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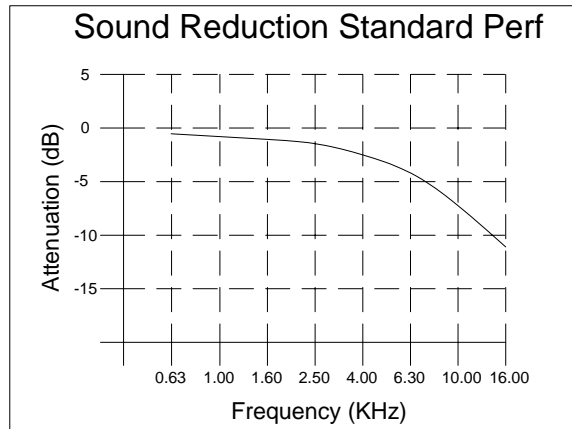
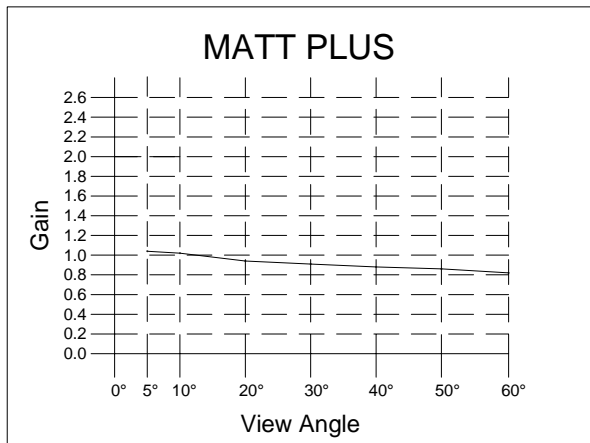
MATT PLUS FRONT PROJECTION SCREEN DATA SHEET

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Matt Plus screens are considered by leading cinema exhibitors and laboratories worldwide to be the 'premier' non-coated projection surface. The flexible PVC based material and coating is manufactured to a unique Harkness formulation and specification, providing: wide viewing angle, high contrast, bright pictures and excellent colour temperature. The surface can be folded for ease of transportation, cinema access and installation. Noted for invisible seams under normal projection conditions.

Application

Matt Plus screens are recommended for use with flat and curved frames in lace-in or wrap-round (floating) frame formats. The surface is also suitable for roller screen applications. Available in full screen perforated form where behind screen speakers are required (see attenuation curve). Mini-perforated and non-perforated options also available.



General Detail

View Distance	Minimum of 5mtr (15') recommended on standard perforated surfaces
Maximum Size	No specific limit
Perforation Size	Ø1.2mm (0.047")
Perforation Density	4.5%
Weight	0.43kg/m ² (0.09lb/ft ²)
Eyelet Spacing	150mm (6") nominal

Typical Packing

Folded in parcel or parcel box up to 90m² (1000ft²). Wooden crate for larger sizes.
Can also be tube packed (long box over 7m (23')).

Despatch/Storage

Screens should normally be transported and stored at temperatures between 5°C and 30°C (40°F and 85°F), with relative humidity less than 80%.
If screens are very cold (e.g. following air transport) then they must be allowed to warm up before unpacking, otherwise cold cracking may occur. Screens should be installed within a maximum of 2 months of shipping. Packages should be handled with care to avoid damage.

Installation

The following principles should be followed when installing Harkness Matt Plus screen surfaces:

- The auditorium should be clean with no building works taking place.
- Installation should be at ambient temperature (20/24°C-68/75°F).
- Care should be taken to avoid the screen coming into contact with sharp objects during installation.
- Excessive loads should not be placed on any specific point of the screen.
- Use of cotton gloves is recommended.
- The viewing surface should not be touched (the rear of the screen is identified by the product label).
- Creasing should be minimised during installation.

There are two principal methods to install the screen:

- Flying the screen by attaching several tie lines to the top of the screen, passing these over the top of the frame and using them to pull the screen into place.
- Unrolling the screen vertically across the front of the frame.

Using one of these methods, the screen surface is loosely attached to the top of the frame. After this, the top of the screen is fully attached to the top lacing bar by working from the centre outwards using each eyelet.

The lower edge of the screen should then be laced from the centre outwards, applying sufficient tension to pull the screen flat. Typically, the screen can be stretched up to 5% of its height at ambient temperature of 20/24°C-68/75°F using sisal cord lacing. Side lacing should be from the top down and sufficient to remove the flutes. Excessive side tension should be avoided, particularly on a curved frame, as it will result in straightening of the screen across the curve (belly).

Springs or elasticated ties are not recommended to install Harkness screen surfaces.

The above method can be used for both lace-in and for wrap-round frames. Normally, two people are sufficient to install a screen surface.

Care and Maintenance

The general environment where the screen is installed should be kept reasonably clean to avoid dirt and dust build-up. Screens can be periodically cleaned using a soft brush or cloth, doing this vertically with limited pressure. Under no circumstances should the screens be made wet or cleaned with any material containing bleach or other chemicals.

Surface Edging Options

- Web and eye (grommet). Triple fold web integral with surface
- Preformed pipe pocket any size on any side
- Cloth web and fixings (snaps) for press stud frames
- Straight sides or shaped to special order
- Cut square (unfinished edge)

Fire Retardancy

Certification to the following standards:

UK BS 5867 Part 2
USA NFPA 701
Canada CAN ULC S102-2
Germany B1
France M1
Italy Class 1
Spain M2
Japan BT-08-050 (*regulation requires certification by importing company*)
Australia