99.36 FLR
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.

CONTENTS

INTRODUCTION

99.36 FLR 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 99.36 FLR

The 99.36 FLR is the third generation of the 99.36 speaker. It is a 2 1/2 way speaker with a true ribbon tweeter and midrange/woofer and woofer drivers from Seas. This new version has several esthetical and functional improvements and still delivers the same great sound as 99.36 MKII. New stylish aluminum feet for increased stability and usability, a new grill with magnetic mounting, and easier access to the filter for service.

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.

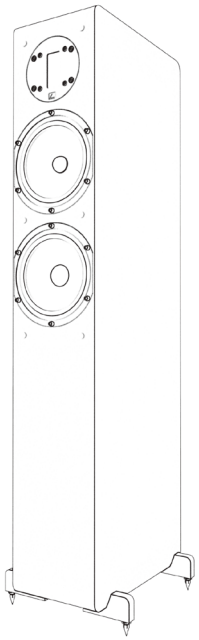
CONTACT US

Website: www.xtz.se
E-mail: info@xtz.se

TECHNICAL PRESENTATION

CABINET DESIGN

The box design with a narrow baffle - is not only an aesthetically neat shape, but also offer advantages in terms of acoustics. The cabinet is made from sturdy MDF board, which offers good sonic qualities.
The cabinet is further strengthened with internal bars, which in total ensures a very stable construction.



TWEETER DRIVER

We have selected a ribbon tweeter which provides superior transient response and a very flat frequency response. The ribbon cone is super light and only 18 microns thick. It is a sandwich construction made from rosin-aluminum-rosin that has been hardened at 320 degrees Celsius.

The magnet system is a 2 row high-efficient neodymium magnets in a molded chassis of ceramic carbon steel.

Fish-bone shaped contactors in aluminum, results in a low connection resistance and good heat distribution.

The driver has high power durability and handles frequencies up to 40000 Hz which makes it DVD-Audio and SACD-ready.

WOOFER/MIDRANGE DRIVER

After evaluating a large number of drivers from different manufacturers we selected one from Seas, a company that has a solid reputation in the area of high quality speaker drivers. You find Seas drivers in many well-known High End speakers.

For woofer/midrange we decided on a 6,5” magnesium driver from the Seas Excel series that has extremely good performance. We claim that finding a better 6,5” driver on the market is a very difficult task.

The surface treated magnesium cone is extremely light but still extremely stiff and effectively reduces resonances. The rubber surround makes sure that no edge resonances are present.

The molded metal basket is a “high flow” type that is acoustically transparent with high precision as the basket is shaped exactly due to the molding process. This makes sure that the basket is very stable and efficiently reduces resonances. The basket is absolutely non-magnetic, which contributes to a higher efficiency of the driver.

A strong magnet combined with the light cone ensures a high efficiency and a good transient response.

Heavy copper rings mounted above and below the T-shaped pole piece reduce non linear- and modulation-distortion and increases the overload margin.

The copper plating of the top and bottom plates along with a solid copper phase plug improves the heat conduction and thus contributes to the high power durability.

Large windows in the basket both above and below the spider reduces sound reflection, air flow noise and cavity resonances.

WOOFER DRIVER

For the bass register we selected a SEAS driver of the type coated paper, a very well-tried type with an unbeatable relation between price/ performance.

The coated paper cone is extremely light but still extremely stiff and effectively reduces resonances. The rubber surround makes sure that no edge resonances are present.

The molded metal basket of “high flow” type that is acoustically transparent and high precision since the basket is shaped exactly due to molding. This makes sure that the basket is very stable and efficiently reduces resonances. The basket is absolutely non-magnetic, which contributes to a higher efficiency of the driver.

A strong magnet combined with the light cone yields a high efficiency and a good transient response.

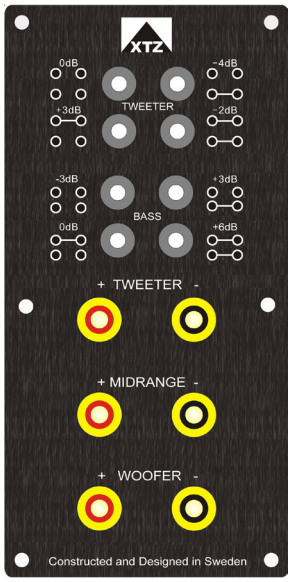
Large windows in the basket both above and below the spider reduces sound reflection, air flow noise and cavity resonances.

CROSSOVER / BINDING POST

For the midrange and tweeter we have chosen a -12/18 dB crossover that has a fast transient response and a minimum of phase shifting. The connectors are of a tri-wiring type so that you can connect to the amplifier with double or triple cables (bi- or tri-wiring), or connect to two or three amplifiers (bi- or tri-amping) to further improve the sound.

The following coupling modes are available:

1. Upper terminal + mid+ lower terminal (loops present) Default setting, the loudspeaker is fed with the entire frequency range. Without the loop between upper and lower terminal:
2. Upper terminal. The signal is only fed to the tweeter.
3. Mid terminal. The signal is only fed to the midrange.
4. Lower terminal. Now the signal is fed to the woofer only. This gives the possibility of driving the basses with a separate amplifier.



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.

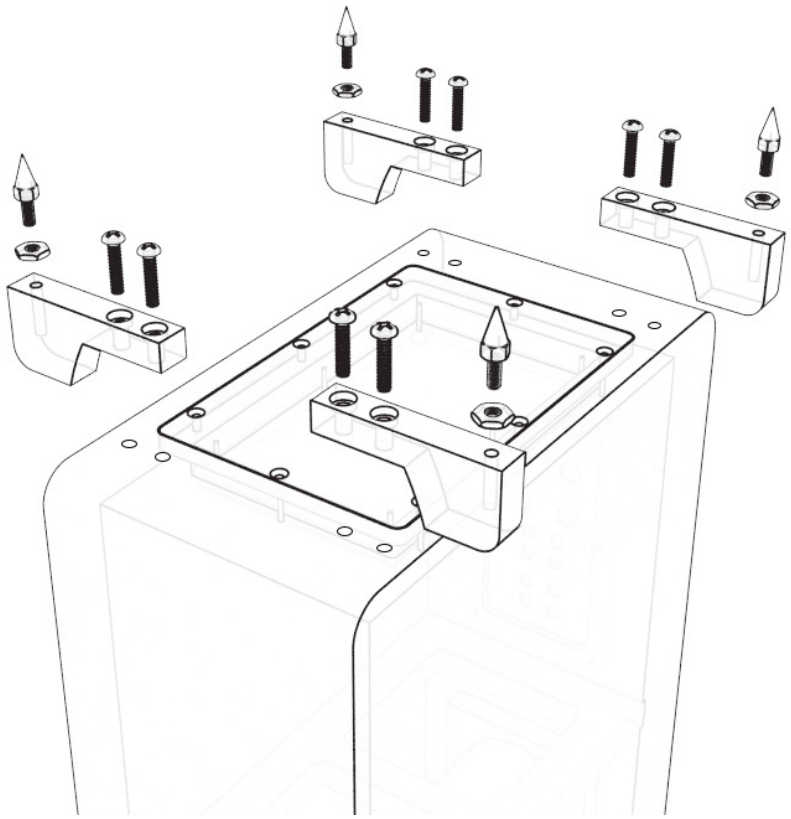
ACCESSORIES

- 3 pcs bass reflex plug
- Cloth Grill
- 4 pcs short spikes
- 4 pcs rubber spikes
- 2 pcs long spikes
- 4 pcs locking bolts
- 4 pcs aluminum feet
- 8 pcs screws
- User manual

ASSEMBLY

99.36 FLR Can be used both with and without the aluminum feet.
To attach the feet place the speaker upside down and screw the feet in place using the 8 screws. Be careful not to scratch the top.
Then screw a locking nut onto each spike and screw them into the aluminum feet.
To get the best sound out of your speaker the tweeter should be aimed at ear-height in the listening position. If your listening position is higher than the tweeter level, you can use the longer spikes in front to tilt the speaker backwards.
Turn the speaker onto it's feet and place it in it's position. Shift the spikes until it stands steadily and in level, and then use the locking nuts to fasten the spikes.

If your floor is sensitive to scratches, place something in between the spikes and the floor to protect it.



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 coloring 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

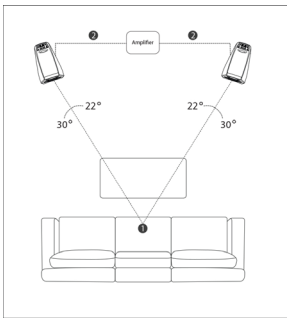
Quadratic rooms or rooms where the length is exactly twice as long as the width should be avoided, since they may create unwanted resonance.

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

MOUNTING ALTERNATIVES

Normally the 99.36 FLR 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.

CONNECTING USING THE CORRECT PHASE

Always connect using the correct phase, from the +-pole on the amplifier to the +-pole on the loudspeaker and corresponding for minus (-).

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.

OVERLOAD

At high load during extensive time periods, there is always the risk of overloading the driver and amplifier.

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.

THE INITIAL PLAYING TIME

It takes about 50 to 100 hours 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 plugs in the bass reflex ports, you can alter the lower boundary frequency on the 99.36 FLR.

The level can be adjusted in 6 different levels in the bass range.

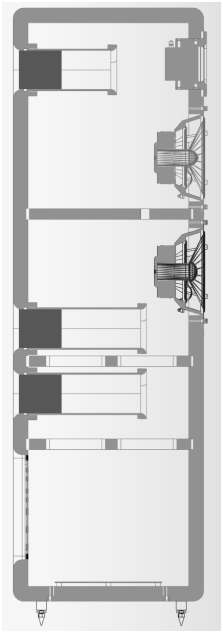
Also the treble level may be adjusted, which allows you to perfectly alter the sonic to fit the room, equipment and your own taste.
The speaker is parted in two bass reflex chambers, one for the midrange / woofer driver and one for the woofer. The uppermost port is for the midrange/woofer while the two lowermost ports are for the woofer.
The figure below illustrates three basic settings.

Deep bass
With one bass plug in the lower ports you have the deepest possible bass, which may be suitable for smaller rooms.
This is under the condition that the bass level is set at mode 3 (+3dB) (See next page)

“Quick” bass
Without bass reflex plugs in the ports, you have a “quick” bass which is especially suitable for large rooms where the lower frequencies often are amplified by the room.

Neutral bass
With two plugs in two ports you have a flat frequency response.
This is under the condition that the bass level is set at mode 2 (0dB) (See next page)

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.



This schematic picture (which does not shown actual measured curves) elucidates the different sonic characteristics of the bass frequencies.

BASIC SETTING FOR NEUTRAL BASS REPRODUCTION

Since the acoustics is determined by a wide range of external factors there exists no single neutral setting that will work properly for all cases. External factors that have influence on the sound include the room, the placing, output levels etc.
One basic neutral setting for an average room of 20m^2 is:

- Two bass plugs in two of the two lowermost ports and one plug in the port for the midrange
- Treble level set at mode 1 (0dB)
- Bass level set at mode 2 (0dB)

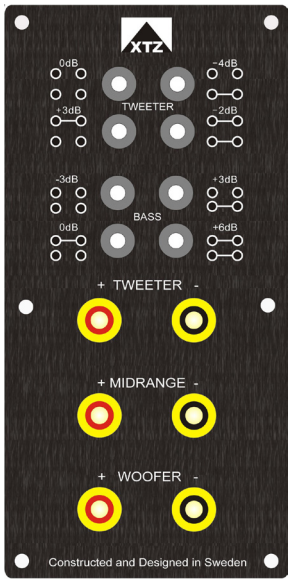
LEVEL ADJUSTMENT IN THE TREBLE RANGE AND BASS RANGE

In the treble range the level is adjustable in four different modes using the supplied loop connector.

Level adjustment in the treble range:
Mode 1/ 0dB
In this mode the sound is neutral with a flat frequency response.
Mode 2/ +3dB
In this mode the treble level is increase by 3dB.
Mode 3/ -2dB
In this mode the treble level is decreased by 2dB.
Mode 4/ -4dB
In this mode the treble level is decreased by 4dB.

In the bass range the level is adjustable in four different modes using the supplied loop connector.

Level adjustment in the bass range:
Mode 1/ -3dB
In this mode the treble level is decreased by 3dB.
Mode 2/ 0dB
In this mode the sound is neutral with a flat frequency response.
Mode 3/ +3dB
In this mode the bass level is increase by 3dB
Mode 4/ +6dB
In this mode the bass level is increase by 6dB



BINDING POST/BIWIRING

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

Without the loop between upper and lower terminal:

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

3. Mid terminal. Now the signal is fed to the midrange only.

4. Lower terminal. Now the signal is fed to the woofer only.

Note!
Make sure that all jumpers are connected.
A loose jumper may cause a short-circuit if they jam between the terminals.

TECHNICAL SPECIFICATIONS

CONSTRUCTION TYPE	2 ½-way with separates boxes for woofer and Woofer/midrange, Bass reflex cabinet that may be set as a closed box, and a total of eight distinct bass modes (Room Tuning). The treble and bass levels are adjustable.	
DIMENSIONS	200 x 1000 x 320 mm (W x H x D)	*(without feet and grill)*
WEIGHT	27 kg /pcs	
MAGNETICALLY SHIELDED	No	
NOMINAL IMPEDANCE	4-8 ohm	
FREQUENCY RESPONSE	35 |30| - 40.000 |40.000| Hz - Anechoic |typical room|	
BINDING POSTS	Bi/Tri-wiring/Banana plug / Fork (Spade) / Pole screw	
EFFICIENCY	88 dB	
POWER	550 W Short term IEC 268-5 200 W Long term IEC 268-5	
TWEETER DRIVER	Ribbon tweeter, SACD/DVD-Audio-ready, Sandwich ribbon cone in aluminum, neodymium magnets, chassis made in ceramic carbon steel.	
WOOFER/MIDRANGE DRIVER	6,5" SEAS Excel, Magnesium driver, molded "high flow" driver basket, powerful magnet, weight 1900 gram, shielded.	
WOOFER DRIVER	6,5 "SEAS , coated paper driver, molded high flow driver basket, powerful magnet,weight 1900gram.	
CONNECTIONS AND SETTINGS	Bi/Tri-wiring and Bi/Tri-Amping possible. 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**

Website: **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** and include your phone number if you wish verbal help, and we will call you back.