GETTING THE MOST® FROM YOUR CAR

This clever device grabs digital audio data from your car

The majority of car owners I speak with are not aware that some of the major electrical and electronic systems in their cars all share a common communications bus.

Much like a HDMI or USB port on your home computer, digital control signals are all sent along the same wires at high speed including 16 bit 44.1kHz or 48kHz digital audio signals to other on-board devices that process and decode them.

MOST is a specifically designed automotive communications protocol. Defined first in 1998, MOST is by no means new, yet it has not been in the consciousness of the consumer until now and even this is restricted to a few keen technophiles. Founded as a result of cooperation between manufacturers of in-car electronic systems and automotive companies amongst others, MOST pointed the way toward a future of cost efficiency and technical compliance not previously seen in the world of automotive manufacturers. MOST is used largely to transfer audio, video and other high-speed digital information around a car. The advantage of having a standard protocol for this was seen in instant savings in development costs and time required to meet the requirements du jour of automotive manufacturers. The development of MOST made it relatively cheap and simple to provide equipment that could simply be plugged in and work.

Initially, many manufacturers of aftermarket in car entertainment products felt MOST development had a hidden agenda, to lock out the possibility of modification to the audio systems on cars. However, the availability of this protocol has actually helped aftermarket accessory manufacturers to produce MOST compatible products that can also plug and play!

Anyone who has taken a car to a franchised dealer with a three-year-old broken car audio unit will know how disinterested car companies are in sorting out your problem. Many who have tried report astronomical figures to get original equipment replaced or repaired. Allegedly, this situation has even led to criminal damage as thieves attempt to fill the void of last year's working replacement original equipment by nicking them from parked up vehicles!

So, as you can see, far from locking aftermarket companies out of vehicles, the widespread adoption by motor manufacturers of a readily available digital protocol has helped the aftermarket to develop products which can replace aged broken equipment in say a BMW or Mercedes.

Automotive aftermarket technologists Audison were quickly on the case with MOST. Audison had already perfected methods of taking high-level speaker inputs directly from speaker outputs. They had with equal alacrity developed systems for nullifying on-board equalisation and other contrivances intended to make very cheap speakers sound almost musical. However, they quickly identified that it was the conversion of signals from the digital domain to analogue using cheap components that was causing much of the stale sound that was appearing at the outputs of factory-fitted head units. They set to work to find the purest, most digital route to convey audio signals directly into their amplifiers. Here, far better quality digital to analogue conversion could be employed.

One such product to tumble out of their research is the Audison bit DMI (Digital Music Interface). This device is able to collect optical digital audio signals directly from a vehicle's MOST bus and convert them to a standard TOSLINK optical digital output. This can then be used to inject the pure digital signal directly into an Audison bit processor for cleaning up or simply directly into the D to A convertor of an Audison amplifier with digital inputs.

Unsurprisingly, although the protocol is defined in format, the information carried by MOST can vary depending upon the on-board systems it is servicing and therefore, vehicle specific firmware updates are not only readily available but simple for your installer to achieve. Once uploaded, the bus information will never change unless the device is moved to a different car in which case your installer can upload the appropriate firmware for the new vehicle.

The Audison bit DMI features; a MOST input, a TOSLINK output and a USB port to enable firmware to be uploaded very quickly and easily. As the device is simply extracting digital audio information, the rest of the vehicle's on-board systems remain untouched and so functionality such as hands-free mobile phone, parking sensor feedback tones and navigation instructions remain just the same as they were with the car in stock condition. As there is no need to cut into any wiring, the installation is a simple case of unplugging the MOST cable from the vehicle port it has been plugged into and removing the power loom. Furthermore the box measures just 141.5 x 36.5 x 86.5mm and is therefore easy to hide away from view. An in-car device needs to run from 12 Volts and also needs to be robust enough to withstand extraordinary temperature swings. In this case, the DMI can cope with temperatures from -40 to 100 degrees centigrade. Temperatures that are quite likely to be experienced in a car parked overnight in midwinter in Finland or during a hot summer day in the Gobi desert or even the South of France.

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The bit DMI offers installers the very best opportunity to provide you with a near perfect source signal without all the usual audio bending and shaping that is commonplace when simply taking a speaker-level output from a factory-fitted head unit and working with it. To have access to unsullied digital audio guarantees a clean and accurate source signal that can be worked and amplified and converted back to analogue at the very last moment. This in turn ensures that no loss or interference can affect the final performance of an audio system.

It is quite usual for lovers of hi-fi listening in the home to spend vast amounts of time and money trying to achieve the same thing that this single hideaway box can do. The difference this magic box can make to the integrity of the source of your music is truly exceptional and if you are looking at high-end audio for your car the Audison bit DMI is an absolute essential.

It is always worth consulting with an expert such as a FOUR MASTER, when interfacing with your vehicle's MOST bus as they have the products and also the knowledge to save you from jumping into what could be a very deep hole! ▢

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