Dr. Udo Zucker – Physicist, PhD in Science, designer of award-winning electronics, dedicated audiophile and Chief Executive Officer of TAG McLaren Audio

Award-winning TAG McLaren technology - the TAG2000 F1 control system has been selected as a Millennium Product by the British Design Council

welcome to

TAG McLaren audio

TAG McLaren Audio exists with one aim in mind: to produce the very best audio equipment in the world.

Like many people, I often have my best ideas when relaxing to a piece of music or watching a movie. For years, knowing the technical capabilities of TAG McLaren, I have nurtured the ambition to push sound reproduction to the absolute limit; that's why we formed TAG McLaren Audio.

At the core of our development team are highly experienced engineers whose heritage of award-winning hi-fi and world-beating electronic control systems is envied by many and equalled by few.

Calliope loudspeaker

In addition to our experience in the world of hi-fi we are able to utilise our expertise in mechanical engineering, composite material technology, multi-layer printed circuit boards, fast digital signal processing, electronic noise suppression, radio frequency technology and software design to name but a few.

All these skills are sharpened to compete in the toughest of all technical sports: Formula One motor racing. We directly apply them to enhance our high-end audio products. For example, composite and aluminium material technology is used to make resonance - free loudspeaker cabinets, suspension technology decouples electronics from the sound field and digital signal processing makes better home cinema products. The list is almost endless.

I have been an audiophile for more than thirty years and have used and upgraded many audio systems in that time. Our aim is sonic perfection combined with aesthetic delight and solid build quality, a rare combination in hi-fi but one which TAG McLaren Audio delivers.

It is our audio engineers' technical capability which provides outstanding sound quality and our stylists' ability to look into the future which makes the Calliope loudspeaker so desirable. Employing 'Aluminium Technology' combined with low distortion drive units makes the sound much better than you would expect from a loudspeaker of Calliope's size. Outstanding technology pushes the limits of clarity and transparency of sound reproduction!

Thank you for purchasing the TAG McLaren Audio loudspeaker Calliope AvantGarde. We are convinced Calliope will give you many hours of listening pleasure.

leading-edge technology

Calliope is a hi-performance, two-way, fourth order reflex-loaded, aluminium technology loudspeaker, capable of reproducing music with outstanding clarity and transparency. Calliope is ideal for high quality two channel stereo and home-cinema applications.

features

enclosure technology

Calliope employs hi-performance materials avoiding the traditional wooden cabinet to eliminate the unwanted sonic signature of energy re-radiation. A pre-stressed, curved profile forms a very stiff, single-piece alloy extrusion which is further reinforced with the addition of aluminium alloy end-caps secured with tie-bolts. This creates a structurally inert and inherently well damped enclosure which ensures that acoustic energy is created by the drive units and not the enclosure. Preventing the enclosure from flexing and re-radiating energy reduces distortion and coloration offering a neutral and accurate portrayal of the performance.

optimised dispersion enclosure geometry

The geometry of the enclosure has been carefully designed to optimise the dispersion of sound energy. Calliope generates an even and consistent energy output both on and off axis resulting in a solid and accurate image.

hi-specification drive unit technology

Calliope's drive units have been designed to optimise their performance within their respective pass-bands. The 150 mm bass/midrange unit employs a woven glass-fibre cone to create a stiff, yet well damped, diaphragm that remains pistonic through the pass-band. A phase plug has been employed in place of the commonly found dust-cap. This phase plug does not contribute to the moving diaphragm assembly. It therefore offers considerable benefits over an orthodox dust-cap: reduced moving mass, improving transient performance; improved off-axis frequency response, providing a wider sound-stage; no physical contact with the diaphragm, preventing a mechanical impedance mis-match; and a smooth frequency response roll-off.

The tweeter's diaphragm is manufactured from silk fabric which is coated with a lightweight damping layer.

magnetically shielded drive units
Both drive units are magnetically shielded to allow Calliope to be used in close proximity to a television.

hi-performance crossover
The components used throughout the crossover are of the highest quality to ensure signal integrity and clarity. The inductors use oxygen-free, high purity copper (OFHC) wound on bobbin cores to improve saturation current limits, reduce DC resistance and minimise stray magnetic field leakage. The capacitors are manufactured with an over-size polypropylene dielectric and are rated at 250V DC to guarantee uncompressed power output. The resistors are high-power devices offering extremely high peak voltage operation without compression.

oxygen-free copper loudspeaker connection terminals
The use of proprietary OFHC gold plated terminals achieves a clear sonic improvement compared to the typically used alternatives. No nickel plating has been used between the OFHC foundation and the gold finish as it adds 'grain' to the sound. Whilst this will lead, in the long term, to some dis-colouration of the terminals due to the copper atoms partially diffusing into the anti-corrosion gold layer, the customary nickel plate interlayer is well known (as a ferro-magnetic and hard oxidised metal) to affect sound quality and was eliminated.

features

single input connection
After extensive research into the sound quality of our flagship loudspeaker, the F1 AvantGarde, it was discovered that the potential benefits of multi-wired terminals for loudspeaker cable connection were outweighed by the losses incurred in their implementation, e.g. additional contact interfaces and electrical connection straps. In addition, it has been found that even with the finest top grade power amplifiers, single input terminals improved perceived dynamics and musical expression. The results of this research have been applied to Calliope to realise the full potential of the components employed throughout the system.

We know you are keen to get Calliope working. This section will have you listening to your favourite music as quickly as possible.

packaging

Calliope has been carefully packaged for safe transportation. If you have the storage space, please retain all the original packaging. This will allow you to transport your loudspeakers safely in the future.

before you start

Make sure that all the components of your audio system are disconnected from the AC supply whenever you change any connections.

loudspeaker connection

Connect the red (positive) terminal of your right loudspeaker to the right, positive output terminal on the back of your amplifier. Then connect the black (negative) terminal of your right loudspeaker to the right, negative output terminal on the back of your amplifier. Repeat this procedure to connect your left loudspeaker using the left positive and negative terminals on the back of your amplifier.

For best sound quality, we recommend that you use loudspeaker cables terminated in 8 mm spade terminals (e.g. our Cable AvantGarde F3-10-SPK). Unscrew the terminal enough to fit the spade into it and then tighten the terminal. If you are unable to fully tighten the terminal, try pushing the spade connector in a clockwise (tightening) direction. Do not over-tighten the terminal as it is made from soft, gold-plated, oxygen-free, high purity copper.

installation

You are no doubt eager to begin enjoying your Calliope loudspeakers but we would ask you to read the following installation guide to help you decide on the optimum position for your loudspeakers.

room placement

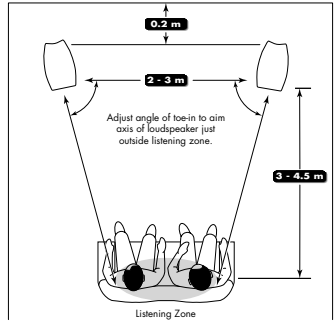
Calliope has been specifically designed to project a wide and even dispersion of sound in order to eliminate the common problem of 'hot seat' imaging. For the best performance we recommend that you site your Calliope loudspeakers following these guidelines:

The listening position should ideally be no more than 1.5 times the distance between the left and right loudspeakers. Avoid choosing a listening position that places your head closer than 40 cm to any room boundary. Try to avoid placing the loudspeakers close to the side walls of the listening room in order to prevent strong interaction with the walls.

We recommend placing Calliope on the (optional) matching stands (see figure opposite).

Calliope shown on its optional 'Aluminium Technology' stand (featuring cable management).

Try to place each loudspeaker so that the rear edge of the enclosure is approximately 0.2 m (8 inches) from the rear wall and at least 0.6 m (2 feet) from side walls. Space them between 2 and 3 metres (6 – 10 feet) apart. Try to locate both loudspeakers in a similar acoustic environment. Toe the loudspeakers in so that the axis of the loudspeakers point just outside the listening zone (see figure below).



fine tuning

To fine tune the position of your Calliope loudspeakers, choose some music you are familiar with and sit in the central listening position. Pay attention to the tonal balance of the reproduction and the accuracy of the stereo sound-stage. Moving the loudspeakers away from the rear wall and into the room will reduce the amount of low frequency energy with respect to the rest of the audible bandwidth. Conversely, moving the loudspeakers closer to the rear wall will increase the low frequency energy.

The distance between the loudspeakers and the amount of toe-in will affect the stereo sound-stage. With careful and patient experimentation, you will find a configuration that will provide an even and neutral tonal balance with an accurate sound-stage. Don't be afraid to experiment.

Once you have found the ideal position for your loudspeakers within your listening room, you may wish to add the mounting spikes supplied. This will allow the loudspeakers to be levelled and provide rigid support improving image stability and bass definition. The position of the mounting spikes has been designed to align with the top plate casting of the dedicated Calliope loudspeaker stand. The dedicated stands also provide an option to bolt the loudspeakers in place.

speaker with and
without grille cover

installation

grille cover removal

In order to realise the best performance from your Calliope loudspeakers, we recommend that you remove the grille cover. To do so, gently prise the side edges of the grille out of the enclosure relief channel starting at the bottom.

assembly of optional spikes

TAG McLaren Audio equipment is designed to give optimum performance for many years.

running in

The performance of your Calliope loudspeakers will improve during the first 48 hours of operation. You may wish to play some programme material at a moderate level continuously for this period of time before listening seriously to your Calliope. Your loudspeakers will continue to improve over the next 100 hours of use.

warming up

Every time you use your Calliope loudspeakers, the performance will improve during the first few minutes of operation until the components have reached their optimum operating temperature.

In order to maintain the appearance of your Calliope, you can clean them as follows:

cleaning

Any grease or dirt on the enclosure may be removed with a soft, lint-free cloth moistened slightly with a mild solution of warm water and detergent or washing up liquid. Do not use any other solutions. Do not use any solvents or abrasives.

Take great care not to get any liquid inside the loudspeaker enclosure or on the drive unit diaphragms. If this happens, you should have your Calliope loudspeakers serviced.

service

Under no circumstances should you attempt to service your Calliope loudspeakers. All servicing should be carried out by one of our authorised service agents.

If service is required, please contact your authorised TAG McLaren Audio retailer. If your Calliope loudspeakers are still under guarantee, please refer to the guarantee card which gives you details on how to claim against the guarantee.

Please package your Calliope loudspeakers carefully when transporting or shipping. If you do not have the correct packaging at this time, please contact TAG McLaren Audio for assistance.

This section is for those of you who really want to know the 'insides' of your Calliope loudspeakers. You will not miss out on any of the functions or performance of your Calliope loudspeakers if you choose not to read any further.

low frequency extension (in-room)	-10 dB @ 35 Hz (-3dB @ 51 Hz)
response uniformity (anechoic)	±1.5 dB (80 Hz – 20 kHz)
sensitivity	87 dB/W/m (4 pi anechoic)
impedance	6 Ω nominal (4.8 Ω minimum)
distortion	<0.3% T.H.D. (ref. 1W, 100 Hz – 20 kHz)
power amplifier requirement	15 W minimum recommended
maximum S.P.L.	109 dB (in-room)
operating temperature range	18 – 35 °C
dimensions	330 x 200 x 300 mm (H x W x D)
weight	approx. 15 kg per pair