

deutsch/english

BEDIENUNGSANLEITUNG
INSTRUCTION MANUAL

 **HELIX**



precision

**2-Wege Komponentensystem
2-Way Component System**

Dear customer

Congratulations on your purchase of this first-class loudspeaker system of the PRECISION series.

This HELIX 2-way component system with innovative technology „Made in Germany“ is designed and produced with highest quality demands and convinces with its perfect tuning capabilities and dynamic music reproduction.

AUDIOTEC FISCHER wishes you maximum enjoyment and listening pleasure with your new HELIX speakers.

About HELIX

Since its introduction in 1997 the HELIX brand sets new standards for sound excellence, technology and quality in the development and production of loudspeakers and amplifiers.

This outstanding position has been earned with **true** innovations, e.g. the exploration of new circuitry concepts and materials, and guarantees that every HELIX customer owns a first class state-of-the-art product.

AUDIOTEC FISCHER, the company behind HELIX, was founded in 1990. Today it is one of the world's most renowned enterprises in the car hifi market.

General information

This manual has been designed to make HELIX PRECISION automotive loudspeaker installation and ownership as trouble-free as possible. Please read through this manual completely before attempting any installation steps and familiarize yourself with your new speaker system.

You will need your purchase receipt as proof of purchase for any and all warranty repairs and for insurance purposes. Keep your receipt, owner's manual, and packing materials in a safe location for possible future use.

Pre-installation instructions

It is recommended that you have your new HELIX PRECISION automotive loudspeakers professionally installed by your authorized HELIX dealer. This will ensure the use of proper installation techniques and materials, and will save much time and effort. If you choose to perform your own installation read the following information and precautions carefully.

Failure to follow the stated precautions may result in personal injury and/or damage the audio system or vehicle.

A. Always make sure the speaker will easily fit into the intended mounting location and that there is adequate cavity depth to accept the magnet structure.

B. Check for adequate clearance between speaker and window, window crank, power window mechanism, seat, glove box, rear deck torsion bars, and other items which may interfere with the speaker's mounting. This is especially important if any hole cutting is required.

Complete speaker, mounting size and depth requirements can be found at the end of this manual. A good way to confirm speaker place meet on a door or body panel is to place the speaker's die cast mounting ring onto the surface. Check for a flat mounting surface, free from all obstruction.

C. The method of installation chosen and level of execution will effect the overall performance of the speaker system. Treat each installation step with a high degree of attention.

D. Do not mount the speaker where water may splash the woofer cone.

A plastic cup or some heavy gauge plastic sheeting may be needed in some locations that are exposed to moisture from behind the body panel.

E. Care must be taken to prevent low frequency cancellation caused by air leakage between the front and rear of the speaker (such as when mounted on a curved or uneven surface, or when mounted in an oversized hole).

F. Mounting panel reinforcement may be necessary in some cases in order to prevent surface flex. This can be achieved by mounting the speaker on a metal or wooden sub-baffle behind the body or door panel. Consult an installation specialist for further direction.

G. Unless you are replacing existing speakers of same size, mounting locations will have to be cut into the doors, body panels, or rear deck. In some cases speaker mounting holes will be precut in the doors, body panels, or rear deck steel. Due to their structural integrity and accessibility. These precut mounting holes should be used whenever possible.

IMPORTANT:

Never cut any metal that is an integral part of an automobile's safety or structural supportsystem.

HELIX PRECISION Speaker Installation

NOTE. HELIX strongly recommends that you operate the complete audio system at low volume before final installation of your HELIX PRECISION automotive loudspeakers. This will allow a trial listening test before securing the loudspeakers into their mounting locations.

CAUTION:

Make sure that all speaker wiring is fully protected from cutting or wear. Any short circuits developing as a result could severely damage the radio/cassette unit or amplifier. Make sure that all speaker wires easily reach the speaker terminals with stress on the wire or connectors.

Securing the loudspeaker

Once you have tested the complete speaker system and have confirmed correct operation, turn the audio system off and prepare the loudspeaker for final mounting.

1. Place the loudspeaker within the mounting ring as shown in the illustration below.

2. Position the loudspeaker assembly into the mounting hole and confirm correct mounting screw hole location. Proceed to insert mounting screws through the loudspeaker mounting assembly and use the provided screw clips to capture the screw. Tighten all screws evenly.

3. Place the speaker grille within the basket and mounting ring and make sure the grille makes contact with the grille mounting adhesive.

Main features

H 236 PRECISION

- 25 mm soft dome tweeter with neodyme magnet
- 165 mm mid/bass with paper cone
- special rubber edge surround for high loadability and long service life
- high-quality, stable metal basket for reducing resonance
- Euro-DIN basket for easy installation in virtually any vehicle type
- solid grille for effective speaker protection

H234 PRECISION

- 25 mm soft dome tweeter with neodyme magnet
- 100 mm mid/bass with paper cone
- special rubber edge surround for high loadability and long service life
- high-quality, stable metal basket for reducing resonance
- Euro-DIN basket for easy installation in virtually any vehicle type
- solid grille for effective speaker protection

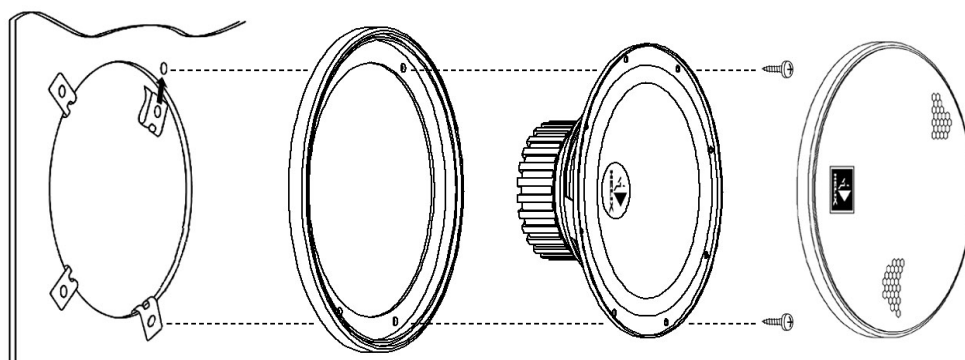
H235 PRECISION

- 25 mm soft dome tweeter with neodyme magnet
- 130 mm mid/bass with paper cone
- special rubber edge surround for high loadability and long service life
- high-quality, stable metal basket for reducing resonance
- Euro-DIN basket for easy installation in virtually any vehicle type
- solid grille for effective speaker protection

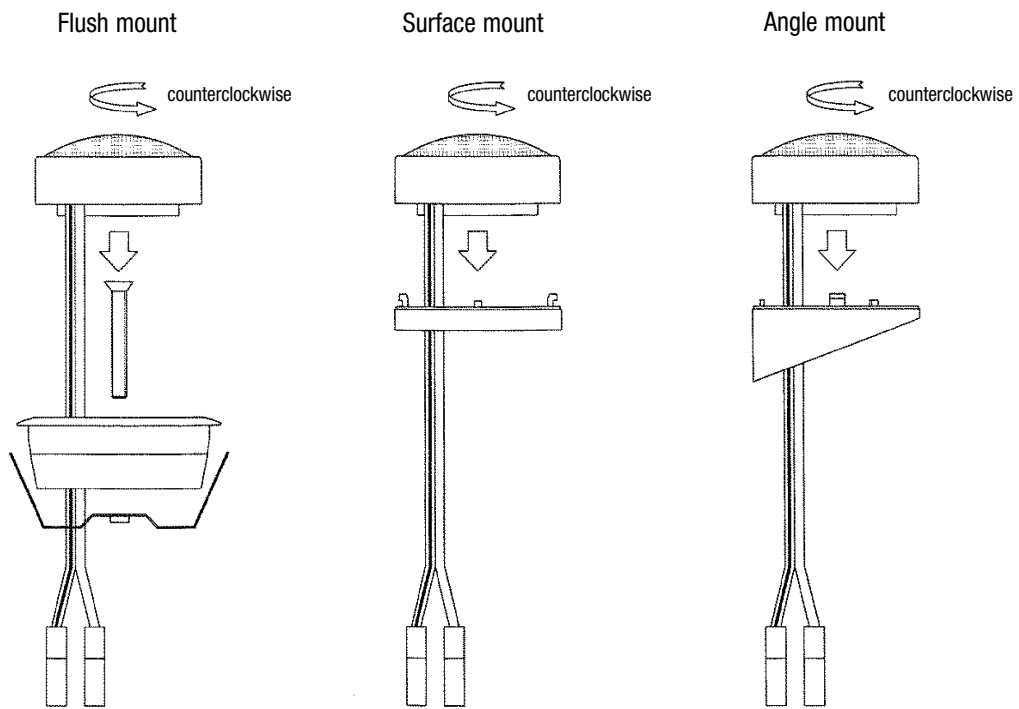
Flexible 2-way frequency crossover

- with
- tweeter level adjustment -3 / 0 / +3 dB with gold plated repositionable jumpers
 - 4 ohm / 2 ohm switchable for the operation of two woofer systems
 - integrated tweeter protection

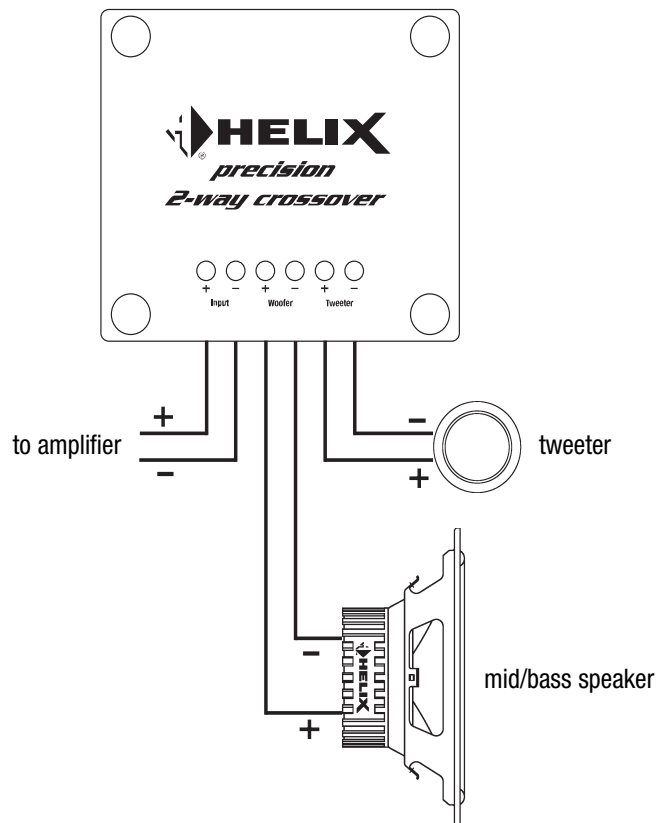
Woofer installation



Tweeter installation

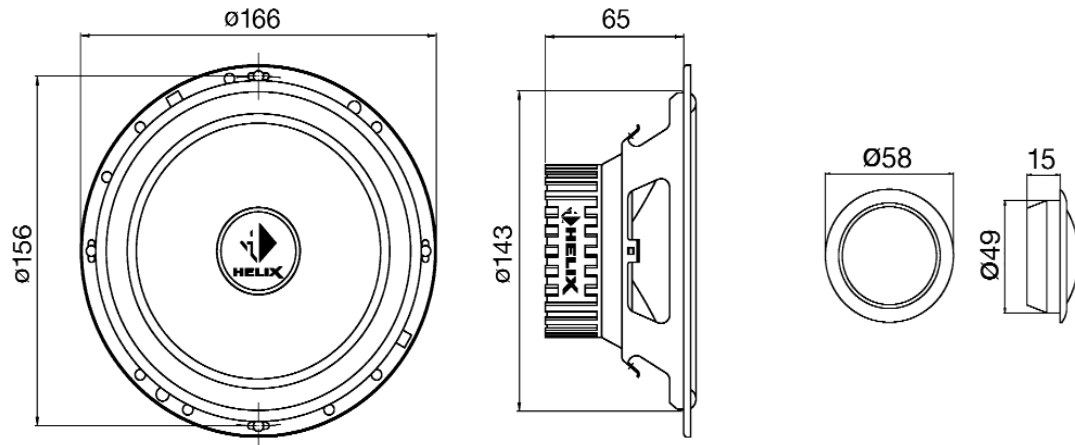


Crossover connection

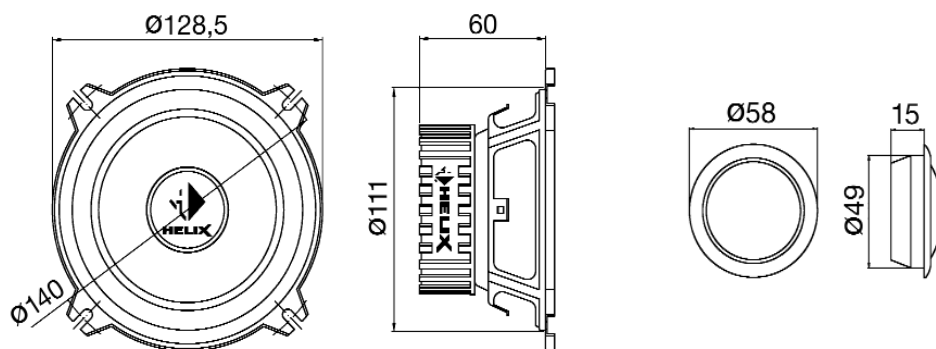


Dimensions

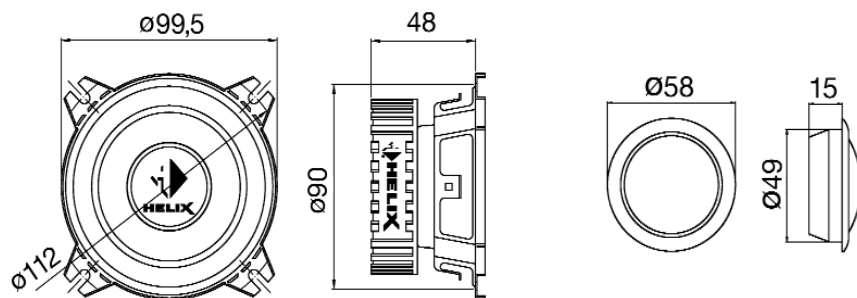
H 236



H 235



H 234



Technical data

	H 236	H 235	H 234	H 1
Power RMS/Max	60/80 Watts	50/70 Watts	40/60 Watts	
Frequency range	50 Hz - 21 kHz	70 Hz - 21 kHz	90 Hz - 21 kHz	2,5 - 21 kHz
Sensitivity	90 db 1W/1m	90 db 1W/1m	89 db 1W/1m	94 db 1W/1m
Impedance	4 Ohms	4 Ohms	4 Ohms	4 Ohms
Mounting depth	65 mm	60 mm	48 mm	

Warranty regulations

Due to the high quality standard HELIX products achieved an excellent international reputation. Therefore we grant a warranty period of 2 years.

The products are carefully checked and tested during the entire production process. In the case of service note the following:

- 1) The 2 years warranty period commences with the purchase of the product and is applicable only to the original buyer.
- 2) During the warranty period we will rectify any defects due to faulty material or workmanship by replacing or repairing the defective part at our decision.
Further claims, and in particular those for price reduction, cancellation of sale, compensation for damages or subsequent damages, are excluded. The warranty period is not altered by the fact that we have carried out warranty work.
- 3) Unauthorized tampering with the product will invalidate this warranty.
- 4) Consult your authorized dealer first, if warranty service is needed. Should it be necessary to return the product to the factory, please insure that
 - a) the product is packed in original factory packing in good condition

- b) the product is shipped prepaid, i.e. at your expense and risk
- c) the receipt/invoice as proof of purchase is enclosed

5) Excluded from the warranty are:

- a) Shipping damages, either readily apparent or concealed (claims for such damages must be immediately notified to the forwarding agent).
- b) Scratches in metal parts, front panels or covers etc. This must be notified to your dealer within 5 days of purchase.
- c) Defects caused by incorrect installation or connection, by operation errors, by overloading or by external force.
- d) Products which have been repaired incorrectly or modified or where the product has been opened by other persons than us.
- e) Consequential damages to other equipments.
- f) Reimbursement when repairing damages by third parties without our previous permission.
- g) Products with removed serial numbers.