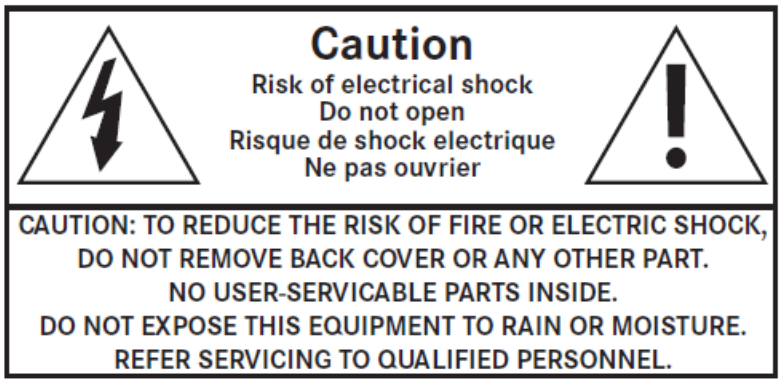
ADAM 456 Tensor Gamma Active Version Instruction Manual

Contents

ADAM 456 Tensor Gamma Active Version

Safety Instructions

Please read the following safety instructions before setting up your system. Keep the instructions for further reference. Please heed the warnings and follow the instructions.



Explanation of Graphical Symbols

-  The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated ‘dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
-  The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution To reduce the risk of electric shock, do not open the loudspeaker. There are no user-serviceable parts inside. Refer servicing to qualified service personnel.

- This product, as well as all attached extension cords, must be terminated with an earth-ground three-conductor AC mains power cord like the one supplied with the product. To prevent shock hazards, all three components must always be used.
- Never replace any fuse with a value or type other than those specified. Never bypass any fuse.
- Always switch off your entire system before connecting or disconnecting any cables, or when cleaning any components.
- Do not place this unit on an unstable cart, stand tripod, bracket or table. The unit may fall, causing serious injury and/or serious damage. When a cart is used, use caution when moving the cart/apparatus combination.
- Do not expose this product to rain or moisture, never wet the inside with any liquid and never pour or spill liquids directly onto this unit. Please do not put any objects filled with liquids (e.g. vases, etc.) onto the speaker.
- Check if the specified voltage matches the voltage of the power supply you use. If this is not the case do not connect the loudspeakers to a power source! Please contact your local dealer or national distributor.
- Protect the cord from being walked on or pinched.
- Always use fully checked cables. Defective cables can harm your speakers. They are a common source of any kind of noise, hum, crackling etc.
- Always keep electrical equipment out of the reach of children.
- Always unplug sensitive electronic equipment during lightning storms.
- The loudspeaker should be installed near the socket outlet and disconnection of the device should be easily accessible.
- To completely disconnect from AC mains, disconnect the power supply from the AC receptacle. Never use flammable or combustible chemicals for cleaning audio components.
- Avoid touching the speaker membranes and do not block the woofer's ventilation ports.
- Never expose this product to extremely high or low temperatures. Never operate this product in an explosive atmosphere.
- High SPL's may damage your hearing! Please do not get close to the loudspeakers when using them at high volumes.
- Please note that the diaphragms build up a magnetic field. Do not ply with magnetic items at close range to the diaphragms.
- Assure free airflow behind the speakers to maintain sufficient cooling.

Introduction

Dear customer,
Thank you for choosing the ADAM Audio Tensor Gamma loudspeaker.
ADAM loudspeakers are built for maximum quality reproduction and audio perfection. With the Tensor Gamma, you have selected one of the most ambitious compact loudspeaker systems available. It combines many of the groundbreaking ADAM innovations in the areas of amplifier and transducer technologies while furthermore distinguishing itself by utilizing only the finest materials and the most fastidious workmanship. With the TENSOR series, ADAM brings loudspeakers into your home that give you access to the sonic authenticity of the most sought-after professional studio monitors. This version of the Tensor Gamma is a four-way ported active system that uses the new X-ART tweeter and an X-ART midrange speaker, ensuring full compatibility with the latest expanded high-frequency resolution media formats plus two HexaCone©-bass/midrange drivers. This manual is intended to provide you with information about your new ADAMs. It contains important safety information, setting up, handling, and warranty. We request that you read these sections carefully to ensure easy set-up and prevent potential problems. If you have any questions about this or any of our products, please don't hesitate to contact us – we will be happy to assist you.
For detailed information concerning ADAM's technologies and products, complete reviews, and a list of worldwide ADAM users and studios, please visit our website: **www.adam-audio.com** You are invited to share your

experience with our products by joining us on Facebook and also if you don’t want to miss out on the latest info on ADAM Professional Audio, come and follow us on Twitter! We hope very much that you enjoy your new loudspeakers, and wish you many delightful hours with them.
The ADAM Audio Team

Front and Rear View / Accessories

The accessories consist of (see fig.):

- 

  2 duster cloths,
- 2 pair of white gloves,
- 2 AC power cables,
- 8 spikes (4 per loudspeaker), 8 plates (on which the spikes can stand), and 8 nuts (for adjusting the spikes),
- 1 screwdriver to adjust the controls (see 6.)

Please note that the accessories come in one of the two white boxes.

Unpacking / Setup

important Information for setup

The Gamma has a total weight of approximately 54 kg. Therefore we strongly recommend unpacking and set up the loudspeakers not by oneself. ADAM Audio is not liable for any damage to the loudspeakers or other items or any injuries which might occur due to improper setting up. We ask you to be very careful. We recommend wearing the white gloves. They provide a white PVC dotted cove-ring on the inside allowing extra grip. Each unit is wrapped in a special sheath that is open at the bottom. In any case, we would recommend keeping the sheath, as it will prove useful when the loudspeaker is being transported. Moreover, it is ideal for dust protection if the loudspeakers will not be used for some time. Furthermore, we recommend not to damage the package and to retain it. The original packaging is the best guarantee for safe transportation (see 9.).

Spikes and Plates

The speakers are intended to be floor-mounted only. They must stand firmly on the floor. If you choose to use the spikes to optimize floor decoupling, please proceed as follows: Take one speaker out of the box and put it carefully on solid ground (to avoid scratches, use a soft cloth). Take four of the spikes and screw them into the designated holes at the base. On a level floor make sure that all four spikes are screwed into the same depth. Please make sure the spikes are either fully screwed in or firmly fixed by the nuts. If you wish to use the plates, put them on the floor according to the desired position of the loudspeaker. Using the plates is strongly recommended whenever the spikes might damage the surface of the floor.

Connecting the speakers

- After having unpacked and set up your loudspeakers, please allow the system to acclimate to the temperature of the room. Please do not connect the speaker for approximately an hour.
- Before connecting the loudspeakers to your audio components and the power source make sure that both the loudspeakers and your audio system are switched off!

1. Connect the loudspeakers with your audio components using one XLR cable per loudspeaker. The male plug goes into the loudspeaker, and the female plug into your audio component. We recommend using high-quality cables to guarantee optimal performance.
2. Check if the specified voltage matches the voltage of the power supply you use. If this is not the case do not connect the loudspeakers to a power source! Please contact your local dealer or national distributor. If the voltages match, connect the loudspeaker via the included power cables to two AC sockets.
3. Switch on the main on/off switches on the rear panel of the loudspeakers. The ADAM logo begins to glow. Now, switch on the standby switch, located to the right of the logo at the front. The writing ‘ADAM TENSOR’ will begin to glow and the ‘OL’ (overload) indicator will flash a few times.
4. Make sure that the line out level (volume) of your stereo is either at a low level or all the way off. Then, switch on your audio system.
5. Turn on your source of music and adjust the volume carefully. Please note that the loudspeakers will need a few days to achieve optimum sonic performance.

Speaker Placement

The proper positioning of your loudspeakers is of extreme importance to the sound quality. Since every room is unique, we can only offer general recommendations concerning room acoustics and the placement of your loudspeakers. Your Tensor Gamma features several controls for fine-tuning them to your room acoustics and

personal sound preferences.

Room Acoustics

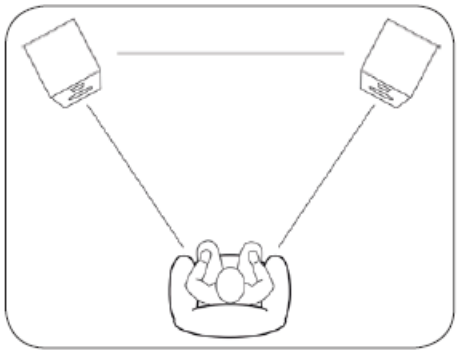
Room acoustics come down to essentially three aspects:

1. Reverberation: The ‘sound’ of a room is to some extent a result of its reverberation, i.e. how the sound waves are reflected. Soft furniture (like carpets, curtains, or sofas) tends to absorb sound waves, especially higher frequencies. Hard materials like stone or glass reflect sound waves almost entirely. In general, reverberant rooms are rather unforgiving in terms of authentic music reproduction due to the great number of reflections.
2. The room dimensions: The volume of a room is the second important aspect of its acoustics. The same loudspeaker will sound different in different-sized rooms with similar sonic characteristics. Therefore, the size of your room partly determines the positioning of your loudspeakers.
3. The listening distance: The distance between the listener and the sound source is the third crucial aspect in loudspeaker positioning. If this distance is either too great or too small, the sound will be compromised.

Speaker Positioning

Placing the loudspeakers too close to walls can compromise their sound. Especially in reverberant rooms, you should adhere as closely as possible to these distances; otherwise, the lower frequencies in particular may distort the overall sonic characteristics.
We recommend experimenting – the best method for finding the ideal positioning of your loudspeakers is using your ears. Listen to your ADAMs from different positions – try out several different setups. You may be surprised at the differences you’ll hear! The ideal positioning of your loudspeaker is pretty much bound to the specific acoustics of your room. We hope the following hints will prove to be helpful for your setup.

- **General Recommendations:**
  Avoid any obstructions between the speakers and your ears – you should be able to see the loudspeakers completely. Furthermore, avoid setting up your loudspeakers close to objects that reflect sound waves too intensely.
  The listening position should not be right in front of a wall.
- **Distances**
  Recommended minimum distance between loudspeakers and walls: to the side: 1 meter or more, to the back: 0.5 meters or more. Recommended minimum distance between the loudspeakers: 2 meters. Recommended minimum distance to the listening spot: 2 meters. Generally speaking, the listening distance should correspond to the distance between the loudspeakers.
- **c) The Stereo Triangle**
  In stereo applications, the optimum listening position should be at the top of an imaginary equilateral triangle with the two loudspeakers being placed at the other two points of this triangle. The loudspeakers should be aligned with the listener’s position.



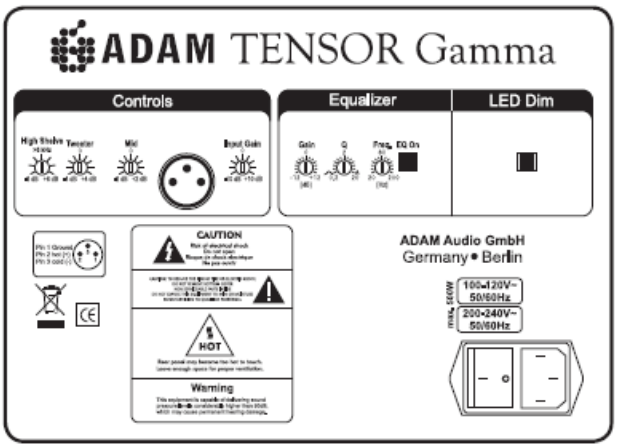
Speaker Adjustment

Standby switch / Overload display

The TENSOR Gamma features a standby button on the front panel. Please note that due to the system, the OL (overload) display blinks when the loudspeaker is being switched on. This does not indicate an overload.

If the OL display blinks during normal operation, this indicates an overload danger. To avert an overload and protect the loudspeaker, the built-in security circuit will limit the maximum level of the amplifier.

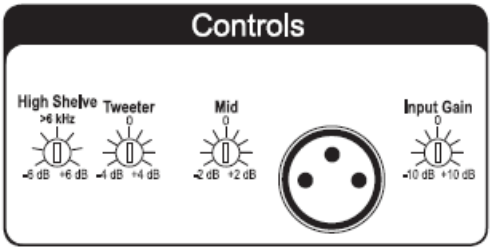
Control panel



On the rear side, you will find controls that allow detailed fine-tuning of your loudspeakers to your particular room acoustics and personal listening preferences. The following tips are intended to assist you at using the controls in the best manner.

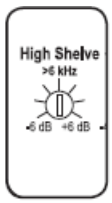
- Please note that using the controls may have a great impact on the overall sound characteristics of your loudspeakers. We recommend using the controls with ut-most care and only after several audio tests with familiar recordings.

Controls

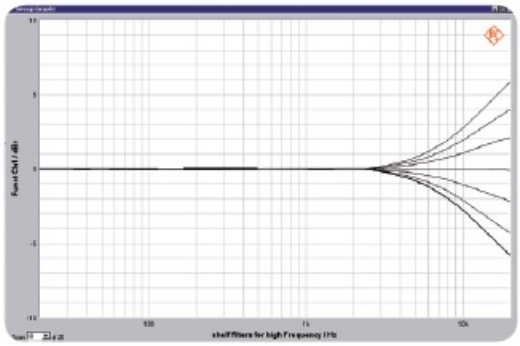


The Control section provides the possibility to change the input sensitivity and to influence the higher pitches with three additional controls.

High Shelf



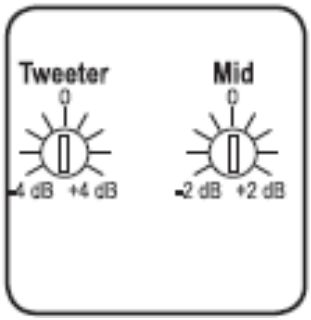
The shelving filter progressively raises or lowers frequencies above 6 kHz up to 6 dB. Progressively means that in a specific frequency band, from a certain point (above 6 kHz in this case) the frequencies are gradually being changed (see fig.).



Room EQ >6 kHz for high frequencies above 6 kHz

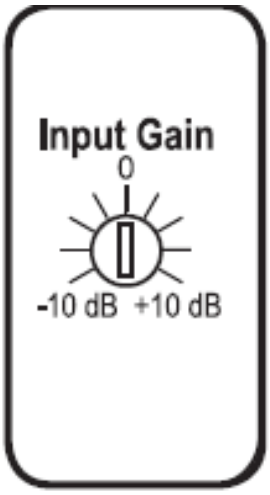
Tweeter / Mid Gain

With the ‘Tweeter’ and ‘Mid Gain‘ controls you can raise or lower the level of the tweeter (-4 to +4 dB, above 4 kHz) and the midrange (-2 to +2 dB, from 800 Hz to 4 kHz). These controls alter the whole frequency range. They are an ideal tool to fine-tune the sonic characteristics of your loudspeakers to your room and your taste.

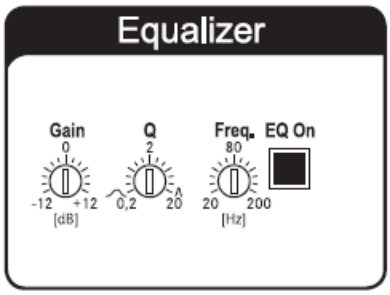


Input Gain

‘Input Gain’ regulates the overall input sensitivity of your loudspeaker within a range of -10 to +10 dB, and controls the volume of your loudspeaker equally in all frequency ranges.

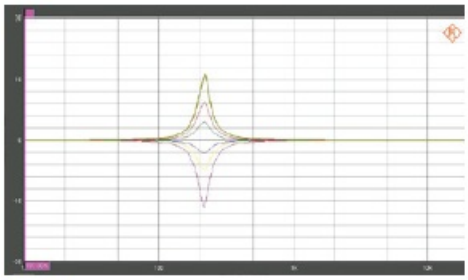


Parametric Equalizer



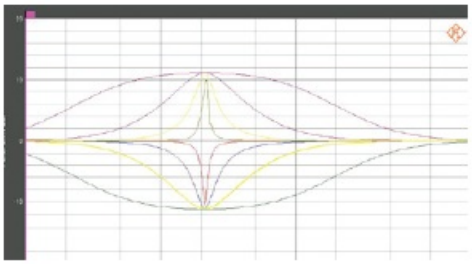
The acoustic properties of specific rooms may cause problems with the authentic reproduction of music (see 5.1). Frequently the bass is the ‘problem child’ in the attempt to create a natural sound, producing a ‘standing wave’ – the overlapping of two waves of the same frequency and phase spreading in opposite directions. This results in local (at specific positions in a room) imbalances of particular frequencies. For example, in a room of 6 meters (20 feet) in width and length, a stan-ding wave typically occurs at approximately 28 Hz, meaning that this tone sounds overemphasized and droning. Using the parametric equalizer properly, a bass ‘overkill’ like this can effectively be neutralized. Furthermore, specific listening habits or preferences may lead you to want to change the lower frequencies to either emphasize or attenuate the bass. The parametric equalizer is the perfect tool for this as well.

Equalization

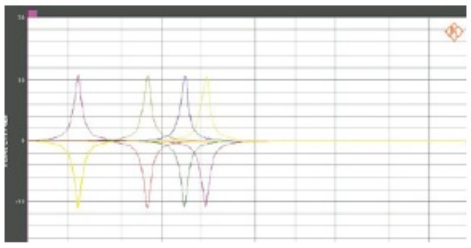


The charts on the right illustrate the individual settings of the equalizer: ‘Gain’ means the sound pressure (volume), ‘Q’ (for Quality) represents the effective width and ‘Freq’ is the particular frequency. In case a problem like ‘standing waves’ occurs, please proceed as follows:

- Lower the ‚Gain’ by -6 dB.
- Set ‚Q’ to 4.
- Now, slowly change the frequency (‚Freq.’) from 20 to 100 Hz until the distortion is no longer audible.



Q (Quality)

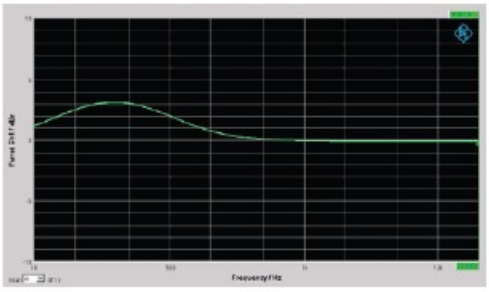


Freq. (Frequency)

Raising or lowering the bass section

If you wish to either raise or lower the bass frequencies, the parametric equalizer is the best tool.

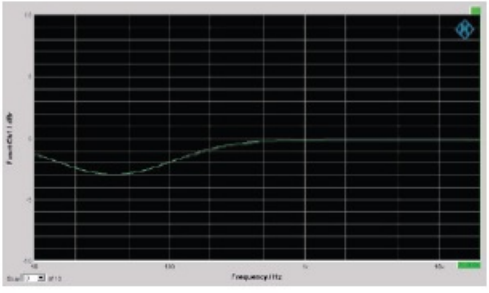
For a moderate bass boost the following settings are recommended:



moderate boost of low frequencies

- Gain' +3dB
- 'Q' -0.5
- 'Freq.' 40Hz.

For a lowering of the bass section, these settings are recommended:



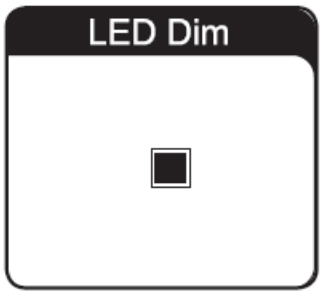
moderate lowering of the bass frequencies

- Gain' -3dB
- 'Q' -0.5

- Freq.’ 40Hz.

Please note: ’Gain‘ is the parameter that controls how much effect the settings of the parametric EQ have on the overall sound.

LED Dim



The LED glows during operation. To dim the LED, please use the LED Dim button on the control panel. If the button is switched on, only the logo and the stand-by button will glow slightly, the writing will not glow.

Troubleshooting

All ADAM products are designed and manufactured to the highest quality standards. However, if any problems with your speaker occur, we recommend to proceed as follows:
Problem: The LED shows normal operation but there is either no or only a distorted audio signal. If both (all) speakers are affected, the reason can probably be found within the signal path. If only one speaker is affected, the problem will probably be within this speaker.

- Check the wiring. Is the cable defective? Are all cables connected correctly?
- Check the signal path. Interchange the cables of both loudspeakers. Does the problem change with one of the cables? Connect the loudspeakers as directly to the signal source as possible (please mind the volume!). Is another part of the signal path (e.g. sub woofer) defective? If the answer to all these questions is ‘no’, the problem is being caused by the loudspeaker with the utmost probability. If the answer to at least one of these questions is ‘yes’, there will prob-ably be another defective device within the signal path.

Problem: You hear parasitic noises (like humming, buzzing, soughing,

cracking). Please disconnect the signal cables. If the noises disappear, check the signal path. If the noises can still be heard, check for other electrical devices close to the speakers (mobile phones, switching power supplies, etc.). If there is no interfering device the speaker will probably cause the problem.

Maintenance

- Please switch the loudspeaker off before cleaning!
- Please note that the diaphragms build up a magnetic field. Do not ply with magnetic items at close range to the diaphragms.
- Please make sure that no liquids get inside the cabinet. Do not spray any fluids on the speaker. Do not use a wet cloth for cleaning.
- Do not use flammable or acidic chemicals for cleaning.
- Do not touch the membranes of the loudspeakers.

- We recommend using a lint-free, damp cloth for cleaning.
- The loudspeaker membranes may be dusted using a very soft brush.

Shipping / Packaging

In case you have to send your speakers to any other location, it is of vital importance that you use the original packaging materials. Experience has shown that it is very difficult to avoid damage if you have to send them without these. ADAM Audio can not be held responsible for damages due to improper packaging. If a mode of transport is necessary and the original shipping carton is not available, a new one can be purchased from ADAM Audio.

Environmental Information

All ADAM products comply with international directives on the Restriction of Hazardous Substances (RoHS) in electrical/electronic equipment and the disposal of Waste Electrical / Electronic Equipment (WEEE).
For disposal, please consult your local authorities for further information.

EU Declaration of Conformity

,
ADAM Audio GmbH
whose registered office is situated at
Ederstr. 16, 12059 Berlin, Germany
declare under our sole responsibility that the product:
Tensor Gamma (Active Version)
complies with the EU Electro-Magnetic Compatibility (EMC) Directive 89/336/EEC, in pursuance of which the following standards have been applied:

- EN 61000-6-1 : 2001
- EN 61000-6-3 : 2001
- EN 55020: 2002
- EN 55013: 2001

and complies with the EU General Product Safety 2001/95/EC, in pursuance of which the following standard has been applied: EN 60065: 2002. This declaration attests that the manufacturing process quality control and product documentation accord with the need to assure continued compliance. The attention of the user is drawn to any special measures regarding the use of this equipment that may be detailed in the owner’s manual. Signed:

Warranty

ADAM Audio GmbH provides a five-year limited warranty for this product.

Terms and Conditions

This warranty is limited to the repair of the equipment or, if necessary, the replacement of parts or the product and return shipping within the country of purchase. This warranty complements any national/regional law obligations of dealers or national distributors and does not affect your statutory rights as a customer. Neither other transportation, any other costs, nor any risk for removal, transportation and installation of products is covered by this warranty.
Products whose serial numbers have been altered, deleted, removed or made illegible are excluded from this warranty. The warranty will not be applicable in cases other than defects in materials and/or workmanship at the time of purchase and will not be applicable:

- for damages caused by incorrect installation, connection or packing,
- for damages caused by any use other than the correct use described in the user manual,
- for damages caused by faulty or unsuitable ancillary equipment,
- if repairs or modifications have been executed by an unauthorized person,
- for damages caused by accidents, lightning, water, fire heat, public disturbances or any other cause beyond the reasonable control of ADAM Audio.

How to claim repairs under warranty

Should service be required, please contact the ADAM Audio dealer where the product has been purchased. If the equipment is being used outside the country of purchase, the international shipping costs have to be paid for by the owner of the product.
Service may be supplied by your ADAM Audio national distributor in the country of residence. In this case, the service costs have to be paid for by the owner of the product whereas the costs for parts to be repaired or replaced are free of charge. Please visit our website to get the contact details of your local distributor. To validate your warranty, you will need a copy of your original sales invoice with the date of purchase.

Technical Data

Tweeter	X-ART
Velocity transfer ratio	4:1
Midrange speaker	X-ART
Velocity transfer ratio	3.5:1
Midwoofer	228 mm / 9“
Woofer	228 mm / 9“
Woofer material	HexaCone
Built-in amplifiers	4
Woofer channel (RMS/music) 1/2	500 W / 700 W
Midwoofer channel (RMS/music) 1/2	250 W / 350 W
Midrange channel (RMS/music) 1/2	250 W / 350 W
Tweeter channel (RMS/music) 1/2	50 W / 100 W
Input gain	± 10 dB
Tweeter gain	± 4 dB
Mid gain	± 2 dB
High shelf EQ > 6 kHz	± 6 dB
Parametric EQ (20 Hz – 200 Hz)	± 12 dB
Frequency response	26 Hz – 50 kHz
Crossover frequencies	60 / 800 / 2.800 Hz
Inputs	XLR
Input Impedance	10 kΩ
Weight	54 kg / 119 lb.
Height x Width x Depth	1100 x 320 x 340 mm / 43.5“ x 12.5“ x 13.5“
Warranty	5 years
Operating temperature	0° C to 40° C (32° F to 104° F)
Storage temperature	-30° C to 70° C (-22° F to 167° F)
Humidity	Max. 90 % non-condensing

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Documents / Resources

	ADAM 456 Tensor Gamma Active Version [pdf] Instruction Manual 456 Tensor Gamma Active Version, 456, Tensor Gamma Active Version, Gamma Active Version , Active Version, Version

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- Manual-Hub.com - Free PDF manuals!
- User Manual