

THE BROADCAST ENGINEERS' JOURNAL

Merry Christmas

YEARBOOK
75c a Copy

TABLE OF CONTENTS PAGE 150

DECEMBER
1941

TERMINAL RADIO CORP.

CONSOLIDATES AT A NEW ADDRESS



FOR BETTER SERVICE to our patrons, Terminal Radio Corp. three years ago opened its doors at 68 West 45th Street. This move placed us in a better position to render quick and more convenient service to a greater number of customers in different parts of the city. The present emergency now dictates another move to maintain our record of service to the radio industry.

FOR BETTER SERVICE . . . we are now consolidating the stocks of radio parts and equipment from our two stores into new and larger quarters at

85 CORTLANDT STREET

AFTER January 15th, at our new address—12,000 square feet on one floor—we will maintain New York's largest and most dependable source of supply in the radio field. By concentrating our ample supplies under one roof we hope to expedite deliveries of essential merchandise under present conditions.

Broadcast station engineers in midtown New York will especially benefit by our enlarged facilities and increased delivery service. In the meantime, we will conduct business as usual at our present addresses.

For radio sets and records only, we will continue at 70 West 45th Street, in a completely modernized store under the capable management of Jack Haizen.

THE NEW TERMINAL SET-UP

85 CORTLANDT STREET

AFTER JANUARY 15th, our new home for radio parts and equipment, amateur apparatus. All the latest transmitters and receivers on display and in operation.

HAM SHACK: A rendezvous for hams to congregate amid all the newest developments in radio communication.

RECORD DEPARTMENT: A complete stock of records and recording equipment.

70 WEST 45th STREET

AFTER DECEMBER 15th, a completely modernized store devoted exclusively to radio sets, records and accessories, under the management of Jack Haizen.

Enlargement of facilities providing more and larger listening booths, larger stock of records and a complete line of all radio sets, phonographs, and accessories. No radio parts and equipment will be available at this store.



NEW YORK'S LARGEST EXCLUSIVE RADIO SUPPLY HOUSE

TERMINAL RADIO CORP.

GREETINGS FROM NABET'S PRESIDENT
EDWARD C. HORSTMAN



To all those who would instill into our everyday existence a greater understanding of the beauties of life; to those who would inspire a richer and fuller meaning to our concurrent problems; to those who would strive to preserve the ideals of America—each participant in the vast industry of broadcasting—I extend most hearty and sincere

GREETINGS OF THE SEASON!

EC Horstman

President of NABET



SUN RADIO

WISHES ITS MANY FRIENDS

A Merry Christmas

and A Happy New Year

A GRAND GIFT

FOR ANY HAM!



HALLCRAFTERS SX-28

Here is a 15 tube 6 band receiver that will warm the cockles of any ham or would-be ham's heart! The new 1942 Super Skyrider SX-28 sets a new high in quality performance at a moderate price. Features two stages of pre-selection with calibrated handspread on 80, 40, 20 and 10 meters.



OTHER HALLCRAFTER RECEIVERS IN STOCK!

Model S19R — SKY BUDDY
Model S20R — SKY CHAMPION
Model S22R — MARINE
Model SX24 — DEFIANT
Model SX25 — SUPER DEFIANT
Model S29 — SKY TRAVELER

ALSO

ALL ECHOPHONE MODELS

EC-1 EC-2 EC-3 EC-4

RECORDS MAKE EXCELLENT GIFTS

We Have a
Complete Selection of
VICTOR
COLUMBIA
DECCA
BLUEBIRD
OKEH, etc.

Classics - Popular
Symphonies
Operas - Operettas
Concertos, Etc.
Also Needles and Albums

OUR 1942 RESOLUTION To the Engineer

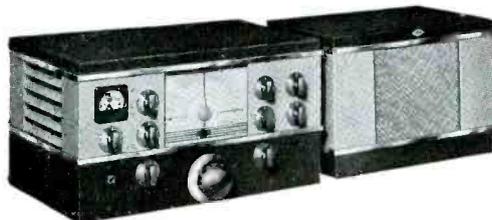
Resolved:

—To continue to provide as good a service as is humanly possible in the face of present, adverse conditions by maintaining complete stocks of all standard radio parts and electronic equipment. At this writing, we have available for immediate delivery such well-known products as

**Thordarson • Stancor
Ohmite • I. R. C.
Cornell - Dubilier
Bud • Triplett
Jones • Johnson
G. E. • R. C. A. • Weston
and many others**

"Try Sun for Service"

A LONG - TIME FAVORITE!



NATIONAL NC-200

You'll find features galore in this modern 12 tube communications receiver, including an extremely effective noise limiter. The crystal filter offers exceptionally wide selectivity on both CW and phone. Has 10 calibrated coil ranges, each with its own scale on direct-reading dial.

OTHER NATIONAL RECEIVERS IN STOCK

NC-45 NC-100XA HRO
NC-100A NC-101X HRO, Jr.

Complete Descriptive Literature Sent on Request



NEW YORK'S OLDEST and LARGEST COMPLETE RADIO ORGANIZATION

Telephone BArcley 7-1840



ENJOY DX

AT ITS BEST!



HAMMARLUND HQ-120X

Designed to meet the most critical demands of both the amateur and professional operator. Far and away one of the most outstanding receivers on the market. Ultra modern 12 tube superheterodyne covering 31 to 54 mc. (9.7 to 555 meters) in 6 continuous steps.



SUPER — PRO

This is the very last word in ultra-fine receiver engineering. Includes every feature for improved performance. Expressly designed for commercial services where peak performance and unlimited flexibility are paramount.

Write for complete descriptive folders on either or both of above models.

We Stock All Standard RADIOS and RADIO-PHONOGRAPH COMBINATIONS

ANSLEY
ADMIRAL • EMERSON
FRED-EISEMANN
GENERAL ELECTRIC
MOTOROLA
PHILCO
PILOT
RCA VICTOR
SENTINEL
STROMBERG-CARLSON
ZENITH, Etc.

Get Sun's Low Prices!



Statement from
NABET Vice-President
J. H. Brown



J. H. BROWN
Vice-President, NABET

*It gives me real pleasure to extend
season's greetings to the ever increasing
membership of the NABET and to all
our firm friends in the industry.*

JAMES H. BROWN

ALLIED GLASS BASE RECORDING DISCS



for broadcasting stations, sound recording studios, schools, musicians, etc. — available for prompt delivery in the professional 16 and 12 inch sizes.

FEATURES:

Durable, flexible special glass base.

Standard overall thickness—every disc uniform thickness—no change of the cutting angle necessary.

Smooth, guaranteed, accurate-size holes—accurate in diameter—accurately centered—drilled directly in the glass base—the same as aluminum.

Extra smooth outside edge—no cutting your hands.

Coating better than the original Allied aluminum base discs, which have been preferred and used in leading studios for the past five years.

Fit any standard make recorder or transcription equipment.

Carefully packed and shipped in special, convenient, safe, easy-to-open, easy-to-use containers—every disc in every shipment guaranteed to reach you in perfect, ready-to-use condition.

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

ALSO AVAILABLE
recoating service for your old aluminum discs. Delivery in one week. Details on request.

⊕ **Prompt Delivery** direct from the manufacturer to any part of the United States, Canada, South America and to some foreign countries.

ALLIED RECORDING PRODUCTS CO.

21-09 43rd Avenue

Phone STillwell 4-2318

Long Island City, N. Y.

Cable: Allrecord New York



V. J. DUKE
Trustee



C. W. PHELAN
Treasurer



G. E. STEWART
Trustee



G. M. SELLAR
Trustee

Merry Christmas from

the JOURNAL STAFF



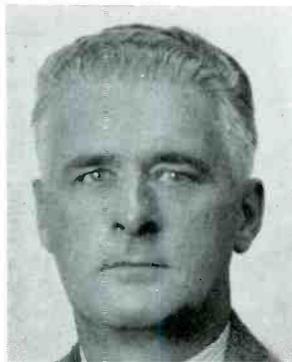
ED HORSTMAN
Director Sales and Promotion



ED STOLZENBERGER
Managing Editor



F. R. ROJAS
Co-ordinator



DAVE MOLONEY
Ass't Treasurer



JOE CONN
Staff Photographer



TOM GOOTEE
Staff Writer

ART POPPEL
Subscription Manager



ROSS PLAISTED
Cartoonist



ED MacCORNACK
Cartoonist



TED KRUSE
Circulation Manager





***“The finest professional
recording equipment
in the entire world”***

We are happy to Greet the Radio Recording Industry at this Holiday Season, and to thank our many friends whose experience and considered opinion has permitted them to recommend our equipment throughout the past year.

As we usher in the New Year of 1942, we are happy with the thought that the first Scully Master Recorder, made a generation ago, is starting its twenty-second consecutive year of superb service.

The first step toward installation of Scully Master Recorders in your studios is to —

Provide for SCULLY MASTER RECORDERS in Your Next Budget

SCULLY MACHINE COMPANY

62 WALTER STREET

Tel. Bridgeport 5300

BRIDGEPORT, CONN.

David Sarnoff's

Christmas Message



DAVID SARNOFF
President, Radio Corporation of America

I am glad to have this opportunity to congratulate the engineers and technicians upon their achievements of 1941. To listen to news scooped in the span of seconds from cities separated by continents and oceans, is one of the wonders of this Radio Age. It is thrilling even to the veterans of radio to hear NBC switch to Ankara, then to London, Berlin, from there back to New York and on to San Francisco to contact Tokyo, Singapore and Batavia. This magic in communication bespeaks the untiring efforts of the engineers behind the transmitter and the microphone.

I have every faith that the engineers of radio are well prepared to meet an even more complex crisis should it arise in 1942. The radio engineer is one of America's intellectual shock troops; his contributions to science and to the service of the public are strong ramparts of national defense.

For the New Year, I wish you every success. May all good things related to health and happiness be on the 1942 calendar for you and yours.

A handwritten signature in cursive script that reads "David Sarnoff".

Holiday Greetings



WILLIAM MORRIS AGENCY, Inc.

New York

Chicago

Hollywood

Established 1898

A Christmas Greeting

FROM

Niles Trammell



NILES TRAMMELL

President, National Broadcasting Co.

It is fitting that at Christmas we should greet each other — not as executive to subordinate, for we all are employees — but as men working together through the days of the year toward a common goal.

We have all of us good reason to be thankful on this particular Christmas, even though the year has brought its measure of anxiety, of fresh obligation and new challenge. Our country has called for greater effort. We can take modest pride in our answer to that appeal.

This year is soon over. The next, we know, will bring more urgent demands for even greater sacrifice. I am certain that we can count on each other in meeting those demands cheerfully, confident that in so doing we share in preserving the American way of life, and hold out hope and courage for a confused world.

None has more richly earned his share of the credit due to radio than the engineer. His skill, his ingenuity and his loyalty have made it possible to multiply radio broadcasting's usefulness to our government and our fellow countrymen in an hour of great national need. I am grateful to the Broadcast Engineers' Journal for the opportunity of expressing that thought here, in this annual Christmas Yearbook.

Christmas is traditionally a time for good cheer in the company of men of good will. Let it be so this year despite the problems that confront us. And may I extend to you, and to your families, my warmest personal wishes for a joyous holiday and a sincere hope that the New Year will bring happiness to all.

Niles Trammell

A Great Big Hand to . . .



TOM ROWE, at the controls of the Alka-Seltzer National Barn Dance since its beginning eight years ago.



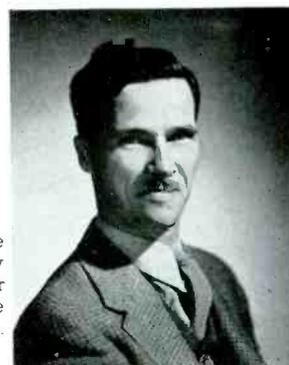
HUNTER REYNOLDS, who knows all the answers on the Quiz Kids program . . . when it comes to engineering.



JAKE O'KELLY, Los Angeles. Three times a day he's on the job for Lum and Abner broadcasts.



"BY" SPEIRS, whose work does something for the Morris B. Sachs Amateur Hour every Sunday from WENR, Chicago.



HERB WYERS, in the control room every Saturday night for the Murphy Jamboree from WLS, Chicago.



BILL PERRY, New York.



TOM GOOTEE, Chicago.

Intricate switching by these two gives us the Alka-Seltzer News of the World.

. . . We're glad they're on the controls when we go on the air.

WADE ADVERTISING AGENCY
Chicago, Illinois



Frank E. Mullen Greets Our Readers

FRANK E. MULLEN
NBC Vice-President and General Manager

During the past twelve months American radio and radio broadcasting have made historic strides. With more than half the world at war, radio has met the challenge and brought to the people of the United States unbiased, first hand accounts, day by day, of these stirring events.

All this has been made possible because of the ingenuity and foresight of American radio engineers and technicians. They have been on the job night and day. The American listener no longer marvels at nightly pick-ups from Russia, Germany, Java or Iceland. He expects this as a regular service.

So, on the eve of a New Year, I am happy to greet the engineers and their families, and to congratulate you all on your splendid services to radio during the past year. I sincerely hope that the New Year brings you rich blessings of happiness and contentment.

Frank E. Mullen

For Your Co-operation

We Thank You



THE BIOW COMPANY

9 ROCKEFELLER PLAZA

NEW YORK CITY

Greetings from O. B. Hanson



O. B. HANSON
NBC Vice-President and Chief Engineer

To The National Association of Broadcast Engineers and Technicians:

Through the courtesy of the Journal, may I extend to the members of NABET my annual greetings, wishing all of you and yours a Merry Christmas and Happiness throughout the coming year.

Nineteen forty-one records an important milestone in the History of Broadcasting as it marks the start of a Commercial Television Service in the United States through the dedication of the NBC Pioneer Television Station, WNBT, New York, on July 1st. Vision by Radio transcends all previous methods of Communication, opening new markets, fields of endeavor, and opportunities for all of us.

This is the Radio Age, and Radio Communication and other Radio devices are assuming roles of paramount importance in National Defense. Radio Broadcasting becomes a vital arm of Defense, and those of us privileged to call ourselves NBC Engineers are ready and willing to shoulder whatever additional responsibilities it may be our duty to assume.

Sincerely,

A handwritten signature in cursive script that reads "O. B. Hanson".



Music Corporation of America

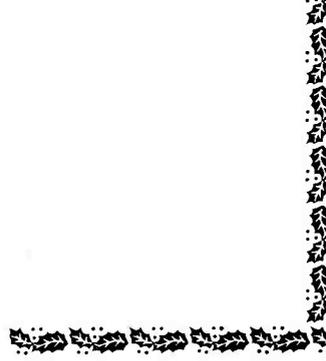
thanks the

N B C

ENGINEERS

for their fine help and co-operation

during the past year





Holiday Greetings
from
William S. Paley

To the engineers and technicians of radio, my most cordial Christmas greetings. In a year beset with the strain and uncertainty of the defense effort, the men responsible for the technical operation of America's great networks have responded fully, quickly and unselfishly to the demands placed upon them.

I am confident that no matter what complications the future may bring, the resourcefulness of the radio technical man will be equal to the occasion. There can be no full happiness until the world is again sane and decent, but of what joy, contentment and satisfaction there is to be had, I wish for all of you, during 1942.

Sincerely yours,
WILLIAM S. PALEY.



WILLIAM S. PALEY
President, Columbia Broadcasting System



Season's Greetings

KAY KYSER

AND ALL THE GANG

A Message From CBS's
Director of Engineering

E. K. COHAN



E. K. COHAN
Director of Engineering, Columbia Broadcasting System

My hearty greetings to all the radio engineers and technicians from coast to coast — the men who have made, operate, and maintain for America the finest broadcasting facilities in all the world!

Cordially,

E. K. COHAN



Merry Xmas
and
Happy New Year
To the NBC Engineers



Edgar Bergen
Charlie McCarthy
Mortimer Snerd

A Message from WOR's President
Alfred J. McCosker



Technical developments have made 1941 an outstanding year in Radio Industry. We at WOR, are grateful to the technicians and engineers for their work in making this year such a success; and I am speaking for all of us when I extend to the ATC of WOR, the NABCT and to the Broadcast Engineers' Journal my sincerest best wishes for a Merry Xmas and a Happy New Year.

Alfred J. McCosker,
Pres. WOR

HOLLYWOOD



Season's Greetings

JACK BENNY

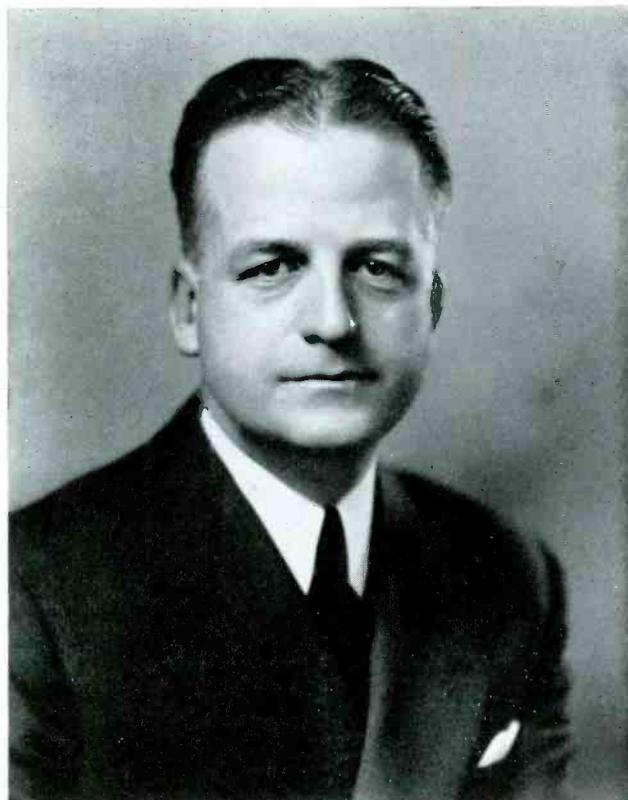
and

MARY LIVINGSTONE



A Message from WOR's Chief Engineer

J. R. Poppele



Season's Greetings and my sincere best wishes to the members of the ATE of WOR, the NABCT, and The Broadcast Engineers' Journal. With the great growth of the Radio Industry and its continued expansion into new fields of radio science, I want to thank the technical staff whose aggression and splendid efforts have aided in the continued growth and improvement of WOR. My expression of thanks is also extended to the engineers of NBC and CBS for their year-round cooperation. Also greetings to the men who have left their radio engineering positions to serve in the armed forces of their country in order that we may all continue to enjoy a very Merry Christmas and a Happy New Year.

J. R. Poppele
Chief Engineer WOR

MARIAN
JORDAN
"Molly McGee"



JIM
JORDAN
"Fibber McGee"

Greetings and Sincere Appreciation to The Engineers



BILLY MILLS



THE KING'S MEN



To the ENGINEERS . . . from LOWELL THOMAS



A salute to my scientific colleagues
who do all the hard work in
putting me on the air

Lowell Thomas



Well I Swan — It's George and Gracie!



HELLO, ARE YOU THERE?

WELL, WE'RE HERE!

The Knight Before Christmas

By Tom Gootee

AS NEAR as I can remember, I can never recall of being in so much trouble and of having so much happen to me and Dr. Killfidget than during the Christmas Season of 1941. In fact, now that I think about it, it seems quite a miracle that either of us are alive today to relate the true story of how I became a Knight—and to explain why we are both in the hospital right now.

It all started on Christmas Eve.

Dr. Killfidget and I were standing out by the curb in front of Joe's Place. The reason we were standing outside in the cold and not inside by the bar was because we had spent the early portion of the afternoon and our pocket-books celebrating the arrival of the Yule Season with some of Joe's delicious Hot Toddy—and we had suddenly come face to face with poverty. In short, Joe had thrown us out for non-payment of dues.

There we stood, leaning slightly into the cold winter wind, and wondering how we were going to spend the fast-approaching Christmas Eve. Generally at this time of the year we are in very good spirits and feeling somewhat happy and contented. But due to being out of necessary funds, the evening ahead did not look promising. We were both stone broke—and that is no way to be the night before Christmas.

Dr. Killfidget shook his lean and gaunt frame several times, and then muttered, "Woe is me. Woe is me. I guess this will be one Christmas when we won't have enough Hot Toddy to go around."

I agreed. "The future looks very bad, Doctor. And here I went and got the night off—so we could celebrate in our usual dignified manner and custom."

"It's very sad, sir," said the Doctor.

I felt pretty sorry for the old gentleman then. Several tear drops splashed down his weather-worn face—and I knew he must be thinking about all that fine Hot Toddy going to waste in Joe's Place.

"It was not always thus," he said at last, producing a well-worn handanna handkerchief and blowing his nose. "Woe is me."

Just then the unpredictable happened.

A very snappy, long, low car came sliding to a stop almost in front of us. It was very easy to see that this jalopy belonged to somebody with a surplus of cabbages and greenbacks. The bus was so big it took several minutes from the time the radiator cap goes by until the back door of this super-super-de luxe stops in front of Dr. Killfidget.

Then, before either of us have a chance to say anything, an old lady pops her head out of the back window and gives the Doctor the once-over. Then she turns to a very pretty blonde dish sitting beside her in the car, and makes some remark which we cannot hear.

I am about to make some crack about the uniformed chauffeur—who looks like he just got out of the army—when this old dame pokes her head out of the window again, and speaks to the Doctor in a voice that sounds like a concertina that was left out in the rain.

"Look here," she says, "are you looking for work?"

Well, now, this was the wrong thing to say to Doctor Killfidget. Because it is a very well-known fact that he has never done a day's work in his lifetime of over fifty-five years—and furthermore, he has no intention of doing any in the future. But then I see that he didn't even hear the

old tomato, as he is looking past her at this very elegant blonde on the other side of the car.

"Hey!" says the old lady again. "Are you out of a job?"

This time he heard her.

"No, madam," replies the Doctor, courteously. "And what is more, I wouldn't work if I did have a job. And what is more, who wants to know?"

"I," says this old potato, "am Mrs. Ritzmore P. Poppelthwaite. And this is my daughter, Ruth."

"Oh," muttered the Doctor, a little disappointed to learn the old crone is tied up with such a blonde honey. "Well, I am known far and wide as Doctor Amos Killfidget," he said, feeling that he was soon to be formally introduced to the blonde. I could see by the gleam in his eye that he was up to something—and this was really very foolish, since both of us are probably old enough to be this girl's father.

"I don't care who you are," said the old mousetrap. "Do you want a job?"

The Doctor didn't answer right away, so Mrs. Poppelthwaite kept right on churning:

"I want you to be Santa Claus," she said. "And we will pay you well for your services. We are giving an annual Christmas Eve party at my exclusive home uptown, but we have no one to play the part of Santa Claus and distribute the gifts. Then I saw you, and I knew you would be just the type to be Santa Claus."

Both of us were a little surprised at this turn of events.

"Madam," said the Doctor, leaning on the car window and blowing in the old lady's puss, "I am not in the habit of working on Christmas Eve, or any other eve. And I feel somewhat insulted that you should think I look like Santa Clause—because, as I understand it, Santa Claus is a very fat old gentleman. And I certainly am not fat!"

"We can take care of that," said old rain-in-the-face. "We have a costume all ready for you, and we can just stuff a few pillows under your belt."

"No, no, no!" said the Doctor. "I'm sorry." And then I started nudging him, because the little blonde in the back seat was beginning to cry.

"Oh, mama! This is terrible," said the girl. "Now we'll never find a Santa Claus, and my Christmas Eve engagement party will be a big flop!"

"Engagement?" I asked.

"Oh, yes," said the old windbag. "My daughter here is announcing her engagement tonight to Mr. Hymie La Toosch. But," she sighed, "we must get a Santa Claus, or the party will never be a success."

The Doctor was shaking his head slowly.

"That's too bad, too bad," he said.

"Won't you please help us, Doctor?" pleaded the girl, turning on that two thousand per cent honey-and smiles.

"I suppose," he said, at last, "I could reconsider my decision—if it really means so much."

"Oh, it does," said the blonde, all smiles.

"It's very important," popped Mrs. Poppelthwaite.

"In that case," said the Doctor, "just what will be my ah—financial remuneration, if any?"

"Why, you can have fifty dollars for the evening, and all the punch you want to drink."

"Did you say punch?" asked the old gentleman.

(Continued on Page Twenty-nine)

Merry Christmas



BOB HOPE

Christmas Greetings
From the
LUM & ABNER PROGRAM



SYBIL CHISM
Organist



LUM & ABNER
Arkansas' Revenge for the Civil War



LOU CROSBY
Announcer

*A Great Xmas and
Greater New Year*

FROM

The Great Gildersleeve
(HAL PEARY)

*The "Peak" of the Season
to You*

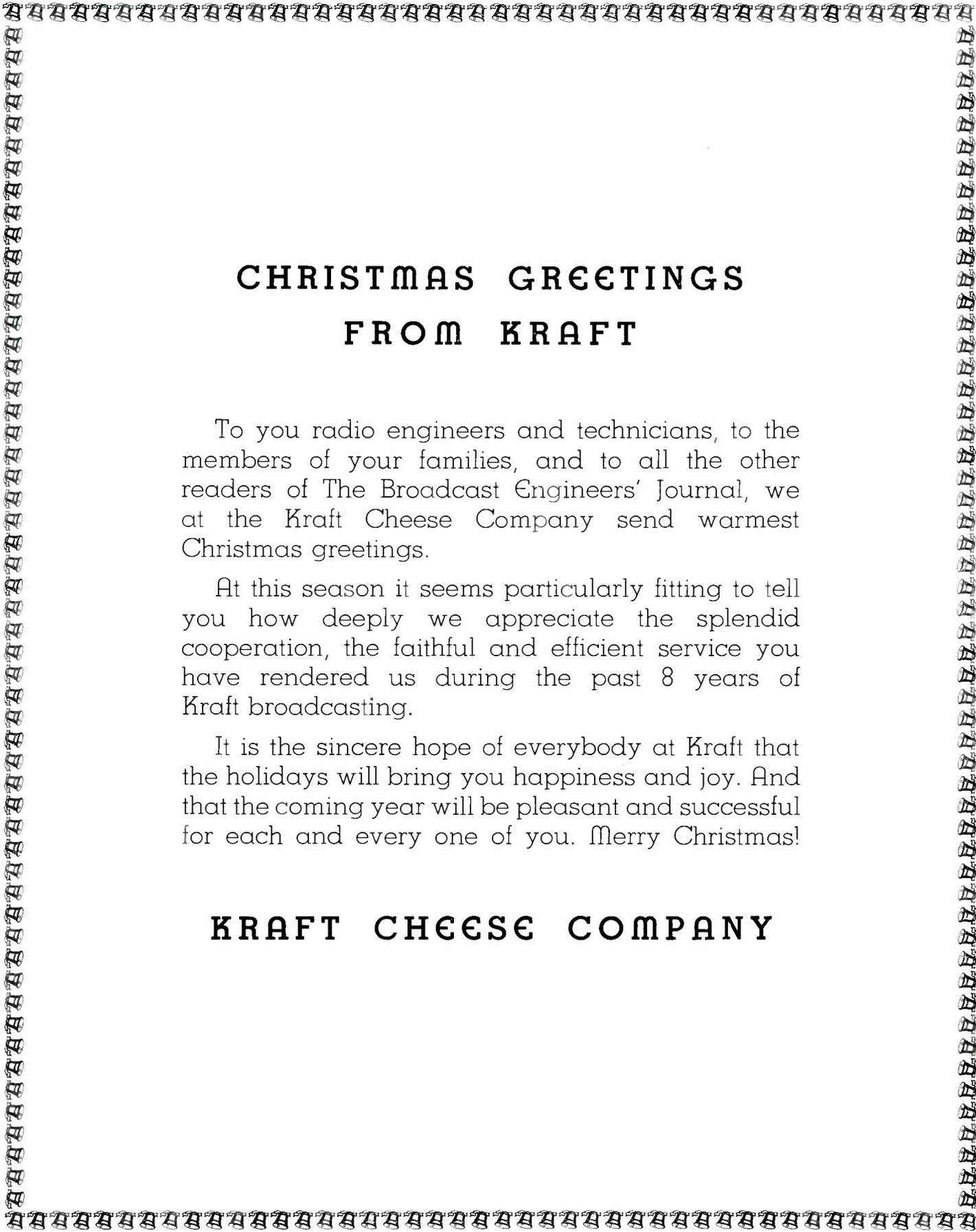


BEN ALEXANDER

Merry Christmas and Best Wishes



SKINNAY ENNIS



CHRISTMAS GREETINGS FROM KRAFT

To you radio engineers and technicians, to the members of your families, and to all the other readers of The Broadcast Engineers' Journal, we at the Kraft Cheese Company send warmest Christmas greetings.

At this season it seems particularly fitting to tell you how deeply we appreciate the splendid cooperation, the faithful and efficient service you have rendered us during the past 8 years of Kraft broadcasting.

It is the sincere hope of everybody at Kraft that the holidays will bring you happiness and joy. And that the coming year will be pleasant and successful for each and every one of you. Merry Christmas!

KRAFT CHEESE COMPANY

The Knight Before Christmas

(Continued from Page Twenty-five)

"Oh, yes," said the old dowager. "We have nothing stronger than punch!"

"No—Hot Toddy?"

"Well, now that you mention it, my husband generally makes some Hot Toddy every Christmas. He has a machine that makes it. But he never comes to the party; he says he'd rather remain in his room."

"That's queer," chimed in the Doctor.

"Yes, he is," said Mrs. Poppelthwaite. "He thinks he's an inventor now. He has a gadget up in his room—a combination short-wave radio and electric drink mixer."

"Well!" exclaimed the Doctor.

"So every year my husband mixes up some Hot Toddy in his room. But he never joins the Party."

"I don't blame him!" I said. Then the old scarecrow gave me the frozen face again.

"I suppose," she said to the Doctor, "you could join my eccentric husband—if you wanted to—for some Hot Toddy. He isn't particular who he associates with!"

"Now, mama," said the cute young dish beside her, "that's not fair to talk about papa that way. After all, he doesn't have anything else to do but tinker with his crazy old invention."

"Hmph!" snorted the old warhorse.

"As much as it is against my judgement, madam," began the Doctor, "I think it is possible we might make some agreement."

"Oh! That's swell," said the blonde.

"But I must make a few reservations!"

"Anything you say, Mister Killfidget," said the old sink-drain.

"Doctor Killfidget!" he said haughtily. Then: "I will act as a Santa Claus at your party—and distribute gifts free to one and all. But only on two conditions. One, is that I may meet and visit with your husband, and partake of his Hot Toddy. And the other, is that my very good friend here, also accompany me—as my assistant."

This floored the old lady.

"But—but—!" she sputtered.

"My friend and I," continued the Doctor, "have always been together every Christmas. And I see no need to break this rule!"

So the old cactus got out her lorgnette, and looked me over several times.

"He certainly doesn't look like much," she mumbled. "I really don't think we can—"

"Either he goes—or there will be no Santa Claus!" interrupted the Doctor. He is one of my best friends, an excellent helper in matters of this kind, and a connoisseur of Hot Toddy. He must go with me!"

"Please, mama," put in the girl.

But the old stovepipe was undecided. "Just what can this gentleman do?"

"Well, for one thing," said the Doctor, "he is a very good radio man, when he is working. But he doesn't often work."

"Maybe he can help papa with his invention," said the blonde.

"Why, certainly," said the Doctor. "This gentleman can fix up anything—and you'd never recognize it after!"

I smiled quite broadly, showing my extreme pleasure.

"All right," conceded the old rockpile. "But I expect you to assist my husband with his invention."

"Okay by me!" I said.

"And I don't want any monkey-business from you two men!"

Whereupon the chauffeur jumped out, opened the door and Doctor Killfidget and me stepped into the car. She gave the guy some directions—and we were off!

By the time we got to this very elegant mansion, I figured the old doll wasn't so bad after all—since she was kind enough to see that I had a roof over my head on Christmas Eve. Doctor Killfidget, as could be expected, spent most of the trip talking to the cute blonde, and telling her what a fine Santa Claus he is going to be, because of his experience in such matters. He even claimed to be playing Santa Claus on and off for over forty years—which I don't think he ever did.

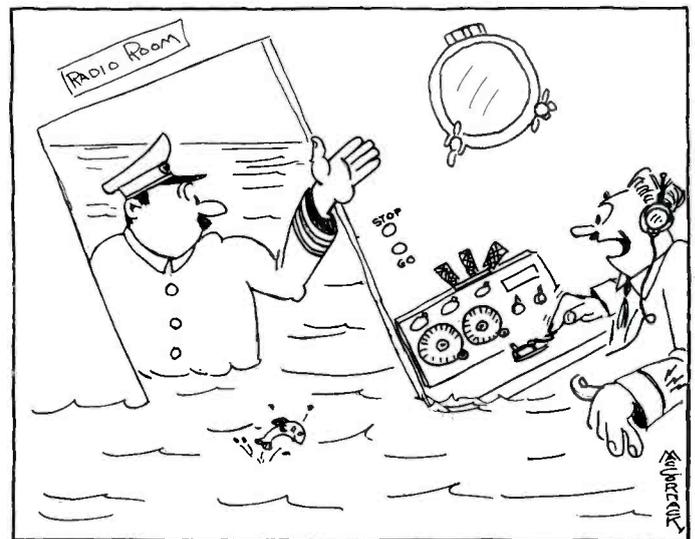
After we got to this ritzy joint, the old battleax shoed us in the back way—and into the butler's room, where a big, fat English guy helped the Doctor into his Santa Claus suit. And then we had to wait there until the party really got started.

Old Doctor Killfidget didn't look so bad as Santa Claus, after all. Me and the butler stuck four big pillows in the front of the old man's pants, and the Doctor was quite a jolly-looking old codger when we got through with him.

But an hour later we weren't so jolly. We had to sit on the edge of the bed, in the butler's room, for that long—and we were getting fed up with the whole thing, mainly because we were so thirsty. From somewhere else in the big house we could hear much laughing and singing—and we knew the party would be quite a roaring success. The house was lit up like Palisades Park, and there was much good cheer floating around—but nothing for us!

So, after about an hour, we decided to investigate the situation for ourselves—and see if we could find Mr. Poppelthwaite. We started pushing in doors around the room, and finally wandered down a long hall, up two flights of stairs and into another long corridor. While we were stomping down the hallway, a door suddenly opened far down at the end—and a little man stuck his head out, then mo-

(Continued on Page Thirty-three)



HEY SPARKS, THE SKIPPER SAYS NEVER MIND THAT SOS NOW!



Merry Christmas

BING



Merry Xmas

JOHN SCOTT TROTTER

K.M.H.

9-10 Red Network

Merry Christmas



JERRY LESTER

Merry Christmas

from

THE MUSIC MAIDS

And Their Arranger

HAL HOPPER

Kraft Music Hall



Best Wishes

CONNIE BOSWELL



Merry Christmas

To the Backbone of the Radio Industry

THE ENGINEERS

CLIFF ARQUETTE



“Greetings”

FROM

DON AMECHE

The Knight Before Christmas

(Continued from Page Twenty-nine)

tioned us to come inside. By a stroke of good luck we found Mr. Poppelthwaite's room with almost no trouble!

He urged us inside, and then closed the door.

"You are the two gentlemen my wife brought home tonight?" he asked in a thin, nervous voice.

"Yes, indeed," I chirped up. And then we introduced ourselves, and shook hands all around. The little old man motioned for us to take seats around a huge, complicated machine—that looked for all the world like an oversize automatic printing-press.

"I'm so glad you came up here," he said at last. "You see, no one ever comes to see me. Most people think I'm a little queer; I know my wife does. But it isn't that at all!"

"No?" I said, not knowing just what to do, or say.

"No," he answered. "I don't like those people who come to her parties. And, anyway, I'd rather stay up here and invent great machines like *this* one!"

With that he pointed to the mass of machinery and gears that occupied the center of the room.

"And what," I asked is *that*?"

Mr. Poppelthwaite beamed proudly.

"It's my combination short-wave radio and Hot Toddy Machine!"

"Well!" smiled the Doctor, not a little surprised.

"That is something!" I agreed.

"But will it work?" asked Killfidget.

"Oh, yes! That is, the Hot Toddy part of the machine works all right. But I've been having a little trouble tuning up the stages of the receiver. My wife said you were a radio man—so maybe you could help me."

"Why, I'd be glad to," I said. It didn't occur to me just then to ask why he had gone to the trouble of combining a radio set and a distillery. But it was none of my business anyway.

"First," said Mr. Poppelthwaite, motioning me to sit down again, "I'd like to give you a demonstration."

Whereupon he pushed a button, and several huge wheels began to revolve on the machine. A bucket was produced from inside the remarkable gadget, and this was automatically placed under an open spigot. There was a crunching and roaring, and all of a sudden a quick gush of steaming Hot Toddy filled the bucket! Then the machine was silent.

"My word!" said the Doctor. He was quite amazed.

"It's remarkable," I said. "But what's the radio built into the thing for?"

"Oh!" laughed the little man. "I just put that in there to entertain me while I'm waiting for more Hot Toddy!"

"A stupendous idea!" said the Doctor.

Then Mr. Poppelthwaite produced several coffee-cups, which he filled with the steaming and delicious Hot Toddy. And all too soon we were drinking toasts to anybody and everybody. It certainly looked like a promising evening, and both the Doctor and I were very glad we had come.

The rich Mr. Poppelthwaite was quite enthused over our visit, and he made no effort to conceal his happiness. He kept the machine going all the time, and as fast as we drank up one bucket of Toddy, he had another ready. It was a very amazing machine—and the longer we stayed and the longer we drank the more amazing it became!

After about fifteen or sixteen buckets of Toddy, the Doctor gave his favorite recitation: "The Sad Tale of a Homeless Radio Operator," which he only recites in barrooms and on special occasions. Little Poppelthwaite got quite a kick

out of the poem, and he told us something about himself.

It seems he made all his money too early in life, and now he could do nothing but loaf around and spend it. Of course, his wife had to put up with his inventions and experiments—because those things kept him busy, just as he himself wanted to be.

So there we were—the three of us—having quite a gay time indeed. After several more rounds, Mr. Poppelthwaite suggested I might look at the receiver and see what was wrong with it.

"I have plenty of extra parts in that big box over there," he told me, between sips of Toddy, "so we can replace any bad parts you may come across."

So while the machine was running off Hot Toddy at one end, I started to work on the radio set at the other end. And within no time at all I had most of the parts strewn all over the floor—in a hopeless confusion.

It was very doubtful if the radio would ever function again, but we were all so happy enjoying ourselves it didn't make a great deal of difference to us. Then I thought of the box of extra parts, so I brought that over and dumped the contents out on the floor with the other parts.

Then a brilliant idea struck me!

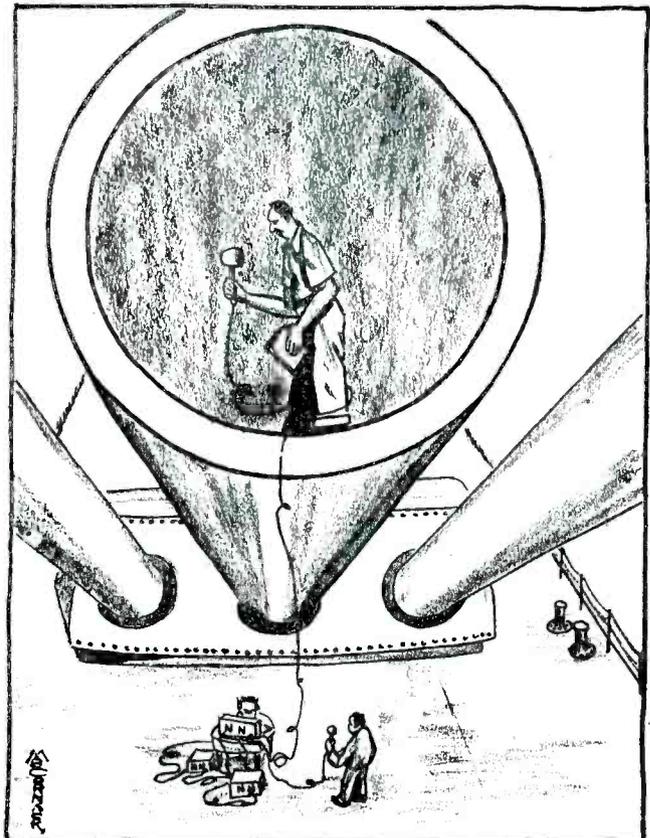
I stopped the Hot Toddy Machine in the midst of another bucket, and announced:

"Mr. Poppelthwaite! Why can't we improve on your remarkable invention, and send Hot Toddy out on the air?"

"What do you mean?" said the little old man.

I motioned toward the pile of used and unused radio

(Continued on Page Thirty-seven)



"THE MUTTY NETWORK, ALWAYS ON THE SPOT—THIS TIME TO BRING YOU THE FIRST SALUTE FROM THE BIG GUNS OF OUR NEW BATTLESHIP"



Merry Christmas
ENGINEERS

Thanks for the Swell Job

GORDON JENKINS
MUSICAL DIRECTOR
WESTERN DIVISION



“Good Luck to You All”

IRENE RICH

Merry Christmas

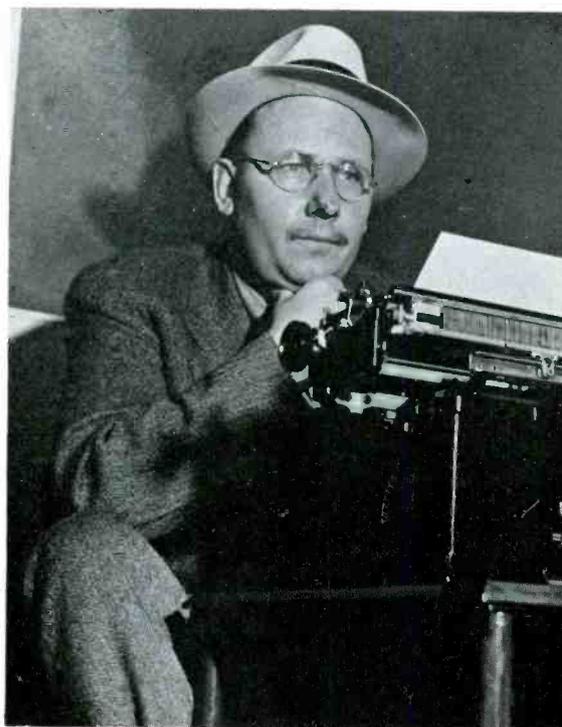
BOYS

THANKS FOR THE YEARS YOU HAVE
PUT US ON THE AIR FROM YOUR:

- STUDIOS-
- MASTER CONTROL ROOMS-
- TRANSMITTERS-
- AFFILIATED STATIONS-
- TELEPHONE OFFICES-
- MAINTENANCE DEPTS.-
- FIELD DEPTS.
- SHORT WAVE STATIONS-

CARLTON E. MORSE

AUTHOR - One Man's Family
I Love A Mystery



ONE MAN'S FAMILY

Merry Christmas

ENGINEERS

- FATHER BARBOUR - J. Anthony Smythe
- MOTHER BARBOUR - M. Netta Ellen
- PAUL - Michael Raffetto
- HAZEL - Bernice Berwin
- CLIFF - Barton Yarborough
- CLAUDIA - Kathleen Wilson
- JACK - Page Gilman
- TEDDDY - Winifred Wolfe
- NICKY - Walter Paterson



Merry Christmas

from

RED SKELTON



Merry Xmas

from

OZZIE NELSON

and

HARRIET HILLIARD

The Knight Before Christmas

(Continued from Page Thirty-three)

parts. "We've got enough parts there to build a complete radio transmitter!"

"So?" asked the Doctor.

"All we have to do is build the transmitter, then connect the output of the Hot Toddy Machine to the input of the radio transmitter—and we can broadcast large quantities of Hot Toddy to everybody—free of charge!"

Mr. Poppelthwaite beamed. "It's a terrific idea! Let's do it!"

"Probably the greatest discovery since Marconi!" put in the Doctor, from under a cupful of Toddy. "Imagine! Sending out huge streams of this delicious Hot Toddy spewing around the world!"

"It's positively terrific," said Mr. Poppelthwaite. "When can you get started?"

"Right now," I said quickly. "But you two men will have to help me!"

"Of course," they answered in chorus. "Let's go!"

Then we went to work rebuilding the radio end of the machine. The Doctor and Mr. Poppelthwaite handed me parts—and I connected them up, one after the other, relying on my technical intuition to get the parts where they belonged. Of course, I may have made a few mistakes here and there, but I really thought the device would work when we had finished. And it was quite a job. We ran out of solder, and had to use library paste and adhesive tape. But at last I had used up all the parts, and the radio transmitter was finished!

Then we were ready to connect the Hot Toddy mixer to the radio transmitter—or what we *thought* was the radio transmitter—and so we had several more buckets of Toddy apiece, before shutting down the machine to make the final changes.

There was a strange stillness in the room when the motor was turned off as if we were on the verge of a great and historic discovery! I carefully attached to an extension pipe from the spigot across to the input of the radio transmitter.

And, at last, all was in readiness!

We were all quite elated over the vast possibilities of such a momentous discovery. Mr. Poppelthwaite cleared his raspy throat, and then said:

"Gentlemen, this a great night for me. I feel that the name of Poppelthwaite will go down in the annals of science tonight—the night before Christmas!"

The Doctor and I applauded this speech, and drained the last drops of Toddy from our well-used coffee-cups.

"Since I am now a member of that great royal family of inventors and discoverers," he continued, a little unsteady on his feet, "I feel that I should now perform my first duty, as a member of the royal family!"

"And what's that going to be?" asked the Doctor.

"I am going to make your friend here, a Knight!" said Mr. Poppelthwaite, proudly patting me on the shoulder. But I was quite embarrassed by the sudden knighthood—and could think of nothing to say.

"I hereby make thee a Knight!" thundered the little man.

Then he stepped across the room, and pushed the button to start the Hot Toddy and Radio Machine.

There was a dull chug-chugging sound as the Toddy machine warmed up, and then a loud sizzling began. A roar started from the radio end of the machine and grew louder in intensity. Then the huge machine began to shake and tremble all over, and soon the entire house began to shake and tremble. Finally came the terrific, ear-splitting explosion!

An earth-rending screech split the air, followed by pieces of glass, metal and a shower of Hot Toddy. I saw Mr. Poppelthwaite go flying up through the roof and disappear, and Doctor Killfidget went through a brick wall as though it were paper. Then a huge, dark oblivion closed in around me. And that's the last I remember.

It's peaceful now—here in the hospital.

And the internes said today I could probably walk around in another month. I don't know what happened after the machine exploded, but it must have been pretty bad. The whole top of the house was blown off, and there was such a waste of Hot Toddy! Poor Doctor Killfidget isn't expected to sober up for another week at least. So it was quite a Christmas!

Of course, I'm still a Knight, I guess, but it was a nerve-racking experience. Because the machine was a total loss. And they never *did* find Mr. Poppelthwaite. **END.**



"BUT BOSS, THIS IS A TERRIFIC IDEA FOR THE MAN ON THE STREET SHOW"



Merry Christmas

BERT WHEELER

BEST WISHES

from

Alvino Rey

and His Orchestra

and

The King Sisters

Louise - Alyce - Donna - Yvonne



HI TECHS!

Merry Xmas

PHIL HARRIS



Hollywood Activity

By Joe Kay

THE ease with which a fifth column could operate within the Hollywood area was demonstrated recently. There was no alarm and the group came, saw, and departed without so much as one police arrest. This is how it all came about. On Saturday, November 1, several men carrying black bags entered the city's far-flung limits by car and made their way to the Hollywood Knickerbocker Hotel where accommodations had been previously arranged by one of their undercover agents. The following couple of days at various intervals members of this questionable band of operatives arrived by every means of transportation, until the most nefarious group of individuals ever seen had made their way through this city. Their devious and observing ways led them through all of the places of interest in this fair town, the radio stations, Television tower and other vital communication points in the area.

How long these various expeditions of information-gathering sorties might have gone will never be known for the

For some time the members of the engineering forces that had captured these wandering purveyors of propaganda were for sealing their bodies in gunny sacks and throwing them in the Los Angeles River—as horrible a fate as could befall anyone; the dust that one encounters at the bottom of the river will choke even the stoutest of lungs. However, unscrupulous as these men were thought to be, it was felt that they were not deserving of such a horrible end and so it was that the better side of the captors prevailed and it was decided to play on the honest streak that was believed must exist within these poor captured souls.

Accordingly a luncheon was planned at Sardi's, a restaurant of some fame located on Hollywood Boulevard. Before the luncheon could be arranged, however, two of the men had escaped and, although a roundup was organized, the two men, Powley and Duke, had made good their escape to Denver and New York. The remainder of the group were met at the luncheon by Mr. Saxton and Mr. DeWolf of



NBC and KFI-KECA Engineers of the Hollywood Chapter of NABET meet to talk over technical matters. Chairman Jim Brown on the arm of the davenport and Secretary Joe Kay nearest the table. Photo by NBC Studio Engineer Art Brearley.

vigilance of the members of the National Broadcasting Company engineering staff, aided by the ever-watchful eyes of their fellow associates from the engineering personnel of the radio stations KFI-KECA stepped in at just the right moment and put an end to the wanderings of these itinerant observers that had invaded our city.

When this questionable mob had been duly rounded up by the members of the above-mentioned engineering groups, and forced to the wall, they disclosed under pressure some very interesting information. They identified themselves as members of a group of characters that had recently convened in San Francisco to discuss sundry and vital problems of the association to which they belonged. They gave their names as Horstman, Schnepfer, Duke, Brandt, Powley and Stolzenberger.

NBC, and Mr. MacDonald of KFI-KECA, as well as the members of these engineering groups that were available. It was thought that in order to enable all the members of the engineering groups of both NBC and KFI-KECA to have a go at the captives that a dinner should be arranged. This was done amid the Old World atmosphere of the Wooden Shoe Inn in Hollywood. At this dinner members of the two engineering staffs were present along with the characters above mentioned. After a bit of wining and dining to soften up their resistance, the ring leader, one Ed Horstman, was put on the spot and forced to disclose his observations on many matters of interest in his organization. His cohort, Ed Stolzenberger, then told of what he had observed in the matter of television and the art of color in television.

(Continued on Page Forty-five)



Season's Greetings

Hollywood Chapter

NABET

NBC Hollywood Section

KFI-KECA Section

Season's Greetings



to the Most Important Men
on Our Broadcasts . . .

the Engineers

Sincerely

HORACE HEIDT

And all the Musical Knights

Merry Christmas

to

NBC

from

Radio Television Supply Co., Inc.

1701 South Grand Street

Los Angeles

National Cornhusking Contest —1941 Style

By R. R. Jensen

THE NBC's "National Farm and Home Hour" of November 3 was without question the corniest show of the year on any network. And it was real corn, in fact, 45.37 bushels were picked, husked, and tossed into a wagon in the eighty-minute contest by the winner, Floyd Wise, of Illinois. The annual event was held on the Shafer farm near Tonica, Illinois, this year and attracted a crowd of approximately 115,000.

NBC's broadcast and the Corn Husking contest have practically grown up together. The first contest was held near Grimes, Iowa, in 1923. Six years later, NBC made the first broadcast and has been at it ever since. Nineteen forty-one marked the twelfth year that NBC microphones recorded the second by second thump, as ears of corn struck the bang-board. The evolution of radio has changed the pickup facilities from a single carbon mike strung to the wagons to the elaborate short wave system used today. The Corn Husking contest has grown up, too, from the first tri-state affair with 2,000 spectators to the vast National meet of the present, which takes on the appearance of a large State Fair. Scores of exhibition tents house a great variety of farm machinery and supplies. To an outsider the first impression is that of an air show, as more than two dozen "barnstorming" planes constantly drone overhead with their passenger loads, not to mention the Goodyear Blimp of the huge Army observation balloon that was moored in the center of things.

To the Field Group in Chicago, the event means a lot of hard work, plenty of fresh air, a good soaking in the rain, mud from head to foot, and a good time! It also means that the four-ton Mobile Unit Number 1 must be piloted to the location, together with about two tons of other equipment. This year the biggest difficulty of the whole event was in transporting equipment to the meet. It all started as Bill Cummings was driving the Unit across the Wells Street bridge the Friday before the show. In the pouring rain, which incidentally always accompanies the contest, Bill contacted the rear end of a truck. Both headlights were removed, both fenders folded back, not to mention the loss of the vertical mounting for the mobile antenna, or the fact that the radiator was bent double over the engine block. The Unit didn't leave that night! Gary DeVleig waited until the next morning to drive to Tonica, after the Unit had spent a very busy night in a local reconstruction factory. Engineers Limberg, Royston, and Cummings went on down to the pickup point Friday night so as to be on hand early the next morning. During the course of the journey, more mechanical trouble developed. Every time the ton and a half panel truck was stopped to be refilled with bang water, the transmission gears locked. By the time the crew reached the cornfield, they could tear down and reassemble the gear box in nothing flat.

Saturday morning, the cornfield was one mass of mud and water with a pouring rain making it constantly worse. The one dry spot on the field was the NBC tower, which is built each year to our specifications. This tower is two stories high with windows on all sides of the upper story. It provides an ideal vantage point for an announcer as well as adequate space for the installation of broadcasting equipment. This year it was even wired with 110 V. A. C., so

the portable gasoline engine generator went unused. Saturday morning was spent in transferring equipment from the truck to the tower, and in the afternoon Cummings and Royston built the "superstructure" for the antenna arrays. Both of these gentlemen came out of the deal soaking wet as a driving rain and windstorm accompanied the operations.

Line facilities in rural areas usually consist of a single line and ground, with twelve customers on the one circuit, and this was no exception. It was up to NBC to use short wave equipment. The nearest town, Cedar Point, population 350, was three and one-half miles airline distance from the field booth. The local school board consented to the use of their building, and the blonde principal said she didn't care if the phone was taken out of her office for the cue circuit to Chicago. Incidentally, that phone was quite a curiosity. Two "Columbia" dry cells on the phone were



NBC Control Tower

marked, "For best results put in service before Oct., 1931," but they worked OK and were used many times on a talk circuit to Chicago. The manual training shop of the school served as a fine receiving point for the short wave transmitters on the field. Three antennas were erected in the school yard, two for receiving and one for transmitting. A Premax telescoping vertical radiator served as the support for the high frequency receiving array. This array consisted of a two element dipole, with reflector spaced one quarter wave from the receiving element. An ND 25 receiver was connected to this antenna and served as the main program channel. The receiver on the emergency intermediate channel was a National HRO using a single wire antenna. The output of the two receivers fed an ND10 which, of course, fed the metallic circuit to Chicago. The Mobile Unit was parked outside and served as the cue channel to the cornfield. One of the transmitters in the Unit, WIEX, operating on 2758 KC. with 50 watts fed a single wire antenna suspended from the fire escape on the school house. During the broadcast on Monday, Bill Cummings operated the

(Continued on Page Forty-five)

VINE STREET

NBC

MELROSE

SUNSET



NICK'S MELROSE GROTTTO

EXTENDS A

Merry Christmas and Happy New Year

TO

NBC Engineers and Friends

NICK'S GROTTTO

Where friendship and good food
welcomes you.



Best Wishes

JIMMY DORSEY

HELEN O'CONNELL

BOB EBERLY

ME TOO, BILL BURTON



PAUL WHITEMAN

Personal Management
JACK LAVIN



Merry Christmas

Thanks for Your Cooperation

GENE KRUPA

SEASON'S GREETINGS

and

SINCEREST WISHES

TO THE ENGINEERS



JERRY COLONNA

Best Wishes to the Engineers

Merry Xmas



BILL GOODWIN

HOLLYWOOD



Merry Xmas

SKITCH HENDERSON



Roving field unit is tested by (left to right) Engineers, Limberg, DeVlieg, and Farm and Home announcer Everett Mitchell

National Cornhusking

(Continued from Page Forty-one)

receiving equipment in the school, while Bob Jensen ran the transmitter in the Unit.

The equipment in the field was even more plentiful and complicated. Briefly, there were two program transmitters, two pack transmitters, two high frequency receivers, three intermediate frequency receivers, an ND10 Field Amplifier and two OP3 Field Amplifiers. Two roving field units followed the huskers during the contest. Each of these units consisted of a tractor wagon combination, an ND 31 pack transmitter, an OP3 Amplifier, RCA "Pick-Me-Up" receiver, not to mention an engineer and announcer. The OP3 provided mixing for two microphones, one for the announcer, the other to pick up the sound of corn hitting the wagon. The pack transmitters both used 2 watts power furnished by the 2-1H+G's in their finals. Engineer Gary DeVlieg and Announcer Dave Garway operated WEJK on 39.26 MC, and Engineer Harold Royston and Announcer Henry Cooke manned WNKF on 37.02 MC. RCA portable receivers were used for cues from the intermediate frequency transmitter, operating on 1606 KC. ND 25 receivers in the tower picked up the signals from the pack transmitters. A half wave vertical doublet antenna was used to feed both of the ND 25's at the same time. The output of the ND 25's fed the ND 10 field amplifier for mixing. A microphone in the tower for Announcer Everett Mitchell also fed the ND 10. The "regular" program transmitter in the tower was an ND 20, using the call WEJM, with 25 watts power on 35.62 MC. The antenna for WEJM consisted of a three element beam, close spaced, fed with a 1/4 Q Matching Section and a 72 ohm line. An emergency program channel served also for cues to the units in the wagons. The transmitter in this case was an ND 14 with 25 watts on 1606 KC., using the call WNBE. A Premax vertical radiator strapped to the side of the tower served as a very efficient antenna for the ND 14. A Hallicrafters S29 Sky Traveller Receiver did a fine job in picking up the cue transmitter at the school, and was in operation all day so that constant contact was maintained to Chicago. During the broadcast on Monday, "Lindy" Limberg operated the short wave equipment in

the tower and Field Supervisor Marshall Rife mixed the program and rode gain.

The day of the big event turned out to be ideal, sun and everything. All of the equipment functioned perfectly, with the possible exception of a receiver at the school which went out twenty minutes before the show. Luckily, a spare could be jerked out of the Unit in nothing flat, so that little bug was killed. The show sounded so good on the broadcast receiver in the tower that Announcer Everett Mitchell took great pains to explain to the air audience that the show was not coming from a studio, but by short wave from a cornfield.

Next year's meet will be held near Mankato, Minnesota, and already there is talk around the field room of self erecting antenna arrays and mud rejectors.

Hollywood Activity

(Continued from Page Thirty-nine)

After much conversation, the entire party retired to the cocktail lounge, where they were given the alcohol treatment. This went on for several hours. Finally it was decided that these invaders of our fair city had had their lesson and the gathering was dispersed. One or two felt that the punishment should be carried on a bit further and so made their way to the bar at the Hollywood Knickerbocker Hotel, where they reconvened until 3 a.m.

It was thought that the treatment administered to these men who had dared to descend upon us had made them see the error of their ways and so no further punishment was



(Above) E. C. Horstman



(Right) A. H. Saxton

meted out. They were in turn put upon trains leaving the city and told to, by all means, come back again.

A day or so later a straggler of this gang came into town alone. He had apparently gotten lost somewhere between San Francisco and Hollywood. He gave his name as Jerry Sellar. But he was taken care of quickly. Before he could so much as raise his voice in defense he was swept into the nearest bar and therein drowned. Some slight trouble was experienced in getting the body out of the city as a mad dash to the railroad station missed the train by inches, but the body was concealed in another bar until the next day and then shipped East.

The only evidence we have of the above-mentioned incidents are the two pictures herewith presented. They are of the ring leader of the invading group and the boss of the home forces.



Merry Christmas

ROCHESTER

Merry Christmas

Radio Specialties Company

Phoenix Los Angeles Hollywood



THE
MERRY
MACS

Singing Stars
of the
Old Gold Program

EXCL. RECORDING DECCA

Per Mgr., HARRY NORWOOD

6650 Franklin Avenue, Hollywood
Gladstone 5124



Best Wishes and Merry Xmas

BILL THOMPSON

Season's Greetings



E. Broox Randall & Sons, Inc.

INSURANCE

For Every Purpose

5901 Sunset Boulevard
Hollywood, California



Microphonically

Yours

RUDY VALLEE





“Rebroadcast in Hollywood”

(Top left) Archie Scott, Producer, and Ray Ferguson, Engineer; (top right) Johnny Frazer, Announcer; Ditto Engineer at platter, bottom

N.A.B.E.T. President Assists A.B.T.U.

At the official request of the International office of the A.B.T.U. of I.B.E.W., Mr. E. C. Horstman, President of the *National Association of Broadcast Engineers and Technicians*, appeared and testified *in behalf* of the A.B.T.U. of I.B.E.W. at the Arbitration Hearing Proceedings (between C.B.S. and the A.B.T.U.) held in Chicago on November

29th, 1941. This request was tendered by Mr. Russ Renaker, the Business Manager of the A.B.T.U.

The testimony offered by President Horstman dealt in generalities, pertaining to working conditions and salaries in the radio industry. This testimony enabled the A.B.T.U. to offer a more complete and concrete case to the Arbitrator — than would otherwise have been possible. —T.E.G.



To The Engineers
Best Wishes for a Merry Xmas
and a Happy New Year
MARTHA TILTON

Season's Greetings

from

HAROLD CURTIS

**Christmas
Greetings**



MEREDITH WILLSON



Merry Christmas and
lots of thanks to the
boys who 'control' us

Frances Scully
(Speaking of Glamour)

Maxwell House Coffee Time

"YOU AND I"
"TWO IN LOVE"

Season's Greetings and Best Wishes



JACK CARSON

and

DAVE "Tugwell" WILLOCK



Hi You Engineers

Z. WAYNE GRIFFIN

Happy Holidays

From Your Needle Bending
Friend

MEL BLANC

*Season's Greetings
and
Best Wishes*

BARBARA JO ALLEN



Season's Greetings
to All

Bill Gilcher and Cliff Webster

NBC — Hollywood

WITH SEASON'S GREETINGS
To a Swell Gang
THE NBC ENGINEERS



CASTLE'S, INC.,
PHOTOGRAPHIC EQUIPMENT
1529 VINE STREET, HOLLYWOOD

MERRY XMAS

BILL SOBRANSKY

EXTENDING

Season's Greetings
to NBC

FROM JACK SCURLOCK'S
Radio City Barber Shop
SUNSET and VINE



SUNSET and VINE
HOLLYWOOD

- Radios
- Records
- Phonographs
- Recorders
- Recording Studios
- Air Check

Open Evenings 'Til 11 P. M. — Sundays 2 to 9 P. M.

GREETINGS and THANKS

FRANK HODEK

Musical Director NBC — Hollywood

Season's Greetings

to ALL of
NBC

from
THE LYONS BROTHERS

Hollywood Recreation Center
ACROSS THE STREET

Season's Greetings

LOU KOSLOFF
Conductor

Mennen's Program NBC Sherlock Holmes

Season's Greetings

To the Engineers
from
DENNIS DAY



*Season's Greetings
and Best Wishes*

CHARLES DANT
NBC Hollywood

*Merry Christmas,
Fellows!*

WALLY MAHER

"Season's Greetings

Clinton Twiss
Frank Bingman
Larry Keating
Vic Perrin
Aubrey Ison

Ken Carpenter
Dresser Dahlstead
Johnny Frazer
Hal Gibney
Abbott Tessman

NBC Hollywood Announcers"

DONNA and the DON JUANS

George, Gordon and Charlie

Wish You

A MERRY CHRISTMAS

Featured with Horace Heidt

**Merry Xmas
and Best Wishes**

ART CARTER

Christmas Greetings to My Friends

THE ENGINEERS OF BROADCASTING

FRANKIE CARLE

RIDING GAIN



ON THE AIRALTO WITH TOM GOOTÉE

AT THIS Christmas time, may we take the opportunity of wishing friends and readers: our sincere Season's Greetings.

* * *

Forty years ago this month—in December of 1901—a young man in Newfoundland accomplished the first long-distance wireless telegraph communication, and so laid the foundation for a new scientific miracle: radio. Using the vague and almost unknown electrical and magnetic principles of Hertz and Tesla—he set up a receiving site close by the Grand Banks, and succeeded in hearing a faint but recognizable signal from a test transmitter in England. The young man, of course, was Guglielmo Marconi. And his feat, on that cold December day in 1901, was the first milestone in long-distance radio transmission. From such small and crude beginnings, radio has come a long way in forty years—its growth has been phenomenal. And of the next forty years? The future of radio defies prediction, because almost nothing is impossible with radio.

* * *

NBC's mammoth Fifteenth Anniversary Party—celebrated on November 15—was one of the greatest mass arrays of talent ever assembled for one program. More than 2,000 artists and entertainers participated in the festivities, which lasted a full three hours and moved with lightning pace back and forth across the continent—even around the world by short-wave. Accomplished with every degree of success, the program was the most comprehensive field hook-up in the history of NBC.

* * *

Television engineers pulled a new trick out of the technical hat for telecasting the news over NBC's station: WNBT—on the occasion of the New York mayoralty election. They joined one image from mid-Manhattan (late election returns from Radio City) to another image (a wrestling match, radioed from a point in Brooklyn) so that New York's televiewers could get late returns without interrupting the regular program entertainment. Thus, while the wrestling continued unabated on the larger part of the screen, televiews could also read the latest election totals in the upper portion of the television screen. This arrangement avoided breaking into the sports program at frequent intervals. To accomplish this, two television units were operated in almost absolute synchronism, with the two generators less than eight-millionths of a second out-of-step with each other. This newly perfected development makes possible a switch from the studios to the mobile unit in the field, without either a blank screen for a second or two or an unstable image in the receiver. It also makes it possible to superimpose a sponsor's message on an image or to show the station's call-letters without interrupting the boxing match, football game or other remote television feature.

* * *

Comedian Al Pearce has two of the most unique and spectacular automobiles in the nation: A specially-built

Scarab that resembles a stream-lined bivalve. And an originally designed camp car that has all the conveniences, fixtures and accommodations of a first-class hotel and restaurant.

* * *

Listeners to NBC's *Behind the Mike* are among radio's most alert—and most skeptical. When the program supposedly reproduced a recording of the voice of one of its guest stars, several listeners wrote in to inquire whether a recording was actually used. *Behind the Mike* was forced to break down and admit that a record couldn't be used because of a network ruling; but that the effect of a recorded voice was obtained by having the guest star speak into a filter mike—while the sound man played a blank record to create the surface noise of a record being played.

* * *

Leonard Levinson—scripter for the *Great Gildersleeve*—makes a hobby of collecting popular songs that not only never make the Hit Parade, but rarely get a publisher. He uses song flops to entertain friends, making notes of the resulting laughs or cracks—as gags for future writings.

* * *

The question of whether or not listeners ever pay attention to station call-letters was partly cleared up by a woman in New Jersey, who wrote to NBC reporting her young daughter (aged 3) had concluded her evening's prayer without the customary "Amen." Said the little girl: "Bless mommy, and daddy, and make me a good girl. This is WJZ, in New York."

* * *

Hollywood studio visitors sometimes see strange sights. Particularly on Tuesday nights when, just as likely as not, Bill Thompson will be romping through the halls wearing a fireman's hat and carrying an axe. Bill, who plays The Old-timer, Wallace Wimple, and other characters on the *Fibber McGee* show, has long been one of radio's "warm-up" gagsters. He cavorts across the stage, before show-time, pulling flowers out of hats, and wearing varied costumes from ulsters to keystone-cop uniforms. The idea being—as Thompson confidentially explains—to supply an antidote for "before-show" nerves which any actor—veteran or novice—experiences. And anyway—Bill likes to clown.

* * *

Television now has a unique weather forecaster for New Yorkers: A talking and singing woolly lamb—created by young Douglas Leigh. The weather lamb is the result of a search for an entertaining way of telling the story of tomorrow's rain or shine. The clairvoyant lamb has an advertising axe to grind, so he (or she?) sports a brilliant colored necktie during the televising.

* * *

The *Lum and Abner* program is one of very few on the air whose scripts are never prepared or okayed in advance by the sponsor or the network. The boys write and time their own scripts—and are responsible for getting on and off the air with their material. With one eye on the clock, they

(Continued on Page Fifty-five)

"Thanks for moving the mikes!"

NBC HOLLYWOOD PRESS DEPT.

Hal Bock
Joe Alvin
Frances Scully

Noel Corbett
Ben Byers
Matt Barr



"And a very, very, good evening!"

SAM HAYES speaking
with
A Merry, Merry Christmas
to
Engineers

CURRENT SHOWS
NBC Sperry Breakfast News —
Daily 7:45 A. M., P. C. — Red
NBC Listeners Lookout —
9:15 P. M. Tuesday — Blue
NBC Weekly Spectator —
7:30 P. M. Friday — Blue
NBC Recording —
"Touchdown Tips" — 72 Stations

PAUL CARSON

Organ

One Man's Family

I Love a Mystery

Irene Rich Show

Bridge to Dreamland

KEN CARPENTER

Greetings

ALEX ROBB

Program Talent Sales

Hollywood

A Merry Crosley
and a
Happy New Rating!

JOHN P. MEDBURY

Writer FLAGG AND QUIRT SHOW

Maurice and His Music



"A Happy
Good Morning
to You!"

Happy
Jack Turner

WLS and NBC



On the Airtalto

(Continued from Page Fifty-three)

speed up or slow down as needed—and thus build their shows as they go along. And besides acting, doubling parts, and directing their shows, they also supply their own sound effects.

* * *

The second floor lobby of NBC in New York is now regarded by theatrical folk as the successor to the front of the old Palace Theater of days gone by. Not a few actors

★

From the look on his face, it's obvious that Jack Benny isn't so keen about playing Santa Claus. He has lost his reindeers — and will have to make his calves do all the work. "What a job!" opines Jack. "And those kids kept pulling my whiskers!"



★

have been asleep in some of the upholstered Radio City chairs for months—waiting for a call to work.

* * *

The newest thing this month in radio is the "Groofus." Ray Erlenborn, CBS sound man, came up with this gadget for the *Al Pearce* show recently. The script called for a man to sneeze with a mouthful of pins. A sound effect was needed to denote pins flying through the air and plunging into a wall. Erlenborn gained a realistic effect with eight strands of piano wire and a table fork—nailed securely to a board; by manipulating this contraption like a harp, he produced the desired effect—and the "Groofus" was born.

* * *

According to Jay Jostyn, the *Mr. District Attorney* of the air, the most consistent fan writers (as a class) are lawyers. Almost every week he receives letters in great detail from them—describing how they would have handled a certain case which Jostyn, as the D.A., prosecuted.

* * *

Ten Years Ago in Broadcasting. Christmas in 1931 was one of outward pessimism; business and financial conditions were none too good as NBC began its sixth year of network broadcasting. An attempted special Christmas broadcast with pick-ups from various cities and countries was only

feebly successful—accompanied by much short-wave static, and familiar feedbacks between city switches.

* * *

Twenty Years Ago in Radio. Station KYW began operation in Chicago, with new Westinghouse Equipment functioning on the 360 meter wave band. This was the month—in 1921—that saw the awakening of interest in radio by the general public—the general and national acceptance of broadcasting. Overnight, radio amateurs and radio "bugs" became the most popular people in the neighborhood—because they knew how to build a radio receiving set. The combined tube manufacture (of all companies) for December, 1921, was under 5,000 tubes—all triodes; a month later, in January, the combined output exceeded 40,000 tubes—and still not enough to satisfy the demand. Radio had come into its own—was, at last, "of age."

Roses to Rossetti

AFTER almost three years of faithful service to N.A.B.E.T., the Journal takes this belated means of thanking Miss Concetta Rossetti (Corresponding Secretary for the National N.A.B.E.T. Office in Chicago) for her untiring efforts in behalf of both the Journal and the N.A.B.E.T.

The boys east and west of the Windy City wouldn't believe us when we extolled the fair charms and uncanny secretarial ability of Miss Rossetti. They claimed it wasn't possible to engage such an attractive miss who could actually read and write. And since her working ability stands unquestioned, we hasten now to prove our other contention with the photograph above.



Miss Rossetti hails from Chicago, by coincidence, and received her A.B. degree from Rosary College in River Forest. Among her other accomplishments, she speaks, reads and writes Spanish, French, Italian and Portuguese; occasionally bakes a pie or cake, can sing. And her favorite sports are horseback riding, tennis, swimming, ping pong, and mailing letters.

Although she never intended to be a secretary, she concedes that she *does* enjoy working for good old N.A.B.E.T. All of which makes the National Chicago Office that much more attractive.

And so at this time of year when we are passing out compliments to everyone else, let's present a bouquet of ROSES TO ROSSETTI.

P. S.—She's single, boys!

Avoid That Xmas Rush!



Shop now, for the boss, for dad or the whole family at Stationers.

Desk sets — pen and pencil sets — brief cases — office furniture — stationery — art and engineering supplies — and a to \$50.00.

STATIONERS CORPORATION

Hollywood	Los Angeles	San Diego
6369 Hollywood Blvd.	525 So. Spring St.	1040 Sixth Ave.



Greetings

ROOS BROS.

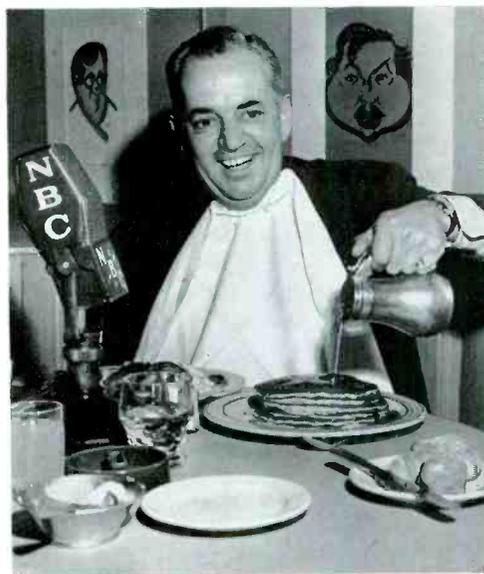
HOLLYWOOD

**Season's Greetings
To Engineers**

- Millen
 - E. F. Johnson
 - Hallicrafter
 - Presto
 - General Electric
 - Solar
 - Meissner
 - and 125 other
- Nationally Famous Lines
for Immediate Delivery

RADIO PRODUCTS SALES CO.

238 West 15th Street Prospect 2488
LOS ANGELES, CALIF.



Greetings, Guys!

TOM BRENEMAN

"Breakfast at Sardi's"

ENGINEER WILLIAM "BILL" WILLIAMS

Merry Xmas



VIC McLAGLEN

Season's Greetings



EDMOND LOWE

Merry Christmas



LEO J. MEYBERG CO., Inc.

Wholesale Radio Headquarters

Best o' Luck!



ART BAKER

Best of Luck Always

VERNA FELTON

and

LEE MILLAR

Season's Greetings

NBC

from

THE HOLLYWOOD TROPICS

Across the Street

Merry Xmas

and

Best Wishes

BEN GAGE

Concise Data and Theory on Popular R.C.A. Microphones

By Frank Burns

Engineering Department, National Broadcasting Company

(Acknowledgment is hereby made to the NBC Technical Service Group for providing manufacturers' ratings and specifications.)



44A



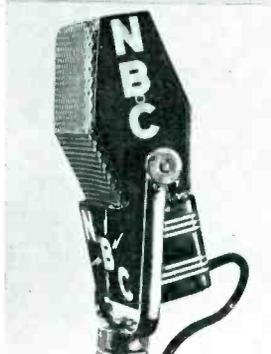
50A



74B



77B



44B

We feel that many of our readers would appreciate having a reference source of information about several of the most used microphones. Therefore we have condensed the more pertinent data within the following pages, for the convenience of those who do not have ready access to lab. files, instruction booklets, etc.

The important characteristics of the microphones shown here are given below in table form.

All the ratings given are those of the manufacturer.

Note that an input sound pressure of 10 dynes/cm² is approximately equal to the input pressure caused by the level of an average announcer.



88A

Model	Type	Frequency Response	Output Impedance	Output Level *	Directional Characteristics
44-A	Ribbon Velocity	60 — 10,000 cps ± 4 db	50/250	— 55 vu	Bi-Directional
44-B	Ribbon Velocity	30 — 15,000 cps ± 3 db	50/250	— 49 vu	Bi-Directional
74-B	Ribbon Velocity	70 — 8,000 cps ± 6 db	50/250/15,000	— 50 vu	Bi-Directional
77-B	Combination Ribbon Velocity and Pressure	50 — 10,000 cps ± 5 db	50/250	— 55 vu	Uni-Directional
50-A	Pressure (moving coil)	60 — 10,000 cps ± 6 db	50/250	— 50 vu	Non-Directional
88-A	Pressure (moving coil)	60 — 10,000 cps ± 5 db	50/250	— 46 vu	Non-Directional

* 10 dynes/cm² input on open circuit with reference to 0.001 watt zero level.

RCA Microphones

(Continued from Preceding Page)

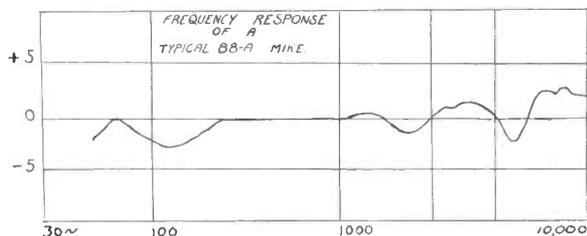
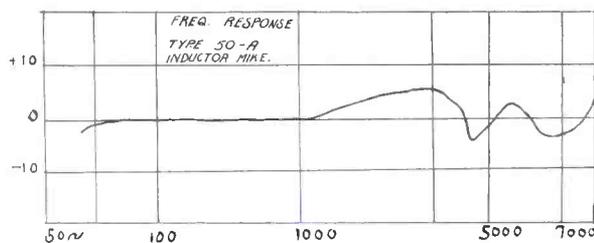
IT MIGHT be of interest to review the major differences in construction and operation of pressure and velocity microphones shown on the opposite page.

We may as well start right at the beginning by considering a pressure mike as one in which the diaphragm has only one of its two surfaces freely accessible to the atmosphere. The diaphragm is forced inward from its normal position as compressed portions of a sound wave reach it and is displaced outward as rarefied portions of the wave arrive.

A very important characteristic of the microphone is its failure to discriminate between sound arriving from random directions (at the lower frequencies). Even sound waves originating at the rear of the microphone "bend" around the microphone case and actuate the diaphragm as though they had originated at front. This is true up to the frequency where the depth of the microphone case approaches the wavelength of the sound.

Thereafter, due to diffraction, the response decreases with frequency for sounds arriving from the rear of the microphone. In order to obtain the best response it is necessary to limit operations to a rather small angle in front of the microphone. Also it is obvious from above that the smaller the microphone the higher the frequency at which diffraction becomes important and hence the wider the range of uniform response.

A very marked difference between pressure microphones is the way in which their mechanical moving systems trans-



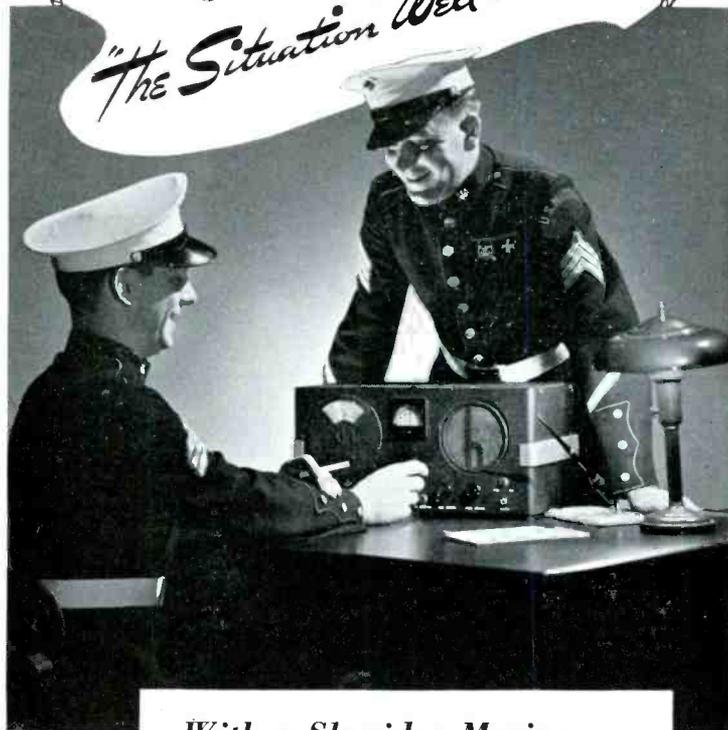
late the information in the sound wave to electrical impulses. With our old friends the carbon and condenser microphones (where diaphragm displacement determines carbon resistance or value of capacity and hence the output) it is necessary that the amplitude of the diaphragm displacement be constant for constant pressure, regardless of frequency. In order to achieve this reaction of the moving system to the sound wave, it is necessary for stiffness (capacitive reactance) to be the controlling element in the mechanical construction of the moving system.

One method of obtaining stiffness as the controlling factor is by use of a stretched diaphragm. This causes the mechanical impedance below the resonant frequency of the diaphragm to be almost entirely stiffness reactance and the

(Continued on Page Sixty)

The Skyrider Marine
always has

"The Situation Well in Hand!"



With a Skyrider Marine

you can have good reception well in hand. It is designed for Marine service in the range from 16.2 to 21.50 meters (18 mc. to 110 kc.). Variable mica condensers are especially treated to maintain adjustment under continuous exposure to salt sea atmosphere. The mechanical bandspread with separate dial provides easy logging. Calling and working frequencies lie in same band. 110 volt AC-DC operation—provision for 6 volt battery operation. Sky-

rider Marine (Model S-22R) complete with tubes and speaker, \$74.50.



On November 10, 1941,
the U.S. Marine Corps
celebrated their 166th
birthday.

USED BY 33 GOVERNMENTS SOLD IN 89 COUNTRIES

the hallicrafters co.
CHICAGO, U. S. A.

RCA Microphones

(Continued from Page Fifty-nine)

diaphragm displacement will be constant for constant pressure over this range.

The more the diaphragm is stretched the higher will be the resonant frequency (below which the mike response is uniform) but the less the sensitivity.

Now in contrast to the stiffness controlled mikes mentioned above (and the mass controlled ribbon velocity mike to be discussed) there is the moving coil type of pressure microphone which has resistance as the controlling element in order that its output should be constant for unit pressure. This is due to the fact that the emf induced in the coil is directly proportional to the velocity of the coil. Therefore the coil velocity should be proportional to pressure and independent of frequency. At right are the response curves for both microphones.

The models 50-A and 88-A are good examples of the moving coil type of microphone. Because of their high output level, the ruggedness of the 50-A and the small size of the 88-A, the both mikes are used for field work.

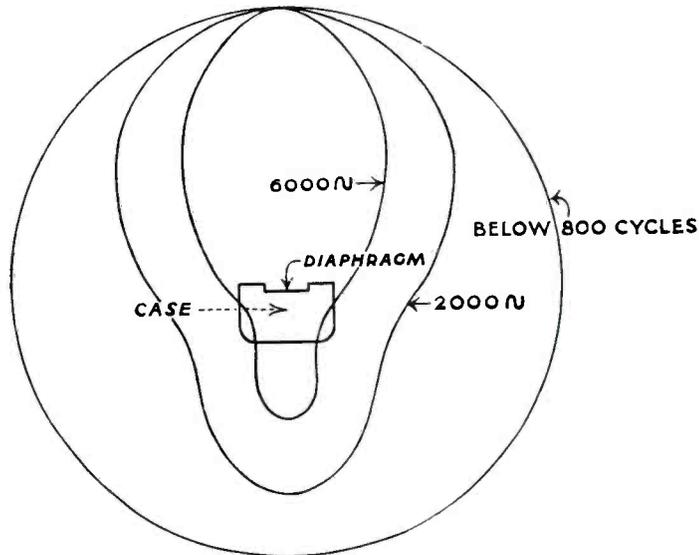
The 50-A, along with having the limited pickup angle (for uniform response) associated with pressure mikes, is placed approximately .577 or about one half the distance from the sound source that the 44-A velocity mikes would be placed for the same ratio of direct to reverberation pickup.

The non-directional pickup characteristics of both mikes are illustrated to the right.

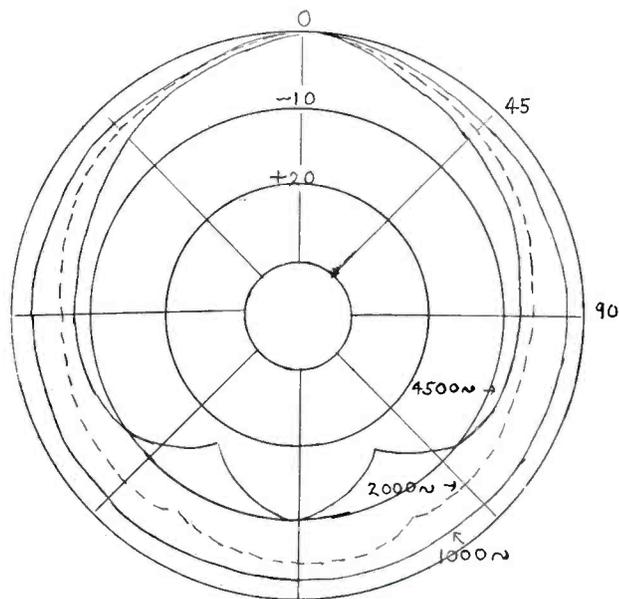
Still another example of a pressure microphone, whose

uniform output depends on resistance, is the pressure actuated ribbon mike. This is the microphone that is combined with the ribbon velocity to form the Uni-directional mike which we shall discuss later.

It consists of a ribbon suspended in a magnetic field and freely accessible to the atmosphere at one surface, but terminated in an acoustic impedance at the other surface. Here, again, the induced emf is proportional to the velocity



(Above) Directional response of 50-A



(Above) Directional response of 88-A

of the ribbon through the magnetic field. Therefore, in order to have velocity proportional to pressure and independent of frequency, the controlling factor is resistance. This is obtained by terminating one surface of the ribbon into an acoustically treated pipe which appears as an acoustic resistance to the ribbon and is very large compared to the reactive components.

The ribbon velocity microphone also consists of a light corrugated metallic ribbon suspended in a magnetic

CAPPS*

SAPPHIRE is, and has always been, the only material for making cutting styli for high class recordings.

CAPPS* Patented Sapphire Styli are the original and accepted standard for high class professional acetate recordings.

Imitated but not equalled

FRANK L. CAPPS

244 W. 49th STREET NEW YORK CITY

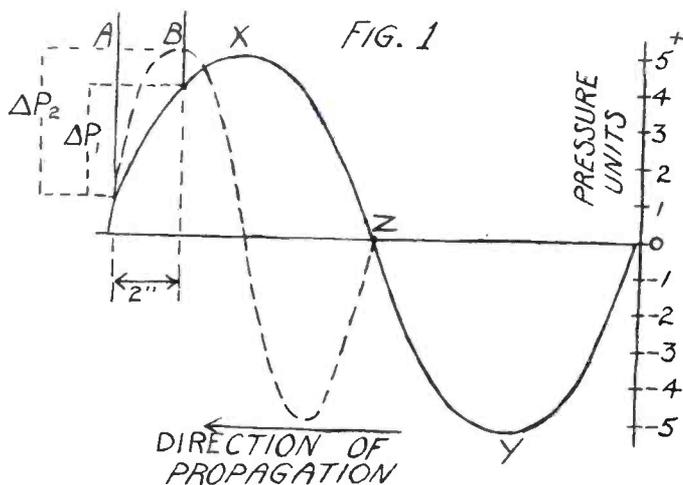
Telephone Circle 6-5285

*Reg. U. S. Pat. Off.

field but is freely accessible to air vibrations from both sides.

In contrast to the pressure microphone, the ribbon in the velocity microphone is not actuated by the sound wave varying the pressure on one of its surfaces. Rather, the ribbon is actuated by the pressure gradient or difference in pressure on its two surfaces. The ribbon being relatively limp, has negligible stiffness reactance and, being suspended in free space, has negligible acoustical or mechanical resistance. Therefore, though the ribbon mass is small, it is the controlling element. The ratio of the velocity of the mechanical system to the pressure or velocity in the incident plane sound wave is substantially independent of frequency.

One of the most important details of construction concerns the size of the baffle surrounding the ribbon. The term baffle is used here to designate a structure (magnetic pole pieces) that determines the air path between the front and back of the ribbon. Although the baffle is of rectangular shape, we will consider, in this discussion, only the



shortest air path around it from one surface of the ribbon to the other.

We will consider the effect on the ribbon of just one cycle of a sound of low audio frequency.

Let x = Pt. of maximum compression

Let y = Pt. of maximum rarefaction

Let z = Pt. of normal pressure

Looking at Fig. 1, solid wave, let us assume it represents the cycle which is actuating the ribbon at a specific instant. Let lines A and B correspond to the two surfaces of the ribbon and the distance between them represent the shortest air distance around the baffle from one surface of the ribbon to the other. We will assume it is two inches for a certain microphone. It is obvious that at A, which is (at the instant under consideration) the far side of the ribbon from the direction of the sound source, the pressure is approximately one unit above normal, whereas, at B which is two inches away from A or the surface of the ribbon facing the sound source, the pressure is four units above normal. Naturally the ribbon is actuated in the direction of the least pressure. It is clear that as the wave continues past the ribbon, the pressure between A and B will continually vary and the ribbon will always be actuated by the difference in pressure on its two surfaces.

The voltage generated by the ribbon moving through the magnetic field is given by:

$$e = Blx$$

where e is the generated emf
 B is the flux density of the magnetic field
 l is the length of the ribbon
 x is the velocity

We have already mentioned that the moving system in the microphone is mass controlled. Mass can be considered as an inductive reactance. Therefore, the higher the frequency actuating the ribbon the greater the reactance offered by the ribbon. This would cause the ribbon velocity to vary inversely with frequency if it weren't for the fact that the pressure gradient or difference in pressure on the ribbon surfaces increases with frequency. The increase of pressure gradient with frequency can be seen in Fig. 1 where the difference in pressure units between lines A and B is greater for the higher frequency wave.

At the lower frequencies the larger the baffle (the greater the air distance between ribbon surfaces) the greater the pressure gradient and the higher the output. However, with the larger baffle, the output will fall off more rapidly as frequency is increased due to the size of the baffle approaching the length of the sound wave, at which time the pressure difference between the front and back of the ribbon is a minimum.

The most widely used ribbon velocity microphones for high fidelity broadcasting are the 44-A and 44-B models. A third type, the 74-B or junior velocity, is used for PA work a good deal.

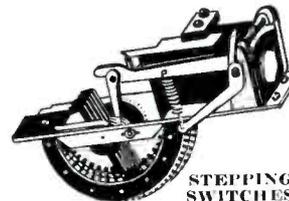
The response of the 44-A drops off at the lower frequencies and hence the microphone is used mostly for close

(Continued on Page Sixty-two)

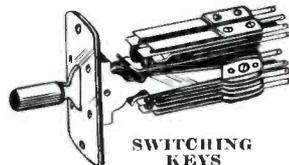
CONTROL APPARATUS by AUTOMATIC ELECTRIC



RELAYS



STEPPING SWITCHES



SWITCHING KEYS

IN AMERICA'S leading radio broadcast studios, Automatic Electric remote control devices are used for the dependable operation of such important equipment as master control boards and announcers' cabinets, for program monitoring and switching, and for other electrical control uses.

These devices have a built-in quality that is the direct result of over 50 years experience in the design and manufacture of communication, signaling, and control systems, utilizing the same engineering skill that revolutionized telephony with the automatic dial telephone.

A complete engineering and consultation service is available to broadcasting studios on any electrical control problem. Avail yourself of this service today by writing—

American Automatic Electric
Sales Company
1033 West Van Buren Street
Chicago, Ill.

AUTOMATIC ELECTRIC

TELEPHONE, COMMUNICATION, AND SIGNALLING EQUIPMENT

Once again...



Capitol Radio Engineering Institute

3224 Sixteenth Street, N. W.
Washington, D. C.

Christmas

Greetings

from all of us — to all of you

E. H. RIETZKE, President

MARK H. BISER, Vice-President

E. W. Thomas

K. G. Miles

W. S. Bell

Ewart Bond

R. T. Hemmes

E. H. Guilford

T. C. Blow

A. W. Langley

R. E. Grimm

A. G. Scholz

P. N. Partridge

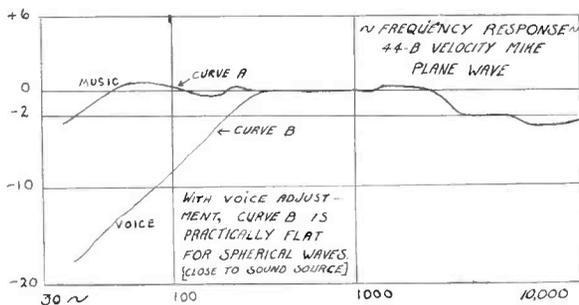
E. M. Gales

R.C.A. Microphones

(Continued from Page Sixty-one)

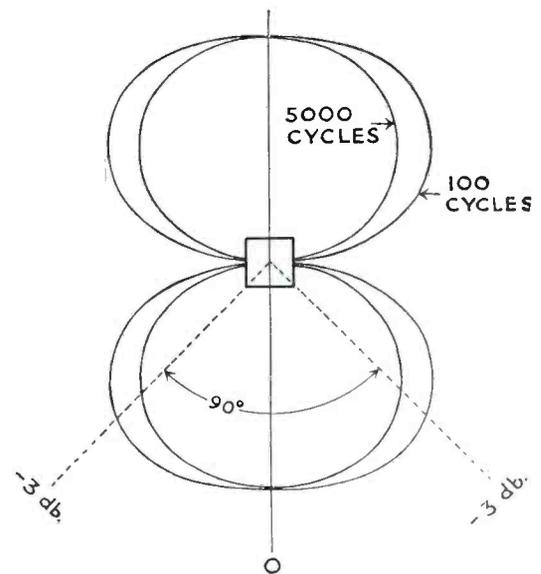
(speech) pickups. Its low frequency characteristics compensate for the added bass response encountered when a velocity microphone is actuated by spherical waves (close to sound source).

The 44-B can be easily adjusted for either close or long-range pickups. Actually, the adjustment places a reactor in parallel with the transformer winding (for 50 ohm output impedance) or part of winding (for 250 ohm output



impedance). When the reactor is used, it drops the response from about 300 cycles down as shown by the "Voice" curve in diagram above. Note that the "Voice" curve was measured in a plane wave field. Therefore, when the microphone is actuated by spherical waves, the response curve will be substantially flat.

We might also note that when a sound wave originates at the side of the velocity microphone (in same plane as the ribbon) the distance around the baffle to front and



Directional response of 44-B

back of the ribbon is the same. Therefore, the pressure on front and back is about equal and approximate cancellation results. This accounts for the very important bi-directional pickup characteristics of the velocity microphone.

When speaking of important directional characteristics we think immediately of the model 77-B Uni-Directional microphone. The measured response approaches a cardioid pickup pattern as shown.

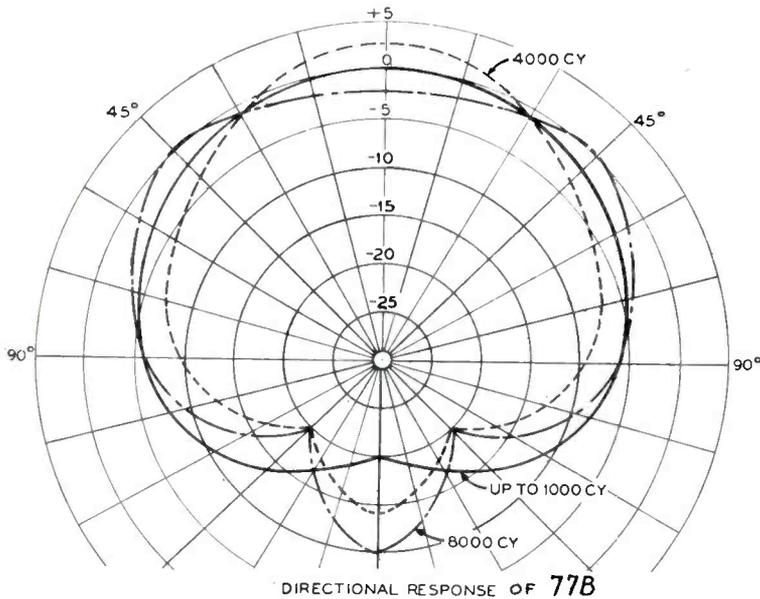
The average response to sounds arriving at the back of

RCA Microphones

(Continued from Page Sixty-two)

this mike is down 14 to 20 db, thus giving approximately a 10 to 1 ratio of desired to undesired pickup.

The moving system consists of a ribbon which is divided into two sections by being clamped at each end and in the center, and immersed in a magnetic field. We may consider each half of the ribbon as a separate microphone. The



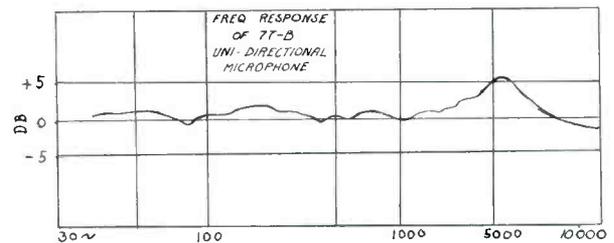
upper half has typical ribbon velocity construction and characteristics. The lower half is a pressure actuated section having one surface of its ribbon terminated in a folded tube packed with sound-absorbing material.

From our previous discussion of velocity Bi-directional and pressure non-directional characteristics it is clear that sounds originating in front of the mike actuate the moving systems so that the outputs are aiding and sounds originating at the rear of the mike actuate the two sections so that the outputs are out of phase and approximate cancellation results.

The cancellation of sounds, arriving from the rear of the microphone, is very good from about 4,000 cycles down. However, from approximately 4,000 cycles up, the response increases due to phase displacement, between velocity and pressure sections which becomes appreciable at these wavelengths.

Below is shown frequency response of a typical Uni-directional 77-B.

This model can also be adjusted (where Bi-directional



or Non-directional pickup is desired) to operate as either a velocity or a pressure operated microphone.



In behalf of students and graduates of the National Radio Institute, and the N.R.I. Staff, I extend most cordial Season's Greetings to the N.A.B.E.T.

J. E. Smith
President

NATIONAL RADIO INSTITUTE, WASHINGTON, D. C.

A Merry Christmas and A Happy New Year



1st LT. C. S. BIDLACK
A. H. BUTLER
H. V. BRANDT
H. B. CASKEY
J. A. CHEEKS
H. L. CLARK
T. C. COX
J. D. DISBROW
F. C. EVERETT
J. J. FRANCIS



J. F. HACKETT
W. R. JEROME
G. E. MAKINSON
A. M. McMAHON
B. C. PRUITT
W. C. PRUITT
A. B. STEWART
H. A. WALKER
L. P. WEST
F. E. WHITTAM

N.A.B.E.T. . . . CLEVELAND

MERRY CHRISTMAS



The Brush Development Co.

3311 PERKINS AVE. CLEVELAND, OHIO



wishes you

Season's Greetings

At the close of this year we are glad to pay tribute to the men behind the controls . . . to you men who make possible the great radio broadcasting industry.

We at Bud Radio have your welfare always in mind. In spite of shortages and priorities and rising costs, we have steadfastly maintained the quality and dependability of our products.

For 1942 we pledge ourselves to the same policy.

Bud Radio, Inc.

Cleveland, Ohio



O. Roach Photo



Season's Greetings

N.A.B.E.T.
KOA, Denver



Cleveland News

By J. D. Disbrow

The NBC 15th Anniversary Party in Cleveland went over with a bang, and every person who could attend was there and enjoyed themselves until the wee small hours. The Alpine Village turned its main floor over to NBC from ten o'clock on with a large table layout and an excellent chicken dinner.

The American Red Cross has been conducting a series of weekly instruction classes on first aid for firemen, police and others who will figure in the picture should a catastrophe occur. Stewart from Brecksville and Jim Hackett from the studios have been attending and will act as instructors to the engineers when the course is complete.



Corner Shot Taken at 15th Anniversary Party.

Jimmy tells us the bandage and adhesive tape business is OK as long as you don't get it around your neck.

Several of the boys have been out on the hunt and

returned with their limit of birds and bunnies. Recently a scare of rabbit fever has kept some of the gang from picking up the trusty shotgun.

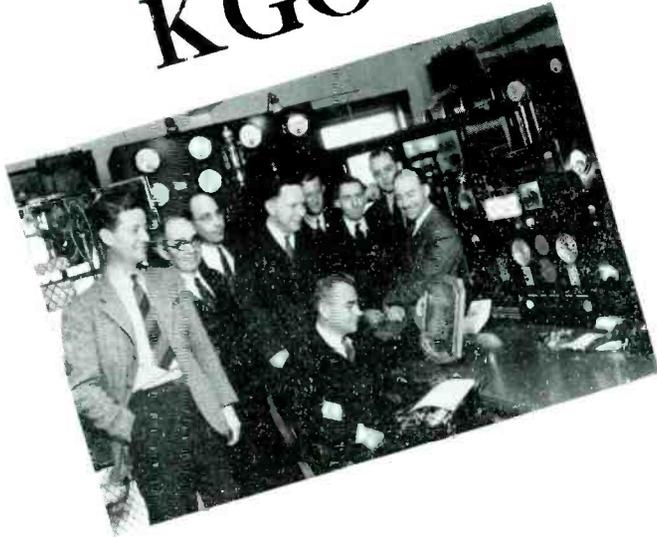
Russell having a hectic time trying to locate eight electric clocks all of a certain type so he could build up his special timing device for clocking the participation periods where one minute commercial plugs fly fast and furious.

The staff deeply regret the passing of the oldest broadcaster on WTAM in length of service. Mr. A. F. Potter of the Cleveland Cooperative Commission Association, who for years has broadcast the daily market reports, passed away from a heart ailment. It is estimated that he completed 7,128 broadcasts.

Another Christmas time has rolled around and the Engineering Staff at WTAM wish to take this medium of expressing their good wishes for a Merry Christmas and Happy New Year to all stations.

THE SEASON'S BEST
from
OUT OF THE WEST
MILTON SHREDNIK — K.O.A.
"Music by Shrednik"

KGO



KPO

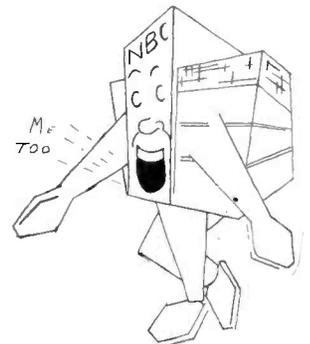


Season's Greetings

from

SAN FRANCISCO

Engineering



Preview of New NBC San Francisco Studios

By T. H. Phelan

Engineering Department, National Broadcasting Co.

THIS is intended to be a preview of what the reader may see and read about in detail when the new NBC Studios in San Francisco are opened early in 1942. Essentially the plant will consist of six live Talent Studios equipped with standard NBC Consoles, one Speaker Studio equipped with transcription facilities and two complete Transcription Studios. The auditorium is two stories high, seventy-two feet long, forty-one feet wide and has at one end a forty by twenty-two foot platform which is raised nineteen inches from the floor. Next in size are studios B and C, which are two stories high, forty-four feet long and twenty-four feet wide, and studios D, E and F, each being about twenty by thirty feet; the Speaker Studio, G, is sixteen by fifteen feet.

If we were to step into a Studio Control Booth we would see before us a typical setup—a large console, production table and a high-fidelity speaker. The console design has been changed to provide a new and more interesting color scheme which will provide, in addition to a better eye appeal, more suitable light and working conditions for the engineer. Another feature of these new Control Booths is the complete absence of any amplifier equipment. The necessary preamplifiers, loudspeaker amplifiers and other associated equipment has been located in the Central Equipment Room. The studios are on the second and third floors and the offices occupy the fourth floor. The large Auditorium Studio will be provided with a built-in sound reinforcing system.

The Speaker Studio, which will be set up as a well appointed 16' x 15' living room, will have the necessary announcers' controls built in to a special desk. Talk-back facilities will be provided by means of a high-fidelity speaker which will be part of the furniture setup. The general appearance of the room will be such as to put at ease those people who are scared by technical facilities in a standard studio. The facilities in the Control Booth of this studio have been arranged to accommodate two transcription turntables so that this studio, in addition to its function as a Speakers Studio, can be used to take care of the overflow of transcribed programs and auditions. The color scheme of this console will be in keeping with the color used in the other studios. The two Transcription Studios will be provided with technical facilities comparable to the Speakers Studio but the equipment color scheme will be the standard black and silver, inasmuch as these are on view from the main lobby, together with the Master Control and Recording Rooms, which will also have our standard black and silver treatment.

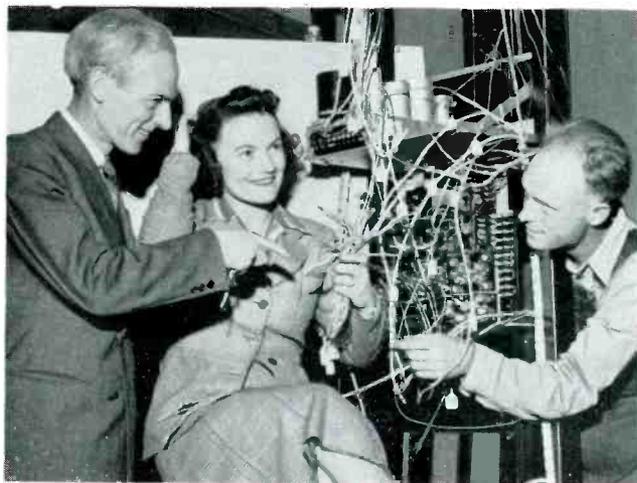
The Master Control Room, visible from the third floor lobby, will consist of a Master Desk capable of handling 18 studios, 8 switchbanks and 14 channels. This Master Control Desk will be flanked on each side by five equipment racks. On these equipment racks will be mounted the necessary patching jacks for studio equipment, incoming lines, equalizers, outgoing lines, etc. One rack will be devoted exclusively to test equipment, oscillator, distortion meter, gain measuring equipment, etc., in order to facilitate routine

checking of circuits and amplifier equipment. A communications type receiver will be mounted on one rack and connected to the house monitoring system.

The News Room on the second floor will be equipped with a special microphone and by means of a system controlled from the Master Desk news bulletins may be put on the local Radio Stations KGO and KPO with the absolute minimum of delay.

Directly behind the Master Control will be the Equipment Room which will house all of the amplifiers used for the entire broadcast plant. In this room will be located the main distributing frame and power boards for distribution of power to the broadcasting equipment.

In order to provide adequate facilities for the six high-fidelity radio receivers an RCA Antenaplex All-Wave System will be installed on top of the Clift Hotel, directly adjacent to the building and some 200 feet higher than the building. A coaxial transmission line will feed the



Gordon Strang, construction supervisor; Jill Fuerst, and Bruce Baker, electrical foreman, make some important connections.

radio frequency waves from the top of the Clift directly to the receivers.

In order to provide standby power facilities an automatically controlled gasoline generator set supplied from a 300-gallon gasoline tank will be provided. This unit will start automatically on power failures or may be controlled manually from the master control desk for test and routine check.

In order that the aforementioned facilities may be properly designed and the installation supervised, a complete Engineering Construction and Assembly Office has been set up directly across the street from the new NBC Building. The activity of this Engineering setup is directed and coordinated by Mr. C. A. Rackey, NBC Audio Facilities Engineer, and by means of this coordination any new developments which may come out of NBC's Engineering Department can be immediately worked into the new plant.



IN APPRECIATION
TO A SWELL BUNCH
OF FELLOWS

FRANK CASTLE

Staff Organist and Pianist

NBC SAN FRANCISCO

Greetings Engineers . . .



. . . from all of us
here at the
Sir Francis Drake
in San Francisco

HOME OF THE FAMED
Persian Room

HOTEL SIR FRANCIS Drake

HAL H. HAMMONS, Manager



Shenoravor Dzenount Yev Pari Gagant
which means in Armenian

Merry Christmas and Happy New Year

TO ALL ENGINEERS

GEORGE MARDIKIAN

of Omar Khayyam's

Merry Christmas
and
Happy New Year

SONIA SHAW

(Songs by Sonia)

COAST TO COAST



Merry Christmas

FROM

Your S. F. Journal Representative

KGO-NBC-KPO

San Francisco Studios Nearing Completion

WHEN KGO and KPO move from their tired old studios at 111 Sutter Street to brilliant and inspiring quarters in the new NBC Building, it will be a day of jubilant celebration.

It will begin a new epoch for broadcasting, not only for KGO, KPO and the National Broadcasting Company, but for all of San Francisco, the Bay Region, the listening areas of the two stations, for the entire network systems of NBC, and for radio in general.

Consequently, the dedication ceremonies, March 14, 1942, will present a fitting climax to the long series of out-

standing promotion activities which started with the most unusual ground-breaking program ever staged.

New studios and offices for NBC stations in San Francisco have been considered periodically for the past 12 years. Scores of schemes have been suggested, many sets of plans have been drawn. Meantime present quarters were growing more and more inadequate, obsolete. Today they are the oldest in use by NBC stations.

Engineers, architects



Mayor Angelo J. Rossi, of San Francisco, helps dedicate the unique temporary studio in the new NBC Building

and radio executives, who know the most about what a modern broadcasting plant should be, pronounce the new NBC Building the most perfect ever designed in arrangement, in equipment, in allocation of space, in general facilities.

So it will be a Seven League stride forward for the San Francisco stations when they abandon quarters that constantly confuse and obstruct efficient operation and move into an ideal building specifically designed for the exclusive use of broadcasting.

Al Nelson began making definite, practical, constructive progress toward this goal when he became general manager of KGO and KPO in October, 1939, and to him goes a large share of the credit for ultimate success.

Proceeding with his customary thoroughness, Nelson, assisted by Curtis Peck, chief engineer of KGO and KPO, investigated 38 different sites and propositions in San Francisco.



Al Nelson, general manager for NBC in San Francisco.

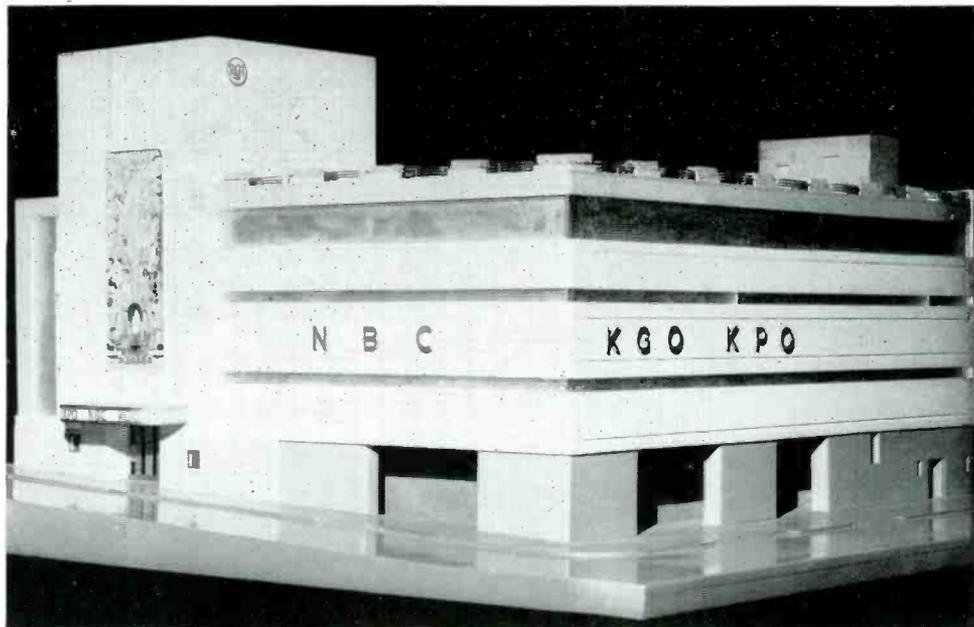
Having the accurate vision and foresight of a successful business man, Nelson knew what revenue the stations could be made to produce with proper facilities and intelligent, aggressive promotion.

From past experience he knew the size and character of an efficient organization. He knew what costs of operation should be. So to each proposition he applied the formula of these factors and if a proposed deal did not promise definite "Profits for NBC" it was discarded.

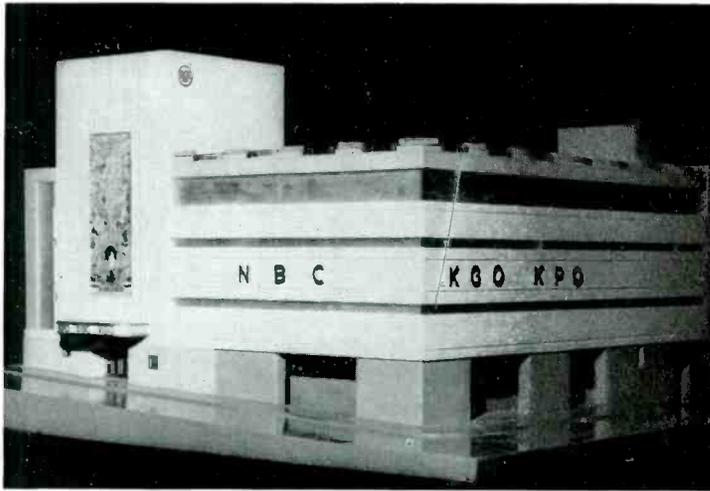
Finally four possibilities remained for the final sifting. One was eliminated because of location, a second was a remodelling proposition that would cost as much as a new building. A third held a threat of complications in the title.

These eliminations settled the final recommendation on the Property at Taylor and O'Farrell Streets, in the heart of the downtown business district, close to leading hotels, clubs and theaters. And there was the happy circumstance that the owners were also general building contractors and that they would have a personal interest in the improve-

(Continued on Page Seventy-one)



Scale model of NBC Building as it will appear when completed.



NBC's New Million Dollar Home Will Be Dedicated to 25 Objectives:

- To sell RADIO to San Francisco.
- To make San Francisco and entire listening area **more radio** conscious.
- To establish San Francisco as one of the **four great radio centers** of U. S.
- To have a plant devoted exclusively to **broadcasting**.
- To double present floor space and reduce **costs of operation**.
- To increase area for production facilities, and make **offices more compact, efficient**.
- To develop facilities for more network **broadcasts from San Francisco**.
- To spread the prestige of **KGO and KPO to nation over NBC networks**.
- To give NBC best facilities for serving **government, public, advertiser**.
- To qualify NBC stations to play important part in **National Defense**.
- To bring radio out of hiding in San Francisco—to make it **conspicuous**.
- To prove NBC is thinking in terms of **community as well as company**.
- To express NBC's faith in the future of **San Francisco**.
- To assure business men NBC shares **responsibility for City's future**.
- To become an active, vital factor in **business life of San Francisco**.
- To make radio advertising attractive, effective, therefore **more desirable**.
- To enable **KGO-KPO to realize maximum advertising and publicity values**.
- To create good will through **hospitality and showmanship**.
- To increase listener pleasure through **better efficiency and equipment**.
- To attract, inspire and encourage the **best of talent**.
- To foster the growing alliance between **business, newspapers and radio**.
- To stimulate cultural things of life at a **time when they are needed**.
- To exhibit and dramatize radio **broadcasting for studio visitors**.
- To maintain popular notion that terms "**NBC**" and "**radio**" are synonymous.
- To help sustain American system of **broadcasting and all its benefits**.

KGO - KPO

KGO-KPO

(Continued from Page Sixty-nine)

ment because they owned other property in the neighborhood.

So this site was recommended to the Company management in New York and the official approval of the NBC Board of Directors followed the endorsement of President Niles Trammell, November 8, 1940. Six days later came the historic ground-breaking.

Instead of following the usual pattern of having some distinguished person "turn the first spade," Nelson invited his entire organization personnel, including actors, artists and musicians, to join him in breaking ground.

Previously the property was occupied as a parking lot, a tire repair shop and service station, but the crowd of spectators overflowed the premises until they blocked traffic on both adjoining streets.

Speakers, orchestra and entertainers worked from a temporary stage on the roof of an existing building, the press box was on top of the service station, news reels and news syndicates carried the pictures and story to the nation. Everyone present was made a charter member of the San Francisco Chapter of the Sidewalk Superintendents' Club and a world-famous chef, George Mardikian, of Omar Khayyam's, was elected president of the organization.

Mardikian introduced a new idea for Sidewalk Superintendents by administering the Official Kibitzer's Obligation, and membership cards were distributed to the crowd by the new president, assisted by the Dainty Dozen, 12 pretty girls of KGO-KPO, attired in photogenic costumes of red and white striped overalls.

Mayor Angelo J. Rossi headed the list of prominent speakers who greeted the improvement. Telegrams were



All Nelson initiates NBC Building when only 50 percent completed, with a luncheon to more than 200 top businessmen of San Francisco, with H. V. Kaltenborn as honor guest.

read from outstanding men throughout the nation, and the signal for all hands to dig in came at the end of a telegram from NBC President Trammell.

Frank Barrett and Harry Hilp, comprising the contracting firm of Barrett and Hilp, together with Larry Barrett, are owners of the property, and the NBC occupancy will be on a 25-year lease. Larry Barrett will operate a parking garage in the basement and a portion of the first floor. Radio will have the main entrance on the first floor and all of the other four floors of the structure.

While all the details of plans, contracts and leases were being worked out following the authorization and ground-breaking, constant promotion and publicity were making the public conscious of the coming improvement. When existing buildings were torn down and the steam shovels waddled in to start excavation in the Spring of 1941, everyone knew what was going on, where it was happening and what it would mean to every man, woman and child who listens to radio programs coming from or through KGO and KPO.

Sticking consistently to his course, Nelson aimed every exploitation activity directly at one or more of the 25 objectives which the new broadcasting headquarters is intended to accomplish. Innovations became a habit. "Firsts" are news. This irresistible combination could not be ignored, even by editors of publications that had been indifferent or opposed to radio.

Broadcasters were among the first to sense the potential of the prospective campaign and eight outside stations broadcast the spectacular ground-breaking program. Today business concerns are realizing that something is happening, that broadcasting is gaining a terrific momentum in San Francisco, and a flood of new accounts is flowing to the NBC stations months before their Building is ready for occupancy and operation.

Conservative, successful San Francisco is accepting the million-dollar improvement as absolute proof of NBC's confidence in the stability and the future of the Bay City. It is indisputable evidence that NBC wants to function as

(Continued on Page Seventy-three)



Chef George Mardikian is president of the Sidewalk Superintendents' Club. When NBC Vice-President in Charge of Engineering, O. B. Hanson, comes to town, George makes him a member of the club by administering the official Kibitzer's Obligation . . . It all has to do with the new NBC Building.

Yuletide Greetings

from

FLOYD WRIGHT

Staff Organist

NBC San Francisco

Merry Christmas

TO ALL

Telephone Equipment and Repair Co.

San Francisco

O. M. CHRISTIANSEN

Season's Greetings

from

San Francisco Announcing Staff

FRANK BARTON	PARKER GAYMAN
CARLOS BENEDETTI	DOUG GOURLEY
BERTON BENNETT	JOHN GROVER
JACK BENNETT	EDDIE KING
REED BROWNING	JAMES MATHEWS
FLOYD FARR	ARCHIE PRESBY
JOHN GALBRAITH	JUAN TRASVINA
PAUL GATES	HAL WOLF
WILLIAM WOOD	



Season's Greetings

from

Gladys Cronkhite

and her

KPO

International Kitchen

Best Wishes for 1942

HAPPY GORDON'S RANGERS

HAPPY GORDON

OZZIE JOHNSON

WALT ARUKSAR

BUD MacDONALD

From Us to You, Engineers

Season's Greetings

To the Boys on the Controls

HOWARD HARDING

Soloist — "Beautiful Music"

RED — Coast to Coast

SUNDAY EVENINGS

Best Wishes

To All

LESLIE WELLINGTON

General Insurance

444 California Street

San Francisco

California

Exbrook 4078

KGO - KPO

(Continued from Page Seventy-one)

a vital unit in the community and that it is ready to assume a share of responsibility for the progress and growth of the entire area.

Increasing good-will from the general public is revealed by the popular reference to the structure as "Our new NBC Building." The people have a feeling of personal ownership that will mean larger and more friendly audiences as time goes on.

Just as his "one for all and all for one" pattern of co-operation was dramatized so vividly at the ground-breaking, Nelson has designed scores of promotion activities connected with the new Building to produce various values for his stations. Each of these results contributes definitely and directly toward the supreme objective of building profits for NBC on a foundation of radio-consciousness in San Francisco.



Every member of the KGO-KPO staff, including artists and musicians, joined their general manager, Al Nelson, in breaking ground for the new NBC Building while thousands of spectators covered the property and blocked two adjoining streets.

There has been co-operation with newspapers, with worth-while civic movements, with outstanding commercial activities, with National Defense efforts, with numerous business organizations, with cultural and educational movements. In fact, the scope has been so broad that one department store executive went on the air to predict that the dedication of the NBC Building would be like the opening of a great new University.

In the early stages of construction there were broadcasts from the lot. Later temporary platforms and stages were erected in the street so thousands of visitors could see as well as hear the wide variety of programs.

As soon as construction had progressed to a point where it was possible, a beautiful temporary studio was constructed in a 30-foot entrance to the parking garage. Frequent broadcasts from this studio are visible to crowds in O'Farrell Street through large windows. Another conspicuous "first" for NBC in San Francisco.

More than 200 of the City's top-flight business, banking and industrial executives were entertained at a luncheon honoring H. V. Kaltenborn, a large space on the garage floor being curtained off for this unprecedented affair. A tour of the building followed the luncheon.

Division representatives of NABET enjoyed a tour of the plant and a broadcast from the temporary studio while in San Francisco. District convention of NAB had an inspection tour and a party.

These are just a few of the dozens of ideas that have made goodwill and news at the same time, activities that are bringing radio out from under its bushel and giving it the spotlight it deserves in this high-speed and complex age. All are elements in a moving panorama which must be dismissed with a brief reference in this story.

To record all that has been said and done to point the meaning and significance, the value of the new NBC Building to both advertisers and listeners would make a book in itself. When that story is written it will analyze an accurate long-range vision combined with a genius for planning and coordination, and it will follow the thrilling progress of skillful, alert executive direction to the consummation of every objective.

That same type of effective showmanship which has characterized the promotion of San Francisco's new broadcasting headquarters has also been built into the Building. If it is to contribute to the cultural values of the City, increase the material wealth of the community, stimulate an improvement and growth of business activity; if it is to perform its maximum service to the public, then this structure must be dramatic, conspicuous.

Architects and engineers accepted this difficult assignment enthusiastically and are producing a building that is certain to be an outstanding show-place in a city full of show-places.

Streamlined without being freakish or fantastic, the reinforced concrete building will be windowless, air-conditioned throughout. It will be five stories high, trimmed

(Continued on Page Seventy-five)



Curtis Peck, chief engineer of KGO and KPO, was of great assistance to General Manager Al Nelson in working out the preliminary plans for the new NBC Building in San Francisco.



Crowd in O'Farrell Street sees as well as hears a special broadcast dedicating the unprecedented temporary studio in the new NBC Building.

Yuletide Greetings

from

MONICA DICK LYLE
Whalen Aurandt Daniels

"ACME BEER"

(They all say "Yes" to Acme)

Season's

Greetings

From

TOM GERUN
FRANK MARTINELLI

"BAL TABARIN"

(Columbus at Chestnut)

SAN FRANCISCO

Merry Xmas

and

Happy New Year

"BILL CLIFFORD"

(Orchestra)

BAL TABARIN CAFE

Holiday Greetings

TO

N. A. B. C. T.

FROM

"PHIL BOVERO"

(Design for Dancing)

To the Boys on the Controls

from

The Boys in "Production"

Merry Christmas

Happy New Year

CAMERON PRUD'HOMME

BOB DWAN
GENE CLARK

FRED HEGELUND
WALLY RUGGLES

Season's Greetings

"RICARDO"

(And His Violin)

Holiday Greetings

"PLEASE, BOYS:—

DIAL ME SWEET AND LOW."

"MONTE MOHN"

"Dr. Kate"

"Chuck Wagon Days"

"I Want a Divorce"

"Uncle Walter's Doghouse"

KGO - KPO

(Continued from Page Seventy-three)

with bands of glass block that will be translucent but not transparent.

Stations will have 52,800 square feet of space, more than double the area in present quarters, but a larger proportion of the footage will be in studio and production departments, not wasted in unnecessary office and hallway space.

Startling and impressive will be the great mural, a panel 16 by 40 feet, symbolizing radio as the universal medium through which all the peoples of the earth communicate and become better acquainted. Secrecy regarding the details of this magnificent feature will prevail until it is unveiled during the dedication of the Building, but it will attract world-wide attention for two reasons: It will be a masterpiece of art, and it will be the only thing of its kind in existence.

Beneath the mural, centered in its 80-foot facade, will be an attractive marquee and the hospitable entrance to the main lobby. Attractive displays will tell the story of radio service and current programs, while elevators and the main staircase will rise from the floor.

Visible from the foyer of the second, or studio, floor will be the news room, with its battery of UP, AP and INS teletype printers bringing last minute news from all corners of the earth. Here, too, will be the triangular news desk from which news broadcasts will originate.

Another large window will reveal the traffic department with more teletype printers and the huge boards on which broadcasting schedules are kept corrected up to the minute.

Studio A, two stories high and with capacity for 500 visitors, opens directly from the second floor foyer, and a public corridor leads to Studios B, C, D, E, F and G. The \$35,000 Wurlitzer concert pipe organ will be in Studio B, and Studio G will be used for individual speakers and forum broadcasts, not open to the public.

Other occupancy on the second floor will include the sound effects room, script conference rooms, artist's lounge, musicians' locker room, store and wash rooms.

Each studio has its own control room, and clients' booths will be above the two-story studios, A, B and C.



A view of the crowd at the ground breaking ceremony of the new NBC Building, San Francisco. Note press box on roof of gas station.



Twelve pretty girls of KPO and KGO wore red and white striped overalls with white blouses and caps for the ceremony. The photogenic "Dainty Dozen," perched on a billboard for a picture. From the left they are: Lola Camaches, sales; Joan Paterson, auditing; Grace Cooper, actress; Marion Hansen, engineering; Ethel O'Kane, announcers; Florida Edwards, actress; Betty Kinsey, actress; Reola Jamison, audience mail; Beth Gardner, typing; "Captain" Mary Hunter, music rights; Vera Lashin, traffic; and Ruth Sprague, comedienne.

Windows facing the third floor foyer will help visitors to see more of the back-stage operations of broadcasting. They will open on the master control room, the radio recording room and transcription studios, H and J. By thus exhibiting the most interesting activities of the business and by placing all public studios within easy reach of visitors, it will not be necessary to have any "conducted" tours of the Building.

Chief Engineer Peck and his staff will occupy much of the third floor. Other departments will be continuity and acceptance, typing, mimeograph, music rights, music and Thesaurus libraries, record audition room and record vaults, production manager, announcers, production men and writers, telephone switchboard and dark room for staff photographer.

Administrative offices will be on the fourth floor. These will include general manager, sales manager and staff, program manager, press, sales promotion, auditor, educational and agricultural department, mail and file rooms, pantry and a clients' audition room between the general manager and sales.

Pent houses will constitute the fifth floor and these will contain machinery for passenger and freight elevators as well as all the air-conditioning equipment.

When finished the structure will represent a total value well in excess of one million dollars, including an investment of \$200,000 for special equipment by the National Broadcasting Company. Much of this is being constructed in a large assembling shop just across O'Farrell Street from the new Building.

Representing NBC on the job are Gordon Strang, general supervisor; Thomas H. Phelan, audio facilities engineer, and Joseph Arnone, architectural engineer, all from the staff of O. B. Hanson, NBC vice-president in charge of engineering; New York.

Hanson and other New York executives have made numerous visits to San Francisco in connection with the improvement and to confer with Nelson and the local

(Continued on Page Seventy-seven)

Merry Christmas

And Thanks for the Use of the Hall

CLANCY HAYES

(Dancing with Clancy)

RED and BLUE



Season's
Greetings



JANET JORDAN

RED and BLUE



Merry Christmas
to
the Engineers

ANN HOLDEN

KGO Home Forum

"MULTI-GAIN"

Lower Frequency Solenoid Antenna

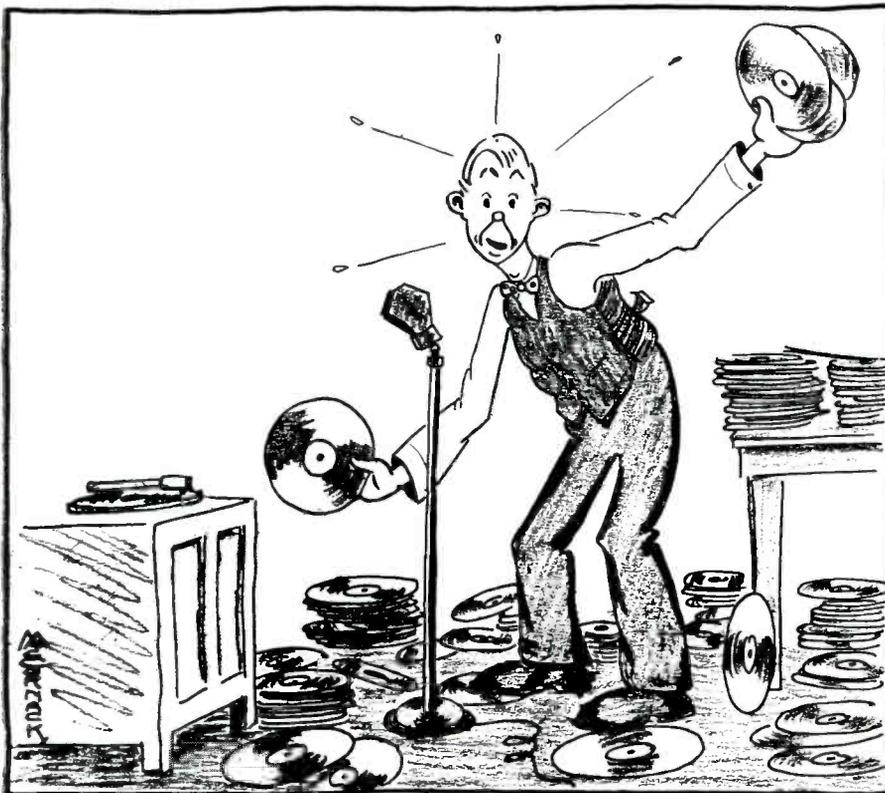
A sensational new mobile antenna that offers an ideal solution for remote pick-up work. Streamlined, small size, high gain on 1500 to 5000 kc. spot frequency

Write for Full Information

TECHNICAL RADIO, Inc.

747 Natoma Street

San Francisco, Calif.



GREETINGS

from

RUDY SIEGER

Caswell Coffee Program

NBC-RED

SUNDAYS

"SURPRISE, FOLKS-ARTURO TOSCANINI AND THE SYMPHONY JUST STROLLED IN"

San Francisco News

By Lee Kolm

THE SAN FRANCISCO SCENE: A group of engineers gathered around Dan Williams, FE, asking questions on house painting, fluorescent lighting, and machine shop practice. Dan is the exception to the old saw "jack-of-all trades, master of none" . . . Those two interested listeners behind the equipment racks are hearing the latest story as told by Oscar Berg, MS. . . . Quiet Andy Mitchell, SE, who has been nick-named "Stillwater," insisting he isn't a "man about town" as many believe . . . Bev Palmer, CS, attempting to get Guy Cassidy, SE, to tell without embellishment what happened in "E". After checking with the transmitters, Bev finds that nothing happened, but the possibilities were tremendous . . . Curtis Peck, engineer in charge, showing his latest photos of the new building construction. Using a Kodak 35 Curtis has taken about 250 pictures detailing all work that has been done at Taylor and O'Farrell Streets . . . Harold Platt, SE, contacting the home movie enthusiasts and trying to sell them on the idea of organizing a film library . . . Ernest Jefferson, SE, known as Paul Bunyon, telling the boys how he can fell a tree in exactly the right spot without damage to person or property. However, he still lacks the necessary finesse to remove pipe from neighboring property without getting into trouble with the police . . . Proudly displaying photos of his twin sons, Eddie Parkhurst, ME, gets into a discussion with the control room gang as to the identification of the two boys. It turns out that Parky isn't so sure himself which boy is which . . . Mark Dunnigan, SE, refuses to give a discourse discount on those new-fangled lawn mowers he's attempting to sell. It's a toss-up whether or not Jim "Get-It-Wholesale" Summers, CS, will be able to convince Mark "a sale is a sale even if you don't make money" . . . George MacElwain, FE, is probably the West Coast's most publicized monitor man. During each Associated Oil football broadcast the announcer makes frequent mention of George and his work . . . The wood-working shop of Red Sanders, FE, is proving to be quite a popular spot. A fellow with any small work to do always seems welcome to use Red's extensive equipment . . . Add Charlie Kilgore, CS, to the long list of engineers owning fog-free property. When the boys see the fog blowing in through the Gate and they question Charlie about his Belvedere Island property he always insists that the prevailing winds keep his estate clear of fog at all times . . . For a long time Senator Thomas Q. Watson, SE, was the man living closest to the SF studios. Now the honor (?) goes to Ken Owen, SE, whose residence is only six blocks from the building. The new building will be closer yet to the Owen domicile . . . That important-looking gent enjoying a huge after-midnight dinner at the Bal Tabarin Theatre Restaurant is none other than the "silver fox of San Mateo" Frank Barron. Frank handles all the Bal shows and is known as SF's only "fee man" . . . If Santa Claus was to bring George Greaves, FS, a yacht he would have his heart's desire. George's main topic of conversation is the swell-looking boats anchored at the Yacht Club . . . With his new exposure meter, received this Xmas, Alan O'Neil, Reference Recording, will have completed his movie equipment layout. Alan probably takes more indoor color movies than any other camera enthusiast in SF Engineering . . . Don Hall, ME, seems

plenty busy when away from the studios what with some radio repair work for friends and movie work featuring his heir . . . Reports have it that Andy Andresen, SE, has been overdoing it with those tall chocolate sundaes at Markdikians Chestnut Tree. Several times Alan O'Neil has returned from lunch with Andy to find that his stomach was not quite as strong as Andy's . . . Back in ship-shape again, George Dewing, SE, is finding plenty of exercise sawing wood at the SF Beach . . . Harry Jacobs, SE, still remains the studio authority of home movie developing and reversing. His lab now has a capacity of 150 feet . . . After much discussion John MacDonnell and Lee Kolm checked their heights and it was found that Mac is now the tallest engineer in the SF studios . . . Many thanks to the boys who aided with this Xmas issue; in particular, thanks to Mr. Nelson, Mr. Peck, the SF Press Dept., and Frank Barron, without whose help SF would not have made the showing it did.

We are sorry to report that, due to a severe attack of the flu and a slow recovery, there isn't much yachting news from Joe Baker. Joe suffered the flu attack several weeks ago and is just now getting around to where he has enough pep to even talk about yachting.

Four of the men at KPO have chipped in and purchased themselves a trailer. The members of the "Corporation" are: Robert Barnes, Art Dingle, Bill McAulay and Mort Brewer. The trailer comes in very handy for hauling away junk, hauling wood, going camping, etc. Mort says that recently he was hauling a load of bricks when the ball-and-socket hitch came lose. The emergency hitch, which is a short piece of chain, held the trailer to the bumper and prevented a serious accident, but when the trailer tongue finally stopped banging into the back of the car Mort says that it looked like a Panzer Division had run over the back of this car.

Ed Manning is very pleased with his baby Studebaker. He reports very good gas mileage, which is important when you have to commute as far as Ed does.

Ed Poage visited the KOA transmitter while on vacation, which was several months ago. We are still hearing about "what a swell layout" KOA has. Wonder what he could mean.

Walt Kellogg has built himself a tool post grinder for his lathe that would do credit to a commercially made job. When the OPM hears about Walt they will no doubt give a defense job to turn out in his own workshop.

KGO — KPO

(Continued from Page Seventy-five)

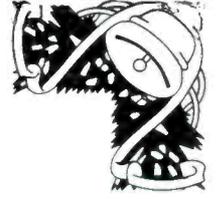
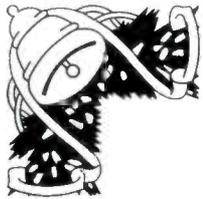
architect, Albert F. Roller. It is a compliment to San Francisco that the technical staff in New York is just as determined to give the Bay City the most perfect broadcasting plant that can be built as are those directly on the job. To that end, everything that has been learned about the construction of such a highly specialized building is being used for the new home of broadcasting in San Francisco.

San Francisco is the sixth great trading area in the country, the recognized business center of the Pacific Coast. Without question, the new NBC Building will make it one of the four principal radio centers of the United States.

HOLIDAY GREETINGS



CHICAGO CHAPTER
OF
NABET



A MERRY CHRISTMAS

and

A HAPPY NEW YEAR

Boys



CHICAGO LOCAL

American Federation of Radio Artists



VIRGINIA PAYNE
President



NORMAN BARRY
First Vice-President

CARLTON KADELL
Second Vice-President



PAUL NETTINGA
Third Vice-President

PHILIP LORD
Treasurer



ANNETTE HARPER
Recording Secretary

RAYMOND JONES
Executive Secretary



Merry Christmas



FORT PEARSON



CHARLES LYON

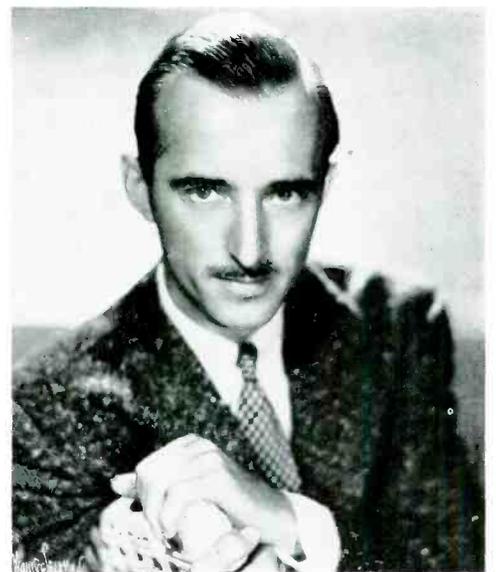


===== Announcers =====

===== NBC - Chicago =====



DURWARD KIRBY



BOB BROWN



A Happy New Year

Merry Christmas

from



THE PRAIRIE FARMER STATION

Burrige D. Butler, President (Chicago) Glenn Snyder, Manager

★ **It's a Merry Christmas, Boys!** ★

from

The TOM MIX Cast

RUSSELL THORSON
as "Tom Mix"

CURLEY BRADLEY
as "Pecos"

DON GORDON
Announcer



PERCY HEMUS
as "The Old Wrangler"

FOREST LEWIS
as "Wash et Al"

TED MacMURRAY
Producer

★ **SEASON'S GREETINGS** ★

to

N.A.B.E.T.

Carl Wester and Company

Who's Who in Chicago — and Fort Monmouth

By Tom Gootee

WHEN Frederic C. Shidel first began tinkering with ham radio back in 1918, he little realized that his interest in "wireless" would some day lead him to become an officer in the Signal Corps of the U. S. Army. Fred is now located at Fort Monmouth, New Jersey—on leave of absence from his NBC Chicago duties—and is a member of the Staff and Faculty of the Signal Corps School, a vital part of the army communication system.

But it was a long time—and a long way—from Amherst, Wisconsin, where Fred was born and received his primary schooling. At about the same time Camp Alfred Vail (now Fort Monmouth) was established—during World War I—Fred became interested in ham radio. He built several hay-wire receivers, and in 1920 received his first station license under the call of 9CIU, which call he still possesses. His first transmitter was constructed from an old Ford spark coil, with the stationary gap soldered to the coil terminals. A year later he built his first rotary-gap spark transmitter of home-made parts. And in 1922 he constructed his first tube receiver, using the type 202 tubes.

Following his interest in radio communication, Fred attended Dodge's Institute in the spring of 1925, and then put in a summer of ship operating aboard a Great Lakes ore freighter. After the close of the Great Lakes shipping season he enrolled in the College of Electrical Engineering at the University of Minnesota. The same schedule was repeated every year following, until 1929—with six months of ship operating alternating with six months of schooling at the University. It was during this time that Fred became interested in the R.O.T.C.—and spent much of his time studying for a reserve officer's commission. Also, during 1929-32, Fred acted as student engineer in charge of the school's broadcast and experimental radio stations, WLB and W9XI. At long last, in the spring of 1932, Fred was awarded his B. of E. E. degree. At the same time he received his commission as a Second Lieutenant in the Signal Corps Reserve.

He then looked around for a suitable radio job, but found none—the depression had arrived. So Fred returned to the University to study for a Master's Degree in Communications.

In the spring of 1933 he was called to active duty in the army in connection with C.C.C. camps in the Superior National Forest.

Back in civilian life again at the conclusion of his C.C.C. duty, the first thing Fred did was to get married. Then, finding no radio jobs open at the time, he became office manager for a large oil company—a job he held for well over three years. During all this time he retained his interest in amateur radio and was active in the Signal Corps Reserve, being promoted to the grade of First Lieutenant in 1936.

In June of 1937 his long-awaited desire for a good radio job was realized, and he came to NBC in Chicago—as a studio engineer. In the Windy City he operated his ham station much more enthusiastically than before—mostly on 10 and 20 meter fone.

On January 3, 1941, Fred was ordered to Fort Monmouth for duty at the Signal Corps School and was assigned to the Department of Training Literature—later being transferred to the Enlisted Men's Department, Radio Division, as Officer in Charge of the Test and Repair Section. In July of this year he was promoted to the grade of Captain.



Capt. F. C. Shidel

A word about Fort Monmouth will aid in explaining its very vital importance to our country's national defense. The school trains personnel from all parts of the country in the many branches of signal corps work. The Enlisted Men's Department of the school has a student body of over fifteen hundred, at all times. Of this number, about half are trained in the Wire Division as telephone and telegraph specialists. The other half are enrolled in the Radio Division and are given training in any of four specialties: as field radio operators, fixed-station operators, radio repairmen, or telegraph printer operators. This department alone can turn out fifteen hundred specialists every fifteen weeks. For this huge task, Fort Monmouth is equipped as well as any of the larger engineering colleges in the country.

Besides the Enlisted Men's Department, there is an Officers' Department with an enrollment of 280 quarterly, an Officers' Candidate School with an enrollment of 500 quarterly, a department for training specialists for aircraft warning organizations, and the Department of Training Literature.

The post at Fort Monmouth, including the Signal Corps School, is commanded by Brigadier-General George L. Van Deusen. All departments of the School are under the direction of the Assistant Commandant, Lieutenant-Colonel W. O. Reeder.

While the Radio Division offers courses in both operating and radio theory, it is naturally impossible to train a man in both specialties within the allotted 15 weeks times. Therefore, the courses are varied, depending upon the requirements of each of the specialized types of training. But the radio repairman's course is one of the most thorough and difficult given to the enlisted man. It is thorough because it has to be—the army needs the best in radio maintenance. Today every tank and plane carries radio equipment. The number of radio sets in an armored division is unbelievable. Then, there is the radio equipment of the infantry, the artillery, and other arms. Maintenance of this equipment is the responsibility of the Signal Corps and explains the great need for trained radio repairmen.

So with the School at Fort Monmouth turning out skilled operators and trained technicians for service in the Signal Corps, the communications backbone of the army is further strengthened, and the future of American democracy is made more secure.

Season's Greetings



JIM CAMPBELL
NBC — Chicago

Season's Greetings



JOHN HODIAK
NBC — Chicago



God rest ye . . .
merrie,
Gentlemen.

The Cadets
Chicago

- Al Stracke
- Cal Scheibe
- Ken Morrow
- Homer Allen
- Reo Fletcher



TOM, DICK and HARRY

WMAQ

CHICAGO KEY STATION... NBC RED NETWORK

and

WENR

CHICAGO KEY STATION... NBC BLUE NETWORK

*Extend
Cordial Seasons Greetings
to all Members of*

N.A.B.E.T.



Merry Christmas, Boys

GARRY MOORE

The
New NABET Members
of
The Prairie Farmer

W L S
STUDIO ENGINEERS

Greet Their City Cousins

CHARLES F. NEHLSN

HERBERT WYERS

JAMES DAUGHERTY

MAURICE DONNELLY

BURR WHYLAND

WALTER VARNUM

WILLIAM TAYLOR

Season's Greetings



RUTH LYON

NBC — Chicago

SEASON'S GREETINGS

Merchandise Mart Store for Men

Second Floor

*Sincere Wishes
For a Merry
Christmas*

Sharon Grainger

MIDGE
on
"Midstream"

MARJORIE
on
"Bachelor's
Children"



The Green Shutters

The Little Colonial House

A Block East of Michigan

212 East Ohio Street

Southern Home Cooking You'll Enjoy

Private Parties

Delaware 1673



NANCY MARTIN
Breakfast CLUB Matinee

Season's Greetings

NBC Engineers

**LOU BREESE
ORCH.**

Chez Paree Chicago, Ill.

Gen'l Amusement Corp. Decca Records

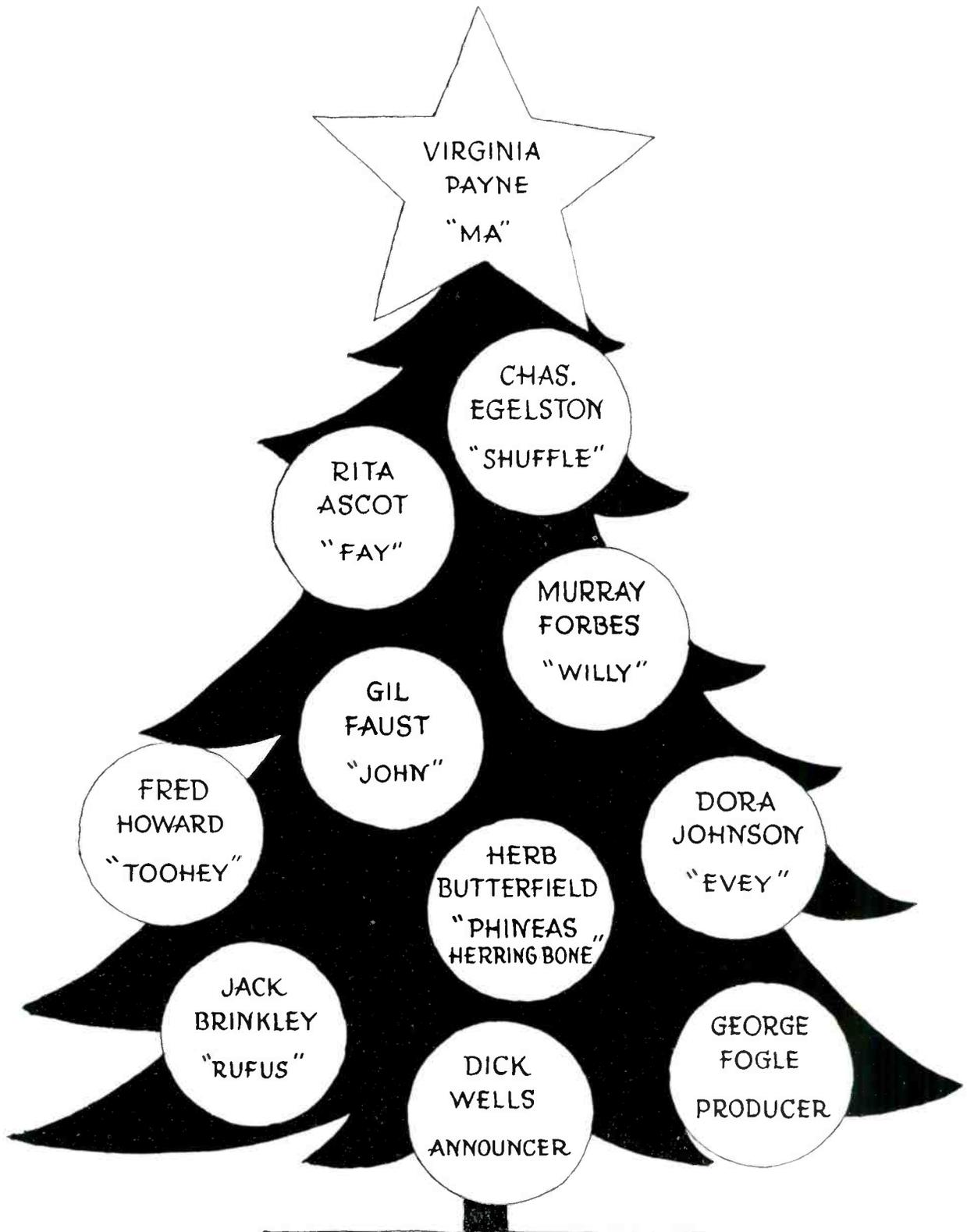
Sam Lutz, Personal Repr.



Merry
Christmas
to
All You
Boys
and
to all
of
Your
Friends



VIC, SADE and RUSH



Merry Christmas
from
Ma Perkins and Family

Chicago AFRA Antics



Ray Jones, Executive Secretary, Chicago AFRA



Norman Barry, First Vice-President, Chicago AFRA



Virginia Payne
President, Chicago AFRA

AFRA Antics — "I've never been to an *Antic* before", said Victor Moore, "but I'll never miss the AFRA Antics hereafter." Applause from the fifteen hundred people gazing at the beloved comedian, gave loud testimony that they wouldn't miss a future *Antic*, either.

AFRA Antics was born four years ago. One dreary winter day in Chicago where sudden serious illness threatened a performer; and all his fellow-performers knew that his inability to come to the studios and broadcast immediately cut off his income, came the spoken hope: "We should be able to do something about this. Let's devise some method of providing for sick and needy artists, who through misfortune of sickness, can do nothing for themselves. Suppose

in radio to freedom from worry over the cost of his illness. If you were fortunate enough to be present in the Grand Ballroom of the Sherman Hotel on November 7, 1941, when the Fourth Annual AFRA Antics got under way, you probably were first impressed by the smart souvenir program presented to you by one of radio's prettiest girls.

A "modern design" cover introduced you to eighty-six distinctive pages. Beautiful pictures of all Chicago's radio personalities, clever messages and attractive layout elicited "oohs" and "ahs". Then you noticed the throngs of people crowded near the entrance to see their radio friends as announcers and klieglights singled them out. There, a hostess officially welcomed you, a flower-girl adorned you with the most beautiful carnation. You wandered through the crowds, greeting your many friends. Susan Armstrong read your future. Norman Barry beguiled you with his "garter-girls". The balloons, plumes, soft lights of the Exhibition Hall provided a festive atmosphere for Tiny Parham's 8-beat at the bar, Karl Marx and Zippy's clown antics. Bob Strong exerted the Strong appeal which has made his music famous; and when you did not feel you could dance another step,



Paul Nettinga, Second Vice-President, Chicago AFRA



Carlton KaDell, Third Vice-President, Chicago AFRA

we give a radio ball . . ." And the rest of the sentence is history. On Armistice Day, 1938, the Chicago Local of the American Federation of Radio Artists sponsored its first Antics. Delegates to the National Convention of AFRA, enroute to St. Louis, attended and marvelled at the quick response the radio industry and the public evidenced. Since 1938, good feeling toward the "Antics" has grown apace. The radio stations have contributed time for announcements; bought tickets for their employees. Advertising agencies joined them in purchasing space in the Souvenir program; and buying boxes for their executives. The National Association of Broadcast Engineers and Technicians (God bless them, every one!) were very much present in print and in person. Page-boy, fan, vice-president all touched glasses at the many busy bars, and toasted some needy fellow-worker



Philip Lord, Treasurer,
Chicago AFRA



Annette Harper, Recording
Secretary, Chicago AFRA

there was the South American band compelling you to rhumba. A visit with your friends in their boxes and at their tables, a trip to the Autograph Cafeteria where all Chicago radio performers smilingly autographed your program. And lo, at midnight, a real all-star floor show: Ben Bernie, Joe E. Lewis, Victor Moore, William Gaxton, Irene Bordoni, Zorina,

(Continued on Page 191)



Season's Greetings
to
NABET
LORETTA POYNTON



73's

KEN GRIFFIN



MERRY CHRISTMAS

and thanks to

NBC Engineers

for

Excellent Cooperation

on

"KNICKERBOCKER PLAYHOUSE"

"THAT BREWSTER BOY"

Pauline Hopkins & Owen Vinson
Writers and Producers
360 No. Michigan Ave.
Chicago



A Merry Christmas
and
A Happy New Year
BETTY WINKLER

Season's Greetings



CLIFF SOUBIER



Uncle Henry - on - Lone Journey



Merry Christmas
All You Engineers
Everywhere

Cleve Conway

Announcing
WINGS OF DESTINY
RICHMOND REPORTER



HARVEY HAYS



I'm goin' t' th'
wagon, boys,
these shoes are
killin' me

"Duke of
Paducah"

WHITEY
FORD

OLAN SOULE

7th Year as "Sam Ryder"
in Bachelor's Children



NBC - RED



SEASON'S BEST

from

the Heart of the West

CHICAGO

Vincent Pelletier



HUGH STUDEBAKER



Laurette Hillbrandt

Merry Christmas

Russ Young



Season's Greetings



ALLEGRETTI'S GRILL

S. E. Corner Wells and Kinzie Sts.

Phone Deleware 4343

*Where Radio Folks get together to meet and eat the most
delicious food in the new and beautiful
restaurant and buffet*

AIR CONDITIONED

Famous for Steaks, Chicken, Spaghetti, Ravioli and Green Noodles

NBC Studios Opposite Us

WLS --- 1942 Style

AS SOON as radio station WLS, Chicago, had its new RCA transmitter on the air, the engineering department, under the direction of T. L. Rowe, chief engineer, turned its attention to completely remodeling all studios and all control rooms, right down to rewiring every inch of the place.

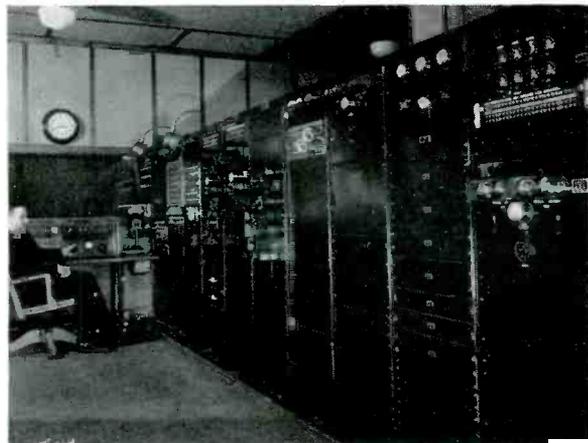
Now the complete job is done, providing two additional studios, individual control rooms for every studio, all passing through the master console, and even including the building of a new floor on the Prairie Farmer Building in which WLS is housed.

At the same time, all offices at WLS were remodeled, redecorated, and the entire plant air conditioned. On the new floor of the building, the music department and library are now located, plus half a dozen rehearsal rooms for talent. Moving these practice rooms to the fourth floor made room for the new Studio D with its latest acoustically treated walls and ceiling and modern two-tone, concealed, fluorescent lighting.



By moving talent practice rooms to the next floor above, WLS made room for the addition of this new studio D, with latest acoustically treated walls and ceiling, tile block floor and concealed, fluorescent lighting.

(Below) Old Master Control Room. When this master control room at WLS was built, it was the last word in efficient radio equipment. But compared with the new RCA control equipment now installed at WLS, this might have been something from the dark ages.



WLS shares this new transmitter building and 586-foot radiator with station WENR. It is located in Tinley Park, near Chicago.

Another new studio provides space for two transcription turntables and storage cabinets, with communication windows looking into the new master control room.

It is the master control room which is a delight to any engineer. When the old WLS control room pictured on this page was first built, it was considered the latest thing in modern radio equipment. But it can't compete with the streamlined equipment today in the new WLS master control. Instead of a variety of gadgets and dials scattered on panels clear across the length of the room, everything in the new RCA console is right at the operator's fingertips. In the old master control, the operator also overlooked WLS's main audience studio, riding gain on all programs there, as well as taking care of the master equipment. Now each studio, including the audience one, has its own control. The only observation window overlooking the master control is that in the transcription studio.

(Below) New Master Control Room. Instead of hundreds of dials, jacks and gadgets spread the whole length of the room, as in the picture of the old WLS control room, everything needed now is at the operator's fingertips in this RCA master control console.





Best Wishes
to Y'All



JACK BAKER
NBC — Chicago

TOM WALLACE

"Uncle Walter"



Heartiest Greetings

PHILIP LORD

Greetings



DON McNEILL

Breakfast Club
Chicago



YOUR BLUE-EYED BOY

Rugged

MICHAEL ROY

*... Protecting arm and guiding
light of the working girl*



... another year's cheery Greeting

HENRY HUNTER

*... Anybody can say it, but only an
engineer can make it sound right ...*

**A Merry Christmas
and
A Happy New Year
DAN DONALDSON**

*Season's
Greetings*

GENE BAKER



Season's Greetings



KATHRYN CARD

NBC Artists' Service
Chicago



FOREST RANGERS

DOG HOUSE

THE BARTONS

Escorts and Betty



SEASON'S
GREETINGS

ESCORTS
and
BETTY

Dear Mom:

For your information, Engineers is technical guys which make us sound swell, so we're wishing 'em a Very Merry Christmas and a Happy New Year.

PVT. HOMER STUBBS

★ John Walsh

PVT. ULYSSES HINK

★ Lou Krugman

CORP. "RED" FOSTER

★ Dolph Nelson

SGT. MIKE MONIHAN

★ Marvin Mueller

CAPT. HOLDING

★ Leo Curley

GEN. SUNBELT

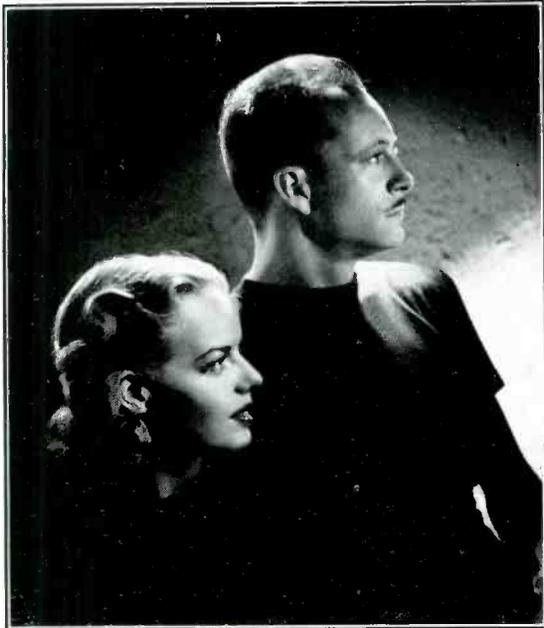
★ DeWitt MacBride

★ Tom Walsh

DEAR MOM'S ANNOUNCER

P.S.: Mom, our technical guy which does miracles for us is Charlie Warriner—C.B.S.

C.B.S. — Thursdays 10:30 P. M. E.S.T.



Best Wishes
from
Eileen and Les Tremayne



Al Boyd
 Rod Cupp
 Bev Dean
 Ray Ferris
 Chuck Ostler
 Bill Vance

W L S
PRODUCERS
CHICAGO



Muriel Bremner



This AintA "Phone-Y"
 It's Really on the
 "Level"

**Merry
 Christmas!**

JACK HOLDEN
 WLS Chicago

Holiday Greetings . . .

To the Boys!

ED ROBERTS

Announcer



... may I wish you
 ... a merry christmas?

Marjorie Hannan

Ruth Ann in
 Bachelor's Children

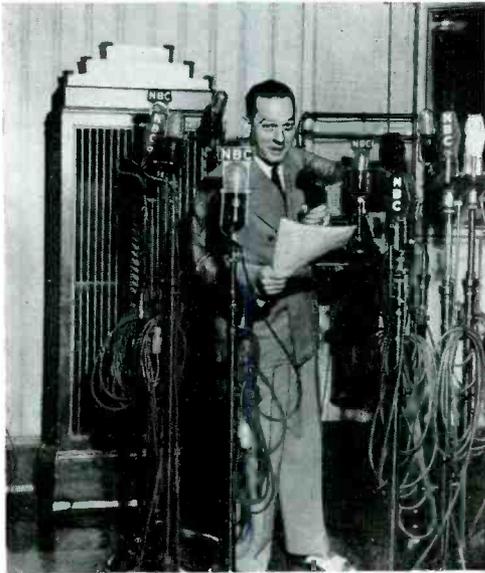
How to Be a Radio Announcer

By Charles Lyon (who is quite proficient at kicking around misplaced syllables) and Tom Gootee (who can't tell his best friends from radio announcers)

IF YOU have ever had the yearning to become a great radio announcer, this is your golden opportunity! Here, in a few thousand assorted English-type words, is the Key to Successful Radio Announcing. (Kindly clip the coupon at bottom of page.)

Time was, when the off-hand remark: "I hope all your children grow up to be radio announcers!" was considered the epitome of all that is insulting; or just like "I hope you break a leg!" or "I hope you choke on your false teeth!" But actually radio announcing isn't such a bad profession after all; anyway, it's better than working. Just think of it! Long hours — small pay — and plenty of vocal calisthenics. It is probably the only job in the world where you can talk as much as you want to, and actually say so little. Then, too, it gives you an opportunity to wear misfit sports jackets, and to drive a snappy-looking low-financed-type automobile!

There are many ways of getting to be a radio announcer.



Winning a hog-calling contest is one; or, possibly, announcing the arrival and departure of trains from your local depot. Then, too, you may have flunked out in your Correspondence Course in Boiler-Making. Anyway, getting to be an announcer is not nearly so hard as trying to decide what type of an announcer you're going to be. A close study of this subject reveals that there are approximately seven major types; these will now be scrutinized more closely.

Probably the most common variety is (1) the symphonic type announcer. You can get to be that kind by understudying a local undertaker (for tonal qualities) and making friends with the Italian fruit peddler on the corner (for pronunciations of such names as "Puccini", "Il Trovatore" and "Bei Mir Bist du Schoen".)

Another oft encountered type is (2) the "cozy" type announcer. This is the guy who moves right in with the family, bounces the kiddies on his knee, whacks pa on the back, and slides his arm around ma's middle — all the while describing the merits of the Universal Sandpaper Toilet Soap.

This lad is quite in contrast to (3) the "slugger" type. The "slugger" is a word spieler from the word *go*. He throws a left hook with every syllable, and generally winds up sitting on your chest to hammer his message down your throat with an over-sized ball-bat.

Then there is (4) the "Personality" boy, sometimes referred to as the "hearty, jovial" type. These boys usually weigh in at about 375 pounds, and have a profound Santa-Claus-type laugh — occasionally tinged with near beer.

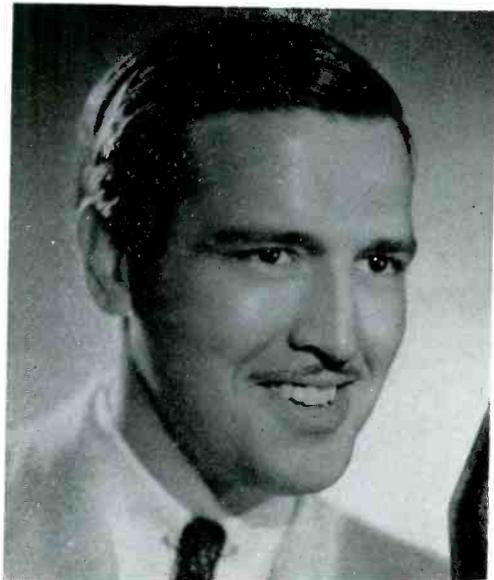
The "sport" type announcer (5) is also very popular. These lads have an alleged knowledge of most major sports, although a number of them will confess — during their off moments — that most of the time they haven't the slightest idea of what they are describing. There are several methods of achieving the peculiarities of a "sports" type announcer. One of the best is to talk out of only one side of your mouth — supposed to put you in the same category with folks who follow sports. Another method is to develop a "hysteria" voice, which is used whenever too many things are happening for you to follow; in this case you rattle off a miscellany of confused double-talk at a very high pitch. No one will be able to understand you — but they will realize that *something* excited must be going on, which gives you a chance to ask the boy in the next seat what happened. It is an unwritten rule for "sports" type announcers, that they shall deliver not less than eight hundred words per minute — whenever they have the air. This means that at moments of lull and inaction, you will have to describe the glories of the distant sunset, the estimated number of people attending, the price of hot dogs and soda pop, or some such numbo jumbo — in order to fill time. In describing football matches, for instance, it is not necessary to properly identify anyone who may be carrying the ball at that particular time — since he will probably lateral the ball to someone you *do* know on the field below. This "sports" type voice is also useful in giving running accounts of various indoor sports, such as pool, billiards, ping-pong, chess, checkers and mild forms of poker.

Probably the most popular type of announcer is (6) the "Matinee Idol" type, a garden variety that can be either Gus Charm or Sam Virile on the same show without a pause for breath. This kind always send out autographed thorax view pictures of themselves—usually while smoking a pipe and lounging aboard a sumptuous yacht (rented for the purpose).

Lastly there is the Charles Lyon type of announcer, which is absolutely unique in itself—and therefore not attainable, in any form.

Once you have decided on the type of announcer you intend to be, there are several ways of breaking into the radio business. In approaching a prospective employer for a position, always remember to have a carefully rehearsed "sales talk" in the same manner as well-known soap commercials; and, in addition, it is customary to have a well-filled and quite voluminous scrap-book of clippings purporting to your great ability as a super-sales announcer. You might show him that little clipping about the time you announced the Grand Opening of the East 13th Street Super A. and P. Market—or on any other subject. These

(Continued on Page 101)



DON DOWD



NORMAN BARRY

**It's a Merry Christmas Again, Boys!
And the Best for the New Year**

Everett Mitchell



Fred Kasper



Lynn Brandt



Louis Roen



A
M
E
R
R
Y



**A HAPPY
ANNOUNCERS**

☆
C
H
R
I
S
T
M
A
S

**NEW YEAR
NBC CHICAGO**



Tom Casey



Marx Hartman



Dick Noble



Henry Cooke

*“it sounds
awfully loud out here”
well, merry christmas
anyway!*

Harry Bubeck	Bob Opper
Tom Bashaw	Mike Eisenmenger
Curt Mitchell	Frank Blatter
Ed Bailey	Bob Graham
Irv Bickler	Bill Joyce
Ken Aikens	John Katulick

TOMMY HORAN
Supervisor



SOUND TECHNICIANS

NBC — CHICAGO

6 1/2" Paper Base Discs
Coated on Both Sides — SPECIAL **4^c**



Very Special
Professional Type
RECORDING DISCS

Metal Base Non-Flammable

Thick Coating Underwriters Approved
Coated on Both Sides

SLIGHTLY IMPERFECT, BUT INSPECTED
And Guaranteed to Make Perfect Recordings

Size	List	Net	1c
6 1/2"	.20	8c	LESS
8"	.30	12c	IN
10"	.40	16c	25 LOTS

TRI PAR RADIO CO.

110 N. WELLS STREET, CHICAGO, ILL.

Ship..... Discs..... Size.....
Name.....
Address.....

C. O. D.
Plus Postage

O.K. . . . come on in, Chicago Engineers
. . . for a GREAT Christmas pick-up
at HENRICI'S

When you get all snowed under with Carols . . . and
Jingle Bells . . . when you'd like to tune in on a
new wave length . . . come in on HENRICI'S . . . the
most restful hour in Radio. (No orchestral din!!)

You might spend five or even ten studious minutes
on our commercial . . . a two-page list of famous
things to eat . . . and choose a meal to keep you
happy and busy for an hour . . . of honest eating.
And when you reluctantly stop chasing those last
delicious crumbs and gulp your last grand drop of
coffee . . . we think you'll think we've engineered a
great show . . . at HENRICI'S.

HENRICI'S GRILL

in Chicago's MERCHANDISE MART

just off the lobby

Merry Christmas

NBC ENGINEERS



from your favorite foto supply house . . .

Imperial Camera Shop

6208 Cermak Road

Phone: Berwyn 344

Harold Soffer

Greetings to the
Engineers and
Special Thanks to

WOODY
LAHMAN and

ED
BERNHEIM

from

CLIFTON UTLEY



A Merry Christmas
To You All

PATRICIA
DUNLAP



Bachelor's Children

Sincerest Holiday Greetings



WAYNE VAN DYNE



Merry Christmas
from
MARY PATTON

73's
from
CHARLES IRVING



"Road of Life"
"Arnold Grimm's Daughter"

Merry Christmas



and a Most Mellowflourishly
Mellow Happy New Year

The FOUR VAGABONDS
CHICAGO

How to Be a Radio Announcer

(Continued from Page Ninety-seven)

clippings can be obtained quite easily from any newspaper or magazine; they have no particular meaning at all—but are generally carefully preserved in an oversize scrap-book.

If the prospective employer is a bit dubious concerning your ability, offer to demonstrate free-of-charge how good you are. Step into a vacant studio and start expounding the virtues of some product (carefully rehearsed for the occasion).

In no time at all—after this display of your vocal art—you will find that one of two things has happened: (1) You have a job with the radio station for life—or at least a few days. Or (2) You will be laying outside on the sidewalk.

Once you have obtained your first job, the rest is very easy. You should make many friends. And to do this, go around slapping everyone across the back with a hefty blow—borrow a few dollars from them while they are off guard—and then read them twenty or thirty thousand words of your opening commercial for the Little Gem Handy-Dandy-type Fly Spray. People will love this, and in no time at all you will have a host of friends.

You can also become quite popular by rehearsing your commercials in a loud voice in elevators, hotel lobbies, street corners and bar-rooms.

Right from the beginning you should make the personal acquaintance of the engineer or engineers handling your programs. These boys have to put up with an awful lot of talking and singing all day long, and they will probably appreciate it if you talk as low as possible. Never signal the engineer, before or after using microphones that may be standing around the studio; he will probably appreciate this gesture on your part—and you will soon become fast friends. Then, of course, if you should be feeling a bit drowsy some morning and make a minor ever-so-slight error—it is customary to blame the engineer for this mistake, since he is responsible for everything.

After you have been working (?) for several years—and if you last that long—you will probably be seized by melancholia, and desire to stir up a little excitement around the radio station. This can be done in a variety of ways, of course, and only the most important will be considered here. For instance, you can walk into a “live” studio and loudly remark with innocence, “Is there something going on in here?” and then laugh heartily. Equally good is announcing the wrong call letters for the station (this is LOTS of fun, and even confuses the FCC), or calling it the “Ned Rework” or “nation-wide wetworks.” Swearing on kiddies’ programs is equally good fun—and also very educational.

Sooner or later in your announcing career, you will believe that you are at last a great news commentator. This is known as the “commentator-type complex”—and generally sets in (like rheumatism) whenever you are given a few stray news bulletins to read. Symptoms of this are weird pronounciations of foreign towns and villages, a solemn dirge-like sadness (as if foreboding doom), or a rush of fantastic predictions as to who is going to win the war and when and why and how.

After you have been in radio broadcasting for quite a while, there will come a time when you will want to leave radio. There are several good ways of getting out of broadcasting. (1) You can bobble up a 5,000 word six-minute soap commercial, and then remark indifferently, “Oh, nuts! I never use this d—n soap anyway!” Or, (2) you can wind

up a program, and then forget to push the button releasing the studio from the air. When this is not done, immediately follow by telling a racy story to the engineer—as a theme for a kiddies’ program. Another method (3) is to invite all of your girl friends up to the studio late some night for special private auditions. Or, as a final resort, you can walk in to your boss—after at least twenty years of faithful service with the same station—and demand that your pay be raised to a more satisfactory amount, say \$15 a week and board, or you will quit. Will you be surprised when he tells you to quit! Which is a very good way of getting out of radio!

AFRA Antics

(Continued from Page Eighty-nine)

The Vagabonds, Harry Blackstone, Singing Marines and Blanche Bradley, Ashton Stevens.

Now the fateful hour, the wheel of fortune spins and the winners of the coveted door prizes are announced! One young lady wins a Silver-fox donated by the Salem Farm. Ray Skryzak, a radio fan and Ken Griffin, a radio star, each won a \$50.00 United States Defense Savings Bond. Corny Peeples cartwheels to the stage to claim the sports coat donated by A. S. Hannegan. When you had danced until dawn, you vowed to rest this twelve months to prepare for the next AFRA Antics. And when you learned from the auditor that in addition to all the gayety and fun, the Antics had netted enough to see that no radio performer in Chicago need go without medical or hospital care, you sighed happily and meant it. Money spent having a good time was being devoted to real need.

You were convinced it was a good idea to contribute to “an Antic.”

Morgan Camera Shop

6262 Sunset Boulevard

Hollywood, California

Mouse Visits Transmitter

On the evening of December 1, a bold, venturesome mouse strolled into the WENR-WLS transmitter at Tinley Park, Illinois. He paused for a moment near a high voltage rectifier, while listening to “I Love a Mystery” program. At 7:12 p.m. excitement got the best of Nickey and caused an eight second Transmitter failure. In due respect to Nickey the mouse the Transmitter boys send the following:

ODE TO A MOUSE

By A. J. Forgach

Here lies the body of Nickey Mouse.
His home was the field and not a house.
A venturesome rodent, he would not be bound
To family ties, so close to the ground.
No dinner for cats or owls would he be,
No timid role for a mouse brave as he.
A Fuehrer like Hitler, his power would grow
And he'd conquer the cat, the owl and crow.
But alas, poor mouse, like humans who crave
To rule the lands of the free and the brave
There is always a power, sometimes unseen
That makes of all Fuehrers, a demised has-been.



A Very
Merry
Christmas

MARION MANN

*Season's
Greetings*



Myron Wallace



Announcing . . .
. . . Road of Life



LULU BELLE and SCOTTY

National Barn Dance



Season's Best
PRAIRIE RAMBLERS
WLS — CHICAGO



Season's Greetings

WALTER BLAUFUSS



LOIS ZARLEY

SYLVIA BERTRAM in ROAD OF LIFE



GREETINGS TO THE BOYS

*Who Make Our Work Lighter
and Millions of Homes Brighter*

**LOUISE MASSEY
and the WESTERNERS**

Merry Christmas and
Best Wishes for a Happy New Year

from
MARY PAXTON
of *The Wishing Well*
WBBM



Compliments of
L. J. Schulkin Sporting Goods
"EVERYTHING FOR THE SPORTSMAN"

Main Floor Merchandise Mart
Delaware 9198



**DINNING
SISTERS**

Best Wishes

THE
HAYLOFT CHORUS
OF THE
Alka Seltzer National Barn Dance

PATTI CLAYTON	LES CLUCAS
GRACE McCARTHY	LES DOLE
VIRGINIA SPEAKER	EARL JOHNSON
TOM BLANCHARD	JOHN NEHER
LAVELLE CARTER	GLEN TAFLINGER
HAROLD TOWNSEND	



Yours for . . .
A MERRY CHRISTMAS
Willard Waterman

Xmas Greetings

TO A GRAND GANG

from

Lieut. Comdr. Eddie Peabody

(The Alka Seltzer Banjo Man)

On Full Active Duty

at

Great Lakes Naval Training Station

*A Very Merry
Christmas*

JANE KAYE

Alka Seltzer
National Barn Dance



The Hoosier Hotshots

Enjoying Their Ninth Short Year for

Alka Seltzer

WADE AGENCY

CHRISTMAS WISHES



*"73's" with
peaks of "100"
for you guys
who grin and bear it*

CHUCK ACREE



FERN PERSONS

"Mom" in The Bortons
"Anne Rogers" in Hot Copy

Season's Greetings

JOE PARSONS

Songs for the Homefolks

The
WAGON WHEEL
Grill

Chicago's Meeting Place

400 N. WELLS

204 W. KINZIE

(One-half Block From Mart)



7 Course \$1.25
Dinner

SPAGHETTI

RAVIOLI

GREEN NOODLES

SEA FOODS

Gus Olivieri

Delaware 0451

CHRISTMAS GREETINGS

and

BEST WISHES

to

NBC ENGINEERS

DR. SAMUEL F. BAUM

S
E
A
S
O
N
S

Shapiro and Daskal

... Merchandise Mart

... Florists to Radio

GREETINGS

Compliments

of

DOCTOR KILLFIDGET

(CHICAGO)

Christmas Greetings

To the NBC Staff

Dr. Gary M. Baker

FIRST FLOOR

EAST CORRIDOR

MERCHANDISE MART

Chicago

Season's Greetings

SHANOFF'S

The Merchandise Mart Jewelers

Main Arcade, Merchandise Mart

CHICAGO

"Jewelers to the Radio Profession"

WELCOME TO CHICAGO'S

LARGEST INDEPENDENT DRUG STORE

A friendly drug store whose ambition is to provide their customers the highest type of service, and friendly, informal hospitality that's refreshingly old in spirit . . . strikingly modern in manner.

Full Line of Drugs, Remedies, Perfumes, Cosmetics,
Daily Needs, Photo Supplies and Candy Bars

R Our Prescription Service Is Unexcelled
Prescriptions called for and delivered. No extra charge.
JUST PHONE SUPERIOR 0079

Come in to us for Bigger Savings in

SMOKERS' NEEDS

Popular Brand Cigars, Cigarettes, Tobacco,
Pipes and Pouches

CHAS. E. MATTHEWS

Merchandise Mart Drug Store



"Did ya make me
sound good?"

GREETINGS

"EDDIE WILSON"

Merry Quiz-mas
to
The Glass-House Gang



JOE KELLY

NBC

WLS

Merry Christmas

to the NBC Engineers

from

EMILE PETTI

and His Orchestra

Yours for a

Merry Christmas

LOUISE FITCH



Nancy Brewster Boy
Bernice..... Arnold Grimm's Daughter
Carol Evans..... Road of Life

Season's Greetings
TO OUR PALS, THE ENGINEERS



The King's Jesters



GEORGE HOWARD

FRITZ BASTOW

JOHN RAVENCROFT



Heard as Pillsbury's Besters
on
The Musical Millwheel
NBC

Season's Greetings



WLS

CONCERT ORCHESTRA

Ushering in a New Ham Receiver

WITH plants working overtime on defense production, manufacturers of communications receivers have had little time to develop new ham models during recent months. Recent announcement by Hallicrafters of their Model SX-32 therefore offered an element of novelty not usually afforded by the entry of a new receiver.

Actually it was possible to introduce this model only because it represents an adaptation of the standard SX-28, rather than an entirely new design. Its purpose is to provide the major features among those that have made the SX-28 famous, but to eliminate others which are of less fundamental importance (although definitely advantageous to the amateur who can afford them) and thus make possible a notably lower price.

Through elimination of the noise suppressor system of the 28 and substitution of a highly effective noise limiter, two tubes have been saved, making a total of 13 included in the new receiver. These are: 6AB7 first r. f. amplifier, 6SK7



second r. f. amplifier, 6SA7 mixer, 6SA7 h. f. oscillator, 6SK7 first i. f., 6SK7 second i. f., 6B8 a. v. c. amplifier, 6H6 automatic noise limiter and second detector, 6J5 b. f. o., 6SC7 first audio, push-pull 6V6's output and 5Z3 rectifier. From this brief listing of the tube functions of the receiver it is apparent that it still retains not only the important fundamentals but many desirable refinements.

The two r. f. stages are a highly important feature, providing improved image selectivity together with some improvement in signal to noise ratio and sensitivity. Both are operative throughout the range of 2670 kc. to 40 mc. On the 500-1455 and 1400 to 2800 bands one of these stages is cut out to avoid excessive selectivity such that high-fidelity broadcast reception would be unattainable. An antenna trimmer control on the front panel insures effective signal transfer and thus contributes to improve reception of weak signals.

The use of separate 6SA7's for mixer and oscillator, and the coupling method employed, reduce the effect of tube and supply voltage variations on the oscillator, improve gain and selectivity of the tuned circuit and in general bring about increased signal to noise and image ratios. Such are these advantages that even the desire for economy did not justify combining these two functions in a single tube.

Selectivity of the high-gain, 2-stage i. f. amplifier is adjustable in six steps ranging from broad-band expansion to sharpest crystal. Three of these selectivity degrees are attained by different degrees of expansion; the other three by variations in the crystal filter circuit. Amplified a. v. c. insures



My Best Wishes

for a

Merry Xmas

and a

Happy New Year

HAL CARLSON

Season's Greetings

JOHN HOLTMAN

Announcer . . . NBC . . . Chicago

Hi, Fellows!

CONSTANCE CROWDER

CHICAGO

complete automatic gain adjustment in both r. f. and i. f. circuits.

The audio system is of high-fidelity design throughout, with provision for matching the output into a 5000-ohm Hallicrafters-Jensen bass reflex speaker or into a 500-ohm line. A phone jack connects headphones through a tap on the output transformer secondary, cutting out the speaker by the action of inserting the phone plug.

The tuning range of the SX-32 is divided into six bands for favorable L/C ratio. These are: 500 to 1455 kc., 1.4 to 2.8 mc., 2.67 to 5.8 mc., 5.3 to 11.3 mc., 10.8 to 23.1 mc. and 20.8 to 40 mc. Each range is, of course, fully calibrated on the main dial. In addition, the electrical-bandspread dial is calibrated for the 10, 20, 40 and 80-meter ham bands. The translucent scales of the main and bandspread dials and "S" meter are comfortably illuminated and designed for maximum readability, as are also all panel notations and markings.

In physical appearance the receiver is identical with the SX-28. The cabinet is of 16 gauge steel finished in machine-tool grey wrinkle. The chassis is of 14 gauge steel with flanged edges and flame-welded corners. Chassis, condenser cover and coil compartments are cadmium plated. The panel is of 1/8th-inch steel, Morocco finished and with control markings etched in white.

The AC power supply is built in and in addition there is provision for emergency operation either from batteries or from a car battery and vibrapack.

The 32 is not by any means a low-priced receiver but it is priced at a level to meet the requirements of the amateur who wants the utmost in fundamental operating qualities but can't afford the last few refinements which spell the difference between the best and a close runner-up.



Best Wishes

**MAXWELL
EMMETT
BUTTRAM**



National Barn Dance

Season's Greetings



CHARLES FLYNN

Season's Greetings



"RED" FOLEY

WLS — CHICAGO

Best Wishes



DOROTHY FRANCIS

73's

Julian Bentley

News Editor

WLS



For

AIR CHECK RECORDINGS

IN CHICAGO

Call or Write

MYRON BACHMAN

4701 N. Winchester Ave.

Phone: Edge. 6461

C. A. Allen
 E. W. Burg
 R. W. Chapman
 W. H. Chew
 C. M. Clark
 N. J. Close
 W. K. English
 C. S. Fisher
 F. J. Fugazzi
 W. L. Godwin
 R. L. Hamill
 J. H. Hogan
 D. O. Hunter
 L. A. McClelland
 A. R. McGonegal
 S. E. Newman
 A. T. Powley
 John Rogers
 W. L. Simmons
 B. E. Stahl
 R. L. Terrell
 D. A. Ullman
 H. A. Wadsworth
 K. B. Williams
 H. W. Yates

Holiday Greetings
Washington
Chapter of
NABET

W R C

W M A L

HONORARY MEMBERS

A. E. Johnson
 D. H. Cooper

SWEETHEART OF THE "HERD"
 Patty Birgfeld

Washington News

By Bill Chew

N B C Anniversary Dinner

HOLD on to your hats because here we go again for another big time in Washington. You guessed it, big boy, the 15th birthday of the NBC, and what a time it was. It was a grand excuse for the local gang to let its hair down, and if you don't think they did, just ask me. Well, sir, the Carlton Room, of the hotel by the same name, was gaily bedecked with flowers, and that, coupled with Sidneys Mayflower Hotel dance band, just naturally made the setting complete for a huge evening.

Mr. Frank M. Russell, vice-president, was host at a cocktail party which preceded the dinner, and, brother, if you aren't familiar with his particular brand of hosting just send a wire and I'll be happy to enlighten you. He did such a swell job that some of the men are still cautiously asking what time the party broke up, etc. All this lasted a good hour and then a steak dinner was served during which, and for a long time after, dancing was the order of business. When I left, well after midnight, the party was just getting good.

To the committee on arrangements, of which Bob Terrell was chairman, we express our sincere thanks for a most pleasant evening. Too bad we don't get together more often.

Al Powley, chairman, returned from Frisco with a peach

of a cold. They do say those park benches are chilly. Probably trying to save the local chapter some money, or couldn't he find the right brand? He says he has learned that one pair can be beaten . . . editor's note to Horstman.

On Wednesday evening, November 19, the local chapter held its first meeting since the chairman's return at the home of N. J. Nick Close, way out yonder in Arlington, Va. At the conclusion of the business meeting we were happy to welcome to the social function Don H. "You can catch a bass Chew" Cooper, supervisor of operations. He so seldom can attend such meetings, due to his hours, or something, that he was doubly welcome. He says to send him the top from an old ice box with your name and address plainly printed, not written, and he will send each and every one of you an autographed diary entry for the evening. Atta boy, Don.

We invariably have large attendance at our chapter meetings because such good "cats" are served. You boys in Frisco can verify that by asking Cliff Rothery. The usual card game concluded the evening. Walter Godwin kept the gang blinking with his flashlight shots, and I'll let anyone see the one he took of me, but I can't speak for B. E. Stahl, WRC station engineer.

To Mr. and Mrs. N. J. Close we wish to express our sincere thanks for letting us wreck their house.

BEHIND THE MIKE—By Con Conrad

E. F. MEADE, NBC Engineering, from Chicago, where work on new studios is nearly finished, to San Francisco to cooperate in the Engineering work there on new studios.

Dave Karback is new Engineer, Announcer at KSUN, Lowell, Arizona. He is formerly of Koy, Phoenix. Cliff Miller is new Engineer at Koy, Phoenix, Arizona.

Edward Lutz, of the Control Room Staff of WFBL, Syracuse, New York, has enlisted in the Communications Division of the Naval Reserve. He is now on duty in New York. The gang at the Studios threw a swell party and presented him with a fine gift before he left.

E. C. Horstman, NBC, Chicago, and President of NABET, spent several days recovering from a bruised arm received while hunting in Iowa. Eddy has a bit of trouble getting the gun to his shoulder before shooting.

J. M. Cunningham, new with NBC, Hollywood, California. He is from the C. C. Longevin Co., of Los Angeles. (They of the P. A. Business.)

Preston Pierson has joined the staff of WRAL at Raleigh, N. C. Preston recently served with WPTF, Raleigh, N. C.

Willard Botts, having served in the armed forces until released recently has returned to his old job at WIP, Philadelphia.

Kilburn Culley, WEEL, Boston, and Jay W. Wright, now with Glenn Gillette, Consulting Engineer in Washington, and formerly of KSL, Salt Lake City, both had the pleasure of announcing the arrival of a new son.

Howard Phillips, new to KVOO, Tulsa, Okla., replaces Clarke McNally, who is now working on Radio for Defense with the Good Ole U. S. A.

Louis Gemoets, Chief Engineer at KTSM, El Paso, Texas,

reports that work has been completed on their new mobile unit and that the primary tests have proven that it will be tops in the Southwest.

Freeman Tatum, has replaced Paul Horten at KFRO, Longview, Texas. Paul has returned to college.

John W. Christiansen has joined the staff at KSL, Salt Lake City. Bob Sowers joined the staff of WICA in Ahtubula, Ohio.

Among those leaving the rank of Benedicts are Norward Patterson having married Fern Whitson, and Judson Edwards, of KSO, KRNT, Des Moines, marrying Cecelia Harness. Patterson is Engineer at KSAN.

Truett Kimzey, Chief Engineer of KFJZ, Fort Worth, Texas, is figuring on going out on his own. He has applied for new station at Greenville, Texas. Station to operate on 1400 kc., fulltime with a power of 250 Watts.

Sid Pearlman, of the Engineering Department of KSO-

(Continued on Page 119)

To the Engineers:

*"Thanks - very much!
from
Bankhage*

FLASH!

from the NBC newsroom in Washington:

"Another MERRY CHRISTMAS wish
To every one of you —
And many happy platter-spins
In nineteen forty-two!"

THE ANNOUNCERS:

- | | |
|--------------|-------------------|
| Ed Rogers | Stuart Finley |
| Bryson Rash | Dorian St. George |
| Jack Roney | Don Fischer |
| George Gunn | Steve Douglas |
| Don Gardiner | Ken Banghart |
| Ray Michael | |

Yule Log Us for This!

**Merry Christmas
And No "Feedbacks"**

... "And That's All

From Washington

At This Time"

EARL GODWIN

**Merry Christmas
Happy New Year**



COUSIN MARY MASON

Director, WRC Home Forum

Washington, D. C.



Hi, Boys

73's

BILL CRAGO



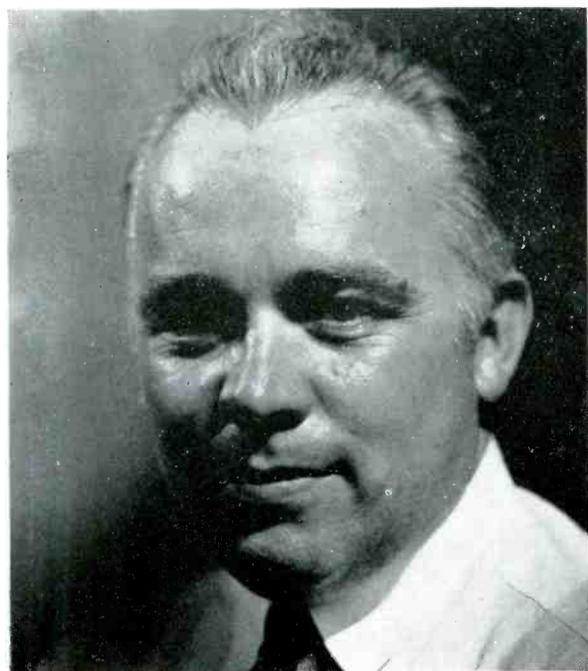


With very best wishes and hearty greetings for the holiday season to the men who make the wheels go round — and particularly to that stalwart group that have fought the good fight for Television.



ALFRED H. MORTON

*NBC Vice-President in Charge
of Television*



Season's Greetings

BY TELEVISION

from

CHRISTOPHER RULE





Merry Christmas

Christmas Greetings
Engineering Skyline

Best Wishes

from

"TELEVISION'S EDUCATIONAL PIONEER"

J. Raymond Hutchinson



THANKS AND MERRY CHRISTMAS

73's ok W2NAZ

Lenore Kingston

Best Wishes

and

A Television New Year

from

**NORMAN D. WATERS
and ASSOCIATES, Inc.**

Advertising

1140 BROADWAY, N. Y.

Dear Santa:

Please "deliver" television.

Yours, for a Happy New Year

Myron Zobel, President

KEN SHAW, Production Manager

TELECAST PRODUCTIONS, INC.

Season's Greetings

from

"THE SONG SHOP"

BETTY RANDALL and TED STEELE



Merry Christmas, Folks

from

"The Human Test Pattern"

ZEKE MANNERS

and His Gang

A NEW FACTOR IN NEW YORK LIFE

T
E
L
E
V
I
S
I
O
N

WNBT

New York's Pioneer
Television Station

Broadcasting 15 Hours of Television

weekly on America's first commercial assignment

Sponsors on

WNBT

Abraham & Straus

Adam Hat Stores, Inc.

Bloomingdale's

Botany Worsted Mills

Bulova Watch Co.

Frank H. Lee Co.

Gold Mark Hosiery Co.

Hat Style Council

L. Bamberger & Co.

Lever Brothers

Missouri-Pacific Lines

RCA Mfg. Co., Inc.

Sun Oil Company

The Procter & Gamble Co.

NATIONAL BROADCASTING COMPANY

A Radio Corporation of America Service



Holiday Greetings

Whispering Jack Smith



Season's Greetings

from

Mary Margaret McBride



Greetings from

PAUL WING



Merry Christmas
From Your Television
Announcer

RAY FOREST

Greetings

FROM

SAM CUFF

"The Face of the War"

GREETINGS OF THE SEASON

to

**BROADCAST
ENGINEERS**

from

"The Store of Personal Attention"

RABSONS

111 WEST 52nd STREET, NEW YORK
Near Radio City

RADIO • CAMERAS • RECORDS
SPORTS • GIFTS

The Business Side of Television

By Noran E. Kersta

Part IV. Code of Ethics for Program Production

[Mr. Kersta is very well qualified to discuss *The Business Side of Television* by virtue of his several years' executive experience with WNBT—"New York's Pioneer Television Station". Part I, *An Example of Promoting an Audience*; Part II, *Deriving a Television Rate Structure*; and Part III, *Some Selling Arguments for Television Advertising*, have appeared in our August, October, and November, 1941, issues, respectively. Mr. Kersta's enlightening series will continue in future issues.]

THE obligations of proper stewardship of television broadcasting are almost ineffable in that these obligations involve, in general, the welfare and progress of civilization itself; and, in particular, it offers important means to influence the destiny of this democracy. The combination of sight and sound broadcasting to the home has the power as a medium of education and entertainment to more forcefully create messages, good or bad, to a greater representation of ages, religions, nationalities, and moral standings than any existing similar social force. In a sense, being a particular combination of motion pictures and sound broadcasting, television must shoulder their heritage along with the many unique problems and virtues of its own. The NBC recognizes the responsibility with which it is entrusted in being one of the custodians of television broadcasting.

The plane which television programs take may be considered as establishing a common denominator for the spiritual, moral, and general correct thinking in social, political, and business life. In deriving such a plane for television broadcasting, problems present themselves which find their base in the particular nature of television broadcasting.

Television broadcasting, as in the case of sound broadcasting, must be designed to serve good purpose to an audience made up of every age, intellectual, and economic strata. However, the task of television is greater, in that by adding sight to sound, a television message is not a disembodied message of speech and music which acts to stimulate a listener's imagination to create personal mental pictures of the atmosphere and intention of a program. Television, in presenting actual pictures, leaves less "to be filled in" by the many different imaginations found in an audience which have as many different self-adjusted codes of tolerance and ethics. Psychologists tell us that 90 per cent of all we know we have learned through our eyes, and that visual learning starts soon after birth and precedes auditory learning by years. Hence, there must be more care exercised in presenting television broadcasting than sound broadcasting because of this forcefulness of learning through our eyes, and because of the relative lack of opportunity for individual imaginations to create personally adjusted perceptions.

It is the desire of the NBC to fulfill the ever-changing tastes of the audience. This objective, by its very nature, presents awkward problems. It is impossible to gratify the

preferences of every listener during every minute of programming, but it is quite possible to meet most desires over a given period of broadcasting. Another situation may be that certain of the audience's tastes would not be within the bounds of fairness and decency as interpreted by others. Such a situation calls for a participation by the public in the form of cooperation and sympathetic understanding of the television broadcasters' problems. Further, many tastes, if met to the exclusion or at the expense of others, would have a deterring influence on a broadcaster's will to create new program forms and ever bring up the general level of wholesome entertainment.

Another group from which participation in the responsibility of television broadcasting must be forthcoming is made up of the advertisers and sponsors who employ the facilities of television broadcasting. It is of vital concern to this group with commercial interests in television programs to strive for quality and integrity in their programs. The measure of the public's confidence in and approval of a sponsor's message is axiomatically dependent upon the scope and nature of the audience's interpretation of his program efforts.

(Continued on Page 119)



"All I asked for was a ventilator!"

VALUES are Greater...

SERVICE is Better...

at VIM

RADIOS

Widest selection of World-famous-name radios. Consoles in every period style. Table models in every size. Portables and auto radios in every style to fit your purse and purpose.

RECORDS

"Boogie-Woogie" or Beethoven! Brahms or brass, your favorite recording is here at VIM. Complete record library for automatic players. Mother Goose or Opera — You name it, we've got it!

VICTROLAS

If you're a "record-bug" you'll find the machine you want at VIM, whether it's a low price hand crank model for the kiddies or an Automatic Combination playing a stack of records on both sides, VIM is the place for the best buy!

WASHERS

Banish those Monday blues with a new washer at VIM! We've got all types — all makes. Under the table models to the automatics that do everything but cook!

REFRIGERATORS

Hot or cold, our refrigerators work efficiently all hours of the day — all seasons and in all climates. We've got all the standard makes and they're cheaper to use than paying the ice-man, believe us, we've proved it again and again!

EASY TERMS

Liberal TRADE-INS

SPORTS

Sports and Sports Apparel for everyone and for all the seasons of the year. Golf, Riding, Jackets, Baseball, Skating, Boxing, Basketball, Bowling and even Ping-Pong. What more can you ask?

CAMERAS

If you want a roll of film we've got it. If you want to equip a modern photo laboratory, we can do that too, and at prices that won't hurt! If you want a tough problem solved, our experts will unravel it pronto! Come to VIM — You'll meet your brand of camera bug.

**OPEN
DAILY
and
SATURDAY
to
10 P. M.**

Downtown
70 Cortlandt St.
31 W. 14th St.
Uptown
121 W. 42nd St.
Yorkville
153 E. 86th St.
Harlem
129 W. 125th St.
Bronx
16 E. Fordham Rd.
935 Southern Blvd.
2891 Third Ave.

White Plains
162 Main St.
Brooklyn
105 Flatbush Ave.
1218 Kings Highway
Brownsville
1592 Pitkin Ave.
Williamsburg
30 Graham Avenue
Bensonhurst
2175 86th St.

Ridgewood
57-03 Myrtle Ave.
Bay Ridge
5222 Fifth Ave.
Astoria
31-65 Steinway Ave.
Jamaica
164-10 Jamaica Ave.
Flushing
36-38 Main St.

Newark
807 Broad St.
Paterson
215 Main St.
Jersey City
16 Journal Square
Elizabeth
119 Broad St.
Union City
3612 Bergenline Ave.
Perth Amboy
146 Smith St.

Main Office and Warehouse—325 Gold St., Brooklyn

Phone MAIN 4-5800

VIM

BUSINESS SIDE OF TELEVISION (Continued from Page 117)

Fortunately for the television broadcaster, he may lean heavily on the experiences of those in sound broadcasting and motion pictures who have so successfully formulated production codes and policies, and formats of business ethics over a period of years. The points of the NBC television code have been gleaned from the rich experiences and able work of these two more mature forms of entertainment and education.

In addition to having available all that has gone on before in the way of experience in servicing an ever-changing public with broadcast entertainment and education, the NBC has the constant guidance of its Advisory Council for its television activities. The Advisory Council,

consisting of a number of prominent leaders representing different walks of life and diversified major interests, has guided NBC's sound broadcasting policies since its infancy to its present position in world living.

It is the earnest endeavor of the NBC to express itself as often as necessary on the points of this operating code, and to amend and expand it to comply with the requirements of the public's changing tastes. As is the practice of the NBC, all program material will be at first broadly subject to these questions:

- Is it in the public interest?
- Is it substantial and solid?
- Is it good television as to entertainment or informative value?

In general, these three main questions cover program production policies pertaining to:

1. Crimes against law
2. News
3. National feelings
4. Children's programs
5. Drinking
6. Vulgarity
7. Repellent subjects
8. Religion
9. Educational material
10. Political and controversial issues
11. Sex
12. Obscenity
13. Costume
14. Dancing
15. Locations
16. Titles
17. Profanity
18. Commercial appeals

By the drawing up of these program policies for television in the very beginning, television broadcasting suffers little lost effort in meeting acceptable standards of entertainment and public service.



"... ok, Chiefie, I'm on the last horse, now what?"

BEHIND THE MIKE

(Continued from Page 110)

KRNT, Des Moines, is conducting night school classes in Radio Engineering and allied radio subjects.

Lester Nafzger, Chief Engineer at WBNS, Columbus, Ohio, announces the completion of their new F.M. equipment. The station is W45 CM. Operating successfully is George Lewis' new FM W69PH. He is Technical Director of WCAU, Philadelphia, Pa.

Lieutenant Col. Frank L. Whittaker, Executive officer of Fort Jackson, S. C., acted as gain rider de luxe on program from WSM. As boys who were assigned from WSM staff could not return from maneuvers in time to cover show, 'tis reported that a job is open any time Frank is of a mind to take over.

David G. Lyon, Jr., formerly of WSYB, Rutland, Vt., is new to the Engineering Staff at WTRY, Troy, N. Y.

David Holt is new Chief Engineer of KGBS, Harlington, Texas. Also new to the staff of KGBS is Frederick W. McFarren, who is from WACO, Texas.

John O'Hara, formerly of WCFL, Chicago, recently recovered from an auto accident, which was responsible for an operation on his nose. Johnny now with KWK, St. Louis,

reports that the singing voice he had many years ago has returned to normal.

Douglas Carveth, Transmitter man at CJKL, Kirkland Lake, Ont., has transferred to CFCH, North Bay, Ontario.

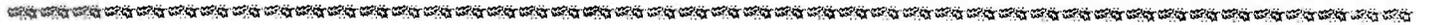
That's all for now, folks! Season's Greetings to all, with greater success in '42!





Best Wishes and
The Season's Greetings

EDWARD WOLF



Cordial Greetings of the Season

Pedlar & Ryan, Inc.



Season's
Greetings



New York Chapter

N.A.B.E.U.



B

I

L

L

M

E

E

D

E

R



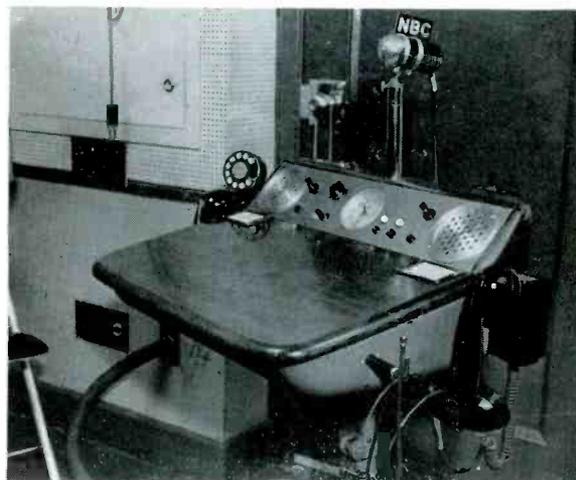
Getting the News of the World

THE NBC's nightly overseas round-up of the international news on the "News of the World" program involves a great deal of technical switching and relaying. In addition to the foreign transmission and receiving equipment used by the foreign news reporters, NBC makes use of the powerful RCA Communications' transmitting stations along the east coast of this country to communicate with the foreign newsmen and, of course, must have adequate receiving equipment to pick up those elusive and wandering foreign signals for rebroadcast. All of which makes for much complexity, and headaches aplenty for the New York News and Special Events Department.

Full control of these foreign pick-ups is in New York on the fifth floor of Radio City. The focal point of this control is centered on a small glamorized school-desk—which has been outfitted with dozens of technical gadgets where once were only ink wells. Shown in the accompanying photograph, the control desk provides facilities for monitoring all overseas program channels in advance of broadcast time; it also is equipped to enable the operator to talk to master control, all of the Radio City studios, and with all the European and Asiatic transmitting points.

The desk mounts two loud-speakers and facilities for head-set monitoring of channels. The selector for the latter is seen at right, together with the feedback circuits to the office of A. A. Schecter, news and special events chief, and to the program production point (in either studio 4-J or 4-K). The channel selector (for 10 channels) at the left

is for the loud-speaker monitoring, with associated volume control immediately to its right. The button control is for the microphone, and the toggle switch controls the studio talk-back address for either of the two production studios.



All interconnecting relays, amplifiers and associated equipment is controlled from this desk.

The program output is not mixed at this desk, however. It is piped to a normal studio control console, where the entire "News of the World" show is put together under the hands of Engineer Bill Perry.



Season's Greetings

from

NEW YORK LOCAL

American Federation of Radio Artists

Compliments of the Season

“Pepper Young’s Family”

MARION BARNEY “Mrs. Young”
THOMAS CHALMERS “Mr. Young”
CURTIS ARNALL “Pepper”
BETTY WRAGGE “Peggy”
JEAN SOTHERN “Edie Gray”
EUNICE HOWARD “Linda Benton”
GRETA KVALDEN “Hattie”
LADDIE SEAMAN “Biff Bradley”
GRACE ALBERT “Nancy Wayne”
JOSEPH HOLLAND “Mr. Brewster”
JAMES KRIEGER “Carter Trent”

Elaine Sterne Carrington Author
Edwin Wolfe Director and “Mr. Bradley”
William Meeder Music
Ed Herlihy Announcer

1941



Season's Greetings and Best Wishes

from

FRANK MUNN



Best Wishes From

GUS HAENSCHEN and ORCHESTRA

*May We Have Many More Years of
Pleasant Association*

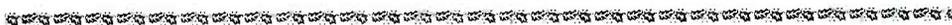


Against the Storm

SANDRA MICHAEL

JOHN GIBBS

AXEL GRUENBERG



GERTRUDE BERG

ON BEHALF OF

MOLLY — JAKE — ROSIE and SAMMY

Proffer Greetings

AND APPRECIATION OF HELPFUL ASSOCIATION

NBC presents these Famous Radio Stars



JOAN
BROOKS

HI LO JACK AND THE DAME

JEAN
CAVALL

DEEP RIVER BOYS

THE VICTORY
TWINNS

BOB DOUGLAS

PATTI
PICKENS

AND
BOB
SIMMONS

THE ETON
BOYS

THE POLKA
DOTS

WHISPERING
JACK
SMITH

THE
4 BELLES

GENE
AUSTIN

To the men who know
what makes it go

with the cordial regards of

JOHN W. VANDERCOOK



Out of This World

By Tom Gootee

CHICAGO comes up with a new radio invention this month which will probably not revolutionize microphone equipment. Although referred to as the "Fat Man's Mike," this new discovery is based on somewhat sound engineering principles and involved much experimentation and accurate design.

It seems that there were two very rotund, stout, corpulent and otherwise massive Chicago radio announcers: Mike Roy and Ed Wilson, shown in the photo to the left. Soon after their arrival in the Windy City, the engineers found that their voice levels were *much* too low—since their slight plumpness prevented them from getting any-

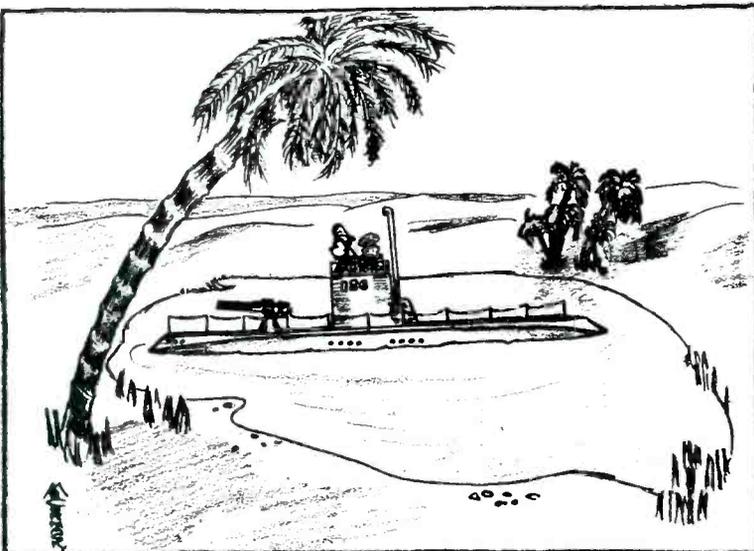


where near the microphone.

After a lengthy conference between Dan Thompson (NBC Press) and Walter Lanterman (Maintenance Supr.) the above gadget was designed and built at practically no expense by NABET member John Martin. Due to the strange design and the skill necessary to engineer such a delicate piece of equipment, a complete technical summary is presented herewith; this confidential information being passed on for what it's worth.

The pronounced bend or curve in the mike stand must be carefully constructed with accuracy, and Mr. Lanterman has suggested that interested persons contact him for further details!

★ ★
Compliments of
Mort and Lester Lewis
"Behind the Mike"



"IF I MAY SAY SO, SIR, WE APPEAR TO BE SLIGHTLY OFF OUR COURSE."

Voltage DB

By Whitney M. Baston

New York Transmission Engineer, National Broadcasting Co.

ALITTLE more than two years ago, most of the communications industry connected with radio broadcasting, adopted a new standard volume indicator and a single reference level. The volume indicator is commonly known as the "VU Meter" and the reference level as simply the "1 milliwatt standard."

The volume indicator was adopted after comprehensive tests and there was every indication that the instrument would satisfy the requirements of radio broadcasting. The favorable comment now heard from many locations justifies the research time devoted to the instrument's development.

The standard reference level of 1 milliwatt of power in 600 ohms was likewise selected with the same degree of care. It has cleared entirely the confusion caused by different companies using separate reference levels.

At the time the new volume indicator and reference level was adopted, the original instigators felt that there was also a need for a set of standard or uniform operating practices that could be used as a guide by all concerned. To this end, representatives of the different companies met and agreed upon a set of recommended procedures. This report was known as "The Standard Volume Indicator and Program Loop Transmission." In this report, under the heading of "Method of Connecting Volume Indicators" the voltage gain of an amplifier in db is defined as equal to 20 times the logarithm to the base 10 of the voltage measured across the output terminated in 600 ohms (or other load impedance) divided by the voltage measured across the input. It is this term voltage db that this article is concerned with, but in so doing, there is no intent to recommend a

new term or discontinue in any way the satisfactory standards now in use. Rather, the following is a sincere attempt to carry further the use of the voltage db already accepted and point out some of its advantages in most branches of actual operating practice.

In the industry, there are a number of audio circuits where it is impossible or impracticable to make the circuit impedance 600 ohms. In some plants, there are no 600 ohm circuits except for radio line transmitting and receiving equipment. Since the VU meter cannot be connected across the line side of this equipment, there is no place in these plants where the meter can be used to read power level correctly. If it is desired to keep all circuit levels in the plant on a power ratio basis, it is necessary to convert all volume indicator readings to what they would be if the circuit was 600 ohms. The conversion takes considerable time, is subject to conversion mistakes and in actual operating practice is very slow.

During the following voltage db explanation it should be borne in mind that the standard volume indicator or VU meter is a voltage actuated instrument so designed that it will maintain for all practical purposes the correct dynamic characteristics when connected across all impedance circuits from the lowest to 1000 ohms. The term VU implies an absolute volume level, single frequency or program by a specified instrument, and the term db implies a ratio of two levels. The input and output levels of units of equipment are correctly expressed in VU and the gain and loss of units of equipment are expressed in db.

A volume indicator or VU meter conversion is required due to the instrument reading voltage, and db is a logarithmic unit of power ratios. One of the powers of the ratio, the standard reference level, is fixed at 1 millivolt of power in 600 ohms. A volume indicator reading in voltage or VU across a circuit other than 600 ohms must be converted to power to satisfy power ratio and determine the numerical number of db from the established reference. If db, for the purpose of simplification of equipment operation, is made a logarithmic unit of voltage ratios, the VU meter readings can be used without conversion.

(Continued on Page 131)

When you want
**RECORDING
BLANKS**
in a hurry . . .



. . . you will find it easy to buy PRESTO. Over 200 leading radio distributors now stock Presto glass, steel and paper base discs . . . cutting and playing needles. They are ready to give you immediate delivery. They will also handle shipments of used aluminum base discs to our factory for recoating and stock the recoated discs for delivery to you as you need them.

If you haven't yet used the new Presto discs, they will send you samples without charge. Take advantage of the convenient service they offer. Write for the name of your nearest Presto distributor today.

PRESTO
RECORDING CORP.
242 WEST 55th ST. N. Y.

In Other Cities, Phone . . . ATLANTA, Jack. 4372 • BOSTON, Bel. 4510
CHICAGO, Mar. 4240 • CLEVELAND, Me. 1565 • DALLAS, 37093 • DENVER,
Ch. 4277 • DETROIT, Univ. 1-0180 • HOLLYWOOD, Hil. 9133 • KANSAS
CITY, Vic. 4631 • MINNEAPOLIS, Atlantic 4216 • MONTREAL, Wel. 4218
PHILADELPHIA, Penny. 0542 • ROCHESTER, Col. 5548 • SAN FRANCISCO,
Yu. 0231 • SEATTLE, Sen. 2560 • WASHINGTON, D. C., Shep. 4003

World's Largest Manufacturers of Instantaneous Sound Recording Equipment and Discs



GENERAL SOUND CORPORATION
"BRINCKERHOFF STUDIOS"
29 WEST 57TH ST., NEW YORK, PLAZA 3-3015

Just a word of Holiday Greeting to the many Engineers who play our transcriptions thruout the country. Be assured that we are ever ready to cooperate in any manner possible. Our transcriptions are Union Made (A.B.T.U.) and we make every effort to insure that you receive a transcription worthy of your station. Again a Very Happy Christmas and a Joyous New Year.



Season's Greetings

VINCENT LOPEZ

CURRENTLY, HOTEL TAFT, N. Y.
Broadcasting 6 Times Weekly
NBC Blue - Twice Weekly to South America

Exclusive Management
WM. MORRIS AGENCY, Inc.
Personal Representative
MANNY HEICKLEN

Voltage DB

(Continued from Page 129)

If a voltage reference level of 0.775 volts or the voltage reference level across 600 ohms at the standard reference level of 1 millivolt is accepted the VU meter will read directly and no conversion will be required. As an example, a VU meter connected across the 250 ohm input of an amplifier reads plus 4.0 VU. A second VU meter connected across the amplifier 50 ohm terminated output reads plus 14.0 VU. The voltage gain of the amplifier becomes very simply the difference between the two volume indicator readings, or 10.0 db. If the gain of the amplifier in db on a power ratio basis is desired, it will be necessary to convert the plus 4.0 VU input level and the plus 14.0 VU output level to power and, from the ratio of the two, determine the db difference.

In the example, the plus 4.0 VU input to the 250 ohms amplifier is equal to approximately 6.05 milliwatts. The plus 14.0 VU output of the 50 ohm amplifier is equal to approximately 301.71 milliwatts. The power ratio of output to input level is 301.71 divided by 6.05, or 49.69. A power ratio of 49.69 is equal to a power gain of approximately 16.96 db. The amplifier input and output level in VU is converted to power from the formula: power is equal to circuit voltage squared divided by the circuit resistance. The circuit voltage for plus 4.0 VU and plus 14.0 VU to satisfy the power equation can be found from tables or curves showing voltage for each VU level or it can be determined by calculation from the equation db is equal to 20 times the logarithm to the base 10 of the voltage desired divided by the standard reference voltage or 0.775 volts. All terms in the equation are known except one voltage, the one desired, and the equation is, therefore, solved for that value.

The calculations above are necessary to determine the db power gain of the amplifier only. If the amplifier's absolute operating level on a power ratio basis is also desired additional calculations are necessary. In most communication systems, the absolute level of all units of equipment must be known in order to operate them within the limits they were designed for. The plus 4.0 VU level reading across the input to the 250 ohm amplifier, given as an example, is converted to VU on a power ratio basis from the formula db is equal to 10 times the logarithm to the base 10 of the power in the measured plus 4.0 VU circuit divided by the standard reference level

of 1 milliwatt. The power in the plus 4.0 VU circuit has already been calculated as 6.05 milliwatts. The power ratio to determine the absolute power VU circuit level becomes 6.05 milliwatts divided by 1 milliwatt, or 6.05. Ten times the logarithm to the base 10 of 6.05 is equal to a power VU level of approximately plus 7.81 VU. The absolute level of the output circuit figured in exactly the same manner is approximately 24.77 VU. The difference between the input and output level is 16.92 db or the amplifier power gain. The gain of the amplifier figured in this manner, the difference between absolute input and output power levels is exactly the same as when previously figured on a ratio of the two power levels.

At this point, it should be noticed that the conversion from a VU meter reading of a whole number to a power value or to a different reading on a power ratio basis often figures to be an odd number. This is obviously a disadvantage in actual operating practice. In the example given, the amplifier input and output level on a voltage ratio basis are whole numbers of plus 4.0 VU and plus 14.0

VU respectively. The amplifier's voltage gain is also a whole number plus 10.0 db. On a power base, both the input and output levels are fractions. In a communications system, where there are a number of different type of amplifiers, having different input and output impedances, and many circuit operating levels, it becomes almost impossible to operate the system satisfactorily with all fractions. The fractions have a tendency to introduce mistakes and are slow to calculate. If an attempt is made to maintain levels gains and losses approximately by omitting the fractions level troubles immediately appear. A small fraction omitted several times in a series circuit may become additive and at the end of the circuit, becomes very appreciable. For this reason amplifier gains, circuit attenuation and all levels must be maintained within small tolerances of their rated value.

Another advantage of using voltage db results when high impedance or bridging input amplifiers are used extensively. Most broadcast plants are equipped with a large percentage of this type. In actual

(Continued on Page 133)

Bliley CRYSTAL UNITS



*Engineered Reliability
— Guaranteed Accuracy ...*

BLILEY precision-made Crystal Units are supplied for all frequencies from 20Kc. to 30Mc. Catalog G-12 contains complete information.

BLILEY ELECTRIC COMPANY
UNION STATION BUILDING ERIE, PA.

Season's Greetings

to the

ENGINEERS

from

THE MYSTERY MAN

The Mystery Man JAY JOSTYN
Announcer DON HANCOCK

N. B. C. Red Network

and

VALIANT LADY

Joan Scott JOAN BLAINE
Tubby Scott CHARLIE CARROLL
Jim Barrett BILL ADAMS
Mike Hagen PARKER FENNELLY
Announcer DWIGHT WEIST

N. B. C. Red Network



Direction RIKEL KENT
Casting WILDA HINKLE
Music GENE PERAZZO
Monitoring GABE GABRIELSON
Sound ED. BLAINEY
N.B.C. Production DAN SUTTER



THE MYSTERY MAN and VALIANT LADY are sponsored by GENERAL MILLS, INC. and produced by KNOX REEVES ADVERTISING, INC.

Voltage DB

(Continued from Page 131)

operations, it is virtually impossible to rate the gain of these amplifiers in power db. Bridging input amplifiers show power gain or loss only when they are connected to specified circuits (a bridging amplifier being a constant impedance input device will always draw a given power regardless of the source impedance when the input voltage is held constant. Because of this fact, that a bridging amplifier does have a definite power gain for each gain setting, a 20,000 ohm bridging amplifier will draw power of $E^2/20,000$, regardless of the bus impedance). A bridging amplifier will show a power gain when connected across a 500 ohm circuit reading plus 4.0 VU and a power loss when connected across a 50 ohm circuit reading the same level of plus 4.0 VU. Assume that a 20,000 ohm input

amplifier with a 600 ohm output is connected across the 500 ohm plus 4.0 VU circuit. The power level in the 500 ohm plus 4.0 VU circuit is by conversion plus 4.8 VU. If a volume indicator connected across the terminated 600 ohm output reads plus 10.0 VU, the db gain of the amplifier so connected is equal to the difference between the input level of plus 4.8 VU and the output level of 10.0 VU, or 5.2 db. The VU level at the amplifier output does not require conversion due to the 600 ohm circuit impedance. When the same amplifier is connected across the 50 ohm plus 4.0 VU circuit the power input level by conversion is plus 14.8 VU. The amplifier output level remains the same since the amplifier is voltage operated and the input level is plus 4.0 VU or 1.23 volts in both cases. The amplifier connected to the 50 ohm plus 4.0 VU circuit now shows a power loss of 4.8 db, yet there was no physical change in the amplifier itself. If the gain or loss of the amplifier is com-



Recommended . . .
for all delicate and precise
Electrical and Laboratory Equipment

**Leaves no residue of
DIRT or STICKY GUM . . .**

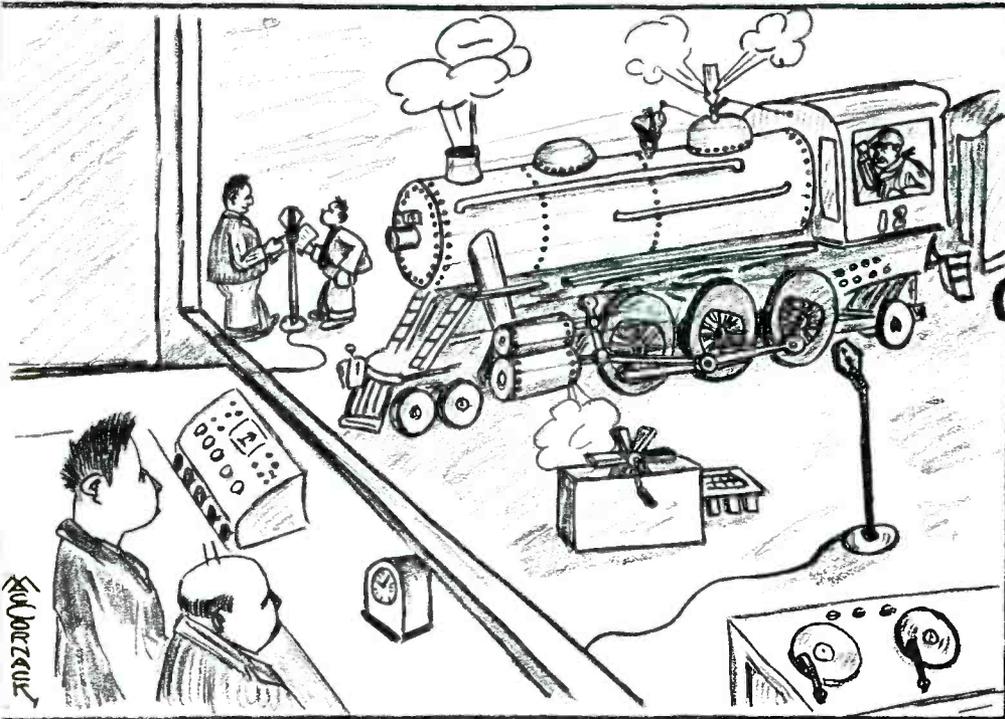
Available . . .
in small bottles with applicator,
as illustrated, or in 8 ounce,
16 ounce and gallon containers.

DAVENOIL COMPANY
158 SUMMIT STREET • NEWARK, N. J.

puted on a voltage db basis there will be no gain change when the amplifier input is moved from one circuit impedance to another of the same voltage level.

Some of the advantages of operating communication systems with voltage db measurements has been given. In actual operating practice, there are other advantages closely related but that do not require detailed explanation. Communication plants completely voltage db operated and are not restricted to the use of 600 ohm circuits when other impedances are more suitable. All equipment, amplifiers, attenuators, coils, etc., can be rated as having voltage db gain or loss to avoid confusion. The elimination of volume indicator conversions saves valuable time. A combination of all the advantages increases plant efficiency a very appreciable amount.

(Another article on this subject will appear in our next issue. — Ed.)



"It may work, but I think Tommy is carrying his realistic sound-effects too far!"

MANY THANKS N.A.B.E.T.

Gordon Hittenmark



Happy Greetings for 1942



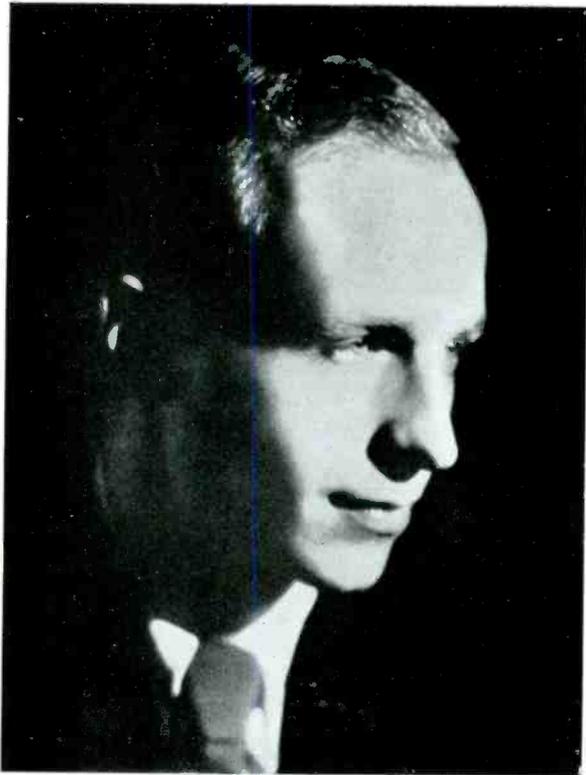
Lucille
Manners



*Merry Christmas
to the Broadcast Engineers*

Thanks for Your Wonderful Cooperation

GLENN MILLER



SEASON'S GREETINGS FROM
JOHNNIE WINTERS
Organist



In the Spirit of the Yuletide
Greetings to the Engineering Staff
FRANK BLACK

Season's Greetings

To The Engineers

"DOC" WHIPPLE

Organist

Thanks for Your

Cooperation

PETER VAN STEEDEN



Season's Greetings
to
the Engineers

**CLAUDIA
MORGAN**



Greetings

To All

Betty Wragge

Peggy Young

in

"Pepper Young's Family"



Compliments of

H. LEOPOLD SPITALNEY



Best Wishes

from

JEAN DICKENSON



*To My Good Friends
in the Engineering Department*
DINAH SHORE

The

Season's

Greetings

CHARLES PAUL





The
Same
Old
Greeting!

ANNE SEYMOUR



"For 'tis the sport, to have the engineer
Hoist with his own petard; and it shall go
hard,
But I will delve one yard below their mines,
And blow them to the moon."

HAMLET — WM. SHAKESPEARE

and

May I Add
"The Season's Best to You All"

RICHARD STARK

GREETINGS ENGINEERS



ROSS GRAHAM



The
Season's Greetings

Chet Kingsbury



To the Boys who make us sound
better than we are

JULIA SANDERSON
and
FRANK CRUMIT

"Battle of the Sexes" for Mollie



The Southernaires
and **Their Desire**

Oh, Lord, make us worthy of all
the beautiful things people say
and do in our behalf



Easy Aces



Greetings

from

JOSEPH STOPAK

NBC Staff Conductor

OFF THE RECORD WITH BILL LAWRENCE

IF THERE'S anybody left that just wants to hear about plain old records with themes that are always good, why howdy! Sit right down. After you buy all the Defense Bonds you can manage and still want to spend something, I've got just the thing. Or, more accurately, Victor has it in album G-30. It includes a fine aggregation of such oldies as *Donkey Serenade* by Friml, *Let Me Call You Sweetheart*, *Star Dust*, *My Moonlight Madonna*, *Believe Me If All Those Endearing Young Charms*, and *By the Bend of the River*. Raymond Paige of Hollywood does the conducting, and the sixty-two-piece orchestra which Paige calls his "Young Americans" is made up of youngsters ranging in age from seventeen to twenty-six. You should give it a try. One important and happy fact which the album betrays is that all kids are not jitterbugs. If all my raving does not convince you all I ask is that you lend an ear—the music will do the rest.

How about a nice symphony? Got one of those, too. It's by a Russian, Kallinnikov, and it is said by slightly more eminent critics than myself that he is even more important in Russia today than Shostakovich. The gent has more melody, anyway, if that gets you. Victor DM-827 will bring you tunes you'll want to whistle and hear again and again.

If not, we'll try you on some romantic period stuff by a writer—what's that name again, son?—Oh, yes, Schumann. Bob Schumann and a little thing called *Symphony No. 4* in D Minor. Rather an imposing title, Bob. What's that? Do I hear a howl from the audience? Sorry, Bob. One of my customers wants to hear something about swing or he threatens to stop reading me. Now don't be offended, Bob—remember you've already got your audience and I've got to work mine up. We'll hear from your symphony later.

If it's swing you want, I can take care of you. I gave you one a minute ago, didn't I—that Glenn Miller job? Remember this is Yuletide! Okay, you win—don't turn the page. Got a half dollar? Good! First buy yourself Victor 27664 and get Artie Shaw playing, of all things, *Rockin' Chair* coupled with *If I Love Again*—both a little old yet both brand new with Artie in there whipping the boys to a frenzy with his clarinet. A real fifty-cents' worth.

If you can't imagine Charlie Barnet with a few strings added to his regular solid outfit buy yourself Bluebird 11327 and hear him for yourself.

Care for Jimmy Dorsey in what seems like his permanent style of double tempo? The number is Decca 4034 and the tunes *It Happened in Hawaii* and *Tropical Magic*.

If you want to risk another Professor Miller disc try his Bluebird of *Chattanooga Choo-Choo* from Glenn's picture *Sun Valley Serenade*.

That drummin' man, Gene Krupa, grabs himself some future royalties on Okeh 6447 with a platter of *Two in Love* and *This Time the Dream's on Me*.

Columbia has released three swell reasonably priced albums by Al Goodman's band and Meyer Davis and his orchestra. The latter, Monsieur Davis, is a gent very well known in the East that can use fiddles and brass to give out some real stompin' musique as well as a sweeter variety. All music in the three albums are "show" tunes by Vincent Youmans, Jerome Kern, George Gershwin and the like. More of that "room noise" recording that I spoke of last month that really gives these records a "big" sound. If you don't think it's good may I add that in the last few Bluebird waxes they seem to agree with me or maybe they agree with Columbia—or am I starting a feud? Well, to remain in the middle, boys, I just want to say that I like it. Keep it up.

Now if that young whippersnapper who screamed for swing music can keep a courteous silence for a bit I'll return to our hero, Robert Schumann, if he hasn't stomped off in a huff and six. No, he's still here.

Now, m'lud, just whom have you chosen to record this little jam number of yours? It's not jam? Okay, no harm done. Freddie Stock and his Chicago Rhythm Kings, you say? Oh, parme. The Chicago Symphony Orchestra under the direction of Dr. Frederick Stock and wrapped around it is an album marked Columbia Masterworks MM-475. Okay, Bob, thanks a lot—let's hear it. Dr. Stock seems to think so, too, the way he's playing it. Giving it the attention he'd give to an old friend, but then according to all reports Schumann's music is an old friend to him. You record buyers reap the profits if you purchase this item.

Now what? Another heckler? Oh, oh—it's the editor, folks. Have to call it a day or a page or whatever the term is. Okay, I'm going, boss. But before I go I want to say this: While I was writing this I was timing Dickens' *Christmas Carol* for use on a program and I had to stop work when Mr. Scrooge began his tear jerking. Actually it's quite a touching performance. I must listen again.



"I TOLD THAT GUY I WAS ONLY BROADCASTING THE MANEUVERS"

THESE ROCKEFELLER IN WISHING THE Season's



Charles Dezemler

"Haircutter to Men"

William Roberts

"Custom Tailor"

Parker & Battersby

"Kodaks, Cutlery, Leather Goods"

First Federal Savings and Loan Association of New York

Buy U. S. Defense Bonds here!

Trepel Florists

"Flowers for All Occasions"

Chase National Bank

"Rockefeller Center Branch"

Center Music Store

"Where Stage, Screen and Radio Stars Buy"

Arthur C. Sogno Company

"Jewelers"

Weber & Weber

"Men's Haberdashery — Knox Hats"

Dextor, Ltd.

"Complete Line of Luggage
and Leather Goods"
RCA Bldg. — 53 W. 49th St.

Kaufman & Bedrick Drugs

"Drugs - Cosmetics - Fountain Lunch"

Edward Reed, Ltd.

"Gentlemen's Apparel"

CENTER MERCHANTS UNITE BROADCAST ENGINEERS

Greetings



Holland House Taverne

"10 Rockefeller Plaza"

Restaurant Mayan

"16 West 51st Street"

Cafe Louis XIV

"15 West 49th Street"

International Cafeteria

"Concourse-International Building"

News Center Restaurant

"Red Heads"
50 Rockefeller Plaza

Economy Blue Print Co.

"Photostats - Blue Prints - Giant Photos"

Rockefeller Center Tobacco Shop

R.C.A. Building

Charles Howatt Sport Shop

"Complete Line of Sporting Goods"

Rockefeller Center Milk Bars

"R. C. A. Building—Time and Life Building"

Rockefeller Center Book Shop

and Lending Library

Colbert Chocolates

"Excellent Candy for Xmas — Gifts"

Courmettes and Gaul Opticians, Inc.

*A Very Merry Christmas
and a Happy New Year to all
the boys from*

GEORGE F. PUTNAM
NBC, New York

Season's Greetings
from



PAUL LAVAL
NBC

Christmas Greetings



Alexander Scourby



Season's Greetings

TO THE ENGINEERS

ALICE MASLIN

"Nancy Booth Craig"

"HOWDY"

TO ALL THE FELLERS

"Texas" Jim Robertson

WJZ — BLUE NET

8:30 A.M. E.S.T.

Merry Christmas
to the Engineers and
Thank You All for Being
So Swell

IREENE WICKER

"The Singing Story Lady"



Season's Greetings

IRVING MILLER

NBC CONDUCTOR



New Studios at NBC New York

By James Wood, Jr.

Engineering Department, National Broadcasting Co.

RADIO CITY'S two newest studios are unusual, their design features an innovation, if you will, by comparison with any studios built by NBC before; and the conditions under which they were built were unusual as well. Most construction work has its problems and difficulties, its "head-aches" if you prefer, and the 6A-6B job was definitely no exception. The intricacies of the enigma "broadcasting will continue as usual" while immediately below dozens of workmen conspire to manufacture an almost indescribable din of hammer blows, concrete pounding iron thumps, carpenter saw whines, and sheet metal moans, will long be remembered, but not cherished, by this writer! Why he was not pounced upon by a coalition of irate agency and NBC production men, and a few studio engineers to boot, not to mention a half dozen or so frantic foremen with construction schedules to meet, still remains a mystery!

But to go back to the beginning—the management had had since Radio City was built, a lease option on the unfinished space of the 6th and 7th floors. Early this year it was decided to take up the option, but for only part of the space. Once the available construction area was decided upon, the architectural design problem resolved itself fundamentally into one of providing the two largest studios consistent with its other utilitarian aspects. It was very soon disclosed, however, that with this condition fulfilled two very large and incongruous building columns would be "right smack in the middle" of the stage and the auditorium of each studio!

Now from the economic point of view at least, the prospect of moving the steel columns of a skyscraper is not something that invokes a feeling of violent enthusiasm. Nevertheless, it was decided that although the auditorium columns should remain, the stage columns would have to be removed. How ingeniously this feat was accomplished will become clearer from Figure 1 which shows the "before" and "after" views of the steel framing at the stage. Briefly and to oversimplify, the work was done as follows: A short, sturdy pair of H sections were spanned between columns B and C. Fortunately, as we shall presently see, column B had a splice a little way above where the new section was joined to it. Next a new column D was erected as shown. Then a truss built up of two 42 ft. by 30 inch I beam sections and several cover plates was raised into place between columns A and D just under the 8th floor steel. Incidentally, each section of this truss was fabricated at the mill, and getting these five ton steel monsters

into the building at Radio City was a feat in its own right. Steel riggers have always had this writer's admiration and respect for the downright dexterity and cleverness with which they handle the clumsiest and heaviest structural sections. In this case the windows were removed from the 6th floor at the west end of the building, and the steel hoisted by crane

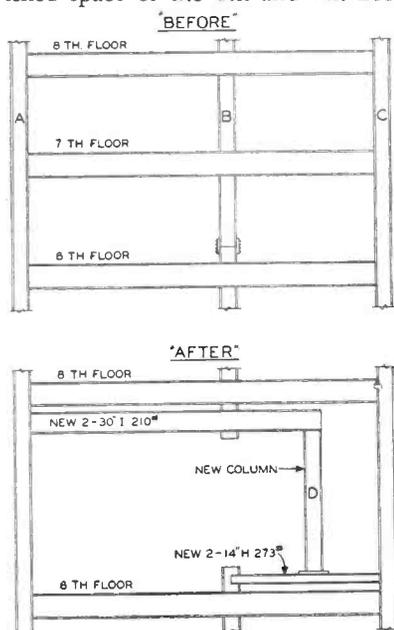


Fig. 1



General view from rear of studio 6A. Clients' observation room at upper right

to the proper level. Once on the floor the sections were moved on rollers to their approximate positions, but not before certain masonry partitions had been broken through to allow passage. A block and fall furnished the mechanical advantage to hoist the heavy members into position. With the big truss in place, temporary angles were fastened to column B in such a position that a screw jack could be used to exert upward pressure on the column against the reaction of downward



Stage and control room studio 6A. Notice the rear wall surface

pressure on the truss. The splice plates of column B at the 6th floor were removed, and the jack gradually turned by means of a heavy bar and a sledge hammer. Finally, when a knife blade could be passed through the joint in column B, its entire load between the 8th and 6th floors had been removed. Holes were then drilled in the column, and bolts



View of studio 6A from stage toward rear, front seats removed

inserted and tightened to permanently fasten it to the truss under the new load conditions. When all joints were complete, the jack and temporary angles were removed, column B was cut immediately below the truss with an oxy-acetylene torch, and the job was done.

And now to a brief description of the finished product. The accompanying photographs are excellent interior views. As to size, the two studios measure approximately 100 ft. long, 50 ft. wide, and 20 ft. high, and for the most part they are duplicates. The rear of the auditorium section is stepped steeply upward, and in a distance of about 40 ft. rises from the 6th to the 7th floor. In studio 6B this section comprises 300 seats, in studio 6A 20 seats less. This type of construction not only affords the audience in the rear an unobstructed view of the proceedings, and permits entrance and exit from either floor, but also allows the space underneath to be used as an air conditioning exhaust plenum chamber. Small vents in the front face of each setback allow the air to pass through. In order to satisfy the local building regulations, the forward part of the seating section with a capacity in each case of 157, is purposely made up of seats which although otherwise similar to those in the rear, are removable.

The auditorium illumination system is unique. It consists of a series of four coves, one behind the other, with the open portions facing the stage and with the bulbs so mounted that the audience although sensible of good overall illumination, is not annoyed by direct glare. All the lights of the auditorium and stage are controllable from the electrician's booth immediately over the studio control room. In addition, two coves of auditorium lights and all the white lights of the stage can be switched on or off from the studio control room. Three strips of stage lighting are available besides eight adjustable overhead spot lights and two spots directed vertically downward at the proscenium so that scripts are easily read at the microphones.

The stage itself is approximately 38 ft. by 38 ft. and is raised 2 ft. 6 in. above the auditorium floor. The control room is at the side of the stage, and its observation window allows a full view of both stage and auditorium. Three stage curtains are available but only the one at the proscenium is motor controlled; the other two, one about half way back and the other at the rear wall, are both hand operated.

Sound insulation and acoustical treatment considerations are ably discussed by Mr. G. M. Nixon elsewhere in this

issue. Suffice it to say here that only the stages are sound isolated; it was not considered necessary to treat the auditoriums. The back wall of each stage is an acoustical surface designed to retain the brilliance of the studio without permitting descrete sound reflections.

As to decoration, studio 6A has copper colored walls with green seats, green linoleum, and green carpet; studio 6B has aluminum colored walls, blue seats, red rubber flooring and red carpet. The clients' observation rooms on the 7th floor seat ten, and are furnished with heavily upholstered pieces.

The writer wishes to say "Thanks" to Bill Clarke for letting him use some of Bill's thunder, and to Ed Prince for preparing the steel sketches.

**Prompt, Intelligent Service on Any
Radio Part, Receiver, or Problem**

TECHNICAL EQUIPMENT COMPANY

Telephone:
WOrth 2-1895

135 Liberty Street
New York, N. Y.

**Courmettes & Gaul
OPTICIANS**

55 West 49th Street
R. C. A. Building, New York
Main Floor

EYE EXAMINATIONS

Prescriptions Filled . . . Prompt Repair Work

PATERSON:
79 Bridge Street

NEW BRUNSWICK:
54 Albany Street

AARON LIPPMAN & CO.

246 Central Avenue

Newark, N. J.

**Leading Radio Equipment Distributor of New Jersey
Prompt Service at No Extra Cost**

Best Wishes to a
Swell Bunch of Guys



ED EAST and POLLY

Season's Greetings
CHARLOTTE HOLLAND
and
SAM WANAMAKER



Best Wishes of the Season

HUGH JAMES

yours for

a merry christmas

bill farren



SEASON'S
GREETINGS

Engineers
and Best Wishes

LOWELL PATTON

Greetings

from

DICK LEIBERT

Radio City
Music Hall



*Season's Greetings
and Best Wishes*

to

A SWELL GANG

All NBC Engineers

from

THE THREE SUNS

ARTIE DUNN

MORTIE NEVINS

AL NEVINS

Hotel Piccadilly



Season's Greetings

DAVID GOTHARD

Season's Greetings

CHET STRATTON



With Regards

STUDIO X

Ralph and Budd



The Season's Best to

The Boys who "Control" our destinies!

JACK COSTELLO

NBC Announcer, New York

Merry Christmas

and

A Happy New Year

BOYS

James Fleming



Merry



Christmas

A.T.E. of

WOR



Season's greetings to —

The men behind the dials

For their patient understanding

Encouragement and smiles.

Sincerely,

GWEN WILLIAMS

EDWIN STRONG, Inc.

Electrical Transcriptions

Special Studio Facilities

BRyant 9-5758 - 9

71 West Forty-fifth Street

New York, N. Y.



Through the Finder — By Jerry Renneck

IT HAD been my intention to tell you about all the new items that have come on the market this past month, but it has been so difficult to get even the simplest of the old items that we will have to forget anything new. Priorities and stuff . . . y'know!

However, as we all know that inside photography, which in itself is fascinating enough, there are processes that add a lot more to our fun than just taking and developing a picture. Looking at some of the winning prints in a recent club "monthly contest," I was surprised to note how many of them were toned. Now black and white prints in themselves are toned in a broad sense of the word, as they range in "color" from whites that have not the slightest tinge of black, to the deep cold blacks of shadows which appear in night pictures.

If we can liven up these shadows with a little color in them, we can get a transparency that will greatly enhance the beauty of our print. To apply color directly to the print is not satisfactory in that the pigment covers the image and takes away from the values we have tried so hard to achieve. If, on the other hand, we can get a "color" to combine with the existing color of the print, we do not lose anything, but gain greatly. There are two main methods of attaining this end. One by chemical toning, and the other by dye toning.

This time we will concern ourselves with the first, and at some other time, dye toning will be the subject of our discussion.

When I said that the "color" combines with the existing image, that was not wholly true. What actually happens is that there is a chemical conversion of the silver image in the developed print, into an insoluble substance of color such as brown Silver Sulphide and colored compounds of such metals as Copper, Uranium, Gold, Iron, etc.

Considering the browns for the present, there are two methods of toning Sepia. First the direct, and second the indirect. The direct is by far the simplest as it requires only one operation. But if you are an "old timer" you will use the indirect sepia toning method which is so popular with a great many professional studios. I don't like it because of the offensive sulphide smell that pervades the dark room, and seems never to leave. It gets into everything like skunk odor, and the only way to get rid of it is to bury the dark room. That's impractical.

An easier way to tone sepia to red without having the neighbors call the health department to get rid of a menace (you), is to use the formula which follows. It is done in one operation, and by controlling your exposure and development, any color from black through the sepias and browns to bright red can be had. I hear that voice again asking who wants to tone a print red? Well, the answer is anyone who wants to will tone a print red. (Quiet, Bub.) I once saw a high key print of a nude which had been toned red. There was just the outlines left and a suggestion of shadows where they should be. To say that it was a striking picture would be a mild understatement. It was a work of art.

Then there are camp pictures around a fire at night, where all faces glowed with the ruddy color of the reflected flames but did not look so good when developed in black and white. Had this print been toned, it would have made a world of difference. All prints can get a lift if they are

toned the appropriate color and the picture that is an ordinary one can sometimes be made a salon print by judicious toning.

The formula above mentioned requires only one chemical that is not found in the average dark room; all the others are standard ones and are probably on your shelf right now. O. K., boys, hold your hats; here we go:

Sepia to Red Developer

Adurol	30 gr	2.0 g.
Hydroquinone	30 gr	2.0 g.
Sodium Sulfite (Anhy)	275 gr	32.0 g.
Sodium Carbonate (Anhy)	275 gr	32.0 g.
Potassium Bromide	3 gr	.25 g.
Water to make	10 oz	250 c.c.

Take part of the 250 c.c. of water and dissolve the chemicals in the order given. When they are thoroughly dissolved, add the remaining water to 250 c.c. (or ten oz.).

The colors are obtained by following the table below:

Exposure	Dilution of developer	Extra 10% per oz. stock devel.		Dev. Time Min.	Color
		Full strength	None (Add pot. Brom.)		
Correct				1 1/2-2	Black
2 1/2 times	10 times	20 minims (1cc)		6	Br. Sep.
4 1/2 "	20 "	90 "	(5.5cc)	10	Sepia
5 "	25 "	100 "	(6.0cc)	18	Red-Brn.
6 "	30 "	120 "	(7.0cc)	20	Brite-Red

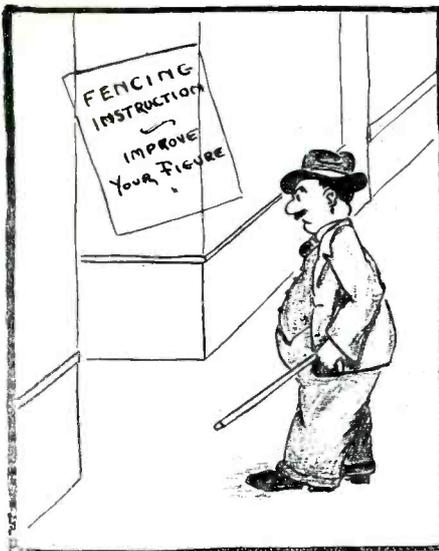
When you read this it may seem like an awful lot of trouble to go to to get a print that has a color in it, but if you have been wondering why your prints do not register it may be because they lack that certain something of which we spoke earlier in our "sessions."

I'd like to tell you about some prints I saw at the meeting I mentioned before. Many of you have seen pictures of the Plaza in Rockefeller Center, and have admired the bronze statuary that is so profuse there. The guest speaker at the meeting had a picture of a female figure, that was toned so beautifully it seemed as though the print were of bronze. In black and white it would have been just a very nice picture, but that extra something was achieved by toning. The toner used was a selenium formula, and most effective.

Another, a view looking along a road with large trees forming a frame around the center of interest which was a small wagon being drawn towards a house in the center, upper right. As a whole it was a magnificent print, but had it been in cold black and white it would have been another picture. As it was, the print had been developed in a "warm tone" developer, and had thus attained a quality that made it take first place in the judging.

Don't think that toned pictures are old fashioned. Photography itself is old fashioned. It's over a hundred years old, but, constantly, workers are striving to give us new ideas and slants on the old methods; ways to improve our technique in getting outstanding prints, so that we can "point with pride" to the work of which we are so proud. I should like to go on here and talk about pride in our work or the ego which prompts our photography, but as we are running out of space, we'll save it for after Christmas, and, by the way, did you make those Xmas cards yet? If you'll send me that masterpiece of a card I'll try to "cadge" a little space for some of the best. Well, anyway, Merry Christmas, and don't forget to . . . "Cap your lens."

References: Photo Almanac, 1930; Falk Pub. Chemistry of Photography, 1932; Mallinckrodt Chem. Wks.



formerly **A-E JOURNAL**
DIRECTED TO BROADCAST ENGINEERS AND EXECUTIVES

THE BROADCAST ENGINEERS' JOURNAL

Managing Editor..... E. STOLZENBERGER
 Coordinator..... F. R. ROJAS
 Director of Sales and Promotion..... E. C. HORSTMAN
 Press Photographer..... JOE CONN
 Staff Cartoonists..... ED. MACCORNACK, ROSS PLAISTED
 Circulation Manager..... TED KRUSE
 Subscription Manager..... ARTHUR G. POPPELE
 Features..... TOM GOOTEE
 Treasurer..... C. W. PHELAN
 Assistant Treasurer..... D. J. MOLONEY

TRUSTEES

E. Stolzenberger G. E. Stewart G. M. Sellar
 F. R. Rojas V. J. Duke

Volume 8, No. 12



December, 1941

TABLE OF CONTENTS

	Page
Knight Before Christmas.....	25
Hollywood Activity.....	39
National Cornhusking Contest.....	41
NABET President Assists ABTU.....	48
On the Airalto.....	53
Concise Data and Theory on RCA Microphones.....	58
Cleveland News.....	65
Preview of New San Francisco Studios.....	67
KGO-NBC-KPO San Francisco Studios Near- ing Completion.....	69
San Francisco News.....	77
Who's Who in Chicago.....	83
Chicago AFRA Antics.....	89
WLS 1942 Style.....	93
How to Be a Radio Announcer.....	97
Mouse Visits WLS Transmitter.....	101
Behind the Mike.....	110
Washington News.....	110
The Business Side of Television—Part IV.....	117
Getting the News of the World.....	123
Voltage DB.....	129
Out of This World.....	130
Off the Record.....	139
Additional Studios at NBC New York.....	144
Through the Finder.....	149

ASSOCIATE EDITORS

Chicago..... CON CONRAD
 Cleveland..... J. D. DISBROW
 Denver..... J. ROHRER
 Engineering Chapter..... BOB FRASER
 Hollywood..... RAY FERGUSON
 KFI-KECA..... H. M. McDONALD
 Mutual Broadcasting..... R. A. SCHLEGEL
 New York..... D. C. SHULTIS
 San Francisco..... LEE KOLM
 Washington..... BILL CHEW

The Broadcast Engineers' Journal is a privately printed monthly publication, issued by the Ass'n of Technical Employees Publications, Inc., a corporation of the State of New Jersey with office at 30 Rockefeller Plaza, N. Y. City. Address all communications to Editor's office: E. Stolzenberger, 116-03 91st Avenue, Richmond Hill, L. I., N. Y. Telephone Virginia 9-5553.

THE BROADCAST ENGINEERS' JOURNAL IS THE OFFICIAL PUBLICATION OF THE N.A.B.E.T.

Advertising rates and information supplied on request. Subscription, \$1.50 per year; \$3.00 for three years. Single copies, except Christmas Yearbook, 25c; Christmas Yearbook, 75c, subject to availability. All remittances in advance. Foreign: Add postage.

Nothing appearing in The Broadcast Engineers' Journal shall be construed to be an expression of The Broadcast Engineers' Journal or the National Association of Broadcast Engineers and Technicians, but must be construed as an individual expression of the author or authors.

P. T. Barnum Is Alleged to Have
 Made This Wise Observation:

**If You Don't Advertise
 Your Business, the Sheriff Will**

We Are Confident in the Future, Are You?

FOR ADVERTISING RATES AND DATA
 Write: THE BROADCAST ENGINEERS' JOURNAL

ED STOLZENBERGER, Managing Editor
 116-03 91st Avenue Richmond Hill, N. Y.
 Telephone Virginia 9-5553

Season's Greetings
from
Sammy Kaye

Come Out From
Behind That Glass

ALLEN PRESCOTT



Hello There!

from

TED MALONE

and

ROSA RIO



A Word to Advertisers

If the Broadcast and related fields are an important market for your product or service — then this publication should be **FIRST** on your media list. A strong statement, but pleasant to make because it's easy to prove.

Circulation: National; controlled — 2,000 copies per month, concentrated among the engineers, executives, and technicians of America's great Broadcast Industry.

The rates **ARE** low; your product or service can benefit from full page display at small cost.

STANDARD printed page size. Our printed page size corresponds to that of 9" x 12" publications in the communications field, and we can accept 1/6, 1/3, 2/3, etc., plates prepared for other publications. You are thus saved additional advertising production costs.

ADVERTISERS IN OUR YEARBOOK ISSUE OF THE BROADCAST ENGINEERS' JOURNAL RECEIVED A 60% DIVIDEND — AT NO ADDITIONAL COST!

Controlled Circulation This Issue — 3,200 Copies

Your 1942 budget can be adjusted to include **THE BROADCAST ENGINEERS' JOURNAL**. For advertising contracts and space reservations, write or phone:

ED STOLZENBERGER, Managing Editor
116-03 91st Avenue, Richmond Hill, N. Y.
(Telephone, Virginia 9-5553)

Subscription Blank

The Broadcast Engineers' Journal:

I don't want to miss the Journal during 1942; please enter my subscription for

1 year for \$1.50

3 years for \$3.00

starting with the issue.

.....
Name

.....
Address

.....
Business Connection

.....
Name

.....
Address

.....
Business Connection

Make checks payable and remit to The Broadcast Engineers' Journal, Subscription Dept., 30 Rockefeller Plaza, New York, N. Y.

A TOAST!

By C. M. Rossetti

(Unknown to Mr. Horstman, the following tribute to his leadership was sent in by the National Office secretary, Miss Concetta Rossetti. The Journal is pleased to print it because she, above all others, is in a position to know the amount of time and labor that Mr. Horstman has devoted to the progress of NABET. — Ed.)

Not to make at least one feeble attempt to express our thoughts and feelings at this time in regard to one individual in our midst would verily be a grave injustice.

And yet, were we to proceed to laud him for his successful achievement in our behalf and for his insurpassable and unfailing guidance at the helm during the past would probably also prove to be an injustice, as mere words can never truly portray the appreciation and admiration which we hold for this one man. We shall nevertheless take this risk.

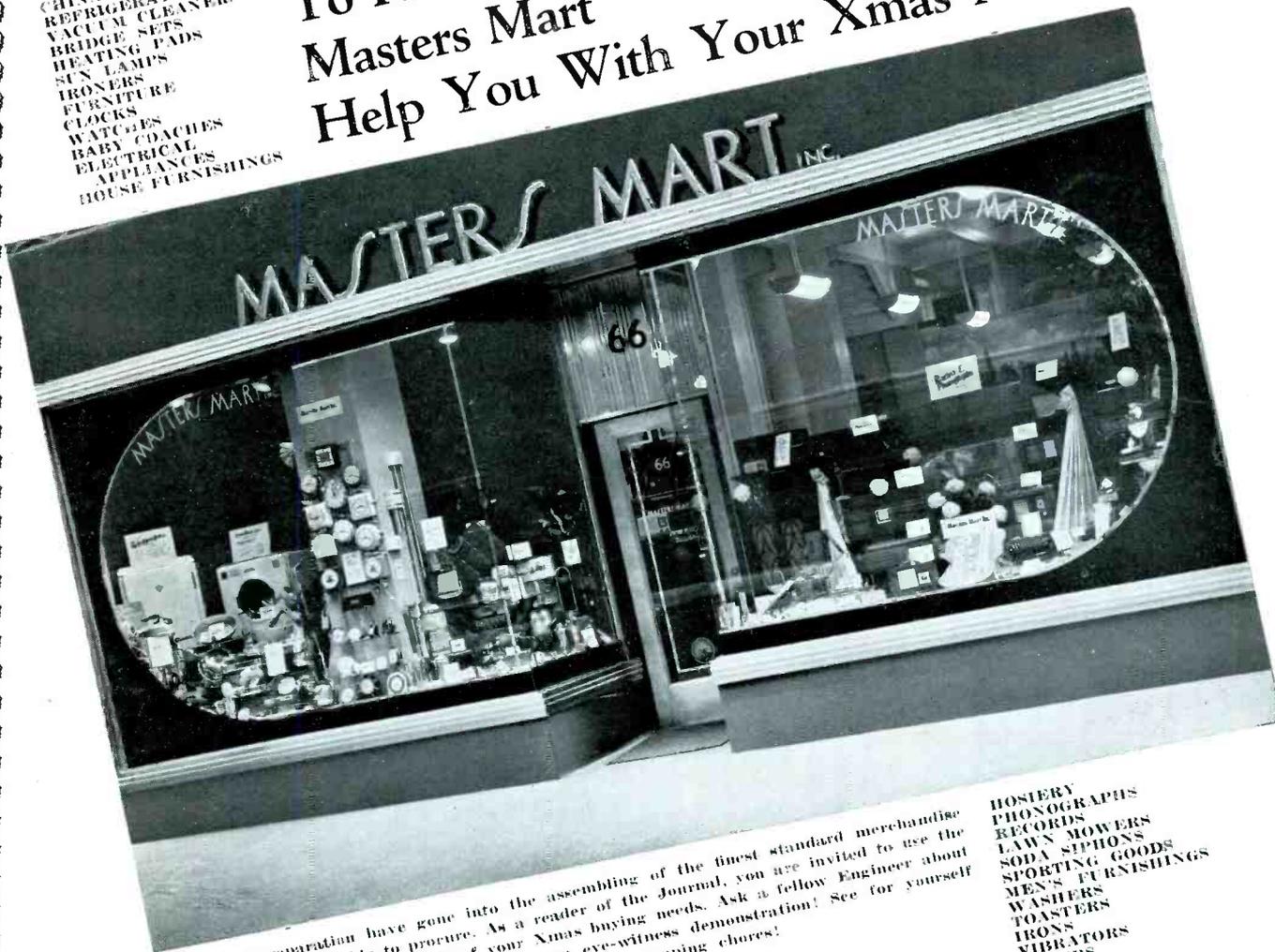
Boundless were the many personal sacrifices offered during his struggle for the attainment of desired goals—to preserve and create one great harmonious unit. Many were the generousities bestowed by him during his patient and unselfish reign. And thus grew and developed this organization of which we are all justly proud.

Esprit de corps — the spirit of common devotedness—the support among the members of the organization. For this he strove continuously—for without it nothing could be gained. His good nature and humor forever melted all opposition and stimulated cooperation and enthusiasm among his fellow workers. I, for one, am proud to have had the opportunity of working with him during these past years, and join the entire membership of N.A.B.E.T. in this toast to say:

Thanks to you, EDDIE HORSTMAN, for your great and inspiring fulfillment of your responsibilities as President of the National Association of Broadcast Engineers and Technicians. Your work will forever serve as a sterling example and will be a perpetual source of inspiration to all your successors, for, as your actions stimulated the symbol of faith within the entire organization, so N.A.B.E.T. became the all encompassing symbol of the spirit of cooperation and unity among men.

ELECTRIC RAZORS
 CARPET SWEEPERS
 KITCHEN RANGES
 ROASTERS
 OUTBOARD MOTORS
 PING PONG TABLES
 CHINAWARE
 REFRIGERATORS
 VACUUM CLEANERS
 BRIDGE SETS
 HEATING PADS
 SUN LAMPS
 IRONERS
 FURNITURE
 CLOCKS
 WATCHES
 BABY COACHES
 ELECTRICAL
 APPLIANCES
 HOUSE FURNISHINGS

What a Relief
 To Have a Store Like
 Masters Mart
 Help You With Your Xmas Needs!



Months of preparation have gone into the assembling of the finest standard merchandise you have ever been able to procure. As a reader of the Journal, you are invited to use the facilities of Masters Mart for all of your Xmas buying needs. Ask a fellow Engineer about Masters Mart and then come quickly for an eye-witness demonstration! See for yourself how Masters Mart can help you with your holiday shopping chores!

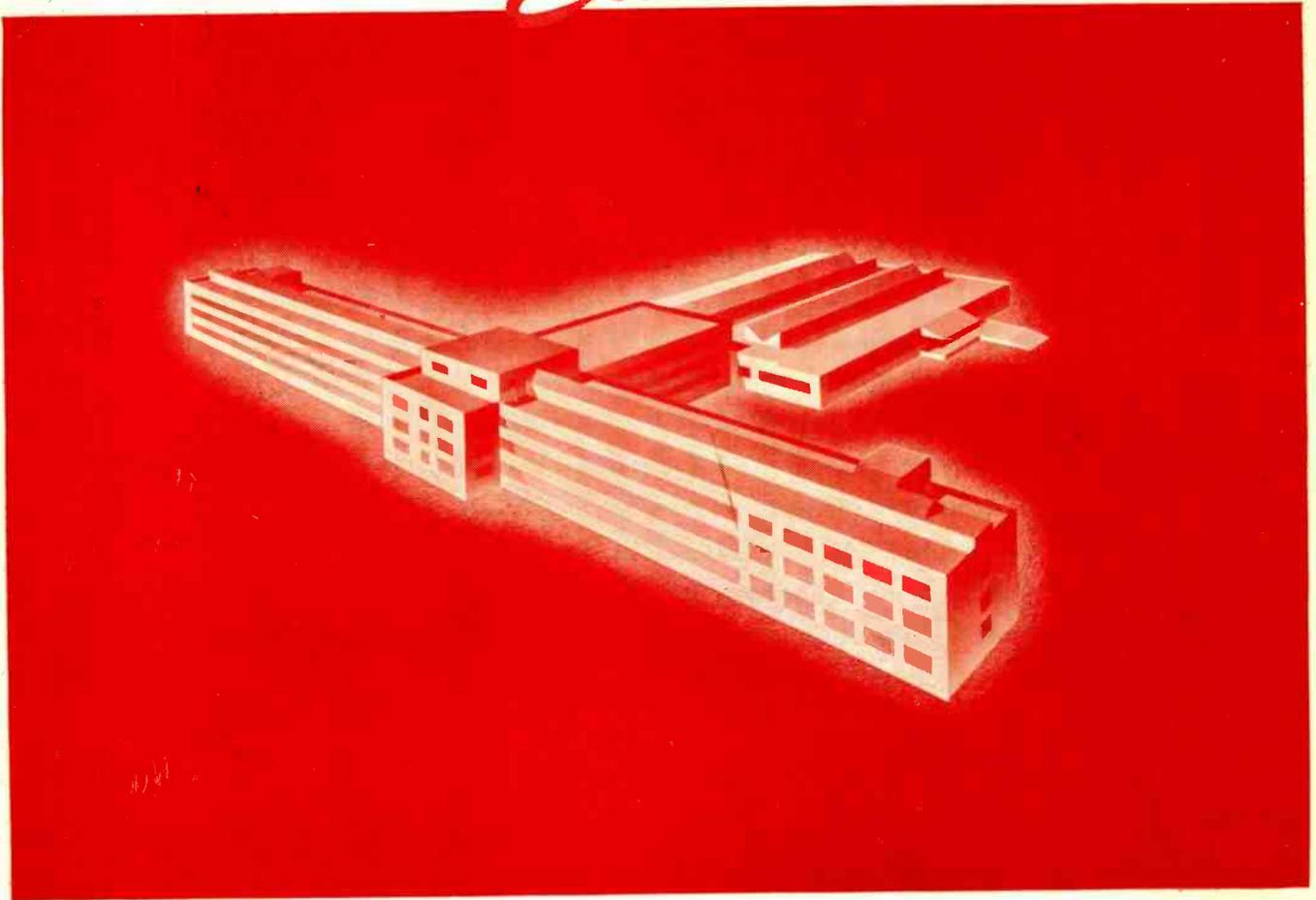
TO OUR "RADIO" FRIENDS
 WE EXTEND

"The Season's Greetings"
 And Our Thanks for Your Continued Patronage
MASTERS MART, Inc.
 66 West 48th Street, New York City
 Telephone BRyant 9-7725

HOSIERY
 PHONOGRAPHS
 RECORDS
 LAWN MOWERS
 SODA SIPHONS
 SPORTING GOODS
 MEN'S FURNISHINGS
 WASHERS
 TOASTERS
 IRONS
 VIBRATORS
 MIXERS
 STOVES
 LEATHER GOODS
 AUTOMOBILES
 TIRES
 AUTO RADIOS
 AUTO HEATERS
 MEN'S NECKWEAR
 LAMPS
 ELECTRICAL
 FIXTURES
 COFFEE MAKERS
 LUGGAGE
 RADIOS
 TYPEWRITERS
 WAFFLE IRONS
 JEWELRY
 FOUNTAIN PENS
 SEWING MACHINES
 SILVERWARE
 HAIR DRYERS

OPEN EVERY EVENING TO 8 P. M. UNTIL CHRISTMAS

This is the House *Electrons* are Building



“**G**REAT OAKS from little acorns grow”—
In radio, great services from little electrons grow. Electrons—tiny bits of electricity—are corpuscles of science in the lifeblood of radio progress.

Electronics took wireless out of the spark gap and put it into the vacuum tube oscillator; it lifted radio off the cat-whisker of the crystal detector and placed it in the electron tube, acting as both detector and amplifier. Electronics gave wireless a voice—the radiophone, now called broadcasting.

Today in the Electronic Age, a new structure—RCA Laboratories—is being built on 260 acres at Princeton,

N. J., planned to be the foremost radio research center in the world. Here in surroundings that inspire clear thinking and research, scientists of RCA Laboratories will seek new truths. They will develop new inventions and services for radio, for industry and for people everywhere, because Electronics is an ever-broadening field.

The main section of RCA Laboratories—the House that Electrons are Building—will be ready for occupancy in the Spring of 1942. And with its opening, a new gateway to the future of radio swings wide for the benefit of America and all the civilized world.



RCA LABORATORIES

A Service of the Radio Corporation of America

Other RCA Services: RCA Manufacturing Company, Inc. • Radiomarine Corporation of America • R. C. A. Communications, Inc.
National Broadcasting Company, Inc. • RCA Institutes, Inc.