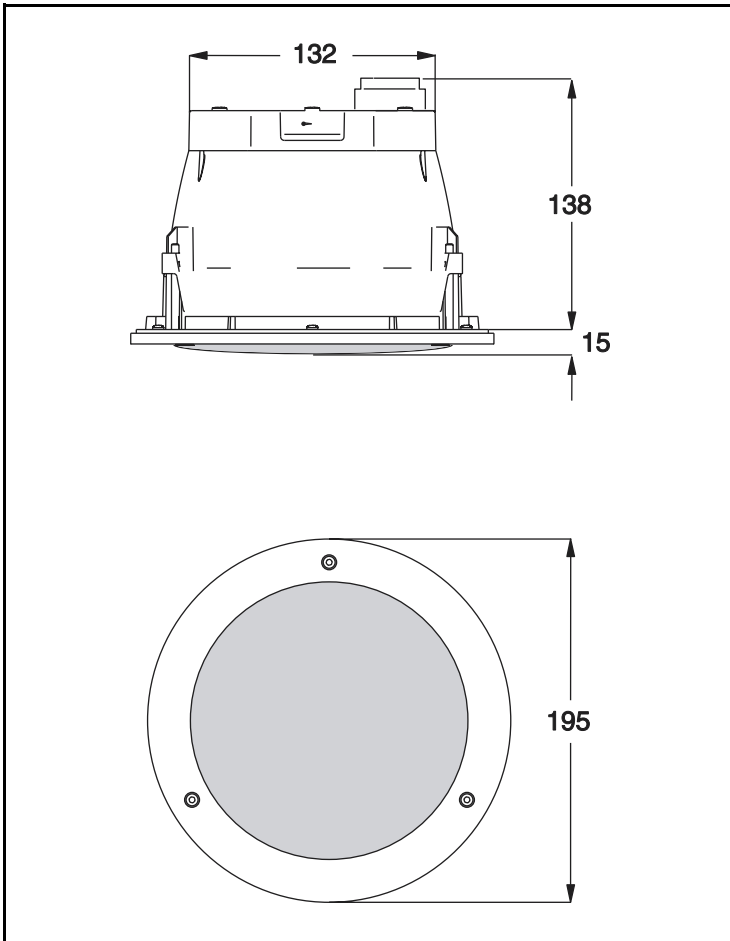


# Alien 51S

user manual



**Mach**



© 2002 Martin Professional A/S, Denmark.

All rights reserved. No part of this manual may be reproduced, in any form or by any means, without permission in writing from Martin Professional A/S, Denmark.

Printed in Denmark.

P/N 35020003, Rev C

<b>Introduction</b> .....	<b>4</b>
Features .....	4
Safety information .....	4
<b>Installation</b> .....	<b>6</b>
Fixture location .....	6
Connections .....	6
Operation with a ViroSound sub woofer .....	7
Installation .....	7
Removing the Alien 51S .....	8
<b>Tweeter protection</b> .....	<b>9</b>
<b>Specifications</b> .....	<b>10</b>

# INTRODUCTION

Thank you for selecting the Mach Alien 51S. The Alien 51S is a compact and high performance recessed speaker designed especially for the ceilings or walls of venues where professional high quality in-fill sound is required.

The acoustic design of the Alien 51S combines a very compact size and true hi-fi performance with a strong emphasis on good speech intelligibility. As the frequency content of background noise in many venues is typically located in the mid frequency area, strong emphasis has been put on clarity and openness in this frequency area.

Alien 51Ss can be supported either by the Mach ViroSub sub-woofer or by the bass output from a main PA in the installation.

The Alien 51S has a very wide and even dispersion that ensures good coverage in low-ceiling applications.

## FEATURES

---

- 5" woofer with coaxial ¾" neodymium tweeter
- Built in 100V module, enabling operation with a standard amplifier or a 70-100 V amplifier (which can drive up to 80 Alien 51Ss)
- Tweeter thermal protection circuit
- 110x110 degree dispersion
- UV stable cabinet and drive unit materials
- High Quality European drive units

## SAFETY INFORMATION

---

**Read this manual** before powering or installing the fixture, follow the safety precautions listed below and observe all warnings in this manual and on the fixture. If you have questions about how to operate the fixture safely, please contact your Mach dealer or call the Martin Professional 24-hour service hotline at +45 70 200 201.

- Do not install the fixture outdoors.
- Do not removed the covers. There are no user-serviceable parts inside.

- When installing the fixture above ground level, verify that the structure can hold at least 10 times the weight of all installed devices.
- Block access below the work area whenever installing or removing the fixture.
- Do not modify the fixture or install other than genuine Mach parts.
- Refer all service to a Mach service technician.

This section describes in general terms how to mount the fixture and connect it to an amplifier. These procedures shall be performed by qualified professionals.

## FIXTURE LOCATION

---

The Alien 51S can be used as either a recessed ceiling fixture, or be positioned in a wall.

When calculating how many Alien 51Ss to use in a room, a rule of thumb is that correct coverage can be obtained by placing the Alien 51Ss a distance apart that corresponds to the height of the room.

Note that the Alien 51S cannot be installed into a wall or ceiling panel that is more than 20 mm (0.8 in) thick.

## CONNECTIONS

---

Always use high quality speaker cables. Poor cables will reduce the sound quality and the reliability of the amplifier and speakers.

The Alien 51S is easily connected to an amplification system through the cable terminal. For correct polarity always ensure that the positive terminal (red or +) on the amplifier is connected to the positive terminal on the speaker. Likewise, make sure that negative terminal (black or -) on the amplifier is connected to the negative terminal on the speaker.

**Note:** *If one speaker is operated in reverse polarity, the result is a strong decrease in bass output and lack of focus in the mid/high frequencies.*

# OPERATION WITH A VIRO SOUND SUB WOOFER

---

For additional sub-bass output, the Alien 51S can be supported by the ViroSound sub woofer. This sub woofer features a stereo amplifier, which enables it to power two Alien 51Ss.

Note that only one Alien 51S can be connected to each output channel.

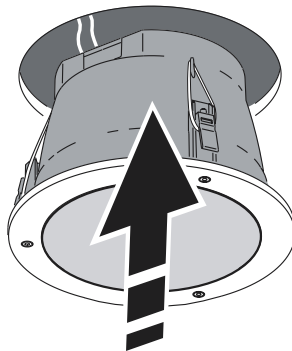
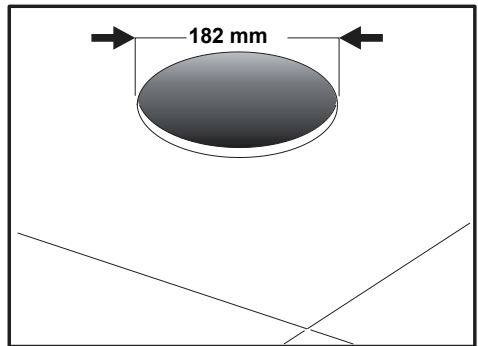
The ViroSound sub woofer can be ordered from your Mach dealer.

## INSTALLATION

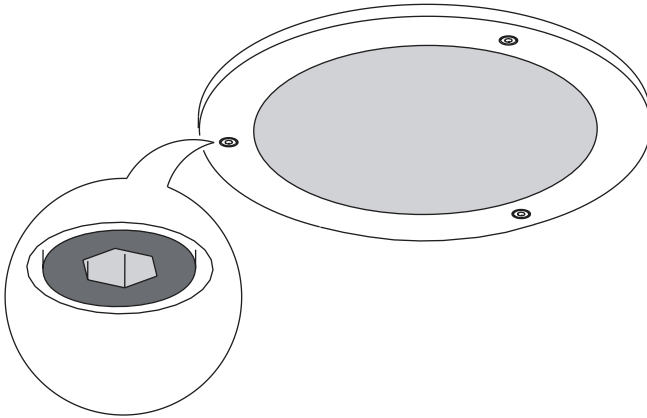
---

To install the Alien 51S:

- 1 Cut a round hole with a diameter of 182 mm (7.2 in) in the panel in which the Alien 51S is to be installed.
- 2 If the Alien 51S is being driven by a:
  - Standard amplifier, then set the switch at the top of the fixture to the 4 ohm position.
  - 100 volt amplifier, then set the switch to the 100 V position.
- 3 Run speaker leads from the amplifier to the hole and connect the speaker leads to the Alien 51S. At this point it is a good idea to turn on the amplifier and test that sound can be heard from the speaker.
- 4 Insert the Alien 51S into the mounting hole.



- 5 Using a 3 mm Allen wrench, tighten the screws to lock the fixture in place. Do not over tighten.



## REMOVING THE ALIEN 51S

---

Once installed it is not recommended that you remove the Alien 51S unless absolutely necessary.

To remove the Alien 51S:

- 1 Remove the 3 Allen screws in the mounting ring (shown in the previous section) using a 3 mm Allen wrench.
- 2 Remove the fixture from the wall/ceiling panel.

During this process, particularly if the fixture is wall mounted, you might lose one or more of the three clamp nuts (P/N 08074102) and rubber bands (P/N 34420503) that hold the fixture firmly in place when mounted. Should this occur replacement parts can be ordered from your Mach dealer.

# TWEETER PROTECTION

The tweeter in the Alien 51S is protected by a thermal protection circuit, which increases impedance when the current exceeds a safe level. This reduces current to the tweeter, thus protecting it against damage.

The audible result is a decrease in the output from the tweeter. If this happens, do not increase the high frequency level on the EQ or the tone control on the mixer, as this might cause damage to the tweeter. At this time the tweeter has reached its maximum power handling and if higher output is required, more or larger speakers are needed.

When volume is decreased and current returns to a safe level, the protection circuit automatically restores full signal to the tweeter and the audio output returns to normal.

# SPECIFICATIONS



## PHYSICAL

Diameter of fixture at widest point: . . . . . 195 mm (7.7 in)  
Depth of recessed base: . . . . . 118 mm (4.7 in)  
Weight: . . . . . 2 kg (4.4 lbs)  
Configuration: . . . . . 2-way coaxial drive unit design  
Woofers: . . . . . 127 mm (5 in)  
Tweeter: . . . . . 19 mm (0.75 in) soft dome with neodymium magnet

## INSTALLATION

Maximum thickness of ceiling/wall panel: . . . . . 20 mm (0.8 in)  
Diameter of hole required for mounting in ceiling/wall: . . . . . 182 mm (7.2 in)

## POWER

Power handling: . . . . . 50 Watt  
Frequency range: . . . . . 90 Hz - 20 kHz  
Impedance (switchable): . . . . . 4 ohm / 70-100 volts

## CONSTRUCTION

Housing: . . . . . Die cast aluminum and polyamide PA 6 (30% glass)  
Color: . . . . . Aluminum and gray  
Woofers: . . . . . 5"  
Tweeter: . . . . . 3/4" soft dome with neodymium magnet

## ORDERING INFORMATION

Alien 51S . . . . . P/N 93101007

## INCLUDED ITEMS

User manual: . . . . . P/N 35020003



The logo for Mach features the word "Mach" in a bold, black, sans-serif font. A dark green triangle is positioned above the letter 'h', pointing downwards and to the right.

**Mach**

Martin Professional A/S

Olof Palmes Allé 18, DK 8200 Århus N, Denmark

Phone: +45 8740 0000, Fax: +45 8740 0010

URL: <http://www.martin.dk>