

# STELLA LIGHT

Art. No. 5896

## Characteristics and sound properties

To be clear from the start: these small sized Stella Light speakers pack a considerable punch. While the outer appearance of the speakers might be described as compact or even sweet, this definitely does not apply to the maximum sound pressure of which they are capable. The combination of universal full-range FRS 8 8 Ohm loudspeaker and W 170 S 8 Ohm woofer stands out because of its unbelievable level accuracy.

The fact that the separating frequency is at a very low 200 Hz benefits the Stella Light's positioning accuracy and generates an image of the stage that easily earns the "live" label. The FRS 8 8 Ohm full-range loudspeaker is remarkably detailed in its output: even the higher frequencies are reproduced accurately and with clear focus. Complemented by the W 170 S 8 Ohm woofer, this combination covers almost the full range of frequencies required.

Whether used as computer speakers to the left and right of the desk or as a stereo set for the sitting room or bedroom, thanks to the excellent value-for-money price, these speakers can be used universally in many different environments without making too large inroads into your wallet. The simple, effective and intriguingly designed series crossover rounds the system off to produce a low-priced, quality building kit.

After all the cables have been positioned in the cabinet, the cable opening in the divider will have to be sealed off with e.g. hot-melt glue.

## Similar Products

NoBox BB

SOLITUDE

SOLO 20

SOLO Eckbox

QUADRO

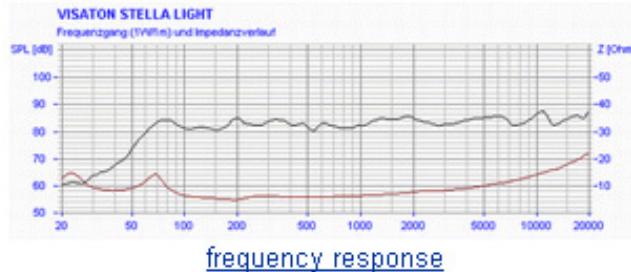
SOLO 100

SOLO 50



## Technical Data:

Rated power	60 W
Maximum power	100 W
Nominal impedance Z	4 Ohm
Frequency response	50–20000 Hz
Mean sound pressure level	84 dB (1 W/1 m)
Cut-off frequency	200 Hz
Principle of Housing	Bassreflex
Net volume	17 l + 0,7 l
Outer dimension height	900 mm
Outer dimension width	120 mm
Outer dimension depth	280 mm



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## Construction

Building the [cabinet](#) is fairly easy because all the panels are glued together as butt joints. We recommend beginning with the rear wall to which you then attach a side wall, lid and base by gluing them in place. This is followed by the strengthening struts and chamber for the small [full-range](#) driver. Not until you have done this can you position the second side wall and glue it in place. All the openings except the one for the [full-range](#) driver in the front panel should be cut and routed later.

The opening for the [full-range](#) driver is a tricky one and requires very accurate cutting. To ensure the diameter is as accurate as possible, it makes sense to buy a hole saw of exactly the right size. Then, apply a bevel to the rear of the [full-range](#) driver opening using an angle router with a guide wheel or a simple rasp. To ensure that the driver is seated perfectly flush, the front edge should be slightly bevelled with a file or round router.

Once this is finished, you can glue the front panel to the body of the [cabinet](#) and then drill, cut and rout the openings for the woofer, [bass reflex](#) tube, terminals and cables ( $D = 8$  mm). The bevels on the front panel are done last using an angle router or rasp. The hole for the cables in the [full-range](#) driver [cabinet](#) should be sealed later with hot-melt glue or a similar substance.

Stability can be improved by fitting a larger base board (e.g. 19 x 230 x 330 mm (h x b x d)) whose design can be freely varied.

The [crossover](#) connection is to be found under the following link:

[Mounting guide crossover STELLA LIGHT \(PDF: 674 KB\)](#)

## Inner damping

Distribute the mats of [damping material](#) loosely throughout the [cabinet](#). One quarter of a mat is required for [damping](#) the mid-range chamber and the rest for the bass area. Ensure the opening of the [bass reflex](#) tube is left free.

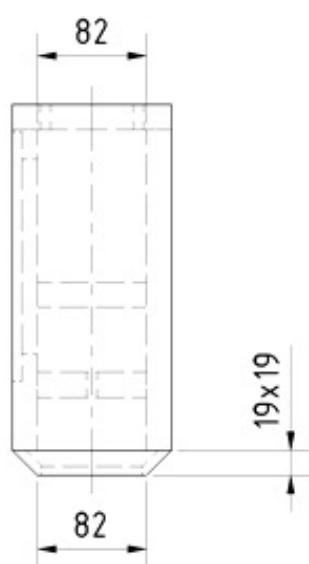
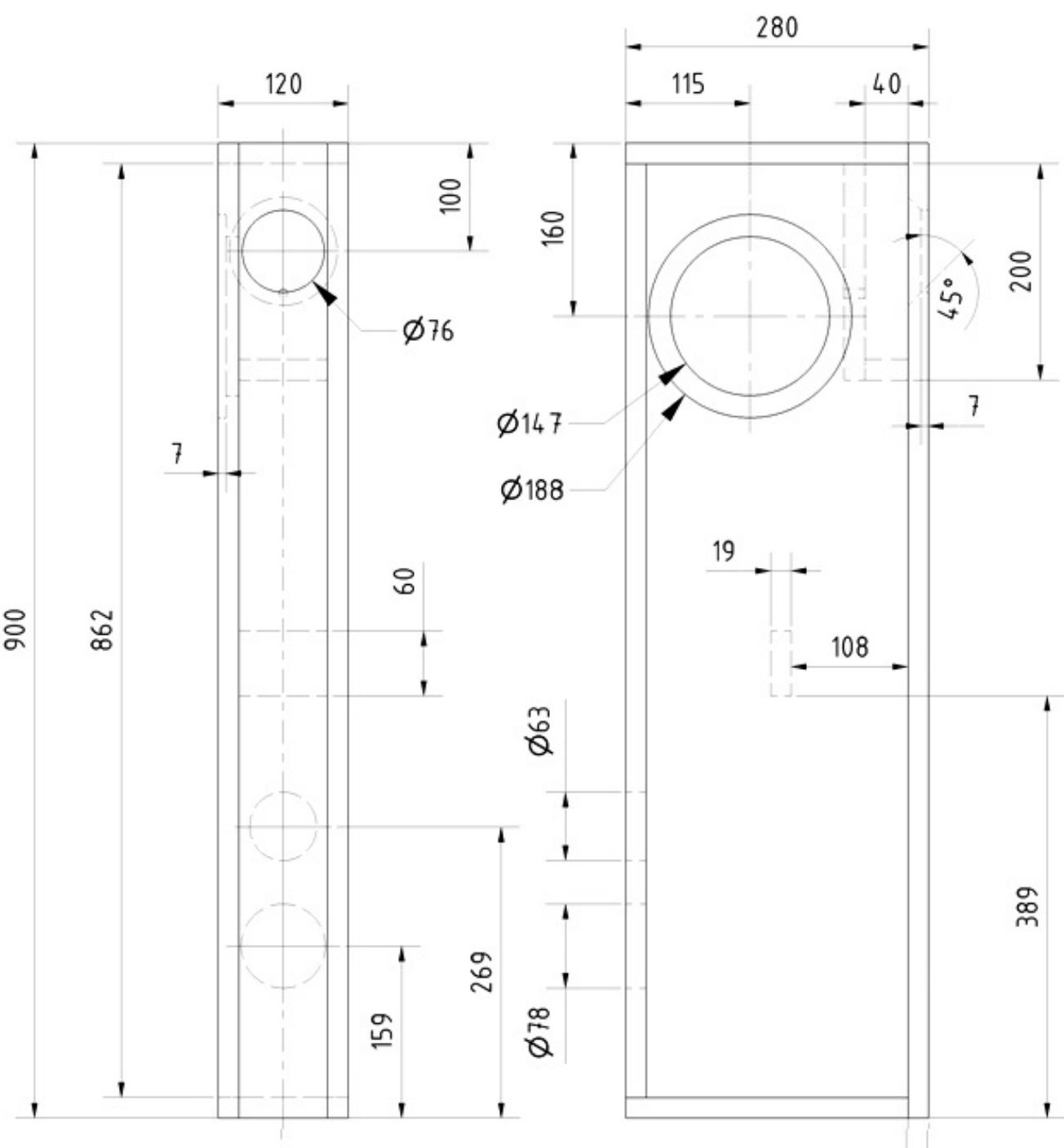
## Component parts list for 1 box

The kit includes all the components listed here but not the [cabinet](#).

Fullrange driver	<a href="#">ERS 8.8 Ohm</a>	1 pc.
Woofer	<a href="#">W 170 S 8 Ohm</a>	1 pc.
<a href="#">Crossover</a> parts	ELKO rauh 150µF	1 pc.
<a href="#">Crossover</a> parts	SP 3,3 mH / 0,6 mm	1 pc.
Terminal	<a href="#">ST 77</a>	1 pc.
<a href="#">Bass reflex</a> tube	<a href="#">BR 19.24</a> (cut to 170 mm)	1 pc.
Dampingmaterial	Polyester wool	2 bags
Cable	2 x 1.5 mm <sup>2</sup>	3 m
Special wood screws	4 x 25 mm	4 pcs.
Countersunk screws	3.5 x 25 mm	8 pcs.

## Cabinet parts list for 1 box

Parts	Size (mm)	Quantity
Material: <b>19 mm chipboard or MDF</b>		
Front	900 x 120	1
Rear panel	862 x 120	1
Side panels	862 x 242	2
Top / bottom panel	120 x 261	2
Internal <a href="#">cabinet</a> rear panel	82 x 200	1
Internal <a href="#">cabinet</a> bottom panel	82 x 40	1
Brace	82 x 60	1
Additional bottom plate	230 x 330	1

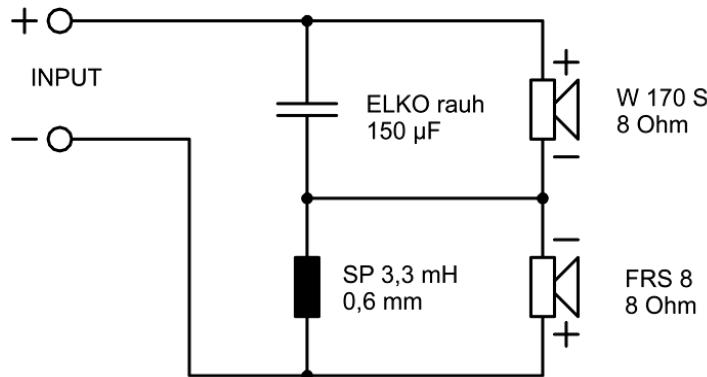


STELLA LIGHT - rechte Box / right box  
(linke Box gespiegelt aufbauen;  
build up left box mirrored)

10.10.2009

# Anschlussanleitung STELLA LIGHT

STELLA LIGHT - Stand 28.05.2009



Zum Anschluss der Kabel und Montage der Frequenzweichenbauteile werden folgende Werkzeuge benötigt:

- Lötkolben mit 30–50 Watt
- Elektroniker-Lötzinn
- Seitenschneider
- Heißkleber oder vergleichbarer Kleber
- Maßband

Zunächst werden die Kabel auf die korrekte Länge entsprechend der Tabelle zugeschnitten.

	Frequenzweiche
FRS 8 (Breitbänder)	150 cm
W 170 S (Tieftöner)	150 cm

Anschließend werden die Kabelenden auf 10 mm Länge abisoliert, einzeln fest verdrillt und verzinnt. Um Verdrahtungsfehler zu vermeiden, ist es sinnvoll, die Kabel mit einer Markierung zu versehen (z.B. Beschriften mit „FRS 8 +“ usw.).

Da die Frequenzweiche aus nur zwei Bauteilen besteht und der Bausatz „Stella Light“ so preiswert wie möglich sein sollte, wurde bewusst auf eine Platine verzichtet. Um einen optimalen und möglichst einfachen Service gewährleisten zu können, empfiehlt es sich, die Frequenzweichenbauteile direkt auf das Anschlussterminal „ST 77“ mittels Heißkleber zu kleben. Dabei kann die Spule „SP 3,3 mH“ direkt auf die Rückseite des Terminals geklebt werden und mit dem Minus-Pol des Terminals verlötet werden. Um ein Lösen der Bauteile vom Terminal zu vermeiden, sollte der Produktaufkleber des Terminals vorher entfernt werden. Nun kann der Kondensator „ELKO 150 µF“ direkt auf die Spule geklebt und an einem Ende mit dem Plus-Pol des Terminals verlötet werden. Wichtig bei der Verklebung beider Bauteile ist die Platzierung der Bauteile auf der Terminalrückseite. Die Bauteile

dürfen dabei nicht über den Rand des Terminals schauen, da sonst eine einwandfreie Positionierung des Terminals am Gehäuse nicht mehr möglich ist.

Nun müssen noch die offenen Enden der Spule und des Kondensators verlötet werden. Dank des längeren Pins des Kondensators ist dies ohne zusätzlichen Kabelaufwand möglich.

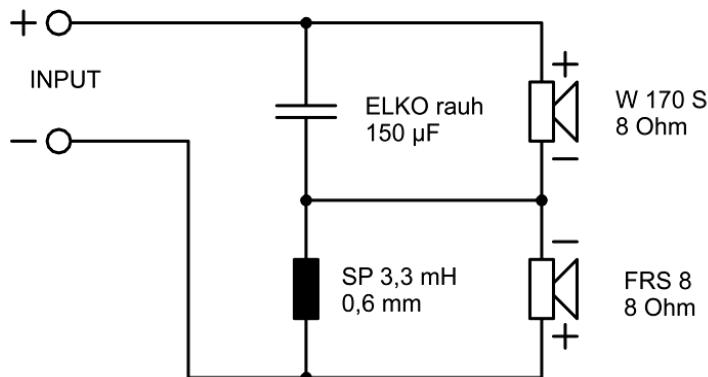
Die Kabel werden nun entsprechend dem Frequenzweichenschaubild oben angelötet. Der Plus-Pol des „FRS 8“ kann dabei direkt an den Minus-Pol des Terminals, der Plus-Pol des „W 170 S“ direkt an den Plus-Pol des Terminals angelötet werden. Die nun noch offenen Kabelenden der beiden Lautsprecher werden mittels Lötzinn an die Verbindung zwischen Spule und Kondensator gelötet. Achten Sie bitte hierbei besonders darauf, dass kein Kurzschluss zu einem benachbarten Kabel entsteht. Außerdem ist es wichtig, die markierten und die unmarkierten Adern der Kabel wie im Anschlussplan angegeben anzulöten. Überprüfen Sie zum Schluss bitte noch einmal den fertigen Aufbau der Weiche mit Hilfe des Anschlussplanes. Für einen zusätzlichen Schutz können offene Adern und Drähte mittels Heißkleber fixiert und gesichert werden.

Danach werden die Kabel im Lautsprechergehäuse verlegt, so dass ausreichend Kabel für eine bequeme Bearbeitung aus den Gehäuseöffnungen schauen.

Beim Anschluss der Kabel an die Lautsprecher muss unbedingt auf korrekte Polarität geachtet werden.

# Instructions for connection STELLA LIGHT

STELLA LIGHT - Stand 28.05.2009



The following tools are needed to connect up the wires and assemble the crossover:

- Soldering iron, 30–50 watts
- Solder for electronic components
- Side-cutters
- Hot glue or comparable
- Tape measure

First, cut the wires to the correct length according to the table below.

	Crossover
FRS 8 (Fullrange)	150 cm
W 170 S (Woofer)	150 cm

Next, strip 10 mm of the insulation from all ends, twist the strands together and tin the ends. To avoid wiring mistakes it makes sense to mark the cables (e.g. mark with „FRS 8 +“ etc.).

Since the crossover consists of only two components and since the kit "Stella Light" was to be reasonably priced, the intention was not to use a board. In order to guarantee an optimum and very easy service, it is recommended to stick the frequency point components directly onto the connection terminal "ST 77" with hot glue. The coil "SP 3.3 mH" can be stuck directly onto the back of the terminal and can be soldered to the negative pole of the terminal. To avoid the loosening of the components of the terminal, the product sticker of the terminal should be removed before. Now the capacitor „ELKO 150 µF“ can be glued directly to the coil and be soldered with one end to the positive pole of the terminal. For the gluing of both components the positioning of the components at the back of the terminal is important. The parts must not look over the edge of the terminal. Otherwise an easy positioning of the terminal in the speaker cabinet is no longer possible.

Now the open ends of the coil and the capacitor have to be soldered together. Due to the longer pins of the capacitor this is possible without using any additional cable.

Now the cables are soldered according to the crossover chart (see above). The positive pole of the „FRS 8“ can be soldered directly to the negative pole of the terminal, the positive pole of „W 170 S“ can be soldered directly to the positive pole of the terminal. The cable ends of both loudspeakers which are still open now are soldered to the connection between coil and capacitor. Please pay attention that no short circuit occurs to a neighbouring cable. Moreover, it is important to solder the marked and the unmarked wires of the cables according to the marks in the connection plan. Finally, please check again the completed construction of the points, comparing them with the connection plan. For additional safety open wires can be fixed with hot glue.

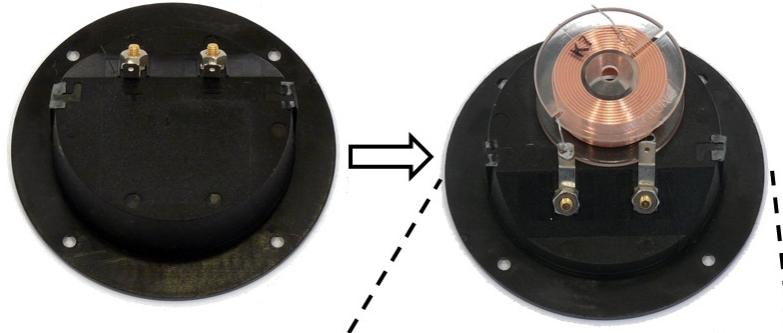
Then the cables are stuck into the loudspeaker case so that enough cable length is reaching out of the openings for comfortable handling.

When connecting the wires to the speaker, it is essential to make sure that the polarity is correct.

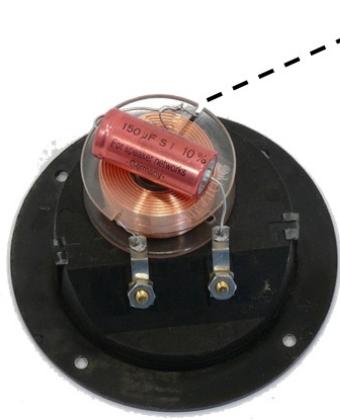
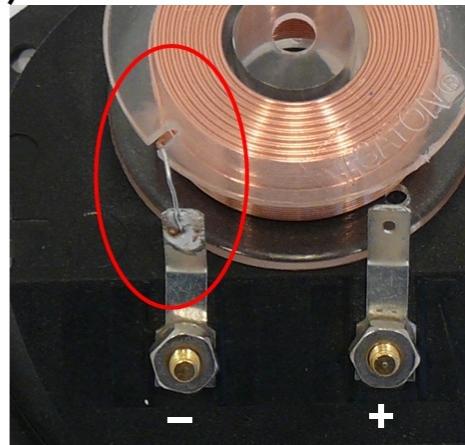
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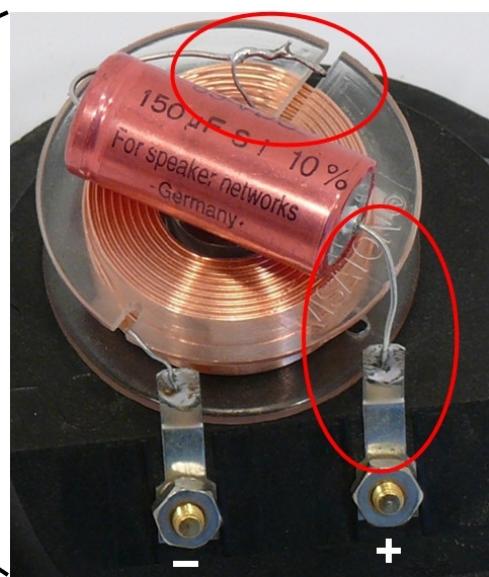
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remove label

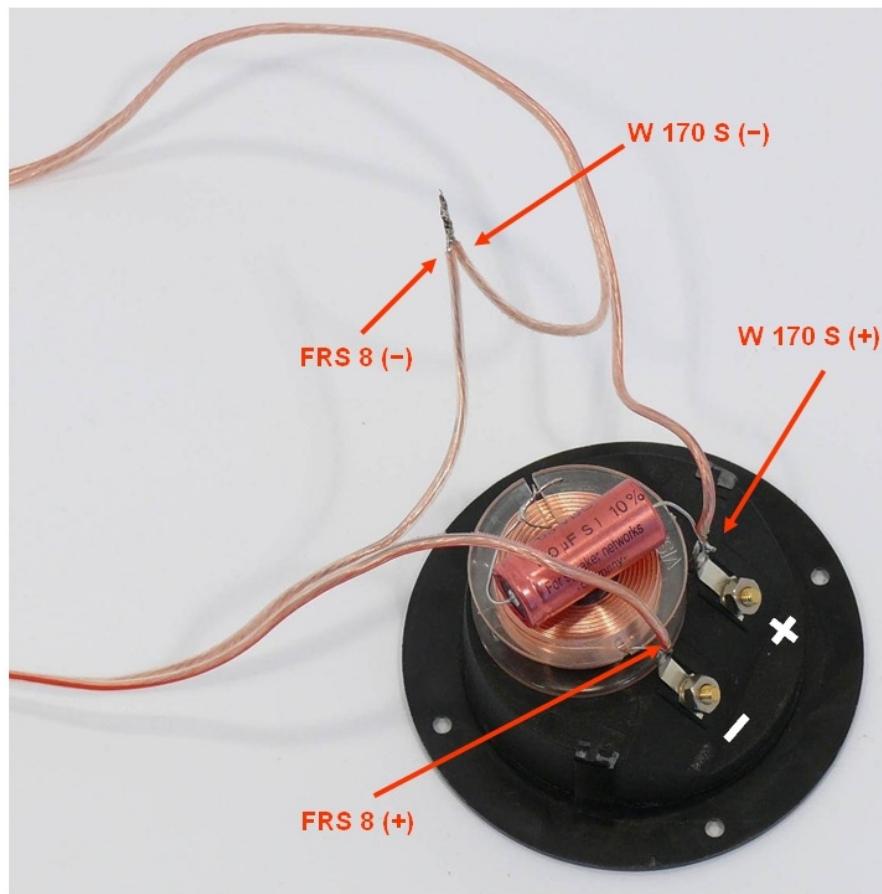


Spule aufkleben und mit  
Minuspol am Terminal verlöten /  
glue coil on terminal and solder it  
with Minus pole

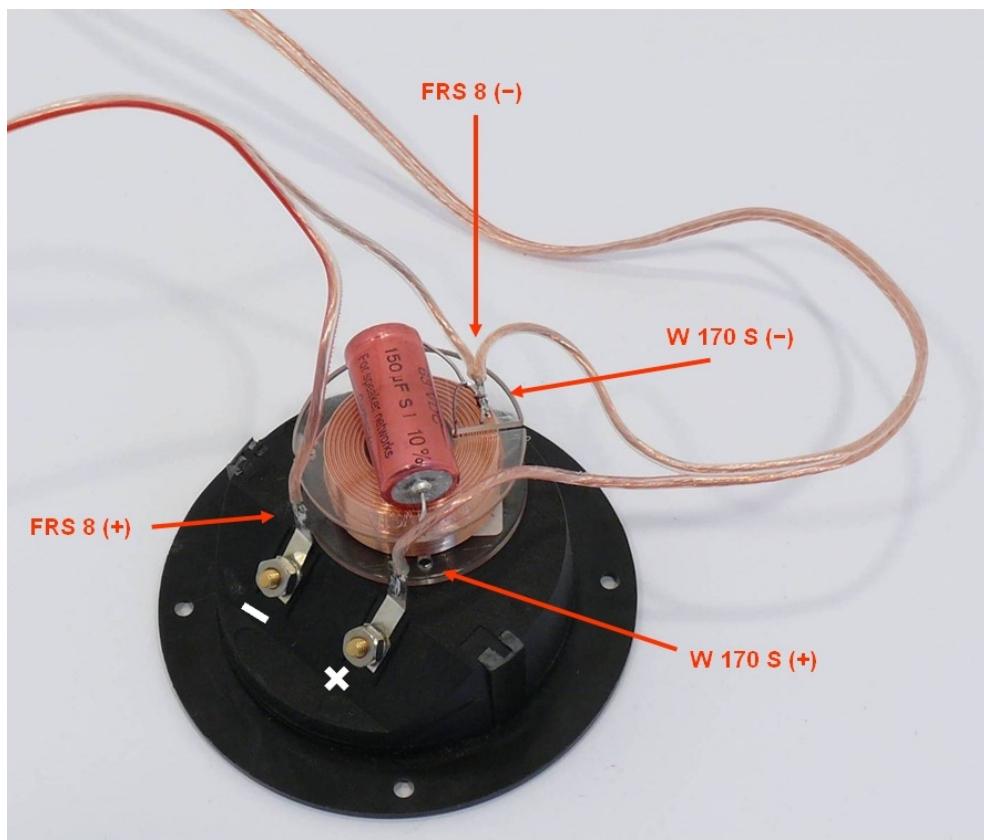


Kondensator aufkleben  
und mit Pluspol am Terminal,  
sowie mit dem offenen Ende der Spule verlöten /  
glue capacitor on coil and solder it with Plus pole and coils open end





Anlöten der Kabel / soldering of the cables



Anlöten der offenen Enden an die Verbindung „Spule – Kondensator“ /  
soldering of the open cable ends on connection between coil and capacitor