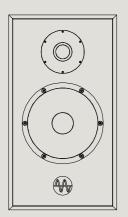
# ATLAS + HURD

# **TEMPEST**



**OWNERS MANUAL** 

## Congratulations on choosing Atlas and Hurd loudspeakers.

Our loudspeakers are designed to reproduce the highest quality sound. To ensure the best performance from your speakers, please read this owner's manual carefully. Please feel free to contact Atlas and Hurd if you need any further information or assistance.

#### Warnings

Please read below regarding the importance of amplifier selection. Incorrect amplifier selection can lead to clipping and is likely to damage your speakers. This is not covered under warranty. Clipping can be recognised as a harsh sounding aggressive distorted sound.

Loudspeakers contain permanent magnets that are used to create a magnetic field to interact with the voice coil and produce sound. This magnetic field can extend beyond the speaker cabinet and may interfere with other magnetic-sensitive devices, such as old CRT televisions or credit cards.

Wherever possible, do not touch the speaker diaphragms, particularly the tweeter diaphragms, as they are fragile and easily damaged. Please see our care and maintenance section of this document to understand how to care for this product.

#### **AMPLIFIER POWER**

TEMPEST RECOMMEDNED AMPILFER POWER 20- -150 WATT

(Power rated up to 500 watts with output not exceeding 150 watts)

Loudspeakers have a recommended power rating, which is intended to guide users in selecting an appropriate amplifier to match their speakers. The power rating of a speaker refers to the maximum power handling capacity of the speaker and is usually given in watts.

It is important to note that the power rating of a speaker does not necessarily determine how loud the speaker will play. The maximum volume level of a speaker is determined by a combination of factors, including the sensitivity of the speaker, the efficiency of the amplifier, and the room acoustics.

Source material can vary in level, and it is possible for an amplifier to reach its maximum power output before the maximum volume setting is achieved. Clipping can occur at a lower volume level with a lower-powered amplifier. This is because a lower-powered amplifier will reach its maximum output power at a lower volume level than a higher-powered amplifier. As a result, it is possible to damage a speaker with a lower-powered amplifier if the volume is turned up too high, causing the amplifier to clip and send distorted signals to the speakers.

To prevent damage to your speakers, it is important to select an amplifier that matches the power rating of your speakers and to avoid turning the volume up too high, especially with a lower-powered amplifier. It is also a good idea to use high-quality source material and to be aware of the limitations of your system to ensure optimal performance and longevity of your speakers.

#### **IMPEDANCE**

The rated impedance of a loudspeaker, expressed in ohms, refers to the electrical resistance that the speaker presents to the amplifier. The nominal impedance rating of a speaker is an important consideration when selecting an amplifier, as it affects the amount of current that the speaker will draw from the amplifier. A  $4\Omega$  speaker will draw more current from an amplifier than a  $6\Omega$  or  $8\Omega$  speaker. This is because a lower impedance speaker presents less electrical resistance to the amplifier, which in turn causes the amplifier to deliver more current to the speaker to achieve

desired volume level. Conversely, a higher impedance speaker presents more electrical resistance, causing the amplifier to deliver less current to the speaker.

In general, it is recommended to match the rated impedance of the speaker to the amplifier's output impedance for optimal performance and to avoid potential damage to the equipment. It is also important to choose quality electronics and to follow the manufacturer's recommendations to ensure the best possible sound quality and longevity of the equipment.

## **CABLING**

Using the appropriately sized speaker cable is essential for ensuring optimum performance and preventing signal loss or degradation. As a general guideline, it's recommended to use at least 16 AWG speaker cable for runs up to 8 meters (approximately 26 feet). For longer runs, consider using thicker 14 or 12 AWG cable to minimize signal loss over distance

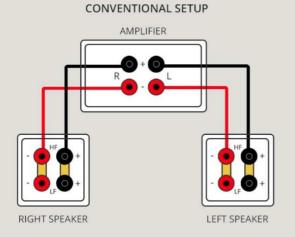
#### **TONE CONTROLS**

While Atlas and Hurd speakers are designed to provide accurate and balanced sound without tone control adjustments, personal preferences and room acoustics can vary. Some individuals may prefer a slightly different sound profile, or the room acoustics may require some adjustments to achieve the best sound quality. Please note that excessive tone control adjustments can negatively affect the sound quality and even damage the speakers. Any adjustments should be made with caution and in moderation. Small adjustments should be made, and the sound should be listened to carefully to ensure that the adjustments are not distorting the sound or causing damage to the speakers. Proper speaker placement can have a significant impact on the sound quality, and it's recommended to experiment with speaker placement before making tone control adjustments. By placing the speakers in optimal positions, you may be able to achieve the desired sound quality without needing to make any adjustments to the tone controls.

Fig 1.



Fig 2.



#### **CONNECTING YOUR SPEAKERS**

It is important that your system is connected properly to ensure correct speaker performance.

Using the appropriately sized speaker cable is essential for ensuring optimum performance and preventing signal loss or degradation. As a general guideline, it's recommended to use at least 16 AWG speaker cable for runs up to 8 meters. For longer runs, consider using thicker 14 or 12 AWG cable to minimize signal loss over distance.

- 1. Turn off all electronic equipment.
- 2. Follow the connection instructions supplied with your amplifier or receiver.
- 3.Please ensure you assign the same cable colour from the positive (+ Red) connector on the amplifier to the positive (+Red) connector on the speaker. Please then assign the cable colour negative (- Black or White) connector on the amplifier to the negative (- Black or White) connector on the speaker.

4.The terminals can take bare wire, spade or banana plug type fixings. (See Fig 1.)

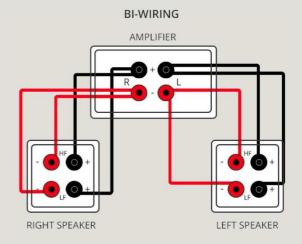
Banana plugs push in from the top until they stop.

Bare wire should be twisted to form a bunch. Loosen the top threaded part of the terminal and insert the bare wire into the hole in the shaft. Please ensure there are no loose wire threads touching the other terminal. Tighten the screw down on the terminal onto the bare wire securely.

Spade plugs - Loosen the top threaded part of the terminal and insert the spade plug around the threaded shaft. Tighten the screw down on the terminal onto the Spade plug securely.

The Tempest speakers have 2 pairs of terminals. If have single run cable you must leave the supplied jumper leads connected. (See fig 2.) If you wish to bi-wire these jumpers must be removed and connected in parallel (See fig 3.)

Fig 3.



#### **SPEAKER PLACEMENT**

Tempest speakers are best suited to being mounted on dedicated speakers stands of the correct height.

The speakers can be used on top sideboards and bookcases as well.

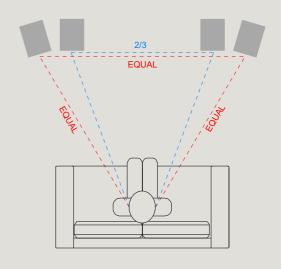
The middle of the tweeter should be as close as possible to ear height when seated. (approx. 930mm high) We recommend using a product like Blu-Tack or similar in approx. 5c coin size spheres compressed to help secure the speakers and help reduce unwanted resonances.

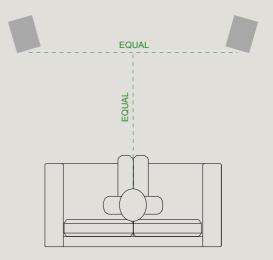
The widest stereo separation is achieved when the left and right speakers form an equilateral triangle with the primary listening position. (Red dotted line)

If the spacing between the speakers is reduced to 2/3 (Blue dotted line) of the distance from the central listening position the stereo image will not be as clean and precise but will create a greater area of stereo sound if more listeners are in the space.

The final solution (Green dotted line) with equal distance between the speakers and perpendicular to the central listener is a balance between the two solutions above.

Greater stereo image can be achieved by angling the speakers towards the listening position a few degrees. We recommend experimenting with this angle yourself to find a sweet spot that most suits your taste.





### **ROOM TUNING YOUR SPEAKERS**

Room tuning is an important aspect of achieving the best possible sound quality from your speakers. The following tips can help you optimize your speaker placement and improve the overall sound quality in your listening environment:

- 1. Position your speakers away from walls and corners: Placing your speakers too close to walls and corners can increase bass output but decrease clarity and depth. A good rule of thumb is to position your speakers at least 50cm away from a corner and 20cm from a rear wall.
- 2. Keep the acoustic environment symmetrical: To create a balanced soundstage, try to keep the acoustic environment surrounding your left and right speakers symmetrical. This can be achieved by using bookcases, walls, curtains, or other furnishings to create a mirror image on either side of your speakers.
- 3. Add soft furnishings to absorb reflected sound: Rooms with few soft furnishings can sound bright and lack detail, as reflected sound can interfere with the direct sound from your speakers. Adding curtains, carpets, picture frames, couches, and bookcases can help absorb reflected sound and improve sound quality.
- 4. Avoid bare parallel walls: Rooms with bare parallel walls can suffer from flutter as sound bounces back and forth between the walls. To reduce this effect, add soft furnishings to the walls or hang acoustic panels to help break up the sound reflections.

By following these tips, you can create a more optimal listening environment for your speakers and enjoy improved sound quality.

#### SPEAKER CARE

Proper care and maintenance can help ensure that your speakers continue to look and perform at their very best for years to come. Here are some tips for cleaning and maintaining your speakers:

- 1. Clean the speaker cabinet with a damp cloth: To clean the speaker cabinet, use a damp cloth to gently wipe away any dirt or dust. Avoid rubbing too hard on any one point, as this could leave a polished spot.
- 2. Vacuum the grille at a low power setting: To clean the grille, remove it from the speaker cabinet and use a soft brush attachment on your vacuum cleaner to gently remove any dust or debris. Be sure to use a low power setting to avoid damaging the grille.
- 3. Dust the bass driver(s) and tweeter with a soft brush: To clean the bass driver(s) and tweeter, use a soft-bristled brush to gently dust away any dirt or debris.
- 4. Avoid using harsh chemicals or abrasive materials: Harsh chemicals and abrasive materials can damage the speaker cabinet, grille, and drivers. Stick to using a damp cloth, soft brush, and vacuum cleaner to keep your speakers clean.

Our speakers are proudly
Australian designed
made/assembled to a premium
level. Built to be heritage quality.
By following the guidelines above
you will enjoy your speakers for
many years to come.

# ATLAS + HURD

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