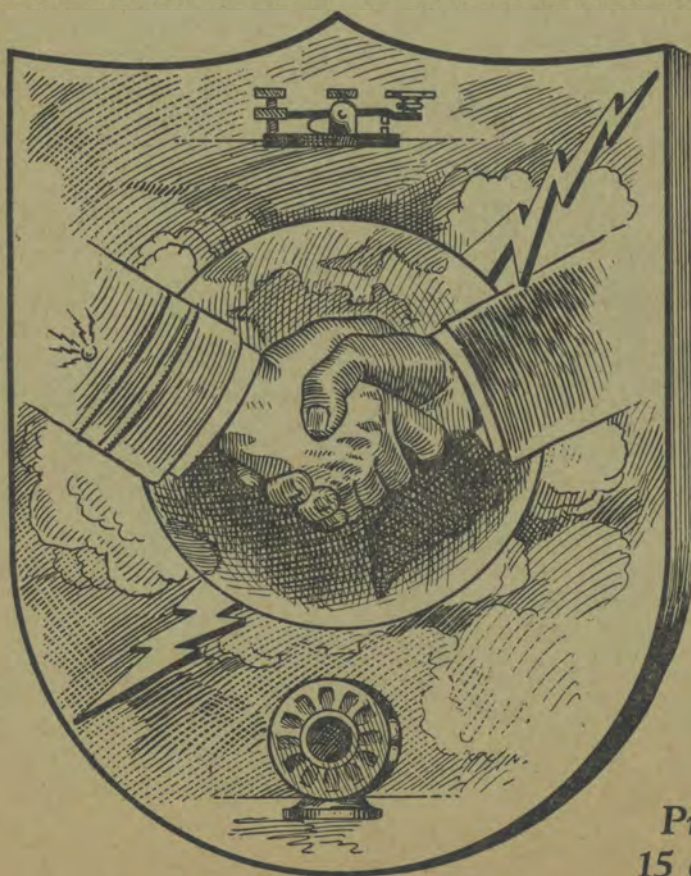


A Magazine OF, BY and FOR Commercial Radio Operators

Vol. 1

MAY, 1931

No. 3



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610 So. Dearborn Street

Chicago, Ill., U. S. A.

“CQ”

DEVOTED ENTIRELY TO THE INTERESTS OF COMMERCIAL RADIO OPERATORS

CQ is published monthly by a group of commercial radio operators and is the only publication OF, BY and FOR licensed radio men.

M. R. RATHBORNE, Jr.
Editor

C. E. DUNCAN
Business Editor

Vol. I.

MAY, 1931

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THIS MONTH

The first installment of "Pioneer Radio Operators," a regular monthly column by Dr. Lee de Forest, appears on page six of this issue. In what is practically a history of the early days of wireless telegraphy, Dr. de Forest will relate many interesting and hitherto unpublished stories of the first American stations and the pioneer operators

who established the splendid traditions that have characterized our profession since its inception. No one is better qualified to tell of the early days of radio and we are sure that every operator, whether old-timer or amateur, will find Dr. de Forest's account both interesting and instructive.

EDITORIALS

With the release of this issue a crucial point has been reached in the life of this magazine. The operators who helped finance the first three issues have fulfilled their promise to establish a publication OF, BY and FOR commercial radio men.

CQ is now on its own—whether it grows to become the official publication of organized American commercial radio men, or fails from lack of support, depends entirely upon the backing received from those it is trying to serve. In establishing CQ the intentions of its founders were, as stated in the preliminary announcement, to “raise the standards of radio operating and secure improved conditions for commercial radio men.” In order to transform these intentions into realities, we have been expending every effort toward gaining the objectives listed below:

The creation of an organization for ALL professional radio men;

The elimination of the twelve-hour working day;

The securing of changes in the regulations governing the issuance of operator's licenses which will increase the severity of examinations and make it mandatory for applicants to be American citizens above a certain age;

The compilation of truthful and up-to-date employment data to be placed at the disposal of amateurs and other potential commercial operators in order that they may have access to RELIABLE information regarding conditions actually existing in the commercial field;

The exposure of misleading and untruthful statements made in advertisements sponsored by certain radio schools.

At this time we are plainly stating our policy and asking you—as well as every other professional American radio operator—for an opinion as to its merits. Do you believe our program is worthy of support? If so, are you willing to forget minor differences of opinion, and, in co-operation with your fellow operators, help us make radio operating a really worthwhile profession? We must secure new subscribers to CQ, outstanding articles and stories, and an enlarged membership for our EIGHT-HOUR DAY CLUB. In another part of this issue you will find an announcement regarding the EIGHT-HOUR CLUB—an organization of public-spirited operators who are helping to finance the battle for improved conditions. Read the announcement carefully, and if you subscribe to our program—JOIN THE CLUB.

Apparently the owners of certain steamships and broadcasting stations think that President Hoover and many prominent industrial and labor leaders were “just kidding” in declaring that the return of prosperity depends to a great extent upon the maintenance of the pre-depression scale of wages.

Authorities in the field of economics have stated that underconsumption is the cause of the existing depression; by advocating wage cuts, misguided employers are still further reducing consumption and are delaying the natural tendencies toward business recovery. Wage cuts recently given to commercial radio operators have been unreasonable, unjust, and unfair. A government agency, the Shipping Board, is responsible for one of the most drastic reductions in salaries paid to radiomen. The United States Lines not long ago lowered the wages of its operators by 22 to 28 per cent. A 20 per cent cut was put into effect by the Nelson Steamship Company and 5 per cent has been clipped from the wages of operators employed by the Luckenbach Steamship Company. In broadcasting and other land stations wage reductions from 15 to 30 per cent have been made in numerous instances.

A recent statement of William Green, President of the American Federation of Labor, places wage-cutting employers in their proper classification. “There are employers who are taking advantage of economic and industrial distress to lower living standards through a forced reduction of wages. SUCH MEN CAN WELL BE CLASSIFIED AS PUBLIC ENEMIES. Wrongs which they are perpetrating are against the public and serve to undermine our national economic structure at a time when leaders in government and public-spirited people are striving to maintain wage standards so that we can facilitate and hasten a return to normal conditions.”

—M. R. R.

BE A RADIO OPERATOR IN 30 DAYS!

"Doc" Cramer, R.T., C.B.S.*

(Radio Technician, Columbia Broadcasting System)

I have just finished reading Bob Longstreet's article on "How To Become an Announcer," in the December issue of "Under Control." This is surely a splendid article and gives all the pointers on breaking into the announcing game—for, after all, it is a game! I hope that at least five million youths adopt his method and then apply for work at the various stations throughout the country. This alone will solve the unemployment problem and at the same time maybe we will get some GOOD announcers. (If an announcer is reading this, I'm just kidding.)

After reviewing the situation, I can't imagine just why anyone should have a "yen" ("yen" from the Chinese, meaning to have a longing) to become a lowly announcer. Now, if one's aspirations are to become a radio OPERATOR—oh, there's another story, which indicates rare (?) judgment. The radio operator is THE MAN! If you don't believe it, just ask one of them! The REAL FUTURE in the radio game is in operating!

Really now, radio operating is SO simple, I can't for the life of me see why most every lad graduating from high school doesn't take it up. (I will gladly make speeches to graduating classes, at any time, to further this cause—barber colleges excepted.) The field of medicine is overcrowded and besides, with the invention of aspirin and tooth paste there is practically no sickness anymore; lawyers are starving to death every day; and, working in a factory is just too mussy, dontchano. Let's look at the field of radio operating. What a rosy picture! Peace, harmony, ideal working conditions, short hours, fat pay checks, independence; in short, everything a person could wish for—and the best part of it all is that it is so easy to attain.

I could have headed this article "Big Pay Jobs for Every Radio Trained Man"; "Success in Radio, Opportunity Is Knocking at Your Door, Be a Radio Engineer"; "You're Wanted for a Big Pay Radio Job" and other choice phrases. However, I hope to convince you that your place is in radio operating without resorting to such flaming headlines.

The best way to convince you of the wonderful opportunities in radio operating, and of the heavenly position the radio operator holds, is to take just one experience of a graduate of my "short 30-day radio course."—"Two months ago John was penniless, broken in health and spirit, he was without hope and had no future. And TODAY? Ah, what a striking contrast! Just 31 days after enrolling in my course John is a changed man. He has regained his health; is now Chief Radio Engineer for one of the large broadcasting stations and is consulting sound engineer for goodness knows how many motion picture companies. He is now married, has three healthy, beautiful children; drives a big motor car (on which all the payments have been made); wears smart clothes (including a raccoon coat); has a bank book with the balance in five figures, and is considered a great success in his chosen field." To what does John owe his success? Why, to my wonderful 30-day course, of course!

By now I presume you are just bubbling over with enthusiasm, and are longing to become a radio operator so that you, too, like John, can soon be in the millionaire class. Therefore, by special arrangement with the editor of this magazine, I am going to offer my "complete 30-day course in Radio Engineering"—with full instructions for achieving success! Why am I making it a 30-day course? Frankly, I don't know. Perhaps 10 days would have been sufficient, but what are a few days? Besides, 10 days would have sounded too legal. (Remember the last time you were caught speeding to a remote?)

I really should have been over at the Hiwanis Club meeting tonight, delivering my world famous speech, "Radio Operators, Why They Are the Most Important Men in America," but in the interests of humanity I have cancelled the engagement and will continue with this article so that the multitudes may have the benefit of my amazing course.

(Continued on page 15)

*This story is reprinted from "Under Control," official publication of the engineers, operators and technicians of the Columbia Broadcasting System, by permission of the editors.

SUN SPOTS on the MOON

By LEW TODD

(Continued from April)

Suddenly, the big boy is aroused by a local disturbance of marked intensity an' extremely low pressure, originatin' at the bridge an' movin' rapidly toward the radio shack. He has barely time to slip into a pair o' pants, grab the phones an' assume a deceivin' pose at the receiver, when Olaf barges through the door, bellerin' like three huricanes, a typhoon an' a young thunder storm, rolled into one. He is fairly boilin' away with rage an' shakin' himself an' the ship with typical scandinavian bluster.

"Swartefahn! Bye yiminee unt bye te yoomped oop—" He bawls, his pan the color of a piece of raw steak; an' punctuatin' his remarks with those flangin'-maul fists o' his'n flailin' the air like the booms of a flounderin' windjammer. "Vhy te tyemem tock iss not giffin' to te brich. . . . Huh? . . . I show you . . . Bye te yoomped oop. . . ."

Wow! Your'n trooly is plainly in a position o' dire peril, cause I can read in Olaf's gloatin' eye, the pleasure it's gonna give him to shread me into fine bits an' then grind the remains into a grisly smear beneath those number fourteens o' his'n. But the squarehead what can out think a Wildcat Corners lad, don't live.

"Why Cap," I interrupts, in a soothin', oily voice, "Ain't you ever heard o' sun-spots?"

"Soon-spots!" he ejaculates stupidly.

The suddenness an' inappropriateness o' my subtle remark has caught him off balance like a well directed blow in the midriff of a overconfident pugilist. Slowly his contorted features settle into a expression not unlike the puzzled stare of a poled ox. It's plain to see that sun-spots is one o' nature's phenomena that has never crossed Olaf's intellectual horizon. An I am elated to learn that my unerrin' intuition has struck fire on the first trigger an' laid bare the big dunce's weak spot. Olaf has a child-like reverence for anything that has the earmarks of erodition. But I'm gettin' ahead o' myself.

"Soon-spots . . . ?" he repeats, playin' with the words like a hulkin', oversized infant, gurglin' his first, 'Goo.'

"Yeah," says I, quick to foller up my advantage, with a series o' lightnin' intellectual crisscrosses and right hooks to the button, "Spots on the sun, like freckles on a red-headed kid, only each one is some-

thin' like a hundred-thousand miles accrost an' composed o' flamin' 'hellyum gas, same as they fill dyrigibles with."

This startlin' information sinks in like water on a tin roof. Olaf is punch-drunk . . . hangin' on the ropes . . . ogglin' me like a Choctaw injun seein' his first street-car . . . too bewildered to utter a sound.

"Sun-spots," I continue, "is the direct cause o' such annoyin' whatnots as hailstorms, halitosis, tornados, siamese twins, trainwrecks, barber's itch, mad dogs, locusts and B.O. Science has isolated these spots down to the point where they borders on the fourth dimension an' affects not only the time keepin' qualities o' cheap alarm clocks, but even interfere with the unerrin' exactitude o' such crafty chronometers as the observatory timepiece at Greenwich Village. This happens about onct in every twenty years, when the spots get lined up in direct perhellion with the moon an' casts their sinister shadow accrost her fair face. Fancy how annoyin' this must be to millions o' stevedores an' school children, hastenin' to the daily chores, to say nothin' o' the vexation it must cause mariners like yourself."

"But te tyemem tock . . . ?" falters Olaf, unable to rid his half-pint mind of the one idear, in spite of the maelstrom of hi'brow litratour I had whirlin' around his eggshell intellectual bark, "Vere iss it?"

"That's just what I'm comin' to," says I, spreadin' my hands in a eloquent gesture o', 'now never you mind my child, I'm gonna make all things clear,' "Y'see Cap, there ain't no time ticks . . . er ah . . . not yet anyways, on account o' the sun-spots. At this very minute, those bohemians up there in Greenwich Village is frantically racin' around tryin' to get that danged clock started again an. . . ."

At this junktoor I happens to glance longin'ly out the door an' spys a American Ham freighter washin' along, just abeam an' about a quarter of a mile from us. Immediately the faithful old bean sees a way out.

"You just sit tight, Cap," I commands, turnin' to my spark mill with risin' courage, "I'll call those old grannies up at the observatory an' ask 'em how about it."

Olaf is gettin' the drift by this time an' he leans against the bulkhead like a bewildered water buffalo, causin' it to creak in protestin' agony. I give the American

(Continued on page 12)

BREAKS

by
THE SKIPPER

In the Employment Reports section we have purposely published the scale of wages paid to licensed radio men in order to combat misleading radio school advertisements and to discourage beginners from entering an already overcrowded field. The salaries paid to skilled radio workers should not depend upon the whims of station managers, marine superintendents or steamship company officials, they should be directly governed by the knowledge, skill and experience of the men employed. There is only one way for us to insure our jobs, assure ourselves of obtaining adequate compensation and protect ourselves against competition from "cheap labor," that is by ORGANIZATION.

* * *

In an extremely interesting article, appearing in the March number of "Radio Engineering," Major R. B. Steele explains the methods used in carrier current telegraphy, whereby twenty messages in each direction are simultaneously sent over a single pair of wires. As each message is sent at a speed of more than 100 words per minute it is possible for two wires to transmit more than 4000 words every minute.

* * *

If the gang will send in the material, we want to enlarge CQ to contain a Technical Section, a Broadcast Operator's Page, and a Joke Department. Who is going to start the ball rolling?

* * *

A vigorous application of the vibrating portion of the Big Brass Bug awaits the next hombre who is heard causing unnecessary QRM by sending his TR to every land station within a radius of a thousand miles. TR's are exchanged by land stations via telegraph or point-to-point radio, sending a position report to half a dozen coast stations is a sign of ignorance and shows a disregard for the rights of other operators who may have important traffic to clear.

* * *

I have received many valuable suggestions regarding the establishment of an organization for professional radio men. I would like to hear from all the operators who are interested in this important sub-

ject. Before any definite steps are taken there are a number of questions that should be answered:

What type of organization will best serve the needs of licensed radio men? 1.—A professional association, such as the Institute of Radio Engineers? 2.—A labor union, similar to the electricians and motion picture projectionists' unions? 3.—A fraternal organization? 4.—A league, such as the American Radio Relay League of Amateurs?

Is the number of operators interested in organizing sufficiently large to warrant the establishment of an organization? Should all radio workers, including marine, broadcast and airways operators and technicians, servicemen, factory technicians, and sound experts be eligible for membership in an organization of professional radio men, or should the membership be limited to licensed operators? How would you answer these questions? I want your ideas, comments, arguments, and suggestions.

* * *

Transcontinental and Western Air have reorganized. Western Air is again an independent concern and has moved from Alhambra to the Grand Central Airport at Glendale. Transcontinental has become a subsidiary of General Motors. In the shake-up a number of radio technicians lost their jobs.

* * *

How many of you remember when the old Marconi rock-crusher at KHK used to shoot 2 a.m. press to the gang? Many of them put down good, solid copy with a carborundum rock up to 4,000 miles? And WSH was the big noise? And you could take your pick of five or six ships? Why go on? I'll be crying in a minute.

(Continued on page 6)

MOVIES ACQUIRING BROADCASTING STATIONS

Apparently the motion picture interests believe that television is just around the corner. They have taken steps to minimize television competition by acquiring substantial interests in a number of leading broadcasting stations. At the present time the National Broadcasting Company and Radio Pictures are owned by RCA. Station KFWB is controlled by Warner Brothers and First National, KNX is owned by Paramount. KMCS is allied with Christie (Metropolitan Studios), and KMTR with United Artists. Fox and Metro-Goldwyn-Mayer are the only large concerns outside the fold. It is probable they will ally themselves with one of the new rumored national chain systems.

BREAKS

(Continued from page 5)

PERSONAL ITEMS

Charlie Breeding is now instructing at the Frank Wiggins Trade School in Los Angeles.

* * *

Hugh Faulkner, chief of KVO, Swan Island Airport, Portland, Oregon, wants to know what has happened to C. A. Button, R. A. Scott, and Gilly Gilmore.

* * *

Wally Leland is chief at KOE, Boeing Air Transport, Cheyenne, Wyoming.

* * *

Is Jack Ryno still with PAT (Pacific Air Transport to you) in Seattle?

* * *

An old friend wants to know where William Pond, once on the Coast Guard Cutter Shawnee, is hiding.

* * *

John Patrick O'Leary, chief of the Yale, and Harry Coyle, Marine Superintendent for Mackay, used to operate together in the dark days when Federal was trying to communicate across the continent with arcs. Lovely things, arcs!

* * *

Lew Todd, creator of "Slim" Phitts (patent pending) is looking for another ship. Lew says the last skipper was too much like Olaf only he had "loomber" on the brain instead of time ticks.

* * *

Duke Wellington, ex-Dollar operator, is now selling insurance in S.F.

* * *

Tom Watson, Art Dingle and Jack Wiehr of KPO are all former Matson Line chief operators.

* * *

Another KPO operator, Curtis D. Peck, went commercial in 1914.

* * *

Here's a record that many oldtimers will find hard to beat: I. T. Stephens, now on KEML, has been pounding brass continuously for twenty-six years. He made his first trip to sea in October, 1905, for the De Forest Radio Company on the S. S. Col. E. L. Drake. On leaving New York, he was given a list of six ships, the only vessels of American registry equipped with wireless.

* * *

Coincidence—The personal sign of William Ehmer, operator for Lindbergh on the Mayan trip, is WE.

(Continued on page 14)

PIONEER RADIO OPERATORS

By Dr. Lee de Forest

During the International Yacht Races in September, 1901, when I installed the first wireless telegraph transmitter upon a tugboat chartered by the Publishers' Press Association, a Western Union operator whose name has long escaped me enjoyed the honor of sending the first wireless message from an American craft. I doubt if he greatly appreciated this honor, however, because the transmitter went to pieces the first half hour, and thereafter the Western Union operator had nothing to do but to watch the struggle between the Columbia and Sir Thomas Lipton's Shamrock II, while a seaman aboard transmitted all further "wireless" messages by means of the time-honored flag signals.

During succeeding days of that regatta, after a spark coil had been installed in place of that crazy contraption of condensers, charged in parallel and discharged in series through a commutator mechanism, the results were about the same—wireless bulletins by flag, light and binoculars were the only reliable means of transmitting our messages to the shack on Sandy Hook. The mutual "jamming" between my spark transmitter on the Publishers' tug and the Marconi installation on the Associated Press boat prevented either receiving station from pulling in anything very legible to the ear.

It was nearly a year following this first wireless fiasco that I ventured to hire my next operator. The first wireless telegraph station in America, located in a specially constructed pent house of steel and glass on the roof of 17 State Street, Battery Park, New York City, was nearing completion. A smooth faced, shallow complexioned young man insisted on visiting me on the roof, day after day, inquiring anxiously as to when the station would be ready for operation, and without hesitancy explaining that he, William Barnhardt, intended to be the first American wireless telegraph operator. "Barney" as we soon came to call him, was a fast Western Union operator, employed in a downtown office. He spent his lunch hours in the pent-house station, watching the installation of the 110 to 5000-volt transformer, the glass-plate tinfoil condenser, double spark gap and other crude equipment, on a long pine operating table.

The cumbersome key, with its half-inch copper contacts breaking under oil, interested "Barney" especially. He soon showed that he could pound out twenty-five words per minute with this curiosity. This, and his eager willingness to aid in

(Continued on page 7)

The Importance of Time Signals

Those innocent dots known as "time" have, in the past, been more or less an abstract matter with the sea-going operator. A necessary business for the checking of the ship's chronometer but seldom thought of as vitally affecting the operation of the radio transmitter. The radio shack, regrettably, has nearly always been seemingly accidentally fitted with a clock at all, and the old watch or Baby Ben did duty—to the nearest five or ten minutes.

It is now being realized slowly that clocks must be ACCURATE in order that all may conform to the International Silent Period. To those who have never visited England ("be a radio operator and see the world!") it will, perhaps, come as a surprise to know that English stations have observed this silent period for several years. With the Washington Convention of 1927, it has become International in scope and, as it is only three minutes, it behooves one to have the correct time.

A point often lost sight of is the fact that it is not only necessary to work on a wave other than 600 meters (if you MUST work during the silent period) but, at the same time, to keep a satisfactory watch on 600. This means that you must be equipped with two receivers if you wish to work in the important three minutes. And they ARE important in view of the heavy QRM on the air at times.

A list of time signals would be too lengthy to give here, but the International List of "Stations Performing Special Services" contains particulars of many stations giving time signals. As the Berne Bureau is now issuing recapitulatory supplements the hard work which had to be performed to keep the old style list up to date has been eliminated. The writer has come across vessels, privately controlled, which did not have copies of the Berne list and, for their benefit, it may be stated that the Master always has the latest time and weather information in his "Notices to Mariners." These are issued by various governments and handed, gratis, to the Master when he clears his ship.

In conclusion, don't call with traffic at 14 minutes past the hour, and don't start clearing a pile of business at 10 past unless you have the correct time to enable you to break at the quarter hour.

—J. E. Kitchen, Govt. Radio Station,
Alert Bay, B. C.

NOTICE

In order that the work of editing and copy-reading may be made as easy as possible, it is requested that our contributors typewrite and double space all material submitted for publication in CQ. Thank you.

NPG AND LIGHTSHIP WEATHER BROADCASTS

Operators on many ships on the Pacific Coast are required to copy the weather bulletin broadcast by NPG as well as the lightship weather reports at 8 a. m., noon, and 8 p. m. NPG starts the bulletin at 7:30 a. m. and p. m., and usually does not finish until a few minutes after eight. The lightships, starting with KCN, San Francisco, start broadcasting at eight o'clock sharp, as a result an operator copying NPG's bulletin usually finds that before it has ended the lightships have already sent their reports. Why can't the operator at KCN listen to NPG's broadcast and wait until it is finished before sending his own weather? (Those who do not need the numbers in the NPG bulletin may copy it from KPH at 8:30 to 9:00 a. m., and 8:20 p. m. P.S.T. This weather is also sent by KUP on 6530 and 8230 kcs. (45.94 and 36.45 meters), following the evening press schedule.—Ed.) —A. E. H.

OPERATING NOTE

Mention was made in the March issue of superfluous signals, such as an "S" on the end of "73." We would write in the gold painted log the names of men who say "NR 1 R OK QRU QSK GN." Some even lengthen this by adding "TNX," or whatever particular abbreviation they use for "thanks." As "1" is obviously the number of the message then "NR" is useless. "R" is, in itself, an acknowledgement of receipt and does not require the help of "OK." "QRU" is quite superfluous for if you had traffic on hand you would surely send it. By the same reasoning, it is the custom to call a ship (or station) if you have anything for him, unless you prefer to mail it. Then, to say "QSK" is a waste of time.

J. E. K.

PIONEER RADIO OPERATORS

(Continued from page 6)

installing the bird-cage antenna on the corner flagpole, soon convinced me that "Barney" was just the man for the job as "Chief Operator." Naturally not much persuasion was needed to induce one so keenly interested in this brand-new wonder, "Wireless," to give up his well-paid job with Western Union for a most precarious salary of eighteen dollars per week (the per being an abbreviation for perhaps).

(Dr. deForest's account of the early days of "wireless" will be continued in the June issue.)

Brasspounding with Lindbergh

By William W. Ehmer, Flight Operator, Pan-American Airways

(Editor's Note.—We are certainly fortunate in being able to present a commercial operator's account of Colonel Lindbergh's recent flight to Central and South America. Radio at sea and ashore may have lost its glamour and become routine, but adventure and excitement still attend the operator aloft, especially if he is so lucky as to fly uncharted skyways with "WE.")

Omitting the aeronautical details of Colonel Lindbergh's flight through Central and South America, these having been well covered by newspapers and the Saturday Evening Post, there are still to be told some points of particular interest to commercial operators.

This trip was Lindy's first experience in carrying a regular commercial radio operator, and he seemed quite satisfied with the results obtained.

The flight was made in a Sikorsky S-38 plane, having a standard Panair radio installation. The first leg of the flight was made to inaugurate airmail service to various points between San Juan and the little Dutch colony of Paramaribo, Dutch Guiana. Due to a heavy load of mail we could carry no newspaper man, so the duty of composing and shooting spot news fell to me. The volume of press handled was enormous, and all of it had to be sent while we were in flight, because at the last minute it was decided to use a new ship, the NC 142 M, due to the fact she had brakes. No one noted that she had no wing antenna, standard equipment with all seaplanes, which permits them to communicate from the surface of the water after landing. To me the trip was an almost constant stream of press.

As we circled towns a running synopsis of crowds and conditions would be shot to Miami, then we would reel in and land, drop the mail and take off, continuing the story as we left. The trip took four weeks and one could almost be on the flight by reading the daily papers.

In addition to the press, a continuous stream of weather data was dispatched to the plane from local stations along the route, plus half hourly reports to our Operations Department. The perfection with which the flight was worked out can be illustrated by one incident. From Barranquilla to Cristobal we encountered strong head winds, and were a bit behind schedule. A large crowd was waiting at France Field to greet the Colonel, when a heavy tropical shower started. Simultaneously, however, our message came through advising our delayed arrival. The Operations Manager announced the news to the

crowd, most of whom went back to town to await the arrival under more favorable circumstances, returning to the field in time to welcome Lindy, who true to form, landed at exactly the specified time.

Much credit is due operators Frank Hill and Penny, at United Fruit Station, at Santa Marta, Colombia, for the snappy way they cleared the large volume of press and company messages. In acknowledgment of this excellent work, the Colonel diverged from his course long enough to circle Santa Marta three times, and allow the Fruit Company personnel the opportunity of seeing his plane. Credit is also due the Navy boys at Balboa, who did splendid work. The crew at Tropical Radio, Managua—S. M. Craigie and Pop Rudder—also did their share, and are still doing it, according to reports from the earthquake area.

From Belize, British Honduras, we left for an exploration tour of the ancient Maya ruins in Yucatan, Dr. Kidder of the Carnegie Institute aboard. Men have spent months in that jungle without covering a fraction of the territory we viewed in three days. When ruins were sighted, we would circle and take notes of locations and possible approaches for the use of ground crews of explorers. Simultaneously, the news was being relayed to the outside world. At one place we landed on a small lake, to look over some apparent ruins. Immediately after anchoring, the rubber boat was pumped up and the Colonel held my antenna up a few feet off the water while I sent in the "safe landing."

An interesting incident occurred while we were en route to Maracay, Venezuela. The Colonel decided to fly over Caracas, the capital, and for reasons of courtesy decided to ask permission from General Gomez, dictator of the republic. The message was sent to Santa Rita Radio, and a few minutes later we had Gomez' answer, giving Lindbergh carte blanche to fly wherever he wished in the country. General Gomez was greatly surprised to have received a message from the plane through his own station, and the matter was given much publicity in the local paper. The boys at Santa Rita were certainly on the job to get that message.

Colonel Lindbergh is one of the most genial skippers with whom I have ever sailed. With all his fame, he is just a darn-good fellow. Undoubtedly, he is the

(Continued on page 15)

EMPLOYMENT REPORTS

ATLANTIC COAST

Apparently an epidemic of reducing has hit the fraternity of American steamship owners. In the following paragraphs you will find how leading steamship companies comply with President Hoover's request that employers refrain from cutting wages during the present depression.

U. S. Lines Reduce Wages

The United States Lines recently made a drastic reduction in the wages paid to radio operators employed on its vessels. This concern operates six ships in the Trans-Atlantic trade and five two-operator (twelve-hour a day) boats running to South America. Here are the ships and the number of operators carried by each:

Trans-Atlantic Ships

Ship	Operators	Ship	Operators
Leviathan	5	Republic	3
Geo. Washington..	3	Pres. Harding.....	3
America	3	Pres. Roosevelt.....	3

South American (12-hour) Ships

American Banker 2	American Trader ..	2
American Farmer 2	American Merchant 2	
American Shipper....	2	

An example of the unreasonable wage cut, as applying to the three-operator ships, is given below:

	Old Wage	Reduced Wage
Chief Operator	\$140 per mo.	\$110
Second Operator	\$125 per mo.	\$100
Third Operator	\$125 per mo.	\$ 90

At the same time the salary of the chief operator on the Leviathan was cut from \$150 to \$125, and the wages of his four assistants reduced from \$125 to \$110.

* * *

Luckenbach Cuts Wages

Effective March 1, 1931, all employees of the Luckenbach Steamship Company aboard ships were given a 5 per cent reduction in wages. Radio operators were effected as well as the balance of the crew. This cut in wages brought the operators wages down to \$100 per month. They were formerly \$105.

* * *

Munson Line Adopts Twelve-Hour Day

The Munson Steamship Company, operating the steamers Pan-American, American Legion, Western World, and Southern Cross in the South American Trade, recently cut the radio staff on each ship from three to two operators, which means that

(Continued on page 11)

PACIFIC COAST

General—

Conditions on this coast remain practically unchanged this month. Reports received from Seattle, San Francisco and Los Angeles show that there are still a large number of experienced radio operators out of work. Many small broadcasting stations are finding it hard to secure sponsors for programs and consequently have been forced to cut wages. Radio schools are crowded—it is estimated that there are nearly 250 students in the schools on the coast. A new school has been opened in San Francisco. In Seattle, conditions have improved slightly, due to the opening of Alaskan stations; however, there are still a large number of experienced men out of work in that area. Twenty reports received from coast cities show that there are still more than 200 operators on the beach. Estimated unemployment figures: Seattle, 50 to 60; San Francisco, 60 to 75; Los Angeles, 75 to 125. Because conditions are practically unchanged, detailed reports are omitted.

American Hawaiian Ships—

Phillip J. Vogel, Radio Supervisor for the American-Hawaiian Steamship Company, has supplied us with the following information relative to the salaries paid to radio operators by that company: "The wage scale of January 1, 1931, for operators employed in this line ranges from \$75 per month to \$125 per month; the yearly increases being based on time of service, conduct and ability. The jobs are straight operators' jobs, i.e., no combination work, such as freight clerk or electrician. The meals and quarters provided are the same as those provided for licensed deck and engineer officers, and, if the work is satisfactory, a vacation for the period of two weeks with pay is granted every operator per year. The maximum pay for the first year is \$95 per month. The scale increases thereafter as follows:

First year	\$75 to \$95
Second year	\$95 to \$110
Third year	\$110 to \$115
Fourth year	\$115
Fifth year and longer.....	\$125

Increases are not compulsory and are granted only to men who have performed their duties satisfactorily in every respect

(Continued on page 13)

CORRESPONDENCE SECTION

Signed communications only will be accepted for publication in this section, names of correspondents will be withheld on request. The publishers of CQ assume no responsibility for statements made herein by correspondents.

☆☆☆

3145 McCall Street,
Point Loma, California,
March 25, 1931.

Editor CQ:

There was so much information contained in the sample copy of the March issue of CQ, in which I was particularly interested, that I feel greatly indebted to you. Having been out of touch with commercial radio for 10 years and feeling an urge to return to marine operating, I have been looking for some data on the very subjects covered in your first number. Naturally I am grateful for the trouble you have saved me.

I was, of course, disappointed and somewhat surprised to learn of the seriousness of the present unemployment situation. Radio schools have probably been greater contributors to this condition than the depression. It is regrettable in this highly scientific age that over-production has been allowed such freedom as to cause many of our economic problems.

It is difficult to realize that there is no organization today of commercial radio operators. I believe all will concede that point, because the reasons are so obvious that one should exist. The fact that the laws require ships to carry licensed operators is sufficient in itself, to say nothing of the mutual advantage to accrue from the fellowship. A friend of mine from the Middle West says that the trouble with the farmers is largely with themselves. This applies to the radio operating profession as well. There is no one to blame but ourselves. Even to refer to our art as a profession sounds out of order. WE have failed miserably to maintain a proper organization.

Those who have been directly responsible for the start which has been made deserve much credit and my hearty congratulations and best wishes are with them.

The very first thing to be done is to push forward for a large subscription to the magazine. Toward this end, I pledge myself to secure three subscribers with the request that they in turn endeavor to secure three others. To make the list grow we will need workers as well as readers. Hard times should be no excuse for failure to invest such a small sum required for one year's subscription. Every operator certainly realizes the importance

of this excellent cause and should willingly put himself about to do something helpful however meager.

There is no time nor space for argument as to the need for such an organization. It has long ago and often been talked of, like many other things. Now that a few live wires have taken the initiative to formulate a nucleus as a beginning, we should all get behind them at once—don't put it off—to raise a 100 per cent actively concerned membership to the CQ list. Become a front row member. Don't wait to see what is going to happen. Join up NOW. Nothing ventured, nothing gained.

Let everyone become an interested subscriber. Express your views. Write in a brief letter to encourage those who have taken it on themselves to help you. They have made the start; it is up to use to keep them going.

Enclosed please find \$1.50 and start my subscription with the April issue.

Sincerely and 73,

HAL DEMPSTER.

(Continued on page 17)

NEW NEWSPAPER FILM IS KNOCKOUT IN MORSE CODE

By Florabel Muir

If you know your dots and dashes there's a good laugh awaiting you with the release of Universal's new newspaper picture directed by Monte Bell—that is unless Junior Laemmle does something about it.

It seems that in order to heighten the proper journalistic atmosphere of this talkie, Director Bell thought it would be a good gag to have telegraph instruments clicking away while the dramatic action of the piece proceeded. Bell is an old-time reporter himself and a stickler for detail.

So a regular telegrapher was hired to sit at his key and pound out dots and dashes, which were only recorded on the microphone to provide authenticity. But those who can read the Morse code will hear the instrument clicking off this sentence time after time, without change of pace. "If it's a Warner picture it's the worst show in town."

I don't know what the telegrapher had against Warners, but something apparently. Laemmle is in a bad spot because to take out the offending words it will be necessary to remake the picture.

—Commercial Telegraphers' Journal.

"I SAW YOUR AD. IN CQ." Tell this to our advertisers—it helps all of us.

EMPLOYMENT REPORTS

Atlantic Coast

(Continued from page 9)

each of the remaining operators will have to work for twelve hours every day.

* * *

The Ward Line will not employ radio operators who are not members of the Naval Reserve.

* * *

Conditions remain deplorable in and around New York; there are still more than a hundred experienced operators out of work. Radio schools are crowded. It is reported that many of the really good operators employed by the United States Lines intend to quit the trade as soon as they can land jobs ashore. When the U. S. Lines cut wages operators attempted to obtain a hearing from the steamship company officials, but were turned down with remarks to the effect that if they didn't like the reduction they could quit.

RCA LOSES PATENT CASE APPEAL

Upholding the decision of the District Court of Delaware, the United States Court of Appeals at Philadelphia recently ruled that the patent pooling agreements entered into by four great electric, radio telegraph and telephone companies, including the Radio Corporation of America, were in violation of the Clayton anti-trust law.

In a suit against the RCA filed by the De Forest Radio Company and several independent tube manufacturers, it was claimed that the independents were frozen out of the market by the patent pool, which required RCA licensed manufacturers to use only RCA tubes in their receivers. As practically all receiving sets are manufactured under RCA patents it was claimed that the patent pooling agreement would virtually prohibit the independent concerns from selling tubes to RCA licensees. This claim was upheld by both Circuit and Appellate courts, the former issuing an injunction against the RCA prohibiting it from continuing the pooling agreements. Attorneys for the RCA have announced that they will carry the case to the Supreme Court.

SECOND-CLASS LICENSE

REGULATIONS CHANGED

The regulations governing the issuance of second-class commercial radio operators' licenses have been changed by the Radio Division of the Department of Commerce so that it is now necessary for applicants to obtain a grade of 75 per cent in order to pass the theory examination. This new regulation, requiring a passing grade of 75 instead of 65 per cent, went into effect during the first week in March and will undoubtedly benefit all commercial operators by reducing the number of new

licenses issued and by eliminating a large percentage of the "lids" who in the past have been interested only in learning enough theory to just pass the examination.

If the officials of the Radio Division were to change the examination question sheets, which have been in use for more than two years and are so easy to obtain that many operators refer to them as "standard," they would be performing a signal service to the many commercial operators who are now unable to obtain employment because of the present unprecedented surplus of inexperienced operators.

~ "CQ" ~ CLASSIFIED ADVERTISING

CQ will accept classified advertising from licensed radio operators and persons employed in allied services at the special rate of five cents per line.

(1) Advertising shall pertain to radio and shall be of interest to professional radio operators.

(2) No display of any character will be accepted, nor can any special typographical arrangement such as all or part capital letters be used which would tend to make one advertisement stand out from the others.

(3) The rate for advertising of a commercial nature is three cents per word.

(4) Remittance in full must accompany copy, closing date for classified advertisements is the first of the month preceding publication date. Provisions of paragraphs (1) and (2) apply to all advertising in this column, regardless of which rate may apply.

BAKELITE PANEL ENGRAVING—Radio and technical; finest workmanship. Established five years. Request price lists. A. L. Woody, Engravers, 19 South Wells Street, Chicago, Ill.

WANTED—Copies of the first issue of CQ. We will pay fifteen cents each for copies of the March number. Our supply is completely exhausted and we are unable to fill the many requests received from operators who desire to complete their files. MRR Care of CQ.

FOR SALE—Acme plate transformer, 500-watt, 1000, 1500 volts each side of C.T. Plenty of room for filament windings, \$10.00. C.D. Care of CQ.

FREE LOG BOOKS—An up-to-date amateur station log will be given to every commercial radio operator having an amateur station. No cost or obligation. Write for yours today. Radio Manufacturers Supply, 1000 South Broadway, Los Angeles, Calif.

THE WARNER BROTHERS own two modern and well-stocked radio stores in the San Francisco Bay region. 428 Market Street, San Francisco, and 22nd and Telegraph Avenue, Oakland. Full lines of operators' equipment, including bugs, relays, keys. When in San Francisco, purchase your radio equipment from Warner Brothers.

OPERATORS—If you have a bug, mill or relay to sell; if you want to obtain parts for an amateur station, advertise in the Classified Section of CQ. Special rates to commercial operators.

"I SAW YOUR AD. IN CQ." Tell this to our advertisers—it helps all of us.

SUN SPOTS ON THE MOON

(Continued from page 4)

Ham guy a CQ an' he comes back like a quartet o' cement mixers. I then explains my unusual perdicament an' he agrees to open up in five minutes an' give me NPG time from his own ship's chronometer.

"I got'er, Olaf, old man!" I shouts joyfully, doin' a hornpipe accrost the deck, "The head gazunkus up there in the dormatory says, they're gonna shoot the belated ticks in five minutes!"

Olaf, not seemin' to notice my familiarity with his maiden name, is fully as overjoyed as myself. His sodden spirits rise like a pot o' boilin' rice.

"Bye yiminee sparkee, tots te stoof! . . . Bye te yoomped oop yimmine!" he bellers gleefully, his broad pan lightin' up like a scandinavian picknic, whilst the big walrus starts pawin' me for a long lost brother. Together, we execute what looks like the May-dance of a elephant an' a giraff. Then he goes bargain' away toward the bridge, to capture the elusive time ticks, an' to ponder over sun-spots whilst lubricatin' his two-ton thought process with copious an' frequent chews of Copenhagen.

Well Sir, that little episode boosted my stock with Olaf to about one-thousand per cent-plus. The big ape begins to regard me as a sort of Grand Vizer an' we become as inseparable as two sheep-killin' dogs. It's been, "Sparkee," this an' "Olaf," that, ever since. . . To see us swaggerin' ashore together, in La Union or Colon, is just about all the belly-quakin', chuckles a ordinary human can stand. An' talk about fun! Say! The Big Four-by-four an' his pal, Slim, has made history repeat itself and grow green with envy, up one side o' the Central American coast an' down the other. Wait till I tell you about the time in. . . But that's another yarn. . . Signin' off now with 73 an' CUL. . . SLIM.

You can help your fellow radio operators by sending in monthly employment reports to CQ. We must have reliable and accurate information regarding the conditions existing in every important city. Reports should be mailed in time to reach Southern California by the fifteenth of the month. Keep us posted on the situation in your city.

Wedel Co., Inc., of Seattle, Washington, besides being one of the leading radio parts jobbers on the coast is maintaining the fastest mail order department. Operators will be given a special inducement the highest discounts available. Wedel's Portland store is located at 443 Washington Street.

Useful Tips on the Maintenance and Repair of Radio Equipment

A small alcohol torch, the kind that can be obtained from any hardware store for about \$2.50, will do most of the heavy soldering around the shack. This type of torch will burn for about thirty minutes on one charge of alcohol and will heat a large lug hot enough to melt solder nearly as fast as a blowtorch.

* * *

To prevent short circuits in a receiver from burning out tubes, audio transformers, and etc., use a 15-watt lamp in series with the "B" positive lead.

* * *

To repair broken porcelain or Pyrex glass strain or standoff insulators square off the broken end and roughen it with a file, applying soldering paste to roughened end of the insulator and the brass cup and heat with a blow torch. When both are hot enough, fill the casting with solder and insert the end of the insulator. Melted sulphur can be used instead of solder and soldering paste. Another good cement can be made from litharge and glycerine by pouring litharge into glycerine, stirring all the while, until a thick paste is formed. This paste should be applied to the joint as quickly as possible after mixing.

* * *

Use crocus cloth to clean small plated contacts. Shining up tube prongs, grid-leak contacts, tube socket springs, anti-capacity switches, and etc., in a receiver makes a world of difference in its performance.

* * *

When seizing cables start the seizing as near as possible to the flattened end of the lug. Starting the seizing where the cable joins the lug makes the joint weak and the lug is likely to twist off. Seizing over a joint helps in preventing short circuits and strengthens the joint.

* * *

When cutting armored cable to make a connection, be sure to leave plenty of rubber between the armor and the joint. It is advisable to leave at least three-quarters of an inch of surface on each layer of insulation. For high voltage cables rubber tape should be used on all joints, friction tape can be used on cables that are not exposed and do not carry more than 200 volts.

* * *

To clean polished panels use lemon oil, lightly rubbed on with a soft rag.

* * *

To keep moisture from audio transformers, use Ozite, for r.f. transformers use Mitchell-Rand No. 2305 black wax.

—JACK LARRABEE.

IMPORTANT NOTICE

All professional radio men interested in raising the standards of their trade are urged to join the EIGHT-HOUR DAY CLUB, sponsored by CQ. The EIGHT-HOUR CLUB was founded in order to secure funds to carry out the following program:

(1.) Creation of an organization for ALL commercial radio men;

(2.) Elimination of the twelve-hour working day;

(3.) Securing regulations increasing the severity of license examinations and making it compulsory for applicants for licenses to be American citizens, at least twenty-one years of age;

(4.) The compilation of TRUTHFUL and up-to-date employment data for the benefit of amateurs and other persons who may be interested in becoming commercial radio operators;

(5.) Exposing the misleading and untruthful statements made in the advertisements of certain radio schools.

The above program is entirely practical and, if sufficient support is forthcoming, IT CAN BE CARRIED OUT. Membership in the EIGHT-HOUR CLUB costs only 25 cents. JOIN NOW! Send your membership fee, and any extra amount you may care to contribute to the cause, to the Editor, CQ. Let's all get together and secure an eight-hour day and the other rights that should be ours. If we can put this program over we will have received recognition as a group, something that has never happened before. Let's go!

* * *

ELITOR, CQ:

I wish to enroll in the EIGHT-HOUR DAY CLUB, enclosed is my membership fee.

Name

Address (permanent).....

Station.....

KGTL TYPICAL AIRWAYS STATION

The T. & W. A. radio station at Kingman, Arizona, is equipped with a standard W.E. 9-A 'phone transmitter, a 150-watt composite CW set, using two 852's, and a National SW-5 receiver. The three operators, who are all ex-marine men with lots of salt water still in their veins, maintain a continuous watch and are kept busy handling traffic on the Los Angeles-Salt Lake and Kansas City-Los Angeles point-to-point circuits as well as in keeping fre-

quent 'phone schedules with the 'planes. The chief operator, W. C. Thomson, reports that KGTL is typical of many stations now used for airways communication work. He states that Kingman is an ideal location for a radio station as there is no QRM and only occasional spells of singing QRN, caused by sandstorms.

EMPLOYMENT REPORTS

Pacific Coast

(Continued from page 9)

and who have a clean conduct record."

Apparently American-Hawaiian operators are satisfied with conditions aboard these ships; of 37 operators who have been in the A-H service more than one year, 16 have more than three years' continuous service and 27 have been with the company more than two years.

GULF

At last! We have raised an operator in the Gulf. (That used to be quite a feat when we were sailing in those waters—that tropical QRN—from NAX to WAX.) Here's the report:

"Conditions for operators in the Gulf are just about the same as those elsewhere—plenty of operators on the beach and very few jobs. The school in New Orleans continues to turn out new members of the profession.

It is understood that ships of the Mississippi Shipping Company, (Mackay controlled apparatus), running vessels from New Orleans to South American ports, are converting some of their freighters to passenger carriers. The SS. Salvation Lass, the first vessel to be converted, will carry two operators, one in the capacity of chief operator and purser. The writer was given to understand that the pay will be \$165 for purser-operator combination, and \$90 for second operator."

GREAT LAKES

Reports received from several correspondents in the Lakes district indicate that there will be a large number of operators on the beach after the season finally opens. Some interesting information contained in the report of one of our Chicago correspondents given below: "Nearly all operators on the Lakes stand watch from 7:00 a.m. until 11:18 p.m. Navigation will not open as soon as expected; however, there are a few ships running at the present time (April 11th) and quite a few will be put into service about April 15th when marine insurance goes into effect. The majority should be running by May first."

Next month we hope to give complete and detailed reports regarding wages, working hours, unemployment, ships in commission, and operating conditions generally.

"I SAW YOUR AD. IN CQ." Tell this to our advertisers—it helps all of us.

TIME CONVERSATION CHART

LONDON G.C.T.		NEW YORK 75th		SAN FRANCISCO 120th	
0000	12 MN	1900	7 PM	1600	4 PM
0100	1 AM	2000	8 PM	1700	5 PM
0200	2 AM	2100	9 PM	1800	6 PM
0300	3 AM	2200	10 PM	1900	7 PM
0400	4 AM	2300	11 PM	2000	8 PM
0500	5 AM	0000	12 MN	2100	9 PM
0600	6 AM	0100	1 AM	2200	10 PM
0700	7 AM	0200	2 AM	2300	11 PM
0800	8 AM	0300	3 AM	0000	12 MN
0900	9 AM	0400	4 AM	0100	1 AM
1000	10 AM	0500	5 AM	0200	2 AM
1100	11 AM	0600	6 AM	0300	3 AM
1200	12 NN	0700	7 AM	0400	4 AM
1300	1 PM	0800	8 AM	0500	5 AM
1400	2 PM	0900	9 AM	0600	6 AM
1500	3 PM	1000	10 AM	0700	7 AM
1600	4 PM	1100	11 AM	0800	8 AM
1700	5 PM	1200	12 NN	0900	9 AM
1800	6 PM	1300	1 PM	1000	10 AM
1900	7 PM	1400	2 PM	1100	11 AM
2000	8 PM	1500	3 PM	1200	12 NN
2100	9 PM	1600	4 PM	1300	1 PM
2200	10 PM	1700	5 PM	1400	2 PM
2300	11 PM	1800	6 PM	1500	3 PM

Operators will find this chart useful for transforming the Short-Wave Press Schedules, published in the April number of **CQ**, from G.C.T. into local time. More schedules are needed, especially those of Mexican, European, South American and Australian local weather press and hydrographic reports. Let's hear from some of you sea-going brasspounders.

BREAKS

(Continued from page 6)

W. L. Clemmons, director of the Gulf Radio School, has been instrumental in securing many new subscribers to **CQ**.

* * *

Interesting Experiences, No. 2—Listening to a 64.9 percent trying to make the RI believe that it **really** should be 65 percent. (Now 75 percent, I am happy to announce.)

* * *

Yes, and who remembers what CQD means?

* * *

Will some operator please send me the names engraved on the monument at the Battery.

* * *

David Sarnoff, president of RCA, was one of the first radio operators employed by the old Marconi Company. I wonder if he still has a commercial ticket.

* * *

KFWI, San Francisco will soon install a new 1 KW, W.E. transmitter and new

speech input equipment, according to Ernest Jefferson, Technical Director.

* * *

Arthur C. Clayton, now at KIT, Yakima, Washington, would like to hear from some of his old sea-going friends.

* * *

WNOX, Knoxville, Tennessee, is kept on the air by J. B. Epperson and N. S. Hurley.

* * *

S. D. LeBarre, Chief Engineer for WPAD, says every time he sees a key he gets that peculiar longing that we all know so well. Well, OM, the 8800 tonners are still drifting around.

* * *

Those who knew Clyde Wend at sea may get in touch with him at WHBU, Anderson, Indiana.

* * *

Which one of you broadcast operators is going to 'kick through' with some real hot studio gossip?

* * *

Several of the gang have requested service information and technical data on W.E. broadcast transmitters. Who knows why they work? I don't.

* * *

Louis S. Butler, Radio Electrician, U.S.S. Milwaukee, writes from Panama Bay in response to KUP's announcement regarding **CQ**. He states that KUP press is fb in those waters and is copied by many Navy ships.

* * *

Julius C. Geise is chief operator at WKJC, Lancaster, Pennsylvania.

* * *

Who can suggest any improvements for this column? There's plenty of room.

* * *

The one about the Irish steam schooner skipper is a joke that you'll never hear.

* * *

Famous Last Words.—"But it must be true, I heard it at 75 Varick Street."

* * *

An old ice box on the boat deck is used for a shack on KFDT (S.S. Calawaili). Lasso must think its radio operators are pretty "hot."

* * *

Is Ralph Krows still in Seattle?

* * *

Carter McCormick was operator on the S.S. Sandmaster in 1926. Where is he now?

* * *

This column will be devoted to "gossip," personal items, general remarks and general cussedness. If you would like to locate one of your old operator friends, write to me and I will ask him where he is hiding. CU next month and 73.

—The SKIPPER.

"I SAW YOUR AD. IN **CQ**." Tell this to our advertisers—it helps all of us.

BRASS POUNDING WITH LINDBERGH

(Continued from page 8)

best known man in the world—we proved it. During the Maya flight, we made an unscheduled stop at a small Indian river village near the British Honduran border. It was the sort of place one would expect to find in the middle of a jungle, possibly two dozen shacks—no mail, no telephone, nor telegraph. No newspapers reach there save years late, and by accident. Our landing caused great commotion, and a few of the more venturesome inhabitants came out to see what we wanted. In the leading canoe was a man staring intently at us, as Lindy and I put over the anchor. In a few seconds he excitedly shouted to his followers that the visitor was "Leenborg," and for five minutes the air resounded with "Viva el Colonel Leenborg." Every person in town came out to the plane. Those who had no boats swam out. His popularity with those Indians was not to be questioned and he went away even more popular than he was on arrival. The big question is, how had those simple people ever heard of him, and how could they have recognized him?

The radio equipment used for this trip was a standard panair 10-watt MOPA, with a range from 32 up to 800 meters, which "kicks out" beyond one's expectations for such low power. In a plane one cannot carry the power he would like to have. To the best of my knowledge, more words of traffic were handled on this flight for the time consumed, than on any other flight ever made, not excluding the flight of the Graf Zep. And ten watts handled it.

Colonel Lindbergh decided that radio aboard aircraft is not only practical, but well worth its weight aboard, as a factor in increasing safety. In a radiogram to E. F. Bourne, Panair Communication Manager, shortly before we arrived in Miami, he said that communication was 100 per cent efficient throughout the entire flight. I believe the Colonel is sold on radio.

BE A RADIO OPERATOR IN 30 DAYS!

(Continued from page 3)

The most remarkable part of my course is that there are NO BOOKS! NO LESSONS! NO NOTHING! ALL PRACTICAL WORK! This hokum about having to have a lot of experience to become a radio operator is all bunk! The longer an operator is on duty, the less he actually knows. If you don't believe this statement, ask any announcer. Therefore, you can see that you have the jump on the average operator right now. Before you start you know nothing (or you wouldn't have started) —the operator knows less

than nothing. Perhaps you have read with awe the reminiscences of oldtimers in the operating game; have heard them speak of the days of coherers and the like. That is all blah. Let me ask you how a "coherer" would look in a modern broadcasting studio? The sopranos look bad enough.

Now that we have become well acquainted with each other, let us proceed with the first (and last) lesson. Refer to diagram A (page 46) which shows clearly the theory, principle and practice of radio. The only apparatus needed is a large tub. (The bath-tub will do if it doesn't happen to contain home-brew.) Procure some shot (Chicago stations please note) and a little block of wood, or anything that floats—Ivory Soap will do. Fill the tub with water to within an inch or two of the top. Place the block of wood (or Ivory Soap) in the water at the outer edge. The floating object will rest on the water without any movement as long as the water remains calm. If small shot, or pebbles, are dropped one at a time into the water near the center of the tub they will create a series of waves on the surface of the water which will radiate equally in all directions. These waves rock the floating object at the outer edge of the tub. Get the idea? Of course you do! The shot represent the sending station, the water waves the radio waves, and the floating object the radio receiver. Simple, isn't it? Now that's all there is to it. (Of course, it might be a good idea to learn Ohm's Law, but if you don't happen to have it handy, any good law that your lawyer can spare will be OK.) Now, armed with this great fund of knowledge of untold scientific value, you are fitted to pass any examination and are a full-fledged operator—that is, at least, from an operating standpoint. (I neglected to mention the mere formality of taking the government examination in order to secure a license, don't let this worry you. It's simple, exceedingly simple!)

Now that you have mastered the entire technical requirements necessary to be a radio engineer of the highest order, it is only fair to set forth some of the other requirements necessary in order to be a radio operator. (Of course, if you intend to take a position tomorrow with the CBS, perhaps you will not have to meet all these requirements—the work of these operators is more specialized.) However, for the independent stations the following requirements are absolutely vital: Remember the days in vaudeville when the comedian came on the stage and made the orchestra leader the butt of his jokes? Well, with the passing of vaudeville, the radio "comedian" makes the operator the "gag" man, you must be able to exercise great will-

"I SAW YOUR AD. IN CQ." Tell this to our advertisers—it helps all of us.

power to restrain yourself from killing at the first joke. So much for requisite No. 1. Next, there is the question of studios. Of course, the announcers are so busy taking a chain break every fifteen minutes (if they happen to be around) that it is a distinct hardship for them to turn out the lights in the studios after programs. Therefore, you must have an eagle eye and be able to detect an empty studio with a light in it, even if it's a mile away. Also, there is the question of keeping the artists in the studio during the program, the production manager is usually SO weary, it would be an imposition to ask him to have anything to do with the artists.

And telegrams! Oh yes, you know that each chain station has its own private wire, if you have ever been a messenger boy you will go over big. (If you still happen to have your cap—Western Union or Postal—you might bring it along.) Perhaps you know that studios just will get untidy, one of your jobs is to keep them looking nice. If you have ever been a custodian or janitor it won't be long before you're promoted to a chief operator. Can you repair radio sets? Well, if not, you had better get busy. You must be able to repair any set owned by any of the staff—for after all, are you not a "radio expert"—besides, everyone likes to save money. Along the same line it would also be a splendid idea to become proficient repairing electric irons, vacuum cleaners, cigar lighters, and other mechanical novelties.

Next there is the question of blood pressure. Are you easily aroused to a fighting pitch? Can you keep cool under all conditions? If you can answer "yes" to these you are admirably fitted to become an operator; however, you won't possess these good qualities for very long. No sir! Let an announcer bawl you out for not having awakened him so he could make a cue break; try and follow a continuity through a program while the producer changes it around while it is on the air; try to keep the studios clean, prohibit

smoking, keep the lights turned out; copy messages with one hand and control volume with the other; just try to do all this—and much more. Can you do it? If you can, you're a wonder.

There you are youths of America! Opportunity is knocking at your door (knocking H—, it's pounding). Are you going to pass up this golden chance of a lifetime? Of course you're not! The very fact that you have had the perseverance to continue reading this article to this point (or was it that you didn't have anything else to do?) shows that you are a glutton for punishment. Therefore, I say unto you, you SHOULD be a radio operator. Why not finish this course in style? Send for my handsome "Diploma," it is beautifully engraved and is printed on sheepskin. When you get it, soak it in water for an hour, removing the ink, then you may use it as a chamois skin for polishing your car. (What? You haven't a car? Then you simply MUST become a radio operator so you can afford one.)

Sorry, friends, I must quit now. I see there are some lights burning in an empty studio and I must turn them out. Also, I still have my dusting to do.

SUBSCRIBE TO CQ

Radio Operators! CQ is published for your benefit. We are attempting to provide you with a real live magazine, full of interesting stories, articles and items. In order to carry out this plan we need your support; send in your subscription NOW. Just fill out the form below,—write a check for \$1.50,—place the two in an envelope addressed to CQ—mail the letter—and we will do the rest.

CQ, 1725 Bedford Road,
San Marino, California

I enclose \$1.50 for one year's subscription to CQ, please start with the..... number.

Name.....

Address to which magazine should be sent.....

I have a friend who would be interested in CQ, please forward a sample copy to him.

Name.....

Address.....

Atlantic Coast and Great Lakes Men — Please Note

CQ needs correspondents and advertising solicitors on the Atlantic Coast and the Lakes. If we are to serve you effectively we must be kept informed of the latest developments in your districts. We need employment reports, personal items, station data, technical articles, press, weather and time schedules, good stories, jokes, cartoons and any other material of interest to radio men. Let's hear from you.

"I SAW YOUR AD. IN CQ." Tell this to our advertisers—it helps all of us.

NEW SHORT-WAVE RECEIVER

In an article in the April-May issue of "Short-Wave Craft," Robert Hertzberg describes an entirely new type of short-wave receiver that covers a wave length range of 15 to 650 meters without the use of plug-in coils. In this receiver the shifting from one wave to another is accomplished by an ingenious switching device, having two cam switches each carrying fifteen cams. The switches are mounted so they can be controlled by one knob on the panel. As the knob is turned, the proper connections are made between four pairs of tuning coils and two double-section variable condensers. There are seven combinations, producing the following wave length ranges: 15 to 23 meters, 22 to 41, 40 to 75, 70 to 147, 146 to 270, 240 to 500, and 470 to 650.

The new receiver, which is known as the Pilot Universal Super Wasp, has one stage of tuned screen-grid R.F. amplification; a screen-grid regenerative detector; an impedance coupled first audio stage and an '45 push-pull output stage. Unlike the old Super Wasp, the Universal mounted on the chassis, permitting the use of rigid construction and eliminating the necessity of the "trimmer" usually used to make the plug-in type coils "track" over the entire range of the tuning condenser.

Judging by the description in "Short-Wave Craft," the Universal Super Wasp is the receiver that the many marine operators who "carry their own," have been looking for, especially if it is possible to boost its wave length range to 800 meters by adding fixed capacities across the variable condensers.—S.R.C.

(After reading the article mentioned, we see no reason why this set cannot be made to tune as high as 1000 meters.—Ed.)

CORRESPONDENCE SECTION

(Continued from page 10)

NATIONAL RADIO INSTITUTE

Washington, D. C.,
April 20, 1931.

Editor CQ:

Your article appearing in the April issue of your magazine under the title, "Notes From QRD?" referring directly to the National Radio Institute has come to my attention.

It has always been our policy to welcome constructive criticism in connection with our advertising, our course and our methods, and I feel in justice to all concerned that you should have given us an opportunity to prove or disprove the accusing statements made in your article before putting them in print.

Really, I like the whole tone of your article if you are sincere in the last words, "Let's fight them with the truth."

Are you able and will you furnish us a list of all our graduates on the west coast and prove to me that some of them are not earning \$50, \$60, and \$75 to \$100 per week?

Are you in a position to show several graduates on the west coast are not holding a job paying \$50 and \$60 per week?

Are you in a position to say that the men employed in teaching and handling the technical work of the National Radio Institute do not even average \$30 per week?

Now if that is absolutely true, I will be the last one to criticize your helpfulness in correcting a very grave evil.

I want to close with this statement that if your organization or any other organization doubts the truth of statements made in our advertising, notify me and if I cannot produce evidence to substantiate these statements, I promise you that these statements will be eliminated as soon as possible from our advertising copy.

If there is any question about this last statement of mine, I will be very glad to give you the name of Government agencies which would be far more effective in stopping publication of misleading and false statements by correspondence schools if the party making the complaint can prove this.

I shall be only too glad to have you publish this letter in your magazine as a

(Continued on next page)

NOTICE TO SUBSCRIBERS

Now is the time for those of our subscribers who were kind enough to return the subscription pledges, accompanying the CQ announcement letter, to fulfill their promises and remit a dollar and a half for one year's subscription. In order to keep office expenses at a minimum, thereby making more funds available for improving the magazine, we are not sending out statements. Use the form below. Please remit at your earliest convenience.

CQ, 1725 Bedford Road, San Marino, Calif.

Here is the \$1.50 I promised to send upon receipt of the first issue of CQ. Please place my name on your subscription list for one year.

Name.....

Address to which CQ should be sent.....

CORRESPONDENCE

(Continued from page 17)

reply to the accusation which you have made, and which I think should be done in fairness to all concerned.

I shall be very glad to hear from you further in regard to this matter.

Yours very truly,

(Signed) J. E. SMITH,

President National Radio Institute.

Here is the reply that was sent to Mr. Smith:

San Marino, California,

April 29, 1931.

Dear Mr. Smith:

Not having access to the records and books of the National Radio Institute, I am unable to answer the questions contained in your letter of April 20th; however, I would like to learn from you just how many of the recent graduates of the National Radio Institute are employed on the Pacific Coast at salaries above \$50 a week.

I am of the opinion that the advertising sponsored by the National Radio Institute is misleading to the extent that it does not fairly and truthfully represent the average conditions existing in the radio field at the present time. Perhaps you know that the \$50, \$60 and \$75 to \$100 a week jobs are the best obtainable in radio in this section of the country. These jobs are usually filled by men with years of radio experience. Rarely are inexperienced graduates of any radio school, no matter how well trained they may be, able to secure these high salaried jobs.

The United States Government will not license a person as a FIRST-CLASS radio operator until he has had at least one year of experience in certain radio stations, because of this there are many good radio jobs that a beginner cannot hold.

I do not question the fact that you can prove every statement made in your advertising. Nevertheless, I believe that your advertising does not tell the WHOLE TRUTH regarding opportunities and conditions in the radio field. In an editorial in the March issue of this magazine, I publicly called your attention to the statements made in the advertising of the National Radio Institute to the effect that shipboard operators receive salaries of from \$85 to \$200 per month. Again I wish to ask: Will you inform me of one American commercial vessel on which any operator is paid as much as \$150 per month solely for radio work? The chief operator on our largest ship, the S.S. "Leviathan," receives a salary of only \$125 per month from the steamship company. Also, I wish to call your attention

to the wages of \$55 per month paid by the Matson Navigation Company to the third operators on its passenger ships the "Sierra," "Sonoma" and "Ventura." There are many American operators who are obliged to work for twelve hours a day at salaries as low as \$70 per month. There are many good radio men with YEARS of experience now walking the streets because they are unable to find work in their chosen profession. Do you mention any of these facts in your advertising?

Recently I distributed a questionnaire to all American marine radio operators. One of the questions was: "Do you believe the statements, concerning marine operating, made by radio schools in their advertising are truthful representations of the conditions existing at the present?" Of the hundreds of marine operators sending in replies, only THREE answered "YES" to this question.

Do you consider it fair to your present students, and to the many men who have graduated from your Institute, to continue to state in your advertising that there are "plenty of good jobs in radio that pay from \$50, \$75 and up to \$250 a week," at a time when there are hundreds of experienced radio men who are unable to obtain employment?

I shall be glad to hear from you further in regard to this matter.

(Signed) MERVYN R. RATHBORNE, Jr.,
Editor, CQ.

In the same mail with Mr. Smith's letter and from his home-town, we received the following:

Washington, D. C.,
April 20, 1931.

Editor CQ:

Your timely and interesting booklet was received several days ago and I have been decidedly impressed with it, thought I advocate stronger and more decisive action, having held a first-class commercial license for ten years and having no place to go for work except here in the air corps, at \$30.00 per month.

There is quite a good deal I might say but am pressed for time and will of course do so at my first available opportunity.

In the meantime please send me your advertising rate card so that I may have an opportunity of paying my subscription with money earned in this way, as I have not the \$1.50 at present—which is obvious when considering the income.

With kindest regards, congratulations, and most sincere assurance that I am with you from here on, I remain.—N. L. P.

"I SAW YOUR AD. IN CQ." Tell this to our advertisers—it helps all of us.

GOOD RADIO BOOKS

(Radio Engineering Principles by Henri Lauer and Harry L. Brown, Second Edition. Published by McGraw-Hill Book Company, 370 Seventh Avenue, New York City. Price \$3.50.)

In this book Lauer and Brown present the underlying principles of radio in a clear and concise manner, practically all the theoretical explanations are given in both mathematical and non-mathematical form. In order to understand the mathematical treatment of some of the subjects a knowledge of calculus is essential; however, mathematics are used sparingly and the radio enthusiast having a knowledge of the elementary principles of electricity and radio will find **Radio Engineering Principles** a worthwhile addition to his radio library.

The subjects covered include: The Un-

derlying Electrical Theory of Radio; Properties of Oscillatory Circuits, with explanation of impedance, series and parallel resonance, of capacities and inductive reactance, and resonant circuits; Antenna Systems and Radiation; Damped Wave Telegraphy; Continuous Wave Telegraphy, covering the operation of the various types of high frequency alternators and arcs; The Three Electrode Vacuum Tube as an amplifier, detector, oscillator, and modulator; and Radio Telephony. The theory of oscillation generation and the theory of power and gridleak detection are explained in detail, both quantitatively and qualitatively. Confusing analogies are conspicuous by their absence.

Radio Engineering Principles is an excellent book for the radio operator or technician who has graduated from radio books written in the popular style.

**Through the Courtesy of a Number of Leading Radio Stores,
CQ Has Been Placed on Sale in the Following Cities:**

SEATTLE—Wedel & Co.,
520 Second Avenue.

SEATTLE—Oxo Radio Mfg. Co.
1022 Third Avenue.

SAN FRANCISCO—Warner Bros. Radio Co.,
428 Market Street.

LOS ANGELES—Radio Manufacturers' Supply,
1000 South Broadway.

Purchase your radio equipment from these concerns and mention CQ — it helps all of us.

PYREX INSULATORS
MICA TRANSMITTING
CONDENSERS

EDGEWISE WOUND
INDUCTANCES

MAin 5077

OXO Radio Manufacturing Company

**WIRELESS TELEGRAPH AND TELEPHONE EQUIPMENT
BROADCASTING STATION EQUIPMENT**

At your service at any time for:

Repairing and Re-building

Building of Sets to Order

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Transmitters and Receivers for All Frequencies

C. W. and Phone Equipment

1022 THIRD AVENUE - - - SEATTLE, WASHINGTON

At Last!

A Complete Set of Five Diagrams

Acceptable for Commercial First and Commercial Second Class
License Examinations—Consisting of:

- 1.—ARC.
- 2.—SPARK.
- 3.—SELF - EXCITED VACUUM TUBE OSCILLA-
TOR.
- 4.—MASTER OSCILLATOR POWER AMPLIFIER.
- 5.—MASTER OSCILLATOR POWER AMPLIFIER
WITH 'PHONE ATTACHMENT.

Each diagram is complete, containing auxiliary battery and charging apparatus, starter, motor-generator, transmitter, receiver and all associated equipment; such as meters, change-over switch, and charger for filament batteries. Every part is numbered and described.

Printed from drawings prepared by an experienced commercial operator familiar with the license examination requirements. Each piece of apparatus is clearly shown and conveniently arranged.

Diagrams measure $8\frac{1}{2}$ by 11 in., the size of standard typewriter paper.

**IF YOU ARE STUDYING FOR A COMMERCIAL
LICENSE EXAMINATION YOU CANNOT
AFFORD TO BE WITHOUT THESE DIAGRAMS.**

The complete set costs only—

75c

Order Yours Today From

CQ, 1725 Bedford Road, San Marino, California

Attention . . .

**Broadcasting Stations, Wireless Operators,
Power Stations, Service Stations,
Engineers, Contractors
EVERYWHERE!**

Buy in Seattle and Portland

At the World's Lowest Wholesale Prices

We carry in stock for Transmitting and Receiving, one of the most complete assortments of

RADIO PARTS, TUBES AND ACCESSORIES

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(We actually carry the merchandise in stock.)

EVERY NATIONALLY KNOWN PRODUCT OF MERIT

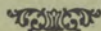
**For Building Transmitting and Receiving Radio Sets, Amplification
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Technical Advice FREE

Standard Merchandise Only—No Job Lots—No Distressed Imitation Parts

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Established 1888

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Portland Branch, 443 Washington Street, PORTLAND, ORE.—Beacon 7783

Cable Address, "WEDELCO"—W. U. Code



You Can Quickly Increase Your Speed in Sending and Receiving Through CANDLER SYSTEM COURSES

The only specialized courses for Radio and Morse Operators. Over 45,000 of the world's leading operators owe their **SKILL** and **SPEED** to The Candler System.

Skill, Speed and Accuracy in handling key, bug, pen and typewriter have meant promotion and success for thousands. If you are ambitious to become a **HIGH CLASS** operator, we can help you to quickly achieve your goal.

The Candler System is a Post Course of intensive training for developing sending and receiving speed through Scientific methods (not trick theories). It trains the Brain, Muscles and Nerves to CO-ORDINATE in doing fast, accurate work. Develops power of concentration; gives you confidence by making you sure of yourself at all times. Shows you how to copy far enough behind, without nervous or mental strain so you can make a clear, clean-cut, accurate copy. Shows you how to send with key or bug, rapidly and smoothly for any length of time without tiring. No matter what your speed is now—we guarantee to increase it.

Let the Candler System Help You To Realize Your Ambitions

If you are not satisfied with your progress—if you want to perfect yourself in sending, receiving and typing and become a real **TOP NOTCHER**, utilize the Scientific methods of The Candler System and "get somewhere." Write us today, outlining your difficulties and ambitions. We will answer any questions without cost or obligation, and give you our personal counsel as we have to tens of thousands of others during the past 20 years, and give you further evidence of how The Candler System Courses will help you quickly to realize your ambitions. Write or,

Mail

Coupon

Now!

My present speed is: Sending.....wpm. Receiving.....wpm.

(....) I want to qualify in both American Morse and Continental.

(....) I am giving in a letter further information about myself, my ambitions, etc., to enable you to give me your personal advice.

Name..... Age.....

Street

City..... State.....

(PRINT)

Win Rapid Promotion

The sun never goes down on Candler System Radio operators. They are to be found in big land stations, on ships at sea, in Broadcasting stations, Commercial and Amateur Stations everywhere. They win rapid promotion, they are successful because they are doing their work efficiently, while untrained, inefficient operators are being shifted about in poorly paid, mediocre jobs with never a chance for advancement. Thousands of letters similar to these come into our offices from all over the world.

"Already I've accomplished one thing I never thought possible, and that is to stay four or five words behind in copying and my sending is just about perfect. My friends remark about it. The Candler System in High-Speed Telegraphing and the course in Radio-Touch Typewriting have certainly done wonders for me.—Raymond Bell, Radioman, U.S.S. Idaho, San Pedro, Cal.

"Since taking the Candler System I can copy 7 to 10 words behind as fast as they come without being the least bit nervous. I can send like a streak of lightning and my arm does not weaken or become tired. If many of those with whom I work would take your System life would be worth living." (Signed) A. C. Jerrett, Post Office Dept., Gambo, E. B. Newfoundland.

"Received two promotions in four months since taking SYSTEM; am being considered for another. The ease with which I telegraph and use "mill," not to mention other improvements, has repaid me a thousandfold."—K. M. Martin, 2033 Webster St., Oakland, Cal.

THE CANDLER SYSTEM CO.

CQ-3

6343 So. Kedzie Ave., Chicago, Illinois

Without obligating me in any way, send information on the course or courses I have checked:

(....) **CANDLER SYSTEM Senior Course for Radio Operators**

(....) **RADIO-TOUCH-TYPEWRITING COURSE**