

# —APOGEEACOUSTICS, INC.

## Centaur Minor Hybrid Ribbon Loudspeaker

The "CENTAUR MINOR" is a mid-sized two-way hybrid ribbon loudspeaker. It is a marriage of a classic line-source dipole midrange/tweeter unit with a moving coil woofer unit operating in a sealed enclosure. The CENTAUR MINOR provides a truly unique three dimensional musical experience with outstanding sound stage and exceptionally fine detail.

The use of a ribbon midrange/tweeter transducer across most of the audio spectrum assures exceptional performance in the areas of detail, clarity, transparency, and sound stage. The woofer unit, operating in a sealed cabinet provides clean, tight bass reproduction to the lowest octaves. The seamless internal crossovers and spatial alignment of drive units provide precise imaging over a wide listening area. The rise time dynamics are consistent with the fastest amplifiers.

The CENTAUR MINOR features:

- A high-power, long-throw 6 1/2" woofer operating in a sealed cabinet configuration providing deep rich bass.
- A unique, narrow tweeter ribbon offering excellent horizontal and vertical dispersion.
- Advanced internal circuitry provides for both a seamless crossover and improved transducer separation.
- A three position "Woofer Contour" switch for adjusting the sonic characteristics of the speaker.
- Stunning architectural quality that readily fits into the decor of a wide range of listening rooms.

The CENTAUR MINOR stands 39 inches high, is 13 1/2 inches wide, and is 9 inches deep. It weighs 50 pounds per speaker. The speaker is finished in a textured black format with metallic grey fascia and black cloth grille.

### SPEAKER SETUP

APOGEE speaker's performance is affected by the quality and compatibility of the front end equipment such as the turntable, cartridge, compact disc player, electronics, cable and connections. The room acoustics and the placement of the speakers also have a highly important effect on the quality of the sound. Care in the selection of high quality compatible equipment and placement of the speakers within the room will be very rewarding in terms of the sonic qualities of your music system.

### ASSEMBLY

The CENTAUR MINOR speaker system is packaged in two cartons. Before opening the cartons, be sure there are no visible signs of damage to the shipping cartons. Place the cartons so that they are oriented correctly with THIS SIDE UP designation.

### SETTING UP PACKAGED SPEAKERS WITHIN ROOM

(See Diagram No. 1)

**CAUTION — REMOVE ALL OBJECTS FROM SHIRT POCKET SUCH AS PENS, PENCILS, AND LIGHTERS. THE MAGNETIC FIELDS FROM THE TWEETER UNIT IS STRONG! DO NOT PLACE MAGNETICALLY ATTRACTED OBJECTS NEAR THE SPEAKERS. REMOVE YOUR WRISTWATCH WHICH MAY BE SUBJECT TO DAMAGE SHOULD YOU APPROACH MAGNETS. APOGEE ACOUSTICS, INC. ASSUMES NO LIABILITY SHOULD DAMAGE BE INCURRED TO TELEVISIONS, MONITORS, OR WRISTWATCHES.**

**CAUTION — TELEVISIONS HAVE VARYING SENSITIVITIES TO MAGNETIC FIELDS. CAUTION MUST BE EXERCISED WHEN PLACING SPEAKERS ADJACENT TO TELEVISION. SEE NOTE AT END OF THIS MANUAL.**

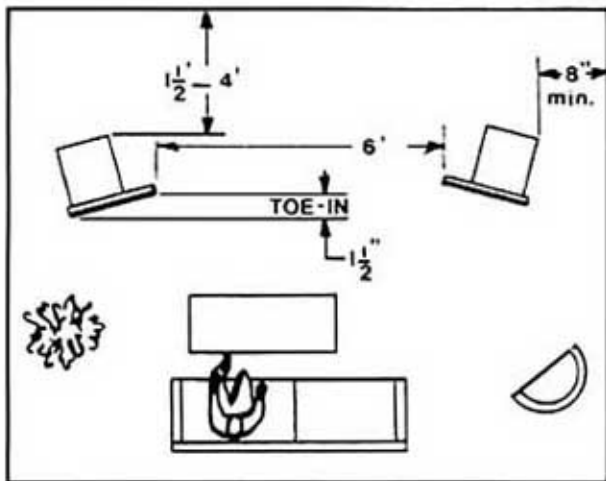


FIGURE 1.

#### OPENING OUTER SPEAKER PACKAGING

Open the carton marked OPEN THIS CARTON FIRST. Remove and read OWNER'S MANUAL before proceeding further. Remove the small accessory kit which is enclosed within this carton.

1. Remove the speakers from their cartons and place face down on the floor, still in the protective packing.
2. Remove the protective pad from the bottom of each speaker and pull up the protective bag.
3. Screw in the leveler spikes to the inserts provided at the bottom of the cabinet and front panel of each speaker. The spikes should protrude approximately the same distance from each insert.
4. Stand each speaker upright, and remove remaining packaging and bag.

#### ORIENTING SPEAKER TO UPRIGHT POSITION

Be sure hands are clean before proceeding. Lift carefully and place the speakers close to the final location to minimize need for final placement adjustment.

#### PLACING SPEAKER IN ROOM

Move speakers to their nominal right and left positions in the room. NOTE: The woofer units should be closest to their respective side wall and the midrange ribbons should be approximately six feet apart. Final placement will depend on room dimensions, seating proximity to the center stage of the speakers and general room acoustics.

#### SPEAKER PLACEMENT

The CENTAUR MINOR loudspeakers were designed to be flexible for placement within your listening area. However, we strongly recommend careful consideration to their placement beforehand. Every listening room has varying room anomalies, therefore, experimentation with speaker placement is well advised in order to achieve optimum results for your music enjoyment.

Outlined below are parameters which should be followed, although room size and other variables must be considered:

#### SPEAKER LOCATION WITHIN THE LISTENING ROOM

- Place Centaur Minor speakers 1 1/2 to 4 feet from the rear wall to the back of the speaker. We strongly recommend accurate measurement using a tape measure or similar tool when installing speakers.
- Rear wall should have little or no damping material. Experimentation with degree of damping is advised. Our own experience has taught us that too much damping can cause upper midrange and tweeter suck-out resulting in a somewhat lifeless quality. Corner treatment with acoustical damping material can work well depending on room acoustics. This can also help to eliminate corner loading of excessive bass energy should your room be inherent of this characteristic.
- Separation should be placed with very little toe-in. We suggest approximately 1 1/2 Inch toe-in to obtain correct imaging. The CENTAUR MINOR has exceptional dispersion and focus; stage and imaging is at its best with very little toe-in. Never place the CENTAUR MINOR in a position in which the speakers touch the side walls. Allow them to breathe by maintaining at least a distance of 8 inches from the side walls. This figure will change, however, with respect to room size.
- Placement of speakers on carpeting is preferable to hard flooring. Adjust the leveling spikes to provide a tilt back to obtain the correct height of image. Be sure the leveling spikes make secure contact with the floor and speakers do not rock.
- The spikes should be adjusted so that the CENTAUR MINOR is tilted backwards from between 4 and 5 inches as measured from the top to the bottom of the speaker. The exact tilt back will depend on your set up and listening distance from the speaker.

## **SPEAKER BREAK IN PERIOD**

The CENTAUR MINOR loudspeakers require at least 50 hours break in to obtain optimum performance. This is best accomplished by allowing the CENTAUR MINOR speakers to play in the background as continuously as possible. After this period you should notice considerable improvement in mid-range transparency and smoothness as well as bass definition.

## **WOOFER CONTOUR SWITCH**

A three position switch is available to alter the woofer output of the CENTAUR MINOR. This switch provides for a "Normal", "Low", and "High" setting. Use the "High" position in larger rooms or rooms with large openings or a great deal of absorbent materials. If you find the bass output overloading in your room, set this switch to the "Normal" position. This position lowers the overall level of the woofer as well as changes its dynamic characteristics to integrate better with smaller listening environments. For even small dimension rooms or those that are extremely live, change the switch to the "Low" position.

## **GRILLE**

The protective grilles attached over the woofer and midrange tweeter units are permanently installed and are removable by qualified technicians only. The CENTAUR MINOR was designed for maximum performance with these grilles in place.

## **ELECTRICAL CONNECTIONS**

The CENTAUR MINOR is designed to be operated from a single high quality stereo amplifier with a nominal rating of 50 watts. More or less power may be used depending on the size of the room, damping material, construction, and desired sonic amplitude levels. **DO NOT EXCEED A 100 WATT AMPLIFIER RATING.**

Connect the high end of the amplifier drive (+ or red) to the RED binding post and the low end (- or black) to the BLACK binding post on the rear of the speaker. The other loudspeaker should be connected in a similar fashion to the other channel of the amplifier. Be sure connections at amplifier and speaker are tight and secure.

## **GENERAL CAUTIONARY NOTES**

1. Do not turn power on to amplifier before double checking to verify the correctness of all system wiring. Be sure all connections are clean and tightly secure.
2. System volume control should be set low and slowly increased to desired listening levels.
3. Do not use vacuum cleaners to clean the speakers.
4. Solid coverings may be cleaned by using a sponge or damp cloth with a mild detergent.
5. Grille guards may be cleaned by gentle use of a feather duster or soft cloth.
6. Keep any objects containing steel away from the speaker to avoid damage due to magnetic attraction.

## **ATTENTION**

### **POSITIONING LOUDSPEAKERS NEAR VIDEO EQUIPMENT OR MAGNETIC SENSITIVE MEDIA.**

Almost all loudspeakers manufactured today use very powerful magnets. Care must be taken when positioning your loudspeakers near video monitors, television sets, VCR tapes, floppy disks, etc. An improper installation may result in irreparable damage to your magnetic sensitive equipment.

Experimentation is the only way to determine where to position your loudspeakers. Video monitors and televisions have different sensitivity levels to external magnetic fields and are usually the most sensitive devices overall when magnetic fields are present. Storage devices such as NCR tapes and floppy disks are usually more tolerant. When you determine the desired placement of your loudspeakers relative to your video equipment, etc., you should start with the loudspeakers approximately three feet away from your monitor. Tune a stable picture on your monitor with as much solid background color as possible. If the speaker is too close to the monitor you will notice the color start to bleed or change tone. If the color is fine you may move the speaker closer until you do see the color distortion. When you have reached this point, move the speaker at least six inches farther away from the monitor. Repeat this procedure for the other loudspeaker as well, and be sure the video picture is undisturbed. When you have determined the safe distance from each speaker to the video monitor, you may use this as a guide for positioning your VCR, tapes, etc. as well.

Please be sure you have carried out your positioning carefully. Every installation is unique and the above guidelines are meant to assist you only. You have the responsibility to determine the final safe positioning of your loudspeakers relative to any other magnetic sensitive device.

#### **NOTE:**

Some installations near video equipment, etc. may not allow positioning of the speakers far enough away to obtain satisfactory results. In these instances it may be necessary to reverse the left and right speakers so the midrange/tweeter units are on the outside. This type of positioning can result in very good performance from the loudspeaker, although more toe-in adjustment may be required.