

# Installation Manual For Dimension4<sup>®</sup> Melody

# Home Cinema Acoustical Tuning System



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### Introduction

Every home cinema is affected by room acoustics. Allow the articulation, tonal balance and clarity of your loudspeakers to be heard. Don't chance missing important elements within the soundtrack. The Dimension4 Melody system is an economical, easy-to-install acoustical tuning solution for home cinemas and listening rooms. Based on scientifically-designed building blocks including Absorbers, Abfuser Strips, Corner Traps, and Ceiling Panels, Melody is calculated to provide optimum absorption and diffusion and is a full-frequency component solution.

Melody panels can be installed in minutes by observing the following simple instructions.



#### Modules



#### Absorber

**Construction:** A 24" x 36" x 2" (60cm x 90cm x 5cm) flat panel consisting of a mineral wool core clad in a fiberglass lining and wrapped in fabric

Benefits: Provides absorption down to 400Hz



#### Abfuser Strip

**Construction:** A 6" x 36" x 2" (tapers to 1") (15cm x 90cm x 5cm) panel consisting of mineral wool clad in a fiberglass lining and wrapped in fabric

**Benefits:** Provides diffusion down to 800Hz by means of an absorptive-reflective transition zone phase shifting process



#### **Corner Trap**

**Construction:** A 24" x 36" x 2" (60cm x 90cm x 5cm) beveledged panel consisting of a mineral wool core clad in a fiberglass lining and wrapped in fabric **Benefits:** Provides bass absorption down to 125Hz by means of corner mounting



#### Ceiling Panel

**Construction:** A 24" x 36" x 1" (60cm x 90cm x 2.5cm) flat panel consisting of a mineral wool core clad in a fiberglass lining, wrapped in fabric, with hanging hoops **Benefits:** Provides absorption down to 300Hz

#### **Tools and Materials Required**

- Screwdriver (Philips or standard depending on the type of fastener)
- Hammer
- 25 Foot (8m) Measuring Tape
- Pencil
- Masking Tape
- Bubble or Laser Level
- Mirror
- Screws or other appropriate fasteners for your wall surface (E-Z Anchor works well for sheetrock)
- Screw Hooks

#### Panel Placement

Melody systems are suitable for a wide variety of room sizes. The bigger the room, the larger the number of treatment panels.

The following diagrams show sample room layouts for three ranges of room sizes. For best results, you will need to find the first reflection points between the speakers and the listening position. (See instructions later in this manual.)

Room Size (ft <sup>2</sup> )	(m <sup>2</sup> )	Kit	Number of Panels
100-200	10-20	System 150	15
200-350	20-35	System 300	30
350-500	35-50	System 450	45
500-750	50-75	System 600	60

# 100-200 ft2 (10-20 m2) Room Using Melody 150 System



Dimension4 Melody 150

3 Absorbers 8 Abfuser Strips 2 Corner Traps 2 Ceiling Panels

Fig 1

# 200-350 ft2 (20-35 m2) Room Using Melody 300 system



Dimension4 Melody 300

6 Absorbers 16 Abfuser Strips 4 Corner Traps 4 Ceiling Panels

Fig 2

# 350-500 ft2 (35-50 m2) Room Using Melody 450



Fig 3

ZSound Trio 450

9 Absorbers 24 Abfuser Strips 6 Corner Traps 6 Ceiling Panels

# 500-750 ft2 (50-75 m2) Room Using Melody 600



Fig 4

Dimension4 Melody 600

12 Absorbers 32 Abfuser Strips 8 Corner Traps 8 Ceiling Panels

#### Placement Guidelines: First Reflection Points

The treatment layout shown in fig 1through 4 gives you great control over the acoustic reflections in your room. For further enhancement, ensure that you have placed Absorbers at all the first reflection points on the side and back walls. You can find these by simply using a mirror as shown in fig 5. Sit at the main listening position and have someone walk up and down the left wall holding the mirror flat against it. Mark an X at the point where you can see the left speaker in the mirror. Repeat for the right wall and back wall. (You should be able to see both speakers at the first reflection point on the back wall.) Later on, you will be covering these X's with Absorbers.

Place the Abfuser Strips 6 inches (15cm) behind the Absorbers on the side walls as shown in fig 1 through 4. The Abfuser Strips should be separated from each other by 6 inches (15cm) as well. Note that the direction of the Abfuser Strips' tapered surfaces does not affect acoustical performance. Feel free to experiment with orienting them forward or backward in the room to create your own distinctive look.



You can see the speaker in the mirror.

Fig 5 First Reflection Point

### Corner Trap

The Corner Trap is a mid to low frequency absorption device with an effective bandwidth down to 60Hz. Corner Trap panels should be placed in the front corners of the room (angled between the front/side wall) at the same height as all other panels. If the corners aren't available, place Corner Traps along the front wall/ceiling junction.

### **Ceiling Panel**

The floating Ceiling Panel is our solution to unwanted reflections from the ceiling. Research has shown that ceiling reflections are detrimental to good sound reproduction.

We recommend hanging Ceiling Panels at the first reflection points for the front speakers as shown in Fig 6.



Fig 6 Ceiling First Reflection

### **Optional Special Products**

#### SpringTrap®

A spring-loaded bass trap, the SpringTrap is our solution to very low frequency room resonance buildup in the range of 40 to 100Hz. This unique patented design, which received the Mix Magazine Certified Hit award, was presented as a research paper at AES in Amsterdam 2003. It consists of a triple-ported resonator system, activated by a large spring-loaded pistonic diaphragm.

The SpringTrap should be placed in an inconspicuous area in front of the mix position or in a corner on the floor. Experiment with the placement of the SpringTrap. Since it is a triangular device, you should have no trouble finding areas to place it.

Play bass-heavy program material and listen to the bass sound pressure at all the corners of the room. The louder the sound pressure, the stronger the standing wave resonance at that location, and the more effective the SpringTrap will be.

The SpringTrap is not included in the Melody system. It is available as optional amendment.

### Panel Installation

Now that you've located the exact recommended placement for each panel, you can move on to the actual installation. Absorbers and Abfuser Strips are hung from the walls using the supplied impale clips (fig 7). There are 3 per Absorber, 2 per Abfuser Strip, and 4 per Corner Trap. Please contact MSR immediately if any of the impale clips are missing.

The Ceiling Panels are hung using screw hooks. You will need to supply a total of 4 Eye Hooks per ceiling panel (not included with the Melody system).







Fig 8 Clip Locations

#### Absorber Installation

- Position the Absorbers based on the diagrams and instructions from the preceding pages.
- Mark the first reflection points as described earlier.
- Determine the exact location on the wall for each Absorber. The top edge should be 66 inches (167cm) from the floor. The middle of the panel should line up with the first reflection point as marked on the wall.
- Attach three impale clips to the wall per Absorber using screws into studs, wallboard anchors and screws, or other appropriate fasteners. The spiky flanges should point toward the ceiling as shown in fig 8. The position of the impale clips does not matter as long as they are hidden behind the Absorber. We recommend that you position one clip 6 inches (15cm) from the top edge and 6 inches (15cm) from the left edge, another clip 6 inches (15cm) from the top edge and 6 inches (15cm) from the right edge, and the third clip 6" (15cm) from the bottom edge, centered.
- Press the Absorber against the impale clips and apply gentle downward pressure until the panel is caught securely. Use a bubble or laser levels to make sure the Absorber hangs straight. Note that the Absorber will travel down about ½ inch (1cm) from where it started. Thus, you should press it against the impale clips about ½ inch (1cm) above where you want it to end up. It may be helpful to put a piece of masking tape on the wall at 66 ½ inches (169cm) as a guide for where to start the top edge of the Absorber.

#### Abfuser Strips

- Position the Abfuser Strips based on the diagrams and instructions from the preceding pages.
- Determine the exact location on the wall for each Abfuser Strip. The top edges should be 66 inches (167cm) from the floor. The edge of the first Abfuser Strip should be 6 inches (15cm) from the edge of the adjacent Absorber. Subsequent Abfuser Strips should be 6 inches (15cm) from the preceding Abfuser Strip.
- Attach two impale clips to the wall per Abfuser Strip using screws into studs, wallboard anchors and screws, or other appropriate fasteners. The spiky flanges should point toward the ceiling as shown in fig 8. The position of the impale clips does not matter as long as they are hidden behind the Abfuser Strip. We recommend that you position one clip 6 inches (15cm) from the top edge and 6 inches (15cm) from the bottom edge, centered.
- Press the Abfuser Strip against the impale clips and apply gentle downward pressure until the panel is caught securely. Use a bubble or laser levels to make sure the Abfuser Strip hangs straight. Note that the Abfuser Strip will travel down about ½ inch (1cm) from where it started. Thus, you should press it against the impale clips about ½ inch (1cm) above where you want it to end up. It may be helpful to put a piece of masking tape on the wall at 66 ½ inches (169cm) as a guide for where to start the top edge of the Abfuser Strip.

#### **Corner Traps**

- Position the Corner Traps based on the diagrams and instructions from the preceding pages.
- In order to hang each Corner Trap in the corners of the room, you will need to use two corner braces supplied with the system as shown in fig 8. These braces will span the corner, the impale clips will attach to them, and the Corner Trap will hang from the impale clips. Install one brace centered at 36 inches (90cm) from the floor. Install the second brace centered at 60 inches (150cm) from the floor. Drive fasteners into the lateral walls that the brace spans.
- Attach two impale clips to the top brace and two to the bottom using screws. The spiky flanges should point toward the ceiling as shown in fig 7. The position of the impale clips along the brace does not really matter.
- Press the Corner Trap against the impale clips and apply gentle downward pressure until the panel is caught securely. Use a bubble or laser levels to make sure the Corner Trap hangs straight. Note that the Corner Trap will travel down about ½ inch (1cm) from where it started. Thus, you should press it against the impale clips about ½ inch (1cm) above where you want it to end up.

#### **Ceiling Panels**

- Position the Ceiling Panels based on the diagrams and instructions from the preceding pages.
- Mark the first reflection points as described earlier.
- Determine the exact location on the ceiling for each Ceiling Panel. The center of each panel should line up with one of the first reflection points as marked on the ceiling.
- Screw 4 open screw hooks into the ceiling in a rectangular pattern 24 inches (60cm) by 12 inches (30cm), 6 inches (15cm) inside each edge of the Ceiling Panel, as shown in fig 8. Make sure that you secure the screw hooks in joists or use wallboard anchors. After all 4 screw hooks are installed, simply lift the wire loops (pre-installed in the Ceiling Panel) over the hooks. The Ceiling Panel will float a few inches (cm) below the ceiling.

### **Care Instructions**

The fabric may be cleaned with mild, water-free solvents or water-based cleaning agents or foam.

### Spares

If any mounting hardware, panel parts, or extra printed material are needed, please call MSR.

### Shipping Weight & Dimensions - Melody

#### Domestic

Item	Units	Weight (Ibs)	Box Dimensions (in)		
	Per Box	Per Box	L	W	Н
2" Absorber	3	39	37	26	9
Abfuser Strips	8	20	37	26	6
Corner Absorber	2	36	49	26	6
Cloud Panel	2	14	26	38	6

#### International

Item	Units	Weight (Kg)	Box Dimensions (cm)		
	Per Box	Per Box	L	W	Н
2" Absorber	3	17	93	66	22
Abfuser Strips	8	9	93	66	15
Corner Absorber	2	16	124	66	15
Cloud Panel	2	6	66	96	15

### Warranty

All Melody modules are warranteed to be free of manufacturing defects for a period of 12 months from the date of purchase.



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