# SPL Installations

## HOW TO BUILD A SPL CAR

**1.** The car must be dampened properly with damping mats or damping compound. Insert spray foam compound in all cavitys.
The car should be equipped with stays.
The car windows should be glued to the car body. Change to thicker glass, minimum 4 cm reinfoced (bulletproof) type. The russian car used 8 cm). Fasten the windows with frames made of steel welded to the car body.
The door header gaskets should be changed to new thicker types, types used in BMW or MB cars. The doors should also have an extra locking device, e.g. bolts all around the door.

**2.** After damping the car you should start with building up the interior of the car to make it completely silent when you knock on it. You can make a sandwich construction with layers of particle board, MDF and metal.
The measuring microphone must have a free space 30 cm around it. The dashoboard can be built in a way so it has a slope towards the floor, minimum 30 cm width. You can have a stay in the measuring area.
The speaker wall must be fastened properly with bolts, screws and stays. The speakers must be mounted on the same side as the microphone, and the ports on the other side.
You can lower the floor in the back of the car for recessed mounting of the batteries.
You must be able to start and stop the car engine from the outside. The amplifiers must also be able to start and stop individually from the outside. The pedals can be covered.
For the gear shift and hand brake handles you can build a cover with the same height as the dashboard.
Two persons with a length of 167 cm must also be able to sit inside the car.

**3. Here is an example of what you need.**
Four (4) alternators, min 110Amp.
Adjustable charging regulator.
Electronic accelerator to adjust the number of revolutions on your engine from the outside.
Two (2) 50 mm (0AWG) cables (+ and -) from each alternator to the batteries. Or copper rails.
Eight (8) 75 Ah batteries. 24 pcs 2 volt cells.
Eight (8) DLS A6 amplifiers.
Head unit with min. 4 line outs and built-in pause function.
Line amplifier with eight adjustable outputs between 8-12 V.
Four (4) DLS SP15 subwoofers.
Box volume 620 liters. Port size 65 x 90 x 10 cm.
The power cables from batteries to amplifiers, min 2 x 21 mm (4AWG).
Speaker cables: 2 x 10 mm for both + and -.

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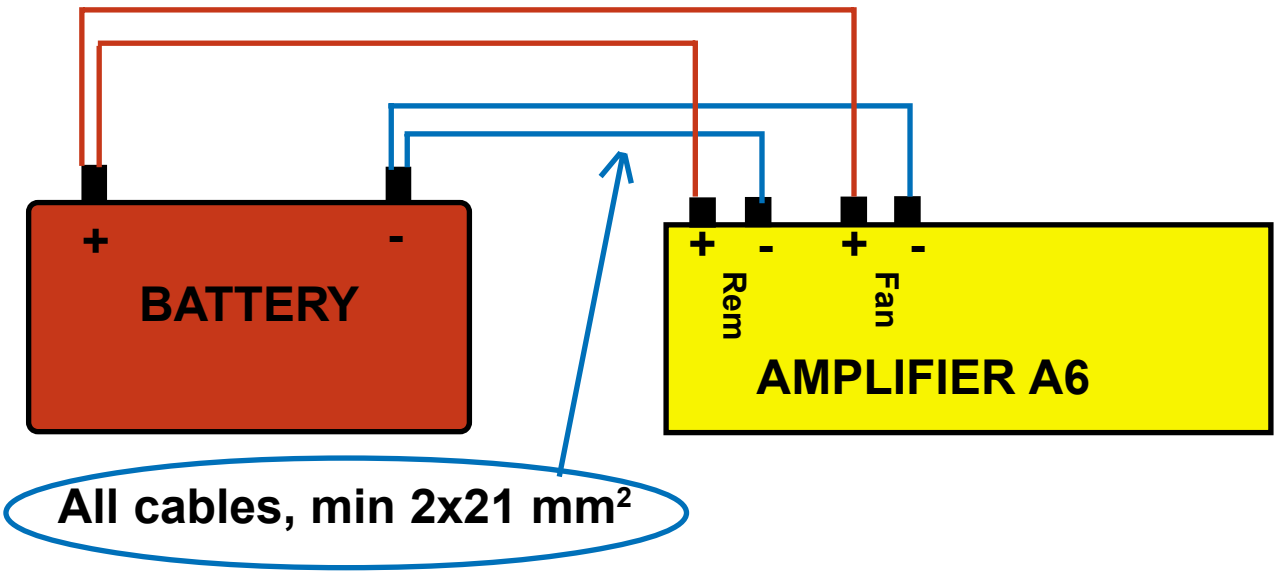
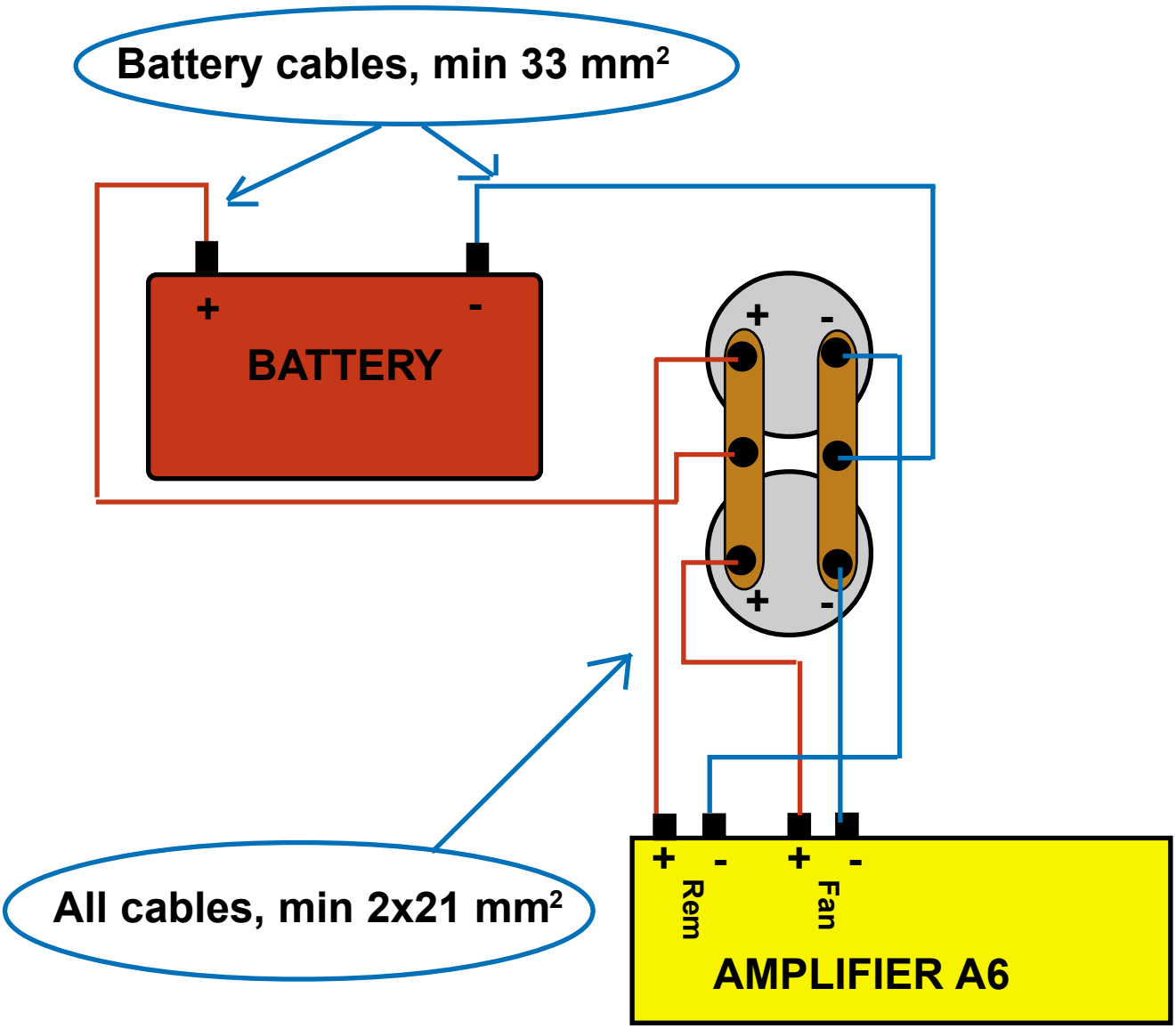
## POWER CABLES FROM BATTERIES TO AMPLIFIERS




**IMPORTANT!**
**Connect amplifier remote via a relay with direct feed from battery. The relay is controlled from head unit remote.**

## POWER CABLES FROM BATTERIES TO AMPLIFIERS INCLUDING POWER CAPACITOR BANK



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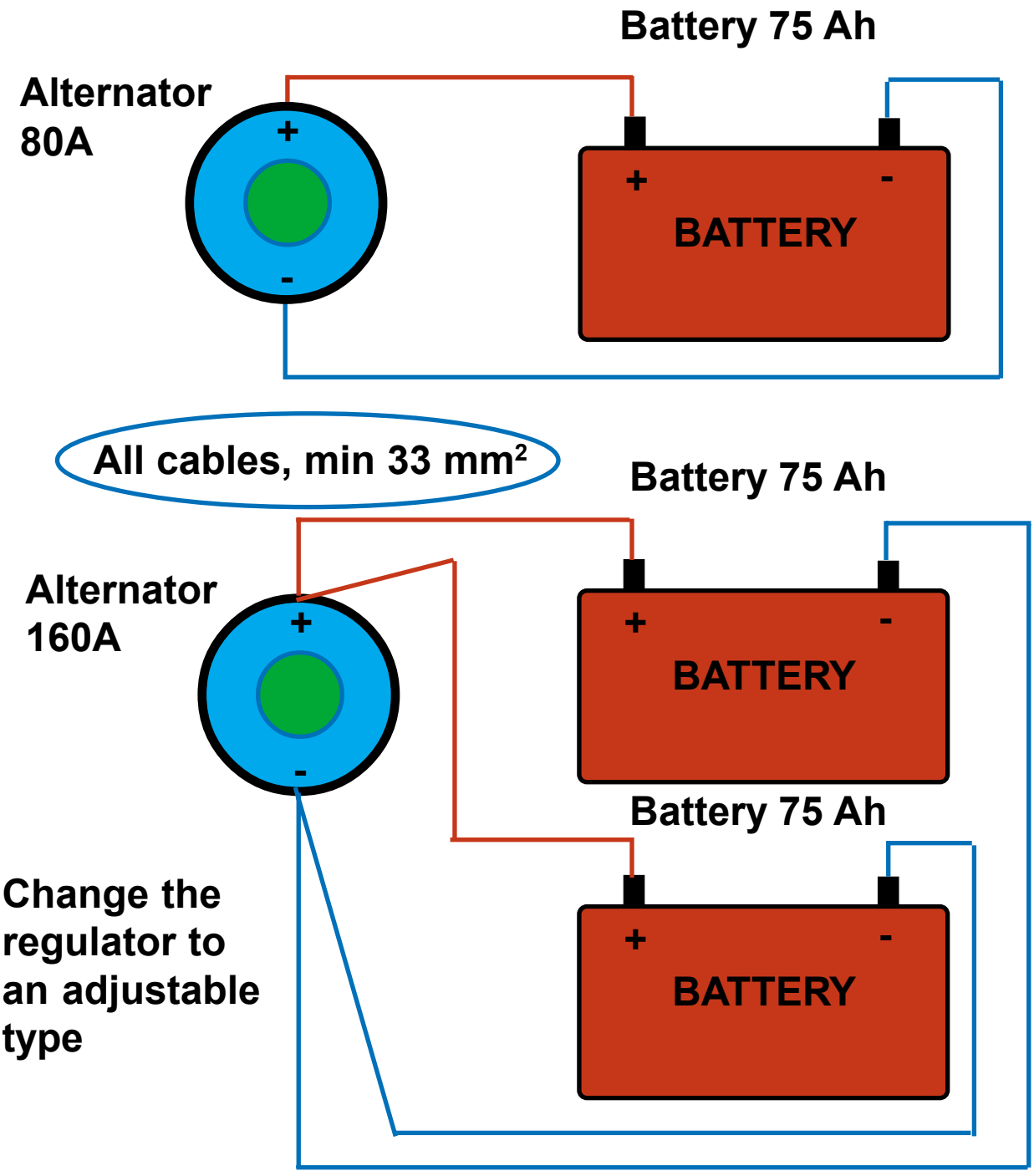
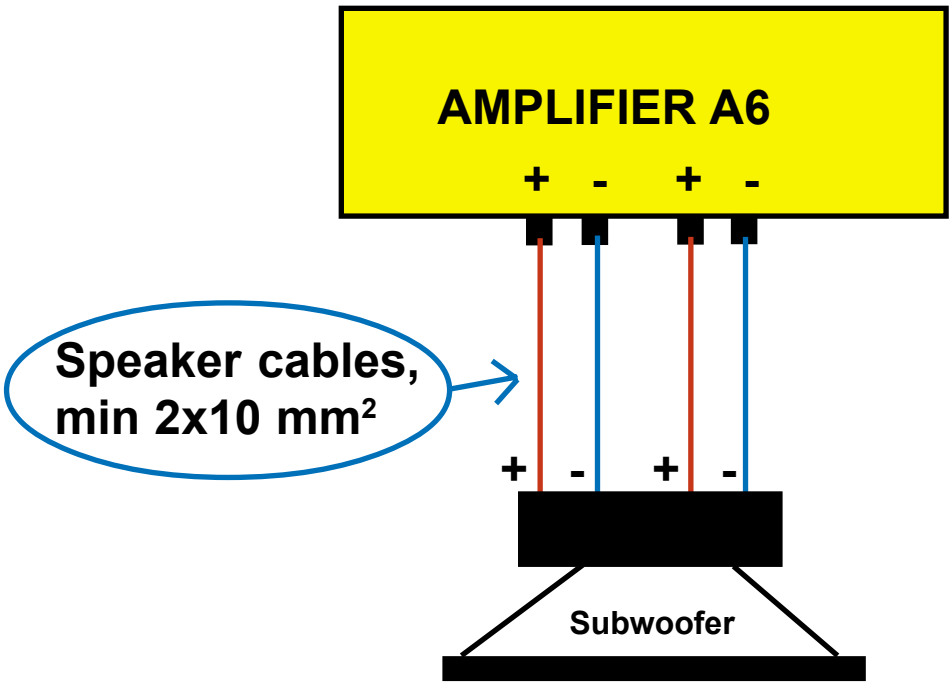
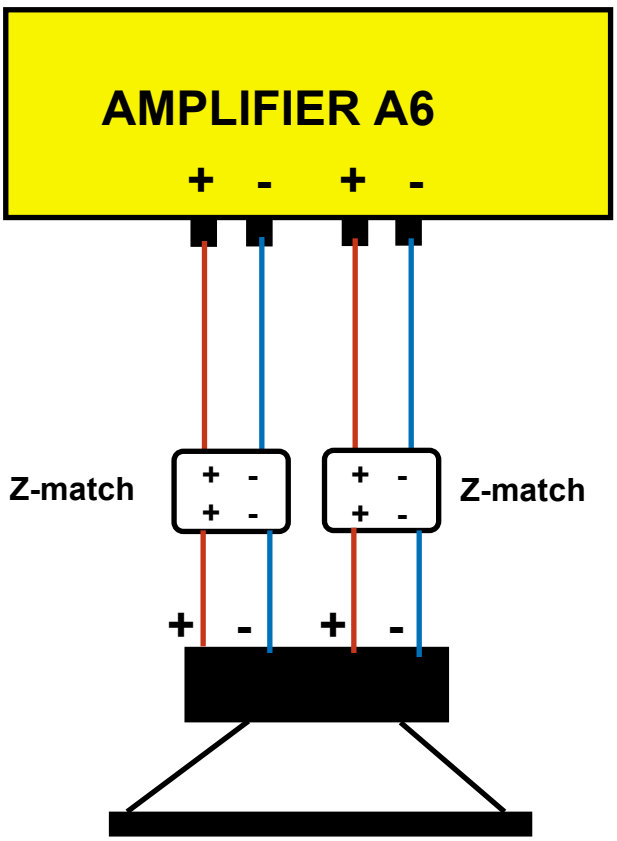
## POWER CABLES FROM BATTERIES TO AMPLIFIERS




**Measure the resistance at the amplifiers for minimum value.**

## SPEAKER CONNECTIONS




**The impedance must be measured when the installation is finished inside the vehicle.**

**After that you can select impedance with Z-match or box volume / port volume**

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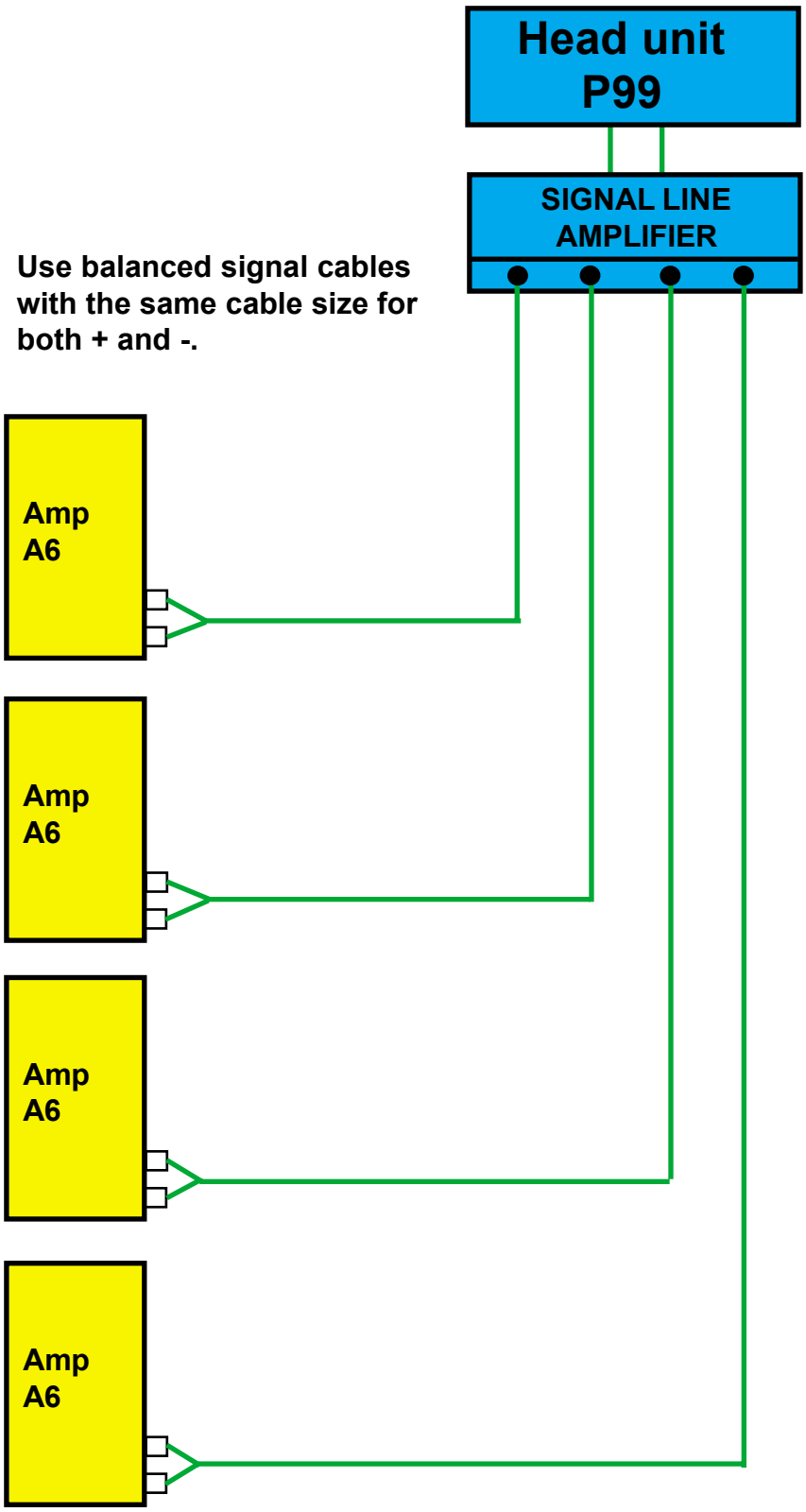
## SIGNAL CABLES




The head unit should have a 4 volt output (or more).

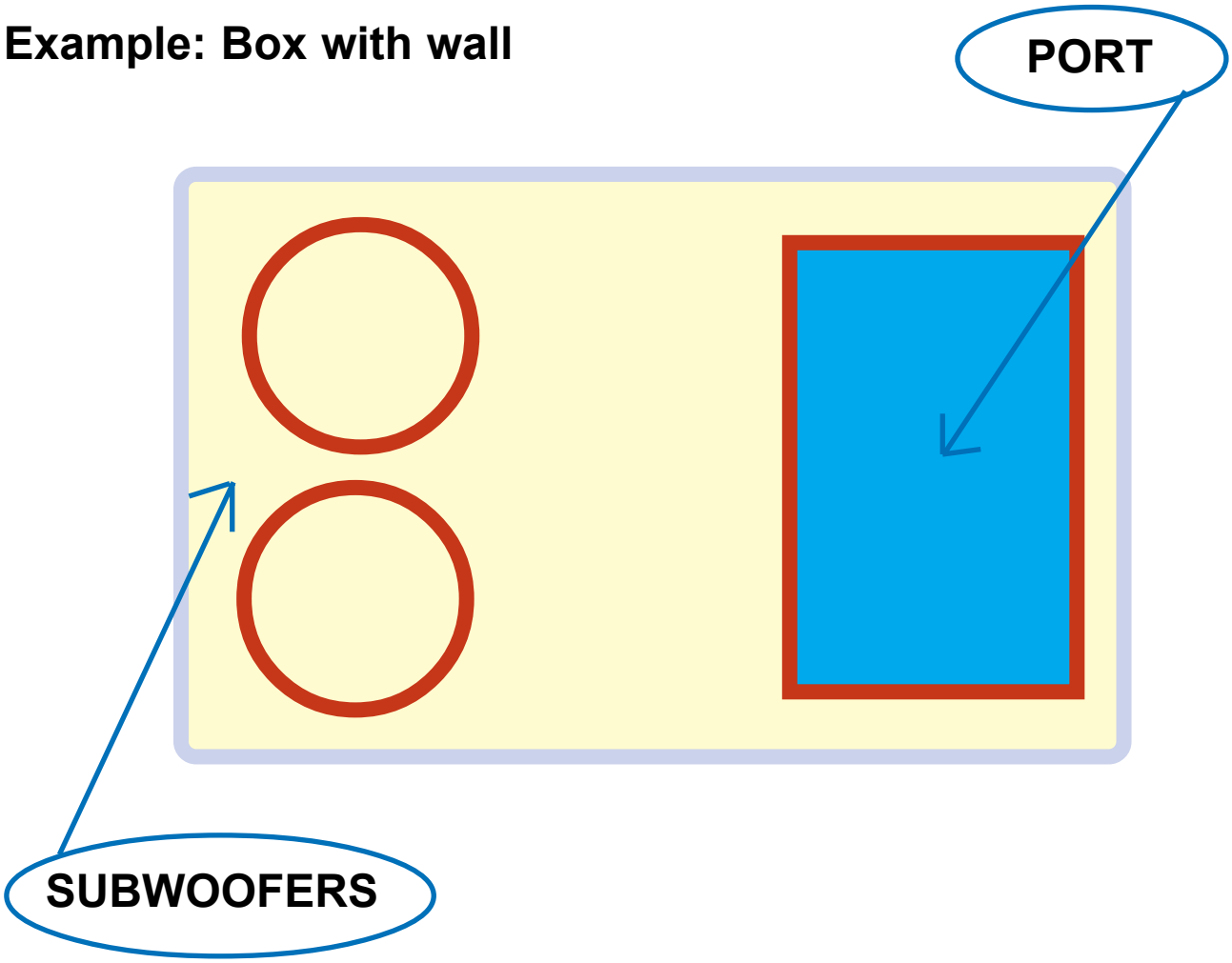
The signal line amplifier must be linear and amplify the signal up to 8-12 volts. It should have separate outputs so you can adjust each level separately.
It´s also important that all amp. levels are adjusted separately.

Use balanced signal cables with the same cable size for both + and -.

## THE SPEAKER BOX

**Which box type you should use depends on which class you want to compete in.**

**Example: Box with wall**




**The sizes of box and port depends on the interior size of the car. Use a good data program for this purpose.**

**The box should be internally dampened and properly fastened to the car body.**

THE SPEAKER BOX

**Which box type you should use depends on which class you want to compete in.**

**Example: Two subwoofers for PRO STREET**