

Vol. 4

No. 2



Feb.

1978

CALL LETTER

XX

W I R E L E S S

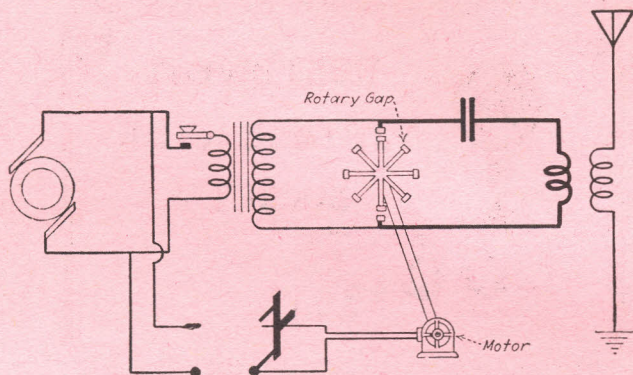
By Dexter S. Bartlett

Today the big argument is who invented wireless, or radio as it is known now. Marconi generally gets the credit, although all he did was to realize the commercial possibilities of Rigi, Loomis, Popof and Hertz's crude experiments and formed the Marconi Co. So, I presume he does deserve some credit.

Spark transmitters were the first used. These consisted of a high voltage power transformer secondary in series with a spark gap and R.F. transformer primary. When the voltage peaked it would spark across the gap and kick the RF transformer into oscillation, which would soon die out causing a highly damped wave RF output. If the gap was not adjusted right, an arc would form instead of a spark with poor results.

Then came the rotary gap, which quenched the arc somewhat and finally came the quenched gap, where the spark was in a vacuum and no arcing occurred, so these were the two ultimate in spark transmitters. Spark transmission might be used today, if it was not for the horrendous band width, which close by the transmitter might cover 10kHz. Incidentally NAA's famous six foot rotary gap is now in the Smithsonian Institute.

Cont. on pg. 2



—A Rotary Gap Transmitting Circuit.

Now we come to the receivers, which were even more crude than the transmitters. In 1891 Prof. Branley discovered that loose filings changed their resistance when sparks occurred nearby. Filings, especially silver oxidized causing a high resistance, which would break-down during RF excitation into a lower resistance. So, the coherer was born.

They consisted of a glass tube filled with silver and plugged with contacts at each end. These plugs were connected in series with a battery, morse relay and a RF choke. The antenna was connected to one plug and ground to the other. When a signal came in it would puncture the oxidized layers, current would flow and close the relay. A decoherer was necessary to shake up the filings for the next signal. This was a doorbell tapping the filings.

Cont. on pg. 8

CALL LETTER

The Call Letter is a monthly publication of the Northwest Vintage Radio Society which meets the second Saturday of each month at the Buena Vista Club House, Sixteenth and Jackson Streets, Oregon City, Oregon.

Editor **Bob Hay**

Staff .. Tom James, Cathi Hay, Mark Moore

Address all correspondence regarding this publication to: The Call Letter, P.O. Box 02379, Portland, Or. 97202

OUR PEOPLE

By
Mark Moore

A new year was quietly ushered in and with it came a new supporting cast of officers for the NWVRS. Each assumed their new duties at the annual meeting which was held Jan. 14th.

Most important on the agenda was the deletion of our present constitution and tentative approval of the new one. Final approval will be decided at the February 11 meeting. Our attorney will be going over the changes and making sure everything is correct legally. This is the only major hurdle in getting our incorporation.

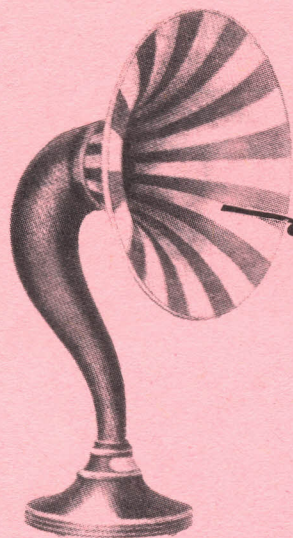
Changes of note in the constitution call for the dropping of family membership which was too complicated to meet legal requirements and the dropping of Senior membership for those persons 70 years of age or older.

Have you ever wanted to spend \$2250 for a mid 1930's console? Chuck Shively reported that one was available at the recent antique show at Washington Square shopping center. He mentioned that it was the most beautiful radio he had seen, having several pelicans carved in it. Apparently it was a special order cabinet with a Midwest chassis. It even had a knob missing.

Joe Tompkins is co-ordinator for a special show and sale to be held in Salem on Sunday February 12th. It is in conjunction with Frank Haley's Flea Market at the State Fairgrounds. Last year there was some excellent picking to be done. Joe also mentioned finding another Kolster. It was not only a very heavy model, but it was too heavy on his pocketbook also; so anyone wanting a Kolster should contact Joe. He seems to know where they're at.

The Golden Hours telethon was discussed and cussed. It was mentioned that we should try to get the film shot which contained our radios. It was generally termed a failure because of poor writing and directing.

Repeating in the roles of Display committee chairman and Swap Meet committee chairman will be Andy Bell and Bob Campbell respectively.



ATMOSPHERICA

By J

THE INDIAN SIGN

"I've got the hottest set in town",
His words, a local joke-----
'Til his filter block went BLOOIE!
And his SPARTON spouted smoke.

** ** *

OLD "ANGELUS"

I have this old CATHEDRAL ---
Tho it has an awful hum ---
The cabinet plies are short on glue,
And the volume control is bum.

The speaker cone is dragging,
And it has a ragged tear.
The tuning knob is missing,
And the power cord is bare.

But it has a lot of classic form,
And maintains my affection,
Mainly because it's the only one
I have in my collection!

** ** *

INFLATION

I offered a fifty, bathed in a sweat,
(This guy had a SPLITDORF I'd hoped to get)
Then I heard him say,
"Sure, take it away ----
I took it in on a three dollar debt".

Adjusting and Neutralizing Crosley Receivers

By N. R. I. Technical Staff.

All circuits involving the neutrodyne method of balancing of tuned Radio frequency sets must take into account the fact that there is a variation in the characteristics of vacuum tubes. In the Crosley Showbox, Jewelbox, and Bandbox models, the method of balancing is by means of small adjustable condensers.

It is generally known that the balancing of the set has much to do with the amplification gain. All Crosley Radio sets are balanced in the factory, using vacuum tubes which are carefully selected and frequently checked, having average standard characteristics. Every Radio-Trician knows that it is occasionally necessary to rebalance any receiving set using the neutrodyne circuit in case the particular tubes used in that set are somewhat off of the average standard. The Crosley Gembox does not have the small variable neutralizing condensers. It utilizes what is known as the grid-to-grid method of balancing. The balance of this set depends largely upon the critical angle of the Radio frequency coils or transformers. They are occasionally adjusted in the factory for average standard tubes just as are the other Crosley models, and as a general rule, these sets will function perfectly with the average tubes with which they are equipped in the field.

However, if any set tends to oscillate with the tubes with which it is equipped, or if the set seems to lack in sensitivity, the method of adjusting the set is extremely simple to adapt it to the tubes with which it is to be used. Simply remove the lid when the set is in operation; change the coil angle by slightly raising or lowering the top of the Radio frequency coil; replace the lid; turn the dial throughout its entire range. If it oscillates at any spot, remove the lid and again change the coil slightly in the opposite direction.

A sensitivity test may then be made by tuning to a weak signal and adjusting the coil or coils until the loudest signals may be had. With the lid again replaced, again test to see if there is any point on the dial where the set oscillates. In other words, get the maximum volume

without oscillation. The movement of the coil is only very slight, probably not a variation of over one-sixteenth to one-eighth of an inch.

The most critical coil in this balancing operation is the first coil in the front of the set. The second coil is far less critical and it is seldom necessary to touch the third coil. This balancing operation is required no more frequently than is required in any other condenser balanced neutrodyne circuit. Probably the majority of sets that you receive from the factory will require no balancing, but for those comparatively rare cases where rebalancing is necessary, the above is the method of doing it.

This method is far more simple than the method of balancing by means of the condensers. It requires no tools, simply a slight bending of the coil angle by means of the fingers.

The same method outlined above can be used in adjusting the coils in the Gemchest, except that it is unnecessary to remove and replace the lid. Of course, it is needless to tell you that this affects only the three Radio frequency tubes. Sometimes the same results can be obtained by shifting the tubes in the set from one socket to another.

Wherever a set is lacking in volume or sensitivity, or if an occasional set is found which oscillates, this simple method of adjusting as outlined will work very satisfactorily. The sensitivity can be increased a great deal and any objectionable oscillations completely eliminated.

The preceding article was re-printed from the May 1929 National Radio News magazine. Contributed by: Chuck Shively.

In mid 1935 a new line of vacuum tubes was introduced by General Electric Co. The new series was the first octal (eight pin with a center locating pin).

The reason for the development of the octal tube was to provide a smaller tube size and built-in shield which also provided a better heat dissipation.

The octal pin configuration was required to provide the eighth pin for the metal shield to be grounded. Use of this tube also provided shorter leads from the tube elements to the tube pins, thus reducing inter-electrode capacitance resulting in receivers being able to operate at much higher frequencies.

The original octal metal tubes were actually no more than tubes in general usage with the octal base and metal shield.

6A7	7 pin to 6A8 octal	6B7	7 pin to 6B8 octal
76	5 pin to 6C5 octal	75	6 pin to 6F5 octal
42	6 pin to 6F6 octal	77	6 pin to 6J7 octal
78	6 pin to 6K7 octal	6A6	6 pin to 6N7 octal
75	6 pin to 6Q7 octal	85	6 pin to 6R7 octal

With a careful inspection of the receiving tubes in an older tube manual, you will find until specialized television tubes the basic 5, 6, & 7 pin tubes changed to octal, to single ended octal (no grid cap), to loctal, to 7 pin miniature and 9 pin miniature. A simple triode would be a good example to follow through 20 years of change. Type 27 to 56 to 76 to 6J5 to 7A4 to 6SN7 (2 triode) to 6C4 to 12AV7 (2 triode).

27-5 pin to 2.5 volt @ 1.75 amp filament to 56-5 pin 2.5 volt @ 1amp filament to 76-5 pin 6.3 volt @ 0.3 amp filament to 6J5 octal 6.3 volt @ 0.3 amp filament to 7A4 loctal 6.3 volt @ 0.32 amp filament to 6SN7 dual triode 6.3 volt @ 0.6 amp filament to 6C4-7 pin miniature 6.3 volt @ 0.15 amp, 12AU7 dual triode 12.6 volt @ 0.15 amp or 6.3 volt @ 0.3 amp filament.

LETTERS

NWVRS:

I have a 1929 Atwater Kent electric radio, model 40. It's in original condition except the exterior of the tuner itself was painted at one time, a dull gray. Speaker, cone, connectors to set all in excellent shape. Speaker in original condition, speaker grille and has covering to protect speaker cone.

Will consider selling if price is right. Have my own price that I will not go under. I live on the old Oregon hi-way West of The Dalles at a place called Toalie Terrace. Phone: 503-296-9938.

Bob Kloat
Rt. 4, Box 209
The Dalles, Or.
97058

NWVRS:

I need a schematic for an Electro Junior Filtered power supply model no. BJ; also need operation manual. I also could use a schematic for a tube tester model DF made by Million.

Any help you can give me on finding this stuff would be appreciated. Also, am enclosing stamp for immediate reply.

Larry Cook
362 East South
Richland Center, Wis.
53581

Ed: Hope someone out there can help Larry. If you can let me know--I owe you a stamp. Thanks for the letter, Larry.

LETTERS Cont.

Dear Sirs:

Would just like you to know that one other member has a cabinetless Kolster. A Seattle member who so far resisted canabalizing it, and would be glad to buy a cabinet if there is one drifting around.

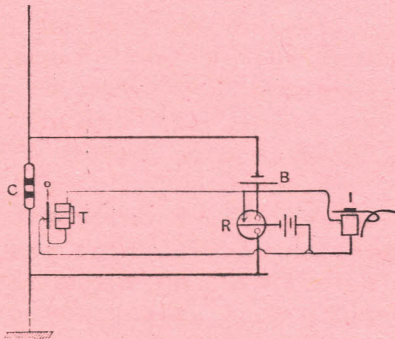
Also really enjoyed the Fall Swap meet and display.

Erik Lofquist
6717 37th Avenue N.W.
Seattle, Wash. 98117

P.S. Enjoy the monthly CALL LETTER. Good work. EL.

XX

WIRELESS Cont. from pg. 2



Arrangement of Coherer C with Battery B and Relay R I is a Recording Instrument, and T an Automatic Tapper.

In 1907 G.W. Pickard and Gen. Dunwoody discovered the rectifying properties of crystals and the cat-whisker detector was born. Galena, a lead ore, was the most sensitive, but it was still quite a problem in finding a sensitive spot with the fine wire cat-whisker.

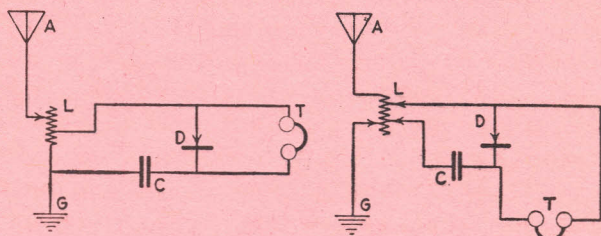
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Then transmitting would burn out the point and you had to quickly find another before the other station transmitted.

In 1906 DeForest added his famous third grid to the Fleming diode and marvelous electronics was on its way. However, due to the high cost at that time, tube receivers did not come into general use until WW-1.

One thing about those early rigs, it did not take an electronics genius to service them.

If any of you folks pounded brass, or serviced radio-telegraph equipment you would be eligible for membership in the very interesting Society of Wireless Pioneers. Johnny Peel, phone 503-654-2712 is the Director of the Portland chapter.



—Crystal Detector Receiving Connections.

Dexter S. Bartlett was voted an honorary member of the Northwest Vintage Radio Society at the November meeting. It is a special pleasure for us to have an "old brass pounder" in our club and my thanks to Mr. Bartlett for his article---Ed.

RADIO STATIC

By:
Glenn Gonshorowski

MULTIPLE CHOICE #1 -- Match up the manufacturer with the correct model.

CROSLY

(a) BANDSAW (b) SANDBOX (c) BANDBOX

DETROLA

(a) PEE WEE (b) TEE PEE (c) SEE SAW

WILCOX GAY

(a) RECORDING (b) RECORDIO (c) ROAMIO

JACKSON BELL

(a) PANCAKE (b) DEADPAN (c) PETER PAN

WARWICK

(a) GRANADA (b) DUELSTONE (c) RADIODYNE

SEARS ROEBUCK

(a) TRUETEST (b) TRUETONE (c) SILVERTONE

LAST MONTH'S ANSWERS

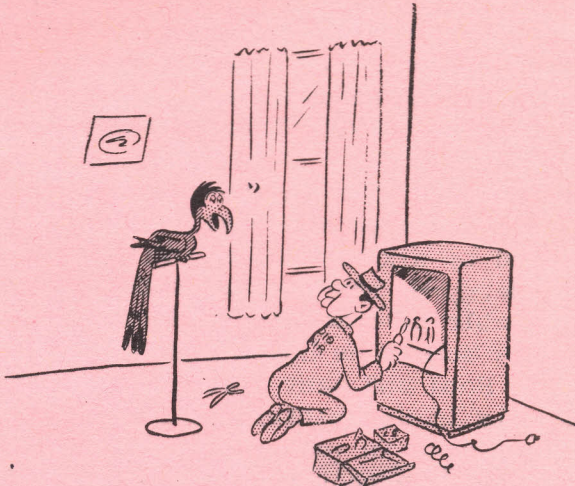
_ A D _	FADA
_ R U N S _ _ _ _	BRUNSWICK
_ _ _ W A R _ W A R _ _ _	STEWART WARNER
_ _ T O R O _ _	MOTOROLA
_ A N T _ _ _	MANTOLA
_ O F F _ _ _	HOFFMAN

MATCH GAME AM ANSWERS

ATWATER KENT	PACKARD BELL
RCA VICTOR	FAIRBANKS MORSE
AMERICAN BOSCH	STEWART WARNER
MISSION BELL	GRIGSBY GRUNOW
WILCOX GAY	STROMBERG CARLSON
FREED EISEMAN	KILBOURNE CLARK

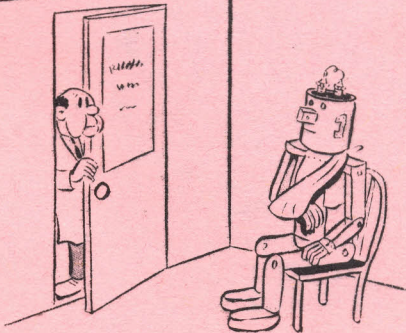
CARTOON CLIPPINGS

From: Art Redman



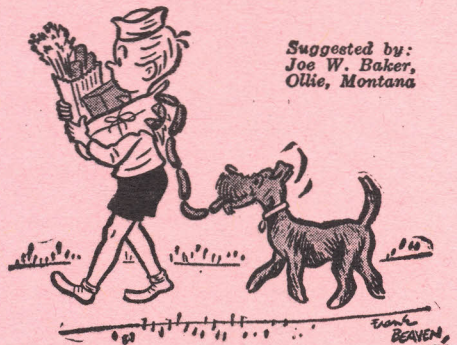
"Now disconnect the 1-megohm resistor R₇ from the number 3 pin of the 6SK7 tube socket!"

RADIO-ELECTRONIC
REPAIRS



RADIO TERM ILLUSTRATED

Suggested by:
Joe W. Baker,
Ollie, Montana



"Transmission Loss"

1947

WIRELESS USED IN MOVING AUTO

The Oregonian, Oct. 30, 1910. From the Oregon Historical Society Scrapbook 15, pg. 29. Contributed by: Art Redman

Wireless telegraph communication from a moving automobile was introduced to the world through the successful experiments of O.P. Guidemeister and E.P. Preble on the streets of Portland. Messages were taken by the wireless station of George M. Schwartz of 127 East Sixteenth Street. A stock Speedwell automobile was selected on account of the even vibration of engines in this make.

The instruments carried in the machine consisted of a special receiving apparatus and a sending machine, which was operated by six dry cells. With this small consumption of energy - six dry batteries - Mr. Guidemeister has been able to communicate a distance of eight miles. Early this summer he had a similar apparatus on the summit of Mt. Hood and sent messages from there to Portland using only 15 dry batteries.

Both machines used in yesterday's experiments are the smallest in their respective classes known to be in use. The whole outfit weighs no more than 30 pounds. The receiver was made especially sensitive by using a new type of detecting instruments which will give indications in the ear phone with an antenna elevation of only 14 feet.

The ground connection was made through the frame of the automobile by a wire attached to the tire grip chain and sliding on the hub.

Communication with Schwartz was established soon after the apparatus was tested. His is a four-kilowatt station, of his own design and manufacture, it being one of the most complete of its kind on the coast.

While coasting down the grade on East Alder Street between Ninth and Tenth Streets, the words "glad to hear" were heard by both receivers quite distinctly. In crossing a very dry section of street the last few words and the signature were lost. The machine was stopped and Schwartz was asked to repeat. The entire message was caught without trouble. With the automobile again in motion and running on a section of street that recently had been sprinkled, the dots and dashes were even louder.

This demonstrated conclusively that wet ground is a prime essential, but also proved that the experiment is more successful while the machine is moving over a

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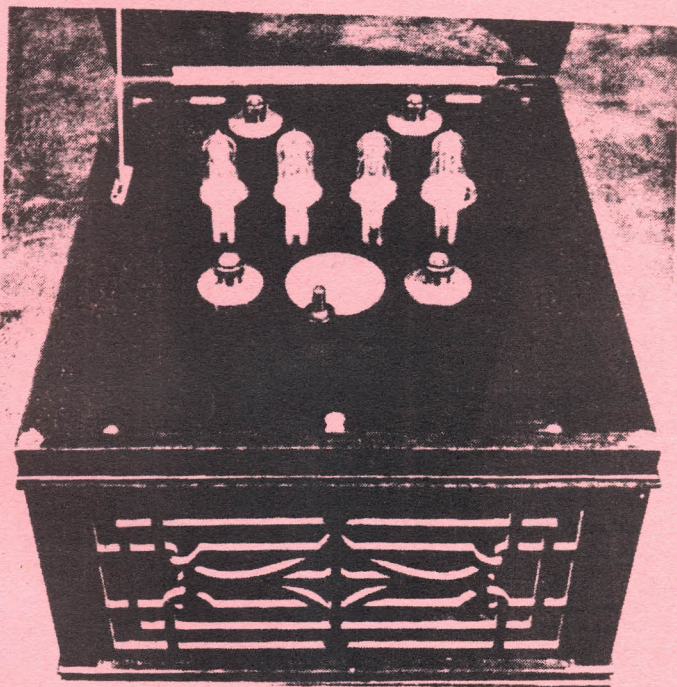
WIRELESS USED IN MOVING AUTO cont.

damp surface than when standing on a dry surface.

In high spirits the operators quit their experiments, satisfied that their work had been a success, that wireless communication from a moving automobile had been established as a reality and that its probable future use for military and commercial purposes had been made possible.

Mr. Guidemeister and Mr. Preble are already arranging for another demonstration. On the next trip they will vulcanize a copper wire to the tire, thus providing a continuous ground connection. They fear that the chain grip cannot always be depended on.

By equipping the automobile with telescoping rods the antenna can also be increased to an elevation of 20 feet. The height of 14 feet could not be exceeded in this experiment on account of the interference of the trolley wires.



The Grand Radiola, built by
RCA in 1922.

EDITORIAL COMMENT

Good news-- The NWVRS and The Call Letter have a new address. In an attempt to end confusion for our members we now have only one address rather than one for the Call Letter, another for the club, another for memberships, and one for the corresponding secretary. From now on all correspondence to the NWVRS and the Call Letter should be sent to:

The NWVRS
P.O. Box 02379
Portland, Or. 97202

Now in the works for future issues are articles on Mahlon Loomis, all about radio collecting, and next month a special A. Atwater Kent issue. If anyone has information on these subjects please drop me a line as we can use all the help we can get.

At the February meeting the membership will decide whether or not to give final approval to the revised constitution. These changes are ones that are necessary to simplify issues such as family membership which were often difficult to interpret and apply. Also these changes are a step toward getting the club incorporated. Many members have told me that getting the club incorporated is very important to them from the standpoint of protecting them personally from a hypothetical lawsuit against the NWVRS. Incorporation makes it more difficult for a lawsuit to get at the personal assets of individual members.

I am in favor of incorporating the NWVRS for two reasons. Not only for the protection aspect but I think the accomplishment of this goal will give us all a renewed faith in the club's ability to achieve the bigger and better goals the future holds for us.

See you all at the next meeting Sat. Feb. 11th at the Buena Vista Clubhouse in Oregon City (16th&Jackson).

Bob Hay

SWAP SHOP

- WANTED: Howard Sam's Auto Radio Manual #1.
Glenn Gonshorowski 503-623-2064
- WANTED: Hallicrafters SX-23
Frank Plaisted, Jr. 503-647-2891
- WANTED: Old Odd Type Tubes
Don Iverson 503-286-1144
- WANTED: Steering Column mount Philco Transitone Car
Radio probably with Chrysler name on head
for 1932 Chrysler.
Craig Hoaglin 503-648-3198 (Office)
or 503-648-1466 (Home)
- WANTED: Chassis for RCA MODEL X
Chet Burress 503-392-3383
P.O. Box 167
Cloverdale, Oregon 97112
- WANTED: Old Tube Sockets for Display
Lou Stober or Dich Howard
503-639-6073 or 503-775-6697
- WANTED: Driver Base for AK Horn Speaker
FOR SALE: AK Model 37 (working) \$37.00
Dick Howard 503-775-6697
- FOR SALE: 1921 RCA Model 104 speaker in cabinet with
5 Watt Amplifier
Maurice Leete 503-656-6489
- WANTED: Empty tube cartons to house my tube collection.
Mini and octal
Bruce Stokes 503-774-2064
- WANTED: Pre 1950 Auto Radios, parts, manuals and misc.
R.C. Campbell
2175 SE Pine
Hillsboro, Oregon 97123

**WANTED ANYTHING MADE BEFORE 1940,
CASH PAID, ANY AMOUNT
WE PICK UP ANYTIME, ANYPLACE
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Rugs	Dolls	Adv. Items	Trunks
Pictures	Wood Stoves	Toys	Trains
Radios	Pocket Watches	Jewelry	Coins

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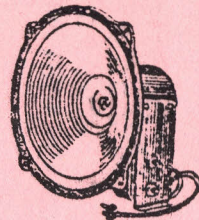
Bob Davis

Res. 1-503-775-9908

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All Makes

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Portland, Oregon 97220
252-2929



NOTICE TO NWVRS MEMBERS

WE STILL HAVEN'T RECEIVED 1978
MEMBERSHIP DUES FROM SOME MEMBERS
THE MAILING LIST WILL BE REVISED
THIS MONTH SO PLEASE MAIL IN YOUR
DUES IF YOU HAVEN'T DONE SO.