



Visit our London Showroom:
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ACOUSTIC WALL PANELS

Introduction

Does your space become too noisy and suffer from sound echo and reverberation problems? With the increasing use of glass and open plan design, this is a common problem facing many offices, meeting rooms, public buildings, hotels, restaurants, retail and homes.

It's caused by the wall and ceiling surfaces reflecting the sound and bouncing it back into the room to cause unwanted echo and reverberation. The situation can become worse as people compensate by raising their voices to be heard. Speaking on the phone and conference calls can be difficult with these sound problems.

When the acoustics of a room are well-balanced, the room's atmosphere is pleasant and creates a more tranquil "softened" setting. This in turn increases people's ability to grasp information and to work efficiently.

Our sound absorbing acoustic wall panels offer excellent acoustic performance via a cost effective and easy to install solution. We produce two types of acoustic wall panels: Acoustic Art Panels and Acoustic Fabric Panels.

1) Acoustic Art Panels

Your chosen design is printed onto the fabric, using a unique printing technology called dye sublimation.

The finished printed look of the panel has endless design possibilities, including:

a) gingerwhite art collection - choose from our library of contemporary images, online at:

www.gingerwhite.co.uk/html/clientpage_Acoustic_Images_v1.htm

(if this link doesn't work directly when you click on it just copy and paste the address into your internet browser)

b) your images - supply your own corporate messages, logo or photos to be printed

c) purchase images from image libraries - if you're looking for something specific, you can search thousands of images from the worlds leading image bank libraries (and then purchase images and send to us to print the image onto the acoustic panel). This website provides a good directory of image bank libraries: <http://www.bapla.org.uk/index.php> (please ensure the image has a big enough file size/resolution for your required acoustic panel size - if in doubt, please ask us to check the files before purchasing from the image library)

d) solid colour - we can colour match to compliment your decor.

Free design advice is available if required.

Your chosen image is printed digitally onto a high quality acoustically transparent fabric and is then hand-stretched over the chunky wooden frame. The image is continued around the edges to produce a clean, sharp and contemporary look.

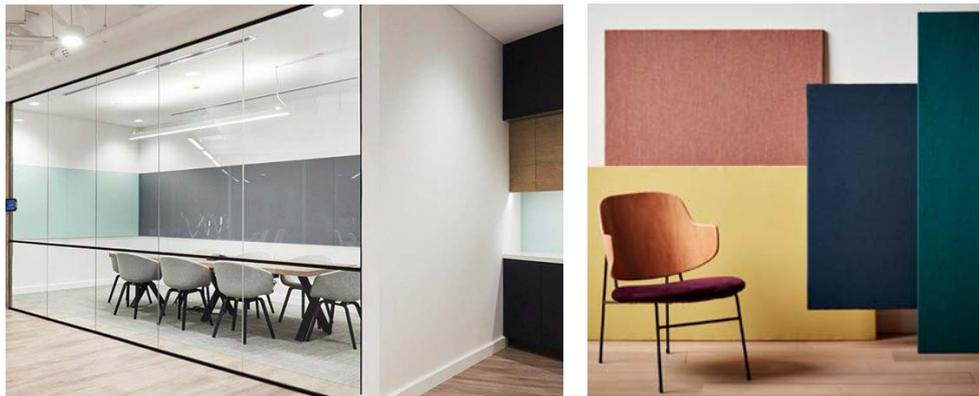


Examples of Acoustic Art Panels

2) Acoustic Fabric Panels

Choose a colour from our Lucia fabric range, offering over 30 fabric colours to choose from. The Lucia fabric range is manufactured in the UK from 100% recycled polyester, thereby saving virgin raw materials and giving a reduced environmental footprint. Lucia is a closer, finer crepe weave fabric offering a non-lustrous smooth finish for the acoustic wall panels.

To download the digital colour swatch chart, click [here](#). You can also request actual fabric samples to be sent to you in the post before ordering (remember digital fabric scans are not 100% colour accurate and can vary a little between different devices/screens). Please contact us to request actual fabric samples. Other acoustically transparent fabric ranges are available upon request.



Examples of Acoustic Fabric Panels

How are the acoustic panels made?

Each acoustic wall panel is handmade at our workshop and is comprised of 3 main parts: a wooden frame; the inner acoustic foam; and the acoustically transparent fabric.

1. The wooden frame is made from 38mm deep gallery standard stretcher bars to form the four sides, with a solid hardboard sheet fixed to the rear. The wooden frame protects the acoustic foam edges and provides an effective method of hanging the panel on your wall. You can easily screw frame fixings (supplied) into the back of the wooden frame to allow you to securely hang the panel using normal wall picture hanging fixings
2. The inner acoustic foam is a high quality 30mm deep acoustic foam which is cut to size and carefully set within the wooden frame.
3. i) With acoustic art panels, your chosen image is printed digitally onto a high quality acoustically transparent fabric. The image is continued around the edges to produce a clean, sharp and contemporary look.
ii) With acoustic fabric panels, your chosen fabric is cut to size and then hand-stretched over the chunky wooden frame.
For both types of acoustic wall panels, the fabric is stapled to the rear of the wooden frame, to provide a long lasting quality finish.

It should be noted that some acoustic panels supplied by other companies are made without a wooden frame by just gluing the fabric directly to the acoustic foam. Whilst this is certainly a quicker and cheaper method, it has the following disadvantages

- The finished face of the panel can have a rippled effect (caused by the glue underneath). Rather, we hand stretch the fabric over the wooden gallery stretcher bars to give you a clean front face
- The glue can fail with time, causing the fabric edges to become loose. Rather, we staple the fabric to the rear, to provide a longer lasting product
- The edges of the panel can be damaged / dented with time. Rather, our wooden frame protects the inner foam and provides a rigid panel
- With no wooden frame to screw fixings into, you typically need to use spray adhesive to fix the acoustic panels to your wall. Using spray adhesive can be fiddly, messy and inflexible if you need to move the panels in the future. Rather, our acoustic panels with wooden frames can be securely hung just like a normal picture and easily taken down in the future.

How do acoustic art panels reduce sound?

The acoustic art panels are made from a highly absorptive semi-rigid core with a high quality printed fabric face.

With acoustic art panels, a unique printing technology (called dye sublimation) is used to print the fabric face with your chosen design. With acoustic fabric panels, the fabric material is acoustically transparent. For both types of acoustic wall panels, sound waves pass through the fabric face (instead of bouncing off it) and are then absorbed by the inner panel core. This reduces the sound echo and reverberation, making the space less noisy and easier to communicate within.

Note if you attempted to print images onto fabric using a normal digital printing process this would not absorb sound (as the print process reduces the fabric's acoustic transparency by effectively adding a layer of ink on top of the fabric which reflects the sound waves). Using the special dye sublimation printing technology maintains the acoustic transparency of the fabric.

Technical performance

The acoustic performance of the acoustic wall panels can absorb up to about 90% of the sound hitting it (varying by different sound frequencies). To put this in context, a typical bare wall has just a 3-5% absorption rate (carpet 20-30%, stone 5-10%, double glazing 2-3%).

For the more technically minded, the acoustic wall panels will meet Class C absorption with a Noise Reduction Coefficient (NRC) of 0.75. The table below sets out the absorption coefficients for different sound frequencies.

		f/Hz						
Panel	Mount	125	250	500	1k	2k	4k	NRC*
30mm	Direct	0.10	0.40	0.80	0.90	0.90	0.90	0.75

*The Noise Reduction Coefficient (NRC) is a scalar representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption. In particular, the NRC is the average of four sound absorption coefficients for frequencies of 250 Hz, 500 Hz, 1000 Hz, and 2000 Hz. These frequencies encompass the fundamental frequencies and first few overtones of typical human speech, and, therefore, the NRC provides a decent and simple quantification of how well the particular surface will absorb the human voice. A more broad frequency range should be considered for applications such as music or controlling mechanical noise.

How Many Panels Do I Need?

There is no definitive answer to how many panels you need, as every space will have different requirements and variables to consider, including the floor space, height of ceilings and amount of "reflective" material in the space (such as glass, tiled floors etc)

Acoustic wall panels not only provide an absorbent surface, they also provide an aesthetic solution. So it's also about striking a balance between the visual look of the room (based on the available wall hanging space and not overcrowding the space with pictures) versus the required level of sound improvement (the higher the panel coverage area the better the sound improvement)

To simplify matters, we recommend the following

- Slight Sound Improvement: A minimum panel coverage area of at least 10% of the floor area to achieve a slight sound improvement.
- Good Sound Improvement: Ideally aim for a panel coverage area of at 20-30% of the floor area to achieve a good and noticeable reduction in acoustic problems
- Excellent Sound Improvement: For an excellent sound improvement, or where spaces have a severe sound problem, consider a coverage area of 30-45% of the floor area.

The above is a guide, based on a typical room of ceiling height of up to about 3m, with the space comprising mainly of sound reflecting materials (e.g. hard floors, smooth walls, glass surfaces, ceilings with poor acoustic properties, a few pieces of furniture).

Additionally, a room can be 'tuned' by adding more acoustic art panels as necessary (see consultation / testing service below).

Example: Small meeting room 5m by 3m = 15m² floor area

For a good sound improvement, we suggest at least 20% coverage area, which is equivalent to 3m² (20% x 15m²). To achieve about 3m² coverage, you could install 3 acoustic panels each sized 1m x 1m (=3m² coverage), or 2 larger acoustic panels each sized 1.2m by 1.2m (=2.88m² coverage)

Acoustic Room Planner: Our Step-by-Step Guide

- Step 1: Measure your floor space (width x length = m²)
- Step 2: Consider the wall space you have available for hanging acoustic artwork
- Step 3: Consider the type of sound improvement required (slight / good / excellent)
- Step 4: Tally up the number/sizes of panels required vs the wall space available
- Step 5: Choose images - consider whether the images are square / portrait or landscape orientation (and how this matches with the available wall space)

Standard and Bespoke Sizes Available

The acoustic panels are available to buy in a range of standard sizes, typically from 60cm to a maximum of 180cm. See the pricing table below.

If required, bespoke sizes are available up to a maximum dimension of 180cm – please contact us with your needs

Split images can also be provided over groups or a sequence of art panels, to cover larger areas and make an even bigger impact. For example, imagine your favourite image on the wall in a giant 2 metre square, comprising a grid of 2x2 1m square panels.

Purchase Prices

Size of Panel (cm)	Coverage Area per Panel (m ²)	Purchase Price Per Acoustic Wall Panel (£'s exc VAT)	
		Acoustic Art Panel	Acoustic Fabric Panel
60x60cm	0.36	£164	£134
60x90cm	0.54	£177	£139
90x90cm	0.81	£193	£147
100x100cm	1.00	£202	£150
120x90cm	1.08	£206	£155
120x120cm	1.44	£231	£170
150x120cm	1.80	£254	£184
60x60cm	0.36	£270	£190

-Prices Correct at June 2020
-Based on 38mm thick finished panel (with a 30mm thick inner core panel inside)
-Minimum order quantity of 3 panels.
-Others bespoke print sizes available upon request.
-Delivery & Packaging prices (within UK Mainland) are about £15-£30 per panel (varying by panel size)
-All prices are subject to VAT at 20%
-Delivery is usually within 15-20 working days, after receipt of payment
-Additional fitting service available – if required, please ask for a quote
-Volume discounts are available on larger orders: 5% for 10+ panels, 10% for 50+ panels

Easy to install

The acoustic wall panels resemble a piece of art and they simply hang on the wall using traditional picture hanging hooks and pins. Each panel comes complete with 2 x picture frame hooks fitted onto the back of the acoustic frame.

Fitting Service Available

We also offer an on-site fitting service if required for customers based in London and the South East. This is explained further on our website here:

<http://www.picturedisplaysystems.co.uk/fitting-service-14-w.asp>

Safety and maintenance

The acoustic wall panels are manufactured from inherently flame proof materials. The inner core of the panel achieves reaction to fire classification of A1 in accordance with standard EN 13501-01 and comply with the definition of non-combustible in accordance with all UK Building Regulations. The fabric face of the acoustic wall panels are 'Class 1' for the Surface Spread of Flame in accordance with BS 476-7.

The fabric can be wipe cleaned with a damp cloth (using water) or cleaned using proprietary upholstery shampoo (to ensure that the fabric will not discolour from the cleaning, we suggest a small area of the fabric, say at the back or edge of the panel, should be tested first before cleaning the full panel).

Weight

Each finished acoustic panel weighs approximately 5Kg/m² (comprising about 3kg/m² for the inner core and 2kg/m² for the wooden frame)

Image & Printing Considerations for Acoustic Art Panels

If you are supplying your own images, please take into account the following:

- You will need to supply a large high resolution file suitable for printing at the required size (with a minimum resolution of 300DPI)
- Usually the printed image will wrap/mirror around the edge of the panel – so please take this into consideration if you have images with specific details (e.g. text) close to the front edges that may also be wrapped / mirrored onto the panel edge.
- To minimize cropping of images, you should try to match the proportion of the image to the size format of the panel e.g. square, portrait or landscape.

Interested in Proceeding?

We offer a number of flexible options for customers, depending on your needs:

Option 1: Purchase Direct from our website (available UK Mainland, panels sent by courier)

Option 2: Site visit, testing and quotation service (available in London & South East)

Option 3: Rent sample panels (available UK mainland, panels sent by courier)

These options are all described further below

Option 1: Purchase Directly from our website (available UK Mainland, panels sent by courier)

If you are clear on your needs (we suggest you follow our step-by-step room planner guide, see above), then you can order directly from our website. We will then contact you to check which image / colour you'd like for your acoustic panels. Or we can help you send us your own files to be used for printing (via a free file sharing service).

If you'd like some help working out how many panels you need, then you can email us the:

- approximate floor dimensions of the room(s) where you have sound echo / reverberation problems, along with some photos of the walls spaces.
- we can then check/advise on the minimum coverage area for the acoustic panels, and send you our suggestions and a quote.

Or you can call us on 0207 359 3964 to ask any questions..

Option 2: Site visit, testing and quotation service (available in London & South East)

For businesses or homes based in London and the South East, we offer a consultation and testing service for our acoustic art panels

How it works is that a member of our team will visit your space and bring a number of sample acoustic panels to show you and test within your space. With these sample panels, we can quickly demonstrate the levels of sound improvements achievable. Note the test panels do not need to be hung onto your walls, just bringing the panels into the space is usually sufficient to determine an improvement in sound echo / reverberation. We can then measure up your space and follow up with a tailored quotation – without obligation.

Our call out fee for this consultation & testing service is as follows:

- £95 exc VAT in Greater London (within the M25)
- £145 exc VAT in the Home Counties (Bedfordshire, Berkshire, Buckinghamshire, Cambridgeshire, Essex, Hertfordshire, Kent, Surrey, Sussex)
- If parking is not provided at the clients premises, then any parking fees will be charged at cost (no mark ups)
- Payment must be made in full by BACS transfer or card before the agreed date of the visit
- The above rates are based on normal working hours Monday to Friday from 9am to 6pm.

If you are based in the UK, but outside of London/South East, we may still be able to visit you. Please contact us with your needs and we will provide you with an estimate. An alternative solution is that we could also send sample panels by a courier (with a returnable deposit per panel) – see Option 3 below.

Option 3: Rent sample panels (available UK mainland, panels sent by courier)

If you wish, you can rent some test acoustic panels to test the sound improvement in your space, before deciding to buy panels finished with your chosen design.

Note the test panels do not need to be hung onto your walls, just bringing the panels into the space is usually sufficient to determine an improvement in sound echo / reverberation. Although if you wish, they can be hung on the walls – each test panel has 2 picture frame hooks attached to the back of the panel.

The price for renting sample acoustic art panels are as follows

No of Panels	Rental Fees (for one week)	Delivery Fee (UK Mainland)	Collection Fee (UK Mainland)	Total (exc VAT)	Refundable Deposit
3	£45	£40	£40	£125	£150
4	£55	£45	£45	£145	£200
5	£60	£50	£50	£160	£250

Notes

- The sample acoustic art panels are either sized 100x100cm, or 120x90cm
- The deposit is fully refunded when the test panels and packaging are returned in good condition
- Deliveries and collections are made by a national courier, Monday to Friday 9am to 5pm (we cannot be more specific on timing, unless you wish to pay extra for an

enhanced delivery service or for weekend delivery). The panels are securely wrapped and boxed up – this is included in the delivery/collection fee

- Or delivery/collection is free of charge if you pick/return them to us at our showroom in East London
- Payment must be made in full by BACS transfer or card before the panels are sent out
- All prices are subject to VAT at 20%

If after renting the test panels, you decide to place an order, then the rental fees paid will be deducted from your order (minimum purchase order of 3 panels required).

Call 0207 359 3964 or Email: info@picturedisplaysystems.co.uk