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THE NEWSPAPER FOR
THE HOBBYIST OF VINTAGE
ELECTRONICS AND SOUND

THE HORN SPEAKER

The Classic Radio RADIO-CRAFT July, 1931

Scott "All-Wave" Superheterodyne

An all-purpose, high-quality receiver for the distance fan who is exacting in his demands.

THIS handsome radio receiver, completely-shielded (even to a base cover-plate), and designed to cover wavelength ranges of 15 to 184 meters, and 200 to 550 meters, is the latest of the distinguished series of distance-getting receivers developed by the Scott Transformer Company of Chicago. The schematic circuit of the receiver chassis is shown in Fig. 1; and that of its power pack in Fig. 2.

Experimenters have long wanted a receiver which would get that "*n*th degree" of efficiency obtained by using inductance values requiring the least tuning capacity, for a given frequency adjustment. The Scott All-Wave Superheterodyne receiver obtains this result by the use of six sets, each of two top-engraved plug-in coils. One set of inductances, which we will call A, covers a band of 15 to 21 meters; set B, 21-27; set C, 27-38; set D, 38-84; set E, 84-184; set F, 200-550.

Accessories for Versatile Performance

As we have pointed out in the articles on sound recording in past issues of RADIO-CRAFT, a high-power audio amplifier must be used for best results. The Scott superheterodyne is peculiarly adapted to this work; since it makes provision for the connection of a microphone output, or a phonograph pick-up, to the input circuit of the second detector, as shown in the schematic circuit. This makes available, therefore, for home recording, a first stage of A.F. amplification using a type '27 tube; a second using two of these tubes in push-pull; and a final stage, also push-pull, using type '45 tubes. The combination is particularly desirable to give an audio output, as in this receiver, of high quality.

To enable the owner of an "All-Wave" to obtain the best results in the use of microphone, phonograph pick-up, and recording head, there is available an accessory unit, a Control Box, Fig. D; and, also, to match its constants, a hand microphone and a 200-ohm phonograph pick-up.

Details of the Circuit

As indicated in Fig. 1, there are nine tubes in the receiver chassis; and in the power pack, two more audio tubes, type '45, with an '80 rectifier. Five of the tubes in the receiver chassis are of screen-grid type ('24s) and the remaining four are '27s. The R.F. or signal-frequency amplifier V1 is a '24; the first detector V2 is another; the following three '24's, V4, V5, V6, are I.F. amplifiers; and the last, V7, is the second detector.

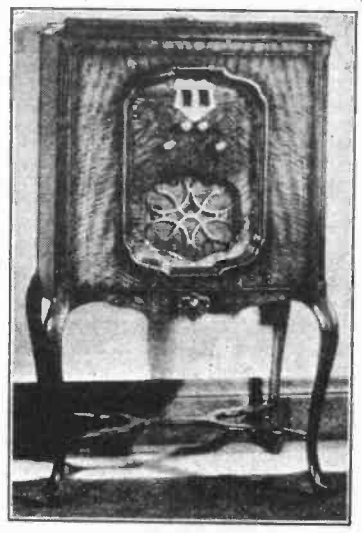


Fig. A
Panel appearance of the All-Wave Superheterodyne in a suitable console.

Fig. B
From right to left, tuner, amplifier-pack, and reproducer; showing the connecting cables which give flexibility of placement. Note the complete shielding nad strong construction.

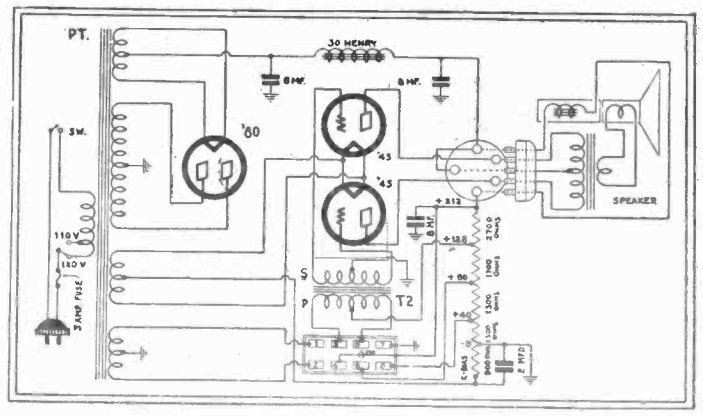
The manner in which such circuits are compensated at the extremes of tuning range (by the selection of .0005- or .00007-mf. tuning capacities, respectively) has been discussed in past issues of RADIO-CRAFT; and nothing further will be stated on this subject; except to remark that a sixth (center) pin on the oscillator inductance operates the switch Sw. Further, the control-grids of V1 and V2 are connected either through red leads for the red-dotted coil sets A, B and C, or through black leads for coil sets D, E, F.

The shield cans are to be used only over the coils used on the broadcast range—200-550 meters. It is necessary, in order to reach the highest-frequency tuning range, to use a '27 tube with a continuous-sheet (not wire-mesh) plate at V3.

As will be observed by reference to Fig. A, a low-boy console is recommended for the Scott All-Wave Superheterodyne chassis

Continued on page 4

Fig. 2 (right)
The circuit of the power pack, with its connections to set and speaker.



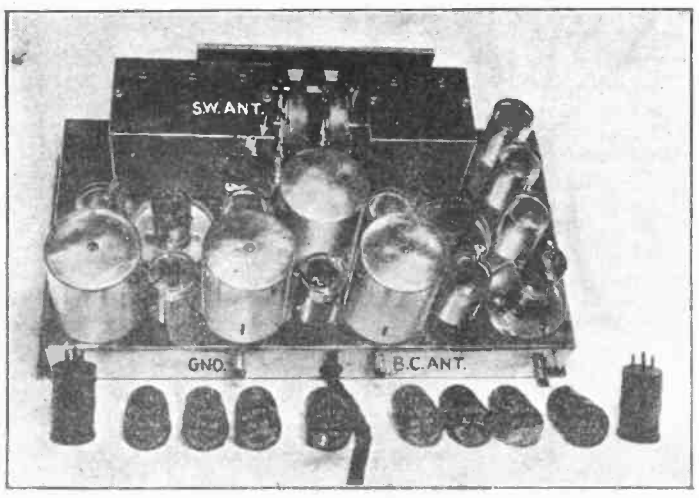


Fig. C (left)
A rear view of the tuner chassis, with all coils. It is unnecessary to shield the short-wave coils, which are therefore easily exchanged.

The Wunderlich Tube

A new push-pull detector tube has been announced by the Arcturus Radio Tube Company. This tube, which derives its name from Mr. Norman E. Wunderlich of Chicago, Illinois, employs two grids at the same distance from the filament.

The push-pull circuit of detection makes possible the combination of the superior selectivity of the grid detector with the greater power-handling abilities of the linear detector, and consequently greater output. There is no radio-frequency energy in the plate circuit, the latter being canceled out by the two grids, which are 180 degrees out of phase at the carrier frequency but in phase at the modulation frequency. The tube adjusts its own bias according to the amplitude of the received carrier. The varying grid bias can also be used to control the grids of other tubes without interfering in any way with the proper functioning of the detector.

Three functions are thus obtained from this one tube. It acts as a full-wave grid detector, a one-stage amplifier and as an automatic volume-control tube. The output is said to be four times the detector output of a triode. All signals, weak or strong, are handled with equal fidelity.

The circuit employed with this tube is shown in Figure 5. Let us concentrate on the detector action first. This circuit is equivalent to a regular full-wave rectifier hook-up such as is used in a B supply. When the coil of the tuned circuit is accurately center-tapped, the one grid will go as much positive as the other goes negative, and, as far as the plate circuit is concerned, there is no change. Current will flow, however, to the grids, in turn, and this current will establish a potential drop across the grid leak. As long as the radio-frequency carrier is not modulated, the voltage drop will be steady, but when modulation starts, it follows the modulation frequency, provided the capacity and resistance ratio has been properly chosen.

The audio-frequency component of the mentioned potential drop is applied to both grids in parallel, and an amplified reproduction of it is found in the plate current. Since there is no radio-frequency component in the plate circuit, no radio-frequency filter is necessary. This effect also permits the handling of larger signal voltages.

The rectified signal is applied to both grids in parallel, and for this action the principles of the tube are the same as for any triode. Its plate characteristics are shown in Figure 6. Resistance coupling is recommended for the coupling to the output tube. If transformer coupling is used, the plate current should be limited to approximately 12 ma. when no signal is being received. This can be done by a series resistor in the plate lead.

The grid condenser may vary between 50 and 100 mmfd., depending on the capacity of the leads in the circuit. Under these conditions the grid leak can be ¼ megohm, for high quality, and from ½ to 1 megohm if sensitivity is of greater importance than fidelity or when compensation is to be made in the audio amplifier.

When the varying grid bias is to be used for the control of the radio-frequency amplifier, the audio-frequency component has to be filtered out. This is done by means of the resistance and condenser combination shown at R and C in Figure 5.

Continued on page 4

Club News

ELECTRONIC COMMUNICATION MUSEUM
of the Antique Wireless Assn., Inc.
EAST BLOOMFIELD, N.Y.

The Association shares a portion of the old Bloomfield Academy Museum, a historical building erected in 1837, owned and currently being restored by the Town of East Bloomfield Historical Society.

The electronic section of the building consists of several rooms displaying communication equipment covering a span of over 100 years:

1. CIVIL WAR TELEGRAPH EQUIPMENT.
2. EARLY ELECTRICAL MEASURING INSTRUMENTS CIRCA 1880's.
3. MARCONI RECEIVING AND TRANSMITTING APPARATUS OF 1905 - 1912 VINTAGE.
4. WWI COMMERCIAL SPARK AND ARC EQUIPMENT.
5. WESTERN ELECTRIC AND DE FOREST BROADCAST STATION EQUIPMENT.
6. MODEL 1925 RADIO STORE WITH SHOWCASES AND SHELVES DISPLAYING RECEIVERS, SPEAKERS AND PARTS OF THE 1920's.
7. NOSTALGIC DISPLAY COVERING THE "GOLDEN AGE OF ENTERTAINMENT"--- EDISON CYLINDER PHONOGRAPHS, EARLY BROADCAST RECEIVERS AND EARLY TELEVISION SETS.
8. DISPLAY OF 7000 VACUUM TUBES - RANGING FROM EARLY FLEMING VALVES (1905) THROUGH TO 100 KW. WATER-COOLED TUBES (tube display currently being mounted).
9. EXHIBIT OF EARLY FAKE ELECTRO-MEDICAL MACHINES.
10. FIVE (5) AMATEUR RADIO STATIONS WITH ASSOCIATED RECEIVING EQUIPMENT. CALL LETTERS: W2AH.
    a. Early spark coil transmitter station.
    b. Sink and non-sink rotary spark gap transmitters.
    c. Self-excited oscillator (vacuum tube) transmitters.
    d. MOPA transmitter (chemical rectifier power supply).
    e. Crystal-control set (motor-generator power supply).

    (The above equipment is currently being installed.)
11. LIBRARY AND HISTORICAL PHOTOGRAPHIC DISPLAY.

Telephone (315) 657-7498 or (716) 244-9519.

Contributed by Ernest E. Mintel, WA2PLK

BRITISH VINTAGE RADIO MEET

One can safely say that our first "Vintage Radio Meet" was a success, the front of our shop was packed with enthusiasts who had travelled quite considerable distances to be there (Chelmsford, London, Essex, Ruislip, Northampton, etc.). Items of interest on display included: A BTH "Rice Kellogg" loudspeaker, an early morse inker, a pre-war German magnetron, an example of the famous "Williamson" amplifier and a collection of early "Round" valves, plus many other interesting relics of radio. Another meeting is on the cards, details later.

Tudor Rees (Vintage Services)
64 Broad Street, Staple Hill,
Bristol, BS16 5NL, Great Britain
Telephone: (0272) 565472.

SOUTHWEST VINTAGE RADIO AND PHONOGRAPH SOCIETY

By Walt Jackson, secretary

The Southwest Vintage Radio and Phonograph Society held its first annual auction on September 20th. It was noted by President Cranshaw., "It was our finest meeting yet."

Although the hour was late, most members lingered in order to know some of the final figures. Jay Hauteman, who was in charge of the new members desk, was elated that seven new charter members were added to the Society. (Charter membership is being taken through the October meeting).

Further checks of the figures showed the following: thirty-nine attended the auction; twenty-eight registered to buy and/or sell; ninety-one items were sold, many others were "no bid"; over two thousand dollars changed hands during the evening; and Bob Sullivan and Mel Zemek both had sore throats for two days following their three hours of auctioneering.

Plans are already underway for contests later this year, a swapfest the early part of 1976, and the second annual auction, sometime in 1976.

The October meeting is scheduled for the 18th at the Texas Power and Light building in Richardson, 519 Lockwood, with this being an area club, all collectors of radios, phonographs, telegraph and telephones are invited to attend. Further information about club activities can be obtained by writing the Society at P.O Box 19406, Dallas TX 75219 or calling 214 286-1673 or 262-7855.

FIND OF THE MONTH

How's this for a find of the month? I got it all at an estate sale for $50.00.

1. Magnavox 2 stage audio frequency Mod. C amplifier.
2. Early Western Electric Telephone
3. RCA model RC (Westinghouse RA, DA combination)
4. Radiola 25 with tubes,loop and meter.
5. Radiola 100 speaker.
6. 3 headphones.
7. Graybar cathedral AC set.

Also, I found a one tube Philmore for $10.00 last week.

James R. Collings
Abilene, Texas

To The Editor:

I really enjoyed Mr. Lawrence Beitman's article, in the last issue, on early days radio servicing. "I was there, then," and this brought back many memories. At that time I did have some of Mr. Beitmans Manuals.. I would like to see more similar articles in the future.

Best Wishes,
Everett Brant
Detroit, Michigan

Dear Jim:

In your May 1975 issue of The Horn Speaker you had a letter from Arthur R. Ward, Convoy, Ohio requesting information on Ear Phone & Speaker Cords. I have been buying Birnbach #107 from a local Electronic dealer and they are fine. They told me that Radio Stations still use earphone cords so they keep them in stock.

I wrote to Mr. Ward and gave him this information and I thought that you might want to pass along the information in The Horn Speaker.

Incidentally, you are doing a fine job in that publication, I read every word in it.

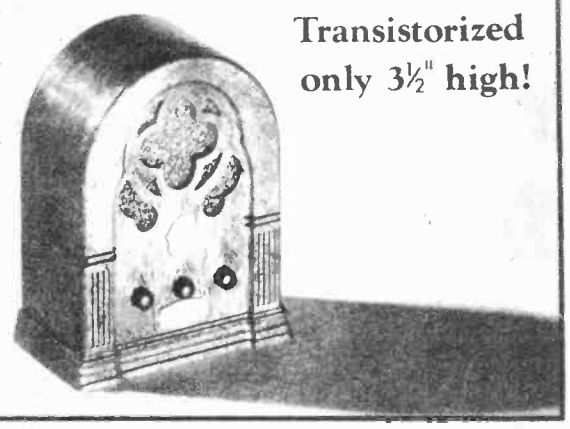
Regards,
J. Albert Warren
Box 279, Church St.
Waverly PA 18471

WHERE IT HAS BEEN FOUND

Jim Collings said that flexible tinsel phone cords can be bought from: Modern Radio Labs., P.O. Box 1477, Garden Grove, California 92642.

you'll have fun with this....

Old Time Radio



Transistorized only 3½" high!

OLD TIME TRANSISTOR RADIO

ONLY **9.90** Postpaid

Remember the good old days . . . when everyone sat around the parlor listening to the radio? This is a miniature copy of that famous cathedral-style old-time radio and measures 3½ x 1½". Our model has five transistors and two diodes and comes in handsome woodgrain plastic case. A wonderful piece of nostalgia. Uses one 9-Volt battery which is included. Each comes gift-boxed.

WALTS EMPORIUM

P O. BOX 19406 DALLAS. TEXAS 75219

EVENINGS 214-262-7855

May 4. 1940

Jack MacBryde (top) interprets the Old Ranger on Death Valley Days. The Old Ranger is supposed to have been born in a prairie schooner somewhere on the desert. He once drove a team of 20 mules, has prospected for gold all over the West, knows every inch of the country and is friends with every living creature in it. Death Valley Days is heard at 7:30 P.M., DST, (6:30 P.M., CST) on Fridays.

Pat Barrett (lower left) says good-bye to Jane Kaye when she came down to see him leave for Hollywood where he will portray Uncle Ezra in a new motion picture. Uncle Ezra will take part in the National Barn Dance, now and then, during his stay in Hollywood.

Hal Culver (lower right) is mighty proud of his new singing Milkman outfit. With him is "Doc" Burlingham who also is heard on the Singing Milkman program, Monday, Wednesday and Friday at 8:00 A.M., DST (7:00 A.M., CST).

THE PRAIRIE FARMER

1975 ad

MULTI-PURPOSE Bike Radio, consists of a solid-state AM radio, headlight and signal horn. Fits on handlebar of bicycle and comes with 2 flashlight batteries, bracket, screws and instructions. Unique and useful for bike rides .....perfect for beach, camping, picnics, sporting events, etc. Easy locking device permits user to install or remove in seconds, yet makes theft difficulty. Shipping weight 8 pounds, shipping size 13 X 9 X 6 inches. Comes post paid. Send $19.95 to Coe Enterprises, Dept. 1026, Box 259, Coe Drive, Mesquite, Texas 75149.

1923 ad

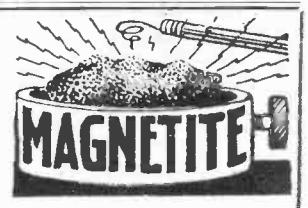
Hit it anywhere! MAGNETITE RADIO-CRYSTAL

The most sensitive Crystal Detector on the world market. Unaffected by handling or moisture and will render efficient service indefinitely. Price 50 cents at ALL DEALERS—or mailed direct. GUARANTEED by

GIBBONS-DUSTIN RADIO MFG. CO.

OWNERS AND NATIONAL DISTRIBUTORS

518 WEST 9TH STREET LOS ANGELES, CALIF., U. S. A.



SILVER GHOSTS

BY JWF PUETT

PHOTOGRAPHS - SCHEMATIC DIAGRAMS-STORIES

OF EVERY KNOWN RECEIVER MANUFACTURED BY

THE EH SCOTT RADIO LABORATORIES

$10.00 post paid

70 PAGES - IF WE CAN RECEIVE ONLY A FEW MORE ORDERS WE WILL BE ABLE TO PHOTO OFFSET PRINT THIS BOOK INSTEAD OF PHOTO COPY REPRODUCTION. ORDER YOURS TODAY!

PUETT ELECTRONICS

P.O. Box 28572 Dallas, Texas 75228

1975 ad

and its power pack. The lid of this cabinet must be readily lifted for convenient exchange of coils, etc.

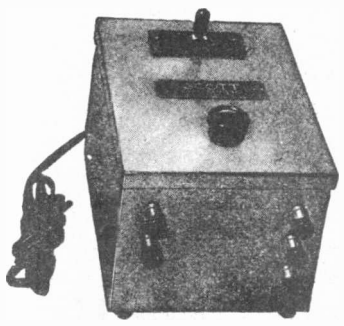


Fig. D

The microphone control box is obtainable as an accessory for recording or speech amplification.

Knack of Short-Wave Tuning

The short-wave enthusiast who has been accustomed to handling other types of short-wave receivers will be pleasantly surprised by the ease of tuning at all points throughout the range of this receiver; this is due, in great part, to the subdivision of the inductances.

A factor in the consummate ease of operation at the shortest wavelengths, right down to 15 meters, is the design of the input circuit of V1. When the first five coils are in use, the antenna connects to the binding post S.W.

Excellent selectivity is obtainable, even at the full sensitivity of the receiver, which is obtained with switch Sw. 2 in position 3.

Just a little fatherly advice concerning the procedure in tuning for the short-wave signals. It will be found that, although the tuning is very simple after a little practice, the listener may observe a tendency for stations to "whip" across the settings; this is due almost entirely to a natural tendency to tune the set as though it was one of the earlier two-dial tuned-radio-frequency receivers; a mistake in the handling of a short-wave superheterodyne. The only really satisfactory method of tuning is to set the left or oscillator dial at a given point, and swing the right or signal-frequency dial back and forth, slowly, a few degrees on either side of the I.F. resonance position (which is that point where a "resonance rush" is heard); then advance the oscillator dial's setting a fraction of a degree and repeat the operation with the right-hand dial.

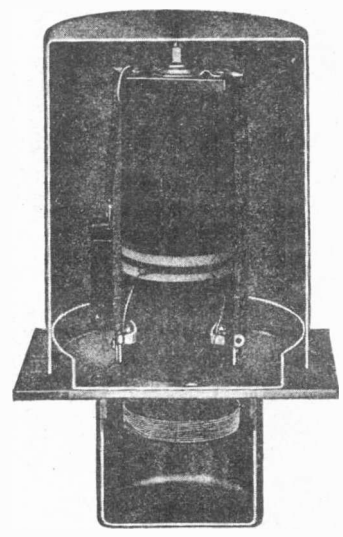


Fig. E

Cross-section of an I.F. transformer; observe "sub-panel" position of shielded R.F. choke.

After operating a Scott All-Wave Superheterodyne at a selected locality in Brooklyn, N. Y., the writer wishes to urge that due care be given to the use of the volume control; which is the potentiometer R in the diagram. There is a natural inclination to advance the setting too far, thus greatly overloading the tubes; since the amplification obtainable through the correct use of the screen-grid tubes is simply tremendous. (Speaking in technical terms, this receiver has at 1,400 kc. a sensitivity of one-one hundredth of a microvolt per meter!) However, if the volume is held at the correct level, there will be no hissing sound and no hum, but perfect audio reproduction.

Taken in its entirety, the Scott All-Wave Superheterodyne, with its tuning range of 15 to 184 meters, and 200 to 550 meters, should appeal to anyone interested in obtaining an exceptionally sensitive radio receiver, operable within these wavelength limits, and designed particularly for ease in tuning and high-quality audio output.

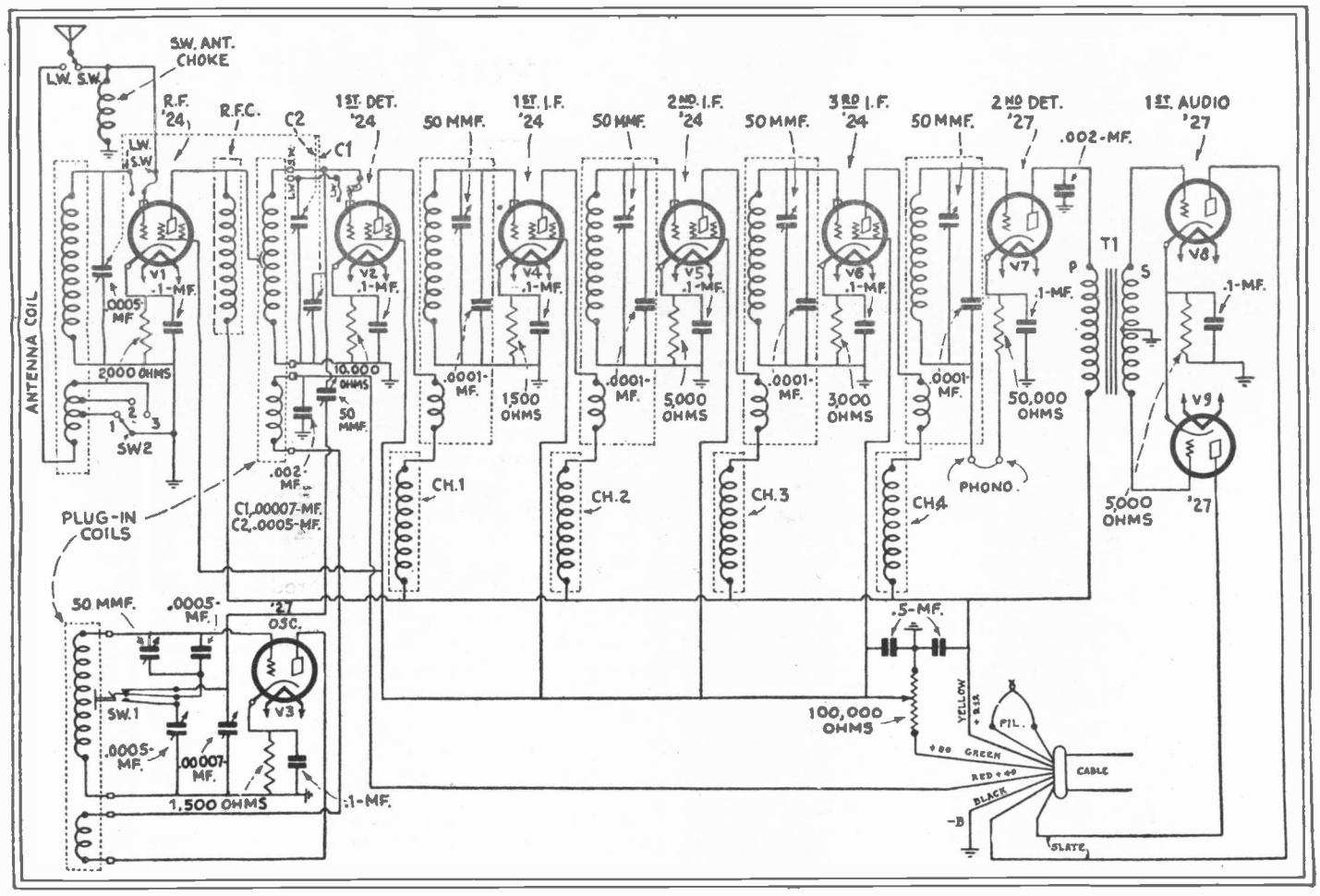
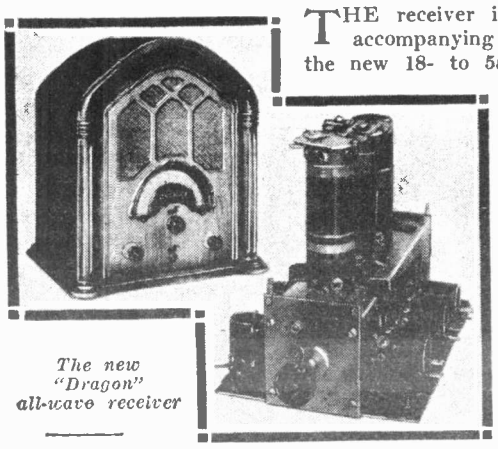


Fig. 1

Schematic circuit of the receiver chassis of the Scott "All-Wave" superheterodyne. The long-wave antenna post is at the rear of the chassis; and the short-wave post on the shield over the tuning gang. The output feeds a push-pull '45 pack (Fig. 2); a push-pull '50 unit is also obtainable.

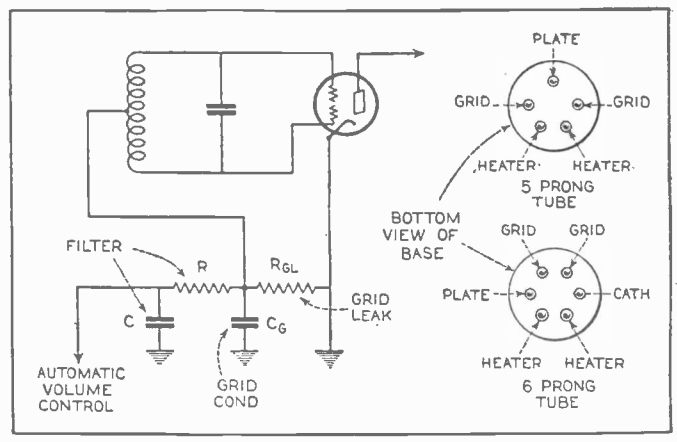
THE PILOT "DRAGON" ALL-WAVE RECEIVER



The new "Dragon" all-wave receiver

THE receiver illustrated in the accompanying photograph is the new 18- to 555-meter receiver manufactured by the Pilot Radio and Tube Corp. The features of the set are "one-hand" control, a 46-point band-selector switch, and catacomb construction of tuning units. A short-wave converter is interposed between the antenna and broadcast receiver. Because of its unique design, no tone-control is necessary.

1932



THIS DETECTOR CAN DRIVE PUSH-PULL –45s

Figure 5. The circuit of the Wunderlich tube is simple and easy to install in existing sets. The prong connections are shown above; the cap on top of the five-prong tube is the cathode

July, 1931

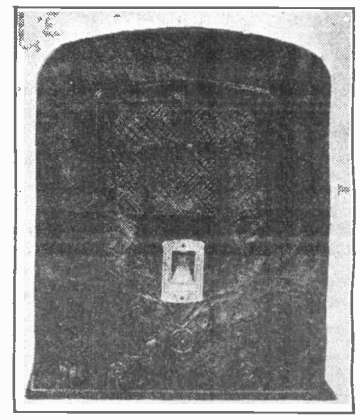
A POWERFUL MANTEL SET

The Roosevelt "Model 19" in a mantel-type cabinet.

IN the newest model of the "Roosevelt" line, the manufacturer has introduced the features of variable-mu amplification and pentode instead of push-pull output. One of the special features of the design is found in the use of bank-wound coils of "Litz" wire to give greater efficiency in high-frequency amplification. All late features are included.

(*Commonwealth Radio Mfg. Co., Chicago.*)

MIDGETS



The Jesse French 7-tube "Devon" super.

BOTH of the compact receivers here shown utilize the latest developments in tubes: the 7-tube "Devon" model being a superheterodyne; and the 5-tube "Tudette," a tuned-radio-frequency receiver.

The French 5-tube "Tudette" midget.

The former utilizes two type '51 variable-mu tubes, one '27, two '24's, and a type PZ pentode. The rectifier is the standard '80.

The "Tudette" mantel set also uses two variable-mu tubes, has a single '24, an '80, and a pentode in the output circuit. A feature is seen in the "full-vision" dial. Both models are equipped with tone controls.

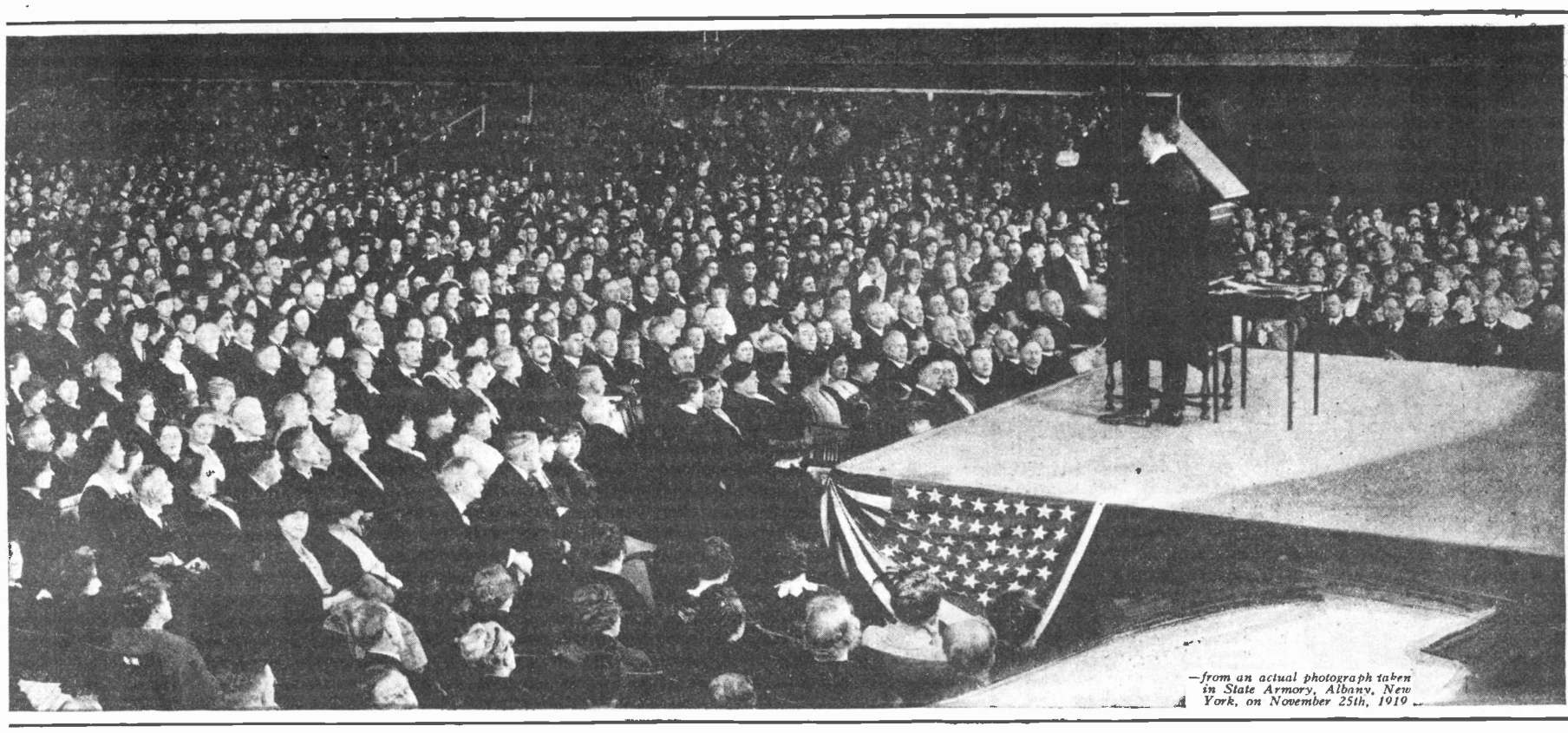
(*Jesse French & Sons Piano Co., Newcastle, Ind.*)

WUNDERLICH

The condenser should be large enough to offer a practical short-to-ground for all modulation frequencies. It should have a high leakage resistance. The resistance R should be several times as large as the grid leak, so as not to spoil the detection characteristics.

Two technical bulletins on the Wunderlich tube, one written by the inventor and the other, more technical, by Professor Frederick E. Terman of Stanford University,

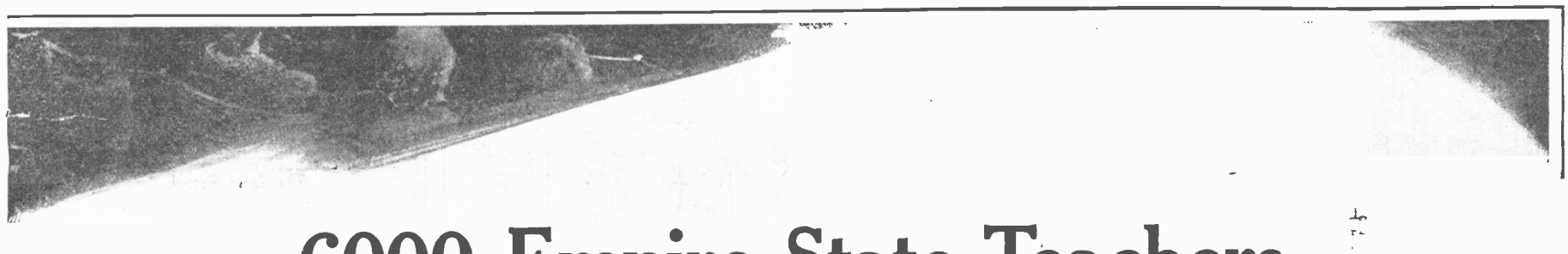
From RADIO NEWS for July 1932



—from an actual photograph taken in State Armory, Albany, New York, on November 25th, 1919

EDISON

"The Phonograph with a Soul"



6000 Empire State Teachers Hear Phonograph Achieve Triumph

THE illustration, although it is reproduced from an actual photograph, but faintly portrays the memorable scene at the State Armory in Albany, New York, on the night of November 25th, when 6000 teachers, principals and superintendents of the public schools of New York State sat spellbound as they heard Mario Laurenti, world-famed baritone of the Metropolitan Opera Company, sing in direct comparison with the New Edison's RE-CREATION of his magnificent voice.

LAURENTI stood beside the stately New Edison Cabinet. His voice filled the auditorium. The audience, which at first had been a trifle tense because of the unusual nature of the proposed experiment, gradually relaxed under the magic influence of the great baritone's artistry.

Then suddenly there was a stir, a subdued murmur of surprise and a perplexed rubbing of eyes. Laurenti's voice, undiminished in quality and beauty, continued to reach every quarter of the vast auditorium, but his lips had ceased to move. The cabinet at his side had taken up the song and was matching his voice so perfectly that the human ear could not tell when Laurenti had ceased to sing.

Edison Had Won Another Triumph

THIS great event proved that Edison's genius has produced the phonograph of supreme realism. It also earned for his achievement the indorsement of one of the world's most famous educators, Dr. John H. Finley, President of the University of the State of New York. Dr. Finley's beautiful tribute to Mr. Edison and the latter's new phonograph are reproduced herewith. It is doubtful if Edison's ambition to serve humanity through the agency of music could have been more accurately divined.

Official Laboratory Model

THE instrument used at Albany was a duplicate of Edison's original Official Laboratory Model, on which he spent more than three million dollars in research work. The Edison dealer in your city will be glad to show you a duplicate of this original three million dollar phonograph and he will, without quibble or question, guarantee it to be fully equal in tonal quality to the instrument used at Albany and to be capable of successfully sustaining the test made at Albany.

Let us send you our book, "Edison and Music," and our booklet, "What the Critics Say." "Edison and Music" is written by one of Thomas A. Edison's right-hand men. Address Thomas A. Edison, Inc., Orange, N. J.

From ALLIED RADIO CATALOG, spring and summer 1937

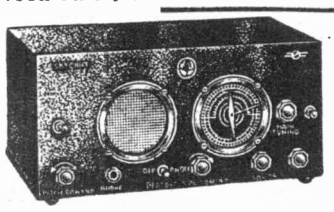
Short Wave RECEIVERS

LATEST HALLICRAFTERS SHORT WAVE RECEIVERS

LOW PRICED SKY BUDDY

Here is the ideal receiver for the amateur or short wave fan who has always wanted a professional type receiver, at an inexpensive price. Has all the features of the larger sets, and is capable of real professional performance. New circuit makes five tubes do the work of eight. Tunes from 18 to 555 meters, in 3 bands. Features include iron core I.F.; A.V.C., which can be turned off for CW reception; calibrated dial, with 36 to 1 ratio bandspread action; shielded beat oscillator, controllable from panel; and built-in power supply and speaker. Arranged for use with either straight antenna or doublet. Headphone jack and all controls are mounted on the front panel. Uses tubes as follows: 1—2A7, 1—6F7, 1—75, 1—42 and 1—80. Housed in rugged, handsome metal cabinet. An exceptionally fine receiver at a low price. For 110 Volts, 60 cycles A.C.

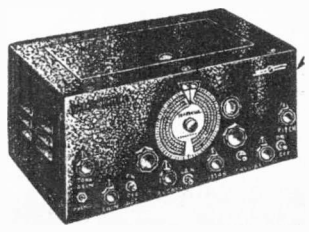
A10150. YOUR PRICE, With Tubes..... **$29.50**



SKY-CHIEF

A new communication type receiver of superior design and construction. An efficient superheterodyne circuit makes use of seven tubes to give ten tube performance. Among the features of this remarkable set are: Band switching, to tune from 17.6 MC. to 540 KC., covering amateur, short wave broadcast, police, and regular broadcast bands; variable beat oscillator controllable from front panel; 6G5 signal strength indicator; iron core I.F. stage; A.V.C.; R.F. and audio gain controls; mechanical bandspread; built-in speaker and power supply, and stand-by switch. Headphone jack, as well as all other controls are mounted on front panel. Uses 1—78, 1—6A7, 1—6F7, 1—75, 1—42, 1—6G5, and 1—80 tubes. In attractive, rugged metal cabinet. For 110 Volts, 60 cycles A.C.

A10151. YOUR PRICE, With Tubes..... **$44.50**



SKY CHALLENGER

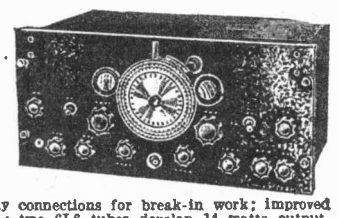
The latest addition to the Famous "Hallicrafter" line. The "Sky Challenger" embodies many of the salient features of the higher-priced "Super Skyrider." Has been engineered to satisfy the most critical Amateur. Covers all frequencies from 40,000 to 535 K.C. (7.5 to 560 meters) with no gaps. Uses smooth continuous electrical band spread, a feature included only in the more expensive receivers. Features included are: Iron core I.F.'s; air-trimmed R. F. coils; nine tubes as follows: 1—6C5, 4—6K7, 1—6L7, 1—6Q7G, 1—6F6G, and 1—80; Single-Signal action (crystal optional); Headphone jack; A.V.C. switch; Send-receive switch; Beat Oscillator Pitch control; Tone control; Antenna circuit arranged for either doublet or conventional antenna; 4 watts of audio power, etc. With tubes. Less speaker.

A10385. Model S-15, less crystal **$69.50**

A10386. Model SX-15 with crystal. NET **$79.50**

A10387. 8" P.M. speaker in attractive metal case..... **$9.50**

SUPER SKY-RIDER



An 11 tube amateur-professional receiver incorporating all of the latest developments. Among the many features of the new Sky-Rider are: Calibrated Duo-Micro-Vernier bandspread tuning; 2 iron core I.F. stages; 6G5 field strength indicator; air trimmed R.F.'s; 338 degree main tuning dial; keying relay connections for break-in work; improved 10 meter performance; A.V.C.; two 6L6 tubes develop 14 watts output. Rack mounting panel with attractive leather finish and steel dustproof cabinet. Covers from 40 megacycles to 535 KC. in 5 bands. Tubes used are: 4—6K7, 1—6L7, 1—6C5, 1—6R7, 2—6L6, 1—6Q5 and 1—5Z3. With tubes.

A10154. YOUR PRICE, less speaker..... **$89.50**

A10155. MODEL SX-11. AS ABOVE but with crystal filter, peaked at factory. New filter circuit design gives true single signal action. NET..... **$99.50**

A10388. 12" P.M. SPEAKER. In metal cabinet. NET...$12.00

A10389. SPECIAL SOLID WALNUT SET CASE. Beautiful solid, hand-rubbed, walnut cabinet for the "Super Skyrider." Copper-lined for perfect shielding. Makes the "Super Skyrider" a piece of furniture that will do justice to any living room. NET.....$9.50

A10390. WALNUT SPEAKER CABINET. Walnut speaker cabinet to match above receiver cabinet. Takes 12" speaker. NET.....$5.50

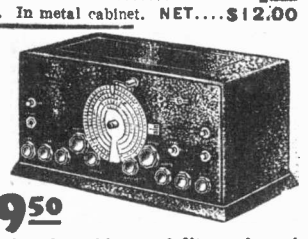
SKY-RIDER COMMERCIAL MODEL S12

A10156. An 11 tube commercial receiver ideal for ship and aircraft use. Tunes 29.25 meters to 3000 meters, covering the 40, 80 and 160 meter amateur bands, as well as many broadcast and commercial wave lengths. I.F. frequency used is 1600 KC. With tubes as above. NET..... **$99.50**

A10157. MODEL SX-12. As above but with improved crystal filter; factory-peaked, for true single signal operation. NET **$114.50**

A10388. 12" P.M. SPEAKER. In metal cabinet. NET....$12.00

ULTRA SKY-RIDER



Designed for use on the 3.76 to 53 meter bands. Covers the 5, 10, 20 and 40 meter bands. Features include: Iron core I.F.'s; R.F. and Audio gain controls; "Send-Receive" switch, etc. Uses 10 tubes as follows: 2—6K7, 2—6L7, 1—6J7, 1—6C5, 1—6R7, 1—6Q7, 1—6F6 and 1—5Z4. In handsome black metal cabinet.

A10152. Model S-10. Less speaker. With tubes. NET **$99.50**

A10153. MODEL SX-10. As above but with crystal filter and panel controlled crystal phasing condenser. NET **$114.50**

A10388. 12" P.M. Speaker in metal cabinet. NET.....$12.00

PEAK PRE-SELECTOR AND PRE-AMPLIFIER

A new improved model of the famous Peak Preselector. Will add increased efficiency to any Amateur or SW receiver by increased sensitivity to weak signals. Permits complete control of R.F. sensitivity, rejects images, and greatly increases signal-to-noise-ratio. Tunes from 9 to 200 meters in four bands. Uses 2—58 tubes. 7¼"x9¼"x10".

A10183. Less tubes. YOUR PRICE **$19.80**

The Newcomer

By O. H. McDonald

In this new column for the beginning hobbyist who restores his own sets an effort will be made to treat briefly the elements of electricity and magnetism which an understanding is so essential to the preliminary study of the radio phenomenon. I personally feel that being acquainted with some of the basic fundamentals of radio the hobbyist can get more involved with the old radios he collects. By knowing a little about the operation of the circuits, the hobbyist can repair and restore many of the radios with not only a savings to himself but he can proudly say "I fixed it myself."

My projected plan is to study radio as the beginners did some fifty or sixty years ago. I will start with increasing our knowledge of electricity and Ohm's law and progress to the operation of transformers, vacuum tubes, power supplies, amplifiers and then we will go right into the one and two tube receivers. In later articles I will cover trouble shooting and servicing various radio circuits. However, the main purpose of these articles will be to acquaint us with the basic knowledge of radio.

I would certainly appreciate any suggestions you might have regarding this new series. Also if you have a special circuit you would like explained with regards to some old radio I will try to cover it in a separate article in some future publication. Please write me in care of The Horn Speaker.

Well I don't want to wear my welcome out right here at the start so I better quit for now. Once I get to talking its hard for me to stop and I'd sure hate for the publisher to have to add an extra page or two because of me. But my mother once sa said, "That son of mine talks so much you'd think that he was vaccinated with a phonograph needle." But Old McDonald does like to talk about old radios. So send me your letters and lets go back in time and study this great phenomenon of yester-year.

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION (Act of August 12, 1970: Section 3685, Title 39, United States Code).

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PHONOGRAPH COLLECTORS, join the American Phonograph Society. Receive the quarterly Journal and four Newsletters. Receive free reprints and stereoscopic phonograph cards. For more information send 10¢ stamp. For one year membership, send $6.50. The American Phonograph Society, P.O. Box 5046, Berkeley CA 94705.

WILL DUPLICATE exactly, the mutilated panel for your antique radio. Send sketch or rubbing for quotation, or will trade for antique radios of equal value. Norman A. Parsons, 22 Forest St., Branford CT 06405.

FOR SALE: Rubber stamp with your name and address plus AK Radio and speaker $3.00 pp. James Fred, P.O. 42, Rossville IN 46065.

TRIAD'S CRATER LAMP

Triad's crater lamp.

A "COLD-CRATER" type neon lamp, designed for use in television receivers, has been announced by the Triad Television & Mfg. Co. The tube consists essentially of two electrodes mechanically mounted within a few thousandths of an inch of each other. One electrode is known as the "target" and has a hole approximately .025-in. in it, through which the intense beam of light is projected to a lens-type scanning disc. The tube draws from 20 to 40 milliamperes and the light intensity is sufficient to allow a picture approximately one-foot square to be obtained.

RADIO-CRAFT, 1932

MART

Classified ad rate: 6¢ per word.
Photo ads: $2.00 extra.

MISC.

ATWATER-KENT SERVICE INFORMATION, Schematics, picture, etc. Model 10 - 67 H1, H2. Priced $1.00 up each IBM reproduction. John Whiting, Rd. 2, Dover, N.J. 07801.

GET THE ORIGINAL look and sound from that old Radio or TV. Contact Fred Geer Restoration Artist, 6042 Brookridge Rd., Jacksonville Fla. 32210. Phone: 904 771-7828.

FOR SALE OR TRADE

FOR SALE: 01A tubes, emission tested $4.00 plus postage. Cathedral radios, battery radios, parts. Send SASE. R. Corum, 29 Melkin Dr., Wallington, N. J. 07057.

$5.00 buys one variable condenser, 2 rheostats, 2 jacks, 2 201A sockets, 2 small knobs, 2 fixed condensers. All for battery sets, postpaid. Arthur J. Bardish, 4042 Herman, S. W., Grand Rapids, Mich. 49509.

SELL OR TRADE: Scott All Wave Hi-fidelity, 1936, perfect, SASE. Steve Raymer, 365 E. Curtice, St. Paul, Minn. 55107.

FOR TRADE: 1923 Simplex telegraph set, U.S. Army type-EE-76. Best offer in antique or classic radios, 201As, etc. Ross Mason, 641 South Georgia, Mason City, Iowa 50401.

FOR SALE: 26 antique battery radios, including 5 Breadboards. Send SASE for list. Paul Giganti, 2429 San Carlos Ave., San Carlos CA 94070.

FOR SALE: Scott custom-built "QQ-236" 11-tube radio. Will trade for mint, large Atwater-Kent or Philco cathedral, or for mint, operating Radiola 17 or 60 with speaker. David Schultz, 720 Caledonia, Dubuque, Iowa 52001.

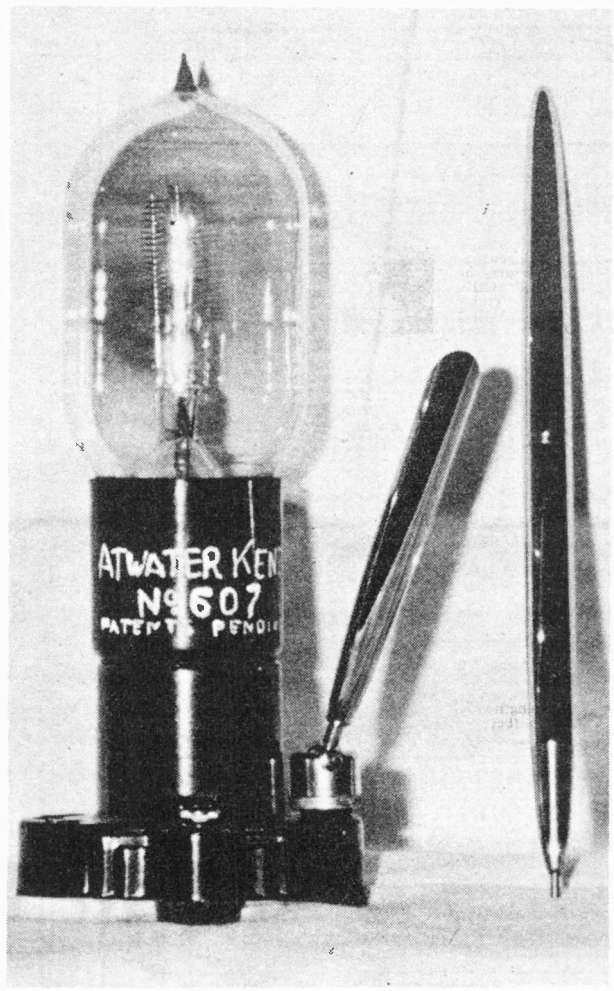
FOR SALE: Solid State power supplies for operating battery radios. G. B. Schneider, 6848 Commonwealth Blvd., Parma Hgts., Ohio 44130.

WD11 Adaptors, use UX199, 120, VT24. No Wiring changes, Radiola III's battery hook up included $5.25 pp., 2 for $9.25. Keith Parry, 17557 Horace St., Granada Hills CA 91344.

FOR SALE: Radiola 64, Walnut Cabinet, mint condition, full tube complement. Best offer. S. Brissey, 414 Bloom, Highland Park, Ill. 60035.

FOR SALE: Have many old radios. Also parts, no list. Please name your wants. John R. Whiting, Rd. 2, Dover, N.J. 07801.

FOR SALE OR TRADE



ANTIQUE RADIO collectors pen set. Gold finished pen and holder. Tubes will vary. $8.50 postpaid. Gary Probst, 336 W. Church St., Lock Haven PA 17745.

FOR SALE: Sterling Radio "A" storage battery charge indicator No. 32 $13. Karas micrometric dial new $5.00, original Corwico Braidite Radio hookup wire 25 feet $3.00, Dejur Ammeter type J-1 D.C. 50mv $4.00, Weston Antenna current indicator model 507 $4.00, GE tuning meter type DW-33 new $2.00, Workman "B" plus booster model 5Ty4 new $4.00, Eico multitester model 540 new $20.00, Heathkit transistor kit/course new $20.00. Gary Probst, 336 West Church St., Lock Haven PA 17745.

OHM'S LAW and ELECTRON THEORY, knowing the importance of these two theories to the understanding of basic radio, I have prepared 10 pages crammed with information, illustrations and problems to assist the pro and teach the beginner $2.00 for quick return package. O. H. McDonald, 1606 Lebanon, Dallas, Texas 75208.

Miscellaneous

PHOTO STAMPS. Your favorite photograph on a sheet of 100 stamps, gummed and perforated. (Black & White) Send your photo and $4.00 to Gary Probst, 336 West Church St., Lock Haven PA 17745. Samples 20¢.

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OLD MICROPHONES pre 1940 also spark gap units & model 61 Federal. B. Katz, c/o Pequod, 8520 Fernald, Morton Grove, Ill. 60053. Phone; 312 967-9161 after 4 p.m.

WANTED: Edison phono "OPERA" case, Edison "FIRESIDE" case lids, Edison "CYGNET" horns, Zonophone "Concert" rear mtg. horn bracket, and extended turntable, XI Kennedy chassis, AK-5, AK-12 audio cluster, Radiola "25" loop ant., dial escutcheon, Radiola X both dials complete or junk chassis, Astatic #2 cartridge. C. Ferrett, 39400 DeAnza, San Jacinto CA 92383.

WANTED: Radio News magazines 1925 March, May, June, July, August, October and December.
Popular Radio magazine, 1926 December.
Electronic Digest magazines 1972 January and February issue.
J. Albert Warren, Box 279, Church St., Waverly PA 18471.

WANTED OUTSIDE horn phonographs, any parts or horns, also any size Victor dog, small needle cans, Record brushes, phonograph catalogs. Price and condition please. Jack Hanson, 15107 Little Spokane Drive, Spokane, Wash. 99208.

WANTED: Wire recording items--unusual only, not Webster or Silvertone. Pre-1940 television and pre-1950 disc recording books. Layer, AV-SFSU, 1600 Holloway, San Francisco CA 94132.

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-ARRL Handbooks for years 1936 and 1939, also west coast Radio Handbooks for same years. Advise price and condition. E. V. Brant, 6465 Sterling Ave., Detroit, Mich. 48202.

WANTED: Old light bulbs and radio tubes, from early experimental to 1930's. Riders Manuals 1-10. Bruce Harbeck, Box 1172, Sioux City, Iowa 51102.

WANTED: Historical, technical information on Vreeland model R6 screen-grid TRF radio. Made for R. H. Macy. Rich Modafferi, Rd. 1, Skyline Drive, Vestal N.Y. 13850.

WANTED: Radio parts and magazines 1920s. Trade 2 Saturday Evening Post 4-12; National Geographic 8-18, 4-23.
WANT BAKELITE PANELS. W6ME, 4178 Chasin Street, Oceanside CA 92054.

RADIO ITEMS AND TOY TRAINS WANTED: Write Box 161, West Hurley, N.Y. 12491.

PUETT ELECTRONICS

P.O. BOX 28572 DALLAS TEXAS 75228
PUBLISHERS OF
THE CLASSIC RADIO NEWSLETTER

LIST NO. 12

HOW TO ORDER

(1) Make checks and money orders payable to PUETT ELECTRONICS.

(2) Please state whether new or used tubes are desired and whether a half-price used tube is desired when a new tube is out of stock. REFUNDS 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) ALL ORDERS ARE SHIPPED PARCEL POST. NO C.O.D. INCLUDE 15% FOR POSTAGE AND HANDLING. INSURANCE RATES ARE 30¢ FOR ORDERS UNDER $50.00. TEXAS RESIDENTS ADD 5% STATE SALES TAX.

MINIMUM ORDER $3.00

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.

SCHEMATIC DIAGRAMS

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 a self-addressed stamped envelope and $1.50 per radio set. This offer is limited to five photocopied pages. If the data on your set exceeds five pages, we will send you a quote. State mfg. & model number.

THE CLASSIC RADIO NEWSLETTER
E.H. SCOTT & McMURDO SILVER:
Send a self-addressed stamped envelope for a sample issue. Send 30¢ in stamps plus a self-addressed stamped envelope for our list of classic radio literature. We sell, buy & trade classic radio literature.

TYPES 014, 99, WD-11, etc.
We sometimes have these tubes in stock in very limited quantities. Send a self-addressed stamped envelope for information.

BALLAST TUBES - We can supply many types of ballast tubes or their equivalents. Send a self-addressed stamped envelope with your inquiry.

OLD RADIO TECHNICAL BOOKS - Send a self-addressed stamped envelope.

TABLE 1 - OLDER TYPE-NUMBER TUBES Prices listed for new tubes. Used tubes are half new tube price.

OA2	$2.	1LE3	$4.	5Y4	$3.	6F6	$3.	6U7	$4.	7Z4	$3.	14B5	$3.	35W4	$2.	81	$6.	5654	$2.
OA3	$2.	1LF3	$4.	5Z3	$3.	6F7	$6.	6V6	$2.	10	$6.	14B6	$3.	35Y4	$3.	82	$3.	5686	$3.
OA4	$2.	1LG5	$4.	5Z4	$3.	6F8	$3.	6V7	$4.	12A5	$4.	14B8	$3.	35Z3	$3.	83	$3.	5691	$3.
OB3	$2.	1LH4	$4.	6A3	$5.	6G5	$4.	6W6	$3.	12A6	$3.	14C5	$3.	3524	$3.	83V	$3.	5703	$3.
OC3	$2.	1LN5	$4.	6A4	$6.	6G6	$3.	6X4	$2	12A7	$4.	14C7	$3.	35Z5	$3.	84	$3.	5749	$2.
OD3	$2.	1N5	$4.	6A5	$4.	6H6	$2.	6X5	$2.	12A8	$3.	14E6	$3.	3526	$3.	85	$3.	5751	$2.
OZ4	$3.	1N6	$4.	6A6	$4.	6J5	$3.	6Y5	$3.	12AH7	$3.	14E7	$3.	36	$3.	89	$3.	5814	$2.
OZ4	$2.	1P5	$4.	6A7	$5.	6J6	$2.	6Y6	$2.	12AT6	$2.	14F7	$3.	37	$3.	117L7	$4.	5879	$2.
1A1	$5	1Q5	$4.	6A8	$3.	6J7	$3.	6Y7	$2.	12AT7	$2.	14F8	$3.	38	$3.	117M7	$4.	5881	$2.
1A3	$3.	1R5	$2.	6AB4	$3.	6J8	$3.	6Z4	$3.	12AU6	$2.	14H7	$3.	39	$3.	117N7	$7.	5992	$2.
1A4	$3.	1S4	$2.	6AB7	$3.	6K5	$3.	6Z5	$2.	12AU7	$2.	14J7	$3.	40	$6.	117P7	$7.	6080	$3.
1A5	$3.	1S5	$2.	6AC5	$3.	6K6	$3.	6Z7	$2.	12AV6	$2.	14N7	$3.	40Z5	$2.	117Z3	$4.	6146	$4.
1A6	$3.	1T4	$3.	6AC7	$3.	6K7	$3.	6ZY5	$3.	12AX7	$2.	14Q7	$3.	41	$3.	117Z4	$4.	6188	$3.
1A7	$3.	1T5	$3.	6AG7	$3.	6K8	$3.	7A4	$3.	12B7	$3.	14R7	$3.	42	$3.	117Z6	$4.	6842	$2.
1B4	$3.	1U4	$3.	6AK5	$2.	6L5	$4.	7A5	$3.	12B8	$4.	14W7	$3.	43	$3.	485	$4.	6973	$2.
1B5	$3.	1U5	$3.	6AK6	$2.	6L6	$3.	7A6	$3.	12BA6	$2.	14X7	$3.	44	$3.	807	$4.	7025	$2.
1B7	$3.	1V	$4.	6AL5	$3.	6L7	$3.	7A7	$3.	12BE6	$2.	15	$5.	45	$5.	809	$6.	7193	$2.
1B8	$3.	2A3	$6.	6AL7	$4.	6N5	$4.	7A8	$4.	12C5	$3.	19	$4.	4523	$2.	837	$4.	9002	$3.
1C1	$4.	2A4	$5.	6AQ5	$2.	6N6	$3.	7AE7	$4.	12C8	$3.	19T8	$2.	4525	$2.	843	$3.	9003	$3.
1C5	$3.	2A5	$4.	6AQ7	$4.	6N7	$3.	7AF7	$4.	12F5	$3.	22	$5.	46	$6.	879	$2.	9004	$4.
1C6	$3.	2A6	$3.	6AS7	$3.	6P5	$3.	7AG7	$4.	12H6	$3.	24A	$3.	47	$5.	884	$7.	VR-	
1C7	$5.	2A7	$5.	6AT6	$2.	6Q7	$3.	7B4	$3.	12J5	$3.	25A6	$3.	48	$4.	923	$3.	90	$2.
1D5	$5.	2B7	$3.	6AU6	$2.	6R7	$4.	7B5	$3.	12J7	$3.	25A7	$3.	49	$4.	930	$3.	VR-	
1D7	$5.	2C26	$2.	6AV5	$2.	6S4	$4.	7B6	$3.	12K7	$3.	25AC5	$3.	50	$6.	950	$3.	105	$2.
1D8	$4.	2E5	$4.	6AV6	$2.	6S8	$3.	7B7	$3.	12K8	$3.	25B6	$3.	50A5	$3.	951	$3.	VR-	
1D21	$3.	2E30	$2.	6AX5	$2.	6SA7	$2.	7B8	$3.	12L6	$2.	25C6	$2.	50B5	$2.	955	$4.	150	$2.
1E5	$5.	2V3	$4.	6B4	$5.	6SB7	$3.	7C5	$3.	12Q7	$3.	25L6	$3.	50C5	$2.	958	$4.	VT-	
1E7	$4.	2W3	$4.	6B5	$5.	6SC7	$3.	7C6	$3.	12S8	$3.	25S	$3.	50C6	$3.	1005	$3.	52	$4.
1F4	$4.	2X2	$2.	6B6	$5.	6SD7	$3.	7C7	$3.	12SA7	$3.	2525	$3.	50L6	$3.	E1148	$2.	XXB	$3.
1F5	$4.	3A4	$3.	6B7	$5.	6SF5	$3.	7E6	$3.	12SC7	$3.	2526	$3.	50X6	$3.	1201	$3.	XXFM	$3.
1F6	$4.	3A5	$3.	6B8	$3.	6SF7	$3.	7E7	$3.	12SF5	$3.	26	$4.	50Y7	$3.	1203	$3.	XXL	$3.
1F7	$5.	3A8	$3.	6BA6	$2.	6SG7	$3.	7F7	$4.	12SF7	$3.	26A6	$4.	51	$3.	1232	$3.		
1G4	$4.	3C6	$3.	6BE6	$3.	6SH7	$3.	7F8	$4.	12SG7	$3.	26A7	$4.	53	$5.	1273	$3.		
1G5	$4.	3LF4	$5.	6BJ6	$2.	6SJ7	$3.	7G7	$3.	12SH7	$3.	27	$3.	55	$4.	1612	$3.		
1G6	$4.	3Q4	$3.	6C4	$2.	6SK7	$3.	7H7	$3.	12SJ7	$3.	28D7	$3.	56	$3.	1620	$3.		
1H4	$5.	3Q5	$3.	6C5	$3.	6SL7	$3.	7J7	$3.	12SK7	$3.	30	$3.	57	$3.	1625	$4.		
1H5	$3.	3S4	$2.	6C6	$3.	6SN7	$2.	7K7	$3.	12SL7	$3.	31	$3.	58	$3.	1626	$3.		
1H6	$3.	3V4	$2.	6C7	$4.	6SQ7	$3.	7L7	$3.	12SN7	$3.	32	$3.	59	$4.	1629	$4.		
1J6	$4.	5AZ4	$4.	6C8	$4.	6SR7	$3.	7N7	$4.	12SQ7	$3.	32L6	$3.	70A7	$3.	1633	$3.		
1L4	$4.	5R4	$2.	6CB6	$2.	6SS7	$3.	7Q7	$3.	12SR7	$3.	32L7	$2.	70L7	$3.	1634	$3.		
1L6	$6	5T4	$2.	6D6	$4.	6ST7	$3.	7R7	$3.	12V6	$3.	33	$3.	71A	$6.	1635	$3.		
1LA1	$4.	5U4	$2.	6D7	$4.	6SU7	$3.	7S7	$3.	12W6	$3.	34	$3.	75	$3.	1656	$3.		
1LA6	$4.	5V4	$2.	6D8	$4.	6SV7	$3.	7V7	$3.	12X4	$2.	35	$3.	76	$3.	1852	$3.		
1LB4	$4.	5V6	$2.	6E5	$4.	6T7	$4.	7W7	$3.	12Z3	$2.	35A5	$4.	77	$3.	1853	$3.		
1LC5	$5.	5W4	$2.	6E6	$4.	6T8	$2.	7X6	$3.	14A4	$3.	35B5	$2.	78	$3.	2050	$3.		
1LC6	$4.	5X4	$3.	6E7	$4.	6U5	$4.	7X7	$3.	14A5	$3.	35C5	$2.	79	$3.	2051	$3.		
1LD5	$4.	5Y3	$3.	6F5	$3.	6U6	$3.	7Y4	$3.	14A7	$3.	35L6	$3.	80	$3.	GK108	$3.		

COMPLETE CATALOG

SEND 50¢ IN STAMPS PLUS A SELF-ADDRESSED STAMPED ENVELOPE FOR OUR COMPLETE CATALOG. IN ADDITION TO TUBES AND SCHEMATIC DIAGRAMS, WE CAN ALSO SUPPLY KNOBS, DIAL ESCUTCHEONS, TUNING DRIVE BELTS, ANTIQUE TUBE CARTONS, OLD-STYLE GLASS ENVELOPE TUBES, SPECIAL TUBES FOR TUBE COLLECTORS, ANTIQUE WIRE, MORE RECENT TYPE-NUMBER AND TV TUBES, SPECIAL MAINTENANCE AND SERVICE NOTES ON SPECIFIC RADIO SETS, ANTIQUE RECORD CHANGER DATA, ANTIQUE PA SYSTEM DATA AND SCHEMATICS, OLD STYLE TUBE SHIELDS, AND SOME ORIGINAL PARTS FOR SETS.

IF YOU DO NOT SEE A TUBE WHICH YOU SEEK LISTED, SEND A SELF-ADDRESSED STAMPED ENVELOPE. WE MAY BE ABLE TO RECOMMEND A SOURCE OF SUPPLY.

MILITARY TYPE (VT) AND EQUIVALENT COMMERCIAL-TYPE TUBE CROSS-REFERENCE LIST Send $1.00 plus a self-addressed stamped envelope.

We offer free technical advice for a self-addressed stamped envelope or you may call J.W.F. Puett at 214 - 279-8309 NO LATER THAN 10:00 PM CENTRAL STANDARD TIME OR CENTRAL STANDARD DAYLIGHT TIME (when applicable) PLEASE.

TABLE 2 - OLD STYLE TUBES
All are new many in original cartons:

RADIOTRON		MAJESTIC	
UY227	$5.	G4S	$5.
CUNNINGHAM		2A6	$4.
C327	$5.	2B7	$3.
CX345	$6.	031	$4.
CX347	$6.	6C7	$4.
CX371A	$7.	6D7	$4.
EVEREADY		6E7	$4.
ER551	$4.	46B1	$5.
		G4A19	$5.
		G6Z5	$3.

We have many others used such as W.E. 205D at $6. Send self-addressed stamped envelope for list.

OCTOBER 75c

THE HORN SPEAKER

1975

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Mr. Gary B. Schneider
6818 Commonwealth Blvd.
Parma Hgts., Ohio 44130