



N.E.W.S. LETTER



The Publication of the North East Weak Signal Group

JULY 1998

VOLUME SIX

ISSUE FOUR

President: N2MSS Hank Lopez
Vice President: AF1T Dale Clement

CURRENT OFFICERS

Secretary: K1MAP Mark Casey
Treasurer: N1DPM Fred Stefanik

NEXT MEETING

THE NEXT MEETING IS ON JULY 18TH, 1:00 PM AT THE HARLEY INN
ALL ARE WELCOME TO THE DIRECTORS MEETING AT 11:00 AM

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N.E.W.S. GROUP NET EVERY THURSDAY 8:30 PM LOCAL 144.250

KD1DU NET CONTROL, WZ1V AND W1COT AS ALTERNATES
STARTS EAST THROUGH NORTH THEN SOUTH FOR DIRECTIONAL CHECKINS
THEN BACK AROUND AGAIN FOR COMMENTS AND GRID HUNTING

MEMBERSHIP in the N.E.W.S. Group is \$10 per year. Apply to Fred Stefanik, N1DPM, 50 Witheridge St., Feeding Hills, MA 01030 (413) 786-7943 You may download an application from our web page <http://uhavax.hartford.edu/~newsvhf>

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FROM THE PRESIDENT'S SHACK: **HANK LOPEZ, N2MSS**

The May meeting offered a great holiday weekend turnout. Some of the members, including myself, took a ride over to the Vernon, CT hamfest before the meeting; a pleasant little hamfest in the hills of Connecticut. Many thanks to the May speakers Stan, WA1ECF and Dennis, WA1HOG who presented on Electro Magnetic Compatibility (EMC). Both have first hand experience with this interference problem and shared a very interesting discussion with the group.

I hope everyone had fun during the ARRL VHF June contest. The wildcard band, six meters, opened up to the Maritimes and then later to the Southwest from my location. This was not only a great way to increase the multipliers, but also yielded 10 new grid squares to the collection. Hopefully these conditions will continue for the remainder of the summer and for the September contest. Let's not forget the UHF contest in August. What a great opportunity to enjoy and promote some activity on the microwave bands. Then in mid-August we have the 10 GHz and above contest where I look forward to once again operating in New England as in past years. I wonder if we will get any "guests" to the area from other parts of the country as the last couple of years - the more the better!

I had the opportunity to attend the Rochester, NY hamfest. This has been known to be a very popular hamfest for VHF+ goodies and was attended by some of our members. It looks like the Fall hamfest events are finally s-p-r-e-a-d OUT! Boxboro (Aug 28-30) the week after our conference, Packrats (Oct 3-4), and Rochester, NH (Oct. 9-10) to name just a few. It got just a little exhausting running to New Hampshire on Friday then Boxboro Saturday and Packrats on Sunday two years ago - hi.

Next month is our 24th Annual Eastern States VHF/UHF Conference that will be taking place in Enfield, CT, August 21-23, 1998. It is a great opportunity to attend some talks by some of the hard working pioneers of this aspect of the hobby and have your preamps, filters, antennas, etc. checked out with the test equipment available at the laboratory workshop and antenna range. Then cap it off with a great banquet with lots of door prizes and spend money on some goodies at the fleamarket.

Our July meeting will be the Show and Tell - Swap 'n' Shop outdoor meeting. Round up your gear, bring them down and show off your hard work! Bruce, N2LIV and Paul, W1GHZ (congratulations on the NEW call) plan to test complete 10 GHz rigs for system performance.

73, Hank - N2MSS

SECRETARY'S REPORT **NEWS MEETING MAY 23, 1998**

The May NEWS meeting was very well attended, even though it was Memorial Day weekend. 41 members and guests were present when President, Hank Lopez started the program at 1:20 PM. Hank noted that about 1/3 of our members attended the Hosstraders Hamfest. Dave Olean, K1WHS, reported on the Weak Signal Banquet held at Dayton.

Our next meeting will be July 18 and will be the annual Sun Noise Measurement & Microwave affair. This will be held in the back parking lot at the Harley Hotel in Enfield.

Rae Bristol, K1LXD, is in charge of planning for the proposed club logo. Anyone having suggestions should contact her. Our next meeting on July 18 is the target date for voting on the logo.

Ron, WZ1V, noted our second position to the newly formed PVRC, in the January contest. Ron is still working on a filter for the trans-atlantic beacon. W1RJA was finally received as the club call thanks to some hard work on Ron's part.

The VHF Conference will be held from August 21-23. Bruce Wood, N2LIV, and Stan Hilinski, KA1ZE, are coordinators for the event. A format similar to last year's will be followed, with 6 speakers and a continuously running lab room. Rae Bristol, K1LXD, is in charge of Registration. NEWS will be meeting late in the afternoon during the conference.

After a short break at 2 pm it was time for the first of our 2 speakers. Stan Laine, WA1ECF, spoke on Electromagnetic Compatibility. Stan presented an interesting program covering corrosion, lightning and grounding.

Dennis, WA1HOG was our second speaker. He spoke on Electromagnetic Interference. Dennis covered computer interference levels, source suppression, shielding, filtering and selection of components.

Another great meeting was adjourned at about 3:30, and the usual social time followed. See you all on July 18 in the parking lot, (inside if we have weather problems), for the annual Microwave Show and Tell. Please bring what you have — working or not!

Respectfully Submitted,
Mark Casey, K1MAP, Secretary

SECRETARY'S REPORT N.E.W.S. GROUP **BOARD MEETING 5/23/98**

The N.E.W.S. Board Meeting was called to order at 11:30 A.M. by Club President, Hank, N2MSS.

During Mention of Old Business, it was confirmed that the N.E.W.S. Group did in fact donate a door prize at the Dayton Hamvention Weak Signal Banquet. Dave, K1WHS, provided a 33 Element, 903 MHz. Directive Systems antenna and presented it at the Banquet on behalf of N.E.W.S. There had been miscommunication that the club did not do so, since there was no separate distinction made between Downeast Microwave and N.E.W.S. when the acknowledgment of thanks were made.

There were no plans for a club participation this year for June VHF Contest per Ron, WZ1V. Discussion was held on the matter of replying to QSL cards received from the club effort of the 1997 June contest. Ron, WZ1V, reported that the Potomac Valley Radio Club defeated the N.E.W.S. Group in the 1998 January VHF Contest. Normally an HF club, it received numerous participation to become eligible for the same category as N.E.W.S.

The correct date for the July meeting is 7/18/98. Bruce, N2LIV and Paul, W1GHZ are to coordinate the details for this Microwave/Homebrewers Show and Tell.

Plans for the Eastern VHF/UHF Conference are well underway. Bruce,

N2LIV, noted that conference material is now available (flyers, mailing list, speaker agenda, etc.) Nominations are needed for the Tom Kirby Award. Equipment is required for the lab demos and possible manufacturer demos might also be held. Zack, W1VT, is unable to conduct the Noise Figure Measurements this year and Fred, N1DPM to fill in if a new Door Prize volunteer is found.

The beacon is not on the air despite contrary reports, but Ron, WZ1V is to pursue.

A contest to be held for a new club logo. Entries are to be submitted and voted on at the July meeting.

The Board Meeting concluded at 12:05 P.M.

Respectfully Submitted,
Lili Lopez, N2RDN, for Mark Casey, K1MAP, Secretary

**24TH ANNUAL EASTERN VHF/UHF
CONFERENCE:
AUGUST 21, 22, & 23, 1998**

HARLEY HOTEL
1 BRIGHT MEADOW BLVD. (OFF RT.5) ENFIELD, CT 06082

8/21/98 FRIDAY LODGING

4:00pm 'til HOSPITALITY ROOM Socializing, Photo displays

8/22/98 SATURDAY REGISTRATION, FORMAL TALKS, LAB DEMONSTRATIONS & MUCH MORE.

8:00am Registration begins adjacent to Hospitality Room

8:40am TALKS, So far.....

AF1T Dale Clement 903 MHz Moonbounce
KD1DU Del Schier Computer DSP for weak signal
N1BWT Paul Wade Microwave Antennas
K1WHS Dave Olean 2304 Blowtorch
ND3F Brian Roving (tentative)
WA8WZG Tom Contesting & EME (tentative)

9:00am - 'til LAB DEMOS and Rx N.F. Measurements

12:00pm LUNCH

1:00pm TALKS RESUME

4:00pm N.E.W.S. Meeting

4:30pm Manufacturers Display

7:00pm BANQUET (7 PM - 8:30 PM)

8:20pm Tom Kirby Award

8:30pm VHF - MICROWAVE TRIVIA QUIZ

9:00pm DOOR PRIZE DRAWINGS EXTRAVAGANZA

8/23/98 SUNDAY

8:00am-noon VHF-SHF SWAPnSELL & ANTENNA GAIN MEASURING 222 & up courtesy of Joe Reisert, W1JR of AntennaCo
(bring your VHF-SHF goodies and antennas)

Notes:

We will also have a manufacturers presentation session at the end, please call for amateur radio mfgs./ distributors to contact me if interested. Need nominations for the Tom Kirby award.

Laboratory test session- bring test equipment and items to be tested.

Bruce N2LIV, bdwood@erols.com
1998 Eastern VHF/UHF Conference Chairman

**ON THE BANDS
BY RON KLIMAS WZ1V, FN31MP**

I didn't get to operate the June contest long enough to tell how conditions were around here, but viewing some of the results of many stations in the southwest and Midwest it looks like six meters must have been wide open the entire weekend there. Lots of stations worked a thousand(!) or more QSOs in 100+ grids on six meters alone. Imagine topping 250K with just one band! Even the Cuban multiop effort C02FRC managed to break 100K. Check the score listings elsewhere in this issue.

We've had a few good openings on six this summer. The weekend of Field Day was pretty good starting on June 27. W1CBI/VE1 was in all morning from GN05 and Don V31PC in EK56 (Belize) caught my attention right before the contest started. I managed to catch Europe June 28 to EH7AH and EH7KWIM67, plus CT1DNFIN54, CT4KQIN60, and CT4QPIM69. J79KVFK95 and VP5JML31 were easy pickings on the 29th, which also sported some really short Eskip on six: W1COT FN31 and myself enjoyed a meter-bending ragchew with Andy W8ANS in EN91.

We've also had a few "wet-noodle nights" on 2 meters and up. July 8th was a particularly good one extending at least as far north as K1TR in FN42 down to at least W4FSO in FM14. KN4SM FM16 was nearly pinning the S meter here on both 2 and 432, while WA2LTM FN20 was at least 30/S9 on 1296.

Everyone's picking up these new vanity call signs so fast that it's nearly impossible to keep up with who's who these days, but two notable ones I caught this past month are Paul W1GHZ (ex-N1BWT) in FN42, and John K1GUN (ex-KA1PE) in FN53.

Support your local activity nets: Roger K2SMN FN20 runs a Sunday morning net 10:30 A.M. EST on 144.250. And don't forget to check into our N.E.W.S. Group Thursday night net on 144.250 starting around 8:30 PM EST, KD1DU net control (WZ1V alt.) I'm done with night school for the rest of the summer, so I hope to check in a little more often myself.

OK gang, keep checking the bands and looking for those openings. See you at the July 18th outdoor N.E.W.S. meeting and on the bands!

Don't miss our gala VHF/UHF Conference August 21-22-23, And 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. Looking for Ham/Engineering software or tech info? -Try our Internet Webpage at <http://qsl.net/vhfnews> -or subscribe to our NEWS VHF E-mail Reflector at newsvhf@qth.net -by Emailing majordomo@qth.net with the message subscribe newsvhf -73 and good DX, Ron WZ1V, internet email: wz1v@ntplx.net -50 through 3456 MHz.

1998 ARRL JUNE VHF QSO PARTY RUMORED SCORES

Call	Grid	NEWS	Class	Total	6m	2m	222	432	903	1.2G	2.3G	3.4G	5.7G	10G	24G	LAS
AB4CR	ROVER	N	R	256824	?	?	?	?	?	?	?	?	?	?	?	?
W2FU	ROVER	N	R	174730	127/47	158/27	91/20	85/21	41/16	34/15	21/10	9/5	4/3	3/3	-	-
W3EKT	ROVER	N	R	146885	253/65	245/26	68/14	104/18	26/10	31/8	-	-	-	-	-	-
ND3F	ROVER	N	R	146376	?	?	?	?	?	?	?	?	?	?	?	?
N1MJD	ROVER	N	R	99440	291/34	180/23	81/15	92/15	12/5	17/7	-	-	-	-	-	-
KF9US	ROVER	N	R	68808	97/40	81/23	42/14	63/17	26/9	30/9	-	-	-	2/2	-	-
K7XC	ROVER	N	R	65727	123/33	214/29	25/7	108/22	-	-	-	-	-	-	-	-
KA2CKI	ROVER	N	R	59052	147/51	90/21	40/10	60/12	14/4	7/3	7/3	1/1	-	-	-	-
WB9SNR	ROVER	N	R	57152	39/18	73/17	43/14	52/14	29/8	33/10	8/2	7/1	7/1	8/1	-	-
N0KE	ROVER	N	R	37848	219/91	22/5	13/4	22/4	-	7/1	-	-	-	-	-	-
N1QVE	ROVER	N	R	35136	63/11	131/14	50/9	62/11	18/6	23/6	-	-	-	2/2	-	-
N3KKM	ROVER	N	R	10792	67/43	37/14	8/4	10/5	-	4/1	-	-	-	-	-	-
K7UV	ROVER	N	R	8052	13/58	9/4	-	-	-	-	-	-	-	-	-	-
KB0QGT	ROVER	N	R	7638	99/56	15/3	-	-	-	-	-	-	-	-	-	-
N5HHS	EM10	N	S	406896	1214/233	102/41	-	34/20	-	-	-	-	-	-	-	-
K1TEO	FN31	Y	S	385560	315/110	364/47	83/30	125/36	41/19	50/17	13/9	2/2	-	-	-	-
W5UWB	EL17	N	S	373520	1095/221	82/39	19/11	29/15	-	5/4	-	-	-	-	-	-
K9MK/5	EM12	N	S	315744	806/192	132/38	35/18	68/28	-	-	-	-	-	-	-	-
K1RZ	FM19	N	S	289044	399/127	230/36	60/22	89/27	23/14	37/19	10/7	-	-	-	-	-
K0GU	DN70	N	S	288008	1032/234	36/17	-	22/8	-	-	-	-	-	-	-	-
KE8FD	EM89	N	S	258718	261/107	176/55	65/35	92/41	24/18	37/21	-	-	-	-	-	-
WD5K	EM12	N	S	203942	953/214	-	-	-	-	-	-	-	-	-	-	-
N0LL	EM09	N	S	201318	638/213	49/25	10/10	19/16	-	3/3	-	-	-	-	-	-
KD1DU	FN31	Y	S	186032	186/51	336/42	69/26	88/25	17/7	30/13	10/6	-	-	10/6	-	-
K5AM	DM54	N	S	167580	683/203	22/15	7/4	8/6	-	-	-	-	-	-	-	-
WA5RT	EL49	N	S	148071	511/169	70/39	-	30/23	-	-	-	-	-	-	-	-
N5JHV	DM62	N	S	139314	642/209	9/5	-	-	-	-	-	-	-	-	-	-
W3SE	DM04	N	S	110544	264/86	155/22	53/14	79/14	-	23/11	-	-	-	-	-	-
N6HKF	DM14	N	S	97197	241/108	106/30	37/19	61/22	-	-	-	-	-	-	-	-
W2YX	EM20	N	S	96048	539/168	11/5	-	1/1	-	-	-	-	-	-	-	-
N8ZJN	EM79	N	S	87400	254/113	63/28	21/15	34/18	5/4	11/6	-	-	-	-	-	-
AF1T	FN43	Y	S	87216	167/64	132/23	46/15	51/16	16/8	17/5	5/4	-	-	5/3	-	-
K6KLY	CM87	N	S	83316	196/73	141/24	36/12	91/16	-	15/6	-	-	-	-	-	-
WB2VVV	FN21	Y	S	81135	103/39	176/28	46/23	49/21	16/10	16/8	6/4	1/1	-	2/1	-	-
AA7A	DM43	N	S	80152	279/130	88/24	-	39/14	-	7/4	-	-	-	-	-	-
N8UM	EM85	N	S	76773	144/73	129/44	28/17	53/20	5/4	7/5	-	-	-	-	-	-
N1MUW	FN32	Y	S	70104	245/67	120/23	34/16	49/16	-	7/5	-	-	-	-	-	-
K4RTS	FM08	N	S	67648	138/68	70/25	34/17	41/21	13/9	17/11	-	-	-	-	-	-
N5LZ	EL29	N	S	65065	409/121	46/22	-	-	-	-	-	-	-	-	-	-
KB0VUK	EN34	N	S	56364	199/109	67/22	15/8	35/15	-	-	-	-	-	-	-	-
K4ZOO	FM08	N	S	52934	193/79	60/20	28/14	31/16	-	9/4	-	-	-	-	-	-
K9AKS	DM04	N	S	50024	191/65	130/21	20/5	60/13	-	-	-	-	-	-	-	-
KC8AGW	EN90	N	S	45292	171/80	101/35	5/4	28/15	-	-	-	-	-	-	-	-
KC8CSD	EN81	N	S	37539	150/83	61/21	14/11	26/14	-	-	-	-	-	-	-	-
NO3I	EN90	N	S	36784	97/51	68/28	28/18	25/15	-	11/9	-	-	-	-	-	-
VE5UF	DO61	N	S	28782	235/106	11/11	-	-	-	-	-	-	-	-	-	-
WA1HOG	FN42	Y	S	26372	87/36	71/15	19/6	50/13	-	17/6	-	-	-	-	-	-
KQ6QW	DM04	N	S	23504	99/25	123/12	38/6	77/9	-	-	-	-	-	-	-	-
W1PM	FN41	N	S	21442	103/33	64/15	31/11	29/9	-	5/3	-	-	-	-	-	-
WA2ZFH	FN30	N	S	19215	48/21	78/16	13/4	48/13	-	19/9	-	-	-	-	-	-
W1COT	FN31	Y	S	12950	34/19	55/22	17/11	19/12	-	8/6	-	-	-	-	-	-
KA1ZE	FN01	Y	S	12320	56/35	98/45	-	-	-	-	-	-	-	-	-	-
KF6HAM	DM14	N	S	10176	57/35	56/19	-	23/10	-	-	-	-	-	-	-	-
WZ1V	FN31	Y	S	7644	11/9	24/14	18/11	20/11	4/2	8/5	-	-	-	-	-	-
KB1VC	FN42	Y	S	7434	53/17	62/14	-	31/11	-	-	-	-	-	-	-	-
KT1VT	FN34	N	S	6136	74/38	32/13	-	6/1	-	-	-	-	-	-	-	-
N1RWY	FN54	N	S	4836	21/10	59/14	2/2	20/13	-	-	-	-	-	-	-	-
WA3LTB	EN92	N	S	3708	-	103/36	-	-	-	-	-	-	-	-	-	-
VE3VRQ	FN13	N	S	3350	67/50	-	-	-	-	-	-	-	-	-	-	-
KB8JVH	EN80	N	S	2738	-	74/37	-	-	-	-	-	-	-	-	-	-
W1FIG	FN41	N	S	2698	20/15	23/13	-	14/10	-	-	-	-	-	-	-	-
KB2VGH	FN13	N	S	2600	24/11	32/9	-	15/2	1/1	1/1	-	-	-	1/1	-	1/1
W9JJ/1	FN31	N	S	2190	73/30	-	-	-	-	-	-	-	-	-	-	-
KF2XF	FN30	N	S	765	-	51/15	-	-	-	-	-	-	-	-	-	-

W5KFT	EM00	N L	630480	1363/245	207/66	31/15	72/29	-	-	-	-	-	-	-	-
W7XU	EN13	N L	474390	944/259	129/58	37/29	54/32	-	-	-	-	-	-	-	-
W0ZQ	EN34	N L	391040	792/227	200/46	43/20	72/27	-	-	-	-	-	-	-	-
W1XE/0	DN80	N L	369279	1066/239	85/27	21/12	38/13	-	-	-	-	-	-	-	-
K1TR	FN44	N L	243840	570/115	348/34	73/20	103/23	-	-	-	-	-	-	-	-
KV4I	EM85	N L	120156	410/155	115/32	12/6	20/11	-	-	-	-	-	-	-	-
N2JMH	FN13	N L	77480	176/74	132/35	42/18	64/22	-	-	-	-	-	-	-	-
K7XD/7	CN83	N L	61864	204/88	133/32	-	40/24	4/4	-	-	-	-	-	-	-
VE3TMG	EN82	N L	42780	165/83	104/29	-	38/12	-	-	-	-	-	-	-	-
KA1EKR	FN42	Y L	9366	-	79/17	27/10	36/12	-	6/3	-	-	-	-	-	-
W2SZ/1	FN32	N U	1187424	680/121	630/49	174/31	300/39	85/21	105/23	59/17	32/10	39/19	27/8	1/1	3/3
K3MQH	FM19	N U	997875	768/177	774/68	169/50	289/50	26/14	27/12	-	-	-	9/2	2/2	-
K8GP	FM08	N U	975540	762/199	477/64	124/42	219/53	31/20	52/28	15/9	8/5	3/3	2/2	1/1	-
K5IUA	EL29	N U	493171	996/203	165/57	30/15	74/31	8/6	14/9	8/4	8/4	-	-	-	-
W4IY	FM08	N U	466918	631/166	320/47	78/30	109/39	16/10	30/17	3/2	-	-	1/1	1/1	1/1
K2TVI	FN21	N U	337440	532/120	323/29	102/25	118/26	16/7	27/10	7/4	1/1	2/2	4/4	-	-
K1WHS	FN43	Y U	327565	585/131	258/34	56/22	97/24	19/12	29/14	10/7	1/1	-	-	-	-
NI6G	DM06	N U	94650	202/85	119/22	57/15	72/18	-	16/9	-	-	-	1/1	-	-
NN5DX/0	DM79	N U	59153	299/127	42/11	10/5	15/4	2/2	-	-	-	-	-	-	-
K8NNU	EN82	N U	47376	147/74	74/22	24/11	40/14	-	9/5	-	-	-	-	-	-
W1VT	FN33	Y Q	46314	61/14	108/19	60/16	75/15	9/6	16/7	5/3	2/1	21/1	2/1	2/1	-
W2TTT	FN30	N Q	45672	112/38	124/14	47/12	59/13	8/4	13/5	-	-	-	-	-	2/2
W7PW	DM09	N Q	1550	-	62/25	-	-	-	-	-	-	-	-	-	-

-comments on the scores page should go to reilly@tiac.net or post your score at: <http://www.tiac.net/users/reilly/junescores/html>

THE W1RJA BEACON IS ONCE AGAIN QRV

The beacon is now located at a commercial two-way site in West Greenwich, RI owned by Mick, W1JJM and Al, K1AST. This move was due to a mixing of the beacon with a component of the TV signal located in the same shack, creating a spur on a cellular telephone frequency. Fears of desensing a 2 meter repeater at the new site have not occurred.

There is another transmitter that has been donated for the beacon, and a prom is now being burned to program the transmit frequency. The beacon is being operated into a temporary antenna until the club's antenna and line is removed from the Westerly site. A tower crew is expected there soon and will remove the antenna and line for us. When first installed, the beacon was signing as WZ1V, as I forgot the W1RJA Eprom at the Westerly site. The beacon was off the air for a while on July 6th after the E-prom was changed, and the keyer failed to restart. The beacon is now signing as W1RJA/b and will be on for the remainder of the coastal tropo season.

73, Bob
K1RWK

LUCAS CLINOMETER SPECIAL

We have located a modest quantity of Lucas AccuStar Clinometers, used for digital measurement of tilt or elevation. The output is a pulse whose width is proportional to the tilt.

I've scanned a small part of the specs:

<http://www.qsl.net/n1bwt/lucas2.gif> & [lucas3.gif](http://www.qsl.net/n1bwt/lucas3.gif)

Special price for microwavers is \$25 each, plus \$5/order for USA shipping.

Email me for details if you are interested. wade@tiac.net
73 Paul W1GHZ (ex N1BWT)

A NEWS MEETING LOCAL ATTRACTION SIDE TRIP ZACK, W1VT

The New England Air Museum at Bradley Airport is a nice interesting side trip. It is open 10-5 daily (closed Thanksgiving and Christmas) I-91 exit 40 take Rt 20 to Route 75. At the intersection of Rt 20 and 75 there is a sign that says 2.8 miles to the airport. Take a left onto Perimeter road. Travel 1.5 miles around the fenced in area till you get to the stop sign. After another 0.3 miles the museum is on the right.

<http://www.neam.org/>

I enjoyed a visit there after one of our meetings! Del, KD1DU

HIGH SPEED CW METEOR SCATTER DEMONSTRATION

High speed cw meteor scatter is a propagation mode well known and used in Europe. In the US very few stations are familiar with this communication method afternoon to become active on HSMS again. A simple modification of a cassette recorder from K-Mart or Radio-Shack will do the job on receive. If you own a computer with a sound card you should consider using the FREE software available on the internet. For more information you can visit the following web site:
http://www.nitehawk.com/rasmit/ws1_15.html

Most of the software and information is available at this web side.

During the upcoming VHF UHF meeting Steve KO0U and I hope to set up a HSMS demonstration.

73 Maarten, W1FIG

NOTES ON THE YAESU FT-847 **STEVE POWLISHEN BY K1FO**

I recently purchased an FT-847. The main reason I bought it was to test amplifiers and thus avoid tearing my station apart all the time. I couldn't resist playing around with the FT-847 on the air. Here are my comments and notes:

The headphone audio volume is quite low. This low headphone level is easily fixed by removing (2) 2.2 ohm resistors (Thanks to DL5MEA). These are soldered to a small PCB on the headphone jack and appear to be an add on as they are tacked to the back of the board.

Power output on 70 cm varies up and down <46 watts to 55 watts, with 47 watts out at 432 MHz. The high end of the band seems to be favored in regards to power output. The power output seems quite sensitive to load impedance. When using the FT-847 to drive LA-series amplifiers significantly more power out could be had by tuning the LA input circuit for maximum SWR and not best SWR. Power output on HF, according to my Drake W7 is: 160M 5-93W, 80m 5-95W, 40m 5-90W, 20M 5-85W, 15M 5-80W, 10M:5-80W. On VHF where I have better power calibration 6M 5-93W, (Which leads me to believe that the Drake W7 is not accurate on 15 & 10M). 2M 42W at 144MHz and 50W at 148MHz. This is a disappointment as my TS-790A puts out 44 watts flat across the band. When the RF power is at minimum the FT-847 does appear to put out the traditional spike before the ALC takes hold to reduce power. Minimum power output is typically 5 watts after the ALC takes hold.

The 144 and 432 power amps use small "bricks" as drivers and discrete output devices! I want to thank Yaesu for setting up the FT-847 to have the same power output on all modes, SSB, CW and FM. Some other VHF multimodes have been a real pain because the CW & FM power output was considerably higher than on SSB which can cause problems when driving high power amplifiers.

The unit is just too small for me. The main tuning knob is too small, other knobs and buttons are too small and too close together. I'm sure that the size is good for portable operation but for a main home transceiver it's too small. I guess that small is in for ham radio. When touring the display case at Lentini there were all these petite radio's IC-821, FT-840, TS-570, even the FT-920 isn't that big. At the end of the display case there were two huge radios that I didn't recognize. Closer inspection revealed them to be CB transceivers! They were both bigger than the FT-1000MP next to them.

The FT-847 has two fans and they are just loud enough to be annoying. One of the fans speeds up on transmit. Give me a larger radio with bigger heat sinks that don't require noisy fans.

There is an apparent way to disable the break in CW mode. This is a major problem for using high power amplifiers and antenna preamplifiers. The only way that I can see to have a safe high power installation is to use a foot switch or PTT keying a sequencer. The sequencer would then switch the antenna relays, high power PA, FT-847 PTT and finally the key line from the paddle or external keyer to the FT-847.

Split operation is convenient for EME. Use VFOB (It's frequency will be on the 2nd display) for TX. In split mode it has its own (small) knob for changing frequency. For RX the main tuning knob VFO A are used.

When the FAST button is pushed it causes many unexpected effects in the operation of the FT-847. Its main function is to make the main tuning knob step at 10 times the normal rate (10 KHz instead of 1 KHz per revolution). In addition it causes the VFO CH (VFO channel) knob to step at twice its normal rate. Makes the MHz up down buttons to step at 10 MHz and it also has the same 10X multiplier for the SUB-TUNE knob. When in the 2X step mode (FAST) it will step based on whether you are tuned close to an odd or even frequency. That is if the step is 1 KHz, FAST is on and the frequency is 432.000.000 to 432.099.999 it will step 432.002, 432.004 etc. If the frequency was originally between 432.001.000 and 432.001.999 it will step 432.003, 432.005 etc. Tuning the VFO CH counter clockwise works similarly but it jumps 2 KHz below the closest full KHz. The FAST button also causes the BAND up down buttons to skip all HF bands except the last one you were on.

The FT-847 has a keyer, but it is not a memory keyer.

There is no separate clarifier readout nor is there a clear switch for the clarifier. I guess not enough panel space on the small box.

The synthesizer is very good. It is very clean, with no clicks or pops and so far no problems with phase noise on RX. It can step in 1 Hz steps giving 1 KHz per tuning knob rotation which is very convenient for EME and the use of narrow receive bandwidths when used in CW operation. Although I didn't perform any quantitative measurements, in strong signal testing on 432 MHz the phase noise was good with it only noticeable within 5 KHz of a 40 / S9 indicated signal (-68 dBm directly into the FT-847 with preamplifier on and the attenuator off).

The S meter was not very accurate on any band. S4 to S7 was 10 dB, S7 to S9 was 10 dB. S9 to 20/S9 was 10 dB and 20/S9 to 40/S9 was 10 dB (preamplifier on). On the VHF bands the receiver was into gain compression at 50/S9. On the HF bands with the preamp on the meter would read all the way to 60/S9.

Its AGC is reasonably good although really strong signals have some distortion, also there is no way to turn the AGC off.

The 432 MHz front end seems reasonably strong. It held up in the June VHF contest even with antenna preamplifier in line. The preamplifier has about 13dB gain on 432. Yaesu must be concerned about 432 MHz overload as the attenuator has 20dB of attenuation with the 432 preamp on but only 10 dB attenuation with the pre-amp off. Curiously on 144 MHz the attenuator has 5dB of loss with the 144 preamp on and 10dB with the preamp off, the opposite relationship as on 432 MHz. On HF and 50 MHz the attenuator has about 10-12 dB attenuation whether the preamplifier is on or off. The preamplifier has 10-13dB gain across the HF bands and 50 MHz.

The standard ceramic IF filters are marginal in bandwidth shape factor for serious HF or contest operator. When tuning around 75 or 20 m, it does sound wide. Unfortunately the optional Collins mechanical filters are very expensive (\$173.00 list each for SSB and CW filters). This must be where Yaesu makes its money (along with their very expensive (\$153.00) matching speaker).

The DSP has a very poor shape factor. In narrow CW bandwidths I can hear signals way off frequency. When adding a preamplifier in front of the FT-847 I can also hear front end noise bleeding through the DSP. Is this normal or a problem with my unit? The off center bandwidth rejection is less than 20 dB on my unit! Even EME signals are strong enough to "bleed" past the DSP filter.

Using it on EME without the optional CW IF filter was a problem as I like a low CW note (400 Hz). If the IF SHIFT control was adjusted to peak the pass band at 400 Hz, signals on both sides of zerobeat pass through the pass band, causing a signal to be heard in 2 places (USB and LSB signal). Add to this the poor DSP shape factor and it becomes apparent that serious CW operating requires the optional (and expensive) 500 Hz CW IF filter (the optional CW filter does fix these problems, see below).

The 25 Hz CW bandwidth on the DSP filter does not seem to be too narrow for 70 cm EME signals. It does appear to make the signals jump out of the noise. However, the above covered shape factor and pass band problems limit its effectiveness without the optional CW IF filter.

Once the Collins mechanical filters were added it was as if I purchased another new radio. The SSB receive audio was much improved, the sound almost reminded me of an old Collins S Line. Tuning around 20 M and 75 M SSB the improved shape factor was immediately obvious. The CW filter was a tremendous improvement. The leakage caused by the poor DSP shape factor was almost eliminated. Many thanks to Yaesu for gain compensating the filters. The CW filter actually has a couple less dB of insertion loss. I can only hope that the days of radios that appear to go dead when the CW filter is selected (due to their high insertion loss) are finally over! The CW filter changed the SHIFT position for best reception and eliminated the dual signal problem described above (that is hearing the desired signal on both sides of zerobeat). I would like it if Yaesu offered a 200 Hz mechanical filter. However I wish that Yaesu would use common filters among its transceivers. It looks like almost all of its current HF products and the 847 use different filters (The FT-1000 & FT-1000MP my use the same Collins CW filter).

There is a glitch in the AF (volume control). There is a significant jump in volume between 8 and 9 o'clock in position (a step function), There is reportedly a service bulletin giving a fix for this, but I didn't see it on Yaesu's web site.

The noise reduction seems to reduce HF static, but it does not do much of anything on UHF "white" noise.

One nice feature is that the FT-847 shifts TX frequency when switching to CW and keeps the RX frequency the same. This is very handy for VHF and UHF DX operation where one often switches between SSB and CW. If a CW signal is tuned in on SSB switching to CW changes the displayed frequency (reflecting the actual TX zerobeat frequency) and keeps the received CW note the same. Most Japanese transceivers shift RX frequency (keeping TX the same) causing one to have to re-tune the operating frequency when switching between SSB and CW.

The amplifier keying output is open collector transistors (24 VDC max.) on a 5 pin mini-DIN connector (mating plug is not supplied and hard to find). Wish they had made the transistor a 40 V unit to give some safety margin in switching 24V relays.

The IF shift control does not reverse its sense when switching between LSB and USB, making you move it back and forth when you switch bands.

The display is nice, large characters, easy on the eyes, although it loses contrast when you are looking up at the display, i.e. its on a shelf above the operating bench.

Overall the FT-847 has the feel and sound of a modern design transceiver. Comparing it to a IC-471H, the IC-471H feels very dated, with an obviously very poor synthesizer. Even the TS-790A feels dated compared to the FT-847. All and all the FT-847 is a nice transceiver and Yaesu should be commended for what it did right on the FT-847. It is by no means an all band panacea however. The FT-847 would be much better without its bugs and operating inconveniences. I'm usually never satisfied, so here is my wish list:

A bigger box with bigger knobs and buttons

A readout and clear switch for the clarifier.

A DSP with a good shape factor, ideally like the DSP in the TS-870S or have a 200 Hz IF CW filter available.

The ability to completely disable the break in CW mode.

A memory keyer with multiple memories (like the TS-870S)

Having a SHIFT control that doesn't pass signals on the wrong side of zerobeat and is digitally controlled so it doesn't have to be reset between USB, LSB and CW.

Either have a good SSB IF filter standard or sell the optional one at a reasonable price.

Power output of 80 to 100 watts on 70 CM.

All in all my wish list is pretty small. A few years ago a VHF/UHF multimode wish list would have filled a page. The FT-847 is a nice little radio. The trouble is what I really want is a TS-870S or FT-1000MP that covers 1.8 - 450 MHz (how about including 23 cm!) with 100 watts output all in one human sized box.

Continued.....See summary page 8

SYSTEM CHECKS ON 10 GHZ RIGS **NEXT NEWS MEETING**

1. Sun noise - connect the transverter output (144 or 432 MHz) to the sun noise indicator box, point the antenna at the sun, then at clear sky. The difference is an indicator of system receive performance. Low NF and good antenna gain will give a larger sun noise reading. Since the measurement is made at IF, we can do this for any microwave band, not just 10 GHz

2. Radiated transmit power - measure power coming out of the feedhorn. test 1. Above is an indication of whether the antenna works, this test measures how much power you have at the antenna.

These are the checks I do on my equipment before going mountaintopping.

So bring your complete rig along, including battery unless your power connectors match mine (Anderson Powerpole).

73
Paul W1GHZ

FT-847 REVIEW SUMMARY

WHAT YAESU DID RIGHT WITH THE FT-847

SSB Receive audio sounds great with Collins mechanical filter.

Covers MF-HF, 50, 144 & 430 MHz

CW filter has excellent gain compensation

Blue display looks great

Power output level is the same on SSB, CW and FM.

AGC Fast / Slow remembers association with mode

Separate preamplifier and attenuator switching with memory of selections on VHF bands and HF.

DSP filter bandwidth is very good.

CW keyer built in.

Fast / Slow Tuning selection button.

Pleasing front panel styling.

Separate amplifier switching circuits for HF and each VHF band with 24 VDC open collector rating.

Separate tuning knob for sub channel and split operation.

Excellent synthesizer, 1 Hz steps, no clicks pops etc. Has reasonably good dynamic range, sounds much more like a good HF radio than previous VHF multimodes, has a modern feel to it.

VHF bands have reasonable receive sensitivity and dynamic range.

Pretty red, green and orange lights on the front panel when in satellite mode.

WHAT NEEDS IMPROVEMENT ON THE FT-847

Collins filters are optional and incredibly over priced

No provision for adding bands such as 222 and 1296 MHz.

CW filter is over priced, is different than the filters in other Yaesu HF transceivers, a 250 Hz filter not available

No Clarifier readout

Power varies across VHF bands.

Can't disable CW break in. AGC Fast-Slow has no memory association with bands and (CW- SSB etc.) can't be turned off.

Only one attenuator selection that is 20 dB on 432, Pre-amp and attenuator selection have no memory association on different HF bands. Attenuator is 20/20dB on 432 5/10 dB on 2m (PA in/out).

DSP filter has VERY poor shape factor.

Keyer is not a memory keyer.

Sense is backwards, I would prefer it to default to fast and slow is selected. Also, fast button effects to many items such as band switching are effected simultaneously by the FAST button. Should be able to program what functions the FAST button changes.

The FT-847 is just too plain small for a home station, Give me a FT-920 size radio with coverage through 450 MHz (1300 MHz?) with good DSP and a memory keyer. Requiring external antenna tuners and memory keyers defeats any advantages the FT-847's small size has. The knobs are too small and close together.

Uses hard to find 5 pin mini DIN connector, not supplied with FT-847 Switching transistor should have 40 VDC rating for safety factor.

Knob is small, also used for clarifier, Can't operate split from memories like Kenwood radios, no clarifier clear button

Performance is more akin to a lower end to mid range HF radio, (i.e FT-840) no ability to add bands like 222 MHz or 1296 MHz like a FT-920 or FT-1000MP class xceiver that also covers 50-144 & 430 MHz with provision for adding 222 and 1296.

S-meter has very poor calibration. (at least on 432 MHz).

No provision for using 144 MHz as an IF for microwave band transverters nor is there any provision to use 28 MHz as an IF for transverters. No provision for using higher frequency satellite modes. Power output spike make using it with RF out at minimum a dangerous proposition.

FOR SALE OR SWAP

K1FO needs to clear out some excess equipment among the items for sale are:

Kenwood TS-850S, DRU-2 digital recording unit

International Radio 400 Hz filters for the Kenwood line 8.8 MHz and 455 kHz if's (TS-850, TS-940, TS-690 etc.)

Icom IC-271H

ETO 30-70 MHz single 8874 amplifier, RF deck presently disassembled for conversion to 2x8874

CDE HAM-3 and TR-44 rotors.

Call Steve at 203-421-3377.

Yesu FT-736R - 144 - 432 with 50 & 220 modules - 600 hz cw filter - mic - instruction book and original packing boxes - mint condition - no nicotine - asking \$1595 - pickup only - no shipping - W1RIL@juno.com - Tel 508-757-3966

JPS NIR10 Outboard DSP Best Offer

Original Rutland Arrays FO 144 - 12 12 Element K1FO Yagi. \$100

Cushcraft 20 Element Colinear Array Good Condition Best Offer

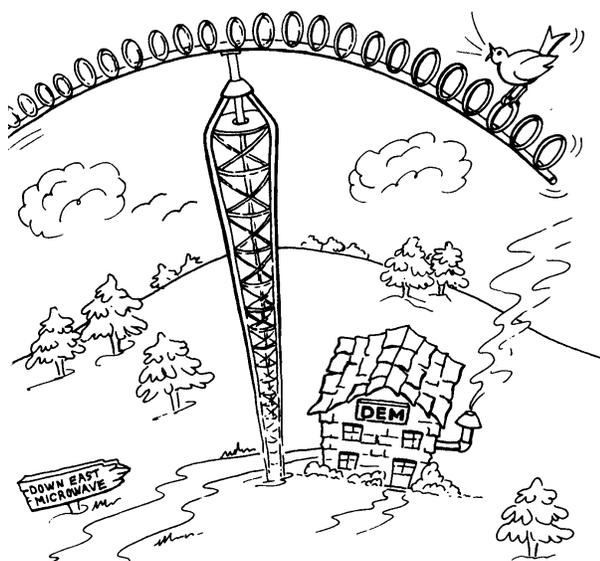
KLM 6M-7LD 7 element 20 foot boom light duty yagi. \$100

Contact Fred, N1DPM at 413-786-7943 or FREDDPM@JUNO.COM

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NEXT N.E.W.S. GROUP MEETING SATURDAY JULY 18TH AT THE HARLEY HOTEL

**OUR JULY MEETING WILL BE THE SHOW AND TELL - SWAP 'N' SHOP OUTDOOR MEETING.
ROUND UP YOUR GEAR, BRING THEM DOWN AND SHOW OFF YOUR HARD WORK!
BRUCE, N2LIV AND PAUL, W1GHZ (CONGRATULATIONS ON THE NEW CALL) PLAN TO TEST
COMPLETE 10 GHZ RIGS FOR SYSTEM PERFORMANCE.**

BOARD MEETING - From 11 AM to noon - open to all.

LUNCH BUFFET - At noon in the hotel restaurant.

MEETING - From 1 PM to 4 PM.

**Harley Hotel of Enfield, CT (FN31qx) (15 miles north of Hartford, I-91 to exit 49,
if Southbound left off exit - 1st right / if Northbound right off exit - 1st right).**

North East Weak Signal Group

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