




# PAARAgraphs



Celebrating 65 years as an active ham radio club—Since 1937  
Newsletter for the Palo Alto Amateur Radio Association, Inc.

## CALENDAR

February.....1, **PAARA Meeting, 7:30**  
Menlo Park Recreation Center  
700 Alma Street, Menlo Park

February.....6, **PAARA Board Meeting, 7:30**  
Red Cross Bld., 400 Mitchell Ln., Palo Alto

March.....1, **PAARA Meeting, 7:30**

March.....6, **PAARA Board Meeting, 7:30**


April.....5, **PAARA Meeting, 7:30**

April.....10, **PAARA Board Meeting, 7:30**

The ARRL has a code practice:  
URL <http://www.pcppractice.com/CW/>  
-Don KF6JMQ

## PROGRAM

February 1, 2002 7:30 P.M.



**Speaker:**

**GEORGE T DAUGHTERS, K6GT\***

**“Contesting”**

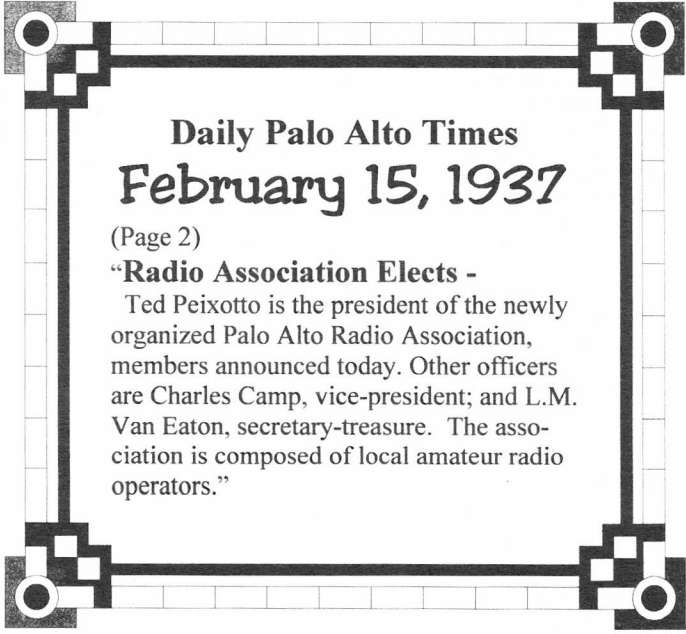
Join us for pre-meeting eyeball  
at Su Hong Restaurant , 1039 El Camino Real, Menlo Park  
Food will be served at 6:00 sharp, so guests will be on time for the PAARA  
meeting. Those arriving late will be responsible for their own order and bill.

—PAARA Radio NET every Monday evening at 8:30 P.M., local time—  
on the 145.230 -600 MHz repeater, PL tone off

WE ARE NOW



And more active each year



**Daily Palo Alto Times**  
**February 15, 1937**

(Page 2)

**“Radio Association Elects -**  
Ted Peixotto is the president of the newly organized Palo Alto Radio Association, members announced today. Other officers are Charles Camp, vice-president; and L.M. Van Eaton, secretary-treasure. The association is composed of local amateur radio operators.”

\*

George is one of the NCCC (Northern California Contest Club) high-end contest operators. He also is the main author of the ARRL antenna book!

-Andreas N6NU

## Miscellaneous Dates

<b>PAARA</b> Palo Alto Amateur Radio Association meets 1st Friday 7:30 each month, Net 145.230 each Monday 8:30, contact: Andreas Junge N6NU.....(650) 233 0843
<b>FARS</b> Foothills Amateur Radio Society meets 4th Friday 7:30 each month, contact: Sheldon Edelman N6RD, 650 493 7212, n6rd@earthlink.net
<b>NCDXC</b> Northern California DX Club meets 2nd Friday 7:30 each month, repeater for member info 147.360, Thur 8:00PM, contact: Bob Mammarella KB6FEC 408 729 1544.
<b>NorCalQRP</b> Northern California QRP Club meets 1st Sunday each month, contact: Jim Cates 3241 Eastwood Rd., Sacramento, CA 95821.
<b>Perham Foundation</b> , contact: (408) 734 4453,
<b>SPECS</b> Southern Peninsula Emergency Communication System meets each Monday 8:00PM on Net 145.27, 440.80 MHz. www.specsnet.org contact: Tom Cascone, KF6LWZ, 650-688-0441 .specs@svpal.org
<b>SCARES</b> South County Amateur Radio Emergency Service meets 3rd Thursday 7:30 each month, San Carlos City Hall. Net is on 144.45 & 444.50 (PL-100) 7:30 Monday evenings. contact:
<b>SCCARA</b> Santa Clara County Amateur Radio Association Operates W6UU repeater 146.385+ Nets: 2m, W6UU, 7:30 Mon; 10m, 28.385, 8:00 Thur. meets 2nd Mon each month. contact: Jack Ruckman AC6FU
<b>SVECS</b> Silicon Valley Emergency Communications Operates WB6ADZ repeater (146.115 MHz+) contact: Lou Stierer WA6QYS 408 241 7999
<b>WVARA</b> West Valley Amateur Radio Association operates W6PIY repeater 147.39+, 223.96, 441.875, 1286.2 meets 3rd Wed every month. contact: Glen Lokke Jr. KE6NBO at 408 971 8626, or glokke@pacbell.net
<b>Disaster Services</b> , <b>PALO ALTO CHAPTER</b> , American Red Cross, www.paarc.org 400 Mitchell Lane Meets 3rd Wed. each month 7:30PM, HF, packet, BBS, ATV, OSCAR Gateway, NASA satellite. contact: Mac Millian 650-688-0423. MACM@paarc.org <b>SAN JOSE CHAPTER</b> , American Red Cross contact: Scott Hensley KB6UOO, (408) 967 7924, FSHENSLEY@NOVELL.COM
<b>VE Exams</b> , 3rd Saturday each month, 10:30AM, 145.23- PL=100Hz Redwood City Main Library, Community Conference Room 1044 Middlefield Road, Redwood City, CA contact: Al WB6IMX@att.net.
<b>Swap meet</b> , LosPositas College, Livermore, 1st Sunday each month. Contact: Cliff Kibbe (209) 835 6715 or Eliot Ross (925) 606 7710  (please send changes to PAARAgaphs editor: k6uro@arrl.net)

### PAARA 2001 Board of Directors

**Actions: Motions brought and Passed:**  
(Only January, February, March, June and September Meetings were recorded)

#### January:

W6OTX call sign is to be used at the Red Cross shack & a log is to be kept and copied to the Secretary.  
\$250 approved for gifts at the January Dinner Party.

#### February:

Menlo Park Civic Center paid for this year's meeting room rental.  
State of California Form 199, CA Exempt Organization Annual Information Return submitted.  
Public Address System purchase approved.

#### March:

Trailer / Tower purchase approved.  
HF Beam Antenna purchase approved.

### Palo Alto Amateur Radio Association, Inc. PO Box 911 Menlo Park, CA 94026

President	Vacant
Vice President	Andreas Junge N6NU.....(650) 233 0843 n6nu@arrl.net
Secretary	Jay Melvin, WA6SBO.....(650) 726 4361 wa6sbo@arrl.net
Treasurer	Bob Korte, KD6KYT.....(650) 595 1842 RGK4U@aol.com
Membership.....	Vic Black, AB6SO.....(650) 366 0636 ab6so@smrn.com
W6OTX Station Trustee..	Gerry Tucker, N6NV.....(650) 326 4908
K6YQT Station Trustee..	Gerry Tucker, N6NV.....(650) 326 4908
Property.....	Gerry Tucker, N6NV.....(650) 326 4908
Badges.....	Don Trask, KF6JMQ.....(408) 251 6494
ARES Officer.....	Lily Anne Hillis, N6PGM.....(650) 325 5484
Club Historian	Vacant?
Advertising.....	Bob Korte, KD6KYT.....(650) 595 1842
Webmaster .....	Andreas Junge N6NU.....(650) 233 0843 n6nu@arrl.net

#### Board of Directors

Joel Wilhite, KA7TXV	(650) 325 8239	'03
Gerry Tucker, N6NV	(650) 326 4908	'03
Rolf Klibo, N6NFI		'03
Jim Rice, K6AK		'03

(see "Calendar" for Board meeting times, visitors welcome)

#### PAARAgaphs Staff

Editor.....	Wally Porter, K6URO.....(650) 494 7038 k6uro@arrl.net
Database.....	Don Trask, KF6JMQ.....(408) 251 6494 trask@shell3.ba.best.com
Columns.....	Vic Black, AB6SO.....(650) 366 0636 ab6so@smrn.com

**PAARAgaphs e-mail address: k6uro@arrl.net**  
Submit material for PAARAgaphs by the 15th  
Use WORD, rich text, ascii, .pub, .ps, or .jpg,  
**PAARA Website <http://www.qsl.net/paara/>**

#### September:

\$4K Gross income obtained from the annual Flea Market sales.

N6NV, Gerry, reaffirmed as Trustee of PAARA license K6YQT

New Trustee needed to replace Silent Key Fred Canham, PAARA's W6OTX

Submitted to the PAARA Board of Directors by Secretary Jay Melvin, WA6SBO, 2002Feb17

## PAARA Radio NET

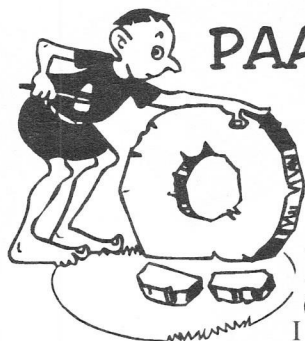
every Monday evening

8:30 P.M., local time

on the

145.230 -600 MHz repeater

PL tone off



## PAARA PROJECT

### 2002

Joel KA7TXV

## PSK Kit Update

(Continued from January issue)

I spent the better part of one afternoon calling CQ and making one or two contacts. I asked the station on the other end to report my frequency as I had only ball parked the frequency adjustment since it was built. On the two different QSOs I received two different replies. So I decided to haul everything down to the main HF station and answer the question once and for all. Both of them were wrong, but not far off. I then realized later after moving the rig back up to the sky loop antenna connection, I had a reference in front of me all along.

Jeff Wilson (N6WLA) had asked me “what is a waterfall?” Inside the computer program used to encode and decode the PSK31 signal, one part of the program includes a display to show the audio pass band of the radio output where the sound energy can be seen and where the user can lock on to a signal and decode it. The display can either take the form of a spectrum analyzer or a waterfall. The waterfall mode is simply a histogram of spectrum energy. If the audio output were viewed on a spectrum analyzer, the display would show a plot of amplitude energy spread over a frequency range or span. The stronger the energy, the higher the plot, and when the plot

line draws from left to right the lower frequencies are on the left and the higher frequencies are on the right. As time passes, the line redraws over and over but only in a two dimensional plane. If the image were turned up on end and each plot line were added over time, the view would look something like a waterfall. The waterfall plot changes the color of the dots in the plot, as the energy gets higher. The frequency axis is the same as a spectrum analyzer but the waterfall has an elapsed time for the vertical axis.

When I moved the Warbler back to the big antenna, I noticed a very pronounced line running down the waterfall. It doesn't decode to anything and it seems to always be there every night. It occurred to me that every television in my neighborhood has the same color burst frequency generator and it stands to reason that everybody watching TV is probably emitting enough energy for the Warbler to detect. Sure enough, after aligning the radio with my main transceiver, the ever-present line dropped right on the color burst frequency 3.579545MHz in the waterfall display.

The latest upgrade going into my design is a small audio

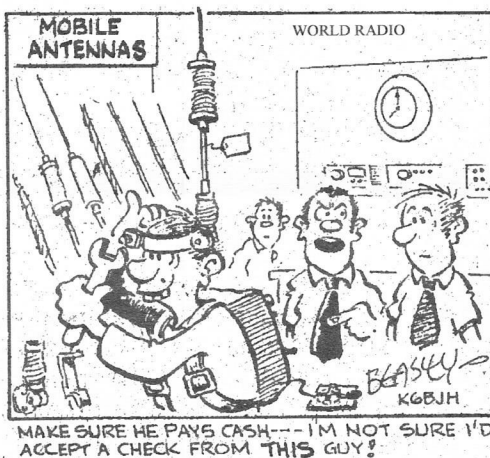
amplifier section so I can hear as well as see the energy going into the computer. The amplifier is based on a kit I found at Halted. The kit is also available directly from <http://www.kitsrus.com/kits.html> and scroll down to kit 17. The audio amp is based on the LM386 and can output over a watt. What I also needed was an enclosure to put the kit in and now that I had a speaker, needed to mount a volume control. I also wanted the audio circuit to shut off during transmit to conserve battery power.

To kill the audio amp during transmit I needed a switch tied to the PTT line from the computer. In the Warbler Doug used a dual op amp to both condition the signal from the computer and add a switching delay when toggling the TX mode on. The second op amp output forward biases a PNP transistor (Q8) to feed current from its collector to the feed the driver stage prior to the final amplifier. The amp needs power when the transmitter is off so what is needed is the opposite. The solution is to add a 2N3904 (NPN) to the same output through another 4.7k ohm resistor so when the op amp output goes positive during receive, it biases the NPN transistor on. The emitter output would then feed the amplifier.

The manual describes the perfect fit of the LMB-139 enclosure for the kit; now try to find an LMB-139. One can always order the enclosure directly from LMB but since in my case the 139 wouldn't allow enough room for a reasonable speaker, I found that a larger size was readily available in wonderful battleship gray. I had thought about adding a built in antenna tuner with a SWR meter and dummy load but have decided that was too much to put into one rig. I had spent enough effort tuning my 80-meter sky loop to opti-

mize the match with the Warbler that I didn't need a tuner unless I go to the field and need to load up some random length. I also reasoned that a QRP antenna tuner/SWR meter/dummy load in one box would be a wonderful addition to the shack as another project.

73 de KA7TXV, Joel



I also want to announce the availability of the

### Warbler kit

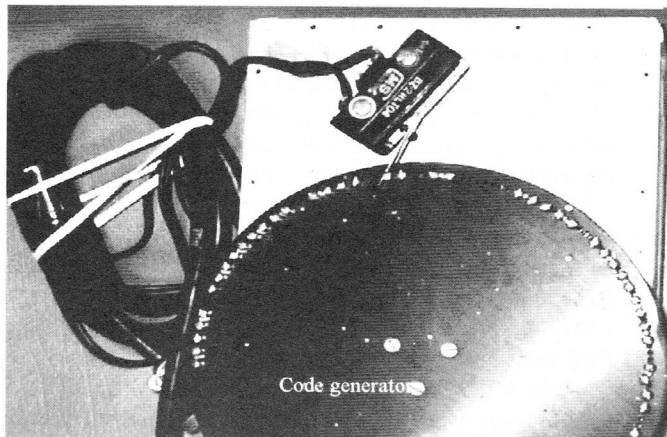
for 40 dollars, payable (to PAARA) by check at the next meeting. This price is 5 dollars off the regular price. I want promote it as a service for dues paying members of the club. Once the first 20 kits are sold, we can do it again, sorry, limit one per member, first come first serve.

I would also encourage the folks that use the PAARA list server at QTH.net to make a donation to the folks that run the service.

73 de KA7TXV, Joel



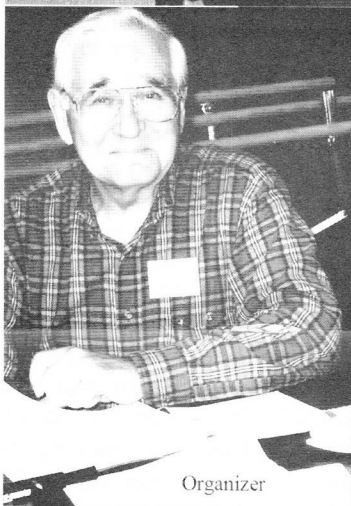
# AUCTION



Code generator



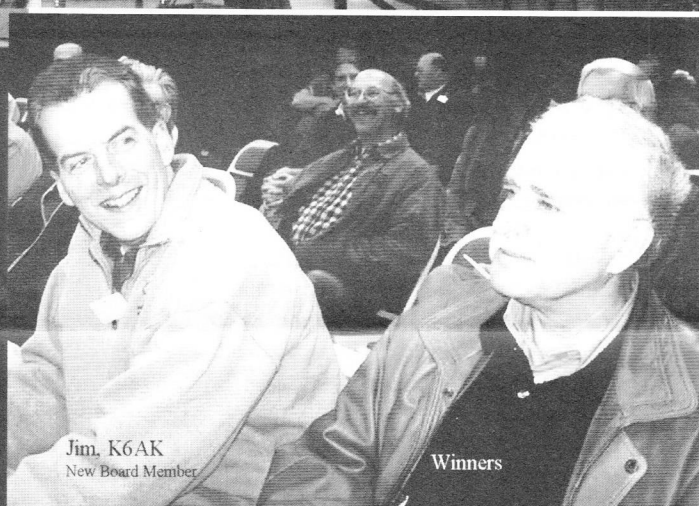
Auctioneer



Organizer

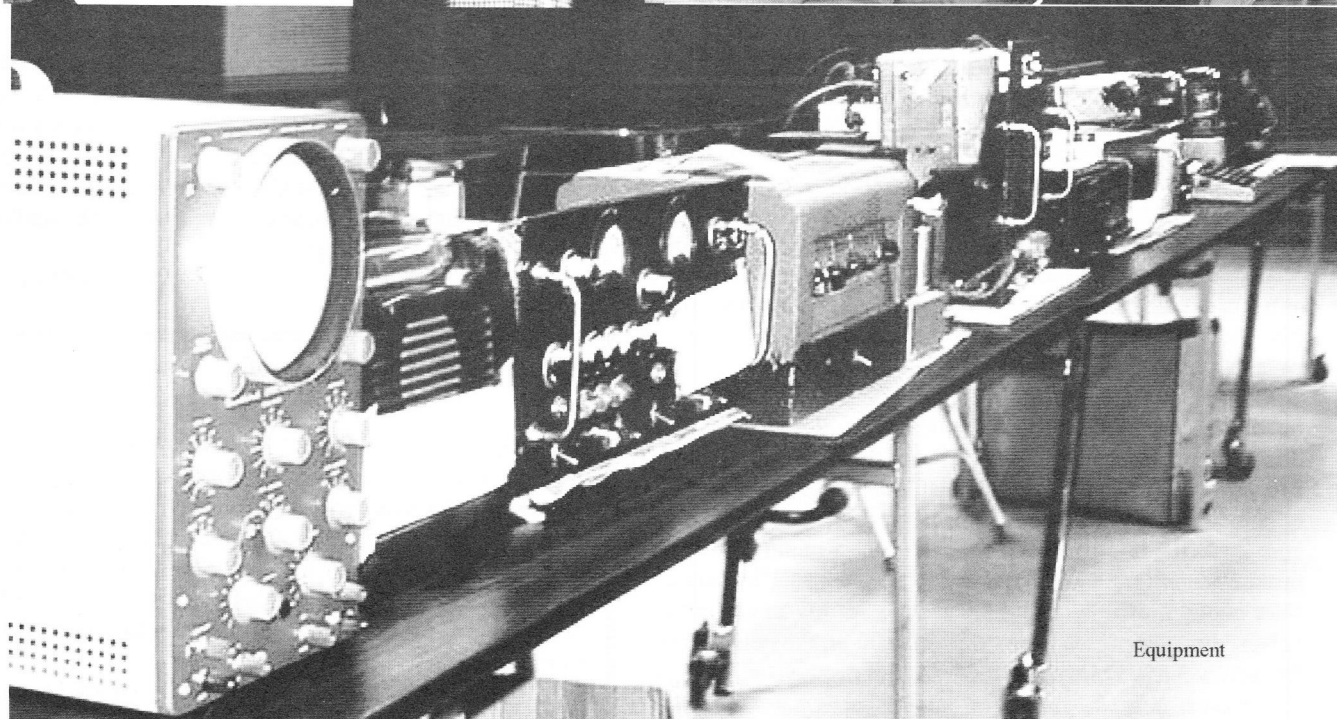


Andreas

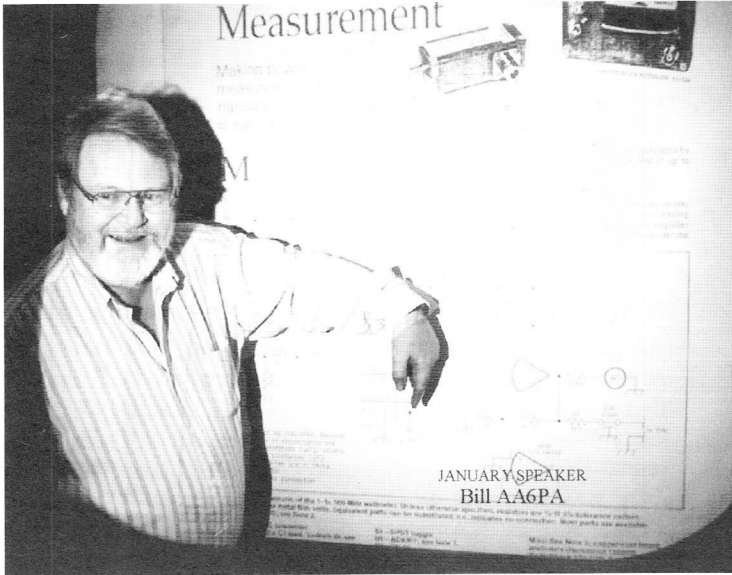


Jim, K6AK  
New Board Member

Winners

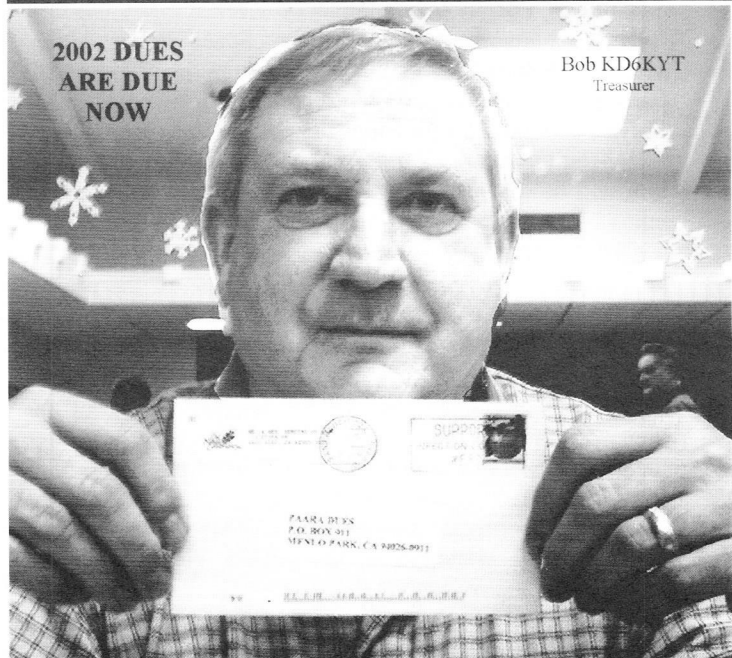
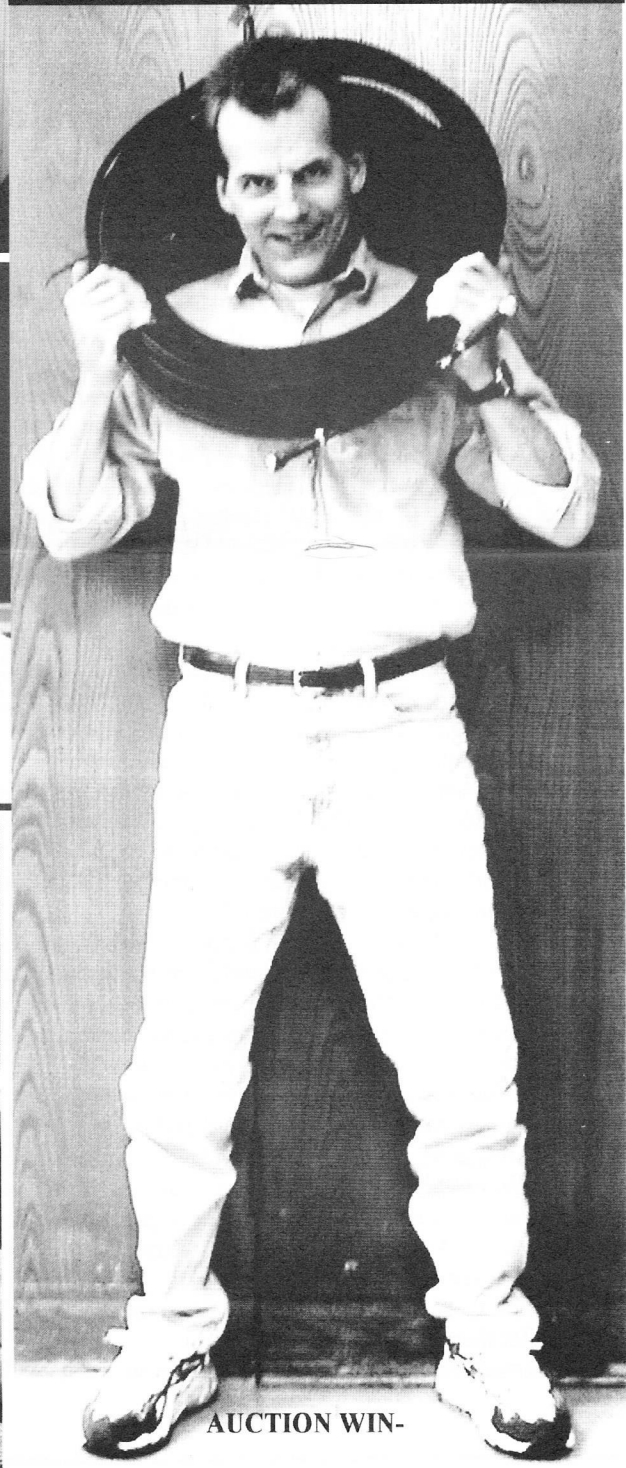
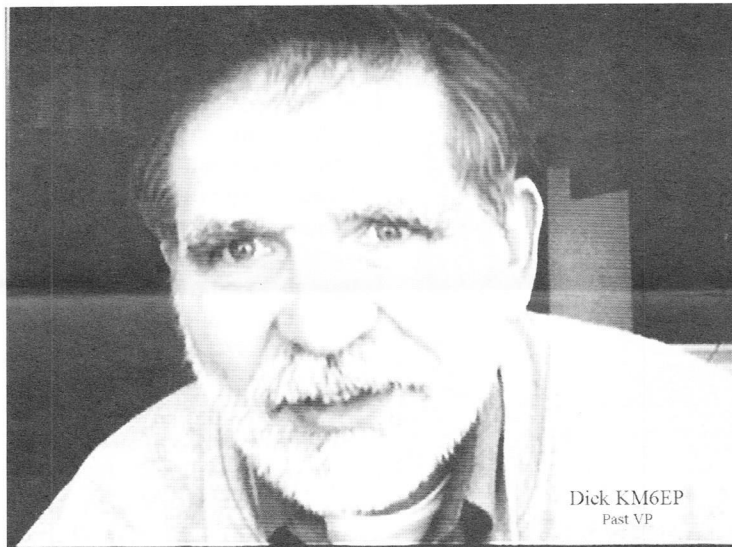


Equipment



# PAARA AUCTION

December 2001





## Thoughts

From QRZ.com

### Danger to CW Operations - Phase 3D CW

*Editor's note: QRZ neither supports or rejects this idea, and presents it only as a note of public interest.*

**WB8HRO** writes...

PHASE 3 in the **destruction** of CW. CW is illegal on every military radio service including Mars. If it is not already, it will soon be illegal on all other radio services and eventually amateur radio as well.

In January, many of the politicians (i.e. the Board of Directors, or Division Directors) at the ARRL will continue to implement the next phase in their plan of eliminating all CW requirements for all classes of amateur licenses.

We must let the politicians (i.e. the Board of Directors, or Division Directors) at the ARRL know the Board must decide to reaffirm the current policy on CW. If this policy is not reaffirmed, we will spend a lot of time campaigning for the opponents of our current Division Director in the next election. No excuses, ARRL politicians, show *leadership* and make sure your colleagues and you reaffirm the current policy on CW.

**DANGER** The board is planning even more destruction, read their words.

The ARRL Letter, Vol 19, No 45 states: "The ARRL Board of Directors will review the League's position on the Morse code as an international licensing requirement when it gathers for its annual meeting in January. Because the issue is expected to come up at the IARU Region 2 Conference next October ... " " ... In January, the Board may decide to reaffirm this policy, to modify it, or to seek additional input from members. In the past, a majority of members has supported the policy."

"The ARRL's Morse policy was formalized by Board resolution in 1993. It supports the retention in the International Radio Regulations of the provision obliging administrations to require that applicants demonstrate ability to send and receive Morse code before they may operate below 30 MHz."

"The Executive Committee also proposed that the Board determine a process for soliciting membership input on possible repartitioning of the HF bands in restructuring's wake. ... The FCC has declined to take up any possible repartitioning, however, until it's had a chance to gauge the effects of restructuring. Amateur Radio license restructuring became effective last April 15."

We elected these guys and we can elect someone else! But you must let them know now.

Please email, snail mail, and telephone your Division Director ...



## ARRL Headquarters

Newington CT  
 January 15, 2002

To all radio amateurs:

SB SPACE ARL ARLS002 ARLS002

### New Amateur Radio antenna installed in space

Amateur Radio on the International Space Station got a new antenna January 14, thanks to a spacewalk by Expedition 4 crew members **Yuri Onufrienko, RK3DUO**, and **Carl Walz, KC5TIE**. Another of new ARISS ham antenna--there are four in all--could be installed January 25.

"It was beautiful to watch," ARISS Board Chairman **Frank Bauer, KA3HDO**, said. "It went like clockwork, everything deploying just as it was supposed to."



THERE'S NOT MUCH USE OF YOU INVENTING A WAY TO SEND MORSE CODE WITHOUT WIRES, MR. MARCONI!--SAYS HERE THEY'RE GOING TO DO AWAY WITH THE CODE REQUIREMENT!  
 WORLD RADIO

While crewmate **Dan Bursch, KD5PNU**, operated the robotic arm and monitored and videotaped the spacewalk--or EVA--from inside the ISS, Onufrienko and Walz first relocated a Russian Strela cargo crane used to maneuver equipment and spacewalkers. Then, they installed the flexible-tape VHF-UHF Amateur Radio antenna on a handrail at the end of the Zvezda Service Module--the crew's living quarters. The new VHF-UHF antenna is the first one designed for and dedicated specifically to sup-

port ARISS operations.

Installation of the new antenna on Zvezda paves the way for two separate ham stations aboard Space Station Alpha. The ARISS initial ham station gear--single-band hand-held transceivers for 2 meters and 70 cm--now is installed in the Zarya Functional Cargo Block. Tentative plans call for a 2-meter station to remain in Zarya, while a second 70-cm station will be set up in Zvezda using the newly installed antenna.

ARRL representative **Rosalie White, K1STO**, said she, too, was pleased to see this phase of the project coming together. "We started all this in 1998--and now we have a permanent antenna on the outside of the station," she said. "Pretty cool."

Bauer congratulated the ARISS international team for their assistance in the antenna project. "We have taken our ideas, concepts and vision and transformed them into reality," he said.

ARRL is a collaboration of ARRL, AMSAT and NASA. For more information, visit the ARISS Web site, <http://ariss.gsfc.nasa.gov>. NNNN /EX

**FYI, Jay, WA6SBO@AMSAT.ORG**





Join us for pre-meeting eyeball

# QSO February 1st gab & gobble

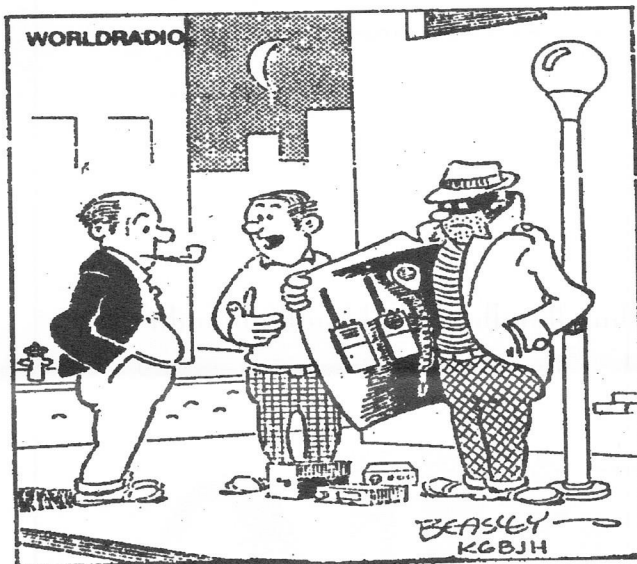
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6 pm— at Su Hong Restaurant  
 1039 El Camino Real  
 Menlo Park

—across from Kepler's Book Store—

PAARA 2002  
 DUES = \$12  
 are  
 DUE NOW



**WANT TO BUY SOME HAM GEAR? HE SAYS HE'S NO LONGER INTERESTED IN AMATEUR RADIO AND WANTS TO LIQUIDATE HIS ASSETS.**



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### PAARAgaphs Ad Rates

PAARAgaphs accepts paid advertisements from non-members.  
 (short personal ads remain free for members in good standing).

All ad rates listed are per issue only.

- Not for profit ads by association members for ham-related items and wants. No cost for business card size ads (additional space at \$2.50 per business card size).
- For Profit organizations and/or individuals: \$5-business card size, \$25-half page, \$50 full page or back cover.

These fees may be reduced or waived in exchange for a valuable consideration that is given to the Association or its general membership. Such consideration must be in addition to any existing arrangements with the association.

The PAARAgaphs editors reserve the right to reject any ad deemed to be not in the best interest of the Association. All fees payable in advance by the year with "scanner-ready" copy or text-only ads. Give payment and copy to Bob Kortz

PAARA · Palo Alto Amateur Radio Association · P.O. Box 911, Menlo Park, California 94026-0911

- Club meetings are on the first Friday of each month, 7:30pm at the Menlo Park Recreation Center, 700 Alma Street, Menlo Park, CA. •
- Radio NET every Monday evening, at 8:30pm, on the 145.230-600 MHz repeater, PL tone off. •

Membership in PAARA is \$12.00 per calendar year which includes a subscription to PAARAgaphs, \$6 for additional family members (no newsletter).  
 Make payment to the Palo Alto Amateur Radio Association.  
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