

TO:

DATE: 18 MAY 1972

FROM: Dan Lansdon

SUBJECT: Barney Oliver Amplifier

A while back Barney Oliver decided to design a stereo amplifier for his home. This labor of love resulted in a state-of-the-art amplifier with outstanding performance. People at -hp- heard it (or heard about it), wanted one and offered to help make it available to -hp- employees. A cooperative, after-hours "G" job resulted. Chris Clare, Rich Marconi and Ken Peterson of Paul Stoff's lab assisted on electrical and mechanical aspects. Paul Rasmussen of Corporate Industrial Design lent his special talents. Clarence Studley of Stoff's lab finalized the mechanical design. Eileen Martin of HPL did PC layout; Betty Downs of HPL did schematics and artwork. Others, including Tom Osborne, helped in a variety of ways. Barney and his helpers spent many, many "spare time hours" and we can now take orders for delivery in September.

Without intending to make a sales pitch, I can say that tests in my home against an excellent system convinced me that Barney's amplifier is probably the best stereo amplifier ever built.

If you want a fine quality stereo system, this amplifier offers performance unmatched at two or three times the price, or perhaps at any price.

The Santa Clara Division has agreed to build a run of these amplifiers in August. THIS IS NOT AN HP PRODUCT, but it will be -hp- quality, completely assembled and tested in accordance with standard -hp- practice. WE WILL BUILD ONLY AS MANY AMPLIFIERS AS NEEDED FOR FIRM ORDERS IN OUR HANDS ON JUNE 19, 1972. WE DO NOT ANTICIPATE FUTURE RUNS.

A description, including pictures and frequency response curves is attached, as is an order blank. Also attached is a q and a sheet which should answer most of your questions. If you want one or more of the amplifiers, please fill out the order blank and mail it to us early enough so that it will be in our hands on June 19th. We will acknowledge your order directly.



**BARNEY OLIVER AMPLIFIER**  
**SPECIFICATION SHEET**

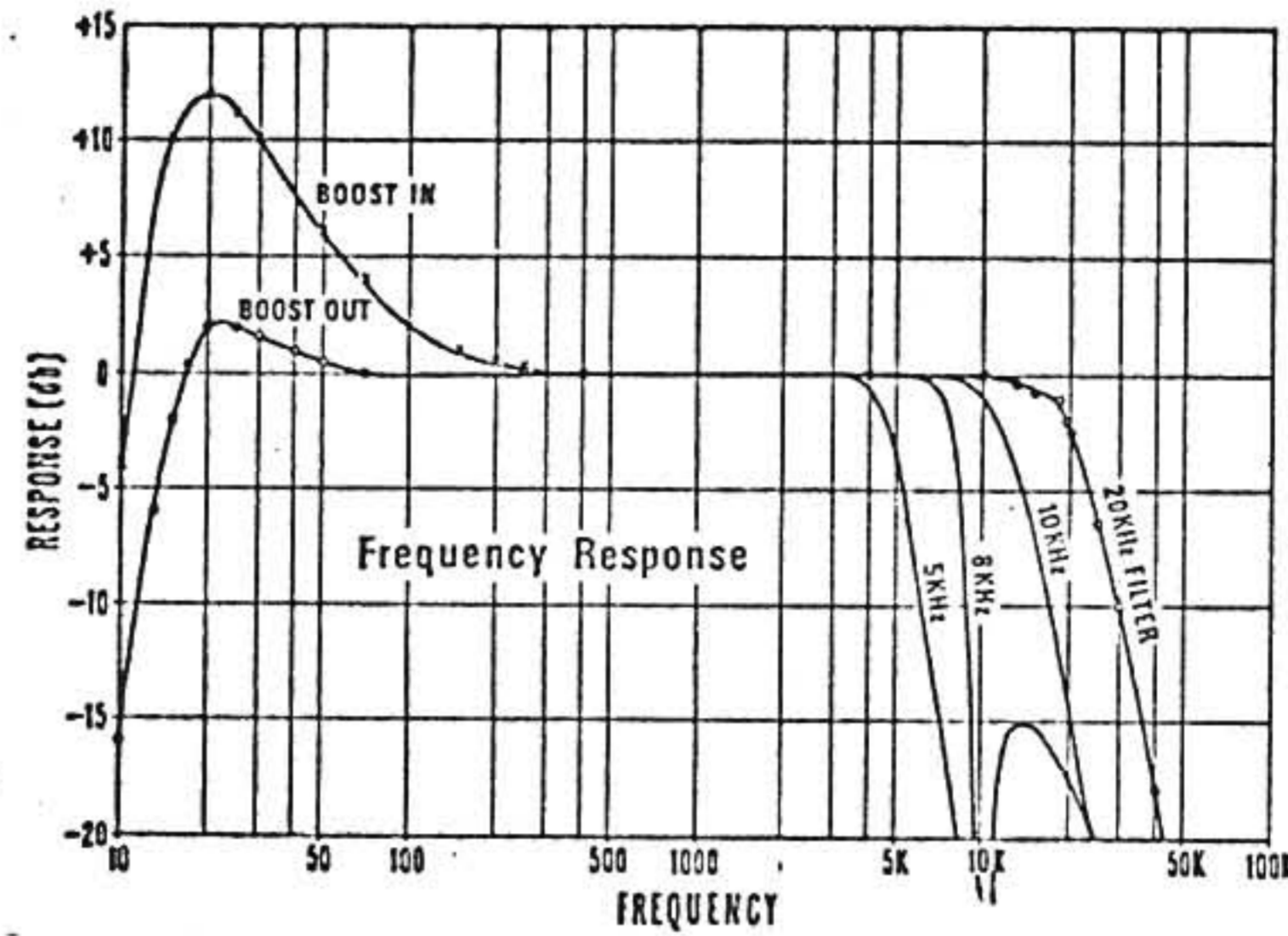
**OUTPUT PER CHANNEL**

**SPEAKER Z CONTINUOUS AUDIO PEAK**

16	80 W	160 W
8	80 W	320 W
4	*	160 W

\*Continuous high power operation at less than 8  $\Omega$  not recommended.

**FREQUENCY RESPONSE**



< 0.01%, 2 mw to max. power, all freqs.

**HARMONIC DISTORTION**

**HUM AND NOISE**

Power Amplifier  
Phono Preamp

100 db below max. output  
84 db below one volt output

**INPUT VOLTAGE FOR FULL OUTPUT**

Tuner, Tape, Aux 1, Aux 2  
Phono

$\leq 1.0$  volt r. m. s.  
 $\leq 5$  mv r. m. s.

**INPUT IMPEDANCE**

Tuner, Tape, Aux 1, Aux 2  
Phono

100 K  $\Omega$   
Optimized for SHURE V-15 Type II Pickup.

**CONTROLS (See attached pictures, curves)**

**INPUT**

TUNER, TAPE, PHONO, AUX 1, AUX 2

**MODE**

STEREO

DIR(ect), REV(erse), L, R

MONO

DUAL, L. R

**FILTER**

Controls active h. f. rolloff filter >18 db/octave with corner at 5, 8, 100 or 20 KHz. Includes 30 db notch at 10 KHz in 5 and 8 KHz positions.

**VOLUME**

Dual precision attenuator, 60 db range, 2 db steps. Eliminates need for balance control.

**BASS**

FLAT, BOOST (see attached curves)

**Response**

RIAA, + 6db, - 6 db

**SIZE**

16.72" (425 mm) wide, 5.0" (127 mm) high, 10.93" (278 mm) deep behind panel. (See attached drawing.)

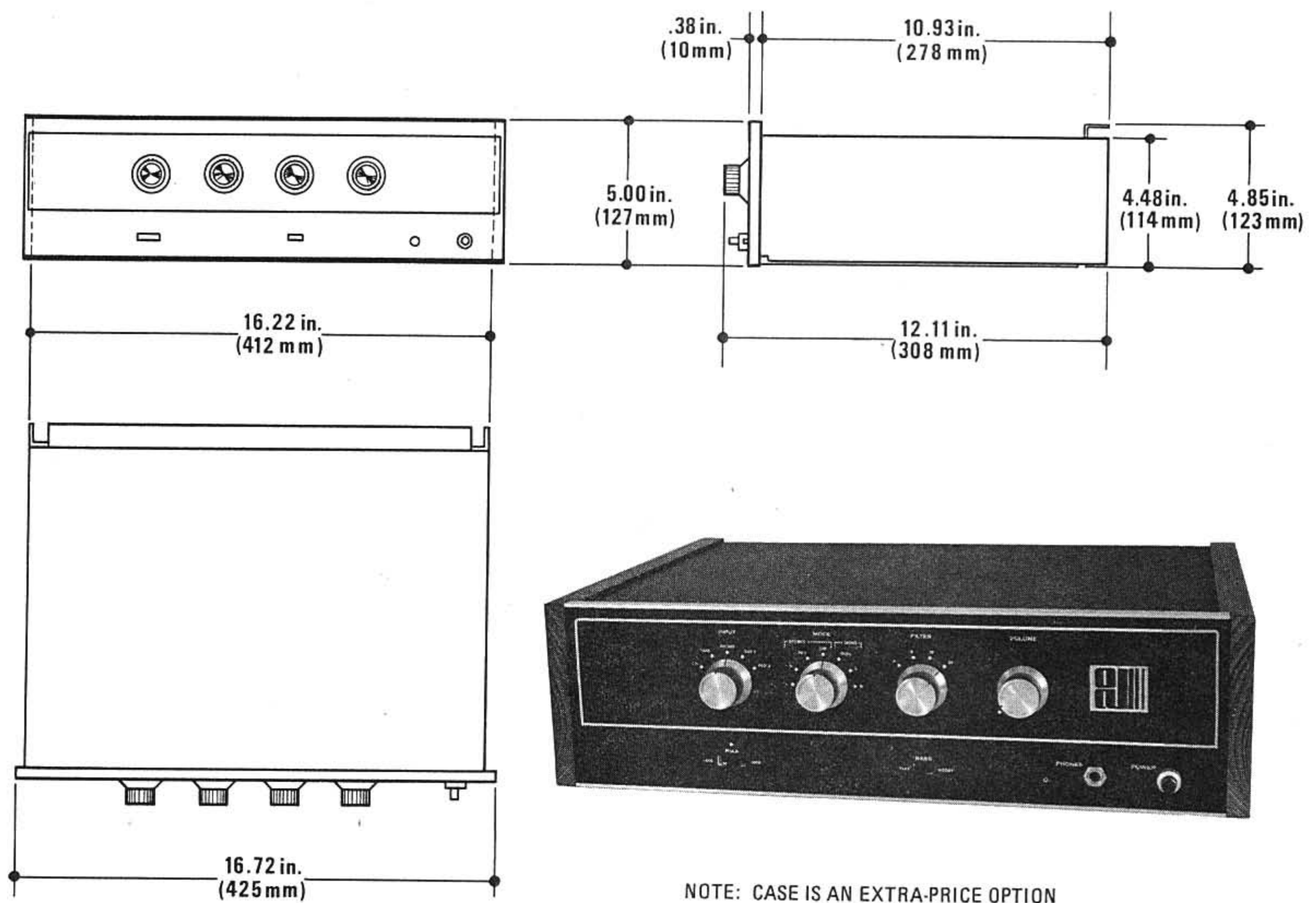
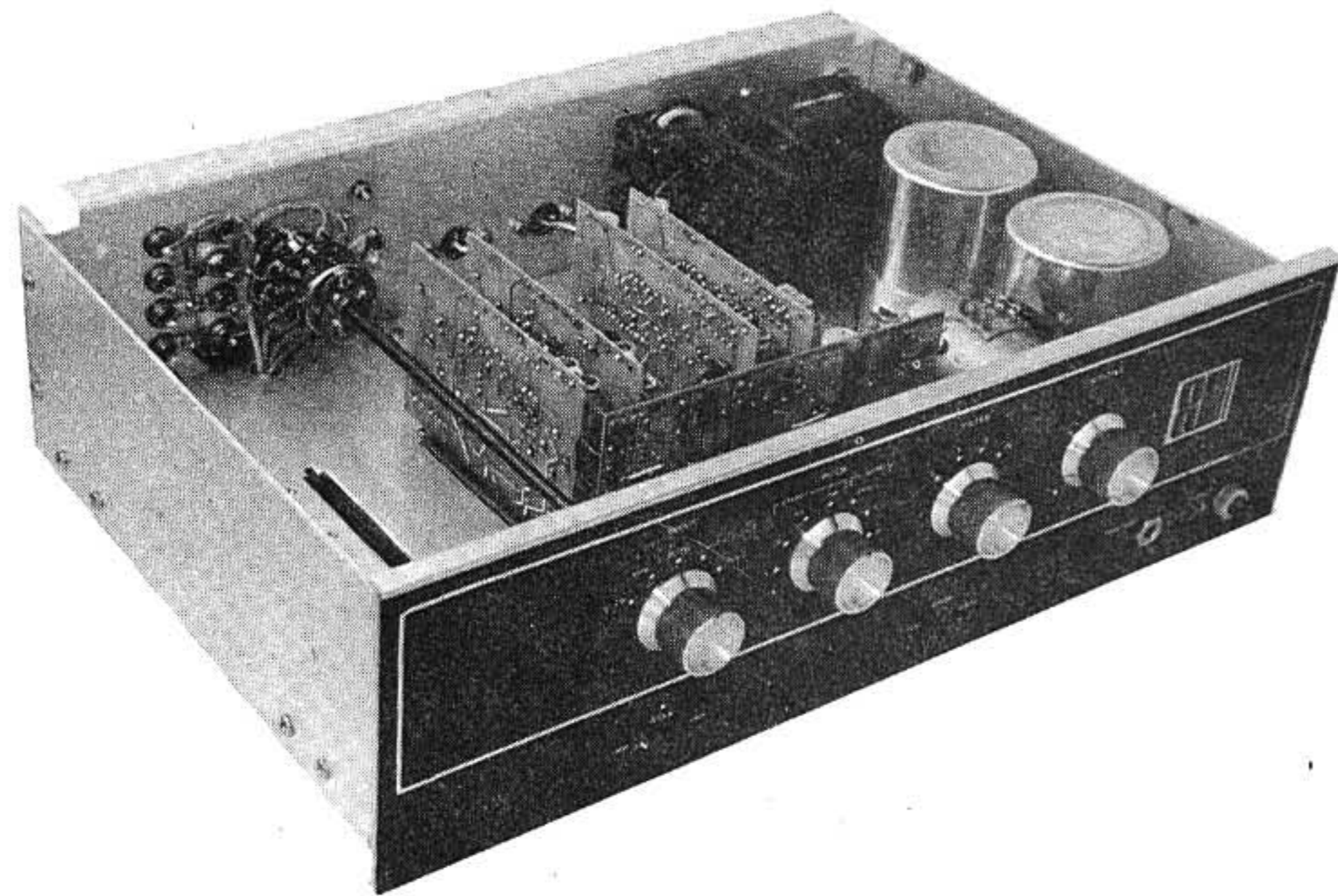
**WEIGHT**

Approximately 20 pounds net without case.

**POWER REQUIREMENTS**

115 or 230 V. A. C. + 10%, 50-60 Hz, 20 W standby power, 135 W at full output into 16  $\Omega$  (both channels)

\*Hum pickup by phono cartridge may cause this figure to be exceeded



NOTE: CASE IS AN EXTRA-PRICE OPTION

## QUESTIONS AND ANSWERS

What is the Price?

\$325 maximum, plus applicable taxes, shipping costs and duties. The base price will be your share of labor, materials and nominal overhead but will not exceed \$325 f. o. b. Palo Alto.

Who can order?

Any -hp- employee. All transactions must be strictly between -hp- employees and the company. You can order extra units for family and friends, but you are responsible for service and warranty.

How to order?

Fill out enclosed order form.

Mail to HP Labs, 1501 Page Mill Road, Palo Alto, California, 94304, U. S. A., Attention: Dan Lansdon

When and how to pay?

This will be arranged by your local -hp- organization. HP Labs will ship amplifiers ordered by those in your organization in a single lot to a specified individual there. Someone there will deliver your amplifier to you and collect the amount due at that time.

What about warranty?

There is none in the normal sense. Remember, this is a cooperative G-job, not an -hp- product. If repairs are needed, we would expect you (or some friend of yours) to do them. In case of problems with major components (power transformer, attenuator, etc.) get in touch with Dan Lansdon.

What is the deadline?

Your order must be in our hands in Palo Alto by Monday, JUNE 19, 1972.

When will more be built?

We do not expect to build but ONE LOT of these amplifiers. We will order only enough parts to cover orders in hand on June 19, 1972.

Will it be available in any kind of "kit"?

No. We reluctantly concluded we could not afford the additional time required to write assembly instructions, do additional artwork, work out special packaging, answer phone calls and correspondence and provide consultation.

When will I get delivery?

We expect to build the units in August and you should have them in September.

What are the most outstanding characteristics of the amplifier?

1. Extremely low distortion. Sounds are very clean; very subtle differences in timbre, etc. are clearly discernible.
2. Excellent dynamic range. Outstanding reproduction of percussion sounds, sudden attacks, loud and soft passages.
3. Utterly quiet with no input.

What kind of speakers must I have?

Barney designed the amplifier specifically for J. B. Lansing linear efficiency LE85 high frequency units and 15" LE15A woofers. My speakers are less expensive JBL units, 175 DLH and D-130 but results are excellent; the improvement over my McIntosh amplifiers is substantial. Without doubt, the better the speakers, the better the overall system, but I am confident the performance will be very good with much less expensive speakers than listed above. Most any reasonably good 8 or 16 $\Omega$  speakers should give satisfying results.

What kind of phono pickup?

The preamp is optimized for the Shure V 15 Type II ( $\approx$ \$65). Others can be used, but the V 15 is strongly recommended.

Is a cabinet available for the amplifier?

Yes, there are two choices, at additional cost:

One enclosure, consisting of two walnut or teak side panels (sanded but not finished), a black vinyl-clad top and necessary hardware may be seen in the attached picture. The additional price is \$10 f. o. b. Palo Alto.

If you prefer a standard -hp- cabinet (full module, 5" high), with rack mounting hardware, specify on your order at \$20 additional f. o. b. Palo Alto. Color: -hp Olive Grey.

Neither enclosure is needed for mounting in your own stereo cabinet.

ORDER FORM

FILL OUT ALL BLANKS. Mail to HP Labs, 1501 Page Mill Road, Palo Alto, California, 94304, U. S. A. Attention: DAN LANSDON

HERE IS MY ORDER FOR BARNEY OLIVER STEREO AMPLIFIER(S).

QUANTITY: \_\_\_\_\_ AMPLIFIERS not to exceed \$325 each\* = \_\_\_\_\_ \*

\_\_\_\_\_ TEAK ENCLOSURE KITS at \$10 ea. \* = \_\_\_\_\_ \*  
\_\_\_\_\_ WALNUT

(Cross out One)

OR

\_\_\_\_\_ STANDARD -hp- CABINETS (full module, 5" high) at \$20 ea. \* = \_\_\_\_\_ \*

Total \_\_\_\_\_ \*

NOTE: Amplifier is to be connected for

115  
230 (cross out one) volt a. c. line

NAME (Please type or print) \_\_\_\_\_

HP Organization (Division, Sales Office, etc.) \_\_\_\_\_

LOCATION \_\_\_\_\_

BUILDING NUMBER \_\_\_\_\_

Signed \_\_\_\_\_

\* Price is f. o. b. Palo Alto, California, U. S. A., and does not include applicable taxes, shipping costs, duties.