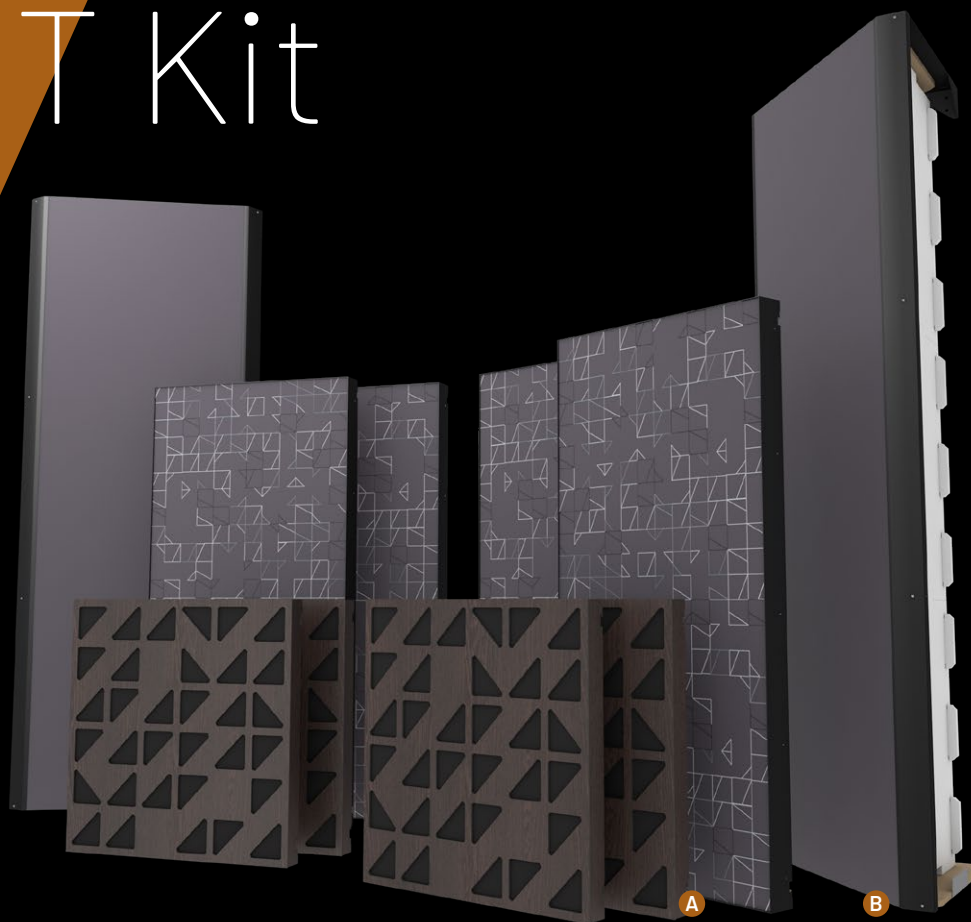


VicCinema

VMT Kit



The main goal in a Home Cinema is for the audience to experience the full enjoyment of the movie being played as the filmmakers intended. It is important that the proper conditions are created for the reproduction of the film in the home environment. While the AV systems have a significant role in the creation of these conditions, there's an often overlooked factor in the equation: room acoustics.

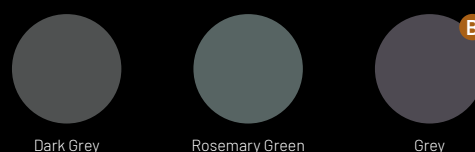
Vicoustic developed an acoustic kit to treat your room and help you to truly enjoy cinema at home: **VicCinema VMT Kit.**

The acoustic design of a Home Cinema should be thought in such a way that a neutral acoustic environment is achieved, to assure a clear and complete film audio experience without introducing any acoustic distortions. Taking this into account, Vicoustic developed a simple and effective acoustic kit to help you approach the acoustics of your Home Cinema in an exciting way.

VicCinema VMT Walls and Ceiling Kit



VicCinema VMT Mega Bass Trap Kit

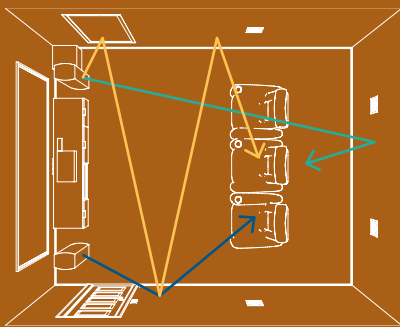


What issues will Acoustic Treatment approach?

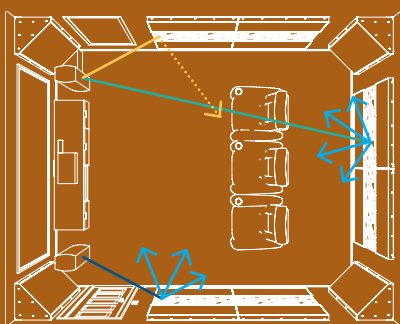
With the VicCinema VMT Kit you'll be able to maximize the acoustics of your Home Cinema, by dealing with the following three main areas:

- First Reflections Control
- Reverberation Time Optimisation
- Sound Field Anomalies Control

Before Acoustic Treatment



After Acoustic Treatment



- First Reflections
- Late Reflections
- Flutter Echo
- Diffused Reflections

Reverberation Time Optimisation

Reverberation is given by the persistence of sound within an enclosed space as a result of repeated reflections or scattering from the room's surfaces or objects.

How does Reverberation impact the perception of the movie's audio?

The degree of reverberation may influence spaciousness and signal definition and the Reverberation Time (RT) is the acoustic parameter that quantifies it.

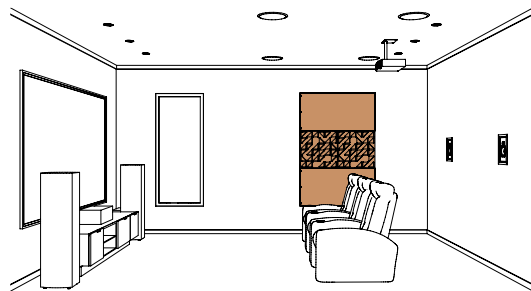
In a film, there's frequently dialogue, which requires appropriate speech intelligibility. Therefore high RT's within a Home Cinema will be detrimental, as late reflections from the room can mask the direct sound. For this reason, the acoustic design of a Home Cinema is generally more focused on the use of sound absorbers in order to achieve very short RT over the frequency spectrum.

Step by Step Improvement

VicCinema VMT Kit is an acoustic kit developed to maximize the acoustic conditions of your Home Cinema. Depending on your goals, available space and/or budget you may acquire one or several kits.

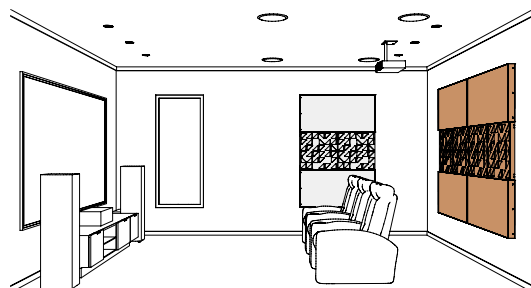
Step 1 / One VicCinema VMT Walls and Ceiling Kit

- Side walls: begin treating reflections from the side walls near the listening positions;
- Start reducing the room's reverberation;
- Start controlling flutter echoes between side walls.



Step 2 / Two VicCinema VMT Walls and Ceiling Kits

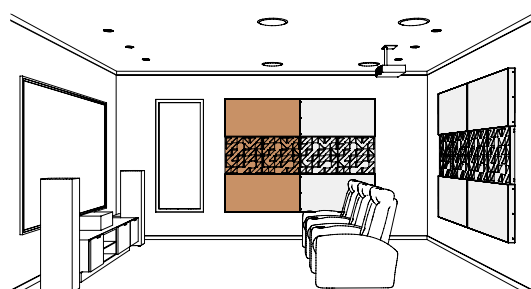
- Same as Step 1
- + Back wall: treat back wall reflections;
- + Further control of room's reverberation;
- + Control of flutter echoes between front and back walls.



Tip: The VicPattern Ultra can be used to hide in-wall/in-ceiling speakers, by removing the VicPET Wool layer from the panel and placing it in front of the loudspeaker. If needed, an acoustically transparent veil (not provided by Vicoustic) may be used inside the panel in order to hide the loudspeaker.

Step 3 / Three VicCinema VMT Walls and Ceiling Kits

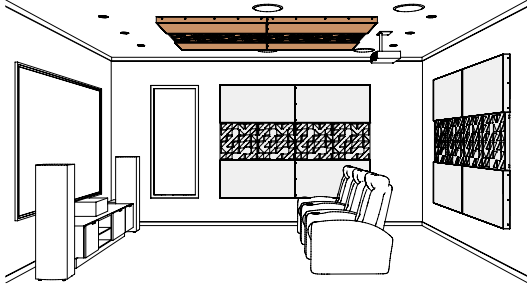
- Same as Step 2
- + Side walls: improve treatment of reflections from the front end of the side walls;
- + Further control of room's reverberation;
- + Further control of flutter echoes between side walls.



Step 4 / Four VicCinema VMT Walls and Ceiling Kits

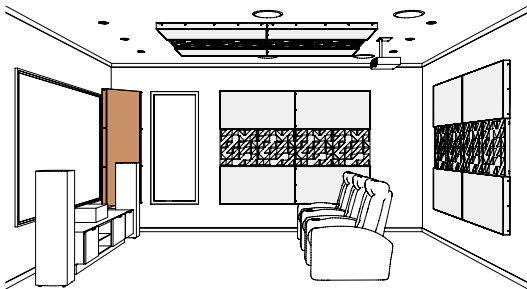
This kit can be used to treat the room's ceiling at any given time.

- Same as **Step 3**
- + Ceiling: treat reflections from the ceiling;
- + Further control of room's reverberation;
- + Control of flutter echoes between ceiling and floor.



Step 5 / One additional VicCinema VMT Mega Bass Trap Kit

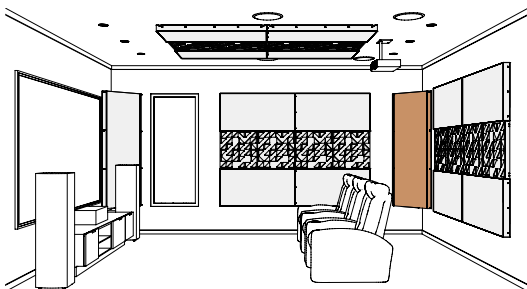
- Same as **Step 4**
- + Low-frequency treatment using Mega Bass Trap on the front-wall corners of the room;
- + Being this a broadband absorber, the Mega Bass Trap will also contribute to further absorption.



The new **Mega Bass Trap** has the aesthetic versatility of the VMT technology, helping increase the performance in the medium and low frequency region. All of these features culminate in what Vicoustic proudly presents as an eco-friendly bass trap.

Step 6 / Two additional VicCinema VMT Mega Bass Trap Kits

- Same as **Step 5**
- + Add two Mega Bass Trap VMT to the back-wall corners of the room to further treat low-frequencies.



These suggestions consider a room under 15 m² (161 ft²) of floor area. For smaller or bigger areas you can scale up or down the solution to fit your needs. VicCinema VMT kits were developed considering small home cinemas generally encountered in residential scenarios.

For more complex projects, feel free to request a VicousticProject Proposal at <https://vicoustic.com/project-request>.

First Reflections Control

When reproducing a film within a Home Cinema, the audience will hear a combination of:

- Direct sound coming straight from the speakers and;
- Multiple sound reflections coming from the room's surfaces.

Some of these reflections arrive at the listening position very soon after the direct sound, and we call these the first reflections.

First Lateral Reflections may influence:

- The stereo image (by shifting or broadening it);
- Sound source localisation;
- The perception of spaciousness within the Home Cinema.

This will have a major impact on the overall perception of a movie, as audio plays a key-role in the full enjoyment of a film experience.

Sound Field Anomalies Control

In Home Cinemas there are mainly two sound field anomalies likely to occur: i) Flutter Echoes and ii) Room Modes.

Flutter Echoes are repeated sound reflections caused by sound traveling between parallel reflective surfaces, such as walls, floor and ceiling.

How to deal with Flutter Echoes?

Using sound absorbing products (such as the Flat Panel VMT with the VicSpacer Plus and the VicPattern Ultra).

It should be noted that by treating first reflections and reverberation one is already dealing with flutter echoes.

Room modes are set-up in rooms due to the relationship between low frequency wavelengths and room dimensions.

Home Cinemas with reduced dimensions normally have poor acoustic response at low frequencies due to these modes.

How to deal with Room Modes?

By including Bass Trap solutions in the corners of the Home Cinema, will help improving the room's low frequency response.

A Sustainable Home Cinema

Most standard acoustic solutions for Professional and Home Cinemas throughout the years revolve around the use of mineral wool, covered by stretched-fabric for aesthetic purposes and because exposure to these fibres is generally not advised for health purposes. Mineral fibres may often contain harmful chemical components, that compromise air quality, therefore likely being a source of health hazards.

Vicoustic's continuing research and innovation in acoustic solutions, led to the development of the VMT and VicPattern Ultra lines

Being aware of the human health risk standard sound absorbing foams represent, Vicoustic's new line of products was developed taking into account a holistic approach by fully integrating its acoustic performance with other sustainability goals, such as human health (air quality), use of recycled materials; human safety (fire), etc.. The latest Vicoustic line of products uses new and responsible raw materials that are predominantly made of recycled PET Bottles (65%), which are recyclable and



low emitting materials (low VOC emissions), therefore providing good air quality. These products maintain all fire safety regulations and are classified as Class 1 according to OEKO-TEX 100 Standard, meeting the human-ecological requirements established for baby articles.

The VicCinema VMT Kit takes advantage of all these new Vicoustic products to help you maximise the overall conditions of your Home Cinema.

Specifications

VicCinema VMT Walls and Ceiling Kit

- 4 units of VicSpacer Plus with Flat Panel VMT (enhanced acoustic performance)
- 4 units of VicPattern Ultra Triangles
- 4 units of VicFix J Profile 1190 mm

VicCinema VMT Mega Bass Trap Kit

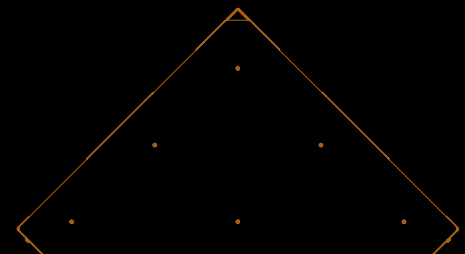
- 2 units of Mega Bass Trap



VicPattern Ultra Triangles



VicSpacer Plus with Flat Panel VMT



Mega Bass Trap

Dimensions*: VicSpacer Plus with Flat Panel VMT: 599 × 1194 × 66 mm / 23,6" × 47,0" × 2,6"; VicPattern Ultra Triangles: 595 × 595 × 50 mm / 23,4" × 23,4" × 1,97"; VicFix J Profile: 10 × 20 × 1190 mm / 0,39" × 0,79" × 46,9"; Mega Bass Trap: 680 × 384 × 1788 mm / 26,8" × 15,1" × 70,4"

* For each product. Please notice that the dimensions of the panels have a tolerance of +/- 2mm

Materials: VicPET Wool, Solid Wood, Lacquered Steel; VicPET Wool, MDF and Melamine; VicPET Wool, MDF, Lacquered Steel

Installation: VicFix J Profile (included)

More information: <https://vicoustic.com/product/viccinema-vmt-kit>