

REPORT OF THE PROJECTION PRACTICE COMMITTEE*

The Committee has embarked upon what is probably its most important undertaking to date—the establishment of standards for the installation and operation of visual and sound projection equipment. When this work is complete, and considered in connection with the standard projection room lay-outs already published by this Committee, there will be available to the industry a valuable reference source covering the entire projection process.

Heretofore, the design, installation, and operation of projection equipment have been seriously hampered by a multiplicity of varying local and state regulations, a majority of which are undoubtedly well intentioned but which sometimes reflect a regrettable lack of knowledge of the projection process on the part of their sponsors. This situation operates to defeat the best efforts of manufacturers, exhibitors, and projectionists to attain better projection results; and also permits the rather widespread use of decidedly inferior equipment and encourages sub-standard installation and operating practices.

It is a not uncommon experience, for example, for a manufacturer to gain approval of his product in one state, whereas an adjoining state withholds approval and enforces changes in design that occasion unnecessary expense and impaired operating efficiency. Indeed, there very often exists a sharp distinction between state regulations and those promulgated by municipalities therein. Exhibitors are confronted with the same difficulties, and equipment having the approval of one city is often unacceptable to another city in the same state. Members of the Committee who have had long experience in practical projection work are agreed that the absence, rather than the existence of specific regulations in many states is highly undesirable, because the conditions to be met in such territories frequently lie within the province of some local official whose personal opinions are not consistent with generally approved procedure. There may then develop friction between the authorities of a given municipality

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wherein one division of the city government disagrees emphatically with another.

The Committee has set for itself the task of establishing projection standards which, it is hoped, will be acceptable not only to the Society but also to the nationally recognized regulatory boards. This goal having been attained, such standards could be submitted to the Sectional Committee on Motion Pictures, of the American Standards Association. Should complete success crown the efforts of the Committee in this direction there still would be lacking means of assuring their adoption by the various states, cities, and towns. It is assumed, however, that the prestige and authority accruing to the standards through the approval of the aforementioned impartial and non-commercial organizations would exert a potent influence, and go far toward inducing favorable action by a vast majority of the authorities.

The efforts of the Committee are naturally directed to improving the quality of the screen image and of sound; but this objective can be achieved only after painstaking consideration of the many diverse elements involved in the projection process, ranging from the film stock itself, through the entire chain of visual and sound projection equipment units, to the screen. Obviously, this task will impose a severe strain upon the resources of the Committee. To this end the Committee extends an appeal to the industry generally, and to the full Society membership in particular, for coöperation in submitting any data having a bearing upon this investigation. Other committees of the Society interested in related subjects have already been informed of this program and have been asked to coöperate.

The Committee, as a matter of technical coördination, will endeavor to obtain from each branch of the industry information on projection equipment and methods and their bearing on other devices and processes used by the industry. These data should be widely disseminated in all quarters where they may be used to advantage to increase efficiency and economy.

Other topics that will continue to engage the close attention of the Committee are:

(1) Further refinement and extension of projection room lay-outs for small, medium, and large theaters.

(2) General auditorium lighting, a topic that invites particularly close attention at this time as a result of the general marked improvement of projection light-sources during the past two years.

- (3) Determination of the correct mirror magnification ratio to obtain an acceptably uniform spot for the standard projector aperture with the Suprex arc.
- (4) Illumination and sound transmission characteristics of the screen.
- (5) Types of screen masking.
- (6) Suitable starting acceleration of motors driving the projectors (avoidance of excessive strain and consequent damage to equipment and film).
- (7) Projection illumination with reference to color-film.

The last topic is particularly important at this time because of the possible increasing use of color film by the industry. The resultant color upon the screen is dependent in large measure upon the light-source used and the accuracy with which it is controlled. Color-film projection merits special attention upon the score of both quality and quantity of the projected light. In the future, the Committee's recommendations concerning projection light-sources will bear specific notations as to their applicability to black-and-white or color projection.

The Committee is particularly interested in finding a suitable light-meter that may be distributed at a price reasonable enough to induce widespread use. Several sample meters are now under consideration.

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DISCUSSION

MR. WITTELS: Not long ago a new theater was being built outside Minneapolis, and I gave the drawings of the projection room lay-outs to the architect, who immediately recognized their value. I believe he took the lay-out for the size of theater he was building, incorporated in it everything that was needed, and laid out the projection room as the Projection Practice Committee recommended. I think the Committee should know about it.

MR. KENNEDY: The Projection Practice Committee deserves a lot of commendation. All this discussion about light-sources and screen brightness will have to be studied from the ground up and will have to be solved. There are many different kinds of theaters, types of seating arrangements, sizes of screens, projection distances, and so forth, that it seems almost impossible for manufacturers to make machines that will be suitable for all conditions—that is, to provide a certain brightness of screen for any distance—while the projectors and light-sources are all made more or less according to certain standards.

As was stated in the report, there should be greater agreement among the States, which even now agree in respect to certain of the specifications. It is

for this body to establish specifications and to see that the States adopt them and adhere to them. Then the manufacturers could make their equipment conform to those specifications.

MR. JONES: A great deal of the preliminary work of standardization has to be done by the technical committees. When a technical committee has reached a point at which it is ready to recommend a standard, the recommendation must go to the Standards Committee, which will then formulate the proposal in the proper manner. We are now in the course of doing that but, of course, it can not be done hastily. We must proceed in an orderly fashion.

MR. HOVER: I agree that the matter should not be taken care of too rapidly; but I happen to supervise a visual instruction program for the division of safety and hygiene of Ohio, and, to our horror, we recently found out that more than 40 high-school auditoriums had been built during the past three years, with the intention of installing sound equipment in them. The projection rooms that were provided are portable, and are 5 feet square and 7 feet high.

MR. WILLIFORD: In the electrical manufacturing industry there is a very definite program for legislating standards. There is a Uniform Legislation Committee, and a paid staff for inspecting bills presented to the various municipal and state legislative bodies, and when advice needs to be given to those law-making bodies, it is given to them.

I am wondering whether this Society has made adequate provision for getting its standards into the proper hands and watching this legislation—particularly with respect to the American Institute of Architects. In addition to the American Standards Association, we should certainly consider taking advantage of some of these other agencies.

MR. GRIFFIN: It has been recommended that the Committee call the attention of the Association of Electrical Inspectors to the work it is doing to achieve uniform regulations throughout the country. It is a very large organization, whose members have jurisdiction over practically all the theaters of the United States. This is an important step and certainly should result in the Committee's gaining prompt action.

MR. MITCHELL: The Non-Theatrical Committee report touches upon some of the regulations that have been promulgated and applied recently in 16-mm. projection and non-theatrical projection generally. We are making quite a point of the desirability of the Society's recognizing the conditions and striving through some sort of recommendation for uniform legislation. I think the two Committees can work together very effectively on this problem.

MR. CRABTREE: In connection with Mr. Williford's remarks, we had in mind the matter of getting together a sort of compendium of information relating to construction. About two years ago Dr. Jones and I met in conference at Rochester with representatives of the American Institute of Architects. The result was that we were requested to have some Committee or individual prepare the material and present it at one of our meetings, at which it would be discussed. After that, the idea was to present it at several of the regional meetings of the AIA, and after further discussion to publish it in their journal.

We tried to proceed with the formulation of this compendium of information. Mr. Schlanger undertook to handle the architectural side, Mr. Wolf the acoustical, and Dr. Jones the optical. I have been trying to get the three together for the

past two years. Mr. Schlanger has published two papers. Mr. Wolf handed me one yesterday, and I believe Dr. Jones will speak for himself. That is where the matter stands now, but the three papers have not yet been fused together. It is a desirable thing to do, because I believe we have sufficient information at least to prevent such terrific blunders from being made as have just been mentioned.

MR. JONES: If you have comprehended what has gone on at this session you will realize why I have not prepared the paper. Much work had to be done, and the work of the Projection Screen Brightness Committee shows what was done. We can not pull solutions out of thin air, and there is no point in recommending practices without adequate foundations upon which to base the recommendations. We have made progress, as reference to the May JOURNAL will show, and when the paper is finally written, it will contain very valuable information.

MR. MCGUIRE: One of the important purposes of the Projection Practice Committee is to show the interrelation of the various activities of the industry to each other in such a way that the industry will more fully appreciate what the SMPE has been doing as a coördinating body. We must try to show the industry how necessary it is to have some organization function to pave the way toward solutions of the many practical problems in the various departments in the industry. Motion pictures are not made in a single factory as is an automobile. They start out in a given place, go through many vicissitudes, and finally wind up at the theaters. At any point in their travels something can happen that will destroy all that the specialists of the Society have done to perfect them.

At a recent meeting of the Atlantic Coast Section we had an excellent talk on the elimination of flutter. There were diagrams. There was no question that flutter had to be taken out. During the discussion it was pointed out that if the sprocket teeth of the projector were worn, there would still be flutter. What is the use of sound engineers taking out the flutter if it comes back into the theater by another avenue?

Although the sound engineer is expected by this time to be a specialist in his particular work, he must take a lively interest in the other activities of the industry, so that when flutter is taken out by him, it will stay out. We are all dependent in the end upon the success of the industry as a whole, and anything that injures the quality of the finished product in any way will to that extent undo the work of other departments of the industry.

Therefore, if we can coöperate more fully, coördinate more, demonstrate how necessary such coördination is, more interest will be taken in the Society and its technical committees. Exhibitors take very little direct interest in the Society. We have made a number of attempts to get them to attend these meetings but the response has been extremely limited.

It is a tremendous job to show the industry clearly, and make it understand, how necessary it is to coördinate all these interrelated activities. We must have the coöperation of the industry itself. But we can not do a great deal until we get real financial support in this field, and we are not getting it. Mr. Williford spoke a little while ago about doing this and doing that—all of which require considerable money. All the Projection Practice Committee can do, for instance, is to make recommendations, for inducing and directing legislation. Perhaps a more complete understanding of what we are doing will prompt the necessary coöperation of the industry and speed up the activities of the Society.