



User manual

CW110F

CW112F

CW112C



Please read this manual carefully before attempting to install the product

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Introduction

Thank you for purchasing a product from Mach Speakers A/S. Every effort has been made to ensure that our products meet your requirements and we sincerely hope that we will live up to your expectations.

To get the most out of your Mach speakers and ensure an easy and trouble-free installation please read the manual carefully and follow the instructions.

If you have any additional questions or comments please do not hesitate to contact our headquarters in Denmark at the following address:

Mach Speakers A/S
Perspektivvej 2
DK-9900 Frederikshavn
Denmark
Tel: +45 72150852

<http://www.mach.dk>

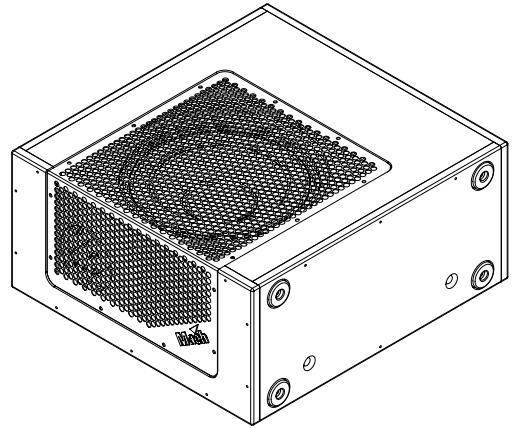
Or send an e-mail to: machservice&support@martin.dk

CW Subwoofer series

The CW subwoofers have been designed to complement the CI range of speakers. The cabinets have been shaped to achieve an attractive appearance as well as easy mounting and positioning. All C-range products are constructed for heavy-duty use in professional environments. Details regarding the subwoofers are listed below.

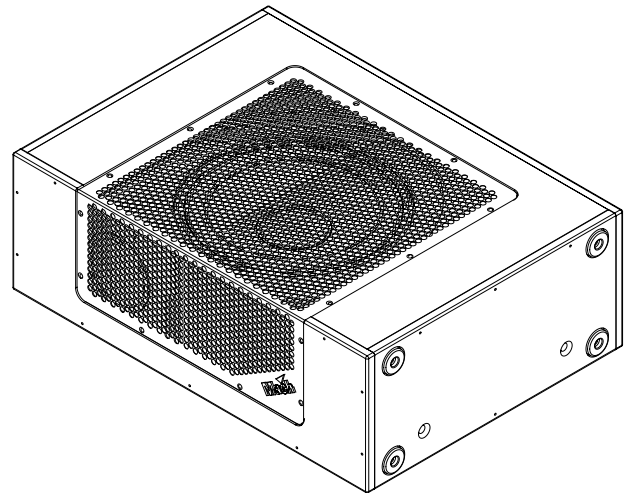
CW110F

The CW110F subwoofer combines easy installation and deep bass output due to the unique design. It can be placed upright or flat against walls or under a couch. The subwoofer has 10 integrated flying points allowing for multiple flying options on a wall or against the ceiling. The subwoofer has a 10" double voice coil drive unit which allows a stereo signal to be applied to the terminals. The built-in crossover makes it a perfect solution in combination with the Ci4 and Ci6 speakers.



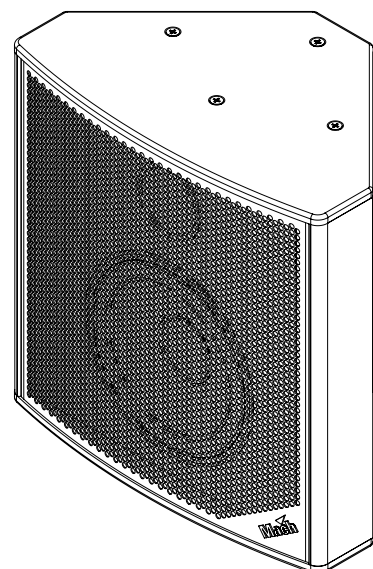
CW112F

The CW112F subwoofer combines easy installation and deep bass output due to the unique design. It can be placed upright or flat against walls or under a couch. The subwoofer has 10 integrated flying points allowing for multiple flying options on a wall or against the ceiling. The subwoofer has a 12" double voice coil drive unit which allows a stereo signal to be applied to the terminals. The built-in crossover makes it a perfect solution in combination with the Ci speakers.



CW112C

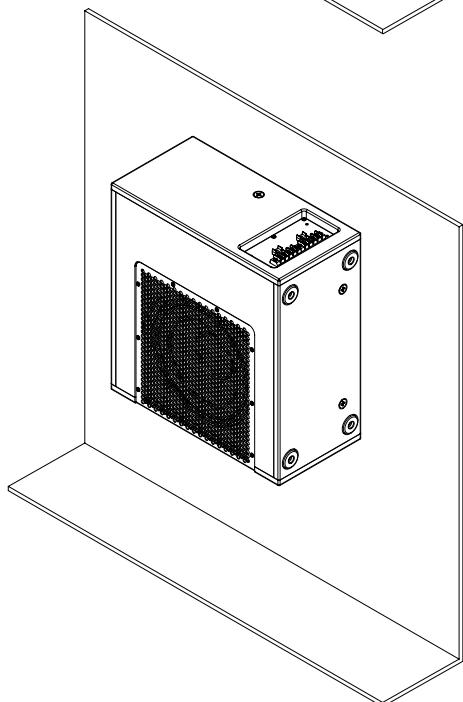
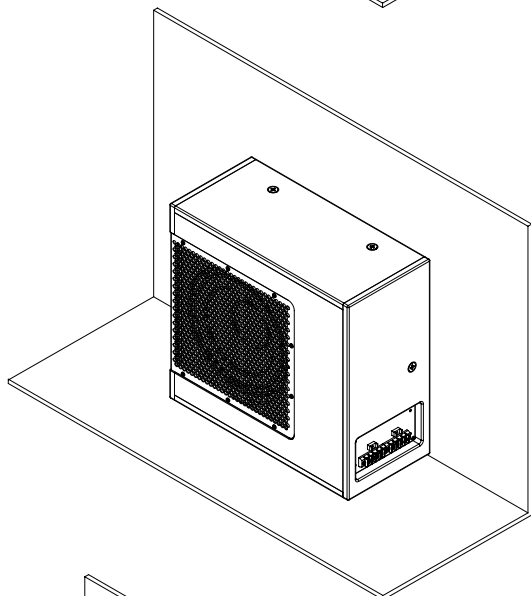
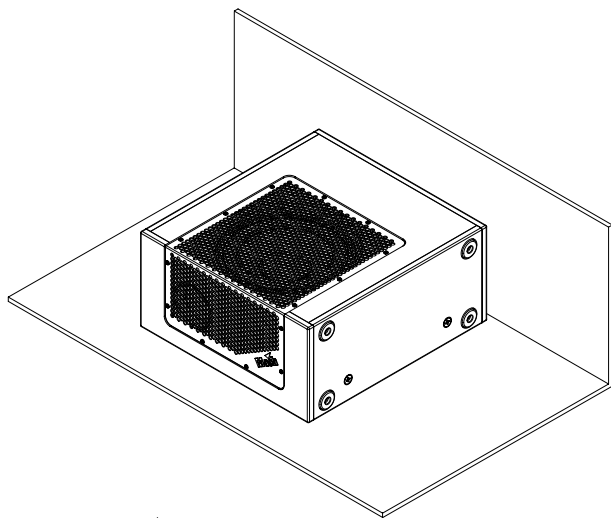
The CW112C subwoofer combines easy installation and deep bass output due to the unique design. The subwoofer is designed to be placed in a corner or mounted on a standard ceiling. The subwoofer has 12 integrated flying points allowing for further flexibility when mounting the subwoofer on a wall or against the ceiling. The CW112C has a 12" double voice coil drive unit which allows a stereo signal to be applied to the terminals. The built-in crossover makes it a perfect solution in combination with the Ci speakers.



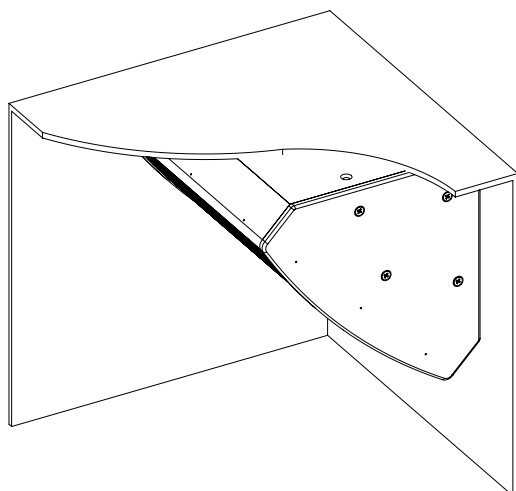
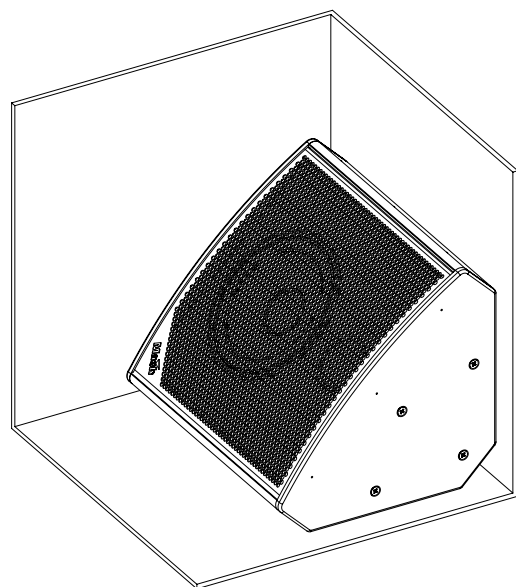
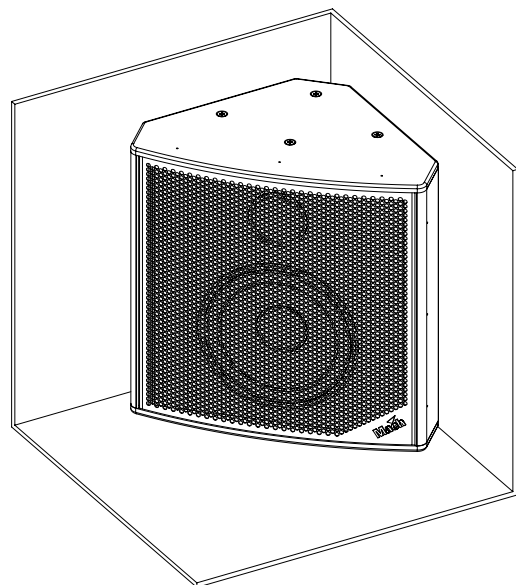
Placement options

The subwoofers can be mounted in almost any position depending on the model.

CW110F-112F



CW112C

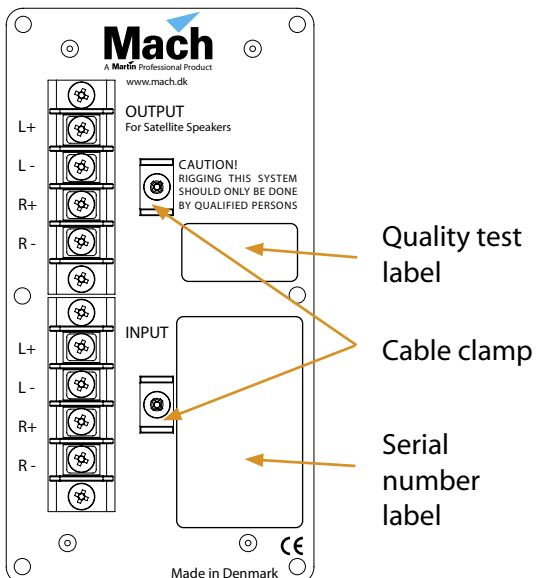


Sub terminal

Stereo input/output terminal with screw connectors.

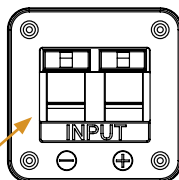
Input from amplifier
Left +/- . Right +/-

Output for satellite speakers.
Left +/- . Right +/-

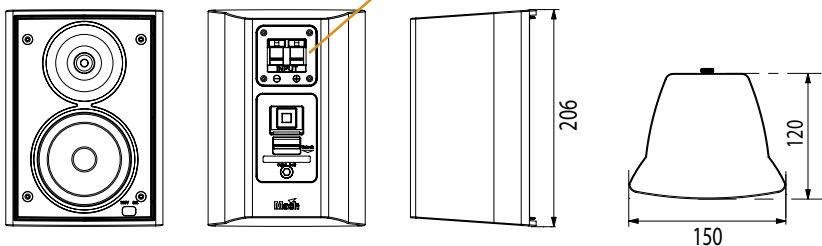


The CI series terminal

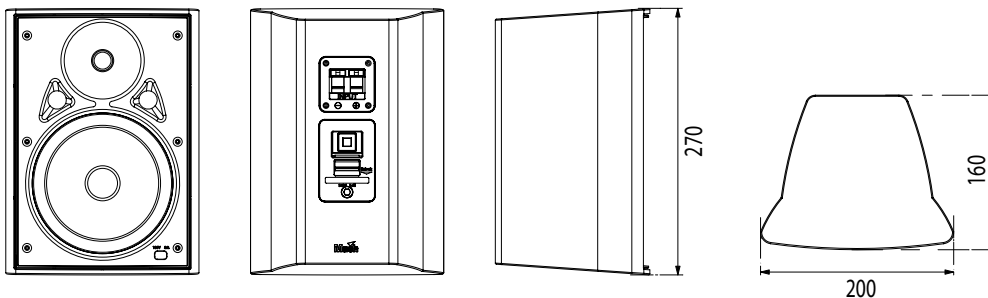
Red (+) Black (-) Input push connectors.



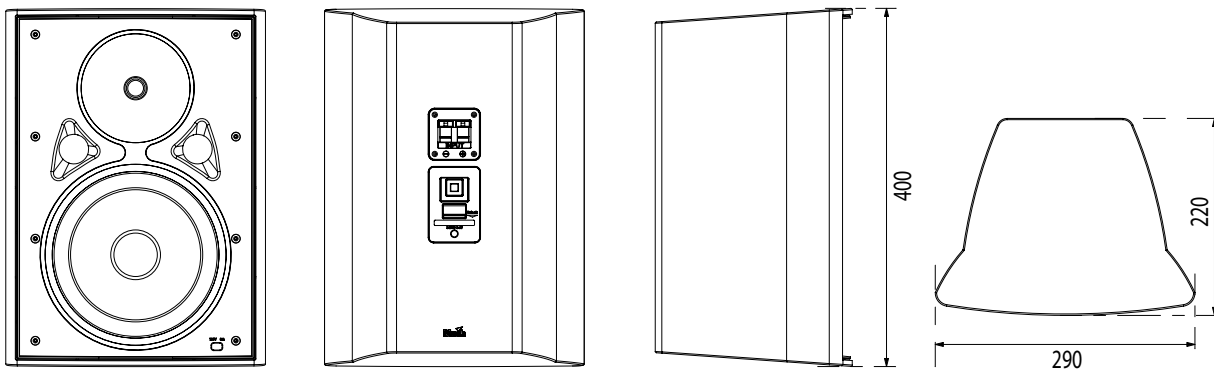
CI4



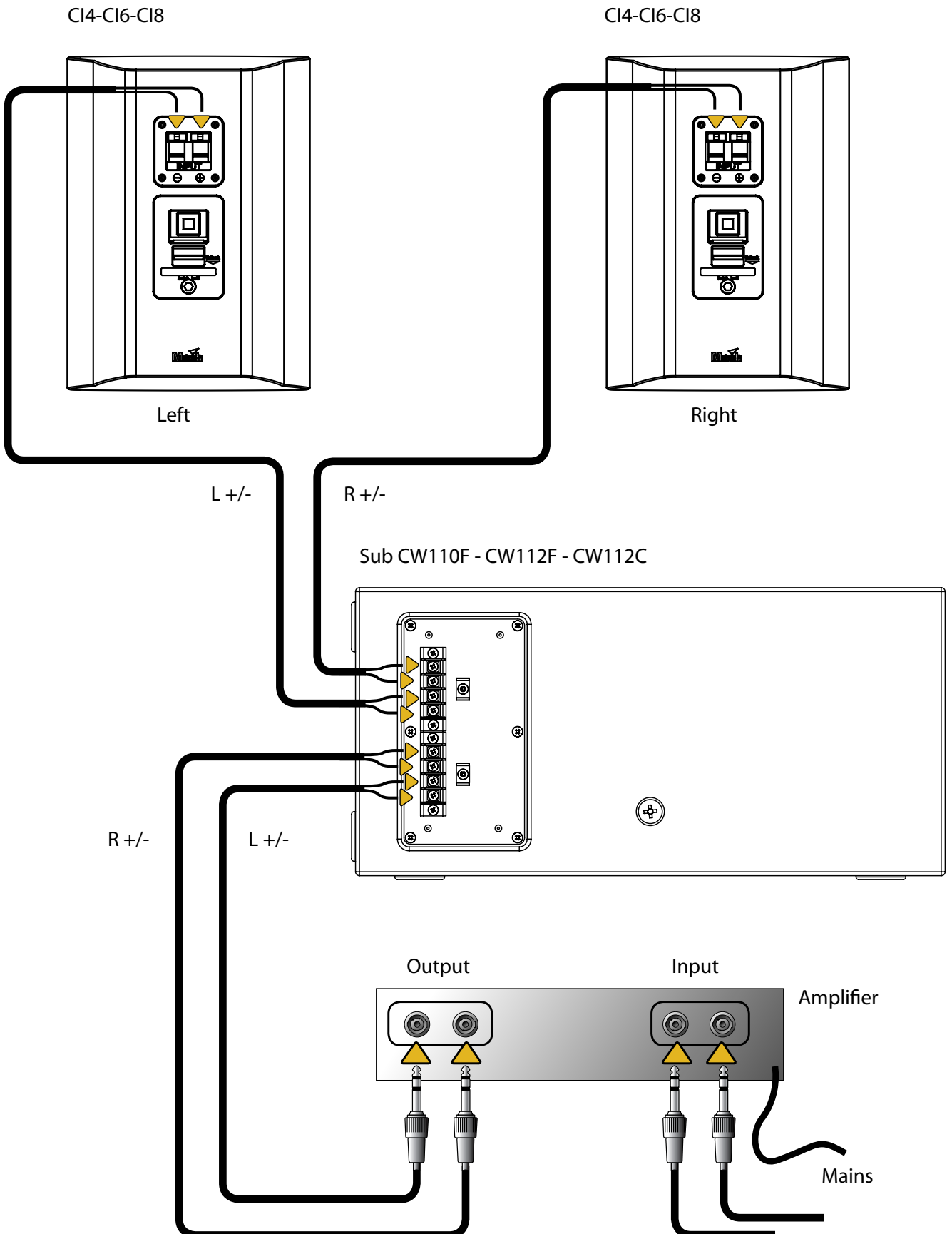
CI6



CI8



Connecting the sub to the speakers



Painting the subwoofer

The C-range cabinets are made of MDF coated with Mach Safecoat and can easily be painted to match the color scheme of your venue.

To paint your speaker please follow the procedure below:

1. Remove the front grille
2. Degrease the cabinet on all surfaces with denatured alcohol/methylated spirit
Warning: Use of other types of cleaning chemicals can damage the cabinet and should be avoided
3. Mask all areas that should remain unpainted (tweeter, woofer, switch, terminals, reflex port etc)
4. Paint the speaker with Etching primer 2K, P565-713, chromate-free, or a similar product
5. Let the primer dry
6. Apply paint in thin layers using a paint spraying device
7. When spraying the grille be very careful not to fill any holes, as this will have a serious impact on sound quality
8. Let the paint dry
9. Remove masking
10. Put the grille back in place

Maintenance of the subwoofer

Although subwoofer systems normally only require very limited maintenance there are several things you can do to ensure that your Mach system sounds as good 3 years after installation as on the day you bought it:

Never overload your system – stay within the specified limits for power handling.

Always keep the speaker clean and dry.

As with any electrical product, currents will accelerate corrosion of metal surfaces. Therefore, it is recommended to check the terminals for corrosion at regular intervals, especially if the speaker is mounted in a hostile environment.

How to remove the grille

Remove the screws in the grille and pull the grille out. When replacing the grille do not over-tighten the screws.

How to change the woofer

Remove the grille, then remove the screws in the woofer and pull them out. Carefully disconnect the wires and connect them to the new transducers, tighten the screws and refit the grille.

How to remove the terminal module

Loosen the six screws and pull the terminal out. Note the positions of the wires, then carefully disconnect the wires from the transducers.

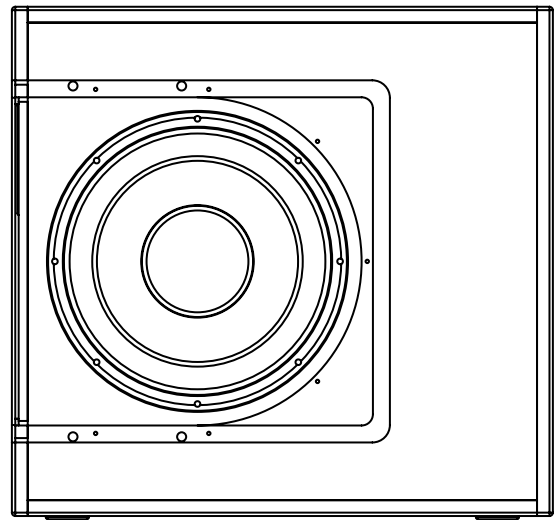
How to change the crossover

Remove the terminal, note the position of the wires then carefully disconnect the wires from the transducers. Loosen the two screws on each Speakon socket, undo the four screws from the crossover and remove the crossover from the terminal.

Technical information

CW110F

Featuring 10 integrated flying points, the CW110F subwoofer combines versatile and easy installation with a deep bass output. The compact design makes it possible to place the sub upright, flat against walls or under a couch and the built-in crossover makes it a perfect solution in combination with the Ci speakers. The CW110F in the C-range speaker series from MACH powerfully projects every nuance of pure sound in any environment you choose.



- Easy installation
- Built-in crossover for satellite speakers
- Optimized for use with Mach Ci series
- Compact size
- 10 Flying points

SPECIFICATIONS:

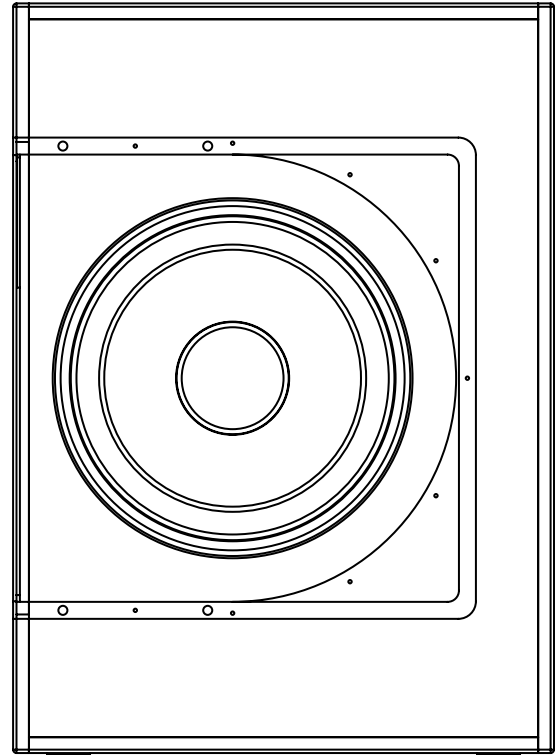
Power rating IEC268: 100W per voice coil
Total system: 200W
Power rating peak: 400W. Total system: 800W
Sensitivity 1W/1m avg: 93dB
Frequency range +/- 3dB: 40 – 150Hz
Nominal impedance: 8 ohm per voice coil
Recommended amplifier: For each side: one voice coil and one Ci6=225W in 4 ohm run through built-in crossover
Max SPL calculated long term: 113dB
Max SPL, peak: 119dB

WEIGHT & MEASUREMENTS:

Dimensions (H x W x D): 220 x 450 x 475mm
(8.6 x 17.7 x 18.7 in)
Net weight: 17 kg (37lbs)
Flying system: Eyebolts, mounting brackets
Finish: 19mm MDF with black SafeCoat
Grille: 2mm steel with foam backing
Input connectors: Barrier strips input and output for satellite speakers
Rigging hardware: Eyebolt part no. 93940002,
Mounting bracket part no. 26020380

CW112F

Featuring 10 integrated flying points, the CW112F subwoofer combines versatile and easy installation with a deep bass output. The compact design makes it possible to place the sub upright, flat against walls or under a couch and the built-in crossover makes it a perfect solution in combination with the Ci speakers. The CW112F in the C-range speaker series from MACH powerfully projects every nuance of pure sound in any environment you choose.



- Easy installation
- Built-in crossover for satellite speakers
- Optimized for use with Mach Ci series
- Compact size
- 10 Flying points

SPECIFICATIONS:

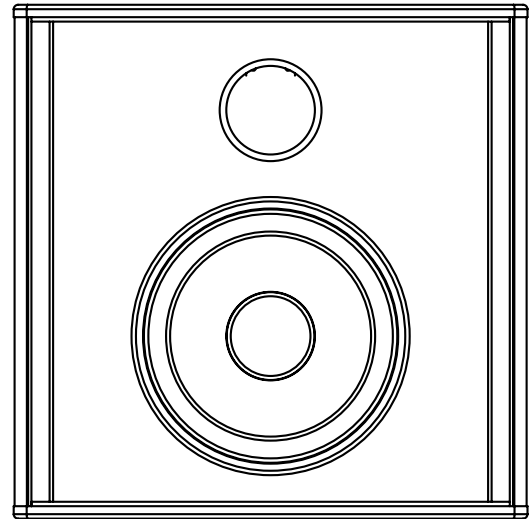
Power rating IEC268: 150W per voice coil
Total system: 300W
Power rating peak: 600W. Total system: 1200W
Sensitivity 1W/1m avg: 95dB
Frequency range +/- 3dB: 38 – 150Hz
Nominal impedance: 8 ohm per voice coil
Recommended amplifier: For each side: one voice coil and one Ci8=390W in 4 ohm run through built-in crossover
Max SPL calculated long term: 117 dB
Max SPL, peak: 123dB

WEIGHT & MEASUREMENTS:

Dimensions (H x W x D): 220 x 665 x 475mm
(8.6 x 26.2 x 18.7 in)
Net weight: 20kg (44 lbs)
Flying system: Eyebolts, mounting brackets
Finish: 19mm MDF with black SafeCoat
Grille: 2mm steel with foam backing
Input connectors: Barrier strips input and output for satellite speakers
Rigging hardware: Eyebolt part no. 93940002,
Mounting bracket part no. 26020380

CW112C

Featuring 12 integrated flying points, the CW112C subwoofer combines versatile and easy installation with a deep bass output. The subwoofer is designed to be placed in a corner or mounted on a standard ceiling and the built-in crossover makes it a perfect solution in combination with the Ci speakers. The CW112C in the C-range speaker series from MACH powerfully projects every nuance of pure sound in any environment you choose.



- Easy installation
- Built-in crossover for satellite speakers
- Optimized for use with Mach Ci series
- Possible corner placement
- 12 Flying points

SPECIFICATIONS:

Power rating IEC268: 150W per voice coil
Total system m: 300W
Power rating Peak: 600W. Total system: 1200W
Sensitivity 1W/1m avg: 95dB
Frequency range +/- 3dB: 35 – 150Hz
Nominal impedance: 8 ohm per voice coil
Recommended amplifier: For each side: one voice coil and one Ci8=390W in 4 ohm run through built-in crossover
Max SPL calculated long term: 117 dB
Max SPL, Peak: 123dB

WEIGHT & MEASUREMENTS:

Dimensions (H x W x D): 580 x 580 x 365mm
(22.8 x 22.8 x 14.4 in)
Net weight: 23kg (51 lbs)
Flying system: Eyebolts, mounting brackets
Finish: 19mm MDF with black SafeCoat.
Grille: 2mm steel with foam backing.
Input connectors: Barrier strips input and output
for satellite speakers
Rigging hardware: Eyebolt part no. 93940002

Declaration of conformity

Manufacturer: MACH Speaker A/S
Perspektivvej 2
9900 Frederikshavn
Denmark

We, MACH Speakers A/S, declare under our responsibility that the following product(s)

Product: CW110F/CW112F/CW112C
Type: Subwoofer

Are in conformity with:

- COUNCIL DIRECTIVE of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (89/336/EEC)

Was manufactured in conformity with the following national standards that implements a harmonized standard:

EN 55013

Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment.

Michael Holmbo Michael Holmbo

Date: 04 October 2004

Warranty

For information on the warranty conditions specific for your country please refer to the material handed to you by your local Mach distributor.

Ordering spare parts

In the unlikely event of your speaker breaking down some of the components can be ordered as spare parts.

For information on how to order in your country please contact your local supplier or contact the head office in Denmark at the following address:

Mach Speakers A/S
Perspektivvej 2
DK-9900 Frederikshavn
Denmark
Tel: +45 72150852

Or send an e-mail to: machservice&support@martin.dk

Ci range overview

A perfect complement to the C-range in most retail and club environments is the Mach Ci series. All Mach Ci in-fill speakers have wide, even dispersion that ensures good coverage in low ceiling applications.

Ci 4

Specifications:

Power rating IEC268	50 watt
Power rating peak	200 watt
Recommended amplifier	70 watt
Freq. Range +/-3dB	120Hz-20KHz
Freq. Range +/-10dB	80Hz-20KHz
Sensitivity 1W/1m	87dB
Nominal impedance	8 ohm
Woofers	4"
Tweeter	3/4"
Dispersion	Ø90°
Flying system	TF bracket, Aux mounting bracket
Dimensions (H x W x D)	207x150x120mm (8.15x5.91x4.72in)
Net weight	1.8 Kg (4 lbs)



Ci 6

Specifications:

Power rating IEC268	65 watt
Power rating peak	260 watt
Recommended amplifier	100 watt
Freq. Range +/-3dB	90Hz-20KHz
Freq. Range +/-10dB	70Hz-20KHz
Sensitivity 1W/1m	89dB
Nominal impedance	8 ohm
Woofers	6.5"
Tweeter	3/4"
Dispersion	Ø90°
Flying system	TF bracket, Aux mounting bracket
Dimensions (H x W x D)	275x200x160mm (10.83x7.83x6.30in)
Net weight	2.7 Kg (5.9 lbs)



Ci 8

Specifications:

Power rating IEC268	125 watt
Power rating peak	500 watt
Recommended amplifier	175 watt
Freq. Range +/-3dB	70Hz-20KHz
Freq. Range +/-10dB	60Hz-20KHz
Sensitivity 1W/1m	93dB
Nominal impedance	8 ohm
Woofers	8"
Tweeter	1"
Dispersion	Ø90°
Flying system	TF bracket, Aux mounting bracket
Dimensions (H x W x D)	395x290x220mm (15.55x11.42x8.66in)
Net weight	5.2 Kg (11.5 lbs)



Cs range overview

The Mach Ceiling/In-wall series consist of a complete range of speakers specifically designed for mounting in ceiling or in walls. All speakers have been developed with the same strict demands on sound and build quality as the rest of the Mach range and therefore represents the optimum solution for the demanding customer. All speakers are supplied with either standard or optionally built-in 70/100v module.

Cs 5

Specifications:

Power rating IEC258	30 watt
Power rating peak	120 watt
Recommended amplifier	40 watt/100V
Freq. Range +/-3dB	80Hz-20KHz
Freq. Range +/-10dB	55Hz-20KHz
Sensitivity 1W/1m	89dB
Nominal impedance	8 ohm
Woofer	5"
Tweeter	3/4"
Dispersion	Ø90°
Flying system	Built-in mounting system
Dimensions (H x Ø)	140 x 215mm (5.51 x Ø8.46in)
Net weight	1.5 Kg (3.3 lbs)



Cs 6

Specifications:

Power rating IEC258	45 watt
Power rating peak	180 watt
Recommended amplifier	65 watt/100V
Freq. Range +/-3dB	60Hz-20KHz
Freq. Range +/-10dB	45Hz-20KHz
Sensitivity 1W/1m	89dB
Nominal impedance	8 ohm
Woofer	6.5"
Tweeter	3/4"
Dispersion	Ø90°
Flying system	Built-in mounting system
Dimensions (H x Ø)	170 x 240mm (6.69 x Ø9.45in)
Net weight	2 Kg (4.4 lbs)



Cs 8

Specifications:

Power rating IEC258	55 watt
Power rating peak	220 watt
Recommended amplifier	85 watt/100V
Freq. Range +/-3dB	55Hz-20KHz
Freq. Range +/-10dB	40Hz-20KHz
Sensitivity 1W/1m	91dB
Nominal impedance	8 ohm
Woofer	8"
Tweeter	1"
Dispersion	Ø90°
Flying system	Built-in mounting system
Dimensions (H x Ø)	210x280mm (8.27x11.02in)
Net weight	2.8 Kg (6.2 lbs)



Miw range overview



Miw 66

Specifications:

Power rating IEC268	50 watt
Power rating peak	200 watt
Recommended amplifier	70 watt/100V
Freq. Range +/-3dB	80Hz-20KHz
Freq. Range +/-10dB	70Hz-20KHz
Sensitivity 1W/1m	88dB
Nominal impedance	8 ohm
Woofer	6.5"
Tweeter	1"
Dispersion	90° x 90°
Flying system	Built-in mounting system
Dimensions (H x W x D)	187 x 230 x 127mm (7.4 x 10.6 x 5in)
Net weight	1.5 Kg (3.3 lbs)



Miw 62

Specifications:

Power rating IEC268	50 watt
Power rating peak	200 watt
Recommended amplifier	70 watt
Freq. Range +/-3dB	80Hz-20KHz
Freq. Range +/-10dB	70Hz-20KHz
Sensitivity 1W/1m	88dB
Nominal impedance	8 ohm
Woofer	6.5"
Tweeter	1"
Dispersion	90° x 90°
Flying system	Built-in mounting system
Dimensions (H x W x D)	310 x 220 x 90mm (12.2 x 8.7 x 3.5in)
Net weight	3 Kg (6.6 lbs)

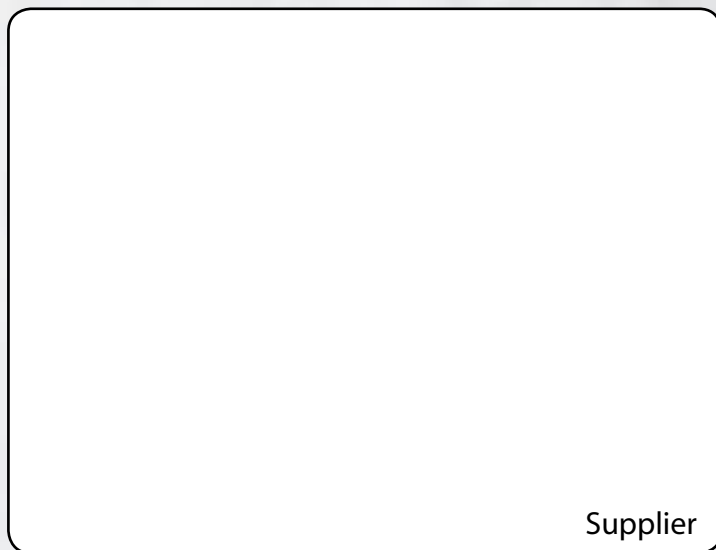


Miw 62-100V

Specifications:

Power rating IEC268	50 watt
Power rating peak	200 watt
Recommended amplifier	70 watt 100V
Freq. Range +/-3dB	80Hz-20KHz
Freq. Range +/-10dB	70Hz-20KHz
Sensitivity 1W/1m	88dB
Nominal impedance	8 ohm
Woofer	6.5"
Tweeter	1"
Dispersion	90° x 90°
Flying system	Built-in mounting system
Dimensions (H x W x D)	310 x 220 x 90mm (12.2 x 8.7 x 3.5in)
Net weight	3.4 Kg (7.5 lbs)





Supplier

Mach Speakers A/S

www.mach.dk