musikelectronic geithain

Studio Loudspeaker
RL 906

Instruction Manual



Introduktion

Dear customer,

congratulations with the purchase of our active loudspeaker system.

The RL906 loudspeaker is equipped with a 125-mm cone woofer and a coaxially positioned 25-mm tweeter callote.
The basic principals of all RL-series active loudspeakers are the active multi-way technology with integrated analogue crossovers and power amplifiers, as well as the implementation of our special coaxial technology. The result are loudspeakers which are unparalleled with respect to focus accuracy, depth perspective and distortion characteristics. Audio-physiological aspects were crucial for optimising the directivity index. The active loudspeaker is magnetically shielded; this allows a position close to a TV set.
Our active loudspeaker system can be connected to any pre-amplifier
(U >1 volts R < 600 ohms).

Please carefully attend to the safety instructions!

This product complies with the requirements of the applicable European and national directives (Electromagnetic Compatibility 89/336/EWG). The conformity was proven; the respective declarations and documentation are deposited with the manufacturer.

In order to maintain its excellent condition and to ensure a safe operation, please carefully read and attend to this instruction manual.

Included in Delivery

Speaker
Line Cord
Instruction Manual

Safety Instructions

As with other electrical equipment, you must attend to the following basic operational and safety instructions, as well as to warning notices, in order to ensure optimal functionality and operational safety of the system!

- For safety reasons, unauthorized alterations and/or modifictions of the system are not allowed.
- Keep children away from electrical equipment.
- The device must only be operated with the mains voltage indicated on the reverse side.
- If the device is installed into a shelf, rack or wall cupboard, please ensure sufficient air circulation.
- Do not Never insert any objects into device openings.
- Do not allow any liquids to get inside the unit.
- Danger of electric shock if cabinet is opened.
- Repairs must be carried out by qualified personnel only.
- For cleaning, please use a damp cloth only.
- Do not use flue gas scrubber or spray cleaners.

Unpacking

The loudspeaker has been delivered in a sound condition. Carefully unpack the loudspeaker and check it for visible damages. Please contact your dealer immediately in case of damage. Please keep the packaging for possible future transports of the loudspeaker.

Cleaning

The loudspeaker surface is of wood veneer and should be treated similar to furniture. We recommend using a quality wax polish for protecting the veneer and keeping it glossy. You can also use a clean damp, soft and lint-free cloth for cleaning the surfaces.

Installation

Please do not expose the loudspeaker to direct solar irradiation. Neither set up the loudspeaker in rooms with high air humidity.

Warranty notes

Any warranty claims expire, if the device has been opened by un-authorized personnel. No warranty exists if the device is destroyed due to overload, improper manipulation or extraneous cause.

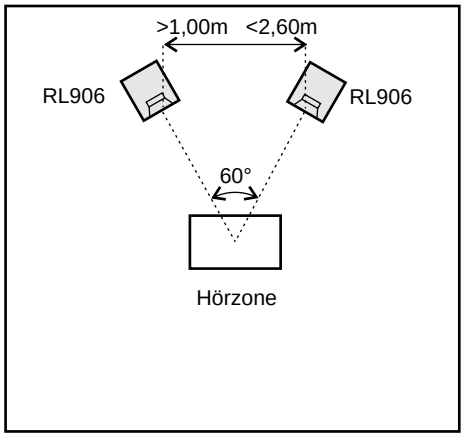
Arrangement

The optimal positioning of your loudspeakers can considerably contribute to a good listening impression in your room.

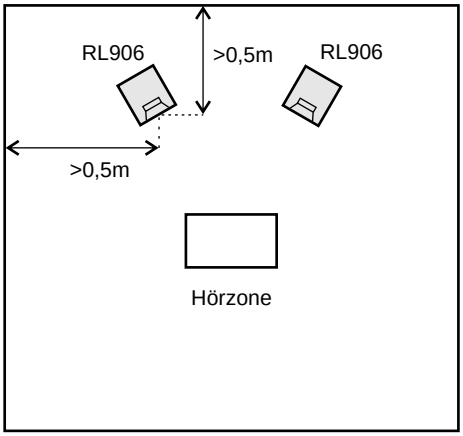
Stereo Operation

The optimal position is the so-called stereo triangle. The base distance between the loudspeakers and their distance to the listening zone should form an equilateral triangle (stereo triangle). The distances should be at least 1.0 m and should not exceed 2.6 m.
For a precise spatial image, turn the loudspeakers slightly inwards in the direction of the listening zone.
The mounting height should be adjusted to the listening level. The ear height in sitting position mostly ranges between 1.0 an 1.2 m. We recommend using the original stands, which were developed especially for this cause.

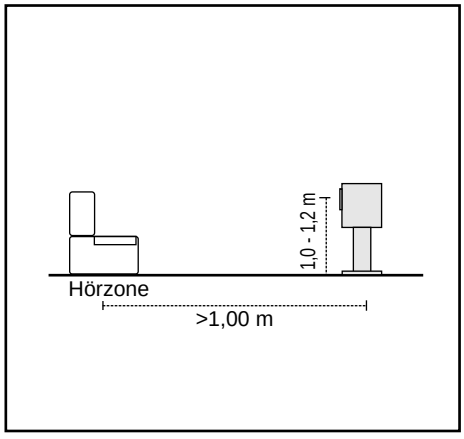
Stereo Triangle



Minimal distance 1.0 m



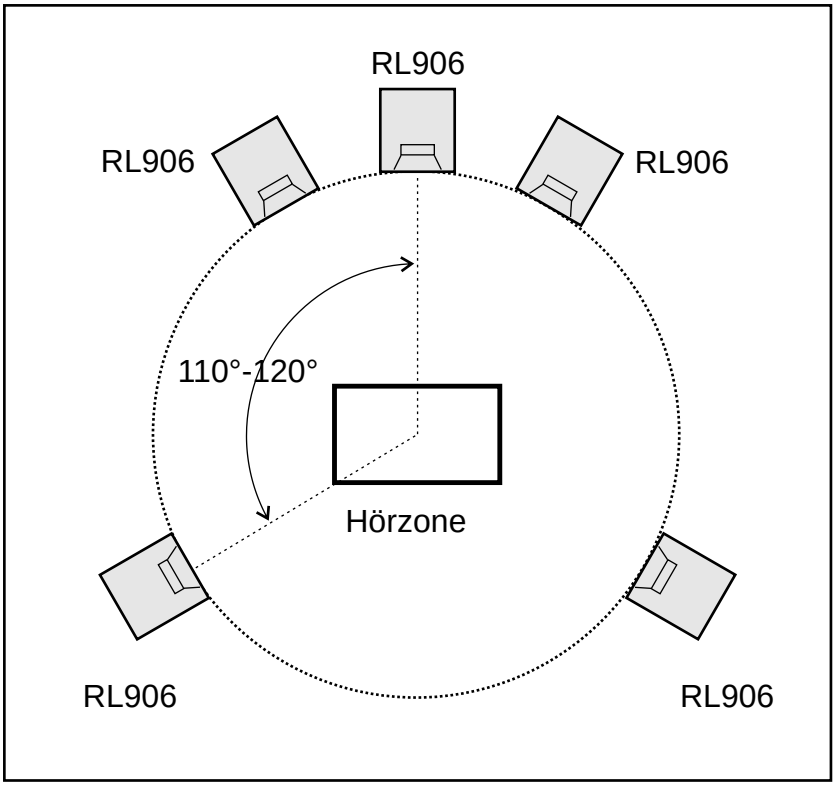
Distance from walls min 50 cm



Horizontal arrangement between 1.00 m and 1.20 m at ear height in sitting position

Surround Operation

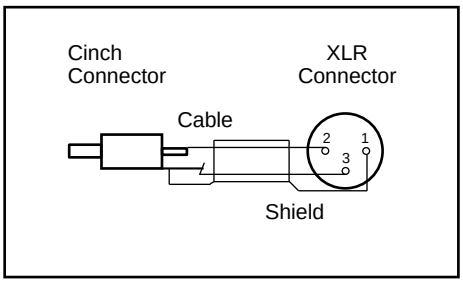
Here, the stereo triangle (see Stereo Operation) is extended to an imaginary circle. The listening zone constitutes the central point of this circle. Please ensure that all loudspeakers are positioned at the same distance to the listening zone.
The centre loudspeaker should be located in the middle between the two front speakers. Thanks to its magnetic shield, you can install it above or underneath the TV set, in standing or lying position, depending on space. Please ensure that the front and rear loudspeakers are on the same horizontal level, as well.
The angle between the centre and rear loudspeakers should be between 110° - 120°.



If your listening room should not allow such a set-up, most decoder devices allow an adjustment between the individual loudspeaker distances.

Cable Connection

If the input signal exists only in an asymmetric way (Cinch), a conversion into a symmetric signal is necessary.

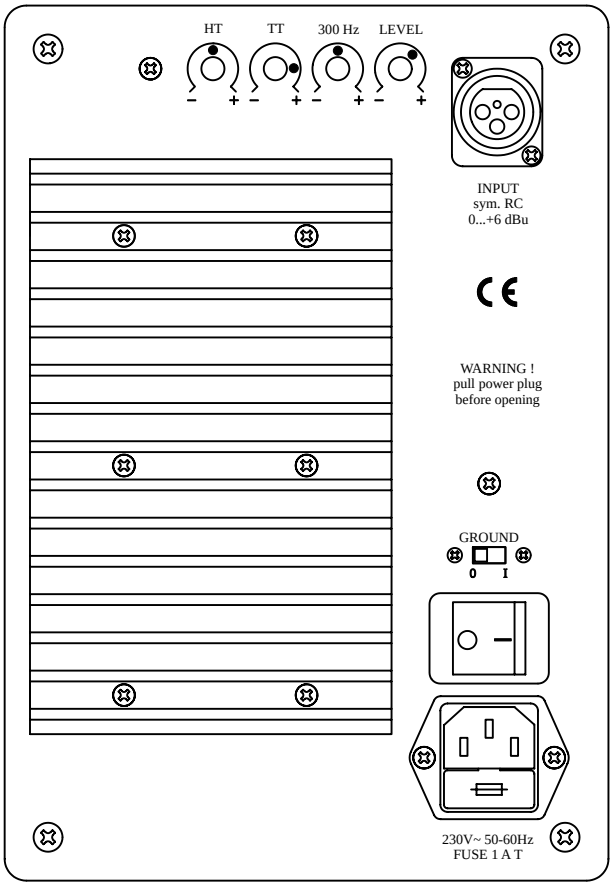


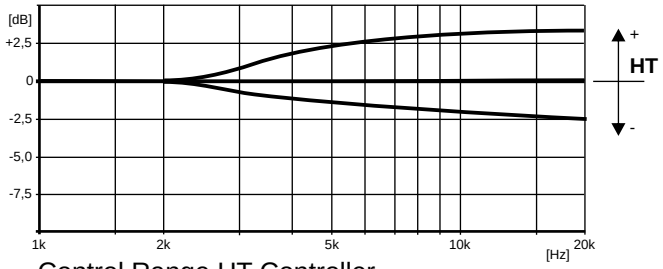
Status display on the front side of the loudspeaker

A two-tone LED beneath the tweeter serves as status display.

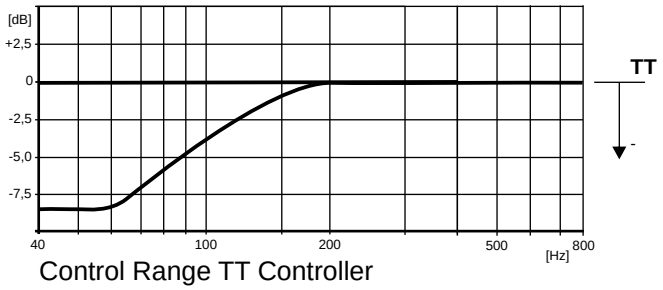
Green: Unit is switched on, normal operation.
Red: Overload protective circuit is activated; limitation to the maximum allowable output power is effected.

Control knob on the reverse side of the loudspeaker

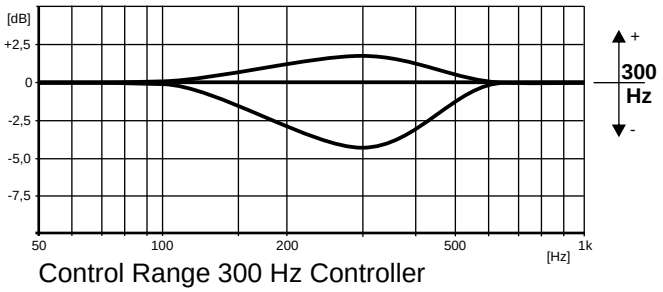




Control Range HT Controller



Control Range TT Controller



Control Range 300 Hz Controller

HT Controller
allows subjective adjustment to individual listening habits.

TT Controller
for adjustment according to acoustic room conditions.

300 Hz Controller
allows sound pressure adjustment in the range around 300 Hz on set-up of the console.

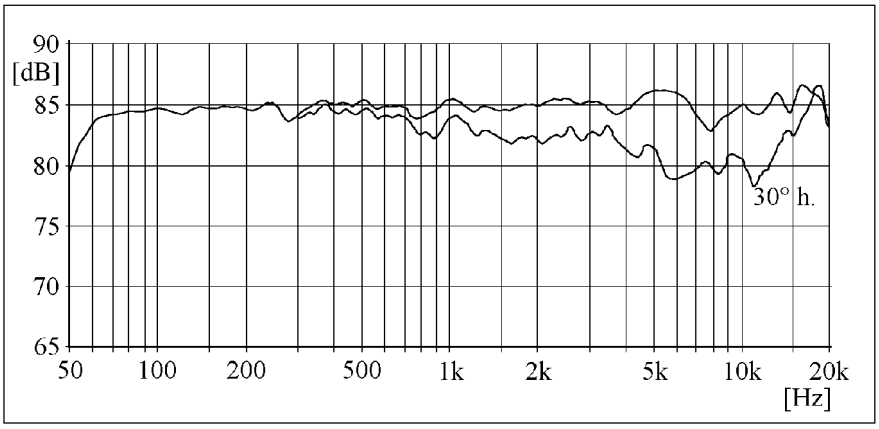
Level Controller
This controller allows level adjustment.

Ground Switch
This switch allows the amplifier electronics to be switched ungrounded. This helps to avoid ground loops (humming), caused by unfavourable cabling.

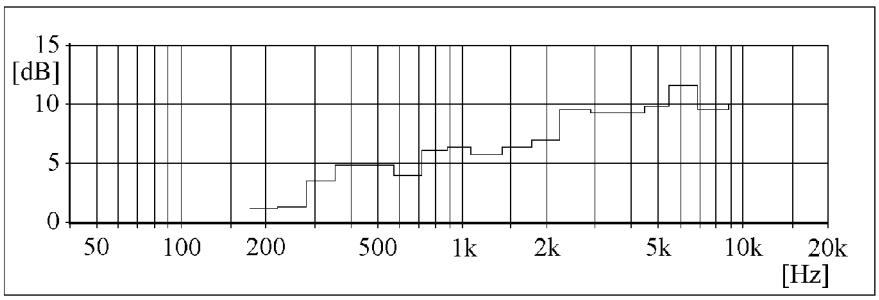
The marks on the reverse side indicate the linear frequency-response characteristic or respectively the calibration of the acoustic output level at P = -14 dBu to 83 dB / r=1 m.

Specifications

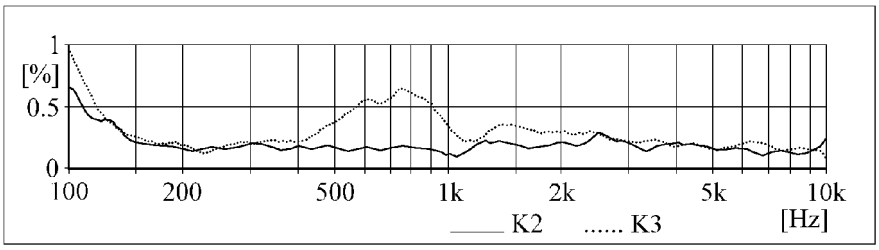
General	active two-way monitor for use in small audio-, video production studios, in mobile broadcast vans, and for multi-channel and near-field purposes
Maximum SPL	104 dB / r=1m
Bandwidth	50 Hz...20 kHz ± 3 dB
Calibration: Acoustic output level / P_E = -14 dBu	76 dB / r=1m
Directivity index from 200 Hz...10kHz	increasing from 1.5 to 11 dB
Inherent noise sound level	< 7dB / r=1m
Total harmonic distortion / measured at 83 dB, r=1m, from 150 Hz...10 kHz	< -40 dB
Nominal input level	+6 dBu adjustable
Input impedance	> 10 kOhm / symmetrically
Nominal output power of the MOSFET-amplifier	
LF	80 Watt / 4 Ohm
HF	40 Watt / 8 Ohm
Electronic crossover frequencies	3 kHz
Operation and clipping indicator	LED on front side
Input connector	XLR 3F
Loudspeaker systems	
Woofer	130 mm cone
Tweeter	25 mm dome
Temperature requirements	
for use	+15°C to +35°C
for storage	-25°C to +45°C
Humidity	45 - 75 %
Power requirements	Europe 230 Volt (±10%), AC, 50 Hz U.S.A. & Canada 120 Volt, AC, 60 Hz
Power consumption	max. 100 Watt at full load
Dimensions (H x W x D)	255 x 180 x 200 [mm]
Weight	5.5 kg
Design of the Cabinet	MDF wood, black veneer, different colors optional
Magnetic shield	optional



Free field frequency response



Directivity index



Total harmonic distortion P_A= 83 dB

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