

RADIO

HOW TO CONSTRUCT SIMPLE RADIO SETS

Materials That Are Necessary and Method of Assembling and Mounting Them.

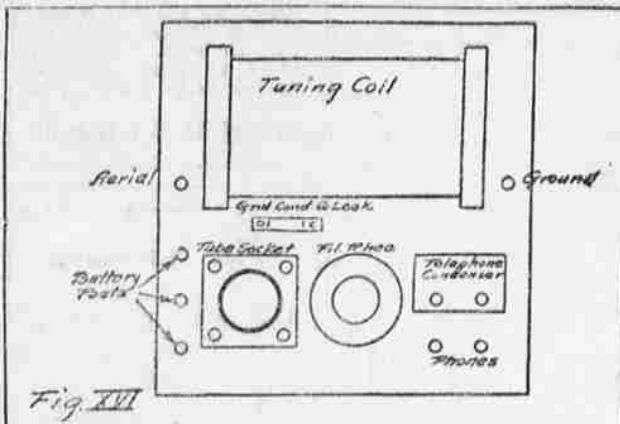
For those who would like to construct a simple, nonregenerative vacuum tube receiver, the details of several sets will be given, before taking up the explanation of the vacuum

Five binding posts. This set requires, of course, an "A" battery to light the vacuum tube filament and a "B" battery to furnish the plate potential. The "A" battery should be a six-cell storage battery of not less than 20 ampere-hours capacity. One 22.5-volt "B" battery unit is necessary for a source of plate potential.

Assembling the Coil.

Starting one-half inch from one end of the cardboard tube, wind on the No. 22 D.C. wire until within one-half inch of the other end of the tube. Then, one end of the winding to the tube, but allow some surplus wire on the other end for making a connection. After the winding is in place, apply a thin coat of varnish shellac to both the turns in place.

Assemble the circuitous pieces of wood by the geometrical center of



tube as an amplifier. The circuits which will be described depend upon the vacuum tube for a detector or as a rectifier not having the additional function of an amplifier.

The first set described will be that of a tuning coil mounted on a horizontal base board. The following material is necessary for its construction:

The Tuning Coil.

A piece of cardboard tubing, outside diameter, three inches and five inches long. It will cost about 70 cents.

One hundred feet of No. 22 D.C. magnet wire. Cost about 25 cents.

One standard slider to fit 1 1/2 by 1 1/2 inch brass rod. Cost about 40 cents.

A six-inch length of 3/4 by 1/2 inch square brass rod. Cost about 20 cents.

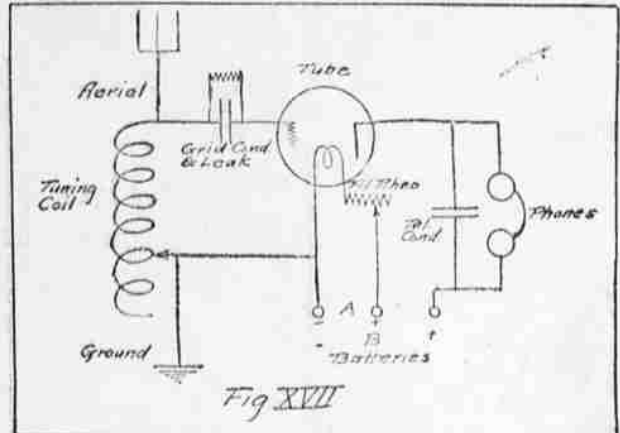
Two circular blocks of wood, whose diameter is just equal to the inside

square blocks and then shellac or varnish them for appearance's sake.

When thoroughly dry slip the two end blocks into the round tube and by means of a few finishing bands driven through the cardboard tube, fasten the end blocks to the round tube.

The slider is to be mounted on top of the coil and should be capable of making contact with any turn of the wire on the tube. In order to remove the insulation from the wire, just under the rod, the slider moves back and forth with a piece of sand paper around a thin piece of wood and using another piece of wood as a guide, sandpaper the insulation from the winding.

Drill a hole one-eighth inch in diameter through the slider rod about



diameter of the cardboard tubing and between 1/2 and 1 1/2 inch thick.

Two tapping posts. Same orange shellac.

The Detector.

A type E V. vacuum tube which sells for \$2.

One standard vacuum tube socket costing about \$1.

A filament rheostat of 50 ohms resistance costing about \$1.

A combination grid condenser and grid leak for the E V. 200 filament costing 75 cents.

In addition a phone condenser costing 50 cents.

One pair of Muschke No. 50 receiver sockets.

For mounting on base board:

One piece of wood eight inches square.

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Churches

All church notices must be in the hands of the editor by 4 p. m. Friday afternoon.

LATTER DAY SAINTS—Regular services at the Tabernacle, Sunday school commences at 10:30 a. m. Sacramental services at 12:15 o'clock. p. m. Mutual Improvement Association, Sunday at 7:30 p. m. Priesthood and Relief Society meeting at 7:30 p. m. Primary association at the tabernacle Tuesday, for children, 4 p. m. Primary association on north side at the little chapel, for children, Thursday at 4 p. m. Religion class at tabernacle Thursday at 2:30 and 4 p. m. Religion class at the chapel on north side at 2:30 and 4 p. m. Tuesday. Regular choir practices at the Tabernacle Thursday at 7 p. m. The public is cordially invited to attend any or all of our services.—David I. Stoddard, Bishop.

First Church of Christ, Scientist—Corner of First and Washington, Sunday morning service at 11 o'clock. Subject: "Truth."

Sunday school at 9:45 a. m. Wednesday evening meeting at 8 o'clock. Reading room open to the public every Monday, Wednesday and Saturday from two to four. All are welcome to attend our services.

Presbyterian Church—A negative person is seldom constructive. The men and women who are ready to make mistakes, if necessary, although without noise, are working their way along new paths in the world's activities. Regular church attendance deepens the springs of life and strengthens one's character to resist temptation and to identify temptation when it appears. Sunday school at 9:45 with classes for all. Morning worship at 11, at which time Mrs. Mel Bohman will sing "Hallelujah, the March of the Cross," by Hammond, and the minister will bring a message of truth. Young people's meeting at 8:00. We gladly welcome the young people of the other churches, whose societies have disbanded for the summer months. A special program has been arranged. The hour is arranged to allow us to attend the Chautauque. Let us make tomorrow a real day with God.—W. C. Ross, minister.

First Methodist Episcopal Church—In harmony with the desires of the Chautauque managers, we will hold a service in the Park pavilion Sunday morning at the eleven o'clock hour. The subject of the address will be "Christianity that Counts." Special music will be provided. Rev. J. W. Gunn, pastor of St. Peter's will preach in the Methodist church at the forenoon service in order to release the pastor for the Park meeting. We trust that all the members and friends will be present to give him cordial greeting. Sunday school at the usual hour.—G. H. Quigley, minister.

Zion English Lutheran Church—906 N. Avenue. Sunday school at 10 a. m. Services at 11 a. m.—Rev. R. Bogstad, pastor.

St. Peter's Episcopal Church, Corner Fourth and O Avenue.—July 23rd is the Sixth Sunday after Trinity. Holy Communion at 8 a. m.; church school, 9:45; morning prayer, 11:00. This service will be in charge of Lay Reader Mr. Robert A. Pratt, as the pastor is to preach at the Methodist church. In the evening we join in the union service to be held at the Baptist church. All are cordially invited.—Jas. W. Gunn, pastor.

Church of Our Lady of the Valley—Fourth and L. Phone Main 5. Seventh Sunday after Pentecost. First mass at 7 o'clock. Communion Sunday for the Young Ladies Society. Second mass at 8 o'clock. A short sermon on "The End of Man" will be delivered at both Masses. "What data it profit a man, if he gain the whole world and suffer the loss of his own soul?" Matt. xvi, 26. Evening devotion at 7:30, rosary, question box and benediction. A cordial invitation is extended to all to attend these services.—A. P. Lonsat, pastor.

Christian Church—Preaching by the pastor at the morning service. Subject: "The Truth of God." There will be an evening service, uniting in the union service at the Baptist church. Bible school at 9:45.—O. W. Jones, minister.

First Baptist Church—Sunday school at 10 a. m. E. B. Hogan, superintendent. Sermon, 11 a. m. "Grace Not the Holy Spirit." Mr. Frank S. Jester, director of music. Mrs. C. E. Happersett, pianist. Large choir, congregational singing. The Young People's Society has a vacation during the union meetings but are helping in the regular services. The union meeting will be at our church this time but on account of the Chautauque and the later meetings we will begin at 7 p. m. and only hold for 45 minutes, closing at 7:45, so that all can go in time for the other meetings. Let's make this service help all the community effort. The pastor will speak and Rev. O. W. Jones of the Christian Church, will preside.—A. R. Sifton, minister.

NEW LEAGUE OF JAP STUDENTS

(By Associated Press)

TOKIO, Japan, July 22.—The Japanese League, a new name given to an association of student champions of the Maratone, which has been organized under the presidency of Mr. Kanakuri, the veteran senior running champion

NATIONAL ESSAY CONTEST PRIZES

The national essay contest of the American Legion which will award \$3,500 in cash prizes to boys and girls has been extended until October 5 upon the urgent request of state and county superintendents and commissioners of education throughout the United States.

The new date will allow all children of the United States and its possessions to participate after the schools open in September, giving the teachers an opportunity to present the subject, "How the American Legion can best serve the Nation."

Meanwhile, scores of letters have been received by Garland W. Powell, assistant national director at national headquarters of the American Legion in Indianapolis, from state school officials telling of unanimous cooperation. In nearly every state, educational officials are urging that boys and girls be interested in writing this essay as vacation activity. A circular to county superintendents issued by Mrs. Josephine Charles Prouty, superintendent of public instruction, Olympia, Washington, emphasizing the vacation advantage of the contest, is one of many.

Porto Rico and the Canal Zone particularly felt the need of extending the time for the essay, letters having been received from Humberto Rivero, director of Education, and the director of Schools A. R. Lang, of the Canal

The organization will be established with 50 chapters selected from the students of the Waco, Kato, Meiji, Takushoku, Reed and other universities. The object is the development of the student's physical possibilities and the encouragement of field sports.

The cash prizes, divided into \$750 for the first, \$500 for the second, and \$250 for the third, are to be used toward scholarships in colleges designated by the winners. In each state there will be a first prize essay medal for the best essay in that state, and a bronze medal for the second best. Other prizes to be announced later will be awarded.

All girls and boys between the ages of 12 and 18 inclusive, are eligible to enter the contest, regardless of whether they are school attendants. The essay must not be more than 500 words in length. Age of writer will be given due consideration.

The essay must be received at a place designated by the county superintendent of schools not later than midnight of October 5, 1934. The winning essays of the county will be forwarded to the state department American chairman of the American Legion not later than October 20. The winners of the state groups, then are to be forwarded to the National American Director of the American Legion at Indianapolis where the first, second and third winners will be chosen.

MLP STOPS MOTOR FIRE

HUTCHINSON, Kan.—When R. D. Lee's automobile caught fire on the Santa Fe trail, other motorists bailed the machine in mid, extinguishing the flames.

UNIVERSITY OF OREGON

The college of Literature, Science and the Arts with 22 departments.

The professional schools of Architecture—Business Administration—Education—Graduate Study—Law—Medicine—Music—Physical Education—Sociology.

The 47th Year Opens October 2, 1934

For a catalogue or any information write The Registrar, University of Oregon, Eugene, Oregon.

BETTER THAN MEDICINE

We have a model to suit your ranging in price from \$65 to \$750.

SEE THEM HEAR THEM

and you will want them. Terms as you like.

Getting well goes faster by far with a Brunswick to help pass the tedious hours. And while it amuses it trains the ear to an appreciation of true tones. Musicians recommend "The Brunswick" for aid in the musical education of children.

Brunswick Records are also unique in the artistic beauty of their interpretation. A Brunswick, on a Brunswick—this is the height of musical achievement.

Brunswick

Eastern Oregon Music Co.

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The M. A. Stilwell Meat Co., Inc.

Delivers the Goods TWO MARKETS

The Quality market Adams Ave., next to the Skaggs store, Stilwell's market on Fir St., next to the Harris Grocery.

We have our own free delivery. WE SELL ICE.

McQUAY-NORRIS

PISTON RINGS

Increase Your Car's Power—Save Gas

If your car needs more power and is wasting gas, the chances are that McQuay-Norris Piston Rings will put it back in first-class condition. They increase motor power by preventing gas waste. They decrease carbon troubles.

We Carry a Complete Service Stock

Leighton's Welding & Machine Works

\$125 For 2 Rings—An exclusive design, preventing loss of gas and reducing carbon. Gives equal pressure at all points in cylinder walls. No side pressure except in the piston rings. Each ring packed in a parchment container.

\$100 For 4 Rings—Keeps lubricating oil out of combustion chamber. Collects excess oil and keeps it out of the cylinder. Each ring packed in a parchment container.

50c JIFFY-GRIP—A one-piece ring, new design, which keeps the piston rings from the cylinder walls. Each ring packed in a parchment container.

Snap Rings—Of the design made by the McQuay-Norris company. Each ring packed in a parchment container.

McQUAY-NORRIS

Leak Proof PISTON RINGS

McQUAY-NORRIS

Superoil RINGS

McQUAY-NORRIS

JIFFY-GRIP PISTON RINGS

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CLERKS TO HAVE WEEKLY HOLIDAY

TOKIO, July 22.—The clerks of Japan, who heretofore have had few if any holidays during the year, are hoping much from the inauguration of a weekly rest day by a summer.

Heretofore the clerks have had only seven days a year, the year around and the employees have had a few days in New Year.

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