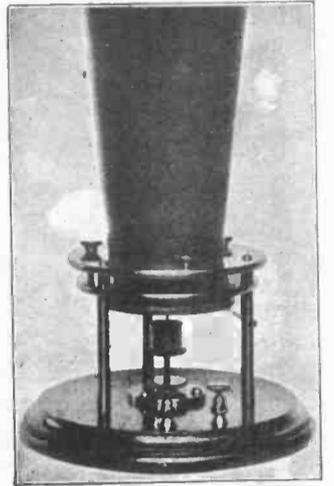


THE NEWSPAPER FOR
THE HOBBYIST OF VINTAGE
ELECTRONICS AND SOUND

TELEPHONE CENTENNIAL
1876 - 1976

THE HORN SPEAKER



1926 ATWATER KENT

Radio Receivers by Production Methods

By JOHN A. PERN

A tour by proxy through one of the largest plants engaged in the manufacture of radio receiving equipment. The reader of this article will be able to form some idea of the magnitude of the fastest-growing industry in the world.

IT IS a very difficult matter for anyone, not actively interested in the radio industry, to form any clear idea of its magnitude or extent, unless he is fortunate enough to be permitted to make a tour of inspection through the factories of some of the greater concerns in the radio industry.

The average person is well aware of the great interest the public in general takes in radio, because he reads of it in the newspapers; he reads the radio supplements and magazines; he sees antenna after antenna on the roofs of private homes and apartment houses. But even all this does not permit him to form any adequate conception of how great and general is the use of radio apparatus, and how intense the interest the people take in receiving the splendid concerts that are being broadcast.

The growth of the radio industry has been phenomenal; things had been brewing for many years—at least fifty—since the first classical researches in radio were conducted by the pioneer investigators. But little had been done in placing its developments before the public until after the great war, during which many of those who went “over there” became first acquainted with the utility and advantages of radio.

CREATING A GREAT NEW INDUSTRY

Almost over night, an enormous demand for radio equipment was felt; adventurers in the industrial field tried to supply the great demand, and in a short time the market was flooded with an overabundance of equipment of all sorts, and of all qualities. Many of these makers were entirely new in the manufacturing business; but there were others who had for a long time been engaged in the production of similar equipment, and were, as a result, able to undertake the manufacture of radio apparatus at once.

Among the latter was the Atwater Kent Manufacturing Company of Philadelphia. For many years they had been manufacturing, and supplying a national demand for their automotive starting, lighting and igni-

tion systems. With the introduction of radio, they were comfortably in a position not only to assemble radio parts, but to make every piece that was used in their receiving sets. This was easily done, as the peculiar machinery used in making ignition equipment is quite similar to that necessary to make radio parts.

Radio design is a special branch of electrical engineering, where the “transients,”

of manufacturing these high-powered, far-reaching sets, may be summarized in the following sketchy description:

To begin with, there are several departments, each of which can be considered as acting independent of the others. These are the departments in which the separate pieces of apparatus are made and assembled, as, for instance, condensers, rheostats, transformers, etc. Each of these departments



An assembling room, showing the trays in which the unit parts are supplied, and the finished instruments to the right of each worker's place.

or small details, encountered in regular power engineering become the important things. Automotive systems deal mainly with electrical “transients,” so that previous experience in that line became more valuable when radio manufacturing was begun.

The Atwater Kent daylight factory extends over twelve acres and employs hundreds and hundreds of people. It is intensely interesting to the ordinary person, as well as to the technically-inclined man, to watch the astonishing transformation of the rough material into mechanically perfect radio parts, in this huge, efficient factory. The process

receives its screws, bolts, etc., from the machine shop or the stock room, winds its own coils, conducts its own tests, assembles the equipment, and then passes it on to the set assembly department. There the parts are put together, on the panel, and in the cabinet, tested, and finally packed for shipping. Everything that goes into the receiver is made in the Atwater Kent factories.

MACHINERY OF ALMOST HUMAN INTELLIGENCE

It is difficult to say what is the most interesting process of manufacturing in this factory; but the specially-designed machines that operate at a tremendous speed are usually first to attract a visitor's eye.

All coils used in the receiver and loud speaker are wound on special automatic winding machines in a twinkling. Most of these machines are attended by skillful girls with deft fingers.

Every advantage is taken of the possibilities of automatic machinery. Special gang-drills bore many holes simultaneously, as, for instance, in the bakelite end-plates of the condensers. A huge punch-press stamps out all the holes in the plate which is to become the panel, in one operation. Spot-welding machines weld the sub-panel to the panel, and the supporting ring to the A.F. transformer casings.

Even the mahogany cabinets, in which the receivers are housed, are made and given that “much coveted” satin piano finish in this plant. Unique devices in wood-working machinery help to speed manufacturing, and lacquer spray-guns facilitate production.

PRESSES COMMAND ATTENTION

The gigantic presses, weighing thousands of pounds, used for shaping the bell of the loud speaker, are especially interesting. The first big press, with a tremendous crash, punches the steel required for the bell out of huge steel sheets, and converts the bell into a shape that resembles a dishpan. After the bell is punched into shape, smoothed and ready for the paint shop, holes are automatically drilled in it to receive bolts or screws for fastening to the neck of the horn.

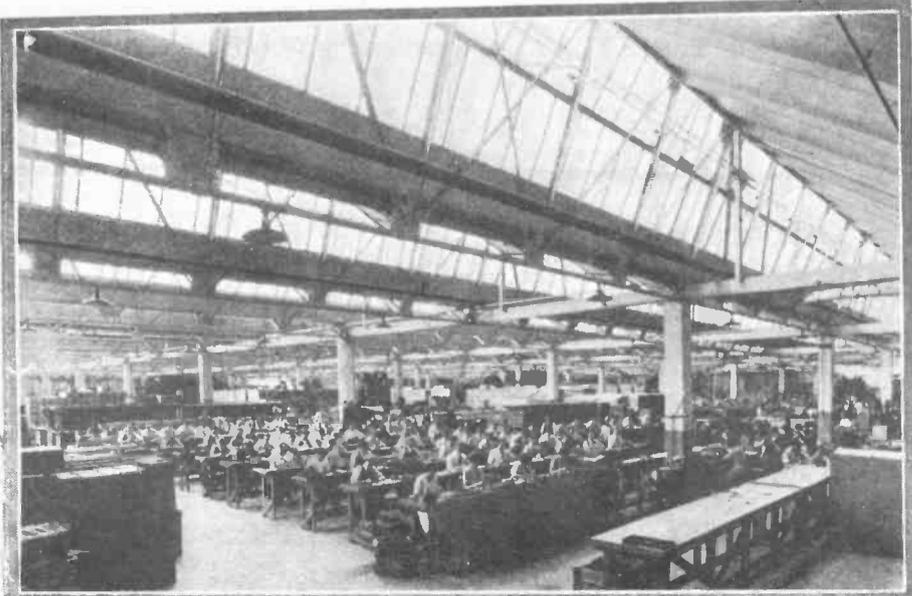
Departments such as the tool-making section may be omitted from this summary, as they do not enter into the special order of radio work; although these departments are as essential as any other. These may be classed as routine steps in the journey, somewhat in the same way as we regard the machine-maintenance or repair departments.

MULTITUDE OF TESTS NEEDED

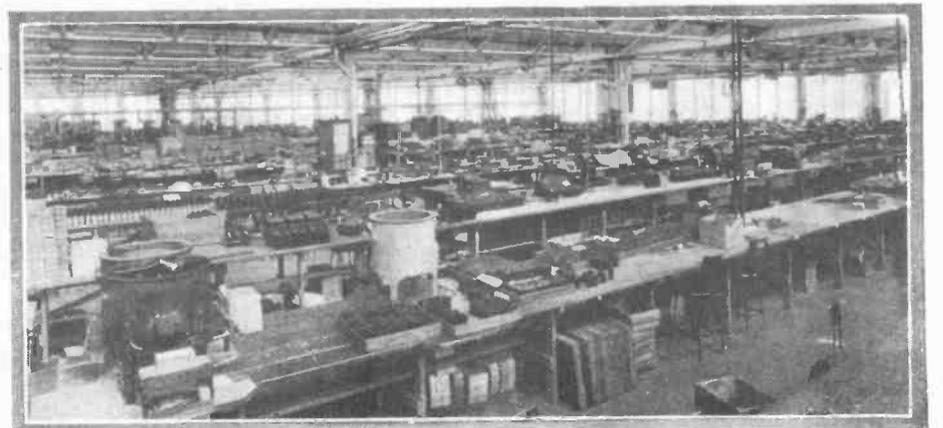
Every piece of equipment made in the factory receives an individual test before it passes to the next department in line. Finally, when the receiver has been completely assembled, it is given two more tests.

Every transformer is compared with a standard transformer before it is passed. If it does not measure up to the mark it is rejected. Both voltage and amplification tests are given it, the voltage test to determine how the insulation stands up, or to detect a broken winding, and the amplification test to determine whether any of the turns are short-circuited or not. This is accomplished by very ingenious set-ups, so

(Continued on page 3)



One of the assembling rooms in which condensers and similar instruments are made up from the unit parts supplied from the stamping and milling departments.



One of the coil departments. Note the vat of impregnating compound, and the various jigs for use in completing the coils, before they are sent to the assembling departments.

ATWATER KENT FACTORY

(Continued from page 1)

that when the transformer is connected, the reading of a meter will tell the tale.

All the molded parts used in the receiver are made at the factories, which include what is said to be the largest privately-owned molding plant in the world.

It is interesting to note that almost every tenth man in the Atwater Kent plant is an inspector. Each receiver is subjected to 140 gauge and physical inspections and 19 electrical tests before it is allowed to leave the factory.

Radio News for February, 1926

Club News

BRISTOL ANTIQUE RADIO CLUB

For east coast collectors a club has been formed for radio collectors. It will be interesting to read about their activities. For information write: John D. Alley, 48 Judson St., Raynham, Mass. 02767.

SOUTHWEST VINTAGE RADIO AND PHONOGRAPH SOCIETY

SVRPS is planning to do it again. They are going to hold another big auction like they did back in September of 1975. It is scheduled for the 19th of June and it will be opened to the public at 3:00pm for early viewing and tagging of the sets. Auctioning will begin at 6:00 pm with Bob Sullivan and Mel Zemek taking bids.

All members and interested people are encouraged to attend this event at the Texas Power and Light Building in Richardson, Texas. For more information call Walt Jackson (214) 262-7855 evenings.

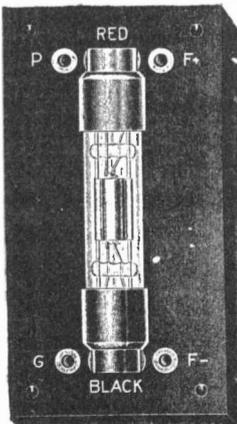
ANTIQUA RADIO CLUB OF AMERICA

The ARCA scheduled to hold its spring meet in Louisville, Kentucky at the Holiday Inn, Brownsboro N.E. 4805 Brownsboro Rd., on June 11 and 12. Activities include talks by Lauren Pickham, Dick Ransley, a discussion by Ralph Williams on "Restoring the AK Green," and a visit to John Caperton's new museum.

For information about ARCA write to John Caperton, 516 Country Lane, Louisville, Kentucky 40207.

1922 ad

RAC-AUDION



AUDION \$5.00

5 TIMES THE AMPLIFICATION OF THE ORDINARY TUBE

RECEPTACLE \$1.00
WRITE FOR INFORMATION AND DIAGRAM USING RAC CHOKE COILS

4 V-Fil 0.8 Ampere 60-Plate
New Jersey Radio Equip. & Install. Co.
120 BIDWELL AVE. JERSEY CITY, N.J.

LETTERS

Dear Jim:

For your mail box if you will please print.

"Thoroughly enjoy the publication Horn Speaker. I'm collecting "blue" Arcturus tubes, among other things. Do any of your readers know the tube types made by Arcturus in blue envelopes? I have a blue 24, 27, 28, 37, 51, 80 and PZ. I'm looking for other types, if any."

Sincerely,

Floyd A. Paul
1545 Raymond Ave.
Glendale 1, CA

Dear Jim:

I got quite a thrill out of the article in the April issue of The Horn Speaker on Mr. John A. Victor-reen. You know I have one of those sets. I cannot find the model on it. It has several knobs plus the two tuning knobs a place to hook up a loop antenna and a switch to change from outside antenna to the loop. This set was a breadboard type made from a kit. Has 8 tubes, 6-01As, 1-200A and 1-112A. I built an A-B-C power supply for it after I did the needed repair work too it (That I will not try to explain now) and you should hear it play.

I have four or five speakers I can connect to it and you wouldn't believe how good it sounds. Believe it or not it will separate the stations on the broadcast band as well as any set I've ever had.

I like The Horn Speaker magazine very much.

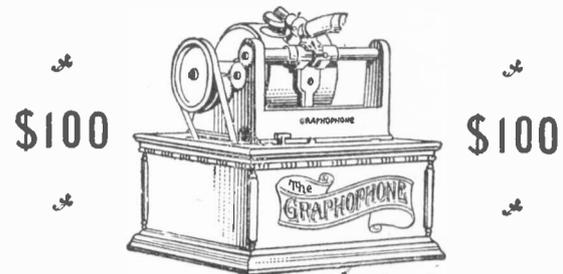
Thank you,
J. Floyd Poland
Rio, W. VA 26755

ROARING 20's

Floyd Paul is sending a trading newsletter to vintage radio and phonograph buffs who send him a self addressed stamped envelope. His address is: 1545 Raymond, Glendale, Calif. 91201.

1976 ad

The Home Grand Graphophone



THE CHEAPEST TALKING MACHINE THAT USES LARGE CYLINDERS.

This machine is similar to the \$25 Graphophone in appearance and construction, only it uses the large records.

PRICE, \$100.00.

- 1 24-inch Horn and Stand.....\$5.00
- Large 5-inch records for this machine, each 2.50
- Blank cylinder..... 1.50

NEW PRICES

Morgan McMahon of Vintage Radio Company has announced a price increase on most Vintage Radio collector-historian books. New prices will be effective on orders placed on or after July 1, 1976.

McMahon expressed a wish to get the word around to Vintage Radio's old customers, giving them a chance to beat the rate increase. He stated that "We don't like to raise prices. However, we have been subsidizing Vintage Radio heavily during it's early phases. Now our little historical enterprise must carry costs, so that we can devote our efforts to more new books for our readers."

For example, the Vintage Radio book will go from \$5.95 to \$8.95. However, some will increase only... \$1.00.

The next release is expected to be a book on how to restore radio sets, now being written by Alan Douglas.



FREE:

ADMISSION TO THE FIRST ANNUAL NOSTALGIA MINI-CON TO CELEBRATE THE THIRD ANNIVERSARY OF THE SOUNDS OF YESTERDAY ON WCNY-FM IN SYRACUSE, NEW YORK.....

WCNY PUBLIC BROADCASTING

- † EXHIBITS OF OLD RADIOS, PHONOGRAPHS, ETC
- † CONTINUOUS FILM SHOWS - SHORTS & FEATURES WITH OLD TIME RADIO STARS
- † LIVE STEREO BROADCAST RECREATIONS OF OLD RADIO SHOWS
- † BROADCASTS OF ORIGINAL RADIO SHOWS ALL DAY
- † DOOR PRIZES
- † AND MUCH, MUCH MORE.....

IT'S ALL FREE AT THE STUDIOS OF WCNY-FM IN LIVERPOOL, NEW YORK ON SATURDAY, JUNE 26, 1976.....

WRITE FOR DETAILS--Enclose a large stamped, self-addressed envelope and mail to:

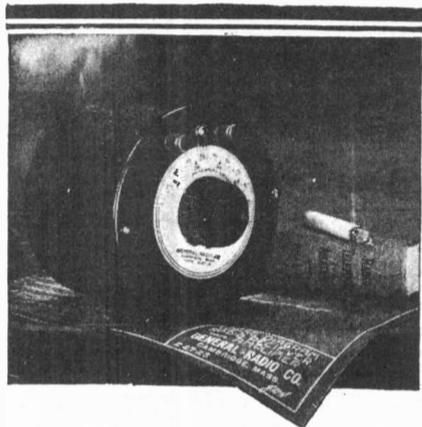
THE SOUNDS OF YESTERDAY, WCNY-FM, LIVERPOOL, NEW YORK 13088

FM/91.3
315/457-0440

authorizing 100 watts on 360 meters with the call letters KDKA. Leo H. Rosenberg, a member of the Westinghouse publicity department, was chosen to do the announcing. In a recent conversation, this writer asked him how he was selected. He replied, "A few days before the broadcast, the head of the publicity department, who was running it, asked me to take a few men up there to read on the microphone. As long as I was there, I read too; and they selected me." That original audition committee was composed of Mr. Davis and other company officials.

Broadcasting began at 6:00 pm.

1923 ad



If you value your Radio Equipment by the satisfaction it gives rather than by its initial cost, you're a potential customer of General Radio Company.

For more than eight years, in the design and manufacture of Radio and Laboratory Apparatus, we've set a standard of quality rather than of price. The results have justified the policy.

Today, men who know and use Radio Equipment of the better sort—whether Amateurs, Engineers or Scientists—accept the General Radio Company's name on an instrument as a guarantee of satisfaction.

Our Bulletin 914N not only describes our Amateur line, but is an educational pamphlet of value. Sent free on request.

General Radio Company

Manufacturers of
Radio and Electrical Laboratory Apparatus
Massachusetts Avenue and Windsor Street
Cambridge, Massachusetts

5344

Type 247-G Variable Air Condenser

A quality condenser at a reasonable price. Low dielectric loss. Rigid mechanical assembly. Fitted as shown, with reduction gearing for fine capacity adjustment.

PRICE—
Type 247-G Mounted as shown. With gear (calibrated in MMF). . . \$7.25

Other capacities, with or without gear, from \$3.25 to \$6.00.

Type 231-A Transformer

Gives the maximum amplification possible without distortion. Like all apparatus manufactured by The General Radio Company, the Type 231-A is guaranteed.

PRICE, \$5.00

Type 214 Rheostat

A quality rheostat for the new UV201-A and UV199 Tubes. A convenient, practical instrument. You'll never cause unpleasant noises in the phones when you rotate the contact arm of a Type 214 Rheostat.

For UV201-A and UV199 Tubes, 20 Ohms. For Tubes such as UV201, 7 Ohms.

PRICE . . . \$2.25

1923 ad

HYGRADE SPECIALS

200 ft. 7 strand No. 22 Copper aerial wire... \$1.25
Morse Eureka Test Clips, per dozen... .50
Skinderviken Transmitter Buttons... .95
No. 763 Eveready 22½ V. Variable B. Bat... 1.25
No. 766 Eveready 22½ V. Variable B. Bat... 2.25
No. 767 Eveready 45 V. Variable B. Battery 4.25
2000 Ohm Murdock No. 56 Head Sets... 3.75
3000 Ohm Murdock No. 56 Head Sets... 4.25
Federal or Brandes Complete Head Sets... 5.95
Dietograph 3000 Ohm Head Sets... 6.98
Fada or Framingham Rheostats... .65
Acme Amplifying Transformers (new type)... 4.25
Acme R. F. Transformers, Types R2-R3-R4 3.98
6 Volt Marko Storage Batteries... 8.95
All orders must include Parcel Post charges

Hygrade Electrical Novelty Co.,
41 West 125th Street New York, N. Y.

The night was stormy. Arrangements had been made to obtain the election returns from the Pittsburgh Post with a private telephone line. Four men were in the room: Announcer Rosenberg, the transmitter operator, a staff member who took the returns over the phone, and the telephone man in charge of the line. Rosenberg read the bulletins into a box-type microphone which was the mouthpiece of an upright telephone connected to a tube. Often he said, "Will anyone hearing this broadcast communicate with us, as we are anxious to know how far the broadcast is reaching and how it is being received."

When the writer asked how his feelings were about having people hear him on the air, he said, "At first we didn't know anybody was listening."

Phonograph records were played between speech segments. Calls were received asking for "more news and less music."

The broadcast continued until noon the next day. The outcome had been determined much earlier. Republican Senator Warren G. Harding received 16,000,000 votes, and Publisher James M. Cox pulled 9,150,000.

Rosenberg recalls that hundreds of letters were received, some from



VINTAGE RADIO HAS GREAT BOOKS FOR YOU!



RELAX WITH A TIME TRIP TO YESTERDAY!

Thousands have already discovered the pleasure of owning Vintage Radio books. You too can enjoy browsing through those pioneer days of wireless and radio. You'll recapture the excitement of wireless days even though they were long before your time. You'll see fine old battery radios of the 1920's, and rediscover "cathedral" radios of the 1930's. You'll relive the dawn of radio broadcasting, visit the radio operator aboard his ship, visit G. I. Joe in his foxhole with his handy-talkie set, and meet the radio "Ham" in his shack.

These experiences and many more await you in Vintage Radio's family of books. Young or old, you'll be fascinated by your journey through those earlier days. You'll also discover the fun and rewards of collecting old-time radio sets and memorabilia.

We have received many enthusiastic letters and book reviews. Some samples may help your enthusiasm too:

"It's a fine, mouthwatering collection . . ."
"So order a copy! You'll love it."
". . . fascination in every page."
"It brought back fond memories."
"You have the ONE mailing list I'm happy to be on."
"I am enjoying it thoroughly."
"Thrilled over all the pictures . . ."
". . . educational and delightful."
"Your new book is great. Thank you very much."
"I unwrapped it and I did not lay it aside until five hours later."

YOU'LL BE FASCINATED BY OLD-TIME RADIO!

VINTAGE RADIO 1887-1929



You'll enjoy this fascinating pictorial story of pioneer days in wireless and radio. Relive the days of Marconi, old spark transmitters, and the struggles of early radio broadcasting. It's the radio collector's reference, with over 1,000 pictures on 263 pages.

HARD-COVER \$7.95
HANDBOOK \$5.95

A FLICK OF THE SWITCH 1930-1950

Here's your time trip through the great days of radio broadcasting and the dawn of television. Revisit the Lone Ranger, Philco "cathedral" radios, old "Ham" days and many more. You'll revel in 312 pages of story, old ads and over 1,000 pictures.

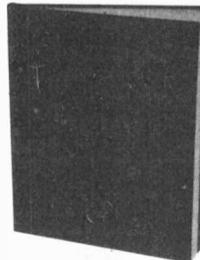
HARD-COVER \$9.95, HANDBOOK \$6.95



1927 RADIO ENCYCLOPEDIA

Own this authentic reproduction of Gernsback's classic. Browse through radio's heroes (who's Marconi?) and hardware (what's a coherer?) of the old days. 175 fascinating pages. Our hard-cover version is a serialized limited edition, an ideal gift.

DELUXE HARD-COVER \$12.95, HANDBOOK \$9.95



DISCOVER THE EXCITING RADIO COLLECTOR'S HOBBY!

as far away as New Zealand. He continued to do the announcing, handling the regular programs from 8:00 to 10:00 each night for about three months, in addition to his regular daytime duties. In 1924, he went to work for the Lord & Thomas Advertising Agency (now Foote, Cone & Belding). One of the radio accounts he handled in the Thirties was the Horlicks Malted Milk sponsorship of "Lum & Abner." He was with the agency for 50 years.

When KDKA celebrated its 50th anniversary in 1970, he was invited back as a special guest for the ceremonies.

Leo H. Rosenberg is now 80 years old, and his voice still has good

strength and resonance. In fact, it still possesses sufficient quality for another broadcast of election returns.

JACK BENNY

BOOK REVIEW
by
Fred L. Davis

JACK BENNY by Irving A. Fein, with introduction by George Burns, G.P. Putman & Sons, \$8.95.

JACK BENNY is a 300+ page book written by a man who was associated with Jack Benny from 1947 until

Benny's death on December 26, 1974. My only criticism of the book really goes for most of the biographies written of stars who happen to be in the twilight years of their careers. Biographies of stars tend to spend too much time with the more recent happenings rather than relating instances and events of the earlier days that actually made the star what he is. I prefer to have biographies that focus on the earlier days and events that led the individual to becoming the star in the entertainment industry. This book on Jack Benny spends about 40% of the book on the first 30 years that actually made him a star and about 60% on the last 15 years of

OUR BOOKS AREN'T ALL - WE'LL BEAUTIFY YOUR WALL!



MAGNIFICENT COLOR PRINTS FROM ORIGINAL ART

These fine "Progress in Electronics" prints are the most striking artwork we've seen in years. Made from the original painting, each print is 8" x 10" with its own coordinated matte background. Prints are on beautiful heavy stock with high-quality inks. It takes nine passes through the printing press to make each of these four masterpieces!

You have a choice of prints for framing, or plaques ready to hang on your wall. Originally conceived as executive gifts by Hall-Mark Electronics, these fine pictures are made by special arrangement with the U.S. Postal Service. Here's the ideal holiday gift for you, your relatives and friends!

FOUR BEAUTIFUL PRINTS FOR FRAMING, \$7.50. READY-TO-HANG PLAQUE SET, \$18.50

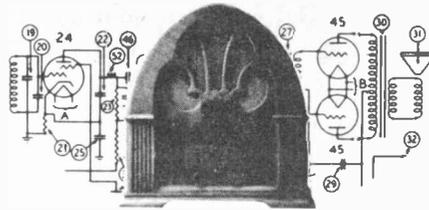
1921-1932 RADIO COLLECTOR'S GUIDE



This book makes you an "instant expert" as you go prospecting for those fine old radios. It eliminates guesswork in determining a set's age and "pedigree." There are 264 pages loaded with over 50,000 facts on 9,000 radio models made by 1,100 manufacturers.

HANDBOOK \$4.95

CIRCUIT DIAGRAMS



We will research any pre-1951 radio model and send you the circuit diagram and any other available repair information. We'll also tell you the year in which that model was introduced. Your money back if we don't come up with at least a circuit diagram!

We now have Canadian diagram's, too!

ANY RADIO MODEL \$3.50

MOST-OFTEN-NEEDED 1926-1938 DIAGRAMS

This reprint of Morris Beitman's Supreme Publications book shows circuit diagrams for 600 radio models. Its 240 pages are valuable for historical circuit information, and are great aids in restoring those old sets. Made from Supreme's original artwork, it is clear and readable.



HANDBOOK \$7.00

Also 1941, 1942, 1948 and 1950 Editions \$4.00 each.

ORDER NOW AND BEAT OUR JULY 1 PRICE INCREASE!

Send check or money order to Vintage Radio, Dep't M, Box 2045, Palos Verdes Pnsln., CA 90274
TEN-DAY GUARANTEE. WE PAY POSTAGE. Californians add 6% Sales Tax.

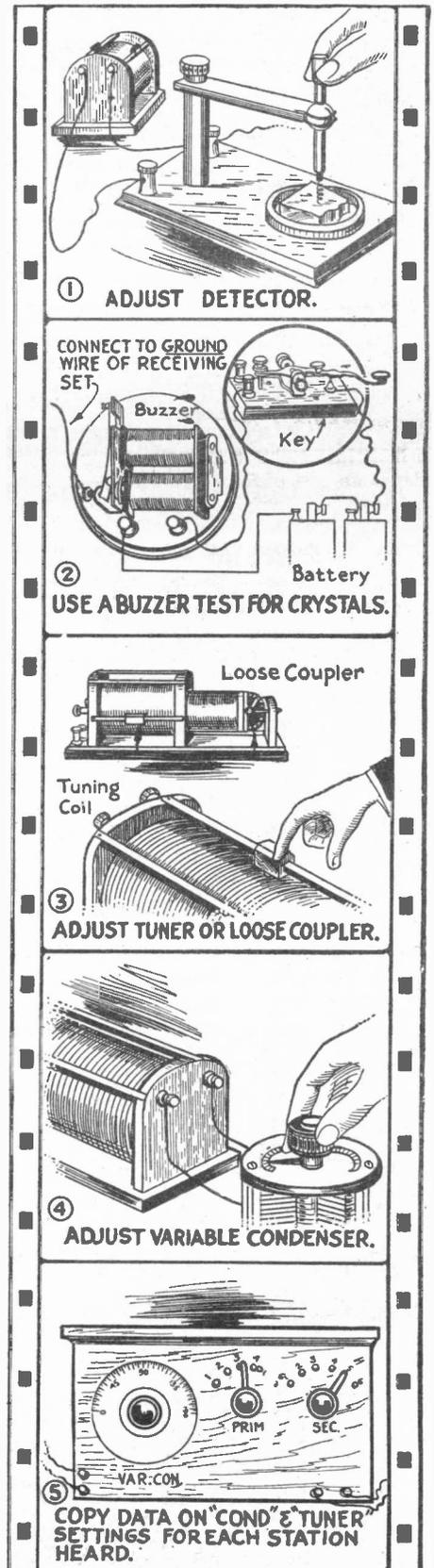
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_____ \$ _____	_____ \$ _____
Total \$ _____	

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

FREE! Radio Age Guide with Each Order. FREE!

1922

TO OPERATE A SIMPLE RADIO



This Motion Picture Strip Shows the Successive Operations, from Top to Bottom, to be Followed in Tuning the Radio Receiving Set Either for Radiophone Concerts or for Regular Radio Telegraph Signals. If a Crystal Detector is in Use, it Will Prove a Great Time Saver to Employ the Buzzer Test Here Shown, as Otherwise You May Spend Several Hours Listening for Signals on a "Dead" Crystal. Adjust the Detector, then the Tuner and the Variable Condenser.

his career.

Benny Kubelsky, then Ben Benny, and last Jack Benny was a star of stage, screen, and radio. Benny was a major star of vaudeville who decided to try the new medium of radio, and then made the successful switch to the still-newer medium of television. Hindsight makes this appear easier than it was.

In vaudeville a successful act could be honed and polished and then used for a long time while touring the United States. Flaws and fluffs were not that important since the act played to relatively few people at any one time. Successful material was like an annuity, played over and over to a variety of audiences. Gestures, leers, movements, and costumes--all a part of physical comedy--were important in vaudeville. Ah, but this new baby...radio...where only the voice mattered, where material was consumed by a monster that was never satisfied even though fresh material was fed to it weekly. Radio had to have good material, material that kept the people laughing, material that would keep a star on top of the Hooper ratings, material that was fresh, new, and exciting. Viewing radio in this light, you can see that moving to the new medium from the secure womb of vaudeville was not easy, and staying on top in radio was even harder.

In the interest of space, I will

limit myself to the highlights in the book. Jack Benny's career did not have dramatic ups and downs as can be said of a lot of stars. His career was one of a relentless rise upwards. Jack Benny and his friends in vaudeville were of a single minded purpose. They thought only of their craft. When a member of a vaudeville act was addressed on the street with the usual "How are you doing?" or "How are you?", it was quite common for the individual to respond with "I'm doing 8 minutes!" or whatever the length of his act at that time. The higher the place on bill, the longer the act. Even after he was on top, Benny still had a single purpose. Stay on top. One story illustrates this drive, which seems to be common among super-achievers. A number of Benny's associates were at his house on a day that turned out to be quite cold. Benny was asked about getting some heat and responded with the fact that the servants were off that day. One of the visitors flicked the thermostat on the wall and received a look of surprise from Benny. Jack Benny had lived in the house for a number of years and did not know how to turn the heat on in his own house.

In 1930, Jack Benny was appearing with the Earl Carroll Vanities at a salary of \$1,500 a week. Although he was successful, he was concerned with all the attention that the little box was getting. Everyone was talking a-

bout the shows and stars on radio. As a sidelight, radio sales in 1930 were around 3,000,000 rising to over 7½ million in 1937. Benny listened to the radio as often as possible, hearing names of acts, such as Gene and Glenn and also Amos and Andy, who were suddenly national stars but had no background in the show business world that Benny knew. Jack's break came on a New York radio station with a guest interview spot on The Ed Sullivan Show on May 2, 1931. Jack's opening line on radio was "This is Jack Benny.... There will now be a slight pause while everyone says, "Who cares?" The response to the interview was excellent and offers begin coming in. Canada Dry Ginger Ale became the sponsor of the radio show starring Jack Benny, George Olsen and his band, and Ethel Shutta which started in May, 1932 for seventeen weeks.

Jack Benny had a successful radio show for almost twenty years, when television came into prominence. Benny tested television gingerly, maintaining the radio show for the first 5 years of his television career, before jumping into TV with both feet. During the 1950-51 season he had 4 programs. 1951-52 saw Benny doing 6 programs. During 1952-53 he went to 9 programs, and then in 1953-54 he started doing 13 shows, one every other week.

WALTS EMPORIUM

P. O. BOX 19406
DALLAS, TEXAS 75219
EVENINGS - 214-262-7855



ALL MATERIAL IS SOLD FOR QUALITY CONTENT ONLY. IF THERE ARE TORN PAGES OR COVERS, IT WILL BE CALLED TO YOUR ATTENTION. SATISFACTION GUARANTEED OR MONEY REFUNDED UPON RETURN OF MATERIAL. CASE (LARGE) FOR FULL LIST

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| HS2 | VAN SICKLE RADIO CO, St. Louis, 1936 \$4.50 | M74 | THE MAGIC OF COMMUNICATION 1925 AT&T \$3.00 |
| HS3 | Van Sickle Radio Co, corner on back cover gone otherwise perfect, 1935 catalog \$4.50 | M75 | Allied's Radio Data Handbook 1915 \$4.00 |
| HS4 | Van Sickle Radio Co, 1935, perfect \$6.00 | M77 | Sales Catalog, School, RADIO INSTITUTE OF AMERICA (Formerly Marconi Inst) \$8.00 |
| HS5 | VAN SICKLE RADIO CO., 1937, perfect \$6.00 | M80 | SCIENCE AND INVENTION Annual experimenters Number, Aug 1921 \$15.00 |
| HS6 | RADIO CIRCULAR CO, NY., 1934-35, good illustrations of sets of the era, toys, trains, and other merchandise...\$7.00 | M82 | DETROLA radio Receiver, chassis model 140 and second booklet for model 101, instructions, \$4.00 |
| HS7 | COAST TO COAST RADIO CORP, 1934, NY, \$5.00 | M88 | ZENITH LONG DISTANCE RADIO 1941 receivers service manual, hard cover, exc. \$15.00 |
| HS8 | RADIO NEWS, Jan 1941, exc covers, 4.00 | M89 | RCA VICTOR SERVICE NOTES for 1933 hard bound volume exc condix \$30.00 |
| HS9 | RADIO-CRAFT, April, 1931, Gernsback \$5.00 | M90 | RADIO FIELD SERVICE DATA (companion book to Modern Radio Servicing by Alfred A. Ghirardi, 1936 loose leaf binder, this is the only I've seen \$18.00 |
| HS10 | RADIO CRAFT, Sept 1933, excellent, \$4.50 | M91 | 1933 Official Radio Service Manual, Vol #3 Official Directory of Commercial Radio Receiver, full radio service guide, Hugo Gernsback publications, in binder(orig)\$30. |
| HS11 | RADIO CRAFT, March 1940, \$4.00 | | |
| HS12 | RADIO CRAFT, June 1940, \$4.00, OR ALL FIVE RADIO CRAFT MAGAZINES FOR \$18.00 | | |
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| M6 | ARMY LIFE War Dept, Sept 1946 \$3.00 | | |
| M16 | "EVERYDAY SCIENCE AND MECHANICS," Gernsback, editor, Feb'35, NOV-Dec '34 (one issue), Oct'32 and Dec '32, \$4.00 ea., \$14.00 lot | | |
| M17 | COMMERCIAL RECEIVERS, National Radio Inst'49 \$3.50 | | |
| M19 | WHOLESALE RADIO SERVICE CO'36, slight cover damage \$4.00 | | |
| M20 | Service Manual, EVEREADY RADIO RECEIVERS, 1929 Covers rec. series #30, \$15.00 | | |
| M24 | RADIO DESIGN, Winter 1929, \$4.00 | | |
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| M40 | WORLD RADIO LABS (WRL) Catalog, 1958 \$3.50 | | |
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| M58 | DAVIS-RUSS CO, Houston, Tex 1935 \$4.50 | | |
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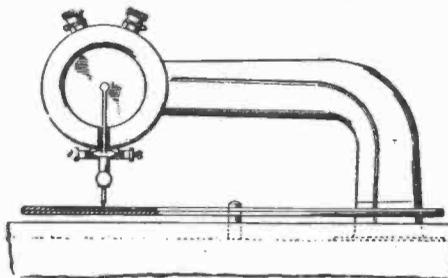
BOOKS - MAGAZINES - SHIPPED PREPAID
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The secret of Benny's success was that he surrounded himself with high quality supporting talent--Don Wilson the announcer, Mel Blanc (Bugs Bunny), Dennis Day, Mary Livingstone, Phil Harris & Alice Faye, Kenny Baker, and others-- had sufficient variety, and let his supporting cast take most of the funny lines while he played straight man with a delayed pause (and a soulful look on TV). Benny realized shrewdly that he would still get credit for having a successful show. The importance of variety was expressed eloquently by a situation related in the book concerning a golf game Jack Benny had with Jack Pearl. Jack Pearl was riding high with his Baron Munchausen character, who used to ask his sidekick Cliff Hall, "Vass You Dere, Sharlie?" Jack Benny made the suggestion that Jack Pearl should go easy on this hilarious line and not use it every week on Jack Pearl's top rated radio show. Pearl said that the leaving out of his catch-phrase would be a mistake, because the listeners were waiting to hear it. The listening audience evidently finally got enough, because within a couple of years the show was off the air. The same thing could be said for Joe Penner and his line of "Wanna buy a duck?" This catch-phrase was also worn to death. Benny on the other hand did not wear out his stock situations such as the basement vault, the Maxwell, stinginess, age of 39, etc.

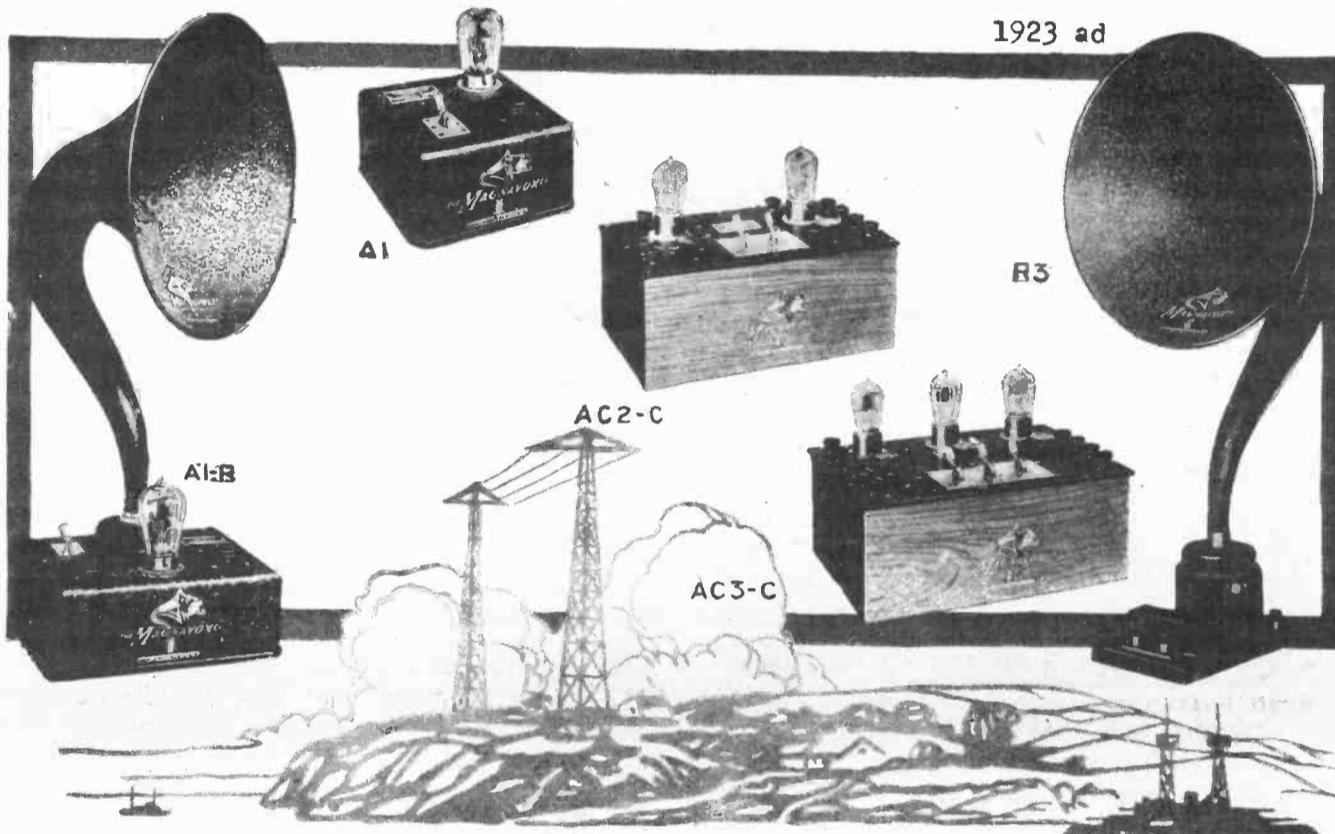
1976 ad

In a book filled with so many situations from such a memorable career it is impossible to even touch all of the high spots. One particularly poignant moment is related of Jack Benny going to visit Eddie Cantor in the hospital after Cantor's heart attack. Cantor was sitting on the edge of his bed in his hospital room and said, "Look at me, Jack. After a month here the doctors are finally letting me sit on the edge of the bed. Me...who used to dance across a thousand stages...and now this."

(1,557,529, E. T. Jones. Filed December 3, 1921; issued September 15, 1925.)
Electrical reproducer for phonographs where a diaphragm is actuated to vary the magnetic reluct-



ance of a telephone circuit for reducing electrical energy in a pair of associated windings. The energy is amplified and reproduced in accordance with the vibrations of the diaphragm.



1923 ad

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0D3	\$3	2C26	\$3	6AR6	\$3	6N7C	\$3	12AD6	\$4	25W4	\$3	117Z6	\$4	5828	\$3
0D3A	\$3	2C34	\$4	6AS4	\$5	6P5	\$3	12AE7	\$4	2525	\$3	124A	\$4	5637	\$3
01A	\$17	2C51	\$4	6AS6	\$4	6Q7	\$3	12AF6	\$3	2526	\$3	126	\$4	5656	\$3
0Z4	\$5	2D21	\$4	6AS7	\$8	6R7	\$4	12AH6	\$2	26	\$4	127	\$3	5684	\$3
1A1	\$4	2E5	\$4	6AS8	\$8	6S4	\$4	12AL5	\$4	27	\$3	171A	\$6	5686	\$3
1A3	\$3	2E22	\$3	6AT6	\$2	6S8	\$3	12AL8	\$5	30	\$8	WE-		5692	\$3
1A4	\$3	2E26	\$3	6AU6	\$3	6SA7	\$3	12AT6	\$4	31	\$7	274A	\$4	5725	\$6
1A5	\$3	2E30	\$2	6AV5	\$4	6SB7	\$3	12AU6	\$4	32	\$4	281	\$6	5749	\$4
1A6	\$3	2O3A	\$17	6AV6	\$3	6SC7	\$3	12AV7	\$3	32L7	\$4	313	\$5	5751	\$6
1A7	\$3	2O5B	\$17	6AV8	\$3	6SD7	\$3	12AX7	\$3	33	\$4	326	\$4	5763	\$5
1B4	\$3	2W3	\$4	6AX3	\$4	6SG7	\$3	12AY7	\$6	34	\$4	WE-		5793	\$4
1B5	\$3	2X2	\$2	6AX4	\$5	6SH7	\$3	12AZ7	\$5	35/51	\$4	328A	\$4	5814A	\$5
1B7	\$2	3A2	\$3	6AX5	\$6	6SJ7	\$7	12A	\$7	35W4	\$3	WE-		5849A	\$4
1B8	\$2	3A4	\$3	6AX7	\$2	6SK7	\$8	12B7	\$3	35Y4	\$5	329A	\$4	5874	\$3
1C1	\$4	3A5	\$3	6B4	\$5	6SL7	\$7	12B8	\$4	35Z5	\$4	345	\$5	5879	\$4
1C5	\$3	3AL5	\$4	6B5	\$5	6SN7	\$5	12BA6	\$3	35Z6	\$4	381	\$6	5881	\$5
1C6	\$3	3A8	\$3	6B6	\$5	6SQ7	\$8	12BE6	\$4	36	\$3	412	\$4	6080	\$9
1C7	\$5	3B4	\$4	6B7	\$5	6SR7	\$8	12BH7	\$4	37	\$3	427	\$3	6100	\$6
1D5	\$5	3B7	\$4	6B8	\$3	6SS7	\$6	12BK5	\$4	38	\$3	445	\$5	6136	\$6
1D7	\$5	3BN6	\$7	6BA6	\$4	6ST7	\$6	12BL6	\$4	38A3	\$3	446	\$4	6146	\$9
1D8	\$4	3BZ6	\$5	6BA7	\$4	6SV7	\$3	12BY7	\$4	39/44	\$3	CK512-		6267/	
1D21	\$5	3C6	\$3	6BC5	\$4	6T8	\$2	12C5	\$5	40	\$4	AX	\$7	EF86	\$3
1E5	\$5	3CB6	\$4	6BC8	\$7	6U5	\$4	12C8	\$3	41	\$4	575A	\$30	7025	\$4
1E7	\$4	3CS6	\$4	6BD5	\$4	6U6	\$3	12CA5	\$5	42	\$4	633	\$7	7027A	\$9
1F4	\$4	3D6	\$3	6BD6	\$3	6W4/EZ90	\$4	12CT8	\$7	EAF42	\$6	715	\$42	GC10/	
1F5	\$5	3LF4	\$5	6BE6	\$5	6V6MET	\$8	12CX6	\$7	43	\$4	717A	\$10	4B	\$10
1F7	\$5	3Q4	\$3	6BF6	\$5	6V6GT	\$6	12DB5	\$3	45	\$5	801	\$3	6-100-	
1G4	\$4	3Q5	\$3	6BH8	\$5	6W4	\$4	12DL8	\$3	45S/VT		EAF-		AL	\$450
1G5	\$4	3S4	\$2	6BJ6	\$5	6W7	\$4	12DT5	\$3	52	\$6	801	\$6	3X2500-	
1G6	\$4	3V4	\$2	6BK5	\$3	6X4	\$6	12DV5	\$4	46	\$7	803	\$38	A3/8161	
1H4	\$5	54C	\$12	6BK6	\$5	6X5	\$4	12DV8	\$3	47	\$8	805	\$21	\$200	
1H5	\$4	5A4	\$3	6BM8	\$3	6Y5	\$4	12EG6	\$4	48	\$8	807	\$10	304TH	\$3
1H6	\$4	5AZ4	\$4	6BQ5	\$4	6Y6	\$6	12EK5	\$3	49	\$6	810	\$28	MLS31	\$40
1L4	\$4	5BR8	\$3	6C4	\$5	6Z4	\$3	12F8	\$3	50	\$6	812A	\$16	2E26	\$4
1L5	\$4	5GH8	\$3	6C5	\$9	6Z5	\$2	12H6	\$3	50A5	\$4	829A	\$19		
1L6	\$13	5R4	\$4	6C6/77	\$4	6Z7	\$2	12J5	\$5	50C5	\$4	833A	\$67		
1LA4	\$4	5T4	\$8	6D6/78	\$4	7A4/XXL	\$3	12K5	\$3	50C6	\$4	837	\$16	8012	\$18
1LA6	\$5	5T8	\$5	6D7	\$4	7A5	\$3	12K7	\$3	50EH5	\$4	845	\$35	CK5886	\$3
1LB4	\$5	5V3	\$5	6D8	\$4	7A6	\$3	12K8	\$3	50HK6	\$4	865	\$4	5915	\$3
1LC5	\$5	5V4	\$5	6DK6	\$4	7A7	\$3	12SA7	\$3	50L6GT	\$6	866A	\$9	5963	\$3
1LC6	\$4	5V6	\$4	6DT8	\$4	7A8	\$3	12SC7	\$3	50X6	\$6	868	\$5	6101/	
1LD5	\$4	5V8	\$4	6E5	\$4	7B4	\$3	12SF5	\$3	50Y6	\$6	884	\$6	6J6	\$4
1LE3	\$5	5Y3	\$4	6E6	\$4	7B5	\$3	12SG7	\$3	VT-52	See	930	\$3	6201	\$3
1LF3	\$5	5Z3	\$5	6E7	\$4	7B6	\$3	12SH7	\$3	45S	\$6	954	\$7	6267	\$3
1LG5	\$5	6A3	\$6	6EJ4	\$13	7C6	\$3	12SJ7	\$4	53	\$5	955	\$7	6550	\$8
1LH4	\$5	6A4	\$6	6EJ7	\$4	7C7	\$3	12SK7	\$3	55	\$6	956	\$7	6973	\$3
1LN5	\$5	6A5	\$4	6EV8	\$3	7E6	\$3	12SL7	\$3	56	\$4	958	\$3	7027A	\$7
1N5	\$4	6A6	\$4	6EX6	\$3	7E7	\$3	12SN7	\$3	CK56	\$6	99L	\$3	7247	\$4
1N6	\$4	6A7	\$6	6F4	\$3	7C7	\$3	12SQ7	\$3	KT66	\$10	FM-		7591	\$4
1P5	\$4	6A8	\$5	6F5	\$6	7F7	\$3	12SR7	\$3	57	\$4	1000	\$10	7869	\$3
1P40	\$10	6AB4	\$3	6F6	\$8	7F8	\$4	12W6	\$3	58	\$4	1201	\$3	8005	\$3
1Q5	\$4	6AB7	\$3	6F7	\$12	7G8	\$3	1223	\$3	59	\$5	1203A	\$3	8012	\$3
1R4	\$3	6AG5	\$3	6F8	\$12	7H7	\$3	14A4	\$3	KT88	\$10	1280	\$3	8525	\$4
1R5	\$7	6AC7	\$3	6G5	\$4	7J7	\$3	14A7	\$3	7017	\$3	1299	\$3	9001	\$5
1S4	\$2	6AE6	\$5	6G6	\$3	7K7	\$3	14A7	\$3	71A	\$6	1367	\$3	9002	\$5
1S5	\$2	6AE7	\$5	6H6	\$2	7N7	\$4	14B6	\$3	75	\$6	1613	\$3	9003	\$5
1T4	\$4	6AF4	\$7	6J5	\$3	7Q7	\$3	15	\$7	VR-75	\$2	1614	\$6	VR105	\$3
1T5	\$3	6AG5	\$5	6J6/6101	\$3	7S7	\$3	17EW8	\$5	76	\$3	1616	\$3	CC10/	
1U4	\$3	6AG7	\$13	6J7	\$7	7T7	\$3	19	\$7	77	\$4	1619	\$8	4B	\$4
1U5	\$3	6AH4	\$3	6J8	\$3	7Y4	\$3	19T8	\$8	78	\$4	1620	\$8		
1V	\$4	6AH6	\$9	6K6	\$3	7Y7	\$3	22	\$5	79	\$3	1624	\$12		
1V2	\$3	6AJ5	\$3	6K7	\$3	7X7	\$3	24A	\$4	80	\$5	1625	\$8		
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FOR SALE OR TRADE

FOR SALE: Airline model 62-149 battery radio, fair condition, complete except for one knob, \$20.00. Used tubes, 4 each 224 \$1.50 ea., three each 27 \$1.00 ea., 6E5 \$1.50, 6G5 \$1.50.

Books--Hawkins ELECTRICAL GUIDE no. 3 1917 \$5.00, FUNDAMENTALS of INDUSTRIAL ELECTRONIC CIRCUITS, by Richter, 1947 \$2.00, ELEMENTS of ELECTRICAL ENGINEERING, by Arthur L. Cook, 1924, \$5.00. T. J. MANUFACTURES RECEIVER TROBIE CURES, copyright 1953, by John F. Rider, publisher, front cover missing. \$3.00, HOW TO MODERNIZE RADIOS FOR PROFIT, by M. N. Beitman, 1952 \$4.00.

Meters--Weston antenna current indicator model 507 \$3.00, Dejuk ammeter type J-1 D.C. 50MV \$3.00. Soldering lugs very useful 100 for \$1.00. Protect your radio collection with an Emhart 911 Smoke Detector, battery operated, brand new. Retail \$69.95 asking \$35.00. Order \$20.00 or more and I'll send you a free AM pocket radio. Please add 15% to help cover postage and insurance. Please write if you need more information. Gary Probst, 336 W. Church Street, Lock Haven PA 17745, Phone: (717) 748-2861.

SPEAKER GRILL CLOTH. Two new styles now available. (Styles #1, 2, 3 sold out) Fine, silky 20's - 30's style fabric. 24" wide \$4.00/yard, plus 25¢ mailing. SASE for samples. Warren Dewey, 5021 Ambrose Ave., Los Angeles CA 90027.

I ran across something in an antique store last month that might be a find of the month (at least it was mine!). The store had a couple of boxes of "old radio/electronics parts" for sale for \$12.50. I nosed through them in the dark enough to determine that the contents were worth the price but didn't fully investigate until I got the boxes into the light of day after I bought them. They turned out to have one complete Emerson AM/Police radio from the mid-30's, a substantially complete Setwart Warner 300, the chassis of an unknown late 20's set with a fine dynamic speaker, and a few Silver Marshall miscellaneous parts, replacement audio transformer for a Radiola III, and an Amperite ribbon microphone of early vintage. Now if I could just figure out what brand that chassis and speaker are....

Sincerely,
Ronald Kramer
134 Coolidge St.
Ashland OR 97520

Recently I found a radio which may be of interest to your readers, and maybe someone can tell me something about it. On the name plate I find the initials RCA, but just beneath them is the names Brunswick Radiola, Super Heterodyne; Brunswick, Balke, Callender Corporation; and lastly, Radio Corporation. The set has six 199 tubes and two variable condensers. The case is not in the best condition (stored in a damp place) and some of it (possibly the battery compartment) seems to be missing. The wiring and other components are in surprisingly good condition with the exception of one variable condenser which is frozen. I suspect some of the tubes are bad.

In time I expect to restore this set but I haven't yet got up the nerve. Meanwhile I have other radios to work on.

Sincerely,
E. A. Thompson
Rt. 8, Box 474
Florence, Ala. 35630

\$5 GRAPHOPHONE.

With Recorder and Carrying Case,

\$10.00.

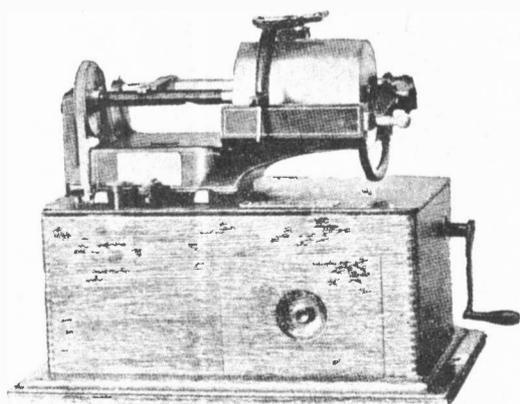
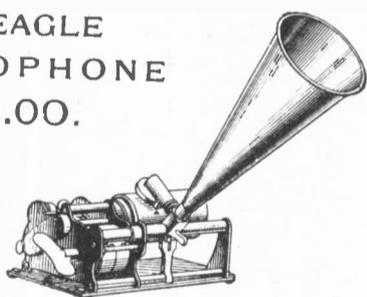


Cheapest Talking Machine made.

THE EAGLE
GRAPHOPHONE
\$10.00.

WITH
CASE,

\$12.00.



The EDISON CONCERT PHONOGRAPH includes a 24-inch brass horn and stand.
PRICE COMPLETE, \$125.00.

Polyphone Concert Grand.

\$130

Loudest
Talking
Machine
Made.



The Polyphone Concert Grand is a new talking machine placed on sale for the first time May 1st, 1899. It is as loud and natural as the human voice. Can be heard distinctly in the largest theatre in the world.

To appreciate the great difference between this and other Talking Machines, you should hear them side by side. We have challenged comparison and have made tests with other companies' best machines, using the same record on both.

ALL THE JUDGES AGREE THAT MACHINES WITH POLYPHONE ARE

}	Twice as loud,
	Twice as natural,
	Twice as musical,
	Twice as sweet

in tone; can be heard by twice as many people at one time and that they will be twice as well pleased.

Edison Concert Phonograph with Polyphone Grand attachment, including two 24-inch brass horns and stand, \$130.00.

Edison Concert Records, each, \$4.00.

Other 5-inch Records, each, \$2.50.

from THE MACHINE COMPANY catalog, H.B. BABSON, 1899

FOR SALE OR TRADE

FOR SALE: Philco Cathedral 37-60, with tubes, works \$40. Colonial T.R.F., circa 1925, without tubes, works, \$35. Atwater-Kent 40, with tubes, restored, works, \$35. Crosley 51, with tubes, works, \$50. Crosley 4-29, without tubes, as is \$38. Crosley dynacone speaker, metal case, probably works, \$12. Radiola 100 speaker, blemished, works, \$30. Horn, small Atlas type-B, works good, \$30. Atwater-Kent "L" horn, blemished, works, \$33. Send SASE for information. Arthur Harrison, 1021 Falcon Drive, Columbia, MO 65201. (Buyer pays for shipping.)

FOR SALE: Professional, high quality reprints of most pre-Orthosonic Federal Instruction Manuals, each includes its schematic. Also 1923 Federal catalog & booklet available. SASE for details, Dick & Ann Schamberger, 1975 Hertel Ave., Buffalo, N.Y. 14214.

FOR SALE: Best offers on World War I portable spark coil transmitter. Looks nice and working. Crocker Wheeler 5 piece add a unit/with CR earphones one tuner coil missing. Looks good. SASE please. Steve Sideroff, RFD 1, Marlboro, New Jersey 07746.

FOR SALE OR TRADE: Radiola VI model AR-895 1922, Miracle crystal set with Baldwin ear phones 1922, Crosley Super Trirdyn regular 3 tube peanut tubes, Atwater Kent model 30 no tubes, Radiola #17, Radiola #18. Will trade for outside horn phonographs or parts. All sets are open for offer. N. Solgas, 810 K St., Sacto., Calif. 95814. Phone: 916 442-3646.

CLOTH COVERED POWER CORD. New 2-conductor cord as used on AC sets of the twenties, thirties, forties. From old stock, limited quantity. In brown or gold 25¢/foot. Please add 50¢ for mailing. Warren Dewey, 5021 Ambrose Ave., Los Angeles, California 90027.

SPECIAL OFFER, WD11 adaptors use UX199-UX120-UT24-864 2 for \$7.50pp. U.S.A. if postmarked before July 4, 1976. K. Parry, 17557 Horace, Granada Hills CA 91344.

FOR SALE: X99A and X20A tested, two for \$15. or \$10. each. I have extra Riders Volumes 3, 5, 6, 7, 12, 14 and 1 to 5 abridged and Riders TV Volumes 1, 2, 3, 4 for TRADE. K. Hanson, 3403 E. Broadway, Long Beach CA 90803. Phone: 213 433-1983.

BLANK BAKELITE STOCK cut to size, 1/8" to 1/2" thick. Fabricating and engraving services available. SASE for pricing sheet. Norman A. Parsons, 22 Forest St., Branford CT 06405, Phone: 203 488-4267.

SEND \$1.00 for the newly published booklet "A Pocket Guide to Antique Radio Collecting." Antique Radio Press, Box 42, Rossville IN 46065.

FOR SALE OR TRADE

ANTIQUATE TELEVISION Collection: 38 different models from 1930s, 1940s one or all \$75.00 up each. List & picture \$1.00. Seidel, 614 Grove Lane, Santa Barbara CA 93105. Phone; 805 687-7967. Want horn phonographs any quantity CASH.

FOR SALE: Telephone operators microphone, breastplate and mouth-piece, no cord or neck band, unused WE 396A \$5.00. Pony relay used for telegraph repeater, \$17.50 in the thirties, now \$15.00, mint a beautiful specimen. Custom power supplies for antique radios, specify and SASE for a quote. Buy or trade antique electronic equipment. Include postage and sales tax for California orders. Excess refunded. Ray Harland, 2602 Mary Lane, Escondido CA 92025.

FOR SALE: 1930 Clarion Cathedral, excellent condition, very ornate \$50. Dick & Ann Schamberger, 1975 Hertel Ave., Buffalo, N.Y. 14214.

FOR SALE OR TRADE: Several old radios; General Model 240 capacity tester; RCA 100A and AK E3 speakers; misc. old radio items; few old phono parts. Send SASE for list. WANT cover and tuning knob for Stewart Warner 300. R. Kramer, 134 Coolidge St., Ashland OR 97520.

FOR SALE: My collection of Atwater-Kent Breadboards and parts. Large SASE for details. Terry Chew, M.D., Medical Service, 16111 Plummer St., Sepulveda, California 91343.

WANTED

JOHN GRIFFIN WANTS TO BUY pre-1930 battery operated radios. Must be in choice condition. Send photo, price, and phone number. Photos returned if no deal is made. 2937 W. Indian School Road, Phoenix, Arizona 85017. 602 263-7658.

WANTED: Radio items of all kinds wanted. Microphones, publications, tubes, parts novelties, battery radios, and early electrics. Toy trains also wanted. Quote price to C.P.O. Box 603, Kingston, N.Y. 12401.

WANTED: RADIO NEWS: POPULAR RADIO and RADIO BROADCAST magazines. GRIMES RADIO model 4DL Inverse Duplex. J. Albert Warren, Box 279, Church St., Waverly PA 18471.

WANTED

WANTED: Early Tuska Vari. Cond. & variometers, guts for Westinghouse DA, Federal Jr. Instruction manual, early Federal parts & sets in most any condition. Dick & Ann Schamberger, 1975 Hertel Ave., Buffalo, New York 14214.

WANTED: Any radio fan magazines. Also, any radio magazine with commercial broadcast or star information. Examples--Radio Guide, Radio Stars, Radio-TV Mirror, etc. Also Photoplay magazines. 1 or a 100. Fred L. Davis, 5106 Skippy Street, Memphis, Tennessee 38116.

WANTED or TRADE: Clapp - Eastham horn speaker, A. K. speaker model E-E2-E3, Magnavox - R3-Horn, Pilot Wasp Radio A.C., balanced amplifier for Radiola-3, unusual make horns and radio tubes; radios. Send price and condition to Raymond T. Nash, 64 Sweeney St., Buffalo, NY 14211.

WANTED: Riders Volumes 9, 13, 15 and HIGHER.

WANTED: Dial Escutcheons for Silver Marshal Model J (it has 2 holes spaced vertically 2-3/4 inches apart) and for Zenith Model 52. I have 20 Escutcheons for TRADE.

WANTED: Schematic Diagram for Radiola Special. Radiola 24 tuning KNOB & SHAFT. Tube test set up list or manual for HICKOK AC51.

Tube bases, UX four pin 1-1/8 inch diameter. K. Hanson, 3403 E. Broadway, Long Beach CA 90803. Phone: 213-433 1983.

WANTED: Beginning collector interested in your duplicates, crystal sets, early radios, horn speakers, etc. Any condition. Troe, 111 Skyline Dr., Morristown, New Jersey 07960.

WANTED: Radio Magazine - all 1920-1921, Radio Broadcast - Nov. 1926, Dec. 1928, many Wireless Age 1921 to 1925. Buy or trade. Thompson, 2930 Delavina, Santa Barbara CA 93105.

WANTED: Crystal sets, battery and electric radios and televisions Mfg. before 1935. Need all related items. Will buy one set or complete collection. Young, 11 Willow Court, Totowa, N.J. 07512.

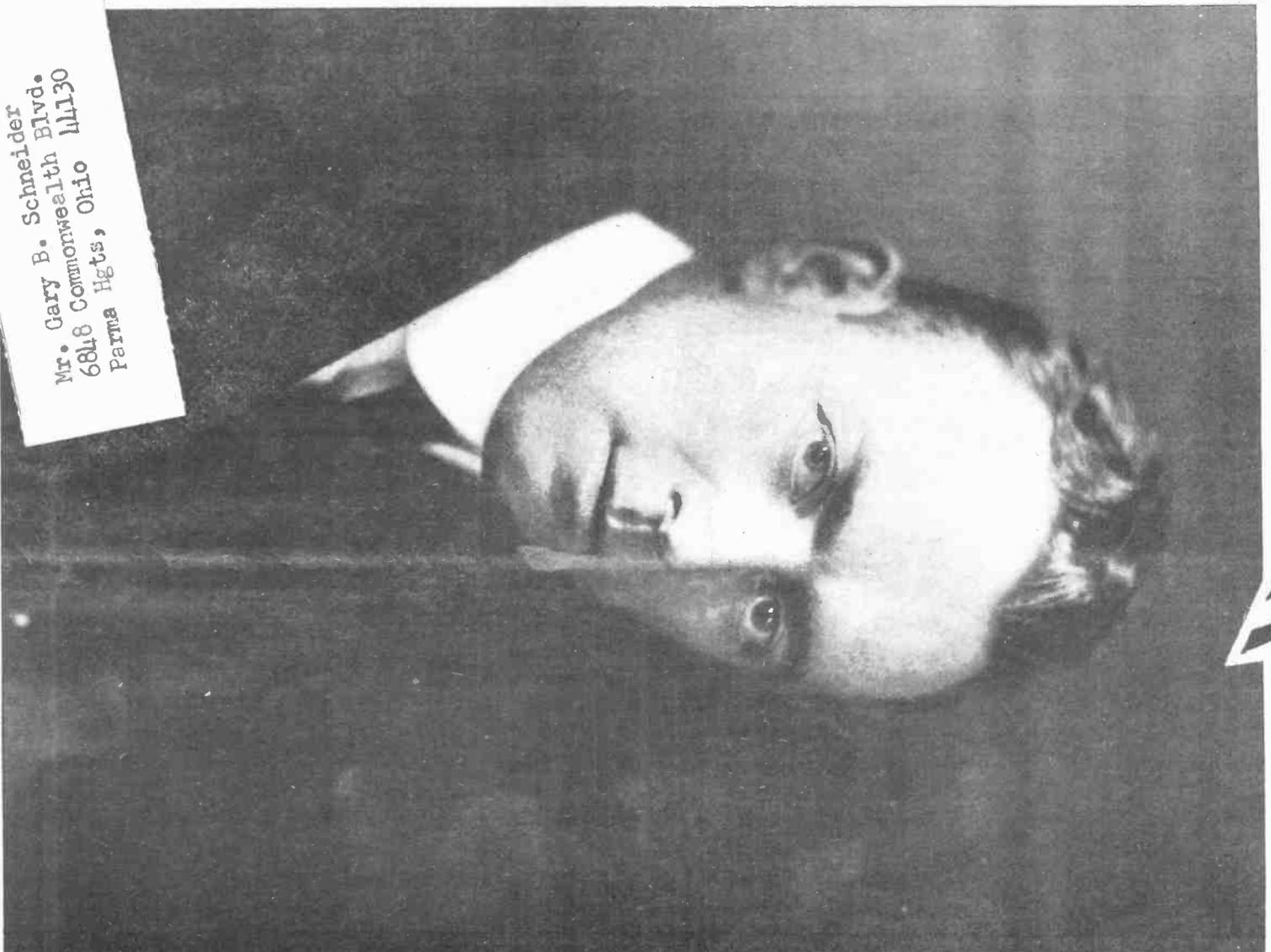
WANTED UNASSEMBLED KIT radio in original box. Boxed parts of any kind. Sets, parts, books, magazines of the 1920s. W6ME, 4178 Chasin St., Oceanside CA 92054.

WANTED: Metal speaker for Atwater Kent model 40. W. H. Webb, 2718 Helmet St., Irving TX 75060. 253 7162.

WANTED FOR 1925 Radiola #26 portable, speaker, door loop, any condition. Herb Balmer, 610 N, 14th, Marysville, KS 66508

WANTED: Still urgently need Atwater Kent detector and two step audio TA Unit to complete Model 9 breadboard. Ieland Smith, Route #3, Jasper, Ark. 72641.

THE HORN SPEAKER



Mr. Gary B. Schneider
 11111 Blvd.
 8 Commons
 Parma, Ohio 44130
 Hgts., 8789

PAUL F. GODLEY
 One of America's foremost radio experimenters
 From RADIO BROADCAST, October 1922



PUETT ELECTRONICS
 P.O. BOX 28572 DALLAS TEXAS 75228
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HOW TO ORDER

- (1) Make checks and money orders payable to PUETT ELECTRONICS.
- (2) Please state whether new or half-price used tubes are desired and whether a used tube may be substituted when a new tube is out of stock. RETURNS are mailed with your invoice for out-of-stock tubes, or when, by customer request, a used tube is substituted for an out-of-stock new tube.
- (3) WE SHIP PARCEL POST. NO C.O.D. INCLUDE 15% POSTAGE & HANDLING PLUS 30% INSURANCE. TEXAS RESIDENTS ADD 5% STATE SALES TAX. MINIMUM ORDER \$3.00 - does not apply to schematic diagrams or lists.

CUSTOMER SATISFACTION GUARANTEED - If you are not satisfied with your order for any reason, tubes may be returned within ten days for refund or replacement with exception of tubes which are shorted or have open filaments. It will be assumed that returned tubes with open filaments or shorts were damaged in shipment. Shipping damage claims will be handled promptly through the post office on insured orders. PUETT ELECTRONICS assumes no liability for orders which are not insured, and no liability beyond that which is covered by postal insurance. ALL TUBES ARE THOROUGHLY TESTED ON A MUTUAL CONDUCTANCE TUBE CHECKER BEFORE SHIPMENT.

THE CLASSIC RADIO NEWSLETTER

SEND 13¢ STAMP FOR A SAMPLE OF OUR CLASSIC RADIO NEWSLETTER. SIX ISSUES PER YEAR - FOUR OR MORE PAGES PER ISSUE.

WE CAN FURNISH SCHEMATIC DIAGRAMS AND TECHNICAL DATA ON ALMOST ANY RADIO FROM 1920 TO 1954 FROM OUR LIBRARY OF ORIGINAL MANUFACTURERS SERVICE DATA. Send \$1.50 and one 13¢ stamp per radio set. This offer is limited to five photo-copied pages. If the data you seek exceeds five pages, we will send you a quote. BE SURE TO STATE MANUFACTURER'S NAME AND MODEL NUMBER.

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 TUBE TYPES 01A, 99 & WD-11 etc. We sometimes have these tubes in stock in limited quantities. Send a 13¢ stamp for our latest New Acquisitions List.

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0A2	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0A3	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0A4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0B3	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0C3	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0D3	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0E4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0F4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0G4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0H4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0I4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0J4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0K4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0L4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0M4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0N4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0O4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0P4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0Q4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0R4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0S4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0T4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0U4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0V4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0W4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0X4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0Y4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654
0Z4	1LE3	5Y4	6F6	6U7	724	1B5	35W4	81	5654

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