



N.E.W.S. LETTER



The Publication of the North East Weak Signal Group

JANUARY 1996

VOLUME FOUR

ISSUE ONE

President: N2LIV Bruce Wood
Vice President: WZ1V Ron Klimas

CURRENT OFFICERS

Secretary: N1LZC Mark Casey
Treasurer: NC1I Frank Potts

NEXT MEETINGS

**JAN. 6, MAR. 16, MAY 25, JULY 13, AUG. 24,25 MEETING WITH CONFERENCE AND NOV. 9.
THE NEXT MEETING IN JANUARY IS AT 1:00 PM AT THE QUALITY INN, VERNON, CT.
WE WILL HAVE A SURPRISE GUEST SPEAKER TALK ABOUT SETTING UP AN ALL OUT STATION.**

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SILENT KEY

I sadly report that on December 1, 1995, Ed Bristol, W1RJA became a silent key at age 64, passing suddenly from a heart attack while in his sleep. Active on 6, 2, 222 and 432, Ed had a commanding signal from his FN31 Connecticut QTH for over 30 years. A staunch supporter of the North East Weak Signal group from its inception, he had just been elected to its Executive Board of Directors and looked forward to serving.

Ed is survived by xyl Rae Bristol K1LXD, whom as you may recall, was registration chairperson of our recent Eastern VHF/UHF Conference. Her address is 328 Mark Drive, Coventry, CT 06238 if you'd like to send a note of consolement.

Ed was a beloved friend and fellow VHF'er with whom I looked forward to sharing many more years of band openings with. I'm sure he'll be missed by all.

Ron Klimas, WZ1V

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1996 - HERE COMES THE NEWS ... GROUP

by Bruce Wood, N2LIV

1995 was an exciting year for our club with continued growth in club membership, technical programs, equipment show and tells and many new projects developed by our membership. Again, we were co-sponsors of the highly successful Northeast VHF/UHF Conference. As one of the premier VHF/UHF and Microwave groups in the country, I am privileged to serve as your president. I know many of you personally and look forward to meeting more of you, both in person and on the air.

I was first licensed in 1966 at the age of 14 with the call sign WB2YZV. In 1990 I changed this call to N2LIV to simplify the phonetics. I currently hold a General class license and am active from home on 50-1296 Mhz and 2304 and 10 GHz portable. I look forward to further portable microwave work in 1996 adding in both 3 & 5 GHz. This year was truly exciting, operating the 10 GHz contest after 1 year of equipment building.

In early December I was shocked to learn of the unexpected passing of Ed Bristol, W1RJA. Only several weeks earlier I had lunch with him and his wife Rae, K1LXD, at our November NEWS group meeting. His presence and mountaintop signal will be missed. Ed and Rae have been active in both the Northeast Conference and the NEWS group. Rae, we offer you our sincere condolences and support as needed.

In our November 1995 meeting several important items were discussed: The membership voted to approve and support publication of 6 newsletters rather than 4 and to hold 6 club meetings in lieu of 4. One of the 6 club meetings will be a short session at the Northeast VHF/UHF Conference.

Also, the W1TKZ Club, active on Mt. Equinox in the June VHF Contest has affiliated with our club and is soliticiting manpower and equipment to help their group grow. Similarly, the board discussed the recent affiliation of the W2SZ Mt. Greylock Expeditionary Force with our club. The W2SZ group is also looking for additional operator support in multiple contests and more so our remembrance to work them on all bands possible, especially in the June contest. See Dick Frey, WA2AAU on this matter.

The January meeting will present an introduction to the new equipment available for our lower four VHF bands, 50-144-220-432 MHz.

Looking forward to good weather and seeing everyone for our January meeting. If you haven't renewed your membership please see Mark, N1LZC our new club secretary. Don't forget to operate the 1996 January VHF Sweepstakes on January 20, 21 & 22 and submit your score as part of the NEWS GROUP no matter how large or small.

Bruce Wood, N2LIV

W1ORS

1996--50TH ANNIVERSARY YEAR--1995

W1ORS the Statford A.R.C. will operatat from 1700Z, 10 Feb. 1996 to 2400Z, 16 Feb. 1996 to commemorate the 50th Anniversary of the Club. Operation will be in the lower 25kHz of the General Calss SSB and CW portions of: 80, 40, 20, 15, and 6 Meters SSB plus 160 and RTTY frequencies.

For a Certificate, send a 9X12 SASE and QSL to:

May Blakley, WA1EHK
17 Coram Road 4F
Shelton, CT. 06484

In additon to the above frequencies, we intend to provide coverage on 2 meter SSB, 1 1/4 meter and 70 cm SSB Bands.

Frank Merkler, WA2TJR

SECRETARY'S REPORT November 11, 1995

Fred Stefanick, N1DPM our out going president, opened the meeting at approximatly 1:30 PM.

Scott Sminkey, WO1G, was introduced and presented our group an invitation from the W1TKZ testers, to join them for the June VHF contest on Mt. Equinox. Several N.E.W.S. members expressed interest and anyone wanting to help out Scott and the W1TKZ group should contact him directly.

Bruce Wood, N2LIV was next and exhibited transverters and modified power modules for 222 and 432 MHz. from Down East Microwave.

Nominations and elections were next, and the following slate was nominated and elected unanimously,

President: Bruce Wood, N2LIV	Vice President: Ron Klimas, WZ1V	Secretary, Mark Casey, N1LZC
Treasurer, Frank Potts, NC1I	Director, Ed Bristol, W1RJA	Director, Hank Lopez, N2MSS

Ron Klimas, WZ1V, gave a short history of our group and went over some of the financial aspects. Ron proposed an increase to from four to six newsletters per year. This was passed by a majority vote. Ron also proposed an increase in regular meetings to five, with an additional approximate one hour meeting at the VHF conference, for a total of six meetings yearly. This was also passed by a majority vote.

Del Schier, KD1DU volunteered to take over the job of editing the newsletter starting with the next issue.

Stan Hilinski, KA1ZE, was our main speaker for the afternoon. Stan brought in tables full of equipment and spoke on the basics of transverters, amplifiers, mixers, filters and everything that goes with putting together VHF to microwave stations both at home, and mobile as Stan is noted for.

Respectfully submitted. Mark Casey, N1LZC Secretary.

VHF PLUS WEEKLY CALENDER

MONDAY:

7PM TO ? 2 METER ACTIVITY NIGHT.....	144.200 USB
7:30 PACKRATS NET 50.150	
7:30 NORTH EAST 10GHz OPERATORS INFORMAL ROUNDTABLE..	144.125
8:00 PACKRATS NET.....	144.150
8:30 PACKRATS NET.....	222.125
9:00 PACKRATS NET.....	432.110
9:00 VHF/UHF OPERATORS NET.....	3.843 MHz +-
9:30 PACKRATS NET.....	1296.100
10:00 PACKRATS NET.....	903.100

TUESDAY:

8PM TO ? 222 MHz ACTIVITY NIGHT.....	222.100
8:30 DX'ERS UNLIMITED C02KK, Radio Havana Cuba	6.0, 9.820, 9.830 MHz

WEDNESDAY:

9PM TO ? 432 MHz ACTIVITY NIGHT.....	432.100, 432.150
9PM EASTERN VE'S 2 METER NET (VA3IKE) FN14,15.....	144.225

THURSDAY:

10PM TO ? 1296 MHz ACTIVITY NIGHT.....	1296.100
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FRIDAY:

9PM TO ? 903 MHz ACTIVITY NIGHT.....	903.100
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SATURDAY:

8:30PM,10:30,12:30AM DX'ERS UNLIMITED, C02KK Radio Havana	6.0, 9.820, 9.830
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SUNDAY:

10:30AM, K2SMN's SUNDAY MORNING VHF DX NET.....	144.250 USB
9:00AM TO 2:00PM 432 AND ABOVE THEN 2 METER EME NETS.....	14.345 USB

AN INVITATION FROM W2SZ/1 By Dick Frey WA2AAU

As many of you know, W2SZ/1 is the callsign used by the group of VHF contesters that has been using Mt. Greylock for the last 20 years. Actually, W2SZ callsign belongs to the RPI Radio Club and RPI is an engineering school in Troy, New York. Many of us VHF contesters are alumni of the school, but over the years, many others have joined the crew. There is no formal organization to our VHF contest group. Instead we are a group of hams united by VHF contesting from Mt Greylock and we are very **SERIOUS** about doing just as well as we possibly can during each contest.

The purpose of this column is to invite any member of the North East Weak Signal Group to join us! The only requirement is that you be seriously interested. Virtually any type of skill you may have even remotely related to Ham Radio is needed and will be appreciated! Obviously good operators who really know the VHF bands can contribute substantially to our effort. Although we have several members that really immerse themselves in operating, we don't have enough people with that special interest to make a well rounded team that can keep the station clicking along in top notch form for the whole contest. Some of us would like to get some more sleep!

Unlike many contest groups, we **BUILD** most of our equipment. Except for the HF transceivers used as the starting point of our stations, virtually **ALL** of the remaining parts of our stations are custom made. We make all our own transverters, power amplifiers, and antennas. By making the equipment ourselves, we try to make it just a bit better than anything that can be purchased. We can also make it so that it fits our operation just the way we want. This approach stems from the engineering background that many of us have from being graduates of RPI. Even so, much of the building is done by individuals good with their hands, not the "egghead" engineers. Just because you can design something doesn't mean you can build it well! We need **DESINGERS** and **BUILDERS**.

Setting up a VHF station the size of W2SZ/1 in about a day and a half takes a lot of people with a lot of skill. We put up a total of 9 steel Rohn-25 towers ranging from 30 to 60 feet in height. They are used as follows: 6M, 2M, FM, 222, 432, 903/1296, 2/3/5G, 2/3/5G Ext, and 10/24 G. Each of these towers has good size antennas on it too! For example, on 6 Meters we use 4 beams with 5 elements on 21' booms. On 2 Meters we use 4 DL6WU style yagis each 32' long. All this stuff has to come down on Monday too. Clearly, we need all the help we can get! Please Come!

Just the logistics for our operation take a lot of effort. We use 3 aluminum "step-van" style trucks for our operating positions. We also bring an additional window van, 2 tower trailers and 1 antenna trailer. All these vehicles must be kept in running condition. Do we have any professional or amateur mechanics interested in joining the group?? We must do most of our own repairs. It would be too expensive otherwise. Our utilities team has the responsibility to set up power, telephone and computer systems for the contest. They must also organize, prepare, repair, and maintain the systems before the contest. These folks are run ragged and could really use some help too.

I hope I've convinced you that you, too, could have a place at W2SZ/1. If you decide to participate, I will promise you that you will have to work your butt off, that you will get little sleep, that you will have to work in the rain, that you will be wearing ski clothing in June, that the Black Flies will eat you alive, that you will be putting up antennas in a screaming gale, that you will be frustrated, that you will be yelled at, and that conditions will stink. **BUT** you will also experience the satisfaction of working with a team where everyone is trying their damndest to do the very best that they can. There will be some absolutely beautiful sunny days and spectacular sunsets. There will be a nice warm lodge on the mountain top to sleep in. There will be a resturaunt for bountiful breakfasts and dinners, regardless of the weather. There will be days when you enjoy a beautiful warm summer day on the summit when your friends are cooking and sweatin in the humid 90s in the valley. There will be days when you can see 130 miles into the Adirondaks. There will be days when you see the inversion on the horizon. There will be days when we will work Florida on 1296 with 1 Watt. There will be days when 6 meters opens and you work Europe. There will be days when the night sky is so clear you never saw so many stars. There will be many weekends when we win the contest (we hope). There will be some weekends when we loose.... boooooo hissssss. There will be days when we set a new all time record for VHF contests. But most of all you will enjoy the comraderie of a crew that enjoys doing something they love to do the very best that they can.

Come Join Us

Next Issue — Some words about rovers.

Contact: Dick Frey, WA2AAU, 7262 Skyline Drive, Delanson, NY 12053 EMail: frey@crd.ge.com Repeaters: Schenectady 224.06 and Mt Greylock 224.10 I will be attending the January NEWS meeting.

PS: W2SZ operates from FN22 during the January Contest mostly as a training exercise. We set up at a hilltop observatory just west of Schenectady, NY. Everyone is welcome to join us there too!

ON THE BANDS: by Ron Klimas, WZ1V, FN31mp

A BIG Tropo opening Oct.23-24 just missed my last columns' cutoff date! Started w/ KF4AMB FM16 at 2325Z, then WD4IXD EL98 and W4EMB EL95 on 144. Indeed, by morning I had at least 2 dozen Florida stations alone in my log on either 144, 222, or 432, as did KD1DU and W1RJA, also FN31. Plus numerous GA, SC and AL Qsos. Best 144 dx for me was KE4NJM EL94 (FL Keys) at 1270 miles, who was running 160w to a pair of 17 el yagis. Had exciting 432 qsos w/ N4TAE EM90, WD4IXD EL98, N0KBH & WA4CHA EL88. New grids on 222 w/ NI4Z EL98 and WB4JEM EL89. Most exciting to me, though was KP4XS EM84 on 903 and 1296 and NA4I EM83 on 1296! Love it!

WB2VVV FN21 felt he was on the extreme west edge of the duct, but still managed to work KA4VXT EL98 on 144. WA1MBA FN32 also felt he was on the edge of the duct but worked W4OXA EM93 and N4TAE + W5HUQ EM90!

KP4XS EM84 was on again in the morning working as far north as FN32, FN42, FN43 on 432. Ken worked KM1X FN41 who had just a 2m beam and WP4O FN41 who was using a 440 vertical! KM1H FN42 worked KE4NJM EL94 (1365 mi.) and was heard by CO2OJ on 144! WB4NPH EL98 worked AA2UK FM29, WA2LTM FN20, WZ20 + N2GHR FN30 on 1296! AA2UK FM29 also worked WB4JEM EL89 on 1296! These are super contacts!

Mini-tropo opening Thursday night Oct. 26. KD1DU FN31 and myself worked KR4QO FM03, KD4JRX FM14, KD4JOB FM15, and KP4XS EM84 on 2m. KD1DU also worked KP4XS on 432. What a terrific month!

November 18 we had 6m Es to Florida. The Leonids meteor shower peaked this day, but my only 2m random was with KP4XS EM84. Nov.21 I ran a sked w/ VE2/SM0DFP FN35 on 903 & 1296 where his 50w to single loopers made 519 QSOs and new grids for both of us. 6m Es to W0's the same day. Nov 24 brought more 6m Es to Louisiana. KD1DU FN31 and I checked into VA3IKE's Wed night 9pm 144.225 net Nov. 30 UTC where we found new stations in the FN15 area on 2m & 432: VA3MWK and VE3CIQ. Decent Es opening on 6 meters Dec. 4 early evening to FL, GA, and AL.

Jim N1HOV FN53 now has 160w on 2m & 100w on 432 in addition to his KW on 6. He's running big yagis up 90 feet from his coastal Maine QTH. Lou NB2T FN30 had great success this past year running 10w QRP on 2m: 10 new grids and 1 new state (FL at 1100 mi.), plus QRP awards in both the January and June contests from his NYC/LI section. Congrats, Lou! Del KD1DU FN31fh has a new 80' tower sporting 4 home brew FO-12's on 2m w/a KW out and elevation rotation. Del has been working out to EN80&90 grids on almost any night. Yours truly WZ1V has nearly completed a new 2w mast-mounted 2304 station w/ LNA to 52 el. at 65' to be QRV in January.

Happy Holidays to all. See you at our January 6 meeting, and on the bands in the January Contest! Please Send reports of DX or Expeditions to me, Ron Klimas, 458 Allentown Rd., Bristol, CT 06010 or call 860-589-0528 if you have something you'd like to share about an unusual contact, etc., or if you just want a sked to check things out. Looking for lots of Ham/Engineering software or tech info?

-try our landline BBS at 860-768-4758 (14400,8,N,1 weeknites/weekends).

-or our NEW Internet Webpage at <http://uhavax.hartford.edu/newsvhf>

-73, Ron WZ1V, internet email: klimas@uhavax.hartford.edu

NEWS VHF'ers on Internet database project

Do you have E-mail capability? I'd like to start a database to help us all stay in touch. I already have hundreds of VHF'ers email addresses in my little black book, how about adding yours? Send me a short note, with your call, grid, and bands active to my address below. Proposed useage: a point and click mailto directory on our Webpage, and supplementary e-mail distribution of our NEWSletters to members, to name a few. By VHF'er I mean anyone on 50 MHz or higher, NEWS-member or not. We'll make a hardcopy list available at our meetings.

-Ron WZ1V, internet email: klimas@uhavax.hartford.edu

W1RIL 2W - 10 GHZ AMPLIFIER

The availability of the Microelectronics Technology Inc. Ku band power amplifiers on the surplus market has resulted in a gold mine of parts for 10 Ghz operators. This white box not only contains 1 or 2 watt (sometimes 1 and 2) Imfet devices but also the Vdd and Vg power supplies needed to run them. The 2 watt device makes an ideal "afterburner" for the 1 watt Qualcomm strip available from the West coast.² The box is massive and makes an ideal heat sink for the unit.

Two internal amplifier boxes, complete with covers, contain ceramic substrate gold microstrip. This stuff is so small it requires a jeweler's loop to even see it. Modifying this gold microstrip is not a task to be undertaken on the Amateur workbench! I decided to strip the box, save the screws and other useful parts and make a new board to fit the box - one that I could see, at least partially, without the aid of the jeweler's loop. See FIGURE 3.

The new board is mounted in a cut down section of the original amplifier box the cut end of which has been fitted with a new brass plate made from .060 stock. A brass carrier cut to the size and shape of the board is fashioned from .032 sheet stock. The board and carrier are screwed down to the box bottom using 0-80 ss cap screws previously removed from the box. Before this is done however the original device landings in the bottom of the box are removed by milling flush with the rest of the box bottom. You will find that many of the 0-80 screw holes are already in the box bottom. It might be a good idea to leave the hole locations off the board and carrier and custom fit the holes to the box as some boxes may have different hole locations than others. The new hole locations can be added as required.

A schematic of the amplifier is shown in FIGURE 1. A few comments about the RFC's are in order. These are .005 - .006 mil lines. Attempting to get these on the board by etching is an almost impossible task. Strip the insulation from a short length of #20 - #22 Teflon coated stranded wire. Remove 1 strand of the silver plated wire from the twisted bundle and stretch it slightly to straighten. Solder to the 50 ohm lines and to resistors R1 and R2 keeping the wires straight and flush with the surface of the board. Also solder these lines to the apex end of the quarter circle bypass / decoupling capacitors. These capacitors have a radius of .207 and have smooth edges. (despite what my computer shows!)

Tuning the amplifier is done by adding stripline pieces - see FIGURE 4. The grey areas on the 50 ohm line were added to tune the amplifier for maximum output into a 50 ohm load. Please note the step in the line at the device input. This is actually a taper (my computer won't do that either!) The line is tapered to the width of the device input gate. Taper the line from .046 to .022 over 1/2 the distance from the RFC to the device input.

The amplifier gives the following results:

+28 dBm (640mw) input = +33.4 dBm (2.2w) output

Vdd = 7.48 @ 720 ma. Vg = -1.28

I would like to thank Bruce, N2LIV for supplying the Tfe board for this project and Don, WB1FKF for figuring out the power supply capabilities. Without their help I'm sure this project would not have come to fruition.

1 Ken Schofield, 21 Forestdale Rd., Paxton, MA. 01612 Tel. 508-757-3966

2 C.L. Houghton, San Diego Microwave Group

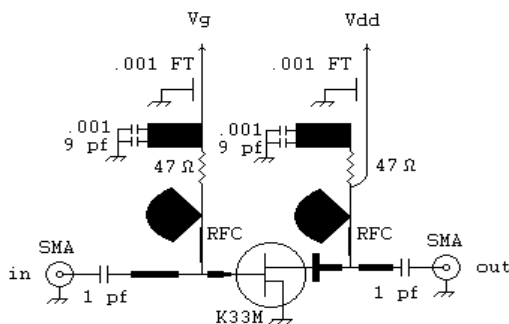


Figure 1:
Schematic Diagram of 2 watt 10Ghz
W1RIL Amplifier using K33M Imfet.

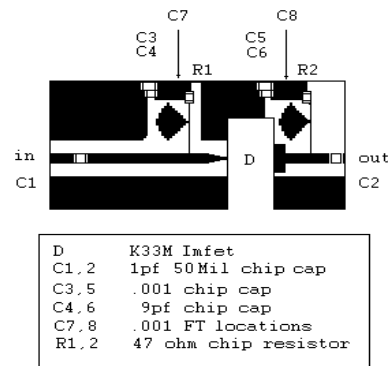


Figure 2:
Parts Layout of 2watt 10Ghz
W1RIL Amplifier

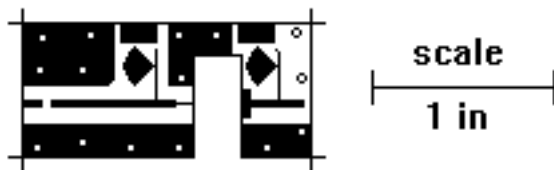


Figure 3:
W1RIL Circuit board to fit modified Microelectronics
Tech Inc. amplifier strip. Approximately to scale.
Mtl: Rogers 5880 Duroid, .015 mil.
er 2.2 50 ohm line = .046 wide.



Figure 4:
Circuit board after tuning.
Stubs shown in grey.

7 ELEMENTS ON A 24 FOOT BOOM FOR SIX BY RON KLIMAS WZ1V

This is what I use on 6 meters, a design passed onto me by W1JR many years ago. An older design, but still delivers nearly 10 dBi and about 25 dB front to back, about the most you can get out of a 24 foot boom. I've had mine up for nearly 10 years. Andy W1AJR EN91 copied it from me a few years back and swears by it. Me too. What's so special about it? It's a low Q design. Here's a sweep:

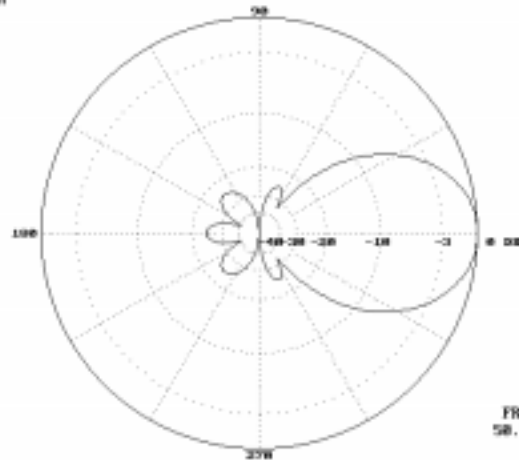
FREQ (mHz)	GAIN (dBi)	F/B (dB)	IMPEDANCE (ohms)	VSWR
49.800	11.92	36.99	26.45-j5.37	1.30
49.900	11.98	30.67	26.16-j3.16	1.20
50.000	12.03	26.83	25.91-j.86	1.10
50.100	12.08	24.12	25.73+j1.52	1.00
50.200	12.13	22.03	25.62+j4.00	1.10
50.300	12.17	20.33	25.61+j6.57	1.22
50.400	12.21	18.90	25.72+j9.23	1.35
50.500	12.24	17.66	25.97+j11.97	1.50

The Normalized Radiation Resistance at 50.100 mHz is = 25.8 Ohms

What's the advantage of low Q? Ease of matching, large SWR bandwidth, good wet/ice weather performance, and better immunity to detuning from nearby objects (such as other antennas). All parasitic elements are 3/4" x .058 wall seamless aluminum tubing, and are mounted across the boom with U-bolts, Cushcraft-style. I cheated and used the driven element assembly / beta-match from an old Hy-Gain 64BS, but have shown how this can be closely approximated using common materials. The PVC insulating tube is the 5/8" OD hot/cold plumbing type. It's actual ID ent assembly is 15/32" so should make a snug fit with the 7/16 driven element. You need just 3", cross-slitted a half inch on both ends with a hacksaw, so you can tighten down on the split driven element tubes with hose clamps. Do the same for the driven element transition ends. A single 8-32 screw goes through the boom and PVC to support the beta tube above the boom via a threaded-on-both-ends 1" 8-32 standoff. Place long solder lugs above and below the boom for soldering the braids of the feedline and balun coaxes (F- and B-'s in the drawing). The top screw should be tightened enough to slightly crush the beta tube against the top of the standoff. (You may want to bench-grind a radius into the standoff, to saddle one side of the beta tube).

E-FLAME PLOT OF 7 EL YAGI
FILE: 7ELAGI

NORMALIZED AT 12.00 DBI

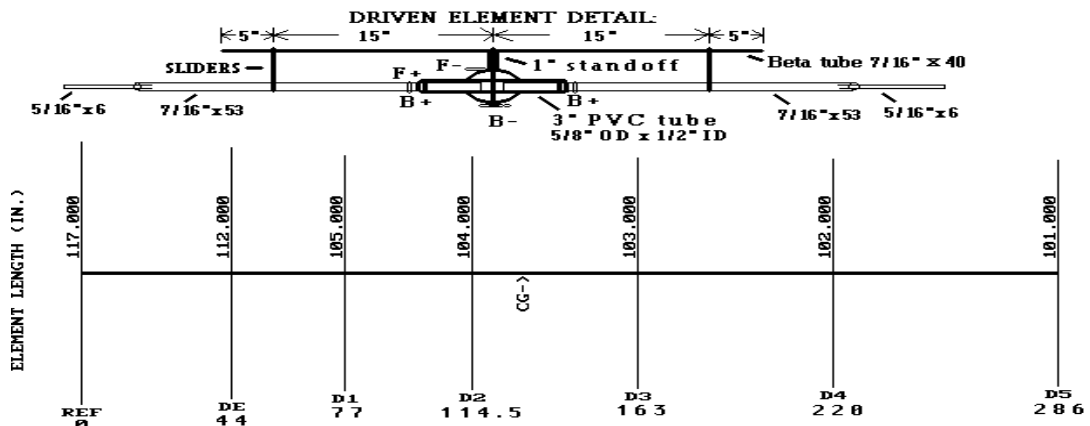


W6VHX 3.0 BY 84UX

FREQUENCY
50.000 MHz
12-04-1995

The driven element tubes should be backed out 3/8" from hitting the screw. The balun is 79.5" (including 1" pigtailed on both ends) of 66% VF RG-213. The balun and feedline center conductors (B+ and F+) attach to the driven element tubes with hose clamps 1/8" away from the PVC tube ends. Coil the balun and tie-wrap it

to the boom behind the driven element. I used Coax-Seal to seal where the pigtailed exit the body of the coax. I used 6061 .058 tubing for the boom, 1 3/4 in the middle, tapering to 1 1/2



then 1 1/4 on the ends, and used 5 feet of 1 5/8" .058 tubing to double wall the middle. It has been self-supporting without failure for over 10 years. I'll leave the design of the sliders up to you. You can use flattened tubing or aluminum bar stock. Keep in mind that the beta tube is the primary support mechanism for the driven element, though. The driven element length adjusts from about 106 - 116". Adjust this first for minimum SWR, then null the SWR further with the sliders. The Dillsburg Aeroplane Works, 114 Sawmill Rd., Dillsburg, Pa 17019 (717)-432-4589 is a great source for aluminum tubing / rod. GL on 6 meters, and contact me if you need further details.

-73, Ron WZ1V, internet email: klimas@uhavax.hartford.edu.

FOR SALE OR SWAP

Custom tuned 902-903 MHz 4 section bandpass Rx filters. These are miniature TOKO helical resonators (2x2 in cascade), intended for installation after your preamp. Specs: -5dB I.L. 902-910, -20 dB @ 890, -35 dB @ 880, -45 dB @ 870, etc. \$15 ea. PPD with sweep and hookup data from Ron Klimas WZ1V 458 Allentown Rd., Bristol CT 06010.

Microwave Modules Transverter MMT144-28R Silver faced deluxe model 2 meter 20 watts \$200

Microwave Modules Transverter MMT 50-28R Silver faced deluxe model 50 MHz 20 watts \$250

Microwave Modules Transverter MMT 144-28 Receive OK but xmit dead \$70

Tokyo High Power 2 meter to HF transverter (thats right) 5w in 20 w out \$250

Marc Casey, N1LZC (413) 566-2445

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Model	Freq.(MHz)	Gain(dB)	NF(dB)	Low Noise Preamps:		Technology	Price
				IP2(dBm)	IP3(dBm)		
RX055	50-60	28	<0.8	30	16	Bipolar	\$35.00
RX144	144-148	28	<0.8	30	16	Bipolar	\$35.00
RX144LN	144-148	25	<0.4	45	20	GaAsFET	\$65.00
RX220	220-230	23	<0.4	40	20	GaAsFET	\$65.00
RX440	420-450	18	<0.45	40	20	GaAsFET	\$65.00
HRX144	144-148	25	<0.2	30	15	HEMT (*)	CALL
HRX440	420-450	20	<0.2	30	15	HEMT (*)	CALL
RX1296	1285-1315	16	<0.2	25	16	HEMT (*)	CALL

Gain, IP2 and IP3 values are typical; NF is guaranteed. Data for items marked (*) are preliminary. The RX1296 will be available by late December, 1995; the HRX144 and HRX440 will be available by Spring, 1996.

Preamps come standard with BNC connectors; For N connectors, add \$5.00; For UHF, add \$3.00

PIN-Diode T/R Switches:

We are also proud to offer a line of VHF/UHF, High-Power, Ultra-Fast, High-Isolation, Low Insertion-Loss, RF-Sensed, PIN-Diode switches designed for use in split transmit/receive, preamp bypass, and preamp bypass/power amplifier insert applications.

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1996 JANUARY VHF SWEEPSTAKES

Once again that time of year is quickly sneaking up on us. The 1996 January VHF Sweepstakes this year will be held on the weekend of the 20th and the 21st. This is the only operating event that includes club competition for a VHF contest.

For the past two years the N.E.W.S. Group has been a major participant in this competition. Although we are not a contest club, we do enjoy our hobby and this give us the opportunity to get on and work all of our friends near and far on the bands and modes we love best. During our first year we placed first in the club competition in the medium category with a score of 1,395,826, and 32 entries. This also placed us second overall, and only shy of the top spot by less than 32,000 points. Not too bad for the new kids on the block. Last year we placed second in the medium category, and third place overall, with 31 entries counting towards our effort last year. This year the new scoring rules for the rovers are in. This won't make much of a difference with our score, but it should help equalize the resultant score for the effort required by those brave, dedicated, (crazy) individuals that travel to activate the rare needed grids. Our membership now is approximately 150, and it would be nice to see us up the number of entries over the last two years. After all, the part of the hobby that ultimately attracted us was communication. After all that building, fixing, connecting, and ugh, buying of that equipment, let's get on and use it!!

Activity hours for the upper bands are 8 AM and 8 PM for 222 MHz, 9 AM and 9 PM for 432 MHz, and 10 AM and 10 PM for 903 and 1296.

Hope to hear everyone on in the contest this year on what ever bands you have. Fred, N1DPM

North East Weak Signal Group

**c/o KD1DU
Del Schier
126 Old West Mountain Road
Ridgefield, Connecticut 06877**

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