

plain and clear. Recent advances in magnetic multichannel sound reproduction are briefly covered. The book closes with a description of panoramic projection, such as used in Cinerama.

A bibliography shows other sources of information, mostly of Russian, French, British and German origin.

The book offers thorough coverage of wide-screen film processes, much of the material being of a type not previously gathered under the general subject of wide screen. Of significant value is the fresh approach offered by the Eastern European origin of the material.—*Willy Borberg, GPL Div., General Precision, Inc., Pleasantville, N.Y.*

Eliminating Man-Made Interference

By Jack Darr. Published (1960) by Howard W. Sams & Co., 1720 E. 38 St., Indianapolis 6, Indiana, Paper-bound. 160 pp. illus. 5½ by 8½ in. Price \$2.95.

This book is intended mainly as a guide to the service technician dealing with noise and interference problems in radios, television sets, electromechanical apparatus, etc., in tracing such interference to its source and then eliminating or subduing it. Many of the illustrations (173 in all) show the appearance on TV screens of the various types of interference that plague set owners. The book is divided into 12 chapters, including a chapter on Case Histories and another on the FCC and Its Role in Interference Complaints.

Nontheatrical Films — Interim Report No. 2

By JOHN FLORY and THOMAS W. HOPE

This Second Interim Report brings up to date (as of January 1, 1961) and amplifies selected statistics contained in the authors' comprehensive study of the nontheatrical field, "Scope and Nature of Nontheatrical Films in the United States" published in the June 1959 issue of the Journal (pp. 387-392). It supersedes the Interim Report published in the January 1960 issue of the Journal (p. 70).

ONCE AGAIN, an annual estimate of the U.S. nontheatrical film and audio-visual field shows significant growth. A \$389 million expenditure for 1960 represents a 9% increase over the 1959 readjusted total of \$357 million (Fig. 1).

The past year was noteworthy as the second year during which the full impact of the National Defense Education Act was felt. Increased concern with the aim of improving the scope and quality of the educational system was reflected in increased emphasis on educational film and related media.

This report has been prepared by John Flory, Advisor on Nontheatrical Films, and Thomas W. Hope, Assistant Advisor, Eastman Kodak Co., 343 State St., Rochester 4, N.Y.

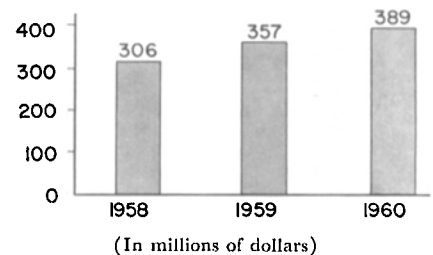


Fig. 1. U.S. audio-visual expenditures in 1960 reach \$389,000,000.

Educational film and AV expenditures for 1960 were ahead of the previous year by more than 32% (Table I).

New Information Available

Newly acquired information has made it advisable to revise upwards the earlier statistics on dollar expenditures shown in last year's Interim Report.

New data are now available on three facets of the field—filmstrip projectors, university-produced educational films, and 16mm film library distribution. Accordingly, all of the Tables included in this report have been revised to give valid comparisons on an annual basis.

Sales of filmstrips for education and filmstrip projectors especially reflected the impetus given to newer educational media by the NDE Act (Table II).

Filmstrip producers and distributors throughout the country are reporting greatly increased filmstrip sales during the past twelve months. Unit sales of filmstrip projectors were up 59% during the same period.

Preliminary findings of a study being conducted for the U.S. Office of Education by the University Film Foundation indicate that today nearly 100 universities, colleges and public school systems in large cities are regularly engaged in producing motion pictures. Based on these preliminary returns, it is estimated that the total annual educational output of these nonprofit institutions is considerably greater than heretofore generally realized.

The third major factor in the revision of previously evaluated total expenditures is in the area of film distribution. An analysis of the latest U.S. Office of Education directory of 16mm libraries* reveals that educational institutions and business organizations operate more than half of the libraries (Table III).

Although this government study lists 3660 film libraries, a figure of 5000 would today probably be a more accurate estimate. This would take into consideration normal growth of the field, in addition to hundreds of libraries asking to be excluded from a national directory because they are obliged to restrict service to users within their own school systems.

* U.S. Office of Education, "A Directory of 3660 16mm Film Libraries," Supt. of Documents, Washington 25, D.C., 1958.

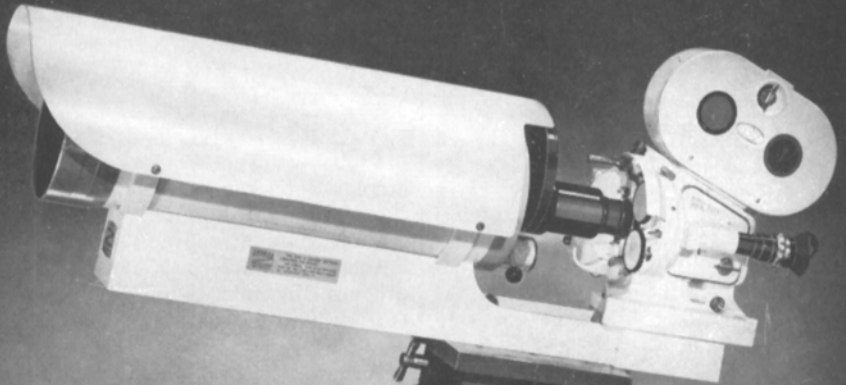
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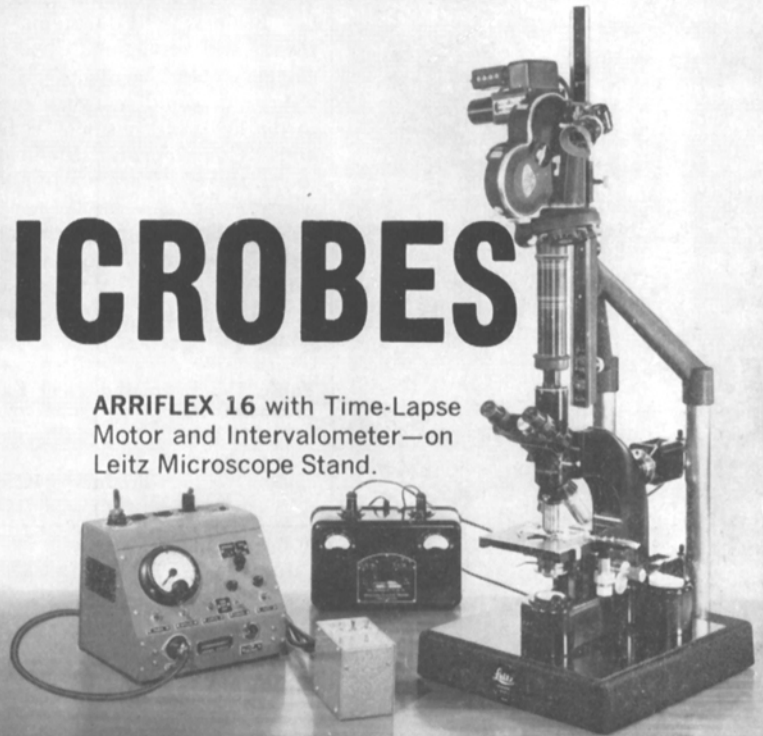
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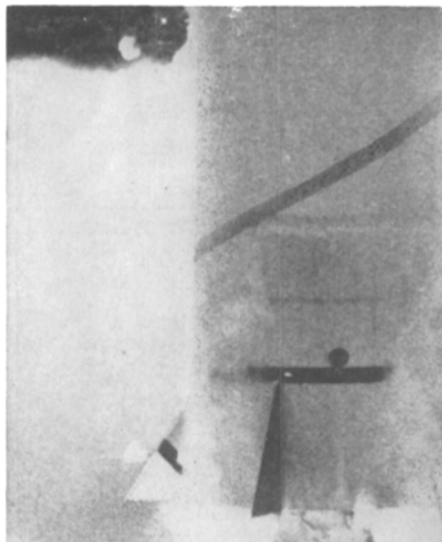
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Table I. Who Spends AV Money? A Three-Year Comparison (in millions).

	1958r	1959r	1960	1960 vs. 1959
Business and Industry	\$155	\$178	\$184	+3.4%
Education	55	78	103	+32%
Government	56	59	59	no change
Religion	19	19	18	-5.2%
Civic, Social Welfare, Recreation, etc.	14	15	16	+6.7%
Medical	7	8	8	no change
Totals	\$306	\$357	\$389	+9%

r = revised Jan., 1961.

Probably over 19,000 persons are employed by the estimated 5000 non-theatrical film libraries. The figures for distribution expenditures, in this Second Interim Report, now take into account the salaries of these persons (see column labeled "Distribution" in Table IV).

Accordingly, 1958 and 1959 estimates for total film distribution expenditures have been revised upwards. Thus 1958 was raised from \$38 million to \$78 million, and 1959 from \$42 million to \$85 million (Table V).

Type of Information Analyzed

Table IV gives the detailed analysis of 1960 for the principal basic categories of "Business," "Education," "Government" and "Religion." The specialized category of "Medicine" encompasses data that would otherwise be allocated to the fields of "Business," "Education" and "Government." Medical expenditures, therefore, are not duplicated elsewhere.

It is hoped that in future years, detailed statistical information can be compiled for other specialized fields, such as "Agriculture" and "Home Entertainment."

Table II. U.S. Filmstrip Projector Sales (units estimated).

	Unit sales	Percentage increase
1958	120,000*	—
1959	131,400	10%
1960	210,000	59%

* Based on 1958 U.S. Census of Manufacturers.

Table III. Nontheatrical Film Libraries (Est.) for 1958.

Educational	1400
Business and Industrial	1150
Governmental	560
Commercial Dealers	550
Civic, Social Welfare, etc.	500
Medical	440
Religious	400
Total	5000

Numerous questions have been asked as to what data are included within each of the five major types of expenditures. They are:

Production — motion pictures, filmstrips, and sound slidefilms

Table IV. Estimated 1960 Expenditure Factors by Categories (in millions).

	Production	Release prints	Distribution	Mot.-pic. equipment	Other AV	Total	Percentage change from 1959
Business and Industry	\$ 73.8	\$38.6	\$35.0	\$ 7.5	\$29.1	\$184	+3.4%
Education	14.0	9.7	26.3	19.8	33.2	103	+32.1%
Government	19.3	9.4	13.6	3.2	13.5	59	no change
Religion	3.4	2.8	6.7	2.6	2.5	18	-5.2%
Civic, etc.	1.5	1.5	10.1	1.9	1.0	16	+6.7%
Medical	3.0	2.0	1.3	1.0	0.7	8	no change
Totals	\$115	\$64	\$93	\$36	\$80	\$389	+8.9%

Table V. How the Money Is Spent: Estimated Nontheatrical Film and Audio-Visual Expenditures by Type of Product (in millions).

	1958r	1959r	1960	1960 vs 1959
Production	\$100	\$115	\$115	no change
Release Prints	49	57	64	+12.3%
Distribution	78	85	93	+9.4%
Motion-Picture Equipment	29	32	36	+12.5%
Other Audio-Visual	50	68	80	+17.4%
Totals	\$306	\$357	\$389	+9%

r = revised Jan., 1961.

Release prints — motion pictures, filmstrips, and sound slidefilms

Distribution — commercial and audio-visual dealer film rentals and sales; sponsored film distribution; and school, governmental, religious, medical, social service and public libraries.

Motion-picture equipment — 16mm sound projectors, cameras, and production equipment such as lights, sound recorders, etc.

Other audio-visual equipment and materials — sound slidefilm, filmstrip, 2 × 2-in. slide, 3¼ × 4-in. slide, overhead and opaque projectors; projection screens; projection stands; materials for making slides and overhead transparencies; and a great number of other sundry items.

Film Production and Projectors

Motion-picture production dropped off slightly in 1960 (Table VI) while filmstrip production increased, according to reports. The dollar expenditure for all production, however, stayed about even (Table V).

Sales of 16mm sound projectors rose considerably compared to the previous year. Although it may be several months before final figures are available, preliminary reports indicate that total sales for 1960 were approximately 50,000 of which 45,000 were for the domestic market. The purchases, by major categories, show that America's schools absorbed 60% to 65% of the new projectors.

This year for the first time an estimate of the number of 16mm sound projectors in use in the home has been included in the total for the United States (Table VII).

Taken into account in determining the year's increase in the number of projectors in use (net gain) are those machines which have worn out or otherwise become obsolete. In addition, the factor of second-hand projectors is included — primarily in the areas of "Religion" and "Home." It is estimated that there are 727,000 16mm sound projectors in use as of January 1, 1961.

Considering the entire population of the United States, there is now one projector for every 250 persons.

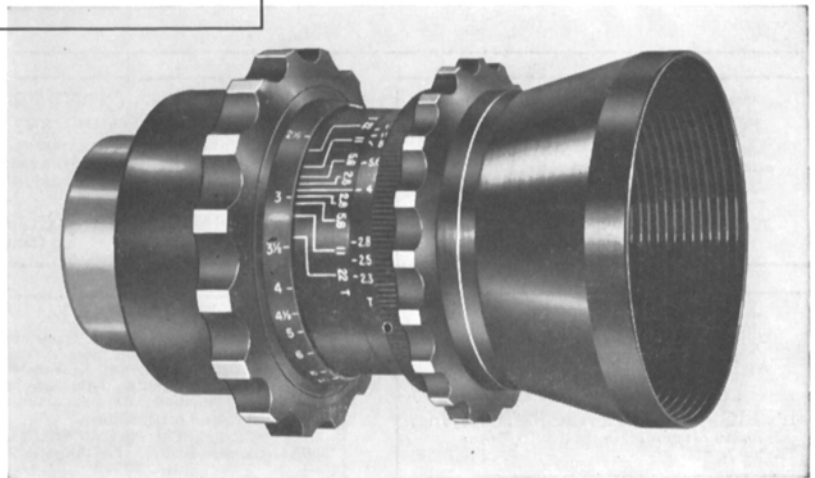
While the percentage of projectors going to schools increased in 1960, obviously due in part to the NDE Act, the ratio of buying by different kinds of schools remained about the same as in 1959, except that public secondary schools purchased 4% more than the year before (Table VIII).

A new development appeared during the year in the form of the 8mm sound projector. It is too early to include any data on it in this report.

More Data Needed

It is felt that to appraise the audio-visual field more accurately in future

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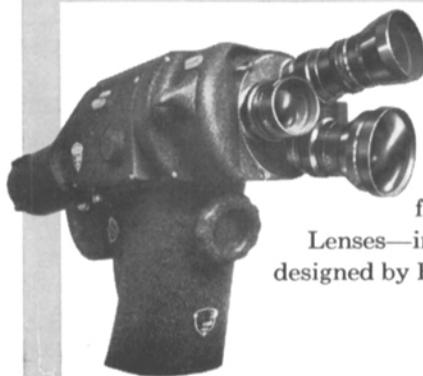
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Table VI. Estimated Number of U.S. Nontheatrical Motion-Picture Productions.

	1958r	1959r	1960
Business and Industry	4500	5400	5000
Education	1300	1500	1600
Government	1500	1500	1500
Religion	200	220	190
Civic, Social Welfare, etc.	200	210	210
Medical	300	400	300
Experimental	100	110	100
Totals	8100	9340	8900

r = revised Jan., 1961.

Table VII. Ownership of 16mm Sound Projectors in Use in U.S. (Estimated as of January 1, 1961).

Education	220,000
Business and Industry	179,000
Religion	127,000
Government	75,000
Home	65,000
Civic, Social Welfare, etc.	50,000
Medical	11,000
Total in Use	727,000
1961 Domestic sales — 45,000 (est.)	
1961 Export sales — 5,500 (est.)	
Second-hand machines resold — 13,500 (est.)	
Projectors, assumed obsolete and therefore deducted — 15,000 (est.)	

Table VIII. Projector Ownership by Schools (as of January 1, 1961).

	Projectors in use
Public Elementary Schools	118,000
Public Secondary Schools	68,000
Colleges and Universities	17,600
Private and Parochial Elementary and Secondary Schools	16,400
Total	220,000

years, capital expenditures — where not already considered as a part of production — should be included in this report. For example, in recent years considerable amounts have been spent by institutions and companies for the building and installation of conference rooms, classrooms and small theaters for the projection of films and other visuals

To complete the picture, attention should also be given to television, including closed-circuit and other forms of noncommercial usage, and audio activities in the field. Tape recorders, phonographs and public address systems in industrial and educational applications should also be included.

The authors welcome all information which can make these reports more accurate, and invite readers to give whatever assistance may help.