



# **SMPTE Test Materials For Motion Pictures And Television**

**Society of Motion Picture and Television Engineers  
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## WHAT IS THE SMPTE?

The Society of Motion Picture and Television Engineers (SMPTE) is one of the world's foremost engineering societies in the fields of motion pictures and television. Since 1916 the SMPTE has played a major role in standardization, and has been a strong influence in encouraging good engineering practices in the industry. For its engineering work, the SMPTE has received an Oscar from the Academy of Motion Picture Arts and Sciences, an Emmy and two Citations from the Academy of Television Arts and Sciences.

SMPTE maintains an engineering staff at SMPTE Headquarters to oversee and coordinate engineering committee activities. SMPTE test films are produced under the supervision of the engineering staff.

SMPTE sponsors two National Standards Committees under the American National Standards Institute (ANSI) and operates the Secretariat of the International Standards Organization Technical Committee on Cinematography (ISO/TC36).

As a membership organization with over 9,000 individual members and 216 Sustaining (company) Members, SMPTE's activities include the publication of the monthly *SMPTE Journal*, and sponsorship of annual technical conferences and equipment exhibits. Additional information about the SMPTE may be obtained from SMPTE Headquarters, 862 Scarsdale Ave., Scarsdale, NY 10583.

## SMPTE TEST MATERIALS

The test materials in this catalog were planned by technical committees of the SMPTE after considerable research and consultation. They have many uses in the motion-picture and television fields. SMPTE test films provide simple equipment performance checks without the use of expensive, complicated test equipment.

## A FEW WORDS ABOUT FILM USE, CARE AND STORAGE

Test films are precision measuring tools. For their continued usefulness and reliability they should be given reasonable care in use and storage. The following specific recommendations and precautions applicable to all test films should be recognized:

1. Equipment should be checked for normal mechanical functioning and operation prior to running any test film, to insure that the film is not damaged during use.
2. Physical distortion, dirt, scratches, and similar defects, generally render any test film inaccurate. The film should be stored on good quality reels or cores in a protective enclosure, and should be inspected periodically.
3. When critical judgments are to be based upon test film performance, it is good practice to maintain two copies: one in active use and the other as a control. By periodically comparing the control with the working copy, changes in the film can be distinguished from changes in the equipment under test.
4. A statistical log should be kept of test film run results on a particular piece of equipment. This will be useful in determining the need and effectiveness of equipment maintenance.
5. All test films are on safety base stock.
6. Magnetic films should be kept away from power lines and magnetic sources.

7. All test films are fragile. They wear out with use and with age. Reliability must be carefully watched and films replaced when questionable. Color films lose their color balance after one or two years.

8. Attention should be given to a film's emulsion position. SMPTE Recommended Practice RP 39 gives specifications for maintaining an "emulsion-in" position. At present, 35-mm SMPTE picture-only and picture-with-sound test films, as well as the 35-mm Subjective Color Reference test films and the photographic 35-mm sound-only test films, are supplied to the user in the "tail-out, emulsion-in" position on 2-in cores. They should be rewound by the user "emulsion-in" on 3-in cores for storage. Some 16-mm and super 8-mm test films are supplied in "emulsion-out" configuration, others as "emulsion-in" items, as the case may be. Wherever the "emulsion-in" condition can be achieved and maintained, improved performance will result. *However, care should be taken that the equipment has been designed to allow the use of "emulsion-in" rolls, because otherwise the first run could damage the film permanently.*

9. More details on the care and handling of test films are available from SMPTE headquarters. Recommended Practices pertaining to all films are also available from SMPTE Headquarters. SMPTE Recommended Practices RP 39 and 45 give especially useful advice on the use and care of test films.

## LIMITED WARRANTY

SMPTE Test Materials are made in accordance with SMPTE Recommended Practices.

If, for any reason, the purchaser is not satisfied with any test materials purchased from SMPTE, the materials may be returned, postage prepaid provided they are in good condition and are not damaged by mishandling, misuse, or alterations.

SMPTE warrants this product to the original purchaser to be free from defective materials and workmanship, and to furnish a new or equal part in exchange if any such defect is found.

*The period of this warranty covers ninety (90) days from date of purchase.* This warranty entitles the original purchaser to have the warranted item rendered at no cost for the period of the warranty described above when delivered to SMPTE with proof of purchase.

This shall be the exclusive warranty and neither this warranty nor any other warranty expressed or implied shall extend beyond the period of time listed above. In no event shall SMPTE be liable for consequential economic damage or consequential damage to property.

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Now Available in 3/4-inch and 1/2-inch Formats.

# The SMPTE Video Tape Cassette For Receiver/Monitor Setup

SMPTE's test tape cassette is used for the subjective evaluation of receiver or monitor setup and for checking out the overall video and audio performance of magnetic helical-scan tape reproducers, having provisions for reproducing the NTSC signal.

Here's what this unique test cassette contains.

## Video

- (a) A recorded seven-step gray scale signal.
- (b) A recorded color bar signal.



- (c) Closeups of female and male models for skin tone evaluation and general definition.
- (d) Selected indoor scenes showing samples of sky, architecture, and human models with outdoor illumination.

- (e) Patterns for Safe Action and Safe Title Areas.
- (f) A crosshatch pattern to check scanning linearity.
- (g) A dot pattern to check picture tube convergence.
- (h) A full red field to check picture tube purity having the same luminance and chrominance as the red bar in a 75 percent color bar signal.

## Audio

- (a) Commentary describing the scenes and calling attention to the reference material and its relationship to proper receiver/monitor setup.
- (b) Orchestral music for evaluation of general audio reproduction.

**No test instruments are required.**

**A commentator describes each scene and what it is intended to check.**

**Each cassette comes in a case and is accompanied by a Wratten 47B blue filter (or equivalent) and an instruction sheet on tape usage.**

**Made in accordance with SMPTE Recommended Practice RP 96**

V3-RMS	.....	3/4" Type E (U) Format
V2-RMS-B1	.....	1/2" Type G One Hour (Beta) Format
V2-RMS-B2	.....	1/2" Type G Two Hour (Beta) Format
V2-RMS-V	.....	1/2" Type H Two Hour (VHS) Format

## Announcing SMPTE's Brand New 16-mm Color Jiffy Test Film.

# THE JIFFY

SMPTE Jiffy Test Films contain a series of picture and sound samples to help you subjectively evaluate the performance of your projector. Titles appear in each section to indicate what is being tested and the purpose of the test. The film is easy to use. No special instruments are required. Each film is accompanied by an instruction sheet indicating the procedure to be used in checking out the projector's sound and picture characteristics.

All versions of the Jiffy test film are made as prints in accordance with

SMPTE Recommended Practice RP 18.

The films have 1R-3000 perforations.

The SMPTE Jiffy films check out these important functions:

### For sound:

- Faithful Reproduction of Wide-Range Music
- Piano Sound for Checking Wow and Flutter
- Correct Soundtrack Guiding (buzz track for photographic sound version only)

- Compromise Sound Focus (photographic sound version only)
- Frequency Response at Normal Program Level
- Dialogue Intelligibility

### For picture:

- General Image Steadiness (vertical and horizontal)
- Uniform Projected Picture Brightness
- General Picture Quality (sharpness and contrast)

**P16-PP-C** ..... (160 ft, 16-mm color film, photographic sound)

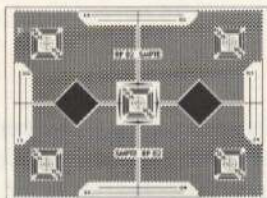
**M16-PP-C** ..... (150 ft, 16-mm color film, magnetic sound)



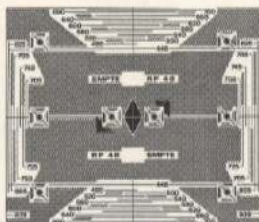
# PROJECTOR PERFORMANCE TEST FILMS

**SMPTE's projector performance test films help you get the best possible image on the screen. The films are used to measure and adjust your projector's optical and mechanical functions. Some of these films can also be used in the film laboratory to test printers. Registration films are available in super 8, regular 8 and 16-mm formats. Projector Alignment and Image Quality test films are available in 16-mm, 35-mm and 70-mm formats.**

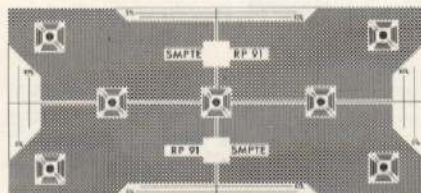
## Projector Alignment & Image Quality Test Film



16 mm



35 mm



70 mm

These films are produced in the 70, 35, and 16-mm formats, and are three of SMPTE's most versatile films. Their purpose is the quantitative measurement of projector adjustments that affect the visual image. The 70-mm and 35-mm versions of the test pattern are supplied in two sections, printed on different film stocks to facilitate their use in different test situations. The first section of the 70-IQ is of a neutral density on color print film stock; the first section of the 35-IQ is on black and white film stock. The second section of both films is on color stock, utilizing the top magenta layer only. The two sections are spliced together. The 70-mm and 35-mm black-and-white sections can also be ordered separately. The 16-mm version is only supplied in black-and-white. The 35-mm and 16-mm versions have short-pitch perforation and can thus

be used also for the following motion-picture laboratory applications: (1) optical printer alignment; (2) focusing of the projector of an optical printer; (3) contact printer resolution checking; (4) contact printer weave checking; (5) contact printer double-exposure alignment; (6) step-contact printer image steadiness checking; (7) title stand alignment.

The three films are produced as prints. The 70-mm and 35-mm versions read correctly with the emulsion toward the observer. The 70-mm version has KS-1870 perforation and is made in accordance with RP 91. The 35-mm version has BH-1866 perforation and is made in accordance with RP 40. The 16-mm version reads correctly through the base. It has 1R-2994 perforation and is made in accordance with RP 82.

## PROJECTOR ALIGNMENT AND IMAGE QUALITY TEST FILMS

70-IQ	(200 ft, 70-mm film, color and black-and-white)
70-PA	(100 ft, 70-mm film black-and-white section only)
35-IQ	(200 ft, 35-mm film, color and black-and-white)
35-PA-50	(50 ft, 35-mm film black-and-white section only)
35-PA-200	(200 ft, 35-mm film, black-and-white section only)
16-PA	(100 ft, 16-mm film, black-and-white)

## Universal Jitter, Weave, and Travel Ghost Test Film

This test film has been designed to facilitate the day-to-day operational checking of jitter, weave, and travel ghost in 35 and 16-mm motion picture projectors for theatrical use or in preview rooms, as well as for television applications. It is produced as a camera original in two formats. The 35-mm version reads correctly with the emulsion side toward the observer and has KS-1870 perforation.

The 16-mm version reads correctly through the base and has 2R-2994 perforation. Both are made in accordance with SMPTE Recommended Practice RP 27.4. See p. 10 for illustration.

## UNIVERSAL JITTER, WEAVE, AND TRAVEL GHOST TEST FILM

U35-JW-50	(50 ft, 35-mm film)
U35-JW-100	(100 ft, 35-mm film)
U16-JW-50	(50 ft, 16-mm film)
U16-JW-100	(100 ft, 16-mm film)

## 35-mm Visual Test Film for Theater Use

This test film contains four different target patterns. They permit the use of the film to (1) check focus and alignment, (2) check the presence or absence of travel ghost, (3) check for jump and weave of the image, (4) check for lens aberrations. It is also used to assist in the installation of new projectors and screens, and in maintenance operations on existing equipment. Explanatory titles precede each of the four sections, and detailed instructions are furnished with the film. Because some users prefer loops or continuous lengths for adjusting their equipment, one projector at a time or also in pairs, the targets can also be ordered as separate sections. The film is produced as a print, and reads correctly with the emulsion side toward the observer. It has KS-1870 perforation.

## 35-mm VISUAL TEST FILM FOR THEATER USE

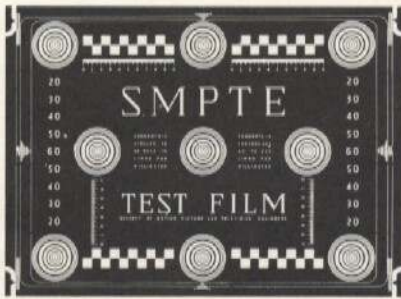
35-VT	(450 ft, 35-mm film, complete version)
35-FA	(100 ft, 35-mm film, section 1 only, Focus & Alignment)



Focus and Alignment Section



# Registration Test Films



16 mm

SMPTE's Registration Test Films are used to test and evaluate film projectors and printers. Here are the functions these films can test: For Projectors: Focus Control, Resolution, Shutter Adjustment (travel ghost), Field Flatness (focus distribution), Steadiness (Jump, Jitter, Weave), and Framing Accommodation.

For Optical Printers, these films can evaluate Focus Adjustment, Shutter Adjustment, Framing Accommodation, and Image Size and Adjustment.

For Contact Printers,\* these films can check out Resolution, Aperture Alignment, Jump and Weave, Double Exposure Alignment, and Image Steadiness.

They can also be used for Title Stand Alignment.

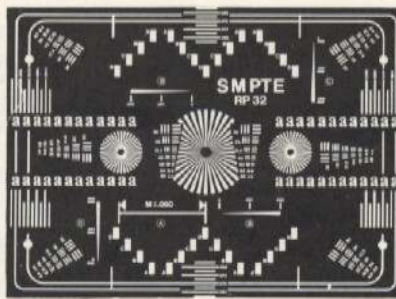
\*The perforation pitch of the super 8 registration test film (S8-RT) is not optimum for continuous contact printers and its value for that purpose is limited.

## 35-mm Anamorphic Projector Alignment Test Film

This test film shows a target pattern composed of ellipses and perpendicular lines. When projected through a properly adjusted anamorphic projection lens with a horizontal magnification ratio of 2:1, the ellipses will appear on the screen as circles, the lines will appear at proper right angles, and the vertical lines will show the same width as their horizontal counterparts. The circle at the center will appear as an ellipse twice as wide as it is high. They are intended to

## 35-mm Subjective Theater Sound Test Film

Now produced by the Society of Motion Picture and Television Engineers, this sound test film replaces the previous theater sound test film issue No. 5 which was originally developed by the Motion Picture Research Council. The new ASTR-6 test film was produced in accordance with SMPTE Recommended Practice RP35. This film is intended for subjectively checking the adjustment of



Super 8

## SPECIFICATIONS

### The 16-mm Registration Test Film.

This film is produced as a camera original on black-and-white high-resolution rawstock. It reads correctly through the base (i.e., with the emulsion side facing away from the observer). The film has a 2R-2994 perforation. It is made in accordance with SMPTE Recommended Practice RP 20.

### The Super 8-mm Registration Test Film

is produced as a camera original on color positive print stock. It reads correctly through the base and has 1R-1667 perforation. It is made in accordance with SMPTE Recommended Practice RP 32.

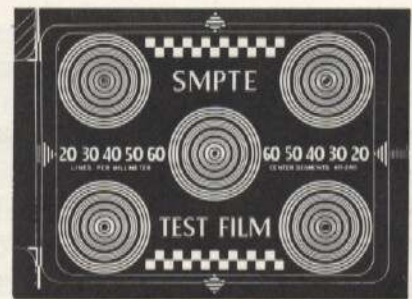
The Regular 8 Registration Test Film is produced as a camera original on

aid in projector alignment and aperture size evaluation. The target is made to the original anamorphic projection specifications. Its vertical centerline is displaced by 50 mil toward the right with respect to the vertical centerline of the film. (It is displaced away from the sound track edge of the film.)

This test film is produced as a print and reads correctly with the emulsion side facing toward the observer. It has KS-1870 perforation, and is on black-and-white material. It is made in accordance with SMPTE Recommended Practice RP 110.

35-mm monophonic photographic sound projection systems. The film includes specially selected scenes from several feature film releases which have been chosen for their exaggerated sound efficiencies.

Features include main title music, specially selected dialog recordings, a piano recording to check wow and flutter, and a glide tone to check general frequency response as well as extraneous vibrations of the sound system.



Regular 8

black-and-white high-resolution rawstock. It reads correctly through the base and has 1R-1500 perforations. It is made in accordance with SMPTE Recommended Practice RP 19.

### 16-mm REGISTRATION TEST FILM

16-RT . . . . . (100 ft, 16-mm film)

### SUPER 8-mm REGISTRATION TEST FILM

S8-RT-50 . . . . . (50 ft, S8-mm color film)

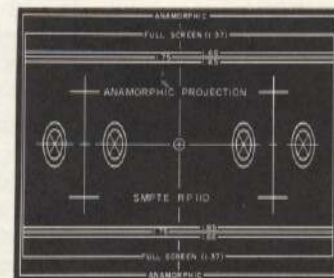
S8-RT-100 . . . . . (100 ft, S8-mm color film)

S8-RT-400 . . . . . (400 ft, S8-mm color film)

### 8-mm REGISTRATION TEST FILM, TYPE R (REGULAR)

R8-RT-50 . . . . . (50 ft, 8-mm film)

R8-RT-100 . . . . . (100 ft, 8-mm film)



## 35-mm ANAMORPHIC PROJECTOR ALIGNMENT TEST FILM

35-AT-50 . . . . . (50 ft, 35-mm film)

35-AT-200 . . . . . (200 ft, 35-mm film)

The test film was produced as a color print containing picture and a photographic monophonic soundtrack. The audio material contained in the film has been chosen to demonstrate particular points of difficulty in the adjustment of theater sound systems.

## 35-mm SUBJECTIVE THEATER SOUND TEST FILM

ASTR-6 . . . . . (576 ft, 35-mm film, color)



# MAGNETIC SOUND TEST FILMS

SMPTE's magnetic sound test films are used for setting up, testing, and adjusting magnetic sound reproducers designed to operate with perforated magnetic fullcoat or striped films. The test films are supplied in 35, 16, and 8-mm formats. The 35-mm four-track films are produced on fullcoat triacetate stock with CS-1870 perforation. They are intended for use on equipment designed for anamorphic-type release prints. The remaining 35-mm films are produced on fullcoat film with a choice of triacetate or polyester base. The films on triacetate base have KS-1870 perforation, and those on polyester base have KS-1866 perforation. The 16-mm films are on fullcoat polyester-base material with 1R-2994 perforation. The super 8-mm films are on fullcoat polyester material with 1R-1667 perforation. Super 8-mm films are made in two different types: Type 24 designed for running at 24 frames/s; and Type 18 designed for running at 18 frames/s.

## Multifrequency (Frequency Response) Test Films

These films are used to adjust and establish the audio frequency response of 35, 16, and super 8-mm motion-picture magnetic sound reproducers. They carry a series of frequencies over the usable range for each particular format (see table). These films are calibrated films and are supplied with appropriate calibration instructions. The 35-mm and 16-mm films are full-width recordings. The 35-mm films can be used with 2-, 4-, or 6-track studio reproducers; all but the M35-MF-4 are calibrated only for the three-track position in accordance with American National Standard ANSI PH22.86. The M35-MF-4 is calibrated only for the theatrical release print four-track position in accordance with American National Standard ANSI PH22.137. The 16-mm film can be used with center-track reproducers; it is calibrated only for the 200-mil edgetrack position in accordance with American National Standard ANSI PH22.97.

The multifrequency magnetic test films are recorded according to the following characteristics: 35-mm films, 35 microseconds; 16-mm films, 70 microseconds; 8-mm films, a combined low and high frequency characteristic of 90 and 3180 microseconds. The 16-mm films are made in accordance with SMPTE Recommended Practice RP 90, and the 8-mm films are made in accordance with SMPTE Recommended Practice RP 92.

### MAGNETIC MULTIFREQUENCY TEST FILMS

M35-MF-4	(510 ft, 4-track, 35-mm film)
M35-MF-T	(510 ft, full-width recorded, 35-mm film, triacetate base)
M35-MF-P	(510 ft, full-width recorded, 35-mm film, polyester base)
M16-MF-P	(200 ft, full-width recording, 16-mm film, polyester base)
MS8-MF-24-P	(100 ft, single-track, 24 frames/s, Super 8-mm film, polyester base)
MS8-MF-18-P	(100 ft, single-track, 18 frames/s, Super 8-mm film, polyester base)

## Flutter Test Films

Flutter test films are used to measure the amount of flutter present in 35, 16, and super 8-mm motion-picture magnetic sound reproducers. They carry a signal frequency of 3150 Hz, originally recorded and having an extremely low flutter content. A flutter meter must be used in conjunction with these films. The 35-mm four-track film is made in accordance with SMPTE Recommended Practice RP 79, the 35-mm version in accordance with RP 75, the 16-mm film in accordance with RP 76, and the two types of super 8-mm films in accordance with RP 62.

### MAGNETIC FLUTTER TEST FILMS

M35-FL-4-50	(50 ft, 4-track, 35-mm film)
M35-FL-4-200	(200 ft, 4-track, 35-mm film)
M35-FL-T-50	(50 ft, full-width recording, 35-mm film, triacetate base)
M35-FL-P-50	(50 ft, full-width recording, 35-mm film, polyester base)
M35-FL-T-200	(200 ft, full-width recording, 35-mm film, triacetate base)
M35-FL-P-200	(200 ft, full-width recording, 35-mm film, polyester base)
M16-FL-P	(100 ft, full-width recording, 16-mm film, polyester base)
MS8-FL-24-P	(50 ft, single-track, 24 frames/s, Super 8-mm film, polyester base)
MS8-FL-18-P	(50 ft, single-track, 18 frames/s, Super 8-mm film, polyester base)

## Signal Level Test Films

Signal level films are used for measuring and balancing the respective power level outputs from two or more 35, 16, or super 8-mm motion-picture magnetic sound reproducers. They are recorded at a constant frequency and level. The recorded level does not in itself indicate a program level unless so specified. It provides a reproducible reference to which a program level can be related. An output meter is used to compare signal level output values from the test films with fixed calibration values.

### MAGNETIC SIGNAL LEVEL TEST FILMS

M35-SL-4-50	(50 ft, 4-track, 1-kHz, 35-mm film)
M35-SL-4-200	(200 ft, 4-track, 1-kHz, 35-mm film)
M35-SL-T-50*	(50 ft, full-width recording, 1-kHz, 35-mm film, triacetate base)
M35-SL-P-50*	(50 ft, full-width recording, 1-kHz, 35-mm film, polyester base)
M35-SL-T-200*	(200 ft, full-width recording, 1-kHz, 35-mm film, triacetate base)
M35-SL-P-200*	(200 ft, full-width recording, 1-kHz, 35-mm film, polyester base)
M16-SL-P*	(100 ft, full-width recording, 400-Hz, 16-mm film, polyester base)
MS8-SL-24-P*	(50 ft, single-track, 400-Hz, 24 frames/s, Super 8-mm film, polyester base)
MS8-SL-18-P*	(50 ft, single-track, 400-Hz, 18 frames/s, Super 8-mm film, polyester base)

\*Note: The films marked with an asterisk, have been recorded at a short-circuit flux of 185 nWb/m. This can be considered as a representative program level.



## Channel-Four (Switching Channel) Test Film

This film is used to check the operation and adjustment of the 12-kHz switching circuit of the fourth channel (the surround sound effects channel) in a four-channel 35-mm motion-picture magnetic sound projector. It also permits volume adjustment of this channel. It is made as a 35-mm, four-track striped film with CS-1870 perforation. Its track No. 4 carries a 1-kHz frequency overlaid in parts with a 12-kHz cueing frequency. Track No. 2 carries a 12-kHz frequency throughout. The other two tracks carry no signal.

### CHANNEL FOUR TEST FILM (MAGNETIC RELEASE PRINT TYPE)

M35-CH-4-50 ..... (50 ft, 4-track 35-mm film)  
M35-CH-4-200 ..... (200 ft, 4-track, 35-mm film)

## Azimuth Alignment Test Films

These films are used for determining the correct angular position of the magnetic head gap in 35, 16, and super 8-mm motion-picture magnetic sound reproducers. Correct azimuth at an angle of 90° with regard to the direction of travel of the film can be checked by means of a Standard Volume Indicator. The 35-mm four-track film is made in accordance with SMPTE Recommended

Practice RP 80, the 35-mm version in accordance with RP 77, the 16-mm film in accordance with RP 78, and the two types of super 8-mm films in accordance with RP 61.

### MAGNETIC AZIMUTH ALIGNMENT TEST FILMS

M35-AL-4-50 ..... (50 ft, 4-track, 8-kHz, 35-mm film)  
M35-AL-4-200 ..... (200 ft, 4-track, 8-kHz, 35-mm film)  
M35-ALT-50 ..... (50 ft, full-width recording, 8-kHz, 35-mm film, triacetate base)  
M35-AL-T-50 ..... (50 ft, full-width recording, 8-kHz, 35-mm film, polyester base)  
M35-AL-T-200 ..... (200 ft, full-width recording, 8-kHz, 35-mm film, triacetate base)  
M35-AL-P-200 ..... (200 ft, full-width recording, 8-kHz, 35-mm film, polyester base)  
M16-AL-P ..... (100 ft, full-width recording, 7-kHz, 16-mm film, polyester base)  
MS8-AL-24-P ..... (50 ft, single-track, 5-kHz, 24 frames/s, Super 8-mm film, polyester base)  
MS8-AL-18-P ..... (50 ft, single-track, 5-kHz, 18 frames/s, Super 8-mm film, polyester base)

# PHOTOGRAPHIC (OPTICAL) SOUND TEST FILMS

SMPTE's photographic (optical) sound test films are used for setting up and checking optical sound reproducers and 35 and 16-mm projectors with optical sound readers. The films are produced on high-resolution, fine-grain, black-&-white film. The 35-mm films are prints from an original recording negative and have KS-1870 perforation. They are intended for projection with emulsion toward the lamphouse. The 16-mm films are direct original recordings on special low-shrink base stock and have 1R-3000 perforation. They are intended for projection with the emulsion toward the projection lens.

## Multifrequency (Frequency Response) Test Films

These films are used to check, adjust and establish the proper audio frequency response of optical sound systems of 35 and 16-mm sound motion-picture equipment. The films carry a series of frequencies distributed over the usable frequency range of each particular format (see table). A frequency tone for initial amplifier gain adjustment and for the range selection of the output meter is also provided. Each film is individually calibrated and accompanied by a sheet of correction values.

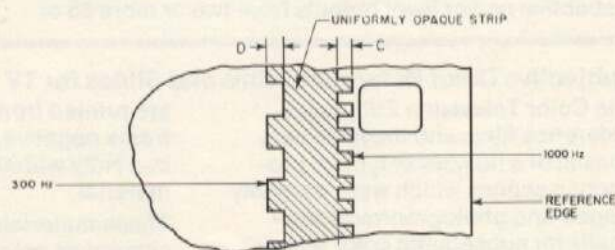
### PHOTOGRAPHIC MULTIFREQUENCY TEST FILMS

P35-MF ..... (250 ft, 35-mm film)  
P16-MF ..... (150 ft, 16-mm film)

## Buzz Track Test Films

These films are used for determining the proper lateral positioning of the scanning beam slit in relation to film travel. The sound record area is opaque so that when the slit is correctly positioned no sound will be heard. On each side of the opaque center strip is a square-wave recording. The one next to the picture has a frequency

of 300 Hz and the square wave next to the film edge has a frequency of 1 kHz.



By identifying the tone, the user can determine the lateral direction of slit misadjustment. The 35-mm film is made in accordance with SMPTE Recommended Practice RP 68, and the 16-mm film in accordance with SMPTE Recommended Practice RP 67.

### PHOTOGRAPHIC BUZZ TRACK TEST FILM

P-35-BT-50 ..... (50 ft, 35-mm film)  
P35-BT-200 ..... (200 ft, 35-mm film)  
P16-BT ..... (100 ft, 16-mm film)



## Test Frequencies on Photographic and Magnetic Multifrequency Test Films, in Hz

P35-MF	P16-MF	M35-MF-4	M35-MF	M16-MF	M35-MF-24	M35-MF-18
1000 Ref	400 Ref	1000 PR	1000 PR	400 Ref	6300 AZ	5000 AZ
40	50	Pink Noise	Pink Noise	15000	10000	7500
70	100	1000 Ref	1000 Ref	12500	8000	6300
100	200	31.5	31.5	10000	6300	5000
300	300	40	40	8000	5000	3150
500	500	50	50	6300	3150	2000
1000	1000	80	80	5000	2000	1000
2000	2000	100	100	3150	1000	500
2500	3000	160	160	2000	500	315
3000	4000	400	400	1000	315	200
3500	5000	1000	1000	500	200	100
4000	6000	2500	2500	315	100	50
5000	7000	4000	4000	200	50	400 PR
6000	400 PR	6300	6300	100	400 PR	
7000		8000	8000	50		
8000		10000	10000	400 PR		
		12500	12500			
		16000	16000			
		1000 Ref	1000 Ref			

Legend: Ref = Reference Level; PR = Program Level; AZ = Frequency intended for azimuth alignment.

## Sound Focus and Azimuth Alignment Films

These films are used for the focusing and angular alignment of the scanning beam slit of 35 and 16-mm motion-picture photographic sound reproducers. They are produced in two types. Type A is for use in manufacturing and laboratories where high precision is required. Type B can be used when lower precision is adequate. The 35-mm film is made in accordance with SMPTE Recommended Practice RP 64, and the 16-mm film in accordance with SMPTE Recommended Practice RP 63.

### PHOTOGRAPHIC SOUND FOCUS AND AZIMUTH ALIGNMENT TEST FILMS

P35-SF-A-50	(50 ft, 9-kHz 35-mm film, Type A)
P35-SF-A-200	(200 ft, 9-kHz 35-mm film, Type A)
P16-SF-A	(100 ft, 7-kHz 16-mm film, Type A)
P35-SF-B-50	(50 ft, 7-kHz 35-mm film, Type B)
P35-SF-B-200	(200 ft, 7-kHz 35-mm film, Type B)
P16-SF-B	(100 ft, 5-kHz 16-mm film, Type B)

## Signal Level Test Films

These films are used for measuring and balancing the respective power level outputs from two or more 35 or

16-mm motion picture optical sound reproducers. The recorded level does not in itself indicate a program level. It provides a reproducible reference to which a program level can be related. The films are to be used in conjunction with an output level meter to compare signal levels.

### PHOTOGRAPHIC SIGNAL LEVEL TEST FILM

P35-SL-50	(50 ft, 1-kHz 35-mm film)
P35-SL-200	(200 ft, 1-kHz 35-mm film)
P16-SL	(100 ft, 400-Hz 16-mm film)

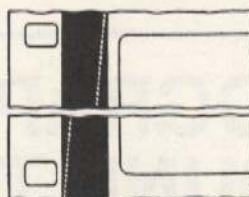
## Flutter Test Films

These films are used to determine the amount of flutter present in 35 and 16-mm motion-picture photographic sound reproducers. They carry a variable-area record of 3150 Hz. A flutter meter must be used in conjunction with these films. The 35-mm version is made in accordance with SMPTE Recommended Practice RP 97 and the 16-mm version is made in accordance with RP 70.

### PHOTOGRAPHIC FLUTTER TEST FILMS

P35-FL-50	(50 ft, 35-mm film)
P35-FL-200	(200 ft, 35-mm film)
P16-FL	(100 ft, 16-mm film)

## Scanning Beam Test Films



These films are used to check the uniformity of illumination across the scanning slit. They have been commonly, though incorrectly, called snake tracks. The films have a 0.005 in wide variable-area track of 1 kHz frequency which travels

at a uniform rate from one edge of the sound record to the other (see illustration). A suitable meter, such as the Standard Volume Indicator, is used in conjunction with the films. Before the use of a scanning beam test film, the correct placement of the scanning beam in relation to film edge and travel must be determined. Use the SMPTE Buzz Track Test Film for this purpose because the Scanning Beam Test Film is not intended for positioning the slit. The 35-mm Scanning Beam Test Film is made in accordance with SMPTE Recommended Practice RP 69, and the 16-mm film in accordance with SMPTE Recommended Practice RP 81.

### PHOTOGRAPHIC SCANNING BEAM TEST FILMS

P35-SB	(five 8-ft loops, 35-mm film)
P16-SB	(three 34-ft loops, 16-mm film)

## Subjective Color Reference Films and Slides for TV

The Color Television Subjective Reference films and the slide sets consist of a number of typical production scenes which were carefully staged and photographed specifically for subsequent color television broadcasting. The 35-mm prints are made from the original negative and the 16-mm from a 16-mm duplicate negative to simulate actual production routines. The individual prints are closely examined and color differences, reel-to-reel, are held to minimums well below those commonly accepted commercially.

The scenes are also available in a set of fifteen 2x2-inch slides which

are printed from a special double frame negative, photographed concurrently with the motion-picture material.

These materials should not be considered as color standards, but as representative color prints intended as guides for laboratories and production personnel to evaluate and subjectively match color balance and density of final color prints to be used for color television transmission.

The subjective color reference test films and slides are produced on color print film rawstock. The 35-mm films have KS-1870 perforation

and are for projection with the emulsion side toward the lamphouse. The 16-mm films have 1R-3000 perforation and they (as well as the 2x2-inch slides) are intended for projection with the emulsion toward the projection lens. These test films and slides are made in accordance with SMPTE Recommended Practice RP 46 "Density of Color Films and Slides for Television."

### COLOR TELEVISION SUBJECTIVE REFERENCE FILMS AND SLIDES

TV35-CR	(376 ft, 35-mm film)
TV16-CR	(153 ft, 16-mm film)
TV2-CR	(2x2-inch slides, set of 15)



### Universal Leaders for Motion-Picture Prints

These leaders and trailers are supplied as fine-grain black-and-white master positives in the 35 and 16-mm formats. The 35-mm leader master has BH-1870 perforation and the 16-mm leader master has 2R-3000 perforation. This enables the labora-

tory to achieve A- or B-wind negatives from the 16-mm master. Both masters are made in accordance with American National Standard, "Leaders and Cue Marks for 35- and 16-mm Sound Motion-Picture Release Prints," ANSI PH22.55.

Each package contains two sets of the complete leader and trailer sections.

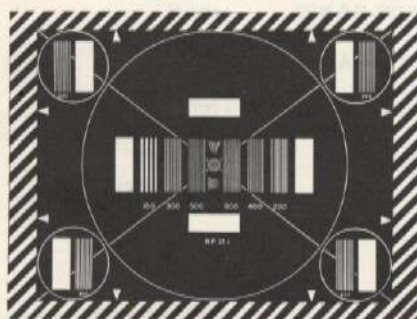
#### UNIVERSAL LEADERS

35-UL ..... (2 sets, 35-mm film)  
16-UL ..... (2 sets, 16-mm film)

## SMPTE's Monochrome Television Test Patterns

*SMPTE's TV test patterns are designed for setting up and checking television studio cameras and telecine systems. They are manufactured under carefully controlled conditions to insure constant dimensions and densities. They are camera originals, produced on high-resolution, fine grain, black-and-white film. The 35-mm films have KS-1870 perforation and read correctly with the emulsion side toward the observer. The 16-mm films have 2R-2994 perforation and read correctly with the emulsion side away from the observer (that is, through the base).*

### Television Operational Alignment Test Pattern

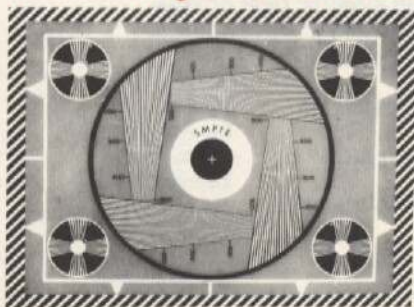


This test pattern is an operational alignment tool for television systems, facilitating day-to-day operational checks and adjustments of such critical functions as focus, resolution response, mid-band streaking, astigmatism, field uniformity, scanning size, linearity, and interlace in live and film television systems. It is made in accordance with SMPTE Recommended Practice RP 27.1.

#### TELEVISION OPERATIONAL ALIGNMENT TEST PATTERN

TV16-OA-50 ..... (50 ft, 16-mm film)  
TV16-OA-100 ..... (100 ft, 16-mm film)  
TV2-OA ..... (2x2-inch transparency)

### Television Alignment and Resolution Test Pattern

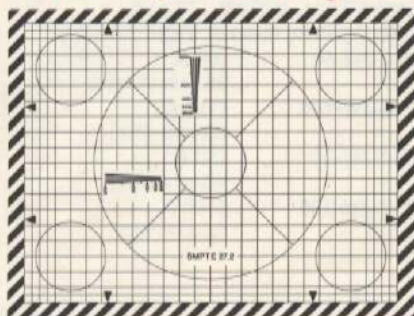


This classic test pattern consists of a target which defines the portion of the projected film frame to be reproduced by the telecine system and permits accurate alignment of the telecine projector with the telecine camera. It is primarily used for aligning multiplexing chains. Its resolution patterns are of the calibrated wedge design and range from 250 to 500 television lines.

#### TELEVISION ALIGNMENT AND RESOLUTION TEST PATTERN

TV35-AR-50 ..... (50 ft, 35-mm film)  
TV35-AR-100 ..... (100 ft, 35-mm film)  
TV16-AR-50 ..... (50 ft, 16-mm film)  
TV16-AR-100 ..... (100 ft, 16-mm film)  
TV2-AR ..... (2x2-inch transparency)

### Television Operational Registration Test Pattern



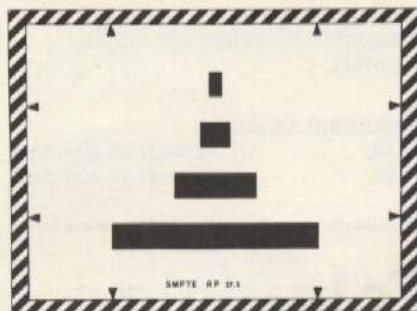
This test pattern is designed to provide a television signal suitable for aligning, adjusting and checking multiple-channel color cameras for combined optical, mechanical, and electrical registration. It is made in accordance with SMPTE Recommended Practice RP 27.2.

#### TELEVISION OPERATIONAL REGISTRATION TEST PATTERN

TV35-OR-50 ..... (50 ft, 35-mm film)  
TV35-OR-100 ..... (100 ft, 35-mm film)  
TV16-OR-50 ..... (50 ft, 16-mm film)  
TV16-OR-100 ..... (100 ft, 16-mm film)  
TV2-OR ..... (2x2-inch transparency)



## Television Mid-Frequency Response Test Pattern



Type A

This test pattern is used as an operational check of the mid-frequency response of a television system and is suitable for the following operational checks: (a) Performance of video amplifier circuitry under conditions that can occur at average



Type B

signal levels corresponding to predominantly light and predominantly dark scenes; (b) Operational setup and adjustment of video amplifier mid-frequency amplitude and/or delay distortion (phase response) controls.

This test pattern is produced in two types: Type A, black bars on a white background and Type B, white bars on a black background. It is made in accordance with SMPTE Recommended Practice RP 27.5.

### TELEVISION MID-FREQUENCY RESPONSE TEST PATTERN

Note: when ordering please specify Type A, Black Bars, or Type B, White Bars.

TV35-FR-50	(50 ft, 35-mm film)
TV35-FR-100	(100 ft, 35-mm film)
TV16-FR-50	(50 ft, 16-mm film)
TV16-FR-100	(100 ft, 16-mm film)
TV2-FR	(2x2-inch transparency)

## Television Safe Action and Safe Title Area Test Pattern

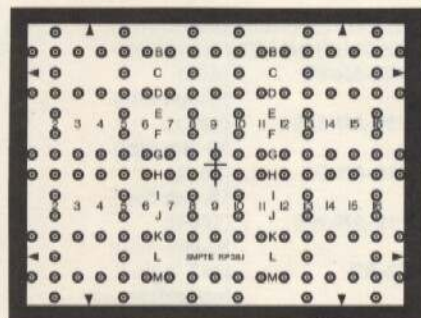


This test pattern indicates the safe action image area within which all significant action must take place and the safe title image area within which the more important title information must be confined to insure visibility of the information on the majority of home television receivers. It is a valuable tool for comparison of program material with available image area, and for checking of edge maskings of monitors. It is made in accordance with SMPTE Recommended Practice RP-27.3.

### TELEVISION SAFE ACTION AND SAFE TITLE AREAS TEST PATTERN

TV35-SA-50	(50 ft, 35-mm film)
TV35-SA-100	(100 ft, 35-mm film)
TV16-SA-50	(50 ft, 16-mm film)
TV16-SA-100	(100 ft, 16-mm film)
TV2-SA	(2x2-inch transparency)

## Television Deflection Linearity Test Pattern

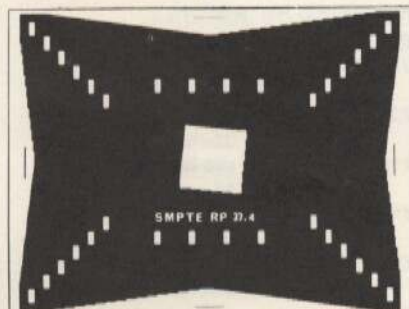


This test pattern is to be used in conjunction with an electronically generated grating signal, as specified in IEEE Standard 20, to facilitate the adjustment of deflection linearity and the measurement of geometric distortion of television cameras and picture display devices. This test pattern is made in accordance with SMPTE Recommended Practice RP 38-1.

### TELEVISION DEFLECTION LINEARITY TEST PATTERN

TV35-DL-50	(50 ft, 35-mm film)
TV35-DL-100	(100 ft, 35-mm film)
TV16-DL-50	(50 ft, 16-mm film)
TV16-DL-100	(100 ft, 16-mm film)
TV2-DL	(2x2-inch transparency)

## Universal Jitter, Weave, and Travel Ghost Test Pattern



This test pattern has been designed to facilitate the day-to-day operational checking of jitter, weave, and travel ghost in 35-mm and 16-mm projectors for television use. It is equally appropriate for the operational checking of motion-picture theatrical and preview-room projectors in the same formats. It is made in accordance with SMPTE Recommended Practice RP 27.4.

### UNIVERSAL JITTER, WEAVE AND TRAVEL GHOST TEST PATTERN

U35-JW-50	(50 ft, 35-mm film)
U35-JW-100	(100 ft, 35-mm film)
U16-JW-50	(50 ft, 16-mm film)
U16-JW-100	(100 ft, 16-mm film)



# SMPTE Test Materials Price List

Code No.	Length	Price (\$)	Code No.	Length	Price (\$)
<b>Video Tape Cassette for Receiver Monitor Setup</b>					
V3-RMS	3/4"	43.00	16-mm film		
V2-RMS-V	1/2"	32.00	M16-FL	100'	73.00
V2-RMS (B-1 or B-2)	1/2"	32.00	24 frames/s, Super 8-mm film		
<b>Sound-Music and Dialogue 16-mm Film—The Jiffy</b>			MS8-FL-24	50'	58.00
P16-PP-C (color)	160'	66.00	18 frames/s, Super 8-mm film		
M16-PP-C (color)	150'	108.00	MS8-FL-18	50'	58.00
<b>Projector Alignment &amp; Image Quality</b>			<b>Signal Level Test Films</b>		
<b>35-mm film, color and black and white</b>			4-track, 1-kHz 35-mm film		
35-IQ	200'	235.00	M35-SL-4-50	50'	38.00
35-PA-50	50'	75.00	M35-SL-4-200	200'	100.00
35-PA-200	200'	230.00	Full-width, 1-kHz 35-mm film		
16-PA	100'	102.00	M35-SL-50	50'	32.00
<b>35-mm Visual Test Film for Theater Use</b>			M35-SL-200	200'	86.00
<b>Complete version</b>			400-Hz, 16-mm film		
35-VT	450'	148.00	M16-SL	100'	73.00
<b>Section 1 only—Focus and Alignment</b>			400-Hz, Super 8-mm film		
35-FA	100'	36.00	MS8-SL-24 (24 frames/s)	50'	58.00
<b>70-mm Projector Alignment Film</b>			MS8-SL-18 (18 frames/s)	50'	58.00
70-PA	see back of page		<b>Channel Four (Switching Channel) Test Films</b>		
<b>Registration Test Films</b>			M35-CH-4-50	50'	38.00
<b>16-mm Registration Test Films</b>			M35-CH-4-200	200'	100.00
16-RT	100'	102.00	<b>Azimuth Alignment Test Films</b>		
<b>Super 8-mm Registration Test Film</b>			4-track, 8-kHz 35-mm film		
S8-RT-50	50'	44.00	M35-AL-4-50	50'	38.00
S8-RT-100	100'	57.00	M35-AL-4-200	200'	100.00
S8-RT-400	400'	150.00	Full-width, 8-kHz, 35-mm film		
<b>8-mm Registration Test Film (Regular)</b>			M35-AL-50	50'	32.00
R8-RT-50	50'	44.00	M35-AL-200	200'	86.00
R8-RT-100	100'	57.00	7-kHz, 16-mm film		
<b>35-mm Anamorphic Projector Alignment</b>			M16-AL	100'	73.00
35-AT-50	50'	43.00	5-kHz, Super 8-mm film		
35-AT-200	200'	139.00	MS8-AL-24 (24 frames/s)	50'	58.00
<b>Magnetic Sound Test Films;</b>			MS8-AL-18 (18 frames/s)	50'	58.00
<b>Multifrequency Test Film</b>			<b>Photographic (Optical) Sound Test Films</b>		
<b>4-track—35-mm film</b>			<b>Multifrequency Test Films</b>		
M35-MF-4 (Theater Print)	425'	343.00	35-mm film		
<b>Full-width—35-mm film</b>			P-35-MF	250'	146.00
M35-MF	320'	343.00	16-mm film		
<b>Full-width—16-mm film</b>			P-16-MF	150'	170.00
M16-MF	200'	191.00	<b>Buzz Track Test Films</b>		
<b>Super 8-mm film</b>			35-mm film		
MS8-MF-24 (24 frames/s)	100'	110.00	P35-BT-50	50'	30.00
MS8-MF-18 (18 frames/s)	100'	110.00	P35-BT-200	200'	102.00
<b>Flutter Test Films</b>			16-mm film		
<b>4-track, 35-mm film</b>			P16-BT	100'	130.00
M35-FL-4-50	50'	38.00	<b>Sound Focus and Azimuth Alignment Test Films</b>		
M35-FL-4-200	200'	100.00	9-kHz, 35-mm film		
<b>Full-width—35-mm film</b>			P35-SF-A-50	50'	30.00
M35-FL-50	50'	32.00	P35-SF-A-200	200'	102.00
M35-FL-200	200'	86.00	7-kHz, 16-mm film		
<b>Prices are subject to change. Prices F.O.B. Scarsdale, New York.</b>			P16-SF-A	100'	87.00
<b>Shipping and Handling Charges Not Included.</b>			7-kHz, 35-mm film		
<b>NOTE: A \$3.00 Handling Fee will be</b>			P35-SF-B-50	50'	30.00
<b>charged to all but advance payment orders.</b>			P35-SF-B-200	200'	102.00
			5-kHz, 16-mm film—Type B		
			P16-SF-B	100'	87.00
			<b>Signal Level Test Films</b>		
			1-kHz, 35-mm film		
			P35-SL-50	50'	30.00
			P35-SL-200	200'	102.00
			400-Hz, 16-mm film		
			P16-SL	100'	79.00

Prices are subject to change. Prices F.O.B. Scarsdale, New York.  
Shipping and Handling Charges Not Included.

NOTE: A \$3.00 Handling Fee will be charged to all but advance payment orders.



**Code No. Length Price (\$)**

**Flutter Test Films**

<b>35-mm film</b>		
P35-FL-50	50'	30.00
P35-FL-200	200'	102.00
<b>16-mm film</b>		
P16-FL	100'	88.00

**Scanning Beam Test Films**

<b>Five 8-ft loops, 35-mm film</b>		
P35-SB		30.00
<b>Three 34-ft. loops, 16-mm film</b>		
P16-SB		91.00

**Subjective Color Reference Films/Slides TV**

<b>35-mm film</b>		
TV 35-CR	376'	159.00
<b>16-mm film</b>		
TV 16-CR	153'	82.00
<b>2 x 2 inch Slides, Set of 15</b>		
TV 2-CR		43.00

**Universal Leader**

<b>35-mm film (2 sets)</b>		
35-UL		41.00
<b>16-mm film (2 sets)</b>		
16-UL		56.00

**SMPTE'S Monochrome Television Test Patterns**

**Television Operational Alignment**

<b>16-mm film</b>		
TV16-OA-50	50'	67.00
TV16-OA-100	100'	121.00
<b>2 x 2 inch Transparency</b>		
TV2-OA		13.00

**Television Alignment and Resolution Test Pattern**

<b>35-mm Film</b>		
TV35-AR-50	50'	75.00
TV35-AR-100	100'	135.00
<b>16-mm film</b>		
TV16-AR-50	50'	67.00
TV16-AR-100	100'	121.00
<b>2 x 2 inch Transparency</b>		
TV2-AR		13.00

**Television Operational Registration**

<b>35-mm film</b>		
TV35-OR-50	50'	75.00
TV35-OR-100	100'	135.00

**70-mm Projector Alignment & Image Quality**

**Black & White section only**

70-PA-50	94.00
70-PA-200	272.00
<b>Color and Black &amp; White</b>	
70-IQ-200	273.00
<b>Color only</b>	
70-IQ-50	94.00

**ASTR-6**

35-mm Theater Sound Test Film...	230.00
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**Code No. Length Price (\$)**

**16-mm film**

TV16-OR-50	50'	67.00
TV16-OR-100	100'	121.00
<b>2 x 2 inch Transparency</b>		
TV2-OR		13.00

**Television Mid-Frequency Response**

<b>35-mm film</b>		
TV35-FR-50	50'	75.00
TV35-FR-100	100'	135.00
<b>16-mm film</b>		
TV16-FR-50	50'	67.00
TV16-FR-100	100'	121.00
<b>2 x 2 inch Transparency</b>		
TV2-FR		13.00

NOTE: Please specify FR-A or FR-B

**Television Safe Action and Safe Title Area**

<b>35-mm film</b>		
TV35-SA-50	50'	75.00
TV35-SA-100	100'	135.00
<b>16-mm film</b>		
TV16-SA-50	50'	67.00
TV16-SA-100	100'	121.00
<b>2 x 2 inch Transparency</b>		
TV2-SA		13.00

**Television Deflection Linearity**

<b>35-mm film</b>		
TV35-DL-50	50'	75.00
TV35-DL-100	100'	135.00
<b>16-mm film</b>		
TV16-DL-50	50'	67.00
TV16-DL-100	100'	121.00
<b>2 x 2 inch Transparency</b>		
TV2-DL		13.00

**Universal Jitter, Weave, and Travel Ghost**

<b>35-mm film</b>		
U35-JW-50	50'	75.00
U35-JW-100	100'	135.00
<b>16-mm film</b>		
U16-JW-50	50'	67.00
U16-JW-100	100'	121.00

**ASTR-5**

35-mm Theater Sound Test Film	168.00
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**LIMITED WARRANTY**

SMPTE Test Materials are made in accordance with SMPTE Recommended Practices.

If, for any reason, the purchaser is not satisfied with any test materials purchased from SMPTE, the materials may be returned, postage prepaid provided they are in good condition and are not damaged by mishandling, misuse, or alterations.

SMPTE warrants this product to the original purchaser to be free from defective materials and workmanship, and to furnish a new or equal part in exchange if any such defect is found.

The period of this warranty covers ninety (90) days from date of purchase. This warranty entitles the original purchaser to have the warranted item rendered at no cost for the period of the warranty described above when delivered to SMPTE with proof of purchase.

This shall be the exclusive warranty and neither this warranty nor any other warranty expressed or implied shall extend beyond the period of time listed above. In no event shall SMPTE be liable for consequential economic damage or consequential damage to property.

**Society of Motion Picture and Television Engineers**  
**862 Scarsdale Ave., Scarsdale, N.Y. 10583 (914) 472-6606**



# SMPTE Test Materials

*For Maximum Sound and Picture Quality*

## PAYMENT AND SHIPPING

Terms are net 30 days when credit has been established. Orders from outside the U.S.A. must be paid in advance in U.S. funds, payable through a U.S. bank, or by bank transfers payable through the Bank of New York, County Trust Region, 40 East Parkway, Scarsdale, NY 10583, Acct. No. 05-217377. A confirmed irrevocable letter of credit is also acceptable from overseas customers. Orders are shipped in our commercial packaging via United Parcel Service domestically, and by air parcel post internationally, unless otherwise instructed by customer. All domestic shipments with a value of \$100 or more, and all international shipments, regardless of their value, will be insured at customer's expense. All orders shipped F.O.B. Scarsdale, N.Y.

## HOW TO ORDER

Complete the order form below. When ordering, specify the **catalog code**, the title and size (format) of the film, and the footage. Send order to:

SMPTE Test Materials Dept.  
862 Scarsdale Ave.  
Scarsdale, NY 10583

Attention super 8 customers: When ordering super 8-mm magnetic sound films, specify whether you want 24 or 18 frames/s. When ordering super 8 registration films (S8-RT), specify footage (50, 100, or 400-ft rolls).

**Order Your Test Materials Today.  
Use The Order Form Below.**

MAIL TO:

Society of Motion Picture and Television Engineers, Inc.  
862 Scarsdale Ave., Scarsdale, NY 10583 U.S.A.  
Telephone: (914) 472-6606 — Cable: SOMOPICT SCARSDALE N.Y.  
Telex: 4995348

## ORDER FORM

DATE \_\_\_\_\_

**SOLD TO**

NAME _____	TITLE _____
COMPANY _____	
STREET ADDRESS _____	
CITY _____	STATE (OR COUNTRY) _____ ZIP _____

Note: A street address and telephone number is required for all P.O. Box number orders.

**SHIP TO**

FILL THIS ONLY IF DIFFERENT FROM "SOLD TO" ABOVE.

NAME _____	TITLE _____
COMPANY _____	
STREET ADDRESS _____	
CITY _____	STATE (OR COUNTRY) _____ ZIP _____

TELEPHONE NO. \_\_\_\_\_ YOUR ORDER NO. \_\_\_\_\_  
SIGN HERE \_\_\_\_\_

QUANTITY	CODE NO.	TITLE	LENGTH (footage)	UNIT PRICE	TOTAL

A \$3.00 Handling fee will be charged on all but advance payment orders.

Total amount \_\_\_\_\_

**Terms: Net 30 days on established accounts.  
All others, require payment with orders or COD.  
Thank you for your order.**



