



# **FM-15**

## **User Manual**





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## Don't be a stranger

Thank you for purchasing the Gato Audio FM-15 high end bookshelf loudspeakers. We are absolutely confident that it will bring you many hours of listening pleasure.

We hereby cordially invite you to join the Gato Audio family by registering your product online. You may also consider signing up for our newsletter to receive information about exciting new products, events and technical updates. We are also present on several social media like Facebook, Twitter, Instagram, Google+ and LinkedIn.

All this and more on [www.gato-audio.com](http://www.gato-audio.com)

Our very best,

Gato Audio

## Package contents

Please check that the following is included in the package:

- 2 Gato Audio FM-15 speakers
- 2 front grille sets
- 2 bass port foam plugs
- 4 pads
- This manual - which you should be reading now 😊



## A few words on your new speakers

A good cabinet is the essential foundation of any loudspeaker. The FusedMass cabinets in the Gato Audio FM series incorporate several noteworthy details. The cabinets are made from high-density fibreboard and a layer of vibration dampening material. Parts of the cabinets are made of up to six layers of mixed materials that together with heavy internal bracing, secures a very efficient resonance dampening construction.

Excellent drivers are the foundation of true-to-life sound. The drivers' capability to react instantly to the provided signal together with total control of mechanical resonance is crucial. The drivers in the FM speaker series are carefully constructed to comply with our high demands for technical quality. The midrange reproduction of any speaker is without discussion the most important, whether it is the reproduction of vocals, a high-hat or drums, since all have important tonal information based in this frequency area. The bass/midranges are specially designed for mid- and high frequency response providing a clean and dynamic impulse response second to none.

The unique state-of-the-art ring radiator tweeter not only yields a useful output far beyond the capability of the human ear, thereby providing instruments with their natural harmonic structure, but it also adds the crucial benefits of extremely low distortion and coloration of the reproduced material.

The heart of any Gato Audio FM speaker is an advanced PurePhase crossover adorned with high quality components: Heavy gauge coils, low-resonance capacitors and non-inductive resistors mounted on a high-quality fiberglass PCB.

Hundreds of hours have been spent designing the network to comply with the drivers' frequency response and impedance, while carefully considering phase, resonance and impulse response. Finally, we trimmed the sound, not only providing a flat frequency response but providing a tantalizingly lifelike sound.

All of the above is draped in a beautiful exterior design, as small as possible and perfectly finished in handcrafted veneer or paint.

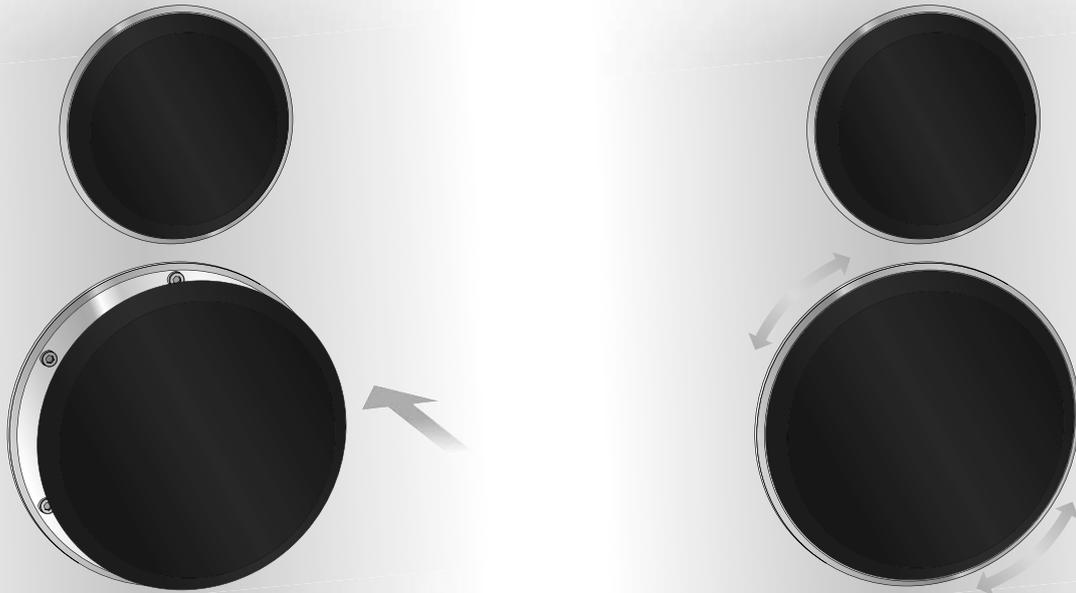
The supplied magnetic cloth grilles are designed to produce a minimum of coloration and distortion to the sound when mounted. Using a small and close-fitting frame clad in sound-transparent fabric ensures that any loss of audio detail is kept at a minimum, and that diffractions are well out of the critical midrange area. In addition, it offers protection for the drivers while enhancing both the beautiful finish and the elegant, simple lines in the design even further.

## Installation

### Mounting the driver grilles

The grilles are easily fastened to the speakers magnetically when the small magnets on the grille are aligned on top of the driver screws.

1. Place and hold the grille lightly on top of the driver as shown below
2. Turn it clockwise or counter-clockwise until you can feel the magnets attach to the screws below.



To detach the grille from the speaker simply turn the grille clockwise or counter-clockwise and remove it.



### Connecting your speakers

Connecting your speakers to your amplifier must only be performed with the amplifier turned off. Otherwise damage may occur. Connect the red speaker terminal (+) to the positive speaker output on your amplifier. Now connect the white speaker terminal (-) to the negative speaker output terminal on your amplifier.

### Bi-wiring and bi-amping

The FM-15 features a double set of high-quality gold plated copper binding posts that can accommodate separate cables and/or amplifiers for high and low frequency reproduction respectively.

**PLEASE NOTE THE FOLLOWING IMPORTANT INFORMATION: Permanent damage may occur to your audio system if the copper shorting plates are not removed before connecting more than one amplifier to your speakers!**

There are many theories about bi-wiring and bi-amping. Our best advice is to experiment with different cables, amplifiers and methods of connection. Whatever performs best in your system might not work equally well in another setup or in a different room. In general, our advice would be to use the same kind of cable both for bi-wiring and bi-amping, and also to use identical amplifiers when bi-amping. This is simply due to the fact that both methods will add more headroom and clarity to the sound reproduction. The introduction of different amplifiers and/or different cables may cause issues with sound integration and cohesive performance.

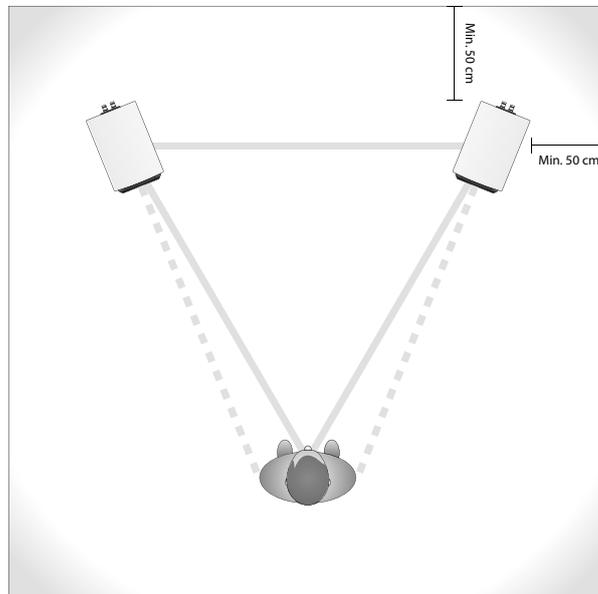


*When bi-wiring and bi-amping; remember to remove the copper shorting plates.*

### Placing the speakers

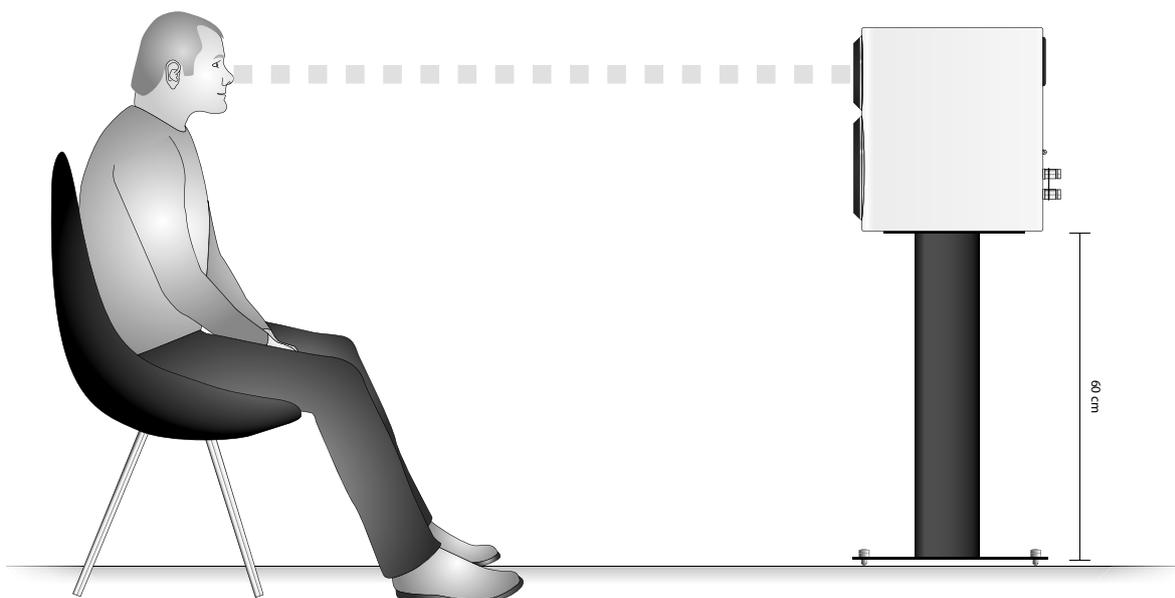
Just like with real estate, location is the most important factor when setting up a high-end audio system. It is impossible to give you an exact instruction via this manual to set up your specific system perfectly in your listening room. However, we can offer you some thumb rules:

- Place your speakers at least 0.5m from the rear and side walls. Placing a speaker close to the rear wall will provide an extension in level of bass and coloration in the midrange.
- Basic setup should be an even-sided triangle with equal distance between each speaker as well as the listening position.
- The FM-15 speakers are developed to play partially direct to the listening position. A good starting point for a setup is to angle them towards the end of your shoulders. If your listening room is very small and the speakers must be placed closely to the side walls, then more toe-in may be useful to get a more precise and clear image.
- Hard surfaces like glass, stone and wooden floors create many reflections which can make midrange reproduction sound harsh and with a blurry soundstage. These reflections can be dampened with curtains and carpets.
- Many soft surfaces, thick carpets and furniture may on the other hand provide too much dampening. This may cause the midrange reproduction to become "thin" and lacking in musical timing and energy. In such cases, it is advised to remove some of the dampening items.



In any case, time spent setting up your speakers is by far the most important adjustment parameter for your system. Room acoustics is a complex field with an almost infinite number of variables. Please note that while a setup might work well in your listening room, it may not be the perfect solution in other locations.

For the best results, place the FM-15 on a solid stand at a height of approx. 60 cm. The tweeter should be in the approx. same height as your ears while seated in your typical listening position. Take extra care to ensure that both the speaker and the stand are not able to vibrate, which otherwise will cause resonances. Make sure that the stand itself is of high quality, stable and preferably filled with sand or other resonance dampening material.





**Adjusting the sound**

A loudspeaker is only as good as your listening room allows it to be. First of all is the room acoustics which is influenced by dimensions and build materials. Secondly is the amount freedom it offers for the best possible placement of your speakers inside the room.

To accommodate some of the above compromises and to make installation and sound tuning of your new FM speaker easier and with a better result, we have provided the speakers with sound adjustments. The FM-15 offers three levels of each setting options; “Focus” and “Detail”. Make sure that both options are set to “Neutral” before you start adjusting the positioning of the speakers in your listening room.

• **Step 1: Initial setup:**

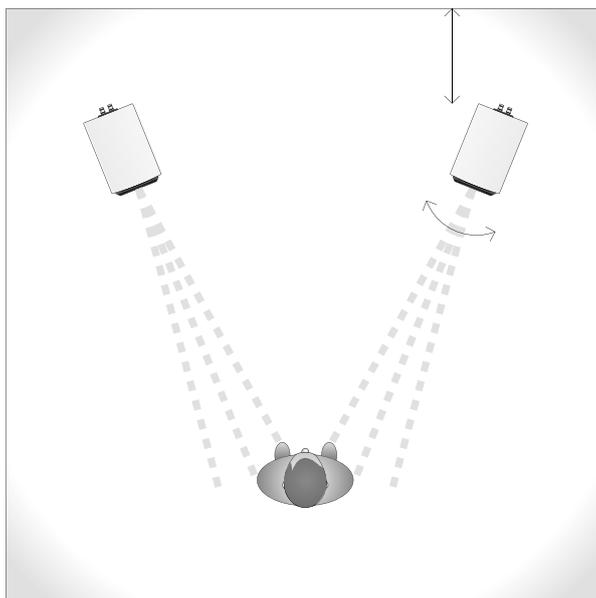
Set up the speakers according to your wanted listening position, following the basic rules of the previous chapter “Placing the speakers”.

• **Step 2: Adjusting the setup:**

The basic setup might not give you the best possible sound quality. Select a few but well known pieces of your favourite music that can help you determine when it sounds just right. Depending on how the speaker interacts with your room the sound will be different. Here is a basic guide to better positioning and sound tuning:

**Bass:** Moving the speaker away from rear wall and/or a corner will clear out the bass and make the sound leaner and less involving. If you are experiencing to have not enough bass, moving your speaker closer to the rear wall and/or corner might help. If you keep having too much bass due to limited possibility of increasing the distance between rear wall and the speaker, we have supplied a pair foam plugs that can be used to block the rear faced bass reflex port. We do not recommend this solution unless everything else has been tried without success.

**Soundstage:** If your soundstage is unclear, the singer might be a bit vague, woolly and too far behind the rest of the instruments in the band – try to angle the speakers more directly towards you listening position. If the sounds stage and instruments are a bit compressed in the middle of the speakers, try a little less toe-in and let the speakers play more straight into you listening room. Please note that even a small adjustment of a few centimetres may make a huge difference.

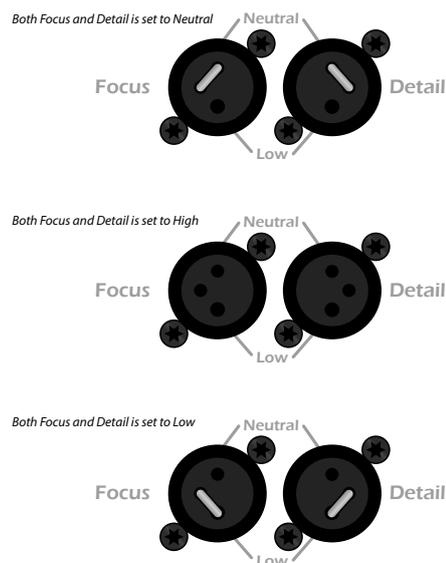


• **Step 3: Adjusting the speaker:**

When the optimum speaker position has been found, you still have a way to adjusting the speaker a bit more. The three setting of each “Focus” and “Detail” on the backside of the speaker may be applied to get the last bit of performance from the setup.

**“Focus” settings:** If you lack a bit of “Focus” in the soundstage set this to “High”. If voices and high pitched instruments are too much and creates listening fatigue over longer periods set it to “Low”.

**“Detail” setting:** This adjusts the level of high frequencies and overtones of any instrument. A natural level of overtones will enhance the listening experience, pleasantly and relaxed. Too much detail will draw the minds focus from the main part of the music, to some high frequency details. Test each option to find the most suitable setting for your specific setup.



## Make it last!

Please apply simple common sense to maintain the sound quality and lifespan of your Gato Audio speakers. Here are a few guidelines:

- Regular care: wipe the surfaces carefully by using a clean soft dry cloth
- Cleaning: if necessary, wipe the hard surfaces clean using a soft cloth dampened only with clean water.
- Grease stains or finger marks on the cabinets can be removed carefully with a clean soft cloth lightly dampened in a mix of clean lukewarm water and a single drop of household washing-up liquid. Then wipe the surfaces dry using a soft dry cloth
- Be careful never to use hot water or any type of concentrated detergent, solvent, thinner, or any other volatile substance on the surfaces, or you may cause permanent damage to the surface coating
- Keep the cabinets away from prolonged contact with rubber or PVC materials
- Do not expose the speakers to direct sunlight or other heat sources

## If all else fails...

...don't panic! Every Gato Audio product comes with a minimum 2-year warranty. See our website for details.

This warranty does not cover damage or wear directly or indirectly caused by improper use, violence, tampering with or unauthorized access to or servicing of any part of the product.

If you are in need of service or repair, please do not hesitate to contact us at [hello@gato-audio.com](mailto:hello@gato-audio.com) or visit our website [www.gato-audio.com](http://www.gato-audio.com) for more information.



## Technical specifications

Frequency response	40 Hz – 35 kHz
Sensitivity (2.83 V)	86 dB
Recommended amplifier output	50 to 200 W
Nominal impedance	4 $\Omega$
Connectors	Gold plated binding post / 4mm plugs, bi-wire
Cabinet	Laminated FusedMass cabinet
Crossover	Advanced PurePhase crossover technology

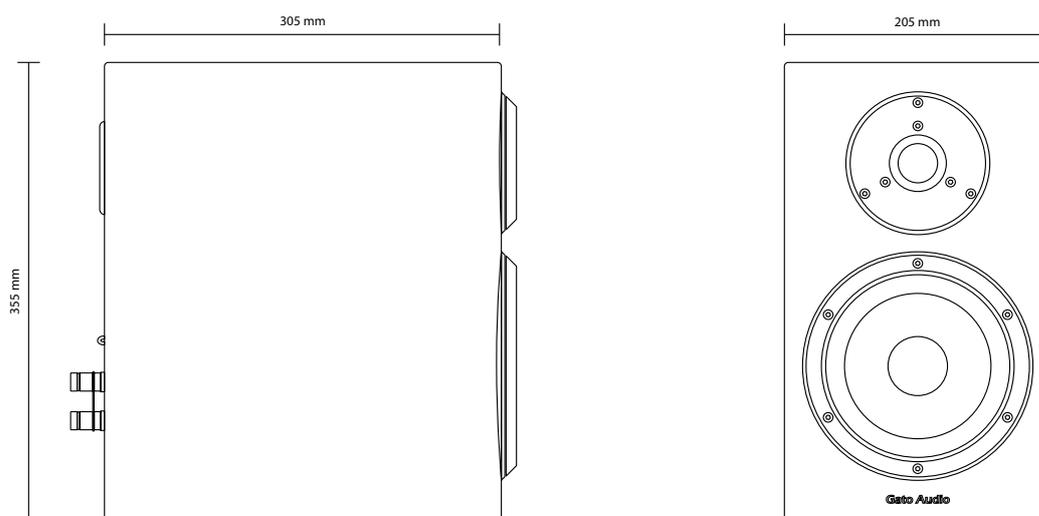
### Drivers

High-Frequency	38mm ring radiator, powerful ferrite motor and optimised chamber
Mid & Low-Frequency	170mm mineral cone, low loss suspension, motor with shorting rings and optimised voice coil

### Weight & Dimensions

Weight	10.5 Kg. / 23 lbs.
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#### Dimensions





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