

DEVOTED SOLELY TO

AMATEUR RADIO



THE NEWS

 EDITED AND PUBLISHED BY: BILL MCNATT, W 9 N F K, FRANKLIN PARK, ILLINOIS

(Copyrighted 1950 by William E. McNatt, Jr.)

- * W5VY, SAN ANTONIO, TO W5JTI, JACKSON, FIRST TEXAS-MISSISSIPPI QSO ON 2!!
 - * A 14 MC. NOISE GENERATOR FOR RECEIVERS WITH UNBALANCED INPUT CIRCUITS. P 12.
 - * "OPERATING THE 4X150A TUBE IN THE 2/3 METER BAND", BY W0WGZ, PAGE 8.
 - * "TEN POINTS ON THE TWO-METER PREAMPLIFIER AT W9NW" BY KEN CALDWELL, P 6.
 - * "THE STATION OF THE MONTH" PRESENTS W3GKP, SILVER SPRINGS, MD. P 10.
-

TWO METERS, LAST MONTH . . .

The southern-states 2-meter gang is off to the races! On May 2 at 9:10PM, W5JTI and W5VY tied up a 570-mile contact for the first Mississippi to Texas QSO on 2! Shortly afterward, W5DSB, Beaumont, Texas, also hooked W5JTI as a cincher! W5FET, Baytown, was No. 3.

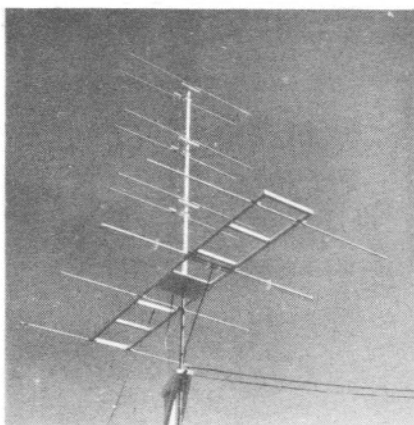
Is this the beginning of a series of "firsts" into Texas, now that so many stations there are on horizontal? See "The VHF News", May and July, 1949.

On April 24th, W7MKP, Baton Rouge, La., worked into the Gulf area, contacting W5VY AXV DCV and ONS, in San Antonio, Austin and Victoria, Texas. W7MKP's DX Scoreboard total is now 4 states, 2 call areas and 450 miles.

The Wisconsin-Minnesota gang has come to life! See W9TQ's "Badger Milk Run".

W7FGG, Jerry Walker, reports that the Arizona gang has come to life, with Tucson and Phoenix having good contacts. W7KWO MIW and MIV, Phoenix, have worked W7FGG and heard W7LLO, Tucson. W7RJN, Casa Grande works into both areas. 522s and ARC-5 transmitters, 5-element and 5-over-5 beams are principal equipments in Phoenix. W7FGG runs 700 watts to VT127As and has a Stacy (WLKIM) Wallman Cascade converter with 6J4 second stage. The path is only about 110 miles, but is a good start to encourage more activity. On 420 Mc., activity is low, but W7SLO UPF OWX and FGG are building gear and hope to work Phoenix, where the band is a beehive of activity.

We still hear rumblings about horizontal activity on 2 in New Mexico and California. Can anyone pass some specific information along?



W7JRG, SHERIDAN, WYOMING, IS NOW READY FOR YOUR TWO OR SIX METER SIGNAL. TOP: 12 ELEMENTS FOR TWO. BOTTOM: 4 ELEMENTS FOR SIX.

Activity is burbling in the near-eastern states. Openings are growing in frequency and range. Late in March, on the 25th, W4JDN PCT, Kentucky, W3RYM, Pennsylvania, W8TES, Michigan VE3EPB, Windsor, W9EGH, Indiana, and W8BFQ kept the band alive. On the 26 W9UCH and NSF worked W8BFQ. On April 6, W4JDN W2GBK W3WEM W8DUL W9EGH and W3JAV worked W8BFQ. Margaret reports that April 9th was excellent, W3MMV W3LNA W3ODF W3WEM W3QKI, W4JDN, W8EP W4AO, VE3LU, W8VQZ DUL, W2QZU GBK and TVC, representing 7 states and Canada, were logged. Conditions were very good, all day April 15, as well as in the evening. The Bare Foot Queen had

(Continued on Page 15)

ATTENTION MOBILE HAMS

COMPLETE MOBILE PACKAGE - NOTHING ELSE TO BUY. OUTSTANDING MOBILE SIGNALS USE MOTOROLA EQUIPMENT - BACKED BY YEARS OF COMMUNICATION EQUIPMENT EXPERIENCE - WORLD'S LARGEST PRODUCER OF 2-WAY MOBILE EQUIPMENT.

F - L - A - S - H ! !

TWO-METER MOBILE HAMS, HERE IT IS!

Motorola FMTU-15V-ARS Mobile FM transmitter, 15 watts output for operation on 144-148Mc. Complete with tubes, crystal, power-supply, military microphone, control-head, cables and roof-top antenna. Crystal for 147.5 Mc. Mobile Net. 15, only. \$145.00
ORDER NOW FROM "THE VHF NEWS" OR FROM ADDRESS BELOW.

250-WATT, OUTPUT, FINAL AMPLIFIER FOR TWO-METERS. USES 4-125s IN PUSH-PULL. SILVER-PLATED LONG LINES IN PLATE AND GRID. IN METAL CABINET FOR RELAY-RACK MOUNTING. ONLY ONE AVAILABLE, NOW. (LESS TUBES AND BLOWER). \$50.00

P-7253 spring base rear-mount antenna. \$22.50

MOTOROLA P-69-13-ARS receiver with special noise limiter for use with any converter having 1500-3000 KC \$60.00

3-30 famous Gon-set converter complete to connect to the P-69-13-ARS receiver \$39.95

P-327-E Fire-wall loud speaker \$5.00

The above comes complete with all necessary accessories and mounting hardware. Order direct or through the Motorola National Service Organization member in your area.

WATCH "THE VHF NEWS"

FOR MORE EQUIPMENT AND PARTS TO BE OFFERED FOR SALE IN THE NEXT ISSUE

Write or Phone

HARRY HARRISON
W9LLX
MOTOROLA INC.

1327 W. Washington Blvd. Phone: Taylor 9-2200, Ext. 161, Chicago, Ill.

BADGER MILK RUN

By: Vic Tresidder, W9TQ.

The Wausau meeting was a good one, touching all bands, emergency work, activity and preparedness. The only howl: not enough time for a good 2-meter gathering. A few huddled after dinner and prizes, 2350 to be exact. A tabulation will be made of equipment, operating hours, etc., so the gang can arrange schedules. Present were W0SMT TCZ HKF, W9FPE JBF BZU HWX GYQ IVE WLZ YYY YFT NVQ LUQ PYM TQ and possibilities VOW and QZ0. A 144 Mc. net is under discussion.

Not much from below stateline, altho we usually miss some because of the job. Surprised NZ, Union, Ill., on April 10; he has to free his rotator. We have to re-place one director; hurts on both send and receive.

On April 23 at 0830 to 1200, signals from Indiana and Illinois were roaring in. Those who got on, got reports. BTI and AFT got most. We connected with JBH and CGR, and AFT helped with QKM; couldn't hold IWE. Sorry.

Newcomer DSL, returnees DKU and NSC welcome. DDG busy; still no HNX, LBC or EZU. WWH has not shown, yet. GJE-TQ schedule still on. Missed LVK, but have heard GGH. LJV reports MFR, Madison, busy, but has heard KQM BTI AFT and TQ. Antenna improvements should make him a regular, and encourage more, there. FPE, Willard, encourages the Wisconsin Rapids area by putting his new rig on for receiver line-up.

KQM is more regular, hoping for improved weather to permit better skywire. Others are BTI LJV AFT; occasionally hear HTJ FES UJM DYZ AVF CXW.

FPE JBH and others expressed considerable interest and approval of our version of a Wallman cascade a' la Stacy, WLKIM. Works, but not finished. Monday evening Emergency Net at 2000 WTL YYY YFT NVQ BTQ GZR AFT LJV CXW (working nights) and TQ.

SYT and others are busy with transceivers on 220; mobile in mind.

W9FPE tested to the new rig from April 17 to 19th, then worked W9JBF who reported S7 sigs using his 28 Mc. beam. Promises to get 144 Mc. beam up, soon. FPE's new rig: 600 watts input to p.p. VT-127As, 12 element

beam 85 feet high, and triple-conversion.

On the 22d of April, FPE fired up to 800 watts, beamed west and put on the automatic keyer. Upon standing by at 2100, W0JHS, Anoka, Minn., was heard calling. Reports were 5/5-9 in both directions. W0JHS uses a 16-element beam 70 ft. in the air, with 120 watts. JHS reported that W0HKY, St. Cloud, was hearing W9FPE fb, so a standby was taken for his signal, which came through R5S6. W0HKY uses stacked 4-elements, NBFM and 180 w. input. It made a nice 3-way for almost an hour, when W0RQT checked in to report that he, too, was reading W9FPE in good shape. Another standby raised W0QHE, 18 miles west of Minneapolis, who was hearing FPE R5S7 on his attic-bounded 4-element beam. St. Cloud and Foley are both over 200 miles. W0QHE runs 260 watts with NBFM. W0SV, St. Cloud, has a 32 element beam 90 feet up, with 700 watts on NBFM. W0TI, Milbank, So. Dakota, W0BJV, AZE and RQT are active, every night at about 2000 CST.

At 2200 of the 22nd, FPE beamed to the east and worked W9EYN. On the 23rd, the Minneapolis gang were worked, again, as was W0QRA in St. Paul. Good reports were exchanged, all around. Watch this gang!

* * *

W0VMY REPORTS FROM SAINT LOUIS, MO. Reading the article on old-faithful 2-meter hams in a recent issue of "The VHF News" prompts me to report activity from this area.

Our net has been active since 1947 and is still looking for new members.

During the opening, the big one, of September, 1949, W0BJL and VMY were the only stations on. Worked 7 or 8 states, the furthestmost being W3. (Ed. Note: A lot of us fellas still await the promised W0BJL QSL!!)

W0IHD has an 829B and an 8 element array. W0KYF uses 4-125s and has a 5-over-5 under way. W0BJL and VMY both use an 829B with 90 watts, two Workshop beams stacked and a pre-amp into VHF-211. W0VMY has W0ZEYV at Cedar Hills, Mo., with a 61 foot tower. Works 2, 6, 10 and 40.

THE UHF WORLD

By: Arnold Bucksbaum, W0WQZ

Well, fellows, "The UHF World" has a new editor. I hope to be with you for a while, and I thank Jack Woodruff, W9PK, for his fine work during the past year in originating this column! (Me, too! Thankee, Jack! - Ed.)

The column will continue to encourage activity on the u.h.f. bands by inspiring interest in construction of equipment and operating it. Not only will your activities be reported, if you let us know about them, but we'll try to help out on details of constructing u.h.f. circuits in your shack.

220 Mcs. In The South . . .

On the afternoon of April 23, W5NYH and W4HHK were on needles and pins! They were all set to find out if a 220 Mcs. signal could be pushed across the 137-mile path between them! Contact was made on 144 Mcs. shortly after 1300 CST. Conditions on 2 were average, with fading. Moore, W5NYH, reported that he was ready to transmit on 220, so with no delay, W4HHK changed the receiver set-up to 220, and gave NYH the green light on 144. Eureka! The 221.7 Mc. signal from W5NYH came in, right off the bat, at W4HHK. It was a weak signal, and faded, but came through well enough for the boys to honestly claim it as a crossband 220-144 Mcs. QSO, logged!

At night, April 23, conditions on 2 were well above average, and a swell cross-band duplex was enjoyed over the 137 mile hop! A schedule was arranged for 7AM the next day, April 24, W4HHK calling on 144, listening for W5NYH on 220, on the dot. On the dot, it was! NYH's 25 watts on 220 seemed as good, or better than HHK's 300 watts on 2. Conditions on 2 were not very good; bad fading. The 220 Mc. signal from W5NYH was steadier. Again, the crossband duplex was very good! Day to day comparisons of the two bands are being made and noted. A 2-way 220 Mc. contact hasn't been made, yet, because W4HHK's rig is sans-modulator and W5NYH's receiver is sans b.f.o.

W5NYH's transmitter uses an 832A final, crystal-controlled, with 25

watts input. The 16-element beam is only 20 feet high. W4HHK's receiver is a 6J6 pre-amp using lines in the grid and plant circuits, to an HFS to an NC-183. The 6J6 pre-amp helps a lot. The antenna is a folded-dipole backed by a screen reflector, about 48 feet high.

W4BOR, on 220, and W4HHK are also enjoying crossband duplex. W4BOR uses an 832A final, crystal-controlled, 25 watts input. He is located about 14 miles from W4HHK, so signals are S9 plus. Comparisons of both bands continue, and more results are expected to be available each month.

The W5NYH - W4HHK circuit probably will produce the first 220 Mc. contact between Mississippi and Tennessee!

The 2/3-Meter Band . . .

What should be the quickest and easiest way of getting on the 2/3 meter (420-450 Mc.) band? The answer to that is a tripler-final, built directly on your present two-meter rig. Now, what tube should be used as a tripler?

Several types can be made to work, with a variety of results in output and efficiency, but consider one of the latest v.h.f. - u.h.f. tubes available: the 4X150A. It is a power tetrode having co-planar elements and is especially designed for the job it does. You may have already seen it advertised (Eimac) in radio magazines; if not, look it up. It's worth the effort to become familiar with this tube, even though its price of \$36 may scare you.

According to the data sheet issued with the tube, 50 watts of useful power output is obtained from one 4X-150A operating as a power amplifier at 500 Mc. with 600 volts on the plate, at a plate-efficiency of 50%.

You ask about driving power. Well, you don't get something for nothing. 15 watts of driver-output power are required at 500 Mc. The circuit for the tube is designated as a coaxial cavity. Someone will now question the possibility of obtaining 15 watts at 500 Mc. By driving the grid of a 4X-150A at 1/3 output frequency, there is no difficulty at all in obtaining 20-watts output to a matched load.

The U H F World (Continued)...
Therefore, if you have a two-meter transmitter, you are all set to triple from 144 to 432 Mc.!

There you are, fellows. Neutralizing troubles of triodes when used as triplers or amplifiers at 500 Mc. are no longer a problem. Use tetrodes!

In the Kansas City area, 420 Mcs. is still the subject of much conversation, and it seems that there will be activity at Odessa, Pleasant Hill, Lees Summit, Mo., Greenleaf, Kansas, as well as in Kansas City before the summer is over. Our reporter, W0MNO, expects to be on 220 in a month or so, but wants someone to contact. He wonders if W0DIX will keep him waiting, long? W0MNO will welcome schedules for 220 Mcs. (W4HHK, BCR, W5NYH)

Well, that's it for this month. How about some reports from you fellows, say W8WJC, W9a TGI, KFK, DRN, CGR, VX and others on 420? We know you're on! Please send your reports to Arnold Bucksbaum, W0WQZ, 1551 Bever Avenue, Cedar Rapids, Iowa, before the 15th day of each month. We'll need a little time in order to get organized, at first, but we'll be on schedule, soon.

W5FEK REPORTS FROM HOUSTON, TEXAS..

Activity on 2 is picking up, with the gang gradually going on horizontal polarization! Converts to horizontal are: W5FSC, W5FEK, W5BHO, W5NZX, W5ON, W5OUG, W5PMM, W5VW, Missouri City, and W5FET at Baytown.

On April 18, W5s FEK IRP KFY and ON worked W5VY; FEK and IRP worked AXY in Austin.

W5OUG, NZX and FEK, on April 22, contacted JBW, Maplewood, La., and W5FET worked W5MKP in Baton Rouge.

April 24th activity included W5IRP to DCV, VY, LOW, AXY ONS. FSC worked VY and ONS. FEK worked AXY and BWQ in Austin, ONJ and JLY of San Antonio.

The Coastal Emergency Radio Net celebrated its 3rd birthday, April 27, with a total of 53 active members. 28 in Houston, 10 in Beaumont, 7 in Port Arthur, 2 in Maplewood, La., 2 in Baton Rouge, 2 in Orange, 1 in New Orleans and 1 in Galveston. The net meets at 8PM, Tuesday nights, on 146.8Mc. W5ON is Net Control Station.

VE3BOW REPORTS FROM HAMILTON, ONTARIO

April 7: Not much activity at this end, W3WEM QKI WJC were worked from Hamilton and Brantford. The Toronto boys were not having too much luck. W3RUE was heard by VE3LU, Brantford.

April 9: A good opening, but activity was lacking. W3QXI and W3OYK were worked by the Hamilton and Brantford stations, with very strong signals. We believe that many other stations could have been worked, had they turned their beams this way. W6BFQ was worked by VE3LU, Brantford. The most interesting part of this opening was listening to W8WJC QSO W3ODG teletype!

April 15-16: The band was open for Ohio and Pennsylvania. Hooked W3RUE for my first Pittsburgh contact at 0148. Also heard and called was W8WM/8, 15 miles south of Lakewood, O.

On Sunday morning, April 16, the band was still open into western Pennsylvania, but - again - no activity.

On April 22, conditions were good into Erie, Pa.; not much activity. A good opening occurred on April 24, to the south, southwest and east. W8WXV, Shiloh, Ohio, was called, many times, with no luck. W2ZHB, Rochester, was worked by Hamilton and Toronto stations, also many other stations further east.

April 25: W6BFQ heard working a W4. Also heard, again, was W8WXV.

In our immediate area, VE3LU, Brantford, and VE3BOW have schedules every evening. BOW is active until a late hour, every night. If the band is open, he stays up until his eyes won't! When the band is good, put your beams into Canada and tune to 145.350 for VE3BOW. Tune higher for the other fellows; many of them await you!

Note to Margaret, W6BFQ: We eavesdropped on you, working W8BGD!!!

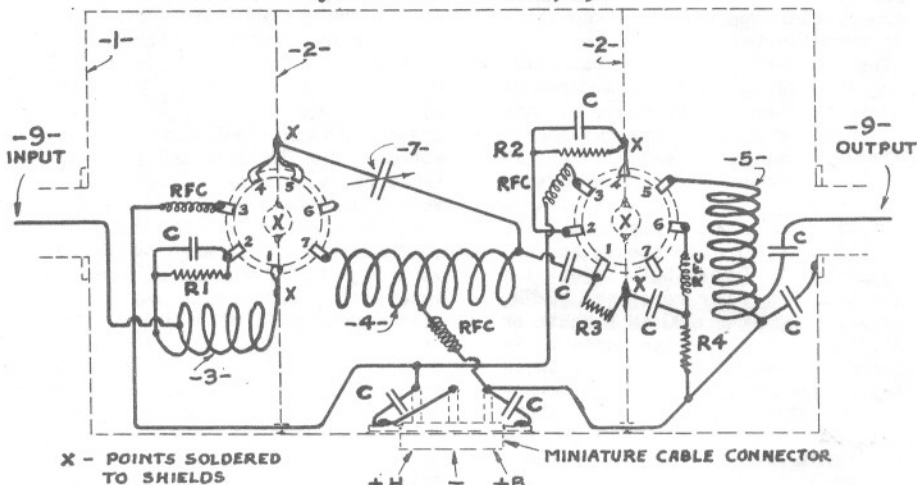
Last call, April 25: W8WM, W8WM!!

THE "QNO" (QUEEN'S NIGHT OUT) CLUB.

The girls enjoyed an evening of slide projections of assorted scenes, a good session of Canasta and refreshments served by the Hostess, Lorraine Stanton. The next meeting of QNO will be held at Terry Landeck's (W9WOK) home, 401 Judson St., Bensenville, Ill., Friday, May 26th.

TEN POINTS ON THE TWO-METER PRE-AMPLIFIER AT W9NW

By: Kenneth Caldwell, W9NW



Pictorial diagram of the chassis-layout of the Two-Meter Pre-Amplifier constructed by W9NW. Text provides full information.

The grounded-grid 6J4-6AK5 pre-amplifier for 144 Mc., used ahead of the ARC-3 to BC-348 receiver at W9NW is the result of essential help by W9WFC* and W9QMD. This article, therefore, merely reports the results of their help and experience. Since the placement of parts in any v.h.f. layout is quite important, the suggestions we received may help some of you fellows obtain greatly improved results at the "intake" end, as at W9NW. No doubt, there have been many "hotter" pre-amplifiers built, but the constructors apparently haven't taken the trouble to let the rest of us in on the details of their work.

The pre-amplifier shown here is easy to construct, and not the least bit "fussy" to align, since it went right to work as soon as finished, without any tendency toward oscillation. Signals are copied, now, that could not be heard previously.

1. The chassis is $3 \times 5\frac{1}{2} \times 1\frac{1}{2}$ " made of .030" copper bent to form and soldered at the corners. A husky soldering-iron is required for the job; a low-voltage, high-current resistance welder with carbon electrodes was used. Solder the coaxial connectors to the chassis.

2. Shields are made of copper, and are soldered in place. First, clip a corner off of each one in order to provide passage for wiring; notch each one to fit the contour of the socket closely, and solder to the center shield of each socket. The sockets are spaced $2\frac{1}{2}$ " on centers.

3. 6J4 cathode coil: 5 turns, #16 wire, $3/8$ " i.d., about $5/8$ " long, one end is soldered to the shield at the socket grid terminal, pin #1. Input lead is connected $3/4$ -turn from cathode-end of coil.

4. 6J4 plate coil: 8 turns #16 wire, $3/8$ " i.d., $1\frac{1}{2}$ " to $1\frac{1}{8}$ " long, center-tap for B plus, 150 v.d.c.

5. 6AK5 plate coil: 8 turns #16, $3/8$ " i.d., $1\frac{1}{2}$ " to $1\frac{1}{4}$ " long, output tap about 1 turn from B plus end.

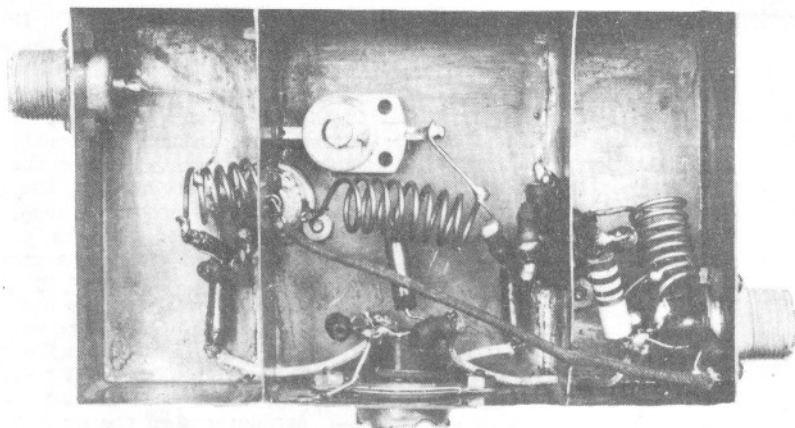
6. Eight .001 "Hi-Kap" condensers marked "C".

7. Ceramic trimmer, 3-7 mmfd.

8. RFC ($\frac{1}{4}$ r.f. chokes) Approx. 40 turns, #26 or #28 enam. cop., wound on 1 megohm, 1 watt resistor.

9. Input, 50 ohms; output, 50 ohms.

10. Resistors: R1 100 ohms; R2 300 ohms; R3 270,000 ohms; R4 5000 ohms. * "Improved 144 Mc. Pre-Amplifier", by Sam Tarantur, W9WFC, "The VHF News", p 10, June, 1948.



The chassis of the "Ten Point Pre-Amplifier" as laid out, originally for a somewhat different circuit. Therefore, the sockets are not centered properly, which caused crowding of components in the 6AK5 plate circuit compartment. A better arrangement is shown in the pictorial diagram, on the opposite page; coaxial connectors and sockets are centered lengthwise. If the chassis is made from sheet steel, it is recommended - strongly - that it be copper-plated at least .001".

INDIANAPOLIS EAVESDRIPPINGS

By: Marge Bowman, XYL-W9GLW

Spring isn't the kindest of seasons for wx and dx, and even locals aren't providing any good news! Let's hope that "some enchanted (and how!) evening", the ol' band will boil with activity! Soon!

From "ear-wagging" Muncie way, we learn that about 10 stations are on, every evening, but only NSF is consistently heard.

March 3-6: Things were looking up, with NSF GZQ VGD DOK K9NAM FVJ UNS ZHL EQZ GHZ EGH LIR FKI UCH 4MKJ and some unidentified signals coming thru to EWO LWN VXR HJH APJ ZEB LLA and FKK as bait.

LWN WORKS OUT-OF-TOWN -- to NSF!!! (Big headlines, plizz!)

"Chicken-Roost Chatter" (Antenny News to you kids!): HJH has new 4-over-4 ready to go on house-top; it will be good, too! APJ has cubical quad in attic and a fine sig at GLW. DOK 16-element turnstile, 36 ft. up, and Peggy C., soon to be licensed, has a 74-footer, which turns our attention Muncie way! ASM, now recovered from TV-itis, hasn't finished

tower, but has a bee-yooti-ful sounding 829 on; really sounds good!

April 9: Came through DeMotte, and from all indications, there were no antennas remaining in that feeroshus storm! TV installations were strewn helter-skelter about roof-tops; such a mess! Wonder how HKQ fared? (He's on the air! - Ed.)

April 15: ASM reports opening, on Saturday, to W4's.

April 17: Oh, happy Monday TV-less night! LLA complaining about blister-finish paint in his neighborhood "in the swamps". LWN, whomusta used glue 'cause his paint sticks, ASM, who has no trouble painting, except maybe antenna towers!, and AQQ, "Who, me? I bin sick! Now workin' for the Radjio store, here, and m' dawg's're killin' me!" - all tearing up the ether!

April 21: JMS barrels in while talking to ASM. Howard's on his last lap in college, now.

Worst Blow of the Month! W9EWO, who - along with FVJ and ZYL - has been one of the best Faithful Few on Two, is off the air. TVI, then the "graveyard" shift, and, now, no beam!! Woe!

OPERATING THE 4X150A TUBE IN THE 2/3 METER BAND

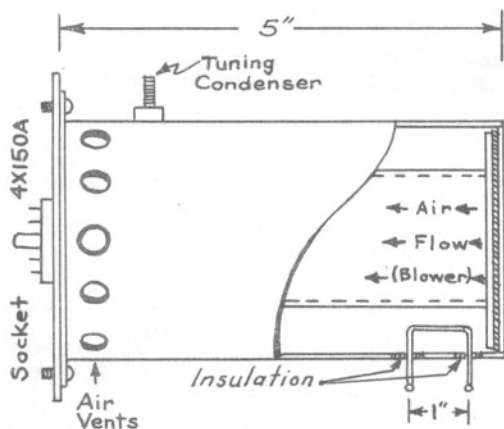
By: Arnold Bucksbaum, W0WJZ

Those who read about the coaxial, plate-tuned circuit for the 4X150A tube in "The VHF News", December, 1949, will be interested in further information on coupling power from the circuit. (Also, see p 13, "The VHF News", April, 1950.) The resonant coaxial line was constructed of 1/16"-wall brass tubing with an in-

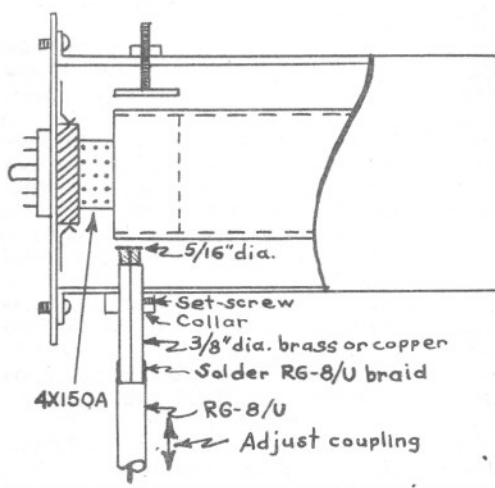
ner conductor diameter of 3". It operates as a shorted coaxial line with its physical length foreshortened from a theoretical $\frac{1}{2}$ -wavelength by the tuning capacitance, tube output capacitance and inductance (small).

Power may be coupled out of the cavity by means of a one-turn loop, or by a capacitive probe. A loop, for balanced-line feed, may be placed near the shorted-end of the coaxial circuit. A wire, insulated by polyethylene, makes a fine coupling loop, and is simple to make by stripping the braid from RG-58/U. The insulation prevents possible shorting of the loop and inner-conductor when the coupling is adjusted. Coupling is increased by pushing the loop into the cavity. Spacers, made of fiber or polystyrene, should be used to support the leads through the holes in the cavity wall; these also minimize impedance discontinuities in the line, at the holes, by minimizing the capacitance between the leads and ground, the outer wall.

A capacitive-type probe may be used, also, to couple power into a coaxial transmission line. The diagram shows the position of the probe within the coaxial cavity. In order to least disturb the electric field, the probe is positioned diametrically opposite from the tuning capacitor. The probe is made of RG-8/U, a 3" length of 3/8" diameter tubing, brass or copper, and a copper or brass disc about 5/16" diameter. Strip the braid from the coax for about 3 1/2" without trimming off the strands. Slip the brass or copper tubing over the polyethylene, dress the outer braid strands over the tubing and then trim them off so that about 1/4" overlap is left; solder, carefully, keeping the line straight. Trim off just enough polyethylene to take the thickness dimension of the disc, drilled at the center for the inner conductor of the line. Solder the disc on the



POWER COUPLING METHODS, 4X150A TRIPLER-AMPLIFIER



inner conductor. The coupling is adjusted by moving the probe in (increase) or out (decrease). Because of the effect of the probe on resonance of the coaxial tank circuit, it is necessary to retune for resonance after every change of the probe position. Consequently, several alternate adjustments of the probe and coaxial line tuning are necessary before the desired loading and power output are obtained. Under this condition, the probe will be about $1/16''$ to $1/8''$ from the center conductor.

It should be recognized that, with capacitive coupling, there is no return for ground for the inner conductor of the coaxial transmission line. Therefore, a ground-return path should be provided in the impedance matching circuits at the antenna, so that all elements of the antenna will be grounded for d.c.

If the d.c. plate voltage blocking condenser is placed at the shorted end of the coaxial tank circuit, the entire inner conductor will be at h.v. plate potential. To prevent accidental shorting of the center conductor to ground with the tuning capacitor, or the output coupling probe, mica or some other high-frequency insulation may be wrapped about the center conductor, or placed on the probe and tuning capacitor surfaces.

Operating data were taken on the author's unit, under the following conditions, at about 450 Mc.: (1) Coupling the 4X150A grid circuit into the plate circuit of an 829B at $1/3$ of the output frequency, with a one-turn untuned grid loop. (2) Using a grid resistor of 22,000 ohms, and a screen-grid resistor of 33,000 ohms. (3) Feeding a matched load.

Power Output	E_p	I_p	I_g
20 w.	500v.	150 ma.	10 ma.
10 w.	500v.	175 ma.	5 ma.

It is suggested that, in loading the amplifier with the antenna connected, a remote field-strength meter be used as an indicator of maximum radiation since plate current readings are not entirely reliable in determining when maximum radiation occurs. Situate the

field-strength indicator so that it does not detect any direct radiation from an open-wire transmission line.

The circuit-dimensions of the amplifier described in "The VHF News", December, 1949, are such that it may be tuned over more than the 420-450 Mc. range. The tuning range, however, may be shifted readily by small variations in the length of the circuit.

For further information on the amplifier, please write to the author at 1551 Bever Ave., Cedar Rapids, Ia.

* * *

THE WABASH VALLEY AMATEUR RADIO CLUB CLASS TO CONSTRUCT 2-METER CONVERTERS

By: Clare Hoffman, W9ZYL



Fourteen Wallman Cascode Converters for two-meters were built by the Wabash Valley Amateur Radio Club, recently, after the unit was described by John Stacy, W1KIM, in the September, 1949, issue of "CQ". It is hoped that the effort will result in some new calls being active on 2! Shown, in the picture above, are (left to right) 1st row: Jack Martin and W9EQZ; 2d row: W9FLB, Bob Campbell, Les Trulock, Ernest Newlin and Floyd Callon. Back row: W9JMS, OMR, ANH, IHO, IHA, GBJ and ZHL. Many of the fellows have their converters before them. (Editor's Note: Congratulations to all concerned! Now, just get those beams up, get the un-licensed boys to pass the exam, and you fellows will make Terre Haute better known on v.h.f. than W9ZHL has, already!)

* * *

"THE VHF NEWS" NEEDS MORE FRIENDS
LIKE YOURSELF!!

THE STATION OF THE MONTH

By: Jack Woodruff, W9PK

We caught Smitty with his antennas down but, never-the-less, we're going to tell you about Wm. Smith, W3GKP, Silver Springs, Md., well known for his VHF dx and experimenting. Smitty was born and had his schooling in Chester, Pa. He moved to the Washington area in 1934.

Like many of the rest of us, Smitty got the radio bug when he saw his Dad tinkering with BC receivers. He found a bushel basket of 'Ol-A's, in the attic, and was started. He was an SWL for several years before getting his license in 1936. He started on 80 cw but soon built modulated oscillators for 56,112 and 224 mcs. and had his first taste of VHF.

Smitty moved to his present location in 1941, but didn't get on the air until August of 1945. His first post war rig was a modulated osc. on 112 mcs. In November he changed to a MOPA with an 832 final, and a superhet receiver, and made the change to 144 mcs. with this equipment and a ground plane antenna. His first "dx" was worked on Dec. 9th, W3CRB in Rockdale, Maryland, over near Baltimore. A 5 element Yagi soon replaced the ground-plane and the Baltimore contacts became a regular occurrence. Smitty's next antenna was "the biggest beam in town", a "billboard" with 8 radiators in front of a screen reflector with which he made contacts with W3CGV, in Del., W3LN in Lancaster, Pa., W3KEI, Chester, Pa., W2DFV and W2HWX in N. J., and W2AES on Long Island in 1946. For 1947, W3GKP put 60 watts on an 829 and built a new antenna consisting of eight 4 section 8JKs. This antenna was described in a "VHF News" story, three years ago. With this antenna, Smitty worked all the stations previously mentioned, W4FJ and W4IKZ in Virginia, plus W1OSQ, Conn., and W1BCN in Mass.

In the fall of 1947 and winter of '47-'48, Smitty put the 829 on 50 mcs. and worked G5BY and lots of W7s on F2 skip. Back on Two, W3GKP completed one of the first crystal controlled Wallman Cascode conver-



"SMITTY", W3GKP, SWEARS THAT HE CLEANED UP THE BASEMENT SHACK BEFORE THIS PHOTO. NOTE THE LONG LINES, CENTER, REAR. HIGH POWER!

ters in June of 1948. (See Dec., '48 "VHF News") On the first night, he heard W3RUE and W8WJC whom he worked on July 2nd, and 7th, respectively. The rig by now was running 600 watts to PP VTL27As on cw only. Smitty was away from home on business for five months but when he came back he continued with his many 'firsts' by working W1OOP/1 in New Hampshire, W9TKL (our own "Jackson") in Illinois, and W9UCH in Indiana in 1949. W3GKP also held nightly schedules with W3RUE across the Allegheny Mts. for a couple of months with outstanding success. His best dx on two is W9TKL (610 miles and 13 states in 6 call areas. Smitty works much of his dx on cw which he finds really pays off. The antenna during 1949 was a W2NLY 24 element beam with all metal construction and supported from a 48 foot steel tower. An ingenious method allowed him to lower the beam, change the polarization and rehoist it in about 15 minutes. Smitty took this beam down every night for safety.

The transmitter consists of an 8 mc. 6AG7 osc.-tripler, a 7C5 tripler, a 6AQ5 doubler, an 832A amp., an 829B

(Continued on Next Page)

amp. using folded plate lines, and a pair of 6V127As with grid and plate lines. Power is supplied by 300, 600, and 2000 volt power supplies. The receiver consists of a 6J6 neutralized PP 1st. RF, PP grounded grid 6J4e second RF, 6BA6 third RF, 6AK5 mixer, 6AK5 broadband IF, and a 6C4 cathode follower coupling to a SX 28 which is tuned to 15 to 19 mc. Injection is obtained on 129 mcs. from a $32\frac{1}{2}$ mc. 12AT7 xtal osc.-dblr. and a 6AK5 doubler.

W3GKP was top scorer in his section in the 1947 ARRL Marathon and in the first VHF Institute Mileage Contest; top scorer in the Washington, D.C., Radio Club, January 1948 VHF Sweepstakes.

In the September 1949 contest, he and W3KUX went portable in the mountains of Western Mc., where they gave several W8s a new state. Yet Smitty says "I am primarily an experimenter and dx QSOs and contests are just "proof of performance" checks on the apparatus I mess with".

Smitty is married and has two sons, seven and ten years old. His present job is radio engineer on VHF and UHF airborne equipment with the Bureau of Aeronautics, Navy Dep't., Washington, D. C.

* * *

W9CAW REPORTS FROM PORTER, INDIANA.

Conditions were especially good during the first part of April, especially up Wisconsin way. W9LJV, Waukesha, just pounded thru on April 2. W9TKL's signal was S9 all winter. TGI, Glenview, Ill., is heard, lots. AFT, Milwaukee, seems to be the first station to come through. Whatever became of that W9PZS powerhouse? QKM, on again, puts in f.b. sig.

HDB, Valparaiso, is active again; has 829B back in business. DLI has new pre-amp and mike on his 522. FER operates W9HKQ most of the time. NHA still says he will be on, again. CAW still plans to "missionary" the Michigan City gang back on 2. Let's all get those inactive. TVI was licked, completely, at DLI, by complete shielding. The 12A6 was most guilty!! Blackie, BBU, thinks he has TVI? He should see it at W9CAW!! CU on 2!



"Audi alteram partem"
(Hear the other party; hear both sides.)

EDITED AND PUBLISHED BY:
BILL MC NATT, W9NFK
FRANKLIN PARK, ILL.

Subscription Rates: In U.S.A., Possessions and Canada, \$2.00 per year. Elsewhere, \$3.00. Single copies of current Volume, 35¢ each. Please do not send stamps.

All editorial contributions will be appreciated, and should be mailed on or before the 25th day of the month for publication in the next issue.

CORNER REFLECTIONS . . .

"I guess the FCC release of March 21st concerning Docket 9295 could easily be misread; anyway, there is an error in your report on page 11 of the April issue. The request for formal hearing was not by ARRL, but was made by NARC in its January filing; SARA added that if there was going to be any further official session, they wanted a hearing also. So the Commission denied their requests, not ours. Our request was for an oral argument, which is quite a different thing, and this FCC granted. As I think you know, the request FCC denied concerning a poll of licensees was by NARC.

" 'Telecommunications Reports', a Washington weekly newsletter, made the same error! They have since corrected it.

"With 73,

"Sincerely yours,
John Huntoon, WLLVQ,
Assistant Secretary,
The A. R. R. L."

4/21/50

The FCC release referred to, above, was not misread; it was written in a manner permitting misunderstanding of the facts. Thanks to WLLVQ for the clarification.

Just to round off the column, please note that when a correction of an error is made, we do so in a space equally prominent. No delay, either!

A 144 MC. NOISE GENERATOR FOR RECEIVERS HAVING INPUT CIRCUITS FOR COAXIAL TRANSMISSION LINES

By: Harold Isenring, W9BTI

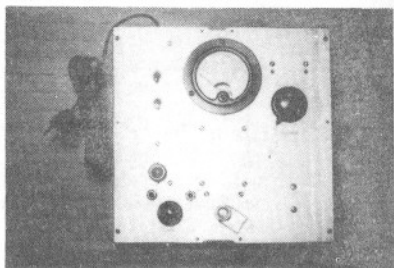
During the course of his search for an improved receiver, a v.h.f. man often wishes for a measuring device which is more accurate than his frequently-unreliable ear. The Noise Generator is the answer to his- and your - wish. It is not the purpose of this paper, however, to delve into the techniques of Noise Generator usage, since this has been done, before, quite ably.^{1,2,3,4}

Several circuits of noise generators that have appeared in recent literature^{1,2,3} were tried by the writer, and were found lacking in noise output when used on the particular two-meter receivers having input circuits designed for use with 52-ohm coaxial line. For example, a type 15E required an anode current of 65 ma. before any noise output increase could be noticed in the particular receivers under test. Type 5722 noise diode was tried in the recommended circuit with the same negative results: the safe, recommended current value for the tube was reached before the desired 2X noise power output was even approached.

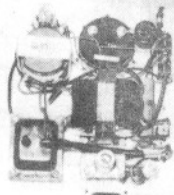
The recommended tubes and circuits apparently have done a job for some users, but we suspect that a tuned output circuit and/or high-impedance input circuits, such as 300-ohms, must have been used.

A large number of two-meter operators, including ourselves, are using receivers with 50-70 ohm input circuits, however. Therefore, our problem seemed to resolve into that of tuning the output of the noise generator to 144 Mc. and coupling it properly into a 50-70 ohm load. But, to tune the output of a noise generator merely by shunting a tuned circuit across the low-impedance load resistor is impracticable because the loading degrades the coil Q so much that little improvement is obtained.

The proper approach is to use the coil so that the least required loading, maximum Q and impedance matching



FRONT (above)
REAR (left) OF
W9BTI'S NOISE
GENERATOR FOR
RECEIVERS WITH
UNBALANCED IN-
PUT CIRCUITS.

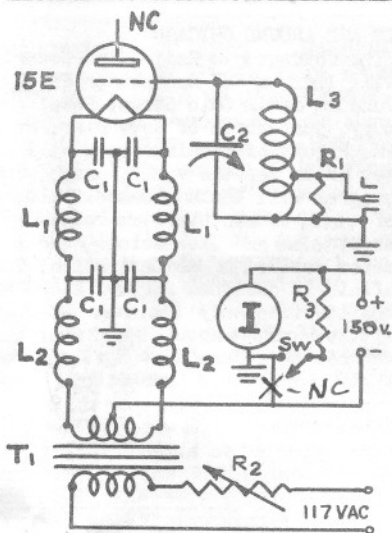


characteristics are obtained. As the accompanying circuit shows, a coil made of 5 turns of #8 copper wire (or tubing), 3/8" i.d., "air-wound" and tuned with an air-trimmer of about 10 mmfd. was placed in the plate circuit of the noise diode. A coaxial connector with its 52 ohm shunt resistor is connected between ground and the third turn of the coil from the ground end. The receiver was connected through a short length of coaxial line. The tuned circuit of the noise diode was resonated (indicated by an increase in receiver noise). The filament of the noise diode was turned up, and terrific noise output was obtained. Apparently, a pretty good match existed between the plate of the diode and the low-impedance line.

Tests were conducted on two converters: an ARC-1 and a Wallman Cascade using a 6AK5-6J4-12AT7. Each unit was connected to an i.f. strip with 10.7 Mc. to 455 Kc. i.f. strip.

The noise generator showed the ARC-1 to have an approximate 6.6 db noise figure as compared to 3.2 db for the Cascade, using the standard noise-generator equation.

The encouragement we got from the above method prompted us to try the 15E, again. It gave better noise output with lower filament voltage, but it has greater thermal inertia, or



NOISE GENERATOR WITH TYPE 15E TUBE

If a type 5722 noise diode is used in place of the type 15E, the only circuit change required—other than proper socket wiring—is the addition of a bypass, C_1 , from the center tap of the filament to ground. All other constants and connections are the same.

R_1 - 52 ohm, 1 watt carbon resistor
 R_2 - 750 ohm, 25 w. rheostat, Ohmite Model "H"

R_3 - Shunt resistor for meter, I, to provide 0 - 2 ma. range, 80 ohms for 200 uA, Model 301 Weston.

I - 0-200 uA, Model 301 Weston

T_1 - 117 v.s.c. pri. to 6.3 v., c.t.

L_1 - 6T, #18, 3/16" i.d., air-wound

L_2 - 30T, #18 on 3/8 poly form with iron core, 1/2" x 1"

L_3 - 5T, #8, 3/8" i.d., air-wound, tapped 2 to 3 turns from ground

Sw - S. p. s. t.

C_1 - 500 or 1000 mmfd. ceramic or other effective v.h.f. bypass

C_2 - 10 mmfd. air trimmer condenser

"lag" than the 5722 has, however, and care must be exercised in setting the filament control.

With reference to the tuning capacitor in the plate circuit, it is advisable to mount it so that it may be tuned for each receiver and for other

frequencies of measurement. Results do vary with frequency because of differences in receiver characteristics and inconsistent techniques of measurement. Great care should be taken in making measurements so as to avoid errors introduced by one's own inconsistencies of technique.

Some comment has been made regarding the importance of the network in the filament leads of the noise generator. We assure that it is necessary; if you doubt this, remove one or more of the slugs from the low-frequency coils and note the change in output! A very important consideration in the construction of the r.f. section of the noise generator is the use of heavy, short leads and a common ground point for by-pass condensers.

Using the circuits shown, it was found that the maximum noise output was far in excess of normal requirements, with either the 5722 or the 15E tube.

The noise generator, as we constructed it, has its power supply built in its cabinet. The circuit for the power supply is now shown, since it is conventional, and also because most fellows have their own ideas, anyway, or at least have a suitable supply already available in the shack. One word of caution, however: avoid the use of power supplies having one output terminal common to the 110 v.a.c. line!! Don't take a chance with such devices!

Turning now to the subject of the length of the coaxial line used between the noise generator and the receiver under test, we used one only 6 inches long in our tests. However, RG-8/U in 10-ft. lengths was tried with only a slight change in noise figure, probably due to a small degree of mismatch of the converter input to a 50-ohm source. The loss in this type of cable, at this frequency, for such a short length is difficult to measure. Long leads may be used for comparison checks between receivers if the input circuit is matched to 50 ohms, or if the receiver under test is at least peaked up in its input stage when

the noise-generator cable is connected.

The table, below, shows typical data for the 15E and 5722 noise diodes when producing a 3 db increase in noise output for the two receivers tested.

TUBE TYPE	FIL. Ef	B+ Ip	RECEIVER SECTION
15E	1.16	0.12	Cascade
15E	1.70	1.40	ARC-1
5722	2.50	0.12	Cascade
5722	3.20	1.40	ARC-1

As engineers have stated, and we will agree, we cannot vouch for the accuracy of this device in determining exact noise figures. We believe that the circuit will serve its purpose well in the ham shack when receiver designing or testing is in the process, and will show up the effect of any changes.

Comments from other noise-generator experimenters are invited, especially in regard to the use of standard equations for noise figure obtained from a noise generator using an impedance matching circuit, such as shown.

References: "Electronics", July, '48; "QST", Sept., '47 and Aug., '49; "Proceedings" IRE, March., '47 and July '44; "The VHF News", Feb., Mar., April, '50; "Tele-Tech", May, '50.

* * *

Bigger and Better Hamfest!

THE STARVED-ROCK RADIO CLUB - W9MKS
Sunday, June 4, 1950, 10:00 AM.

Same place as last year, Camp Ki-Shau Wau. Follow "Hamfest" signs south of junction of Illinois routes 178 and 71, near Starved Rock State Park. If you travel route 51, turn east at Tonica; follow the black-top road.

New games, contests and entertainment for all. Mobiles: keep an accurate log of your contacts. Be prepared to show your equipment. Registration: \$1 per person before May 25; \$1.50 at the gate. Write to W9MKS.

15TH ANNUAL INTERNATIONAL PEACE-PARK HAMFEST, CANADA

On July 14, 15, 16, the 15th Annual Glacier-Waterton International Peace Park Hamfest will be held at Waterton Lakes Park, Alberta, Canada. Glacier Eagle will be there. Write, now, to J.J. Dobry, VE6DR, for information.

IN AND AROUND CHICAGO . . .

The Chicago Area Radio Club Council will hold a VHF Hamfest on Friday, June 16, at the Ohio Street Naval Armory, just north of Navy Pier, at 8 PM. Plenty of parking space will be set aside for the v.h.f. gang. The program will include demonstrations of v.h.f. transmitters and receivers, short talks and discussions, and a 2 meter mobile f.m. demonstration. The affair is designed for, and aimed at the low-frequency operator who has little accurate knowledge of what can and has been done on v.h.f. Accordingly, every v.h.f. man within reasonable travelling distance should attend and "spread the word" to the l.f. boys, expected to attend by the 100s!

A scattering of DX was enjoyed during the month by W9NW, GEM, EQC, BEU (yep, he's back on) TKL, TGI, DPF, when W9MAL, Peoria, HGE, Beloit, AFT, TQ, BTI and LJV, Wisconsin, came thru in fine shape during the month. Congratulations to W9HKQ and HDB, who handled emergency traffic when wire services were out during the April floods! Surprises of the month: the return to 2 by W9DXX, W9BEU, W9HGE, W9ZNJ, W9GGH and W9GDZ. Did we miss anyone? Surely was good to hear some of the good "backbone" calls, again. TGI KJU DRN VX KFK HXS "420-420-420". W9MAL, W8WJC, W2GUM, W3HNG, visitors; W8CP, Muskegon, in town, too.

The FM Net, 147.5, grown: W9LLX, ZYF, NFK active; W9CEW, RAY, LLZ and others about ready. SXJ interested. FB QSOs.

CGR on 420; NFK flooded; RTY 522 out with blown bypass in tight spot. BAD faithful. PNV spasmodic. CEW, grid-dip meter, 220, 6 and some 2. SAK is on 147.6, Franklin Park. KCW tunes the band, high, as does W9FXB, PMW, CEW, EQC, RHL to catch the 147.5 FM.

No Midwest VHF Club Picnic, this year. Let's go to Turkey Run, July 30!

Activity now at the point where we can't track it all down. How about Chicago area reporter? Help!

O' happy-day item: W9WFC reportedly ready to move to own home in River Grove, and will be back on Two.

W9EQC preparing for 250 watts out to new beam. Stations within 50 miles: short your antenna-input stage!!

TWO METERS, LAST MONTH.....(Cont'd)
contacts with VE3LU BOW W8DUL W3OYK
W2UTH W4JDN W8YEG W9UCH and W9EGH.

W7JRG now has company on 2 in Sheridan, Wyo. W7LLP has a new VHF-152A and a 522. Thus, on May 2, the first 2-meter contact for both was had. In the past, Ken worked crossband, 2 to 6 or 10 with the locals! And many of us think we have "no activity"! Congratulations to W7JRG and LLP!

As for the VHF-152A, W7JRG says, "Please extend my sincere thanks to W0SSG and W0VOF for a simple and very effective cure for unstable tuning in the VHF-152A, 'The VHF News' p 18 February, 1950. The two-meter band now tunes as smoothly as 6 or 10!"

W5DFU, Tulsa, Oklahoma, says that pickings are still slim on 2-meters. Warren states that the band would be crowded if all the "promised" activity were to occur. W5CUE, however, is now on 2 at Durham, Okla. W5CVW and DFU still hold schedules at 1830 and 2200, when both are home. Plans are being made at DFU to put up a 4 element beam in place of the 48-element, lower job. The idea being that 4-elements, high in the air, are better than 48 behind a tree!

W8WXV, Al Burson, now has a 12-element array which shows up about 9 db better than a folded dipole at 45 ft. height. Al says he is now convinced that Aurora exists on 2. He and W3RUE find that 2 shows Aurora at the same time it appears on 10. WXV has observed at least 6 Aurora openings, this spring. Most of the openings have arrived at about midnight, according to Al, who says that W3RUE is always on the ball with c.w. W8WXV thinks that a whole new way of working 2-meter dx is coming up, with the shift in sun-spot cycle. Al is aiming for Texas; is Texas aiming for him?

Thanks to Ken Myers, W8WRN, for the nice words in "Carascope", published by the Columbus Amateur Radio Association. Thanks to W2PAJ, VHF Editor, "CQ" Magazine for his comment. Brownie has some v.h.f. surprises coming! By the way, whatever became of Ferrell's findings on 2-meter polarization?

W5JTI now has a pair of 4-125As on 2 with 500 watts input. A new 24-el-

ement array is practically in the air. Tim was joined on 2, recently, by W5KTH who has 250 watts. Jackson now boasts 2 stations on 2! W5NYH pumps 250 watts into his p.p. 826s.

W5IRP, now in Houston, enjoyed the April 18th opening. Along with W5FSC and FEK, IRP worked W5ONS, Victoria. W5VY, San Antonio, over 200 miles, was 20 db over 9 at IRP. Wilmer also worked W5s FEK KFY and ON, Houston, W5QIO and DSB, Beaumont, about 300 miles. W5VY runs 800 watts to p.p. 4-125As. W5FBT, Baytown, W5AXY, Austin and W5CNH, Port Arthur, got in on the opening, too.

W5MKP, Baton Rouge, heard W5FEK and IRP, Houston, on May 2, but couldn't raise them. MKP is looking for some signals from Alabama, Georgia or Florida, but hasn't heard any, yet. Rad says, in reply to our editorial note in last issue, that receivers were reasonably well matched to the parasitic antennas described.

"The Faithful Few On Two" nomination list continues to grow. W5NYH, W5JTI, W8EKI join W4JDN W8ZUR W8BFQ W8WJC W9TKL W9NW W9HXS W9IWE W9CGR W9CAW, W9VX W9KJU W9EXQ W9EQC W9GDM W9MGP W9UCH W0DVV W0LRW W0ANQ W4HEK. "The Faithful Few On Two" nomination should be made in all seriousness. It is not for the two-meter operator who shows up for contests, or when the band is open. It's for the fellows who live 2-meters, winter or summer.

Now that improved conditions will produce changes in the DK Scoreboard, it's a good time to send your up-to-date total to Mel Mendelsohn, W9OBW, 4644 W. Adams St., Chicago, Ill.

SIX METERS

W7FGG is active in Tucson, W7LEF will be, after moving. W7CNX is rebuilding to p.p. 826s. FGG has new 4-over-4 beam. Baton Rouge and Plaquemine, La., are represented on 6 by W5HEZ and W5ACY, according to W5MKP. W1HDQ says the band is in the "in-between" period, awaiting Es. (May 11?) W5DFU says, "It's been so long since I heard a 6-meter signal, I wouldn't recognize one if it did show up!" W9QKM, W9HGE W9ZHL and W9ZHB are most active stations in the middle west. How about the Minneapolis gang?

W5CVW REPORTS FROM FT. WORTH TEXAS.

Welcome to the ranks of Amateur Radio, our old friend and critic, Sid Stout, now W5RHW and his fine 144 Mc. transmitter! Expect the right-handed wizard on VHF any day, now. Sid has 16 elements, vertical, but promises to switch 'em over to horizontal if Certain Parties can prove certain points, etc. Certain Parties will try!

Another newcomer to hamdom: W5RIR, name of Willie; hind-end of Handle is Hassell. As soon as he scorches the paint on the 10-meter rig, will convert him to Two. (Just heard that the paint is not only scorched, but badly peeled!)

Via the grapevine, and from W5AJG's visit, I find that Texas is going to horizontal in the Gulf-Coast, San Antonio, Ft. Worth and Dallas areas. It is also interesting to note that many of the low-powered transmitters have been changed to the 150 to 300 watt class. This, I believe, will result in better signals and consistency of contacts, dx-wise.

In Oil City, La., Art Bates, W5ML, has been on 144 Mc. all winter and has worked W5JTI, Jackson, Mississippi, some 25 times in the past two months, W5FSC, Houston, and has gotten into Baton Rouge during the past month. These QSOs are all 240 miles or better, somethin' for these here parts! (These hyar parts, too! Ed.) Art reports 12 stations in Shreveport and 3 in Texarkana. The gulf-coast stations have a card from ol' W5CVW advising them that Cowtown is gunning for dx with 400 watts and 16 elements. Active in Ft. Worth are W5LU SH REW and CVW. Our neighbors over at the big D (Dallas) have been sorta slow in getting back on, altho W5AJG is certain to be back, soon; W5ABN promises to be on, shortly. Hearin' is believin'!

The big rig at W5CVW has been on, nightly. Several checks have been made with W5AQN, Waxahachie, 40 miles, with extremely good results, even under very poor conditions. The 4-65As have been loaded up to 580 watts, and loaf along at 400 watts. The 522 drives the final, nicely. A considerable increase in drive occurs when the line between the 522

and the final is coaxial line rather than 300-ohm line. The power supply for the 522 delivers 400 volts and 250 mls. All stages are biased with 45 volts so that the oscillator may be keyed. The clamper tube in the final holds the 4-65A plate current to 60 mls when the excitation is off. The 522 has been operated with 400 v. for 2 years with only one breakdown, one screen bypass on the 832 tripler. The 832 final can be loaded safely to 70 mls at 400 v.; when driving the final, the 832 loading is 60 mls.

W5CVW is now flying in and out of the Washington, D.C. area, and hopes to meet some of the v.h.f. gang, there.

* * *
W4BYR REPORTS FROM FLORIDA . . .

Things are picking up on two, again, in Florida. The picture seems the best ever, with even more improvement indicated.

New stations are W4ZHS (ex-W8ZHS) in Tarpon Springs, W4CCC, Winter Haven, and W4COZ, Lake Wales. ZHS puts an excellent signal into Central Florida with his 829B; sounds like it has the IX thing in it. CCC and COZ are plagued with usual v.b.f. beginner troubles, but are getting squared away.

We are still looking for promised signals from GCR, Sarasota, IMF, Plant City, DQW, Cortez, and FZR and KM in Tampa. FQA, Bradenton, will get on as soon as he can shake broadcast station QRL.

EID, Jacksonville, is heard from, occasionally, but the love bug has taken hold. FWI, BI, VV and GZY, Homestead, seem to be holding up the Miami activity. Central Florida v.b.f. men hope for a consistent signal from Miami, now that BI has purchased FLH's 400-watt transmitter.

FPC, St. Petersburg, is back on with his usual good signal. AYX, Bayview, and GYO, Gainesville, are in the "once in a while" class, but good when they do get on. Not exactly like Chicago, yet, but one can make numerous 50 to 100 mile contacts in central Florida almost any night in the week, now.

* * *
W9MMV, BOB TER VEEN, RECOVERED. . .

After a 2-months illness, caused by an injury at work, W9MMV is about ready for action, again. FB, Bob!



"Audi alteram partem"
(Hear the other party; hear both sides.)

EDITED AND PUBLISHED BY:
BILL MC NATT, W9NFK
FRANKLIN PARK, ILL.

SUBSCRIPTION

\$2.00,

1 YEAR

We Need 'em, Fellows!!!

CIRCULATION: U.S.A., HAWAII,
ENGLAND AND HOLLAND.

W9NFK
THE
VHF
NEWS

Bill and Helen McNatt
2433 Elder Lane
Franklin Park, Illinois

WQMNQ REPORTS FROM KANSAS CITY, MO.

New stations on two in the Kansas City area are: W0HCZ, Ottawa, W0PYK and 8HQ, Lee Summit, Mo., W0NDS, Kansas City, W0TCQ, and W0LW of Edwardsville, Kansas. W0CXB, Belton, Mo., is reportedly on 160! Regulars W0DVV and DRW are still keeping the band hot, with W0DVV, chief of the local chapter of "The Faithful Few on Two" having made at least one contact on two everyday of this year; Ned is usually on from 2 to 4 hours each night. Other regulars are DDX 0NQ VRF VOF SSG and LFW, with intermittent operation by HNJ MZH JZN UVV QJE AE and BYS. W0TMJ, Odessa, Mo., gets on, every weekend. QXT and INI, both of Pleasant Hill, Mo., are active. Harry is preparing to quit his noisy location; the new home, on a high spot, is under construction.

W0DSR hasn't been too active because of illness, but Neil puts a signal into Kansas City whenever he gets on. DSR's 12 watts over the 125 mile path between Greenleaf and Kansas City gave the longest, consistent DX signal during the winter. Whenever Neil gets on, the subject of the QSO always turns to 420, and we hope to QSO on 2/3 meter before fall.

W0RNC, Jim Adams, St. Joseph, Mo., rejoined the army, and is now in Texas, so Jim won't be around for some time. His signal - like a local - will be missed by the gang.

The only casualty of the high winds in late April was W0DDK's City Slicker; it got tired and laid over, again. It still put out quite a wallop, even though the mast was tilted at about 60°! Vince Dawson, W0ZJB, has his rig rebuilt, and a new antenna ready to go up, but Vince hasn't been at home on a calm day. He has a VHF-152A which won't respond to the cure! Just all worn out from DX-hunting, for so long that the planetary drive and gears can't be trued-up.

The W0DDZ and W0MNQ 220Mc. activity is now at the contact stage, even though considerable haywire still exists. The receivers are ARR-1s, converted, but - after considering all the work and trouble, we think it would have been better to start from scratch! Others expected on, soon.

TWO METER TOPICS IN TEXAS

By: John N. Naff

We've not had any real 2 meter DX weather, yet. But, on March 25, at 10:30 PM, WFLA-FM, Tampa, Florida, was coming in like a local, so 6 must have been open, even though 2 was not affected. Seems as though an opening, to some degree, always occurs just before we have a change in weather. For instance, on Tuesday, April 18, Houston stations were heard and worked, and - a little later, W5VY, San Antonio, was worked. W5ONS, Victoria, was heard and some Austin stations came through, too. According to the weather map, a "norther" (wind from the north, to us Yankees. -Ed.) was forecast for the morning of the 20th; conditions on the 19th were not too good.

On April 15, 13 stations were heard in QSO at various times during the evening. W5DSB Q10 OZQ QJE QLL and SM, Beaumont, JBW, Maplewood, La., W5CNH BCF PJX, Port Arthur, and W5IRP FEK NZK, Houston, W5CNH, Port Arthur, worked W5VY, San Antonio, on the night of April 18. The band opened, late. W5VY runs around 800 w. on 2. W5IRP uses 2 4-element beams, 3/4-wave stacked, on horizontal. W5KWA is in his new home in Beaumont and is preparing to erect a 16-element beam. W5PJX, Port Arthur, was heard in Houston by W5FEK, who was unsuccessful in a QSO try.

W5JEW has an 829B final in his 522 and now gets out much better. W5MKP Baton Rouge, carries on a schedule with W5Q10, 8PM nightly. W5QFQ and MZL no heard lately. W5ON FSC and FEK, Houston, W5ABT, Baytown, heard regularly. W5NZK has a nice signal.

On Sunday, April 2, at about 2300PM 6 was found open, HC2OT coming thru a steady S9 plus. Many LUs were heard but signals were unsteady. W5DSB got HC2OT and an LU; Q10 also worked HC2OT and 2 LUs.

W5JEW and IYG also hooked HC2OT. W5FCD, Port Arthur, is working to get on 6 meters.

* * *

ATTENTION, V H F MEN!!
TURKEY RUN, INDIANA, SUNDAY, JULY 30!
The Wabash Valley Radio Club invites you to attend. Basket lunch. - W9ZHL

Quad ELECTRICAL SUPPLY, INC.

AMATEUR AND AIRCRAFT RADIO EQUIPMENT—X-RAY—MEDICAL, INDUSTRIAL AND SHOE FITTER SERVICE

TELEPHONE HOURS—DAILY 9 A. M. TO 5 P. M. 1650 N. DAMEN AVE.
AR MITAGE 6-8809 CHICAGO 47, ILL.

PE-865, 28v DC DYNAMOTOR FOR BC-347.
Output 240v 60 MA DC. Has filter in base. **BRAND NEW \$3.00**

PE-101C, 12 OR 24 VOLT DYNAMOTOR—NEW \$1.50
For BC-645. 24v DC input; 400v 135 MA, 800v 20 MA DC and 9v 12 Amp. 80-cycle AC, simultaneous output.

PE-94C, 24 VOLT DC DYNAMOTOR. NEW \$1.95
For SCR-522. 24v DC input; 300v 260 MA, 150v 10 MA and 14.5v 500 MA DC simultaneous output.

TRANSFORMERS

Sec. No. 1, 300v 100 MA. Cased 50c

Sec. No. 1, 6.3v 6/10 Amp.
Sec. No. 2, 6.3v 6.4 Amp. Cased \$1.50

Sec. No. 1, 720c CT 100 MA
Sec. No. 2, 6.3v 4 Amp.
Sec. No. 3, 5.0v 2 Amp. Cased \$2.00

Sec. No. 1, 250v DC 125 MA from filter.
Sec. No. 2, 6.3v 6.3 Amp.
Sec. No. 3, 5.0v 2 Amp. Cased \$2.25

Sec. No. 1, 630v CT 84 MA
Sec. No. 2, 6.3v 2.3 Amp.
Sec. No. 3, 5.0v 2 Amp. half-shell \$1.65

24 VOLT FILAMENT TRANSFORMER that will operate most surplus radio equipment; prop pitch motors, for rotating beams (after magnetic brake is removed), or for running model trains.

Primary: 100* volt 60 cycle AC
Sec. No. 1, 10.2 volt CT 5 Amp.
Sec. No. 2, 10.2 volt CT 10 Amp.

*With 117 volt line input, these secondaries become 12 volt CT, at full ratings. Tested and guaranteed. **BRAND NEW. CASED \$3.00**

8 Henry, 200 ohm, 105 MA,
Choke, open frame 59c

2500 MFD 3v GALVIN. BRAND NEW, 10 for \$1.75
Round metal can. Upright mounting, each 20c

.1 MFD 200v DC metal cased, paper tubular, AERVOX, 4c ea., 10 for 35c

1, 1, 3 and 5 MFD. 150v DC Common negative. Oil filled, metal cased, AERVOX 49c

CONDENSERS, OIL FILLED, METAL CASED... REDUCED

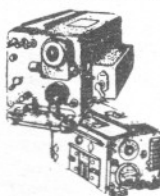
to Close Out. LIMITED SUPPLY.

MFD	VOLT	PRICE	MFD	VOLT	PRICE
2	5000 DC	\$1.00	4, 4	600 DC	.98
2	1000 DC	.79	4	600 DC	.59
6	600 DC	.98	2	600 DC	.29
5	660 AC	1.25	4.5	400 DC	.29

\$\$\$\$	TUBE SPECIALS	\$\$\$\$
6 for \$1.00	5 for \$1.00	4 for \$1.00
1629	211	6C4
954	1626	955
		VT-62

TERMS:All prices quoted are NET, FOB our warehouse, Chicago. All merchandise is subject to prior sale. 20% minimum deposit, balance COD. Add 2% f or a ll Illinois deliveries. PLEASE include sufficient postage and save at least 30¢ COD & MO .

SCR-283 RECEIVER TRANSMITTER SET



Includes 4 tube, 5 watt, CW-MCW-VOICE transmitter, 5 plug-in-coil sets, to cover 2.5 to 7.7 MC; control box; 24v DC dynamotor; antenna relay; 6 tube TRF receiver; control box; mounts, Tech Manual; less receiver coils. **BRAND NEW ea. \$20**

BC-429, Above receiver, less coil, USED \$3.95
BC-430, Above transmitter, less coil, USED \$3.95

TRANSMITTER COILS — 2.5-3.2 4.0-5.0 5.0-6.2 6.2-7.7, each 75c
4-5 MC with 4495 KC crystal **\$1.50**

RECEIVER COILS — Single 2.5-4.7 each 75c
Dual, 200-400 KC and 2.5-4.7 **\$1.00**

BD-93, 24v DC DYNAMOTOR FOR SCR-283.
375v 150 MC DC output.
USED, excellent, ea. \$1.75

BC-231, CONTROL BOX FOR ABOVE RECEIVER
Has volume control, AUTO-OFF-MANUAL switch, jacks, receptacle, etc. Metal case 4"x3"x1 3/4". USED, excellent, each 39c
10 for **\$3.50**

BC-232, CONTROL FOR ABOVE TRANSMITTER.
Has VOICE-CM-TONE selector switch, test key, jacks, receptacle, etc. Metal case 4"x3"x1 3/4". USED, excellent, 39c
10 for **\$3.50**

BC-334, JACK BOX, BRAND NEW 45c
Has RADIO-INTERPHONE switch jacks, etc. Metal case 4"x3"x1 3/4". USED, excellent, ea. 25c
10 for **\$2.25**

MC-135, REMOTE CONTROL for Dual Plug-In-Coil sets, HIGH-LOW, USED, excellent 65c

Tach Shaft connects above to dual coil set. 51" with splines, nuts, and ferrules. USED, soiled, very good. Each **\$1.00**

MC-124, REMOTE CONTROL CABLE (Tach Shaft).
Fits MC-125 and BC-429 receiver. Also fits ARB receivers, and all MDF and ADF installations (RA-10, ARN-7, SCR-269, MN-26). **BRAND NEW 240" \$3.50**
340" **\$4.00**

66" USED, soiled **\$1.00**
Plugs to fit SCR-283, USED, good, choice **35c**

THE VHF NEWS

Bill McNatt, W9NFK
2433 ELDER LANE
FRANKLIN PARK, ILL.



MR. KEN MYERS
W8WRN
2623 Beulah Road,
COLUMBUS, II
OHIO

POSTMASTER: If addressee has moved, notify sender on Form 3547, postage for which is guaranteed.