

RAINBOW GERMANIUM...

For the audiophile, technological development is appreciated provided performance isn't compromised in favour of sonically less important criteria. Rainbow has put the battle between size and performance to one side while developing this exciting new range of audiophile products.

In the eighties, I was lucky enough to spend some time working in Germany on audio systems, many of which were installed into concert venues of varying sizes. I was struck by the number of these that

existed and the fact that they seemed to be frequently filled to the rafters with music-lovers young and old attending orchestral and choral music concerts.

For the purist, anything that gets in between the performance and the ears is very much frowned upon and viewed with suspicion however even in these purpose designed concert venues a level of sound reinforcement is required. An ongoing obsession with sonic transparency held by the descendants of the Teutons has led to the design of some superb audio products over the years and to have this driving force developing audio products for in-car use is a very good thing. This led me to have

a Rainbow system installed into my own car last summer. It consists of a pair of the previous incarnation of Germaniums and I absolutely love them. For me, they do just about everything I could hope for at their particular mid to high-end price point. A Rainbow iPaul amplifier that perfectly meets my needs drives mine actively.

So, why would Rainbow fiddle about with such a perfect speaker? The pursuit of perfection never ends I suppose and for the seeker there is always room for improvement. One criticism of the previous range for instance was the size of the crossovers. These were necessarily huge in order to reach the high standards demanded and installers were forced to find spaces which often didn't exist and some even mount them in the doors which is not a great idea as the action of



FUNCTION OVER FORM?

I haven't heard new Germanium yet but if they truly do improve on the old ones then they are definitely worth investigation.

closing the door can put huge stresses on the mountings. The new crossovers are extremely compact in comparison yet still manage high levels of filtering and audio integrity due to the use of hand-wound coils and top spec. components. The phase corrected 12dB per octave crossovers have selectable crossover frequencies and five steps of attenuation to help installers achieve the correct balance for specific vehicles.

Moving on to the drivers themselves, the 6.5inch aluminium woofer cone has been updated with a compound of aluminium and paper. The new cones are black which helps with aesthetic integration and the dust cap has been redesigned to further remove any resonances and is now concave rather than convex. The back plate has eight ventilation holes to vent heat build-up from the motor

assembly to ensure cool running when providing bags of percussive excitement and great mid-range response at high levels. The woofers will reach down to 39 Hz, which is impressive for full-range speakers. I run my old ones without a subwoofer and still hear bass when driving on motorways. The tweeters feature coated silk domes designed to provide a warm and natural sound much associated with acoustic instruments. A low-resonance acoustic chamber that encloses the rear of the tweeter assembly assists them in this. Sound is sonically connected to the chamber via 12 coupling holes drilled into the back plate of the tweeter magnet.

Two Germanium subwoofers have been introduced to complement the speakers. Both 12inch and 10inch are of a similar construction to the woofers although on a much larger scale. Again the convex dust cap is designed to reduce resonance and an aluminium die cast basket continues this good work. As with

the woofers, a double-ridged surround makes for great stability during long excursions and in the case of the subwoofers a double spider keeps everything tight and punchy even when run at the highest levels and lowest bass reaches. The 12inch boasts a reach down to 21Hz and when run at the quoted 600Watts continuous power rating, should be enough to crack pavements.

A range of three Germanium amplifiers has been developed to perfectly complement the improved speakers and subwoofers. These are built for no compromise sound. While other manufacturers obsess with digits, it is refreshing to see Rainbow cling to the best analogue audio technology here to reinforce its commitment to the best possible sound over compact case size. Three amplifiers provide installers with flexible system design opportunities. The Germanium Four offers 4 X 105Watts RMS into 4Ohms but will run quite happily into 20hm loads in this instance delivering 140Watts RMS. Pairs of channels can be bridged and on-board filtering used to create the classic full-range stereo plus subwoofer system but the flexibility of running a pair of Germanium full-range in active mode also exists. A two channel provides 2 X 140Watts RMS into 4Ohms or 2 X 220Watts into 20hms. The channels can be bridged to provide a single mono output of 450Watts RMS into 4Ohms. A mono block amplifier completes the range and is capable of outputting 950Watts RMS into 10hm for monstrous bass. All amplifiers in the range are thoroughly equipped with every conceivable protection system. This is essential when dealing with audiophile quality amplifiers with so much pure power. □