Price \$8.50 yearly Single issue \$1.00

# THE HORN SY

Farm Radio

Radio News for January, 1925

By J. FARRELL

A point has been reached where the farmer cannot well do without a radio set. The information broadcast daily by the U.S. Department of Agriculture, through numerous broadcast stations is invaluable to the modern farmer. Mr. Farrell proves it, in a pleasing manner.



One of the radio exhibits of the U. S. Department of Agriculture that is attracting wide attention throughout the country. It leaves nothing to the imagination of the farmer. It tells everything he has wanted to know about radio and what it can do for him.

HE hold that radio has taken on the rural population of the United States is strikingly brought out in the latest survey made by the United States Department of Agriculture. This survey, made through more than 800 county agricultural agents,—Government representatives who come in daily contact with farm people,—developed the fact that the number of radio sets on farms is now twice the number in use a year ago.

The survey showed that on the average there are now in use 130 radio receiving sets in each agricultural county, which figure projected to the 2,850 agricultural counties in the United States rolls up a grand total of 370,000 sets, as compared with a similar estimate of 145,000 sets a year ago. In some counties more than 90 per cent, of the farms are reported to have radio equipment Over 50 per cent. of the county agricultural agents themselves have radio sets in their offices for the dissemination of agricultural news.

The writer, in previous issues of RADIO EWS has described fully the nation-wide NEWS News has described fully the nation-wide agricultural news broadcast service of the Department of Agriculture from upwards of 80 broadcast stations throughout the country. There is practically no farm community in the United States where crop and market advices are not now available, and the big job now, as the Department officials see it, is to encourage greater use of radio in the reception of these advices. Through the county agricultural agents, whose work it is to encourage the use of modern marketing methods, it is hoped to increase the use of radio until practically every farmer in the country may have the benefit of this comparatively new medium for keeping informed of current markets conditions.

The drive for greater farm use of radic will be made by giving individual demonstrations of radio on farms, and through





Postal Identification

Statement, page 2

novel exhibits that have been devised for novel exhibits that have been devised for showing at country fairs, national agricultural conventions, and at other affairs that bring together large groups of farmers. The survey brought out the information that the greatest farm use of radio is in places where the local county agents and agricultural college officials have established radio on a daily practical basis and visually demonstrated to farmers the simple operation of the sets. tion of the sets.

tion of the sets.

Many county agents reported in the Federal Survey that one of the chief reasons why more farmers do not own radio sets is because they feel that operation of the instruments calls for great technical skill. They are confused by such terms as Neutrodyne, Heterodyne and other radio nomenclature. To overcome this situation, the launching of nation-wide campaigns in country newspapers, farm journals and other publications that reach farmers, which will publications that reach farmers, which will explain in simple language the theory and practice of radio, is proposed.

Proper methods of erecting antennae

should be particularly stressed in these campaigns, say the county agents, inasmuch as in many cases of dissatisfaction with radio the difficulty has been found due to faulty aerials and connections rather than to the sets themselves. Several of the county agents are themselves radio technicians and have won many farmers back to radio by demonstrating the simple principles of tight connections, unbroken circuits, etc.

### "GIVE RADIO DEMONSTRATIONS!"

often written in capital letters, is the common plea in the reports. "Farmers have been buncoed so often," says one agent, "that they are skeptical of everything. I have found that the easiest way of interesting farmers is to carry around a demonstration set; rig up a utility antenna in his front yard, tune in, and there it is—so quickly done and so simple that it fairly takes him off his feet." As a result of this suggestion, several of the State agricultural colleges which jointly with the Federal Department of Agriculture employ the county agents, have arranged to equip all their agents with demonstration radio sets.

with demonstration radio sets.

The State agricultural colleges are keenly interested in increasing the use of radio among farmers, because they feel that radio among farmers, because they feel that radio offers farmers a real opportunity to employ modern distribution methods in their business. The county agent office, farm bureau headquarters, or co-operative marketing organization which does not use radio to keep in touch with current agricultural conditions is now considered behind the times, but it is felt that the greatest benefits will come only when every farmer has his own set in his home.

come only when every farmer has his own set in his home.

The survey showed that of the radio sets in use, about 50 per cent. are home-made, particularly where there are farm chlidren of school age. Some of these home-made sets are costly affairs running as high as \$350 each. The technical phases of radio are more fully understood in these instances and an important movement has developed in the organization of groups of the farm boys and girls into radio clubs that give radio demonstrations and service to farmers over a wide territory. This service combined with that of the county agricultural agents, and the relaying of agricultural reports by telephone companies over rural lines, ports by telephone companies over rural lines,

RADIO NEWS FOR MAY, 1932

bring the practical benefits of radio to up-wards of 1,000,000 farmers.

One novel suggestion offered in the sur-vey is the establishment of so-called "service stations" by manufacturers, so that purchas-ers of manufactured sets may receive expert advice at some local point on the operation of the equipment, erection of antennae, and other technical phases. This service, it is suggested, should be given free for a limited period until the buyers become familiar with the working principles of radio. There is need in any event, it is said, for simple technical descriptions with each set, a kind of "what makes it work" explanation. In conjunction with the service stations it is proposed to give written courses in radio technique.

Government agricultural officials are greatly pleased with the extent to which farmers are using radio, as revealed in the survey just made, and feel that the coming year will show even greater progress. Farmers generally are now in the best financial condition in four years, and the factor of cost of radio sets is less of a hold-back to purchases than at any time since the establishment of radio broadcasting. They have the price, and with radio being regarded as a necessary farm implement, it will not be long, it is felt, before radio sets on farms will be as common as milk pails.



#### FROM THE MARCH, 3082, ISSUE OF "RADIOVISION"

News item:

Scientists at the Tampa, Florida, ski grounds have unearthed another of those queer specimens of the Genus Homo. The skull has the usual indentations or depressions which are so common in specimens that are believed to have lived about the year 1925.



THE PROBABLE CAUSE



RADIOPHRENOLYSIS

The theory is prevalent that the deformity resulted from the habitual use of the old head-phones which seem to have been used in

the reception of messages, the constant pressure causing the tissue to waste away.

The mulady has been termed Radiophrenolysis. The sketches give the scientist's conceptions of the appearance of this primitive race hich one time roamed the earth.

—Contributed by Clyde E. Volkers.

#### ASK DAD-HE KNOWS

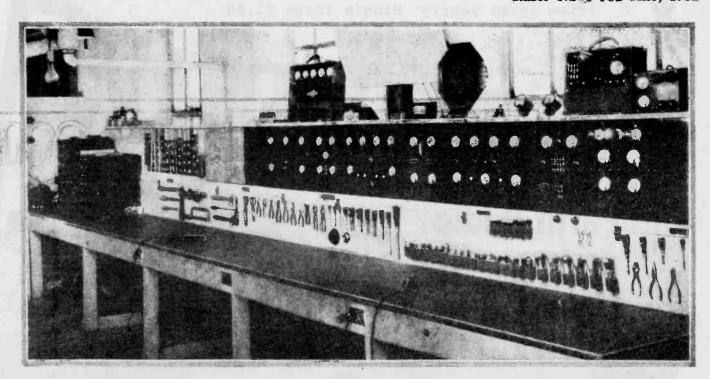
"Pa, which is worse—an automobile maniac or a radio nut?"

"A radio nut is the worst thing on earth, my boy—an automobile maniac kills you quickly with his gas buggy and it's soon all over, but a nut with a loud talker drives you crazy and keeps you that way the balance of your life."

—Contributed by H. C. Newton.

### IT'S THE BUNK

When people say they receive radio messages through iron beds—it's thè "bunk."



# The Service Bench

Advertising

for Enterprising Servicemen-

PUBLICITY and advertising are the oil and grease on the cogs of modern industry. Advertising is a direct and unequivocating plug for a product or one who sells it. As far as the serviceman is concerned, it may take several forms, aside from the mouth-to-mouth advertising of satisfied customers. customers

The shop sign itself may be made an attractive advertisement. The manufacturers of practically all receivers and tubes are glad to supply their dealers and representatives with a variety of signs, from the simple placard to the flashing electrical display, at cost. These signs incorporate the dealer or serviceman's name in an advertisement of their own products.

If the serviceman possesses a service truck.

ment of their own products.

If the serviceman possesses a service truck, he should take advantage of its possibilities as a mobile advertisement. Each side should be placarded with a forceful and colorful declaration of name and specialty. Several slightly unconventional ideas for such signs are contained in the suggested newspaper advertisements on the opposite page. The truck should be maintained clean and sbining. The wording of the sign should be simple—the colors brilliant but attractive and not "sickly."

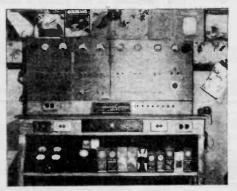
#### Newspaper Advertising

Newspaper advertising

Newspaper advertising is useful in two
ways. In the first place it provides an effective method of direct appeal. Secondly, it
paves the way for the free appearance of
publicity items. The amount of space
taken will be determined, for the greater,
part by the rates—which are reasonably low
in all but the large city newspapers. It will
be found generally that a series of small advertisements is much more effective than a
few attempts at large space, at the same few attempts at large space, at the same cost.

### Conducted by Zeh Bouck

You will find on the page opposite sample newspaper advertisements for the radio serviceman—advertisements running the entire gamut of space and appeal. They have been prepared with a thought to providing elasticity. The space may be varied in several cases by changing the length of stock borders, and the majority of the layouts admit of considerable latitude in copy. However, in many instances, it will be desirable to change only the name of the service organization. The types used in the portions of the advertisements that have been set up, are standard fonts, and can be duplicated are standard fonts, and can be duplicated



A Canadian service bench—that of A. Bellemare, Shawinigan Falls, Quebec. Extremely neat, light and roomy. The service bench itself can be made an interesting display, contributing considerably to service and accessory sales.

or very closely approximated by almost any local printing shop.

These ads can be used by the serviceman in several ways. Line-cuts can be made to any desired size, direct from the illustrations in several ways. Line-cuts can be made to any desired size, direct from the illustrations shown. Such cuts, of course, will duplicate the type exactly. The portions devoted to the names of the servicemen can then be mortised out, and new names substituted in a harmonizing type. Your local printer can do this for you. Another possibility is to make line-cuts only of the display or illustrative material, and to reset the complete advertisement in accordance with your own requirements. Also, the Service Bench has made arrangements whereby the serviceman can be supplied with mats of the entire series of twelve advertisements at the nominal cost of one dollar. Send in your requests with a check or a dollar bill pinned to your letter, addressed to Dept. M, Radio News. These mats are standard single and double column sizes and include all hand work—pictures, display lettering and in some cases borders—but not set-up type. From these mats, your local printer can make stereos, and set up the advertisements as shown here or with variations as you require them. This will save you the large sum ordinarily spent for the cuts.

The accompanying advertisements are by no means limited to newspaper publication, and many of them are readily adaptable to postcards, envelope stuffers, blotters, stickers and circulars.

POSTAL IDENTIFICATION STATEMENT The Horn Speaker (USPS 956120) published monthly, except July August Jim Cranshaw, 9820 Meadow Drive, Dallas, Texas 75217. rates are \$8.50 Subscription

per year, \$15.00 for two years. Second class postage paid at Texas. POSTMASTER: SEND Dallas, ADDRESS CHANGES TO, THE HORN P. O. BOX 53012, SPEAKER, P. O. BO DALLAS, TX 75253-0012 Subscribers, advertisers,

photographers and please use the following

THE HORN SPEAKER P. O. BOX 53012 DALLAS, TX 75253-0012 RADIO NEWS FOR MAY, 1932

951



bought, sold and serviced. Television, short-wave sets and converters. Home demonstrations. Our prices are the lowest compatible with sincere, expert attention to your radio needs.

HOGAN'S HAINES FALLS Radio Shop Telephone 628





### The Radio Hospital

Rush calls are our specialty. Day or night a phone call brings an expert for any job from a tube replacement to a complete overhaul!

HOGAN'S RADIO SHOP Emergency Call 628!

### RADIO SERVICE





can fill your every radio need from installation to repair. Finest equipment in Haines Falls!

HOGAN'



Let Us Check Your Tubes

One By One!

One bad tube is enough to spoil reception. It will take our experts only a few minutes to locate the offender! And the cost is nominal.

Hogan's Radio Shop HAINES

### "Service" Advertisements That Will Bring You Business

THESE nine sample newspaper "Ads" have been developed by the advertising department of Radio News especially for the benefit of our servicemen readers. They can be used with your own name inserted in place of the specimen name. They will bring in new business you could never get in any other way. Read the Service Bench for further information and our special offer.



### YOUR SET PERFORM

Poor tubes are the cause of 90 per cent of all radio ills. Let us check your tubes when the complaint isfading-poor volume-unnatural tones-noisy reception-or just a plain dead radio!

HOGAN'S RADIO SHOP



Haines Falls 628

Modern equipment! Expert Personnel! Courteous immediate attention! Fair and Moderate charges! For radio SERVICE in the finest sense of the word call on-

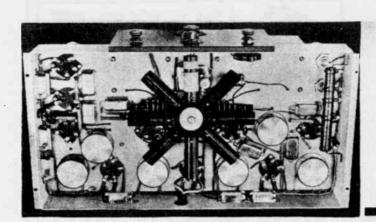
The Hogan Radio Shop

HAINES FALLS, N. Y.

INSPECTION SERVICE

It costs you nothing to se-cure our expert opinion. If your radio is working per-fectly you will be told so. If it needs attention, we shall give you an estimate for fair, square service.

HOGAN'S RADIO SHOP HAINES FALLS, N. Y.



## AN ALL-WAVE SUPER-HETERODYNE

By E. H. SCOTT\*

Fig. B rodyne. Note the arrange

UST as broadcasting swept the country a few years ago, so short-wave radio, combined with a standard broadcast receiver, is being sought by those who desire the acme of radio reception. The advantages to be gained by such a combination have been discussed in these columns before, but a description of a receiver incorporating some of the most modern advances in the field always arouses interest. The receiver to be described is known as the Scott Allwave DeLuxe Superheterodyne which con-

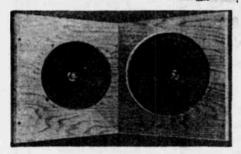


Fig. A The twin-matched speakers in the Soott super.

sists of twelve tubes and has the following characteristics:

A pre-selector stage using a '51 variablemu tube; a first detector using a '24 screen-grid tube; an oscillator using a 56 tube; three stages of I.F. with four tuned circuits and three type '24 tubes. Each of the I.F. stages is completely shielded and isolated from the others, and employs a new system of I.F. amplification giving extremely high gain without loss of stability. Additional features are the use of the 56 as a second detector; three stages of resistance-coupled audio amplification, using two type 56's and two type '45 tubes, the latter being push-pull; and last, but not least-twin, laboratory matched speakers.

#### Description of the Circuit

The oscillator circuit utilizes one of the new 56 tubes, while the first detector incorporates a type '24 tube with plate rec-tification, and is coupled to the oscillator in such a way that it not only gives perfect modulation, but at the same time automatically tracks or aligns the tuning of the circuits so they may be operated by a single dial without loss of sensitivity or

selectivity from 15 to 550 meters. The single dial tuning, without external trimmers, is indeed a novel idea.

The gain, or sensitivity of a superheterodyne receiver depends largely on the efficiency of the I.F. amplifier. Reference to the schematic circuit of Fig. 1, indicates that the design of the I.F. coupling used in this model is radically different from that employed in other superheterodynes.

It consists, briefly, of a highly developed tuned impedance circuit in which each unit in each stage is thoroughly shielded from each other, and from other circuits in the receiver.

Laboratory curves of the audio amplifier show that the response is flat within plus or minus 2 db from 30 to 8,000 cycles. Each stage of amplification is of the class A or linear type. This arrangement produces a high degree of quality and is used in preference to the class B system which delivers a much higher output, but at the same time, much greater distortion.

Since most broadcasting stations do not modulate frequencies above 5,000 cycles, and since a large part of the tube hiss and interfering noises such as static,

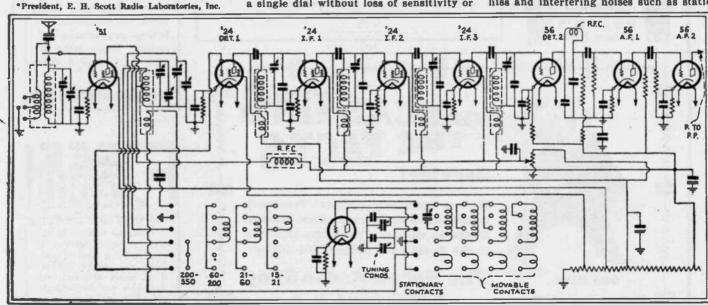


Fig. 1 Complete schematic circuit of the Scott Allwave DeLuxe receiver.

### MA

A distinctive superheterodyne is one that rigidly adheres to the rules underlying good radio design. This article illustrates what really can be done with modern apparatus in a commercial laboratory.

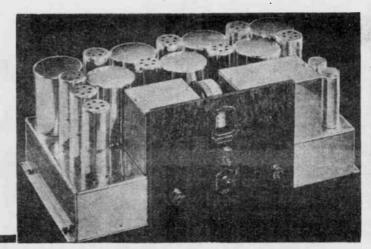


Fig. C
Front view of the receiver illustrating the arrangement of the parts.

etc. occur at frequencies above 5,000 cycles, a low-pass, audio filter designed to cut off frequencies above 5,000 cycles is incorporated in this amplifier to effectively reduce the noise level of the receiver. This results in remarkable clarity of distant stations.

### Twin Speakers Used

Recent investigations indicate that it is quite impractical to depend upon a single speaker to deliver full output at all of the audio frequencies used in radio reception. Experiments proved, therefore, that the road to tone perfection lay in the use of two matched speakers. This combination eliminates the peaks or resonant points which sometimes cause "boom" on the bass notes and tinny reproduction on the treble notes. An illustration showing the twin reproducers used is given in

Plug-in coils, while efficient, are inconvenient to use, and it is necessary when changing from one waveband to another to pull out one set of coils and insert another. This receiver employs a separate coil for each waveband in a mechani-

1,000 KC. 1,000

Fig. 2
Selectivity curves of the receiver. Note the sharp resonant curves.

cal change-over device, which has proven highly efficient because of the fact that the design enables even shorter leads to be used between the coils and the tube sockets than with ordinary plug-in arrangements. Fig. B, an under-chassis view of the receiver, shows very well the unique mechanical layout.

The entire switching unit is mounted on a die-cast frame; the coils being placed within the base of the chassis, completely shielded and operated by a small lever on the front panel. The coil contacts may be seen directly between the two coils in the center, and they connect directly to the oscillator and detector tubes. The socket for these tubes will be noticed just at the back of the switch contact.

All tuning is done with one knob, operating single dial, without any other adjustments from 15 meters right up to 550 meters. While single dial receivers are common for the broadcast band, I believe this is the first all-wave receiver that tunes more than one circuit on the short

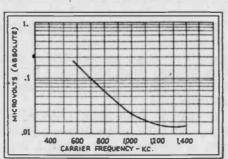


Fig. 3
Sensitivity curve of the set.

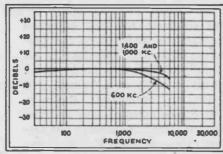


Fig. 4 Here's real fidelity.

waves with a single dial, without the use of external trimmers. Usually, short-wave receivers using a stage of R.F. ahead of the first detector have used either two dials or a single dial with auxiliary trimmer condensers. A single dial has been

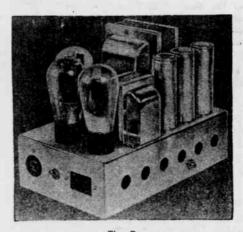


Fig. D
The power amplifier used with the Scott receiver.

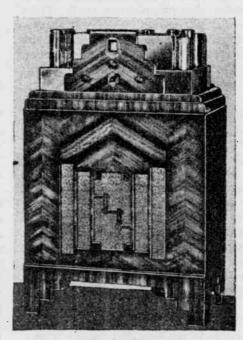


Fig. E
The "Napler," a distinctive Scott model.

used in receivers where only the oscillator cir-cuit is tuned, but with a tremendous loss in sensitivity and selectivity.

used in receivers where only the oscillator circuit is tuned, but with a tremendous loss in sensitivity and selectivity.

Selectivity and Sensitivity

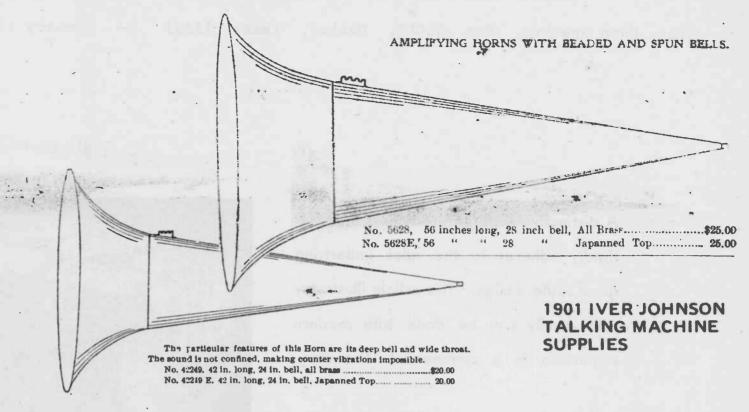
An examination of the selectivity curve, which is shown in Fig. 2, taken in the center of the broadcast band (1,000 kc), shows that at 100 times normal field strength 9 kc, selectivity is secured; at 200 times normal field strength 10 kc, selectivity is obtained; and, 20 kc, separation is secured at a field strength of 5,000 times normal. What the above means is that the receiver will bring in a distant station through a bead naviog 5,000 times the field strength and separated from the local by only 20 kc, without any interference.

The sensitivity curse of this receiver is shown in Fig. 3, an examination of which reveals that it varies from approximately .016 to .19 microvolts absolute. At 100 kc, the sensitivity is approximately .016, and at 600 kc, the sensitivity is approximately .10 microvolts absolute. Such extreme sensitivity makes possible the reception of distant stations with case on both the long and short wave bands.

A fidelity curve of the entire receiver is shown in Fig. 4. This curve shows that the electrical fidelity is flat, within plus or minus 2 db. from 30 to 3,500 cycles at 1,000 and 1,400 kc. Sound pressure curves show that the overall response from the speaker is uniform up to approximately 5000 cycles. At 600 kc., the fidelity falls off silghtly, but not enough to impair the quality of the receiver to any noticeable degree.

A front view of the set is shown in Fig. C and in Fig. 10 an excellent photograph of the power amplifier.

For those desiring a cabinet of modernistic design, the Napier, illustrated in Fig. E, will meet all requirements.



### The History of the Development of the United Fruit Company's Radio Telegraph System

Since 1911 the radio activities of the United Fruit Company in all its branches have been under the immediate direction of Mr. George S. Davis, who is General Manager of their Radio Telegraph Department. He is also President of the Wireless Specialty Apparatus Company, General Manager of the Tropical Radio Telegraph Company and a Director of the Radio Corporation of America. He is a Fellow of the Institute of Radio Engineers and a member of various other scientific organi-

While in the United States Navy, Mr. Davis became interested in electric propulsion for steamships, and, largely as a result of his initiative, the United Fruit Company decided to give electric ship propulsion a trial. Their newest steamship, the San Benilo, was accordingly equipped with electric drive by the General Electric Company, and has proven so satisfactory that additional ship tonnage when built will probably be propelled by electric machinery.

Assisting Mr. Davis in the Company's radio engineering and construction work is Mr. William E. Beakes, Chief Engineer of the Radio Telegraph Department and of the Tropical Radio Telegraph Company. Mr. Beakes was with Professor Fessenden's company from 1904 until 1912 and participated in the early work at both the Brant Rock, Massachusetts, and Machrihanish, Scotland, stations. He represented the Fessenden Company in the installation of the United Fruit Company stations at Cape San Antonio, Cuba, and New Orleans, entering the service of that company

Colonel W. P. Rothrock, formerly Chief Designing Engineer of the Fort Pitt Bridge Works and well known among structural steel builders as having supervised the third tracking of a large section of the New York Elevated system, and the construction of some of the largest war material plants, is superintendent of tower and building construction for the Radio Department of the Fruit Company. He erected the new 350-foot towers at Almirante,

and is now in Honduras, erecting the 420-foot towers at Tegucigalpa.

This article would hardly be complete without a few words concerning the United Fruit Company's activities—what it is and does. It was incorporated on May 30, 1899, and is engaged primarily in the production and transportation of tropical products, principally bananas, sugar, cacao and cocoanuts. It also conducts an extensive freight and passenger business.

Its tropical divisions are located in Colombia, Costa Rica, Cuba, Guatemala, Honduras, Jamaica, Panama and the Canary Islands. During the past ten years it has shipped from the tropics 284,000,000 bunches of bananas.

It has on its payrolls, including those of its subsidiaries, approximately 67,000 employees. It owns 1,536,000 acres of land of which more than 365,000 are cultivated. In addition it leases 125,000 acres of land of which 30,000 are cultivated.

It operates more than 1,300 miles of railways, 500 miles of tramways and over 3,500 miles of telephone and telegraph lines, in addition to its radio system.

In Latin America it does a mercantile business amounting to more than \$10,000,000 a year.

The United Fruit Company is one of the most complete and best equipped organizations devoted to the production of sugar. This fact is not generally known by the public, which regards it solely as a banana and steamship enterprise. It has in Cuba 87,000 acres of cane and two large sugar mills located at the seaboard, and owns the Revere Sugar Refinery at Boston, which is one of the most modern plants of its kind in the world.

Before closing the story of this remarkable company and its achievements, mention should be made of its medical service in the tropics. Probably few realize the magnitude of this service including, as it does, not only

the care of the sick, but preventive medicine and supervision of sanitation. Yet on the preservation of health and improved conditions which make living in the tropics safe and enjoyable has depended in a large measure the success of all that the United Fruit Company has attempted and achieved.

An annual medical service, which is expressed in six figures, commands attention. During 1921 the numberof patients cared for in the tropics by the Company's medical department was 208,000, of whom 33,000 were non-employees.

A large personnel of experienced executives, doctors and nurses, recruited from all over the world, is carrying on the work of this department of the United Fruit Company's activities.

Part

The cost last year of operating hospitals and dispensaries was \$240,000 in excess of receipts. Through other departments directly associated with but not included in its medical service, the company spends annually in sanitation \$275,000; for parks and street cleaning \$200,000; and \$300,000 in excess of receipts for electric light plants and waterworks.

The Company has expended more than \$200,000,000 toward the development of the Latin American countries where it does business and is the most potent factor in the extensive commercial relations of the United States with these countries.

These few salient facts concerning the United Fruit Company and its operations clearly indicate the varied interests served by its ex-

**OPERATING HOUSE UNDER CONSTRUCTION** At the new Tegucigalpa station of the Tropical Radio Telegraph Company. All the buildings at this station will be made of stone



### AMPLIFYING HORNS WITH BEADED AND SPUN BELLS

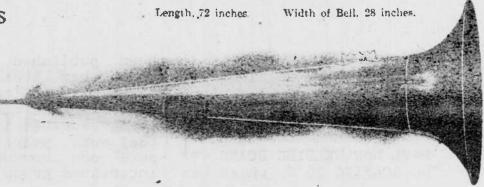
Width of Bell, 24 inches. Length, 56 inches.



No. 5624, all brass. No. 5624 E, brass bell, Japanned top.

PRICE, \$20.00

Designed for Concert and Out-door use. Handsome and attractive in appearance. Also adapted for home use where clear, fine reproductions are desired.



No. 7228, All Braes. No. 7228E Brass Bell, Steel Japanned Top.

### Radio Broadcast

tensive and rapidly growing radio system. Radio—a dream of the scientis s two decades ago-has firmly established its place in the commercial and political life of the world. Too much credit cannot be given the inventors and pioneers for their courage and perseverance in accomplishing this result.

The United Fruit Company has just announced the inauguration of a free medical radio service from its hospitals in the various countries of Central America and from its passenger steamships to all ships at sea. This service is available without charge so far as the United Fruit Company and subsidiary companies are concerned to ships of all nationalities through the following radio stations operated by the United Fruit Company or the Tropical Radio Telegraph Company:

Burrwood, Louisiana	WBW				
Fort Morgan, Alabama	WIO				
Swan Island, Caribbean					
Sea	US ·				
Tela, Honduras	UC				
Puerto Castilla, Honduras	UA .				
Tegucigalpa, Honduras					
(Open Nov. 1922)	UG				
Port Limon, Costa Rica	UX				
Almirante, Panama	UB				
Santa Marta, Colombia	UJ				
All passenger steamships	For ships' call letter				

of the United Fruit

Radio Stations

New Orleans, Louisiana

see International Radio Call Letter List

Radio Call Letters

WNU

Radiograms requesting medical advice should be signed by the captain of the ship and should state briefly, but clearly, the symptoms of the person afflicted. Such radiograms should be addressed "UNIFRUITCO" (name of place) and may be sent to any of the United Fruit Company's hospitals listed below:

> Santa Marta, Colombia Port Limon, Costa Rica Almirante, Panama Tela, Honduras Puerto Castilla, Honduras Puerto Barrios, Guatemala

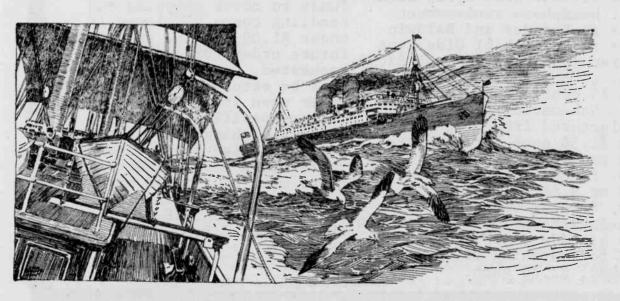
All United Fruit Company passenger ships carry doctors, and free medical service may be secured by radio from any of them by a radiogram addressed "Ship's Doctor" followed by the name of the steamship.

This free medical service is established primarily for the benefit of ships not carrying doctors; however, should occasion require, ships' doctors may hold consultation by radio with the United Fruit Company ships' doctors and hospital staffs.

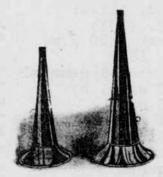
It is requested that when sending medical advice radiograms, radio operators check them "(number of words) DH Medico."
"DH Medico" radiograms will be given

preference over all other radiograms, excepting SOS calls, throughout the radio service of the United Fruit Company and subsidiary compa-

### RADIO BROADCAST 1922



### Amplifying Horns, with Beaded and Spun Bells



No. 146, 14 in. No. 187, 18 in. No. 146 E, 14 in. No. 187 E, 18 in.



No. 2411, 24 in. No. 2411 E, 24 in.

The Editorial Group, I'td. P.O. Box 521, Pulo Alto, Culif.

### RADIOS FOR SALE

Scott All-Wave XV w/ Spkr. & Pwr. Supply...Grebe Synchrophase Chassis ...A-K 33/55-C/37 Metal Cabinet... A-K E-3 Spkr...Electrola 760...Am. Bosche 5/66/260 Lo-Boy...All-Americ. Mohawk...All-Americ. Chieftan Five.. Sargent-Rayment 710...Freshman Masterpiece V with Integral Spkr...Echophone Commercial EC-2...Echophone 4.. Gilfillan 40...Philco 45-150/19/112... Freed-Eisemann NR-5/NR-80/48...Patterson PR-10...Hallicrafter SX100... Day-Fan Five...Fada 3-Dial TRF... B-T Counterphase...Browning-Drake 1926...Sargent Pre-Selector & Chassis & Spkr...RCA 17 Console & Table-Top ...RCA 60/80/22/28...Custom-Built TRFs & Regen. Sets...Speakers From RCA, Baldwin, Rola, Sonocorde, Nat'l. Zenith. Stew.-Warner, A-K, etc.

SASE For Complete Listings & Prices.

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been published free for eight years has just held its last issue. The editor, Floyd Paul, Meing received in the quantiles PAUL NOW HELPING SCARS \*\*\* pose of communicating to an The ROARING 20'S which has interested group of nationwide

members has been served. Floyd has become vp and co-editor of Southern California Antique Radio Society's journal. The club solicits members, Interested? If so, write; SCARS, 656 Gravilla Pl., La Jolla, 92037 for an application.

AUTUMN SEASON 1982 --- OLDE TYME RADIO COMPANY ---- 2445 Lyttonsville Road, Silver Spring, MD 20910. (301) 585-8776. -- After 7:00 p.m. local time. No. 182B - 1. HEADPHONES --- a) general service .. \$3.00 each. b) vintage .. \$6.50 each. - 2. REPLACEMENT SPEAKERS PM OR DYNAMIC. Many sizes from 2" ovals to 10" rounds. Send us your needs for quote.
- 3. 60uf 250V filter caps. 50 cents each or 3/\$1.00. - 4. NEW VOLUME CONTROLS 1/4" SHAFT. MANY SIZES FROM 10 OHMSTO 1.0 MEG. OHMS. \$1.25 EACH OR 3/ \$3.00 - 5. WIRE DEPARTMENT - 6 conductor AK style \$1.25/ft. -5 conductor AK style \$1.00/ft. - brown silk type power cord type power cord .20/ft. - old style cloth twisted pair power cord .45/ft. - single conductor hookup wire (cloth) .12/ft. -#20 magnet wire double cotton wrap 80 feet \$3.50 ft. - #18 bare stranded copper wire .25/ft. VINTAGE TEST EQUIPMENT. WRITE FOR LIST. 6. Exact replacement Radiola /. OLDE TYME RADIO TUBES tubes from the 20's thru the 60's used and new. write for a quote. - 8. Need name plate or escutcheon screws? We got them. guage length respectively 0-1/4", 0-3/8", 1-1/4", 1-0-1/4", 0-3/8", 1-1/4", 1-3/8", 2-1/4", 2-3/8" 10 for 50 cents. Above are brass. Can be ordered manufactured from 1920 thru with flat or round head style. --- 9. Ant., rf, osc. coils manufactured by Meissner. Broadcast band and some SW band and multiple band coils only

\$3.00 each (higher for special

units) --

- 10. Slip over replacement coil for ant. and RF coils. Just tell us the diameter of your defective coil form \$1.50 each. - 11. I.F. transformers (Meissner) most frequencies. \$3.00 each (higher for special units) -- 12. WHITE TUBE CARTONSSize G, 2x2x6 20 cents, lots of 100 18 cents each. Size large G, 1 1/2  $\times$  1 1/2  $\times$ 5, 18 cents, lots of 100 16 cents. Size GT, 1 1/4  $\times$ 1 1/4 x 3 3/4, 16 cents, lots of 100 15 cents. Size miniature, 1x1x3, 15 cents each, lots of 100 14 cents. - 13. Used power transformers. From \$7.00 to \$10.00. state your needs and we will send a · 14. Mallory electrolytic .30/ft. - white small size silk capacitors small fr type 10 uf type power cord .20/ft. - old x 10 uf at 450V \$1.00 each or 6 for \$5.00. last ones. - 15. We cannot provide WD-11's but we can provide WD-11A's made with 864's in WD-11 bases. 864 tubes are new. Work better than WD-11. \$15.00 each or 2 for \$25.00. - 15. DIAL LAMPS - 25 cent each or 5 for \$1.00. - 16. Crystal set items - a) II or VIII leather handle. only galena xtals \$1.50 each b) xtal or can't get it. Free flyer \$4.50. -- detector ass'y w/xtal \$3.50 each c) unmounted xtal detector ass'y without xtal \$2.00 each. - 17. Headphone replacement cords a) Brandes and Baldwin types \$4.35 each b) Olde tyme speaker replacement cords \$3.50 each. c) replacement pin jack tips 25 cents each or 5/\$1.00 - 18. Schematics for sets 1946 \$1.50 each for complete data package \$2.50 --- 19. Fahnestock clips 15 cents each or 8 for \$1.00 --- 20. Stancor output transformers primary imp. 2,000 ohms secondary imp. 3.2 ohms. Good for matching triode to speaker. \$2.50 each.

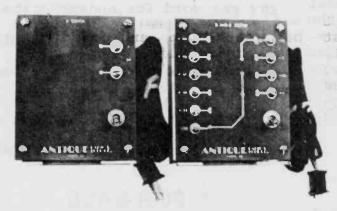
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If you don't see it, ask. - 21. Olde tyme phone plug \$1.85 each --- 22. SPECIAL SMALL SIZE 40 uf., 200V CAPAC OR 3 FOR \$2.75. 200V CAPACITOR.. \$1.00 EA - 23. SCREW BASE CAPS.. TAKE THE HUM OUT OF ANYTHING. 40 uf/ 40 uf at 450V \$3.00 each or 2 for \$5.00. - 24. RESISTOR LINE CORD REPLACEMENT KIT. - 5 TUBE SET TYPE RLC-2 \$4.50 - 4 TUBE SET TYPE RLC-1 \$3.50 --- 25. CAPACITOR BONANZA ASSORTED 20 / \$1.00 20 PF. TO 0.5 UF. 200 TO 600V - 26, OLDE TYME AC PLUGS.. \$1.10 EACH OR 3/\$2.95 -- 27. Olde tyme toggle switch with short bat with ball \$1.85 each. Good for AK-37, etc. Radiola 17, 18, etc. - 28. SPEAKER GRILL CLOTH, 2 PATTERNS.. \$3.25 SQUARE FOOT. SEND FOR SAMPLE. PLEASE NOTE: All items previously advertised are still advaiable plus much more. If you don't see it in the ad, write and we will respond immediately with a quote or, if possible, let you know where else to try if we don't have it OUR SHIPPING POLICY ---We ask that you send sufficient funds to cover shipping and handling costs. Overages if under \$1.00 will be credited to future orders or refunded if requested. Overages over \$1.00 will be returned with your order when it is shipped. Unless specified otherwise, orders weighing 1 lb. and under will be mailed by first or third class mail. Order over I pound will be shipped by M. P. S. When making an inquiry, please send S.A.S.E. PHONE AFTER 7:P.M. E.S.T. (301) 585-8776.

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## Mailbox

Dear Jim,

Last month I gave a talk to the local Society on "Neutralization, Ancient and Modern" which I will complete later this month with a practical demonstration of the neutralizing of a receiver. neutralizing of a Almost at the same time arrived an issue of THE HORN SPEAKER covering the same subject. I was more than interested in that article as it was very close to way I had undertaken the subject. Great stuff, Jim.
I have just been informed

by my friend John Stokes that his book on tubes (valves) is now off the press and will be available for sale world wide anyday now. Printed by Vestal Press in the U.S. Earlier in the project I proof read a lot of the chapters and it is all good stuff. Keep your eyes open for it, Jim. I still enjoy your paper as much as ever. Please keep up the good work. I will keep in touch.

With kind regards, Your sincerely, Arthur E. Allen Radio ZL1JQ

EDITOR... Thank you for the kind words and please forgive the slowness in printing your letter. Yes, indeed, the book by John W. Stokes, 70 YEARS OF RADIO TUBES AND VALVES is full of good stuff. The place to write for the book in the U.S. is Vestal Press, Vestal, NY 13850.

Dear Friends:

I ran across your name in a little publication printed by Antique Press, Rossville, In-

I have an Atwater Kent radio; it is in a steel which slides into a wood cabinet. It is model 55. The voice coil on the speaker has opened up. I could flip the tone control for awhile and it would come back on, but now it has quit completely.

Would you tell me if you have a coil or a complete speaker cone for this model? I am making a drawing of the speaker below, perhaps will help. If you do not have such a thing, do you know where I could get one? If so please

advise.

Sincerly, Vernon D. Parnell P.O. Box 457 Slaton, TX 79364

EDITOR... We suggest that you try our advertisers or maybe a reader can help.

THE HORN SPEAKER

I am in need of a sche-matic tor an ERLA set model S-51. Have looked in all the usual sources without success. Can you help? If so, please send along with your invoice or first let me know the cost and I will remit immediately.
D. H. Brodie, W6PGQ

315 Cotton ST. Menlo Park, CA 94025

Dear Jim,

I just found something out that I would like to pass along to fellow collectors. It worked for me and I found it by chance.

Radio Shack has power adapters to step down household voltage for various battery powered radios. I recently purchased an adapter for my 6 volt battery radios and works.

The plug in on the adapter is as follows: The tip is positive, the sleeve is negative, so just clamp your radio7s connection to the proper place and you have your 6 volt set playing for about \$6.00.

George Friedrich 7162 Jacqueline Lake Lane Custer, WI 54423

The Editorial Group, L'td. P.O. Box 521, Pulo Alto, Calif.

#### RADIOS WANTED

Am. Bosch 260-C...Fada 66(KY)...RCA K-64...Remler "29" Infradyne...Pilot "Dragon" 84...Bremer-Tully 80....De Wald 801...Lincoln R-9 & SW 33..... Most Any Kit Radio From The Late 20s & Early 30s.

#### SHORT WAVE CONVERTERS & ADAPTERS

Erla...Detrola...Grigsby-Grunow (Not Majestic)...Midwest (1937)...Leutz.. RCA SWA - 2...Silver-Marshall..... Walker...Stromberg-Carlson 69,...Stewart-Warner 301, A-B-E...Or...?

#### MISCELLANEOUS WANTED

Sub-Panel Mntng. Brkts...Original En-Graved Panels Late 20s...Cabinets... Panel Meters...SW Coil Sets...A-B-C Eliminators, Any Make...B-T AF Xfrmrs. Daven/Truphonic/Remler AF Amplifiers.

SASE For List of Items For Sale.

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### \* FOR SALE \*

ELECTRICAL RESTORATION SER-VICE: Anything from Scott's to Silvertones. Get benefit of experience at competitive at experience competitive rates. FOR SALE. A53C x-formers at \$14 each or 2 for \$26. We have unused 4 mf at 600V oilfilled caps with old style screw base (extremely low leakage) at \$2.75 each or 4 for Want auto vibrators, unused tube stock, and Sam's Auto Repair manuals, SASE to Dr. ZEE'S OLD RADIO HOSPITAL; P.O. BOX 31555; HOUSTON, TX 77235; after 7 p.m., Maury Zivitz at (713) 723-4254:... \*\*\*\*\*\*\*\*\*

A 45 YEAR COLLECTION OF OVER 30 COLLECTIBLES SUCH AS FEDERAL 59 AND 61, RADIOLA V, ZENITH, CROSLEYAND AK, 50 AC CATHE-CATHE-DRALS, TOMBSTONES AND CONSOLES, 4,000 PLUS NEW AND USED TUBES AND A TON OF MISCELLANEOUS AND TEST EQUIPMENT. ALL LOCATED IN AN ACTIVE RECREATIONAL AND AN-TIQUE AREA ON THE SOUTH SHORE OF LAKE ONTARIO, MIDWAY BE-TWEEN TORONTO AND BUFFALO. ALSO THREE DESIRABLE PIECES OF REAL ESTATE IN SAME VILLAGE. 70% AT 10% ON R.E. CALL (716) 751-6053 EVENINGS.

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SUPPLY FOR SCOTT 12 TUBE ALL-WAVE (SINGLE DIAL) FOR POWE SUPPLY FOR SCOTT 12 TUBE ALL-WAVE (2 DIAL); ALSO NEED S/W COILS FOR ALL WAVE 2 DIAL. SEND



McMurdo MASTERPIECE VI speaker in original cabinet. All in perfect condition. \$1,000.—M. DeMayo, 17533- 12 Avenue NE, Seattle, WA 98155. (206) 362-7043.

\*\*\*\*\*\*\*\*\*\* FOR SALE- BATTERY AND ELECTRIC RADIOS, including 2 tall clock-radios, several battery Radiolas, communication receivers; 28 bound volumes of EXPER-IMENTAL WIRELESS AND WIRELESS ENGINEER 1924- 1956; Rider manuals. Send SASE for complete list. Dan Voydanoff, 1141 Yorkshire, Grosse Pte Park, MI 48230.

\*\*\*\*\*\*\*\*\*\* ANTIQUES: Carrier Condenser Broadcast Microphone. Old. Nice looking. No stand. \$45.00; Shure Cardioid 556C Broadcast Mike. Excellent. \$45.00; Lepel "Semi- Quenched" Spark Gap. \$25.00; Workrite Superneutrodyn. Looks good. \$65.00 W/O tubes; Radiola III with clear glass open fil. tipped 11s. \$67.50; Sets not tested. Leeds and Northrup antique decade box. \$25.00; Magnavox R3 Horn Speaker. \$65.00; Browning Drake basic coil and condenser set. Good. \$30.00. All plus UPS. Buy spark equipment parts. Paul C. Crum, 6272 N. Cicero Avenue, Chicago, IL 60646. (312) 282-3033.

\*\*\*\*\*\*\*\* NOTICE-- NOTICE--- AUDIO TRANSFORMER COIL WINDING SER-VICE IS DISCONTINUED EFFECTIVE JANUARY 1, 1983. RICHARD RAY,

423 ORCHARD, CANON CITY, COLO \*\*\*\*\*\*\*\*\* FOR SALE; RIDER'S TV MANUALS #1
AND #2, RIDER'S TROUBLESHOOTER'S MANUALS #1 TO #5
(ABRIDGED), #6 THRU #17 AND LARGE S.A.S.E. FOR COMPLETE AND UP TO DATE LIST. RON BOUCHER, #20. ALL \$180 PLUS PACKING AND 376 CILLEY ROAD, HANCHESTER, NH SHIPPING, PETERS, 163 S. 03103, (603), 669-1698. 11757. 11757.

RCS- 728 POWER SUPPLY for battery radios now available in kit or assembled form. Gary Schneider, 9951 Sunrise Blvd., #R-9, North Royalton, OH 44133. \***\*** 3 BAKELITE OR PORTABLE RADIOS \$25.00 -- Heathkit tube tester TC-2 \$20.00 -- Clough- Brendel signal generator \$35.00 -- Asst. chassis, less tubes, priced per weight 20-25.00 -- 2 W.E. field phones wood boxes \$20.00 -- old parts grab bags \$10.00 -- 1926- 38 Supreme Diagram book \$7.00 -- juke box speaker 15" E.M. \$10.00 --- All items as is UPS. prepaid. --John Martin, 817 Cook Avenue, Billings, MT 59101.

\*\*\*\*\*\*\*\*\* RADIO PARTS- Three wood frame variometers, one needs gluing, \$15 plus 8 lbs. UPS. Honeycomb coils, 1500T and 1250T mounted, 1250T loose with mount and a two coil mount, \$15 plus 4 lbs. WD11 brass base good filament \$25 plus 2 lbs. SASE, Serge Krauss, 141 Homan Avenue, Elkhart, IN 46516.

FOR SALE- USED TUBES, speakers, output and power transformers, switches, and many other parts. Send s.a.s.e. for lists. Elmer Nelson, 11 S. Church Street, Princeton, IL 61356.

\*\*\*\*\*\*\*\*\*\* SMALL BUT NICE COLLECTION FOR SALE. SEND SASE FOR LIST. PAUL GIGANTI, 2429 SAN CARLOS, SAN CARLOS, CA 94070. PHONE (415) 593-4723.

\*\*\*\*\*\*\*\*\* FOR SALE; PHILCO TABLE RADIO, MODEL 511 WITH SEPARATE SPEAK-ER, PLAYS BUT WEAK, CASE AND SPEAKER VERY GOOD. \$160.00 PLUS PACKING AND SHIPPING. W. PETERS, 163 S. BROADWAY, LINDENHURST, NY 11757.

:::::::::-WANTED-::::::::::

WANTED: 21 INCH MAHOGANY MUSIC MASTER BELL. CONDITION NOT IM-PORTANT. CHARLIE STEWART, 900 GRANDVIEW AVENUE, RENO, NV 89503

WANTED: ATWATER KENT CONDENSERS variable, detector and amplifier tube panel and filament control and switch panel. William L. Compton, 11 Harbor

Woods Drive, Clearwater, FL 33519.

ARE THERE ANY OF YOU RADIO FANS OUT THERE THAT COULD HELP ME OUT? I NEED AN QPERATOR'S IN-STRUCTION MANUAL FOR A PRECIS-ION TUBE MASTER, TUBE AND BAT-TERY TESTER, SERIES 10-12. WILLING TO PAY WHATEVER YOU REQUIRE FOR A PHOTOSTATIC COPY OR ORIGINAL. ALSO I NEED A
TRANSFORMER, AM, DETECTOR/ FM
DISCRIMINATOR NO. 32- 4147 FOR
A PHILCO MODEL NO. 47- 1230.
THE WIRE IN THE COIL IS BROKEN
AND AM AUDIO IS VERY LOW. NO
FM. COULD ANY OF YOU RADIO FANS REPAIR IT FOR ME? WILLING TO PAY WHATEVER YOU REQUIRE, FOR ANOTHER COIL, OR YOUR SERVICE FOR REPAIRING IT. PAUL P. BROUCHKIE, 545 REDONDO ROAD, YOUNGSTOWN, OH 44504.

WANTED: SCOTT COIL SHEILD CANS (late copper type). Musicmaster radio in deluxe cabinet; Philco Pup radio. Dick Howe, 9318 Wickford, Houston, TX 77024.

WANTED TONE ARM AND REPRODUCER a Edison radio- phonograph combination model C-4, also C-4, also power supply for the same unit. Quote price and condition. Bill Shawver, Route 2 Box 2720, Kennewick, WA 99336.

WANTED: SE950, SE143, SE1400 and other SE series sets, type B amp., BC131, BC161, and other BC series, SCR equipment, Leutz, Norden Hauck, any GR parts, VT1, VT2, VT5 tubes. Incomplete sets OK. Also Grebe CR equipment. Ray Garner, Route 1 Box 320, Big Sandy, TN 38221.

WANTED: RIDERS VOL. XXII and XXIII. Cabinet Grebe CR-9. Balanced amplifier Radiola III. For sale - trade; Freed Eisemann, NR-20, Bosch 376-BT. Interested in AK's. Bob Nicholson, 3423 Long, Topeka, KS 66605.

WANTED; SCHEMATIC PLUS A GOOD B&W Polaroid (will refund the cost later) for a CHELSEA Super-5 TRF, 1926. If possible, a detailed drawing of the panel's reverse side top would be appreciated. Someone has re-worked the arrangement on mine, wish to restore originally if possible. D'Arcy Brownrigg, Chelsea, Quebec. JOX 1NO, Canada.

BIDDER- Orr auction at Opelika? Name your price for copy of items sold, prices obtained. Or will copy and return. Ralph Barnett, 3434 E. Oakwood, Decatur, IL 62521.

### BACK ISSUES

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# JANUARY THE HORN SPEAKER

1983



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