

Thank you for purchasing the Talon Thunderbird Loudspeaker. You will find with proper care this speaker can provide you with years of enjoyment.

### ***In this manual you will find the following:***

1. Proper care and maintenance
2. Break In
3. Connections
4. Speaker Placement
5. Service

### **Proper care and maintenance:**

The finish on the Talon Thunderbird Loudspeaker is a polyester automotive paint finish that rivals that of the finest automobiles. Care for this finish is similar to that of a fine car. Automotive wax, very soft microfiber towels, and high gloss automotive finish products such as Novus, will keep your speakers looking like new for many years to come.

We recommend whenever you are moving the speakers you remove all watches, rings, belt buckles or other metal that might accidentally scratch the finish. While most minor scratches can be buffed out successfully, it's easier to avoid the scratches in the first place.

### **Break In:**

These speakers need at least 400 hours of break in. Prior to break in there will be limited bass response. The speakers are designed to operate optimally once the break in period is complete. We recommend using a break in CD which sweeps all frequencies continually. If you can play this at reasonable volumes continuously for a couple of weeks you will be amazed at the difference in the performance of your speakers.

### **Connections:**

The Thunderbird speaker has the capability of single wiring. We recommend using a cable that is designed for subwoofer operation. To connect loosen the knob by turning it counter clockwise until the spade connectors can be inserted. Connect the positive wire to the connection labeled + on the plastic binding plate. Once the wires are placed properly tighten the knob by turning it clockwise.

### **Set up:**

Thunderbirds should not be placed in a cabinet or in the corner (unless you are using 4 Thunderbirds each in a corner). Corner loading used by many manufacturers causes more efficiency but at the expense of clarity. This technique is not recommended for state of the art products such as the Talon Thunderbird.

### **Speaker Placement:**

Speaker placement for the Talon Thunderbirds is very important. This can be the most difficult speaker to place. There are a variety of reasons for this, but in general, bass frequencies are most affected by their placement in the room. First let's examine placement with one subwoofer. This is actually the most difficult. Subwoofers can either be placed in corners, where they have the benefit of sound reinforcement from adjacent walls. This means less amplification is required

and less distortion on the sound the woofer is producing. However, this comes at a price. While many subscribe to the thought that bass is omni directional, a woofer placed in one corner can usually be detected as being in THAT corner. Omni-directional does not necessarily mean it can not be detected as a sound source. The other expense is that corner placement excites room modes and generally delivers less than a flat frequency response.

When we calculate room response curves theoretically, we do it to find out how flat a response we can achieve. This usually yields a subwoofer placement that is slightly off center in the room and fairly far out into the room. This gives us a good idea of how flat we are able to achieve, but inevitably this is not the best overall sound for the subwoofer. It is for this reason that we do not even specify subwoofer placement, rather we give a location where we found the flattest frequency response.

We have found that if you can detect the most problematic axial mode, say for example the length. You can place the subwoofer on the long wall at the  $\frac{1}{4}$  wavelength cancellation, or  $\frac{1}{4}$  the distance of the length from the front (speaker) wall. This method can also work for 2 subwoofers.

If you can afford a second matching subwoofer, this is generally preferred to a single more expensive subwoofer. By using 2 subwoofers on opposite walls you can get one more axial mode cancellation. This is highly recommended. By going to 4 subwoofers you can place each in a corner, or each at a midpoint on each wall. This will give the most uniform response. See the paper below by Todd Welti and Floyd Toole of Harman International:  
<http://www.harman.com/wp/pdf/multsubs.pdf>

Getting the subwoofer in phase can be a little tricky for a novice. The best way is to use a test tone at the crossover frequency of the subwoofer. Play this tone and adjust the phase so that the tone is the loudest at the listening position. Using an SPL meter can be a great help here. When it is at the loudest the subwoofer is in phase.

\* Note:  $\frac{1}{8}$  of a wavelength (in feet) =  $1130/\text{wavelength} * \frac{1}{8}$   
Thus for a 80 Hz wavelength = 1 foot 9 inches

### **Service:**

It is unlikely your speakers will ever require service. However, should they become damaged you should first contact your local dealer where you purchased the speakers. They in turn will contact Talon and determine the best course of action for repair. Shipping the speakers is expensive and we would like to avoid this if at all possible. However, in some cases it can not be avoided and we will need to have the speakers returned to the factory for repair.

To contact Talon for service call the toll free number:  
877-656-4536



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