



# Master M2 Owners Manual

# IMPORTANT SAFETY INSTRUCTIONS

1. **READ INSTRUCTIONS** - All safety and operating instructions should be read before this product is operated.
2. **RETAIN INSTRUCTIONS** - The safety and operating instructions should be retained for future reference.
3. **HEED WARNINGS** - All warnings on this product and in the operating instructions should be adhered to.
4. **FOLLOW INSTRUCTIONS** - All operating and use instructions should be followed.
5. **WATER & MOISTURE** - Do not use this product near water - for example, near a bathtub, washbowl, kitchen sink, laundry, tub, in a wet basement, near a swimming pool, or the like.
6. **ATTACHMENTS** - Do not use any attachments not recommended by the product manufacturer as they may cause hazards.
7. **ACCESSORIES** - Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with accessories recommended by the manufacturer.
8. **HEAT** - This product should be situated away from heat sources such as radiators, heat registers, stoves, or other equipment that produce heat.
9. **CLEANING** - This product should be cleaned only as recommended by the manufacturer.
10. **OBJECT & LIQUID ENTRY** - Care should be taken so that objects do not fall and liquids are not spilled onto the enclosure.
11. **SERVICING** - Do not attempt to service the product yourself, beyond what is described in these operating instructions.
12. **REPLACEMENT PARTS** - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
13. **SAFETY CHECK** - Upon completion of any service or service of repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition. All other servicing should be referred to qualified service personnel.

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## INTRODUCTION

### INTRODUCTION

Master M2 offers great possibilities, so in order to utilize your new loudspeaker in the best way; you should carefully read through this manual before using the loudspeaker for the first time. It may take some patience in order to make the loudspeaker sound optimal.

If you have no previous experience of these kinds of installations, or if you have any questions, feel free to contact our free of charge support and we will help you. (See further under the heading of **Support** on the last page of this manual).

## ABOUT MASTER M2

Master M2 is a truly unique product in the audio world: a compact loudspeaker designed under all aspects as a real high end speaker, but at a price point that is rare in this industry.

Master M2 is built without compromise that comes close to the perfect high grade 2-way speaker within its dimension.

## ABOUT XTZ

### PHILOSOPHY

Our reference and starting point is to recreate a natural sound, but also in respect to the fact that acoustics and sound always is a matter of taste.

### XTZ GOALS

**To provide the optimal relation between price, performance and quality on the market.**

Our concept:

- To produce the perfect compromise.
- Cost-effective manufacturing at a large scale.
- The quality of our products is more important than the marketing.
- Reduce the number of middlemen.

### CONTACT US

Website: [www.xtz.se](http://www.xtz.se)  
E-mail: [info@xtz.se](mailto:info@xtz.se)

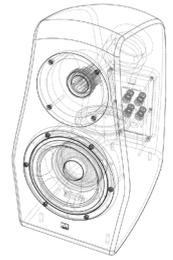
## TECHNICAL PRESENTATION

### CABINET DESIGN

Master M2 is constructed using a non-resonant, high-density and unique new material, with 40% higher density compared to MDF. Cross bracing is added to further reduce cabinet resonance. Main ingredients of this unique material are Epoxy, Polyurethane, Potassium carbonate and organic bubble.

The M2 cabinet offers outstanding stability and extremely reduced cabinet resonance .

The cabinet is built using a narrow front - not only an aesthetically neat shape, but also an advantage from an acoustic point of view, as it provides a stable construction with non parallel walls to keep inner reflections and standing waves to a minimum.



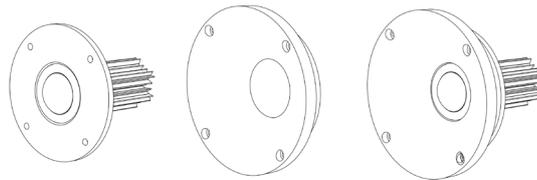
### TWEETER DRIVER

We choose a high performance, 30 mm soft dome tweeter that works perfectly for demanding high frequency audio applications.

The low resonance frequency and high power handling makes this dome the ideal tweeter for 2-way speakers, where standard tweeters will not do.

The usage of dual neodymium magnets as power house ensures an almost perfect magnetic screening for demanding applications.

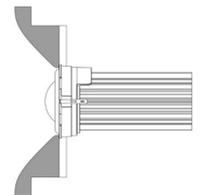
The low distortion and the smooth and extended frequency response combine extreme details and dynamics into making this dome perfectly match the mid-woofer .



### WAVEGUIDE TECHNOLOGY

To further optimize this tweeter we use a waveguide that not only increases sensitivity and lowers distortion . The perfectly matched waveguide is optimized to offer a perfect dispersion pattern all over the high frequency range.

It has been developed to achieve the perfect balance between optimal energy dispersion, optimized crossover point and best high frequency performance. The best possible compromise between spreading/efficiency/distortion. This makes adapting the speaker to various listening rooms very easy.



### WOOFER/MIDRANGE DRIVER

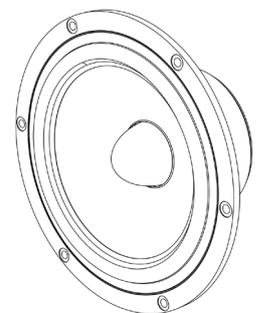
The mid/woofer driver is a development cooperation between SEAS and XTZ. This drivers is basically a further step ahead, based on one of the world's most successful high-end midwoofers, the famous Seas Excel line. Seas 60 years of experience plus XTZ experience supports this driver.

The new Curv cone, a woven polypropylene cone with excellent internal damping together with perfectly matched moving parts guarantees a smooth and extended frequency response with lowest distortions up to the higher midrange.

Curv® is the world's first self- reinforced 100% polypropylene composite offering extraordinary levels of impact resistance, light weight and high stiffness.

Curv® is a novel material made from Polypropylene that combines the versatility of a 100% thermoplastic with the high performance of a fiber reinforced composite. High stiffness, high tensile strength and outstanding impact resistance at low density are the remarkable properties of this material.

We combines the Curv cone with a special, natural rubber surround reducing suspension and edge resonances to th minimum.



The magnet system is equipped with heavy copper rings and a solid copper phase plug, which reduce flux modulation and eddy current distortion. The phase plug also guides the sound waves from the driver to the listener and reduces cancellations which creates a smoother frequency response. The solid copper phase plug offers enhanced cooling and improves the air circulation around the coil windings, the coil temperature variation as well as the consequent sensitivity modulation are lowered. Further, the power handling capacity is increased.

Magnet system with bumped back plate makes room for extreme coil excursion. Heavy copper rings mounted above and below the T-shaped pole piece reduce non-linear and modulation distortion and increase overload margin.

The extreme stiff and stable injection molded metal basket case keeps the critical components in perfect alignment. Large windows in the basket both above and below the spider reduce sound reflection, air flow noise and cavity resonances to a minimum.

Gold plated terminals mounted in a glass fiber reinforced plate to reduce contact resistance and improve reliability.

## CROSSOVER FILTER & BINDINGS

The crossover is an advanced Linkwitz/Riley type, with 12 and 18 dB/octave slope for midrange and tweeter, which offers minimal phase shiftings and good transient response. The filter uses MOX resistors, air wound coils and top notch capacitors from Mundorf.

The internal cabling is realized in 99.99% pure copper wire, which guarantees highest signal transparency. To reduce skin effects and interferences we use several twisted cables for each conductor.

The connectors are copper and of bi-wiring type so that you can connect to the amplifier with double cables (bi-wiring), or connect to two amplifiers (bi-amping) for further improving the sound.

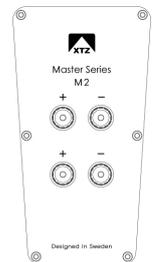
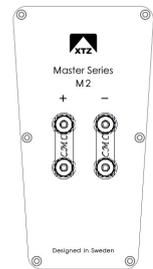
The following coupling modes are available:

**1. Upper terminal + lower terminal (bridging present)** - Default setting, the loudspeaker is fed with the entire frequency range.

Without the bridging between upper and lower terminal:

**2. Upper terminal.** - The signal is only fed to the tweeter.

**3. Lower terminal.** - Now the signal is fed to the woofer only. (See further: Sound settings)



## PREPARATIONS

### UNPACKING

Carefully unpack the speaker, and pay attention so you don't accidentally break anything. If possible, save the carton box for future transportations. If there should be damage on the loudspeaker, please contact your retailer.

### ACCESSORIES

- 1 pc bass reflex plug
- 1 pc low res. bass reflex plug
- Rubber feet
- User manual

## PRACTICE OF SOUND / INSTALLING AND PLACING TIPS

This chapter contains common information on loudspeaker placement and installation.

### IN WHICH ROOM DO YOU ACHIEVE THE BEST SOUND?

No matter how good the equipment is, in the wrong listening environment it will inevitably sound bad. There are some basic rules concerning a proper loudspeaker installation.

### REFLECTIONS

Carpets, curtains and soft furniture absorb midrange and high frequency sound, and this is preferable. A large empty area, on the contrary, reflects it and produces a hard sound that may lead to a blurry dialogue. Apart from colouring the sound, also the perspective of the sound will deteriorate.

### AMPLIFICATION OF BASS FREQUENCIES

A loudspeaker that is placed near a wall, ceiling or floor will be amplified in the lower frequencies in a sometimes not desirable way (since it may lead to an indistinct sound recreation). This amplification becomes even more obvious if the loudspeaker is placed near a corner. Thus, for a sound as clear as possible, the loudspeaker should be placed about 30 cm (about 12 inches) away from the wall.

However, there are exceptions from this rule. For some type of walls / rooms it may be advantageous to place the loudspeaker closer to the wall.

### FURNITURE

Be aware that furniture may vibrate and thus create bad low frequency sound.

### ROOM DIMENSIONS

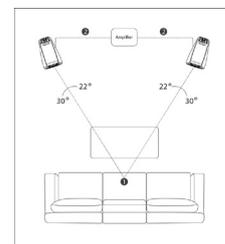
Quadratic rooms or rooms where the length is exactly twice as long as the width should be avoided, since they may create unwanted resonance.

### PLACING THE LOUDSPEAKERS

How the loudspeakers are placed towards the listener is of great importance.

### THE FRONT SPEAKERS

For stereo listening the loudspeakers should be placed symmetrically in front of the listener. The distance between the loudspeakers should be about 80% of the distance between the listener and one loudspeaker, or put in another way: the angle between the loudspeakers, as seen from the listener, should be about 45 degrees. This means for example that if the distance between the loudspeakers is 2 meters, the listener should be placed 2.5 meters from the loudspeakers.



### ANGLING?

Either you can have the loudspeakers angled in towards the listener or you can have them directed straight ahead. Some loudspeakers sound better when angled, but this may also depend on reflections from the side walls. By angling the loudspeakers inwards, you decrease unwanted reflections and thus you get a better stereo perspective.

### THE CORRECT HEIGHT

If the loudspeakers are small, they should be placed on stands or tilted so that they are on the same level as the ears.

### CABLES

Try to keep them as short as possible. By its electrical parameters, a long conductor will have a larger influence on the sound than a short one. The subwoofer cable should be shielded, to avoid noise.

Make sure that all connections are clean and not oxidized. All connections should be mechanically stable, both power, signal and loudspeaker cables. Signal cables should be separated from other cables.

### FINALLY

Please remember that good sound is a matter of taste, so you have to experiment to obtain it.

We wish you the best of luck!

## MOUNTING AND CONNECTING TIPS

<b>MOUNTING ALTERNATIVES</b>	Normally the Master M2 is placed standing by a wall. The wall behind and the wall beside the loudspeaker have influence on both the bass level and the bass characteristics, so please be patient and try different distances to the rear and side walls.	
<b>CONNECTING USING THE CORRECT PHASE</b>	Always connect using the correct phase, from the +-pole on the amplifier to the +-pole on the loudspeaker and corresponding for minus (-).	<i>If you by accident connect the other way, there is no risk of damage. However, the sound will not be correct, especially in the lower frequencies.</i>
<b>OVERLOAD</b>	At high load during extensive time periods, there is always the risk of overloading the driver and amplifier.	<i>All loudspeakers have a limited patience for high power, so be careful not to play extremely loud and not to increase treble or bass settings to much.  By increasing the bass or treble from 0 to max you will increase the power by about 16 times.</i>
<b>THE INITIAL PLAYING TIME</b>	It takes about 50 to 100 hour of initial playing time, for the driver to sound optimal. During this time, the speaker may be used normally.	

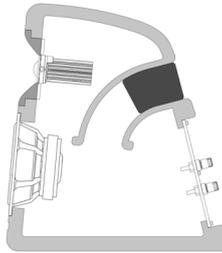
## SOUND SETTINGS

### ROOM TUNING - MECHANICAL ADJUSTMENT OF THE BOUNDARY FREQUENCY

By using the supplied bass plug in the bass reflex port, you can alter the lower boundary frequency on the Master M2

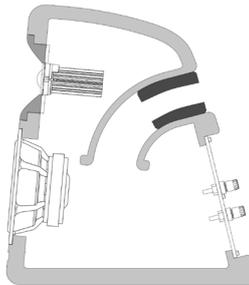
#### Closed port

With the full bass plug mounted in the bass reflex port, the cabinet is closed and the loudspeaker operates as a closed construction. This yields a more "tight" bass reproduction and smoother roll off.



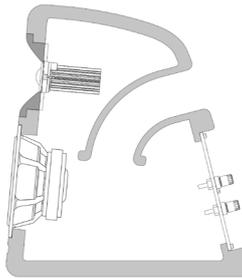
#### Bass reflex, low

With the low resonance bass plug mounted in the bass reflex port, the cabinet is a bass reflex construction. The low frequency resonance is at its lowest point with a flat bass reproduction.



#### Bass reflex

With no plug present in the port you have a higher bass level and more alert bass reproduction. The bass is not as deep as the bass reflex, low mode.



*These settings also depend on the size and shape of the room, and also on your own taste, so please have patience when trying out your preferred setting.*

### BINDING POST / BI-WIRING

**1. Upper terminal + lower terminal (loops present)** - Default setting, the loudspeaker is fed with the entire frequency range. In this mode, it doesn't matter which connectors you use when connecting the speaker cables.

Without the loop between upper and lower terminal:

**2. Upper terminal.** The signal is only fed to the tweeter.

**3. Lower terminal.** Now the signal is fed to the woofer only.

*PLEASE NOTE!! When the loops are connected, ensure that all four contacts are properly fastened so that the loops connectors are stuck -if the loop falls of, it may short-circuit between the + and - contact and thus damage the amplifier.*

## TECHNICAL SPECIFICATIONS

<b>CONSTRUCTION TYPE</b>	2-way, Bass reflex cabinet that may be set as a closed box.
<b>DIMENSIONS</b>	231 x 424 x 374 mm, 9.1 x 16.7 x 14.7"(W x H x D)
<b>WEIGHT</b>	17 kg, 41 lbs /pc
<b>MAGNETICALLY SHIELDED</b>	No
<b>NOMINAL IMPEDANCE</b>	8 ohm
<b>MINIMAL IMPEDANCE</b>	7 ohm
<b>FREQUENCY RESPONSE</b>	45 Hz - 29 kHz / 37 Hz - 29 kHz (in room), +/- 3 dB
<b>BINDING POSTS</b>	Copper bi-wiring/Banana plug / Fork (Spade) / Pole screw
<b>EFFICIENCY</b>	88 dB
<b>POWER</b>	300W Short term IEC 268-5 120W Long term IEC 268-5
<b>TWEETER DRIVER</b>	30 mm softdome tweeter with waveguide technology, large heat sink and strong magnet.
<b>WOOFER/MIDRANGE-DRIVER</b>	6,5" SEAS Curv, composite driver, moulded "high flow" driver basket, powerful magnet, voice coil former in aluminum, phase plug. Weight 2000 gram.
<b>CONNECTIONS AND SETTINGS</b>	Copper bi-wiring. Bass reflex adjustable to closed box.

## SERVICE & SUPPORT

### "DO IT YOURSELF" - SERVICE

We apply "do-it-yourself" service on all XTZ products. If you by yourself are able to find out what part of the loudspeaker is defective, you are fully allowed to unmount that part (which would normally be a driver, a filter or the amplifier) and send it back to us for exchange.

#### IMPORTANT!

Always contact your dealer or us before taking the loudspeaker apart. It can also help you finding the fault.

You can of course always choose to return the whole loudspeaker; therefore you should save the original package.

*To aid service, XTZ products are constructed and produced using common technology, so that basically most people are able to "unscrew" the loudspeaker using common tools..*

### IF SOMETHING IS BROKEN

If you cause additional defects by yourself when unmount the defective part, the warranty still applies if it is obvious that the part had a manufacturing defect. In other cases however, the warranty does not apply if you cause other defects on the loudspeaker

### WHERE TO SEND THE PRODUCT FOR A WARRANTY REPAIR

For service we refer to your retailer.

For questions regarding service, contact us by email: [support@xtz.se](mailto:support@xtz.se)

Website: [www.xtz.se](http://www.xtz.se)

*ALWAYS pack the product / part very carefully. Unfortunately damages during transportation are very common. If the package is weak, the transporting company does not compensate damages. Always enclose a copy of the receipt and a description of the defect.*

### SUPPORT

Please contact our free of charge support if you need installation advice, or if any problem occurs during the installation.

Contact us by e-mail [support@xtz.se](mailto:support@xtz.se) and include your phone number if you wish verbal help, and we will call you back.