

New American Standard

Sound Transmission of Theater Projection Screens, PH22.82, was developed by the Society's Sound Committee based on a war standard, Z52.44-1945. The specified transmission characteristics are in accord with most present-day theater screens of proven performance value.

The need for this standard was indicated by the occasional installation of screens with excessive transmission loss. Increasing the gain of the sound system as a compensation very often drives the amplifier into its nonlinear region and consequently produces excessive distortion.

American Standard for
**Sound Transmission of
Perforated Projection Screens**


ASA
Reg. U. S. Pat. Off.
PH22.82-1951
*UDC: 778.554.4

1. Sound Transmission Characteristics

1.1 The sound transmission characteristics of perforated projection screens shall be such that the attenuation at 6000 cycles, with respect to 1000 cycles, is not more than 2½ db and the attenuation at 10,000 cycles, with respect to 1000 cycles, is not more than 4 db. The regularity of response shall be such that there is no variation greater than ± 2 db from a smooth curve at any frequency between 300 and 10,000 cycles. The general attenuation at and below 1000 cycles should be not greater than 1 db.

2. Method of Measurement

2.1 The sound transmission of the screen shall be measured by means of a loudspeaker, fed by an audio oscillator and amplifier, behind the screen, and a calibrated microphone, amplifier, and output meter in front of the screen. The loudspeaker shall be of the type normally used in motion picture theaters for the size of screen being tested, and shall be placed with its axis not less than 2 feet from an edge of the screen with its mouth parallel to and separated from the screen by 4 to 8 inches (center cell in the case of a curved-front multicellular horn). The microphone shall be located 10 to 12 feet in front of the screen and on the axis of the loudspeaker. The sound transmission of the screen at any frequency is then the difference in the sound level measured with the screen in place and with the screen removed.

2.2 Suitable precautions shall be taken to eliminate or minimize the effect of standing waves in the test room.

Approved July 17, 1951, by the American Standards Association, Incorporated
Sponsor: Society of Motion Picture and Television Engineers

*Universal Decimal Classification

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