



FIG. 13. This is the "Trading Post" set used on WTMJ-TV's color telecast of "The Hotshots" program. Standing in front of the board fence are "Pedro" (Alex Mayer) and Gordon Hinkley, m.c. of the Hotshots, and the Winkert sisters. Note the Electrazoom lens which gives WTMJ-TV almost as much flexibility as a second camera, and saves the labor of "dollying" in and out.

## WTMJ-TV's Plans For Color Development

Walter J. Damm, Vice President and General Manager of Radio for the Journal Company, is an enthusiastic believer in the future of color television. He has backed his belief by seeing to it that WTMJ-TV is equipped with a complete color setup—the best of everything throughout. At the same time, however, he has analyzed the practicalities of the situation and his color program for the station is based on a very down-to-earth line of reasoning.

Mr. Damm has for several years been chairman of the NBC Affiliates Committee and as such he is very conscious of network-station relationships. As he sees it the local color programming of most network-

affiliates will be largely limited (as local monochrome programming presently is) to daytime and late evening hours. This, he feels, means mostly kid's, women's and cooking programs (and some film). He agrees that these are important revenue producers (and may become more so); but they are not, he points out, elaborate productions. And they certainly do not require elaborate facilities and operating staffs. Therefore, since local color is to be limited to these programs, the local station certainly does not need color facilities and color crews of the size envisioned by network operations.

With this thinking in mind, Mr. Damm's

present directive to his staff is not to build special shows for color, but rather to find out what will be needed for WTMJ-TV to originate in color its present local shows. To do this the station has undertaken a schedule which in coming months will see each of its regular shows done several times in color. This exploratory program, Mr. Damm thinks, will take about a year. In the meantime, he feels that the big network color shows and the introduction of large-screen color receivers will have prepared the public for all-out color. By then, WTMJ-TV, with its experimenting all done, and its plans made, will be ready to go ahead with a full-scale color operation.

# WTMJ-TV's Color Programming

WTMJ-TV, as we have noted, has a very definite plan for color programming. This is that they will not build shows for color but rather will take each of their present monochrome shows in turn and try it out for color. They believe that by doing this they will learn quickest just what are the possibilities of color for local programming.

With the exception of the two opening-week shows all of the color programs WTMJ-TV has aired have followed this dictum. Their original schedule was to do two color shows a week to start—one a sustainer and one sponsored. With minor changes this schedule has been followed. Perhaps the best way to indicate what has been done is to list and describe briefly the color shows WTMJ-TV aired in its first six weeks of color operation.

*July 18, 1 hour*

Opening celebration—variety program with circus atmosphere featuring "The Grenadiers," a nine-piece orchestra which has been a WTMJ radio favorite for two decades. Included were singing and dancing acts plus the usual magicians. Background mostly colored drapes festooned with ribbons and balloons.

*July 20, 1½ hours*

"The Layton Art Story" (sponsored by Blatz Beer)—a documentary built around the locally famous Layton Art School included discussions of all types of art; sculpture, water-colors, oils, industrial design, etc. Illustrated by artworks mounted on panels that made up the background for the set.

*August 3, 15 min.*

Gretchen Colnik (sponsored by Mrs. Karl's Bread)—women's show (non-cooking) featured flower arrangements on this day.

*August 6, 15 min.*

"Sports Picture" (daily participating sponsorship)—announcer and featured guest in interview-type program featuring collection of guests.

*August 12*

Kitchen Show—cancelled because of mechanical difficulties in getting equipment into Kitchen Studio.

*August 17, 30 min.*

Foreman Tom—crackerhouse cowboy comments between film segments.

*August 19, 15 min.*

"Play Ball" (sponsored by Spic and Span)—a baseball quiz program, with mc, umpire and four guests. Somewhat difficult to get all on one camera.

*August 23-27, 15 min. daily*

"The Hotshots" and "The Grenadiers" alternating. Both one man or two piece musical groups with soloists. This program was put on especially for viewers at the State Fair.

*August 26, 10 min.*

Color insert on NBC "Home" Show, featuring Wisconsin State Fair Craftwork was originated by WTMJ and fed to the network.

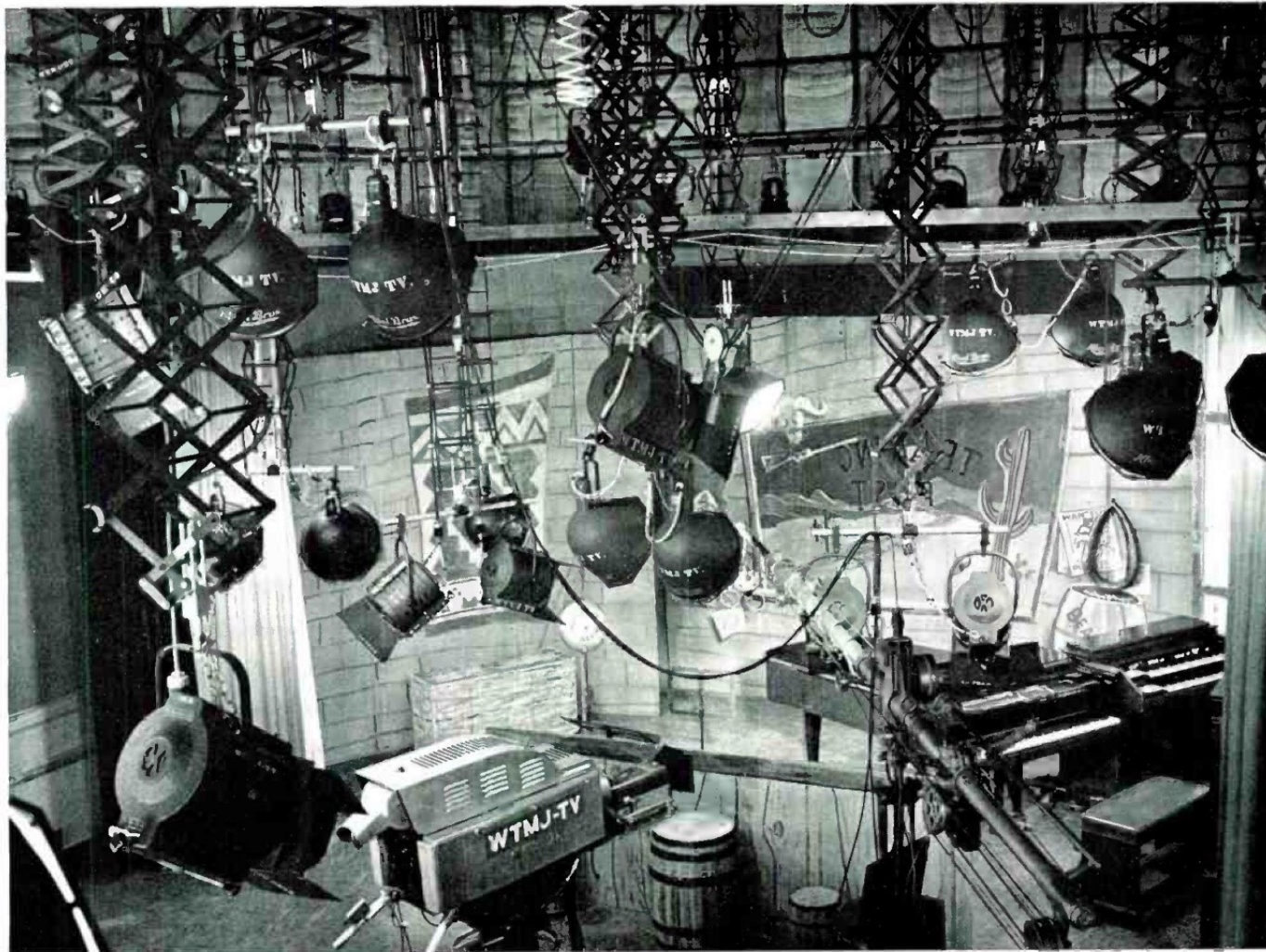
*September 1, 15 min.*

Let's Experiment (public service program). Commentator using props from museum. This day's subject is crystals.

*September 3, 30 min.*

The Woman's World with Beulah Donohue (station-produced participating women's show). Home decorating as feature on this day.

FIG. 14. This view of the "Trading Post" set shows more of the details and also gives an idea of the lighting arrangement.



# Color Operating Experience

## Color Rehearsals

With the exception of its two big opening shows WTMJ-TV has not found it necessary to do any special rehearsing for color. All of its other color programs have been regular station shows, most of them of the type not formally rehearsed (such as interviews, panel shows, small musical groups, etc.). For these shows all WTMJ-TV did in advance was to "check them out for color," i.e., make sure there were no features (costumes, makeup, props, etc.) which were really bad in color. On the average this took from a half to one and a half hours. At first this was done a day or two before the scheduled program, at some time when the color camera equipment would be warmed up for that day's show. Recently this check period has been shortened and scheduled preceding the normal rehearsal or the show itself.

Local station performers are usually quite excited over the prospect of being on in color. Not infrequently they are rather fearful of the outcome. A rehearsal a few days in advance is of value if for no other reason than to allay these fears.

WTMJ-TV has found, as have others, that most of the stories about color's pe-

culiarities are greatly exaggerated. They have noticed, for example, that many performers are perfectly all right for color with no makeup at all. Those who do need makeup do not always require the special (CTV) color makeup. Quite often the makeup they have been using for monochrome will be satisfactory. Possible exception to this is lipstick which is rather critical. Bright red tends to become too red. Dark red goes muddy. Best color is on the orange side. Fortunately, it is mostly the ladies who need "glamorizing" for color. And they, of course, take to it like ducks to the water. WTMJ-TV maintains no "makeup" department, finds its regular performers quickly learn to apply their own. Most guests do not need makeup. When they do, a member of the production staff gives them help.

## Color Commercials

To date WTMJ-TV has done only a few "commercials" in color. Most of these have been done "live" and fairly well integrated into the show.

On the opening commercial program (for Blatz) which told the story of the Layton Art School the "commercial" was worked in by telling the story of the Blatz triangle

monogram (an example of industrial design, sic). This commercial opened with a shot of the Blatz bottle surrounded by beautiful flowers, the so-called "glory shot." As the announcer went into the story of the Blatz monogram, the camera panned over an array of Blatz bottles of yesteryear showing how the monogram had been used for several generations. Following this, slides were used to show use of the monogram in ads, on billboards, even on the truck-driver's uniform. This commercial ended with a dissolve back to the announcer.

As contrasted to this "institutional" type selling, the commercial for Mrs. Karl's Bread, as done by WTMJ-TV in color, is a close-up of blue-checkered package next to a plate full of colorful sandwiches made from the bread. Cheese and other fillings give the color. Really very good!

On the "Play Ball" program mentioned above the commercial for Spic & Span (dry cleaning firm) was a live shot of the "specials" for the week (certain types of garments) panning around and into a closeup of a model of the client's store front with one of the delivery trucks in front.

WTMJ-TV, in the future, expects to do more of its commercials on slides. It feels that this will be safer and more satisfactory. It will also ease the camera operation. Doing commercials live in a one-camera operation requires considerable advance planning, trying out lighting, etc.

## Sets

In line with its policy of trying out (for color) its regular program "as is" WTMJ-TV has not built any sets for color. Moreover, it has made only very minor changes in existing sets. The established procedure is to "check out" for color the existing set just as it has been used for monochrome. Only if it is glaringly bad is any change made. WTMJ-TV has always used color in its backgrounds and its experience to date indicates that most of these backgrounds are fairly satisfactory for color. Where changes have seemed desirable they have been accomplished by substituting available color panels from other sets. In a few cases colored balloons or colored drapes have been used to "brighten up" the existing backgrounds.

Most of WTMJ-TV's color shows have been done with a single set at one end, or the other, of Studio D-1. However, they have done a show with three sets, one at each end and one along the side. These sets

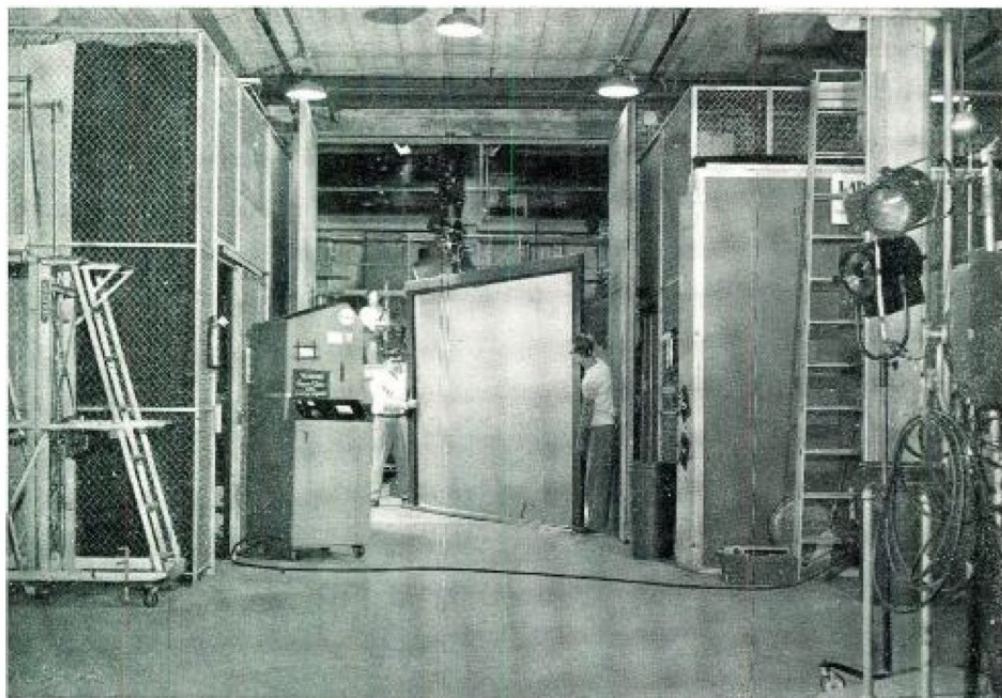


FIG. 15. This view, looking from the elevator through the double doors into the studio, shows the rear projection screen being mounted in the doorway for use on a program. The Trans-Lux projector is at the left of the doorway. By setting the projector out in the corridor, WTMJ-TV does not use up valuable studio floor space.

## at WTMJ-TV

FIG. 16. Rear Projection in use on a WTMJ-TV studio program. To date it has not been used for color. However, WTMJ-TV engineers feel that they will be able to work out a method of using it, despite higher base lighting needed for color.



formed an arc with the camera at the pivot. This arrangement is satisfactory provided the continuity is so arranged that the camera can pan from one set into the next (without having to skip over).

Of course, one way to get from one set to another (when using only one live camera) is to have slides, either "commercial" or program inserts that break at the right point. This technique was employed quite successfully on WTMJ-TV's first two color shows which were among its more ambitious undertakings and thus required such handling.

### Use of Background Projection

WTMJ-TV has a unique and convenient method of using projection. As mentioned previously, there is a large corridor from the studio to the elevator. By using this space for the projection equipment (Fig. 15), with the screen set in the studio doorway, no studio floor space is required.

WTMJ-TV uses their background projection equipment frequently on monochrome. So far they have not actually used it on a color program. However, they have experimented with it and feel that it has possibilities. The problem, of course, is how to sufficiently light the set without washing out the background. It's not easy, but someone will probably figure out how to do it.

### Operating with One Camera

WTMJ-TV presently is using one live camera in Studio D-1. It's really surprising

what they can do with it. Of course, to produce an extravaganza with one camera would be impossible; large dramatic shows and most audience participation shows would be difficult. But such shows are seldom produced locally. The programs which most stations produce themselves are usually small musical groups, interviews, kitchen shows, fashion shows, kid programs, the weather and so on. Most of these can be done quite well with one camera. Providing the production and program people exercise a little ingenuity they can be made as interesting as two-camera shows.

WTMJ-TV has worked the technique out very well. By planning the action and sets with single camera continuity in mind, and using increased movement by participating talent to make up for lack of shot variety, they are producing shows which the viewer at home would never distinguish from two camera shows.

There are certain limitations which must be kept in mind. One of these affects overall planning to some degree. This is the fact that considerable studio space must be left available for dollying back to get a "long shot." Since lenses cannot be changed during the program, it is necessary to use one lens (usually 50 mm.) for both "close" and "long" shots. This lens has an angle of  $34^\circ$  which means, for instance, that to take in 15 ft. wide set the camera must be back 20 ft. with six feet more for camera and operator this requires 26 ft. of dollying space in front of the set. Because of this

depth requirement, and because the camera is rather hard to move laterally, the tendency is to arrange sets in an arc about the camera. The camera then simply turns in and out along a straight line. To make up for inability to switch cameras it is necessary to do this much more than on two-camera shows.

### Use of Electrazoom Lens

WTMJ-TV has devised a mounting (on the color camera) for their electrazoom lens and has been using it very successfully on about half of their shows. This lens allows the cameraman to "zoom in" on a part of the set without moving his camera. In a one-camera show this is particularly important because it greatly reduces the large amount of dollying in and out which otherwise is necessary to maintain action.

The Electrazoom does introduce limitations. Because its widest angle is  $26^\circ$  it has to be 30 ft. back to take in a 15 ft. wide set. In addition the camera (with Electrazoom mounted in front) and operator requires another 8 feet. Thus a total space of 38 ft. in front of the set is necessary. In a narrow studio, to get this far back, means limiting the shot to an almost straight-on angle. There is also an undesirable tendency to "immobilize" the camera. For these reasons WTMJ-TV prefers not to use the lens when they have enough manpower (assigned to the show) to move the camera about as needed. But they do like it very much for small shows where the cameraman may be working alone.

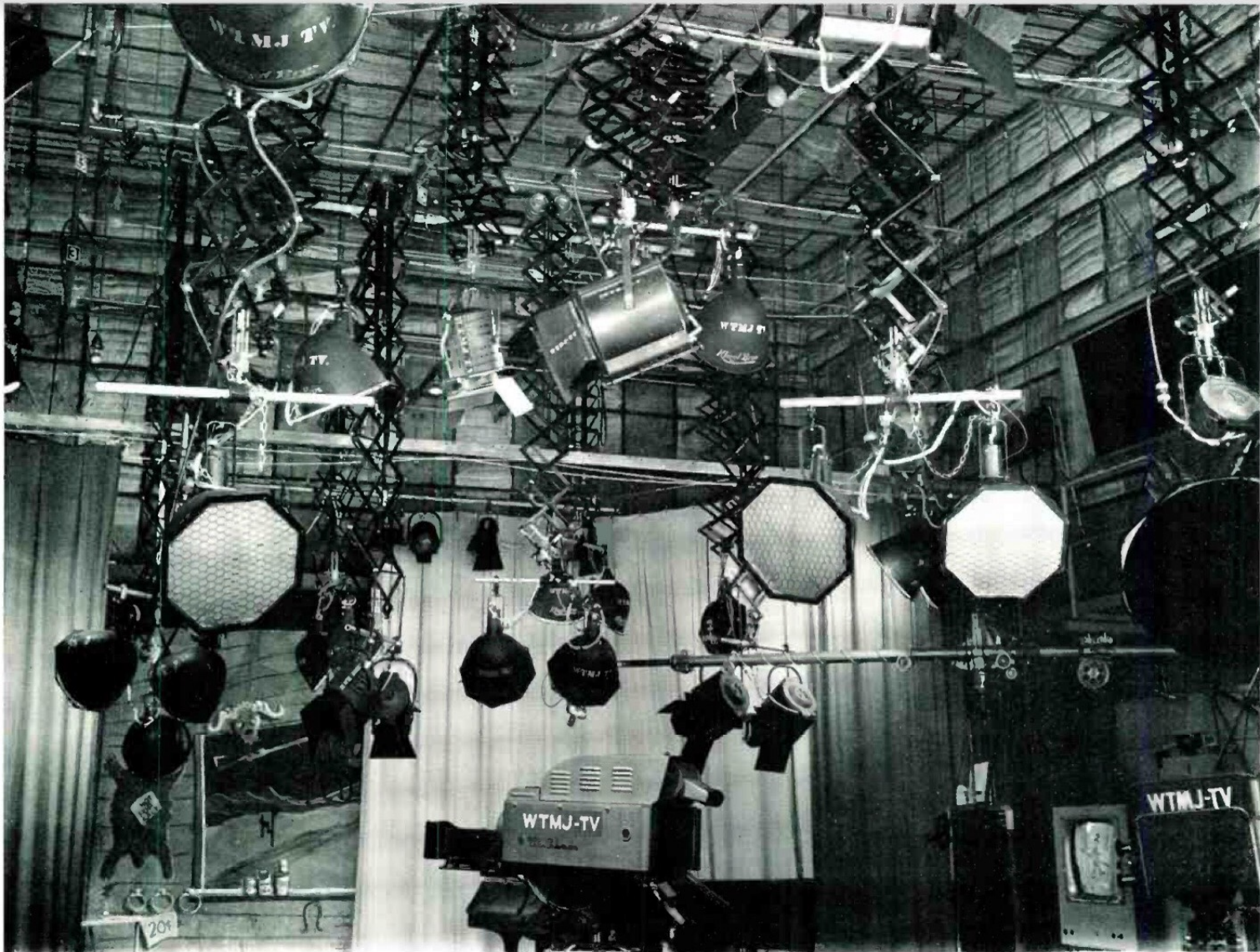


FIG. 17. Scoops and spots used for base lighting in WTMJ-TV's Studio D-1 are suspended on pantographs. Smaller spots used for back lighting are attached to pipe supports around three sides of studio.

## Lighting for Color at WTMJ-TV

WTMJ-TV made a number of changes in, and a considerable addition to, the lighting facilities in D-1 Studio in order to provide for the increased lighting required in color television. Originally the lighting was part fluorescent and part incandescent. The fluorescent fixtures were removed and additional outlets installed for all-incandescent lighting. There are now 56 outlets on the overhead grid and an additional 32 outlets around the wall and on the catwalk.

The photographs (Fig. 17 and Fig. 19) show the general arrangement of the lighting facilities. 25 Type 3534 Century pantographs are mounted in 7 rows across the width of the studio. Each pantograph has a horizontal bar at the lower end to which are attached two scoops or spots. In addition, there is a pipe rail across both ends, and along one side of the studio, to which small (750 watt) spots are clamped for back lighting. The normal fixture complement of the studio is as follows:

- 26 Kliegl Scoops (1000 watts)
- 12 Kliegl Spots (1000 watts)
- 25 Century Spots (500 watts)

In addition, some twenty portable floor lamps of various types are available.

In order to facilitate handling of the increased number of lights, WTMJ-TV installed in D-1 Studio a new Kliegl Dimmer Board (see Fig. 19). This consists of a 12 point, 72 circuit Rotolector board connected to a dimmer control console. Six points of each rotolector can be dimmed, six are no dim. Each of the six dimmer units can handle 5500 watts. Total capacity of the board is 600 amperes.

The lighting arrangement in WTMJ-TV's D-1 Studio was planned primarily to light two sets at a time (one at each end of the studio). The Blatz show, however, used sets around three walls of the studio. And, of course, for monochrome more sets can be used. Originally a base light of 400 foot

candles was used. However, Nick Brauer, Color TV Technical Supervisor, has been experimenting with somewhat lower levels and reports that good pictures can be obtained at levels around 250 foot candles. This is especially true when the camera is not very far from the performers and less light can then be more effective. The lower level is easier to obtain, more comfortable for the performers, and places less load on the air conditioning system.

The most important requirement of lighting for color is that the whole set be evenly lighted. If it is not the colors will change as the action moves from lighter to darker areas. This is true not only of action across the set but also of action toward or away from the camera. Thus the lighting must be even not only across the set but also in the direction of its depth. To get this even balance WTMJ-TV uses several rows of lights downstage from the performers.

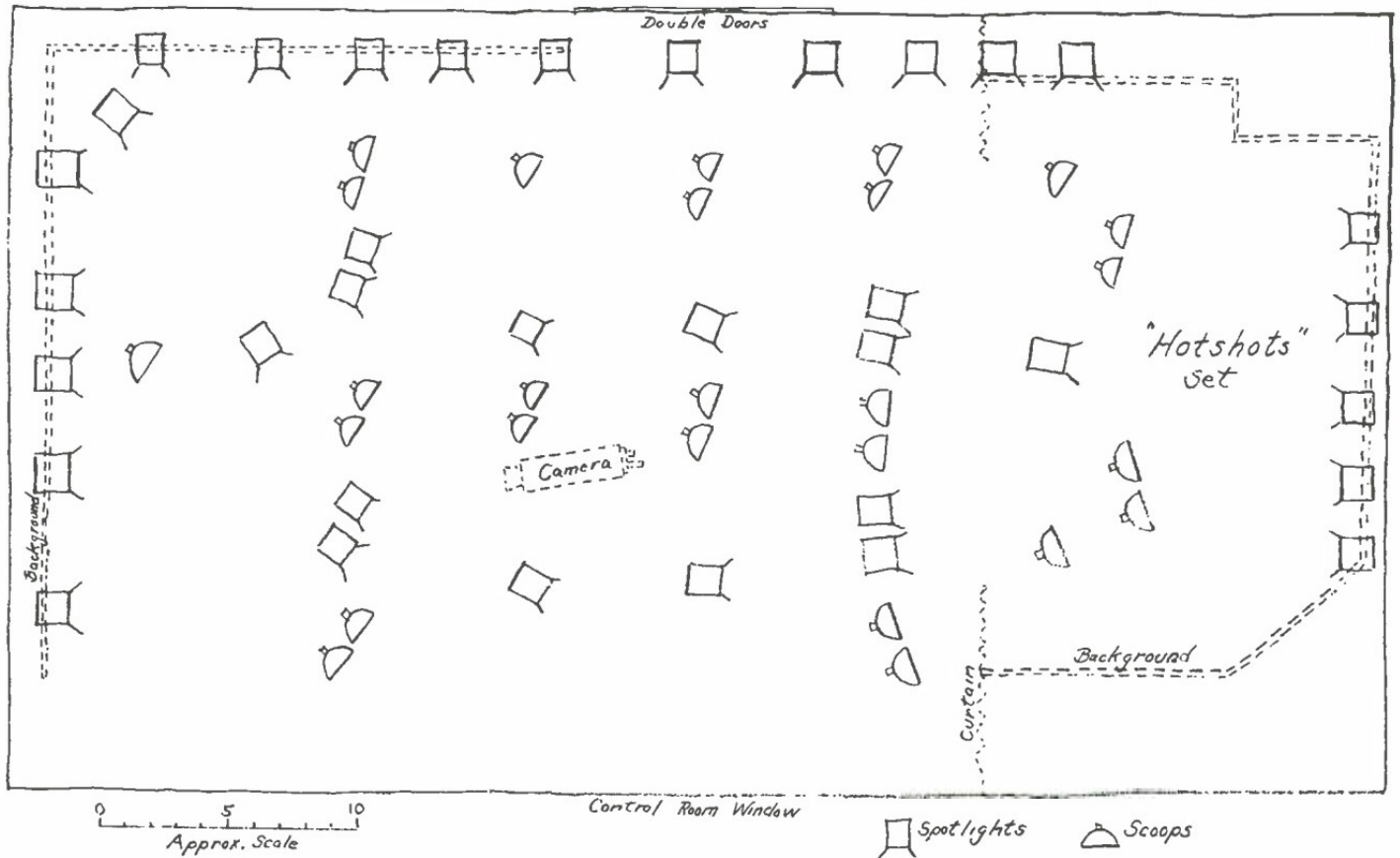


FIG. 18 (above). Sketch of the lighting setup for the Hotshots set (Fig. 13). The last row of lights (to rear of camera) is not in use. The scoops directly over the set are used on the background.

Fig. 18 is a rough sketch of the lighting for the "Hotshots" Program (set shown in Fig. 13). The main row of lights is about 3 ft. in front of the performers. These lights (6 scoops, 4 spots) are hung about ten feet above floor and angled down at about 45 degrees. There are two additional rows of lights about six and twelve feet further back. These two rows are slightly lower and at a somewhat flatter angle. Backgrounds also require full lighting. To get this on the set shown in Fig. 17 four scoops are used directly over the set. These are about twelve feet high and angled down rather sharply. Backlight is provided by five 750-watt spots hung on the pipe rail and pointed almost directly downward (not on the backs of the performers). About  $\frac{1}{2}$  to 1 backlight to frontlight is used.

This approximate arrangement of lights is used in most of WTMJ-TV's color shows. Even balance of light over the whole set (side to side, and front to back) is the chief consideration. Floor fixtures or single spots are used only when necessary to "bring up" a shadow on a performer's face or to correctly color an important prop. Ordinarily there is no attempt to use "modeling" light.

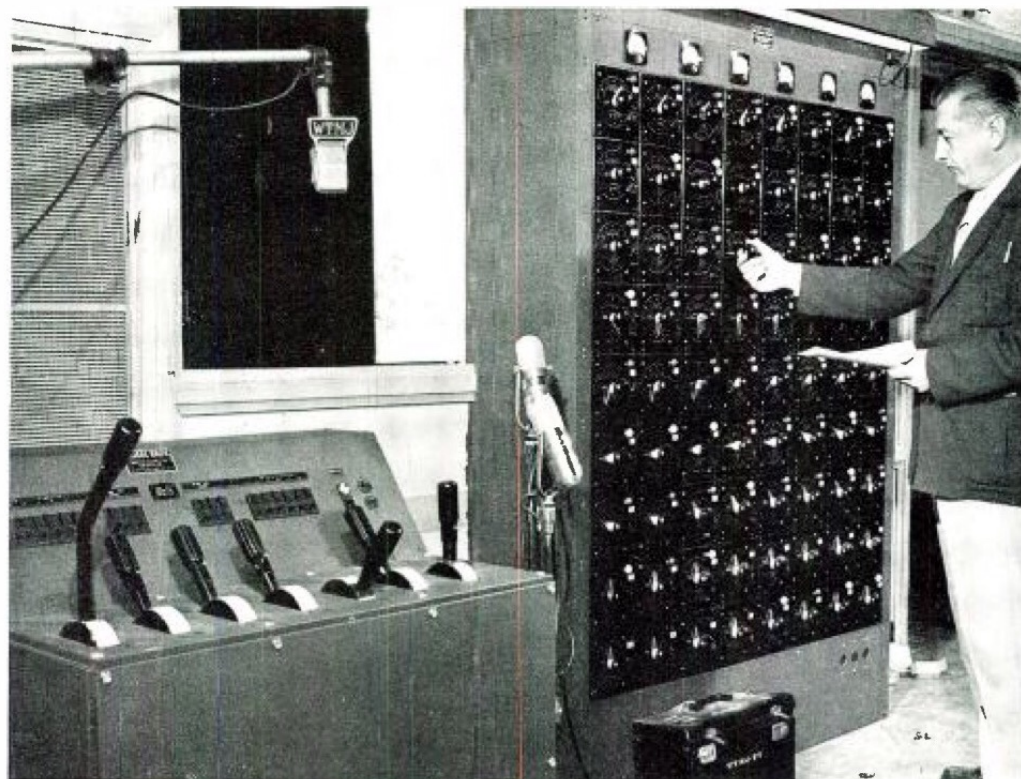


FIG. 19. Lighting in D-1 Studio is controlled by a 72-circuit rotolector board and a six-position dimmer control console. Total capacity is 600 amperes.

### Manpower for Color

WTMJ-TV has not added any people to its staff in order to handle color. The station has a good-sized and extremely competent technical staff. During color installation some overtime was necessary. And, of course, the extra checkout time for color cameras adds some additional man-hours per week to the work load. However, they feel that they have enough leeway in their regular assignments to handle this.

The regular technical crew on a WTMJ color studio show includes one engineer on the live camera, one engineer on the boom (sometimes omitted on small shows), one video engineer on camera control and one engineer on audio control. A studio technical supervisor is on duty to coordinate the technical requirements of engineering as required by production. Since color monitoring is done only in the control room he actually does not participate in operation. Switching is done by the video engineer as directed by the program director. This is the same size crew as used on monochrome production and operating procedure is identical.

So far WTMJ-TV is using color slides only for station identification and program titles. If it is decided to use slides as program inserts, or for frequent commercials, it may be necessary to add another man to

the crew. Certainly he will be needed when film equipment is operated and is used in conjunction with live shows. This too would parallel monochrome practice.

At present WTMJ-TV has a "color corps" of a half dozen video engineers. Assignments to color shows are made from among this group. These assignments, however, are not exclusive as these men also work monochrome shows. Eventually WTMJ expects that many more of its engineering staff will be trained in color and available for assignment to color shows.

On the production side the story is about the same. Since only regular station shows are being aired in color, and these with no change in format, there has been no great increase in the production load and no additions to the staff. Program and production people spend a little longer on checking out costumes, makeup and lighting but the total adds up to only a few hours a week.

The station's "color coordinator" is Joe Fox, their Art Director. He has been sitting in on all color shows and acting as a consultant to the production department. At the same time he has been carefully studying the results obtained on each show with a view to recommending changes which might be made to enhance the impact and value of the show in color.

### Setup Time for Color

WTMJ-TV has found, as have others, that more time is required for "setup" in color than in monochrome. There are several reasons. One is that the equipment takes longer to warm up. The second is that camera check-out takes longer. A third reason is that lighting is more critical and time must be allowed to properly set it.

The exact time necessary for these operations is difficult to state accurately because they are usually sandwiched in with other chores. Warm-up, for example, is usually going on while other maintenance work is in progress. Camera check-up is done before, during and in between rehearsals and set lighting check-outs. An idea of the setup operation is provided by the following somewhat idealized schedule:

1 hour

*Camera Warm-Up* by maintenance or camera control man. During warm-up this man checks out rack equipment (colorplexer, gamma amplifier, monitor alignment) with color bar generator.

1 hour

*Camera Check-Out* by camera man and camera control man. During this period technical supervisor works with production department on lighting and technical requirements of show.

Variable

*Rehearsal* time depends on the nature of the show—usually rehearsal is done either right before show or a previous day following that day's color show (so that it is not necessary to fire up the camera just for rehearsal).

15 min.

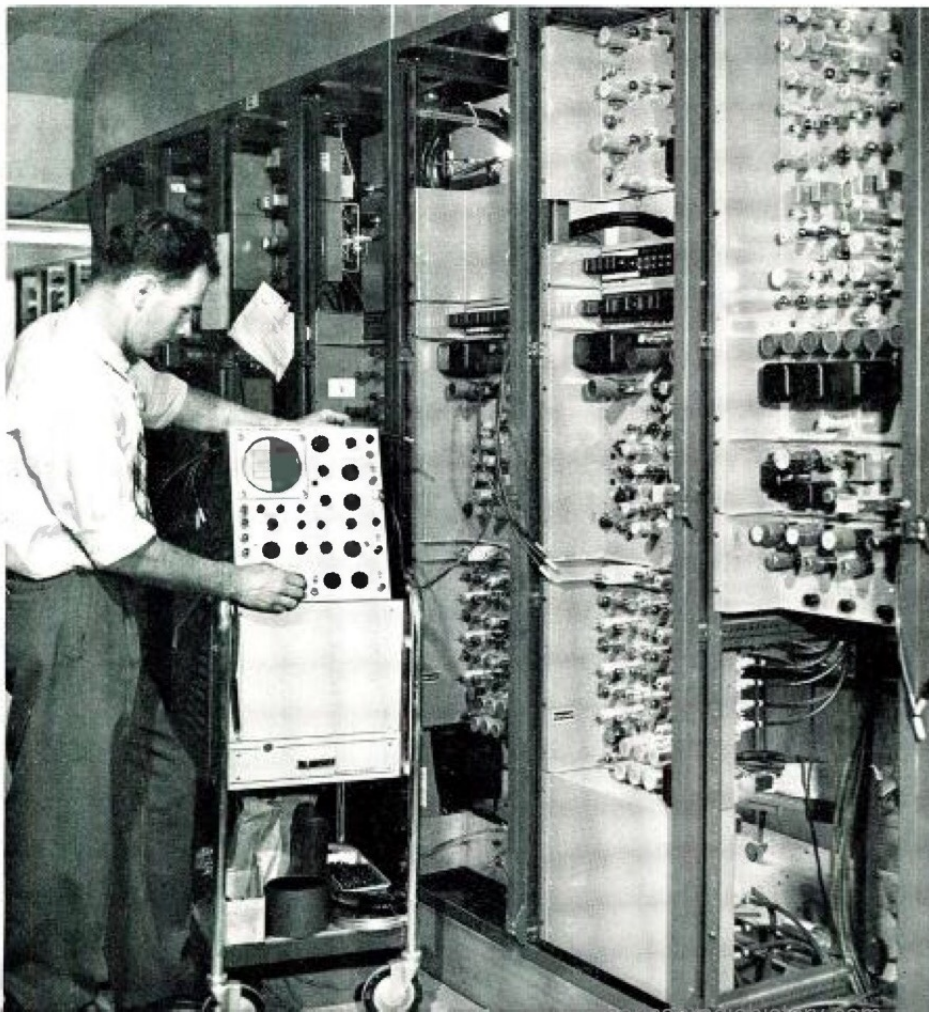
*Final Camera Check-Out* is done after rehearsal and just previous to show time.

Compared to "on-air" time the setup time seems large. However, as "on-air" hours increase the ratio will improve because only one warm-up period per day will be required. Camera check-out will be reduced to perhaps ten minutes per program.

### WTMJ-TV Experience with Equipment

WTMJ-TV's experience with its RCA color equipment can best be summed up as follows: (a) they put it all in themselves and made all adjustments without any factory help, (b) they have kept it operating and are obtaining amazingly good pictures, again without outside help, and (c) they have had no major failures. For such a complicated array of equipment this is a fine compliment both to the ability of the station staff and the quality of the equipment.

FIG. 20. Checking out rack equipment in WTMJ-TV's color studio control room.



## Thrills, Aches Found by Novice Skin Diver

### First Try at Making Like Fish Results in Debatable Success, but He'll Try Again

By **MILWAUKEE STAFF**  
**OF THE JOURNAL**  
**MOOSE LAKE, Wis.** With aching muscles and noticeable lack of energy, a novice reports debatable success in his debut as a skin diver.

But like most new comers to the fascinating underwater sport, he probably will go back for more. His first cautious attempts at making like a fish were recorded Sunday at Moose Lake in Waukesha county.

When the beginner arrived, stepping gingerly over piles of lungs, flippers, lead weights and headgear, he was met by Earl Hammett, 1734 W. Fair Chasm rd., River Hills.

Hammett is president of the newly organized Milwaukee Aqua club, a group of skin diving fans. He was up and apace moments after the bottom of whatever body of water happens to be closest.

### More Clubs Forming

"We formed the club about a month and a half ago," Hammett said. "There's another one in Milwaukee—one forming in Fond du Lac, and we're helping a club in Madison get started."

"The object is a statewide organization of skin divers."

Hammett became interested in skin diving several years ago when the propeller of a cabin cruiser he keeps on Lake Winnebago kept fouling. He built his own diving unit to keep the prop free of weeds and got a permanent bug for life below the surface.

Most of the club's 50 members were on hand for the day's diving. Hammett, after carefully explaining the equipment, lying about, borrowed a face mask with snorkel attachment and a pair of flippers for the novice.

"The mask lets you see over the face, allowing full vision through the glass plate. With two pipes extending up from each side, it resembles the head of a large bug with antennae."

### Prevents Goggles Tumbling

"You can tuck 'em along the top of the water with your face below the surface," Hammett said. "And breathe through the tubes. When you want to dive, water pressure forces the tubes shut. All you've got to do is hold your breath."

Adjusting the flippers and mask, the novice bravely plunged in. The water was warm. It was also cloudy from the activity of nearby swimmers.

With two swimmers near by, he made it in slowly and nearly had the tanks removed.

"You were too excited down there," a diver said. "You were moving too fast and breathing too hard. It seemed tough because you were fighting it."

Another test. The discussion stayed with skin diving and the novice was told that there were more than one million active divers in clubs across the country this year.

"We're hoping to get legislation passed so we can go spear fishing for game fish," one diver said. At present, only rough fish can be caught with the underwater spear gun.

It was time for the final experiment. Hammett strapped his rebreather on the beginner's chest, took a snorkel and flippers for himself, and together the pair went in.

### Air Runs Out Quickly

From the needle indicator on the tank there was about 20 minutes of air left. Again, the air seemed to run out, and the beginner and Hammett surfaced near a boat in the middle of the lake. The tank was empty.

"You used it up in five minutes," Hammett said.

With further, the novice was assured that he would make the grade, however, and he headed home for a night's rest.

Aches began to set in between the shoulder blades, and black and blue marks appeared.

The novice spent a sleepless night, silently figuring how to talk his wife into buying him a diving outfit.

## Auto Collision Fatal to Four

### Three Were on Way Here to Visit When Accident Occurs

An Indiana woman, her husband and her son were injured fatally Sunday while driving in Milwaukee in a car that seriously ill in a hospital.

The fatal: Mrs. Queen Esther Osborne, 32, La Porte, Ind.

Joseph R. Osborne, 81, her husband.

Louis Collins, 16, her son by a former marriage.

Also killed in the two car collision near Stoughton City, Ind., was John Frank King, 28, Evansville, Ill., the driver of the other auto. Indiana state police said young Collins was driving the Osborne car.

The family was on the way here



Clown costumes worn by the Malone sisters, Janice (left) and Mickey, and Marvin Moran, make splashes of color Sunday in Wisconsin's first color telecast of a local program. The trio appeared in a circus theme program of the Grenadiers broadcast by WTMJ-TV, The Milwaukee Journal television station.

## First TV Color Cast Here Is Big Success

### WTMJ's New Camera Put on Grenadiers; Hour Long Show Is Hailed as Milepost

By **HARRY HILL**  
**OF THE JOURNAL STAFF**  
 Color television advanced to another major milestone in Milwaukee Sunday.

WTMJ-TV, The Milwaukee Journal station, turned its new color camera on "The Grenadiers" for the first color telecast of a local program ever attempted in Wisconsin. The hour long show was a dazzling success, both technically and artistically.

Myron Zindler, who sponsored the program with a brief talk, hailed the event as "an extension of the scope of knowledge and culture in this city." He congratulated WTMJ-TV which, he said, has "always been a pioneer" in radio and television improvements.

### Circus Theme Used

"The Grenadiers rose to the occasion with a show built around a circus theme. This provided broadcast opportunities for a splashy use of color in costume and settings.

For example, master of ceremonies Gene Franklin dressed for his ringmaster role in gaudy, set-line tails. The suit had black and red lapels and trousers.

The band, directed by Frank Paugh, gave the set jokers a dose of circus music.

Sets were imaginatively done to show off the possibilities of the color camera. Bright hues had been sprinkled the backdrops. Crests of rich shades were used effectively.

The new color equipment, which cost almost \$20,000, had produced these faithfully. Flash lines, which represent a major problem for color TV, were remarkably lacking.

Station officials said they were delighted with the show. They originally had sought in perfect their own color technique to match the quality of network color, but thousands of Milwaukeeans already have seen.

### 80 to 100 Sets in Area

"We did even better than we expected," one executive said. "The color was even superior to some the network has produced."

Phillip B. Laesser, manager of radio and television engineering, said the staff was well pleased with the operation of the new equipment. No serious technical problems developed, he said.

The program was telecast from studio D, which has been converted into a color studio. The audience, which usually watches the Grenadiers in the Radio City auditorium, saw the show this time on a color receiver in the

viewer by the National Broadcasting Co.

The first color TV ever originated in Wisconsin was picked up last month by NBC cameras at Whittall park for portions of the "Home" and "Today" shows, carried by the station here.

WTMJ-TV will score another first Tuesday night when it presents the first commercially sponsored color telecast. The program, sponsored by the Blatz Brewing Co. at 8:30 p.m., will be "The Layton Art Story," a tribute to the Layton School of Art.

"The Grenadiers" is not a sponsored program. Commercially sponsored shows are carried on a participating basis, but for Sunday's color preview the commercial spots were devoted to public service announcements and mention of future WTMJ-TV programs. Color slides were used.

### 21 Inch Color Tube

New York, N. Y.—UP—Radio Corp. of America Sunday announced the development of a 21 inch kinescope television picture tube with a picture area of 250 square inches.

W. W. Watts, executive vice president, electronic products division, said the new tube was demonstrated Sept. 15. At the same time Watts said, RCA will demonstrate a new color television receiver chassis having greatly simplified circuitry. This, he said, substantially reduces the number of tubes and components required in a color set and results in "a significant reduction of costs."

RCA introduced color sets last year with 12 1/2 inch picture tubes, but conceded that the screen was smaller than the public and the industry really wanted, in view of the size of black and white tubes.

Watts said the new tube employed a 21 inch round metal envelope and incorporated many new developments of RCA engineers. The picture area, he said, matches the quality of network color tube now available.

Introductory price for the tube to equipment manufacturers will be \$175, Watts added.

A new RCA electron gun makes it possible to make the new tubes shorter and the round metal construction ribs the weight 25 percent that of 18 inch glass tubes, Watts claimed.

## Adjusts Brakes and Makes Test; Lands in Ditch

A motorist who adjusted the brakes of his car in preparation

An ingenious trick used by the WTMJ-TV engineers will be of interest to other color stations just starting up. This is to use old 5820's in the color camera during the period while the camera is being initially lined up. By so doing many hours of life on the expensive 1854 Image Orthicons are saved. And possible damage to new color IO's avoided through the shakedown period.

Another smart thing WTMJ-TV has done equipmentwise is to put a.c. line voltage regulators on the filaments of the more critical units. By so doing they have greatly reduced "drift"—and possibly also increased tube life. They determined which video units were most critical by putting a Variac on the line side of each filament transformer in turn, running the voltage up and down and noting the results on the picture. They found that a dozen 500-watt regulator units strategically placed would reduce the drift by a large factor.

Only real difficulty WTMJ-TV has had was in locating the reason for one color monitor not performing properly. Trouble turned out to be failure of red gun in kinescope. It was found only after someone thought of the idea of pulling picture tube cable over from one monitor and plugging into kinescope in the other. Moral: locate your color monitors close together.

Insofar as time to get equipment installed goes WTMJ-TV says it took them roughly one week to get color bar picture, a second week to get the scanner operating, and a third week to get the live camera going. However, this was in the midst of building changes and they were in no great hurry. They feel that if rushed they could have done it faster.

### Promoting Color

WTMJ-TV's promotion of color with its advertisers is tied into its scheduling. As

noted above, it plans to air each of its regular programs in color several times during the coming months. This will give each of its advertisers a chance to see his own program—and product—in color.

In addition, WTMJ-TV uses its large clients' lounge to entertain selected groups of advertisers from time to time. Programs shown to these groups are network, local shows or closed-circuit presentations.

For the public WTMJ-TV has installed color receivers in its auditorium studio and in one of its radio studios. Tickets are offered free on its regular programs. Since the station began colorcasts last December, over 50,000 people have taken advantage of this opportunity to see color.

During State Fair Week (August 23-28) WTMJ-TV set up color receivers in the "Communications" building and arranged a daily local color show so that thousands of fair visitors could see "color."