



ACR®

ACR AG Bohrturmweg 1, CH-8437 ZURZACH, Switzerland
Tel.: (056) 49 01 81 Fax: 49 20 19 Tlx.: 827487

SWISS

Expansion of Sound – Expansion of Mind. the Combination of Craftsmanship and Technology Creating a New Dimension in Audio

Every single ACR product derives from a unique idea, incorporating both the requirements of our time and the most advanced technology blended with traditional craftsmanship. Through their superior quality ACR products have become the topic among music lovers, audio engineers and professional musicians all over the world.

Our aim has always been the fusion of the latest technology on the level of engineering with that of craftsmanship if not art on the level of design. The latest epoch-making sound sources such as the Compact Disc or Digital Audio Tape plus the things yet to come produce a continuous challenge for us to strive for perfection of sound reproduction:

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ACR – Pioneers in Loudspeaker Kits

In 1975 ACR – Acoustic Center of Research – opened its doors to the public. It was only a small shop close to Zurich's city centre through Europe's first specializing in nothing but loudspeakers. At the time, nobody in the industry believed in a possible success of this project initiated by a couple of young audio fanatics dedicated to the perfection of sound reproduction with loudspeakers. Contrary to all predictions ACR products soon had a solid following of loudspeaker enthusiasts soon spreading beyond the city boundaries all over the country.

The tiny shop at 21, Sternenstrasse rapidly became the Mekka for all "speaker addicts". ACR did not deal in hundreds of different products but started its line with a number of superb chassis and only two loudspeaker kits. However, on all their products they were able to provide full information down to the last detail regarding such things as characteristics of cone and dome material or voice coil widths, the wire material used therein etc. In short ACR had a profound knowledge of the products they were offering their clients.

About one year after its foundation ACR published its first loudspeaker catalogue for Switzerland and Germany. Priced at DM 10.– it sold over 10000 copies in Germany alone. This also had the effect that ACR became popular in Germany. As time passed the company expanded its range of speaker kits and ACR shops were popping up all over Switzerland, Germany and Austria. Nevertheless the original concept of the small shop with few but committed staff was never abandoned. Today ACR shops can be found in more than twenty cities. Parallel to its development in the audio field ACR has also become one of Europe's most renowned manufacturer of computer controlled professional lighting equipment, a leading installer of turn-key installations for clubs and discotheques as well as the largest manufacturer of show laser equipment on the Continent.



Full Range

The FE Series of full-range speaker units started their story of success with the first model FE103. The speaker series features bright and crisp sound while demonstrating a high level of performance even in small enclosures.

The FF Series uses a special white cone paper in order to achieve clearer definition and better sound dispersion. All FF modules are equipped with a aluminium center dome for dust protection. They are the "New Wave" of full-range speaker units that were developed with regard to the new audio life still to come.

The FP Series are high performance speaker units. Their excellent sound resolution allow sharp, bright and crisp sound reproduction while at the same time offering low distortion even at high input levels.

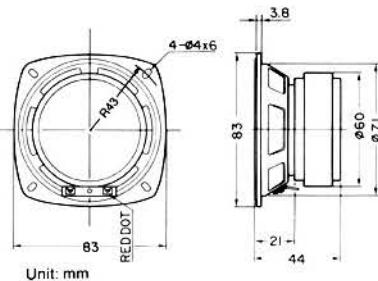
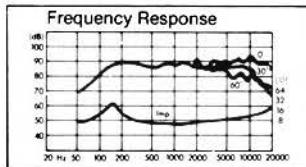
FE Series

8cm cone-type, full-range unit

FE83



- The selected cone paper material insures reproduction of bright and crisp sound.



Specifications

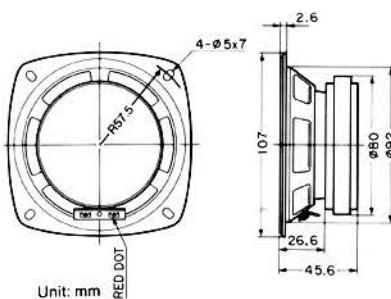
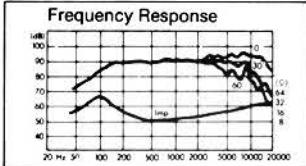
- Impedance 8Ω
- Min. resonance frequency 140Hz
- Reproduction frequency response f_r~20kHz
- Output sound pressure level 88dB/W(1m)
- Input 7W(Mus.)
- m_o 1.15g
- Q_d 0.8
- Effective vibration radius(a) 3.0cm
- Magnet weight 140g
- Total weight 0.364kg

10cm cone-type, full-range unit

FE103



- The roll edge and heat-resistant, efficient voice coil assure low distortion even at full power.



Specifications

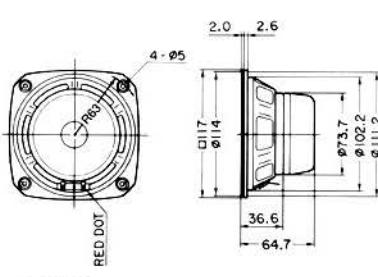
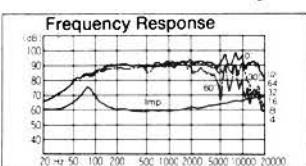
- Impedance 8Ω
- Min. resonance frequency 80Hz
- Reproduction frequency response f_r~18kHz
- Output sound pressure level 89dB/W(1m)
- Input 15W(Mus.)
- m_o 2.7g
- Q_d 0.35
- Effective vibration radius(a) 4.0cm
- Magnet weight 193g
- Total weight 0.63kg

12cm cone-type, full-range unit

FE127



- 12cm speaker featuring repulsion-type special magnetic circuitry of high efficiency and low leakage.



Specifications

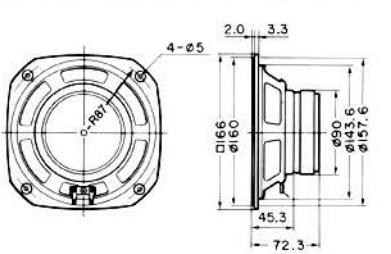
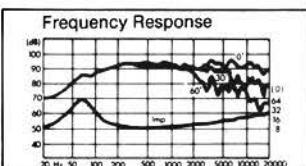
- Impedance 8Ω
- Min. resonance frequency 70Hz
- Reproduction frequency response f_r~20kHz
- Output sound pressure level 90dB/W(1m)
- Input 40W(Mus.)
- m_o 2.9g
- Q_d 0.56
- Effective vibration radius(a) 4.6cm
- Magnet weight 157g
- Total weight 0.57kg

16cm double-cone, full-range unit

FE164



- The use of the sub-cone improves the response in high frequencies and directivity.



Specifications

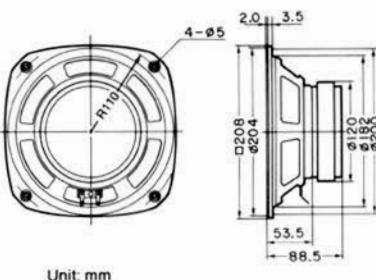
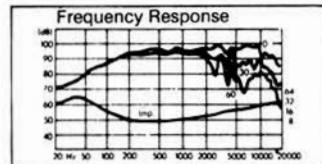
- Impedance 8Ω
- Min. resonance frequency 50Hz
- Reproduction frequency response f_r~20kHz
- Output sound pressure level 92dB/W(1m)
- Input 60W(Mus.)
- m_o 6.9g
- Q_d 0.34
- Effective vibration radius(a) 6.5cm
- Magnet weight 330g
- Total weight 1.1kg

20cm double-cone, full-range unit

FE204



- High efficiency and easy handling, thanks to the small-mass vibration system and powerful magnetic circuitry.



Unit: mm

Specifications

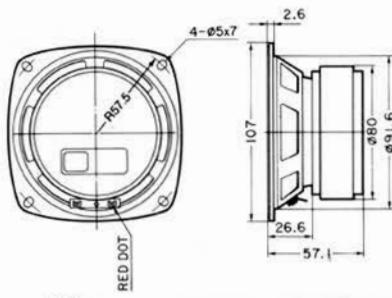
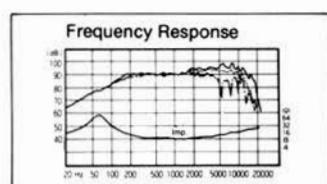
- Impedance 8Ω
- Min. resonance frequency 45Hz
- Reproduction frequency response f_r~20kHz
- Output sound pressure level 95dB/W(1m)
- Input 80W(Mus.)
- m_o 14.6g
- Q_o 0.23
- Effective vibration radius(a) 8.1cm
- Magnet weight 848g
- Total weight 2.4kg

10cm cone-type, full-range unit

FE103Σ



- All frequency bands can be covered with this unit.
Powerfull and rich sound can be reproduced.



Unit: mm

Specifications

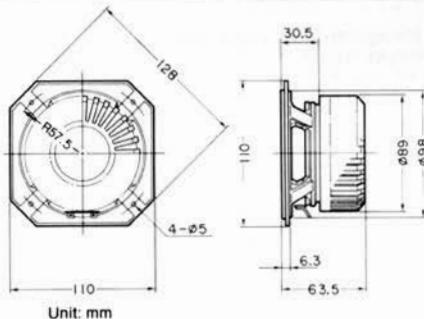
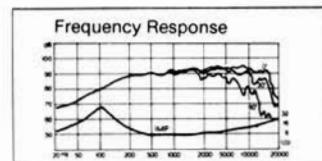
- Impedance 8Ω
- Min. resonance frequency 70Hz
- Reproduction frequency response f_r~18kHz
- Output sound pressure level 90dB/W(1m)
- Input 15W(Mus.)
- m_o 2.9g
- Q_o 0.32
- Effective vibration radius(a) 4.2cm
- Magnet weight 386g
- Total weight 0.96kg

10cm double-cone, full-range unit

FE106Σ



- Definitive version of 10cm full-range speaker for use in a back-load horn type enclosure.



Unit: mm

Specifications

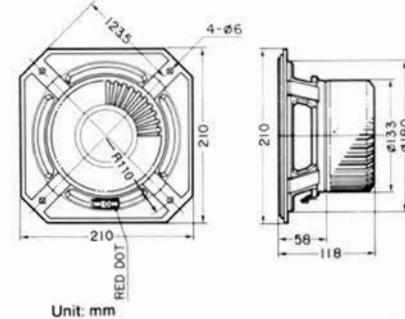
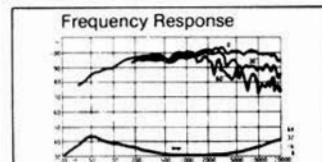
- Impedance 8Ω
- Min. resonance frequency 80Hz
- Reproduction frequency response f_r~18kHz
- Output sound pressure level 92dB/W(1m)
- Input 15W(Mus.)
- m_o 2.7g
- Q_o 0.28
- Effective vibration radius(a) 4cm
- Magnet weight 386g
- Total weight 0.95kg

20cm double-cone, full-range unit

FE206Σ



- Optimum for use in a back-load horn type enclosure.



Unit: mm

Specifications

- Impedance 8Ω
- Min. resonance frequency 45Hz
- Reproduction frequency response f_r~20kHz
- Output sound pressure level 96.5dB/W(6.5s)
- Input 80W(Mus.)
- m_o 12.0g
- Q_o 0.26
- Effective vibration radius(a) 8.1cm
- Magnet weight 1.7kg(double)
- Total weight 3.7kg

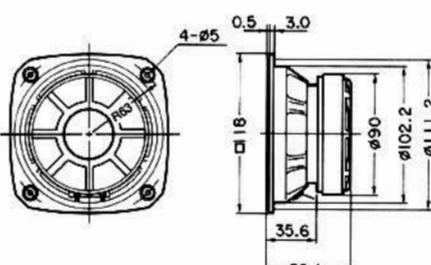
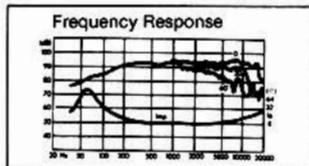
FF Series

12cm cone-type, full-range unit

FF125



■ Bright and light sound from high efficiency and high permissible input level.



Specifications

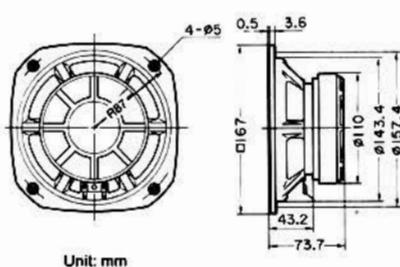
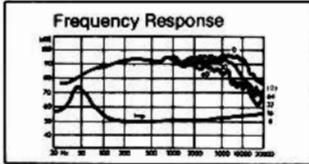
- Impedance 8Ω
- Min. resonance frequency 60Hz
- Reproduction frequency response f_r~18kHz
- Output sound pressure level 92dB/W(1m)
- Input 50W(Mus.)
- m_d 2.6g
- Q_a 0.24
- Effective vibration radius(a) 4.6cm
- Magnet weight 330g
- Total weight 0.865kg

16cm cone-type, full-range unit

FF165



■ The sound can be upgraded by using an additional tweeter.



Specifications

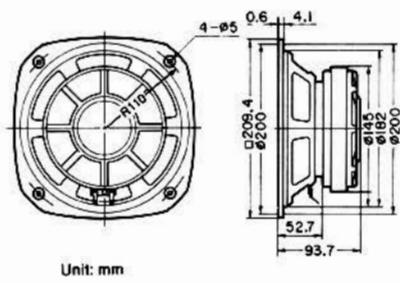
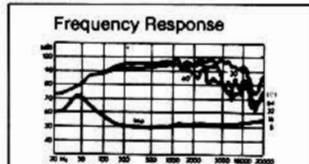
- Impedance 8Ω
- Min. resonance frequency 45Hz
- Reproduction frequency response f_r~14kHz
- Output sound pressure level 94dB/W(1m)
- Input 70W(Mus.)
- m_d 7.2g
- Q_a 0.26
- Effective vibration radius(a) 6.5cm
- Magnet weight 600g
- Total weight 1.685kg

20cm cone-type, full-range unit

FF225



■ Suitable for use with any kind of enclosure, from sealed type to back-load horn type.



Specifications

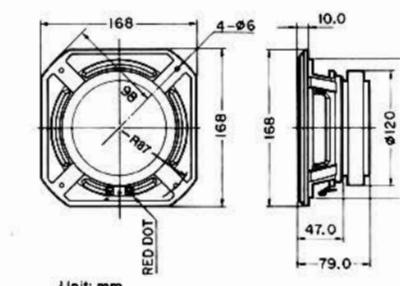
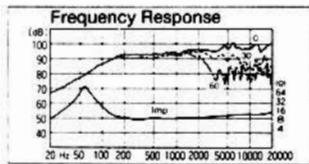
- Impedance 8Ω
- Min. resonance frequency 40Hz
- Reproduction frequency response f_r~14kHz
- Output sound pressure level 96dB/W(1m)
- Input 100W(Mus.)
- m_d 18.2g
- Q_a 0.23
- Effective vibration radius(a) 8.4cm
- Magnet weight 1.067g
- Total weight 3.7kg

16cm double-cone, full-range unit

FP163



■ The double-cone mechanism using a sub-cone improves the directivity and high-frequency response.



Specifications

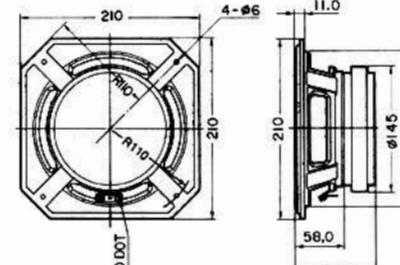
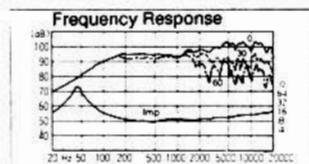
- Impedance 8Ω
- Min. resonance frequency 55Hz
- Reproduction frequency response f_r~20kHz
- Output sound pressure level 93dB/W(1m)
- Input 80W(Mus.)
- m_d 7.0g
- Q_a 0.33
- Effective vibration radius(a) 6.5cm
- Magnet weight 720g
- Total weight 2.25kg

20cm double-cone, full-range unit

FP203



■ The sound is bright and steady, featuring sharp-cutting high tone.



Specifications

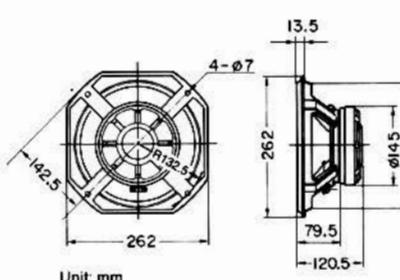
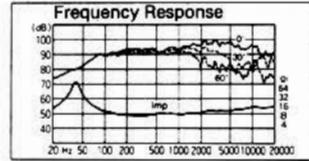
- Impedance 8Ω
- Min. resonance frequency 40Hz
- Reproduction frequency response f_r~20kHz
- Output sound pressure level 95dB/W(1m)
- Input 100W(Mus.)
- m_d 12.0g
- Q_a 0.33
- Effective vibration radius(a) 8.1cm
- Magnet weight 1.090g
- Total weight 3.75kg

25cm cone-type, full-range unit

FP253N



■ The frame is designed to have sufficient sturdiness and strength. A tweeter can be added without trouble thanks to the proper high-frequency response.



Specifications

- Impedance 8Ω
- Min. resonance frequency 37Hz
- Reproduction frequency response f_r~20kHz
- Output sound pressure level 95dB/W(1m)
- Input 120W(Mus.)
- m_d 21g
- Q_a 0.5
- Effective vibration radius(a) 10.3cm
- Magnet weight 1.056g
- Total weight 4.4kg

Woofer

In high fidelity sound reproduction the quality of performance in the low and ultra-low frequencies is directly related to the realistic listening experience of music. Therefore ACR offers a wide range of high performance and easy-to-handle quality woofers.

The **RW Series** woofers marked by their red gaskets (soon available in black) can reproduce tight low frequencies at high cost efficiency.

The **FW100/160/200/250 Series** are high-compliance woofers developed for superior low-frequency reproduction so as to be sufficiently powerful even when they are installed in relatively small size enclosures. The **FW305** and **FW405** have powerful magnetic circuits for low distortion. They are suitable for low and ultra-low bass reproduction. The **FW505** has a large 200 mm dia. ferrite magnet. The **FW800 Super-Woofers** with super-wide 800 mm diameter is for ultimate ultra-low frequency reproduction and is the world's largest

bass driver produced in series. The **FW120/180/220** are the latest developments of ACR. All models feature cones made of carbon and aramid that are glued crosswise. This construction results in high rigidity cones with low sound distortion and high impulse accuracy.

The **TC Series** are fitted with polypropylene cones and dual voice coils thus enabling surprisingly strong bass rendition compared to the size of these loudspeakers. They are especially suited for high quality two-way combinations in small size enclosures.

The **SLE Series** are the only type woofer in the world that can operate without rim suspension (protected by patents worldwide). These woofers allow distortion-free reproduction from bass up to midrange (approx. 1500 – 2000 Hz). For high-end speakers or active loudspeakers combinations there is hardly an alternative to the SLE.

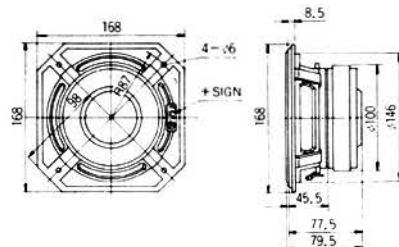
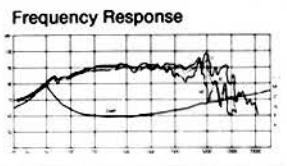
RW Series

16cm woofer

RW162



■ Superb cone paper is used.



Unit: mm

Specifications

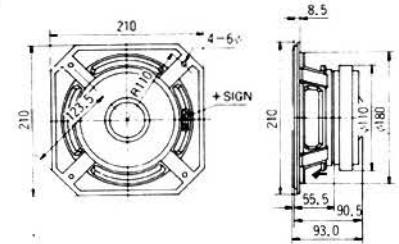
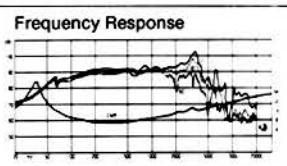
- Impedance 8Ω
- Min. resonance frequency 40Hz
- Reproduction frequency response f₀~9kHz
- Output sound pressure level 91dB/W(1m)
- Input 60W(Mus.)
- m_o 15g
- Q_o 0.34
- Effective vibration radius(a) 6.4cm
- Magnet weight 377g
- Total weight 1.54kg

20cm woofer

RW202



■ Even with a small enclosure, powerful bass sound can be reproduced.



Unit: mm

Specifications

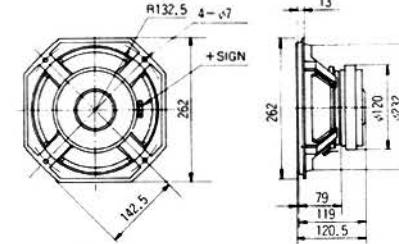
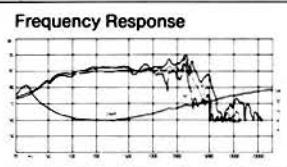
- Impedance 8Ω
- Min. resonance frequency 30Hz
- Reproduction frequency response f₀~5.5kHz
- Output sound pressure level 92dB/W(1m)
- Input 60W(Mus.)
- m_o 27g
- Q_o 0.31
- Effective vibration radius(a) 8.1cm
- Magnet weight 567g
- Total weight 1.95kg

25cm woofer

RW252



■ Designed for use in a 2-way speaker system, reproducing smooth sound.



Unit: mm

Specifications

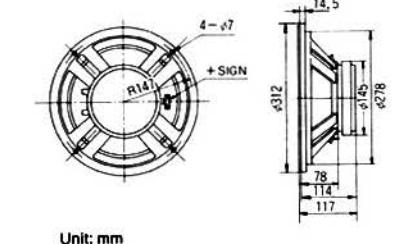
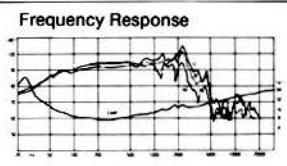
- Impedance 8Ω
- Min. resonance frequency 27Hz
- Reproduction frequency response f₀~5kHz
- Output sound pressure level 92.5dB/W(1m)
- Input 90W(Mus.)
- m_o 43g
- Q_o 0.33
- Effective vibration radius(a) 10.45cm
- Magnet weight 721g
- Total weight 3.35kg

30cm woofer

RW302



■ High rigidity and high performance, resulting in rich bass sound.



Unit: mm

Specifications

- Impedance 8Ω
- Min. resonance frequency 25Hz
- Reproduction frequency response f₀~4kHz
- Output sound pressure level 94.5dB/W(1m)
- Input 100W(Mus.)
- m_o 54g
- Q_o 0.28
- Effective vibration radius(a) 12.15cm
- Magnet weight 1.088g
- Total weight 4.63kg

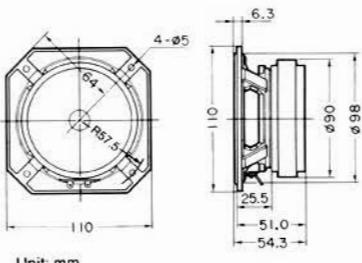
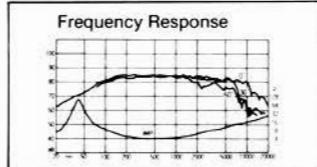
FW Series

10cm cone-type woofer unit

FW100



■ Small but having excellent bass reproduction, this woofer can be used in making a super-compact speaker system.



Specifications

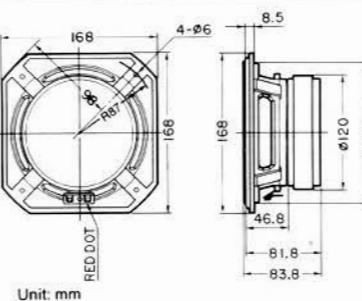
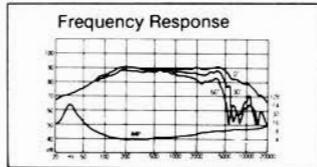
• Impedance	4Ω
• Min. resonance frequency	45Hz
• Reproduction frequency response	f _r ~10kHz
• Output sound pressure level	84dB/W(1m)
• Input	50W(Mus.)
• m _o	7.3g
• Q _o	0.32
• Effective vibration radius(a)	4.0cm
• Magnet weight	330g
• Total weight	0.95kg

16cm cone-type woofer unit

FW160



■ The heat-resistant voice coil is highly efficient and distortion is low even at full power output.



Specifications

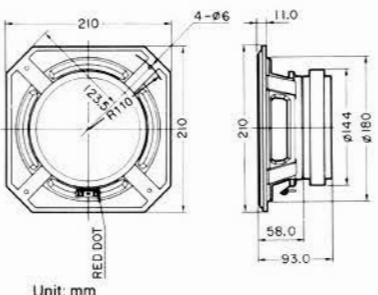
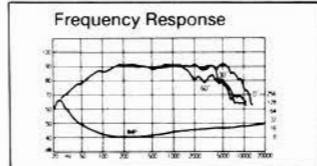
• Impedance	4Ω
• Min. resonance frequency	30Hz
• Reproduction frequency response	f _r ~10kHz
• Output sound pressure level	87dB/W(1m)
• Input	100W(Mus.)
• m _o	21g
• Q _o	0.27
• Effective vibration radius(a)	6.5cm
• Magnet weight	850g
• Total weight	2.6kg

20cm cone-type woofer unit

FW200



■ The rise of impedance in high frequencies is suppressed, making it easy to design a network with this woofer.



Specifications

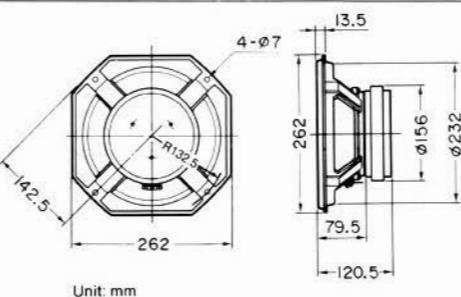
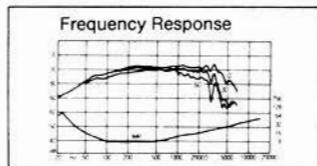
• Impedance	8Ω
• Min. resonance frequency	25Hz
• Reproduction frequency response	f _r ~6kHz
• Output sound pressure level	91dB/W(1m)
• Input	100W(Mus.)
• m _o	28g
• Q _o	0.25
• Effective vibration radius(a)	8.1cm
• Magnet weight	1.090g
• Total weight	3.8kg

25cm cone-type woofer unit

FW250



■ Even a small enclosure can provide bass with good damping.



Specifications

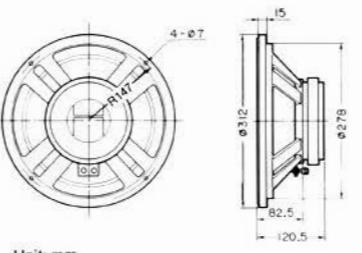
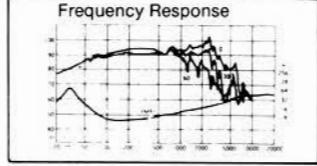
• Impedance	8Ω
• Min. resonance frequency	23Hz
• Reproduction frequency response	f _r ~4.5kHz
• Output sound pressure level	92dB/W(1m)
• Input	100W(Mus.)
• m _o	55g
• Q _o	0.21
• Effective vibration radius(a)	10.5cm
• Magnet weight	1.410g
• Total weight	5.0kg

30cm cone-type woofer unit

FW305



■ Suitable for a wide range of enclosures from compact to larger models.



Specifications

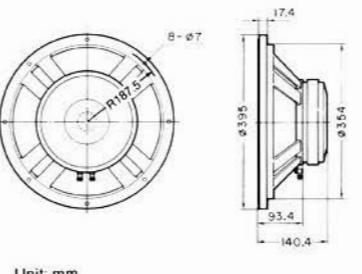
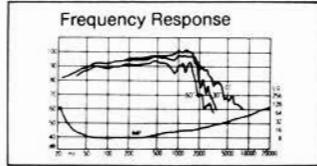
• Impedance	8Ω
• Min. resonance frequency	25Hz
• Reproduction frequency response	f _r ~3.5kHz
• Output sound pressure level	95dB/W(1m)
• Input	125W(Mus.)
• m _o	55g
• Q _o	0.31
• Effective vibration radius(a)	12.95cm
• Magnet weight	1.410g
• Total weight	5.0kg

40cm cone-type woofer unit

FW405



■ Uses low-distortion magnetic circuitry and a thick diecast yoke for high efficiency in operation.



Specifications

• Impedance	8Ω
• Min. resonance frequency	20Hz
• Reproduction frequency response	f _r ~2.5kHz
• Output sound pressure level	96dB/W(1m)
• Input	150W(Mus.)
• m _o	125g
• Q _o	0.38
• Effective vibration radius(a)	16.29cm
• Magnet weight	1.821g
• Total weight	7.8kg

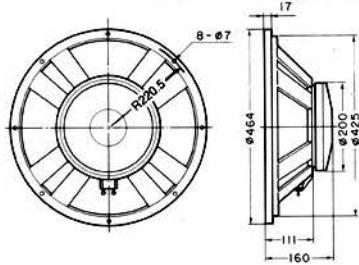
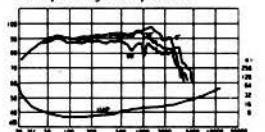
46cm cone-type woofer unit

FW505



With the large 200mm dia. ferrite magnet, this can also be used as a super-woofer.

Frequency Response



Unit: mm

Specifications

- Impedance 8Ω
- Min. resonance frequency 20Hz
- Reproduction frequency response f_r~3.0kHz
- Output sound pressure level 96dB/W(1m)
- Input 150W(Mus.)
- m_o 170g
- Q_d 0.4
- Effective vibration radius(a) 20.15cm
- Magnet weight 2,010g
- Total weight 10.5kg

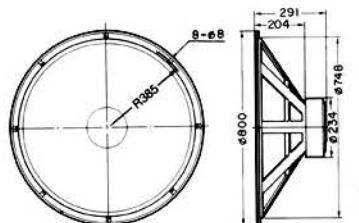
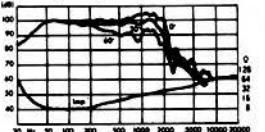
80cm cone-type super woofer unit

FW800



A super-woofer using a large, 200mm dia., 2kg heavy ferrite magnet.

Frequency Response



Unit: mm

Specifications

- Impedance 8Ω
- Min. resonance frequency 15Hz
- Reproduction frequency response f_r~2kHz
- Output sound pressure level 100dB/W(1m)
- Input 300W(Mus.)
- m_o 385g
- Q_d 0.45
- Effective vibration radius(a) 35.75cm
- Magnet weight 2,010g
- Total weight 20.5kg

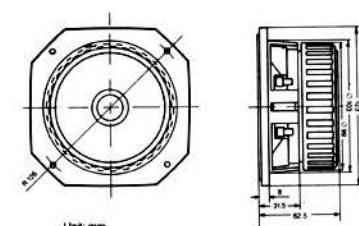
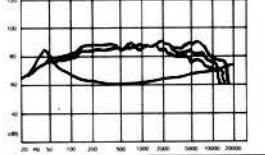
12 cm Carbon-Aramid woofer

FW120



For small but highly efficient two-way combinations as well as a midrange cone-speaker in three-way systems. The FW120 can also be used for car audio.

Frequency Response



Unit: mm

Specifications

- Impedance 8Ω
- Min. resonance frequency 53Hz
- Reproduction frequency response f_r~10 kHz
- Output sound pressure level 88 dB/W(1m)
- Input 80W(Mus.)
- m_o 74 g
- Q_d 0.33
- Effective vibration radius (a) 4.6 cm
- Magnet weight 330 g
- Total weight 1.1 kg

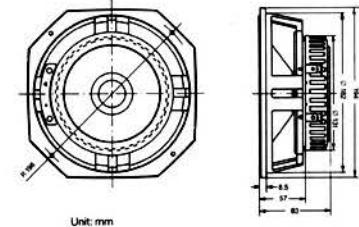
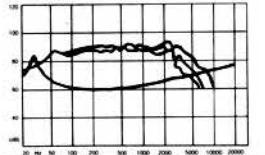
18 cm Carbon-Aramid woofer

FW180



Suitable as extended woofer or midbass in four-way-combinations or bass in small two-way combinations.

Frequency Response



Unit: mm

Specifications

- Impedance 8Ω
- Min. resonance frequency 30Hz
- Reproduction frequency response f_r~5 kHz
- Output sound pressure level 90 dB/W(1m)
- Input 100W(Mus.)
- m_o 26.5 g
- Q_d 0.36
- Effective vibration radius (a) 8.0 cm
- Magnet weight 721 g
- Total weight 2.44 kg

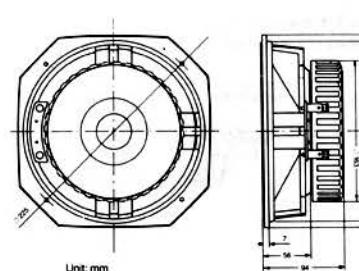
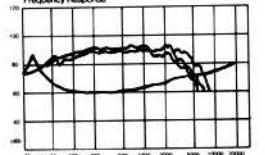
22 cm Carbon-Aramid woofer

FW220



This model offers thick bass and a transparent sound. Its frequency response requires the addition of a tweeter, only.

Frequency Response



Unit: mm

Specifications

- Impedance 8Ω
- Min. resonance frequency 25Hz
- Reproduction frequency response f_r~5 kHz
- Output sound pressure level 91 dB/W(1m)
- Input 120W(Mus.)
- m_o 54.9 g
- Q_d 0.28
- Effective vibration radius (a) 9.5 cm
- Magnet weight 1410 g
- Total weight 4.22 kg

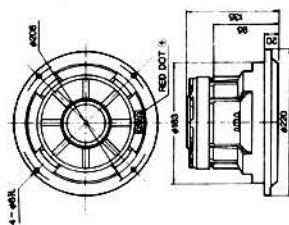
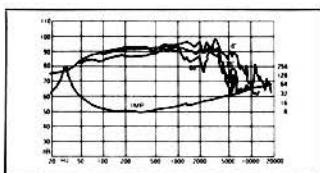
SLE Series

20 cm edgeless woofer

SLE24W



- A fast response bass module and therefore the most natural sound reproduced by woofers.



Specifications

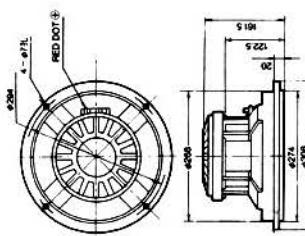
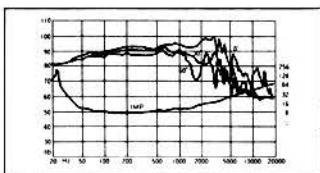
- Impedance 8Ω
- Min. resonance frequency 30 Hz
- Reproduction frequency response $f_0 \sim 5$ kHz
- Output sound pressure level 90 dB/W(1 m)
- Input 100 W(Mus.)
- m_s 30 g
- Q_s 0.35
- Effective vibration radius (a) 8.6 cm
- Magnet weight 1090 g
- Total weight 3.65 kg

30 cm edgeless woofer

SLE34W



- A long stroke but still quick response type of bass, for high end combinations e. g. with RP (RP is a trademark of Fostex Corp., Tokyo) speakers.



Specifications

- Impedance 8Ω
- Min. resonance frequency 22 Hz
- Reproduction frequency response $f_0 \sim 4.5$ kHz
- Output sound pressure level 93 dB/W(1 m)
- Input 160 W(Mus.)
- m_s 68 g
- Q_s 0.3
- Effective vibration radius (a) 12.7 cm
- Magnet weight 1821 g
- Total weight 7 kg

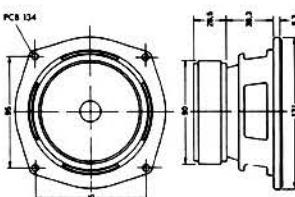
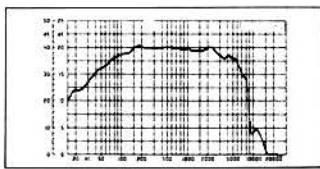
TC Series

13 cm twin coil woofer (Bextrene)

TC130



- Surprisingly strong bass for smallest two-way combinations and book-shelf speakers.



Specifications

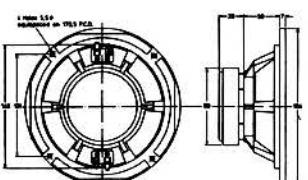
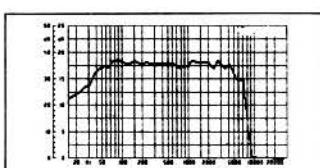
- Impedance 8+8Ω
- Min. resonance frequency 40 Hz
- Reproduction frequency response $f_0 \sim 4$ kHz
- Output sound pressure level 88 dB/W(1 m)
- Input 80 W(Mus.)
- m_s 11.5 g
- Q_s 0.21
- Effective vibration radius (a) 5 cm
- Magnet weight 440 g
- Total weight 1.4 kg

17 cm twin coil woofer (Cobex)

TC170



- In combination with the TT25 a test winner in internationally acknowledge HiFi-magazines.



Specifications

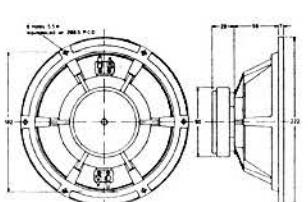
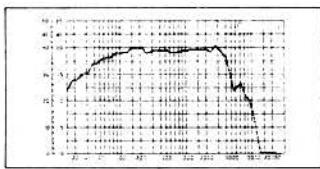
- Impedance 8+8Ω
- Min. resonance frequency 32 Hz
- Reproduction frequency response $f_0 \sim 3.5$ kHz
- Output sound pressure level 91 dB/W(1 m)
- Input 100 W(Mus.)
- m_s 21 g
- Q_s 0.21
- Effective vibration radius (a) 6.6 cm
- Magnet weight 440 g
- Total weight 1.6 kg

20 cm twin coil woofer (Bextrene)

TC200



- A serious competition to 25 mm and 30 mm woofers in high-grade two and three-way combinations.



Specifications

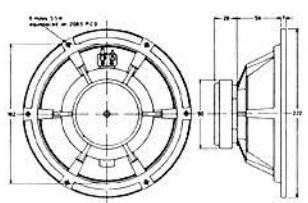
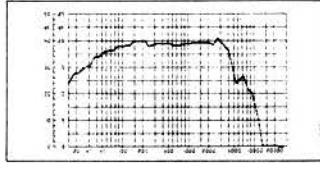
- Impedance 8+8Ω
- Min. resonance frequency 27 Hz
- Reproduction frequency response $f_0 \sim 3.5$ kHz
- Output sound pressure level 93 dB/W(1 m)
- Input 120 W(Mus.)
- m_s 23 g
- Q_s 0.27
- Effective vibration radius (a) 8.25 cm
- Magnet weight 440 g
- Total weight 1.6 kg

20 cm (Bextrene)

SC200



- In slim columns even two SC200 may be used.



Specifications

- Impedance 8Ω
- Min. resonance frequency 29 Hz
- Reproduction frequency response $f_0 \sim 3.5$ kHz
- Output sound pressure level 91 dB/W(1 m)
- Input 120 W(Mus.)
- m_s 15.3 g
- Q_s 0.37
- Effective vibration radius (a) 8.25 cm
- Magnet weight 440 g
- Total weight 1.6 kg

Mid Range

Upgrading the mid and high frequency response of a speaker system is like upgrading the entire sound system. Therefore ACR offers numerous mid and mid-high types of speaker units.

The **FS165** is a cone-type mid-range speaker that, with its flat frequency response, renders superb sound quality.

The **FS50D/80D** are dome-type mid-range speakers, which easily provide optimal mid and mid-high range with good directivity and natural sound.

The **FS21RP** (RP is a trademark of Fostex Corp., Tokyo) operates on the magnetostatic principle that offers the same excellence in sound definition as

electrostatic units without the hassles of the latter and better efficiency. RP stands for Regulated Phase, a patented technology which has been developed by FOSTEX engineers over the past ten years. This unique transducing design has produced a family of loudspeakers and microphones that exhibit extremely low distortion, excellent transient response and wide dynamic range.

The **TT Series** are skull caps made of titanium with ferrofluid coils manufactured as one single piece. The light but rigid diaphragm ensures high resolution.

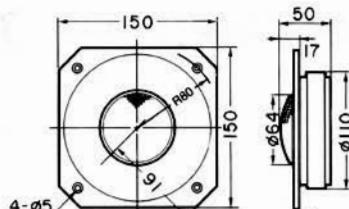
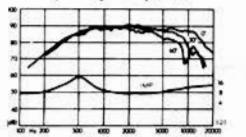
Dome mid-range speaker

FS50D



- The lightweight, very-sturdy diaphragm reproduces superb mid-range tones.

Frequency Response



Unit: mm

Specifications

- Impedance 8Ω
- Min. resonance frequency 500Hz
- Reproduction frequency response 1~15kHz
- Output sound pressure level 90dB/W(1m)
- Input 80W(Mus.)
- Magnet weight 600g
- Total weight 1.6kg
- Diaphragm diameter 38mm
- Recommended cross-over frequency 600Hz or more
- Baffle opening dimensions 7kHz or less
- Dimensions φ138mm

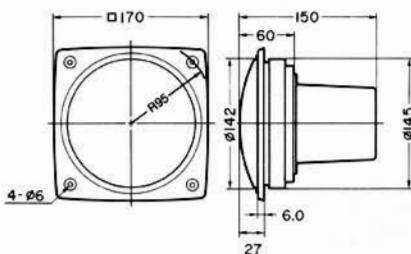
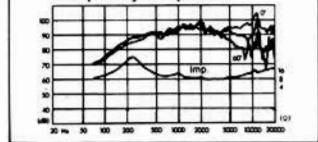
Dome mid-range speaker

FS80D



- The large diaphragm, made of special light alloy, provides high efficiency and high power output.

Frequency Response



Unit: mm

Specifications

- Impedance 8Ω
- Min. resonance frequency 240Hz
- Reproduction frequency response 1~20kHz
- Output sound pressure level 97dB/W(1m)
- Input 100W(Mus.)
- Magnet weight 1.089g
- Total weight 3.5kg
- Diaphragm diameter 65mm
- Recommended cross-over frequency 500Hz or more
- Baffle opening dimensions 7kHz less than
- Dimensions φ147mm

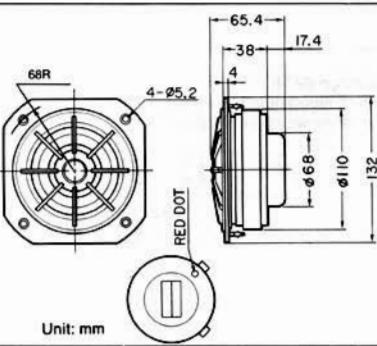
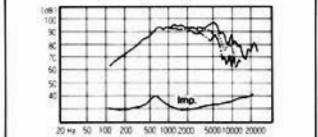
Dome Midrange

FS32D



- Mid range dome speaker unit for soft mid range sound reproduction.

Frequency Response



Unit: mm

Specifications

- Impedance 8Ω
- Min. resonance frequency 630Hz
- Reproduction frequency response 1.2kHz~8kHz
- Output sound pressure level 93.5dB/W(1m)
- Input 60W(Mus.)
- Magnet weight 567.5g
- Total weight 1.53kg
- Diaphragm diameter 38mm
- Recommended cross-over frequency 500Hz or more
- Baffle opening dimensions 7kHz less than
- Dimensions φ136mm

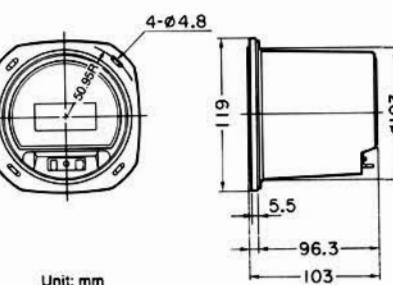
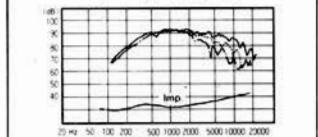
11cm cone Midrange

FS112



- Mid range cone speaker unit for smooth mid range sound reproduction.

Frequency Response



Unit: mm

Specifications

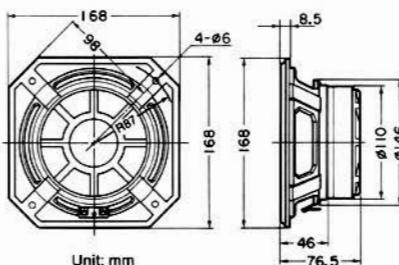
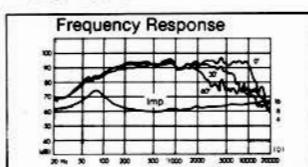
- Impedance 8Ω
- Min. resonance frequency 720Hz
- Reproduction frequency response 720Hz~8kHz
- Output sound pressure level 92dB/W(1m)
- Input 90W(Mus.)
- Magnet weight 226.2g
- Total weight 0.92kg
- Diaphragm diameter 65mm
- Recommended cross-over frequency 500Hz or more
- Baffle opening dimensions 7kHz less than
- Dimensions φ119mm

16cm cone mid-range speaker

FS165



- The special mold edge allows the speaker to be used also as a mid-range woofer.

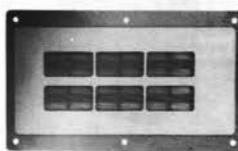


Specifications

- Impedance 8Ω
- Min. resonance frequency 75Hz
- Reproduction frequency response 10~12kHz
- Output sound pressure level 94dB/W(1m)
- Input 40W(Mus.)
- Magnet weight 600g
- Total weight 1.82kg
- Recommended cross-over frequency 300Hz or more
- Baffle opening dimensions 7kHz or less
- φ151mm

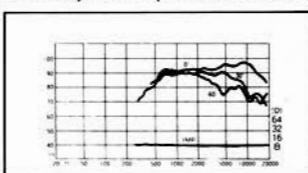
RP midrange unit

FS21RP



(RP is a trademark of Fostex Corp., Tokyo)

As mentioned above the unique RP-System renders a superb, highly efficient, high definition and absolutely natural sound reproduction. Thanks to its absolutely linear impedance the FS21RP is easy to handle.



RP Midrange

Specifications

- Impedance 8Ω
- Reproduction frequency response 0.6~15 kHz
- Output sound pressure level 92 dB/W(1 m)
- Input 150 W (Mus.)
- Magnet weight 500 g
- Total weight 1.86 kg

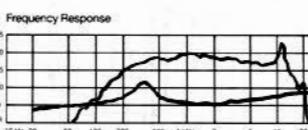


95 mm Titan dome midrange

TT50



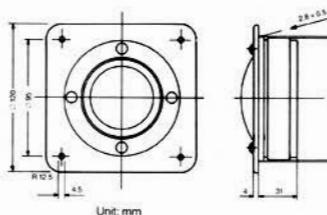
- All TT's have ultra-light domes made of titanium. Top resolution and outstanding price/performance ratio.



TT Series

Specifications

- Impedance 8Ω
- Reproduction frequency response 0.4~15 kHz
- Output sound pressure level 92 dB/W(1 m)
- Input 150 W (Mus.)
- Magnet weight 500 g
- Total weight 1.86 kg



Tweeter

Tweeters can either be employed in complete speaker systems or as an additional component for existing systems thus enhancing the dynamics and liveliness of any standard speaker.

The **FT2RP** (RP is a trademark of Fostex Corp., Tokyo) tweeter uses the RP (Regular-Phase) system developed by FOSTEX. RP stands for Regulated Phase, a patented technology which has been developed by FOSTEX engineers over the past ten years. This unique transducer design has produced a family of loudspeakers and microphones that exhibit extremely low distortion, excellent transient response and wide dynamic range.

The **FT25D/55D** are dome tweeters with excellent directivity, superb frequency response and a natural sound.

The **FT15H** horn tweeter features sharp sound and high efficiency, and can be combined with other units without trouble.

The **FT50H/65H/66H/96H** are horn type super tweeters with high performance that make them ideal for use as additional tweeters.

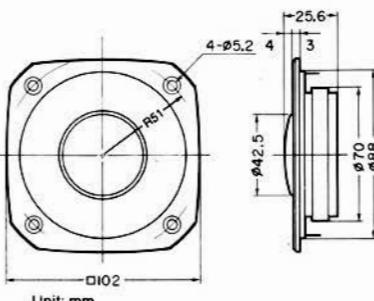
Our range also includes the **FT17H/FT30H** compact size horn tweeters and the **FT700H** wide-range tweeter which belongs to our P.A. Series. Despite their high-quality they are competitively priced.

The **TT Series** are skull-caps made of titanium with ferrofluid-cooled coils made of one piece. The light but still rigid diaphragm ensures above-average resolution.

FT Series

Specifications

- Impedance 8Ω
- Reproduction frequency response 2kHz~30kHz
- Output sound pressure level 90dB/W(1m)
- Input 40W(Mus.)
- Recommended cross-over frequency 3kHz
- Magnet weight 120g
- Total weight 415g
- Baffle opening dimensions φ90mm

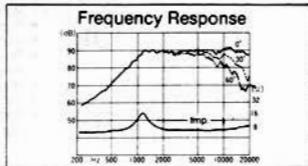


Dome tweeter

FT25D



- The dome-type diaphragm has a small diameter of 20mm but offers good directivity and wide sound dispersion.

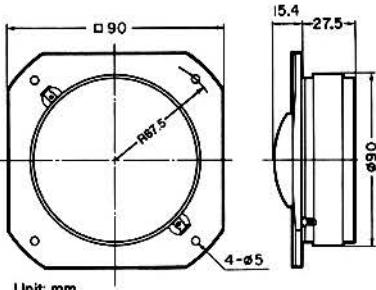
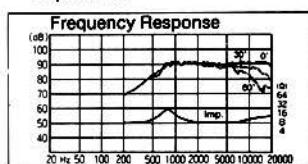


Dome tweeter

FT55D



■ The 30mm dia. diaphragm is ideal for reproduction with low distortion and superb directivity of high frequencies.



Specifications

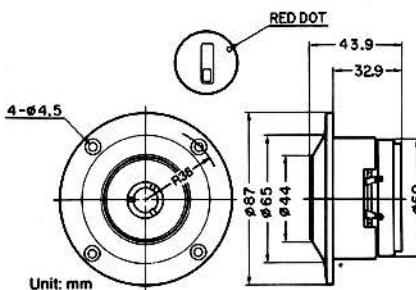
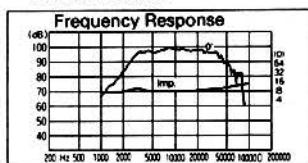
- Impedance 8Ω
- Reproduction frequency response 800Hz~25kHz
- Output sound pressure level 92dB/W(1m)
- Input 70W(Mus.)
- Recommended cross-over frequency 1kHz
- Magnet weight 330g
- Total weight 950g

Horn tweeter

FT15H



■ The ultra-light diaphragm makes possible a frequency response in excess of 30kHz.



Specifications

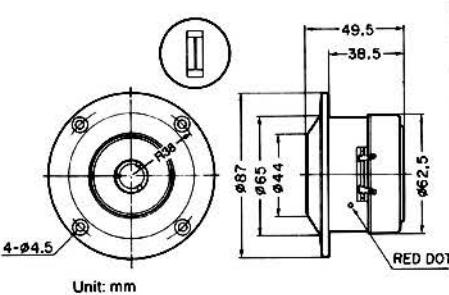
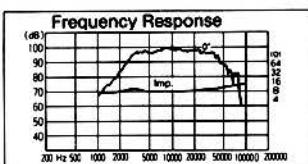
- Impedance 8Ω
- Reproduction frequency response 5kHz~30kHz
- Output sound pressure level 98dB/W(1m)
- Input 30W(Mus.)
- Cutoff frequency 2.6kHz
- Recommended cross-over frequency 5kHz
- Magnet weight 100g
- Total weight 300g

Horn tweeter

FT17H



■ The low-leakage horn-tweeter is equipped with a diecast alloy horn and a powerful magnet. It is compatible with a wide range of AV applications.



Specifications

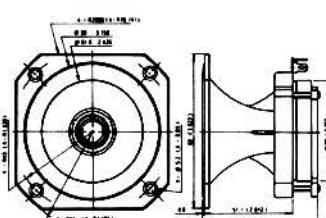
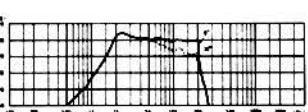
- Impedance 8Ω
- Reproduction frequency response 5~40 kHz
- Output sound pressure level 96 dB/W(1 m)
- Input 50 W(Mus.)
- Magnet weight 99.1 g
- Total weight 0.49 kg

Horn tweeter

FT30H



■ Compact public address system tweeter at a competitive price.



Specifications

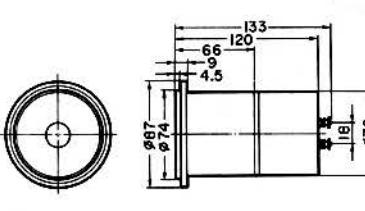
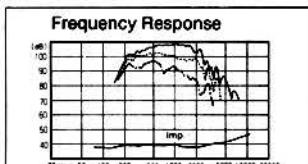
- Impedance 8Ω
- Reproduction frequency response 5~20 kHz
- Output sound pressure level 100 dB/W(1 m)
- Input 50 W(Mus.)
- Magnet weight 99.1 g
- Total weight 0.43 kg

Horn tweeter

FT65H



■ High efficiency horn tweeter reproducing penetrating sound.



Specifications

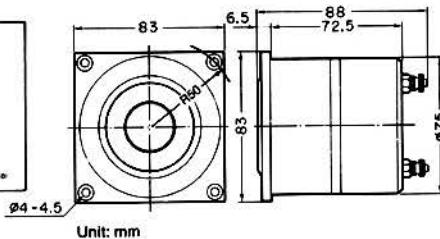
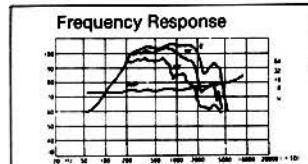
- Impedance 8Ω
- Reproduction frequency response 2.5kHz~25kHz
- Output sound pressure level 108dB/W(1m)
- Input 50W(Mus.)
- Cutoff frequency 3.9kHz
- Recommended cross-over frequency 3.5kHz or more
- Magnet weight 135g
- Total weight 1,480g
- Baffle opening dimensions φ71mm

Ring-diaphragm tweeter

FT66H



■ High efficiency, excellent transit characteristic and directivity.



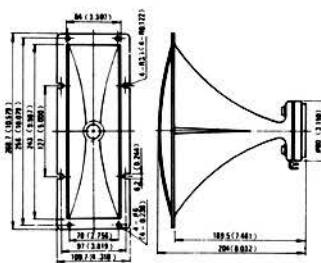
Specifications

- Impedance 8Ω
- Reproduction frequency response 2.5kHz~22kHz
- Output sound pressure level 105dB/W(1m)
- Input 70W(Mus.)
- Cutoff frequency 2.3kHz
- Recommended cross-over frequency 3.5kHz or more
- Magnet weight 100g
- Total weight 1,150g
- Baffle opening dimensions φ76mm

Horn tweeter **FT700**



■ This makes up a powerful two-way system when combined with a larger full range or bass-mid-range speaker unit.



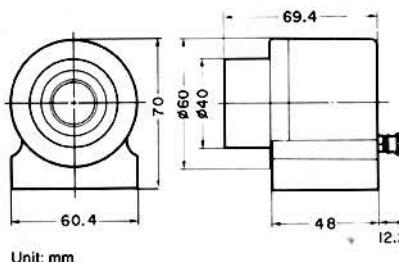
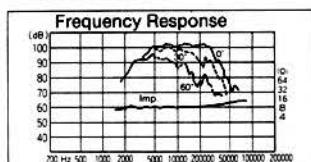
Specifications

- Impedance 8Ω
- Reproduction frequency response 3 - 14 kHz
- Output sound pressure level 108 dB/W(1m)
- Input 120W(Mus.)
- Magnet weight 226.2 g
- Total weight 1.62 kg

Horn Super-Tweeter **FT50H**



■ The horn is made of aluminum alloy, and has a small opening providing excellent directivity even in ultra-high frequency range.



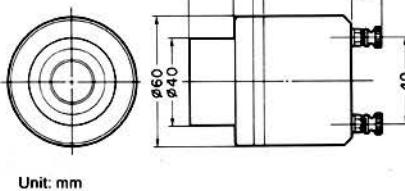
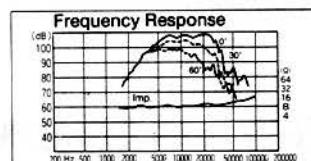
Specifications

- Impedance 8Ω
- Reproduction frequency response 5kHz~35kHz
- Output sound pressure level 102dB/W(1m)
- Input 50W(Mus.)
- Cutoff frequency 3.6kHz
- Recommended cross-over frequency 7kHz or more
- Magnet weight 92g
- Total weight 420g

Horn Super-Tweeter **FT90H**



■ The super-lightweight, ring-type diaphragm helps extend the frequency response to ultra-high frequencies.



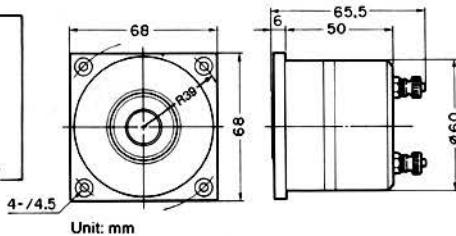
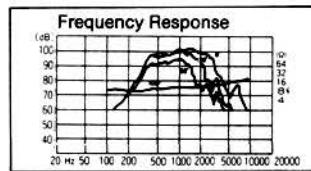
Specifications

- Impedance 8Ω
- Reproduction frequency response 5kHz~35kHz
- Output sound pressure level 106dB/W(1m)
- Input 50W(Mus.)
- Cutoff frequency 3.6kHz
- Recommended cross-over frequency 7kHz or more
- Magnet weight 100g
- Total weight 720g
- Baffle opening dimensions φ61mm

Horn Super-Tweeter **FT96H**



■ The high-performance magnetic circuit uses the ALNICO magnet.



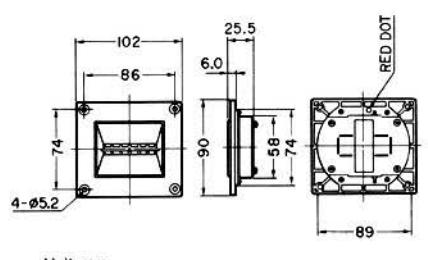
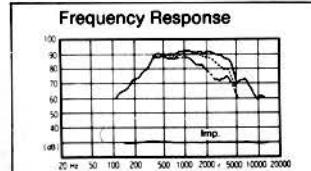
Specifications

- Impedance 8Ω
- Reproduction frequency response 4kHz~33kHz
- Output sound pressure level 100dB/W(1m)
- Input 50W(Mus.)
- Cutoff frequency 3.9kHz
- Recommended cross-over frequency 8.0kHz or more
- Magnet weight 34g
- Total weight 600g
- Baffle opening dimensions φ61mm

RP tweeter **FT2RP**



■ Printed ribbon tweeter for high frequency sound reproduction.



Specifications

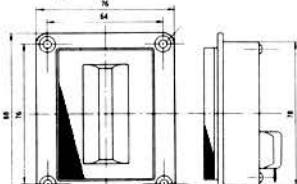
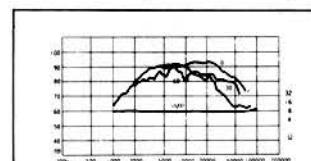
- Impedance 8Ω
- Reproduction frequency response 6kHz~40kHz
- Output sound pressure level 92dB/W(1m)
- Input 60W(Mus.)
- Cutoff frequency 3.9kHz
- Recommended cross-over frequency 7kHz or more
- Magnet weight 92g
- Total weight 242g



RP tweeter **FT7RP**



(RP is a trademark of Fostex Corp., Tokyo)
Transmission ranges up to 45 kHz. Very good omnidirectional characteristics. RP stands for Regulated Phase, a patented technology which has been developed by FOSTEX engineers over the past ten years. This unique transducer design has produced a family of loudspeakers and microphones that exhibit extremely low distortion, excellent transient response and wide dynamic range.



Specifications

- Impedance 8Ω
- Reproduction frequency response 3 - 45 kHz
- Output sound pressure level 93 dB/W(1 m)
- Input 80 W(Mus.)
- Total weight 0.155 kg

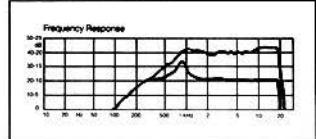


25 mm Titan dome tweeter

TT25



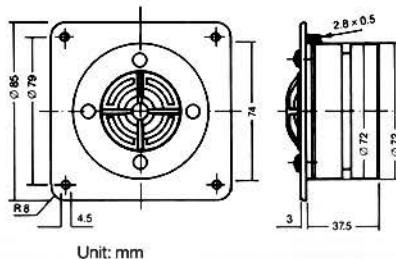
■ (Titanium dome tweeter) The TT25 can be used already at lower frequencies and is therefore especially well suited for two-way combinations. Its high output power results from a double magnet.



TT Series

Specifications

- Impedance 8Ω
- Reproduction frequency response 2.8~32 kHz
- Output sound pressure level 91 dB/W(1m)
- Input 100 W(Mus.)
- Total weight 0.76 kg



Woofer Cone Transducer

ACR Laboratory Series Woofers are high-performance, high-efficiency, highly reliable speaker units designed and developed for professionals.

The L Series woofers are indispensable for providing dense saturated low frequency reproduction. With the light but highly sturdy cone paper material, high-level inputs can be accepted with a wide margin. The magnetic circuit is designed symmetrically with respect to the voice coil to minimize distortion in the mid and low frequencies. The voice coil is wound edgewise around glassfibre reinforced polyamid for excellent heat resistance.

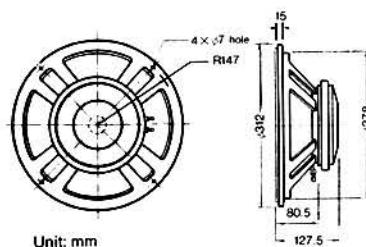
The L569 and L469 are high-power models based on double-dumper mechanisms, using a heat sink with the L569 and an inside double-dumper with the L469. These speakers will demonstrate their full performance in horn-load or bass-reflex type enclosures. Select the one that suits the application best, for stage, public address, studio monitoring, disco, etc.

The PA Series are high-capacity woofers for public address systems and are of an outstanding efficiency. After all the PA38 is used in the "ACR-Eckhorn".

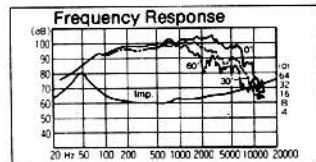
F Series

Specifications

- Impedance 8Ω
- Min. resonance frequency 50Hz
- Reproduction frequency response f_r~7kHz
- Output sound pressure level 98dB/W(1m)
- Input 100W(Mus.)
- m_s 41g
- Q_o 0.4
- Effective vibration radius(a) 13cm
- Magnet weight 1.281g
- Total weight 6.7kg

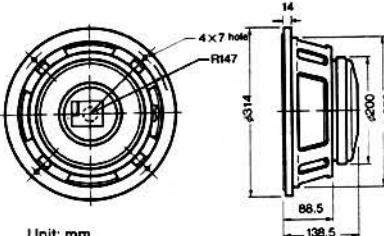


■ One single unit can be used as a wide-range speaker as well as a woofer in a system.

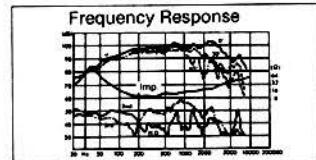


Specifications

- Impedance 8Ω
- Min. resonance frequency 35Hz
- Reproduction frequency response f_r~5kHz
- Output sound pressure level 98dB/W(1m)
- Input 300W(Mus.)
- m_s 55g
- Q_o 0.21
- Effective vibration radius(a) 13.05cm
- Magnet weight 2.010g
- Total weight 9.8kg

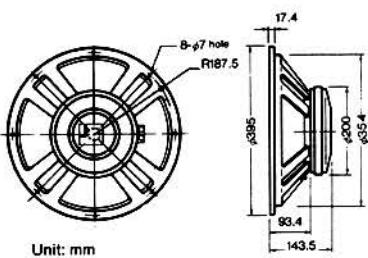


■ The magnetic circuit is designed symmetrically with respect to the voice coil, minimizing distortion in the mid and low ranges.

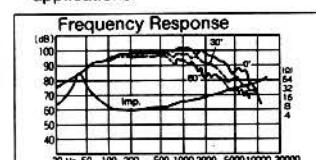


Specifications

- Impedance 8Ω
- Min. resonance frequency 40Hz
- Reproduction frequency response f_r~3.5kHz
- Output sound pressure level 100dB/W(1m)
- Input 300W(Mus.)
- m_s 73g
- Q_o 0.34
- Effective vibration radius(a) 16.85cm
- Magnet weight 2.010g
- Total weight 9.4kg



■ High-performance, high-efficiency unit designed for professional applications.



30cm cone-type woofer

L362



40cm cone-type woofer

L467



Horn Driver

Our Laboratory Series horn drivers were designed to cover a wide range from mid to high frequencies, with a high efficiency, high performance and crisp sound. The powerful magnetic circuitry uses alnico or ferrite magnets. The diaphragms are either metallic, made of aluminium or duraluminium, or plastic made of phenolic resin. Each of them is made by a special molding method for light weight and high strength. The drivers having a throat diameter of 25.4 mm are of a wide-range type covering even the range assigned for tweeters, and the drivers with a throat diameter of 50 mm are high-power models. Select the drivers that suit the sound you want to make, according to the horn units to be used together.

To make their operations more safer and convenient, all these horn drivers are designed to facilitate servicing or replacement even in case of diaphragm troubles, etc.

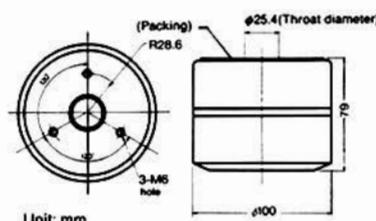
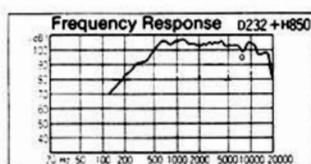
D Series

Horn driver with a throat diameter of 25.4mm

D232



■ Driver designed for high cost efficiency and high fidelity.



Specifications

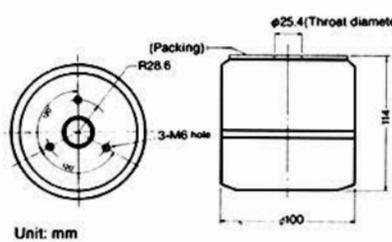
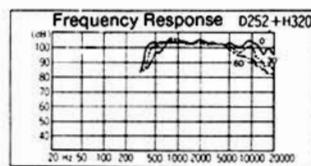
- Impedance 8Ω
- Throat (Opening) 25.4mm
- Reproduction frequency response 650Hz~18kHz
- Recommended cross-over frequency: 1kHz
- Output sound pressure level 104dB/W(1m)
- Input 50W(Mus.)
- Voice coil diameter 40mm
- Magnet weight 330g
- Total weight 1.4kg

Horn driver with a throat diameter of 25.4mm

D252



■ Designed for high fidelity, using a powerful magnetic circuit using an alnico magnet.



Specifications

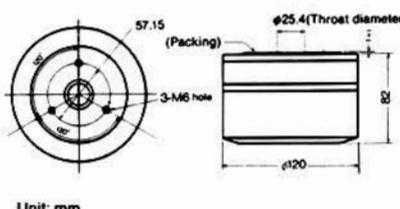
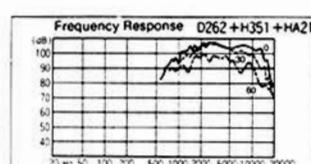
- Impedance 8Ω
- Throat (Opening) 25.4mm
- Reproduction frequency response 650Hz~20kHz
- Recommended cross-over frequency: 1kHz
- Output sound pressure level 105dB/W(1m)
- Input 50W(Mus.)
- Voice coil diameter 40mm
- Magnet weight 650g
- Total weight 3.3kg

Horn driver with a throat diameter of 25.4mm

D262



■ Wide-range type driver that covers a wide range including that conventionally assigned for tweeters.



Specifications

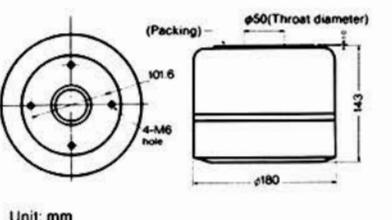
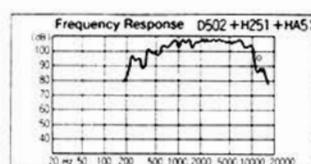
- Impedance 8Ω
- Throat (Opening) 25.4mm
- Reproduction frequency response 800Hz~15kHz
- Recommended cross-over frequency: 800Hz
- Output sound pressure level 104dB/W(1m)
- Input 60W(Mus.)
- Voice coil diameter 50mm
- Magnet weight 850g
- Total weight 2.3kg

Horn driver with a throat diameter of 50mm

D502



■ A powerful, big unit which provides high power output from the throat having a diameter of 50mm.



Specifications

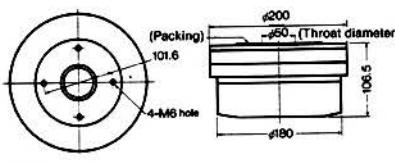
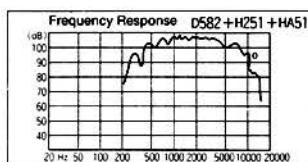
- Impedance 8Ω
- Throat (Opening) 50mm
- Reproduction frequency response 500Hz~10kHz
- Recommended cross-over frequency: 500Hz
- Output sound pressure level 108dB/W(1m)
- Input 80W(Mus.)
- Voice coil diameter 100mm
- Magnet weight 3,100g
- Total weight 13kg

Horn driver with a throat diameter of 50mm

D582



The diaphragm of this driver is made by a special molding technique which gives it light weight and high rigidity.



Specifications

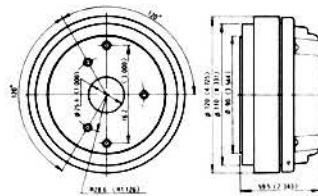
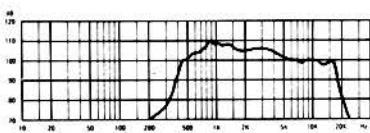
- Impedance 8Ω
- Throat (Opening) 50mm
- Reproduction frequency response 500Hz~10kHz
- Recommended cross-over frequency: 500Hz
- Output sound pressure level 106dB/W(1m)
- Input 80W(Mus.)
- Voice coil diameter 100mm
- Magnet weight 4,020g
- Total weight 9.2kg

Horn driver with a throat diameter of 25.4 mm

D400



Driver designed for maximum cost efficiency and high fidelity.



Specifications

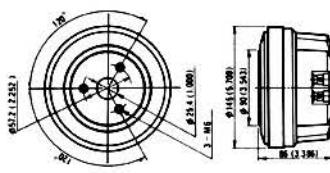
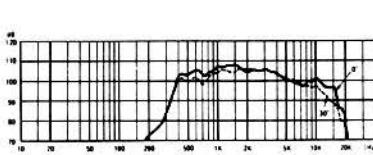
- Impedance 8Ω
- Throat (Opening) 25.4 mm
- Reproduction frequency response 0.8~16 kHz
- Recommended cross-over frequency 1000 Hz
- Output sound pressure level 104.5 dB/W(1 m)
- Input 40W(Mus.)
- Voice coil diameter 40 mm
- Magnet weight 848.2 g
- Total weight 2.4 kg

Horn driver with a throat diameter of 25.4 mm

D450



A well-balanced sound pattern for powerful systems.



Specifications

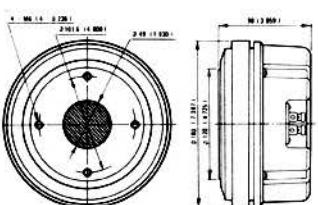
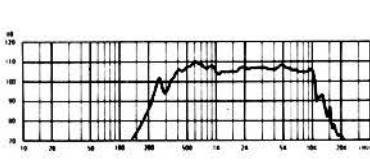
- Impedance 8Ω
- Throat (Opening) 25.4 mm
- Reproduction frequency response 0.5~16 kHz
- Recommended cross-over frequency 1000 Hz
- Output sound pressure level 105 dB/W (1 m)
- Input 40W(Mus.)
- Voice coil diameter 40 mm
- Magnet weight 1067 g
- Total weight 3.8 kg

Horn driver with a throat diameter of 50 mm

D800



For low frequencies and high capacity.



Specifications

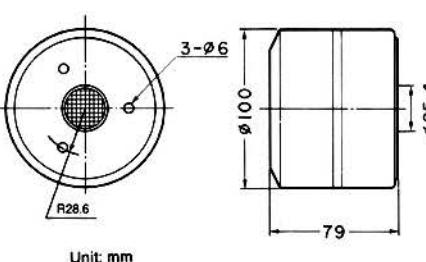
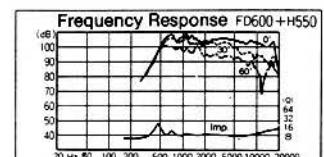
- Impedance 8Ω
- Throat (Opening) 49 mm
- Reproduction frequency response 0.3~10 kHz
- Recommended cross-over frequency 500 Hz
- Output sound pressure level 106 dB/W (1 m)
- Input 45W(Mus.)
- Voice coil diameter 80 mm
- Magnet weight 1820 g
- Total weight 6.4 kg

Horn driver

FD600



A highly cost efficient wide range horn driver incorporating the advanced technology of our Laboratory Series.



Specifications

- Impedance 8 Ohm
- Reproduction frequency response 0.8~18 kHz
- Output sound pressure level 104 dB/W (1m)
- Input 50W(Mus.)
- Total weight 1.4 kg
- Throat diameter 25.4 mm
- Recommended cross-over frequency 800Hz or more

Horn Tweeter

The tweeters in our Laboratory Series are indispensable for multi-way speaker systems incorporating woofers and horn mid-range drivers. The voice coil diameters of **T825** and **T925** are 20 mm and that of the **T850** and **T950** are 40 mm. All these tweeters are capable of offering excellent high-frequency response using a ring-shaped aluminum diaphragm of light weight though high strength.

The **T825** is a radial diffusion type horn tweeter with very good directivity. The **T850** also belongs to the radial diffusion type, and the **T925** is our Super-Tweeter featuring sharp sound quality.

The **T850/950** are designed for public address systems because of their high power handling capacity and safety.

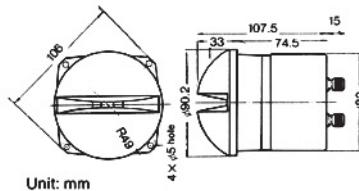
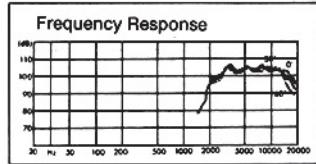
T Series

Horn tweeter

T825



■ Radial diffusion type horn tweeter with very good directivity.



Specifications

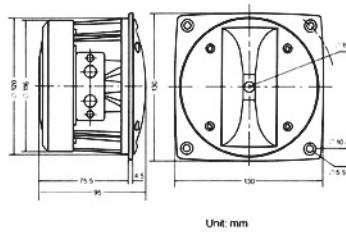
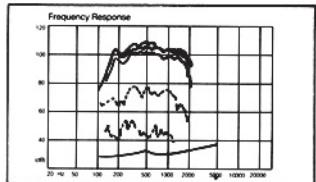
- Impedance 8Ω
- Reproduction frequency response 2kHz~20kHz
- Recommended cross-over frequency 4kHz
- Output sound pressure level 102dB/W(1m)
- Input 50W(Mus.)
- Voice coil diameter 20mm
- Magnet weight 240g
- Total weight 2.05kg

Horn tweeter

T850



■ Suitable for large-scale hall or stage public address systems.

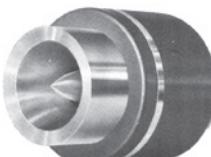


Specifications

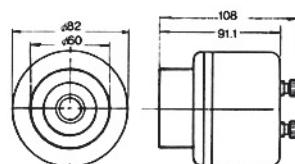
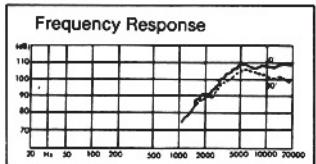
- Impedance 8Ω
- Reproduction frequency response 2.5~19 kHz
- Output sound pressure level 105 dB/W (1 m)
- Input 50W(Mus.)
- Magnet weight 540 g
- Total weight 2.25 kg

Horn tweeter

T925



■ Super-tweeter with sharp sound quality.



Specifications

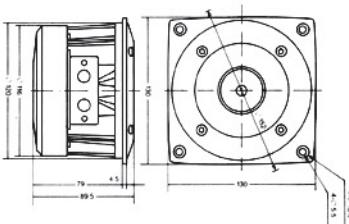
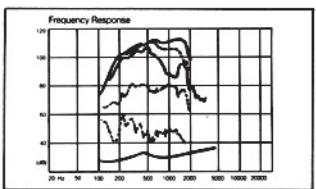
- Impedance 8Ω
- Reproduction frequency response 5kHz~40kHz
- Recommended cross-over frequency 7kHz
- Output sound pressure level 106dB/W(1m)
- Input 50W(Mus.)
- Voice coil diameter 20mm
- Magnet weight 240g
- Total weight 1.78kg

Horn tweeter

T950



■ Powerful and high efficiency tweeter.



Specifications

- Impedance 8Ω
- Reproduction frequency response 2~20 kHz
- Output sound pressure level 110 dB/W (1 m)
- Input 50W(Mus.)
- Magnet weight 540 g
- Total weight 2.25 kg

Horn Throat

The matching of driver and horn units is a very delicate subject. Our wide range of horn units have been developed to make full use of the characteristics of the top-class horn drivers in our Laboratory Series. The H Series include sectoral and straight horn units made of light weight aluminum alloy or wood. Each model was designed for a different cut-off frequency and dispersion angle, providing a wide selection to match the crossover frequencies of different speaker systems and the range of sound field reproduction. Throat adapters are also available for joining driver and horn units. They should be selected in accordance with the driver's throat diameter.

ACR horn speakers – are for every corner of the stage, hall or disco, or anywhere where professionals can be found. All our horns are designed not to discolour original sounds and remain absolutely neutral because their respective resonance frequencies lie below their frequency response range.

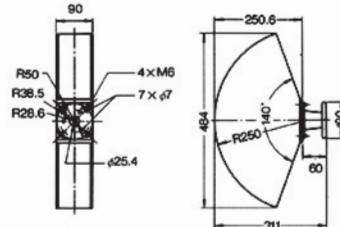
H Series

Radial wooden horn

H425



■ Designed especially for HiFi use.



Specifications

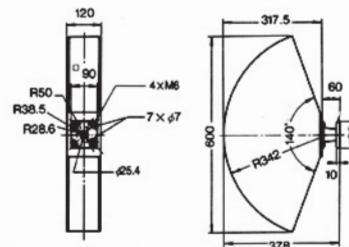
- Cutoff frequency 440 Hz
- Horizontal radiation angle 140 Grade
- Material massiv wood
- Total weight 3 kg

Radial wooden horn

H325



■ This model matches perfectly with the characteristics of Laboratory Series horn drivers.



Specifications

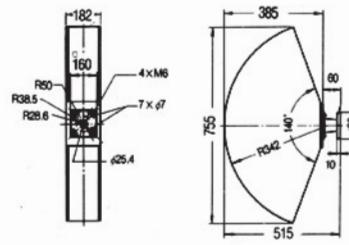
- Cutoff frequency 340 Hz
- Horizontal radiation angle 140 Grade
- Material massiv wood
- Total weight 4.5 kg

Radial wooden horn

H220



■ A parallel plywood horn unit, with a cut-off frequency of 250 Hz.



Specifications

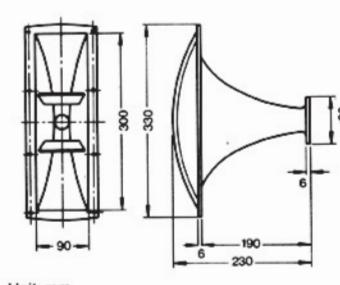
- Cutoff frequency 235 Hz
- Horizontal radiation angle 140 Grade
- Material massiv wood
- Total weight 7 kg

Sectoral horn unit

H550



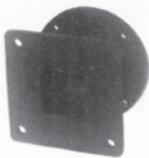
■ A sectoral horn unit cast out of light alloy, with a cutoff frequency of 600 Hz.



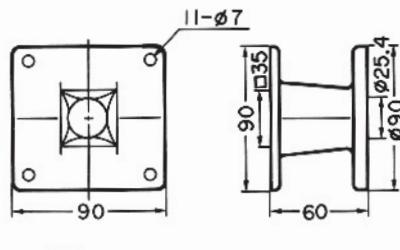
Specifications

- Throat diameter 25.4mm
- Cutoff frequency 600Hz
- Horizontal radiation angle 120°
- Material Aluminum
- Total weight 1.6kg

1" throat
HA20



- Aluminium throat with an internal diameter of 25.4 mm.

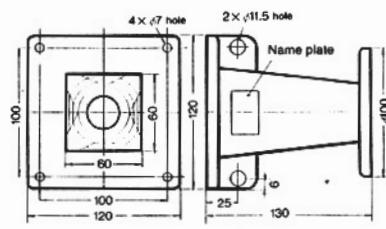


Unit: mm

1" throat
HA21



- The throat, made of light alloy, connects the driver and horn units. The throat diameter is 25.4 mm.

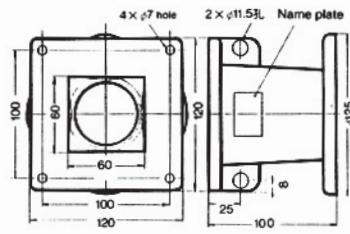


Unit: mm

2" throat
HA51



- Made of aluminium. The throat diameter is 50 mm.



Unit: mm

Specifications

- Throat diameter 25.4mm
- Material Aluminum
- Total weight 380g

Specifications

- Throat diameter 25.4mm
- Material Aluminum
- Total weight 1kg

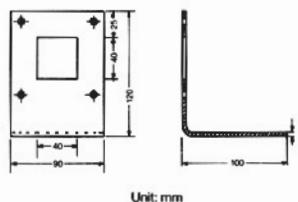
Specifications

- Throat diameter 50mm
- Material Aluminum
- Total weight 1.1kg

Mounting device
HW20



- L-angle piece for mounting of H425/325.

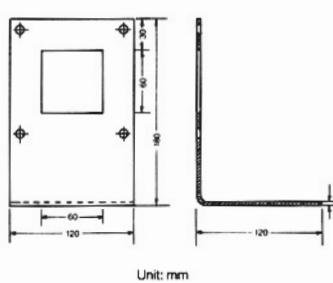


Unit: mm

Mounting device
HW50



- L-angle piece for mounting of H220.



Unit: mm

HA Series

Specifications

- Throat diameter 25.4mm
- Material Aluminum
- Total weight 380g

Specifications

- Throat diameter 25.4mm
- Material Aluminum
- Total weight 1kg

Specifications

- Throat diameter 50mm
- Material Aluminum
- Total weight 1.1kg

Thiele-Small Parameters

	FE 206 Σ	RW 162	RW 202	RW 252	RW 302	FP 163	FP 203	FP 253N	FW 100	FW 120	FW 160	FW 180	FW 200	FW 220	FW 250	FW 305	FW 405	FW 407	FW 505	FW 362	FW 467	FW 469	FW 470	L 569	L 470	TC 130	TC 170	TC 200	SC 200	
Free-Air Resonance Frequency	F _S (Hz)	45	40	30	27	25	55	40	37	45	53	30	33	25	29	23	25	20	19	20	35	40	30	25	30	40	32	27	29	
DC Resistance of Voice Coil	Re (Ω)	13.5	6.8	6.3	6.7	7.0	7.2	7.2	3.5	6.8	3.2	6.5	6.5	6.6	6.6	6.8	6.8	6.8	7.5	6.8	6.8	6.8	6.8	6.8	6+6	6+6	6.9			
Electro-Magnetic Q at ts	Qes	0.22	0.38	0.32	0.30	0.25	0.26	0.28	0.45	0.32	0.34	0.23	0.41	0.20	0.20	0.23	0.34	0.41	0.29	0.43	0.22	0.34	0.28	0.21	0.30	0.24	0.25	0.29	0.41	
Mechanical Q at ts	Qms	3.2	4.7	7.91	4.89	10.91	8.94	8.58	9.03	12.8	10.95	4.72	7.74	7.3	8.12	9.5	3.8	5.1	11.8	6.7	5.2	11.0	8.2	5.9	4.2	1.65	1.6	4.19	3.63	
Total Q at ts	$\frac{QES \times QMS}{QES + QMS}$	Qts	0.2	0.35	0.30	0.28	0.25	0.25	0.27	0.73	0.31	0.33	0.22	0.39	0.19	0.19	0.22	0.31	0.38	0.28	0.4	0.21	0.35	0.27	0.21	0.28	0.22	0.21	0.27	0.37
Volume of Air Having Same Acoustic Compliance as Driver Suspension	Vas (l)	64	21	49	150	233	30	81	141	6.2	7.7	34	51.8	88	76	150	290	564	715	860	153	245	259	457	560	13	30	97.2	126.6	
Effective Diaphragm Area	SD(m ²)	0.021	0.128	0.206	0.343	0.463	0.013	0.021	0.033	0.005	0.067	0.013	0.201	0.021	0.284	0.035	0.053	0.089	0.089	0.13	0.054	0.089	0.089	0.089	0.137	0.137	0.214	0.214		
Peak Linear Displacement of Diaphragm	Xmax mm	1.5	1.55	3.65	3.5	3.5	0.7	2.0	1.9	3.5	2.8	5.8	6.2	6.0	4.8	4.5	9.4	4.3	4.3	8.5	4.2	4.2	4.0	4.2	4.0	5.0	5.0	6.0	6.5	6.0
Peak Displacement Volume of Diaphragm (SD X MAX)	V _d (cm ³)	30.9	19.9	75.2	120	162	9.3	4.2	6.3	17.5	18.3	75.4	123.7	126	134.7	158	500	384	384	1100	224	374	356	374	510	-	-	-	-	
Half-Space Reference Efficiency	%	2.8	0.44	0.61	0.81	1.32	1.25	2.0	0.16	0.32	0.32	0.43	0.79	0.91	1.0	2.0	1.06	2.5	4	6	3.5	5	5	0.3	0.4	0.64	0.73			
Thermally Limited Maximum Input Power	Pe(W)	80	60	60	90	100	80	100	120	50	80	100	100	120	100	125	200	200	300	300	300	400	300	500	80	100	120	120		

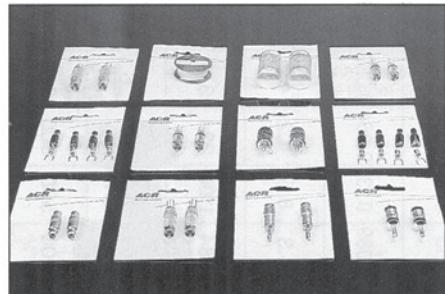
ACR Accessories – Attention to Detail

Besides loudspeakers of all kinds, ACR carries a wide range of useful accessories at competitive prices. ACR also offers numerous enclosure-kits for loudspeakers.

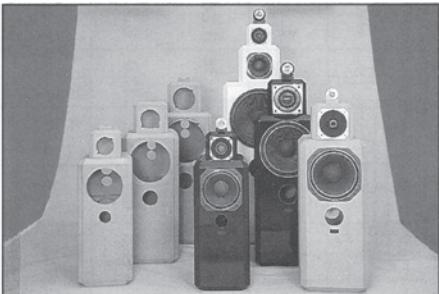
ACR-cabinets are available in MDF raw (a high-density wood type material) completely assembled, in egg-shell finishes of any colour, in piano varnish, or almost any other veneer and, of course, there are our complete speaker-kits.

Plugs, speaker-terminals, baffle-fasteners, L-pads are available prepacked, as are coils, cement-resistors and universal PCB's. For our speaker-kits we sell complete frequency-crossover-kits with cable assembly, screws, allen keys, assembly instructions, duct pipe, speaker-terminals and L-pads.

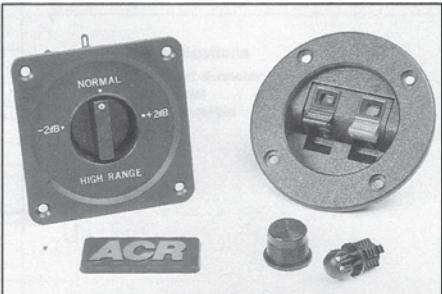
Also famous are the highly flexible **ACR-loudspeaker cables** which come in 1,5 mm², 2,5 mm², 4 mm², 6 mm² and 10 mm² thickness. Ask for our special catalogs on accessories and/or our full colour catalogs on our loudspeaker-kits.



ACR-accessories, plugs



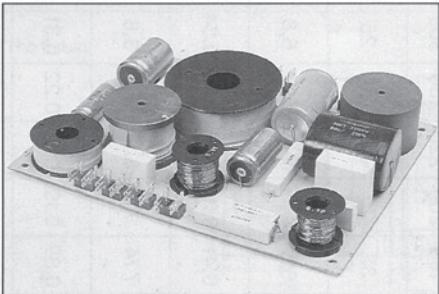
ACR speaker cabinets (e. g. ACR-Cubicline)



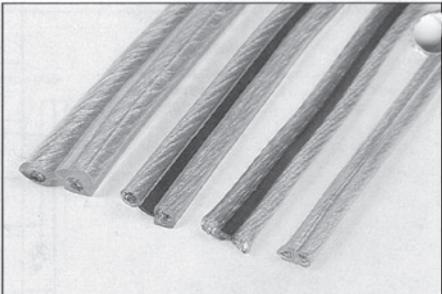
Speaker-terminals, baffle-fasteners, L-pads



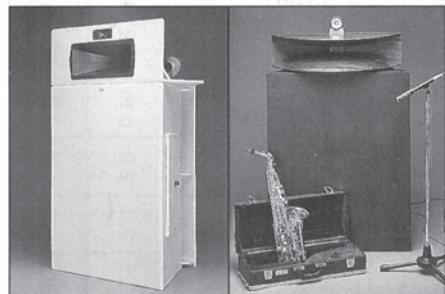
coils, cement-resistors, capacitors, universal PCB's



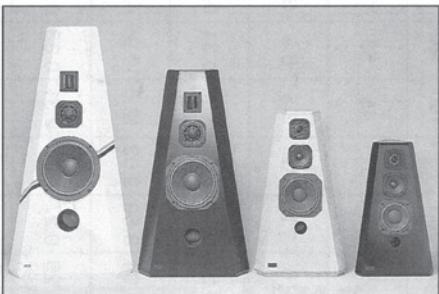
ACR frequency-crossovers



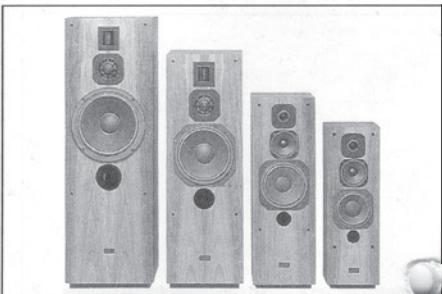
ACR-loudspeaker cables



ACR-Eckhorn



ACR-Newline



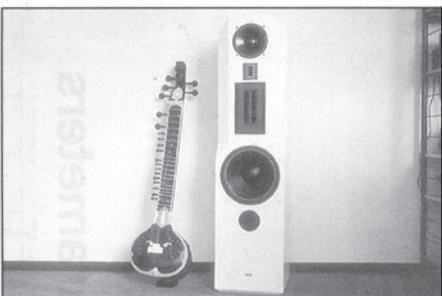
ACR-Skyline



ACR-Technoline



ACR-Piccolo/Pan/Cello/Cembalo



ACR-Isostatic