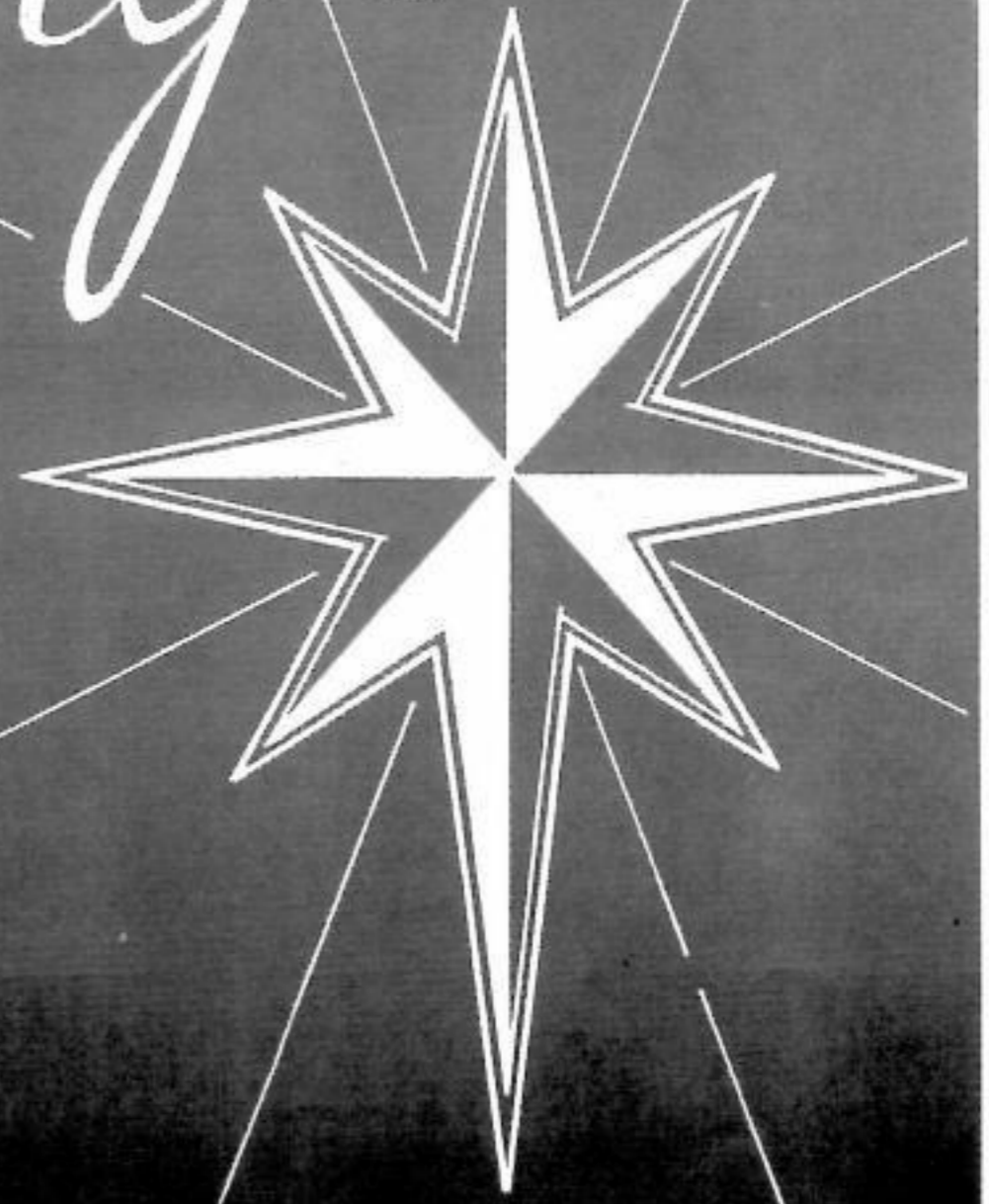




*Season's
Greetings*

from the

**JBL PROFESSIONAL
DIVISION**



1. NEW PRODUCTS

We have no new products for the month but we will bring everyone up to date on the 5306 progress since the newsletter of 8-71.

A. We have deleted the input pads in favor of a scheme that changes the feedback of the input amplifier. In case of overdrive indication by the flasher, the operator need only reduce the gain control setting.

B. The unbalanced, Hi-Z inputs were formerly RCA pin jacks and are now 1/4-inch phone plugs.

C. The program input transformers formerly plugged into the rear chassis apron but have now been moved inside the chassis.

Performance remains pretty much the same. We have a preliminary spec sheet being prepared. Delivery is now scheduled for March.

A special thanks to those of you who participated in the field tests. Your suggestions led to the changes noted above.

GOOFS! —

1. Some additions and corrections are in order for the November *Pro Note*: A) The 7126 data for the meter range switch should read "+18dBm" not -18dBm. The noise figure quoted is for the microphone input and is read at the 600 ohm output.
2. We discovered (while preparing for a local seminar) that the wrong front brackets have been packed in some of the 2350 boxes. The wrong brackets are actually for the new 2345 but can be re-drilled to fit the 2350 holes.



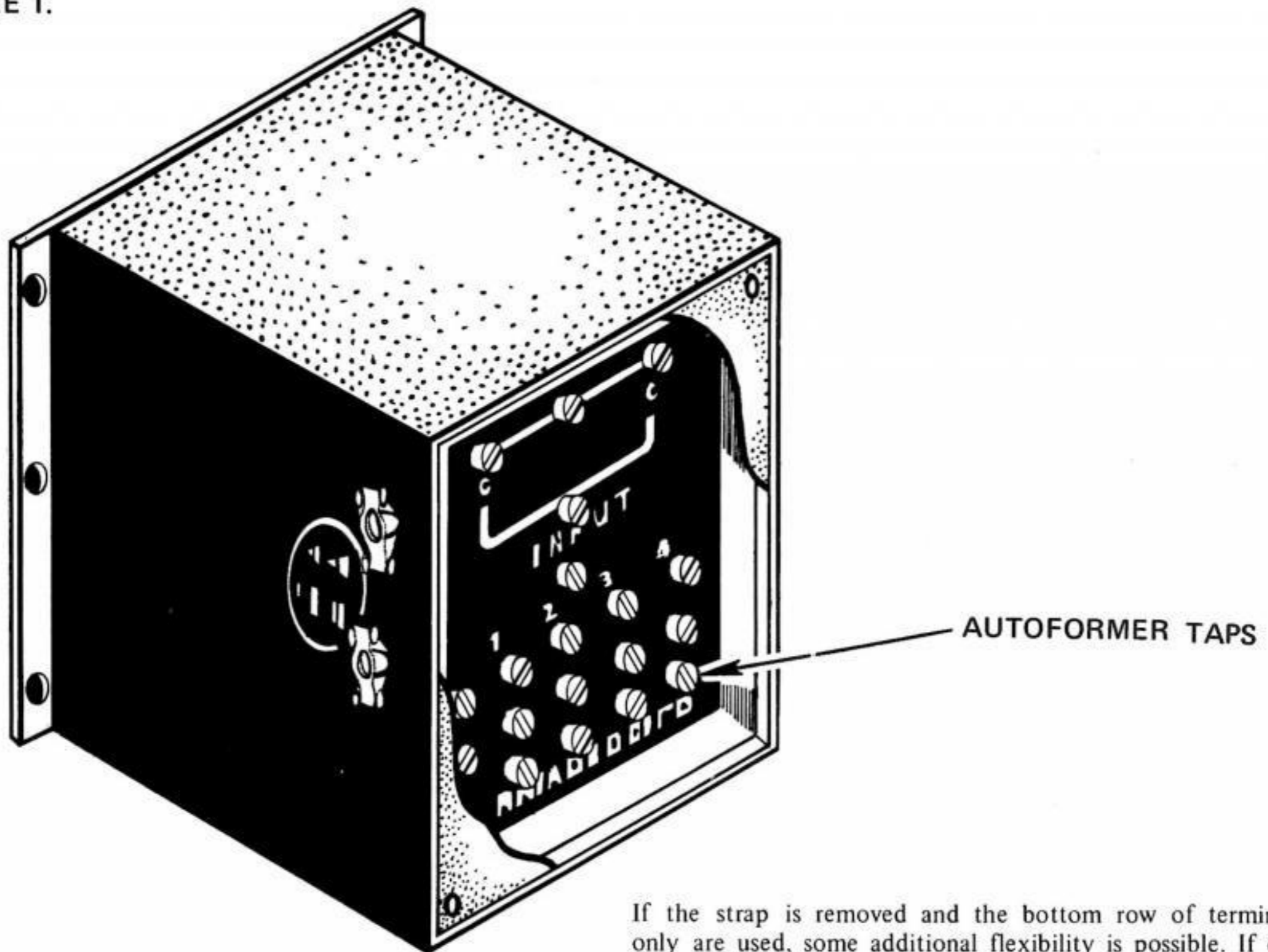
PRODUCT HINTS

1. For those who are interested in higher power combinations of 6015's, we suggest the obvious method of connecting the output windings in series. We made a pretty fair loudspeaker destroyer by connecting two 8 ohm windings in series for 300 watts at 16 ohms. This gives about 425 watts before clipping at 1kHz. Consider the possibility of four 6015's in series at 8 ohms to produce 600 watts into 32 ohms (70.7V). It would be difficult and expensive to get a balanced 70V line at this power level by any other method. A more down-to-earth application might be two 141 volt windings in series for 280V at 300 watts for servo motor or long line service.
2. For high frequency driver protection we often recommend a series capacitor and shunt resistor. The value for a capacitor which gives -3dB, 20 ohms, 500Hz, is 16MF. We have a capacitor, part number 10358, which is used in the 3150 network. This unit has a value of 16.5 MFD, +10-0%. The list price is \$8.40. A 25 ohm resistor on the amplifier side of the capacitor will keep the amp partially loaded. There is no housing for these parts. If a half-section, 500Hz high-pass network is desired, the following parts from the 3115 network are available. The 6mH inductor, part number 10354, is \$9.90 list. The 25Ω/25 watt resistor, part number 10368, is \$1.11 list. Of course, the 10358 capacitor is also used. As before, no housing is available for these parts.
3. Also in regard to networks some additional data would be helpful for the network product sheet PPB-3100. Although we don't say so, the input impedance for all the listed networks is 12-16 ohms. The special note attached to the 3150/3180 networks requires some explanation. See Figure 1 and Figure 2.
4. To add a 2405 high-frequency mechanism to the 2440 driver, it is not necessary to use an additional 3105 network. The 2405 can augment the output of the 2440 above 9kHz. Since the 2440 output is decreasing at this point, the 2405 can be brought in at a 6dB/octave rate. A 1.5MFD capacitor will give a -3dB point for the 2405 at 9kHz. Usually, the 2405 efficiency at 9kHz approximates the efficiency of any acoustic lens. The JBL capacitor for the required value is a 10460 (\$2.10 list). The 2405 and capacitor can be paralleled across the HF output of the network used.
5. Some contractors have inquired about a remote monitor lamp to indicate the status of the 6000 series amplifiers. Here is one way to do a neat job on the 6015.

Determine the location of R7 (3k, 5w) on the upper chassis. There is a terminal strip for the lamp circuits which makes this job easier. Run a wire from the junction of the lamp socket wire and R7 to pin 4 of output socket X6. Using a 9 pin plug, pins 4 and 5 will be the connection for the remote lamp. R7 must be reduced to 1500 ohms when both lamps are used. Paralleling another 3k across R7 would be the easiest way to do this. Treat this circuit with care! A short in the remote lamp circuit will disable the amplifier. A 1/2 amp fuse in series with the remote lamp might be a good idea.

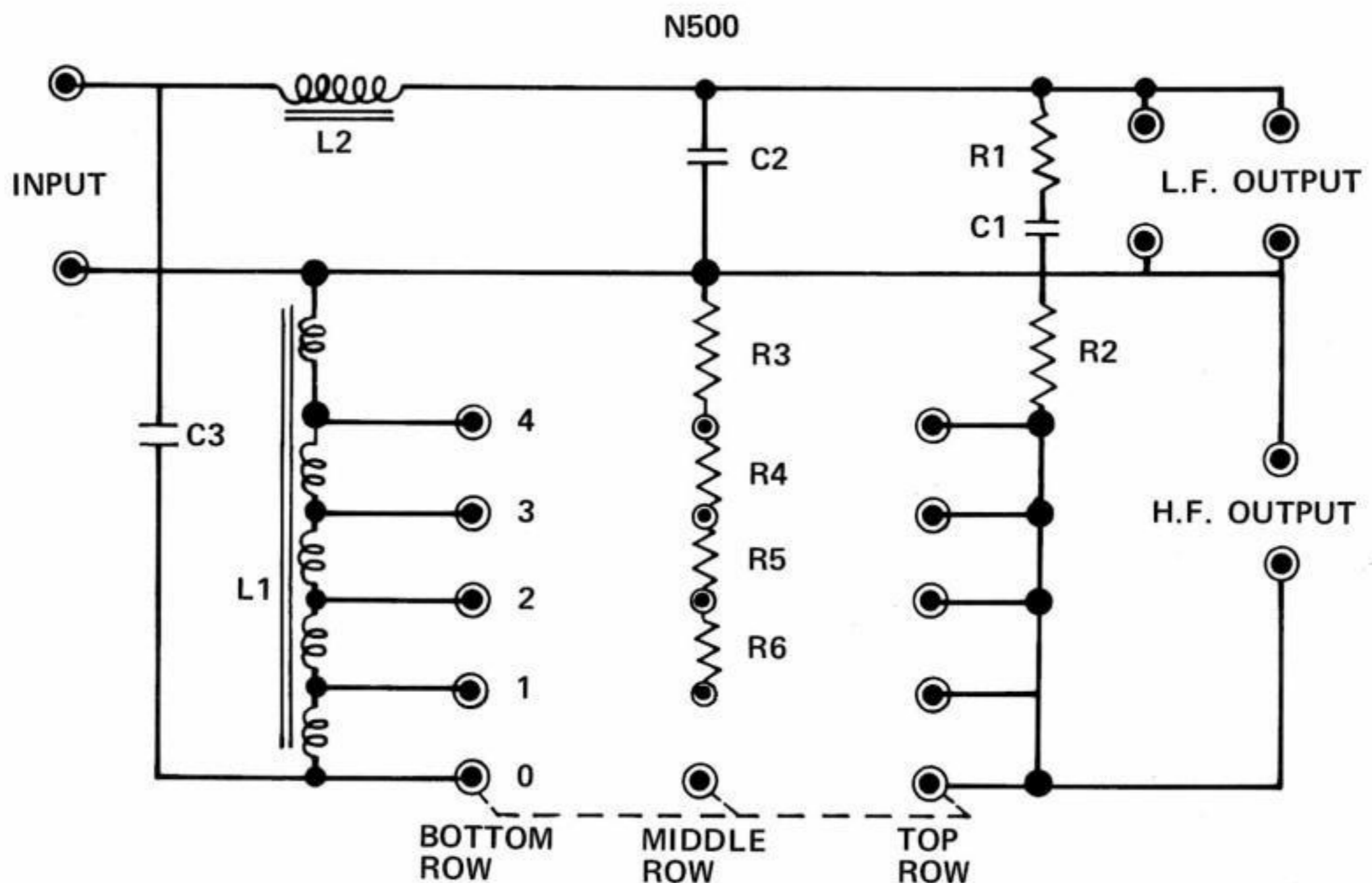
The 6010 and 6006 do not have convenient output sockets so one will have to improvise. The lamp voltage-dropping resistors all have to be reduced in value by one-half for two lamps.

FIGURE 1.



If the strap is removed and the bottom row of terminals only are used, some additional flexibility is possible. If one had a four ohm HF load and connected it to the "3" tap, the HF load would be matched to the network and attenuated 3dB. Naturally this is a pretty peculiar condition but nonetheless explains the notation at the bottom of the chart. However, using the internal autoformer of the 3150 in conjunction with the 9375 has some advantage in complex matching schemes.

FIGURE 2.





JBL TECHNICAL SEMINAR

The first JBL professional products seminar held November 16th and 17th in Burbank for the Western Region contractors was very successful and we plan to move East with at least two more sessions early in 1972.

Different combinations of transducers and enclosures were assembled and used throughout the program to demonstrate some of the technical points. Higher sound levels were used during coffee breaks, etc., but we were careful at all times to avoid cracking the glass walls of our meeting room. Demonstrations of the new and old 2480 drivers attached to the 2356 horn were carefully controlled since our glass budget was limited.

