Making Available Light Available

By GEORGE GILL and CHARLES E. SORENSEN

Lighting is a matter of special interest to photographers and television personnel. Photographed and televised subjects also have an interest in how they are lighted, since properly angled and directed lights can enhance appearance. Many public figures employ staging and lighting advisers for their public appearances.

Theatrical, television and display directors, photographers, and cinematographers have long used controlled lighting to attract, transfer, and release attention. Although the versatile theatrical-type lights, with variable focus controls, are very useful, their relatively short life is a serious drawback especially where lights are required to burn for long hours. The artistic limitations of fixed focus, sealed beam lamps have been accepted in return for long life.

The new quartz-iodine lamps and fixtures which fully utilize their compact sizes have superseded for many uses the low-output, yellowish lamps characteristic of the old-type, long-life filaments. Quartz-iodine lamps use filament replenishment to extend lamp life without reducing output and light quality. Heated iodine continuously returns the burned tungsten from the lamp interiors to the burning filament thus providing considerably longer life and stable light of constant color temperature. The light-hour cost is thus reduced and efficient, constant light is available wherever and whenever required.

Types of public buildings in which controlled light is utilized includes churches and temples. Services and weddings may be photographed and televised with regulated, adequate available light without a need for flash, portable lights, stands or cables which may be hazardous and which distract the participants and viewers. Such lighting may be used for all services.

Lighting for press conferences, demonstrations, business, industrial and political meetings, etc., must be comfortable for all concerned. Where free discussion takes place between speakers and audience the lighting must be free of glare so that prompt recognition of each speaker occurs.

Lighting for nontheatrical events should differ from the dramatic lighting of the theater and studio.

In locations where preplanning is possible, for example, auditoriums, meeting rooms, banquet rooms, churches and temples, arenas, etc., adequate, controlled permanently installed lighting systems are possible. As requirements dictate, the principal staging or speaker areas should be lighted both for visibility and to provide the best three-dimensioned images on two-dimension film and TV.

Presented on November 3, 1965, at the Society's Technical Conference in Montreal by George Gill, Eastern Manager, ColorTran Industries, Middle Village, N.Y. 11379; and by Charles E. Sorensen, Brenner Photo Co., 933 Pennsylvania Ave., N.W., Washington, D.C. 20004. The Conference presentation included the projection of color slides.

Portable Systems

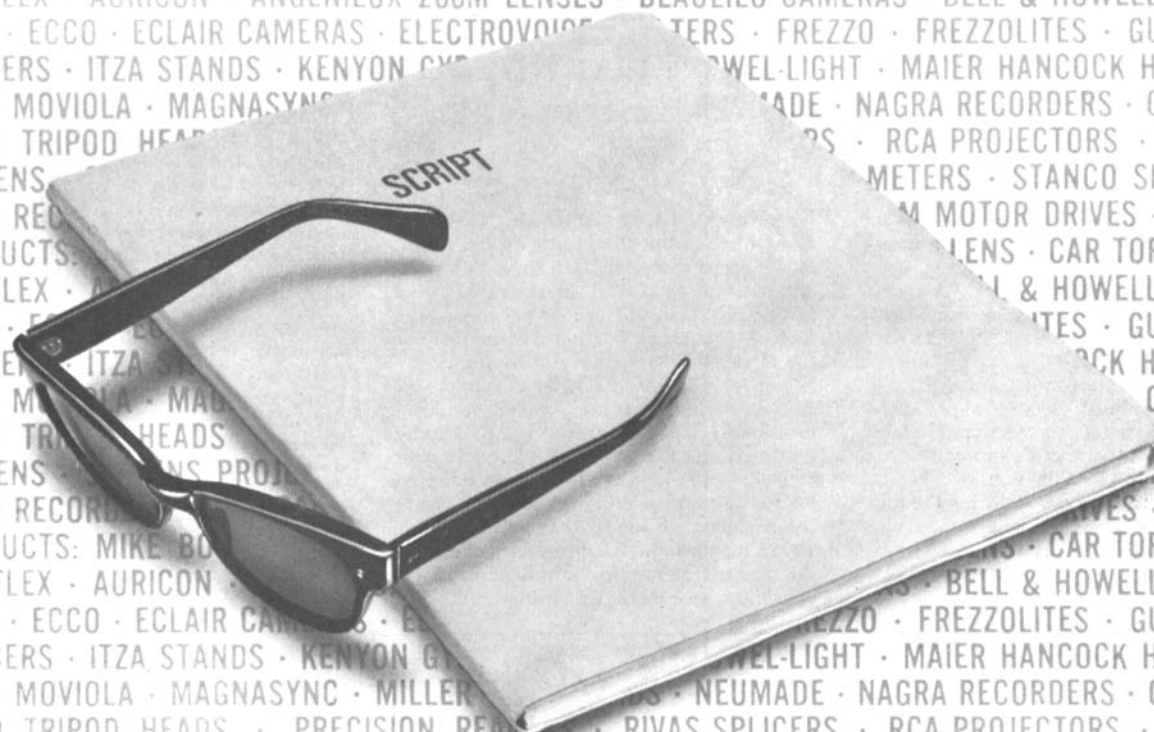
In locations where preplanning is not possible, portable systems should be available. These should include front and modeling lights, remote intensity controls, wiring outlets and sturdy mounting frame or grid to hold the lights and outlets safely in the proper locations so as to provide correct lighting angles. The background should be of selected color and material to produce a suitable contrast to the subjects, provision for hanging a curtain should be part of the unit. Lights and curtains should be easily adjustable.

Some considerations in designing mobile staging and lighting systems include the use of individually powered, lightweight, solid-state electronic dimmers. Several dimmers can be fed from different available power sources. Power is almost always difficult to obtain where needed. Very small controls from each dimmer location can be centralized for group and master control of the lights. Another consideration is the ability to erect and take down the equipment quickly and to pack it in lightweight cases not exceeding five feet in maximum length. Case handles and dimensions must permit easy passage through standard doorways, corridors, etc.

In locations having low-power lights for live appearances only, lighting for monochrome and color photography and television can frequently be easily provided either by using adapters, such as the ColorTran Quartz-King dual lights with screw bases, or by using the existing lighting circuits to feed higher output lights placed adjacent to the standard low output lights. Care should be exercised not to overload circuit capacities. It is desirable to have someone familiar with the premises supervise the electrical connections. Locations of circuit breaker panels should be known in the event that any overcurrent protective device operates. If the overcurrent protective devices are fuses, it is important to maintain a supply of the correct size and type of fuses.

The performance of existing lighting equipment can frequently be improved by making sure that the light units, lenses and reflectors are in good condition, including being clean! In some instances, equipment can be re-lamped with higher wattage and/or higher output lamps either directly or with adapters such as the type previously mentioned. All portable lights and wiring devices should be equipment grounding. The metal framework and light supporting devices should also be grounded both for safety and conduction of some electrical noises. No devices which prevent the proper operation of overcurrent protective devices should be used to keep fuses or circuit breakers from operating when overloaded. The "O.K. overload" could be a resistive fault which would be sustained, possibly causing fire.

Although the main concern here is with the visual communication elements, i.e., lighting, lights-mounting grid, and back-



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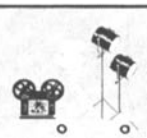

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ground, thought and care should be given to coordinating all of the staging elements such as audio, lectern, prompting, viewing angles, etc., so that the program or presentation has a finished, professional appearance. To complete the program, considerations must also include audience comfort, i.e., seating, viewing, temperature control, ventilation, crowd control, ambient general lighting to control contrast between staging and surrounding areas, and audience lighting for establishing shots and audience participation. Communication between speaker or stage manager and front of house, lights and sound, orchestra leader, security, etc., is also an important staging element. Competition between nonprofessional theatrical and broadcast presentations and modern professional presentations requires that every program present the smooth professional "look" now generally expected by the public. (These were demonstrated with slides.)

DENVER, Feb. 22—Western Cine Service was the host for the **Denver Section** meeting where 36 persons attended.

Rupert F. Goodspeed, RCA Broadcast Equipment Representative for the Rocky Mountain Area, presented "A Dream Comes True," the story of Red Skelton's television mobile unit and studios that he co-designed and built. Goodspeed presented slides on all phases of construction. He said, at the end, that it was a dream come true for him, as well as Red Skelton.

Refreshments were served during the tour of the remodeled Western Cine Service facilities—John H. Seide, *Secretary-Treasurer*, 2941 E. Colorado Ave., Denver, Colo. 80210.

DETROIT-CLEVELAND, Feb. 17—John J. Kroll, Head of the Photographic Dept., Henry Ford Hospital, Detroit, gave a presentation on "Medical Photography in a Major Hospital," before 40 persons at the **Detroit-Cleveland Section** meeting held at the Henry Ford Hospital Auditorium.

Through the use of 2 × 2 color slides and 16mm motion-picture film clips, Kroll thoroughly explained medical photography by describing the photographic equipment as well as the lighting equipment adapted for sterility and safety. The preparations to insure safety and to provide remote controls were illustrated. Step-by-step examples showing photographic equipment for major operations were shown using stills and motion pictures in combination. The program was highlighted by a color motion picture of open-heart surgery.

Another spectacular example of medical photography was the Stapes operation which is controlled through a ¼-in. diameter tube which carries the surgeon's instruments, the optics and light. This work in miniature was projected on a 15 ft wide screen in excellent color and detail.—John A. Campbell, *Secretary-Treasurer*, The Jam Handy Organization, 2821 E. Grand Blvd., Detroit, Mich. 48211.

HOLLYWOOD, Feb. 15—Roderick T. Ryan, Sales and Engineering Service Representative, Motion Picture and Education Markets Div., Eastman Kodak Co., Hollywood, gave a picture demonstration, and discussed the characteristics of two new high-speed Ektachrome reversal color films (daylight and Type B), before 266 persons at the **Hollywood Section** meeting. The meeting was held at CBS Television City.

Current trends in the design of quartz-iodine lighting for motion pictures and TV was demonstrated by Milton Forman, Executive Director, ColorTran Industries, Burbank, Calif. and Richard Glickman, Director of Engineering at ColorTran.

Jack Fromkin, Director of Electronics Research and Development, ColorTran Industries, discussed current trends in the design of lighting control systems for motion pictures and TV. William Sargent, Project Coordinator, ColorTran-Sarkell, demonstrated the new ColorTran crab dolly.

Opening the meeting was a film, *Mazatland*, produced by Calpad Company.—Ted Fogelman, *Secretary-Treasurer*, 1057 S. Ogden Dr., Los Angeles, Calif.

ROCHESTER, Jan. 27—Dr. Joseph A. Sincius, Photo Products Dept., E. I. du Pont de Nemours and Co., Inc., described a new silver halide photographic process, Photosolubilization, at a meeting of the **Rochester Section.** More than 100 persons attended the meeting held at the Dryden Theater.

Dr. Sincius illustrated his talk with slides and, by means of a view graph projector and glass solution trays, showed the development of an image by the new process.

Carl F. Oster also gave a "Visual Encyclopedia" presentation on the subject of "Electron Microscopy."—Raymond H. DeMoulin, *Secretary-Treasurer*, 193 Kaymar Dr., Rochester, N.Y. 14613.

SAN FRANCISCO, Feb. 15—Twenty-five persons attended the February **San Francisco Section** meeting held at the University of California, Berkeley.

R. A. Isberg, TV Consultant, University of California, Berkeley, and Bob Horning, Lawrence Radiation Laboratory, Livermore, Calif., discussed and demonstrated an experimental video infrared transmission system.

The second half of the meeting was devoted to a lecture by Ken Winslow, Executive Director, Western Radio and Television Association. He discussed guide lines for the specification of video tape recorders for educational purposes.—John B. Steiger, *Secretary-Treasurer*, 13456 Mandoli Dr., Los Altos Hills, Calif. 94022.