NEXT MEETING
THE NEXT MEETING IS ON JANUARY 3RD, 1:00 PM AT THE HARLEY INN
ALL ARE WELCOME TO THE DIRECTORS MEETING AT 11:00 AM
TEST EQUIPMENT PRESENTATION BY PAUL SWEDBERG, WB8TSL

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FOR SALE OR SWAP

N.E.W.S. GROUP NET EVERY THURSDAY 8:30 PM LOCAL 144.250
KD1DU NET CONTROL, WZ1V ALTERNATE
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

The N.E.W.S. LETTER is the publication of the North East Weak Signal Group. Articles may be reprinted with proper credit given to the author and the N.E.W.S. LETTER. Articles can be sent to KD1DU, Del Schier, 126 Old West Mountain Road, Ridgefield, CT 06877 either hard copy, IBM compatible disk, via e-mail at KD1DU@amsat.org, or faxed to (203) 637-6773.
President Ron Klimas, WZ1V, opened the meeting at 1:30 PM. The first order of business was the election of officers. Hank Lopez, N2MSS, was nominated and elected as the new President of NEWS by a clear majority. John DeNardo, N1MUW was nominated and elected as a new board of directors member by a clear majority. Current Officers re-nominated and elected by clear majority are Vice President Dale Clement, AF1T, Treasurer Fred Stefanik, N1DPM, Secretary Mark Casey, K1MAP(ex-N1LZC). and Board Member Rae Bristol, K1LXD.

Ron explained the problem with the TransAtlantic Beacon as we had discussed at the earlier Board of Director’s meeting. The envelope was passed and Ron reported $140 toward the new beacon.

The next meeting date of Jan 3rd was approved.

It was voted to allot to Del, KD1DU, the slight additional funds, in order that he may have the Newsletter printed in his area, also having the printer do more of the chores involved in getting it out such as labeling, folding and stapling.

Ron proposed that the newsletter position be a voting officer's one. This was passed as a constitutional change. We now have 5 Officers and 4 Board of Director's Members.

Walt, WA2ALV, brought up the proposal of advertising the club in QEX, possibly along with other VHF+ Weak Signal clubs in the Northeast. K1MAP motioned that we allocate $52 for a 1/2 page advertisement, to be taken out at a time in the future to be decided by the Board. Our Treasurer, Fred, N1DPM, agreed that funds were available, and this was passed.

Art, W1TDS, proposed a tune-up night or two on 432 and up, before the January contest, and KD1DU will set up some dates for this.

Ron had several copies made of applicable contest rules and talked about this for a few minutes, so that there would be less confusion about rules for the Jan VHF event.

The floor was turned over to members who had brought show and tell projects and we heard from the following Amateurs:

AF1T, Dale, with a homebrew 10GHz transverter in a rugged case about the size of a mobile rig.

W1VT, Zack, with a self designed 10 watt small sized amplifier.

K2CBA, Judd, with a 10 GHZ dish and transceiver & tripod all built as one unit

KA1SUN, Eric, with a report of a successful GHz experiment with Pete, K2AEP, through the Hoosac Tunnel in North Adams, Mass., (5 Miles), on Wideband. The liason on 446 MHz simplex wouldn't work but 10 GHz was loud with only 20Mw!

WA1VH, Harry, with his 10 GHz, Transverter, also small enough for him to put in his coat pocket, climb the tower and operate with during the Sept. contest from near to top at 150+ feet above the ground!

KJ1K, Sigurd, brought N1FGY, Ed's, 10 Ghz transverter project in progress.

That was about it and the meeting went back to general social activity at about 3 PM. Everyone had a good time and the hall cleared at about 4 PM. 47 members were present at the meeting.

See you at our next meeting, Saturday, January 3rd, 1998 at 11AM for the Board and 1PM for the General Meeting, at the Harley Hotel, just off I-91 exit 49, Enfield, CT.

Mark Casey, K1MAP, Secretary
November 17 was a great day for 2M meteor scatter. Here’s excerpts of what some operators said about the Leonids meteor shower:

From: Bert - NS4W EM76 <ns4w@qsl.net> Wow, as of 1700z, 23 contacts 21 grids 12 NEW grids. I haven’t worked this many new grids since ’89.

From: “RayVeldran N4KWX FM08wf” <ravn4kwx @mnsinc.com>
One new state NEBRASKA & grid: K0SM EN10 - NICE 15 sec. burn!

From: W1LP@aol.com Good rocks from FN41 on Cape Cod. Many one minute “blue whizzers” All random contact except for KO9QS, and we completed in 3 minutes with a minute and 10 second burn. Best DX was W0SD at 1350 miles.

From: “Jason Baack N1RWY FN54no” <baack@maine.edu>
A reminder KB2ZVP FN22 runs a 6 Meter Net Tuesdays 7:30PM on 50.230. W2CCP FN32 runs a 2 Meter Net Tuesdays 8:00PM on 144.230. (KB2ZVP and W2CCP occasionally swap nets). Also, K0SM FN20 runs an excellent net at 10:30am Sunday morning on 144.230. KD1DU net control (WZ1V alternate).

From: “Roger W. Amidon, K2SMN FN20oj” <k2smn@dxcc.com> Leonids shower results at K2SMN (1200 watts, CC 18XL, FT726R):

<table>
<thead>
<tr>
<th>GMT</th>
<th>CALL</th>
<th>GRID</th>
<th>DISTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:25</td>
<td>16/11/97 KBOVUK</td>
<td>EN34</td>
<td>1177 miles</td>
</tr>
<tr>
<td>10:53</td>
<td>17/11/97 KE8FD EM89</td>
<td>795 miles</td>
<td></td>
</tr>
<tr>
<td>11:05</td>
<td>17/11/97 W9JN</td>
<td>EM54</td>
<td>982 miles</td>
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<td>11:07</td>
<td>17/11/97 K4KAE FM02</td>
<td>987 miles</td>
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<td>11:42</td>
<td>17/11/97 KBHZ EN75</td>
<td>782 miles</td>
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<tr>
<td>12:09</td>
<td>17/11/97 NS4W EM76</td>
<td>1002 miles</td>
<td></td>
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<tr>
<td>13:40</td>
<td>17/11/97 KF9WM EN70</td>
<td>858 miles</td>
<td></td>
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<tr>
<td>14:13</td>
<td>17/11/97 K4HE</td>
<td>EM96</td>
<td>836 miles</td>
</tr>
<tr>
<td>15:10</td>
<td>17/11/97 W9JX EM63</td>
<td>993 miles</td>
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</tr>
<tr>
<td>15:39</td>
<td>17/11/97 WSOUD EM79</td>
<td>888 miles</td>
<td></td>
</tr>
</tbody>
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From: Ron Klimas, W1LP <wz1v@connix.com> 50 through 3456 MHz.

In the club member spotlight this month, I’d like to report that John N1MUW in FN32 is now QRV on 6, 2, 222, 432, and 1296 with high power and a new 100 foot tower. Look for John in the January contest. In other news, Paul K1WVX has passed the 275th gridsquare milestone on his 6 Meter VUCC and is up to 38 countries.

The WA2UMX FN23xc 222 MHz beacon is on the air! Steve K0C5Y of Down East Microwave Inc. donated the 25 Watt 222 MHz PA kit to the cause, which I put together and married to their GLB exciter. The beacon was handed off at our last meeting to WA2ALV who delivered it to Jim WA2UMH, trustee of the 2 meter WA2UMX 144.290 beacon, who installed it at the same site. It runs continuously on 222.050 MHz with 30 Watts to a pair of Big Wheels at 80’ atop 1620’ ASL. Send WA2UMX/B reception reports To: mcknight@Capital.Net

In other club news, our W1RJA 2 meter beacon is temporarily QRT. The transmitter failed after just a few weeks of operation. Bob WA1ZPI has managed to repair it, but it can’t be put back on the air until we solve an intermod problem at the site. It seems that the beacon was generating a product in the Cell Phone band as a result of the 144.282 mixing with RF from the UHF TV transmitter at the site. Both Bob and I have been extremely busy, and unable to find time thus far to troubleshoot the site. We welcome anyone expert with RF intermod problems to lend us a hand, please. I’d like to thank everyone at the last N.E.W.S. club meeting for pitching in the dollars to help fund this project. Additional donations were received from K1CA and W3EP to offset the initial installation costs, and we presently have $140 available. You may contact either Bob or me via Email at lknott@wsbe.org or wz1v@connix.com if you’d like to help.

A reminder KB2ZVP FN22 runs a 6 Meter Net Tuesdays 7:30PM on 50.230. W2CCP FN32 runs a 2 Meter Net Tuesdays 8:00PM on 144.230. (KB2ZVP and W2CCP occasionally swap nets). Also, K2SMN FN20 runs an excellent net at 10:30am Sunday morning on 144.250. Don’t forget to check into our Thursday night net on 144.250 starting around 8:30pm local, KD1DU net control (WZ1V alternate).

Time to tune up for the upcoming January 17-19 VHF SS contest, remember, every improvement that helps you also helps our club compete better collectively. Let’s win the gavel again in ’98! See you at the January 3 meeting and on the bands!

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 new 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 happy holidays, Ron WZ1V
internet email: wz1v@connix.com 50 through 3456 MHz.
FROM THE PRESIDENT’S SHACK:

Happy New Year to all! I am looking forward to a great year for the North East Weak Signal Group. I am eager to work together with my fellow officers, Board of Directors, and the members of the club. Many thanks to all for their support in my election as President. I hope to exemplify and advance the N.E.W.S. Group in all aspects of the weak signal field of Amateur Radio. I would like to offer recognition to our past President in 1997, Ron Klimas - WZ1V. Ron’s duties went beyond the role of President and he deserves a very special thanks for all his efforts and achievements. I will look to him for his continuing assistance for the club.

I’d like to take this opportunity to offer some background on my radio experience. I have given various talks at many of the Hudson Division Club meetings, as well as the N.E.W.S. Group, and have had the honor to be invited to conduct the various Band Sessions at the Eastern VHF/UHF Conferences. In the past, I have acted as the Net Control Operator for an area radio club, participated in Field Day planning, and contributed articles for many club newsletters. In this month’s N.E.W.S. Letter, I am beginning my multi-part series of articles on one of my favorite subjects, Gel Cell Batteries. This month’s feature is a how to on buying Gel Cell batteries. As many of you know from working me, I am an avid VHF/UHF contester, and enjoy operating portable or roving throughout New England. I am active on 6 meters through 1296 and 10GHz portable.

To contact me through E-Mail, I can access n2mss@juno.com from almost any location I happen to be. I also have several other E-Mail accounts for different purposes as do many of you. If you ever need to send me an attached file, graphics, etc., please contact me at the juno account and I will forward you an address that will serve that purpose.

January spells C-Q C-O-N-T-E-S-T! It is once again time to gear up for the ARRL VHF Sweepstakes to be held the weekend of January 17-19. Your participation in this first contest of the new year is crucial since all scores submitted will be credited towards the N.E.W.S. Group. We must also not forget the importance of promoting activity on the bands. So get on the air, and send in your scores, be they great or small. For a complete run down on compliance with club participation, please refer to the President’s Column in the November N.E.W.S. Letter. I may be portable again for this contest. Last year was the first year I actually was concerned about frostbite, hi-hi. My job may take me back to New England that weekend, which means back to the Boston area with 10GHz. Fortunately, I gained lots of experience in that area during the 10GHz contest this past Fall. Remember to give the contest your best shot and support our N.E.W.S. Group club competition effort this January.

Hope the weather permits for a great turnout to the first meeting of the year on January 3. I look forward to seeing everyone there. Our featured speaker will be Paul, WB8TSL, who will talk about test equipment. I understand that he is very knowledgeable on this subject and anticipate a very informative presentation. Make sure to tell your friends about N.E.W.S. in ’98. One of my goals as President will be to increase the awareness of the club and encourage new members to our ever growing base. Please also remember to renew your membership, if you haven’t done so already.

73,
Hank - N2MSS
n2mss@juno.com

1998 N.E.W.S. VHF CALENDAR:

January 3, 1PM - 4PM 1998
N.E.W.S. Group Meeting
January 17-19, 1900Z - 0400Z
ARRL January VHF Sweepstakes
March 14, 1PM - 4PM
N.E.W.S. Group Meeting
April 13 (Mon), 7PM - 11PM
144-MHz Spring Sprint
April 21 (Tues), 7PM - 11PM
222-MHz Spring Sprint
April 22, 2100Z
Lyrids meteor shower
April 29 (Wed), 7PM -11PM
432-MHz Spring Sprint
May 9, any 5 consecutive hours from 6AM - 1PM
902/1296/2304-MHz Spring Sprint
May 16-17, 2300Z - 0300Z
50-MHz Spring Sprint
May 23, 1PM - 4PM
N.E.W.S. Group Meeting
June 13-15, 1800Z - 0300Z
ARRL June VHF QSO Party
July 11-1
CQ World-Wide VHF Contest, 1800Z - 2100Z
Internet 6 Meter DX Contest, 1800Z - 2400Z
July 19, 1PM - 5PM
N.E.W.S. Group Meeting
August 1-2, 1800Z - 1800Z
ARRL UHF Contest
August 12, 1540Z
Perseids meteor shower
August 15-16, 8AM - 8PM
ARRL 10-GHz Cumulative Contest
August 22-23
Eastern VHF-UHF Conference
September 12-14, 1800Z - 0300Z
ARRL September VHF QSO Party
September 19-20, 8AM-8PM
ARRL 10-GHz Cumulative Contest
November 7, 1PM - 4PM
N.E.W.S. Group Meeting
November 17, 1650Z
Leonids meteor shower

73 and happy holidays, Ron WZ1V
internet email: wz1v@connix.com 50 through 3456 MHz.
The foregoing plan was approved by majority vote at the NEWS meeting held on August 23, 1997. NEWS will be glad to consider changes and additions. The NEWS group is also looking for both input for and approval of, this plan, from the Mt. Airy VHF Radio Club and the Rochester VHF Group, and from other coordination bodies. The NEWS Group intends to continue the responsibility of updating and improving Bandplans and Frequency Coordination of 50 Mhz and higher Amateur Allocations, as had been the charge of the Northeast VHF Association, incorporated into NEWS in August, 1996.

73,
Mark Casey, K1MAP, (ex-N1LZC)
Secretary, Northeast Weak Signal Group (NEWS)
N.E.W.S. GROUP OFFICERS:

PRESIDENT: N2MSS, Hank Lopez, 34 Bell Lane, Tappan, NY 10983, FN31aa Email: n2mss@juno.com
Home: 914-359-6977 Work: 914-644-4771
ACTIVE ON: 6, 2, 222, 432, 903, 1296, 10 GHz.

VICE PRES: AF1T, Dale Clement, 2 Corbin Road, Henniker, NH 03242-3367, FN43
Home: 603-428-3840, Work: 603-627-7877
ACTIVE ON: 6, 2, 222, 432, 903, 1296, 2304, 3456, 5760, 10 GHz.

SECRETARY: K1MAP, Mark Casey, 303 Main Street, Hampden, MA. 01036, FN32 Email: map@map.com
Home: 413-566-2445
ACTIVE ON: 6, 2, 222, 432, 903, 1296, 2304, 3456, 5760, 10 GHz.

TREASURER: N1DPM, Fred Stefanik, 50 Witheridge Street, Agawam, MA 01030, FN32 Email: freddpm@juno.com
Home: 413-786-7943, Work: 413-569-0116 ext.211
ACTIVE ON: 6, 2, 222, 432, 903, 1296, 2304, 3456, 5760

EDITOR: KD1DU, Del Schier, 126 Old W. Mountain Rd., Ridgefield, CT 06877, FN31fi Email: kd1du@amsat.org
ACTIVE ON: 6, 2, 222, 432, 903, 1296, 2304, 3456, 5760

BOARD OF DIRECTORS:

K1WHS: Dave Olean, RFD 1 Box 282 Poplar Hill Road, West Lebanon, Me. 04027, FN43 Email: k1whs@worldpath.net
ACTIVE ON: 6, 2, 222, 432, 903, 1296, 2304, 3456, 5760, 10 GHz

K1LXD: Rae Bristol, 328 Mark Drive, Coventry, CT 06238, FN31 Email: rbristol@snet.net
Home: 203-742-8650
ACTIVE ON: 6, 2, 222, 432, 903, 1296, 2304, 3456, 5760

N1MUW: John Denardo Jr, 628 South Hampton Rd., Westfield, MA 01085, FN32 Email: jad44o@aol.com
Home: 413-572-9072, Work: 413-562-8242
ACTIVE ON: 6, 2, 222, 432, 1296

WA2TEO: Jeff Klein, 11 Farmview Cir., Trumbull, Ct. 06611, FN31 Email: JDKLEIN@hewitt.com
ACTIVE ON: 6, 2, 222, 432, 903, 1296, 2304, 3456

NEW W3CCX MICROWAVE BEACONS ON THE AIR

The three new Pack Rat Beacons were installed and turned on by our Chief Field Engineer (N3DQZ) at high noon yesterday, 12/16/97. Large signals were heard at AA2UK, N3AOG and W3RJW. Pass the word.

W3CCX/B
3456.220 MHz 5 watts to 16 Slot Waveguide Antenna
5760.200 MHz 5 Watts to 32 Slot Waveguide Antenna
10368.200 MHz 0.5 Watts to 32 Slot Waveguide Antenna

FM29JW, Center City, Phila., 500 feet above street level.

Other W3CCX/B Beacons: 432.295MHz, 903.072MHz, 1296.251MHz, 2304.037MHz

If you hear the new beacons, send reports to:
Ron Whitesel W3RJW (ex WA3AXV)
at rwhitesel.warm@veda.com

K1TR 903 BEACON BACK UP

My 903.065 MHz beacon, located in FN42FM, was down or operating in an impaired state for the last couple of months. It has been repaired and re-installed on 12/15.

I would appreciate any signal reports.

Ed, K1TR
esparsons@lucent.com

A CALL FOR INFO

BY BRUCE WOOD N2LIV

A recent issue of the North Texas Microwave Societies “FEED-POINT” newsletter indicated that Kent Britian, WA5VJB will be editing a column in “CQVHF” magazine. The column will alternate monthly between microwaves and antenna topics. In addition, Kent is a long term editor of the “FEEDPOINT” newsletter and contributes information to a MICROWAVE USA column in "DUBUS" magazine. These three sources not only provide a wealth of information to us, but allow us various avenues for publishing articles and disseminating information. These publications are what we help make them to be. Articles, photos, news and operating events, etc. are all welcome by him. They do not have to be exclusively technical articles. So please send him your 50 MHz and up info to him at 1626 Vineyard, Grand Prairie, TX 75052-1405 or e-mail at kbritain@johnstonetech.com.

73,s Bruce N2LIV
APRS 144.390 POSITION STATEMENT

Just a comment from one who hasn't had the pleasure of using APRS, but does, on a regular basis, use the Weak Signal portion (144.0-.3) and this region's liaison/experimental & miscellaneous area (144.3-.5). Many of us also used the 145.5-.8 segment for simplex FM in the past. With the advent of automatic digital stations in this area, most voice users were driven off. The users who have moved to the 144.3-.5 area include FM simplex, which is, to the surprise of many, used for long-hauls of over 100 miles, AM operators, whose calling frequency here on the East coast has been and continues to be 144.400, sideband op's, and FM liason stations for ATV (144.340,.360,.380), Hang Gliding (same as ATV), Microwave operation (144.460), and many others.

Most Weak Signal op's support both the rights and needs of digital users. Indeed, digital should be able to be coordinated in the repeater portion in addition to the areas they reside in already. The further problem comes in when automatic digital station do not recognize transmissions of another mode. I can't tell you how many times I've had a digital station start up in the middle of a conversation on our local simplex freq. of 145.650. With the exception of a typical calling pile-up, no decent operator would start transmitting when another station is engaged in a transmission already. We'll be glad to help digital op's get a permanent place for APRS and digital, but PLEASE consider the stations transmitting that digital doesn't hear.

The North East Weak Signal Group/Northeast VHF Association Bandplan (which can be found at the NEWS Web Site "uhavax.hartford.edu/newsvhf"), for the North Atlantic area asks that automatic, digital and repeater operations be kept above 144.500. If APRS moves to 144.390, no doubt a load of automatic digital stations in this area, most voice users were driven off. The users who have moved to the 144.3-.5 area include FM simplex, which is, to the surprise of many, used for long-hauls of over 100 miles, AM operators, whose calling frequency here on the East coast has been and continues to be 144.400, sideband op's, and FM liason stations for ATV (144.340,.360,.380), Hang Gliding (same as ATV), Microwave operation (144.460), and many others.

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We have enough spectrum on 2 meters for everyone, we just have to all get together and find out what each group needs and give and take a little bit. Best of luck to TAPR and it's membership in their drive for a dedicated frequency. Many of us support your actions, but at a frequency above 144.500.

Sincerely,
Mark Casey, K1MAP

Editor's note: I operate an APRS wide area digipeater on 145.790 presently and I have no intention of moving it to 144.390 as I agree with Mark. I will simply shut it down.

Del Schier, KD1DU

POWER DIVIDER INFO FROM
VHF@W6YX.STANFORD.EDU

You didn't mention whether you wanted info for 2, 4 or 6 way power dividers.

For a divide by 2, the ratio of the ID of the outer tube (square) to the OD of the inner tube (round) is 3.06 for a 1/2 wave length divider. For a divide by 4, the ratio of ID/OD is 2.18, for a divide by 6 the ratio is 1.875. If you use common hardware store 1"square tubing with 1/16" wall thickness, found in US stores, the inner conductor should be 9/32", 13/32", and 15/32" respectively. These ratios and dimensions are for 50 ohm systems, i.e., 50 ohms in and 50 ohms out. These sizes are to the nearest 1/32".

The length of the center tube (conductor) between the center pins of the output connectors (type "N", I hope), should essentially be free space 1/2 wavelength. This can be easily calculated by: 150/freq(MHz) = length in meters.

Example: 150 / 144 = 1.0666 meters. Divide by 39.37 for inches, multiply by 100 for centimeters. You will need to add a bit more length so that you can drill holes to solder the center pins of the outer connectors through. These dimensions will give a return loss of > 25dB.

I've made this fairly basic, however others have asked similar questions in the past. BTW, hobby store brass tubing comes in 1/32" diameters and can be spliced using the next smaller diameter. Also 2M pwr. div. can be used on 432, and 432 dividers can be used on 1296 - this is one way to shorten your lossy phasing lines.

I hope this helps, GL and 73, Chuck/W7CS, Z COMM

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(mfg of pwr dividers and phasing lines)
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............................................REPLY:
The "K&S" hobby brass is very good for many kinds of home-made applications such as sliding probes for cavities etc. For power dividers, it can be obtained in 3ft lengths as well as the more common 1ft.

Silver-plating the brass is a good idea, to prevent the surface finish from turning black and lossy after a few years.

One more tip about power dividers: avoid very high division ratios -the inner diameter becomes very critical to get a low VSWR. Also the loaded Q increases, and therefore the losses (not a lot, but possibly significant for EME). Instead of a 4-way quarter-wave divider, it's better to use a 2+2-way back to back ("half-wave").

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.demon.co.uk/g3sek
GEL CELL BATTERIES: PART I
“HOW TO BUY”
BY HANK LOPEZ, N2MSS

I wrote this article to help clear up some of the confusion about buying batteries at hamfests. This is a collection of my personal experiences and opinions that might give you some ideas so that you can make the final decision. Some of the factors to consider are:

AGE: Look for a date code, usually stamped or melted into the case. The date code should be obvious, but may be encoded. For example, the numbers “9012” might mean that the battery was manufactured in December 1990. Ask the vendor how old the battery is, but take any answer with a bit of skepticism. I have actually found date codes on batteries and decided to ask the vendor anyway, just to see what kind of answer I would get. The answers can be surprising - many vendors simply do not know what a date code is, or just lie about it!

LOOKS: Cleanliness can give a clue as to how the battery has spent its life so far. Dust, dirt, and grease can indicate that it has had a rough life. Carefully examine the battery for damage: are there any cracks, dents, or deep scratches. An impact strong enough to damage a battery case can rearrange the battery’s insides, ruining it. Finally, examine the terminals for arc burns, and if they have been unsoldered, look for burn marks on the case just in case a very high wattage iron (or torch) was used - both can cause damage that is difficult to detect.

TEST: Bring a load! If the vendor is honest, he/she won’t mind letting you run a load test. At the least, bring a light bulb and see what you get. You can also use an HT, with the proper connections. Don’t forget to bring a voltmeter, to watch the battery voltage under load - if it drops rapidly, the battery is spent. Ideally, (best case) you should test a battery at 3 times its Amp-hour rating for 15 seconds. If the battery is good, it will stay above 9 volts. Smaller loads should draw the voltage down less. Make sure you have permission before testing, and try not to annoy the vendor with crazy requests.

A Gel Cell battery may become permanently damaged if it is allowed to discharge deeply, and the damage becomes worse every day the battery remains uncharged. A few months at 11 volts or less will reduce the battery life greatly, eventually killing the battery. I personally would NEVER buy a battery that reads a resting voltage less than 11.8 volts! This is my (liberal) rule of thumb. You might want to be a little more conservative, perhaps 12.2 volts. A fully charged battery should measure 12.65 volts, and every 0.2 volts less means 25% less charge. Depending on the type of charger and how you charge your gel cells might have something to do with your final decision.

Here is a case: suppose that you are testing a few batteries and they all seem to show a resting voltage of 9 to 10 volts. You bring one home and charge it. While charging, all signs of full survival are seen i.e., the battery takes the charge up to its 14.4 volt max rate. But you find that when you remove it from the charger it goes down to the original 9 to 10 volt range. Well, this shows that this battery is no good, because one or more of the cells have gone bad. Remember there are 6 cells that make up the 12v battery, each one providing approximately 2.1 volts.

Another case: I accidentally let two batteries that I keep in parallel to run my packet station run down to 3 volts. This is not a good thing to do, since the battery will not forget you did this to it. I put them on my charger and, because these cells were in extremely good shape, they were up and running in a few days. Since they were at the low voltage for less that two days, they probably got very little damage, and in most cases they should come back up most of the way.

PRICE: Eventually you will want to buy one, assuming it tests OK. A 6 or 7 Amp-hour battery should cost between $10 and $15. Higher capacity (15 to 24 Amp-hour) still should never cost more than $30. After all, these batteries are usually not new, and they should still have plenty of life in them for radio applications.

I do hope that you find these guidelines and suggestions useful in your search for backup Gel Cell batteries. If you have any comments please forward them to n2mss@juno.com or call book address. More to come in Part II.

TRANSATLANTIC BEACON FUND

We wish to thank the following members for their kind donations totaling $140 for the purpose of rebuilding the 2 meter TransAtlantic Beacon, W1RJA, on 144.282, located near Westerly, RI, FN41..

WZ1V, W1NWE, N2MSS, N2RDN, K1MAP, K1LXD, N1DPM, N2LIV, WA2ALV, K2MQI, K1WHS, K2CBA, KA1SUN, K2AEP, K2YMR, N1FUS, W1COT, WA10HR, W1TDS, N1LZK, KJ1K, KA1EKR, N1A, KX1C, K1CA, K1OR, WA1VVH, WW1Z, K1IM, KD1DU, WA1MBA, AF1T, KU2A, WA1HOG, W1RIL, WB1FKF, N2XRE, N1SAG, N1RXM, AK1WI, N1MUW, W1VT, N2YCA, N2GXH, WA2AAU, N2OJY, N2LBT.

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