# Catalog of
# TEST FILMS

available

from

Motion Picture Research Council, Inc.

1421 North Western Avenue
Hollywood 27, California

and

Society of Motion Picture Engineers

Hotel Pennsylvania
New York 1, New York

## TEST FILMS

The 35-mm and 16-mm test films listed in this catalog are made available by the Motion Picture Research Council and the Society of Motion Picture Engineers to be of more service to the motion picture industry in general and to the exhibitor in particular.

Prices include shipping charges to all points within the United States.

PLEASE ORDER BY NAME, CODE NUMBER, AND TYPE.

All test film is sold on a cost basis. Therefore, no cash discounts are given and facilities for extending credit are not available.

## INDEX OF TEST FILMS

| Test Film | Code No. | Length (in Feet) | Price |
|---|---|---|---|
| 35-Mm Visual Test Film | *VTF-1* | 450 | $ 17.50 |
| Focus-and-Alignment Section | *VTF-FAS* | 100 | 5.00 |
| Travel-Ghost Target Section | *VTF-TGS* | 100 | 5.00 |
| Jump-and-Weave Target Section | *VTF-JWS* | 100 | 5.00 |
| 35-Mm Theater Sound Test Film | *ASTR-3* | 500 | 17.50 |
| 35-Mm Multifrequency Test Film | | | |
| *Type A*—Laboratory Type | *APFA-1* | 450 | 25.00 |
| *Type B*—Service Type | *ASFA-1* | 300 | 17.50 |
| 35-Mm Transmission Test Film | *TA-1* | 250 | 17.50 |
| 35-Mm Buzz-Track Test Film | *ABZT-1* | 50 min* | 0.04/ft |
| 35-Mm Scanning-Beam Illumination Test Film | | | |
| *Type A*—17 Position Track | *A17P-1* | 230 | 12.50 |
| *Type B*—Snake Track | *AST8-1* | 8 | 0.50 |
| 35-Mm Sound-Focusing Test Film | | | |
| *Type A*—9000-Cycle Track | *A9KC-1* | 50 min | 0.035/ft |
| *Type B*—7000-Cycle Track (Area) | *A7KC-1* | 50 min | 0.035/ft |
| *Type C*—7000-Cycle Track (Density) | *D7KC-1* | 50 min | 0.035/ft |
| *Type C*—Acetate Base | *D7KCS-1* | 50 min | 0.04/ft |
| 35-Mm 3000-Cycle Flutter Test Film | *A3KC-1* | 50 min | 0.05/ft |
| 35-Mm 1000-Cycle Balancing Test Film | | | |
| For Two Machines | *ABL2-1* | 14 | 0.50 |
| For Three Machines | *ABL3-1* | 21 | 0.75 |
| 1000-Cycle Test Film | *ABLN-1* | 50 min | 0.035/ft |
| 35-Mm Multifrequency Warble Test Film | *APWA-1* | 450 | 25.00 |
| 16-Mm Sound-Projector Test Film | *Z52.2* | 200 | 12.50 |
| 16-Mm Multifrequency Test Film | *Z22.44* | 150 | 41.25 |
| 16-Mm Buzz-Track Test Film | *Z52.10* | 100 | 27.50 |
| 16-Mm Scanning-Beam Illumination Test Film | | | |
| Laboratory Type | *Z52.7-L* | 100 | 27.50 |
| Service Type | *Z52.7-S* | 100 | 27.50 |
| 16-Mm Sound-Focusing Test Film | | | |
| Laboratory Type | *Z22.42-7000* | 100 | 27.50 |
| Service Type | *Z22.42-5000* | 100 | 27.50 |
| 16-Mm 3000-Cycle Flutter Test Film | *Z22.43* | 380 | 104.50 |
| 16-Mm 400-Cycle Signal-Level Test Film | *Z22.45* | 100 | 27.50 |

* Minimum.

## CATALOG OF TEST FILMS

| TEST FILM | CODE NO. | LENGTH (in Feet) | PRICE |
|---|---|---|---|
| **35-Mm Visual Test Film** | *VTF-1* | 450 | $17.50 |

The Visual Test Film is a print on safety stock, picture only containing four targets to check focus and alignment, travel ghost, jump and weave, and lens aberration. This test film is used when installing new projectors and screens or performing maintenance operation on existing equipment.

The Focus-and-Alignment target shows whether or not picture size and screen masking are correct, and whether the projected picture is centered properly on the screen.

The Travel-Ghost target shows improper timing of the shutter quite readily and gives a clear indication of the correct adjustment as the timing is being corrected.

The Jump-and-Weave target gives an accurate indication of the unsteadiness of the projected picture. Picture jump is measured in per cent of picture height, and picture weave is measured in per cent of picture width.

The Lens-Aberration target shows picture distortion and gives an indication of the lack of sharpness that will be present in pictures shown on any particular projector.

Explanatory titles precede each section and an instruction booklet is furnished giving complete details on its proper use.

Because some users prefer loops or continuous lengths of the separate target sections for adjusting machines, one at a time or in pairs, separate sections of the first three targets have been made available. They may be purchased separately in 100- to 900-ft lengths in multiples of 100 ft.

| | | | |
|---|---|---|---|
| *Focus-and-Alignment Section* | *VTF-FAS* | 100 | $5.00 |
| *Travel-Ghost Target Section* | *VTF-TGS* | 100 | 5.00 |
| *Jump-and-Weave Target Section* | *VTF-JWS* | 100 | 5.00 |
| **35-Mm Theater Sound Test Film** | *ASTR-3* | 500 | $17.50 |

The Theater Sound Test Film is a print on nitrate base containing picture and sound and is used to check the over-all sound quality in the theater. Included are main title music to check the frequency range and the high- and low-frequency balance, specially selected samples of current dialog recording to check the frequency response, and a piano recording to check flutter.

Standard electrical characteristics for the commonly used types of two-way theater reproducing equipment were specified by the Research Council early in 1937 in order that studios might re-record for the best possible reproduction on a theater sound system set to a standard electrical characteristic applicable to that

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|---|---|---|---|

system. The standard electrical characteristics were arrived at after listening tests were conducted in various representative theaters. During these tests the equipment in each theater was adjusted to various settings of the electrical characteristic. That setting which gave the optimum reproduction was established as the standard for that particular loudspeaker system. For the listening tests necessary in arriving at the standard electrical characteristics, the Committee devised a test film containing sample recordings of music and dialog from all the studios. The use of this film was so successful that prints subsequently were made available for the use of theater service engineers.

This test film has been revised from time to time, in order to increase its value for theater service engineering use.

The current version, designated Theater Sound Test Film *ASTR-3*, contains three dialog samples, a choral-music sample, a vocal (single-voice) music sample, and a sound-effect sample, totaling approximately 500 ft in length. A title is superimposed over the picture indicating the particular sound difficulty which that sample demonstrates. The material contained in the film is not necessarily the best recording available, but each sample has been selected to demonstrate a particular point of difficulty in the adjustment of theater sound systems.

**35-Mm Multifrequency Test Film**

| | | | |
|---|---|---|---|
| *Type A*—Laboratory Type | *APFA-1* | 450 | $25.00 |
| *Type B*—Service Type | *ASFA-1* | 300 | 17.50 |

The Multifrequency Test Film is a variable-area print on nitrate base and is used to obtain the electrical frequency response at the output of the power amplifier. Each print is individually calibrated, and correction factors, accurate to within $\pm$ 0.25 db, are provided with each film. The response within any one frequency will vary less than $\pm$ 0.25 db.

*Type A* (Laboratory Type), normally used by manufacturers and in the installation of equipment contains the following frequencies each, preceded by a spoken announcement:

| cps | cps | cps | cps |
|---|---|---|---|
| 1000 | 200 | 1500 | 6000 |
| 40 | 300 | 2000 | 7000 |
| 55 | 400 | 2500 | 8000 |
| 70 | 500 | 3000 | 9000 |
| 100 | 700 | 4000 | 10000 |
| 150 | 1000 | 5000 | 1000 |

*Type B* (Service Type), normally used in routine theater servicing, includes the following frequencies, each preceded by a spoken announcement:

| cps | cps | cps | cps |
|---|---|---|---|
| 1000 | 300 | 2500 | 5000 |
| 40 | 500 | 3000 | 6000 |
| 70 | 1000 | 3500 | 7000 |
| 100 | 2000 | 4000 | 8000 |

| TEST FILM | CODE NO. | LENGTH (in Feet) | PRICE |
|---|---|---|---|
| **35-Mm Transmission Test Film** | *TA-1* | 250 | $17.50 |

The Transmission Test Film is a print on safety stock and is used to check the position of the scanning beam, the electrical frequency response of the system, and flutter.

The film contains two sound tracks, one on each side of the film, which are printed head to tail thereby making rewinding unnecessary when playing both tracks.

The first track, entitled multifrequency test, starts with a short section of buzz track to check the guide-roller adjustment. Next is a series of the following constant frequencies: 1000, 40, 70, 130, 300, 500, 2000, 3000, 7000, and 8000 cps. The low frequencies are recorded at a reduced level and announcements precede all sections up to and including the 3000-cycle section. An unmodulated track of average density is included between the 7000- and 8000-cycle tones to evaluate the effect of film noise on the readings.

The second track, on the opposite side of the film, entitled flutter test, contains 60 ft of sustained piano chords followed by a 3000-cycle tone. While the flutter in this print is low, it is intended only as an aural check. For the bridge-type of flutter measurement, the toe-recorded variable-density negative (*A3KC-1*) should be used.

| | | | |
|---|---|---|---|
| **35-Mm Buzz-Track Test Film** | *ABZT-1* | 50 min | $0.04/ft |

The Buzz-Track Test Film is a print on nitrate base and is used for checking scanning-beam placement. The track consists of an 0.087-in. opaque center with a frequency of 300 cycles on the picture side and a frequency of 1000 cycles on the sprocket side. These tracks are accurately located on the film so that when the film is run on a projector in correct adjustment and free from weave, no sound is heard. If the scanning-light beam is out of adjustment laterally, either the 300- or the 1000-cycle tone will be heard.

This film is available in 50- to 500-ft lengths in multiples of 50 ft.

| | | | |
|---|---|---|---|
| **35-Mm Scanning-Beam Illumination Test Film** | | | |
| *Type A*—17-Position Track | *A17P-1* | 230 | $12.50 |
| *Type B*—Snake Track | *AST8-1* | 8 | 0.50 |

The Scanning-Beam Illumination Test Film is a print on nitrate base and is used to check the uniformity of illumination across the scanning slit.

*Type A* (17-Position Track) is used by manufacturers or on new installations. The film contains 17 incremental 1000-cycle tracks, all with the same amplitude of approximately 0.007 in. The tracks appear on the film in succession, each preceded by an announcement identifying the track number. The 17 tracks cover a width greater than the standard scanning beam. By running this test film and observing the indications of the output meter it is possible to correct unevenness of illumination and bring the variation of output within a limit of $\pm 1.5$ db, which is the recommended maximum variation. This is accomplished by adjusting or replacing the exciter lamp.

A calibration sheet giving the exact position of each track from the guided edge is provided with each film.

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|---|---|---|---|

*Type B* (Snake Track) is used as an 8-ft loop for quick service adjustment of the scanning-beam illumination. It contains a 1000-cycle track with a 0.007-in. amplitude placed on the film in such a way that the track moves across the scanning slit from one edge to the other at a uniform rate.

In order to maintain a constant length of track, and thus hold the scanned area constant, the usual type of film splice should not be used in making up this loop. Instead, a butt-end splice should be employed, obtained by placing the ends of the print securely against one another without any overlap and joining the two ends with transparent tape, such as Scotch cellophane tape. Experience has shown this splice to be very practicable as it may be remade without any loss of film. In addition, this type of splice disturbs the reading of the volume indicator less than the conventional overlap splice. This film has been prepared for testing the uniformity of the illumination across the scanning slit and is not intended for use to determine slit placement adjustment, for which the Buzz Track should be used.

**35-Mm Sound-Focusing Test Film**

| | | | |
|---|---|---|---|
| *Type A*—9000-Cycle Track | *A9KC-1* | 50 min | $0.035/ft |
| *Type B*—7000-Cycle Track (Area) | *A7KC-1* | 50 min | 0.035/ft |
| *Type C*—7000-Cycle Track (Density) | *D7KC-1* | 50 min | 0.035/ft |
| *Type C*—Acetate Base | *D7KCS-1* | 50 min | 0.004/ft |

The Sound-Focusing Test Films are prints on nitrate base (except *D7KCS-1* on acetate base) and are used to adjust the focus and azimuth of soundhead optical systems.

*Type A*—9000-Cycle Track (*A9KC-1*) contains a 9000-cycle variable-area tone recorded at 1 db below 100 per cent modulation with a power output variation of less than $\pm$ 0.25 db. This film is normally used by manufacturers and laboratories. It is not recommended for theater use.

*Type B*—7000-Cycle Track (*A7KC-1*) contains a 7000-cycle variable-area tone recorded at 2 db below 100 per cent modulation with a power output variation of less than $\pm$ 0.25 db. This film is used for servicing theater equipment.

*Type C*—7000-Cycle Track (*D7KC-1*) contains a 7000-cycle variable-density tone recorded at 2 db below 100 per cent modulation with a power output variation of less than $\pm$ 0.25 db. This film is used for servicing theater equipment.

*Type C* is also available on acetate base (*D7KCS-1*).

These films are available in 50- to 200-ft lengths in multiples of 50 ft.

**35-Mm 3000-Cycle Flutter Test Film** *A3KC-1* 50 min $0.05/ft

The 3000-Cycle Flutter Test Film is a toe-recorded variable-density negative on nitrate base and is used in measuring flutter. A flutter bridge is required to make this measurement. The total flutter of this film is not more than 0.06 per cent. A complete analysis of the flutter content is furnished with each purchase of film.

This film is available in 50- to 1000-ft lengths in multiples of 50 ft.

**35-Mm 1000-Cycle Balancing Test Film**

| | | | |
|---|---|---|---|
| For Two Machines | *ABL2-1* | 14 | $0.50 |
| For Three Machines | *ABL3-1* | 21 | 0.75 |
| 1000-Cycle Test Film | *ABLN-1* | 50 min | 0.035/ft |

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The 1000-Cycle Balancing Film is a print on nitrate base and is used as a loop to measure and adjust the power-level output of two or more projection machines. It contains a 1000-cycle variable-area tone with a power-level output variation of less than 0.25 db.

The *ABL2-1* contains sufficient film for making loops for two machines and the *ABL3-1* contains sufficient film to make loops for three machines. An instruction booklet is furnished with these balancing loops.

This film is also available in single lengths of 50 to 200 ft in multiples of 50 ft.

**35-Mm Multifrequency Warble Test Film** *APWA-1* 450 $25.00

The Multifrequency Warble Test Film is a variable-area print on nitrate base and is used to make acoustical-response measurements. This measurement requires the use of a sound-level meter. Each print is individually calibrated and correction factors are provided with each film. This film contains the following frequencies with the indicated amount and rate of warble for each frequency:

| Frequency | Amount of Warble | Rate of Warble | Frequency | Amount of Warble | Rate of Warble |
|---|---|---|---|---|---|
| 750 | ±250cps | 5 cps | 900 | ±12½% | 5cps |
| 40 | ±12½% | 2½cps | 1000* | ±12½% | 5cps |
| 50 | ±12½% | 2½cps | 1250 | ±125cps | 5cps |
| 55 | ±12½% | 2½cps | 1500 | ±125cps | 5cps |
| 65 | ±12½% | 2½cps | 1750 | ±125cps | 5cps |
| 70 | ±12½% | 2½cps | 2000 | ±125cps | 5cps |
| 85 | ±12½% | 2½cps | 2250 | ±125cps | 5cps |
| 100* | ±12½% | 3 cps | 2500* | ±125cps | 5cps |
| 130 | ±12½% | 3 cps | 2750 | ±125cps | 5cps |
| 150 | ±12½% | 3 cps | 3000 | ±125cps | 5cps |
| 175 | ±12½% | 3 cps | 3500 | ±125cps | 5cps |
| 200 | ±12½% | 4 cps | 4000 | ±125cps | 5cps |
| 250* | ±12½% | 4 cps | 4500 | ±125cps | 5cps |
| 300 | ±12½% | 4 cps | 5000* | ±125cps | 5cps |
| 350 | ±12½% | 4 cps | 5500 | ±125cps | 5cps |
| 400 | ±12½% | 4 cps | 6000 | ±125cps | 5cps |
| 450 | ±12½% | 4 cps | 6500 | ±125cps | 5cps |
| 500* | ±12½% | 5 cps | 7000 | ±125cps | 5cps |
| 600 | ±12½% | 5 cps | 7500 | ±125cps | 5cps |
| 700 | ±12½% | 5 cps | 8000 | ±125cps | 5cps |
| 800 | ±12½% | 5 cps | | | |

* An identifying beat tone precedes these frequencies.

**16-Mm Sound-Projector Test Film** *Z52.2* 200 $12.50

The 16-Mm Sound-Projector Test Film is a print on safety base, containing picture and sound, and is used to check the adjustment of 16-mm sound motion picture projection equipment and to judge the acoustics of the room in which

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the equipment is operated. This film is the 16-mm version of the 35-mm Theater Sound Test Film (*ASTR-3*) and contains the same main title and choral music, dialog samples, and piano recording. The picture has been optically reduced from 35 to 16 mm and the sound re-recorded from 35 to 16 mm.

**16-Mm Multifrequency Test Film** *Z22.44* 150 $41.25

The Multifrequency Test Film is a direct-positive original recording on safety base and is used to obtain the electrical-frequency response at the output of the power amplifier. Each film is individually calibrated on equipment correct within ± 0.25 db up through 3000 cycles and within ± 0.5 db above 3000 and through 7000 cycles. The deviation from the intended flat-response characteristic (assuming negligible reproducing light-beam width) is stated as a correction for each frequency which will give the true level when it is added algebraically to the output-level measurement obtained when using the film.

This test film contains the following series of frequencies, each preceded by a spoken announcement:

| cps | cps | cps | cps |
|---|---|---|---|
| 400 | 300 | 2000 | 5000 |
| 50 | 500 | 3000 | 6000 |
| 100 | 1000 | 4000 | 7000 |
| 200 | | | 400 |

**16-Mm Buzz-Track Test Film** *Z52.10* 100 $27.50

The Buzz-Track Test Film is an original negative on safety base and is used for checking scanning-beam placement. The track consists of an 0.076-in. opaque center with a frequency of 300 cycles on the picture side and a frequency of 1000 cycles on the sprocket side. These tracks are accurately located on the film so that when the film is run on a projector in correct adjustment and free from weave, no sound is heard. Either or both the 1000- and 300-cycle tones will be heard, however, if the scanning-light beam is out of position.

**16-Mm Scanning-Beam Illumination Test Film**

| | | | |
|---|---|---|---|
| *Laboratory Type* | *Z52.7-L* | 100 | $27.50 |
| *Service Type* | *Z52.7-S* | 100 | 27.50 |

The Scanning-Beam Illumination Test Film is a print on safety base and carries a narrow sound track (0.005 in. wide) modulated at constant level by a 1000-cycle tone. The location of this sound track changes at a uniform rate along the length of the film from a position just inside one edge of the scanned area to a position just inside the opposite edge of the scanned area. The narrow 1000-cycle sound track sweeps across the scanning-light beam from one end to the other at a uniform rate, the position of the sound track relative to the ends of the light beam at any instant being shown by an animated diagram appearing in the picture area.

If the scanning-beam illumination were absolutely uniform across the width of the scanned area, the output level of the 1000-cycle tone would be constant. In practice, however, some variation of an output-meter reading will always be

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observed. By running a loop of the film continuously and observing the indications of the output meter while adjustments are made, it is usually possible to correct unevenness of illumination and bring the variation of output within a limit of $\pm$ 1.5 db.

The *Laboratory Type* may be spliced into 34-ft loops and the *Service Type* may be spliced into $3^1/_2$-ft loops. Each type is available in 100-ft lengths.

**16-Mm Sound-Focusing Test Film**

| | | | |
|---|---|---|---|
| *Laboratory Type* | *Z22.42-7000* | 100 | $27.50 |
| *Service Type* | *Z22.42-5000* | 100 | 27.50 |

The Sound-Focusing Test Film is an original negative on safety base and carries a special "square-wave" track, chosen because its output changes more rapidly with changes in the focus of the sound optical system of the projector than the output from the usual "sine-wave" high-frequency track. The "square-wave" track also gives a more sensitive indication of the errors of the "azimuth" adjustment of the sound-reproducing light beam.

The Sound-Focusing Test Film is made in two types: *Laboratory Type*, a 7000-cycle record for manufacturing and precision adjustment of the focus and azimuth of the sound optical system, and *Service Type*, a 5000-cycle record for quick service adjustment.

**16-Mm 3000-Cycle Flutter Test Film** *Z22.43* 380 $104.50

The 3000-Cycle Flutter Test Film is a direct-positive original recording on safety base and carries a 3000-cycle tone having extremely low flutter content for use in measuring the flutter introduced by 16-mm sound reproducers. The recorded frequency is within 25 cycles of the 3000-cycle frequency, the output level is constant within 0.25 db, and the total flutter content of the film at the time of shipment is less than 0.1 per cent.

**16-Mm 400-Cycle Signal-Level Test Film** *Z22.45* 100 $27.50

The 400-Cycle Signal-Level Test Film is a direct-positive original recording designed to furnish as nearly as is practicable an absolute standard of recorded signal level for use in measuring the effective amplification and sound output of 16-mm sound motion picture projectors, taking into account the sound optical system and phototube, as well as the amplifier and loudspeaker.

A definite output level is determined by specifying the amplitude of the recorded signal, the density of the image, and the combined base and fog density of the clear part of the sound track within narrow limits. The specified level is approximately 2 db below the maximum level possible and is about equal to the highest level that is to be expected in most recording, since in commercial practice the image density is usually not so great and the fog density not so low as the values specified for this film.

The actual measured values of signal amplitude, image density, and fog density are given with each film, together with the corresponding calculated value of overall deviation from the intended standard signal level.