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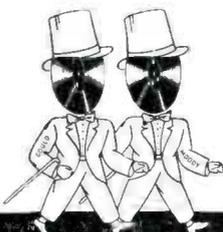
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THE BROADCAST ENGINEERS' JOURNAL

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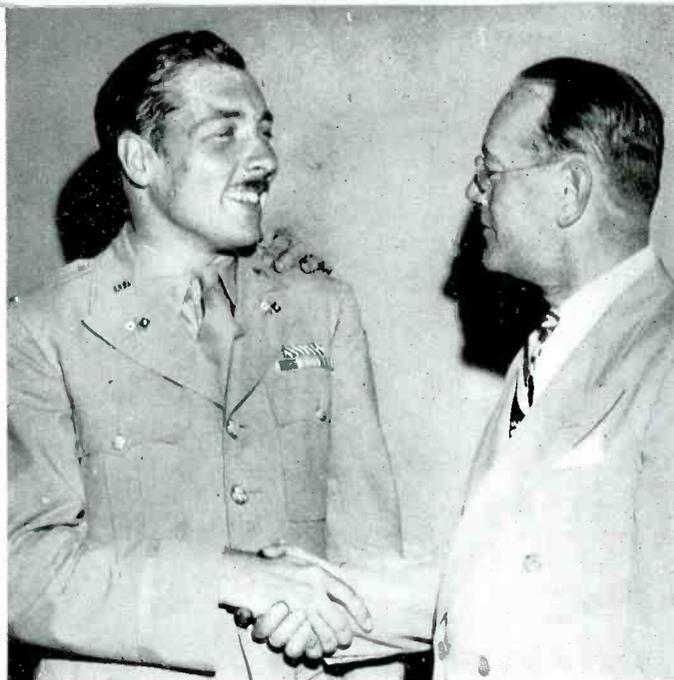
You are doing a magnificent job in your work which keeps free American radio effective and vital every minute of the day — to help win this war, to help win the coming peace.

The National Broadcasting Company

The Happy Warrior Returns! By Ray Bierman

FIRST LIEUTENANT THOMAS E. GOOTEE, Central Division Studio-Field Engineer, who received the Order of the Purple Heart, and the Distinguished Flying Cross from both the Royal Air Force and the U. S. Army Air Force, returned to Chicago for a few days leave from London and points North, East, South and West. Tom spent most of his leave with his wife, Ruth, including a couple of days' visit to his mother, but he did find time to receive the plaudits and toasts of his many friends in the Chicago office. *Journal* readers will remember Tom for his many articles and stories, especially about Dr. Killfidget, old hot toddy hound.

Tom is credited with having been the first to reach a demolished surface shelter to assist in the rescue of some thirty-five trapped people, many of them children, while he himself was badly injured. It all happened one afternoon last spring in a little town in the south of England. There, it seems, air raids were so frequent that people paid no more attention to the howl of a siren than we do to a thunderstorm. However, when the planes themselves can be seen, then it is a sure bet that the time has come to duck. Most of the people duck for the nearest surface shelter, which unlike the subterranean shelters in the larger cities, consist merely of four walls built of stone, concrete and steel, and situated right on the surface of the ground. This affords protection from flying debris, and is considered ample protection for most anything but a direct hit. However, the Germans had been using a type of bombing which is called "tip-and-run bombing". Tom assures us that the name is "tip-and-run" and not "hit-and-run" as it would seem when you learn how it is done. The planes fly in low over the towns at an elevation of say 50 to 100 feet, and at about fifteen miles per, and drop their bombs without any particular object in mind. That way they are assured of some kind of damaging results but they apparently do not care whether they hit munitions and armament plants or civilians. So it was during one of these raids that Tom found himself on a side street in a little English town near Bristol. He saw one of four Folke-Wulf bombers fly low and drop a 500-lb. buster. Now at such low altitude, a bomb does not have time to right itself and land nose first, but rather it skips along on its side in much the same manner as a stone skips over water. This particular bomb fell in the street and skipped along toward a surface shelter in which about thirty or forty people were standing. Tom, who was about 75 feet away, fell to the ground beside a small stone garden wall, but before he could lie against the wall, the detonation threw him to the ground with considerable force, covering him with flying debris. It was all over in seconds. Tom got to his feet, and started out on a run to the surface shelter, or rather to what was left of it. He says that the impact completely leveled the steel and stone walls, beneath which were buried dead and badly hurt people and children. Tom did what he could in rescuing several of the injured and trying to make them comfortable until the ambulances and air wardens arrived and took over. He says that the sight was not a pleasant one to see, and that much credit should be given to the doctors and nurses for some really humane work with the injured. Almost all of the people lost their lives, and it was only a question of doing what could be done to alleviate their suffering. It was during the rescue



Lt. T. E. Gootee being greeted home by E. R. Borroff, Vice-President of the Central Division of The BLUE Network Company

work that one of the doctors noticed that Tom was badly wounded in the leg and about the body, and ordered him to the hospital, but the hospital had no bar, so Tom left after a couple of days! Tom, alive and very very well now after his harrowing experience, says that he must have been extremely lucky to have escaped with his life, since he was only 75 feet away, and quite often the force of detonation is sufficient to kill a man 1500 feet away, and still not leave a mark on his body. For assisting in the rescue work while being badly injured himself, Tom received the Order of the Purple Heart, pinned on his blouse "by George, by George!" as he puts it. Of this and his other decorations Tom says little. About the only way we could get much information from him was to glean a fragment here and a fragment there in his conversation. He was attached to the R.A.F. as a Radar Engineer, and beyond that further queries only lead to such remarks as "Viva La France" and "some more rum, if you please," from him.

Accordingly, on the night of June 25, cries of "Viva La France" and "Viva Gootee" and other encomiums echoed through the halls of the Merchants and Manufacturers Club in the Merchandise Mart. The wassail bowl was brimming full, and from far and near the tipplers came to pay homage to one freshly returned from the wars. Many and sundry were the toasts proposed. One engineer, less hardy than the rest, drank deep from a glass of milk. Less hardy than the rest, perhaps, but not one whit less fervent in the jubilant cry of "Viva La France" and "Viva Gootee". Many were the big shots that were there. Offered here is a picture taken when the festivities were approaching the knee of the saturation curve. Hysterisis reigned uppermost in the minds of the execs and the humble (Writer's note: No class distinction between the execs and the help on the BLUE. We is all one happy family). In fact, the merriment continued into the night until in the minds of many, Saturday and Sunday never even happened. As a matter of fact, when I saw Tom Monday morning at nine o'clock up in the office of the BLUE Engineering Manager, he rejoined with "some party, isn't it?"

Right now for the next few weeks, Tom can be found at the Officers' Club, Fort Monmouth, New Jersey. Where he goes from there, nobody knows.

We asked him about his stay in England and about the English people. Tom replied, "You never know who you are going to meet in an underground air raid shelter," and

(Continued on Page Nineteen)

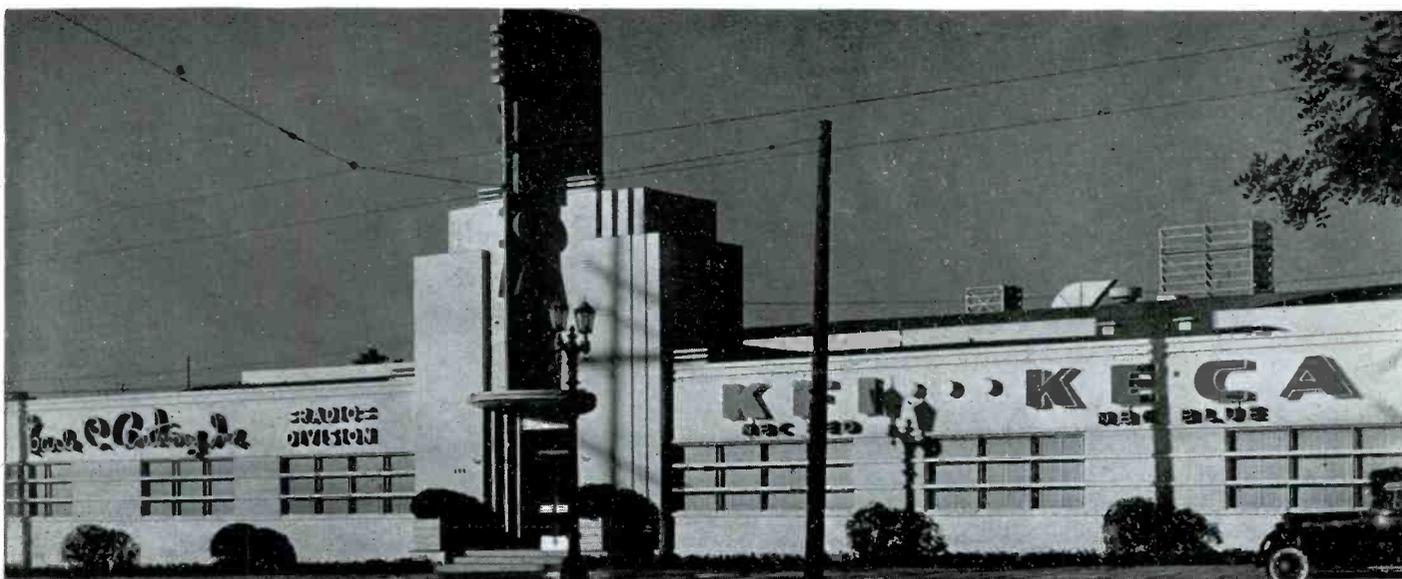


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Los Angeles News By H. M. McDonald

IF IT'S fishin' you are missin' let KFI T.E. Norol Evans "comfort" you with the stories he's telling, after returning from his vacation spent on a ranch near Bend, Oregon, to-wit: in a stream he caught fifteen trout, the legal limit, all over 8 inches, in two and one-half hours; another limit, fishing for size another day, in three and one-half hours; and in a lake, four twenty-two inch and one twenty-four inch trout in twenty minutes, all within a mile of the ranch house. Or if you prefer steaks, there's a million of them on the range thereabouts. Norol helped roundup, brand, and dehorn a herd and had both eyes blacked, a finger injured, and as much battering as the cattle.

Whether switching programs or a-marrying, William A. Erickson, KFI-KECA S.E., is a man of few words and fast action. Bill met Jacquelin Foster, one of the stations' comely secretaries, promptly decided they were meant for each other, announced it, hurried her over to Kingman, where they rousted out the Justice of Peace, and were married at midnight. They're a swell couple and we wish them every happiness.

After twelve years with CBS, Harry Spears has resigned his position as Audio Supervisor at KNX to become a producer for the Biow Agency. Before coming to Los Angeles he was Chief Engineer of the CBS television department in New York. Currently he is producing "Take It or Leave It" and developing other shows for next fall.

Can you N.Y. and S.F. NBC men picture that beau brummel Ernie Wilmshurst with a saw and hammer in hand, and his two kiddies under foot, a-building a sleeping porch extension on his house? He did just that and made a darn good job of it, too. But don't think he has lost his S.A.; the girls at the plastics plant up the block from KFI-KECA Studios whistle come-hitherishly at him every time he passes.

Bruce Piersall, formerly at KNX-CBS here, and now a Lieutenant (jg), is an inspector for the Navy at a Crosley plant in Cincinnati.

S.E. Ed Starr of KFI-KECA is justly proud of his uncle, Edwin Basye, who at twenty-eight is a full Colonel, one of the youngest in the Army, and often mentioned in stories recounting the exploits of General Chenault and his flyers now in China.

Vern Taschner, ten years in broadcasting here, most recently at KNX-CBS, is now a Lieutenant (jg) USN, presently at Ft. Schuyler, N. Y.

Ted Crosby, KFI-KECA S.E., also spent most of his vacation playing golf, and solved the problem of transportation by purchasing a motor scooter; seventy miles to a gallon (the seller said).

Two more well-known Los Angeles engineers have gone to Western Electric in New York. Jack Smithson, former Chief of Pasadena's 10 KW station, KPAS, and Gene Mahoney, formerly with RCA and lately in charge of the elaborate PA and radio set-up in the Biltmore Hotel here. Karl E. Zint, formerly of KFI and now with W.E. in N.Y., was recently back here recruiting radio men especially skilled at installation, maintenance and repairing.

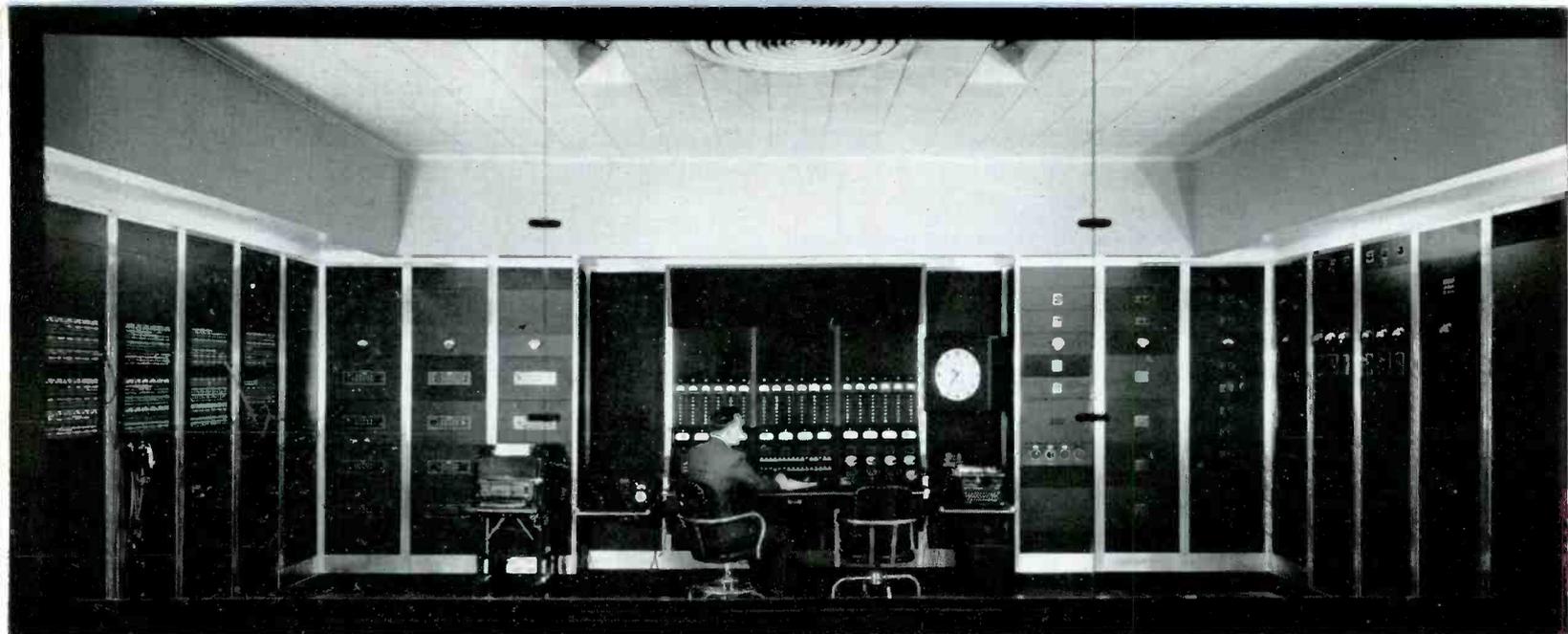
Ray Moore, Wilbur Alexander, and John Sutcliffe, in KFI-KECA Studio Engineers' Lounge reminiscing over the days they spent in France. Moore passed the ammunition in our QM Corps over there during World War I; Alexander toured the country to gain a better understanding of the language which he was teaching at Washington and Jefferson in 1922-23; Sutcliffe was part owner and operator of Radio Mediterrane near Nice from 1937-1939 and was also engaged in exporting radio equipment and perfumes to the Far East.

William Gass, eighteen years in radio, and long at WHO, the 50 KW releasing NBC programs at Des Moines, is now Chief Engineer at KFVD, Los Angeles.

Another former Iowa Engineer, James La Shaum, who started back in 1924 at KSO, Des Moines (Blue), and at Los Angeles stations since 1929, is now Studio Supervisor at KMPC, a 10 KW independent here.

Jonathan Smith, Engineer in Charge at KECA Transmitter, missed death by inches when a passing car struck and almost demolished his car door as he opened it to get out.

Captain William Comyns, U.S.A., an engineer long well-known in all branches of radio here, lastly at Wiggins School, is reported to be in the South Pacific; the name of the island was censored but his "French rapidly improving". Lieutenant Steven Sykes, former communication engineer in the Sherriff's Dept. here, is at the same place.



The above picture, which will adorn this column each month, is a visitor's-eye view of the Crosley Square Master Control. It was taken through the observation window from the elevator corridor. The rather-handsome human specimen, who is busily engaged in watching the clock, is none other than our illustrious brother, Frank Atwood. The other chair is occupied by the Invisible Engineer, first cousin to the gremlins. The Invisible Engineer is the one who shoves the shavings under the cutters in the recording room; moves the pickup head over a couple of grooves when you're starting an E.T. spot; smears dirt on the fader contacts; and devises many other diabolical little annoyances from his home West of Denver. The bays, from left to right, include the line termination equipment, line amplifiers, switching position (immediately in front of Atwood), monitor amplifiers, signal and telegraph rectifiers, and miscellaneous equipment. A closer look at the picture discloses that the schedule under Frank's right fist, is upside down, no doubt the work of the Invisible Engineer. In case you're just dying of curiosity, it is 10:37 A. M.

Notes from the Nation's Station WLW - WSAI - WLWO

By Bob Brockway

DEPT. OF VITAL STATISTICS. The stork, on his regular monthly visit to Crosley Square, left a son at Good Samaritan Hospital for Louis Barnett. The youngster's name is Mark and is "Barney's" second child. Mark took up residence in the Queen City on June 23rd. Our heartiest congratulations to the Barnetts and we might add that we all enjoyed the cigars. The grapevine has been carrying a story that Charley Hamilton is about to, or has already, changed his status from a bachelor to a benedict. Ye Scribe talked to Hamilton the other night and he would neither confirm nor deny it. He did say that it *might* be next week. We surely hope so in order that we can quote a few facts in this column instead of having to bank on possibilities. For the benefit of our readers of the fair sex, we might advise you that we have but one eligible bachelor left at the studios, Herb Crawford. Any of you ladies who might be interested in hooking this boy, please contact this magazine and we'll make all the necessary arrangements. We might as well use this space for a "Lonely Hearts Column" because in the span of the few short months that this column has been in existence, all the boys have been leading exemplary lives for fear we might get some dirt on them and print it!

* * *

The annual election of officers of Local 1224, I.B.E.W., which represents the technicians of all five Cincinnati stations, was held Saturday, June 26th, at the Netherland-Plaza Hotel. Good weather prompted a good turnout of members, who elected the following officers:

President, William Symons (WLW-WSAI); Vice-President, James Mattox (WCKY); Recording Secretary, Al Schwerling (WLW-WSAI); Financial Secretary, Walter Rogers (WLW-WSAI); Treasurer, Louis Barnett (WLW-WSAI); Executive Committee, Don Hulse (WKRC), Ralph

Jordan (WCKY), Bob Knapp (WCPO), Frank Atwood (WLW-WSAI).

Our best wishes for a pleasant tenure of office to all of the electees. In all seriousness we want to respectfully doff the editorial cap to President Bill Symons, who, by the way, was the incumbent candidate. Bill has done a grand job in the past as president of Local 1224 and it was only natural that he was reelected. Bill possesses an unusual knack of securing excellent working contracts with the stations. We at the Nation's Station are particularly proud of our working agreement which Bill negotiated a few months ago. We feel it is one of the finest contracts in the industry today and all hands are well pleased with it, which is an accomplishment in itself as radio men are considered hard to please generally!

* * *

SPORT SECTION. The first of a series of swimming meets was held recently at Airy Hills pool. Your *Journal reporter* was there and made notes of the proceedings. The following events were called off: 330 yard free-style; high-diving contest; 3-mile backstroke; and low-diving contest. The judges awarded the following medals: to Raymond Murphy for the noisiest "belly-whopper"; to Dave Wheeler for splashing the water the highest; and to William Coddling for getting the sorest sun-burn. Two of the contenders didn't show up; Vernon Madill thought it was too chilly out so he went back to bed. Ed Gleason was entered in the "aquacade" by mistake. Ed told us he was going to show us a new dive, and we promptly enrolled him in the high-board events, but what he referred to was a new beer-joint out in Price Hill. Since witnessing our mermen in action, Ye Scribe is a firm believer in the saying that clothes make the man. When we saw our fellow engineers practically N-U-D-E except for abbreviated swimming-trunks, we began

to doubt if the studio gang will have a likely contender for the title of "Miss Crosley, 1943".

* * *

Notes From the Static Mills

MASON TRANSMITTER (WLW-WLWO). That cussed stork apparently rode in on the 700 kc. beam because a daughter, Dawn Elyne, was left at the home of R. O. Woodward. At present writing, Woodward is in the hospital recuperating from an operation, but we are assured that the hospital episode is in no way connected with the new daughter. New arrivals at the transmitter who were not delivered by the stork, at least not in the last thirty or forty years, are John Blackwood, formerly chief engineer at WLOG, Logan, W. Va.; and Neal Black who was recently with WBNS, Columbus, Ohio. Jim Baysore has the answer to the meat shortage. Jim, who is the beefsteak-and-plenty-of-it man, has found an abundant supply of meat right in his own backyard. The little creek which runs through his place is the home of a family of turtles. Now, whenever the Baysores want a filet mignon, they just fish out a turtle and unshell it. Bill Alberts and Art Young are literally standing their watches; it's too painful to sit down. The boys are paying for spending too much time out in the sun clad only in their "step-ins".

MT. HEALTHY TRANSMITTER (WSAI). Charles Carey, who hails from WJDX, Jackson, Miss., is the newest man on the WSAI staff. More recently, Carey worked at the Mason transmitter. Jim Eberhart is so fond of this end of town that he bought himself a house in College Hill, which is a suburb of Mt. Healthy. Enjoying thoroughly his vacation is Bill Schwesinger. Our *confidant* doesn't state just where Bill is spending his three weeks, but whether it be mountains or seashore, we envy him not having to work through this heat wave. This weather information in no way can give comfort to the enemy, because no one could be comfortable in this kind of weather. The only member of the WSAI staff to have a bad case of moon-burn is Jack Gray, who most ably holds down the dog-watch.

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What Is It

?

It is an approximately 5X enlargement of a (ctenoid) scale of a striped bass (*Roccus Lineatus*). A photo like this enables you to tell the age of the fish.

The fish scale was sandwiched between the two glasses of the negative carrier, put in the enlarger, and projected on sensitized paper. —Sergei de Somov.

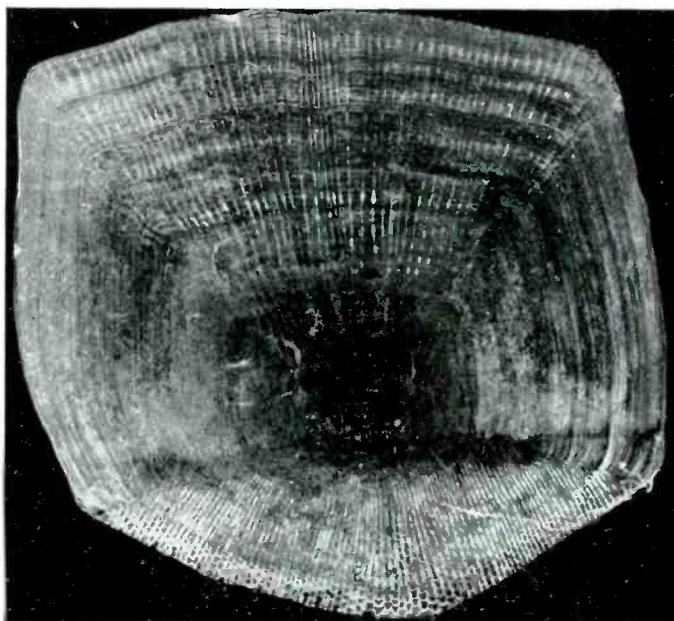


Photo by Sergei de Somov

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Denver News

By George H. Anderson

"V" gardens in this sector now doing nicely, thank you. Late spring, hail, frost and stuff held up an early sprouting but this smooth summer weather is literally pulling the stuff out of the ground. The transmitter gang, headed by "Plough-handle" Austin and "Compost" Nesbitt, have a beautiful plot producing everything from radishes to rutabaga. Fell and Anderson, however, would much rather raise—or attempt to raise—a pair of kings than cabbages (apologies to O'Henry).

Carpenter, of course, has the edge on all of us. Pigs, chickens, vegetable truck garden and fruit trees are all producing a maximum. Almost forgot his cow and small calf. Oh well, just one littel thing after anudder!

Mr. Blake, S.E., killing two stones with one bird, took unto himself a wife, thereby acquiring dish washing, ironing help and assistance in paring down his income tax. Wonder where he will stop?

"Wirechief" Rohrer is still giving embryo radiomen and women the benefit of his wide experience in his radio class at D.U.

Vern Andrews figured his vacation would be the proper time to paint his house. He's now trying to get a refund on his "unused" paint by trading in his overalls for some inside enamel. Evidently he got more paint on himself than on the house. Some stuff!

Stan Neal spent a pleasant week in the local slaughter house recuperating from a case of (a) appendicitis, or (b) gall bladder infection, or (c) gas on the stomach, or (d) intestinal flu. Take your choice, that's what the doc did. They cured his intestinal flu and let the rest go to pot.

The war has brought a batch of new faces to both transmitter and studio: Ray Moore and Joseph Turre are transmitting, and Joseph Finch, late of KVOD and war work, is sojourning at the studio. "Snowbird" Pogue is playing utility by working at both transmitter and studio.

Mountain vacationing is out of the question this year, but a few of the boys manage to thumb a ride with the nemo men and drop by the wayside for some fishing. On one such trip by "Pinky" Kahle, a three (?) foot trout just missed getting caught because he (Pinky) stepped in a hole. Oh, yeah!!!

Washington News WRC—WMAL

By R. E. Shenton

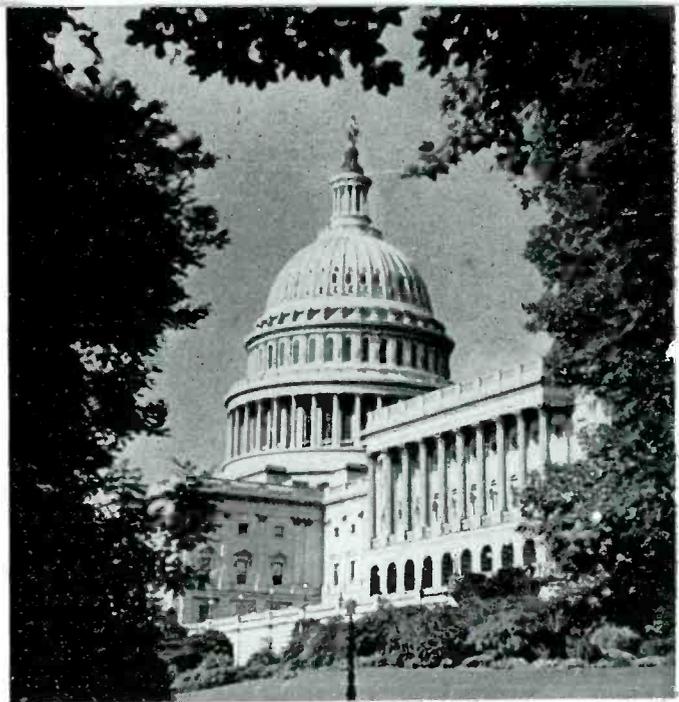
IN LAST month's column, the spotlight played most prominently on the select group of ten-year men here at NBC Washington. Logically, then, we wish to direct its beam onto some newcomers in the forthcoming sentences. But before attending to the optical operation, we wish to announce with mixed feelings of remorse and pleasure the transfer of Dorson A. Ullman from Washington to the New York studios. Truly a mainstay in the Washington organization, Ullman put in nearly sixteen years of conscientious duty in the Capital City, during which time he held such important posts as Field Supervisor and Senior Control Supervisor. It was in this second position that he was serving at the time of his departure. Ullman took up his post in the New York studios effective the first of June, so we feel certain that his prowess and diligent activity have already made their mark in the big town. The Washington tribe extends its best wishes for success and happiness, finding no substitute for the trite expression that Washington's loss is most certainly New York's gain.

The call of the big city has also been heard and heeded by SE Gerry Werst, who has applied for transfer, which was approved, and who will leave Washington as soon as the necessary arrangements can be completed. Gerry (gnashingly known as the "Werst of the engineers" to a certain clientele of announcers) has been with NBC Washington just a little under a year, although his experience and training in radio dates back considerably further. He will, incidentally, take up the duties of studio engineer at New York, being firmly convinced that the larger and more live the production, the better he'll like it. Perhaps a session with the soap-sobbers, or "big pay with Camay." Good luck, Gerry.

And so from the outgoing to the influx. Three newcomers are in evidence since the last Capitol Communique, namely, Dodd Boyd, SE; Jim Weaver, SE, and George E. Wolfe, TE at the WRC xmitter. Boyd is a newcomer to radio, but not to Washington, while Weaver has worked both at the WMAL transmitter and the studios in past years. He left the WMAL ether buster to join up with the Coast Guard, but discovered that radio was his first calling after all, so he has returned to his old duties at the studios. In a forthcoming issue, we hope to be able to bring you pictures and more detailed discussions of the newcomers' respective claims to fame.

While on the subject of future promises, we also plan to give the hoe-happy victory gardeners of the transmitter tribes, both WRC and WMAL, a break when harvest time rolls around. Patience, gentlemen, your diligence shall not go unrewarded. Also, if you happen to have a surplus of tomatoes, beans, peas, well, just remember the boys up at the studio who feed you programs . . .

Having lapsed into the world of fantasy (and also because news is essentially nil here), we will continue with an idea that struck us upon seeing a line extension order issued by Chief Cooper. It read something like this: ". . . loops should terminate to the North side of the South fire-



R. E. Shenton

place on the West side of the East room" (of the White House, incidentally). Before continuing, please rest assured that this is not a gag; the information put forth in the above fascinating order is not only entirely accurate, but shows a touch of meticulousness characteristic of a good executive and engineer.

SE C. A. Allen supplies us with this month's it can happen here story. After finishing his eight hours one day, Al climbed into his Zealous Zephyr and aimed it toward his Virginia farm, which lies quite a fur piece from town. Wishing to be neighborly, as well as to make the OPA happy and keep his "C" gas book, Al picked up a male passenger, whom he discovered to be a fellow resident of the great North Virginia Agricultural Area. The journey continued happily, both gentlemen contributing to a sprightly flow of conversation which terminated only when Al's passenger disembarked at his destination. Thanking Al for his service, the stranger offered his highway host a friendly invitation to come over to his place for a swim sometime soon. Al said he would be glad to, thinking that swimming during these hot summer days might be a fine idea. But now to the bare facts of the story — it was not until a few days later that Al learned that his passenger was a member of a nudist camp. One might say that this only goes to prove that there's often more to an invitation than meets the eye. With this most revealing of stories, we wind up the July dispatch.

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WOR Recording Studios

By R. A. Schlegel

A FEW years ago WOR installed several recording machines to take care of its own needs for audition and air check recordings. This need for recording facilities developed rapidly to include recording for delayed broadcasts. There followed in rapid succession the demands of advertising agencies for air checks, transcribed advertising campaigns, master recordings and pressings so that the available facilities soon became inadequate to handle the growing volume of business.

In the summer of 1941 much planning and research was carried on to determine what type of recording installation would be most desirable to properly service the various types of recording work which we had been called upon to produce.

The results of the survey showed that it would be advantageous to divide the recording activities into two separate work spaces, one space to be for transcription recording service and the other for "air check" and "off the line" recording service. For this it was necessary to find new space in the building with the result that an entire wing of the eighteenth floor was taken over for the sole purpose of building a new recording department with its own studios and offices.

Two studios, one 18'x 26' and the other about 24'x 36', designed expressly for recording and isolated from each other, make it possible to accommodate several recording sessions at the same time. These studios were designed from the floor up, as to physical shape, cubical contents and acoustical properties, under the supervision of ERPI sound control experts and Edw. J. Content, Assistant Chief Engineer of WOR. The walls are built with obtuse angles, which, together with the applications of the most modern acoustical treatments, control reverberation in the studios, eliminating all objectionable sound reflections without the loss of desirable brilliance, so necessary to the production of high fidelity transcriptions. The size of the studios may be changed to accommodate smaller groups by means of movable wall partitions which can cut off that portion of the studio not in

use, thereby eliminating "roominess" so often present when one or two voices are used in a large studio. Acoustic treatment has been used in the design of the announcer's desk, the tops are angled and covered with low frequency absorption material to eliminate the undesirable "boominess" present when a speaker is seated before a desk microphone.

The studio control rooms are so designed, physically and acoustically, as to provide the best possible working conditions for production men and engineers. At the same time comfortable seating and observing facilities are provided for clients and agency executives. Great care has been taken to provide the best possible monitoring and listening conditions in order that the engineer and production man in the control room have a perfect auditory picture of the performance in the studio. This has been accomplished by proper acoustic treatment of the control and recording room.

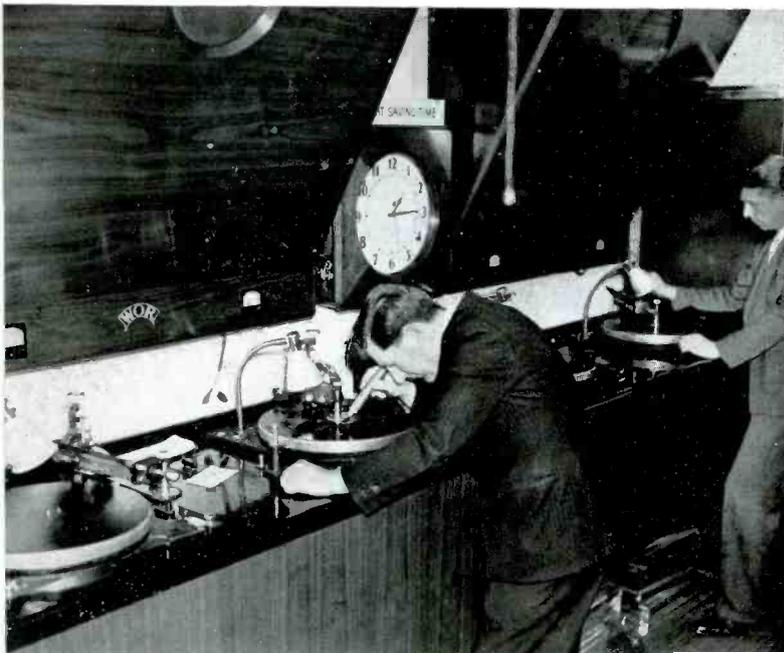
The studio control equipment consists of Western Electric 23C speech input console with eight microphone positions, two Fairchild dual speed playback tables fitted with RCA MI4875 vertical lateral pickups. The studio console has been modified to the extent of removing the original talk-back circuits and incorporating an additional amplifier to handle the talk-back microphone. This amplifier also serves as a cueing amplifier for the ET pickups. Since the photographs were taken, an additional cabinet of equipment has been added to the left of the turntables. This consists of additional pre-amplifiers, special dialogue and voice effect equalizers and jacks for terminating all microphone and line circuits. This addition makes the 23C console as flexible as could be desired for recording work.

The studio recording rooms are directly behind the studio control room and are so arranged that a vision panel enables the recording engineer to look directly into the control room and studio. This feature is highly desired by producers as it creates a feeling of complete control over the entire production from microphone to recording. In particular, it increases the efficiency and facility with which announcements may be produced and recorded as it eliminates the loss of time and effort expended in telephoning or signalling back and forth to a recorder who is out of sight and operating under remote control. Two Scully Master Recorders are located in each recording room along with their associated amplifiers and controls. When not in use for recording sessions, these channels may be used to augment the battery of Presto recording machines in the reference room.

An audition or client's room is centrally located and immediately accessible from the cutting rooms, studios or offices. It is comfortably furnished and equipped with an RCA 70B transcription turntable and Western Electric amplifiers and two-way loudspeaker system for the playback of recordings or listening to studio sessions.

Altogether, fourteen recording channels are available at all times, four of which are directly associated with the two studios in pairs and the other ten are located in what is known as the reference recording room. These latter ten channels are chiefly used for "off the air" and "off the line" recording work. The technical design allows extreme flexibility and makes all fourteen channels quickly interchangeable. Two additional audio channels are available in case of equipment failure on any one of the recording channels. All audio

THEN: Showing WOR recording department in one of its stages of growth. Ted Kasma looking for a groove Gremlin



equipment terminates in a Jack bay and is interchangeable with like units of other channels. The heart of the entire plant centers about a 19"x23" panel of sixteen selector switches, each of these switches feeds a recording channel and by means of bridging coils, it is possible to put all channels on one program bus or a separate channel on each of any of the twenty-four different selector stator positions. One set of stator contacts of each switch appears on jacks and in this manner it is possible to use this position for additional program sources. The rotor contacts of each of the switches are connected to a high impedance coil, the 600 ohm side then goes through a volume control at the recording table and then to a pre-amplifier whose output is connected to the recording equalizer input, a monitor amplifier and V.I. are also bridged across the circuit at this point. The recording equalizer output is connected to the Presto 88A fifty watt recording amplifier which in turn feeds the RCA cutting head. A cutter control relay system has found much favor when it is desired to start and stop modulation simultane-

•
Photos, from top to bottom:

Scully recording machines as seen from Studio A recording room. The control room is located between studio and recording room. The acoustic panels are folded back showing the entire studio.

Paul Baldwin about to start one of a battery of eight reference recording machines as seen from the lobby.

Control and production desk of one of the recording studios. The moveable panels used to reduce the size of the studio may be seen beyond the boom microphones.

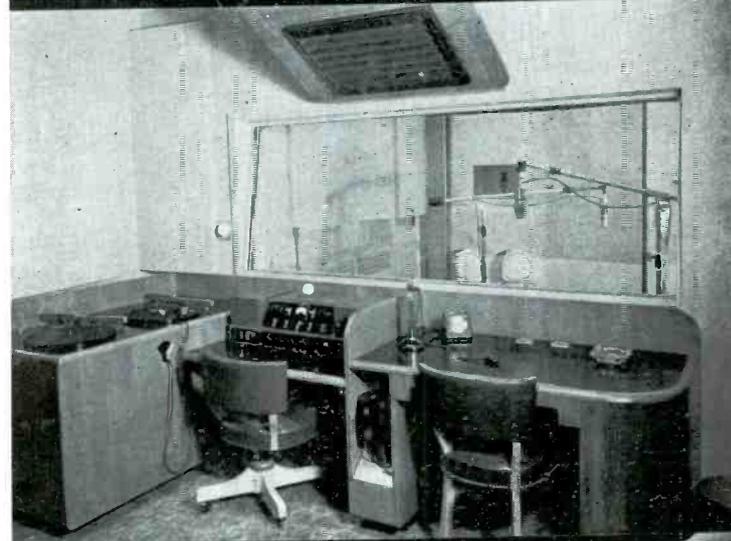
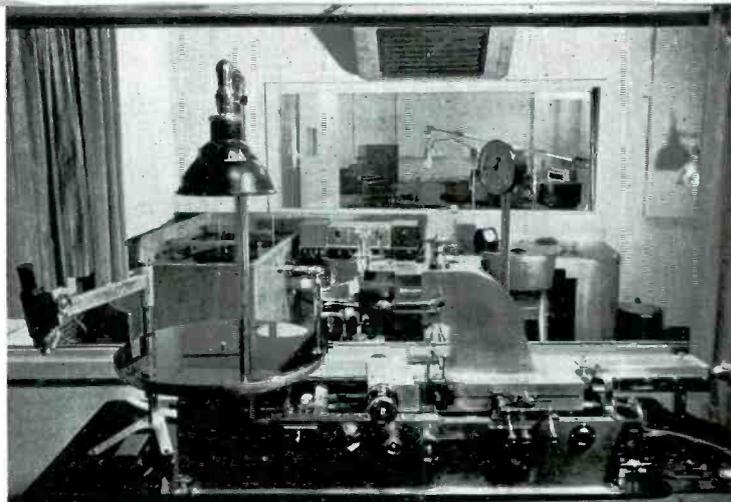
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AND NOW: WOR Recording Studios new reference room showing the auxiliary speech console, two recording tables, telephone switchboard and a portion of the equipment racks.

ously on more than one table. This is of particular advantage when cutting spots or double and triple half hour programs, enabling one operator to make the cut-over from one part to another, alike on all discs.

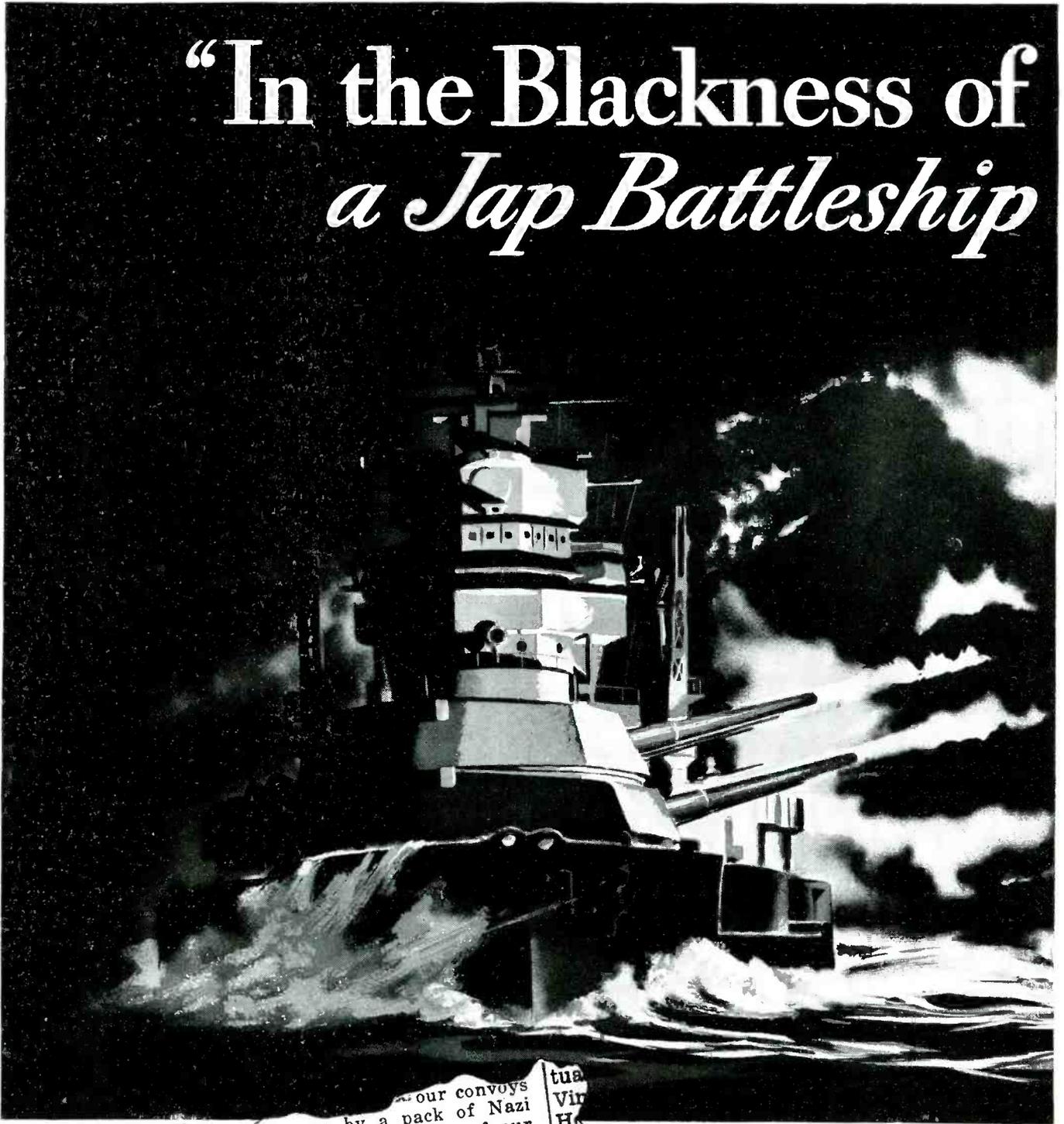
The reference room is fitted with vision panels opening into both studios which makes it possible to operate either studio from a speech input console located in the reference room. Thus a client who desires to make a recording at a minimum of expense may do so without engaging the services of an entire studio staff. This speech input console may also be used in event of failure of the studio equipment. Each pair of recording tables has a telephone which terminates on a W.E. 268A PL panel where the circuit may be patched to any other point in the plant or to outside points of pickup which are provided for by radio line receiving equipment, thus enabling the department to record programs from other radio stations at a moment's notice as each radio line is normally connected through the line equipment, one patch cord is necessary to bring the radio line to the recording selector bus.

In addition to these recording facilities, the reference room may be used as an auxiliary master control point in case of an actual air raid. All the important radio and private line circuits for WOR and MBS come through the recording division jack terminations before continuing on

(Continued on Page Twenty-one)



"In the Blackness of *a Jap Battleship*"



EXTRACT from
address by James F.
Byrnes, Director of
War Mobilization,
at Spartanburg, S. C.,
May 31, 1943,
broadcast over the
Blue Network.

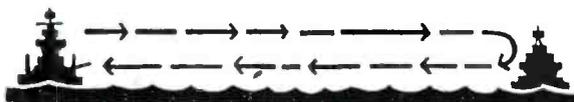
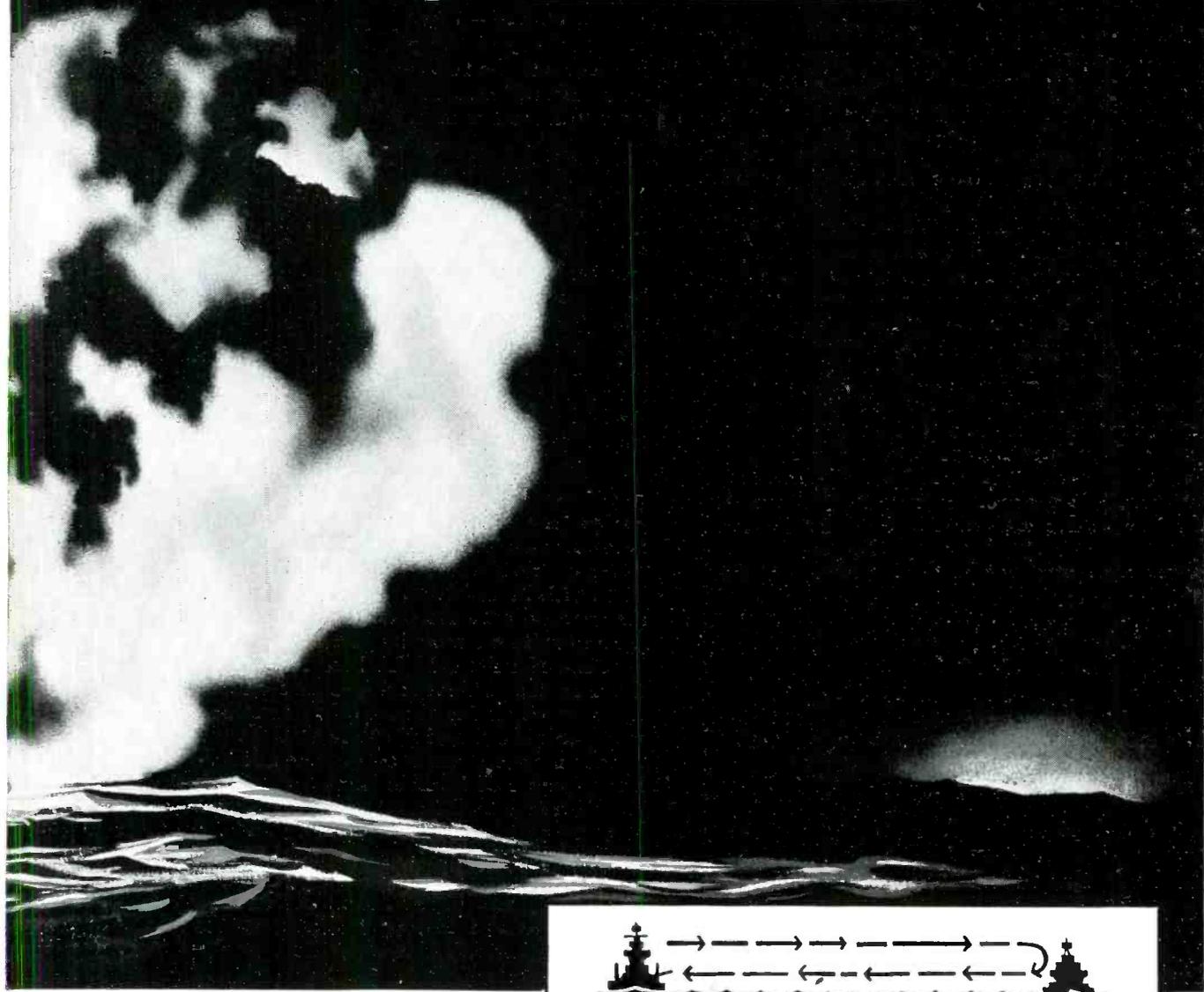
...our convoys
was set upon by a pack of Nazi
submarines. They got one of our
merchant ships, but we got four
of their submarines.
History will some day record
the part radio and the radar have
played in giving us fighting su-
periority over the Axis. But let
me give you one instance. On the
night of Nov. 14, off Guadalcanal
there lay a Japanese battleship.
It was a stormy night. Eight
miles away was a ship of our
fleet. With the use of the radar
our ship with its second salvo,
sank the Jap battleship in the
blackness of night, eight miles
away. Is there any wonder that
the

Radar principles were first applied to avia-
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installed in its own plane in 1937, in connec-
tion with a study of collision prevention.

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installation for the U. S. Navy. As the result
of tests, in October, 1939 the Navy placed
with RCA its first order for service Radar
equipment. Since then, vast strides in the
development of Radar in RCA Laboratories

RADIO

Night, Eight Miles Away” *is sunk by RADAR*



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Gold Medal Awarded Station WGAR

THE National Board of Fire Underwriters recently awarded a gold medal to station WGAR (Cleveland) for its outstanding work in the field of fire prevention during the past year.

Pictures by Gordon

The originator of the expression "Variety is the spice of life" probably wasn't referring to photography when he said it. In fact the expression may have preceded the camera as far as we know. And he probably didn't have Lee Gordon, WTAM's musical director, in mind either. Lee's hobby is photography, and if variety of subjects he shoots means anything, Lee should find his hobby nothing less than the spice of life.

The fact that Lee has had his pictures in the "Pic" magazine is proof that originality and imagination plus good photography combine to make his pictures interesting. We asked Lee to shoot a picture for the Broadcast Engineers' Journal. He shot and here's the picture. Thanks, Lee, and how about shooting some more for us?

Curves

Men strike for higher pay, better working conditions, etc. Their main thought seems to be to keep the wolf from the door. A group of women out in Vancouver, B. C., went on strike in defense of "the inalienable right of women to snare her man." The strike was in protest of the dismissal of a fellow worker who wore clothes that displayed



Jerrold Swank — WHIO



Photo by Lee Gordon

her curves to the best advantage. "Women," challenged the irate strikers, "must retain above all things her preeminent right to snare her man!"

Headlines of the Past

1910—Radio message transmitted from airplane over Sheepshead Bay, New York City. 1914—WSL, Sayville, L. I., and POZ, Nauen, Germany, carried on two-way contact by wireless. 1922—Station "WEAF" broadcast the first commercial program to go on air; the Queensboro Realty Company sponsored the broadcast. 1924—Pictures were sent from London to New York by radio. 1928—Television transmitted from station 2KZ, Purley, England, to Station 2CVJ, Hartsdale, New York. 1935—General Electric Co. announced the production of metal tubes. 1940—Republican National Convention in Philadelphia telecast there and in New York City.

Cleveland Visitors

C. W. (Joe) Colledge, NYFE, dropped in for a bull session June 5th. Joe came out to Cleveland to handle the Blue's Horace Heidt Coca-Cola show. Our bull session gave wonderful results. We solved difficult world problems in no time at all. In less than an hour we won the war and put a shaky world on a more stable foundation. Joe says he expects to be in the army by July of this year.

Gene Hamilton, N. Y. Blue Production, came out for the same show. Cleveland is Gene's old stamping grounds and his visit reminded some of us that the present way of living isn't like the good old days of the early '30's. No sir . . . no more can one brag about his latest batch of home brew. Gene used to make home brew. Harry Caskey made home brew. John Disbrow made home brew. Tommy Cox made home brew and I made . . . well, words can't describe the concoction that fermented in my basement. Cox worked his brew for two weeks, added sugar and a quart of alcohol, then let her bubble for another week or two. We soon learned to treat Cox's stuff with respect. Gene wanted to know if I recalled the time we went over to Caskey's home on Spring Rd. I said, "I do . . . who could forget it?" Harry was out in the back yard when we arrived. He stood there with his right foot on a beer bottle. He was holding a bottle opener in his right hand and a towel in his left.

"What's coming off?" questioned Gene and I in unison. "Watch!" said Harry, "it's wilder than a mule!"

Harry said this as he wrapped the towel around the neck of a bottle. Gene and I watched, fascinated by the cautious way Harry handled the bottle. He slipped the bottle opener on the cap, gave a quick jerk then jumped away from the bottle. A geyser of bubbles and yeast shot across the yard into a rose bed.

"Look!" Harry was pointing at the bottle. Sure enough, the bottle was trying to wiggle backwards across the lawn.

(Continued on Page Fifteen)

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Behind the Mike By Con Conrad

LT. A. L. Hockin of the Blue Network, Chicago, Ill., has just been heard from in the South Pacific area. He is doing some very important work for the Navy in that war theatre. Something of Lt. Hockin's background follows:

Born in Calumet, Michigan, on August 8, 1908, English ancestry, and married, no children. Attended Tilden High School in Chicago, graduating 1926, and the RCA Institutes from 1930 to 1931. His background included experience as a Radio Operator with the American Airlines in Roanoke, Virginia. Studied music, played piano, drums professionally for ten years as a sideline. His hobbies include amateur radio, music, and baseball. Subjects most liked in school were mathematics and English.

On August 23, 1942, Lt. A. Lloyd Hockin, Studio Engineer at the Blue Network, enlisted in the United States Navy Air Corps as a Lieutenant, Senior Grade, and immediately proceeded to Corpus Christi to be stationed at the Naval Air Station Aviation Radio School, Ward Island. At present Lieutenant Hockin is located somewhere in the Pacific.

Rod Dewar, formerly of CKVD in Quebec, new to the broadcasting field, has joined the staff of CKCL, Toronto. Ditto Jack Dailey.

Wes Armstrong, formerly of the maintenance staff, CKCL, Toronto, Ken Biddner and Gord Scuttle have all taken military leave and have joined the Royal Canadian Air Forces.

Flavius Jankauskas, new to the broadcasting field, has joined the staff of WIBG in Philadelphia.

Major P. H. Clark, of the U. S. Signal Corps in the South Pacific area, was paid a visit recently by H. D. Crissey. Crissey is serving with the Navy. Both are from the NBC engineering department in Chicago.

William Dunbar, formerly of the WOW engineering staff and now an ensign with the U. S. Navy, reported back to Omaha to have the boys celebrate with dinner, et al., before entering Radar School.

Chuck Ostler, of the WLS engineering staff, recently became a father of a baby girl.

Contrary to our notation of last month, re: George Maher becoming NABET chairman for Chicago, on a technicality. As we go to press, the elections have just been concluded, and the incumbent and NABET Vice-President, F. C. Schnepfer, has been re-elected.

Captain F. C. Ahlgrim, formerly of the WENR-WLS transmitter staff in Chicago, has just been heard from and is now stationed for the time being in the British Islands.

Lieutenant T. E. Gootee, formerly of the NBC engineering staff and staff writer for this *Journal*, returned to Chicago recently and was wined and dined to the limit by the Blue and NBC staffs. Tom looked well in spite of the many ex-



Lt. A. L. Hockin

periences he has had, decorations for which he will be able to proudly wear a long time hence.

Lieutenant D. J. Kempkes, formerly of the NBC engineering staff in Chicago, is now stationed in Brazil. In our last communique from Dave he likes the Spanish señoritas very well.

A recent disaster near Chicago caused the losing of telephone cables in which circuits to all the major stations were routed. The major stations were off the air for times ranging upwards of a half hour, ranked high among the talking points until the public were made aware of the trouble. Emergency equipment was brought into play by the stations, some of which functioned very well. Re-routes by the telephone company were up in orderly fashion following listed priorities. Aside from the above, the general outcome was that many a Chicago broadcast engineer paid the FCC a visit and obtained licenses to legally qualify for the operation of the emergency equipment. Conditions similar may arise in other areas, and it behooves each and every man to obtain the necessary license for such emergencies.

CLEVELAND NEWS

(Continued from
Page Fourteen)

Marine-Announcer

You usually think of a radio announcer as a fellow who goes skipping through long commercial announcements with the ease of a water beetle skimming the surface of the old mill pond. After you work with an announcer for a period of years you expect to see him there in the studio with a microphone on his chin. The mike seems to be as much a part of his anatomy as his right ear. Without his microphone he appears to be somewhat undressed. It's rather shocking, to say the least, to open a letter from an announcer and see him aiming a cannon at your



1st Lt. John Hicks, USMC

craw. First Lieutenant John Hicks, USMC, Parris Island, S. C., would look more like himself if he were aiming a ribbon mike at the control room engineer. That thing he's pointing in our direction doesn't look like sponsor bait to me. John's in the Marine Air Corps. Says he blanked out when coming out of a power dive the other day. "You have to give these young fellows credit for having what it takes to make good pilots," John says.

WHIO Dayton, Ohio

Jerrold Swank, Assistant Chief Engineer of WHIO, is quite a photographic fiend. As shown in the accompanying picture, Jerrold delights in taking photographs of various pictures around the WHIO studios. Jerry is very busy these days doing outside recording work and taking motion pictures on a commercial basis in addition to his duties at the radio station. Due to the scarcity of engineers, he has his difficulties in scheduling control operators.

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WOR NEWS

FEW people know, and those that you mention it to hardly believe it, when you tell them that WOR and the Mutual Network is not only the largest chain in the United States but most likely the largest in the world. We can now boast of 209 stations reaching out from coast to coast and, this does not include Canada.

Speaking of old times, never mentioned in this journal we have one Bill (Shorty) Stahl, who is not only an engineer, but also a teacher. For ten years Bill was with the Electrical Research Products, Inc., and about six months of last year he worked seven days a week teaching radio theory to Signal Corps. personnel. Bill is married and has two boys (also a Victory Garden) and lives in Flatbush. Wifey occasionally appears at remotes, says it is the only chance she has to see him and says, "Bill, it's not true."

Did you know that Mac Ried has five lunches a week at the Hotel Taft on that good old program known as "Lunch With Lopez." He now has so much food left over in his Victory Garden that he decided to open up a vegetable stand on the front lawn of his home in Pleasantville, N. Y.

Ted (Maintenance) Kasna not only holds down a good job at WOR, but also has a neighborhood open-air beer garden in the front of his home. The empty kegs are stacking up so high that the passing planes are using them as a landmark.

Gifford (ATE President and ET boss) Campbell hopes to solve the meat rationing problems with his new grass seed mixture of ground up sea shells and grass seed. The result, he hopes, will give him the finest and largest crop of soft-shell crab grass in New Jersey. Go out and visit him while he's working in his tan slack suit and he will explain the process.

Along these same lines we understand that Louis (bow tie) Tower is trying to cross a duck with an octopus in hopes to produce a freak of nature that will have at least eight legs — you see Louis likes drum sticks.

Here's one for the books, the latest in patching, called "The Benoit Patch." On the big show, "Superman," little Benoit can't be bothered with ear phones, so he patches the net to the PL and hears the program on the telephone. Some patch.

Bill (all night) Taylor just got back from vacation. Bill and his wife went to the Berkshires hoping to go horseback riding and hiking, but the weather man had other plans — results, no riding, no hiking, but much reading and listening to good old WOR programs (busmen's holiday — ha! ha!). The last week Bill ended up with a cold and had to stay home with more reading, radio and textbooks.

Ely Bergman, now back in the groove, spent his vacation and honeymoon in one. Yes, sir, Bergy got himself a wife and took her all the way to the wild and wooley state of Texas, hoping to return a big he-man.

Bill Wernicke, SE, recommends that for a complete change from riding the WOR sound waves, try riding the Long Island Sound waves. Bill and his charming wife, Mary, enjoyed their vacation aboard the good ship Hel-Child Too, a 45-foot cutter, replete with mains'l, stays'l, jib and Genoa. The radio bug hit Bill back in the old days. He decided to make his hobby his life's work, and studied

By Herman G. Berger

at RCA Institutes. Last Christmas was one of the happiest in his life when he was appointed to the staff of WOR on December 7, 1942, and his baby daughter, Monica Mary Katherine, was presented to him on December 22, 1942. We're glad to have you with us, Bill.

Edger A. Leach of Rockford, Ill., now with our Engineering Department, formerly spent fifteen years with the French-American Banking Corp., New York City. He is married and has a son only twenty-one months old. Edgar, not having too much experience in radio, decided to take a course from the RCA Institute. It has been said that he once assembled a one-tube receiver from the 5 and 10 parts (and with plenty of outside help). All that we can say now is, if you continue to do as good a job as you did on John Gambling's show, you can't help but meet with radio success.

Cupid bent its arrow at WOR. It hit two birds at once when it struck Max Ulass and Charlotte Heinig, both formerly of WOR. Max left to join the Merchant Marines; came back for a visit and took one look at Charlotte and decided she was the only girl.

Newcomers

Lawrence P. McCormick of Brooklyn, N. Y., now in the Engineering Department, was a former radio operator for the New York Fire Department with previous experience including point to point telegraph technician and ship work. He is now taking an NRI advanced course. He is the holder of the first class telephone ticket and second class radio telegraph ticket and he hopes that some day he will end up at Carteret.

James C. Chapman of East Orange, before joining our staff, was with the United States Army Transport Service for three years and was stationed on a troop ship as Chief Electrical Engineer. While on his last ship he was sent into the South Pacific right after the war started. Upon his return to the States he was sent into the Middle East and North African theatres of war. James was given a medical discharge from the service on May 10, 1943.

Off the Record from the WOR Recording Studios

For here we've a swell bunch of boys. Let's call roll and introduce you to some of their sapphire qualities.

Paul Baldwin, one of the oldest in the wax works business and still a young fellow (old in his vast experience).

Bart Simpson, another old-timer who knows recording from the power cord up. Bart could have shown Edison a few tricks in building recorders and equipment.

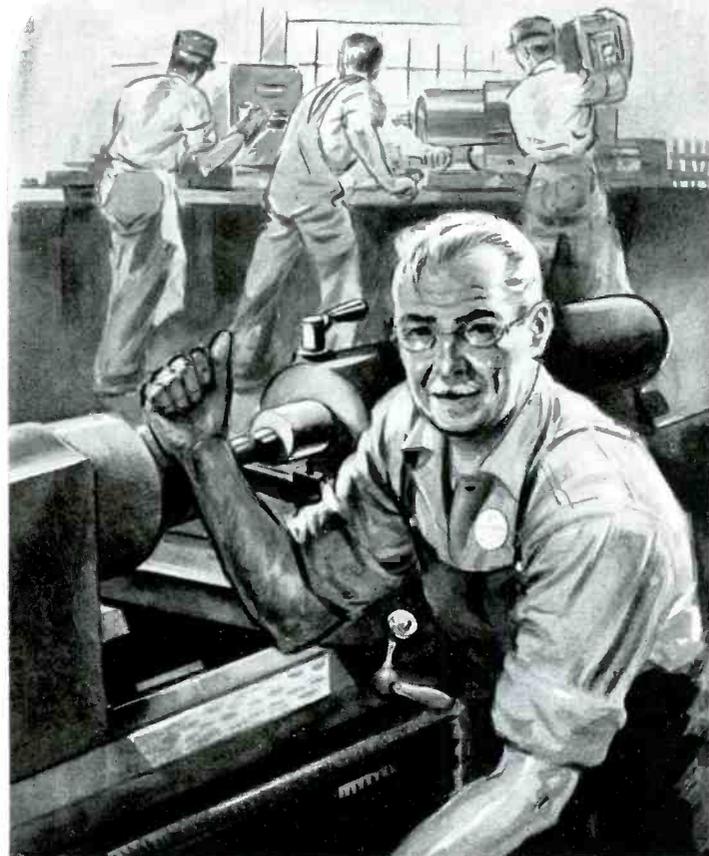
Doug Hawkins, a refuge from the Met, and we do mean the opera house. "Pappy is always a smilin'" and good cause, too — 'twas a son. Doug just can't get interested in a studio job unless he's got eight mikes and a foot of records to cue in.

Danny Conover, the RCA boy all the way, too. Dan's famous slogan, "We can dubb it off and patch it together." Two to one you couldn't know the difference.

Ray MacEntee, our new member, the baby of the gang. Ray knows his stuff. Nice going, Ray; so far so good. Keep it up.

Pres Yeomans, jealous of Pappy Hawkins, so he ups and gets himself a girl. Not what you think — she's only nine pounds. Pres doesn't think he is working unless he has ten or twelve tables to worry about. Believe it or not, he can (dood) it.

"MY BOY OWNS THIS PLACE!"



Some time ago I retired, just a good, old fashioned, real-American retirement . . . thought I had served my time and done my share.

When the war started I went back to work . . . a good tool maker can do a lot to help lick those fellows, you know. And it is fun to work for my boy. I'm proud of him and proud of America that makes men like him possible. He had the same start I had only now he owns this shop. And that is one of the things we are all fighting for—to preserve that American FREEDOM of opportunity.

Pardon me, I've got work to do now. When the war's over look me up . . . on the front porch.



BUY MORE BONDS!

hallicrafters
CHICAGO, U. S. A.





Photos by Joe Conn

New York News By George F. Anderson, Jr.

AS EVERYONE knows, your former New York correspondent, Charlie Younger, is now First Lieutenant Charles A. Younger, AUS. So I have been drafted by Chairman Hiller to do this column and am taking a vacation to prepare for the ordeal. Charlie, incidentally, reported to Fort Monmouth, N. J., for training as of June 12, 1943.

Another newcomer to Uncle Sam is SE Harry Grelick, now Ensign Harry Grelick, USNR. Harry is still grinding out soap operas though, as he has not yet been assigned to duty, at the time this column went to press. From all the group "best wishes."

As noted last month, SE Gil Markle became a proud pappy for the second time in May. Gil has been overheard telling the world that he is "The Senior Father," but as yet we haven't found out where he received the right to the title, unless it is because he is the first of the New York SE's to go on a six-day week, which is due to his handling of the "Colgate's Million Dollar Band." For a slight financial remuneration, Gil will undertake the management of any "SE" and get him those juicy plums. (Fees, ???)

In the recently held chapter elections here in New York, SE Harry Hiller was re-elected chapter chairman. Fritz Rojas, MCD, was runner-up. Congrats, Harry. Charlie Bennis, MCD, was re-appointed secretary-treasurer of the New York Chapter and our spies report that Charlie was seen buying reams of paper and pencils by the gross to enable him to record the minutes of the many New York Chapter general and council meetings.

Among the newcomers to the lounge are:

D. Ullman, veteran NBCite, who transferred from Washington and is now in studio. He has been with NBC since 1927.

James Kenney, SE, who also is a welcome addition. He comes to us from CBS where he spent the last eight years in their Field Dept.

SE George Mathes, Blue, is no longer blue since the arrival of Jimmy, as George has been able to hand over the Roseland and Pennsy pickups which he has been doing for quite a while.

John Ross, SE, coming to us from the Columbia University Lab where he was doing research for the NDRC.

Lionel Drayton, ME, who hails from the Barbados, British West Indies, where he was with Radio Distribution, Ltd., and after coming to New York was with Ferranti Elec. and Baetinger Elec. Co.

If we have missed anyone we promise to bring you up to date next month.

This month saw the redecoration of the lounge, which was blessed with a new coat of paint and the removal of the carpet. It is said that the carpet was removed in order to improve the acoustics of the room, but as we go to press, the rug is back again.

We would like to hear from the boys out at the xmitters and we will be very pleased to print anything they would send for this column.

Wondered why **Pete Prinz** was not seen lounging in the lounge any more and, lo and behold, we find him out at WEAf's xmitter holding the breakers closed.

Harry Hiller reports that in spite of his interrupted vacation, he managed to catch some speckled beauties, but he probably is not doing so well with catching some 8mm Kodachrome film—being also an owner of an 8mm camera, I can sympathize with him. Wonder when there will be ration stamps for film.

A letter from former SE **Dewey Sturgell** tells of swimming on Hawaii's sunny shores. Well, we also have had plenty of sun lately.

That is all for now, and here's hoping for a longer and more interesting column next month. Chimes are ringing.



Who's Who at WPTF—Raleigh

By
J. Willard Dean

SINCE first seeing the light of day from under a blanket of blue, in western North Carolina, and having lived in practically every other section of the state since that time, Frank T. Colvert's true contention still remains . . . "The tar should be thick on my heels" . . . Emerging from the Charlotte High School, where he was active in track and baseball, he began work with the North Carolina State Surveyors. This meant plenty of traveling, but in all of his moving around, Frank admits, he was unable to get rid of a certain bug that had been trying to bite him. Back in 1930



Frank T. Colvert

that bug finally got him, and he landed in the Fraternity of Amateur Radio Operators . . . Pounding the brass on forty meters, and doing quite a bit of phone work on seventy-five and twenty meters. Some years later a little, five foot, blond school marm (born Margaret Sallie Briles) loomed into his life, and instead of a bug-a-biting, it was an arrow-a-piercing the life sustainer.

Before coming with WPTF, Frank was a radio operator for four years

with the North Carolina State Highway Patrol System, where he did general dispatching, maintenance, and installation work. On February 1st, 1942, he started throwing the switches for WPTF when he joined the staff as control operator; however, he has just recently been transferred to the transmitter.

Since the war has stymied his ham activities, Frank is now devoting his spare time to such outside interests as fishing, swimming, and golf—but there isn't much doubt as to his choice, for the boys tell me when relieving him, that he invariably signs off with a "So-long, fellow, I'll be teeing ya" . . .

WARRIOR RETURNS!

(Continued from
Page Three)

"The English pubs are a fine place to be when the night is cold and rainy." He did pause long enough to remark that morale is high over there and the war is in the bag. No names were mentioned, however, and we are still in doubt as to what he meant. Asked what most of all did he want while he was over there, he replied, "Mail. Just send us letters while we are away, and the darndest, toughest going is something that the boys won't mind at all if they know that the folks at home are thinking of them, even if they have no idea where we are and what we are doing. It's the feeling that they are thinking of us that makes all the difference in the world, and letters are the best concrete evidence that you people can give to a soldier that he is not forgotten. Not just one letter a week or so, but *letters*, lots of them."

Tom brought back some souvenirs which he prizes highly, perhaps even more than his medals. One of his treasures he spent most of one night and the better part of a bottle of rum in order to acquire. It is an old rubber bulb auto horn from one of London's taxicabs! Viva Gootee!

NICHOLAS V. PIELER was born in St. Paul, Minnesota, December 2, 1916. Laying claim to having lived in several states, Nick did quite a bit of traveling before finishing his primary schooling. Leaving St. Paul at the tender age of four, he moved to Lillian, Alabama, on the banks of Perdido Bay, where he remained until he was eleven years old, moving then to Pensacola, Florida. Upon his departure from the Sunny South, crossing the boundaries of five states, Nick took up new residence in Norfolk, Virginia, where he finished high school.

Deciding previously to follow radio as a career, Nick enrolled during 1938 in the First National Radio and Television School at Kansas City, Missouri. After completion of this course he had several months of control and transmitter work at station WBRY, as a finishing process. Desirous of obtaining as much practical experience as possible during the early stages of the game, Nick looks around until he locates a job involving the construction of a new station.



Nick Pieler

This he does, and joins the staff of WCNC at Elizabeth City, North Carolina, where he remained until 1940. It was here that he met a charming little blonde, Helen Cartwright, whom he later married. Seeing a chance to further familiarize himself with the intricacies of construction, he moved to Roanoke Rapids in November and was engaged in the installation and operation of station WCBT. With the urge to play with more power, Nick applied for a position with WPTF's Engineering Department in February of 1942, and came to work as a control operator, transferring to the transmitter in June of that same year.

Driving being Nick's chief pleasure, he has found it necessary to choose from his lesser favorites in that of bowling and reading, however a modest contention says more "studious than athletic" . . . So, don't be surprised if you should see some highly TECHNICAL ISSUE expounding on Pieler's Theorem'

Aaron Lippman & Co.

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Radio and Electronic Equipment

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WJZ Puts on the DOG!

THE National Broadcasting Company being pioneers in private industry to go into the protection of their Transmitters with dogs, have designated the Protection Division to select and train animals for this purpose.

They are particularly trained to alert the personnel at these locations of the presence of any strangers in the vicinity. While in the company of a Patrolman, they will hold at bay anyone attempting to approach within physical contact of the Patrolman they are assigned with. Otherwise, they are gentle and will not attack unless commanded to do so.

One of these dogs, a pedigreed thoroughbred Great Dane, was a gift to the Protection Division by an Ensign in the U. S. Navy, who brought the dog up from a pup and he traveled all over the world, his last trip being to Greenland. The Ensign being transferred to



"King" Trains for Attack



"Jay-Z"— Patrol Dog

submarine duty was required to find a home for this dog. Hearing of the exceptional care taken of these animals by the National Broadcasting Company, he asked them to accept this dog as an outright gift. The dog, King, by name, is one of our best trained dogs.

We have since the installation of this protection and as a result of the great efficiency, received requests from our Chicago Station for dogs, and have only recently trained and shipped two dogs, namely, Jay-Z and Fritz to that station from New York.

If you have not been using or have not yet tried Allied's New Glass Base Discs, a trial will convince you of their merits and superior quality — at no premium in the cost to you. We invite you to try this disc — that is how we obtain new customers. We feel certain that you will

reorder — that is how we build sales volume — from satisfied users. Your telephone call, letter, wire or cable will receive our prompt and courteous attention.

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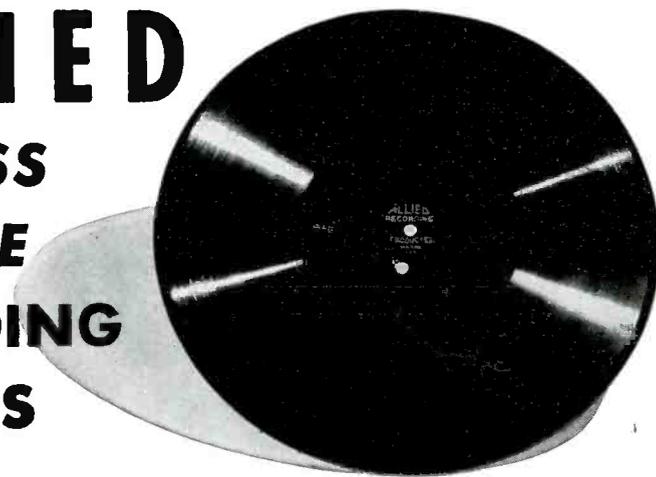
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WOR RECORDING

(Continued from
Page Eleven)

to the 25th floor Master Control and by a simple patching system these circuits may be re-routed through the recording studios and a portion of the recording channels and then to the local A. T. & T. offices for transmission; this includes the elaborate Fighter Command system for air raid warning. These facilities are complete to the extent of a gasoline driven AC generator for emergency power supply and have been set up should New York have an air raid and WOR master control be put out of commission.

A separate room for re-recording (dubbing) is located in the rear of the reference room; here are located four Fairchild dual speed turntables and four complete audio channels with RCA type MI4875 pickups. These are so arranged that they may be used separately and four different records copied simultaneously or any combination of the four may be used in dubbing some special program together. At the time of installation it was thought that four re-recording channels would be more than necessary but on several occasions it was necessary to feed the output of the four tables to one of the studios where an additional two tables were available so that six very short portions of dialogue, whose total running time was about two minutes, could be pieced together to fit into a complete program. Two additional re-recording channels are built into portable cabinets and are used in conjunction with re-recording masters. These cabinets contain the regular complement of audio amplifiers in addition to specially designed equalizers to

properly compensate for losses encountered in re-recording work.

The entire studio and office space is air-conditioned, the recording and reference rooms have separate temperature controls so that these rooms may be kept at the same temperature at all times, this has been found necessary to insure uniform results from the recording heads. A special cold air duct has been installed to the reference room racks which house the fifty watt recording and monitor amplifiers. An exhaust duct at the top of the rack connects to the air return, thus keeping the operating temperature of these units down.

The racks for amplifiers in the reference room have been built up to the ceiling, in this way it was possible to use the equipment as a means of dividing the room into two work units, one for recording with the rear of the bays used as a storage space for discs, etc., while the other side of the room has a work bench and storage space for spare parts and tubes.

WOR Recording Studios has grown in a few short years from a one man, one turntable reference recording room to a complete recording division having fourteen independent channels, two studios and an audition room of its own.

It is hoped to have ready in a few months, another article dealing with the technical aspects of this recording plant.

In a succeeding issue, I shall try and give a more detailed description of the technical side of this recording plant.



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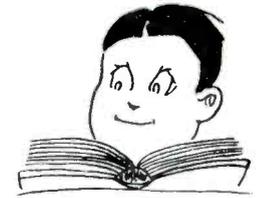
Available . . .

in small bottles with applicator,
as illustrated, or in 8 ounce,
16 ounce and gallon containers.

DAVENOIL COMPANY
191 Central Avenue Newark 4, N. J.

A large advertisement for Bliley Crystals. At the top, the word 'DEPENDABLE' is written in large, bold, black letters. Below this, there is a stylized illustration of a propeller airplane. The airplane has a star on its tail and a banner on its wing that says 'ARMY' and 'NAVY'. To the right of the airplane is a small illustration of an eagle with its wings spread. In the foreground, there is a white card with a black border. On the card is a photograph of a cylindrical crystal unit. Below the photograph, the text reads: 'Accuracy and dependability are built into every Bliley Crystal Unit. Specify BLILEY for assured performance. BLILEY ELECTRIC COMPANY ERIE, PENNSYLVANIA'. At the bottom of the advertisement, the words 'Bliley Crystals' are written in a large, white, cursive font against a dark background.

TECHNICAL PRESS REVIEW



By Ed. Stolzenberger

A digest of leading technical articles in the current contemporary press.

[In these busy times few engineers can spare the time required to read all the current technical literature. It will be the purpose of this regular feature to provide an index of current technical articles on radio broadcasting and related subjects.—Ed.]

Proceedings of the IRE - (June, 1943)

260- to 350-Megacycle Converter Unit for G. E. FM Station Monitor

By H. R. Summerhayes, Jr.

The development of an ultra-high-frequency converter unit is described. This unit is used in conjunction with a G.E. FM station monitor to measure the characteristics of frequency-modulation transmitters operating in the 260- to 350-megacycle frequency range.

A Method of Measuring the Effectiveness of Electrostatic Loop Shielding

By D. E. Foster and C. W. Finnigan

In the design of radio receivers employing electrostatically shielded loops, difficulty in measuring the effectiveness of the loop shielding in the laboratory is usually encountered. This paper describes a method using a short rod antenna connected to a conventional standard-signal generator which has been found to be convenient to operate and capable of producing consistent results. The effectiveness of shielding is determined as the ratio of the effective height of the loop as a magnetic field collector to its effective height as an electric-field collector.

Variable-Frequency Bridge-Type Frequency Stabilized Oscillators

By W. G. Shepherd and R. O. Wise

Results are given of a theoretical and experimental investigation into two types of bridge-stabilized oscillators incorporating a thermal device for amplitude control. One circuit employs only resistances and capacitances in the frequency-determining network and consequently is useful for low-frequency operation. The other circuit uses an inductance-capacitance network which is well adapted to the higher-frequency network.

A Note on Field Strength of Delhi 3 and Delhi 4 at Calcutta During the Solar Eclipse of September 21, 1941

By S. P. Chakravarti

The signal field strengths of two Delhi, India, stations on frequencies of approximately 15.3 and 11.8 megacycles were measured during a morning solar eclipse in Calcutta 900 miles away. Changes related to the eclipse were found.

Open-Wire Radio-Frequency Transmission Lines

By E. A. Laport

Design formulas for several types of open-wire transmission lines, both balanced and unbalanced, are developed and listed in a simplified form suitable for most engineering applications.

An Analytical Demonstration of Hartley Oscillator Action

By F. A. Record and J. L. Stiles

An analytical solution of the Hartley oscillator circuit is made to determine the amplitude of the alternating voltage of the output wave in terms of the tube and circuit parameters. The approach to the solution makes use of a rotating vector, which alternately gains and decays in amplitude, applied to idealized tube characteristics.

Network Theory, Filters, and Equalizers (Part III)

By F. E. Terman

This section of the paper deals with ladder and lattice filters, attenuation and phase equalizers, and dividing networks.

Electronics - - - - - (May, 1943)

KTKC Builds a 5 KW Transmitter in War Time

By B. Williamson

The author shows how, by touring the country for parts, many of them amateur components, the engineering staff of the station built their own transmitter.

Measuring Coil Characteristics Without an Impedance Bridge

By H. D. Brailsford

The author shows how to use a cro to measure inductance, Q, impedance, power factor, and effective resistance of coils.

Precision Tuning Problem in UHF Broadcasting

By S. Y. White

Between 60 and 200 mc there are 1,000 channels if allocations are on a 0.1 per cent basis, but there are 14,000 if allocations are on a 10-kc basis. Means are suggested for securing the necessary precision tuning to use these channels.

Narrow Band-Pass Filter Performance

By H. Holubow

Charts enabling one to design quickly a filter of desired characteristics; for given cutoff frequencies and coil Q, the minimum attenuation, attenuation at cutoff frequencies, and the actual curve may be obtained.

Electronics - - - - - (June, 1943)

Automatic Transmitter Protection

By F. Marx

Complete and reliable protection from overloads and underloads are features of this simple electronic relay system. Use of spare parts to provide full transmitter protection

makes this a particularly timely article for radio station engineers, and is in use at WMCA, New York.

Low and High Pass Wave Filter Units

By E. S. Purington

Treatment of electric wave filters on the basis of considering them as bisectable symmetrical circuits.

Court Decisions Affecting Broadcasting

By L. T. Parker

A review of broadcasting cases on which decisions were made by higher courts in 1942. The rulings are definite and authentic interpretations of modern law as it pertains to broadcast stations.

Radionics — Vol. 1, No. 1 (July, 1943)

A new publication in the field is always a healthy sign, and indicates an expanding future for the industry in general.

Cosmic-Ray Radiosonde

By S. H. Pomerantz

An engineering review of the meteorological radiosonde equipment used for the detection of cosmic-rays.

A Graphical Method for the Design of Low Frequency

Compensation Networks in Wide Band Amplifiers

By H. R. Johnston

A method is developed and its application illustrated. The equations derived and the curves drawn from these equations are valid only in those amplifiers where the plate load resistance is very much smaller than the dynamic plate resistance of the tube involved.

Facsimile at Station WOR

By M. Hammer

The Finch system of facsimile broadcasting as used by WOR. Its post-war possibilities and a review of working diagrams.

Lateral Beam Devices — Recent Tube Developments

By C. E. Atkins

Design characteristics that show promising possibilities for the future of several types of tubes that are still in the development stage.

Electronic Industries - - (June, 1943)

The Role of UHF After the War

By S. Y. White

The author, in an interesting style, discusses his experiences with UHF and visualizes some of the UHF services we might expect in the future.

NBC's New FM Transmitter

Engineering details of the experimental equipment in the Empire State Building tower in New York, with circuit diagrams.

Formulas for RF Voltage Amplifiers

By W. E. Moulie, Jr.

Reference sheet of design rules by which the best operating conditions for transformer-coupled amplifiers can be determined.

Communications - - - - (June, 1943)

100 Megacycles and Beyond

By W. L. Widlar

Discussion of equipment used by WEMV, the mobile unit of WGAR.

UHF Design Factors

By A. H. Meyerson

The author reviews such factors as contact resistance, circuit stability, tuning methods, etc., and their added significance at UHF.

Transients in Coupling Circuits

By G. B. Hoadley and W. A. Lynch

The study of transients is a fascinating part of circuit theory. A good article on the subject by well-qualified writers.

San Francisco News

By Bob Shover

WITH vacations on, and a heavy studio-field-recording schedule, all the gang here are going full pace.

E. E. Jefferson (Cr Supr) returns from Pebble Beach where he has been getting that Calif. sun tan and a place where there are no switchbanks, channels and phones to think about.

J. Alan O'Neil (Rec. Supr) spent most of his vacation at Carmel.

Charlie Kilgore (Cr Supr) starting on his vacation to points unknown.

Guy (Skeets) Cassidy (S. E.) leaves for vacation and we hear that he now is very busy with his rabbits and chickens, as he caught the gophers.

Oscar Berg (Maint. Supr) now on vacation and after the blackout the other night, guess he won't be going too far from home as he is an officer of the Oakland Aux. Police force, and as he admits, he is the only cop on the Oakland Aux. Police force with small feet.

At the Transmitters

Art Dingle, KPO, and **Ed Manning** are back on the job.

At KGO, **Shorty Evans** gets back in the saddle and **Eldredge** takes his annual rest.

Gardner Kramer, KGO, got nine marbles from his potato plants. **Dutton** was walking in his sleep the other night and fell down the hall stairs, however, he was not hurt badly when he woke up. It must be that east bay weather we hear about over here. Also the squash vines or plants, whichever you want to call them in this case, are up about

(Continued on Page Twenty-four)

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FCC Reports and Public Notices

SINCE our last resume of FCC Reports and Public Notices pertinent to broadcasting, the following have been received:

No. 67335, Public Notice, March 30, 1943: Suspended the requirement that FM stations during their first year of regular operation, shall submit to the Commission continuous field intensity records . . . and suspended the requirement of FM broadcast stations to maintain a regular daily operating schedule . . .

No. 67866, Public Notice, April 27, 1943: Amended Order 75 by the adoption of Order 75-C, so as to require every person who holds an outstanding commercial or amateur radio operator license issued by the Commission, and every person who has applied or shall apply for such a license or a renewal thereof, to furnish such additional information bearing upon the individual's qualifications to hold an operator license as the Commission may in writing request after examination of the application for license or of the data submitted pursuant to Order 75 as amended.

No. 68518, Press Release, May 31, 1943:
"Ham" Operators' Licenses Extended

The Federal Communications Commission today announced adoption of General Order No. 115 reinstating all amateur radio operator licenses which have expired since December 7, 1941, and extending such operator licenses for a period of three years from the date of expiration shown on each. In the same order the Commission provided that all amateur operator licenses, expiring between May 25, 1943, and December 7, 1944, inclusive, are hereby extended for a period of three years beyond the expiration date on each license.

In the interests of national security, the Federal Communications Commission (in Orders No. 87 and 87-A adopted December 8, 1941, and January 8, 1942, respectively) has halted all amateur radio station operations, and Commission Order No. 87-B (adopted September 15, 1942) discontinued the issuance of all amateur station licenses. The Commission, however, at the request of the military, has continued its policy of issuing new or renewed amateur operator licenses.

Since present conditions make it difficult for amateur radio operators who are in the armed services or engaged in war work at locations distant from their homes to make timely applications for license renewals, the reinstatement of amateur operator licenses which have expired since December 7, 1941, and extension of such operator licenses expiring not later than December 7, 1944, were authorized by the Commission.

Provisions of the Order do not apply to any amateur radio operator license which has been voluntarily surrendered by the licensee or which has been, or may hereafter be, finally suspended by Commission order. Nor does the Order apply to any amateur radio operator licensee who has failed to comply with FCC Order No. 75 (regarding citizenship).

No. 68684, Public Notice, June 8, 1943: Amended Section 15.75 of its Rules as follows, pertaining to War Emergency Radio Stations:

"Sec. 15.75 Tests—The licensees of civilian defense stations are permitted to make such tests as are necessary for the purpose of maintaining equipment, making adjust-

ments to insure that the apparatus is in operating condition, training personnel, and perfecting methods of operating procedure, *Provided*, That such tests shall be conducted only during the following periods:

Time Zone	Eastern	Central	Mountain	Pacific
Mondays.....	10 p.m.-12 mid.	9-11 p.m.	8-10 p.m.	7-9 p.m.
Wednesdays	10 p.m.-12 mid.	9-11 p.m.	8-10 p.m.	7-9 p.m.
Sundays.....	5 p.m.-7 p.m.	4-6 p.m.	3-5 p.m.	2-4 p.m.

All times given are local standard (war) time."

No. 69214, Public Notice, July 6, 1943: The Commission today authorized the continuance of its manpower survey of first and second class radiotelephone operators. The postcard survey will be mailed to the remaining 19,000 licensees to ascertain how many of this number are available for full- or part-time employment in the communications industry.

San Francisco News

(Continued from Page Twenty-three)

fifteen feet at the bottom of KGO's towers. If this keeps up the boys will be able to open a vegetable stand and have a good business during switching periods and Spot announcements.

W. Andreson (SE) returning from Portland Nemo (Town Meeting of the Air).

C. T. Stevens (SE) now has just about all of his house interior repainted, which he has been doing during his vacation and spare time.

Bob Wood dropped in the other day and is very happy with his work in the Navy, installing radio gear on Navy planes.

Phil Rider (SE) is all set for the Air Corps Cadet Training School, which he intends to enter the latter part of July.

Toby Hamma (SE) has now completed his law course and is studying hard on the State Bar Exam.

Clif Rothery (SE) off to a Blue Nemo pickup in Seattle.

George Greaves (Eng in Chg) in New York on annual NBC engineers' meeting.

Mr. Saxton (better known to us up here as "Sax") stopped by for a few hours on his way east.

Clark Sanders (SE) returned from Wyoming on a Nemo pickup with a bad case of the flu, which sent him to the hospital. We hope you are getting along OK, Sandy, and will be back soon.

Ed Parkhurst (ME), now vacation relief supr., is losing more hair as he not only has the desk to take care of, but making out studio schedules as well. Oh, me!

Hal Ashby (SE) bought himself a new home in the Sunset District and now we wonder if he will have time to go fishing and hunting this year, as he has done in the past, as there are always a lot of things to do around a home.

Will Watson (SE) has joined the ranks of F. I. W. (fathers in waiting). His heir being due any day, suggested he speed up delivery in order to make Journal dead-line. Bill has an original idea for conserving slightly used paper drinking cups—he uses them to transplant small plants. Not a bad idea.



Music STILL HATH CHARMS

Orpheus, with the enchanting playing of his lyre, cajoled Pluto into letting his wife, Eurydice, return to earth with him. His request was granted on the condition that he would not look at her until they had passed the gates of the underworld. Without thinking, he glanced back at her, and immediately she was denied to him, till he would join her in death.

Although the music of today raises no such crises of life or death, inferior reproduction quality may have been responsible for the loss of a sponsor and the consternation of an audience. Such woes, traceable to substandard blanks, can be eliminated by specifying Advance Glass Base Recording Blanks. They reproduce faithfully and have fine tonal quality. Try them today.

Advance **RECORDING PRODUCTS CO.**

36-12 34th STREET

LONG ISLAND CITY, N. Y.
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We put the Back Fence in Studio 3B

A new idea has hit the air . . . an idea new to radio but old as the hills to housewives.

You know about Woman's Exchanges . . . the glorified back fences of America . . . the clubs organized by housewives to facilitate the swapping of jams, recipes and ideas helpful in home-making.

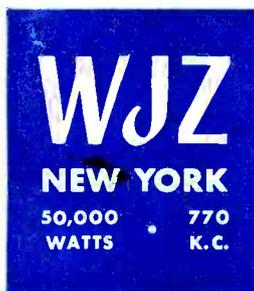
On Monday afternoon, June 21st, WJZ's new show, "Woman's Exchange," took to the kilocycles . . . to serve as a

clearing house for the interchange of ideas among the housewives of the vast WJZ coverage area . . . to help them in their wartime food and household problems. It is a participation show (an economical one) from 1:15 to 1:45 P. M. Monday through Friday. Most important is the fact that Alma Kitchell, established favorite of women listeners

throughout the country, will guide this series and serve as its commentator. There will also be guest experts, two strong mail pull angles, and . . .

But watch for news of "Woman's Exchange" . . . and watch it go to town. It's for sale on a participation basis . . . is sure to attract listeners and sponsors fast. We have just prepared a brief written outline of the program. Write or phone for your copy today.

NEW YORK'S FIRST STATION



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