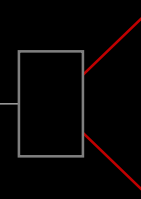




Arne Rodahl :

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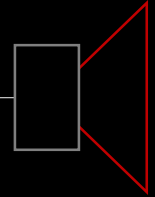
# Højtalere gennem tiderne





Arne Rodahl :

## The X Speakers



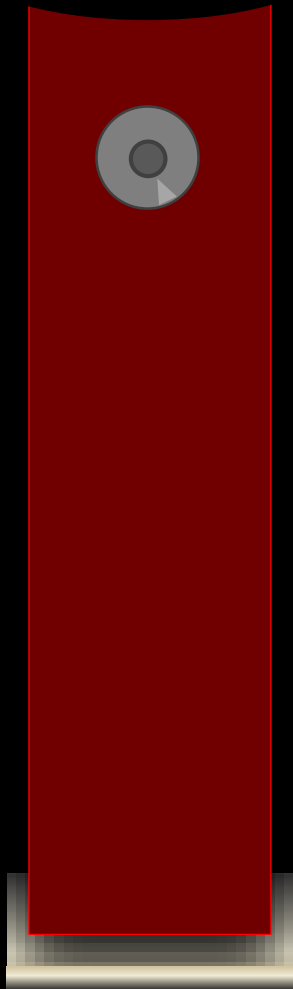
Separate the *woofer-units* from the *midrange / tweeter-units (satellites)* and get the best placing-opportunities in the listening room.

Place the woofer-units close to the wall and the direct- and the reflections-waves arrives to sweet area at the same time.

You will get a precisely impulse-response. — We name it “Boundary System”.

Place the open baffle satellites separate free off walls in relation to the sweet area and you will get the best three-dimensional response.

A neutral and dynamic response you have never heard before.



## arne rodahl

SAT- X Satellite loudspeaker

open baffle

point source

An sculptural floorstanding open baffle loudspeaker with a three-dimensional-soundpicture-response based on point source system from the coaxial driver.

The SAT-X is intended to be used in combined the woofer-unit.

Developing the SAT-X I took a serious look into one of the largest problem for loudspeakers, the cabinet itself, and simply removed it. The speaker cabinet was developed as an easy way of obtaining deep bass from a small speaker system, but a cabinet is resonant and vibrant added to the original sound. The cabinet advantage of extended bass has costs in degradation of all the octaves above, especially the upper bass and midrange.

Since I did not need bass from the SAT-X the choice was easy.

Furthermore, the air inside a cabinet works like an air-spring attached to the cone and works as a brake holding back the cone when it starts to move. This actually drains energy from the impulse response which obviously compromises dynamics, attack and precision from the remarkable amazing magnesium cone producing a very smooth response without any break-ups in the midrange area.

### Data

Open baffle

Driver: SEAS 146 mm coaxial

Cones: Magnesium (midrange) - coated fabric (Tweeter)

Long Term Power output\* : 80 Watt / 100 Hz Highpass filtre

Short Term Power output\* : 220 Watt / 100 Hz Highpass filtre

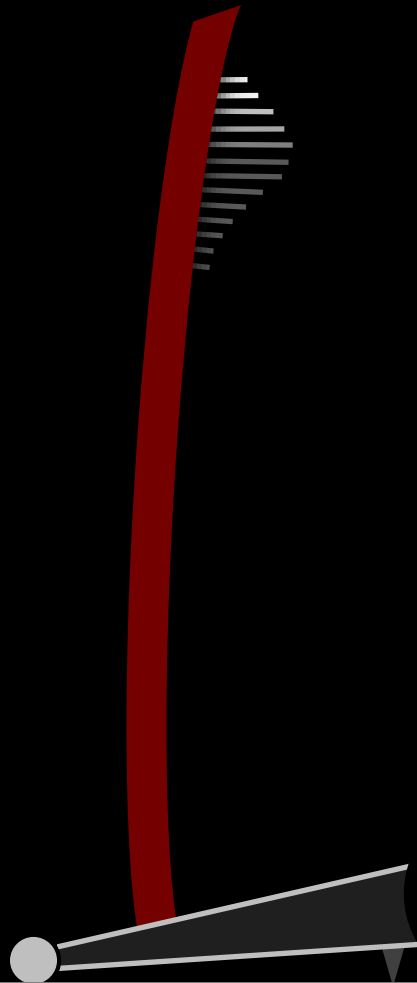
Dimensions: 5 x 30 x 110 cm (incl. socket)

Frequence-response : 180 – 25.000

*for connaisseurs only*

arne rodahl

SAT-X loudspeaker  
open baffle  
point source



Site wiew

*for connaisseurs only*

arne rodahl  
anti vibration woofer



## Woofer-unit ideal for floor-placement .

Dedicated to the SAT-X open baffle speaker.

The boxer configuration with two drivers ensure reducing cabinet vibrations and resonances with more than 95 %.

At the same time the two drivers with to very strong "motors" working together wit the dual sealed cavities with slot loaded output. The result is a very accurate impulse response.

Resistive slot loaded assures smooth frequency response.

Slot Loaded is a superior way of smoothing and extending the low bass of the bass-unit.

It is a tried-and-true design whose benefits are simplicity, better transient response, extended low bass, aperiodicity or no "bump" in the bass response and better power handling than a tuned-port design.

Efficiency lies halfway between a tuned port and an infinite baffle, and the impedance the amplifier "sees" is smoother than either of the other designs.

## Data

### SUB-X-1

Placing: Near to wall (Boundary System)

Drivers : 2 x SEAS 220 mm, long throw, boxer configuration

Doubled treated, hard paper cone

4-layer voice coil

T-shaped cross section of the pole piece for low distortion

Box type : Anti-vibration system. Sealed, dual cavity, slot loaded, total 24,2 Litre

Amplifier : Abletec Class D

Long Term Power output\* : 180 Watt

Short Term Power output\* : 360 Watt

Frequency-response : 15 Hz – 250 Hz Low-pass-filter , Boundary System, Wave Sync Method \*\*

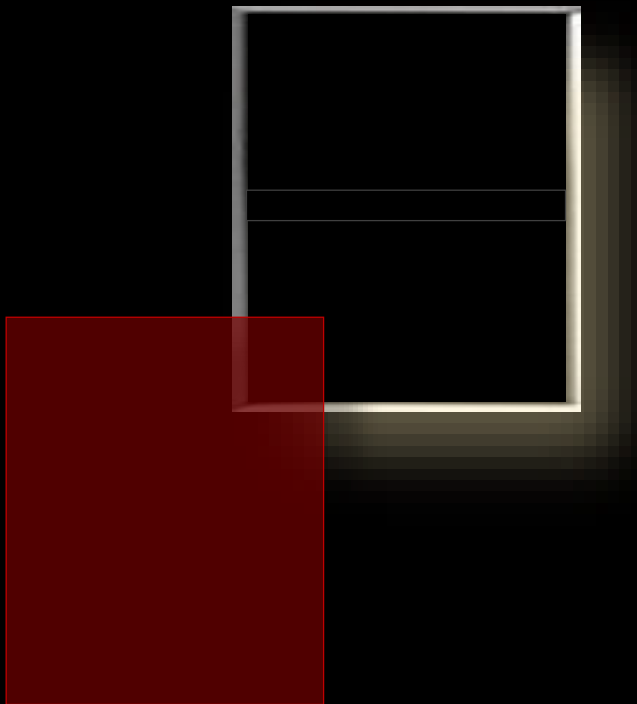
DSP: DSPeaker Anti Mode 8033S II

\*) IEC 268-5

\*\*) Wave Sync Method ensures the direct waves and critical reflections from floor and walls arrives at the same time at the sweet area.

*for connaisseurs only*

arne rodahl  
anti vibration woofer



## Woofer-unit ideal for placement in furniture.

Dedicated to the SAT-X open baffle speaker.

The boxer configuration with two drivers ensure reducing cabinet vibrations and resonances with more than 95 %.

At the same time the two drivers with to very strong "motors" working together wit the dual sealed cavities with slot loaded output. The result is a very accurate impulse response.

Resistive slot loaded assures smooth frequency response.

Slot Loaded is a superior way of smoothing and extending the low bass of the bass-unit.

It is a tried-and-true design whose benefits are simplicity, better transient response, extended low bass, aperiodicity or no "bump" in the bass response and better power handling than a tuned-port design.

Efficiency lies halfway between a tuned port and an infinite baffle, and the impedance the amplifier "sees" is smoother than either of the other designs.

## Data

### SUB- X

Anti-vibration system

Placing: In furniture

Drivers : 2 x SEAS 220 mm, long throw, boxer configuration

Doubled treated, hard paper cone

4-layer voice coil

T-shaped cross section of the pole piece for low distortion

Box type : Sealed, dual cavity, slot loaded, total 24,2 Litre

Amplifier : Abletec Class D

Long Term Power output\* : 180 Watt

Short Term Power output\* : 360 Watt

Frequency-response : 15 Hz – 250 Hz Low-pass-filter , Boundary Wave Sync Method \*\*

DSP: DSPeaker Anti Mode 8033S II

\*) IEC 268-5

\*\*) Wave Sync Method ensures the direct waves and critical reflections from floor and walls arrives at the same time at the sweet area.

*for connaisseurs only*

arne rodahl

anti-vibration woofer

## Woofer-unit ideal for placement close to walls.

Dedicated to the SAT- X open baffle speaker.

The boxer configuration with two drivers ensure reducing cabinet vibrations and resonances with more than 95 %.

At the same time the two drivers with two very strong "motors" working together with the dual sealed cavities with slot loaded output. The result is a very accurate impulse response.

Resistive slot loaded assures smooth frequency response.

Slot Loaded is a superior way of smoothing and extending the low bass of the bass-unit.

It is a tried-and-true design whose benefits are simplicity, better transient response, extended low bass, aperiodicity or no "bump" in the bass response and better power handling than a tuned-port design.

Efficiency lies halfway between a tuned port and an infinite baffle, and the impedance the amplifier "sees" is smoother than either of the other designs.

## Data

### Prisma SUB- X

Anti-vibration system

Placing: At floor

Drivers : 2 x SEAS 220 mm, long throw, boxer configuration

Doubled treated, hard paper cone

4-layer voice coil

T-shaped cross section of the pole piece for low distortion

Box type : Sealed, dual cavity, slot loaded, total 24,2 Litre

Amplifier : Abletec Class D

Long Term Power output\* : 180 Watt

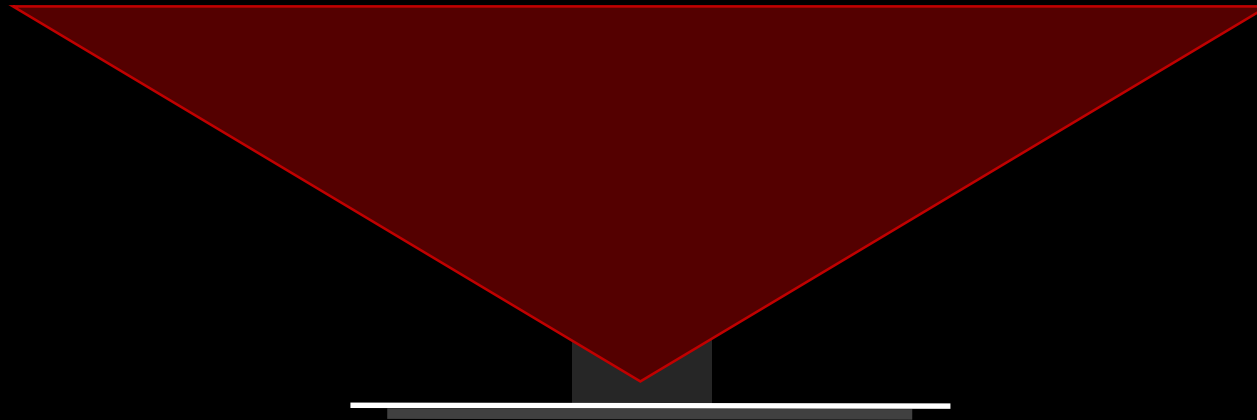
Short Term Power output\* : 360 Watt

Frequency-response : 15 Hz – 250 Hz Low-pass-filter , Boundary,  
Wave Sync Method \*\*

DSP: DSPeaker Anti Mode 8033S II

\*) IEC 268-5

\*\*) Wave Sync method ensures the direct waves and critical reflections from floor and walls arrives at the same time at the sweet area.



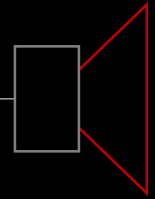
*for connaisseurs only*



Arne Rodahl :

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# Hi-fi og TV møbler med højttalere





A/V platform



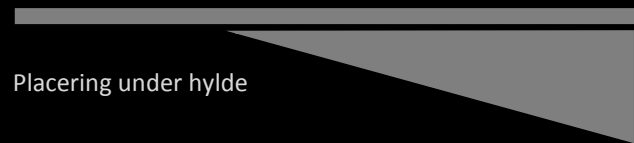
# Penta

Typebetegnelse :  
Penta QWR  
Anvendelse : Hyldeplacering (A/V platform)  
Kombineres med subwoofer

Lanceret : 2007  
Design og konstruktion : Arne Rodahl

Data :  
System : Tovejs  
Belastning : 100 Watt short term, 50 Watt long term  
Impedans : 8 Ohm  
Respons: 70 – 20.000 Hz  
Drivere : VIFA 5" bas/mellemtone, 1" diskant

Kabinet :  
Princip : Trykkammer  
Rumfang : 2 liter  
MDF

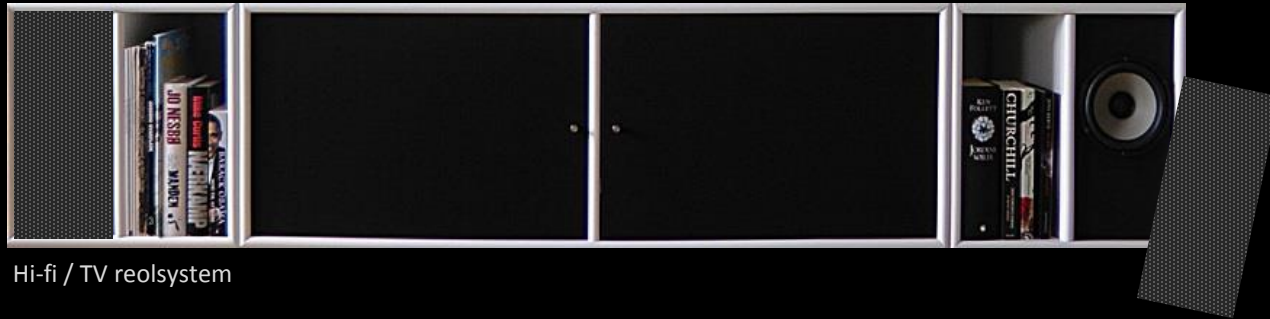


Placering under hylde



Placering på hylde

## Frislev



Hi-fi / TV reolsystem

Typebetegnelser : SAT-1 og SAT-2

Anvendelse : Reolhøjtaler

Lanceret : 2007

Design og konstruktion : Arne Rodahl



### SAT-1

Point Source System

Driver : SEAS koaxial, 5½"

Magnesium membran, bass / midrange

Fabric cone, high frequency

Box Type : 10 Liter, trykkammer, progressiv dæmpet

Nominal Impedance : 4 Ohms

Short Term Power Handling : 220 Watt

Long Term Power Handling : 80 Watt ( 100 watt med 80 Hz High Pass filter)

Frekvensresponse : 30 – 25.000 Hz



### SAT-2

Point Source System

Driver : Fountek, bredbånd 5½"

Alu membran

Box Type : 10 Liter, Basrefleks

Nominal Impedance : 8 Ohms

Short Term Power Handling : 80 Watt

Long Term Power Handling : 40 Watt ( 100 watt med 80 Hz High Pass filter)

Frekvensresponse : 50 – 18.000 Hz

Typebetegnelse :  
Prisma, sub 1  
Anvendelse : placering under hylde (A/V platform)  
Kombineres med satellitter

Lanceret : 2007  
Design og konstruktion : Arne Rodahl

Data :  
Forstærker : 100 Watt  
Respons: 18 - 140 Hz  
Drivere : 2 x VIFA 8"  
DSP : DSPeaker 8033

Kabinet :  
Princip : Dobbelt trykkammer, slot load\*  
Rumfang : 2 x 12 liter  
Materiale : MDF

\* Slot Load assures smooth frequency response.

Slot Load can be a superior way of smoothing and extending the low bass of a subwoofer. It is a tried-and-true design whose benefits are simplicity, better transient response, extended low bass, aperiodicity or no "bump" in the bass response and better power handling than a tuned-port design.

Efficiency lies halfway between a tuned port and an infinite baffle, and the impedance the amplifier "sees" is smoother than either of the other designs.

The trick is to control the dimensions of the Slot.

## Prisma sub 1



Typebetegnelse : T3  
Anvendelse : Reolhøjtaler

Lanceret : 1993  
Design og konstruktion : Arne Rodahl

Data :  
System : Tovejs, koaxial, point source  
Belastning : 100 Watt short term, 50 Watt long term  
Impedans : 4 Ohm  
Respons: 60 – 20.000 Hz  
Drivere : Koaxial  
VIFA 5" bas/mellemtone, 1" diskant  
SEAS 5" bas/mellemtone, 1" diskant (lanceret 2007)

Kabinet :  
Princip : basrefleks  
Rumfang : 3,5 liter  
MDF  
Fod : Rustfri stål



*Prisma*

## Concenti Elatio

Typebetegnelse : QW 7

Anvendelse : Væghøjtaler

Lanceret : 1990

Design og konstruktion : Arne Rodahl

Mål h-b-d : 810 x 300 x 75

Data :

Belastning : 70 Watt short term, 35 Watt long term

Impedans : 8 Ohm

Respons: 50 – 20.000 Hz (på væg)

Drivere : VIFA 5" bas/mellemtone, 3/4" dome diskant

Kabinet :

Princip : basrefleks

Rumfang : 7 liter

Front : Italiensk marmor / Norsk skifer / stoframme

Bag : MDF

## Concenti Excelsior

Typebetegnelse : QW 15

Anvendelse : Væghøjtaler

Lanceret : 1990

Design og konstruktion : Arne Rodahl

Mål h-b-d : 810 x 450 x 85

Data :

Belastning : 100 Watt short term, 50 Watt long term

Impedans : 8 Ohm

Respons: 45 – 20.000 Hz (på væg)

Drivere : VIFA 6½ bas/mellemtone, 3/4" dome diskant

Kabinet :

Princip : basrefleks

Rumfang : 15 liter

Front : Italiensk marmor / stoframme

Bag : MDF

## Concenti Supra

Typebetegnelse : QW 22

Anvendelse : Væghøjtaler

Lanceret : 1990

Design og konstruktion : Arne Rodahl

Mål h-b-d : 810 x 600 x 100

Data :

Belastning : 200 Watt short term, 80 Watt long term

Impedans : 8 Ohm

Respons: 40 – 20.000 Hz (på væg)

Drivere : VIFA 8" bas/mellemtone, 1" dome diskant

Kabinet :

Princip : basrefleks

Rumfang : 22 liter

Front : Italiensk marmor / stoframme

Bag : MDF



Concenti QW 7 - Elatio



Typebetegnelse : Allegro, C 15  
Anvendelse : Væghøjtaler  
Lanceret : 1987  
Producent : Concenti  
Design og konstruktion : Arne Rodahl

Data :  
Belastning : 100 Watt short term, 50 Watt long term  
Impedans : 8 Ohm  
Respons: 45 – 20.000 Hz (på væg)  
Drivere : VIFA 6½ bas/mellemtone, ¾" dome diskant

Kabinet :  
Princip : basrefleks  
Rumfang : 15 liter  
Front : Støbt polyester-marmor  
Bag : Plast, bitumen dæmpet



*Concenti Allegro*

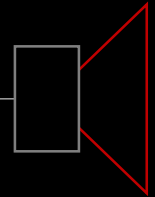
Lanceret 1987



Arne Rodahl :

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# Køkken højtalere





Typebetegnelse : C 15 A

Anvendelse : Køkken m.m. / trådløs hi-hi væghøjtaler med bluetooth

Lanceret : 2010

Design og konstruktion : Arne Rodahl

Data :

Type : Tovejs, aktiv

Forstærker : Abletec, 100 Watt, klasse D

Respons: 35– 20.000 Hz (på væg)

Drivere : Wavecor, 6½ bas/mellemtone, 1" dome diskant

Bluetooth receiver : Grape aptX , NFC

Kabinet :

Princip : basrefleks

Rumfang : 15 liter

Front : Støbt polyester-marmor

Bag : Plast, bitumen dæmpet



C 15 A



Typebetegnelse : C 7 A

Anvendelse : Køkken m.m. / trådløs hi-hi væghøjtaler med bluetooth

Lanceret : 2010

Design og konstruktion : Arne Rodahl

Data :

Type : Tovejs, aktiv

Forstærker : Abletec, 100 Watt, klasse D

Respons: 50– 20.000 Hz (på væg)

Drivere : Wavecor, 4½" bas/mellemtone, 1" dome diskant

Bluetooth receiver : Grape aptX , NFC

Kabinet :

Princip : basrefleks

Rumfang : 7 liter

Front : Støbt polyester-marmor

Bag : Plast, bitumen dæmpet



C 7 A



## CONCENTI WING lyd og lys køkkensystem

### Placering under overskabe eller hylder

Wing er gennemtænkt i mindste detalje og kan diskret, svævende som en vinge, placeres under de fleste typer Køkken-overskabe og hylder.

Man kan selv komponere sammensætninger af Wing-modulerne med højttalere og halogenbelysning.

Ønsker man at ændre eller flytte moduler, kan dette nemt praktiseres ved hjælp af Concenteri's mønsterbeskyttede "snapsystem"

Med Concenteri's elegante modulsystem har man rigeligt med lys til alle gøremål ved køkkenbordet akkompagneret med sin favoritmusik eller de seneste nyheder fra radioen.



Wingmodulernes elegante og kileformede stålprofiler fungerer som kabinet for højttalere og lamper.

Profilerne er udformede således, at de udnytter pladsen under overskabene optimalt uden at gribe forstyrrende ind i arbejdspladsen og køkkenets originale arkitektur.



### Højttalerelement

Kabinet: trykkammer, rustfrit stål  
Belastning: 6 Watt RMS / 12 Watt peak  
Impedans: 4 Ohm  
Frekvensrespons: 150 – 20.000 Hz  
Følsomhed: 87 dB



Subwoofer anbefales

### Halogenbelysning

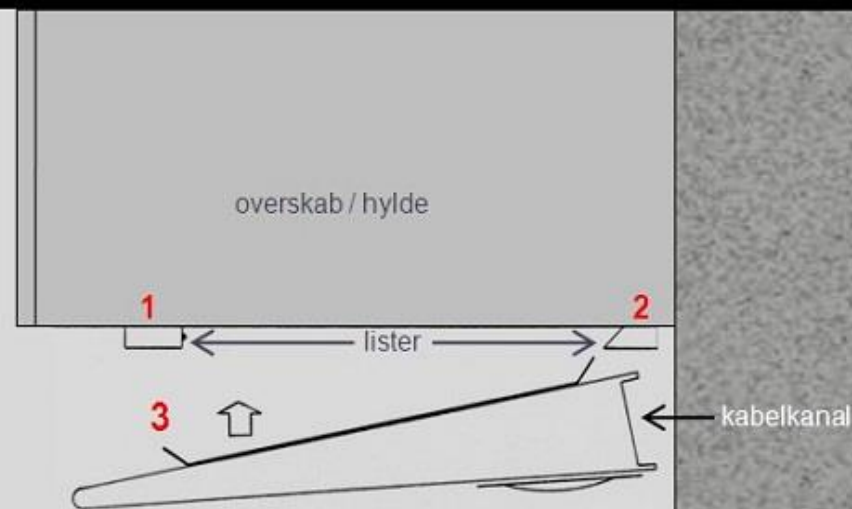
Wing stålprofiler sørger for en effektiv køling af de indbyggede halogenlamper. Ved hjælp af "snapsystemet" kan lamperne placeres mest hensigtsmæssigt uden at Blænde.



## Wing montagevejledning

Bageste liste (2) fastgøres på skabet /hylde og skal flugte med bageste kant.

Forreste liste (1) fastgøres på skabet /hylde ved hjælp af skabelon.



### Opsætning af modulene:

Kabler til højttalere og halogenlamper trækkes i kabelkanalen og tilsluttes modulene.

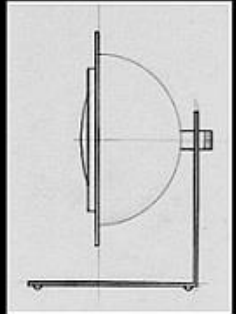
Modulets bageste ophæng opsættes på bageste liste (2).

Modulets forreste ophæng (3) løftes helt op mod overskabet.

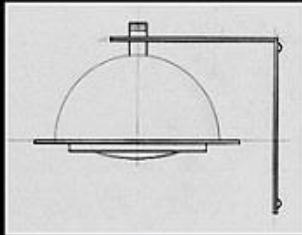
Modulene låses let med pinolskruerne i forreste liste (1).

Når alle moduler er opsat bør der være en indbyrdes afstand mellem modulene på ca. 2 mm. Afstanden justeres ved at flytte modulene sidelæns inden pinolskruerne tilspændes.

# CONCENTI KALOT højttaler



bordmodel



vægmodel



hyldemodel



## Højttalerelement

Kabinet: trykkammer, rustfrit stål  
Belastning: 6 Watt RMS / 12 Watt peak  
Impedans: 4 Ohm  
Frekvensrespons: 150 – 20.000 Hz  
Følsomhed: 87 dB

Subwoofer anbefales

Lanceret 2005

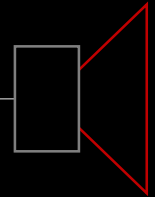




Arne Rodahl :

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# Kurser for højtalerbyg



Kursus i højttalerbyg  
Underviser: Arne Rodahl  
LOF Roskilde



Som en case byggede kursisterne  
basreflekshøjttalere baseret på  
VIFA 8" bas og 1" domediskant.



Lanceret 2007

