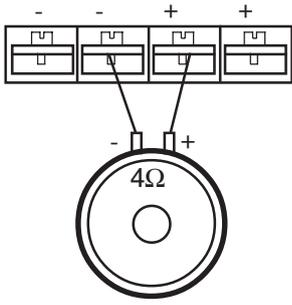


On DLS mono amplifiers, with doubled speaker connectors, both the + and - terminals are internally connected in parallel.

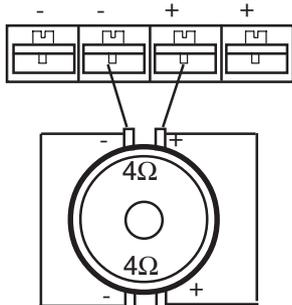
## CONNECTION OF SUBWOOFERS TO DLS MONO AMPS

Amplifier speaker terminal



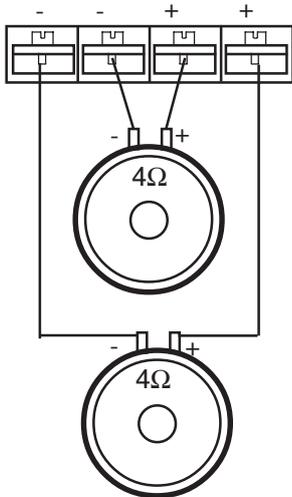
Connection of a subwoofer with 4 ohm single voice coil  
Impedance = 4 ohm

Amplifier speaker terminal



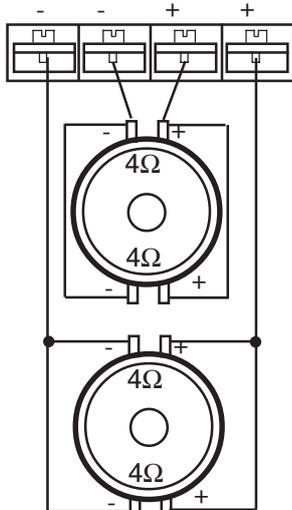
Connection of a subwoofer with 4 ohm dual voice coils  
Impedance = 2 ohm

Amplifier speaker terminal



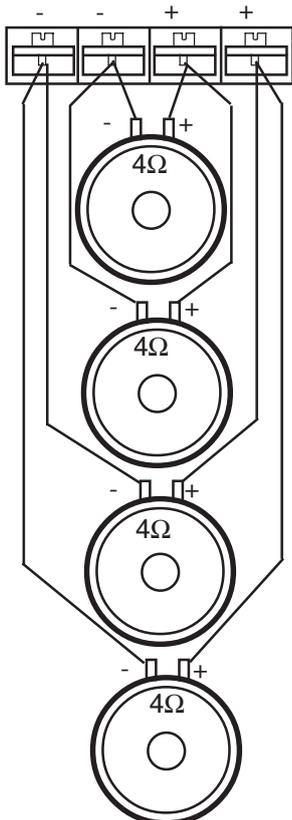
Connection of two subwoofers with 4 ohm single voice coil  
Impedance = 2 ohm

Amplifier speaker terminal



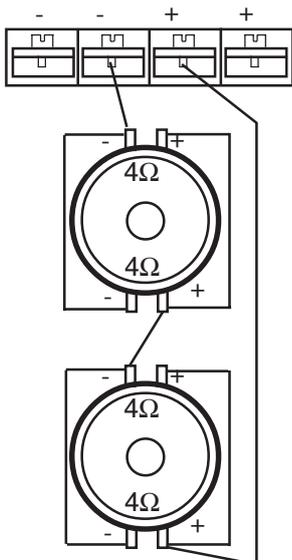
Connection of two subwoofers with 4 ohm dual voice coils  
Impedance = 1 ohm

Amplifier speaker terminal



Connection of four subwoofers with 4 ohm single voice coil  
Impedance = 1 ohm

Amplifier speaker terminal

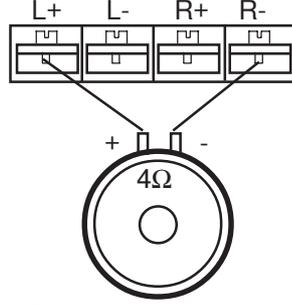


Connection of two subwoofers with 4 ohm dual voice coils in parallel and then in series to the amplifier with a resulting impedance of 4 ohms.

If you connect two subwoofers with 2 ohm voice coils in this way the resulting impedance is 2 ohms.

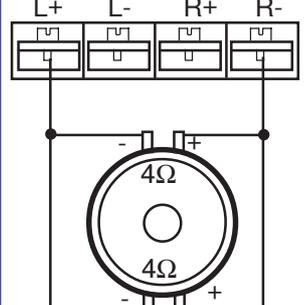
## CONNECTION OF SUBWOOFERS IN BRIDGE MODE TO DLS STEREO AMPS

Amplifier speaker terminal



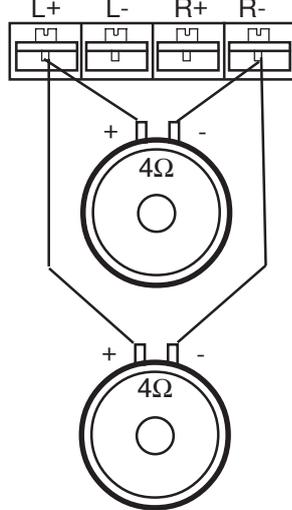
Single voice coil subwoofer connected in bridge mode.  
Impedance = 4 ohm  
Amplifier load = 2 ohm

Amplifier speaker terminal



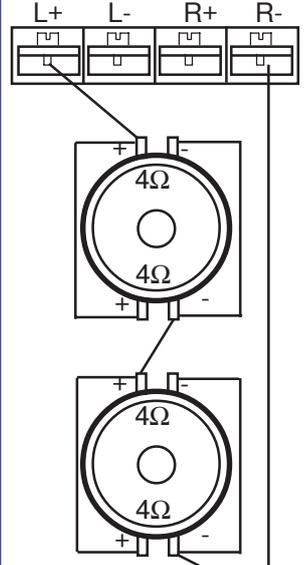
Dual voice coil subwoofer connected in parallel in bridge mode.  
Impedance = 2 ohm  
Amplifier load = 1 ohm

Amplifier speaker terminal



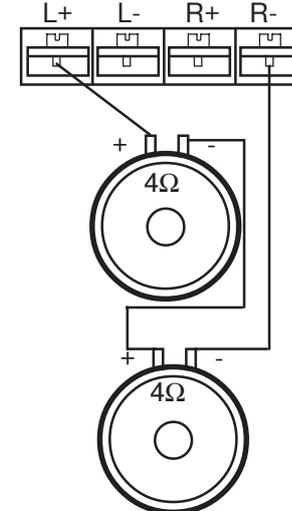
Single voice coil subwoofer connected in bridge mode.  
Impedance = 2 ohm  
Amplifier load = 1 ohm (only for DLS A-series amplifiers)

Amplifier speaker terminal



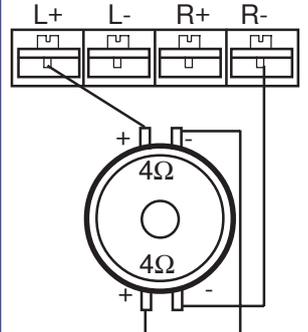
Connection of two subwoofers with 4 ohm dual voice coils in parallel and then in series to the amplifier gives a resulting impedance of 4 ohm.  
Amplifier load = 2 ohm

Amplifier speaker terminal



Connection of two subwoofers with 4 ohm voice coils in series  
Impedance = 8 ohm  
Amplifier load = 4 ohm

Amplifier speaker terminal



Connection of a 4 ohm dual voice coil subwoofer with the voice coils in series.  
Impedance = 8 ohm  
Amplifier load = 4 ohm



## SPEAKER LOADS

Most car audio speakers have an impedance of 4 ohm, but 2 ohm speakers and subwoofers are becoming more common. Many new subwoofers also have dual 2 ohm voice coils.

Here are many examples of how to connect subwoofers.

## CONNECTION IN STEREO MODE TO STEREO AMPLIFIERS:

- DLS **Performance** (former CLASSIC) and **Reference** amplifiers can handle loads down to 2 ohm on each stereo channel.

- DLS **ULTIMATE** amplifiers can handle loads down to 1 ohm on each stereo channel.

## CONNECTION IN BRIDGE MODE TO A STEREO AMPLIFIER:

When you connect in bridge mode there is one most important thing to know:

- **The impedance is halving when connected in bridge mode to a stereo amplifier.**

The speaker's impedance is of course the same, a 4 ohm speaker is always 4 ohm. It is the amplifier that perceives the 4 ohm speaker as a 2 ohm load, and a 2 ohm speaker is perceived as a 1 ohm load.

DLS **Performance** (CLASSIC) and **Reference** stereo amplifiers can handle loads down to 4 ohm when connected in bridge mode. The amplifier perceives this as a 2 ohm load and we say that these kinds of amplifiers are 2 ohm stable.

DLS **ULTIMATE** stereo amplifiers can handle loads down to 2 ohm when connected in bridge mode. The amplifier perceives this as a 1 ohm load and we say that these kinds of amplifiers are 1 ohm stable.

If you are using more than one speaker / subwoofer they must be connected in a way so the impedance is still 4 ohm when connected to a **Performance** (CLASSIC) or **Reference** amplifier in bridge mode.

On the **ULTIMATE** amplifiers you can connect speakers in bridge mode with an impedance of only 2 ohms.

## CONNECTION OF SUBWOOFERS TO MONO AMPLIFIERS:

DLS mono amplifiers are available in all of DLS three amplifier lines. These amplifiers are internally designed for use with subwoofers at low impedances.

## MONO AMPLIFIERS CAN NOT BE CONNECTED IN BRIDGE MODE!

All of the mono amplifiers have double speaker terminals that are internally connected (+ with + and - with -). The double output terminals can not be connected in bridge mode, it is just for making it easier to connect more than one subwoofer to the amplifier.

- DLS **Performance** (former CLASSIC) mono amplifiers CA12, CAD11 and CAD15 can handle loads down to 1 ohm (like four, 4 ohm subwoofers, connected in parallel.)

- DLS **Reference** RA10 mono amplifier can handle loads down to 1 ohm.

- DLS **ULTIMATE** A6 mono amplifier can handle loads down to 1 ohm.

## MULTI CHANNEL AMPLIFIERS:

Our multi channel amplifiers have two or four stereo channels and one mono sub channel.

The mono sub channel on these amplifiers can not be connected in bridge mode. They are designed to be mono channels only and are connected in the same way as the mono channel amplifiers above.

- DLS **Performance** (former CLASSIC) CA31, CAT31 and CA51 are multi channel amplifiers that can handle loads down to 2 ohm on the mono sub channel.

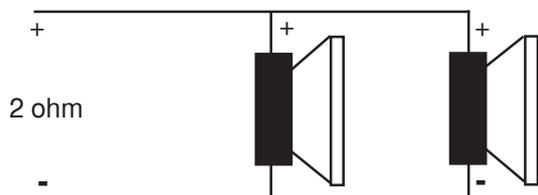
- DLS **Reference** RA30 and RA50 are multi channel amplifiers that can handle loads down to 2 ohm on the mono sub channel.

- DLS **ULTIMATE** A5 and A7 are multi channel amplifiers that can handle loads down to 1 ohm on the mono sub channel.

**NOTE!** Choose a location for your amplifier where air can circulate freely around it. Do not cover the amplifier with carpets or hide behind trim panels.

Do not mount the amplifier in an inverted or upside down position. Mono amplifiers will generate a lot of heat!

*Two 4 ohm speakers in parallel*



*Two 2 ohm speakers in series.*

