Postal identification

Price \$10.00 yearly

Published since 1972

Happy)
Holidays

THEHOR Radio Tubes

CINCE most vacuum tubes are designed for a particular function, it is of great importance to select those best suited to your requirements. For instance, an amplify-

ing tube, in the usual case, will not function well as a detector, while a tube designed for detection will prove very unsatisfactory if employed as an amplifier. The layman is often at a loss as to the type of vacuum tube to purchase for a definite use. For his benefit, we have printed herewith, a table, including the characteristics of all well-known makes of threeelement vacuum tubes, giving as well their operating conditions when used as detectors, radio frequency amplifiers, audio frequency amplifiers or oscillators. If a tube is not suitable for any of these functions, the corresponding space



UV-199, C-299.

"B" battery voltage. A grid battery of from four to six volts is satisfactory if the WD-11, WD-12, UV-199, C-299 and "N" tubes are used with "B" batteries of from 60 to 100 volts. An additional six-volt grid battery should be added for every 100-volt "B" battery; this, of course, being proportionate to the increase in the "B" voltage. The Western Electric VT-1, VT-2 and 216-A require approximately a 9 to 12-volt grid potential for every 100-volt "B" batgrid potential for every 100-volt "B" battery

The first important consideration when selecting vacuum tubes is, whether storage batteries or dry cells are to be used for lighting the filaments. All of the 6-volt tubes require a storage battery. The small 11/2-volt and 3-volt tubes, such as the WD-11, UV-199 and "N" tubes, can be run from ordinary dry cells. Although both types of tubes work equally well as detectors, the dry-cell tubes are not as satisfactory for audio frequency amplifiers, as they cannot handle as much energy as the larger tubes. However, they make excellent radio frequency amplifiers. The UV-199 and "N" tubes are probably the best that can be obtained for this purpose because of the small size of the elements. For power amplification, where great volume is desired, tubes with large elements, such as the UV-201-A and Western Electric VT-

2 or 216-A, are the most

satisfactory.
Genuine French tubes and the R.A.C.-3 tubes are satisfactory for all-around work. They are both very good as detectors and radio frequency amplifiers, fair as audio frequency amplifiers and as oscillators. As power amplifiers, of course, they are not well adapted, due to the small size of their elements.

An important factor in the operation of vacuum tubes is the filament voltage. For best results the voltage impressed upon the filament should always be equal to the voltage rating given for the particular



VT-1 or "J" Tube

Oscil-

lator

Amplifier

Audio

Fre-

quency

Amplifier

Detector

Fre-

quency Amplifier



Type	"A" Filament Volts	Filament Current	Filament Watts Consumed	Plate	Negative Grid Voltage	
	1016	- Current	((Miscase G	Det.	Amp.	For Amp.
UV 199	3 0	0.06	0.18	45	60 to 90	1 to 4.5
UV 200 C 300	5.0	1.00	5.0	22) 2		
UV 201—A C 301—A	5.0	0.25	1.0	45	60 to 100	3 to 6
UV 202 C 302	8 0	2,35	18.8	40 to 60	100 to 500	·3 to 9
WE "N" tube	1.1	0.25	0.27	2212	45	1 to 2
WD-11 WD-12	1.5	0.25	0.37	22) 2	45 to 60	1 to 3
VT 1	2.5	0.9	0.36	2232	45 to 90	1 to 3
VT 2	7.0	1.35	9.45	45	45 to 350	1 to 40
216—A	6.0	1.35	8.1	. 45	45 to 150	1 to 12
RAC-3	4.0	0.8	3.2	· 2214	43 to 90	1 to 10
French tube	4.0	0.8	3.2	45	40 to 300	1 to 25

	-											
	UV 199	3 0	0.06	0.18	4.5	60 to 90	1 to 4.5	Good	Good	Good	Fair	
	UV 200 C 300	5.0	1.00	5.0	22 1 2			Good				
	UV 201—A C 301—A	5.0	0.25	1.0	45	60 to 100	3 to 6	Good	Good	Good	Good	Good
	UV 202 C 302	8 0	2,35	18.8	40 to 60	100 to 500	·3 to 9	Fair		Good	Good	Good
	WE "N" tube	1.1	0.25	0.27	2212	45	1 to 2	Good	Good	Fair		Good
	WD-11 WD-12	1.5	0.25	0.37	2212	45 to 60	1 to 3	Good	Good	Fair		Good
	VT 1	2.5	0.9	0.36	22 1 2	45 to 96	1 to 3	Good		Good	Fair	Good
-	VT 2	7.0	1.35	9.45	45	45 to 350	1 to 40	Good		Good	Goo I	Good
	216—A	6.0	1.35	8.1	· 45	45 to 150	1 to 12	Good		Good	Good	Good
O BB	RAC-3	4.0	0.8	3.2	· 2214	43 to 90	1 to 10	Good	Good	Good		Good
WD-11 Tube	French tube	4.0	0.8	3.2	45	40 to 300	1 to 25	Good	Cood	Good	Fair	Good
									300	Allend .	•	



"N" Tube

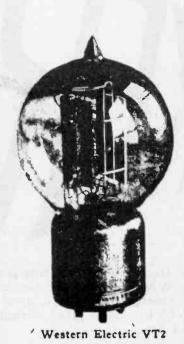
is left blank. The rest of the chart tells its own story, except perhaps the list of negative grid potentials. A negative grid voltage is necessary only when a tube is used as an amplifier, with rather a high



RAC-3 Tube

tube being used. For an example, a pressure of five volts should be maintained on the filament of a Radiotron UV-200 tube, since five is the voltage rating as given on the chari.









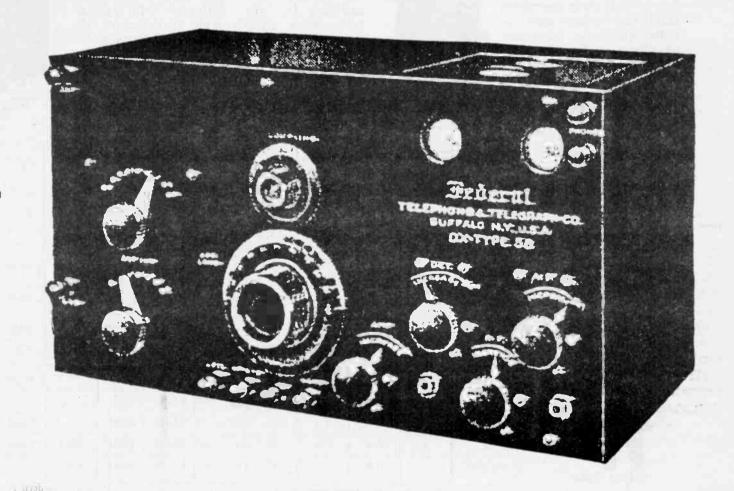


Federal

In 1919 Federal Telephone and Telegraph Company offered an off the shelf item to radio experimenters. It was the 226W transformer. Federal became popular to radio builders by many other components offered to radio builders.

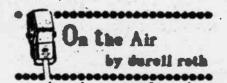
The Federal 58 DX made in 1922 at Buffalo New York was very typical. It was double tuned with one stage of RF, a detector and two stages of audio. The DX sold in 1922 for \$116.00. A popular price in 1987 is \$370.00.





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Radio News for May, 1925



A few thoughts on aeriels and grounds. Most of the old sets do require some kind of an aerial and ground system. But contrary to popular opinion, a long high aerial is neither necessary nor desired when using even the simplest tube type receiver. A short indoor aerial is usually quite sufficient for both local and distant(DX) signals and actually has several advantages over an outdoor system. The indoor aerial, being very short, delivers a small signal to the receiver and doesn't cause overloading and distortion on local stations but still provides adequate sensitivity for DX with most sets. Lightning is also of less concern with the indoor system and the aerial usually does not need during disconnected thunderstorms. Installation is also much easier with the indoor system, as can be seen in the following examples.

A fifteen foot wire attached to the back edge of a bookcase is the system I use with my Radiola III (See on the air, Oct. '87 Horn Speaker). The aerial is small, easy to install and is very satisfactory for both local and long distance reception.

In cases where more signal strength is needed and overloading is not a problem, try a 30 foot wire installed in the attic, with the lead-in brought down the inside of a wall. A TV antenna connector can be installed to provide a neat connection point for the receiver. I also use this type of system with vintage receivers that have sufficient gain control to prevent overloading on local stations.

A good ground is as important as a good aerial! The ground is a safty device but it also completes the signal current path to the earth making a complete aerial and ground system. The ground also helps to decrease signal fading and

Radio In 1935

NHERE is today a science which may be termed the Science of Prediction. In former years one had to be a prophet to make predictions, whereas in these enlightened days it would appear that even the best historical prophets antiquity were in reality but good scientists themselves. In other words, these worthy individuals had mastered the science of prediction themselves and by putting two and two together they often achieved remarkable results which, to the superstitious populace, seemed supernatural.

Any good astronomer today can predict with exactitude the solar and lunar eclipses for the year 1935 down to a small fraction of a minute. The mean average temperature for the United States can now be calculated months ahead, due to recent studies of solar activity.

When it comes to predicting what radio will be in 1935, it is not necessary to make wild an improbable guesses, but by following certain laws and by building upon what has been accomplished for some years back, we can readily arrive at a result that will we can readily arrive at a result that will

be fairly accurate.

When the writer compiled his book on the vited the writer completed his book on the radio telephone, in 1910, the first of its kind to be published anywhere, entitled, "The Wireless Telephone," he made certain statements therein, which he believed sound in view, of the then prevailing wireless art. The preface of this book is printed on this page. page. The writer was criticized quite a good deal, and called visionary and a dreamer by many at that time; the predictions, nevertheless, not only came true, but proved far too tame, and not visionary

Breface

The present little volume is intended for the

The present little volume is intended for the experimenter doing research work in wireless telephony and the student who wishes to keep abreast with the youngest branch of the wireless art.

The author realizes that the future use of the wireless telephone will be confined to the low power or battery system, as the present instruments, necessitating 220 and 550 volts for their successful operation, are not desirable nor practical enough for every day use.

The wireless telephone of the future must be as flexible as the wire telephone of to-day.

The wirpless telephone of the future must be as flexible as the wire telephone of to-day.

Every farmer will be able to operate his wireless telephone, when the sending and receiving instruments will be housed in a box a foot square, without depending on the lighting current for its operation.

The author predicts that in less than 10 years this stage will have been reached as it is bound to come sooner or later.

Quite a little new matter will be found in these pages and while some old matter has necessarily appeared for the sake of completeness of the book, the author trusts that the necessity of reviewing such matter will he apparent.

The author shall feel happy if this little volume will be the cause to advance the new art if ever so little, and he will be pleased to bear honest criticism and suggestions as to the contents of the book.

New York.

February, 1910.

enough to compete with the events that actually took place later on.

So when the writer sets himself the task of predicting the advance in radio in the year 1935, he no doubt will be ridiculed again. Nevertheless, the statements that follow hereafter are probably entirely too conservative, and with 10 years, far more impossible things will have come about than those mentioned in this article.

This is a very unsatis-factory state of affairs, and 50 meters, possibly below 10 meters. At such low

ing with

LOSSES

ular broadcast stations were to suddenly drop to 25 meters. No broadcast receiver made today could receive at such a low wavelength, because modern receivers are made to operate on a wave-length between 200 and 600 meters, or thereabouts. The writer makes the prediction that

during the next few years the popular broadcast receivers will be those which will be able to tune down lower and lower. will be able to tune down lower and office. Already broadcast stations are beginning to go down in the wave band. Of course, this gradual, as it should be. Such movement is gradual, as it should be. Such changes take time, which is a good thing, because if the changes were made overnight, all present broadcast receiving sets would be obsolete. By building better receivers to be obsolete. By building better receivers to operate at lower and lower wave-lengths. each year will show an improvement over the past one, and soon we shall have nothing but low wave receivers.

At the same time the sensitivity of our sets will keep on increasing, as it has during the past 10 years. The greater amount of losses having been done away with, the efficiency having been increased, it stands to reason that the sensitivity of the set will be increased as well.

While the writer believes in the present cycle of super power, he does not believe that it will prevail in 1935, for the following simple reasons:

When Marconi first started sending across the Atlantic Ocean, it took 50 kilowatts or 67 horsepower to accomplish the feat. Most of this energy was wasted, and only a very small fraction arrived at the other side of

(Continued next page.)

By HUGO GERNSBACK

Member American Physical Society

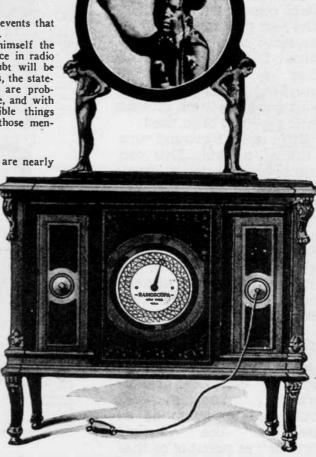
MORE STATIONS At the present time there are nearly 600 broadcast stations operating in this country, but we have only 150 channels in which to operate them. That means that some of the stations have to share time with others, to give them all a chance to get on the air, while some must be so far removed as not interfere with others.

the writer has pointed out a number of times before that the only solution is to reduce the wave-length for all broadcast stations. It is the writer's firm belief that in 1935 all broadcast stations will operate below wave-lengths the frequency

incre ases so rapid-ly that 10,000 stations can be separated 20 and more kilocycles without interfer-

"wave-length" will not be used in 1935. Rather, sta-tions will all be known to operate under so many operate under so many kilocycles, or perhaps, myriacycles (kilo meaning 1,000 — myria, 10,000). Operating at 25 meters or below, we could immedia ately accommodate, even today, thousands of extra broadcast stations, which would not interfere with each other in any way whatsoever. The reasons why it is not done at the present time are various.

Suppose one of our pop-



Above is shown the tentative radio set of 1935. Here we have radio television combined with radio broadcast. Instead of using a number of dials as we do today, the user of the future radio set will have a small pear, as shown. Pressing one of the buttons revolves the pointer slowly until you get the station you desire. Releasing the pressure on the button puts the station on the loud speaker and a television apparatus begins to function at the same time. Pressing the other button will bring in foreign stations located on the inside circle, using the same pointer, the operation being identical in all cases. Separate loud speakers can, of course, be used in this set, or the screen itself upon which the televison picture shows may become the diaphram for the loud speaker.

A prediction made in 1910 by Mr. Gernsback in the original book, "The Wireless Telephone," which was the first of its kind published shywhere. The prediction of the book have already the control of the

. H. GERNSBACK.

(Continued next page.)

make DX listening more enjoyable.

A six to eight foot rod, similar to those available in Radio Shack stores, driven into the earth and connected to the radio with a short wire constitutes a very good ground. Use of the cold water system, commonly thought of as the best ground, should be considered only as a second choice. The cold water line makes a very effective ground only if all pipe joints are in good condition and no plastic pipe has been used.

DO MOT use the ground wire in the AC outlet!! This can cause severe electrical shock and damage the receiving instrument. Because of ground loops, long lengths of wire and poor connections these systems are rearly good

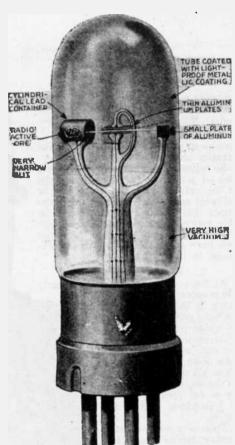
rf grounds.

Before hunting DX signals, check the dial calibration accuracy of your set to be sure you are tuned to the correct frequency. Stations of known frequency can be used as dial calibration The markers markers. should be chosen to be as desired to the frequency as possible so that any calibration error can then be used to interpolate the correct dial setting.

Next month I'll give you a brief list of stations around the country that are running old radio shows as well as new productions. Until then, don't forget one of the oldest radio shows on the air, The Brand Ole Opry on WSM, 650 Kc, in Nashville, is still being broadcast live every Saturday night.



Radio News for May, 1925



The theoretical cold vacuum tube of the future. Some experiments by a number of scientists have been made along these lines, and it is now thought possible that within the next ten years we, shall have a tube that will not require an "A" battery at all, the electrons of the tube being supplied, not by a hot filament as at present, but by a radio-active substance, or perhaps in some other similar way to obtain the same result. No such tube has, of course, as yet been produced, the above illustration representing the artist's conception of the tube.

the ocean. Here we had wireless receiving instruments with fearful losses and the small amount of energy that came in was barely audible. On the other hand, the amateurs of today are sending messages across the ocean regularly with an energy of 10 watts, which is exactly two-hundredths of one per cent. of the energy that it took Marconi to do the same thing 24 years ago. In other words, with the energy inherent in a few small ba' teries that can be easily put into a small suitcase, and which can be readily carried about, it is now possible to transmit radio intelligence across the Atlantic ocean. Again, if conditions are right, and the transmission and reception are efficient, there is no need for super power. In 1935 a 10-watt station will be heard around the entire world. Under such conditions, with ultra-sensitive apparatus, the super power system would create havoc with receiving apparatus within a distance of a few miles, and for that reason it probably will not be used at that time.

TELEVISION

In 1935 we shall have radio television. It will be possible to see, as well as to hear, by radio. An explorer will take along with him a portable radio station and he will be able to give a lecture right on the spot in the jungle in darkest Africa or up in the unexplored regions—if such there be at that time—of the Amazon. He will explain everything he sees, and his projector will also be tuned at every angle so that the listeners 10,000 or 12,000 miles away will be able to see at the same time. This television apparatus, by the way, is almost within our grasp now, thanks to the wonderful work done by C. Francis Jenkins, of Wash-

ington, D. C., and Edouard Belin; of Paris, France. The actual transmission over short distances has already been accomplished, and it remains only to put on the finishing touches.

TUBES

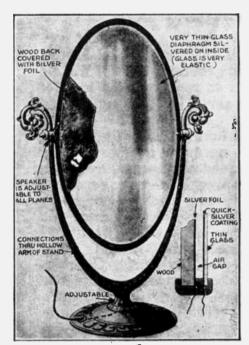
What tubes shall we use in 1935? The development of the vacuum tube since 1906 has been slow but steady. Since DeForest invented the Audion, much improvement has been made. We are still using the same tube with a number of refinements. At the present time all tubes are run by batteries, or, if operated from the 110-volt house-lighting current, an intermediate circuit is used to step down the current to the right voltage. Within the next few years we shall have a 110-volt tube, which will operate directly from the electric lighting mains, without any resistances whatever. This will be a great step forward, but to the writer's mind this is not the final solution. Engineers are working towards a further goal, and that is a cold electronic tube; in other words, namely, no more heated filaments and no more "A" batteries. It is already possible to make an electrolytic "tube" such as was invented in Germany recently, where a colloidal liquid was used, and there is, of course, no heat in this. The electronic action is between plates and grids.

A "cold" tube will probably be used by

A "cold" tube will probably be used by 1935, this tube containing certain gases which may become luminous under the action of the current. These tubes will probably be used on either batteries or 110-volt current, but there will be no heating current, and such tubes, therefore, will be most economical. Even if five or six such tubes should be used, the consumption of current would be so small that it would not even be registered on the house current meter.

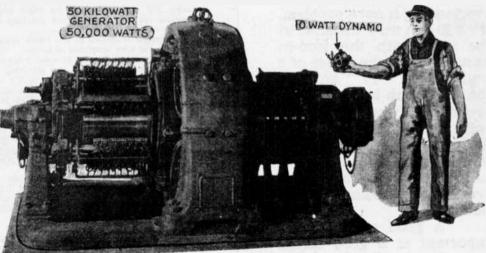
CONTROLS

The control of the radio receiving outfit of 1935 will be simplicity itself. We are getting away from too many controls, knobs and other handles, which long before 1935 will be obsolete. It was the writer, by the way, who, in an editorial in the February, 1923, issue of Radio News, was the first to advocate single control sets. It will have been noted that a few of these made themselves noticeable late in 1924, while 1925 will surely witness the advent of a great many single control sets, which seem to gain greater and greater favor with the public. The outfit shown on our cover illustration, as will be noted, has a single control, with a remote control added. At the present time it is necessary to jump up whenever you wish to tune in another station or whenever an adjustment has to be made. This ties down the listener to the set, which is



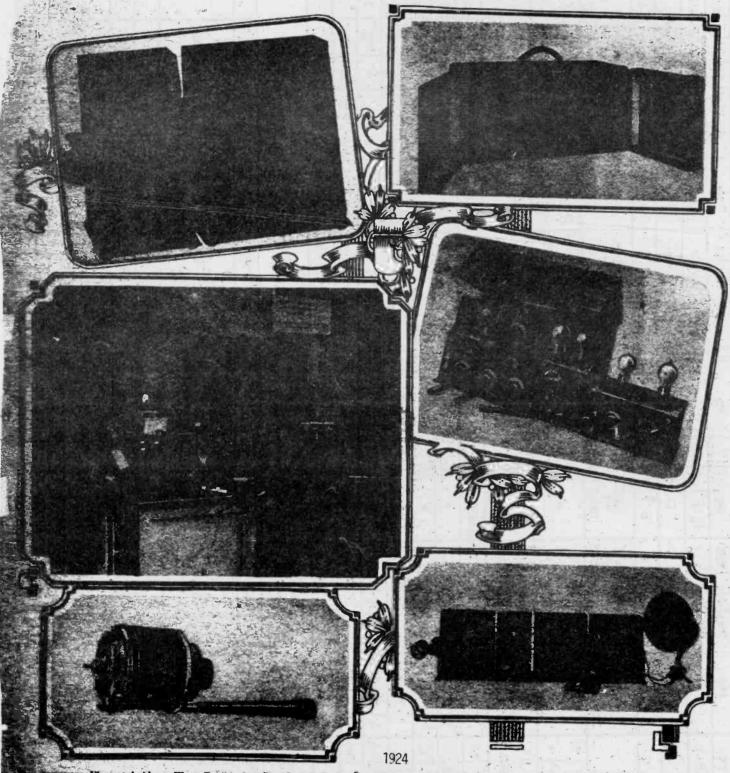
It has always been Mr. Gernsback's contention that the present loud speaker with a small diaphragm, operated on the telephone principle, is all wrong. Pictured above is theory of an electrostatic loud speaker whereby a large surface is made to vibrate on the electrostatic principle. Mr. Gernsback has himself been working on a speaker of this kind for some time and has obtained fair results. The loud speaker of 1935, in our opinion, will have a large vibrating surface instead of the small 2½ to 3 inch surface in use today.

not always desirable. The writer shows the remedy for this by having a pear-shaped control, as shown. The lady on the cover, by pressing a button, closes a circuit which automatically rotates the tuning controls very slowly or swiftly, depending upon the amount of pressure on the button. When the station desired is reached, the pointer on the dial revolves very slowly in the manner of a vernier until the station comes in loud and clear, at which the control is stopped. American stations will be found at the outer circumference, while foreign and trans-Atlantic stations are just below, in the red inner circle. By touching the second button on the pear-shaped control, the operator can, at will, bring in either foreign stations, or the stations of her own country. It goes without saying that the single control operates both the sounds from the station to be received and the television elements, both working in unison and automatically.



When Marconi, 24 years ago, sent his first message across the ocean, it required 50,000 watts. The radio amateur today accomplishes the same results in a much better way by using 10 watts only; in other words, the merest fraction of the power necessary to accomplish the same thing 24 years ago. The chances are that in 1935 no broadcast station will require more than 10 watts in order to supply entertainment to listeners within a radius of several hundred miles.

The London Radio Show



LETTERS

Just got done reading your HORN SPEAKER. On page 10 (November 1987 issue) you have 2 ads. NO NAME NO ADDRESS. I also have this problem. People send me lists. I just got a for sale list from someone, 7

pages, and no name or address on any of the pages. The only clue is the sender's envelope, and the post mark is not readable. Or the guy that sends you a postcard marked. "Please send me all your lists of everything you have for sale." They want you to take the time to make up a list, spend the postage for a

reply, all for a 14 cent postcard, then if they order anything, they do not include postage. There are lots of buyers and collectors out there that expect a lot for noth-

Thank you. Frank Krantz Somerdale, NJ

Meny Christmas flea market

ADVERTISE IN THE HORN SPEAKER Box 53012, Dallas, TX 75253 (lower price per square inch-compare)

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December 1987

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ICAL	ARVIN	013 010 017 018	-	No Yes	1:4 16:1	O	- 4 -	540 to 1575	2 3 5	•	2" 08"	ELECTRO.	455 (70	5 54 7.2	§Σ	MEG5 S MEG.	10 @ 3.5	No Yes	- 65K7	T 6A8	GK7 6K7 6SK7	L	607 67 67 67 68	9	-	6K6 GT 6K6G6V6G	6X5G	Non-Sync.	44 51
ECHNICA	ARCADIA WELLS-GARDNER	9C 14	-	Yes	21:1	CCW	9	540 to 1560	æ	9	0	ELECTRO.	456	7.8	1 2 MEG. MEG.	16.5	@ 1 1 @	Yes	SK7 6SK7	65A7 6		6886	Т	6SK7	6K6G	6N7G			(2)
TE	AIRLINE MONT WARD W	62-554 62-653	2 1	o N	•	•	6 5	540 to 1560	4.5 2.5	3 4.5	-	ELECTRO. E	456	6.8	1	.5 .5 2 MEG. MEG.S MEG.	1.5 @	Yes No	6SK7 6S	6SA7	6SK7		6н6 6507		6SK7 - (6766 41	I	Sync.	51. 51
•	NAME	MODEL	UNITS	REMOTE CONT.	RATI	ROTATION @	PUSH-BUTTONS	RANGE Kc.	WATTS MAX.	UUTPUT UNDIST.		LECTRO.	I-F PEAK (Kc.)	CURRENT DRAIN 6	-	CONT.	SENSITIVITY	7	R-F	1st. DET. OSC.	I-F	2nd. DET.		. AUDIO	_		RECT.	ATOR	PILOT LAMP

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TAT 6K7GT

65K7

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Yes

6K7GT

TAT

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I-F PEAK (KC.)

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SPEAKER DIA.

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SENSITIVITY CONTROL

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P0s.

TONE CONT.

VOLUME CONT. ®

SENSITIVITY

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HSAN NZE

34 KJ

34K6 PACKARD

SOB BOICK SOBE BOICK

OLDSMOBILE PONTIAC 28-0,30-P

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CHRYSLER De SOTO DE SOTO PLYMOUTH

SHEVROLET

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FORD

MODEL

NAME

MOTOROLA

TECHNICAL

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UNITS

REMOTE CONT.

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December 1987

7C5 6K6 (2)

6N7G

6K6G

65K7

TY4 6X5

1

Syn

Sync.

NDISCRIMINATELY

(2) 54

44

(1) C - CLOCKWISE , CCW - COUNTERCLOCKWISE (CONTROL HEAD)

(3) SATTER RESISTANCE VALUE MEANS SWITCH

(1) SATTACHED TO CONTROL

(6) USING 50 MMFD. SERIES AND 50 MMFD. SHUNT AS DUMMY ANTENNA

(2) 6K6 6V6GT GT

6K6GT

6V6 GT

GK6GT

AUDIO OR DRIVER

AUDIO

DUTPUT

65Q7GT

10109

TO TOSA

6Q7GT

197029

AVC

2nd. DET.

6SK7GT

6K7GT

Non-Sync.

55

44

51

PILOT LAMP

VIBRATOR

RECT.

* MOTOR TUNING

NOT SUPPLIED

024

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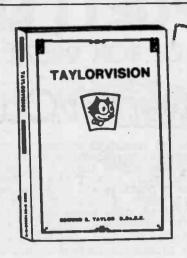
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*************** FOR SALE: PHONOGRAPH COLLECTION. RED GEM \$700; BLACK GEM \$450; BLACK GEM \$450; BLACK GEM \$375; BLACK GEM \$350; FIRESIDE \$475; FIRESIDE \$450; STANDARD \$375; STANDARD \$400; STANDARD \$400; STANDARD \$400: \$400; STANDARD STANDARD \$400; STANDARD WITH WOOD HORN \$1800; STANDARD \$400; HOME \$425: HOME \$375; LONG BOX HOME \$475; HOME \$425; TRIUMPH WITH FLOWERED HORN \$1500; MAHOGANY OPERA WITH WOOD HORN \$4200; AMBEROLA 50 \$400; AM-BEROLA 30 \$375; AMBEROLA XA \$390; AMBEROLA X \$390; AMBEROLA CVI \$475; VICTOR M WITH WOOD HORN \$2,000; VICTOR O WITH MAHOGANY HORN \$900; VICTOR M WITH WOOD HORN \$2,000; VICTOR II WITH WOOD HORN \$1,900; HARMONY WITH MORNING GLORY HORN \$650; HARMONY \$275; AERTINO BACK MOUNT \$575; STANDARD OPEN WORKS \$675; STANDARD A \$475; STANDARD A \$475; BUSY BEE \$325; COLUMBIA WITH LID \$300; PUNK \$495; COLUMBIA EAGLE \$375; COLUMBIA EAGLE \$300; CAMERA

PHONE WITH LEATHER \$200; TALKS PHONE \$550; COLUMBIA AH ORNATE \$950: COLUMBIA BN \$700; 800 CYL-RECORDS IN BOXES: -INDER PER-SONAL COLLECTION \$4,000. 400 DISK RECORDS, MOST IN ALBUMS \$400; 25 EXTRA HORNS— CYGNETS, MORNING GLORY BELLS, ETC. \$2,500; 15 BOXES OF PARTS, REPRODUCERS, ETC. FREE WITH COLLECTION OF PHONOS; CATHE-DRAL, TOMBSTONE AND CONSOLE RADIOS; NOVELTY RADIOS: OTHER ANTIQUES: STELLA DISK MUSIC BOX \$1,800; TWO CYLINDER MUSIC BOXES, BOTH \$500; PREFER TO SELL ENTIRE LOT FOR \$33,500.00 OR MIGHT SELL SOME SEPARATES AT A BETTER PRICE. CHUCK SEIDEL, CALL DAY (503) 479-4282.

FOR SALE: RADIOS, SPEAKERS, TUBES AND RELATED ITEMS, LSASE, BRINGS 4 PAGE LIST. FRANKLIN HAAS, DARLOW DRIVE. McPHERSON. KS 67460.

50 YEAR COLLECTION HARD TO FIND TUBES: LOW LOW PRICES, INQUIRE, M. LEVY, 101 EAST DRIFTWOOD #44, FBG, TX 78624.

COLLECTORS OF OLD RADIOS - 700 old tubes, 25 vibrators, Sams that starts with no. one to 863, some missing after 315, Hickock 288x signal generator, Hickock 533 tube tester, other test equipment, 100 capacitors lots of can types, many speakers, many old radio books from early 1930s, dash plates for cars, trucks from late 1930s, Boxes and Boxes of miscellaneous. Also TV books to 1952. Phone (701) 967-8386. HOWARD WININGS, BOX 74,

***************************** MY COLLECTION OF ANTIQUE AND LATE MODEL MIROPHONES FOR SALE. PICTORIAL PRICE LIST- SEND LARGE SASE--- WALTER F. TURNER, P. O. BOX 13069, ARLINGTON, TX 76094.

ARTHUR, ND 58006.

FOR SALE- NATIONAL NC303 runs fb.

excellent comm. recvr. A. N6SSB Ham bands included 144 and 220. Price \$150.00 or B.O. ------- WANTED --DICTOGRAPH L.S. or similar Tuska models or Kennedy. W. M. Key. 58 Sycamore Drive, Halifax, MA 02338. Tel. (617) 294-1831. *************************

LONG ISLANDERS! Search your attics and basements for old radios. Bring them to A A Electronics, 178 I. W. Willets Road, Albertson for repair, trade or sale, (516) 741-4212.

FOR SALE- HIGHEST BIDDER. BLUE mirror radio. Fish design in Wood cabinet need refinishing. No name. Semi diamond shape. ALSO; Scott 1947 Metropolitan 16A in Chippendale cabinet. Excellent inside and out. Some FM problems. \$300 pickup only. SASE if writing. (414) 748-2471. Jerome & Debbie Schliepp, 1062 W. Fond du Lac St., Ripon, WI 54971. ***************************

A. K. "BREADBOARD" tuning condenser unit complete, excellent condition \$35.00, Dave Black, 6701 Brinker Street S.W., Navarre, OH 44662. Tel. (216) 879-5374.

FOR SALE; NEW OLD STOCK and used tubes, cone speakers, phono cartridges and needles, send SASE, C. Elmer Nelson, 11 S. Church ST., Princeton, IL 61356. ******************************

FOR SALE.... BC348 RECEIVER with A.C.-PS.- SPEAKER A1 NICE WITH MANUAL \$50.00. NATIONAL TRANSCEIVER NCX5 WITH MANUAL MATCHING P.S. SPEAKER. P.S OK- TRANSCEIVER NOT WORKING \$50.00. VACUUM TUBE VOLT METER SUPERIOR MODEL 670A A1 CLEAN \$25.00 HEATHKIT SIGNAL GENERATOR MODEL 1-G-102 A1 LOOKS NEW WITH MANUAL \$25.00 TUBE TESTER SIGNAL CORP. 1-177B WITH MANUAL AND TEST CARDS LOOKS NEW \$30.00 HEATHKIT DX20 EXTERNAL P.S.

HALLICRAFTER HT40 - \$35.00 NATIONAL" NC300 REPAIRABLE \$40.00 NATIONAL 6 METER CONVERTER - FOR NC300 \$25.00 KELLOGG AC CONSOLE- USES 24A's-\$100.00 AMERICAN BEAUTY- \$100.00 HEATHKIT VFO VF1- \$25.00 HEATHKIT RECEIVER GR91- \$25.00 NATIONAL SPEAKER FOR EARLY RECEIVERS \$35.00 GONSET MOBILE CONVERTER - 10-20-75 \$25.00 LAFAYETTE 10 METER VFO-\$25.00 LYSCO - MOBILE VFO- \$25.00 K4UJZ, 608 W. THOMPSON LANE, MURFREESBORO, TN 37130 (615)

THREE PIECE TELEGRAPH SET RARE-ALSO STERLING POCKET SIZE VOLT TESTER 0-5. RUSSELL SCHOEN, E. 7340 NIETZKE ROAD, CLINTONVILLE, WI 54929. (715) 823-6744.

WANTED

CATHEDRAL RADIOS, MUST BE NICE AND WORKING CONDITION. WILL PAY TOP DOLLAR. ALSO WANT OTHER UNUSUAL AC RADIOS. HAROLD PERKINS, 4468 SUN VALLEY DRIVE, LAS VEGAS, NV 89121.

WANTED: CROSLEY MODEL 59 CHASSIS IN ANY RESTORABLE CONDITION TO COM-PLETE MY CROSLEY GRANDFATHER CLOCK RADIO. BURNETTE B. KERCHNER, 27 WILLOW ST., LENHARTSVILLE, PA 19534. PHONE (215) 562-8772.

SX-28, SX-71, COLLINS 51J RECEIV-ERS, A-K CATHEDRALS, A-K HORN SPEAKER. JOE WATSON, 3300 ARROWHEAD CIRCLE, ROUND ROCK 78681 (512) 255-7962.

WANTED, PREMIUM PRICE PAID for Tower Adventurer sailing ship speaker, also for similar smaller ship speaker, made by Jodra. Gordon Wilson, 11108-50 Avenue, Edmonton, Alberta, T6H OH9 Canada.

WANTED- RADIO TUBES w/tip type as WD-11, UV-201, etc., Equipments & Sound systems from Western Electric, Langevin, Jensen, Altec, JBL, Tannoy, McIntosh, Marantz, Dynaco — Tel.: (818) 576-2642. David Yo, P. O. Box 832, Monterey Park, CA

WANTED: PEERLESS DYNAMIC 9" speaker Model 19 AR-60. Early Canadian Radio Magazines. Radio News 1919, 1921, 1922. Radiola 20 chassisgood audios. Good driver for Saal speaker. Ron McNeill, Box 472, Yorkton, SK, Canada, S3N 2W4.

WANTED: SEPARATE DETECTOR AND AM-PLIFIER. UNITS USED WITH GREBE CR9.

WOULD APPRECIATE OFFERINGS OR LET-Z this ad. This ad and the one down TER FROM GREBE SPECIALISTS. CHESTER got separated from the its sending FRANZ, ONE CHAROLAIS DRIVE, BAY, MO envelope. 65041.

knobs. Call, or write (612) 352-3500. Vernon Freichels. 1025 Pleasant Street, Sauk Centre, MN 56378.

WW2 AIRCRAFT RADAR H2X, MICKEY PHILCO AN/APS-15, W. AN/APQ-13- NEED PIXS, SCHEMATICS, TECH., ORDERS, ETC. B. C. VINTAGE FLYING MACHINE, P. O. BOX 18099, FORT WORTH, TX 76118. (817) 282-3825.

WANTED----- MARCONIPHONE VIII CAB-INET OR PHOTO OF ONE. GORDON WILSON, 11108 - 50 AVENUE, EDMON-TON, ALBERTA CANADA, T6H 0H9.

CAPEHART BC- SW- PHONO LATE 30'S OR EARLY 40'S. MODEL THAT TURNS RECORD OVER. RCA BC-SW PHONO LATE 30'S OR EARLY 40'S MODEL THAT HAS 22 TUBE CHASSIS AND 16" SPEAKER. TURN TABLE 78-45-33 WITH GOOD SPEED ADJUST. WILL PAY TOP \$ FOR GOOD CONDITION. SEND INFO TO: JOHN C. BALDWIN, 210 KAWEHI PL., KULA, HAW 96790 (808) 878-6374.

DIAL GLASS & A-M & SHORT WAVE WHEEL FOR ZENITH BLACK SQUARE DIAL, MODEL 8S647. ARM CHAIR RADIO. RUSS SCHOEN, E. 7340 NIETZKE ROAD, CLINTONVILLE. 54929. WI

WANTED - NORTHERN ELECTRIC decals or any information as to source. Gordon Wilson, 11108 - 50 Avenue, Edmonton, Alberta, Canada T6H OH9.

WANTED --- CABINET FOR CAPEHART ORCHESTROPE JUKE BOX. J. JOHNSON, BOX 17, FOWLERVILLE, MI 48836. (517) 223-8417.

WANTED: ANY ALLIED RADIO CATALOGS, DATED BETWEEN 1938 TO 1941. I BUY CRYSTAL RADIOS. SEND INFO TO-RICHARD SPRATLEY, 2112 McLAIN STREET, CHESAPEAKE, VA 23324. (804) 545-2402.

PRECISION SIGNAL GENERATOR, series -E-200 by Precision Apparatus Company, Brooklyn, NY. Will the one who sent this ad to us, please send his name and address to us so that we can run it again.

WANTED: RADIO RIDER MANUAL NUMBER XXIII 23, early hard rubber RCA horn speakers, knobs for RCA- 16, 17 radios, 200A detector tubes, one good case for an AK big box 20, and spools of wire and wire recorders. Need another name and address for

envelope.

WANTED - MANUFACTURED CRYSTAL SETS MANUAL OR REPRINT FOR HALLICRAFTER 1906 - 1930: units, -history, SX-88, SX-42, S-36 and S-27 type pictures, schematics, manufacturer's literature, parts, etc. for material for a book on crystal sets of that era. Credits given and costs covered. Write me and let me know what you have. Dr. B. Turke, 660 N. Dixie Highway, Hollywood, FL 33020.

> RADIOLA I (made by GE) and Radiola IIIA. For more information contact: Andy McKenzie, Box 1872, Medley, Alberta CANADA TOA 2MO.

WANTED: TRANSFORMERS used in the HEATH model W5M power amplifier, output & power. Hajime Funakosh, 98 Yuwakura, Minami-: kedacho. Sakyo-ku, Kyoto, 606, JAPAN.

WANTED- SW3 NATIONAL receiver with plug-in coils or coils alone. (2) Victor no. 4 phono reproducer that is restorable. (3) Source of black brushing wrinkle or crackle paint. T. A. Drogoski, 507 Coal Valley Road, Clairton, PA 15025.

WANTED: DIAL AND SWITCH KNOB for Crosley model 148, original or close to original. Gary Cappoen, 18025 NE Chehalem Drive, Newberg, OR 97132.

WANTED: OLD HAM SETS. CB's, military sets, manuels, etc. Working or not, WOOD, 7304 Dixon Avenue, Tampa, FL 33604.

WANTED: AK CATALOGS, OWNER'S MANUALS, SIGNS, POSTERS, PLAYING **FACTORY** CARDS. ETC., ANY ADVERTISING MATERIAL; AK 35, SN LOWER THAN 730,000 AND HIGHER THAN 1,000,000) AK 36, (SN LOWER THAN 2,610,000) AK 48, (SN BETWEEN 644,000 AND 950,000) MODEL R POWER SUPPLY, MODEL R HORN, MODEL K SPEAKER, AK 30 (SN OVER 1,000,000) RAYMOND THOMPSON, 7422 CHERRY TREE DRIVE, FULTON, MD 20759.

WANTED: WESTERN ELECTRIC AND RCA MICROPHONES, WALTER F. TURNER, PO BX -- 13069, ARLINGTON, TX 76094. (817) 261–6700.

WANTED- PLASTIC FRONT PLATE with numbers for RCA Victor 525 & glass plate for Westinghouse Model 780 B & Y. Myles Henderson, 10 Dunrobin Drive, Dartmouth, Nova Scotta, Canada, B2X 1J4 or call (902) 462-5236. :0

WANTED: HARD RUBBER PANEL at least-10"x11"x1/4". Also 215 peanut tubes

(VT-5) dead or alive: Gordon Wilson, 11108 - 50 Avenue, Edmonton, Alberta, Canada, T6H OH9.

WANTED: ZENITH STRATOSPHERE. Good condition with minimum rust. Will pay top price and arrange packing and shipping. Call #(808) 878-6374 or John Baldwin, 210 Kawehi Pl., Kula, HI 96790.

WE TAKE THE LIBERTY HEREWITH TO INTRODUCE OURSELVES AS BEING A LONG ESTABLISHER IMPORTER OF ANTIQUE MECHANICAL MUSIC. — ALWAYS WANTED --- VINTAGE & ANTIQUE RADIO, HORN SPEAKER, VINTAGE T.V., CATHEDRAL RADIO, GRAMOPHONES, PHONOGRAPHS, POLYPHONES, CRYSTAL SETS, MUSICAL BOXES, TYPEWRITER, SEWING MACHINES, TELEPHONES AND ALL OTHER OLD MECHANICAL ITEMS. --- TOP CASH PRICES PAID - WHOLE COLLECTIONS OR SINGLE ITEMS. WE WILL TRAVEL ANYWHERE TO COLLECT, IF YOU HAVE THEM IN HAND. PLEASE CONTACT US WITH PRICES AND PHOTOGRAPH TO: MR. PIPAT W. POOLPOL, CETO STEREO, 9 SOON THON KOSA ROAD, KLONG TOEY, BANGKOK 10110, THAILAND, TEL. (02) 249-2447, 249-6253.

WANTED: POLICE SCANNER, CRYSTALS, Tube type C. B. Radios, Tram. Lafayette, send list include asking prices, must work. Looking for Lafayette HE-20-D Mint- Send to: Michael S. Sabodish, Sr. 11—A Matawan Avenue, Cliffwood, NJ

WANTED -- EVEN IF IN POOR CONDITION: A.K. 5, 9, 10, 12, 217 165, 708, 206, 275, 944, 558, 60 KIEL; Crosley 5-38, 608, Companition, 169, Travette, Fiver, Sixty-one; RCA any Aeriola or Radiola, R-28, R-225, R-37, 140, Radiola 103 spkr.; Wurlitzer 5D; Stewart Warner 305, Philco 90, 70, 20, 507L, 30T, 10T, 49-501, 49-1401; Admiral AM 787; GE- L-50, K-60, K-64, K-63; Zenith 75, 668; Temple spkr. 15; Lewol-4L; TV's: Zenith G 2420; RCA 630TS, 8TS30, T120; Philco 48-1000, 50-702; Motorola VT-73, VT-71; Also need spkrs to fit these radios; GE - K-80; AK 559. James Baker, 704 Medway Road, Hagerstown, MD 21740-4130. P.S. Don't throw that junk away, write to me, first.

PREMIUM PRICE PAID for Super Zenith VII. Gordon Wilson, 11108 - 50 Avenue, Edmonton, Alberta, Canada. 1-403-434-6257.

WANTED: WILL PAY \$2.00 EACH for WW II surplus Hytron 864 tubes. Can use 50 or more. James Fred, R1, Box 41. Cutler. IN 46920.



 Antique type, twisted, black, 2 wire cloth covered power cord. Need hard to find Olde Tyme Radio parts such as: *AK Style Ballery Cable

"ANT, RF, OSC, IF Colls "Headphones & Speaker Cords *Headphones

*Olde Tyme Hookup Wire

Brown Silk Type Power Cord

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*Vintage Tubes *Audlo Transformers

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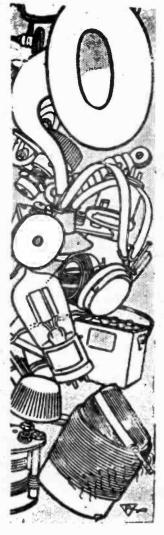
Atwater Kent Equipment Catalog Radiola IIIA Manual

Vintage Radio Identification Sketchbooks

by D. H. Moore (See Flyer for details) Radio Horn Speaker Encyclopedia by F. Paul

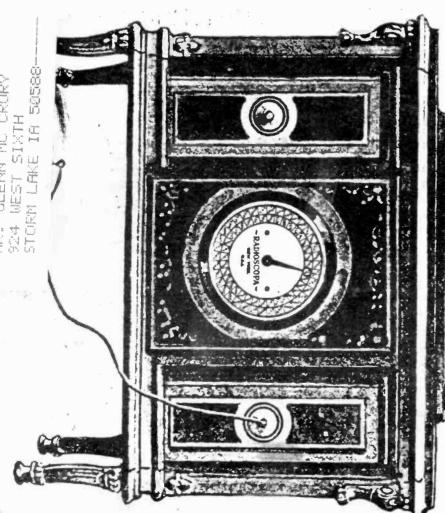
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December

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