

## How To Make Your Super 8 Equipment Run Properly.

If proper presentation of your Super 8 films is important to you, then your equipment must be in perfect condition. To learn how well your Super 8 system performs, you'll need an SMPTE Test Film.

There are two basic types of test film. The first, for projection performance — picture only, is the **SMPTE 8mm Registration Test Film** (50 or 100 ft). This film has no sound track. Its purpose is to measure and help you adjust the optical and mechanical performance of your projection equipment. The patterns are designed to measure and adjust aperture size and position, jump, weave, travel ghost, lens focus, and film buckling.

The second type is for Super 8 Magnetic Sound. There are four all together, each of which was recorded on full-coat magnetic stock with a Super 8mm .1667-in pitch, and contains a 24-mil record in the edge track position.

The four films now available are:

1. **Azimuth Alignment Test Film** (50 ft) which is used to align the azimuth position of the recording and reproducing heads on magnetic sound equipment.
2. **Flutter Test Film** (50 ft) to measure flutter introduced by sound reproducers, contains an original recording with extremely low flutter content.
3. **Signal Level Test Film** (50 ft) helps measure and balance the power level output from motion picture sound reproducers. The recorded level does not in itself indicate a program level, but provides a reproducible reference from which a recommended program level can be determined.
4. **Multifrequency Test Film** (100 ft) is used for testing and adjusting motion picture sound reproducers and projectors. It is calibrated, and correction factors are supplied with each film.

For further information, please mail the coupon immediately.

### SMPTE Test Films

Society of Motion Picture and Television Engineers  
Test Film Dept.  
862 Scarsdale Ave.  
Scarsdale, NY 10583

Please send me information on:

- Registration Test Film  
 Flutter Test Film  Azimuth Alignment  
 Multifrequency  Signal Level

Name \_\_\_\_\_

Co. or organization \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

## 50 years ago in the Journal

P. M. Robillard and E. B. Lyford,  
"Recent Developments in RCA  
Photophone Portable Recording  
Equipment," March 1931

The RCA Photophone portable equipment for sound-on-film recording was described in 1929. It is the purpose of this paper to describe the improvements which have been made in the equipment since that time.

Before launching into detailed description of specific parts, let us review briefly the general arrangement of this equipment.

... The condenser microphone picks up the sound, which is then passed through a cable to the amplifier, where it is brought up to a level suitable for recording. The sound energy passes through another cable, via the battery box, to the recording head mounted directly upon a standard Mitchell motion picture camera. The amplifier contains all batteries necessary for the microphone and recording exposure lamp, as well as for its own power-supply — the separate battery box supplies only the power necessary for the camera motor and interphone system.

... Since portability is one of the important features of the entire equipment, it was felt that the original amplifier might, with profit, be reduced in size and weight. The new amplifier case measures only 8½ by 18 by 15 in. over-all and weighs but 53 pounds complete with all batteries.

Herbert E. Ives, "Two-way  
Television," March 1931

*Summary.* — An experimental two-way television system in combination with a telephone service has been installed between two buildings in New York. With this system, two people can both see and talk to each other. It consists in principle of two complete television systems of the sort previously used for one-way transmission. Scanning is accomplished by the beam-scanning method using disks containing 72 holes. Purple light, to which the photoelectric cells used are quite sensitive, is employed for scanning, and a yellow-green light is used for illuminating the television booth. High-intensity neon lamps are used with a condenser lens disk at the receiving end to give an image brilliant enough to be seen without interference from the scanning beam. A frequency band 40,000 cycles wide is required for each of the two television circuits. Synchronization is effected by a 1275 cycle alternating current, controlling synchronous motors rotated 18 times per second. Speech is transmitted by microphones and loud speakers concealed in the television booths

so that no telephone instrument interferes with the view of the face.

Ever since the initial demonstration of television both by wire and by radio at the Bell Telephone Laboratories in 1927, experimental work has been steadily pursued in order to learn the problems and possibilities of this newest branch of electrical communication. The latest development to be demonstrated is that of two-way television as an adjunct to the telephone.

## 25 years ago

A. H. Lind and B. F. Melchionni,  
"Optical Multiplexing in Television  
Film Equipment," March 1956

Optical multiplexing in TV film pickup systems is the technique of arranging an array of film projectors and TV cameras in such a manner that a given TV camera can "look at" any one of several projectors when a "multiplexer" is introduced into the arrangement to provide optical path-switching. Optical multiplexing is in widespread use in TV broadcasting stations. The keynotes of its popularity are economy and efficiency.

There is economy of floor space when as many as three and sometimes four projectors can be used with a single TV camera. Such an arrangement provides for very efficient use of the TV camera since continuous programming is possible by switching from one projector to another as the program progresses. Efficiency and convenience of operation are also implemented in that remote control panels can be consolidated which, coupled with a lesser need for TV film camera chains, makes possible an operation with fewer operating personnel. There is economy and flexibility in replacing obsolete equipment. In a multiplexed installation the film projectors and TV cameras retain their autonomy and thus any one unit can be replaced with a newer one without changes being required on the remaining ones. In operations such as network program origination, a second copy of a film, usually 16mm, is run simultaneously as "protection" against failure in the primary program chain.

Multiplexing can increase the protection against equipment failure by providing cross protection, i.e., making it possible to use either film projector with either TV film camera. In color-film pickup the use of optical multiplexing can make programming more satisfactory because camera-to-camera switching can be avoided. Thus sometimes noticeable color shift between cameras can be eliminated. And, of course, an important consideration to the TV station owner is the economy of capital investment for equipment to do the film pickup job when multiplexing is used.