





**MAGNEPAN INCORPORATED • MAGNEPLANAR PRODUCTS**

**WHITE BEAR LAKE, MINNESOTA • 55110**

INSTRUCTION MANUAL  
MAGNEPLANAR TYMPANI III-B

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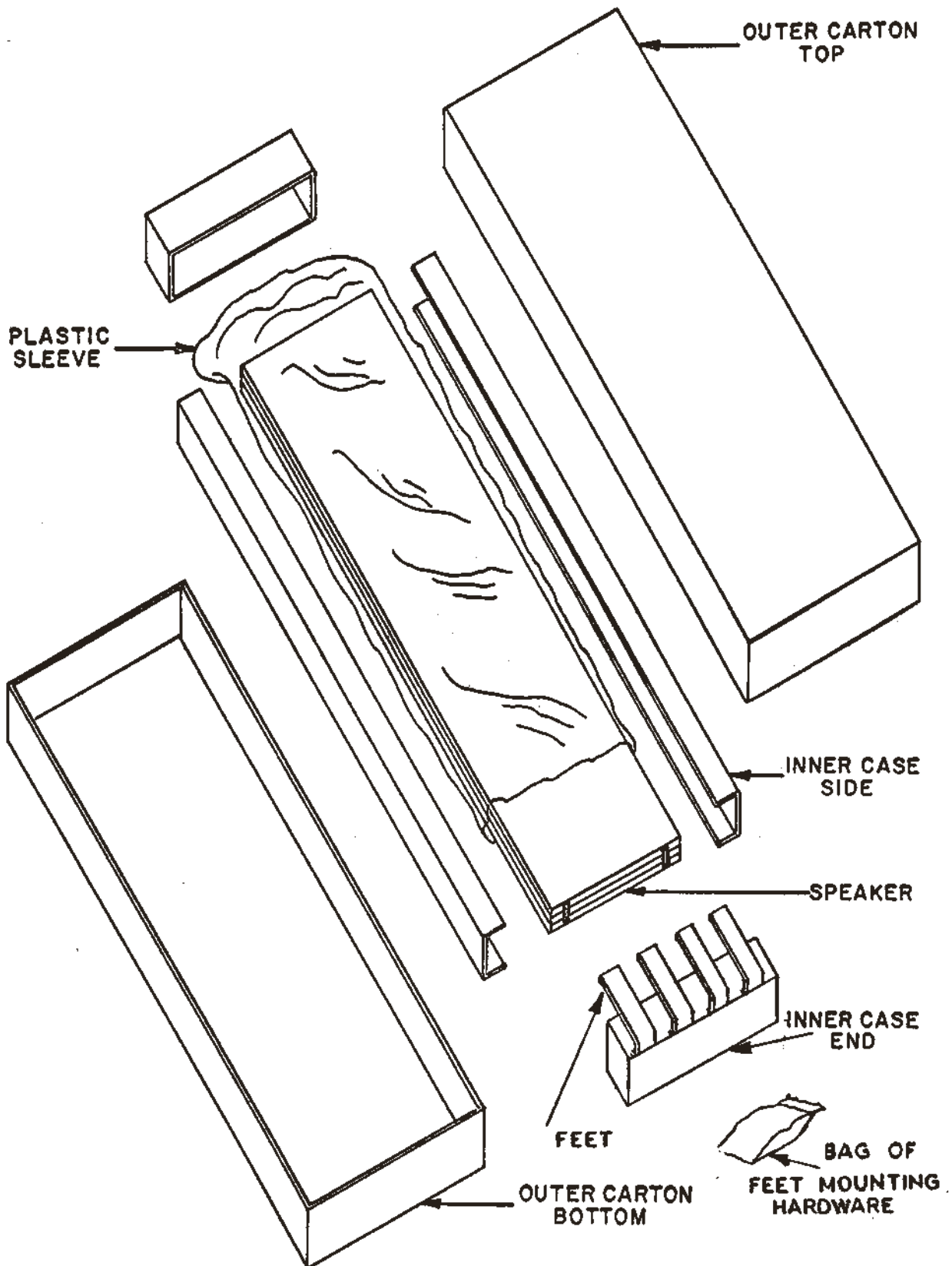
## 1. INTRODUCTION

Congratulations on your purchase. The Magneplanar\* Tympani\* loudspeaker was conceived and designed for perfectionists. One of the most revealing loudspeakers made, the Magneplanar Tympani will provide outstanding music reproduction when used with the finest associated components. Due to the elegant simplicity and ruggedness of the design, the Magneplanar Tympani loudspeaker will give many years of trouble-free service.

## 2. PACKAGING

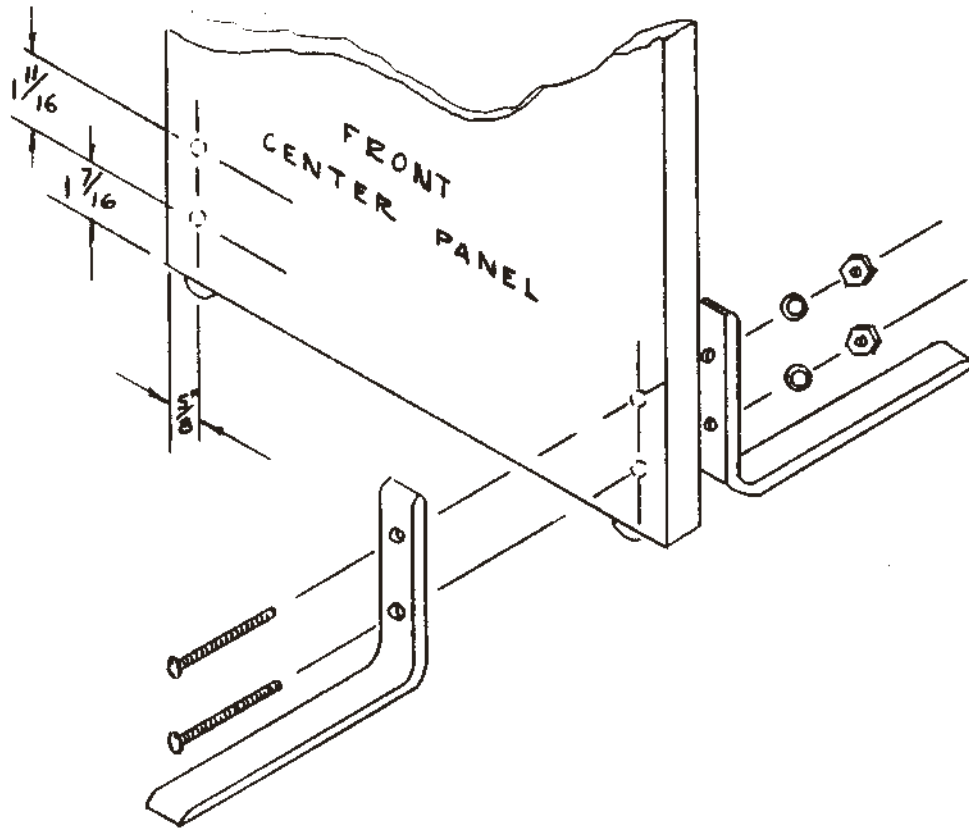
Save all the packaging. If you need to transport the speakers they can be shipped safely only in the original packaging. You may never have to return your loudspeakers; but should the occasion arise, they should not be shipped in any packaging but the original. Should you misplace it, factory packaging may be purchased for return shipment.

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INSTALLATION OF FEET

TYMPANI LOUDSPEAKERS



STEPS

1. Locate 4 holes in outside edges of center panel.
2. Place 2 feet in front and 2 feet in back of panel.
3. Insert #10 - 32 x 1-3/4" long screw thru front feet, fabric and panel, and back feet as shown.
4. Assemble lock washer and nut as shown.
5. Tighten screws with speaker assembly resting on a flat level surface.

### 3. GENERAL DESCRIPTION

Your Magneplanar Tympani loudspeaker is supplied as a mirror-image pair (each loudspeaker will have its tweeter on the opposite side from the other loudspeaker). The Magneplanar Tympani III-B is a three-piece folding floor screen design with eight hinged panels. Any two adjacent panels are hinged in such a manner that either panel may be swung at any point in a 360 degree arc in relation to the other. This arrangement provides optimum placement potential for a given room or installation. Frequency response and phase response can be tailored with judicious panel placement.

The Magneplanar Tympani III-B is comprised of one four-panel bass unit and two two-panel midrange/tweeter units. The tweeter panel may be identified as the panel with the connection plate on the back side.

The connection plate on the midrange/tweeter unit provides connections for the output of a single stereo power amplifier. Optionally, the system may be wired at the terminal plate for bi-amplification (see Bi-amplification, Section 9).

The bass panel must be connected to the outputs of a separate stereo amplifier through the use of an external electronic or passive crossover (not provided). Thus the complete T-IIIB system requires bi-amplification with two stereo amplifiers and an external two-way crossover, and it can optionally be tri-amplified with three stereo amplifiers and a three-way crossover.



#### 4. MAGNEPLANAR TYMPANI III-B SPECIFICATIONS\*

##### Frequency Response:

+ 3 dB 40 Hz\*\* to 20 kHz: (35 Hz minimum when installed correctly in a proper room.)

##### Power Handling:

A. Midrange/Tweeter Unit--The unclipped MUSICAL output of a single amplifier with a power rating of 200 watts RMS per channel. Sine wave testing or program material with a large power distribution above 1000 Hz (causing the tweeter diaphragm to melt) will invalidate the warranty. Supplied with 2 amp normal-blo fuse in the tweeter line.

B. Bass Unit--A 200 watt per channel stereo amplifier can safely be used with the bass panels. Some diaphragm bottoming may be experienced with some extreme types of program material.

##### Sensitivity:

1 watt RMS - 500 Hz - 84 dB - @3'. 1 watt RMS pink noise input will produce 83 dB @3'.

##### Impedance:

4 ohms resistive, both sections essentially no inductive or capacitive reactance.

##### Internal Crossover:

A. Mid/treble 1500 Hz - 6 dB per octave; (see your dealer for crossover recommendations when tri-amplifying).

B. Bass requires separate stereo amplifier with external two-way crossover (not supplied).



Dimensions:

2 - 2-section screens -- Each section 72"H x 16"W x 1"D

1 - 4-section screen -- Each section 72"H x 32"W x 1"D

Shipping Weight:

235 lbs.

\*Magnepan, Incorporated reserves the right to modify the performance of any of its products at any time without incurring any liability to do so for existing products.

\*\*New Magneplanar Tympani speakers will not develop their full bass potential. After a month or two of use the bass response will lower 5 Hz or more. At this point the response will stabilize and the speakers rated performance (or better) can be realized. While this 5 Hz or more of increased bass response is important, the most important factors in obtaining good bass response from the Tympani speakers are room size and geometry, wall material, and speaker placement (see Section 6).

## 5. THE LISTENING ROOM

The best listening rooms are usually rectangular (approximately 13' X 19' or larger). Best bass response will be achieved if the floor, wall and ceilings are rigid (loose walls or paneling absorb low frequencies).

In any listening room, there are areas of bass cancellation (and re-enforcement) for any given speaker placement. While speaker positioning will affect these areas of cancellation, most often, it is easier and more effective to simply move your favorite listening chair to a more ideal position.

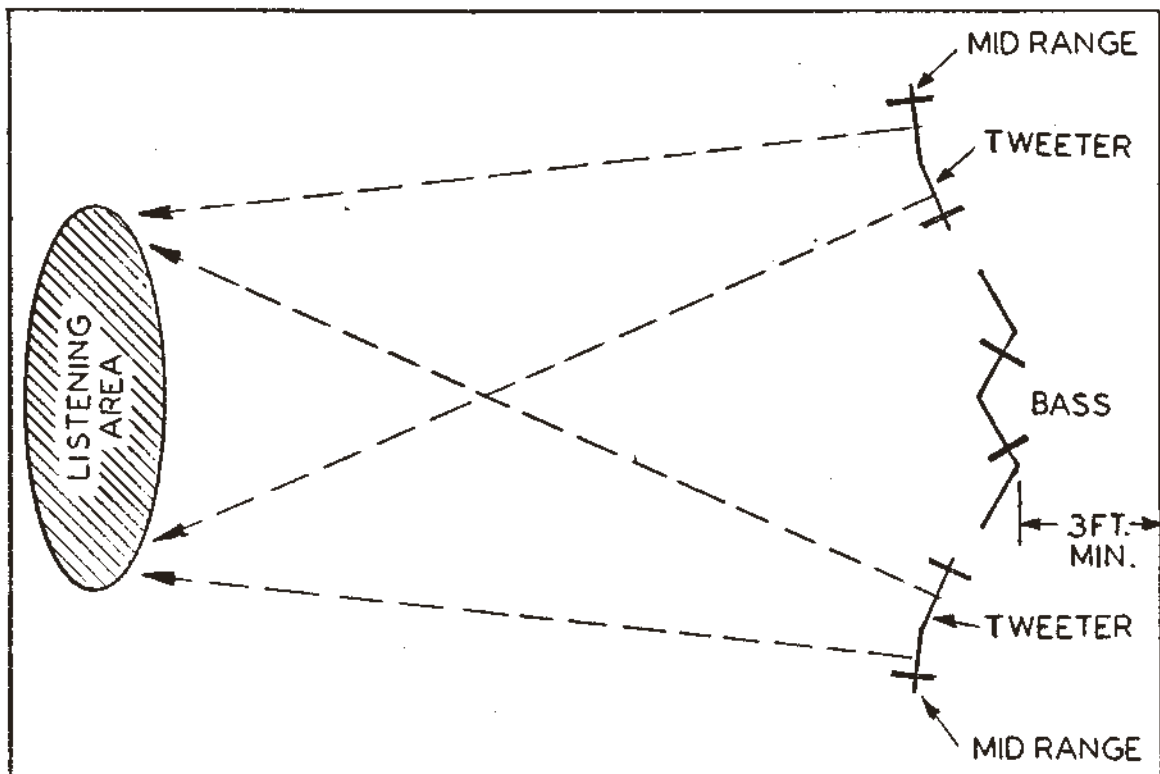
In most installations, the Tympani speaker will give the best results when placed along the short wall (see Position Guide, Section 6). If the speaker is placed closer to the rear wall than recommended in the diagrams, you may find that the speakers sound better if a damping material is placed on the wall directly behind the speaker (such as cork, drapes, fiberglass, etc.). Additional damping materials may be required to reduce middle and high frequencies if the listening room is overly "bright" or reverberant. Normally, sound absorbing materials placed on one of any two parallel walls is sufficient to correct an overly "bright" room.

## 6. SPEAKER PLACEMENT

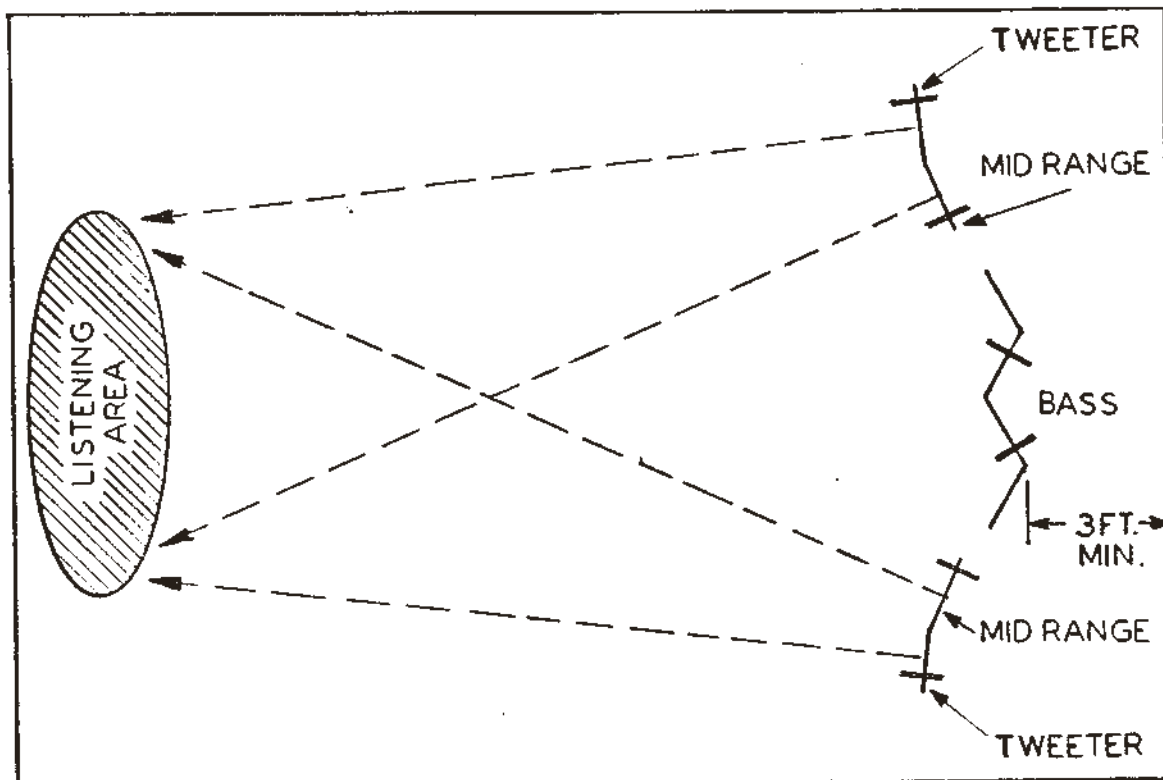
A PROPERLY installed Tympani speaker will provide satisfying, natural sound (the degree of naturalness depending on the quality of source material, associated equipment, and room conditions).

Achieving the best performance from any loudspeaker requires a good listening room and the correct installation of the speakers in the room. Unique to the design of the Magneplanar Tympani is the user's ability to control the parameters of frequency response, phase response, dispersion, imaging, etc. All of these areas can largely be affected by simply changing the position of the speakers and the individual panel angles. Such versatility can be used OR ABUSED.

### Standard Installation



Reversed Tweeter Installation (See Tweeter Phasing, Part 7)



The speaker placement diagrams shown above are intended as a guide. As a general guide, these suggested installations will work in most listening rooms. The exact placement will vary for each room. Only a certain amount of experimentation will reveal the best positioning for your listening room. In the event you are unable to achieve the desired results, your dealer can be of valuable service, since he has had experience with the installation of many Tympani speakers in various rooms.

A. Crossfired tweeters help achieve stable imaging. Therefore, whenever possible, Tympani loudspeakers should have their tweeters placed on the inside. Outside tweeter placement is desirable only when the room is too narrow to place speakers sufficiently far apart to achieve a satisfactory stereo image.

## 7. SPEAKER CONNECTION AND TWEETER PHASING

The Tympani III-B can be properly connected by referring to the diagrams on pages 13 and 14. The Tympani III-B is a 4 ohm loudspeaker. If you are using an amplifier with output transformer taps, use the "0" and "4" taps. When separate amplifiers are used for bi-amplification or tri-amplification, each section remains 4 ohms.

Since the Magneplanar Tympani III-B is a 4 ohm loudspeaker, some power losses are possible when wire of too small a diameter is used for a given length. For instance, 20 feet of two-conductor #22 gauge speaker wire will yield only 75-85 watts from a 100 watt amplifier (150-170 watts from a 200 watt amplifier). This can result in as much as a 25% power loss!

We recommend a MINIMUM of #16 gauge wire (the smaller the number the larger the wire) for runs up to 20 feet. #14 gauge or larger is recommended for wire length of 20 feet or longer.

Some positions of the speaker panels may put the tweeter acoustically out of phase with respect to the midrange. (This is usually the case with the reversed tweeter installation.) This may be checked by playing a 1000 Hz tone and reversing the tweeter phasing. The tweeter and midrange are in phase when the tone is loudest. Refer to diagrams on pages 13 and 14.

## 8. FUSING

The Tympani III-B loudspeakers are shipped with 2 amp, Type 3AG, normal-blo fuses installed in series with the tweeters.

Normal operation - The T-IIIB, being a tri-amplified loudspeaker, requires no fusing to the bass panels, as they have a tremendous power handling capability. They will handle 200 watts (RMS continuous) or more with ease.

The midrange panel is not fused, but can conceivably be damaged if overdriven for a sustained period of time. It can be driven safely, however, with up to 200 watts RMS of unclipped music power. When tri-amplifying, a 3 amp fuse can be used in series with the + side of the midrange panel, although it is not necessary.

The tweeter panel requires a maximum rated fuse of 2 amps. This will allow you to use the full output of an amplifier rated at 75 watts RMS into 8 ohms. As the tweeter is a 4 ohm driver, you will nearly double your amplifiers rated output without endangering the tweeter. You may, of course, use a higher rated amplifier; however, you may find it is possible to blow the fuses frequently.

NOTE - If you use amplifiers rated at significantly less power than those discussed above, we recommend using a 1 ampere fuse. If you use maximum rated amplifiers, but do not listen at maximum levels, we recommend using a 1 ampere fuse. The key to good protection is to use the smallest size fuse possible.

## 9. BI & TRI-AMPLIFICATION

The Magneplanar Tympani III-B is one of the highest definition loudspeakers manufactured today. Rather than sacrifice some of its sonic accuracy, it was designed to be a bi-amplified system, where an additional external 2-way crossover and stereo amplifier is needed. The crossover may be electronic or passive. Your dealer will provide you with the necessary information to help you make a decision. Refer to specifications for crossover point and slope.

Bi-amplification provides the following benefits:

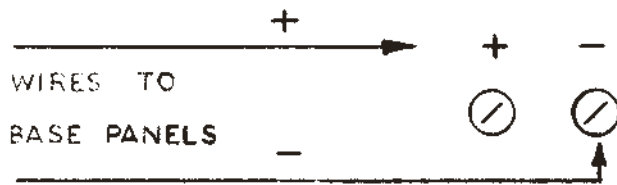
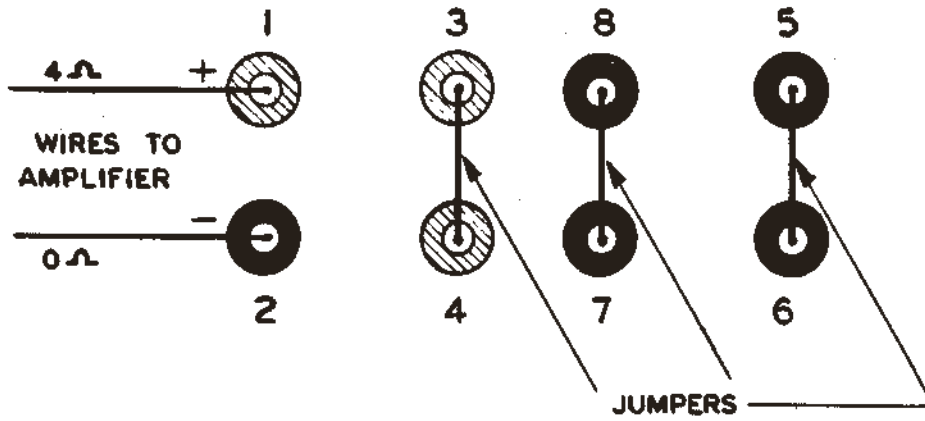
- A. Increased dynamic range: Obviously two amplifiers can produce more power. Although twice as much power will only provide 3 dB more SPL, the additional "headroom" is often the little extra needed to make a sound system "come alive", PROVIDED the quality of the amplifiers used is not reduced. Rarely will a bi-amplified system with two low quality amplifiers outperform a high quality single amplifier system.
- B. Reduced distortion: When a single amplifier system is overdriven by low frequencies, high frequency distortion components are produced (a "buzzing" or "tearing" sound) which is passed through the speaker's internal crossover to the tweeter. These high frequency distortion components are significantly reduced in a bi-amplified system since the mid/treble amplifier is unaffected when a bass amplifier is momentarily overdriven.



C. Increased definition: Through the use of more ideal crossover points and slopes, most speaker systems will provide higher musical definition through bi-amplification.

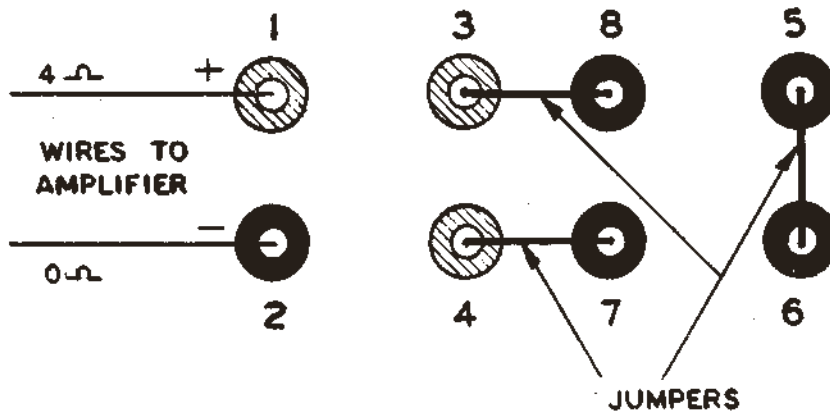
The Tympani III-B may also be tri-amplified. Although we feel that the added definition derived through tri-amplification is less significant than through bi-amplification, it is a source for further improvement for the same fundamental reasons. This can be done using a three-way external crossover and three stereo amplifiers. The cost versus improvement ratio is somewhat disproportionate - but this we leave for you, the audiophile, to decide.

NORMAL BI-AMPLIFIED HOOK-UP

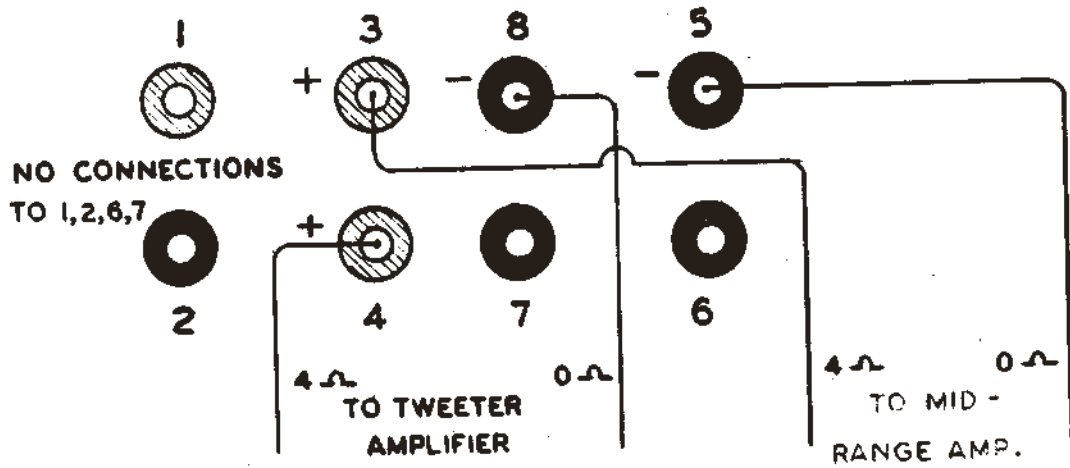


*RED TERMINALS ARE POSITIVE (+) OR "HOT"*

REVERSED PHASE BI-AMPLIFIED HOOK-UP

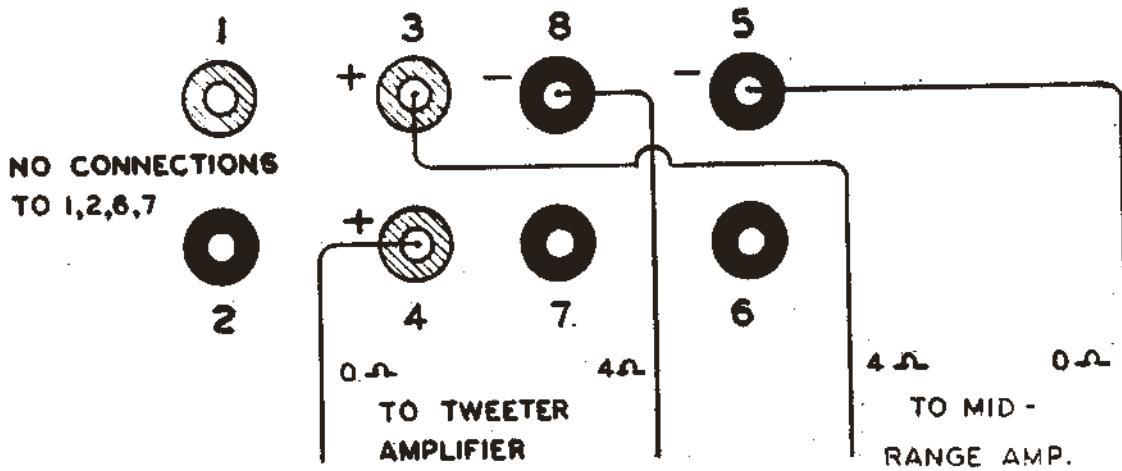


\*  
TRI-AMPLIFIED HOOK-UP



*RED TERMINALS ARE POSITIVE (+) OR "HOT"*

REVERSED PHASE TRI-AMPLIFIED HOOK-UP



\* REQUIRES THREE STEREO POWER AMPLIFIERS & 3-WAY EXTERNAL CROSSOVER

## 10. CLEANING OF SPEAKER FABRIC

Smudges on the fabric of the Tympani speaker can be successfully removed with the proper use of K2R cleaner without leaving a ring around the area cleaned. (K2R is available at most supermarkets or variety stores.)

1. Use light, repeated applications of K2R cleaner.
2. Allow the cleaner to dry thoroughly after each application.
3. Brush lightly and blow the residual powder from the fabric.

Your dealer can supply replacement speaker fabrics which can be easily installed in the event the fabric is damaged or soiled beyond repair.

## 11. IF YOU SHOULD NEED SERVICE

In the unlikely event that you should need service for your Tympani loudspeakers, we recommend that you contact your dealer. He is experienced in providing service and can assist you if the speakers must be returned to the factory.

If it is determined that your speakers must be returned to the factory for repair, ship your speakers (freight prepaid) to:

Magnepan, Incorporated  
1645 Ninth Street  
White Bear Lake, MN 55110

Include a packing slip or letter describing the nature of the problem.



**MAGNEPAN  
INCORPORATED**

1645 NINTH ST. WHITE BEAR LAKE, MINNESOTA 55110 (612) 426-1645

### Fabric Instructions for Tympani

#### A. Initial Disassembly

1. Before you start -- Study the drawing that relates to your speakers. It is important that the speakers are hinged back together the same way.
2. Make an Identification Tag for each panel, I.E.; #1 Twt, #2 Twt, LM, RM, LC, RC, ect. and place them on the back of the proper panel. (Later, as the fabric bag is pulled off each panel, transfer this Identification Tag to the backside of the speaker.)
3. Unplug the interconnect leads that go between the panels (This is a male/female pressure fit connector.
4. Remove the screws from the nameplates.
5. Remove the hinges and gliders. The panels are now separated from each other.

#### B. Removing & Re-Installing Fabric

1. As you do these next steps, start and complete a panel before moving on to the next one.
2. Remove the staples from the top and bottom of the speakers. (If working on a tweeter, also remove staples under nameplate.)
3. Slip off fabric -- BE SURE TO NOTE WHERE THE FABRIC SEAM IS LOCATED.
- 3a. If doing a tweeter, push the nameplate thru the hole cut in the fabric and then slip off the fabric. Be sure to note how and where this hole was cut.
4. Turn the replacement fabric bag inside out and then slip it over the top end of the speaker, locating fabric seam per previous notation. DO NOT FORGET TO TRANSFER IDENTIFICATION TAG.
5. Staple the fabric to the bottom end of the speaker frame, while pulling the fabric taught.
- 5a. If doing a tweeter:
  - A. Push the nameplate against it's fastening block and fabric over the nameplate, stapling the fabric to the bottom end of the speaker frame.
  - B. Cut as small a hole as possible in the fabric, over the nameplate, for the nameplate to slip thru and pull it out from under the fabric.
  - C. Reattach the nameplate with it's screws.

One panel is done now and you are ready to complete the remaining panels.

REMEMBER: As you do each panel, transfer the Identification tag.

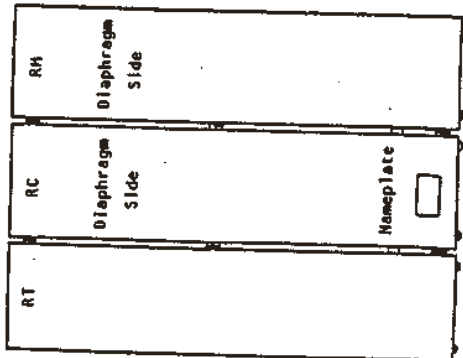
#### C. Final Assembly

1. Install gliders at bottom end of speakers.
2. Install hinges on #1 side first -- per diagram -- using original screw holes. (Use a small nail, ect. to find holes.)
3. Install interconnect leads on #1 side first, again using nail, ect. to push male/female connectors together. (Some force may be necessary to make male plug fit into position.)
4. Complete all of above for #2 side -- per diagram.

Tympani Instructions

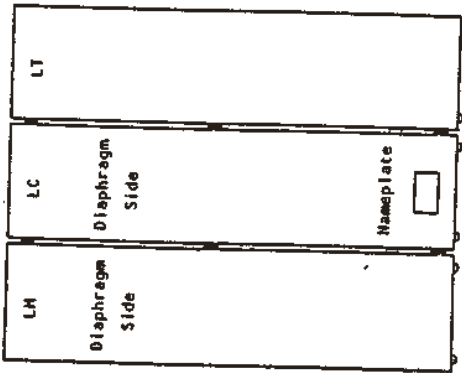
#2 Twt. #2 Side N/R Bass

Right - (From back side.)



#1 Side N/R Bass

Left - (From back side.)

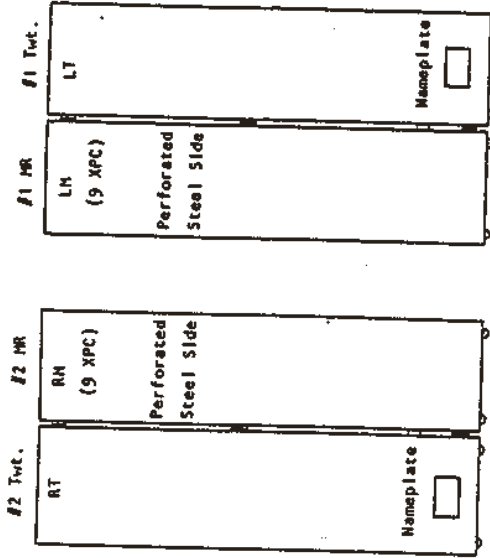


Tympani I-U

BACK VIEW

Tympani Instructions

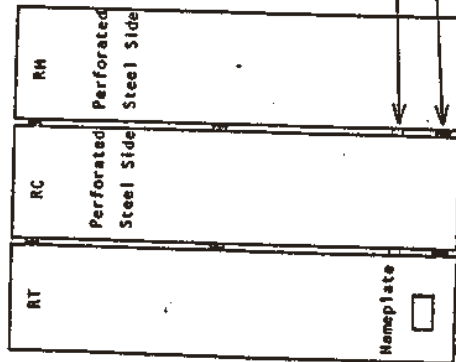
Tympani III, III-A, III-B, III-C, III-D, III-E, III-F, III-G, III-H, III-I, III-J, III-K, III-L, III-M, III-N, III-O, III-P, III-Q, III-R, III-S, III-T, III-U, III-V, III-W, III-X, III-Y, III-Z



BACK VIEW

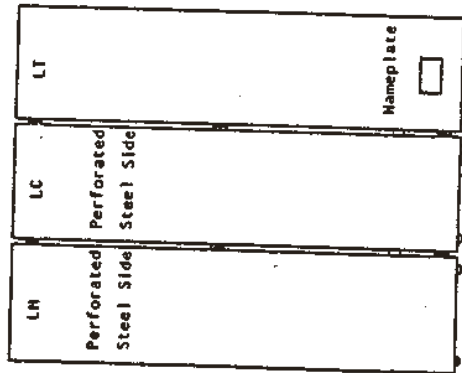
#2 Twt. #2 Side N/R Bass

Right - (From back side.)



#1 Side N/R Bass

Left - (From back side.)



Tympani I-A  
" I-B  
" I-C  
" I-D

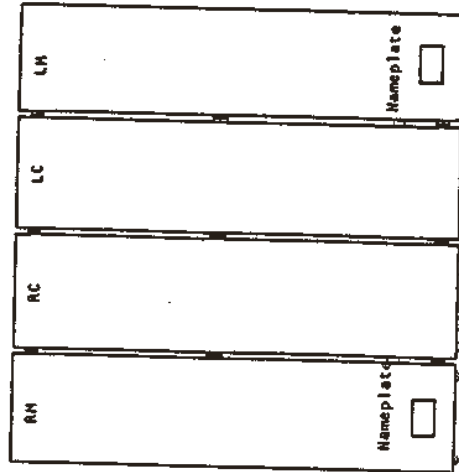
BACK VIEW

Interconnect Lead  
Hinge  
Gliders

Y-III & T-III A  
Backside is Diaphragm side.

T-III B  
Backside is Perforated Steel side.

Bass Section



BACK VIEW

#2 Bass Section #1 Bass Section