. The volume control matching was exceptionally accurate and the deviations were less than 0.2 dB. Crosstalk measured 52 dB at 1 kHz, and 48 dB at 10 kHz, channel A to B with 44 dB and 48 dB, channel B to A (phono inputs, 600 ohm termination). Input required for 2 volts output, 600 ohm load was 200 Mv for the high levels and 1.4 mV for phono. Signal-to-noise (ref. 2 volts output, "A" weighting) was better than 100 dB and 80 dB respectively. Overload

point for phono was 110 mV with symmetrical clipping.

So much for the figures; how did it sound? In a word: neutral. For the initial listening tests it was connected to a G.A.S. Son of Ampzilla power amplifier and comparisons made with other super combinations. Among the phono cartridges were a G.A.S. "Sleeping Beauty" (Naturally!) ADC XLM, Empire 2000Z and a Stanton 881S. In addition to several top-rated speaker systems, a pair of Audio Technica electrostatic headphones was also used to check whether the Thoebe was introducing any audible coloration. There were indeed slight differences between the various cartridges (also apparent with other preamps), but I believe any other discrepancies were due to barely measurable matching differences. As mentioned earlier, the Thoebe is designed for the purists who would never dream of using a high-frequency filter or loudness control so they won't miss these items. On the other hand, most of them will appreciate the flexibility of separate tone controls and the choice of subsonic filters. Furthermore, they will appreciate the ability to use up to three tape recorders and especially those recording jacks right on the front panel. Another refinement is the use of a relay with time delay to avoid speaker-damaging switch-on surges. This preamp is not particularly cheap but then the precision controls and the small tolerance components necessary to provide really accurate RIAA equalizing are quite expensive and you can pay much more and get a lot less for your money!

One other point: allow plenty of ventilation as the unit runs pretty hot — at least for a preamp. —
George Tillett



GAS Thoebe

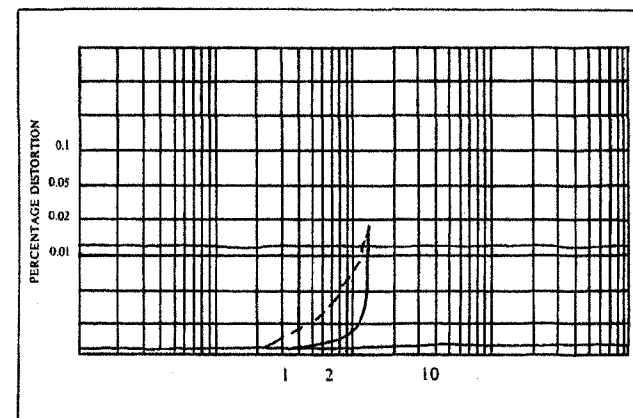


Fig. 1—Volts output and distortion, 600 ohm loads

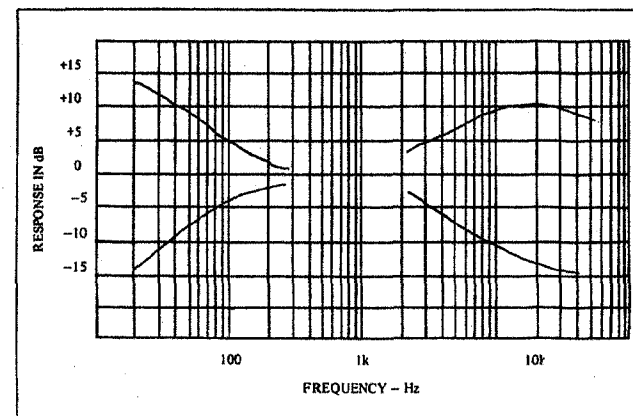


Fig. 2—Tone control characteristics

JUST ANOTHER PRETTY FACE!



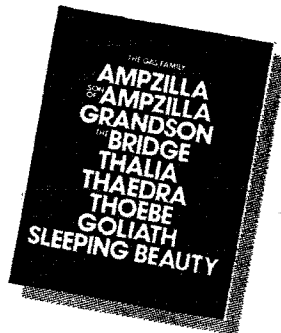
THE GREAT AMERICAN SOUND CO. INC.

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Godzilla is a professional component. The inputs are switchable in four different ways: balanced, unbalanced, high impedance (50K Ohms), and low impedance (600 Ohms), in any combination. Slew rate is an incredible 1000 V/ μ -sec!

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