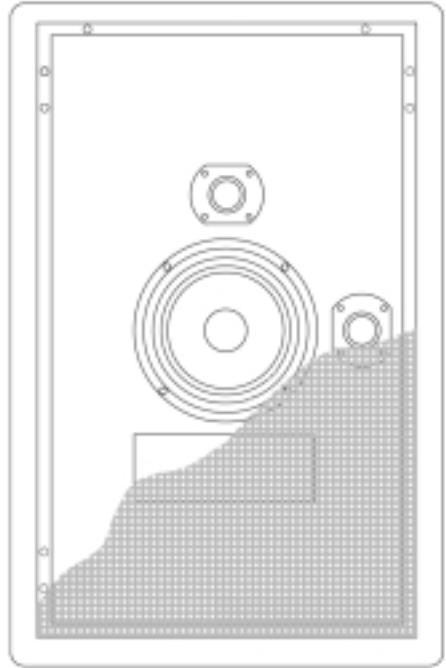




wafer-iw™

In-wall
loudspeaker
User-Guide



ATL™

Advanced Transmission Line

Serial No

wafer 1-iw™

Builder

wafer2-iw™

Product Support

For product support, accessories or servicing advice, please contact a PMC authorised distributor. See www.pmc-speakers.com.

Guarantee Certificate

Please take a few moments to complete the warranty card at the back of this booklet or register at www.pmcloudspeaker.com/guarantee. It records the purchase and provides you, the customer, an opportunity to make suggestions and provide feedback directly to PMC.

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This document should not be construed as a commitment on the part of PMC.

The information it contains is subject to change without notice. PMC assumes no responsibility for errors that may appear within this document.

CE Conformity PMC passive loudspeakers conform to CE Directive LVD 73/23/EEC and EMC 89/336/EEC

Loudspeaker User-Guide

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Introduction

The **wafer™** series of in & on-wall loudspeakers are a true breakthrough and encompass PMC's award-winning professional monitoring heritage in a slim and elegant design, ideally suited to match modern décor and lifestyles.

PMC products are to be found in every demanding environment, from broadcast and major film scoring to CD and DVD mastering. No other manufacturer can rival the accumulated technical knowledge and high level of engineering excellence PMC has developed over many years at the peak of professional monitoring. This expertise has been encapsulated in the development and production of the PMC consumer range.

The **wafer™** series is ideal for stereo or all channels of a surround system. The **wafer™** has been engineered with an identical tonal balance and similar dispersion characteristics to all PMC models, thereby any combination will afford seamless integration and a perfect audio picture. The professionally proven TLE1 active subwoofer can also partner any of the range to provide the ultimate in low frequency power and musicality.

See page 22 of this user guide & www.pmc-speakers.com



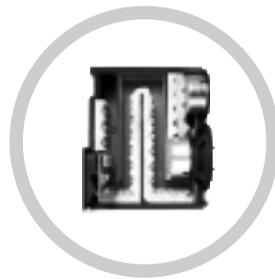
Closing the loop between the studio and the home

The **ATL**™ Approach

PMC **ATL**™ (Advanced Transmission Line) enclosures have taken loudspeaker design to the highest level. A PMC transmission line design utilises sophisticated cabinet construction, proprietary drive units and patented absorption materials and techniques. The benefits are enormous compared to the relatively simple sealed and ported models currently available elsewhere.

The main driver is placed at one end of a long tunnel (the transmission line), which is heavily damped with absorbent acoustic material. This material is specified to absorb the upper bass and higher frequencies that radiate from the rear of the main driver. The lowest frequencies, which remain in phase, then emerge from the large vent at the end of the line, which essentially acts as a second driver. One advantage to this approach is that the air pressure loading the main driver is maintained, thus controlling the driver over a wide frequency range, which in turn significantly reduces distortion.

A spin-off from the lack of distortion is that the upper bass and midrange is not masked by harmonic distortion residing in the very low frequencies. The result is PMC's characteristic transparent midrange and fast, attacking bass notes, all with outstanding clarity. A further advantage of the transmission line approach is a cabinet that produces a higher SPL and lower bass extension than a ported or sealed design of a similar size, even if identical drivers were used. Moreover, as the loading on the main driver is maintained at all volumes, the frequency response also remains consistent regardless of listening level. Neither casual late night listening nor prolonged monitoring sessions have to be conducted at high volumes to achieve maximum bass response, a characteristic that is especially suited for both the home user and recording professional alike.



The DB1+ **ATL**™



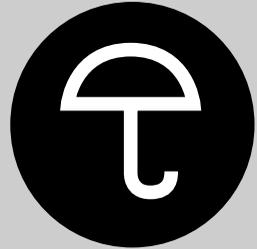
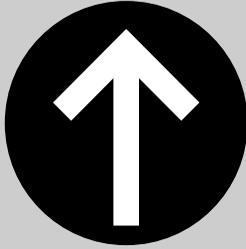
Our Attention to Detail

All PMC loudspeakers are hand-built in the U.K. using individual components that are matched to our reference model; this includes the structural integrity of every cabinet and the testing and recording of each component. This guarantees it will be within our strict tolerances and ensures your purchase sounds identical to the original design. Each completed loudspeaker then undergoes a set of objective and subjective measurements - frequency response sweeps ensure that the design meets our exacting performance criteria, and then listening tests are conducted against the reference model using a wide variety of material, from a benchmark BBC speech test to classical music, pop and rock.



General Usage Guidelines

- 1 Read these instructions and keep them in a safe place for further reference.
- 2 Heed all electrical safety warnings, including any on the loudspeakers themselves.
- 3 Do not use the loudspeakers near water.
- 4 Clean only with a dry, lint-free, cloth.
- 5 Do not install near any heat sources such as radiators, ovens or other equipment that produce excessive heat.
- 6 High volume audio signals, however short their duration, have the potential to cause hearing damage. Use care when setting the system volume level to ensure playback sound pressure levels remain within comfortable limits.
- 7 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way or exhibits a distinct or sudden change of operation or performance.
- 8 The **wafer™** series is not magnetically shielded, please ensure that they are positioned at least 1 metre/3 feet away from items that could be damaged by stray magnetic fields. Conventional glass tube (CRT) televisions and computer monitors together with media such as floppy discs, cassettes and videotapes are particularly susceptible.
- 9 PMC has made efforts to provide accurate installation information and good quality fixings, PMC Ltd / PMC USA LLC cannot be held responsible or liable for injuries or property damage - direct, indirect or consequential - arising out of use or inability to use this product safely and properly.



Unpacking

Please retain your packaging for future use as all PMC cartons are durable, reusable and can be employed to safely transport your loudspeakers should they be relocated.

Much of the packing is constructed from recyclable materials, so if you are to dispose of it please do so in an environmentally friendly manner.

Check list

- 1 x Printed card positioning template.
- 1 x Perforated grille. (paintable)
- 1 x Grille removing hook
- 1 x Paint/dust mask (Within the grille - remove before operation)
- 1 x Cabinet including 8 concealed spring lugs and integrated paintable bezel/frame

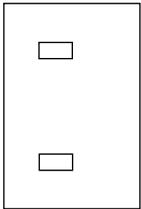


wafer™ series installation examples

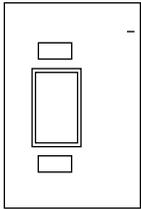
Mixing and matching any of the **wafer™** series and PMC s consumer range creates a supreme and unbeatable surround system.

See page 22

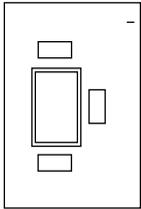
wafer1™ series installation examples



wafer1™ stereo



wafer1™ stereo with 42" plasma

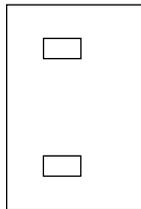


wafer1™ Left, Centre, Right with 42" plasma

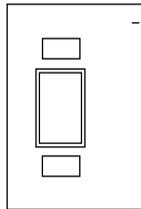


Optional TLE1 sub

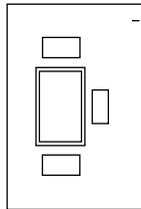
wafer2™ series installation examples



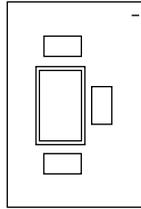
wafer2™ stereo



wafer2™ stereo with 42" plasma



wafer2™ Left, Right, wafer1™ Centre with 42" plasma

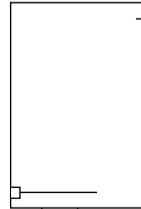


wafer2™ Left, Centre, Right with 42" plasma

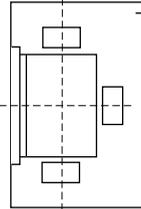


Optional TLE1 sub

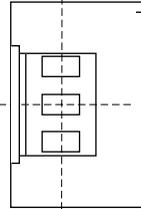
wafer™ series installation examples with projection screens



Side view showing wafer™ behind screen



Installation example with non-perforated projection screen



Installation example with perforated projection screen



Optional TLE1 sub

wafer-*iw*[™] control

- High frequency adjustment

Fine adjustment for perfect definition.

The **wafer-*iw***[™] sports a three position tweeter level control to ensure a perfect tonal integration into even the most difficult environment.

FLAT

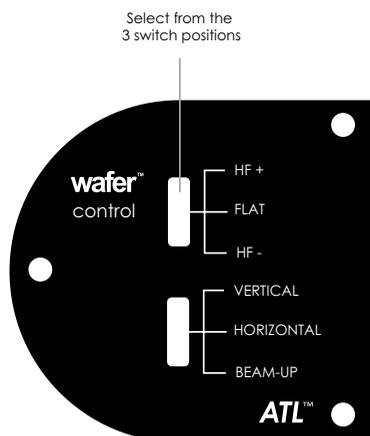
The **FLAT** setting is perfect for the majority of installations.

HF-

Rooms with very little soft furnishings, like kitchens, can emphasise the high frequency, so a reduction may be desirable by moving the switch to the **HF-** position.

HF+

Conversely a very heavily furnished absorbent room or if the **wafer-*iw***[™] is placed behind a perforated projector screen may need a small high frequency boost to improve definition. Set to the **HF+** position.



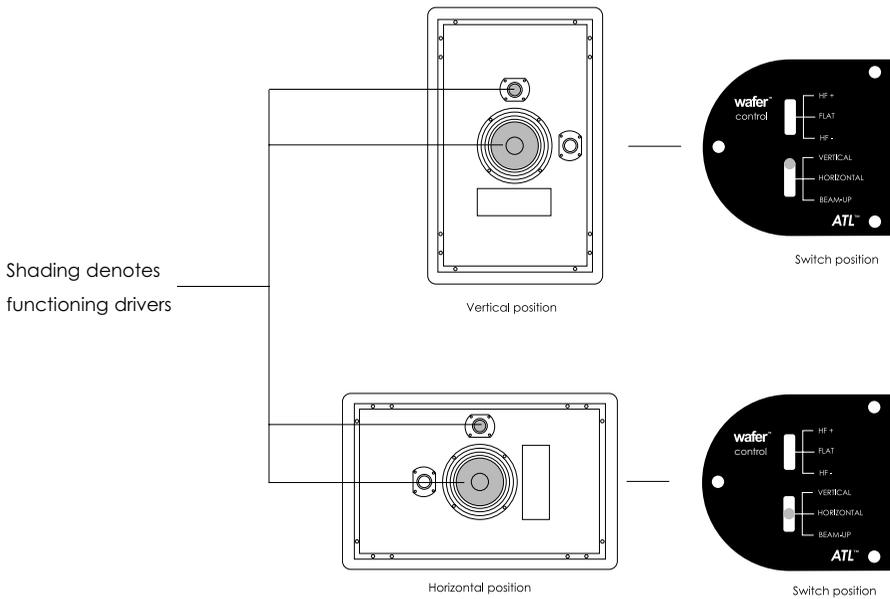
These are not hard and fast rules, as every listening environment has its own distinct acoustic. For the best results listen to the same recording on each of the HF settings and adjusting accordingly.

wafer-iv™ Control - TT Technology™

Perfect response in either horizontal or vertical placement.

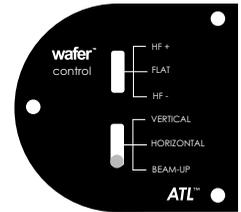
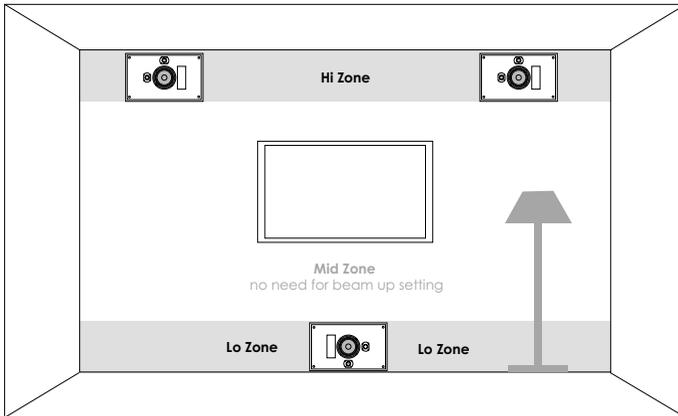
The **wafer-iv**™ has a number of innovative features that will further enhance the quality of sound so it can be sited where it is convenient and most pleasing to the eye.

The first of these is **TT Technology**™. This feature has two distinct benefits; firstly, either tweeter can be switched to ensure a perfect response in either horizontal or vertical placement.



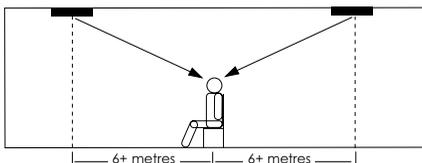
Using TT Technology™

to ensure high performance when placement is less than ideal.



Switch in the 'Beam-Up' position

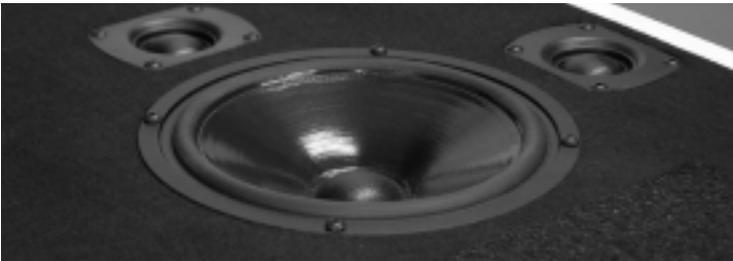
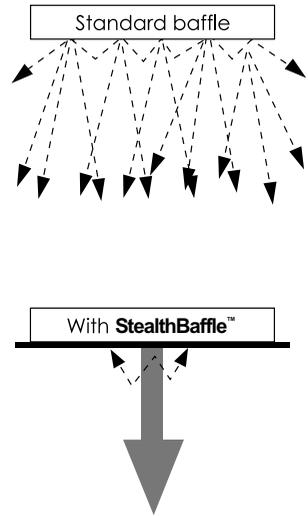
PMC's **TT Technology™** also allows for steerable image techniques which utilises both tweeters to tilt the direction of the sound - a perfect solution if the **wafer-iv™** is placed much higher or lower than the listening position. It can also come into play in some large environments when ceiling mounted. This mode should be tried if the prime listening position is in no way directly below the **wafer™** but some 20 feet further forward or behind. Experimentation is best in this circumstance, as room acoustics will play a large role in the result (see diagram below).



NB This mode will only function when the cabinet is in the correct horizontal position with the **wafer-iv™** controls set as per the diagram above.

StealthBaffle™

Standard in-wall and on-wall designs are compromised by the large surface area of their front baffle that surrounds the drive units. This detrimental effect is best compared with cupping your hands around your mouth whilst speaking. PMC's acoustic specialists have developed a unique, structured, absorbent surface that prevents these unwanted characteristic sound waves being reflected. The drive units behave as though in free space and concentrate pure, untainted audio directly into the listening space.



H-Line ATL™

The ultra-shallow **H-Line™** interior of each cabinet is divided to create a long chamber, which is in turn lined with special acoustic materials. The result is an expansive, dynamic soundstage, with the type of deep bass one would only expect from a speaker many times the size.



Wall/Ceiling installation of the wafer-iv™

Safety instructions

Instructions detailed in this manual assumes the installer has the required skill and knowledge of the tools, local building and fire regulations and is aware of the environment within which the speakers will be installed. If in doubt, consult a qualified professional.

Before attempting to make the wall cut-out by using the enclosed template, ensure your actions do not detrimentally affect the structural integrity of the building nor disrupt any hidden services or other installations. E.g. power, pipe work, air conditioning, signal cable etc.

This wafer™ may contain nuts.

Before embarking on the installation ensure the kit is complete.

Check list

1 x Printed card positioning template.

1 x Perforated grille. (paintable)

1 x Grille removing hook

1 x Paint/dust mask (Within the grille - remove before operation)

1 x Cabinet including 8 concealed spring lugs and integrated paintable bezel/frame

- 1 Ensure correct orientation for optimum performance. (See pages 12,16 &17)
- 2 Produce the wall cut-out using the supplied template. (See Safety instructions before taking action)
- 3 Check inside the cavity for obstructions that will impede the spring lugs on the sides of the cabinet.
- 4 Tighten up the spring lug bolts that correspond with the spring lugs intended for use until they appear fully from rebate in the sides of the cabinet. It is ideal if all 8 can be utilised, but if there is obstructions e.g. studwork etc. The recommended minimum is 4.

Wall/Ceiling installation of the **wafer-iv™** (Cont.)

- 5 Note the wall thickness, and tighten the spring lug bolts so the spring lugs move close to the position they will remain once the cabinet is secured. This will avoid aching arms and swearing.
- 6 Ensure the unused spring lugs are returned to their rest position and do not protrude from the cabinet rebate. Failure to do so may result in rattling.
- 7 Connect loudspeaker cables (See connections, page No.18)
- 8 Install the cabinet through the prepared hole ensuring the cable are safely inside the cavity. The spring lugs should click into place and temporarily secure the cabinet from falling out from the opening.
- 9 Tighten the appropriate number of spring lug bolts required until the bezel/frame and cabinet are fully secure.
- 10 Make any adjustments to the **wafer™** control switches - Vertical, Horizontal, HF+, HF- etc
- 11 Remove the Dust/paint mask if painting is complete and there is no risk from dust.
- 12 Gently press the grille into place.

Removal of the **wafer-iv™** from the wall

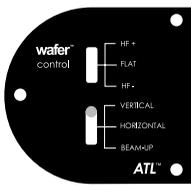
To remove the **wafer-iv™** from the wall/ceiling. Remove the grille starting from one edge using the grille removing hook. Slacken all 8 spring lug bolts; this will retract the lugs into the rebate freeing the cabinet. Do this operation gently.

PMC has made efforts to provide accurate installation information and good quality fixings, PMC Ltd / PMC USA LLC cannot be held responsible or liable for injuries or property damage - direct, indirect or consequential - arising out of use or inability to use this product safely and properly.

wafer-iv™ in-ceiling Installation examples

Depending on the direction of the woodwork e.g. beams or joists that form the ceiling structure, it will be necessary to orientate the **wafer-iv**™ in the following manor to ensure the highest quality response.

These diagrams are a view from the floor looking directly up at the ceiling. An identical view if you were lying on your back in bed. Not that we are insinuating you are lazy, but it is a view you will be familiar with.

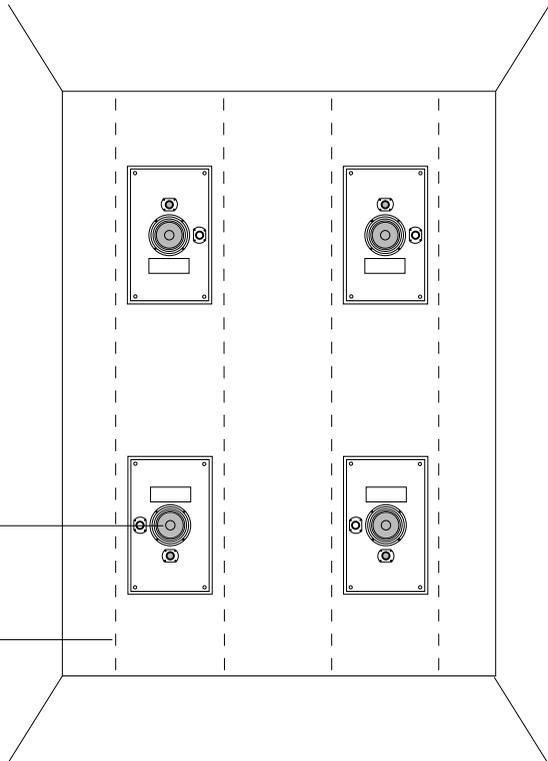


Switch position

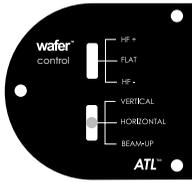
Switch position set to vertical

Shading denotes functioning drivers

Beams/Joists



wafer-iv™ in-ceiling Installation examples (Cont.)

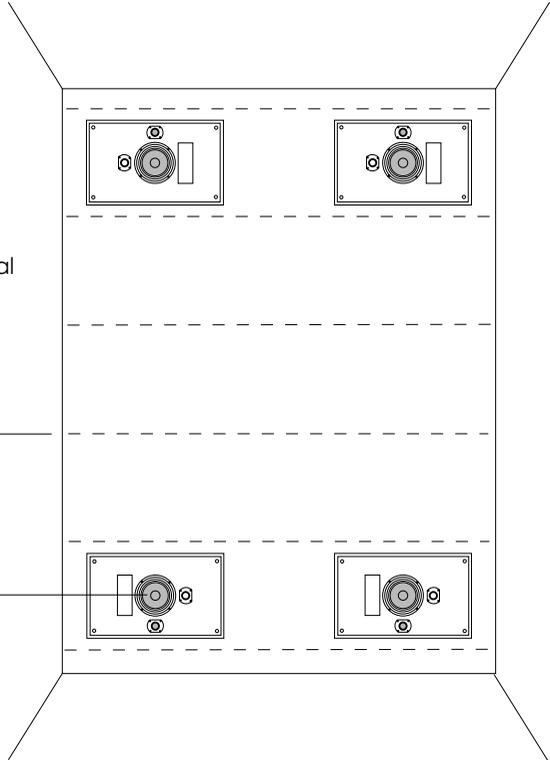


Switch position

Switch position set to horizontal

Beams/Joists

Shading denotes
functioning drivers



NB

If the **wafer-iv's**™ have been installed within the ceiling of a large room or the listening position is more than 20 feet away; experiment with those distant speakers using the beam-up function. If the acoustics of the room allow, the image will be more obvious in this setting.

Connections

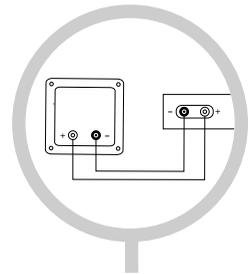
To avoid potential damage, please ensure that your power amplifier(s) or receiver is turned off before making or breaking any loudspeaker connections.

When selecting cables for use with your PMC loudspeakers, ensure that their construction is of a high enough quality to withstand the rigours of everyday use and comply with local regulations.

Bare, finned, or 4mm banana plug terminated cable can be accommodated by the **wafer-iv™** sprung binding posts.

To use the spring terminal function - push the terminal lightly until the two 4.3mm holes of the inner and outer housings correspond. Place the cable through the hole and release the terminal. Then test the cable is secure and there is no loose cable strand protruding that may cause shorting.

It is of vital importance to observe the polarity markings and maintain positive-to-positive and negative-to-negative connections from amplifier or receiver to the **wafer-iv™** . The **wafer-iv™** terminals are colour-coded to aid in their identification, positive terminals are red, negative terminals are black.



wafer™ back panel

Customisation

Both the bezel & grille can be repainted to match the desired interior scheme. When painting ensure the paint is applied as a thin coat and does not reduce the pore size of the grille. Failure to do so will inhibit the performance of the **wafer-iv™** . While painting, or when there is dust in the atmosphere, leave the Paint/Dust mask in place not forgetting to remove it before operation.

NB: Do not attempt to paint the main cabinet or front baffle of the **wafer-iv™** .

Service

We are confident that your **wafer-iv™** loudspeakers will afford many years of trouble-free listening of the highest order, but in the unlikely event that one or more requires repair, our unique manufacturing procedure, wherein the precise value of each component together with the response of the system as a whole is recorded, will ensure that any replaced parts will exactly match the performance of those originally included within each individual loudspeaker.

For any issues that might arise or for advice and service requirements, the primary point of contact should be your knowledgeable and authorised PMC dealer/distributor.

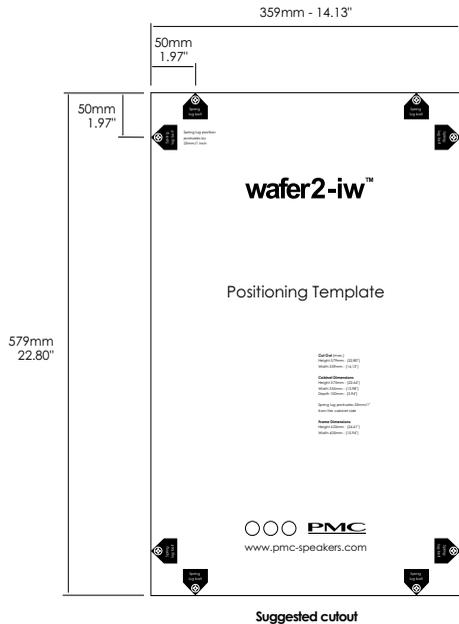
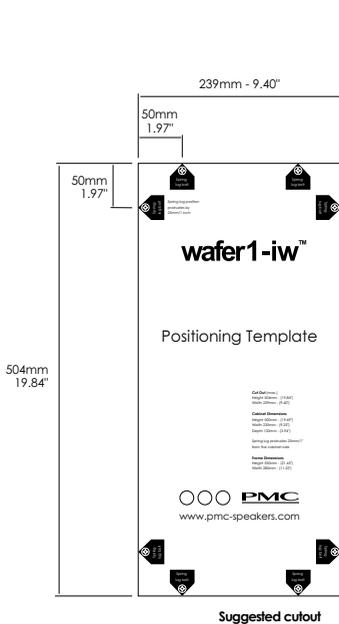
If you do not have a local representative please see www.pmc-speakers.com and click on distribution.

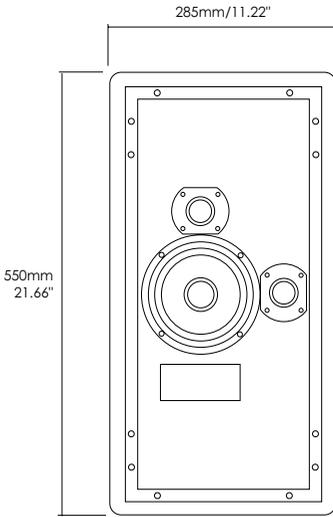
Important Note: Please do not return any products to PMC directly without first contacting our support department and obtaining a Return Authorisation Number.



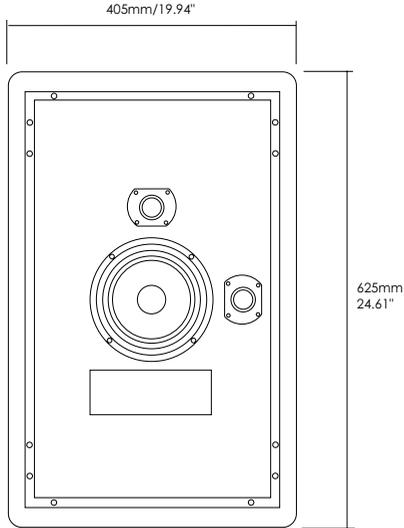
Specifications

	wafer1-iw™	wafer2-iw™
Freq response	50Hz-25kHz	40Hz-25kHz
Sensitivity	87dB 1w 1m	90dB 1w 1m
Impedance	8 Ohms	8 Ohms
Drive Units	LF 140mm (5.5 inches) HF 2 x 27mm Soft dome	LF 170mm (6.5 inches) HF 2 x 27mm Soft dome
Input connectors	1 pair - Sprung & 4mm sockets	1 pair - Sprung & 4mm sockets
Dimensions	H x W x D	H x W x D
Cabinet	500 x 235 x 100mm (19.7 x 9.3 x 4 inches)	575 x 355 x 100mm (22.6 x 14 x 4 inches)
Cabinet with grille	550 x 285 x 107mm (21.65 x 11.22 x 4.21 inches)	625 x 405 x 107mm (24.61 x 15.94 x 4.21 inches)
Weight	5.5kg (12.1 lbs)	7.1kg (15.62 lbs)
Grille & frame/bezel	White, satin, RAL 9016	"
Cabinet colour	Black, satin, RAL 9005	"

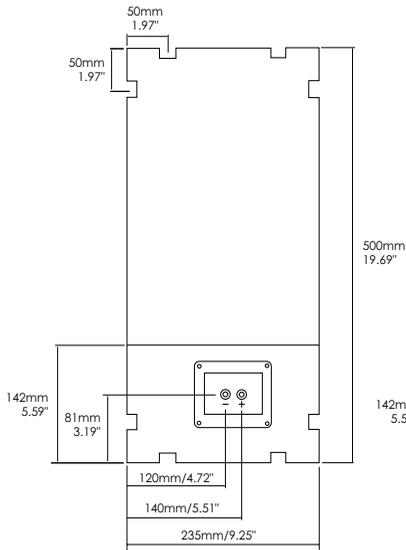




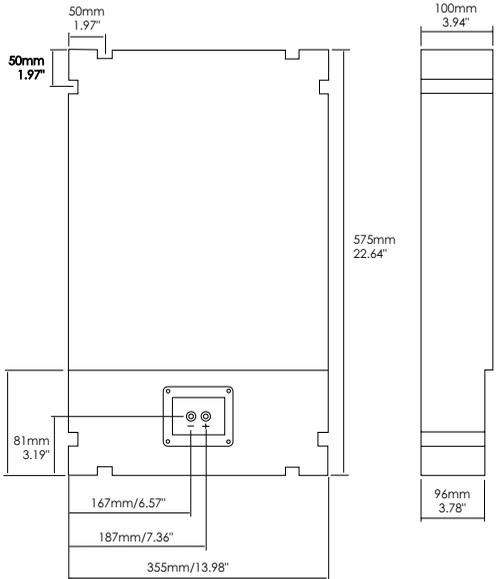
wafer 1-iw™
Front



wafer 2-iw™
Front



wafer 1-iw™
Rear

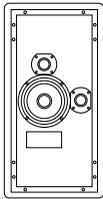


wafer 2-iw™
Rear

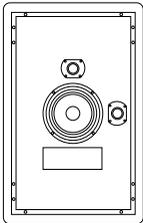
Suggested Associate Loudspeakers

PMC manufacture a large selection of loudspeakers and sub-woofers to meet a range of budgets and uses, from compact, audiophile designs to large studio monitors.

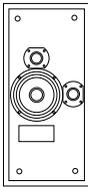
The following products make ideal companions to create an unbeatable surround system.



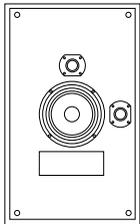
wafer1-iv™
(Two Way in-wall monitor)



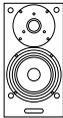
wafer 2-iv™
(Larger Two way in-wall monitor)



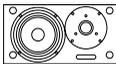
wafer 1™
(Two way on-wall monitor)



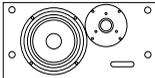
wafer 2™
(Larger, Two way on-wall monitor)



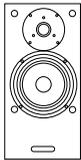
DB1+
(Compact two way monitor)



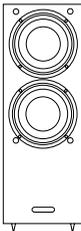
DB1M-C+
(Magnetically screened
Horizontal centre channel)



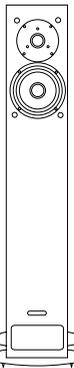
TB2M-C+
(Larger, Magnetically
screened Horizontal centre)



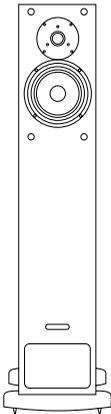
TB2+
(Larger, Two way monitor)



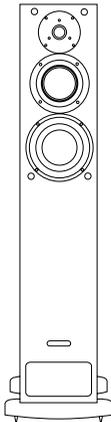
TLE1
(Active Subwoofer)



GB1
(Compact, Two Way,
Floorstanding monitor)



FB1+
(Two Way, Floorstanding monitor)



OB1
(Larger, Three Way
Floorstanding monitor)

Inspection Certificate

Every component that appears in a PMC product is measured, tested, matched and recorded by hand. This analysis also applies to the final product with the addition of the ultimate test of the human ear. We simply listen to every product we make to ensure you receive an identical replica of the reference model.

Enclosure finish

Assembly & Wiring

Driver Installation

Enclosure seal test

Level - Frequency test

Impedance - frequency test

Listening test 1

Listening test 2

Final inspection

Paint/Dust mask included

Grille hook included

User Guide included

all above checked by

Date

GUARANTEE CERTIFICATE - Part 1

Your Copy

Please complete and retain this page

Thank you for purchasing a PMC product. Please read all points carefully before sending any product to PMC Limited.

If a product is returned to us and subsequently is found to have no fault it will be subject to a minimum testing and labour charge of £50.00 plus an additional £18.00 carriage for its return.

(UK customers only)

Proof of purchase is required for any claim covered by this guarantee.

This product is guaranteed for a period of 5 years from the date of purchase or date of receipt if received by mail, provided that the bottom section of this form is detached and returned to PMC within ten days of purchase or receipt. The guarantee covers defects due to faulty materials or workmanship but does not cover defects arising from accidental damage, misuse or wear and tear. The guarantee is void if any attempt has been made by persons not authorised by PMC to dismantle or repair any part of the product.

Should you have a claim under this guarantee, you can either send the product to the address at the bottom of this form or return it to the dealer from whom the product was purchased.

Please ensure that it is properly packaged as this guarantee does not cover damage in transit. Please note that the cost of the carriage to PMC is not covered by the guarantee.

Returned products that are defective will be repaired or replaced at the discretion of PMC and returned free of charge.

Please allow 14 working days for return of guarantee repairs.

This guarantee does not effect your consumer rights under statutory law.

This guarantee certificate is only valid in the United Kingdom.

Type of product

Serial Nos

Date of purchase

Dealers Name

Address

Town

County

Postcode

Dealers Telephone No

PMC LIMITED 43-45 Crawley Green Road Luton LU2 0AA UK **T** +44 (0) 870 4441044 **F** +44 (0) 870 4441045

GUARANTEE CERTIFICATE - Part 2

Our Copy

Please complete and return this section -

or complete the on-line version at www.pmcloudspeaker.com/guarantee

Product

Serial Nos

Date of purchase

Your name

Address

Town

County

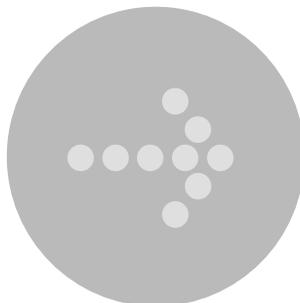
Zip/Postcode

Dealers Name

PMC Limited 43-45 Crawley Green Road Luton UK LU2 0AA

T (0)870 4441044 **F** (0)870 4441045

Help us improve
our products
see over



Help us Improve - Your Comments

We value all our client s comments. Please take a moment to help us improve:

If there is one thing we should change, what would it be?

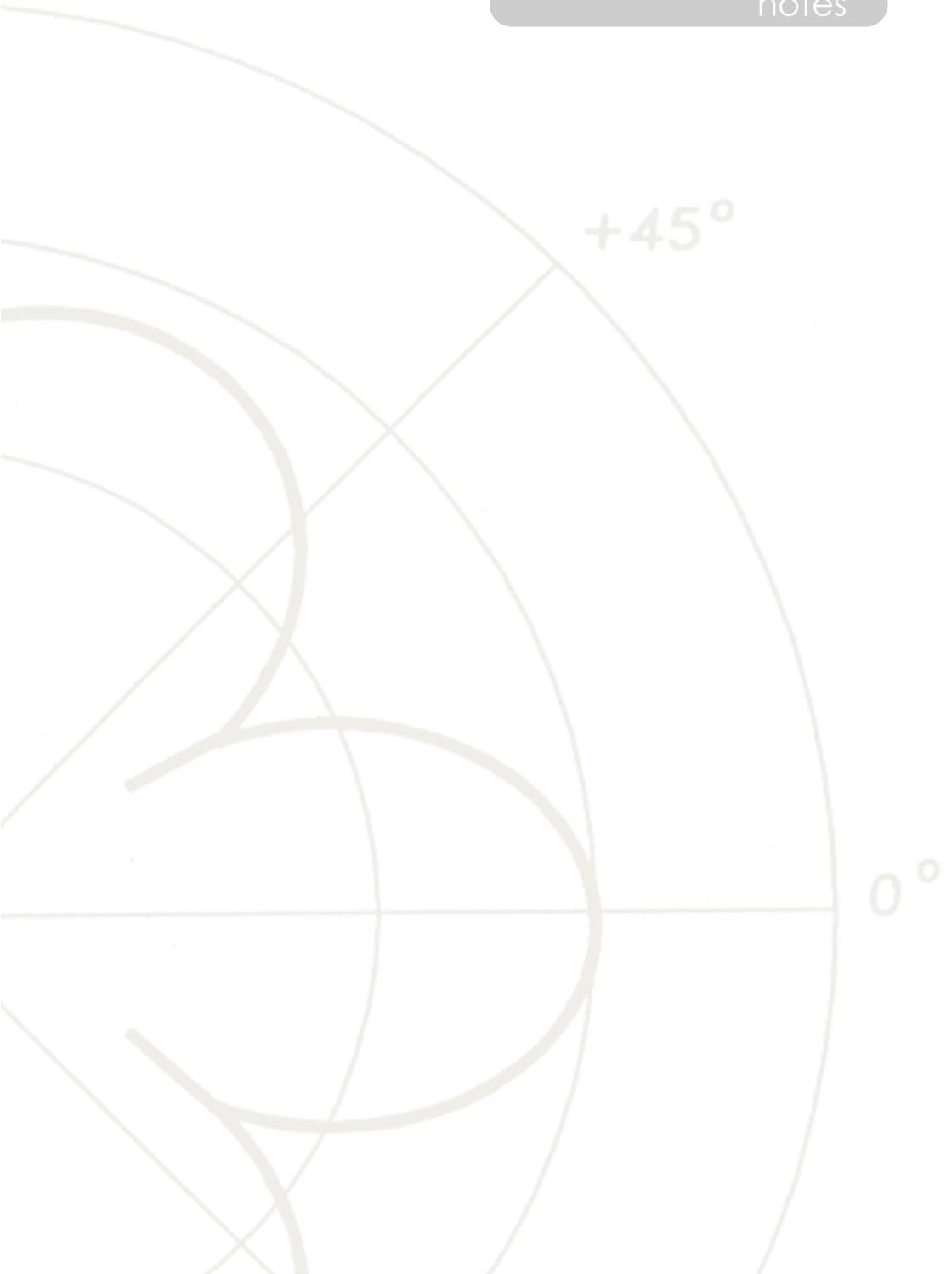
Four horizontal rounded rectangular input fields for providing feedback.

Is there a product/finish missing from our range? If so, what would it be?

Four horizontal rounded rectangular input fields for providing feedback.

If you wish to write your very own review of your PMC product, please attach it with the guarantee certificate - CD/Floppy/Hard copy. We will include as many as we can on our website page - Clients Reviews. See www.pmc-speakers.com

Many thanks





PMC LIMITED

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