

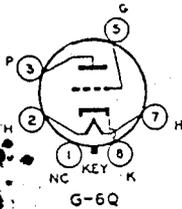


CALL LETTERS

VOLUME 14

SEPTEMBER 1988

NUMBER 9

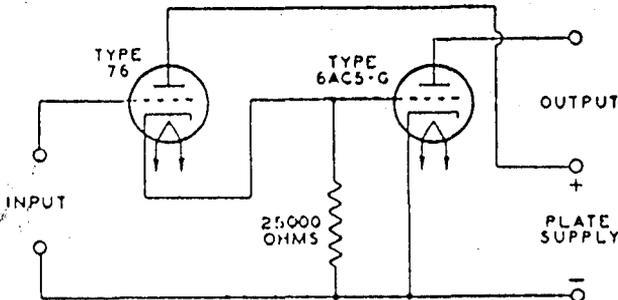


HIGH-MU POWER AMPLIFIER TRIODE

6AC5-G

The 6AC5-G is a high-mu triode designed for use in either single-ended or push-pull audio-frequency power amplifiers. It is especially useful in direct-coupled circuits in which the

driver tube develops positive grid bias for a single 6AC5-G. In push-pull class B service, conventional zero-bias operation is employed.



CALL LETTER

The Northwest Vintage Radio Society is a non-profit historical society incorporated in the State of Oregon. Members are dedicated to the preservation and restoration of antique radio apparatus.

The Northwest Vintage Radio Society meets at the Buena Vista Club House (Atkinson Park) 16th & Jackson Street, Oregon City, Oregon. (Note: take Washington St. to 15th, up 15th hill to Jackson, turn left to 16th).

Meetings are held at 10:00 AM on the Second Saturday of each month except for summer vacation in July and August. The meetings are an opportunity to exchange information and advice. Annual Dues:

Regular Membership.....\$15--

Associate Membership.....\$12--

Renewals are due on January First

***** 1988 NWVRS OFFICERS & STAFF *****

PRESIDENT.....DAN HOWARD.....503-761-7799

VICE PRESIDENT....SONNY CLUTTER..503-254-9296

TREASURER.....ED CHARMAN.....503-654-7387

SECRETARY.....NORRIS JACKSON.503-642-5625

LIBRARIAN.....CHUCK KIBLER...503-678-5066

CORRESPONDENT.....BOB EWING.....503-647-5918

***** NWVRS MAILING ADDRESSES *****

Membership Applications & Renewals:

Northwest Vintage Radio Society

P.O. Box 02379

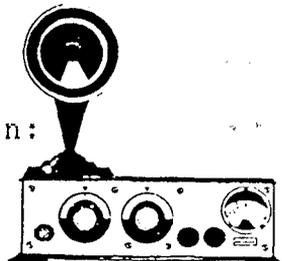
Portland, Oregon 97202

All Newsletter Business/Information:

Call Letter

4041 NE Wistaria Drive

Portland, Oregon 97212



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Insert

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The **CALL LETTER** and The **HORN OF PLENTY** are published monthly as the official publication of the Northwest Vintage Radio Society and the Puget Sound Antique Radio Association. The Call Letter and The Horn Of Plenty are available only as part of the NWVRS/PSARA memberships. NWVRS/PSARA are not responsible for any buying /selling transactions incurred, or for any other use of the contents of this publication.





ATMOSPHERICA

By *J*

A Toast - -

Here's to the lowly Kolsters,
A rarity in recent years;
Must have heeded all Joey's prayers,
For now they run out of our ears!

(apologies to the Club outlanders
for including this "inside" non-
sense verse. tj.)

Radio Genetics

Scientists in our Vintage Club
Found a method of cloning a speaker.
They'd take a portion of any part
And culture that piece in a beaker.

But the curious thing they found out--
The quirk that made little sense--
No matter the make of the Mother,
The products were Atwater Kents!

** ** * ** * ** *

Epitaph

I had a little Tombstone,
It's brand was highly rated;
I polished off the face, one day,
And the dial disintegrated!



Cover Story: The Direct Coupled Power Amplifier

By Matthew Thornton

The rather interesting circuit diagram on the cover is from the 1940 RCA receiving tube manual. (We hope they don't mind.) It shows a high- μ power triode driven by a triode cathode follower. The 6AC5 will work fine with a positive grid voltage of about 13 volts. In 1938 and a little later some fine Zenith and other radios used this power output circuit. The Zeniths used a 6P5G in place of the 76.

The obvious advantage of this circuit is that it does not require a grid coupling capacitor. All us radio restorers know that these almost invariably get leaky and result in mushy tone and excessive current in the output tube. The disadvantage is that the circuit needs two tubes.

This circuit never became very popular, probably because beam power tubes (6V6 and 6L6) came in with lower distortion and better efficiency.

CHARACTERISTICS

HEATER VOLTAGE (A.C. or D.C.)	6.3	Volts
HEATER CURRENT	0.4	Ampere
AVERAGE CHARACTERISTICS:		
Plate Voltage.....	250	Volts
Grid Voltage.....	+13	Volts
Plate Resistance.....	36700	Ohms
Amplification Factor.....	125	
Transconductance	3400	Micromhos
Plate Current.....	32	Milliamperes
Grid Current.....	5	Milliamperes

CONCLUDED ON PAGE 15



PSARA Election

Members of PSARA are asked to make a special effort towards 100% attendance at the September 18, 1988 Election / Meeting

PSARA Coming Events

Shoreline Museum Seattle Washington

September 18, 1988

11:00 AM Swap Meet

1:00 PM Business Meeting; ELECTION OF CLUB'S OFFICERS

Presentation: Dave Dintenfass on Wire Recorders.

Show and tell: Restored cabinet by Big Nifty Radio Company.

October 16, 1988

11:00 AM Swap Meet

1:00 PM Business Meeting

AWA sponsored events.

November 20, 1988

Contest; Times and events later.

December 11, 1988 (Note second Sunday)

11:00 AM Swap Meet

1:00 PM Business Meeting

Presentation: Mark Campbell on Re-plating of old chrome chassis.

Show and Tell: open

For additional PSARA information contact:

Max Kaplan 206-851-4187.

14902 84th Ave. Ct. NW.

Gig Harbor, Washington 98335



Forest Grove Display

Jerry Talbott, Sonny Clutter, Jim Mason and Jim Richardson displayed "Unique Art Deco" radios at the Concourse DeElegance auto show. Pictures were not taken. On Pages 8-9 are VINTAGE RADIO pictures from a prior year, not previously published in this newsletter.

Photographer, Melvin Lieurance
503-288-8081

September 1988

SUN MON TUE WED THU FRI SAT

SHRS/CHRS Swap Meet - Sept. 10, 7AM
AUBURN & HEMLOCK ST. SACRAMENTO, CA.
INFO: BILL HALL, 916-487-6384

CHRS Swap Meet - Oct. 1, 7:00 AM
MISSION COLLEGE - SANTA CLARA, CA.

				1	2	3
4	5	6	7	8	9	10 OREGON CITY NWVR5 10:00 AM Meeting Auction
11	12	13	14	15	16	17
18 SEATTLE WASHINGTON PSARA 11:00 AM Swap Meet 1:00 PM Meeting	19	20	21	22	23	24
25	26	27	28 LOS ALTOS CHRS 7:30 PM Meeting FOOT HILLS COLLEGE	29	30	





Radio Waves at the Radio News of 1925

Excerpts from Radiotics in *Radio News* May '25.

• Loving Coils

In the January 24, 1925 issue of the *New York Sun* appears an advertisement telling about "a low-loss OSCULATOR coil." This must be an invention for the radio set of the lovelorn.

• Back to the Farm

In the *American Radio Transmitter*, for January 1925, a set is advertised using "WD 12 RUBES." We were aware that there was great agitation in Congress over the Farm Bloc, but by chowder, we didn't know that it influenced radio too. It is reported that the sockets are a combination milk stool and mowing machine seat.

• Try It Yourself

On February 8th, 1925, the *Rochester (N.Y.) Sunday American* gave this advise: "Turn dial number two until whistle in THE SHAPE OF A V is detected. Then get into the exact center of the V and slowly disengage the places of condenser number one." Outside of needing an X-ray outfit to find the V-shaped whistle and a panel stretcher to move the condenser about, nothing much is required.

• Medical Aid for Transformers

In the *Pittsburgh Post Radio Broadcasting News* of December 24th, 1924, is an item telling about an interesting medical operation: "The thickness of the core was reduced to reach the saturation point, which would reduce the HYSTERICIS." Now, if there is an hysterical transformer in your set (detected by howls, yells, etc.), call in Dr. Hackensaw and have him amputate some of the core.

Here are the answers for the *Radio, the Way It Was* quiz that will appear in the October Newsletter.

A, B, D, A, C, C, G, B, and C.

Watch for this and other fun in the Combined Newsletters of the Northwest Vintage Radio Society and the Puget Sound Antique Radio Association.



JA MAC PRODUCTS

SPEAKER RECONING ALL MAKES

8600 NE Sandy Blvd

Portland, Or 97220

503-252-2929

1940-1945-1950-1955-1960-1965

R5-D3

ELECTRONIC SURPLUS

6111 S.E. 82 ND AVE.

PORTLAND OREGON 97206

OPEN: 10:00 AM. TO 6:00 P.M.

TUESDAY — SATURDAY

RADIO, TELEPHONE, TEST GEAR,
COMPONENTS, TUBES, X-FORMERS

TRADE—SALE—CONSIGNMENT

BOB LEE BUS.(503) 774-6560

1920-1925-1930-1935

1970-1975-1980-1985



YOU'RE INVITED

Radio Collectors

Sale & Housewarming

September 17, 10-4

SEVERAL COLLECTORS PARTICIPATING
FOOD & REFRESHMENTS

RADIO, T.V. & RELATED ITEMS
TOO MANY RADIOS FOR DISPLAY ROOM
WOOD, PLASTIC, CONSOLE RADIO,
EARLY PROJECTION T.V.

14407 NE FREEMONT ST.
PORTLAND, OREGON 97230
(ENTER FROM 141ST & SANDY
OR 122ND & FREEMONT)

SONNY CLUTTER 503-254-9296



BIG NIFTY

V I N T A G E

RADIO COMPANY

COMPLETE AND COMPREHENSIVE
ELECTRONIC OR CABINET
•REPAIR•RESTORATION•SALES•
OF ALL MAKES AND MODELS OF
•TUBE RADIOS•

BIG NIFTY RADIO CO

1262 S.W. ORCHARD SEATTLE, WASHINGTON 98106

206-763-2515

SWAP SHOP

WANTED*****

Zenith 805 Cathedral, Pilot AA-902 Amplifier

Jerry Talbott 503-649-6717

1440 SW 239th Hillsboro, Oregon 97123

Philco 70 Speaker. Edwin Buhite 503-288-9727

4041 NE Wistaria Dr. Portland, Oregon 97212

Small metal radios made by Arvin and Silver-

tone; coin-operated radios and parts; un-

usual antenna insulators and lightning

arrestors. Dan Howard 503-761-7799

2940 SE 118th Portland, Oregon 97266

FOR SALE*****

Lead- Radios & related items

Harry Wainborn 503-228-5337

Lead- 1946 Stromberg Carlson 1121 Console

\$75-- 503-244-1767



Yesterday USA

We are very happy to report: Yesterday USA is back on the Satellite. Located on Satcom F4, 15 Bill Bragg is Your host with the Vintage Radio programs from The National Museum of Communications.

NWVRS Auction

September 10, 1988. Please provide a list of items to be auctioned. Place a number on each item which corresponds to an item number on the list. ALSO any minimum bid MUST be noted on the LIST (not on the item).

NWVRS Coming Events

OCTOBER.....8.....CONTEST: AMATEUR, NOVELTY

NOVEMBER.....12.....SWAP MEET

DECEMBER.....10.....ELECTION/PARTY

Information: Dan Howard 503-761-7799

2940 SE 118th Ave Portland, Oregon 97266

Editorial

Recently, Dick Karman has spent some time in the St. Vincent Hospital. We all wish Him a speedy recovery.

Swap Shop and Ole! seem forgotten in the summer with very little participation. You paid for the use of them in your annual dues. If you can't make it to the meeting send a post card to:
Edwin Buhite 4041 NE Wistaria Dr.
Portland, Oregon 97212.

Most of us have seen the new reprod. solid state of the G.E. J100. Cathedral. At \$50-- it looks like a superior value compared to previous attempts at reprod. cathedrals. If you prefer a reprod. solid state 1940 console J.C. Penney catalog has one for \$260--.

EJB



NWVRS President's Page

Since the September meeting is nearly upon us, I want to catch up on the Summer's activities.

Displays by members at the Forest Grove auto show and the Newberg "Old Fashion Festival" were well received and generated leads and new interest in the club (as always).

The Board of Directors met at V.P. Sonny Clutter's house on Thursday August 18th. After a tour of Sonny's beautiful collection, the meeting was called to order. Among other items of business, the position of the Corresponding Secretary was discussed. For several years, the duty of corresponding on behalf of the club has been delegated to all of the officers and the Call Letter editor, rather than resting with the Corresponding Secretary. We feel that this system is an appropriate and efficient way of doing business. However, it makes the position of Corresponding Secretary somewhat redundant. At meetings this fall, we will discuss eliminating this position next year.

Also discussed was the topic for the October old radio contest. In order to expand the appeal of the display and to allow more members to participate, we are adding "Novelty" radios as a category. As usual, ribbons will be awarded to the top three radios in each category (early ham/communication gear, novelty radios).

The PSARA (Seattle) meetings and swaps over the summer have been excellent. At the August swap meet lots of material changed hands. Among other things, a rare Neutrowound receiver and a

Trophy baseball radio were seen (even console radios were changing hands at a brisk pace). By far the best deals were on the Catalin radios however, and they went early. Would you believe \$10.00 for a brown Dewald lyre-shaped set (less glass and knobs)?

Speaking of swap meets, why not bring out some items to the auction? This is a good chance to unload some slow sellers or to dispose of that piece of gear whose worth you "just don't know". Past auctions have been excellent for selling bulk items such as boxes of tubes, magazines, parts, surplus test equipment etc.. Due to publicity through the Antique Radio Classifieds, I have been in touch with some non-members in the local area and hope to see some new faces at the September meeting.

Finally, the growing migration of choice radios and components away from the Northwest and toward markets with better prices (California, New York, even Japan) is disturbing. Although each collector must make buying/selling decisions for himself, the economic draw of the other markets is beginning to make finding (let alone affording) certain high visibility radios a real challenge. I applaud steps that local collectors are taking such as giving club members first crack (ahead of the dealers) at radio garage sales, bringing good quality sets to our auctions and swap meets, and advertising sets for sale in the Call Letter. Let's continue to make an effort to keep good sets in the local pool at Northwest prices, so that regional trends don't ruin the good thing we have.


Dan

MEMBERSHIP APPLICATION

NAME _____

ADDRESS _____

CITY _____

STATE, ZIP _____

CALL LETTERS _____

PHONE _____

Special Interests _____

New___ Renewal___
Regular Membership ___ \$15.00
Associate Membership___ \$12.00

Membership renewals are due in
January each year (regardless
of the month which you Joined).

Mail application and dues to
the address found on page two.
Any additional information may
be obtained from the treasurer.

***** NWRS 1988 ROSTER SUPPLEMENT *****

Sept. 1988 Update - Additions and corrections

John B. August A
U.S.S. Valley Forge
F.P.O. San Francisco,
California 96682

Edwin Buhite
New Phone
503-288-9727

Walter Barnett III R
3315 SW Nyssen Road
Beaverton, Oregon 97006
503-591-0825

Joseph Breivogel R
Rt.2, Box 803A
Beaverton, Oregon 97005
503-649-5071

Fred J. Butsch R
5806 N. Detroit
Portland, Oregon 97217
503-283-4991

Max Kaplan W7INB A
14902 84th Ave. Ct. NW
Big Harbor, Wa. 98335
206-851-4187

Richard Lanz R
28411 S. Needy Road
Canby, Oregon 97013
503-651-2704

Eric Lofquist
Zip Code: 98177

Nick S. Tonkin R
6610 N.W. Dogwood Dr.
Vancouver, Wa. 98663
206-696-2501 or 696-6878

Joe Warburton R
135 E. Adams St.
Brownsville, Texas 78520
512-542-7396

Gerhard K. Watzig R
4221 N.E. 75th Ave.
Portland, Oregon 97218
503-282-1195

Roster Code:
Associate....A
Charter.....C
Honorary.....H
Regular.....R

Bob Ewing R
Rt. 1, Box 350
Hillsboro, Oregon 97124
647-5918

As Class B Power Amplifier

PLATE VOLTAGE	250 max. Volts
PEAK PLATE CURRENT (Per tube).....	110 max. Milliamperes
AVERAGE PLATE DISSIPATION	10 max. Watts

TYPICAL OPERATION:

Values are for two tubes

Plate Voltage	250	Volts
Grid Voltage	0	Volts
Peak A-F Grid-to-Grid Voltage	70	Volts
Zero-Signal D-C Plate Current	5	Milliamperes
Effective Load Resistance (Plate-to-plate)	10000	Ohms
Power Output (Approx.)*	8	Watts

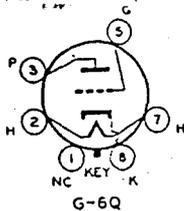
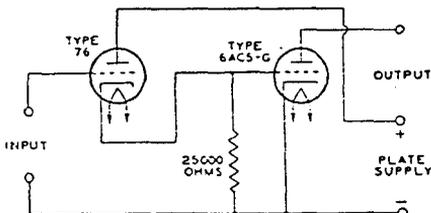
* With peak input of 950 milliwatts applied between grids.

INSTALLATION and APPLICATION

The base of the 6AC5-G fits the standard octal socket which may be installed to hold the tube in any position. Physical characteristics of the 6AC5-G are shown in Fig. 2-17, OUTLINES SECTION. For heater operation, refer to Type 6K6-G. Cathode connection is the same as that for Type 6A8.

In push-pull class B service, the 6AC5-G should be operated as shown under CHARACTERISTICS.

In direct-coupled power amplifier service, a single 6AC5-G is preceded by a Type 76 in the dynamic-coupled circuit shown below. Bias voltage for both tubes is developed by the elements of the circuit which are common to both tubes. The total d-c resistance in the grid circuit of the driver should not exceed one megohm. The main purpose of the 25000-ohm resistor is to prevent a current surge occurring while the tube is warming up. In this service, the maximum plate voltage is 250 volts, the maximum average plate dissipation is 10 watts, the average plate current is 32 milliamperes, and the average plate current of driver is 5.5 milliamperes. With an input signal to the driver of 16.5 volts (rms) and a load resistance of 7000 ohms, the power output is 3.7 watts with 10% distortion. When the driver tube is operated up to the grid-current point, a power output of 3.3 watts with approximately 16% distortion may be obtained



HIGH-MU
POWER AMPLIFIER TRIODE

6AC5-G

The 6AC5-G is a high-mu triode designed for use in either single-ended or push-pull audio-frequency power amplifiers. It is especially useful in direct-coupled circuits in which the driver tube develops positive grid bias for a single 6AC5-G. In push-pull class B service, conventional zero-bias operation is employed.

In push-pull class B

