



Loudspeaker Model: DIVA

Manual

1. Thanks

We thank you for having chosen the WLM loudspeaker **DIVA** and the confidence in our product you have thus proven.

Due to the special functioning of this WLM speaker we are asking you to read this manual carefully before connecting or operating your speakers. Your benefits: an optimized installation will lead to an improved sound reproduction.

2. Design-Features

After the successful introduction of the REFERENCE- and its upgrading to the SIGNATURE-series the design demands for the new speaker were real challenges to the WLM developer:

- Keeping to the strict cost limit of an entry speaker
- Maintain over-all quality of WLM cabinetry
- High sensitivity
- Superior sonic characteristics regarding
 - musical homogeneity/balance
 - authentic reproduction with great detail
 - dynamic and impulse
 - low frequency reproduction
 - long-term reliability.

It resulted in an unusual, unmistakable WLM speaker that will set new standards even beyond its own class.

3. Supply

The supply of the DIVA loudspeakers comprises:

- 2 DIVA – speakers (left and right box are interchangeable)
- 2 x 4 Spikes
- This manual, incl. warranty registration

The **packaging** of the cabinets provides a perfect protection to our product during transportation. We recommend keeping it for future shipping needs.

4. Description

The model DIVA is a 2-way speaker system having a coax-chassis design, e.g. tweeter and mid/low frequency drivers are mounted on the same axle. By the perfectly parallel emission of all frequencies the signal is conveyed to the listener in the most direct and immediate way, resulting in a very intensive sound reception experience.

The speaker DIVA is made for the passive operation mode. The built-in filter is splitting the incoming signal for the tweeter and mid/low frequency driver.

The solid WBT connector terminals for single-wiring accept all known loudspeaker cable ends: bare cables, banana or forked cable shoes.

Please keep in mind that the speakers have a bass reflex opening below in the cabinet. It is vital that the sound waves coming from this aperture should "radiate" freely to all sides. The spikes supplied are an ideal means to keep an appropriate gap between the floor and the cabinets. (The use of the optional inner reflex tube is explained further below).

Note: the gap between the floor and the lower edge of the speaker box should be no less than 30 to 40 mm.

The spikes supplied are a good means for the firm placement of the speaker cabinets on the ground; their purpose is also to decouple the speaker from the support.

Screw the spikes in the sockets inserted in the bottom of the cabinets. We recommend tightening the counter screws after having adjusted the cabinets vertically "plumb". Each speaker should rest solidly on the 4 spikes. Vibrating or even wobbling would hamper the sound reproduction considerably.

Adjustment of the bass reproduction through the modification of the bass reflex tube

The different lengths of the bass reflex tubes will influence the bass reproduction of the speaker, depending on the acoustic of the room and your listening preference. Adjustments in 3 steps are possible.

1. Main (outer) + inner bass reflex tube of 160 mm (standard).

The WLM speakers are supplied as standard with a bass reflex tube consisting of an outer and inner tube. Both are firmly screwed to the speaker box. The combined bass reflex tube has a length of 160 mm.

The application of both tubes will result in a more moderate build-up of the lower frequencies, which could turn out to be more appropriate in rooms having a difficult acoustic setting.

2. Main Bass Reflex tube of 80 mm (without the inner tube)

(Best bass performance in most applications!)

To raise the bass performance of your WLM speakers we recommend removing the inner tube (160 mm) from the main tube (80 mm). For this purpose unscrew the main tube, remove the inner tube and screw the main tube back to the cabinet.

The bass reproduction will be considerably enhanced by the use of the main tube only.

3. Complete removal of the bass reflex tubes

Through the complete removal of the bass reflex tubes (main and inner tube) the bass will grow considerably. In certain rooms this measure could prove to be counter-productive.

5. Positioning

Due to the concentric emission of the signal the DIVA will not be difficult to place in your room. We recommend maintaining a distance of 50 cm to the rear and of 35 cm to the side. Keeping to these rules you will find that the DIVA will be able to reproduce an enjoyable bass signal easily, regardless of its final location.

6. Connection and adjustment of the speakers to the listening environment

6.1 Connection of the DIVA speaker

The Diva is to be connected directly to the mono amps or the integrated amp. Make sure to maintain identical polarity on the terminal of the amp and the speaker. Mixing poles will result in a disharmonic reproduction of your music. In most cases the + poles are marked in red, the –poles in white or black.

The DIVA as an all-round speaker it is not very demanding regarding electronics and cables. It will however respond to better electronics and cables of higher quality to an even higher degree. Thanks to its high sensitivity the DIVA can be operated readily by tube amps having low power characteristics.

By means of the "**TWEETER CONTROL**" (built in the terminal of each speaker as standard), the upper frequencies of the DIVA can be adjusted to the prevailing room acoustics and your individual listening preference.

6.2 Partly active operation mode with WLM "DIVA CONTROL" (optional)

The very useful WLM device **DIVA CONTROL** will enable you to operate the passive DIVA speakers in a partly active mode.

The middle and lower frequencies of the signal can be adjusted to the surrounding environment by an **active** rectification during the reproduction of these frequencies. A noticeable extension of the lower portion of a signal is the appreciable result.

In addition to the adjustment according to room acoustics, it will produce also greater warmth and fullness of sound, besides a clearly improved and well controlled bass foundation.

7. Running in

The DIVA will surprise you right from start by its fresh and lively playing behavior. Due to the extremely hard membranes allow for a few weeks of a running-in phase after which bass and mid tone will extend considerably; the DIVA will thereafter be capable of a rounder and fuller sound reproduction.

8. Technical Explanations

8.1 Speaker Sensitivity

The sensitivity of a speaker system, measured in sound pressure (dB at 1W, at a distance of 1 m), specifies its effectiveness of reproducing a given signal. The higher the sensitivity, the lower the demand regarding the performance of an amplifier and the efforts required to reach higher volume levels.

WLM speakers excel in this respect, since they offer an exceptional and unusual sensitivity of 97 dB (1W, 1m).

8.2 Impulse Behavior

The faster and the more precisely a speaker is responding to the changes of a signal impulse (by swinging the membrane forward and backward), the better the sound impression will be. The smallest delays between the reception of the impulse and its transformation (initiation of the membrane movement and its stop) will have a distinct impact on the quality of the sound reproduced and perceived.

The especially hard support of the paper membranes on one side and the extremely strong, high performance magnet coils on the other side are warrants for an extraordinary impulse behavior of all WLM speaker systems.

8.3 Minimalist filter design

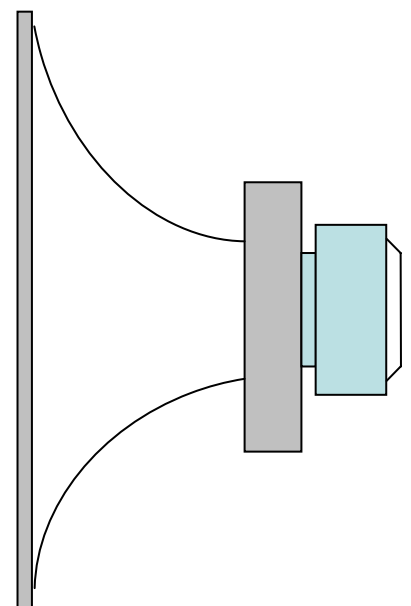
The filter has been designed in a minimalist approach, however opting for the best quality of the material employed.

8.4 Coaxial driver principle

WLM is not the only manufacturer applying this speaker technology, WLM is however perfecting this system regarding space imaging, bass behavior, dynamic and musical reproduction of the details of the original recording.

Through the perfect focus and direct signal emission the timing of high and middle/low frequencies traveling to the ear of the listener will not deviate. It will bring the listener a less disturbed, more intense and immediate enjoyment. He is put closer to the core of the original recording.

The Super-Tweeter and main driver are twin-mounted on the same axle. Coming from the same supplier, they are related in their sonic and harmonic characteristics: dynamic, speed of impulse, stiffness, dampening, with a very wide frequency range for an extended overlap.



9. Care and Maintenance

As a general rule, please avoid unnecessary power surges when switching on the amps or output over-loads amounting to peaks beyond the rated power output level. Not only your ears will suffer, also the coils and capacitors of the filter may get damaged. In addition, when changing cables, please make sure all units are shut off.

All functional parts of the DIVA are maintenance-free. We nevertheless recommend checking in regular intervals the tight fitting of the loudspeaker cables and the firm positioning of the cabinet on the 4 spikes.

The speaker cabinet manufactured in the highest tradition of Austrian craftsmanship is using natural veneer surfaces which are well finished and properly treated before shipment. Small imperfections in the wooden structure are proof of the natural origin of the material and are not subject to complaint after delivery.

In spite of the excellent finish, the color of the timber will darken during the time of use, particularly when directly exposed to the sun.

A periodic wax or special polish treatment of the valuable wooden surface will help to maintain their attractive surface finish.

10. Specification: DIVA

Driver / 2-way-CoAx principle	SUPER-TWEETER 10" / 254 mm Paper medium/low Driver
Impedance	8 Ohm
Frequency range	33 Hz - 25 kHz
Sensitivity	97dB - 1m/1W
Recommended Amp Power	5 to 250 Watt
Wiring Method	Single Wiring WBT
Dimension	1100 mm Height (incl. Spikes) 265 mm Width 300 mm Depth
Weight per Unit	26 Kg

11. Warranty

Limited Warranty

During the warranty period the company WLM will guarantee that their products are well functioning and free of flaws.

The warranty periods for the various products are: Loudspeaker DIVA - 5 years, DIVA CONTROL - 2 years (counted from the date of purchase from an authorized WLM-Dealer).

Condition for the warranty service is that the products are operated in accordance with this manual.

During the warranty period WLM will replace or repair the defect parts free of charge to the customer.

Condition is however:

- The warranty registration card is received by WLM within 30 days after the date of purchase.
- The cabinets are not showing any traces of physical damage and inside there are no signs of overheating due to wrong installation/operation resulting in an overloading of certain parts.
- The PCBs and components thereof are not showing any signs of undue handling, regardless whether the intention was to repair or to modify the unit under claim.
- There is no indication what-so-ever that the WLM products have been operated differently as specified by the manual.

In addition, the customer will lose his right for a warranty claim when the serial-Nr. of the unit in question has been modified, removed or manipulated in any way. WLM will not be held responsible for damages resulting from repairs executed by un-authorized personnel.

Collateral Damage

During the duration of this limited warranty period (and there-after) WLM will not be responsible for collateral damage, directly or indirectly linked to the operation of the WLM product.

Warranty Claim

The customer may on the basis of this limited warranty claim the repair or replacement of the defective part by the manufacturer or the authorized dealer with no charge to him. For the claim please contact either WLM directly or the WLM distributor in your country. After receipt of the claim confirmation please send the unit under claim to the shown address. The defect will be examined and, when justified, will be repaired at no cost to the customer. The customer will have to bear the cost of shipment. Without a corresponding warranty claim (received within 30 days after the date of purchase at the address below) no warranty claim will be accepted or processed.

WLM Loudspeakers
Treietstrasse 56
6832 Sulz
AUSTRIA

Phone: +43 (0)5522 44641 (Customer Service)
e-Mail: info@wlm-loudspeakers.com
Web: www.wlm-loudspeakers.com

WLM Warranty Registration

Please ask your dealer to fill in this form at the time of the purchase.

This registration will entitle you to call on WLM for technical support and it is a prerequisite for an eventual warranty claim against WLM.

Please send your registration to:

WLM Loudspeakers
Treietstrasse 56
A-6832 Sulz
Austria

Customer Service:

Phone : +43 (0)5522 44641

Fax : +43 (0)5522 44641-74

Web : www.wlm-loudspeakers.com

Unit/Model: **DIVA**.....Serial-Nr.:.....

Unit/Model: **DIVA CONTROL**.....Serial-Nr.:.....

Date of Purchase:.....Dealer Name:.....

Dealer Address:.....

First/last name of customer:

Address Street:

Postal Code/Town:

Customer Contact Phone:

Fax:

E-Mail:

Your comments are always appreciated: