



JOURNAL

DIRECTED TO BROADCAST ENGINEERS AND EXECUTIVES

The *NEW*

WEAF

PORT WASHINGTON
LONG ISLAND

Maestro

Arturo Toscanini

TOURS
SOUTH AMERICA



AUGUST » » » » 1940

**NEW TUNING
HOUSES OF**

WRC

and

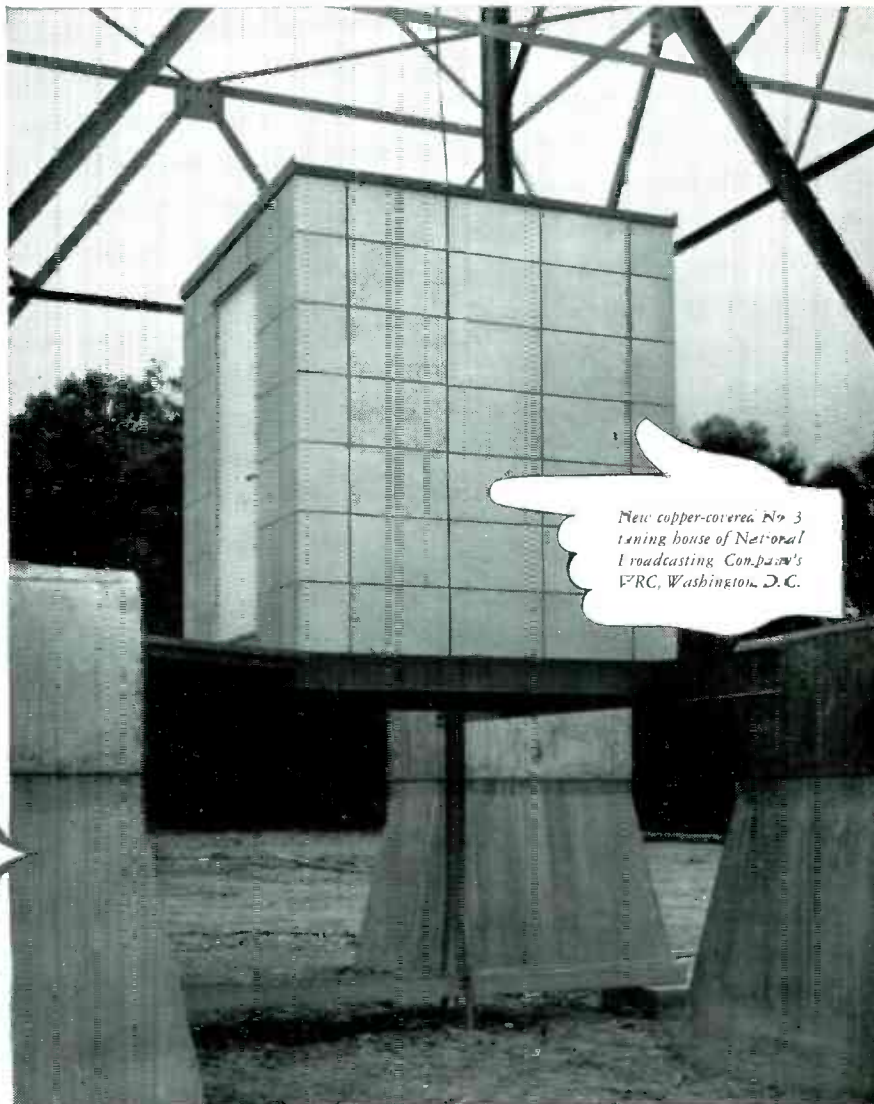
WEAF

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and
Shielded*

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WRC, Washington, D.C.*

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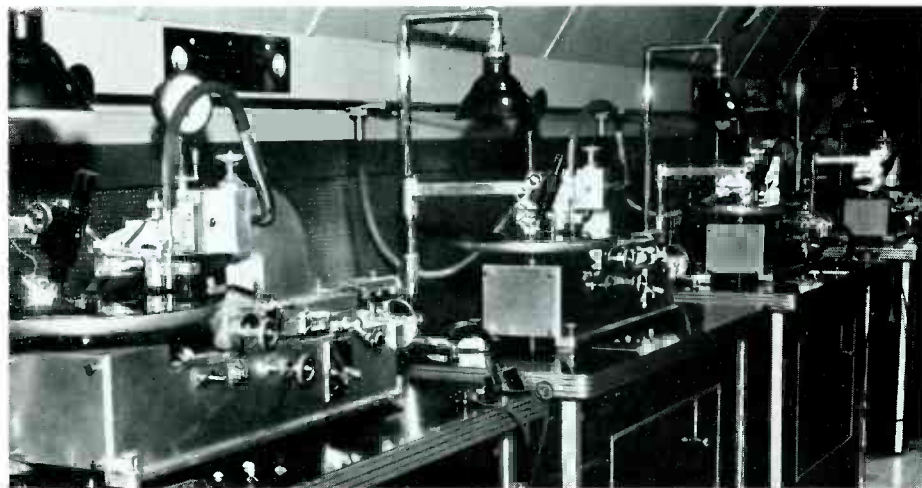
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OUR COVER

Tower number one under construction at WEAF's NEW location at Port Washington, Long Island, with 250 feet to go.

WATCH SURPRISES IN THE SEPTEMBER ISSUE!



View of Some
of the
**SCULLY
MASTER
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Editorial Notes

MOVING AND REBUILDING WEAf is an exceedingly interesting story, written by Ray Guy, NBC's R-F Engineer.

MAESTRO TOSCANINI has recently returned from a concert tour of South America. Under the title, "Music That Charmed," Engineers Larson and Wies tell of their experiences while on tour with the Maestro.

NEXT ISSUE: "The How and Why of F-M," by Ray Guy; F-M by Mutual's Chief Engineer Jack Poppele; F-M facts, by Bob Bigwood and W. R. Brown. Also — Sound and Television at the 1940 Conventions by prominent writers, with a few surprise statements from people you will hear more about!

The October issue will be our annual PHOTOGRAPHIC effort. A classic and authentic photographic feature will be written by Engineer Bob Fraser, ex-professional photographer of some note. Since bonified amateurs are not slaves to the pecuniary interest, the Journal will dispense with contest prizes. Due to the volume of photos sent us on this occasion, no entries will be returned.

For the future: We will present a memory-rejuvenating story of early broadcasting in the Chicago Area by Tom Gootee, and possibly a "Chicago" issue. Also, the Electron Microscope vs. the Optical Microscope as an aid to Humanity, and the technical explanation of RCA's new Omnidirectional Radio Beacon.

Effective with the July Recording Issue, the Journal has undergone a change of staff. Messrs. Meyer and Stewart resigned their posts, and in their places we have Ed Stolzenberger, Managing Editor, and C. W. Phelan, Treasurer. Needless to say, the new Journal management appreciates the many letters and words of praise from Engineers, Executives, and the Trade on our first effort;—regretfully, it was impossible to fill the tremendous demand for extra copies of the Recording issue.

On Friday, July 26th, W2XBS, New York Television station, broadcast an evening program called "Magazine Rack." Featured on the program were Gus and Van, the Eton Boys, and the Magazines Variety, New Yorker, and the ATE JOURNAL!

AIEE Pacific Coast Convention will be in session from August 27th to 30th in Los Angeles, Calif., with Headquarters at the Ambassador Hotel.

VWOA Activity: Saturday, September 7th, has been officially set as DE FOREST DAY at the Golden Gate International Exposition being held at Treasure Island in San Francisco Bay. Dr. De Forest was recently acclaimed by the U. S. Patent Office as one of the 19 greatest American inventors of all time.

Post Credits

The July cover showed Mr. H. B. CASKEY, Cleveland SE, operating an RCA Type MI-4822 Portable Recorder. The photo was taken by Mr. J. D. Disbrow, Cleveland.

For the excellent and instructive photo-micrographs that appeared in our July issue, we are deeply indebted to Mr. Warren Andresen, San Francisco NBC Engineer.

The WOR Recording block-diagram was erroneously shown above the WOR sub-heading, instead of beneath the sub-head.

Control Room Technique

By James Coleman, NYSE

After spending some time in the Studio Group, the idea of ease of studio operation by reducing the amount of movements to a controlled minimum seems to me to be a field of thought in our work which can be studied to advantage. The approach of an Engineer to control room set-up can give a program an ease of operation which is reflected in the actual production. The men in our field who have developed their studio operation techniques no doubt have individual likes and dislikes. I believe after observation that some of you have approaches which if adopted by others would improve general technique. It would be my pleasure to receive descriptions of any individual approaches to the matter so that I might make a general survey of these ideas which are now existent with individual engineers in the control rooms. These ideas extend by their nature into the studio where microphone setup is an important phase of technique due to the effect the number of microphones used have on studio control room operation.

Cleveland

By F. C. Everett

There is apparently some truth in the story current some time ago about carrier pigeons being confused by radio transmitters. Several have shown up at WTAM's transmitter from time to time in the past and have eventually disappeared. However, the latest has been taken home several times by A. H. Butler, Assistant Station Engineer, and fed and released and after making a few large circles in the air it disappears and soon returns to WTAM. Finally, he took it six or seven miles out and released it again with the same result — it appeared at WTAM pronto. It certainly must be tuned in on the wrong frequency.

J. A. Cheeks, Cleveland Transmitter Engineer, points out a useful relationship which he has noticed, which will be handy to memorize or otherwise preserve for reference, between the AWG (American Wire Gage) and the DB. The following apply to both the AWG and the DB.

- (1) The power (resistance) doubles or halves for each 3 db (gage numbers).
- (2) The power is multiplied or divided by 1.26 for each db.
- (3) " " " " " " " " 1.6 " two "
- (4) " " " " " " " " 10 " ten "

. . . KILOCYCLES . . .

Will Sal recover from imagined ills,
Or relapse and swoon on her sponsors pills?
Will Sue eventually decide to wed?
What will become of temperamental Fred?
Will Lucy recover her girlish form,
And blunder through life with screwball Norm?
Will Kitty awake and open her eyes,
Or continue to swallow the villain's lies?
Will Joe be elected to president,
Or will he remain in his squatter's tent?
Will you purchase Krunchies to snap and munch,
Or some other package of munch and crunch?
Will you become damp if you fall in the lake,
Or heat the oven when you bake a cake?
Will you be here day after tomorrow,
To help us grieve and whimper in sorrow?
Will you send to us your nickles and dimes
Immediately after the barking of chimes?
Now good-bye, folks, my little chickadees,
See you tomorrow, so relax at ease.—A. C. Volt.

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Moving and Rebuilding WEA F

By Raymond F. Guy
Radio Facilities Engineer

IT SEEMS that life can be very complicated. These masterful strokes recount with verve, or something, the harrowing adventures which brought virtue's reward, a crisp FCC construction permit to move WEA F from its present site at Bellmore to the new site at Port Washington. Down through the years the Great White Father has favored us with many C. P.s and we built many Radio Stations. It's a daily stint, a routine chore ordinarily dashed off with speed, economy and nonchalance. But this one wasn't. It was 72 weeks of pot walloping, manoeuvring, making the Welkin ring with speeches before Kiwanis, The Lions, The Taxpayers Associations, arguing with cops, horse-trading and lying awake nights trying to figure out how in hell the latest obstacle could be circumvented.

The object was to move WEA F, after 13 years, to a better location, to put it back on top of the heap as befits NOBILITY. Simple.

The first move is always to study maps and by a series of calculations select tentative sites for closer study. This had been done.

The choice of new sites had been narrowed down to two—North Jersey around New Milford and Long Island around Sands Point. The areas had been quietly scouted and all suitable properties were marked out on maps. When Mr. Lohr gave us the nod, things started to hum. Options were to be taken on sites in both of the areas selected. Let's see what happened in New Jersey.

Site No. 1 was a truck farm, flat, near good power lines, on a main highway, near city water, near telephone lines and well-located. Your raconteur negotiated in his own name to protect from holdup the prospective buyer so luscious to he who would sell at a Fat Price. The first approach was casual, indefinite. "Nope — ain't interested in selling. Family always lived here. What d'ye offer? Nope, wouldn't even consider twice that much." Stopping by a week later, casually, there was progress with less finality. "So you been looking around? Well, me and my brothers been talking it over . . ." And finally, a few weeks later, the last roundup, the gathering of the clan, agreement of all heirs and a short option for \$100. "Nope, 3 months is all we can give. Got to sell or plant by that time."

Thence to Long Island. Choice No. 2 was in Kings Point, an ideal spot, but with tough zoning which would have to be changed for us, and high prices. The owner of the desired plot turned out to be a socialite but land-poor American, here from his home in France only to struggle with his taxes, and anxious to go back (at that time). Inasmuch as he was a trustworthy and discreet gentleman it was neces-

sary, and also desirable, to explain the situation frankly. Ensued a most pleasant session punctuated with excellent juice of the grape, an explanation of the involved political situation which made it impossible to sell any part of the 200 acres at less than \$4,000 per acre, and his unrestrained exuberance at an offer to lease for the taxes plus 5% of the appraised value for 10 years with an option to renew. But it wasn't that simple. There were zoning problems and other trustees representing his deceased sister's interest in the estate. One was a top flight Brooklyn attorney and the other the owner of a stock brokerage house. What a combination! Some battle! A series of meetings lasting two weeks with the lawyer and broker holding out for more and the brother-owner near prostration at the thought of the deal falling through, culminated in an agreement on the original terms with an escape clause protecting NBC against inability to obtain the necessary permits.

With this settled, and Harmony and Light the order of the day, socialite, lawyer, broker, and engineer laid out a



The New WEA F Transmitter Building

plan of strategy, a Blitzkrieg, if you please, on the zoning restrictions. Your raconteur's part was to contact the Mayor and Trustees and try to sell them the idea.

Kings Point is strictly a Cadillac neighborhood, heavily weighted with retired utility magnates, floor traders and coin of the realm, and fiercely proud of its exclusiveness. The Mayor was owner and president of a prosperous company. Pictures of radio stations, talk about varnish and broadcasting, and he was on our side, but only if we could be admitted under the existing zoning laws.

He arranged an immediate meeting with the village attorney, head of a New York law firm. He was afraid there was no loophole but promised to investigate carefully. The following Sunday the Mayor had a special meeting at his home to consider ways and means. Dissension and split ranks resulted in another meeting, this one public and ad-

dressed by your raconteur. There followed another, and another, and finally the appropriation of town funds to retain the best zoning lawyer in New York to pass an Ultimate Opinion. The answer, received in due course, was that a broadcasting station was "industrial", the answer was "No", and that was that! The final meeting lasted until the wee hours and was followed by a well attended wake at the owner's home.

So we started all over again. But not in Kings Point. More scouting and another plot was found through an experienced local agent. This was 2½ miles east, very good, and up for back taxes. One hundred two acres of the defunct Crescent Sand Company had been placed on the auction block by Nassau County in an effort to recover \$78,000 delinquent taxes but there had been no bidders for it. However, a sand company was attempting to buy the choicest part of it for \$50,000, and was on the point of getting an option. Through our agent, former Mayor of a nearby town, we immediately saw the Realty Division and made a verbal deal for an option for the same choicest portion at a price of \$1,200 per acre, about ½ of the appraised value. A dash into New York and back the next morning with the option and check for \$1,000. That clinched it and the sand company was frozen out for six months.

The next step required was to make site surveys from the two properties under option. FCC authorization was obtained to do this with our portable 100 watt transmitter, a hoary vet of such surveys. Obtaining permission from the County to use the optioned property was easy. In New Jersey, where we wished to avoid permature publicity, we had to avoid the optioned farm and, therefore, approached the occupants of a dilapidated farm a half mile away. The most voluble woman on the face of the earth, in a few million words, accepted \$20.00 for the necessary permission after being convinced that the (1) house would not burn down (2) we sold no washing machines (3) she would not be electrocuted (4) we weren't tax investigators (5) we weren't police (6) we weren't insurance salesmen—oh well! The penalty for success was a nice long talk. It seems that she was behind three years in her talking and the polite gentlemen were such a nice audience that she not only caught up but got in a six months' advance installment. Mr. Fitch, a markedly reticent gentleman, still marvels at such colossal volubility. After having a power line run in and getting well started, perversity again reared its ugly head. The owner dropped in to inform us that the occupants of the farm were squatters without rights, and inquired what the hell we were doing to his farm. Messrs. McMillan and Fitch talked fast and eloquently—and not only escaped buckshot in the rudder but also modeled a new scientist out of raw material.

After the surveys confirmed our customary flawless conviction that Port Washington North was the Site with A MESSAGE, the fitting and proper place to launch our Soap Operas, the fun really began. (Continued on Page Six)

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- Broadcasting station WCAF (1st unit) and erection of antenna towers, Bellmore, Long Island
- Broadcasting station WCAF (2nd unit), Bellmore
- Broadcasting station WCAF (3rd unit) and erection of antenna towers, Port Washington, Long Island
- Broadcasting station WJZ (1st unit), Bound Brook, New Jersey
- Broadcasting station WJZ (2nd unit), Bound Brook
- WJZ studio renovation, 33 West 42nd Street, New York
- Removal of old WJZ towers from roof of 33 West 42nd Street
- RCA Technical and Test Building, Van Cortlandt Park South, New York
- RCA receiving station, Belfast, Maine
- RCA tuning coil and mast foundations and anchors, Tuckerton, New Jersey
- RCA short wave station and cooling pond, Rocky Point, Long Island
- Foundations and erection of towers and masts, Rocky Point
- RCA community house addition, Rocky Point
- Additions and alterations, administration and development buildings, Rocky Point
- RCA receiving station and additions, Riverhead, Long Island
- RCA alterations, Bush Terminal, Brooklyn, N. Y.
- Mast erection, roof of 30 Broad Street, New York
- Mast erection, roof of 65 Beaver Street, New York
- Alterations, RCA Communications Building, 66 Broad Street, New York
- Erection of NBC television antenna on dome of Empire State Building, New York
- Design and erection of television relay tower, Hauppauge, Long Island
- WABC guyed tower erection and foundations, Mountain View, New Jersey
- American Radio News tower erection and foundations, Carlstadt, New Jersey
- WEVD mast erection and station alterations, Brooklyn, New York
- Research laboratory for Major Edwin H. Armstrong, Alpine, New Jersey
- F-m Tower (design and erection) Station W2XMN, Alpine

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Moving and Rebuilding WCAF

(Continued from Page Five)

Right or wrong, the FCC grants or rejects a site depending upon the opinion of the CAA as to whether or not the towers would be a menace to air navigation. The CAA ordinarily refers applications down through its various departments to the Regional Supervisors and they refer it to all interested parties, including the airlines. They refer it down through all of their departments to the pilots. The pilots are inclined to play safe. How can they lose? The matter then is referred back up step by step, gaining authority with altitude. If the broadcaster doesn't live with his application, and Make Friends and Influence People as required, his chances may be decimated. The WCAF matter was referred to the Army, the Navy, the Coast Guard and 22 other companies, officers or Government Departments. Each and everyone was contacted. Many potential objections were uncovered and charmed into at least passivity. All but one. This one was from a friendly company owning an airport one mile away. It looked like we were torpedoed for sartin. Each side was fortified with A CAUSE.

They didn't want to object themselves so they got others to do it for them, including an association of private fliers. One local paper was for it, therefore, the other one had to



Messrs. Hanson and Guy step outside the new WCAF building to settle a difference of opinion. They compromised by sawing off the foreman's leg, and wrecking the building.

be against it. The Taxpayers' Association rose in righteous indignation, spurred on by a Fifth Column of their own.

For the sake of brevity, we will have to skip the gum shoeing, speech-making, efforts to convince, and skip ahead to the point where the aviation people were asking us to sign a contract to put radio beacons all over the place, agree to buy unbuyable land if needed for the purpose in the future, and buy the Air Port anytime on short notice for cash, at a price they would fix, presumably at book value. In exchange, the objections to our radio station were to be withdrawn, clearing the way for towers shorter than originally desired. These stipulations, becomingly modest as they were, were a little too much for the authorities to sanction. The result was that a CP was granted and your raconteur returned with it firmly clutched in his grasp.

And next to the purchase of the property. A Fee-simple title was guaranteed by the county of Nassau but our title company discovered that there was a defect in procedure and also one in title, extending back to about 1914, which would not give the county a clear title. A laborious search followed through a number of corporations, terminating with a gentleman who humorously informed us that "he had been waiting for somebody to try to buy that property". His interest was ultimately bought off. A deal was then worked out with an adjoining estate to trade 10 acre parcels to our mutual advantage, to round out our plot. However, it developed that the estate owning the 10 acres was unliquidated and could only sell, not buy. This deal was complicated by a lease of the estate's property to a sand company. We finally took an option to buy from the Estate subject to cancellation of the lease, we gave an option to the sand company to buy, they gave a release of lease subject to purchase of our plot and all the time we had to resist lawyers who were trying to make a Better Deal for their clients. More meetings, deals, and agreements, and we sold to the sand company, they gave up their lease, and we bought from the estate. Each deal had to be protected by options since interested parties were scattered all over the country. Your raconteur is certain that building radio stations is a BREEZE compared with real estate law. Even the lawyers don't know much about it.

WEAF is now approaching completion, we are happy to say. The accompanying pictures are of progress up to July 9th. The Journal's cover photograph shows one of the two 320' towers being erected. The antenna will be slightly directional to the West to give approximately the coverage that would have been obtained with the ideal antenna height.

About two years ago the old Downers Grove WENR plant was shut down and operations were taken over by a new station. At the old plant there was a modern 50 KW power amplifier and rectifier. These have been modernized and rebuilt and are now being installed at the new WCAF plant. At Bellmore the corresponding 50 KW amplifier and

(Continued on Page Twenty)

Introducing

New NBC President

NBC's R. F. Engineer



Niles Trammell

Niles Trammell, recently executive vice-president and now president of the National Broadcasting Company, is one of the youngest and best known major executives in radio.

Born in Marietta, Georgia, July 6, 1894, he attended school at Sewanee Military Academy and the University of the South. When the United States entered the World War he was commissioned a second lieutenant in the regular

army at Fort Leavenworth, Kansas. Military duties took him to Fort Snelling, Minn.; Camp Devens, Mass.; and to the infantry school at Fort Benning. At the close of the war he was a first lieutenant in the 36th Infantry of the 12th Division.

Instead of entering civilian life immediately he remained in the army until 1923 as a member of the staff of Major General Charles G. Morton at the Presidio in San Francisco. On resigning from the service, he joined the Radio Corporation of America and has remained with that company and its subsidiary, the National Broadcasting Company, ever since.

From 1923 until January, 1925, he was engaged in one assignment after another for RCA on the Pacific Coast. In January, 1925, he was named assistant sales manager of RCA for the Pacific Coast, a position he held until March, 1928, when he was summoned to New York to join NBC. Two months later, in May, 1928, the task of strengthening NBC's Middle West organization was given to him, and he moved to Chicago as manager of the Central Division. The following March he was made a vice-president. He came to New York as executive vice-president on January 1, 1939, and on July 12, 1940, he was elected president.

Raymond F. Guy entered the marine service of the Marconi Wireless Telegraph Company in 1916 and served as Radio Officer on seven ships, resigning in 1918 to enlist in the regular army Signal Corps Replacement Company. After a year overseas he entered Pratt Institute, graduating in Electrical Engineering in 1921. After a short period as Inspector for the Shipowners' Radio Service and the Independent



Raymond F. Guy

Wireless Telegraph Company, he became, in 1921, one of the small pioneering group that built and operated WJZ, at that time licensed by the Westinghouse Company and located in the Newark plant. After three years of supervisory activities, Mr. Guy transferred to the RCA Research Department, heading the Broadcast Engineering Section, where he engineered the RCA stations, did consulting work for RCA clients, and directed the development of all broadcast transmitting apparatus used or sold by RCA. In 1929 he accepted Mr. Hanson's proposal that he become Radio Facilities Engineer of the National Broadcasting Company. Since that time, as head of the Radio Facilities Section, he has had direct charge of the design, construction, and engineering of all NBC's Standard Broadcasting, Television, UHF and International Radio Facilities, coverage studies and surveys, cost studies, frequency allocation, power tube engineering, development and design of antenna systems, propagation, etc. He is a licensed Professional Engineer in New York and New Jersey, a Fellow of the Institute of Radio Engineers, a Fellow of the Radio Club of America, and a member of the New York Electrical Society. During the last 10 years he has been active on technical committees of the IRE and other bodies.

He first became an amateur in 1912 and was active before the war. He has been W2AK for many years but during the last 29 years has been 2ANC, 2WO and, before the days of licenses, just RG.

Music That Charmed

By Jon Larson and Al Wies, NYFEs

BORN of the desire to create good-will through the common medium of music of the masters without distinction as to race or creed of the creator, the NBC proceeded courageously on May 31, 1940, with the undertaking of sending the famous NBC Symphony Orchestra, under the direction of Maestro Arturo Toscanini on a tour of three of the leading South American Republics, Brazil, Uruguay and Argentina. The success of the 16 concerts as borne out by the incredible and tremendous ovations accorded the performances at every concert more than gratified and repaid the NBC for the expense and countless problems involved in managing a symphony organization of 101 musicians in three foreign countries over a period of approximately two months. It was indeed a triumphal return to South America for the Maestro, particularly at Rio, where 54 years before he had made his debut.

Mr. John F. Royal, V.P. in charge of programs for NBC, who personally directed the tour, is responsible for the performance of a service well done in having forged another link in the growing chain of good-will in drawing the Americas still closer together. The people of the America of the South came to realize that to those of the North fine music and the art of appreciation of it had not been lost in this mad and very sick world.

To provide facilities for broadcasting enroute aboard the 33,000-ton SS Brazil of the American Republic Line, as well as covering the pickups from the various theatres and opera houses in South America, Messrs. Wies and Larson were assigned to accompany the entourage on the 14,000 mile tour. On May 29th the installation of the short-wave transmitter WNBM (500w) and its associated equipment in the sea-cabin just aft of the bridge was begun. Power leads were run to the regular and spare 3kva 240DC/110AC converters, placed in the ship's elevator motor housing 30' aft of the sea-cabin. Since lack of both time and space prohibited the erection of directional arrays single half-wave elements cut for the most useful frequencies of 17, 12 and 9mc were hung vertically from the ship's main antenna. Three unterminated quarter-wave feeders fed the corresponding elements from an antenna termination panel in a window of the sea-cabin. Here also entered the twisted pair feeder from the HRO receiving doublet cut for 15mc which hung vertically from the forward cross-arm. Using the 9mc antenna successful tests were made on both 6 and 4mc employing an antenna matching network. These freqs. were used only up to about 350 miles from New York.

From the transmitter location two shielded pairs were run through ventilators and devious paths to the main lounge which served as the studio. One line was used as audio feed and the other as a talk circuit between both

points. The output of two 77B RCA mikes were fed to regular and spare ND10 amplifiers which fed the audio line through additional and most necessary isolating coils. At the transmitter end pads and isolating coils reduced the feed to a satisfactory level into the built-in high gain amplifier in WNBM. That bogey RF feedback of course wouldn't stay 'way from our door but was tamed finally by a combination of three isolating coils, one at the amplifiers, the other two at the line and drop sides of the pads at the transmitter end. Chokes and bypasses were useless. Nor were low potential grounds within reach at these frequencies. Juggling of grounds to avoid circulating currents and isolation of the audio circuit finally reduced the sing point to below full modulation level. Satisfactory tests were made daily with RCA Communications which used 9, 12, 15 and 18mc on CW at our request since the proximity and inadequate filtering of our converters caused a terrific hash in the receiver.

Having left with an eight-hour handicap due to a very heavy and persistent fog, the SS Brazil, formerly the "Virginia," of the Panama Pacific Line, cautiously left New York at 8 a.m. on June 1st to begin her task of delivering to Rio the NBC Symphony on time for the evening concert on June 13th. Only by the complete and unstinting cooperation of the officials of the American Republics Line and Captain Sadler of the "Brazil" and his crew could all the scheduled performances at the various cities have been given.

The initial musical broadcast from the ship of an orchestra of 40 musicians of the symphony was made from 5 p.m. to 5:30 p.m. on June 4th on 17mc when 1,300 mi. from New York and 180 mi. N. E. of Puerto Rico.

On June 5th we reached Barbados at 6 p.m. and anchored about 2 mi. from shore. Here we remained for three hours to discharge and take on cargo after several passengers had disembarked including VP4TO, Mr. Gordon Bagg, who is associated with an oil firm at Trinidad. None of us were allowed to go ashore but we amused ourselves watching the natives diving from their small boats for coins thrown from the ship. Also, much dickering went on between passenger and native for curios such as cattle horns made into birds, fish and hats.

The second broadcast enroute was at 10 p.m. on June 6th, using 12mc at 2,000 mi. S. E. of New York, 200 mi. off Devil's Island. On June 8th at 10 p.m. the third show originated at a point 500 mi. S. E. of the mouth of the Amazon, 3000 mi. from New York, and was also transmitted on 12mc. Reception was also made at Rio, 2,000 mi. South by Radiobras for distribution to South American stations. This frequency was favored over 17mc because of

(Continued on Page Twelve)



“Now I see what NBC Red means by its

NEW ‘SALT-WATER WAY’ TO GREATER SALES IN GREATER NEW YORK!”

When WEAF ground waves “take to the water”—millions in New York area will become steadier customers of Red Network advertisers than ever before.

There’s nothing mysterious about it. Salt water is the slickest conductor of ground waves in the business. So, in selecting a site for the erection of WEAF’s newest 50,000-watt transmitter, NBC engineers looked for a location that would take best advantage of the salt water around New York.

After years of search, they finally

found the right spot in Port Washington, Long Island. As you can see from the picture above, the path from antenna to New York is almost entirely over salt water.

At present the new transmitter is being built—from plans which took more than a year to formulate. It will probably commence operation in September. When it does, the first station of America’s first network is going to exert an even more powerful influence over the New York market’s buying millions than at present. Yes—and new thousands in the most productive listening area in the United States will become WEAF enthusiasts!

Thus the “salt-water way,” by providing better-than-ever signal to WEAF’s listening millions, is going to mean *more listeners . . . greater sales and profits . . .* to Red Network advertisers.

Add to this the known fact that the Red Network provides its advertisers with radio’s biggest listening audience and you have a mild idea why, again last year, they invested more money in Red Network time than in any other single advertising medium—almost \$35,000,000. The Red is a profitable investment because it’s first in stations and programs—and has been since radio broadcasting began.

NBC
Red
NETWORK

The network most people listen to most!

Music That Charmed

(Continued from Page Eight)

some fading. M. Jacobson, NYFS, however, noted that at his Jersey location 17mc was the much better channel. A test conducted with RCAC on the following day, June 9th, at a distance of about 3,500 mi. from New York showed 17mc poor at 5 p.m. and 12mc suitable for a program of speech. The accompanying figure shows the optimum frequency at our disposal for the distance and time of day used.

SIGNAL FIELDS OF WNBM (500W) ON SS BRAZIL AT RCAC, RIVERHEAD, N. Y.

Miles to N.Y.	Freq. kc	Field Mv	EDT	Date
92	4797.5	75	5 p.m.	6/1
400	9135	218	Noon	6/2
840	12862.5	25	Noon	6/3
840	17310	6	Noon	6/3
(A) 1300	17310	93	5 p.m.	6/4
2000	17310	81	8:30 p.m.	6/6
(A) 2000	12862.5	210	9:30 p.m.	6/6
3000	17310	22	10 p.m.	6/8
(B) 3000	12862.5	38	10 p.m.	6/8
3500	17310	5	5 p.m.	6/9
3500	12862.5	8	5 p.m.	6/9

(A) Programs transmitted to N. Y.

(B) Programs transmitted to N. Y. and Rio, 2,000 miles.

The following two days were spent in dismantling WNBM, the antennas and preparing equipment for use on the southern continent. In visiting with the various officers we learned how important short-wave broadcasting is to them after their ship sails away a few hundred miles from the southern tip of U.S.A. They have come to depend entirely upon the short-waves for their news and entertainment. We noticed that at 4,000 mi. the 17 and 21mc channels hold up with good signal strength until several hours after dark. Of course, the competition from the Europeans is very great due to their advantage of a greater night-time path which produces for them an earlier-in-the-evening optimum signal period whereas our signals at Buenos Aires particularly reach optimum levels several hours later.

In the second figure is shown comparative signal fields at B.A. of NBC's WNBI, WRCA and several other prominent U.S. short-wave stations. Mr. Krahenbuhl, Chief Technical Engineer of Transradio, who kindly furnished this data explained that this was a fair daily average. It shows that the Radio Facilities Group, under Mr. R. F. Guy, has done its work well.

The arrival at Rio on June 13th at 7 a.m. was a lasting thrill and one which will stay with us for a long while. The spell-binding beauty of its harbor, the Sugar Loaf and the crescent of mountains surrounding the city was feasted upon by all, newcomer and veteran traveler alike, as the early morning sun through low hanging shrouds of mist bathed first in shafts of warm yellow light the towering and deeply inspiring statue of the Christ on the steep peak of the Corcovado in the distance. As the sun continued to peek above the eastern ranges the mist over the endless

beaches of powdered white sand dispersed and the countless number of clean and bright ultra-modern apartment buildings fringing the city reflected the bright sunlight. Only vivid imagination could produce such a gorgeous picture if one had never drunk in this beautiful scene through his own eyes.

That afternoon we installed the audio equipment and hung the 77B mikes in Rio's Teatro Municipal for the concert that evening, and on the following day, June 14th. Mr. Grasser, Manager, and Mr. Lemgruber, in charge of Program Transmission Service of "Radiobras," graciously came to our rescue by converting our English into La Portuguesa when we wished to convey something to the theatre people. At all pickups two circuits were provided, one as "sound line" and the other with a telefonica as order wire to the Radiobras control room. During the programs we could monitor the shows coming back from New York via RCAC on this talk circuit. Before and after program time we would talk with RCAC, New York, over our mike at the amplifier and listen on the telephone.

AVERAGE DAILY CARRIERS AT TRANSRADIO RECEIVERS — BUENOS AIRES (July 3, 1940)

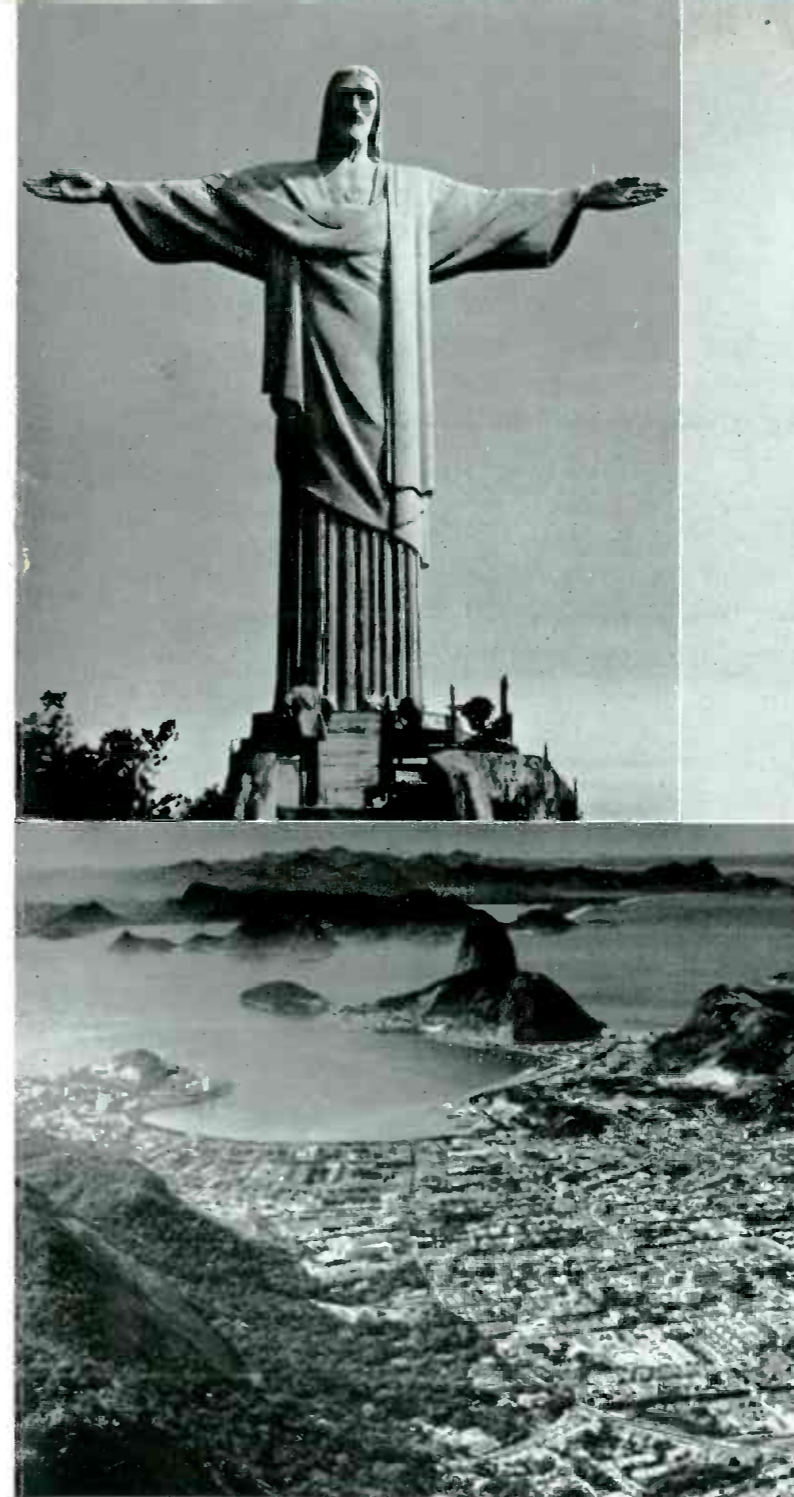
EDT PM	B.A. Time	Station	Freq.	Field Mv.
7:57	19:57	WRCA	9670	80
8:34	20:34	"	"	280
9:09	21:09	"	"	450
11:23	23:23	"	"	1300
9:40	21:40	WNBI	17780	450
10:28	22:28	"	6100	130
8:41	20:41	WGEO	9530	80
9:14	21:14	"	"	560
11:27	23:27	"	"	560
9:18	21:18	WBOS	9570	180
11:31	23:31	"	"	55
7:31	19:31	WPIT	11870	100
7:50	19:50	"	"	130
9:43	21:43	"	"	320
10:08	22:08	WLWO	15270	280
10:31	22:31	"	"	450

Note: B. A. operates on a 24 hour clock and is 1 hour later than N. Y.

Directly after the first show we visited the famous Casino La Urca, the most magnificent night club and gambling establishment we have ever seen anywhere. The showmanship of the entertainment was superb.

It was indeed a pleasure to see on the bill Tito Guizar in his element. Two excellent orchestras supplied continuous music for dancing. Included also in the show was a chorus of our own Broadway beauties. After La Urca we visited cafes along the moonlit beaches of Rio and wound up for breakfast at the swank Carlton Club. Though very warm and pleasant, there was no bathing, apparently for no other reason except that it is the winter season, which to them seems so much cooler.

By noon of June 14th we had reached by car the summit of the 5,000-foot high peak of Corcovado and the tremendous 120-foot stone and cement statue of Christ facing east and looking over the city, blessing it with outstretched arms. The amazing view of Rio and its setting from this



Maestro Arturo Toscanini Tours South America

Photographs by Jon Larson, NYFC

Upper left: The Christ Statue facing East, at the summit of Corcovado Mountain.

Upper right: Maestro Arturo Toscanini.

Lower left: View of Rio de Janeiro, and Sugar Loaf Mountain, from Christ Statue on Corcovado Mountain.

Lower right: Portion of NBC Staff: Left to right, Wally Magill, Al Wies, Phil Barbour, Larry Fitzgerald, Al Walker, Jon Larson and Dan Russell.

sanctified place is glorious. Nothing can approach it except perhaps the closer view of Rio from the peaks "Monsucre" or "Sugar Loaf" at the entrance to the harbor. The scenes are so vast and awe-inspiring that you think what you see can't be real. It was on the return visit to Rio on the way back from B. A. and Santos that we had the thrilling experience of taking the cable car ride from street level to the top of the exceedingly steep 2,000-foot peak of La Urca and thence by still another cable car across a half mile long cable in mid-air to the still higher and steeper summit of the "Sugar Loaf" mountain. The excitement of that really made the old whiskers bristle.

Sailing on midnight of June 14th, the SS Brazil reached Santos, Brazil, at 10 a.m. on the following day. It is a quaint seaport city set in a pretty harbor behind a long and winding waterway entrance. The aroma of unroasted coffee is in the air everywhere. At 2 p.m. we boarded a special train with the orchestra for Sao Paulo, 40 mi. away and up in the hills for a concert that evening. The city is about half the size of Rio and about 1.5 million people, but it is the greatest industrial city of the entire continent of S. A. It is reached by the Sao Paulo Railway which unlike most roads does not follow a winding, roundabout and easy path to avoid steep grades, but boldly goes directly up and over several ranges. This difficult and obviously very expensive achievement was accomplished by the installation of several well placed power plants operating sections of continuous loops of cable to which in each section two trains of three cars each were attached at opposite points of the cable so that as one train was pulled up the other would come down, giving a mechanical balance to the system. At the terminus of each section small switching engines would provide the necessary shunting to the next section. This road is the highest paying on the continent, nevertheless, because of the great traffic in freight which it carries.

After dinner at the Hotel Esplanade the concert was held in Sao Paulo's Teatro Municipal. Directly after the concert all the instruments and necessary impedimenta, in all some 150 pieces, were hurried back to the depot and at 1:30 a.m. we began the 2-hour train ride back to Santos for the 5 a.m. sailing to Montevideo.

All transmitter equipment was dismantled enroute so that it could easily be removed when the SS Brazil returned to New York without delay since we were to remain in Buenos Aires for two weeks and return on the SS Uruguay, formerly the "California."

The regular ship call at Montevideo, Uruguay, was made in a fog at 11 a.m. on June 18th. The Sodre Theatre was surveyed for the broadcast of a concert to be given on the return trip. After lunch an auto tour was made with Dan Russell, our Good-Will Ambassador-Announcer, and Wally Magill, in charge of music and production, of this modern city of over one million population. Due to its location on the wide La Plata River it holds the most strategic position on the continent. Outstanding sights here were the

(Continued on Page Fourteen)

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COMPLETE MEISSNER F-M RECEIVER

JUST OUT! A complete F-M home receiver, with built-in speaker. Includes 12 tubes, 3-stage I.F. amplifier, high gain R.F. amplifier, limiter, detector systems. Range 42-50 Mc. Beautiful polished walnut cabinet. Sliding rule dial.

YOUR COST—complete\$59.50

C. M. L. HIGH FIDELITY F-M TUNER

May be coupled to any high fidelity radio or amplifier system. Employs 1-6SA7 convertor, 2-6AC7 I.F. amplifiers, 1-6H6 limiter AVC, 1-6AC7 limiter, 1-6H6 detector, 1-6E5 magic eye, 1-80 rectifier. Furnished completely wired and tested in handsome walnut cabinet.

YOUR COST—with tubes.....\$37.50

MEISSNER HIGH FIDELITY R. F. TUNER

For fine **QUALITY** reception. Tunes from 535 to 1600 K.C. with wide band selectivity. Offers real high fidelity reproduction. 5 tube T.R.F. circuit with AVC. Factory wired and assembled in steel cabinet. 8 $\frac{3}{4}$ x 8 $\frac{3}{4}$ x 12 $\frac{1}{2}$ ".

YOUR COST—complete\$42.25

SCOOP! MILLER R. F. TUNER

Never before at such a low price! A sensational **SUN SPECIAL!** This famous 7 tube tuner now comes to you completely wired and assembled less only cabinet and front panel.

PRICE—only\$34.69

Heavy steel front panel (optional).....\$1.20
Black crackle steel cabinet (optional).....\$4.80

NEW! CINAUDAGRAPH TELESPHERE

Reaches a new high in true fidelity speaker combinations. Beautiful tone. Incorporates a low frequency "woofer" and a high frequency "tweeter" with crossover network in special tone chamber. Range 50 to 17,000 cycles. 15 watts output. 36" diameter.

YOUR COST—complete\$74.97

JENSEN DUAL CONCENTRIC REPRODUCER

A finely precisioned high fidelity speaker covering 30 to 14,000 cycles with superb tonal qualities. Consists of a 6" tweeter and a specially designed 15" low frequency unit with built-in crossover network. 10 watts output. 15" diameter.

YOUR COST\$27.34

HALLICRAFTERS F-M/A-M RECEIVER

Model S-27. Covers 145 Mc. to 27 Mc. in three bands. Switch changing from frequency modulation to AM reception. Features acorn tubes in RF and converter system, beam power tubes in AF amplifier, AVC and "S" meter. Complete with 15 tubes. Less speaker.

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Music That Charmed

(Continued from Page Thirteen)

Congressional Building with its marble halls and pillars of native marble in countless colors and shades, the beaches and parks, the Constitucion Square in the center of town, and the group statue of the U. S. Covered Wagon drawn by oxen. Though it was winter here and much cooler than Rio 1,500 miles north, the grass was green and the palms in the squares and parks looked bright. Whereas we wore topcoats, the Uruguayans wore nothing more than suit coats. As in Rio and all through South America, 95% of the automobiles are of U. S. manufacture. There is just a sprinkling of English, French and German cars. The traffic however, as in B. A., is to the left, whereas in Brazil it is to the right. The majority of the cars are of right-hand drive in both Uruguay and Argentina. Gasoline is about the same price as in the States.

Sailing for Buenos Aires was at 8 p.m. on June 18th, and that capitol city of the Argentine saw us dock at noon on June 19th, it being just across the 125-mi. wide mouth of La Plata. The weather was still cooler here and the heavy fog and intermittent rain made light topcoats feel mighty good. Up until this time we had had no customs problems but here over five hours of pandemonium and confusion reigned involving the whole orchestra. Two other ships had arrived at that same dock just before. Even after clearing customs all were made to alight from their respective cabs and submit to individual searches at the military guardhouses at each gate leading from the docks. The American Republics are becoming increasingly alert and they are certainly on the job.

Due to the many tourists in town and the comparative lack of hotel accommodations, the members of the orchestra and staff were of necessity split up and quartered at the hotels City, Castelar, Plaza and Alvear Palace. As rooms became available most of the men were put up at the City.

Amiable Bill Clark of Transradio Program Transmission Service met us at dinner and advised that circuits had been installed and that the local municipal network was prepared to make the pickup. That was fortunate since we couldn't have reached the Teatro Colon before 6 p.m. However, upon our arrival we proceeded to hang the 77B mikes and 600 ft. of mike cables from the ceiling of that world famous opera house and managed to handle the program ourselves that evening since there were more programs to come during our 15-day stay in Buenos Aires. Again the tremendous and unbelievably long periods of applause were a tonic to all. There were 8 concerts given here of which 3 were broadcast via Transradio to RCAC.

Concerts and evening affairs in Buenos Aires don't begin until usually after 9:30 in the evening since dinners are had rather late. In Brazil the night spots don't open until 11:30 p.m. but they run until all hours of the morning.

Since it is winter below the equator now the rainy season is on in Argentina and the dampness is raw and pene-

trating. When it isn't raining or misting the sky is almost continuously overcast. In the two weeks we were there we had just two days of any sun and we were never without our topcoats. The sudden change from our summer to their winter threw every one off stride, many took cold and no one felt quite himself until after a week of adjustment to the weather and food.

Following are splashes of highlights around B. A. . . . visit to the new Radio El Mundo with its 7 ultra modern studios, the best layout in town . . . shown around by Mario Cozzi who took us for a drive around the suburbs of B. A. including Palermo, Rosedale, Belgrano . . . beef a lomo steaks at La Cabana and Sorrentino's with Bill Clark of Transradio . . . the Tabaris Cafe on Corrientes . . . the throngs of people habitually walking through Avenida Florida on the way home . . . visit to Ciudad de La Plata, 35 miles north and its pre-historic museum . . . numerous rides on the four subway systems (subterranos) with their surprisingly quiet cars painted a cream color . . . each station with historical scenes inlaid in colorful mosaics and lighting of different colors so that upon looking up from reading a newspaper one can recognize any station by its hue . . . each system constructed by a different group of foreign engineers . . . old-fashioned landau carriage ride in La Plata . . . continual problem of ordering food from Spanish menus . . . once requests for something sweet as a dessert brought a steaming dish of broiled sweetbreads . . . meats devoured in great quantities . . . each kind of food and course served separately . . . no beverage until dessert is finished . . . vegetables seldom eaten though good . . . fruits delicious and plentiful . . . continental breakfast of rolls and coffee con leche (milk served hot in pitcher and poured into very strong coffee to suit) . . . secret of cultivating taste for the rich, black Brazilian coffee is to use an equal amount of powdered sugar in the chico cups—coffee brewed our way now tastes muddy . . . lunch periods are from noon to 2 p.m. and 2:30 p.m.—all rush home swinging on and off carelessly while in motion subterraneo, trains, trolleys and colectivos, the light and fast Chev and Ford 10-passenger buses which scurry from city to their particular suburban terminals—the fare varying with distance . . . sweet fragrance all about—men commonly wear perfume . . . large department and jewelry stores owned by English—all have interpreters to help make it so easy for the tourist to buy . . . large scale cattle raising for export make meats very cheap and plentiful, and tender too, because cattle graze all year 'round and meat is fresh—leather is abundant but manufactured articles not cheap . . . shoe shines that are a joy. Rubbish receptacles nowhere to be seen; they are sunk flush with the sidewalks near the curb and covered with hinged metal lids to which are attached leather straps for convenient opening . . . the complete absence of traffic lights in B. A. . . . green bulb in right headlights so that in case of burn-out the oncoming driver won't be confused. Few picture opportunities—poor light, very little sunlight

... cameras, domestic and foreign, all quoted at list prices. The bidou dice game and the strange looking decks of cards. The visit with 70-year old LU8AB. We saw Il Traviata during the opera season at the Colon Theatre . . . Carmen Amaya in her wild Spanish dance at the Teatro Mayo. Clocks advanced 1 hour not to save daylight but to conserve fuel . . . cafes must close at 1 a.m. beginning July 1 . . . B. A. normally 1 hour later in time than N. Y., Rio, 2 hours later. Enjoyable exchange of notes and gossip at round-table chit-chat with Transradio engineers at their regular meeting. Mate tea cups (gourds) and the strainer-suckerupper bombilla. 4.75 Argentine pesos to \$—2.5 Uruguayan pesos to our frog-skin—22 Milreis to the \$ in Brazil . . . The impossible task of keeping 101 musicians all happy at the same time . . . problems of money advances, accommodations and instructions . . . Fitzgerald and Walker much grayer at the temples as a result. The memory of the King Neptune Barbour initiation of the lead-off man, H. L. Spitalny.

All feature movies are from Hollywood and in English with Spanish titles — newsreels are in native tongue . . . beckoning and farewell gestures reverse of ours . . . the lack of firecrackers with which to celebrate our Fourth. Con-ferias or Tea gardens which look like our old-fashioned-high-fronts with lace curtains—ice cream parlors are as numerous as our taverns. The American Club dinner, and the last breakfast in B. A. at the Plaza Hotel followed by the buffet lunch at Radio “El Mundo” before the start of the 6,500 mile return journey on July 5th. Flowery names for each radio station such as “Radio Splendid.”

The overnight La Plata R. steamer to Montevideo and back after a concert and broadcast . . . 25 minutes of applause with the audience calling in surging rhythm for Tos-ca-ni-ni and the manager of the teatro begging the Maestro to come out though in his bathrobe. Graf Spee’s charred hulk barely discernible . . . being salvaged. The mixture of radio equipment imported from all countries . . . manufactured by Phillips, Ericsson, Siemens, Telefunken, Marconi, RCA and W. E., and some domestic firms . . . U. S. equipment and parts very popular particularly among best amateurs . . . competition keen in radio set field—U. S. sets expensive . . . strong competition too in transmitting tubes since Europeans greatly under-rate plate dissipation ratings . . . RCAV has big set mfg. plant outside B. A. . . transmitters and heavy equipment imported in knockdown form and assembled to reduce high import duty.

The return trip to Rio from B. A. was via the same route as on the way down except that the orchestra entrained at Sao Paulo after a concert for the overland rail ride to Rio to give a matinee performance before the arrival of the ship at Rio on July 10th.

Observed in Rio again — coconut milk by the glass . . . mammoth shrimp and citrus fruits . . . great numbers of souvenir shops . . . the Florida Bar — In B. A. beer was ordered as “cerveza”; in Brazil one must ask for “chopp”

(Continued on Page Twenty)

Did You Know That . . .

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. . . Cross-Country Currents . . .

New York

By J. Larson

Fraser of New York Field got married. Messrs. Milne, Hutson, and Larson on SS America from Newport News to New York over recent week-end. Army maneuvers coming up from Ogdensburg, N. Y. Wild-goose chase of Mobile unit to PAA base at Port Washington, men at La Guardia and Floyd Bennett in attempted scoop to cover arrival of the Duke of Windsor but he was little man who wasn't there.

By Ted Kruse

Well, we see that Chicago and Hollywood have again made a success of their dances. BRAVO, boys, and scallions to the New York and Engineering Chapters who can't get together long enough to throw a nickel beer binge.

Visiting Recording during a slow period, only four recordings and three dubbings going simultaneously! Found out that Jack Holmes has moved to Verona, N. J., and that Saunders now domiciled in Maplewood, N. J.

A Client (always right) recently complained that the Client's Room loud speaker (super-hi-fidelity) did not sound the same as the radio in his home!

Recent New York Chapter Elections: Chairman, G. M. Sellar; Secretary, Clayton; Maintenance, Costello; Day Studio, Kelly; Night Studio, Hiller; Field, Snell; Recording, Stewart; WJZ, Gullans; WEA, Holland; Master Control, tie between Clements the incumbent, and Paul Herrold.

Engineering Chapter recently elected Robby Clark its Chairman, and DeBaun its Secretary.

By Costello

Rojas, DeBaun, and I enjoyed a day aboard Carlos — pardon me — Captain Carlos Clark's boat. Captain Clark has been a long time getting his craft in seafaring condition but the results are worth it; it is really a fine boat — 34 foot cruiser with two bunks forward for sleeping, two in the main cabin where a folding table may also be set up for



dining, and an open cockpit aft. It is equipped with all conveniences such as galley, lavatory, and (at least the day we were out) a fresh water shower!

We have a number of rabid boating enthusiasts here in New York. (ADVERTISERS PLEASE NOTE!) They are too busy boating to write up a New York Boat Activity

column. However, Stolzenberger succeeded in getting the adjacent photo of Bob Johnston's (NYSE) 34 foot cruiser "Sally." We were surprised to learn that Bob actively uses his boat until ice-floes become heavy in December. You'd think some advertiser would educate us about this year-'round sport.

Stewart and Close of Recording, and Thompson of Field have left on a recording expedition to Mexico. Stewart is already back, while Close and Thompson will be gone about two and one-half months.

George Shields is back in the Studio Group after having done a turn at WEA. Maintenance is busy cleaning faders.

It is reliably reported that Mel Lewis has been actively assisting the G-Men. Our troubles are over now that "Bunny" is on the job.

To all who will lend an ear, Markle will gladly give his newly acquired opinions on three cornered pants versus the new fangled variety, bottles versus—you know what—, or any of the allied subjects so close to the hearts of new fathers. It's seven pounds and some ounces, and of course a boy. Everybody's doing swell.

The casualties have been rather heavy of late. Pooler fell and broke his heel; now back to work on crutches. Clements fell and broke two ribs, complicated by bronchitis, now back on the job. Bowman also out sick. Gabrielson back after long illness, and is again on the way up, this time in the Studio Group.

We have all wondered about the origin of the word "Nemo" applied to remote pickups. Stewart was reminiscing the other night about the "old times" and told this story: In 1923, Stewart was working for AT&T Company and nemo pickups were known as remote controls. The GE Company, however, held a patent covering a remote control device. Legal considerations concerned with this patent made it inadvisable for AT&T to continue using the term "remote control," so from the powers-that-be came the order changing the designation to "The use of wire facilities as an adjunct to radio broadcasting." It was inevitable that some one would shorten that cumbersome phrase and it fell to Stewart to apply the word that stuck, Nemo which is Latin for "no name." Stew tells an interesting story on "Woof" but that's another story!

Westover dropped into Maintenance the other day all excited about receiving his first Radio Telephone license or do I mean Radio Telephone First — maybe it's both. At any rate Westy was telling us about the new streamlined exam on the selective-answer system. Westy said he did fine on all questions except those relating to Ohms Law. He didn't know it had been upheld by the Courts!

MacQueen, NYME, undertook to show your columnist who recently moved to Baldwin, L. I., some of the local hot-spots in the new home town. Since much time was consumed in sight-seeing, Mac decided to account for it to the storm and strife by blaming it on overtime due to the war! This little fib would have gotten by, but C. W. Phelan, NYMS, had already sent a message to Mac's home, asking him to phone the office as soon as he got home. Incidentally, CWP lives in Rockville Centre, only a short distance from Baldwin, in view of which Mac gives me this bit of sage advice (gained thru experience?): If you call up to report sick, be sure you mean it.

WOR

By R. A. Schlegel

Best vacation to date was that of Don Hale and Ed Scatterday who took a cruise to Cuba and Mexico, visiting Yucatan, Vera Cruz and Mexico City. Scatterday shot 15 reels of 8mm color film, 2 reels of black and white 8mm and 6 rolls of 35mm stills. Probably the only things that he remembers about his trip to Mexico are the scenes he saw through the view finders of his cameras. While in Mexico City Ed was busy making a "pan" shot with the movie camera when suddenly he was surrounded by soldiers with fixed bayonets. One soldier yanked his exposure meter away while another attempted to open the camera and destroy the film while Ed, in his best Spanish pantomime, was attempting to dissuade the gendarmes from ruining his equipment. The guide came to the rescue and after much hand waving the matter was straightened out to everyone's satisfaction. The cause of the rumpus was due to Scatterday's inclusion of the military arsenal in his panorama view of the public square in Mexico City! For those contemplating a trip to Mexico, Ed advises that there are three foto taboos in that country. No pictures of military objectives, beggars and drunkards are permitted. Hale and Scatterday, like true radiomen, spent a great deal of their time on shipboard in the radio shack and when ashore, visited XEW. A real busman's holiday. They report the return trip was uneventful with but one exception, the entire ship's passenger list had an attack of dysentery with the result that two rather wan looking engineers returned to our fold.

Joe Craig spent his vacation around Miami where the fishing and swimming are, as Joe says, "swell." Fritz Street to Florida at the same time but their paths didn't cross. Street spent most of his time at Marineland where he took about 300 pictures of the fish in the tanks. Fritz became very attached to a certain porpoise and was loathe to leave. He claims these mammals are nearly human in their actions. During his stay at Marineland, a Grantland Rice Sport Short was being filmed.

Bill Ulrich back from Montauk Point with a few rolls of 8mm color film, a few tuna fish and a tan which was acquired under a sun lamp at the boarding house. Barney Boyle managed to find a place on Long Island where it didn't rain too much and is now fit for another year on MC. Jack Byrne rented a cottage near Montauk and is subletting it to Hadden and then to Joe Bier. It looks like Byrne will have a cottage rent free before the season is over.

When last seen, Lew Tower was headed in the direction of Ithaca where he intends to spend part of his vacation. Reid, the gentleman farmer and horticulturist, will be found among the flowers in his garden. Eric Herud will be fidget-

ing around the house and getting in the way of the brooms and vacuum cleaner.

Bob Kirkman, formerly of WNYC, joined our staff and drew the Gabe Heatter assignment at Lake George in the Adirondack Mountains for six weeks while Woodruff drew the Grossinger's job in the Catskills for the dance band pickups. No one can say that WOR doesn't treat the newcomers properly when they are given assignments such as these. Just like a vacation.

It is rumored that Babcock is to be presented with a special kind of heavy gray shirt which he is to wear while cutting the lawn on a very hot day.

KFI-KECA

By H. M. McDonald

Sauntered into Bullock's photo salon yesterday and strike us pink if there wasn't one of Lloyd Jones pictures, taken recently at Gay's Lion Farm. We're told it's to be displayed all over the country by Eastman Kodak Stores. In another contest judged by the heads of the photo departments of Los Angeles' three leading papers Lloyd was elevated to the advanced division of amateurs, after winning several prizes. He's been shooting pictures the shortest period of time of any of the advanced division members and is an outstanding contender for first position.

Norman Leonard divided his vacation between the mountains and the sea. Up at Big Bear he was out on the Lake fishing at 5 every morning; (but it kills him to get down to the studios at 6:30); fair catches of bass, crappie and blue gills. Down at the Beach he added more tan and caught some barracuda. Came back to work with a jaunty step and wearing a yellow tie and socks.

Carl Estep bought a light house trailer and vacationed up in the tall timber along the Rogue River in southern Oregon, 6,000 feet elevation, cool, big trout and plenty of them. He camped near a Forestry Service pack station and can now throw a diamond hitch around a pack mule quicker than a relay drops.

Carl Sturdy and George Tokar on a fishing trip to Catalina; brought home enough fish to start a market, yellowtail, barracuda, et cetera. Need we say more?

Headlee Blatterman staying down at Balboa these days and has gone completely marine on us, sailing, speedboating, swimming, sunbathing, parading on beach in shorts, etc., and feeling tops.

Curtis Mason so elated when his 112mc FM transmitter perked OK on completion that he put on his Panama, went out and returned two hours later with a new touring sedan. We don't see any connection between the two, but the Packard is sure doggy.

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Chicago

By Ray Bierman

NATIONAL SECRETARY ADOPTS ECONOMY MEASURE

Since the adoption of the National Defense Tax on tobacco, National Secretary George Maher is smoking them right down until there is nothing left but a butt (we don't mean a noise like a motorcycle). When interviewed in his sumptuous office at 201 North Wells Street, Secretary Maher said, "I believe we in A.T.E. should practice economy in all things." Mr. Maher then paused, leaned forward, extracted his wallet, and neatly flicked the cigar ashes inside. "Moth protection," he observed, and then settling back in his chair, he continued, "It's like Cassidy used to say, back in San Francisco. Cassidy used to say, 'Go ahead, I know the cop!'"

It is rumored that Mr. Maher, who smokes an awful lot of cigars (and you can take that two ways) saves the bands for Mr. Horstman who also collects stamps, strings, and paper boxes.

E. C. Horstman and Howard Crissey are fast friends. Each day they may be seen walking across the Wells Street bridge at high noon, savoring their after dinner toothpicks.



More often than not these two chums engage in light conversation, and though the occasion is rare when controversial topics are discussed, there are times when strong opinions are expressed.

Recently Edward and Howard were crossing the Wells Street Bridge as usual, and the conversation happened to be about men's styles, more specifically men's hats. Now it must be pointed out that ever since Mr. Horstman lost his hat in the engineer's lounge he has been going bareheaded, and so he was while crossing the Wells Street Bridge with Mr. Crissey. Not being able to refer to a top piece of his own for discussion, Mr. Horstman plucked the hat off Mr. Crissey's unsuspecting head. Immediately Mr. H. was seized with an irresistible urge. "Look," he said to Mr. Crissey, "do you want this hat?" Mr. Crissey, even as you and I, responded, meekly, "no." "Okay," replied Mr. Horstman and promptly threw the Crissey sombrero into the river.

E. C. Horstman and Howard Crissey are fast friends.

From the WENR transmitter comes news that Frank Ahlgrin enjoyed his vacation in the Rockies in and around Denver, and that the only casualties were two blowouts.

Also from WENR we hear that Artie Johnson is vacationing for two weeks at Long Lake, Wisconsin. Hope that we get to sample some of the big ones he brings back.

Marty Martin (me) says that although he is not a ham he is still using diapers on his final. It is his 3rd and he hopes his final!

The gang in the Maintenance Department are trying to design some sort of trusswork that will hold Tiny Schomacher up against the ceiling whenever he has to work in such lofty places.

Monday, July 2, saw the dedication of the NBC clock in the main entrance of the merchandise mart. An electronic oscillator connected thru a 250 Watt audio amplifier bongs out the NBC chimes every quarter hour.

Did you hear about the absent minded announcer who while walking along Wacker Drive heard the NBC clock chimes, and turning to an unsuspecting lamp post, said "WMAQ, Chicago."

Byron Speirs and Ralph Brookes have purchased 5 and 1 H. P. gas driven tractors, respectively. Besides the tractor, Brookes also sports a gas driven lawn mower. Such a life of luxury. No doubt we will be seeing a sign on the bulletin board any day now reading "Get your fall plowing done fancy and cheap, see Speirs and Brookes."

Here for the Democratic Convention broadcast were Messrs. McElrath, Hastings and Cooper. Besides these men there will also be Messrs. Luttgens, Schreyer, Rife, Lanterman, Moore, Limberg, H. Royston, Cummings, Sturgis, and Gootee. By the time you read this there will have been numerous others that will have had a hand in the broadcast.

Whenever a gang of the boys meet in the master control room, various and sundry subjects are discussed. Whenever Mr. Geo. Maher and Mr. Ralston Miller are in the group, the topic eventually gets over in the realm of religion. "You know," says Miller, "I never cease to wonder that George knows too much about the Scriptures." Mr. Miller, it must be pointed out, is the local authority on the King James version, and can be heard M. C.ing the Gideon Gospel PGM over WWAE, Hammond, Indiana, twice a month.

The York Radio Club won the Chicago Area Title in the F. D. this year. Seven transmitters on 5 bands were used to pile up a score of over 4,200 points. High lights of the rainy week-end were when W9GY and W9CQI changed two spark plugs in the Model A engine, without stopping the engine. (Note: Operating a gas driven power unit on two cylinders does not appreciably change the wave form of the generated voltage).

Crissey and Limberg spent a fine vacation in Cook, Minnesota, catching fish. They brought back several samples (I didn't get any). Lindy is going back every week-end for a while for more fish.

Add to your collection of circumstances based on coincidence: Charlie Corliss has a friend who recently built his first ham transmitter. He brought it over to Charlie's house to test it out for the first time. Before ever connecting it up Charlie twiddled the dials in casual inspection of the rig. Then with power supply connected he threw the plate switch, and lo! the rig was in perfect tune. Not one dial had to be adjusted. Every circuit was in perfect resonance.

Bill Sholz is another one of the boys who have joined the ranks of home owners. Bill has a dandy fine place in Stonegate, a suburb of Arlington Heights.

Comes Harold (Horse Power) Jackson sporting a big new Studebaker sedan, to be followed closely by Ralph

Davis with an equally bran' new Dodge. Both these guys had their old cars for quite a few years so I guess they MERITed a new one. Get it?

Dave Kempkes is getting all set to hunt wild elephants or sumpin' in the forests of Ontario. Dave really heads out for the tall timber when he goes hunting or fishing. This year he hopes to take along a high powered rifle in order to try his hand at some of the large game that roam the wilds of Canada. What with all the furor in the world, it seems Dave has to prove his citizenship, grandmother's maiden name, etc., before he can go on his one man safari.

The other night when all the dance nemos were cancelled here in Chi, the only engineer who had to make a local field pickup was that sterling character and writer of those funny stories you read in the Journal, T. E. Gootee. Tom was assigned to Grant Park for the evening, and a right smart job of gain grinding did he do. Because of the pickups that were cancelled, considerably more stations than usual carried the band concert. This of course, makes the main gain on an ND-10 somewhat harder to turn, and Gootee suffered a sprained ankle for a few days. (Tom, it had often been thought, rides gain with his right foot.)

Things we'd like to see again in the Journal: Bill Eddy's swell cartoons of Imby . . . All the dope about somebody's ham rig . . . Photographic contest devoted entirely to scenes of the beach . . . A natural photo of the president of A.T.E. . . . Some news items from the WMAQ transmitter . . . 72 pages . . . Articles by Larsen . . . More Ads.

NEW SUN RADIO CATALOG

Of special interest to all lovers of true fidelity musical reproduction is the lavishly illustrated 24-page booklet just released by SUN RADIO COMPANY, 212 Fulton Street, New York City. Listing amplifiers, sound systems, recorders and accessories, this booklet will prove of invaluable assistance in the selection of proper sound equipment. A page that should prove of more than passing interest is that devoted to high-fidelity equipment for home entertainment. Employing a specially designed Webster Electric-Racine 20 Watt amplifier as a basic foundation, a complete ultra-de luxe system includes the new Cinaudagraph 36-inch Telesphere Reproducer (combination low frequency woofer, and high frequency tweeter), and BrushPL-20 pickup and phono assembly in case, a choice of the well-known Miller or Meissner RF Tuners, and all cables and plugs necessary for interconnection. A catalog describing these items will be gladly sent to interested persons by simply addressing Sun Radio.

Washington

By McGonegal

Summer is here in Washington at last. The warmth that Brother Shidel complained of during his visit here is but a cool and pleasant memory. Transmitter engineers gasp for air, and field men yearn for air-conditioned studio assignments.

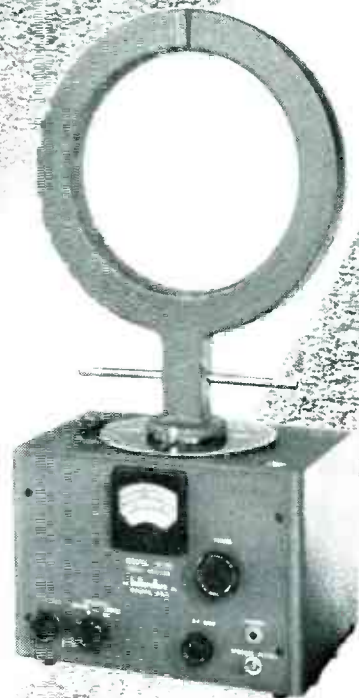
Bob Terrell is doing his cooling off at Lake Sunapee, N. H. He expected to do a little fishing up there, but Cooper received a card from him, saying, "Dear Don—Fishing license costs \$3.50 up here, and besides, I don't believe there are any fish in the lake. Regards — Bob."

In the NBC Open Golf Tournament, held June 19th at Kenwood, Dan Hunter won first in the "blind Bogie" contest, a 21 jewel Bulova wrist watch. Al Powley's prize was a child's rubber ball, six inches in diameter, with a note at-

(Continued on Page Twenty)

New DIRECTION FINDER

Model S-30 Radio Compass and Direction Finder covers from 200 to 3000 kc (1500 to 100 meters) on 3 bands—Beacon, Broadcast and Marine. Has provision for external speaker. Welded aluminum cabinet houses the receiver and supports the rotatable 12-inch loop antenna. Power supply in separate cabinet. Operates from 6 volts. \$99.50 NET

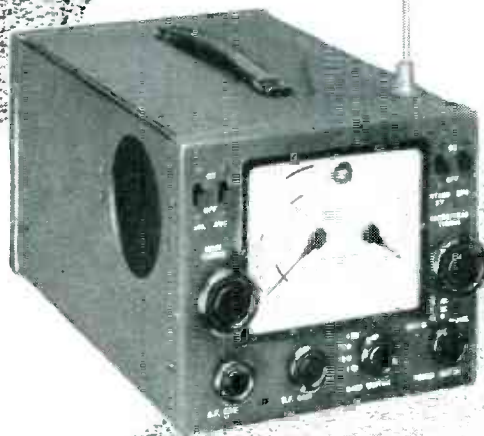


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Model S-29 Sky-Traveler operates on 110 volt AC or DC or from self-contained batteries. Covers from 542 kc to 30 mc (553 to 9.85 meters) on 4 bands. Built-in collapsible antenna extends to 3 feet. Battery life prolonged through self-contained charging circuit. Automatic noise limiter, electrical bandspread, built-in speaker, etc. \$59.50 NET



Music That Charmed

(Continued from Page Fifteen)

—Invariably, whether one has just one beer or a dozen, small dishes of potato chips, bits of cheese and Spanish peanuts are served without request and it is a nice touch . . . nothing is hurried except the traffic and one must jump to keep clear . . . the number of coasters under your drinks to indicate how far you are in the hole while watching the world go by the sidewalk cafes along Avenida Rio de Branco . . . the intricate designs and figures of its inlaid mosaic sidewalks for which the Portuguese are noted. Much souvenir shopping by every one.

Just before the concluding concert and broadcast in Rio on July 10th, we were saddened by the loss of Jacques Toushinsky, viola, in a traffic accident. For days all on board ship were sick with grief for they loved him so.

The long 5,000-mile voyage from Rio to N. Y. was broken up by a regular stop at Trinidad and an unscheduled stop at Guantanamo Bay, Cuba, to discharge diplomatic envoys, including Senor Melo, to the Pan-American Conference at Havana. They were transferred to a U. S. destroyer at the Naval base.

We arrived at the British Port-of-Spain, Trinidad, at dusk of July 17th and spent most of our time roaming the town with stops at the Queen's, De Paris and Marine hotels, and made a couple of short tests on planters' punch. They tested OK! At the docks the natives managed to sell to our group all sorts of baskets, dolls and jewelry. A great percentage of the population is Hindu. At 7 a.m. the following morning the "Uruguay" hauled anchor.

On July 23rd that symbol of freedom, the Statue of Liberty, looked awfully good to everybody. The good old U. S. A. can't be appreciated as much as by those who have been away from these shores nowadays.

The tour of the NBC Symphony was a great adventure and a most successful one. There were high spots and there were times of trial but these were experiences which will long be remembered as rich in impressions of how our neighbors in the other half of our hemisphere live. We wish that all of you could have been with us.

Members of the NBC staff assisting Mr. Royal but not appearing in the photo were Messrs. Chotzinoff, Spitalny and Bob Sarnoff.

Messrs. Simpson, Rehm, Schroeter, Rowe and Hammond of RCAC in N. Y. gave us grand cooperation and throughout the trip it was a pleasure to work with them from South America.

Washington

(Continued from Page Nineteen)

tached suggesting it would be a mite easier to hit than the regular size. John Dodge, Commercial Manager, had low medal score.

The ultimate of perfection in two-piano pickups has at last been reached. Frank Fugazzi reports he had a balance so perfect the other night, that when both pianists struck

Moving and Rebuilding WEA F

(Continued from Page Six)

rectifier will be temporarily excited, not by the customary driver stages, but by the auxiliary transmitter. This will permit removing, modernizing and reinstalling at the new plant the low power end of the regular WEA F 50 KW transmitter.

Modernization consists of discarding all of the rotating machinery used for bias and filament supply. The filament supply will be from AC. The 5 KW stage, of two tubes, will be excited by filament transformers in phase quadrature and the 50 KW filaments will be similarly excited. The 5 KW and 50 KW stages will be excited with a phase difference of 45 degrees, giving the equivalent of four phase excitation. The bias supply will be a specially designed rectifier having extremely good voltage regulation under a wide range of grid currents.

The 5 KW stage is to be modernized by conversion to UV 207 tubes which will be grid modulated by 845 tubes. The 849's formerly used are being omitted in the interest of simplification, improved performance and a saving of about \$400.00 in tube cost.

The 50 KW stage is to have fixed neutralizing capacitors, compressed air tank capacitors and other improvements.

The towers will be located respectively about 475 feet and 875 feet from the transmitter building and will be fed by individual coaxial transmission lines of the type developed by Mr. Duttera of the Radio Facilities Section. These lines have various improvements including couplings and insulators which give them three times the voltage rating of the design which they superseded.

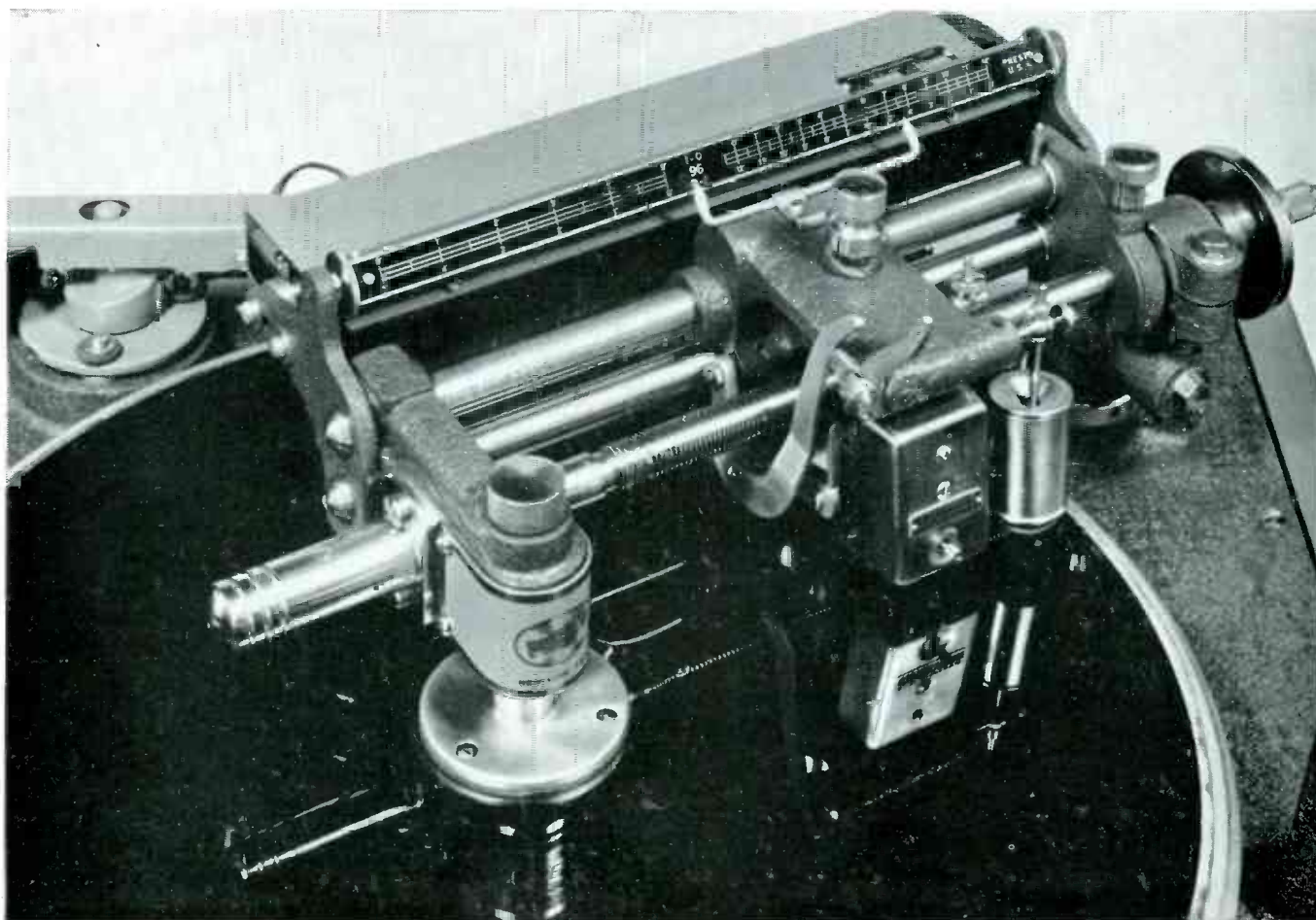
The use of a separate control room has been abandoned in favor of location of the speech equipment immediately adjoining the front end of the transmitter. The power line control gear consists of metal clad switching apparatus. This is located on the opposite side of the room from the speech equipment, making it possible for one man to have almost at his fingertips complete control of every important circuit of the station.

the same note at the same time, they canceled out, and the VI remained stationary. "That's pretty good, Johnny."

For several years now, NBC has been endeavoring, with varying success, to beat the Washington Correspondents at softball. On a recent Hyde Park trip, Al Powley evened things up with the scribes by trimming a picked team of White House Correspondents at the grand old American game of poker, to the respectable tune of sixty-seven bux. Dan Hunter tried to hold his own the following week-end, but it cost him twelve berries.

Clarence Allen was much surprised to receive a maintenance assignment sheet, with the following notation, "You're in the Army now! Report to Mr. Johnson for detail." It turned out to be a maintenance assignment on the War Department's transcription equipment.

Bob Chapman is on the air at last. As befits a dyed-in-the-wool maintenance man, he has built a beautiful rack and panel job. Listen for W3ESL on 14mc phone, 14176, to be exact.



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Here is a new turntable designed to replace the famous Presto 6-C and 6-D recording turntables which have been standard equipment in United States and Canadian broadcasting stations for the last four years.

Mounting and operating dimensions are identical with the previous equipment but the performance has been greatly improved.

NEW FEATURES:

1. New overhead cutting mechanism redesigned to simplify alignment with the turntable, can be removed for transportation by loosening one screw.
2. New cutting head mounting spaces grooves

more accurately, facilitates quick change of feed screws.

3. Includes as standard equipment spiralling feed screw, vertical damper, cam lever for lowering cutting needle, 4 pitch time scale, automatic equalizer and Presto 1-C high fidelity cutting head.

List price Presto 11-A recording turntable in wood mounting cabinet \$500.00 without automatic equalizer. (With automatic equalizer, \$695.00.) Liberal trade-in allowance to station owners who wish to replace their 6-C and 6-D tables with the new PRESTO 11-A TABLE. Write giving type and serial number for cost of exchange.

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"I have been using the AR-77 for about a month and find that it is even finer than your announcement led me to expect."

... So writes Dr. Burton T. Simpson, W8CPC of Buffalo, an old-timer in the amateur game and still one of the best-known voices on the air. He adds: "The AR-77 is extremely sensitive and certainly brings the signals in, even under bad conditions. The noise limiter is particularly valuable because of its manual adjustment which can easily be regulated to best advantage to meet local conditions in separating signal from noise. I am more than pleased with the outfit and believe it is the last word in receivers!"

TRY IT TODAY! Dr. Simpson is one of the many well-known amateurs who have accorded enthusiastic praise to the AR-77—the most sensitive, the most stable receiver RCA has ever produced. Write for descriptive folder, but, above all, visit your nearest RCA distributor and test its superiority for yourself. You be the judge!



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