

welcome



Dr. Udo Zucker – Physicist, PhD in Science,  
designer of award-winning electronics,  
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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.

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.

TAG McLaren's 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.

Dr Udo Zucker



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

### Calliope Centre Channel Loudspeaker

The Calliope Centre Channel is a magnetically shielded, high performance, 4th order reflex-loaded loudspeaker capable of reproducing music and voices with outstanding clarity and transparency. It has been voiced for perfect 'timbre matching' to our Calliope range of loudspeakers.

#### enclosure technology

The Calliope Centre Channel employs high performance materials eschewing the traditional wooden cabinet to eradicate the unwanted sonic signature of energy re-radiation. The curved profile forms an extremely stiff, single-piece aluminium extrusion which is further reinforced with the addition of the aluminium end caps secured with high tension bolts. This creates a structurally inert and inherently well damped enclosure which ensures that the only acoustic energy is created by the drive units and not the enclosure.

#### optimised dispersion enclosure geometry

Marrying form and function harmoniously, the geometric form of the enclosure has been carefully designed to optimise the dispersion of sound energy from the enclosure. The Calliope Centre

Channel generates an even and consistent energy output both on and off axis resulting in a solid and accurate image.

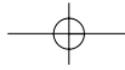
#### drive unit technology at its best

The Calliope Centre Channel loudspeaker's drive units have been designed to optimise their performance within their respective pass-bands. All drive units are magnetically shielded to allow the Calliope Centre Channel to be used safely in close proximity to CRT television screens.

The drive units are arranged in a D'Apollito configuration and voiced for installation above or below a screen. Their close vicinity to each other offers a uniform directivity with frequency and is hence much less dependent on room geometry than conventional designs.

The 150 mm bass/midrange units employ 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: better transient performance, a wider sound-stage and a smooth frequency response roll-off characteristic.

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

### high quality 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 d.c. 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. All component connections are hard-wired as opposed to being printed circuit board tracks to maintain optimum transfer of music signals.

### OFHC loudspeaker connection terminals

The use of proprietary OFHC gold plated binding posts achieves a clear sonic improvement compared to the typically used alternatives employing high copper content alloys. Furthermore, no nickel plating has been used between the OFHC foundation and the gold finish as it added 'grain' to the sound. Whilst this will lead,

in the long term, to some dis-colouration of the binding post due to the copper atoms partially diffusing into the anti corrosion gold layer, the customary nickel plate interlayer is well known to affect sound quality and was eliminated.

### single input connection

After extensive research into the sound quality of the F1 AvantGarde loudspeaker, 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 the Calliope Centre Channel loudspeaker.



## getting started

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

**packaging** Your Calliope Centre Channel loudspeaker 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 the loudspeaker 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.



## connecting loudspeakers

**loudspeaker connection** Use high-quality loudspeaker cable. For best sound quality, we recommend that you use loudspeaker cables terminated in 8 mm spade terminals. Connect the red (positive) terminal of the Centre Channel to the positive output terminal of your amplifier.

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.

Then connect the black (negative) terminal of your Centre Channel to the negative output terminal of your amplifier.



**grille removal** The Calliope grille geometry has been carefully designed such that it has only a very small effect on the acoustic response, so the penalty for leaving the grilles in place is slight. However, if you want to realise the best performance from your Calliope Centre Channel you might want to remove the grille. To do so, gently prize the side edges of the grille out of the enclosure relief channel, starting at one end.

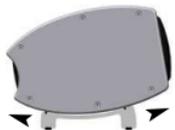




**the best location**

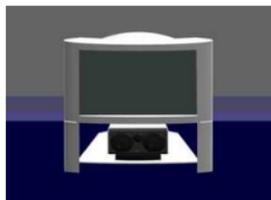
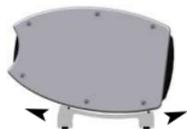
The Calliope Centre Channel loudspeaker has been designed to be placed horizontally on top of or below a cinema screen. Its voicing (the way it sounds) has been carefully optimised for these positions. If your TV's enclosure is rigid enough, place the Centre Channel on top of the TV, otherwise below it. The Centre Channel can be fine tuned by angling it on its plinth to direct the output at the audience.

To angle the Centre Channel upwards the highest edge of the plinth should be at the front.



For fine adjustment slide the 'centre channel' backward or forward.

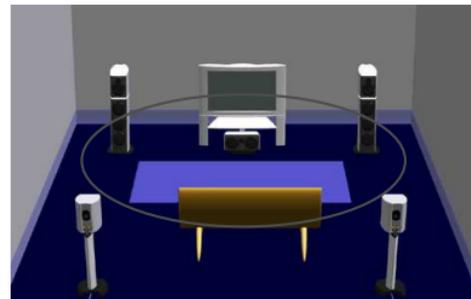
To angle the Centre Channel downwards the highest edge of the plinth should be at the back.



**home cinema set-up considerations**

The Calliope loudspeaker range allows you to build a very high quality home cinema system. For a start-up system we recommend using four Calliope Bookshelf loudspeakers on their dedicated stands (front left and right, rear left and right) and the Centre Channel. For increased impact add the Calliope Bass Modules to the front left and right. For the ultimate system use Bass Modules for the surround channels as well. When expanding to a seven channel system, add two Calliope loudspeakers (with or without Bass Modules) between the rear left and right.

Try to place all the loudspeakers at a similar distance from you, with the centre channel being behind a line drawn between the left and right front loudspeakers.



**running in** The performance of your Calliope Centre Channel loudspeaker will improve during the first few weeks of operation.

**warming up** Every time you use your Calliope Centre Channel, the performance will improve until the components have reach their optimum operating temperature which, depending on replay volume, is usually achieved within 5-10 minutes of operation.

**cleaning** In order to maintain the appearance of your Calliope Centre Channel loudspeaker you can clean it as follows:

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 Centre Channel serviced.

**service** Under no circumstances should you attempt to service your Calliope Centre Channel loudspeaker. 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 Centre Channel loudspeaker is still under guarantee, please refer to the guarantee card which gives you details on how to claim against the guarantee.

Please package your Calliope Centre Channel carefully when transporting or shipping. If you do not have the correct packaging at this time, please contact your retailer for assistance.



## technical data

<b>configuration</b>	2-way, 4 <sup>th</sup> order reflex loaded system in D'Apollito configuration, magnetically shielded
<b>crossover</b>	damped 2 <sup>nd</sup> order (electrical) low pass to bass/midrange damped 3 <sup>rd</sup> order (electrical) high pass tweeter 3 kHz crossover frequency, avoiding off-axis comb-filtering effects
<b>low frequency extension (in-room)</b>	-10 dB @ 30 Hz (-3dB @ 45 Hz)
<b>response uniformity (anechoic)</b>	80 Hz - 20 kHz ( $\pm 1.5$ dB)
<b>sensitivity</b>	88 dB/W/m (4 pi anechoic)
<b>impedance</b>	6 $\Omega$ nominal (4.0 $\Omega$ minimum)
<b>distortion</b>	<0.3% T.H.D. (ref. 1W, 100 Hz - 20 kHz)
<b>power amplifier requirement</b>	15 W minimum recommended
<b>maximum S.P.L.</b>	109 dB (in-room)
<b>operating temperature range</b>	18 - 35 °C



## technical data

<b>dimensions</b>	200 x 395 x 325 mm (H x W x D)
<b>weight</b>	approx 15 kg

We reserve the right to alter design and specification without notice.  
Specification may vary for different countries

