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The Call Letter is a monthly publication of the Northwest Vintage Radio Society, a non-profit organization, incorporated in the state of Oregon. Meetings of the Society are held on the second Saturday of each month, normally, at the Buena Vista clubhouse located at 16th and Jackson Streets, Oregon City, Oregon. Meetings convene at 10 o'clock A.M. Editor-in-chief.....Bill De Vev 16969 S.W. Tracy Ave. Lake Grove, Or., 97034 Ph: 635-6746 Contributing Writer.....Tom James Power Supply.....Bobbie Kibler Our People......Hugh Rankin Advertising Mgr.....Bob Hay Feature articles are contributed by members under various by-lines. Please send all contributions to the editor. Call Letter Address: P.O. Box 02379, Portland, Oregon, 97202

POWER SUPPLY BOBBIE KIBLER

Our monthly meeting place for August 9 will be at the Trolley Car Park in Forest Grove, 10:00 A.M. A pot luck picnic is planned after the meeting. The Power Supply will furnish cold pop and rolls. Please bring your own table service, along with a favorite hot or cold dish, etc. I understand there are outlets for warming up food in skillets or crock pots. Bachelors in the crowd might prefer bringing pickles, chips of some sort, olives or ready-made salads. It should be a lot of fun, so bring all the gang and have an enjoyable day.

Kohlrabi Is one of today's neglected vegetables. With it's very delicate turnip flavor, it's good sliced raw or teamed with other vegetables, as in the following recipe:

Kohlrabi-Potato Custard

2	c. cubed,peeled kohlrabi
3	medium potatoes
A	tsp. paprika
6	drops Worcestershire sauce
3	to 4 slices bacon
3	eggs, separated
1/3	c. milk
1/8	tsp. cavenne pepper

Cook kohlrabi and potatoes in boiling, salted water until tender. Drain, combine and mash; add paprika and Worcestershire sauce. Crumble crispy fried bacon and ½ c. drippings into vegetables. Beat egg yolks; add milk and pepper and whip into potatokohlrabi mixture. Cool slightly. Fold stiffly beaten egg whites into mixture. Heap lightly into greased 2 qt. baking dish, set in pan of hot water. Bake at 325° for 40 to 50 min. or until risen and delicately browned. Makes 8 servings.

RK

The Call of the Wild I went up to Buck's, one Sunday; (ountry miles up in the sticks, Said he'd love some company, and---He'd a radio set to fix. I tried to phone a girl from there, But the line so loaded up (Receivers down by the dozer) 9 got mad as (rosley's Pup. Then a fiendish plan unfolded Jo give my voice a whoppin' hike. I hooked the radio to the line--Used the speaker for a mike. I next rang up Newton Thompson, A bachelor, with a flair, Which alerted all the busybodies Jo a story ---- maybe rare! Then Newt went to his phone-Was expecting a certain call HELLO IMERE NEWJ ! the receiver yelled, And he slammed it on the wall ! "Is Jom James there at Howe's ?" Asked the "hello-girl", from town. "Jell him to cut the comedy, All the drops are falling down ! In the Lazy Vale of Synarep, That story is going yet, How Jom electrified the gossips With an old time battery set. (a true episode for you, IJ)

HERICA

By IT.



FROM PORTLAND:

Out (west) on Canyon Road (Sunset Hiway, U.S. 26) to Tillamook Junction. Turn left at junction on Oregon #6. Go 12 miles west through the communities of Banks and Glenwood. Look for PARK sign about the 38 mile post.

CAMPGROUNDS:

Open Labor Day through October 1.



RAILWAY TIMETABLE: Hours: 11:00 A.M. to Sunset





the clubhouse was a jumble of lumber, tools and rawdust when we arrived for the July meeting but we managed to muddle thru and even had a few sets on display. Glen Bricker brought a Stromberg-Carlson, an early AC table model, in a beautiful cabinet - and it worked well. Stromberg-Carlson was noted for quality and fine cabinetry. Glen also showed an unusual Emerson battery set, polished wood in jewel box styling, and in good working condition. Bob Campbell showed a Browning-Drake 5 tube kit set and a Philco cathedral Model 60 and Joe Tompkins had a Radiola III which also was for sale.

Bring on those lazy, hazy, crazy days of summer - - it's picnic time 1980. Back in March when we first started to talk about our picnic at Trolley Car Park August seemed far away, but here it is almost upon us. The old trolleys are a nostalgic hold-over from a bygone era, so come and enjoy. Date: Saturday August 9th. See the Power Supply page for additional information.

Attendance at the Butcher's Bistro dinner on July 18 was most gratifying -- a total of 19. I think we were the first group to use the newly completed dining room. The food was good, the room cool and comfortable and, while the service was a bit slow, I don't think anyone minded too much -- it was a chance to relax and do some visiting.

March 29th was moving day. On that date in 1941 many of the 1300 stations on the North American quadrant were assigned new frequencies by order of the Federal Communication Commission. This re-allocation stemmed from a study made by an international committee of radio engineers that surveyed the air space needs of all stations in the U. S., Canada, Mexico and Cuba. There was virtually no change on the lower end of the dial but starting about 740 kcs, frequencies were spread out and pushed upwards, particularly in the middle sector of the dial. For instance, the old frequency of 1000 kc became 1040, 1200 became 1230 and so on. This reallocation was made primarily to accomodate Mexican and Cuban outlets that had started as small local stations but over a period of time, had increased their power and range until they presented monumental interference problems in many areas. The last prior allocation was in 1928 by the old Federal Radio Commission. Under the international plan adopted at the time Canada got six exclusive channels, Mexico got six, Cuba one and the U. S. more than 40.

In 1941 an estimated 11 million U.S. radios were equipped with push button tuning. To insure clear, unimpaired reception these would have to be re set to the new frequencies. Trade magazines urged service men to take advantage of this golden harvest, not only to re set push buttons, but to check for weak tubes, noisy parts, poor antennas and to demonstrate new portable and table model sets. But this anticipated bonanza never developed. Several months later only a comparatively small percentage had been serviced. Apparently many either learned how to "do-it-yourself" with the push buttons, or chose to ignore the whole thing and tune their sets by hand. In some cases new station positions were close enough to bring in an off-cen er but recognizable signal and in other cases it brought in a new station of different call letters.

_ Easy Set Building

3 Tubes = 5

The Battery Receiver for the Experimenter and Beginner

• A 2-VOLT battery receiver using two tubes of the dual type, which gives results equal to five tubes, is here illustrated. The first tube, a 1D5-GP serves as a radio fre quency amplifier. An exceptionally smooth and positive control of the regeneration is obtained, utilizing one of the triode sections of the first 116-G tubes: the second triode of this tube serves as a detector. A second 116-G tube acts as a 2-stage audio amplifier of the resistance coupled type. This circuit is a very good one for the short-wave listener and experimenter; the 200-550 meter broadcost hand may be funed in by using coils with a sufficient amount of wire on them, or by using larger tuning condensers. This circuit can be very nicely built up into a portable style receiver, with self-contained batteries. The plate circuit requires 135 volts for best results. The sensitivity of this receiver has proven to be very high; anyone who has tuned the average regenerative set will be surprised at the very smooth way in which this receiver behaves so far as the regeneration control is concerned. The regeneration in this circuit is controlled by means of a 200,000 ohm variable resistance inserted in the tickler coil circuit.

By using an untuned radio frequency stage, any unde-irable reaction from the antenna circuit is climinated; also there is a notable absence of dead-spots and the tuning is remarkably smooth and stable. The third tube serves to give a better quality signal with less tube noise.

The tuning and regeneration controls are simple to handle; on the front panel of the set the tuning dial is found at the center, with the regeneration control knob on the leit. The control knob at the right is the filament control rheostat. The front panel, of aluminum or other metal, may be about 7 x 10 inches while the base measures about 7 x 8 inches and 2 inches deep.

For the plug-in coils a 5-prong socket is provided. In the original receiver the



By H. W. S.

oovs—Appearance of the receiver. Selow: Wiring diagram.

Na-Ald shortwave broadcast band-spread coils were used, with an excellent bandspread tuning effect. For tuning in the *amateur shortcenee* bands, band-spread coils covering the desired bands were employed. If one desires to tune over the whole shortwave spectrum, from 15 to 200 meters, then the 5-prong *accerd coverage* coils may be used. All of these tuning range possibilities may be tried out without making any changes in the wiring.



This set is very economical on the batteries and as the plate drain is only about 15 ma. at 135 volts, one of the newer type small-size B batteries may be used. If desired, a 90 volt "B" battery may be employed, but stronger signals are of course obtained with 135 volts. A battery supplying the filament potential of 2 yolts may comprise two #6 dry cells, the cells being connected in series. The current drain here is about 1/2 ampere. Where the set is to be used over quite a lengthy period, it will be desirable to use either a small storage battery or a heavy duty 3 volt "A" battery. Any type of single wire antenna may be used with this set, and it is suggested that a wire about 100 feet long and as high as possible be used, together with a ground connection to water pipe or other good ground,

The circuit diagram shows the set to be really very simple to build and extremely economical, so far as parts are concerned. The R.F. stage used a small R.F. choke in the grid circuit and the antenna is coupled directly to it through a small condenser which can be adjusted to reduce broadcast band harmonics on the 160 meter coil. The output of the R.F. stage feeds through three condensers before it gets to the grid of the detector tube. In this gase there is no danger of any of the plate voltage of the detector. The plate of the 34 is shunt-fed through a 2.5 mh. R.F. choke.

In the detector stage we have the two triodes operating, one as the detector and the other as the feed-back tube. Two grid condensers are connected in series and the grid of the regeneration tube connects to the mid-point. The grid-feaks of both tubes are returned directly to the " Λ " plus lead instead of across the condensers. A high resistance rheostat is connected in series with the plate supply of the regeneration tube in order to vary the voltage and thus control the amount of feed-back

Alden Plug-in Coil Data

Meters	-		Distance
lenath	Grid coil turns	Tickler turns	2 coils
200-80	52 T. No. 28 En.	19 T. No. 30 En.	1/8"
	Wound	Close wound (C.	W.)
80-40	23 T. No. 28 En. Wound	11 T. No. 30 En. C. W.	ж.
40-20	16 T. per inch. 11 T. No. 28 En. 3/32" between	9 T. No. 30 En. C. W.	¥**
20-10	turns 5 T. No. 28 En.	7 T. No. 30 En.	56*
Coller	luras	C. W.	
Contor	14" dia.	C. W. = Close w	ound

Parts List for Separate Reg. Sat

Neutrodyne

FRANK D. ANDREWS

On March 2, 1923, Professor Louis A. Hazelton delivered a lecture before the Radio Club of America at Columbia University, New York City, entitled, "Tuned Radio Frequency Amplification With Neutralization of Capacity Coupling."

Literally thousands and thousands of people who like to construct their own sets, after hearing of this new development, have ben waiting for accurate and complete details which would enable them to build their own receivers of this type.

The question of the practicability of these new circuits can only be decided through an actual set-up of the apparatus and a test of operation. Considering the number of these new wonder circuits, the reader can readily conceive the fact that it is not an inexpensive proposition. In doing this, however, the real worth of the circuit is soon disclosed, the simplicity of difficulty of the hook-up becomes apparent.

Every amateur and fan knows that internal capacity, due to the condenser action turns in the windings of any tuning unit, should be kept as low as possible. Because of this, the peculiar method of winding honeycomb coils was developed and in like manner lattice and spider web coils were placed on the market. This same condition holds true of the transformers and even in the vacuum tubes betwen the thre elements because of the dielectric value of the vacuum in the bulb. Even the wiring of the set creates capacity reactions if closely spaced. The actual microfarad value of this capacity effect may be small, but its ultimate effect on the operative efficiency of a receiving circuit is very important.

With every change in wave length there is a corresponding change in its radio frequency component, and the shortest wave-length in practical use today bears a frequency relation to the longest wave-lengths of about one hundred to one. Due to this wide frequency range which it is necessary to amplify in order that radio frequency amplification may be applied to any radio station which may be in operation today, different manufacturers have resorted to different expedients as inter-value couplings. In general these may be divided into the following classes: 1. Resistance coupling.

- Choke coil coupling. 2.
- 4. Iron core transformer coupling.
- Air-core transformer coupling. 5.

The last two may be divided into two classes, namely, aperiodic and tuned. It is the latter type supplemented with the last-named combination that we shall discuss, but a brief general discussion at this time will not be out of place.

The divisions are merely arbitrary, many of the intervalve couplings at present utilized being a combination of one or more of these divisions.

With the exception of utilization of the Armstrong super-heterodyne receiver, resistance couplings do not seem to be in favor in the United States, although they are almost universally used in Europe, particularly in England and France, experimenters in the latter country using them to cover the entire wave length band in present use.

It has even been found more desirable to employ iron core or air core transformer coupling in the Armstrong super-heterodyne receiver, though resistance coupled amplifiers function well at wave lengths over one thousand meters when employing the average American triode, with increasing efficiency at the longer wave-lengths. At waves below one thousand, however, the amplification may be found to be less than unity, i. e., a decreased signal strength will result. It has been shown that this is due to the high internal capacitance of our American triode, which, though small in itself, is markedly detrimental in this type of amplifier. French experimenters have constructed special valves for use with this circuit in which the grid and plate leads enter the tube through the side walls, rathr than through the base, decreasing this capacity value to negligibility.



(89) A candohm is-

 (a) A Canadian ohm. (b) A special type of wire-wound resistor protected by a metal shield.
 (c) A new type beer container. (d) Ten million ohms.

RALPH L. GREEN

(40) All expert radio men know that heavy is-

(a) A good sport. (b) A unit of measurement for inductance. (c) A hen-pecked husband. (d) Used as a unit of measurement for amplification.

J. I. STANCIL

(41) We hear that a filter is-

(a) A small can filled with sand, through which the grid leak is allowed to flow. (b) A device for detecting leaky condensers. (c) A system for separating A.C. components from D.C. supplies. (d) A gadget to prevent moisture accumulating in a radio set. (e) A contrivance for purifying the electron stream.

(42) It is not news that a choke is-

(a) A device to prevent advertising ballyhou coming through the koudspeaker. (b) A coil of wire that offers high resistance to A.C. and low resistance to D.C. (c) A contrivance to regulate the flow of air through air-tuned intermediates. (d) A device to blow the dust from a radio chassis.

G. W. RUMBILL

(43) The expression auto-induction means-

(a) To introduce a new line of automobiles. (b) A voltage induced into a secondary winding, by a primary one. (c) That auto prices are reduced. (d) A voltage generated in a same winding, which established the magnetic field in the first place.

(44) The amplitude of a sound wave determines-

(a) The pitch of the sound wave. (b) Intensity or kudness of the sound. (c) The wavelength of the waves. (d) The static-like noise which accompanies the radio programs.

MASAO SERA

(45) A choke coil is-

(a) A primitive implement of execution. (b) A coil wound tightly on a tube shield to absorb stray currents. (c) A coil used to offer high impedance to an alternating current.

ROBERT E. HARRISON

(46) Every Service Man knows that a rectifier tube is-

(a) A tube connected in series with the key of a transmitter to rectify any mistakes which the operator may make in sending. (b) An automatic tone control tube. (c) A tube for transforming A.C. into pulsating D.C. (d) A photoelectric cell in a cashler's window to rectify any mistakes in making change.

(47) Of course you know that frequency drift

(a) A drifting of seaweed in the Sarganso Sea which interferes with radio reception in that area. (b) A series of random frequencies which drift around from place to place after a thunder storm. (c) The gradual change in frequency of a carrier wave.

(48) It is a well-known fact that a tube is saturated when-

(a) There is too much water in the bulb. (b)
The filament has soaked up too much moisture.
(c) The grid is biased strongly negative. (d) All
the electrons emitted by the cathode are drawn over to the anode.

(49) If you saw the words detector tube, you would know that they referred to-

(a) A tube used by the F.C.C. to detect any attions which are operating off-frequency. (b) A tube for rectifying the inaudible radio-frequency input into audio frequency which may be heard in the headphones. (c) A tube used in modern radio sets to detect mice which may nest in the cabinet. (d) The audio output tube in a superbet.

LESTER KREND



In the letters column, the only thing received, was a letter from Joey Jompkins, Salem, which contain items both suitable for Swap-Shop and Ole. We'll put it into letter form anyway (tj)

Dear. Jom and Dorothy ---

ed to find a model 91 (athedral Philco, as 9 had never seen one Listed anywhere nor even a picture of one. It's the large 9 tuber and is bigger than any Philco shown.

9 was walking down Ferry Street here in Salem and passed an upholstery shop, when 9 recalled a fellow saying that he saw a radio up high on a shelf, once when he was there. So 9 looked and there it was. I asked if it was for sale, the owner said yes but 9 should know that it smoked and stunk up the house ! 9 bought it anyway and found the owner right, it was a real stinker ! But after a transformer transplant it started right off. The case is great and so is the tone.

9 have an AK33, in fact two of them which 9 would like to trade for battery sets of comparable value, or cash. Something like \$80.00 with tubes, or \$65.00 without. Also for sale; Model III Radiola, 2 tuber, rum(K, for \$75.00, no tubes. 9 have a barrel of tubes in boxes 9 will bring to the meeting (a few tubes sans boxes too) to be sold for four-bits apiece, with generous discounts to the financially distressed. Quite a large bunch of Ham tubes, some hugeones, are in the lot as well

See you all at the meeting next time,

Joey Jompkins

Ole! by T.J.

Finds this month are as scarce as wooden knobs at a Swap Meet, Or W.D. IIs in original cartons.

Dick Howard came up with a firm deal on a W.E. 217, baseball tube, plus a McMurdo Silver Wavemeter in the original box. I think Dick **can see** forther than some of the rest of us, living up on Mt. Scott, as he does!

Don Iverson says he drew a blank on his annual vacation jaunt; however he did get another Grebe Synchrophase, and a World crystal set since he last reported.

Summer doldrums seem to have captured the rest of the members, or so it seems. If I could just jar some of our associate members loose with some info on their latest acquisitions of old radio gear, we'd be in good shape in this column for months to come. Seems strange that at the very least, someone of the outlanders has found a barren field for as long as this column has been going. Is it procrastination or the 15¢ fee for postage to your ed.?

"When 9 was a boy" reminisced the nautical minded Antique Dealer, My secret ambition was to be a pirate"! "Congratulations!" said a prominent member of the NWVRS, ambling out the door.

In the writing of this column, I have attempted to relay the pulse of the club to all members, if they feel the pulse is weak then they should seek the services of another doctor, who by whatever means, may have the shot of adrenalin, or other juice, to shock-excite the membership into a bit more co-operation in filling the (all Letter with materials which this same membership hopes to absorb from it ! Irankly, I don't expect to have to call members, or contact them personally, to find the materials. After all this is not a paid editorship or reportership, this is a mutual effort on everyone's part. It's been fun--I hope to be able to continue. tj/7/80

Cartoon Clippings



"Have 4 been getting too many cigerette commercials?"





One of the statements below is wrong, so read the items carefully, or you will miss the error.

A regenerative set uses positive feedback to overcome the inherent circuit losses.

A reflex set uses one or more radio frequency stages, which also serve as audio amplifiers.

A super-heterodyne beats the incoming signal frequency with a local oscillator, then amplifies the difference frequency. It does not interfere with nearby receivers.

The megadyne uses a screen grid tube and a crystal detector, in a sort of super-regenerative circuit with very high sensitivity, but with poor rejection of local broadcast transmitters.

J.M. receivers are superheterodynes, as above, differing only in the method of detecting the audio signal and limiting the amplitude of any amplitude modulation.

** ** **

Missing word in last Jrimmer were : 1. Renown 2. Jazz 3. Jred Waning 4. Bussey 5. Airlanes 6. (onnecticut 7. Wayne King 8. Knowledge 9. Spitalny 10. Latin 11. Bob (ats 12. Sammy Kaye 13. Royal 14. Lads ** ** **

Lucy Wyre calls her radio set the Milk Irain, because it whistles at all the stations.

tj/80



WANTE :: Power transformer (#95-627) for Zenith Model # \$463. Glen Ownbey, Ph: 668-6055 WANTED: Bell for horn speaker. Art Redman, Ph: 774-9913 WANTED: Short-wave recieving magazines. parts, misc. Bob Campbell, 2175 S.E. Pine, Hillsboro, Or., 97123 Sams TR-17 manual or copy of TK-46 WANTED: information. C. R. Kibler, Rt 2, Box 694, Aurora, Or., Ph: 678-5066 WANTED: Three interstage audio transformers. (3:1 or 3½:1) to restore Long Radio chassis. These appear to have been the old American style, with screw terminals on a fiberboard plate at the top. C.E. Charman. Ph: 654-7387 or 243-4409 FOR SALE: A.K. LARGE 20 w/o tubes \$95. A.K. Model 33 w/o tubes \$55. Dick Howard, Ph: 775-6697 WANTED: Early tubes, crystal sets, cabinets for Crosley Tryrdyn Slope Front. Crosley model 51. QSTs 1915 to 1924. Dick Howard, 9999 S.E. Frenchacres 16 Dr., Portland, 97266, Ph: 775-6697.