DLS ULTIMATE MIDRANGE SPEAKERS

UP 2.5 / UP2.5i
UP 2.5B
UR 2.5
Gothia 3

Welcome

Thank you for buying a DLS Ultimate speaker.
This manual will show you how to do a correct installation. Please read the entire manual before beginning the installation. Install the speakers yourself if you feel confident with our instructions and if you have the proper tools. The ULTIMATE speakers are our best speaker line but a poor installation job can destroy the final result even from these speakers. So if you feel unsure, turn over the installation job to someone better suited to it.

Installation

The speakers should be installed high up in the door side or in the dashboard. These speakers doesn't require any box. When the midrange is mounted high up on the dashboard the mid level creates a frequency peak in some vehicles. If so use the low "mid level" in the filter box. If the level is still too high, connect a 3-5 ohm resistor in series with the + feed. We recommend you to install them in a strong baffle of MDF-board or similar. A strong baffle will improve the sound quality. If you don't have the possibility of doing strong baffles you must use the steel rings coming with the drivers to improve the stability of the mounting.

Wiring

Use high quality speaker cables like DLS HQS or similar. Avoid using the factory pre-installed cabling, they will not give the sound reproduction that you should expect from these high class speakers.
Make sure the cables don't get jammed causing a short circuit to ground. This can damage the output circuits of your head unit or amplifier.
Connect the cables with correct polarity to the speakers. Observe the markings on the terminals. The red marked terminal is plus and the black is minus.

Break-in period

Allow the speakers to play at normal volume for at least 15-20 hours. After this time the performance is correct.

Technical Assistance

For technical assistance ask the shop where the product was sold or the distributor in your country.
You can also send an e-mail to info@dls.se
Information can also be found on our web-site www.dls.se
We follow a policy of continuous advancement in development. For this reason all or part of specifications & designs may be changed without prior notice.

Warranty service

This speaker is covered by warranty, depending on the conditions in the country where it is sold. If the speaker is returned for service, please include the original dated receipt (or a copy) with the product.

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Technical data UP 2.5 / UP 2.5i / UP 2.5B

Size	2,5" (6,3 cm)
Nom. power (RMS)	90 Watts RMS
Maximum power	160 Watts
Frequency range	400 Hz-8000 Hz
Rec. frequency use for	500 Hz - 5000 Hz
active crossover	Use HP 18-24 dB slope /oct.
Sensitivity	91 dB / W / m
Resonanst freq. / Fs	490 Hz
Magnet diameter	65 mm / 2,56"
Outer diameter	100 mm / 3,94"
Installation depth	15 mm / 0,59"
Mounting hole	82 mm / 3,23"
Cone	Doped fabric
Voice coil	52 mm / 2" al. flat wire

Technical data UR 2.5

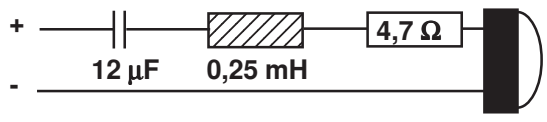
Size	2,5" (6,3 cm) with rear chamber
Nom. power (RMS)	90 Watts RMS
Maximum power	160 Watts
Frequency range	400 Hz-8000 Hz
Rec. frequency use for	500 Hz - 4500 Hz
active crossover	Use HP 18-24 dB slope /oct.
Sensitivity	91 dB / W / m
Resonanst freq. / Fs	430 Hz
Magnet diameter	65 mm / 2,56"
Outer diameter	100 mm / 3,94"
Installation depth	26 mm / 1,02"
Mounting hole	82 mm / 3,23"
Cone	Doped fabric
Voice coil	52 mm / 2" al. flat wire

Technical data Gothia 3

Size	2,5" (6,3 cm) with rear chamber
Nom. power (RMS)	100 Watts RMS
Maximum power	160 Watts
Frequency range	250 Hz-8000 Hz
Rec. frequency use for	400 Hz - 4500 Hz
Active crossover	Use HP 18-24 dB slope /oct.
Sensitivity	91 dB / W / m
Resonanst freq. / Fs	280 Hz
X-max	+- 0,5 mm
Magnet diameter	80 mm / 3,15"
Outer diameter	120 mm / 4,72"
Installation depth	28 mm / 1,1"
Mounting hole	95 mm / 3,74"
Cone	Doped fabric
Voice coil	75 mm / 3" al. flat wire

Crossover

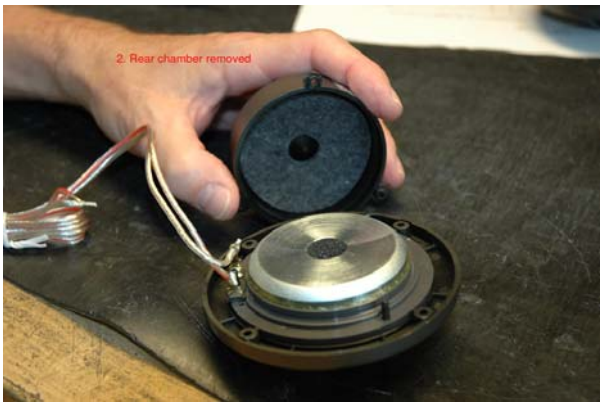
The speakers must be used with either a passive or an active filter in a 3-way configuration. If you can't use active filters you can build your own passive filter like in this example. It is a 6/6 dB slope band pass filter ~500 - 4500 Hz



This rather simple passive filter can be used for UP2.5 / UR2.5. Iridium 3 should only be used in active crossover mode. Use polypropylene capacitor and low-resistance air coil. The resistor is used to adjust the level. The 4,7 omhs is a standard value but you must find a resistor value that matches the sensitivity of the other speakers in your system. In some configurations you don't have to use a resistor at all.

Changing grilles on UR2.5

1. Remove the rear chamber by bending with a screwdriver on the three spots where it is attached to the driver. Be careful!



2. Rear chamber removed.

3. Remove the grille from the driver unit like this.

4. Grille removed.

5. The other grille in place.

6. Reinstall the rear chamber and use the screws to put all parts together again.