

**A** car is far from the ideal listening environment. Many reflective surfaces, coupled with resonating metal panels, added to the noise from tyre-on-road, not to mention engine noise, all conspire to ruin our enjoyment of music on the move. However, help is at hand by way of Skinz sound treatment.

# Treated for Sound

A recording studio contains specially designed rooms where every possible attempt is made to ensure that sound is heard in its purest form. Acoustically treated panels are used for walls and ceiling and efforts are made to avoid any parallel reflective surfaces. This is because reflected sounds can add together to falsely boost certain frequencies or similarly, cancel each other out leaving "holes" in the resulting music.

Similar sound treatment principles should also be observed when installing a car audio system. By sound treating a car we can minimise the effects of some of the key offenders.

**// We believe a treated car will improve the performance of your speakers by up to 40% //**

It is argued that we cannot do a lot about road noise as this is directly injected into the vehicle through the tyres' contact with the road, which is then transmitted through the suspension of the vehicle to the passenger space. However, by reducing the resonance in doors, bulkheads, floor and ceiling we can considerably reduce the amplifying effect these panels would otherwise have, so treating a car can and does have an attenuating effect on these. As a lot of this noise is low frequency, you may well find yourself boosting bass when on the move as it is here that most of the cancellation from road noise will happen.

Speakers not only produce sound forwards but also transmit backwards or from the rear of the speaker. It is therefore essential that we treat the areas behind a speaker, as any energy reflected from a panel behind it will try to interfere with the sound coming into the car.

**system**  
**SKINZ**

The three step solution to improve and protect any aftermarket speakers  
Limited 3-year extended warranty and a Limited lifetime warranty against water ingress on selected speaker brands

- 1. Moisture Guard For Speakers**  
Acoustically transparent open-cell synthetic foam  
Prevents water damage to speakers
- 2. Acoustic Sound Wave Diffuser**  
Reduces back waves, ensuring a tighter punchy mid/bass speaker performance
- 3. Reference Damping Technology**  
Eradicates rattles and vibration for a superior musical performance

**Sound improvement and protection for life!**

In order to "deaden" a panel, we need to stop it from vibrating in sympathy with the music or any other sound. We do this by applying a multiple layer adhesive sheet that contains a bituminous material which adds weight and substance to the panel it is attached to as well as having no resonant frequency of its own. This deadening layer will also reduce the amount of reflected sound returning to the rear of the speaker. Tapping a treated door and comparing the sound you get against that of an untreated door will demonstrate how effective it is. Skinz Expert Damping is made up of a triple layer sandwich of two differing density Rubber layers covered by an Aluminium layer offering very effective damping. A pressure sensitive adhesive compound ensures optimum adhesion to sheet metal, plastic and other reasonably level and grease-free surfaces.

We can further diminish issues caused by reflected sound by placing a shaped foam

layer between the rear of the speaker and any reflective surface. Skinz Wave Diffuser has an irregular egg box shape which ensures that sound from the rear of the speaker is broken up and absorbed both on the way to and back from a reflective surface and will have additional audible benefits when used in conjunction with Skinz Expert Damping.

In many cases, it is hard for a FOUR MASTER to get drivers excited about the benefits of sound treatment. It is often hard to justify spending money on what cannot be seen and although the function of it can be explained, the resultant benefit to the sound is difficult to perceive without sitting in identical cars with identical systems, one treated and one not. We believe that a treated car will improve the performance of your speakers by up to 40% and firmly believe this represents a significant return on a modest investment.