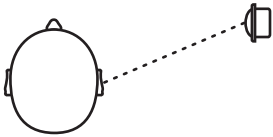


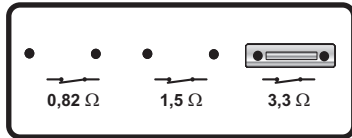


## 4) ADAPTATION OF THE SOUND ON SUPER-HIGH FREQUENCIES

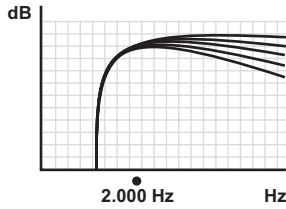


If tweeters are installed by "direct radiation" (low angle default), they will sound too loud on the super-high frequencies range.

### Section 4

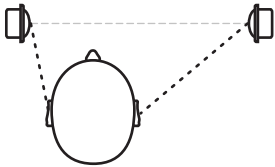


0,82 Ohm	1,5 Ohm	3,3 Ohm	Result
Jumper	Jumper	Jumper	0 Ohm increase 1,5dB
-	Jumper	Jumper	0,82 Ohm increase 0,8dB
Jumper	-	Jumper	1,5 Ohm basic setting
-	-	Jumper	2,32 Ohm decrease 2dB
Jumper	Jumper	-	3,3 Ohm decrease 3dB
Jumper	Jumper	-	4,12 Ohm decrease 4dB
Jumper	-	-	4,8 Ohm decrease 4,5dB
-	-	-	5,62 Ohm decrease 5dB



By increasing the resistance R, the amplitude will be reduced in the super-high frequency range. Remark: The bigger the value of R, the smaller the amplitude.

## 5) ADAPTATION OF THE WHOLE HIGH FREQUENCY FIELD

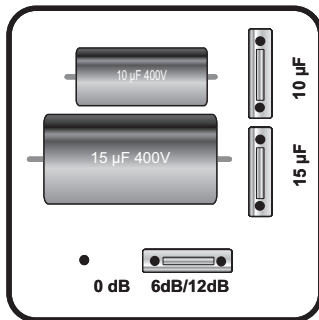


The level can be adapted across the whole high frequency area by increasing (decreasing) C and simultaneous decreasing (increasing) R. The common front-stage audio systems have sounding problems caused by different distances between driver and tweeters, combined with different angle defaults of the left and right tweeter. The specialist know how to adapt the left, respectively the right tweeter itself, according to the 3) and 4) points.

## 6) ADAPTATION OF THE MID FREQUENCIES

The FW-HX1 crossover allows you to tune the mid-range by different cut-off slopes: 0 dB, 6dB or 12 dB, limiting it thereby upward differently. Depending on position of the loudspeakers, each operation can be favourable. Usually, however, the 12 dB operation is the most favourable for the characteristic of the HX-165 model.

### Section 5

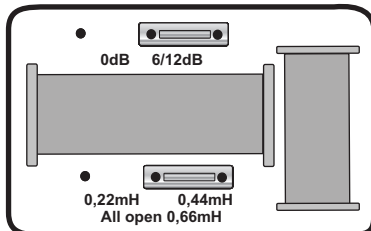


**0 dB** Activate by changing the JUMPER of the right 6/12 dB in the left 0 dB range. Thus the midrange is not limited upward. Advantage is that no units are running, which could cause a damping effect. Thus the best efficiency is attainable.

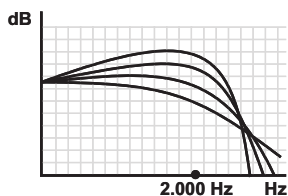
**6 dB** JUMPER has to be put in 6/12 dB position while the 15µF and 10µF bridges have to be out. This increases the "upward" limitation of the midrange additionally by 6 dB. Thus super-elevated parts of the midranges can be decreased.

**12 dB** Insert JUMPER in the "6/12 dB" position and insert JUMPER(s) in positions "15µF", "10µF" or in both for 25µF C value, changing filter's characteristic. Higher C value means stronger presence of frequencies within the range of the cut-off point. This setting tune the sound by positions of loudspeakers. With the ZERO PRO 165.2 PP we recommend the usage of 15 µF or 10 µF (bridge in it). The ZERO PRO 165.2 DUAL system should be used with 15µF or 25µF.

### Section 6



0db	6/12dB	0,22mH	0,44mH	Result
Jumper	-	-	-	No adjustment possible
-	Jumper	-	Jumper	Coil 0,22mH
-	Jumper	Jumper	-	Coil 0,44mH
-	Jumper	-	-	Coil 0,66mH



As for increase inductivity, the amplitude within the higher range is reduced. If the amplitude on the cut-off range is too quiet, the amplitude can also be reduced by reducing inductivity. Notice that on variation of inductivity, the characteristic of the filter will change.