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The Martin Experience

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Martin Audio – C516 Ceiling Loudspeaker



This equipment conforms to the requirements of the EMC Directive 89/336/EEC, amended by 92/31/EEC and 93/68/EEC and the requirements of the Low Voltage Directive 73/23/EEC, amended by 93/68/EEC.

Standards Applied	EMC Emission	EN55103-1:1996
	Immunity	EN55103-2:1996
	Electrical Safety	EN60065:1993

1 INTRODUCTION

Thank you for purchasing a Martin Audio C516 ceiling loudspeaker. This is a versatile flush-mount loudspeaker designed for high quality music and speech reproduction in distributed sound systems. It has been styled to present a discrete, high quality appearance which will blend unobtrusively into commercial and architectural environments.

It features a 6.5" (160mm) 2-way drive unit utilising patented ICT™ (Inductively Coupled Transducer) technology. This size of driver has been chosen to optimise the conflicting requirements of low frequency extension and high frequency dispersion.

The C516 is available in the following electrical configurations:

C516	4 ohm
C516T	100V line (Europe and Japan)/ 70V line (USA)

2 UNPACKING

Each C516 is built to the highest standard and thoroughly tested before it leaves the factory. After unpacking the loudspeaker, examine it carefully for any signs of transit damage and inform your dealer if any such damage is found. Check that the electrical configuration supplied (4 ohm, 70/100V line) is the one you require. It is suggested that you retain the original packaging so that the speakers can be repacked and returned if necessary.

Please note that Martin Audio and its distributors cannot accept responsibility for damage to any returned product through the use of non-approved packaging.

2.1 Contents of A 1-pack

- 1 loudspeaker baffle
- 1 back-can (complete with steel strip spring)
- 1 support bracket + wing nut

3 CEILING TYPE

Before beginning the installation, it is important to evaluate the construction of the ceiling. The type of ceiling will affect the installation procedure and method of connection. It will also determine whether optional support rails (see Section 3.1) are required. A qualified person such as a building professional, architect or qualified engineer should make these determinations.

3.1 Optional support rails

Some ceilings or ceiling tiles may not be strong enough to support the weight of the speaker without support rails. Whether a ceiling alone is strong enough to support the weight of the loudspeaker should be determined by a qualified person such as a building professional or architect. Optional support rails for the C516 are available from your dealer.

3.2 Rigid ceiling tiles

Rigid ceiling tiles will normally not require additional support rails, though these may be deemed necessary if the tiles are likely to be degraded by moisture.

3.3 Soft ceiling tiles

Soft ceiling tiles will usually require the use of additional support rails since they may not always support the weight of the loudspeaker.

3.4 Fixed ceilings

Installation of the C516 can be performed without access to the rear of the ceiling, making it also suitable for use in fixed ceilings.

3.5 Cutting the mounting hole

Cut the mounting hole in the ceiling or tile. The hole required for the C516 is 212mm(8.3") diameter. The back-can requires a clearance height of at least 160mm(6.3") from the rear surface of the ceiling.

4 INSTALLATION

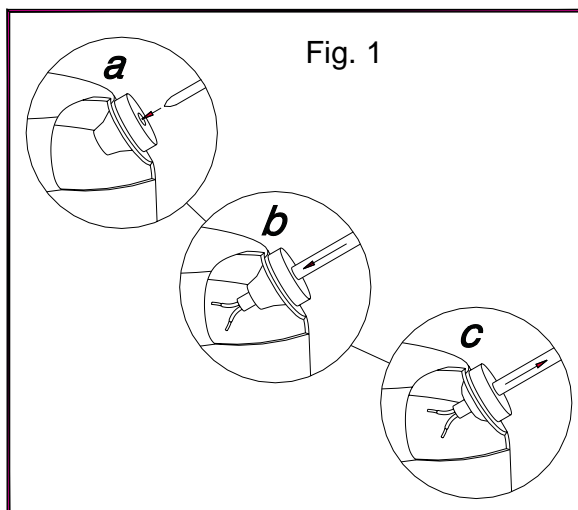
The C516 is installed in 2 stages:

First fix: Make electrical connections and install back-can in the ceiling

Second fix: Install speaker baffle

4.1 First fix

Note: The back-can of the C516 is provided with two 20mm holes. One hole is fitted with a grommet which accepts cables with diameters of 7-10mm and provides light strain relief (see Fig. 1). The other 20mm hole is fitted with a blanking plug.



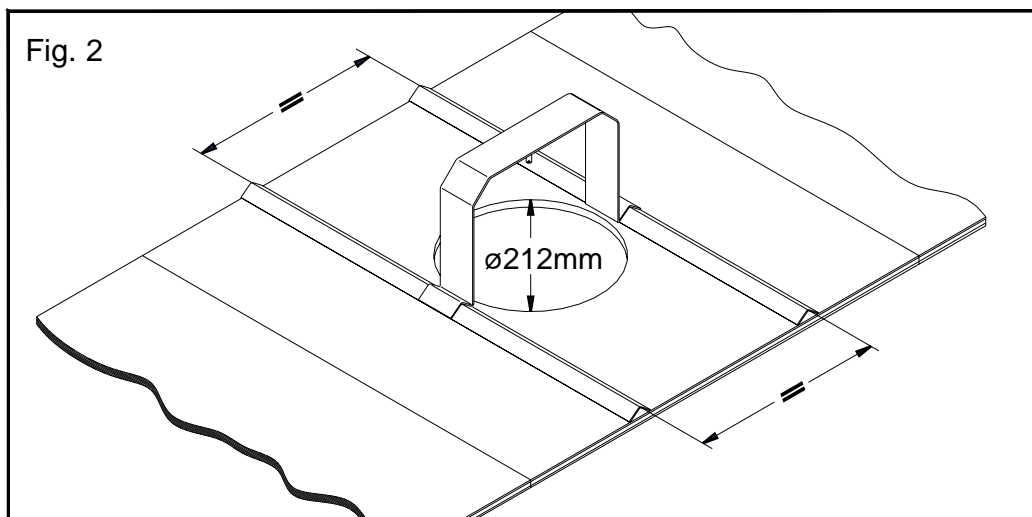
IMPORTANT

Please note that is very important for the acoustic performance of the C516 that the back-can remains airtight after installation. If the grommet and blanking plug are removed and other cable glands utilised, these should be airtight.

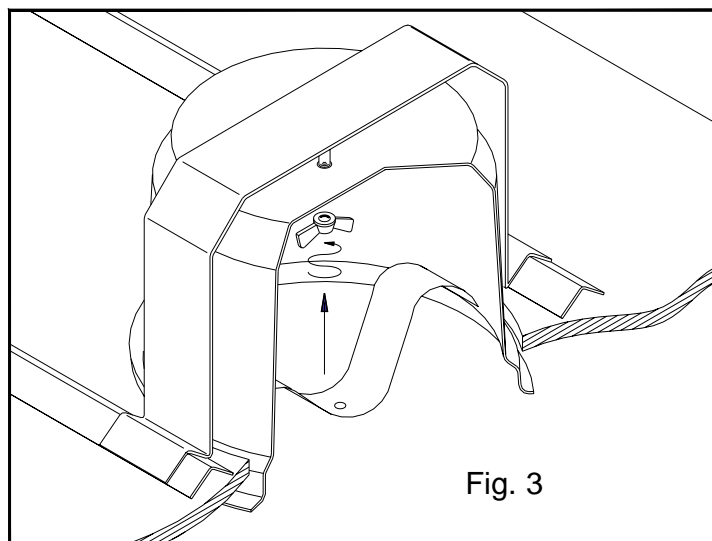
Depending on local electrical codes, flexible metallic tubing or conduit may have to be used in conjunction with metal cable glands.

1. The terminal block within the back-can will accept stripped wires. To prepare the wires for connection, strip back approximately 8mm.
2. Pull the steel strip spring in the back-can to its down position.
3. Insert the stripped wires into push-terminal block in back-can. Please note that it is important to maintain consistent polarity throughout.
4. If support rails are to be used feed them up through the ceiling cut-out and place them in parallel positions on either side of the cut-out.

- Put the support bracket through the ceiling cut-out and stand it up on the ceiling rear surface. If support rails are used, place the feet over the rails (see Fig. 2).



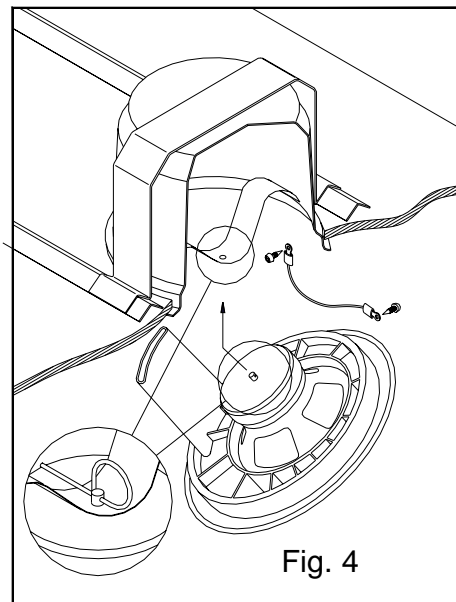
- Push the back-can up through the cut-out and locate the hole in the rear of the back-can on the stud at the centre of the support bracket (see Fig. 3).



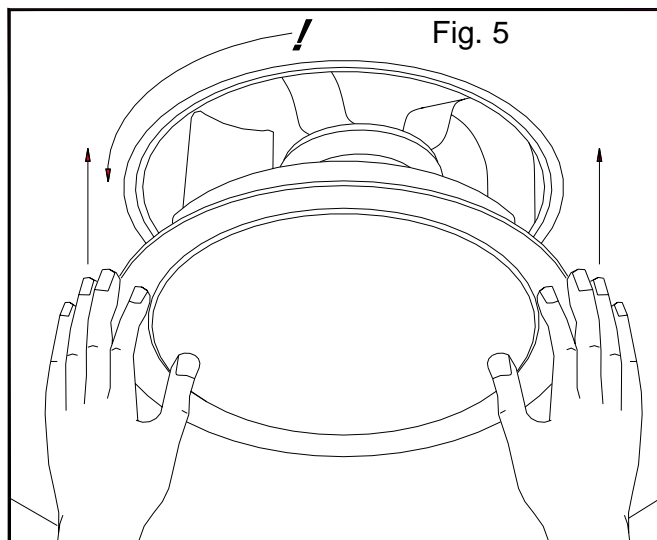
- Tighten the wing nut on the stud. This will sandwich the ceiling between the support bracket and the front lip of the can.

4.2 Second fix

1. Attach the safety wire between the back can and loudspeaker baffle with a screwdriver.
2. With the steel strip spring in its down position, insert the stud attached to the loudspeaker magnet through the hole in the strip spring (see Fig. 4).



3. Push the retaining clip through the small hole in the stud.
4. Attach the spade terminals to the loudspeaker. The brown wire should be connected to the + terminal, the blue wire to the - terminal.
5. Rotate the baffle slightly so that the port is clear of the spring and will not foul it. Gently push the baffle upwards (see Fig. 5). The spring action will draw the baffle into the can once past its initial resistance.



5 TRANSFORMER VERSIONS

'T' versions of the C516 have a transformer mounted in the back of the can. 3.7w, 7.5w, 15w, and 30w taps are available for 70v and 100v line systems. The appropriate taps may be selected by changing a spade link on the p.c.b.

The PCB mounted terminal blocks on the transformer assembly will accept stripped wires up to 2.5mm² and has a loop out, input link facility. To prepare the wires for connection, strip back approximately 8mm.

Insert the stripped wires into the terminal blocks by sliding the yellow lever towards the spade terminals. Please note that it is important to maintain consistent polarity throughout.

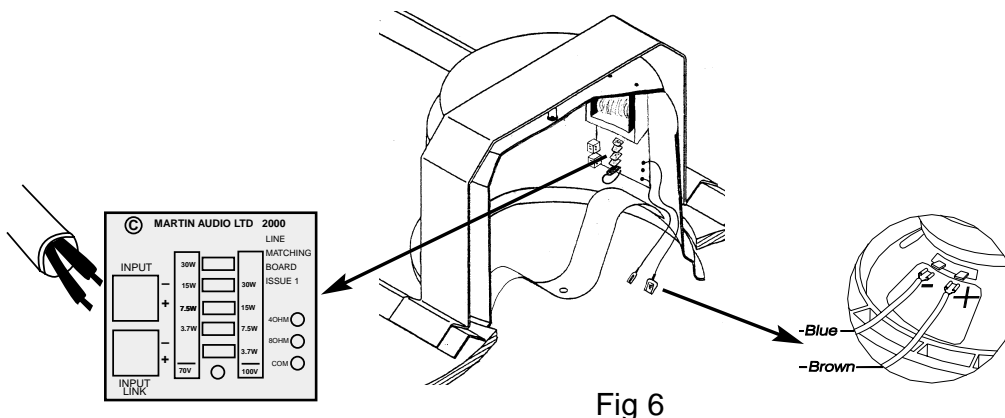


Fig 6

6 PAINTING THE LOUDSPEAKER

Both the outer rim and grille of the C516 may be painted if required and the grille can be removed to make this easier. If the grille is to be painted, it is important that a spray can is used rather than a brush, as this will tend to clog the holes. Please note that Martin Audio cannot accept responsibility for the quality of finish obtained

7 WARRANTY

Martin Audio C516 Ceiling Loudspeaker is warranted against manufacturing defects in materials or craftsmanship over a period of 5 years from the date of original purchase. During the warranty period Martin Audio will, at its discretion, either repair or replace products which prove to be defective provided that the product is returned in its original packaging, shipping prepaid, to an authorised Martin Audio service agent or distributor.

Martin Audio Ltd. cannot be held responsible for defects caused by unauthorised modifications, improper use, negligence, exposure to inclement weather conditions, act of God or accident, or any use of this product that is not in accordance with the instructions provided by Martin Audio.

Martin Audio is not liable for consequential damages.

This warranty is exclusive and no other warranty is expressed or implied. This warranty does not affect your statutory rights.

8 TECHNICAL SPECIFICATIONS

C516

TYPE	Ceiling Mounted, two-way ICT™ vented baffle
FREQUENCY RESPONSE	80Hz – 20kHz 120Hz – 20kHz ± 3dB
DRIVER	1 x 6.5" (160mm) full-range ICT™
RATED POWER	50W AES, 200W peak
RECOMMENDED AMPLIFIER	50-200W into 4 ohms
SENSITIVITY	88dB (1 watt @ 1 metre)
MAXIMUM SPL	105dB continuous, 111dB peak
IMPEDANCE	4 ohms
DISPERSION (-6dB)	90 degree conical
FINISH	Bezel & grille – white
PROTECTIVE GRILLE	Expanded metal mesh
CONNECTORS	20mm gland in backcan
OPTIONS	30w line transformer Tile support rails
DIMENSIONS	(OD) 240mm x (D) 180mm (OD) 9.6ins x (D) 7.1ins
WEIGHT C516 WEIGHT C516T	2kg (4.4lbs) 2.7kg (6lbs)
SHIPPING DIMENSIONS	(W) 300mm x (H) 200mm x (D) 300mm (W) 11.8ins x (H) 7.9ins x (D) 11.8ins
SHIPPING WEIGHT C516 SHIPPING WEIGHT C516T	2.5kg (5.5lbs) 3.2kg (7.1lbs)

Due to our policy of continuous improvement all specifications are subject to change without notice.

C516 Ceiling Loudspeaker



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Century Point, Halifax Road, Cressex Business Park, High Wycombe, Buckinghamshire HP12 3SL, England.

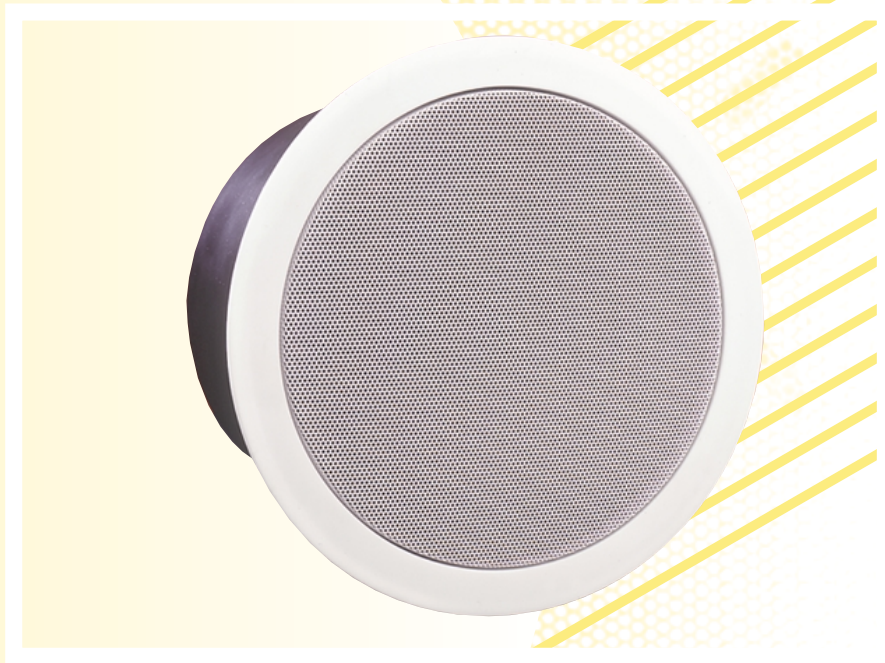
Telephone: +44 (0)1494 535312 Facsimile: +44 (0)1494 438669

Web: www.martin-audio.com E-mail: info@martin-audio.com

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User's Guide



ENGLISH



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