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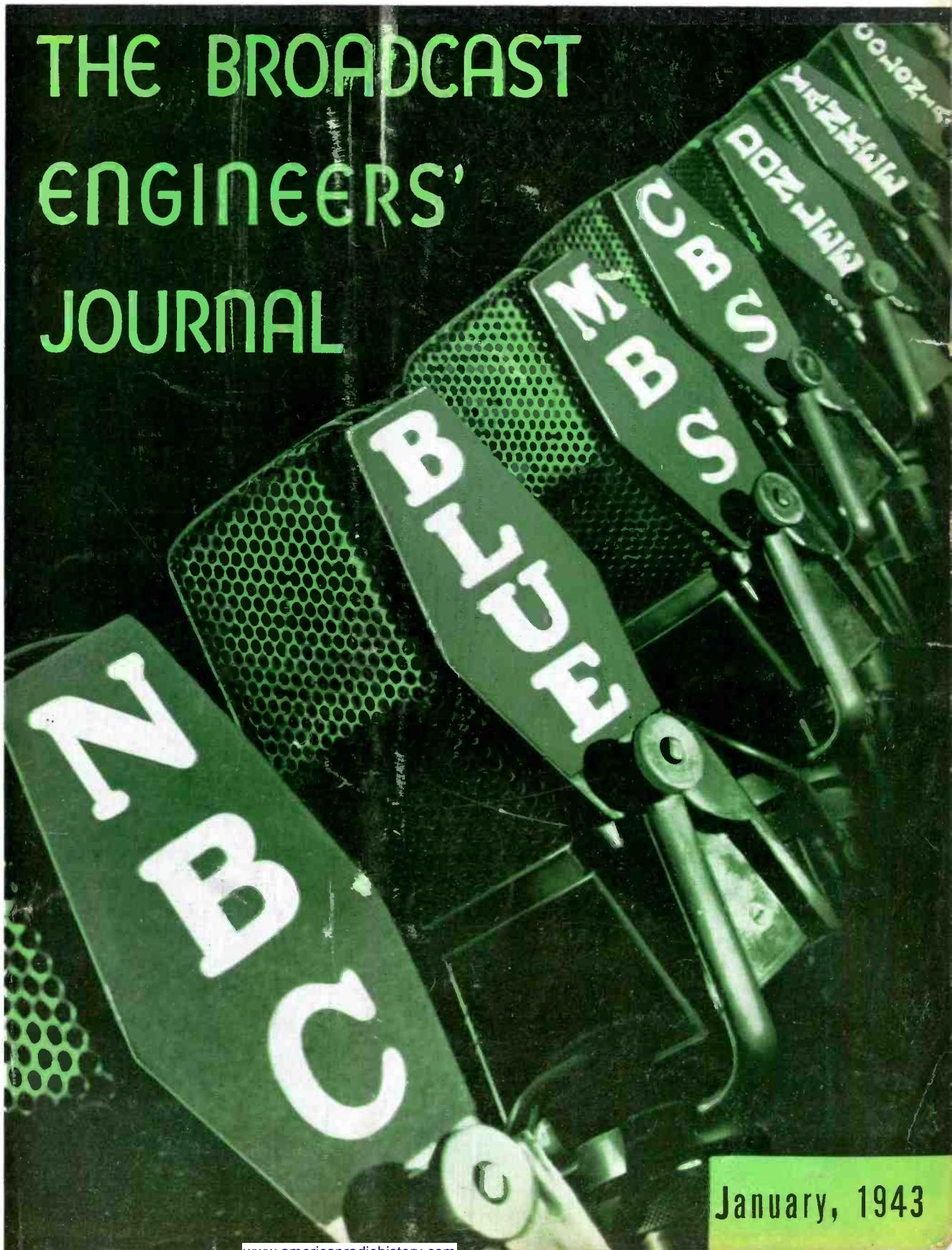
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# THE BROADCAST ENGINEERS' JOURNAL



January, 1943



*Wheezes, Wows, Squeaks, Noises,*  
are out because there are

**NO GREMLINS**

in GOULD-MOODY'S sensational

**"Black Seal" GLASS BASE**

*Instantaneous*

**RECORDING BLANKS**

Gremlins are those pesky little pixies who annoy pilots of the RAF and the U. S. Air Force. They're also present in many recording blanks, causing wows and rumbles, squeaks and noises. But, there are no Gremlins in "Black Seal" Glass Base Instantaneous Recording Blanks. They're the talk of the industry...giving a wide frequency range, true and beautiful reproductive qualities, and absolute freedom from noises—you hear only the performance itself! Try these Gremlin-free "Black Seal" blanks at our expense — if they don't come up to your expectations, send them back and we'll stand the entire tariff.

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**THERE ARE HUMAN GREMLINS, TOO!**

They're well-meaning, but kind of careless, people who buy things they don't need, who spread rumors, who throw away scrap and rags, who waste fuel, who drive their cars too fast, who aim to but don't invest in War Bonds.

**Help win the war, help spread the word**

**— DON'T BE A GREMLIN!**



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*the* **GOULD-MOODY** *company*

RECORDING BLANK DIVISION

395 BROADWAY

NEW YORK, N. Y.

**THE BROADCAST ENGINEERS' JOURNAL**

Volume 10, No. 1



January, 1943

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**THE BROADCAST ENGINEERS' JOURNAL**

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is daily emphasizing the importance of dependability and permanence in all of our equipment.

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*The Test of Time has proven*

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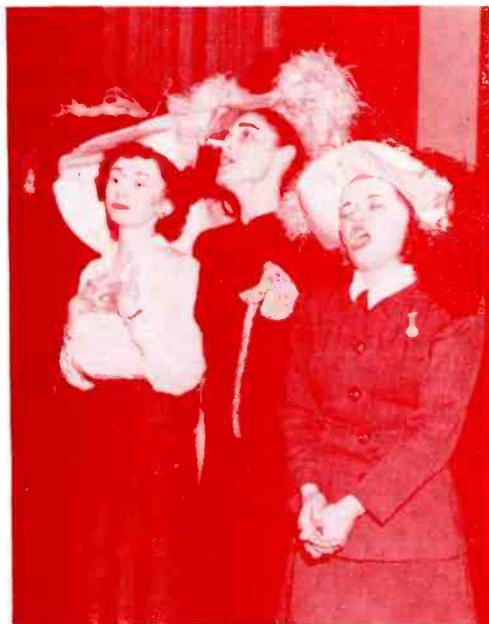
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# WTAM Employees Go To Town!

**T**HE employees of WTAM threw a party for Mr. Vernon H. Pribble, manager of the Cleveland Division of N.B.C. The man who said that time flies knew what he was talking about. Off hand one wouldn't think that eight years have slipped over the dam of Time since Mr. Pribble came to WTAM as manager. The fact that this party was the eighth anniversary party for him proves otherwise.

This party would have warmed the heart of anyone who loves good music, delicious food, superb acting, or a good old snifter of the stuff that displays our Government's personal stamp of approval.

I hesitate to mention the part our Government played in our party, but we are living in a Democratic country.



Doesn't this picture rock you? We rocked too. One can stand most anything but those heartbreaking words of "She's Only a Girl in a Gilded Cage!" This trio, composed of Vivian Eastabrook, Marcella Harlow and Katie Burke, left to right, put pathos and tragedy into that tearjerker by the tub full. Note the professional stance of these killerdillers.

They say the foundation of Democracy is free speech. Free speech should be encouraged, and we know of nothing that encourages free speech like the stuff that has the Government's stamp of approval.

Thus encouraged by our Government, I believe I am safe in writing this. In case they present me with a can with a string I'll likely go to Washington and see what can be done about revising the Constitution of the United States. You can imagine the stir a studio engineer would create down there.

On the other hand, perhaps I'd better not challenge fate by seeing how far my neck will stretch. I'll ask J. D. Dishrow for some pictures he took. Pictures have a habit

of being more convincing than the type of prose I wade through. I hope he got a picture of that cute little blonde aiming a Dagwood sandwich at one of our transmitter men.



This is Miss Betty Lou Isham, member of the Stenographic Department. She shook a mean pair of batons.

Shirley Eggleston, Music Rights, did a dramatic take-off that brought the house down. It seems that three rabbits met a hunter in the woods. The hunter was standing by three trees—one here—one there—and one

over yonder. The rabbits didn't know that the hunting season was closed so a game warden arrested them when they shot the hunter standing by the three trees. Mass weeping followed this rendition. I'm not good at telling stories, so I may have this mixed up.

Charles Avellone, musician, and Charley Dorf, porter, did some rapid fire punning. Dorf's jokes were a little too deep for the average listener.

Gene Lavalle, Recording Library, and announcer Warren Deem did an imitation of Hitler and Mussolini meeting at the Brenner Pass. Tears turned to jeers.

Tereste Sabo played the piano.

Others played heck with a case of beer!



Dan Gooding, our postman, surprised us all when he proved that Charlie McCarthy isn't the only person who can make a human voice come from a block of wood. Dan is an expert in the art of ventriloquism. And that explains the mystery of those phantom voices that have been floating down the empty halls since Dan came to WTAM!



# MICROPHONES

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**Prewar Microphones.** In prewar microphone design, the chief development was in directional pickup. This was a stride forward in the discrimination against unwanted sounds, feedback and background noise. The most efficient directional pickup pattern was the "Super-Cardioid". It effects a 73% reduction in pickup of random noise energy. This was developed by the Shure engineering staff and is being utilized today to good advantage in many wartime applications.

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**Designers and Manufacturers of Microphones and Acoustic Devices**

# NBC THESAURUS

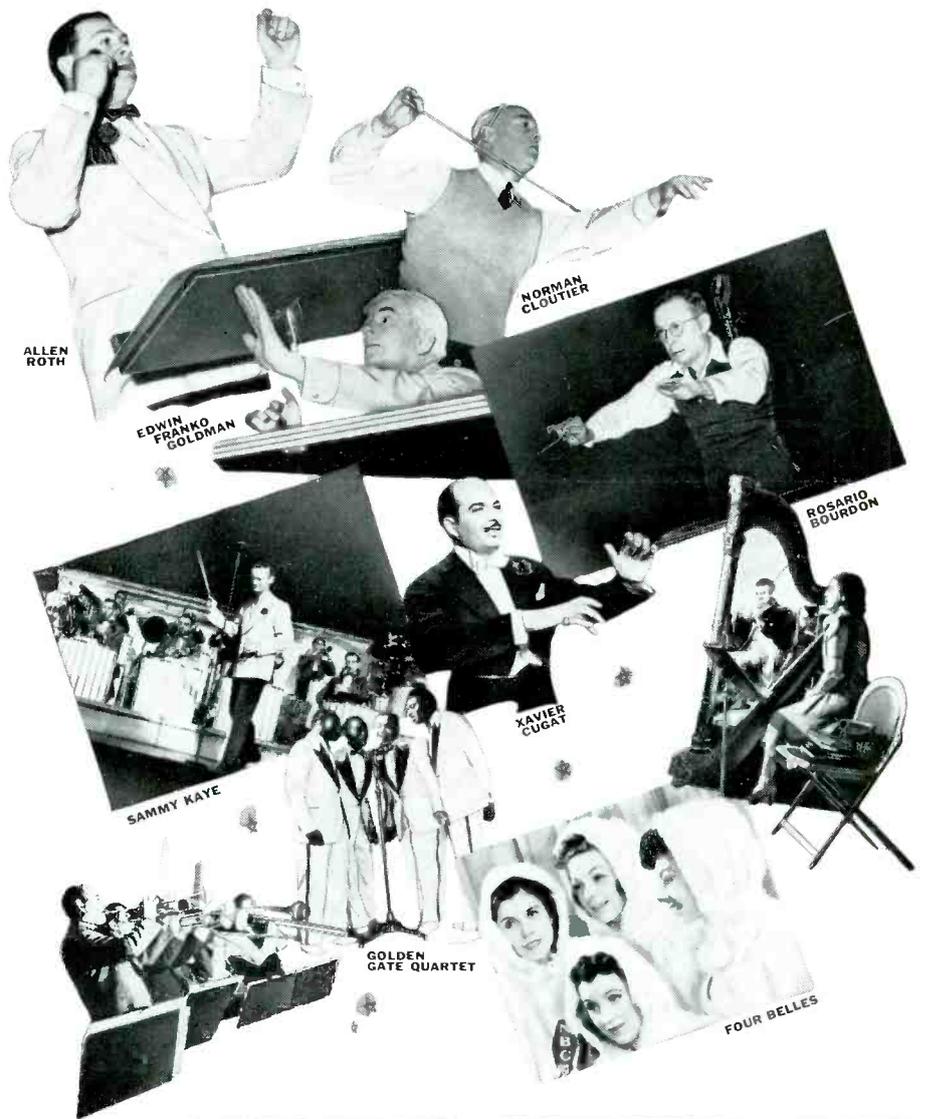
A TREASURE HOUSE OF  
RECORDED PROGRAMS

*Pride of  
the Engineer!*

In 200 stations stretching from Fairbanks, Alaska, to São Paulo, Brazil, from Bangor to Honolulu—Engineers, too, take pride in their NBC THESAURUS programs. Let the Program Director talk about the exclusive artists that are featured in *Thesaurus* shows—The Goldman Band, Allen Roth, Sammy Kaye, The Jesters, Thomas L. Thomas, Dick Jurgens, Rosario Bourdon, Xavier Cugat and other star names . . . *Engineers* at *Thesaurus* stations point with pride to ORTHACOUSTIC—the recording and reproduction standard developed by NBC engineers and introduced by *Thesaurus*. *Orthacoustic* sets the pace for fine, life-like broadcasts by transcription, with “studio quality.”

*NBC Thesaurus* is a treasure house of music—the music today’s listeners want—presented by artists they want to hear—played as they want to hear it.

If your station doesn’t have *Thesaurus*, ask your station manager about it. We’ll gladly send full information, rates and audition samples.



## OTHER SERVICES OF NBC RADIO-RECORDING DIVISION

**NBC Recorded Features**—Complete series of recorded programs—from five minutes to half-hour—musical, dramatic, talks, sketches. “Betty and Bob”—“Flying For Freedom”—“Let’s Take A Look In Your Mirror”—“The Name You Will Remember” and others.

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• Merchandise Mart, Chicago  
• Sunset and Vine, Hollywood

# FCC Reports and Public Notices

From F. C. C. Report No. 51 — (RULES AND REGULATIONS) Dec. 22, 1942, Public Notice 65402:

The Commission en banc today took the following action on Rules and Regulations:

Adopted Order No. 83-C, which continues for a further period beginning January 9, 1943, and ending June 30, 1943, the suspension of the requirements of six months' previous service for radiotelegraph operators.

From F. C. C. Report No. 50, Dec. 8, 1942, Public Notice 65123:

Adopted Order No. 77-B, suspending from January 1, 1943, until further order of the Commission, but in no event beyond January 1, 1944, Sections 12.26, 12.66 of the Rules Governing Amateur Radio Service and Section 13.28 of the Rules Governing Commercial Radio Operators, in so far as the required showing of service in connection with renewal of license is concerned. This Order continues in effect the provisions of Order No. 77-A, issued December 3, 1941, to expire not later than January 1, 1943.

From F. C. C. Report No. 443, Dec. 22, 1942, Public Notice 65401:

The Commission deleted from all outstanding authorizations the frequencies 6370, 11145 and 13050 kilocycles, presently assigned to the Radiomarine Corp. of America for coastal telegraph services, and assigned them to the international broadcast service. Operation on these frequencies is presently inactive, and it is understood that these frequencies will not be needed for coastal telegraph services for the duration.

From F. C. C. Report No. 440, Dec. 15, 1942, Public Notice 65250:

Police Frequencies Allocated to International Broadcast Service.

At the request of the Board of War Communications, the Federal Communications Commission allocated two additional frequencies to the international broadcast service for the duration of the war. These two frequencies, 7805 and 7935 kilocycles, are available for assignment to zone and inter-zone police stations under the provisions of Section 10.44 of the Commission's Rules and Regulations. On the basis that the broadcast transmissions will be intended for reception outside the continental United States and that most of the zone and inter-zone police communication on these frequencies occurs during daylight hours, it is not expected that the police service will cause any interference to the international broadcast service. Zone and inter-zone police stations now licensed to operate on 7805 and 7935 kilocycles will be permitted to continue the use of these frequencies, upon the express condition that these stations do not interfere with the international broadcast service, and subject to such pertinent orders, rules, and regulations as the Commission hereafter may deem necessary to prevent such interference.

F. C. C. Report No. 52 — (RULES AND REGULATIONS) December 22, 1942, Public Notice No. 65403:

The Commission en banc today took the following action on Rules and Regulations:

Adopted an Order suspending until further order of the Commission Subsection (f) (1), (2) and (3) of Section 4.43, Subsections (d) and (e) of Section 4.44, and Section 4.46

of the Rules and Regulations governing international broadcast stations. These particular restrictions were considered unnecessary at this time. This action was taken in order to coordinate the operation of all international broadcast stations in the interest of the Government for the conduct of psychological warfare and to insure maximum flexibility of operation.

The text of the suspended subsections and section is as follows:

Subsection (f) (1), (2) and (3) of Section 4.43:

"(f) (1) Each licensee of an international broadcast station shall make verbatim mechanical records of all international programs transmitted.

"(2) The mechanical records, and such manuscripts, transcripts, and translations of international broadcast programs as are made shall be kept by the licensee for a period of two years after the date of broadcast and shall be furnished the Commission or be available for inspection by representatives of the Commission upon request.

"(3) If the broadcast is in a language other than English the licensee shall furnish to the Commission upon request such record and scripts together with complete translations in English."

Subsections (d) and (e) of Section 4.44:

"(d) An international broadcast station will not be authorized to use more than one frequency listed in any group listed in paragraph (a) without a showing of technical necessity.

"(e) Not more than one frequency shall be used simultaneously under the same authorization and call letter designation."

Section 4.46: "A supplemental report shall be filed with and made a part of each application for renewal of license and shall include statements of the following:

(a) The number of hours operated on each frequency.

(b) A list of programs transmitted of special international interest.

(c) Outline of reports of reception and interference and conclusions with regard to propagation characteristics of the frequency assigned."

At the same time the Commission interpreted Subsections (d) and (e) of Section 4.43 as requiring a single station identification for all stations which are carrying the same program, and as requiring identification of international broadcast stations only at the beginning and end of a transmission.

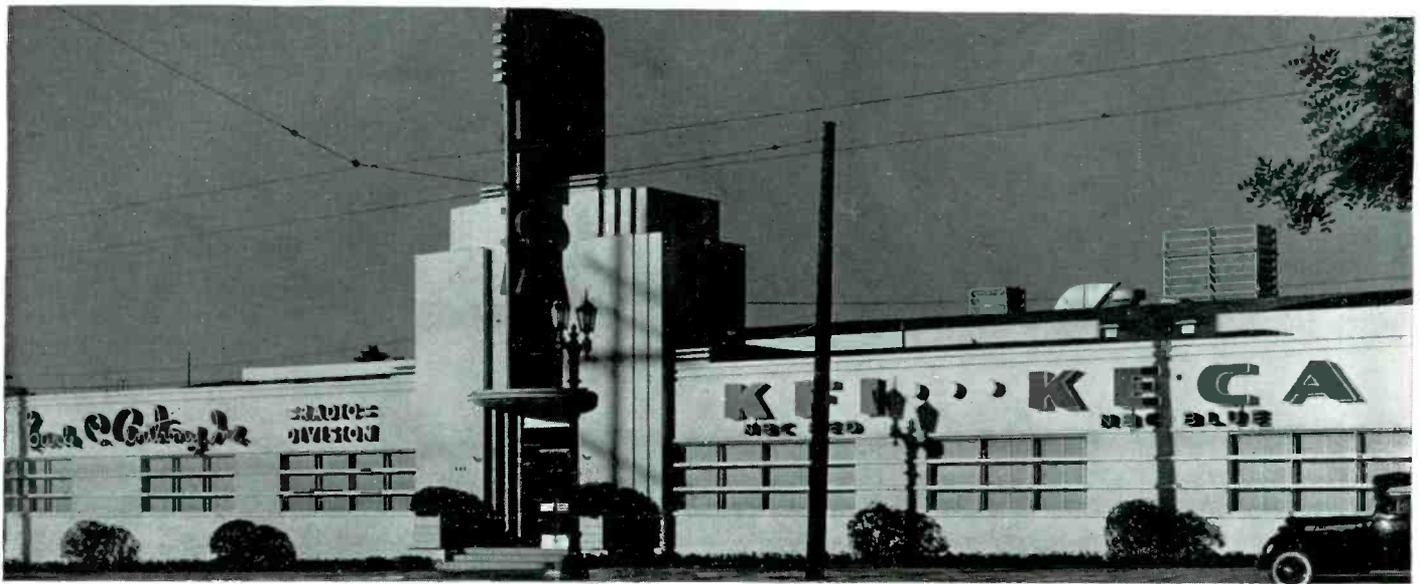
From F. C. C. Report No. 53—(RULES AND REGULATIONS), December 29, 1942, Public Notice No. 65505, the Commission adopted an Order designed to extend the normal license period of an international broadcast station. The order states:

"1. The license term for every international broadcast station, either licensed at this date or licensed hereafter, shall end at the earlier of the following dates:

(a) November 1, 1945, or

(b) The first day after October 31, 1943, on which its operations are not controlled, by agreement or otherwise, by the Office of War Information or the Coordinator of Inter-American Affairs;

"2. The portion of Section 4.3 of the Rules and Regulations, which established for international broadcast stations a normal license term of one year, is hereby suspended until further order of the Commission."



# Los Angeles News

By H. M. McDonald

**W**HAT'S this; a card from Pvt. Jim Wright, dated PARIS! Well what do you know! Our ex-Studio Engineer in Paris already. But wait—there's a U. S. stamp on the card. What's under that blurred cancellation? CAMP MAXEY, PARIS, TEXAS. Gosh! For a moment we thought the war must be over. Yep, Genial Jim is with the 92nd Signal Battalion, in HQ Company. Paris is near the Red River, which separates Texas from Oklahoma. It is only a short distance upstream to Ft. Sill where another ex-KFI-KECA SE, Major B. T. Cole, is stationed. Suppose both boys will come home wearing ten-gallon hats, strumming "geeters" and warbling "Red River Valley".

William F. Grimes, 11th Naval District Communications officer, has been promoted to the rank of captain. From 1933 until he was recalled into active service two years ago he operated the Radio Interference Engineering Bureau, an organization supported by Los Angeles radio stations and public utility companies for the purpose of reducing interference to radio broadcast signals. He is a veteran of the last war, having served as Chief Radio Electrician on the Pennsylvania and Rhode Island in the Atlantic Fleet. He has been prominent in the development of the Naval Communication Reserve on this coast.

Again the best Christmas present received by KFI-KECA employees was a bonus check from Earle C. Anthony, Inc. No one is spending the windfall on non-essentials this year. Many are making extra payments on their homes; others socking it away in War Savings Bonds.

The Studios gang celebrated New Year's Eve in a series of impromptu parties, progressing from the McDonalds, to the Moores, to the Starrs, and to the Leonards for the grand finale. And it was GRAND.

Weather Hindcast—New Year's Day: Sunny; high temperature 70, low 51.

Rationing is said to have reduced traffic 19% here but

it is hardly noticeable. It is just as hard to find parking space as before and there seem to be as many "FULL" signs displayed at parking lots in the central shopping districts as before. It is reported that there were 30,000 automobiles at the Rose Bowl game New Year's, 8,000 more than any previous year.

We hear from a relative in the Army that the meals are served cafeteria style; each man selects what he wants and the amount; the quality is good and there is plenty. But if any is left on a man's plate afterward he is taken aside, reproved, and reminded that someone at home may have had to go without that portion. There is little waste.

Carl Sturdy, KFI TE, has added scientific poultry raising to his long list of avocations. He went at it in his usual thorough manner and the hen house is ultra modern, the last word in sanitation. The hens are kept up off the floor on a wire netting, which allows the droppings to go through. Water is piped in and released a few drops at a time by the hen when she pushes a small valve with her beak; clean, fresh and no waste. When an egg is layed it rolls out of the nest down into a trough; easy gatherings and other laying hens are not disturbed. It's all strictly utilitarian on the inside, but on the outside—ahh—an artistic achievement—no less. With his wood-working machinery Carl turned out all kinds of whatnots and thingamabobs and topped it all off with scalloped eaves decorated with variegated colors. It's just to to. "Razz all you like; I've got eggs and you haven't," he gloats. The fiend.

Helmar W. Anderson, long Chief Engineer at KFAC, Los Angeles, is now with CBS, at KNX.

Reminder to NABETeers on detached duty: renew your licenses before they lapse.

Every man in KFI-KECA Engineering Department is buying War Savings Bonds through the Payroll Deduction Plan.



**CAPTAIN FRANK M. FIGGINS**

Frank M. Figgins was born in 1897 at Kensington, Maryland, and comes from Southern stock on both sides of the family. The family moved to Denver in 1910 where Frank lived until he left school to enlist in the army in April, 1917, where he served in the Cavalry, Infantry, Engineers, Motor Transport and Quartermaster Corps, thus seeing a good cross section of the Army.

Upon discharge in 1919, Frank worked as a jack of all trades as a cow puncher, osteologist, electrician, palaeontologist and machinist until 1924 when he put in three years in radio work in construction, installation and maintenance.

Resumed work as a palaeontologist for the Denver Museum during 1927 and 1928, after which Frank migrated to Los Angeles, starting work for the Los Angeles Broadcasting Company on January 1, 1929, as a maintenance engineer. Public Address work consumed the major portion of his time during 1932 and 1933, during the course of which he broke his arm attempting to hurdle obstacles that the builder thereof had intended should be skirted by public address men.

Convalescing after the broken arm episode, he started to work for RKO as an installation man on the new stage being built for the single NBC show then originating in Southern California, after which Frank went on the NBC payroll when NBC took over active operation of the Hollywood studio. His duties ran the gamut of all engineering department activities through the construction of the then magnificent Melrose studios, three outside stu-

(Continued on Page Eight)

You can still get all replacement parts for your Presto Recorders and Transcription Tables



There is no need to cut down on necessary recording at your station nor to let your recording equipment deteriorate for lack of proper maintenance. All vital replacement parts such as idler wheels, turntable tires, bearings and miscellaneous small parts are on hand for immediate delivery. Cutting heads and pickups are being reconditioned promptly. An A-3 preference rating is sufficient to obtain any parts or factory service. There is no shortage of discs. Your local radio distributor can deliver discs and needles immediately from his stock without requiring a preference rating on your order. But remember, these conditions may not last indefinitely. Wartime demands may at any time prevent our offering this service to Presto owners. We suggest that you recondition your turntable equipment without delay and carry a full stock of discs and needles at your station. Order through Graybar Electric Company or your local radio parts distributor.

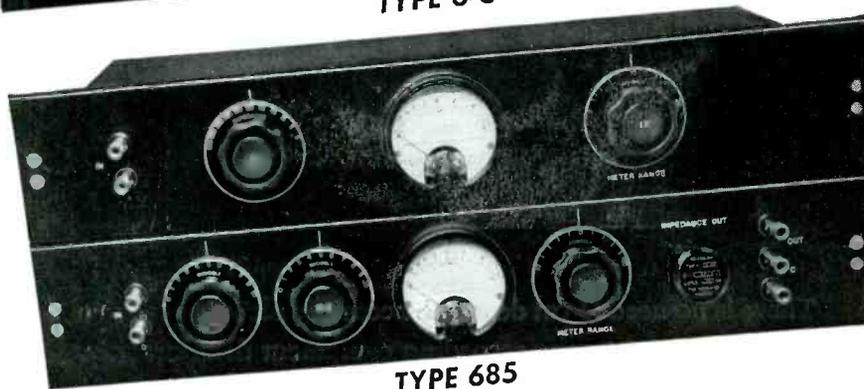
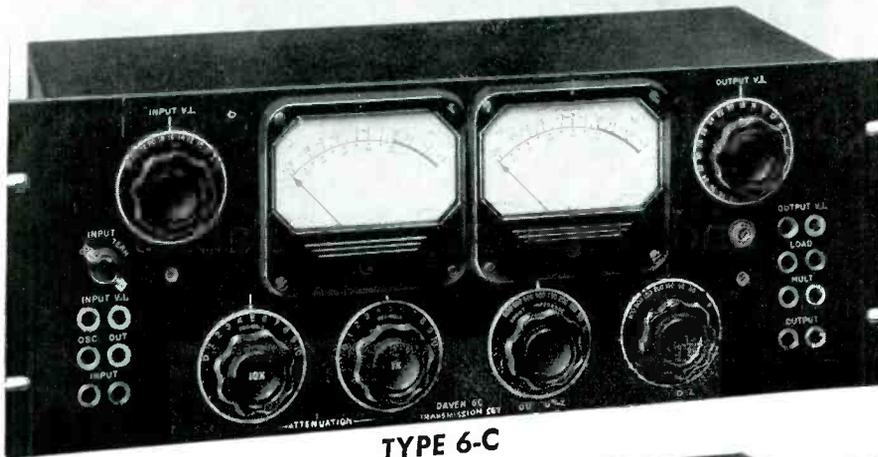
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The reference level is the new standard of 1 mw. across 600 ohms. New Weston Type 30 meters are employed. The attenuation range is from Zero to 110 db. in steps of 1 db. Power range is calibrated from -16 to +45 db. Dial selection of useful network input and load impedances. No correction is required when changing impedances. Overall accuracy is  $\pm 2\%$ . **\$325**

**TYPE 685** An unusually flexible, universal gain measuring instrument for rapid and accurate measurement of overall gain, frequency response and power output of audio amplifiers, this assembly has a useful frequency range from 30 to 17,000 cycles.

It is direct reading in decibels and does not require correction factors or calibration charts. All networks meters and associated apparatus are shielded and carefully balanced, matched for uniform accuracy over this wide frequency range.

Attenuation range is +10 db. to -120 db. in steps of 1 db. Power measuring range is -20 db. to +36 db. Eleven load impedance values, ranging from 5 to 600 ohms are available. Output impedances may be changed from "balanced" to "unbalanced" and to any loss impedance by means of plug-in type matching networks. Overall accuracy is  $\pm 2\%$ . **\$225**

The DAVEN catalog lists the most complete line of precision attenuators in the world: "Ladder", "T" type, "Balanced H" and Potentiometer networks—both variable and fixed types—employed extensively in control positions of high quality program distribution systems and as laboratory standards of attenuation.

Special heavy duty type switches, both for program switching and industrial applications are available.

Super DAVOHM resistors are precision type, wire-wound units from 1% to 0.1% accuracy.

More than 80 laboratory test equipment models are incorporated in this catalog.

Captain Frank M. Figgins

(Continued from Page Seven)

dios at Warner Brothers, El Capitan Theatre and another installation at the old RKO site.

His promotion to maintenance supervisor occurred on June 1, 1938, which position he occupied until leaving the employ of NBC on June 1, 1942, on a military leave to accept a commission of Captain in the U. S. Army Signal Corps.

Frank was active in ATE and NABET, serving as Hollywood Chapter Secretary during 1936 and NABET National Secretary Treasurer from March to June, 1942.

## How to Be a Big Slayer

(In One Easy Lesson)

By Tom "Scarface" Gootee

Do you want to make a big killing among your friends? Are you going to die in obscurity on the obituary page; or will your mugg be plastered all over the front page as a hero? It's up to you! We have trained some of the world's best slayers—and we can train you! Are you tired of reading about hatchet murders? Then axe us! We have all the answers.

Pick your course, and send the coupon below. We specialize in all forms: hammer, poison, gas, hatchet, and love cult. Prices vary slightly west of the Mississippi. But we supply all equipment for you to be a First Class Slayer. With only a little practice, you can go in business for yourself.

Try our "Chicago Special", which includes three tear gas bombs, one bullet proof vest, two complete Thompson sub-machine gun outfits with 30,000 rounds of ammunition, and a subscription to the Police Gazette.

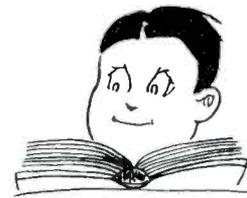
For advanced students we have the "New York Whirlwind Set", which includes all the above plus two dozen Lueger automatics, a repeating Mauser rifle, and a package of Twenty Grands. This set is barrels of fun. Don't allow your friends to think you a dead one; send for this set and let your friends have it. And on cold, snowy days you can really sleigh!

Shoot the dough in to us for either of these courses, and within a week you'll want to slay us.

Broadcast Engineers' Journal, January, 1943 **8**

**THE DAVEN COMPANY**  
158 SUMMIT STREET • NEWARK, NEW JERSEY

# 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 I. R. E.

for December, 1942

### Preparation of Technical Articles

By Beverly Dudley

To appeal to the interests and intellectual requirements of the reader, the text of technical articles must be properly selected, arranged in logical order, and well proportioned, with essential concepts presented in proper relation to one another. To assist in meeting these requirements, a topical outline is given as a basis for the development of research or engineering articles. Recommendations are given for the typing, mailing and proofreading of the manuscript. Suggestions are included for the preparation of diagrams and photographs so that they may be most suitable for publication.

### Copper-Oxide Rectifiers in Standard Broadcast Transmitters

By R. N. Harmon

Improvements in the processing of copper used in copper-oxide rectifiers make practical the use of this type of rectifier in modern broadcast transmitters. Features are reliability, long life, and ability to withstand surges.

### The Half-Wave Voltage-Doubling Rectifier Circuit

By D. L. Waidelech

An analysis of the half-wave voltage-doubling rectifier circuit is made with the main assumption that the tube drop is zero while conducting. The performance characteristics of the circuit as predicted by the analysis are presented together with experimental verifications of several of these characteristics. Operating conditions for which polarized electrolytic condensers may be used and the currents to be expected on short circuit are discussed. The performance characteristics calculated from the analysis are presented as curves suitable for use in the prediction of the performance of an assembled circuit, and in the design of this doubler to meet specified operating conditions. A comparison is made of the performance characteristics of the half-wave and full-wave voltage doublers.

### Some Characteristics of a Stable Negative Resistance

By Cleo Brunetti and Leighton Greenough

By employing positive feedback in a two-stage amplifier it is possible to obtain an input impedance which is equal to the impedance in the feedback circuit multiplied by a negative constant. For a resistance-capacitance feedback circuit the input impedance becomes a negative resistance in

series with a negative capacitance. With the proper choice of circuit constants, the negative impedance can be made to approximate closely a pure negative resistance over any given frequency range. In the apparatus described, high stability is secured by the use of inverse feedback in addition to the positive-feedback loop.

### Thermal-Frequency-Drift Compensation

By T. R. W. Bushby

The conditions necessary for minimizing frequency drift with variation of ambient temperature are examined for various types of circuits. In fixed-tuned circuits the drift can be eliminated by a comparatively simple adjustment of the temperature coefficient of capacitance. In variable-tuned circuits, expressions for coefficient adjustment resulting in minimum integrated drift are given, together with simpler expressions resulting in an approximate minimum. It is shown to be practicable in some instances to design circuits in which the drift is better than ten parts per million per degree centigrade, over normally used frequency ranges, by complementary adjustment of the temperature coefficients of inductance and capacitance. Frequency drift in superheterodyne receiver circuits is discussed, and it is found that the local-oscillator circuit is peculiarly adaptable to drift correction by reason of the complex nature of its capacitance network. Such padded circuits can be very effectively corrected by simple adjustment of the various capacitive coefficients, the drift factor being tracked in a manner analogous to the frequency tracking. The padding of variable-capacitance-tuned circuits for the express purpose of drift correction presents the simplest means of minimizing thermal drift in such circuits. The necessary expressions are given, together with the results of some experimental work.

### Attenuation of Electromagnetic Fields in Pipes Smaller Than the Critical Size

By E. G. Linder

A theoretical and experimental discussion is given of electromagnetic fields in pipes smaller than the critical size, especially with regard to attenuation, and based upon waveguide theory. It is shown that the rate of attenuation, as the wavelength increases and passes through the critical value, approaches a high asymptotic value. Confirmatory experimental data are given. Simple formulas for attenuation are included.

## **Electronics**

for December, 1942

### **Electron Tube Terminology**

By *W. C. White*

A discussion of such terms as "electron", "electronic", and "electronics"; some history dealing with the early tube names and some suggestions for proper naming of electron tubes by one who has been closely associated with vacuum tube engineering since the beginning and is familiar with its communication and industrial applications.

### **Aircraft Antenna Characteristics**

By *Paul J. Holmes*

By measuring the length of a fixed aircraft antenna, making some empirical allowance for its proximity to the fuselage or the size of the ship, reactance and radiation resistance may be estimated with accuracy to permit the design of a dummy antenna.

### **Graphical Determination of Power Amplifier Performance**

By *Robert I. Sarbacher*

Complete performance of Class B and C power amplifiers may be obtained graphically from static characteristics of tube, through use of plastic calculating device. Results obtained quickly from routine schedule involving only arithmetic operations.

### **Simple Harmonic Wave Analyzer**

By *R. F. Thomson*

Speed of testing and inspection of audio frequency devices is facilitated through use of a simple amplifier-filter-rectifier instrument, designed to read directly the amount of second and third harmonic distortion.

### **An Experimental Television System**

By *Robert Mautner and Frank Somers*

Successfully operated in the 114 Mc band just before the war, the inexpensive video equipment described is semi-portable and susceptible to adjustment without elaborate test equipment. It should, therefore, be of immediate practical value to educators and of interest to men storing up knowledge of the art for future commercial application.

### **Impedance of Some Simple Electrical Circuits**

By *Beverly Dudley*

The impedance and admittance of simple elements, connected in series and in parallel, is presented as a means for simplifying and aiding in the analysis of complicated electrical circuits for communication or industrial applications.

### **Avoiding Patent Pitfalls**

By *Rudolf F. Wild*

This article contains various suggestions which will be helpful to inventors in securing patents on their inventions. While the suggestions may be well known to employers having patent departments, they may be unknown to inventors in small firms, or to individual inventors who have little occasion to follow the basic requirements imposed by the Patent Laws upon an applicant for a patent.

## **Bell Laboratories' Record**

for December, 1942

### **A New Frequency Divider for Obtaining Reference Frequencies**

By *F. R. Stansel*

In recent years several new types of frequency dividing circuits have been developed. Of these probably the most successful is the regenerative frequency divider, which has today entirely replaced the multivibrator in the reference frequency system of the Laboratories. The basic form consists essentially of three elements: a modulator, an output circuit tuned to the sub-multiple frequency to be produced, and a harmonic generator. Unlike the multivibrator, the regenerative frequency generator cannot operate without an input frequency. Should the input frequency fail, the output drops to zero, and thus off-frequency operation does not occur. In addition, the output current of the generator is a relatively pure sine wave, and additional "clean up" filters are not required as they are with the multivibrator when a sine wave is desired.

## **Communications**

for December, 1942

### **Pack Communications Equipment for Fire Fighting**

By *A. H. Meyerson*

Description of actual equipment, presenting useful data on compact transmitting and receiving units operating on 117 mc.

### **Filament Control and Its Tube Life Affect**

By *D. W. Jenks*

Graphic data is presented showing the effects of operating various types of filaments above or below rated voltages.

### **High Frequency Response of Video Amplifiers**

By *Albert Preisman*

The author is well qualified in this subject, and his work is recommended to those interested in the video side of broadcasting.

## **BUY U. S. WAR BONDS**

### **From MacArthur to Hallicrafters**

General Douglas MacArthur wired a Christmas message to the Hallicrafters employees commending them for their war effort and asking for their continued support. The message, read over the public address system to all the employees, was as follows:

"On this sacred day of our Lord we, the soldiers on the firing line, give thanks to you soldiers on the production line for the sinews of war that make our victory possible. We are dedicating this Christmas Day to the defeat of our enemies—yes, this Christmas Day, the day after and every day thereafter until we establish peace on earth and good will to men."

## Supervisors

We quake before these supermen,  
They make our blood congeal;  
Who else can loop two copper wires  
And make the copper squeal?

## Studio Engineers

Fademen we tip our hats  
And loudly cheer your art:  
Your finger tips control the sobs  
That come from out the heart!

## Announcers

You are men of destiny—  
Just think what you can do!  
A playful little jab can make  
The Red turn awfully Blue!

## Nemo Men

You have one standard answer that  
Suffices night and day:  
"It's strange you aren't getting it—  
It's leaving here OK!"

—Bert Pruitt.



### KFI Transmitter Engineers Solve Meat Problem

When shortages of food are first rumored Engineers Packard, Griffin and Evans turn to and raise their own. The picture shows how they met the shortage of beef. They slaughtered their two 450 pound bull calves, dressed, and had them ready for freezing in five hours. The meat is kept in rented lockers in cold storage plants, along with their surplus rabbits, chickens, and vegetables from their Victory Gardens. There are many freeze locker places in Los Angeles, mostly for the convenience of sportsmen.

**F**ROM that high resolve was born the Army-Navy Production Award which stands today as our fighting forces' joint recognition of exceptional performance on the production front . . . of the determined persevering, unbeatable spirit which can be satisfied only by achieving today what yesterday seemed impossible!"

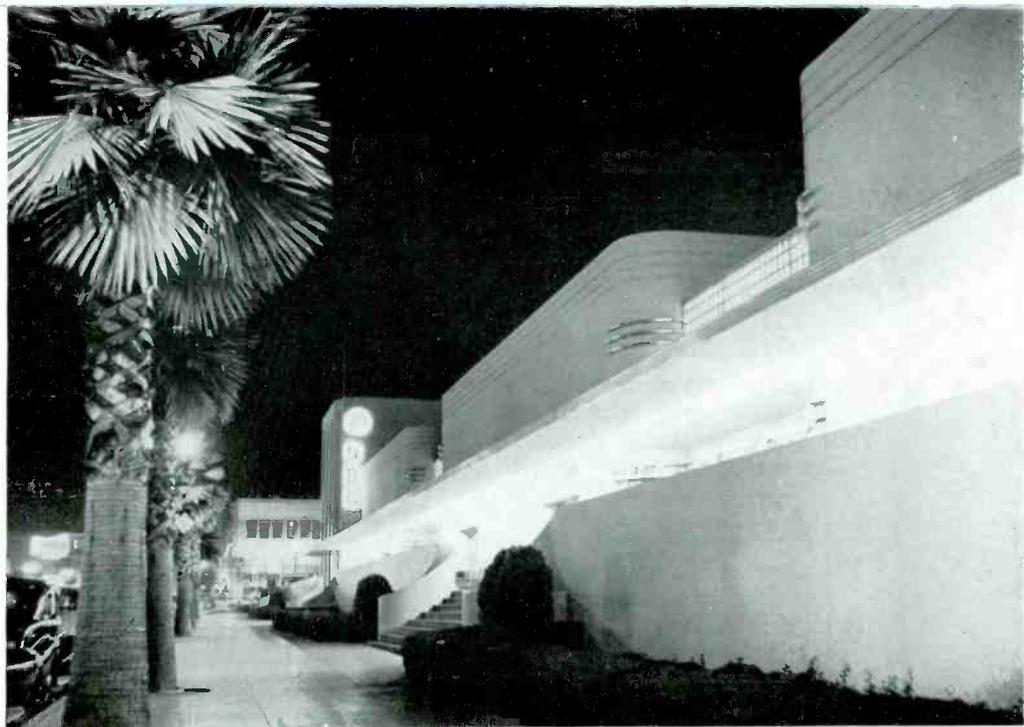
We're sincerely proud of our award —its significance will always be our goal.

BLILEY ELECTRIC COMPANY · ERIE, PA.

*Bliley Crystals*

# H O L L Y W O O D

By Bob Brooke



**HAPPY 1943 Gang . . . Lots Happening in Hollywood . . . Adams to Marines . . . Joe Kay Takes Over Field Department . . . More Shows Than Ever . . . A Few Babies . . . Some New Men . . . Fine Weather . . .**

**JOURNAL . . .** Congratulations, Stolzy, on another fine Christmas issue . . . And our sincere apologies for no Hollywood column in the last two Journals . . . In November we were too busy until too late and in December our copy was on its way but so were the Journals . . . Welllll, it was just the same old stuff about fine California weather anyway . . . Yes sir, weather that beats any we've ever had . . . Like summer these days and no reason at all to go to Palm Springs . . . Why we're growing vegetables in our back yard the like of which you've never seen . . . Regular Paul Bunyan vegetables . . . And to receive the Journal in this fine weather is really something . . . We look at it and think of all it's been through coming from blizzard-swept New York . . . We think of you and Millie and Ed., Jr., and Ted Nolen and Resides and Jordan, who only a few short weeks ago were basking in our Hollywood sunshine, and we've taken a vote and decided to open a Hollywood Engineering Chapter and all of you, including Gordon Strang, can come out and run your slide rules at Sunset and Vine . . . Be sure to bring your butter and eggs along . . .

**FIELD . . .** Miv Adams, Hollywood Field Supervisor the past four years, has been commissioned as a specialist and first lieutenant in the Marine Corps . . . Joe Kay, ex-New Yorker and handler of many big time studio and field shows in Hollywood, takes over for the duration . . . Miv started Hollywood NBC as its first engineer in charge of the old RKO layout and from there went to the San Francisco studios until called back to take over the Field Department when RADIO CITY was built . . . He costarred with New York's Brown in handling the famous Canton Island Eclipse expedition . . . He developed our present highly successful method of handling Army Camp commercials . . . He handled the department during one of the most hectic periods of Hollywood's radio history . . . We're sorry to see Miv go but we think he's found himself a swell berth and we know the Marines can use his experi-

ence and resourcefulness . . . Good luck, Miv, and stay out of the way of any Jap presents . . . In taking over Miv's job, Joe Kay has no bed of roses . . . With more and more demands on field equipment and equipment itself getting mighty scarce, we're certain there's a job ahead for Joe . . . However, Joe's background at New York NBC and his long experience in field and special assignments in Hollywood should stand him in good stead . . . And then, too, he'll have a few pretty sharp boys helping him in the field department . . . So may we say WELCOME, Joe, and just call on us . . . And again so long, Miv . . . Best of luck . . .

**BLUE . . .** Biggest news from the Blue is in the satisfactory completion of the now famous Christmas day Coca-Cola round robin . . . Popular Blue chief Denechaud handing out bouquets and receiving them on all sides . . . Naturally all who participated are mighty proud of their small part . . . But I think they all should really get a special bow for a lonely Christmas away from home . . . Particularly one man sent to a godforsaken desert camp and who walked the streets for eight hours, not being able to find friends or lodging . . . Matter of fact, a quiz of all members that day would find many a man too busy to partake of proffered Christmas dinners or would find many a tale of transportation difficulties while loaded down with a couple of hundred pounds of amplifiers and mikes . . . But we will say a job well done is one of the greatest satisfactions in the world and particularly when it is appreciated . . . Congratulations, Blue, and to the NBC men who participated . . . Not much other news from the Blue this month altho Lorenz sez to tell the NY gang that he's still alive and kicking . . .

**MISC . . .** A few changes have taken place in NBC personnel . . . Ken Hicks, formerly of Chicago and for the past two years in the Hollywood recording room, has transferred from the "Salt Mines" to maintenance for a little rest and recuperation . . . Rick Rickberg replaces Ken in Recording . . . Another recent item concerns the return of Ken Owen to NBC after a year building airways radio stations thruout Africa . . . Ken returned to get rid of a bit of malaria and joined us in Hollywood instead of his old hangout, San Francisco NBC . . . Ken had some tall tales

to tell and they were especially pointed as he told them in his own quiet, technical way . . . They came only after much prodding and questioning by the boys in the lounge . . . Altho they were well censored, Ken's picture of central Africa held all that we read as youngsters about life on the Dark Continent to be still true today . . . He spoke of the complete filth and squalor of African cities of 500,000 population and predicted that under U. S. guidance these conditions could be cleaned up in less than a decade . . . He spoke of conditions cleaned up in a year by Pan-American that remind one of our health campaigns in Panama, Hawaii, and the Philippines . . . Ken was with us a couple of months and found it so hard to live on our present base salary that when Douglas Aircraft asked him to join them he took a regretful leave and accepted a research position in the lab at Douglas . . . Good luck, Ken, maybe when the war is over you'll be back with us in a job you liked so much . . .

**RATIONING** . . . We are in our fifth week of gas rationing in California and from all appearances it hasn't changed the look of Sunset and Vine very much . . . True you can now find a parking place in downtown Hollywood at noon and occasionally find a spare place in the NBC employees' parking lot on a quiet day . . . But lenient rationing boards have given some 400,000 supplementary rationing books to the drivers of Southern California and it has resulted in adequate gas for almost all business mileage plus some that isn't for business . . . Talking to people impresses one with the many apparently unfair allotments . . . Radio people crying because they don't have enough and others bragging about how much they have . . . Looks like the fast talkers made out all right as usual . . . However, it is obvious that the system has reduced pleasure driving, as indicated by a notable reduction in traffic at night and over weekends . . . Most of my trips are short and I hesitate to pick up riders for only a few blocks . . . Often feel rather guilty . . . Think I'll have a sign printed "Sunset and Vine" on one side and my home corner on the other side . . . Then hang it on the windshield and see what happens . . . As for other kinds of rationing, Southern California has been hard hit . . . The butter, eggs and meat situation has been so bad that many wrote their midwest relatives and asked for two lamb chops for Christmas . . . In the paper it looks as tho the national situation is growing steadily the same . . . We of course wont mind as much if the whole country shares our scarcity, but it did get the people around here when for several weeks Southern California, and particularly the defense areas, were practically without essential foods . . . In any event victory gardens are no longer just a patriotic fancy . . . And I always did like oatmeal . . .

**PERSONALS** . . . Jake O'Kelly, well-liked ex-Senior Control Supervisor NY and more recently of the Hollywood staff, is back in the Army . . . Drafted recently, Jake is reported to be one of three chosen for officer training from Mather Field, Sacramento, California . . . Further reports indicate Jake awaits healing of a fractured ankle before he reports at OTC . . . In World War I, Jake went through every major battle with the famous Rainbow Division and came out without a scratch to continue in aviation radio for the Army until shortly before he joined WEAJ in about 1926 . . . We're all wishing you just as much good luck this time, Jake . . . Another ex-New Yorker just sworn in as a senior Navy Lieutenant is Bob Schuetz, head of the Hollywood recording division but better known for his work in audio facilities and in charge of such major installations as

(Continued on Page Fifteen)

## Immediate Delivery of McElroy Audio Oscillator and Key!



Get Your  
Ear On  
This!

**\$11.85**  
Powerful Master Oscillator MS-700, 110  
volt, AC or DC. Headphone output. Speaker  
can be cut out. Handsome plastic case. Helps teach or  
learn code.



Put Your  
Fist On  
This!

**\$2.25**  
Less shifting  
lever

When the World's Champion Telegrapher makes a stream-  
key, you can bet it's tops! Model 200, with heavy metal  
base, baked wrinkle enamel. 3/16" platinum contacts.



**W**ASHINGTON CHAPTER of NABET gave a buffet dinner at the Ambassador Hotel in honor of Mr. A. E. Johnson who left for Dartmouth College to become a Lieutenant in the United States Navy. Everyone had a pleasant evening in spite of the next day of headaches. Frank Russell, V.P. of NBC, and Carlton Smith, WRC Manager, turned out to bid Lt. Johnson farewell.



Lt. A. C. Johnson, U.S.N.R.



Don H Cooper

the job. Don says his favorite sport is fishing. We hope his new duties don't cause him to miss his yearly sojourn at Sunken Meadows.

Replacing Mr. Cooper as Operations Supervisor is Keith Williams, formerly Field Supervisor. Mr. Williams also joined NBC in 1928 after serving a hitch in the Coast Guard. Between rounds of golf Keith found time to act as Studio Engineer Control Supervisor and since 1934 Field Supervisor. Presidential trips were his specialty.



Keith Williams

New faces at the helm — Don H. Cooper appointed acting Engineer in Charge of Washington Division. Don is only thirty-seven years old, but has put in five years at sea and fifteen years with NBC. He joined our ranks in 1928, when Mr. McElrath was Engineer in Charge of Washington Division. WRC was then located in the Riggs Bank Building. Mr. Cooper has held about every position except Field Supervisor in this office and knows

## Capitol Punishment

By Gordon I. Henry



Bill Chew

Other promotions which we will cover in detail next month: Dorson A. Ullman from Junior Control to Field Supervisor; Ralph L. Hamill from Relief Control to Junior Control Supervisor; and William Chew from Studio Engineer to Relief Control Supervisor. Upon receipt of a stamped self-addressed envelope and three good Washington telephone numbers we will furnish further intimate details about any of these gentlemen.

Visitors during the past month included Lt. Walter Godwin, USNR; Lt. (J.G.) John Hogan; Lt. L. A. McClelland, Air Force; and Dan Hunter, NDRRC, all former S.E.s; also Mr. Frank McIntosh, chief of the Civilian Radio Section of WPB. Incidentally, Frank was Chief at WOW in 1928 when we served our first BC hitch there.

Rumor has it that Hamill, while doing a Boy Scout deed for Eddie Burg, now in the Navy as a Warrant Officer, nearly burned down Burg's home, but the timely intervention of the Bethesda Fire Department saved the day. We never liked to rake leaves either!

Howard Sugg, section chairman of the WPTF group and Transmitter Supervisor at that station, has received his commission in the Naval Reserve and is on active duty. How about some news from WPTF? (Yes—how about it? Ed. S.)

Our new member at WMAL, Robert E. Dalton, has consented to furnish monthly news from the Blue Station as a part of this column — which follows directly:

Eddie Burg, of The Evening Star's kilocycle palace, near Bethesda, Md., now returns the salutes of subordinates in the square rig of a Warrant Officer, U.S.N.R. Burg, a Radioman in the same outfit during World War I, according to the last communique, was reviewing "basic theory" at a famed tanker port on the Gulf of Mexico. A handmade leather "ditty box" for the stowage of personal gear was presented Eddie by the "skeleton staff" at WMAL prior to his sudden departure.

John J. Nagy, recruited from the news picture field, eventually took over Burg's watch. Nagy cannon-balls over from Arlington every work day as does Bob Dalton.

Dalton is ex-NBC N. Y. & Chicago field and was a Signalman at fifteen in The Royal Canadian Naval Volunteer Reserve during the "War to End Wars".

Charlie Fisher and Dalton overheard reminiscing about skylarking down in Tegucigalpa and Puerto Barrios, Honduras, plus way stations in the Republica de Panama, couple of decades back, when both were members of the Banana Navy.

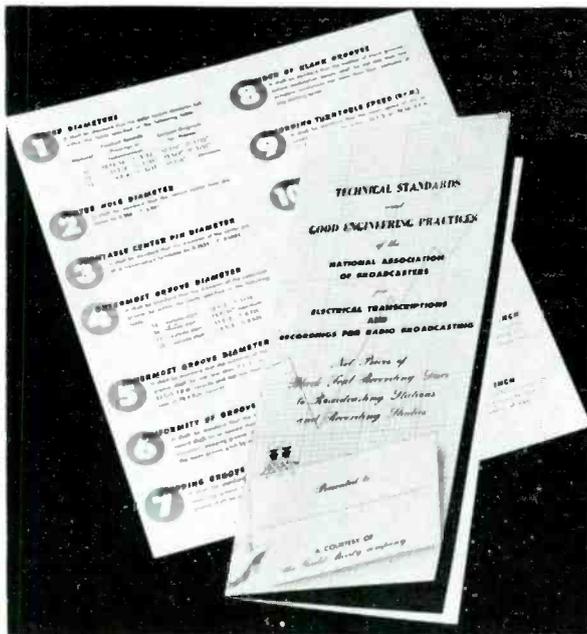
A bit of a personnel turnover cramped Chief Engineer

Wadsworth's usual vacation assignment as unofficial National Geographic Society cinematographer. Well, ennyhoo, that's our impression after viewing a few miles of Waddy's colored movie film. Mr. and Mrs. Wadsworth picked up the Keys of Atlantic City and Manhattan, however, before calling quits 'till next issue — quien sabe? —End WMAL.

Thanks for the help Dalton. Now all we have to do is get him to write the rest of the column so we can put our feet back on the desk!

After the swell dinner we just ate at Bob Terrell's home in Silver Springs, Md., it's no wonder our mind is sluggish. C U next issue with more news.

**RECORDING STANDARDS IN CONVENIENT FORM by GOULD-MOODY**

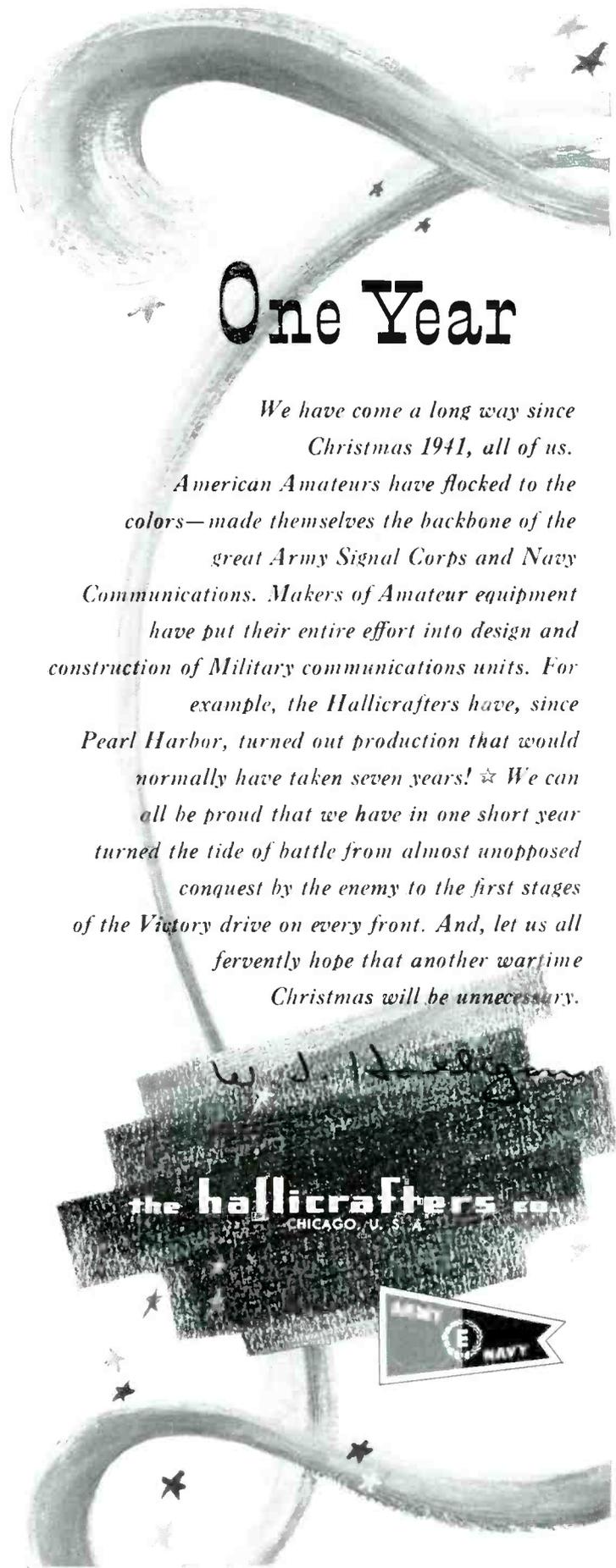


"Technical Standards and Good Engineering Practices," printed on a tough, durable stock, able to handle plenty of punishment, done in two colors, contains the fourteen pertinent facts as established by the National Association of Broadcasters for electrical transcriptions and recordings for radio broadcasting. It may be obtained free of charge by writing to Mr. Sidney Gould, Gould-Moody Company, 395 Broadway, New York City.

**Hollywood News**

(Continued from Page Thirteen)

Hollywood Radio City . . . Bob reports for a six-week officer training schedule in Florida to be followed by assignment to Radar in one of the Eastern Colleges . . . Bob is taking Mrs. Schuetz (Helen Welty) along and a proud little wife she is too . . . Guess that leaves Captain Frank Figgins' house in the valley vacant for awhile . . . And Chief Announcer Buddy Twiss just comes through with the news that he has been assigned to Pacific operations as NBC War Correspondent . . . As Buddy always complains that we don't mention him enough in the Journal, we herewith appoint him the JOURNAL'S War Correspondent in the Pacific Area. Now Bud, it's your own fault if you don't make every issue . . . 73 from the Hollywood staff.



**One Year**

*We have come a long way since Christmas 1941, all of us. American Amateurs have flocked to the colors—made themselves the backbone of the great Army Signal Corps and Navy Communications. Makers of Amateur equipment have put their entire effort into design and construction of Military communications units. For example, the Hallicrafters have, since Pearl Harbor, turned out production that would normally have taken seven years! ☆ We can all be proud that we have in one short year turned the tide of battle from almost unopposed conquest by the enemy to the first stages of the Victory drive on every front. And, let us all fervently hope that another wartime Christmas will be unnecessary.*

*W. J. Hallicrafter*  
**the hallicrafters co.**  
 CHICAGO, U. S. A.





Photos by Joe Conn

## New York News By C. A. Younger

**A**NOTHER PILLAR of the New York Operating Group has been called to war. Charley Grey is now on leave while he serves as Captain in the Army Service of Supply at Washington, D. C. Chicago will remember Charley for his work there as Central Division Operations Supervisor while New York remains indebted to him for his organization activities when NABET's predecessor, the ATE, was being formed. Charley has been one of our outstanding Studio Engineers: he has been responsible for the technical excellence of many difficult and important programs such as the NBC Symphony and the Metropolitan Opera Broadcasts.

The UNITED STATES NAVY now includes FE Merle Worster in its ranks as Warrant Officer. Merle joined NBC early in 1941, was transferred to the Blue Network a year later. He had been a member of the Studio Group until just a few weeks preceding his call from Uncle Sam, when he was transferred to Field. Merle had plenty of what it takes to make a true patriot in deciding to leave his family at this time since an "heir raid" is expected at his home this Spring. Mail addressed to Radio Electrician Merle Worster, U.S.N.R., will reach him at the Fleet Sound School, Key West, Florida.



Radio City, New York

JOURNAL STAFF PHOTOGRAPHER Joe Conn is in the Navy too. On another page next issue will be found an extended history of Joe and his contributions to the success of this publication. The striking photos which now grace this column are his work and your scribe is greatly indebted to Joe for them.

### Suggested Sign for Control Rooms

Please be kind to our engineers — they are harder to keep than clients.

\* \* \*

THE HEAVY HAND of Ol' Man Winter struck lustily through the Engineering Personnel during December. MC Supervisor Paul Herrold was one of the first victims suffering a severe attack of the grippe. A few days later, the Three Busy B's of Transmission, Whit Baston, Ogden Bowman and Charley (NY Sec. Treas.) Bennis were simultaneously laid low with respiratory infections and the "flu." Chapter Chairman Harry Hiller and MC Supervisor Loyal Lane were later victims.

NO — PROFESSOR!! That wasn't an earthquake which rocked your seismograph on December 24th. That was merely the cumulative effect of the several Christmas celebrations which occurred in and around NBC and the Blue Network Offices. Epicenter was on the fourth floor, in the territory of the Press Department. Everybody who is anybody in Broadcasting seemed to be on hand that day with the exception of Operation Engineer George McElrath who was at home awaiting the outcome of a race between Santa Claus and the stork. Santa arrived according to schedule, and the stork a day later — with an heiress.

NEW YEAR'S ENTRY was punctuated on the Blue Network by the arrival of Announcer Walter Herlihy's daughter at exactly 12:03 a.m. on the morning of January 1st. Walt was at Roseland, announcing the program from there, when SE Vic Bary, at the ND-10, relayed the news to him. Miss Herlihy was the first child to be born in the city of Boston this year.

A LEGENDARY EDITOR once told a cub reporter, "When a dog bites a man, that's not news — but when a man bites a dog, that IS news." We have the counterpart of this transposition at the Master Control Desk. For when a Studio Engineer says that his schedule gives him a pain — that's not news. But when he says a Paine gives him his schedule, that means we have a new Engineering Clerk named Jack Paine who is making up the checkerboard as

an understudy to Bill Wells. Bill expects to be in the Army soon.

**JOURNAL CIRCULATION MANAGER** Ted Kruse has taken himself out of circulation at last. Just before Christmas, and just after he had been transferred from Maintenance to the Night Studio Group, our debonair devotee of the gaming table married Miss Mary Buck, who we understand, is from Pennsylvania. A pre-nuptial party was staged for Ted at Riley's, but details about it are lacking. All that is known is that Ted was presented with a distinctly unique lamp designed by some of the more inventive and creative minds of the Maintenance Department.

\* \* \*

**A GRAND INVESTMENT** any way you look at it. The New York Chapter has just purchased two \$500 War Bonds.

\* \* \*

**AMONG THE ALUMNI:** Harry Jones, ex-RCA Phonophone Argentina branch, but more recently NBC Recording Specialist, now with OWI Film Unit as Supervisor of Recording Operations . . . Second Lieutenant Vic Tervola formerly one of George Stewart's Recording Engineers, recently sent him a letter postmarked in North Africa . . . Dewey Sturgell, Blue Studio absentee, now in Honolulu doing civilian job for the U. S. Navy Bureau of Ships . . . Neil Youngster of the Recording Department, now Civilian Specialist for the Army at Fort Monmouth, dropped in recently to wish us a Happy New Year. So did Les "Doc" Miles, currently putting on his own show at WNEW as well as performing a special service for the Government related to the war effort . . . Bernie Tullius, another graduate of the Blue Network, was in town recently. He is regularly stationed in Chicago as Resident Engineer for the

Hazeltine Service Corporation . . . Address mail to Captain Walter R. Brown, A.U.S., Serial O-918852, A.P.O. No. 10078, care Postmaster, New York City . . . Television's Bob Fraser now on loan to RCA institutes where he is teaching.

**ON THE HOME FRONT:** SE Maurice Kamke and S.E. Dick Berrien now steadily assigned to the midnight to 8 a.m. trick as the result of a "deal" with Operations Supervisor Paul Gallant . . . Tony Hutson, former Field Councilman, back with us after an extended absence due to illness. He is now a member of the Day Studio Group . . . Ed Wilbur lives in Teaneck, not Bloomfield, N. J., as previously reported . . . Ed Schabbehar back home after an extended stay in Cleveland, doing a special job for the Recording Department . . . Irv Grabo doing a swell mixing job on the Opera . . . ME Carlos Clark serving in an advisory capacity on the DCB in Rockville Center . . . SE Gil McDonald affiliated with WERS, same town . . . SE George Anderson busy with WERS in Fairfield, Conn.

\* \* \*

**BUDDHA IS NOW BEING RATIONED:** SE Ed Whittaker voluntarily took off thirty pounds of avoirdupois, thus saving more than trouser cuffs when buying new clothing.

\* \* \*

**NABET NEWCOMERS:** New York welcomes ten recent additions to its membership rolls. Group 2 men are: for the Blue, T. J. Cain at WJZ, Bound Brook, and J. L. Decker, Day Studio. For NBC, R. E. Griffith, Day Studio; J. Morrissey, Recording, and S. Mayo, Maintenance.

The other five men are NBC Apprentices, M. L. Connes and W. DuBois, currently serving in the Studio Group; G. Moch and A. Sisko, Field, and L. Mahler, Maintenance.

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.

**PROMPT DELIVERY** direct from the manufacturer to any part of the United States, Canada, South America and to some foreign countries. **ALSO AVAILABLE** recoating service for your old aluminum discs. Delivery in one week. Details on request.

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DISCS**



# Cleveland News

By Bert Pruitt

## Engineer Gets Fan Mail Via Western Union

In my November column, I mentioned something about the drooping grid of an 866. That statement proved that the communication system of the United States is an admirable network that functions with startling efficiency.

For thirteen years, I have dreamed of receiving fan mail like announcers, pianists and hillbillies. This wish increased in due proportion to the time I spent in radio. My wish was finally fulfilled, and I'm so thrilled I can't wait until I quote some of the more friendly telegrams I received . . .

Bert Pruitt,  
WTAM, Cleveland,  
Ohio.

Amazing stop Send us the characteristics stop  
Anxious to see grid plate current curve of 866 stop  
(Signed) Censored  
Flagstaff,  
Arizona.

Isn't it wonderful to be famous? But that is only the beginning . . . Listen to this one.

Bert Pruitt,  
WTAM, Cleveland,  
Ohio.

We are looking for a man who can design an equalizer that will make the average run of singer outdo Caruso. We assume, after reading your Novem-

ber news, that you can do this with the ease of an 866's grid thumbing its nose at an unfriendly pair of plates. Name your own price.

(Signed) Censored  
Sacramento,  
California.

The fan letters I received would fill this journal. Some of the other fellows might get jealous if I grabbed too much space, so I will quote just one more telegram —

Bert Pruitt,  
WTAM, Cleveland,  
Ohio.

We admit that we have been operating our transmitter in a kindergarten fashion stop We blush when we find it necessary to admit that the grids on our 866's have been hanging free since 1932 stop We are applying for a patent, for we have proof, by actual operation, that 866 tubes work without grid stop We are giving you due credit if the patent goes through stop We are sincere stop Take another look at an 866 stop

(Signed) Censored  
Raccoon Hollow,  
Tennessee.

A letter from Captain Cecil S. Bidlack (SE) advises us that he has been transferred from Fort Hayes, Columbus, Ohio, to Miami Beach, Florida.

We wont discuss New Year's resolutions . . . who ever heard of anyone keeping them?

## The Cat's Revenge

We have heard of the prankish tricks bears play on people who camp in the great out-of-doors. We likewise know that elephants have a weakness for peanuts. That cats have a weakness was unknown to us until very recently.

A certain announcer came to work two hours late one morning. This wouldn't have made news if the announcer had explained that a polar bear stole his car keys . . . or that a vitamin-seeking elephant wouldn't take his trunk out of the announcer's overcoat pocket.

It was a little unusual, we thought, when the announcer explained that his pet cat turned his alarm clock off during the night!

You've got to get up early in the morning to top the ingenuity of (CS) J. J. Francis. J. J. goes to work before the sun pushes the moon from the sky, and who would think of going to work that early without having a steaming cup of coffee? Not J. J. There's a story connected with J. J.'s java. It's something like this: When his alarm rings, a relay begins to labor, this in turn causes the perculator to labor. By the time he is dressed his coffee is ready. J. J. drinks it, then goes to work.

Horace Clark (TE) leaves WTAM to work with War Specialty group at Western Electric.

C. W. Smith, former SE, now an Ensign of the Navy.

John A. Cheeks (TE), now a First Lieutenant in the Army. John has been with WTAM for 13 years. During the past year he has been teaching Under-Engineer trainees for the Army Signal Corps. His classes were held at Case School of Applied Science.

Lew West (SE), dropped in for a chat the other day. Lew is doing some kind of work connected with Columbia

(Continued on Page Nineteen)

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\*Reg. U. S. Pat. Off.

## Greetings From Broadcast Engineers Now Engaged in War Research

ON BEHALF of those engineers who are associated with the Columbia University Division of War Research, may I extend a hearty toast to the New Year.

Most of us who have left the broadcast field for defense jobs have found ourselves so busy that we have lost contact with our former associates, so it is indeed fortunate that we can use the *Journal* to greet our old friends. Our work is interesting and so absorbing that we usually work seven days a week and we are not restricted as to working hours. Our salaries are such that we neither gain nor lose on net income based upon previous earnings. Most of the scientific staff live near the laboratory in Mineola, New York, and pool their cars in order to save gasoline and rubber.

We have the finest technical facilities to work with and some of the nation's most outstanding electronic engineers direct our work. Dr. D. G. C. Hare, formerly of the Texas Company Geophysical Laboratory, is the Director of the Airborne Instruments Laboratory, the group with which I am associated. The following is a partial list of broadcast engineers engaged in war research at this laboratory.

W. B. Lodge, CBS; H. R. Skifter, KSTP; O. W. Towner, WHAS; J. W. Wright, G. D. Gillett, consulting; C. R. Evans, KSL; C. R. Miller, KSL; R. K. Blackburn, WTHT; Lauren K. Findley, KSTP; J. N. Fricker, NBC Television; R. A. Isberg, NBC Television; J. H. Hidy, KFI; Dan Hunter, NBC, Washington; G. E. Makinson, WTAM; D. M. Miller, KSTP.

C. F. Noyes, G. D. Gillett, consulting; R. L. Oswald, CBS; E. C. Drewes, CBS; Henry Riblet, KLV; J. G. Ross, WGY; Robert Schultz, KSTP; Sydney Warner, Conn. State Police; N. D. Webster, KFBK; L. P. West, WTAM; W. H. Williams, Blue-Hollywood; Harry Jacobs, KPO, KGO; Myron Case, KGO; Earl Sorensen, NBC, Hollywood.  
—R. A. "Al" Isberg.

### Cleveland News

(Continued from Page Eighteen)

University. We asked him what kind of work he is doing but he changed the subject . . . It's either a military secret, or Lew just doesn't want to talk about it since the job added twenty pounds to him in six months.

Some people shuffle off to Buffalo . . . Not J. D. Disbrow (field supervisor). He shuffles back and forth between Cleveland and Pittsburgh to handle the Dr. I. Q. programs.

Frank Whittam isn't particular where he shuffles. "A nemo's a nemo," says Frank, (SE), "and direction has little bearing on the flicker of a V. I." Frank and Alvin McMahon (CS), are pretty fair shufflers with a billiard cue.

Earl Holl switching from air conditioning to Engineering Group. Donald Serafy replaces him . . . in Air Conditioning.

### News From Station WGAR

XMTR: Don McCollister is interested in the study of earth vibrations in relation to forge hammers near XMTR plant.

We gave Walt Widlar, WGAR Engineer, a call and

asked him if he could give us some literary tidbits regarding the happenings at WGAR. He said he could, he did, and here are his tidbits.

R. M. Pierce, Chief Engineer, is awaiting call from the OWI to leave the country in an advisory capacity to the Signal Corps. Lloyd Wingard will be Acting-Chief during the absence of Pierce.

Ken Sherman is teaching Lab at Fenn College in his free time. Ken developed a wooden analogy of a generator that the Army may reproduce in quantity for Lab instruction.

Bill George has a class at Thomas Edison School. Recently, Bill conducted the entire class on a tour from the school to the XMTR plant.

Dwight Howland keeps a sharp ear tuned to the air raid alarm circuit.

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**HERBERT LEROY RICE AGENCY**

# WPTF Raleigh

By J. Willard Dean

*(The author of this new column has been connected with the Engineering Department of WPTF since March, 1931, in the Studio and Master Control, Recording and Field, principally that of Field for the past several years. He is a Member of the WPTF 10-Year Club.)*

**W**ELL, here it is the second month of Infant '43. That's hard to believe in one way, but when you realize it's only a matter of days before installment No. 1 of your income tax is delinquent, you get pale around the gills and your pants suddenly become infested with ants. Oh well, we pulled thru' the month of January, what with all the Christmas bills coming in, surely we can muster up enough courage to encounter the deadline of March 15th. Especially since the extermination of this Beastly Maniac Herr Schicklegruber is of such prime importance.

Hats off to our genial chief, Henry Hulick, and Manager Richard H. Mason for their untiring efforts in delivering a new studio layout ahead of schedule, even though they were confronted with many, many complications involving priorities, shortages of materials and the like. We think it one of the most elaborate jobs in the country. Drop in to see us, we think you'll agree. Completely sound-proofed studios, including auditorium, housing a Kimball Grand organ, new equipment throughout, offices more spacious than ever before and a reception room that is not only beautiful within itself but adorned with three Southern belles, who will undoubtedly bring you back again, namely: Nine Gray Liles, Peggy Fox and Frances White.

Rub-a-dub-dub, three men in a tug (with apologies to Mother Goose).

Frank Higgins (TE)—Destroyer Stephenson.

Pres Pearson (SE)—Tug unknown.

Sam Liles (TE)—One of our old-timers puts out to sea. What sea is a military sea-cret. Beware, mates, he deals a mean hand. Unofficial sources have it that this guy Liles had a hand in the disruption of the financial institution of Monte Carlo.

Best of luck to Bob Royal (SE) with his new adventures in the USA Air Corps ground crew. We'll have to hand it to General Hershey, he surely knows how to select an Army.

Here's wishing Frank Colvert (SE) all the success with his application for OCS USA. It's a cinch.

After teaching a twenty-week ESMWT course at North Carolina State College, Felton Williams (TE) is wondering if his efforts have gone to naught, when one of his apt students inquired, "What type receivers do radio stations use in order to pick up network programs so well? They always seem so clear." Sorry I missed the answer—I'm enrolling for the next semester.

Word has it that transmitter men will be letting themselves in and out of the grounds in the near future. Keys are being made now. It's an even bet that the cells of Guy Beard and Nick Pieler get together with another cell after their first trip in the rain.

Lawton Metcalf (SE) being awfully perturbed about the whole thing believes himself actually a member of NABET after spotting his name in the Christmas issue of the journal. How about his card, Washington?

Waldo Rood (SE) still insists his brat can take mine over in a pugilistic way. However, since I haven't taken out any liability insurance on his "dooks", I deem it unwise to schedule the battle just yet.

Our sympathies go to Supervisors Tripp and Sugg with their sordid headaches in making out schedules with the renowned manpower shortage that seems so prevalent everywhere.

Oh, by the way WRC—please accept our alibi for the accentuated lows on the Fort Bragg Cavalcade Show, recorded here at "PTF" on the 5th. "D" line service from the camp . . . just sixty miles off.

Our congratulations go to Virginia Tatum, newly appointed Program Director, in the absence of Graham Poyner, Lt. (j.g.), USNR. It might also be well to add that Virginia is a definite exception to the rule, "Beautiful but dumb."

Wesley Wallace, WPTF's veteran announcer, is now undergoing rather arduous chores in completing his officer's training curriculum at Aberdeen, Maryland.

Announcer Milton Estes has been "tagged" Sergeant York by his colleagues, as a result of a recent bird hunt. Boasting of a bird a shot, bagging nine. However, I haven't as yet found anyone with an invitation to a bird dinner . . . strange, huh? Well . . . Milt's a great fisherman, too.

Without further ado, compliments should be tossed in the directions of Peggy Dean, Continuity Supervisor, and Phil Ellis, Chief Announcer, for the job which they're most capably handling.

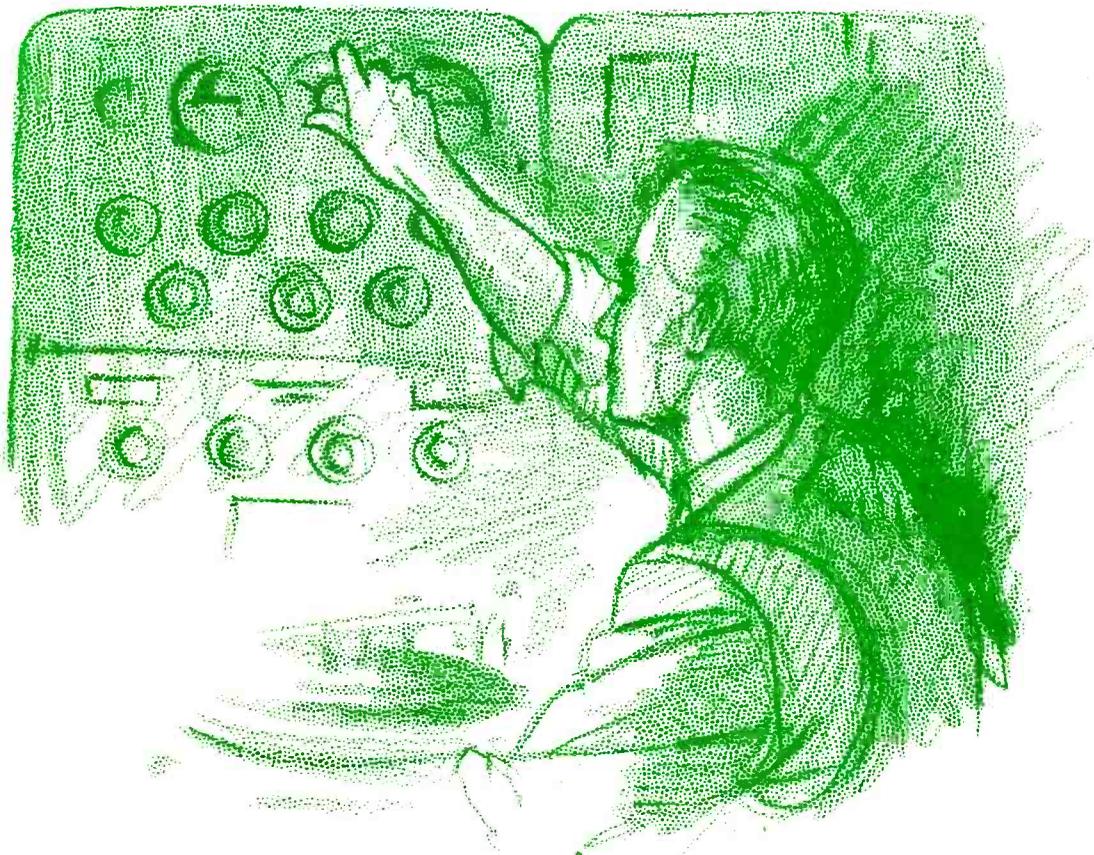
Gordon Meriwether, former bookkeeper, now Yeoman 3rd Class, USNR, stationed at Raleigh Recruiting Office, says there's an education in the Bluejacket Manual!

Just received word from Lady Killer Ollie Carpenter, who is handling the war bond sales here at the station, that the chips are really rolling in . . . just topped the \$83,000 mark. Killer, I'm beginning to catch on.

## Television Hangs On

During the month of December, 1942, the F.C.C. reports the following television applications received:

W6XAO	Don Lee	Los Angeles, Calif.
W6XDU	Don Lee	Los Angeles, Calif.
WCBW	CBS	New York, N. Y.
W2XBT	NBC	New York, N. Y.
W2XBU	NBC	New York, N. Y.
W2XGE	G. E. Co.	Schenectady, N. Y.
W2XI	G. E. Co.	New Scotland, N. Y.
WNBT	NBC	New York, N. Y.
WRGB	G. E. Co.	New Scotland, N. Y.
W2XCB	CBS	New York, N. Y.
W3XPR	Philco	Philadelphia, Pa.
W3XP	Philco	Philadelphia, Pa.
W3XE	Philco	Philadelphia, Pa.
W3XWT	Dumont	Washington, D. C.
W2XMT	Metropolitan	New York, N. Y.
W2XVT	Dumont	Passaic, N. J.
W10XKT	Dumont	New York, N. Y.
W2XVT	Dumont	New York, N. Y.



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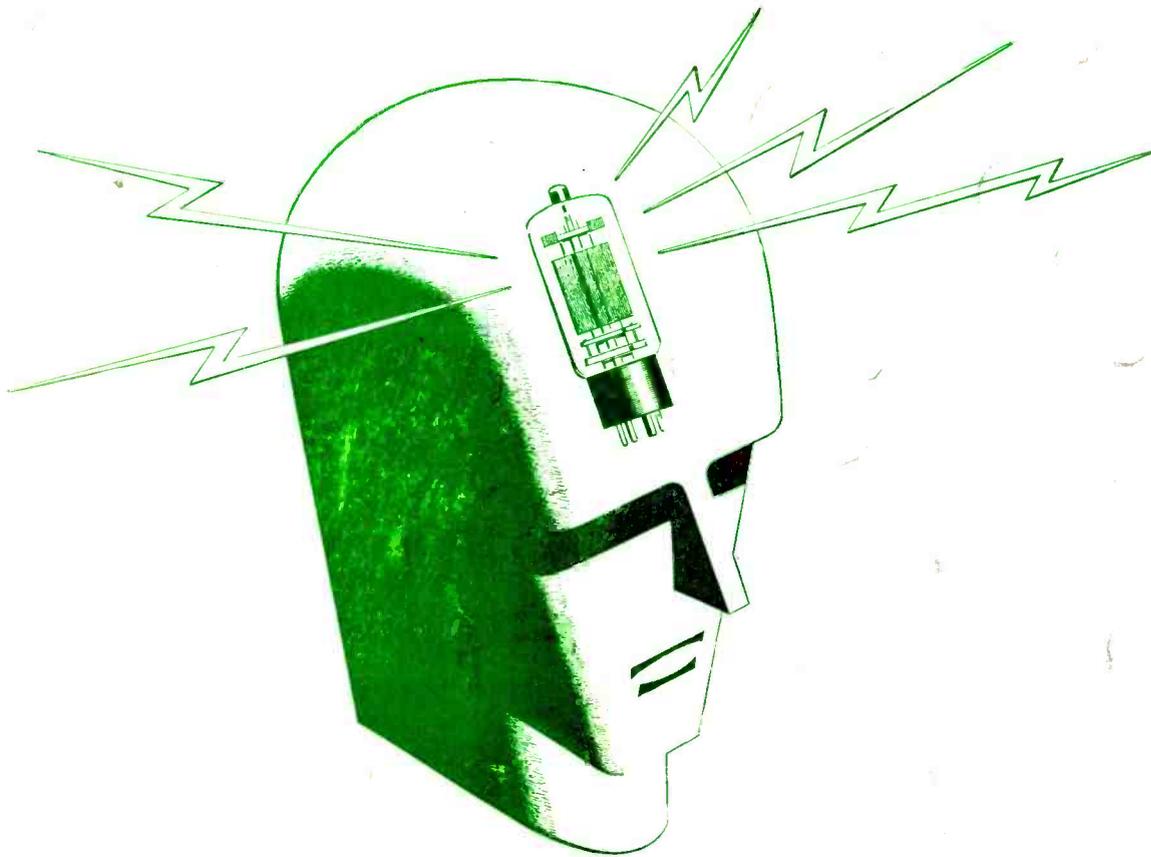
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**This is a war of mobility and speed.** Mobility on land, sea and in the air is made possible by speed of communication. *Radio carries voice, code and pictures at the speed of light.*

**This is a war of morale.** Soldiers, sailors and home folks must be informed and entertained. Understanding must be maintained with allied peoples. Courage and hope must be brought to those awaiting liberation. *Radio broadcasting builds morale.*

For more than two decades, the Radio Corporation of America has pioneered in the progressive development of radio, electronics and television. In the present crisis, those developments — in communications, broadcasting, research, engineering and manufacturing — are performing services of vital importance to the United Nations. Out of RCA's war experience will come new and finer products and services for industry, the home, and the nation — to help make life more than ever worth living.



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Army-Navy "E" to the RCA Radiomarine Service

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