

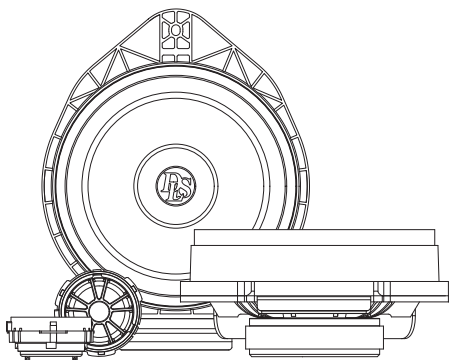
CRPP-OP1.6

User Manual

Opel



CRUISE



Welcome to DLS!

Thank you for purchasing the DLS Cruise CRPP-OP1.6 component kit. For us, it's all about the sound experience. We care deeply about sound and construction quality. In order for your experience to be as optimal as possible, it is important that you fully read this manual, preferably before you start your installation. Keep the manual in a safe and accessible place for future reference.

Your speakers must be installed correctly in order to work as intended. Make sure you have all necessary tools nearby before starting and that you are completely confident in how to proceed. If you feel the slightest uncertainty; feel free to take the help of an experienced installer or a car audio dealer.

Warranty

This component kit 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 with the product.

DECLARATION OF CONFORMITY

DLS plug and play speakers for vehicles are manufactured in accordance with the EU directive EEC 95/54 (72/245/EEC) and are marked with the approval number. They are also marked in accordance with the WEEE-directive 2012/19/EC. The products are also produced in accordance with the EU RoHS directive 2015/863/EU.

DLS CRUISE CRPP-OP1.6

Content

Welcome	2
Parts Included	3
Pre-installation	3
General Info	3
Installation	3
Remove Door Panel	3
Remove Speaker	4
Mount DLS Speaker	5
Remount Door Panel	5
Remove Tweeter	6
Mount DLS Tweeter	7
Crossover Settings	8
Running-in Time	9
DLS Support	9
Specification Woofer	10
Specification Tweeter	10
Compatible Car Models	12
Disclaimer	12
Product Markings	13

DLS speakers are engineered by DLS Sweden,
a part of:

Winn Scandinavia AB

Idrottsvägen 37 - SE-702 32 Örebro - Sweden

Tel: +46 19 20 67 65 - E-mail: info@dls.se

www.dls.se

Designed & Sound tuned in Sweden.



Parts Included

Included products:

2pcs Woofers
2pcs Tweeters
2pcs Crossovers

Included accessories:

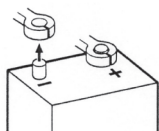
2pcs Stainless steel Cruise logo badges
2pcs Flat bottom adapters
2pcs Woofer connection cables
2pcs Tweeter connection cables
4pcs Adhesive foams for wrapping
2pcs Four-leaf clover foams for tweeter
8pcs Terminal crimp connectors
1pc Pry tool
1pc Manual

Pre-installation

Disconnect Battery

Before you start the process of replacing speakers, disconnect and secure the negative terminal from your battery/power source. This will prevent the risk of damaging yourself or the products.

Place the disconnected terminal in a secure and isolated location away from any possible connection belonging to the battery/power source system.



General Info

Some sound systems may vary in size of the door speaker. Before you start the assembly, make sure that your vehicle has the same size as this kit.

The installation process may vary depending on the car model, factory options and other factors. The approach is similar to all of the described car models. Some screws and clips may be placed differently and depending on if the tweeter is placed in the A-pillar or side mirror, the course of action may vary.

Take care when removing panels, so there will be no marks. Use plastic pry tools to avoid marks on the panels and damaging the plastic clips.

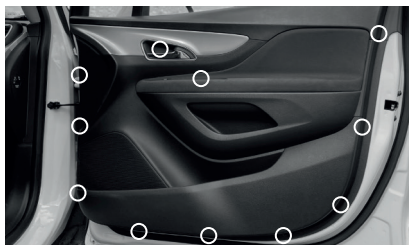
Installation

Tools needed

- Bit screwdriver
- Bit socket M7 wrench size
- Small flat head screwdriver
- Plastic pry tool (included)

Remove Door Panel

Disassemble the front door by removing the door panel cover.



Usually the clips/screws are placed by the white marks. This could vary depending on the vehicle.



In most cases the screws used are M7 bolts. Un-screw them and store the screws in a safe place, for later use when reinstalling the door panel.

Use a wrench or tool bit socket, size 7. Normally the bolts are located at the door handle and opener.





To remove the door panel, all clips need to be released. Loosen the door panel by inserting the pry tool between the panel and the door. Pry the door panel gently, but firm, outward to release the clips.



When the door panel is loose, start by softly lifting the panel straight up to remove it.

There are several electrical and mechanical connectors on the backside of the panel. Start with detaching the release cable from the door handle. First lever out the black or white clip. The door release cable is now loose and can be removed from the front turning the cable and unhooking it.



Disconnect electrical connections for the window control panel



Remove Speaker

Remove the speaker by unscrewing the M7 screw at the top.



Use the pry tool to release the speaker from the door.



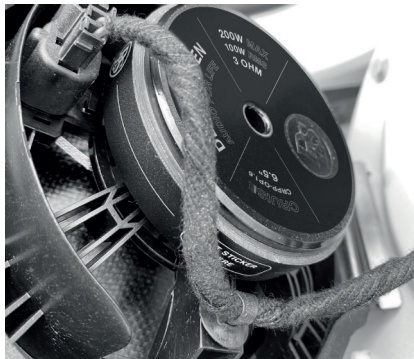
Release the clips that hold the speaker cable to the basket and release the speaker connector.





Mount DLS Speaker

Reconnect the speaker connector in the new DLS speaker and re-attach the cable clip into the speaker's basket.



Install the speaker to the door by using the OEM M7 screw. Make sure the speaker is properly mounted and fits nicely.



Remount Door Panel

Start the reassembly of the door panels. Follow this manual in reverse order.

Reconnect all cables. Reconnect all electrical connectors and the unlocking device, place the door cover from the top by the window seal and push it down gently. Make sure the clips align with their holes and can engage. Give the door panel a push by the hand to attach to the clips. Mount and fasten all screws/bolts at the correct places. Make sure that no screws or clips are left over.

Hint!

Take care when installing the door panel, to make sure no wires get squeezed and/or pressed against the midrange speaker when it's installed in the door frame.



Remove Tweeter

Locate the tweeter – Either in the A-pillar or the side mirror



Start by removing the tweeter covers. Use plastic pry tools and be careful, there can be air-bags behind the A-pillar. The first clip can be hard to remove. Take it easy and use minimal force. The instructions below shows how to remove the A-pillar tweeter.

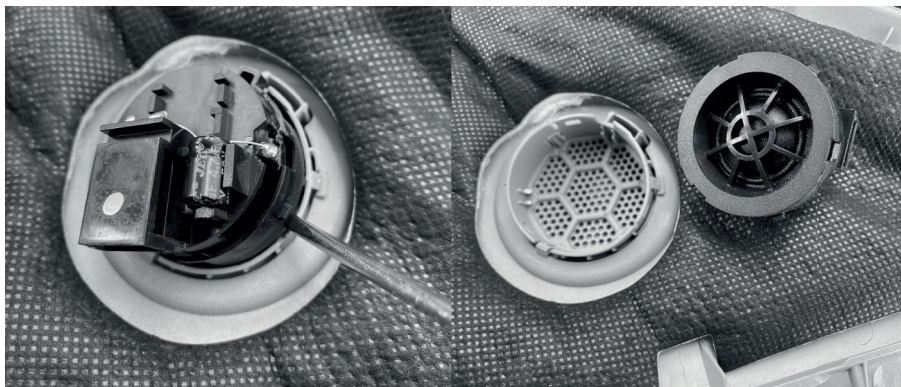


Un-clip the speaker connector from tweeter.



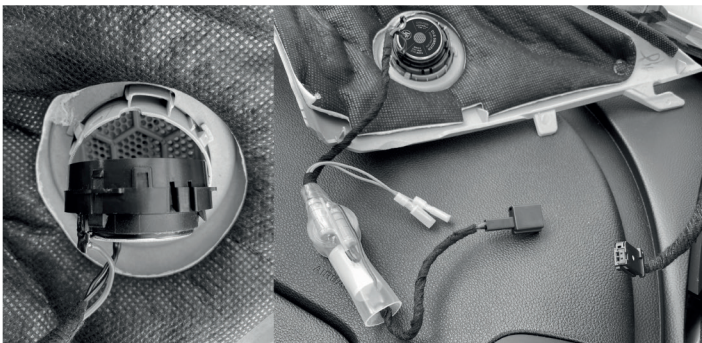


The OEM tweeter is snapped into a holder in the A-pillar cover. Use a PRY tool or small flat head screwdriver to remove the tweeter



Mount DLS Tweeter

Install the new DLS tweeter in the same way as the OEM tweeter. Make sure that the DLS tweeter is properly seated. For extra stability of the tweeter installation, the adhesive four-leaf clover foam pad can be used. Ensure that the DLS tweeter is installed firmly in place with no risk of movement.



For some models, the four-leaf clover needs to be adapted. Use a sharp scissor to adapt and modify it.

Make sure that the crossover gets in place behind the A-pillar, down under the dash or behind the door panel (if installed in the door). Add adhesive foam so that the crossover doesn't rattle against any plastic panel or metal.

Make sure that no screws or clips are left over, reconnect the battery/power source terminal.



Crossover Settings

Connect the crossover using the factory connector. Use the remaining wrapping foam to secure the crossover and cables.

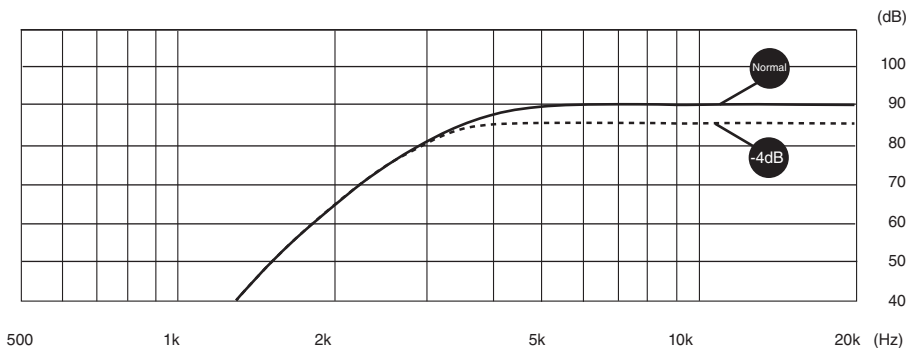


Tweeter Level

The yellow cable loop is a tweeter level selection, enabling fine tuning of the high-frequency sound.

- Closed loop = -4dB (Shown in the picture below)
- Open loop = Normal (Shown in the picture below)

By closing the loop as shown in the picture above, the tweeter gets less power in the higher frequencies, making the sound seem less intense. We recommend using the closed loop setup in installations where the factory tweeters are angled towards the listening position.





Running-in Time

The component kit will perform at it's best after 15-20 hours of running-in time. The running-in time can be played with a tone, or by just playing music like usual.

Start your listening at a moderate level and increase the volume as time goes by. After 15-20 hours of listening the performance and characteristics will be as intended.



DLS Support

For technical assistance, ask your car audio dealer where the product was sold or the distributor in your country. You can always contact the DLS Support in Sweden via e-mail: info@dls.se. For more information regarding DLS and our products, visit our website: www.dls.se. We follow a policy of continuous advancement in development. For this reason, all or part of specifications and designs may be changed without prior notice.



Specifications

DLS Cruise CRPP-OP1.6 Component Kit

Technical Specifications

Size	6.5" / 165 mm woofer and 1" / 25 mm tweeter
RMS Power	100 W
MAX Power	200 W
Impedance	3 Ohm
Sensitivity	91 dB 1W/1m
Freq. range	55 Hz - 25 kHz
Crossover	4800 Hz 12 dB / Oct with Mundorf caps

DLS Cruise CRPP-OP1.6 Woofer

Technical Specifications

Size	6.5" / 165 mm
RMS Power	100 W
MAX Power	200 W
Impedance	3 Ohm
Freq. range	55 Hz - 5 kHz
Voice Coil Size	1" / 25 mm
Voice Coil Material	CCAW voice coil with Kapton® former
Basket	Glass Fiber Reinforced ABS
Magnet	Optimized hybrid neo/ferrite magnet
Cone	Glass Fiber
Suspension	Rubber

Electro-Acoustic Parameters

Re	2.5 Ohm
Fs	66.9 Hz
Mms	11.5 g
Cms	0.50
Vas	12.6 L
Qts	0.72
Qes	0.87
Qms	5.73
Bl	3.96 Tm
Spl	89.5 dB 1W/1m
Sd	139 cm²

DLS Cruise CRPP-OP1.6 Tweeter

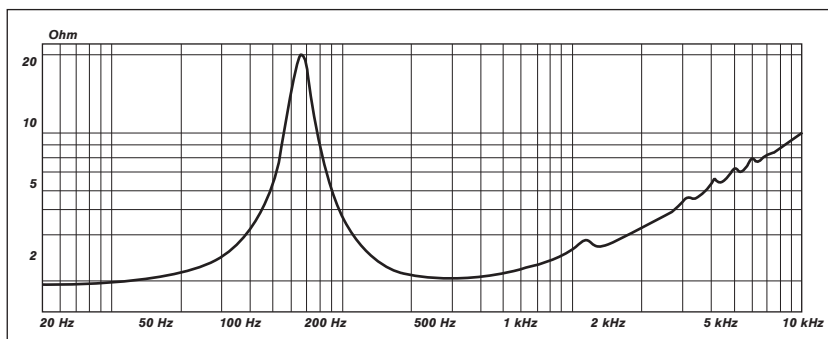
Technical Specifications

Size	1" / 25 mm
RMS Power	50 W
MAX Power	100 W
Impedance	4 Ohm
Freq. range	2 kHz - 25 kHz
Voice Coil Material	CCAW voice coil with aluminum former
Frame	Glass Fiber Reinforced ABS
Magnet	Neodymium with copper shorting ring
Cone	Natural silk dome
Attenuation	-4 dB / 0 dB

Electro-Acoustic Parameters

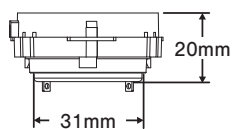
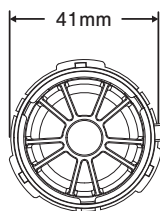
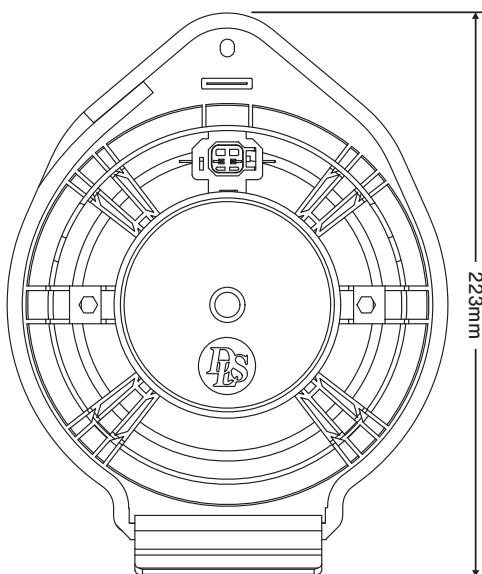
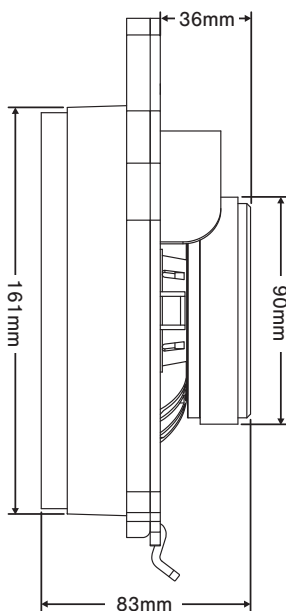
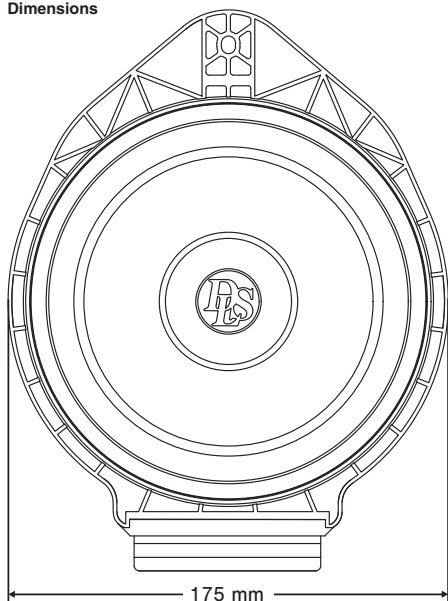
Re	3.5 Ohm
Fs	1992 Hz
SPL	94 dB 1W/1m

Impedance vs. Frequency





Dimensions





Compatible Car Models

DLS Cruise CRPP-OP1.6 & CRPP-OP1.6CX

Make	Model	Year	Front speaker	Rear speaker
Chevrolet	Cobalt	2006-2010	CRPP-OP1.6	CRPP-OP1.6CX
Chevrolet	Cruze	2009-2016	CRPP-OP1.6	CRPP-OP1.6CX
Chevrolet	Camaro	2010-2015	CRPP-OP1.6	
Chevrolet	Malibu	2011-2015	CRPP-OP1.6	CRPP-OP1.6CX
Cadillac	Escalade	2007-2013	CRPP-OP1.6	CRPP-OP1.6CX
Hummer	H3	2005-2007	CRPP-OP1.6	
Hummer	H3	2008-2010	CRPP-OP1.6	CRPP-OP1.6CX
Opel	Adam	2013-2019	CRPP-OP1.6	CRPP-OP1.6CX
Opel	Astra (Model J)	2009-2015	CRPP-OP1.6	CRPP-OP1.6CX
Opel	Astra (Model K)	2015-2021	CRPP-OP1.6	CRPP-OP1.6CX
Opel	Crossland X	2017-2021	CRPP-OP1.6	CRPP-OP1.6CX
Opel	Insignia	2008-2021	CRPP-OP1.6	CRPP-OP1.6CX
Opel	Karl	2015-2019	CRPP-OP1.6	CRPP-OP1.6CX
Opel	Meriva(Model B)	2010-2017	CRPP-OP1.6	CRPP-OP1.6CX
Opel	Mokka	2012-2020	CRPP-OP1.6	CRPP-OP1.6CX
Opel	Zafira-Tourer	2011-2019	CRPP-OP1.6	CRPP-OP1.6CX
Vauxhall	Adam	2013-2019	CRPP-OP1.6	CRPP-OP1.6CX
Vauxhall	Astra (Model J)	2009-2015	CRPP-OP1.6	CRPP-OP1.6CX
Vauxhall	Astra (Model K)	2015-2021	CRPP-OP1.6	CRPP-OP1.6CX
Vauxhall	Crossland X	2017-2021	CRPP-OP1.6	CRPP-OP1.6CX
Vauxhall	Insignia	2008-2021	CRPP-OP1.6	CRPP-OP1.6CX
Vauxhall	Karl	2015-2019	CRPP-OP1.6	CRPP-OP1.6CX
Vauxhall	Meriva(Model B)	2010-2017	CRPP-OP1.6	CRPP-OP1.6CX
Vauxhall	Mokka	2012-2020	CRPP-OP1.6	CRPP-OP1.6CX
Vauxhall	Zafira-Tourer	2011-2019	CRPP-OP1.6	CRPP-OP1.6CX

Disclaimer

Note! The factory sound system (for example speaker impedance) may in rare occasions be changed without prior notice from the vehicle manufacturer. If the factory speaker is below 2 Ohm or above 6 Ohm impedance, you should be cautious before installing your new speakers. The new speakers may not function properly, and can cause harm to the factory amplifier. For more information, visit www.dls.se or consult your local DLS dealer.



Product Markings



The crossed-out wheellie bin symbol means that the product, literature and packaging included must be taken to separate collection at the end of their working life. Do not dispose of these products as unsorted municipal waste: take them for recycling. For info on your nearest recycling point, check with your local waste authority.



This product has been granted with the CE certification mark to show that the product follows the health, safety, and environmental protection standards for products sold within the European Economic Area (EEA).



DLS products comply with the relevant provisions of the RoHS Directive for the European Union. In common with all Electrical and Electronic Equipment (EEE) the product should not be disposed of as household waste. Alternative arrangements may apply in other jurisdictions.



DLS is a global partner of the European Mobile Media Association, an organisation that focus on promoting the custom made mobile media installations to consumers.

We follow a policy of continuous advancement in development. For this reason all or part of specifications & designs may be changed without prior notice. We reserve for possible typos, factual or numeric errors that may have been printed on any products, package designs, user manuals and/or other included accessories.



CRUISE **E**