PAARA NEWSLETTER
VOLUME 47 NUMBER 12 December 1998

W6OTX

PAARAgraphs

Celebrating 61 years as an *active* ham radio club—*Since 1937*
Newsletter for the **Palo Alto Amateur Radio Association, Inc.**

CALENDAR

Dec.....4, **PAARA Meeting**, 7:30
Menlo Park Recreation Center
700 Alma Street, Menlo Park
Dec.....9, **PAARA Board Meeting**, 7:30
Red Cross Bld., 400 Mitchell Ln., Palo Alto
Jan.....8, **PAARA Meeting**, 7:30
Jan.....13, **PAARA Board Meeting**, 7:30
Jan.....15, **PAARA Winter Party** (tentative)

PROGRAM

December 4, 1998
7:30 P.M.

Speaker:
Not confirmed at press time
Check on net Monday night before meeting

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

PAARA PONDERINGS

de VIC BLACK, AB6SO

. Weekly Monday night PAARA Net Certificate qualifiers this month include: **Don Nelson K6DPW, Frank DeFranceso KE6LSP, Dan Curry WB6STW, Kitty Hevener WB8TDA** and **Jeff Wilson N6WLA**. To qualify, you only need to check in 20 or more times during the calendar year.

Last month I reported that **Terry Conboy N6RY** won the Pacificon drawing for a $550 Elecraft K2 radio kit. Now it's confirmed that PAARA member **Jon Zweig AD6FX** won the daily grand prize of a Yaesu FT-50R dual band HT. **Herb Davidson KF6BKL** is the proud owner of a 2-meter/70cm antenna from the final prize drawing. That brings the total PAARA Pacificon winnings to nearly $1000, plus lots of kit PC boards and bound compendium "freebies" from the NorCal QRP Forums. Not too shabby for a $5 entry fee!

One issue addressed by Pacificon forums concerned proposals for FCC license streamlining. A major VEC group has even suggested eliminating the CW requirement solely because it's a bother to test applicants. Most of us have strong feelings about licensing change proposals from the ARRL, the FCC and others. Even so, there appears to be a lot of apathy when it comes to actually expressing our feelings directly to the FCC. I would like to quote, as a guest editorial, an Internet message from **Nick Hulbert KG5N**.

Nick responded to assertions from **Harley Silver** that CW "_seems to be the only criterion used to differentiate between SOME of the licensing levels in SOME places" and that "_the speed of keying CW _ seems as arbitrary as using as a criterion how quickly someone is able to do various electronics calculations with a pencil and paper or how quickly someone is capable of doing mental arithmetic" at a time when computers are ubiquitous.

Harley stated, "How quickly someone is capable of keying seems to only limit WHO he can key with. Having public radio

(Continued on page 107)Ponderings

Miscellaneous Dates

Flea Market at Foothill (info at: http://joslin.com/FleaMarket)
Schedule will return in Spring '99

PAARA Palo Alto Amateur Radio Association
meets 1st Friday 7:30 each month, Net 145.230 each Monday 8:30,
contact: Dave Bailey, WS6W 408 730 5215

EMARC Electronics Museum Amateur Radio Club
meets 4th Friday 7:30 each month,
contact: Sheldon Edelman 650-858-2176, Edelman@richochet.net

NCDXC 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.

NorCalQRP Northern California QRP Club
meets 1st Sunday each month,
contact: Jim Cates 3241 Eastwood Rd., Sacramento, CA 95821.

Perham Foundation,
contact: Jerry Tucker WA6LNV 650-961-3266

SPECS Southern Peninsula Emergency Communication System
meets each Monday 8:00PM on Net 145.27, 224.36, 440.80 MHz
contact: Mike Hastings KB6LCJ, 408-243-6745 or 408-249-6909.

SCARES 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: Dick Collins K6ANN 650-593-8952

SCCARA Santa ClaraCounty 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

SVECS Silicon Valley Emergency Communications
Operates WB6ADZ repeater (146.115 MHz+)
contact: Lou Stierer WA6QYS 408 241 7999

WVARA 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

Disaster Services,

PALO ALTO CHAPTER, American Red Cross
Meets 3rd Wed. each month 7:30PM,
HF, packet, BBS, ATV, OSCAR Gateway, NASA satellite,
contact: Alan Ball 650-688-0423.

SAN JOSE CHAPTER. American Red Cross
contact: Scott Hensley KB6UOO, 408 249 7093, fsh@richochet.net

VE Exams, 3rd Saturday each month, 11AM, 145.23- PL=100Hz
American Legion Hall,.651 El Camino Real, R.C.
contact: Joe KB6OWG.

1999 PAARA DUES

Some members still owe '97, 98 dues. See your PAARAgraphs mailing label.

$12 for full membership

$6 each for additional family member same address
One copy of newsletter

payable to PAARA and mail to:

PAARA, Box 911, Menlo Park, CA 94026

or to:

Treas. Doug K1DIT

(be sure to include names and calls of all members)

PLEASE include a completed copy of

MEMBERSHIP FORM

(The form was in Oct. PAARAgraphs and available at PAARA meetings)

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

President.....*(vacant)*
Vice President.....Dave Bailey, WS6W.....(408) 730 5215
Secretary.....Andreas Junge KF6NEB.....(650) 233 0843
Treasurer.....Doug Schliebus, K1DIT.....(650) 851 0727
Trustee/Property/Badges..Fred Canham, K6YT .....(650) 948 9238
ARES Officer.....Lily Anne Hillis, N6PGM .....(650) 325 5484
Club Historian.....Steve Stuntz, K6FS.....(650) 322 4952
Advertising.....Bob Korte, KD6KYT.....(650) 595 1842
Webmaster ...../Andreas Junge AD6FQ.....(650) 233 0843

Board of Directors

Charles Grandjean, WD6FAF	(408) 739 5185	'98
John Buonocore, KD6ZL	(650) 366 1658	'99
Terry Conboy, N6RY	(510) 944 5388	'99
Steve Stuntz, K6FS	(650) 322 4952	'99
Vic Black, AB6SO,	(650) 366 0636	Past Pres

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

PAARA*graphs* Staff

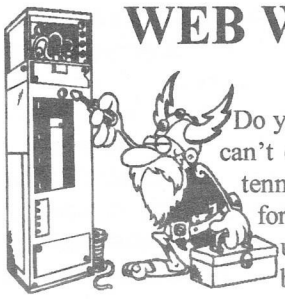
Editor.....Wally Porter, K6URO.....(650) 494 7038
Database.....Don Trask, KF6JMQ.....(408) 251 6494

PAARA*graphs* e-mail address: wmporter@aol.com
Submit material for PAARA*graphs* by the 15th
PAARA Website http://www.qsl.net/paara/

VE .VE test of Nov. 21, 199[illegible] held at the Veterans Bldg. in Redwood City. Present to administer the testing were: **Joe Horne Sr. KB6OWG, Al Montoya WB6IMX, Bill Sooman WB6UVO, Dan Curry WB6STW, Ron Panton W6VG.** We were very pleasantly surprised to have two applicants ace the extra class written test. One was our PAARA member **Ron Carmichael KQ6RS.** Congratulations on such a fine paper Ron. The turnout was about half of what we would like to see, but once again, they all (most) arrived before 11 A.M. Session adjourned at 1 P.M. as the facilities were needed. ☺☺☺

—Ron, W6VG

I'M JUST TRYING TO GET A VALUE PERSPECTIVE HERE--- I'D SAY EACH SLEEVE IS WORTH AN ICOM IC229H, THE MAIN BODY IS EQUAL TO A TEN-TEC PARAGON, AND THE COLLAR------



WEB WANDERINGS

de Vic Black, AB6SO

Do you live in a condo or apartment and can't erect a full size, permanent HF antenna? Or maybe you've been looking for a lightweight, HF beam for portable use. Consider using Hamsticks to build a custom antenna to fit your needs.

Hamsticks are inductively loaded verticals with a radiating whip on top.

With quick disconnects at the base of each Hamstick, you can give a quarter turn twist by hand to attach the antenna to its mount, or to dismantle it for storage, in less than a minute. Valor Pro-Am makes a similar antenna with a collet at the top of the loading coil so you can further dismantle and reassemble it using only a small wrench without measuring the whip extension each time.

The simplest antenna would be a Hamstick with quarter wave counterpoise wires for a ground system. If you have a metal guard rail on a balcony, you could use a CB "mirror mount" to hold the antenna and use the rail for ground. HRO sells antennas, quick disconnects and dipole adapters at reasonable prices. Radio Shack sells similar CB mirror mounts for attaching antennas to trucks. You may even be able to find them at "pick your part" auto dismantlers.

Stan Cooper K4DRD used a Hamstick dipole on an apartment balcony in San Mateo. The system can be easier and cheaper to build than buying special, thin wall telescoping aluminum tubing for a standard rotatable dipole. It can be mounted horizontally or vertically. It's not as efficient or as broad banded as a full size dipole, but Stan found the high Q design quite satisfactory using QRP since he tuned it for the QRP calling frequency. He could sneak out at night, erect the antenna to do some work and disassemble it in a few minutes so the neighbors wouldn't be upset by visual pollution. What they don't see won't upset them.

The next logical extension to the idea is a small, lightweight portable Yagi-Uda beam using additional Hamsticks. Add a director and reflector to your dipole to create forward gain and increase the front/back ratio. Current, coupled by induction from the driven element to the parasitic elements, re-radiates later in time and produces constructive interference off the front of the beam and destructive interference off the back of the beam because of phase differences. Element spacing is determined by the distance radio waves travel from the driven element to the parasitic elements to create phase differences.

Each Yagi design is a compromise among forward gain, half power beam width and front/back ratio. These parameters vary as the element spacing changes. Element spacing can vary from about 1/8 to ¼ wavelength. It's possible to use closer spacing, but the drive impedance drops to a very low level and makes transmission line matching more difficult, although a hairpin match may handle it.

HF hams normally choose close element spacing to achieve narrow band width and high forward gain whereas commercial users and VHF contesters often use longer booms to achieve moderate gain with higher front/back ratios and broader half power beam widths. Tune the driven element to resonance and make the director about 5 - 6% shorter and the reflector 5 - 6% longer than the driven element.

Credit for the idea of building a Hamstick Yagi goes to **Rick Dorsch NE8Z** of Hamburg, MI. He mentioned it to **Russ Wilson VE6VK** who implemented the design in Calgary, Alberta. Russ, an experimenter, likes mobile and portable operation, including IOTA, using CW, SSB and Pactor on HF and 2 meters. Russ describes a 3 element 20 meter mini-beam with design data, specs and photo on his web page at http://www.eng.mu.edu /~usi/hamstick.html. The antenna uses three boom sections of 1-1/4 inch diameter aluminum tubing, each 4 feet long, for easy storage and transport. The boom can be reassembled using internal plugs, or in the case of a square boom, external angle stock at the joints. Square tubing might be best if you build the antenna using hand tools.

Russ mounted a 40 meter Hamstick on top of the beam to provide a "double whammy". The vertical uses the Yagi and its support as a small ground plane. Two feedlines mount to the supporting mast. The longest element (reflector) is 15 feet long, tip to tip, mounted on the 12 foot boom. The 3 element 20 meter beam, 40 meter vertical, balun and feedlines weigh about 12 pounds in a storage tube.

Maybe this idea will get the creative juices flowing in our membership. Six or ten meters would be a good start. **Chip Angle N6CA**, who has worked Hawaii on 18 bands (!), reports that "Recent surveys of Alinco, Kenwood, Yaesu & ICOM indicate that more than 30,000 radios which contain six meters have been sold in the past few years alone". Who will be the first to build a 2 element portable VE6VK Hamstick Yagi for SSB on 6 or 10 meters with a vertical Hamstick on top for FM use?

I stumbled across the No-SSB International group, the answer to the No-Code International group. Here are a couple of their well conceived, non emotional, basic doctrines: "Anywhere you find Single Side Band, you also find Mr. Splatter. Mr. Splatter is not our friend. NSI members don't like Single Side Band. It sucks." For some light hearted fun, go to http://www.qsl.net/kh2d /nossb.html. Also check sister clubs: No-FM International, No-RTTY International, No-SSTV International, No-QRP International and No-QRO International at http://www.qsl.net/kh2d/home.html. Join for free if you would like to become a member. If you don't find these clubs to your liking, they'll start another just for you. It's possible that they induct most new members on April 1. The clubs, headquartered in high tech Guam, are growing fast and some already have as many as two members.—**Vic, AB6SO**

Bring a Show & Tell
to the next
PAARA meeting

PROGRAM NOTES:

PAARA Program, November 6, 1998

— Steve Stuntz, K6FS

The depth, breadth and diversity of PAARA's own resources were once again highlighted: guest speaker was longtime member Patty Hevener, WB8TDA, Computer Access Training Specialist at the Western Blind Rehabilitation Center, Palo Alto Veterans' Medical Center. Blind from birth, a licensed Ham since 1974 and a dedicated CW operator (she admits to loving contesting!) Patty addressed the problems encountered by amateur radio operators with visual disabilities.

Patty opened with a definition of visual handicap ("blindness') as maximal acuity of 20/200 in the better eye with correction, and field restriction of 20 degrees or less. She noted that such limitations may be encountered by people of widely ranging ages and circumstances, from birth to advanced old age.

Focusing on the special problems faced by visually-impaired people seeking to become licensed radio amateurs, she first considered materials and methods of study and training preparatory for the FCC examinations. Lessons on audio-cassette tape are available from the Handi-Hams* division of an organization called Courage, based in Minnesota. (NOTE: QST and CQ magazines often carry ads for similar materials produced by Gordon West and marketed by the W5YI Group of Dallas, Texas.) These may be used for either self- or group-study. Where exam-prep classes include visually-impaired students, Petty noted that when using projected text or graphics, an instructor should verbally describe what is presented on the screen. Models of ham-related objects such as towers or antennas, with definite tactile elements, are helpful, since they can be explored by sense of touch.

Printed text in Braille or large-scale type is a time-proved technique, although not widely available in ham-related teaching aids. Under provisions of the 'Americans With Disabilities Act', classes are legally required to be accessible to people with a wide variety of limitations; individuals and clubs.

When administered by volunteer examiner teams, the license examinations must be tailored to the needs of disabled candidates. Test questions may be read, presented in large print, or in Braille if requested and available.

Once licensed, the visually-impaired ham has many options - participating in club activities (serving on boards and committees), public-service events - especially those adaptable to sight-limited operation. In this connection, Patty emphasized the value of voice-synthesizers, now available as options from manufacturers. These add-ons, activated by front-panel push-buttons, announce operating and PL tone frequencies; also in some cases, mode (CW, sideband, FM, etc.).

Patty then described and demonstrated (how often do we have "show and tell" by a visually-impaired ham?) a high-tech device known simply as "Braille Lite". Battery-powered, smaller than a briefcase, it can read or write Braille via a laptop-type keyboard. In use, it can store text typed in by the operator, and on command it will "read back" what has been entered, either by synthesized voice or by a mini-size stylus-matrix display of up to 18 characters, over which the operator may run fingers, sensing conventional Braille letter-patterns. Also, by connecting to either serial or parallel ports on its panel, Braille-Lite can feed its stored contents into a computer.

This advanced-technology gadget, priced around $3000, serves as a portable notebook, calendar, clock - and recorder for keeping track of activities at the public-service events in which Patty often participates. Of course the built-in calculator, through its synthesized speech output, can be helpful to the sight-impaired in handling arithmetical questions on license exams. Also, it can help with logging chores in contests or everyday QSO's - it can record date, time and other data, to be read later into a computer.

Reminiscing about her professional career, Patty described her stint at ARRL Headquarters, as (1) editor of QST's 'Washington Mailbox", 1984-86; (2) as coordinator for the League's program for the disabled, in which she updated an earlier edition of a Membership Service guide. This publication, unique in its field, is a 110-page compendium of encouragement and advice to would-be hams with various disabilities and to non-disabled "Elmers", technical articles describing various aids for operating and/or checking ham gear, including instruments, lists of equipment and references (both print and non-print) with suggested operating procedures and nets directed specifically towards handicapped radio amateurs.

[NOTE: *a copy of this Guide (which Kitty vows will someday be updated when she has the time and inclination) is currently in the possession of K6FS.*]

In summary, Kitty offered some recommendations for relating to handicapped - especially vision-impaired - hams and non-hams:

- First - socialize - don't ignore or brush off an obviously handicapped person.
- Second - don't be shy about including blind or otherwise handicapped hams in club activities.
- Third - when in the company of a blind person, ask if he or she would like assistance, and what kind.
- Fourth - if the person wants/needs a sighted guide, first make contact so he/she knows where to reach for the guide's arm; grasping the guide's arm just above the elbow, he/she then walks beside and slightly behind the guide, who walks normally, keeping his/her arm in a normal position, that is, not held away. According to Kitty, it is important that the guide carry the arm so that the blind person's hand is in contact with both the guide's arm and side. Her advice to sighted guides: walk confidently - don't be hesitant!
- Fifth - going to a seat (as at a PAARA meeting): guide places escort's hand on back of chair for orientation, if possi-

(Continued on page 108) Program

(Continued from page 103) Ponderings
spectrum available to only a very few that have adeptness in one area of Amateur Radio seems to me to lack long term thinking." Nick's response and analysis of the issues provides valuable insight concerning the concept of earned privileges.

"Let me offer my humble opinion ... There was a time, many years ago, when being a radio operator was a skill based profession. One's ability to copy Morse code was a prerequisite to becoming a radio operator. Technical skill was also important, but code skill was held in higher preference. When the military trained radio operators, potential operators went through intense weeks of code training where many 'washed out'. They washed out for reasons of lack of interest or desire to clear inability to master the Morse code. The military realized then that there would be a screening process for acquiring the best radio operators and that many would fail. The Morse code was that screening process. Where Morse code is concerned, you will always have those who can master it and those who cannot, or will not, for whatever reason.

The truth of the matter is that life is full of screening processes that preclude many of us from doing things we would like to do. Be they physical, mental, timing, or just plain lack of motivation, education, etc., we are all eliminated from something that we might otherwise enjoy doing. Many don't like that reality and think it's unfair!! If one's desire is strong enough he or she can overcome some of those roadblocks and achieve a personal goal they might otherwise not have achieved. They become stronger individuals because of that dedication. I believe this to be true of Amateur Radio as well. At least the Amateur Radio we know right now.

There seems to be a flaw in American thinking that says: 'I should be equal to everyone else'. We somehow get that mixed up with the idea of equal opportunity under the Constitution. The concept of equal opportunity does not suggest that everyone has the right to be an Amateur Radio operator regardless of the requirements. It means everyone has the opportunity to become an Amateur Radio operator by meeting established requirements.

Part of the Amateur Radio legacy is the Morse code and that is why the existing structure provides various privileges based upon code speed proficiency and, of course, the technical written material. Therein lies the rub. There is a movement by a group of people to eliminate the Morse code from the Amateur requirements. 'Let's reduce the requirements,' they say, 'thus the effort required for achievement'. They state that the code skill is antiquated and, in modern times, without merit or purpose. They cite the ever increasing satellite coverage of the entire globe and they talk about how slow a data rate Morse code is, and that it is no longer needed. They would like to see the Morse code killed, eliminated, and forgotten.

The argument is so strong that they have gained the attention of the FCC and the ARRL. Both of these organizations are concerned about headcount and the masses, not necessarily individual achievement. The very reasons they cite for eliminating the CW requirement are, in my opinion, the reasons to somehow keep it alive. Let's not forget the unsinkable Titanic, a high tech achievement for its time, and now think of those missing life boats as tomorrow's lost skills in Morse code. I believe that some of this anti-Morse code movement is fostered by those who want Amateur privileges without having to meet the code requirements.

The written exam, as we all know, is a joke at best_ just a pool of technical questions easily memorized. To pass the exam one does not have to know what Ohm's Law is or what a great tool it provides, but that the answer on the test is '2 milliamps'. Once we can eliminate the code the masses can be Amateur Radio operators. Yet I submit that there will still be those who want to be Hams without having to memorize the question pool, either. After all, that takes a lot of time!! And Gee, no one's REALLY learning anything from memorizing a question pool, so what good is the exam?

Once they've eliminated the Morse code the next move will be to eliminate the written exam. Just apply for your Ham ticket on the Internet!! So eventually the socialistic goal will be achieved;

Amateur Radio for the masses....NO SKILL REQUIRED!! And to think it all came about because a group of people just didn't want to learn that stinkin' code!!

My basic point to all this is that I believe there must be a stronghold for Morse code. When the Military and other communications services are eliminating the Morse code operation from their functions in favor of high technology, then the only obvious stronghold for maintaining Morse code proficiency is the Amateur Service.

In order to spark proficiency there's nothing wrong with offering additional privileges for demonstrating that proficiency. Those who don't like that statement are those who have not achieved it nor care to work for that achievement. de **Nick Hulbert KG5N,** Colorado Springs, CO".

Most comments to the FCC concerning CW requirements have been from Techs and Tech Pluses. The consensus of opinion from them is that a CW requirement is not unreasonable in exchange for HF privileges. The only bone of contention seems to be the required speed. Most favor 5 wpm for full HF privileges. If this happens, it may mean more Techs will upgrade to 5 wpm and, if they get on HF, they may find they like CW and want to increase their speed. Most will probably opt for SSB only, though, expecting the same level of armchair copy found on FM repeaters.

Along this line of thought, one magazine publisher recounts the tale of a Ham who whined that he had been trying to learn CW for 30 years, all to no avail. The publisher correctly pointed out that the Ham in question only needed to learn one character per year to become proficient in CW during that time! Is that asking too much in exchange for all the privileges it would confer? In the final analysis, perhaps there's enough spectrum for all who earn it. Remember the motto of **Jim Hossack W7LS** of Duvall, WA. "I'm bilingual; I speak CW and SSB".

—Vic, AB6SO

(Continued from page 106) Program

ble; otherwise, tell the blind escort where the seat is, and where he/she is in relation to it. Where seats are arranged in rows and guide-escort must traverse the space between rows, guide so informs escort and takes lead, with escort following behind, but still in contact as before.

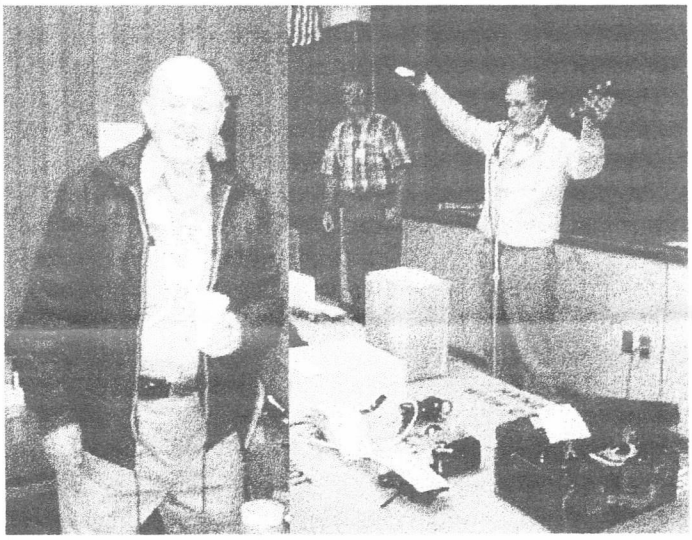
- Sixth - DON'T grab the blind person, even if you intend no harm. Likewise, avoid taking hold of the cane or other aid the blind person may have.
- Seventh - when traversing a particularly narrow passage - e.g., approach to a restaurant table - use what Kitty calls "a narrow-space technique". Guide takes lead, with escorts hand at guide's wrist, guide proceeds through space with escort a full step behind guide but still in contact, until passage has been traversed, when former guide-escort position is resumed.
- Eighth - handling steps or curbs. Guide/escort approach step or curb straight - not at an angle; guide pauses just before stepping up or down; if necessary, guide tells escort "Curb (or step) up (or down).
- Ninth - dealing with doors. Guide precedes escort, who keeps hand-contact with guide; guide may tell escort "Door opening away (or toward) left (or right)".
- Tenth - when accompanying a sight-impaired person, whether as a guide or social companion, and you have to separate, be sure to leave your blind escort where he/she has some sort of spatial reference - wall, doorway, chair or other furniture.
- Eleventh - when in contact with a sight-impaired person, speak directly to him/her; assume that except for the eyes, he/she is perfectly normal. Use your normal voice. DON'T SHOUT!
- Twelfth - don't hesitate to identify yourself by saying your name, especially if you have met before but can't be sure of being recognized.
- Thirteenth - if a sight-impaired person has a dog-guide, avoid petting, feeding or otherwise distracting the dog from its job; whenever it's guiding a sight-impaired person, the animal is working. IT'S NOT A PET!
- Fourteenth - don't be shy about using "look", "see?", "watch", as you would in normal conversation with a sighted person - in other words, don't let a sight-impaired person's disability embarrass you.
- Last - if you're guiding a sight-impaired escort, and either forget or don't know how to proceed - ASK!

-30- **–Steve, K6FS**

Kindness is a language which the deaf can hear and the blind can read.
—Mark Twain

*Courage HANDI-HAM System,
3915 Golden Valley Road, Golden Valley, MN 55422;
Tel.: 612/520-0511;
E-mail: handiham@mtn.org;
Web: www.mtn.org/handiham

PAARA
Auction & Flea Market
November 14th



Steve K6FS **Gerry WA6LNV**

VP Dave WS6W **Treas. Doug K1DIT**

To view these and more pictures go to Dick Kors Web site:
http://www.best.com/~rjkors/PAARA/

PAARA*graphs* Ad Rates

PAARA*graphs* accepts paid advertisements from non-members.
(short personal ads remain free for members in good standing).
All ad rates listed are per issue only.
1. 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).
2. 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 PAARAgraphs editors reserve the right to reject any ad deemed to be not in the best interest of the Association. All fees are for "scanner-ready" copy or text-only ads.

PAARA PRIDE
wear your
PAARA Badge
to
meetings, picnics, field days, winter parties, ham fests, flea markets, Pacificons...
(if you need one, contact Fred, K6YT)

Join us for pre-meeting eyeball
QSO December 4th
gab & gobble
6 pm— at Su Hong Restaurant
1039 El Camino Real, Menlo Park
—across from Kepler's Book Store—

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 PAARAgraphs, $6 for additional family members (no newsletter).
Make payment to the Palo Alto Amateur Radio Association.

December 1998

Palo Alto Amateur Radio Association, Inc.
PAARA*graphs* Newsletter
P.O. Box 911
Menlo Park, California 94026

FIRST CLASS MAIL

INSIDE:

Korsak, Andy Paid Through 98
VE3FZK
504 Lakemead Way
Redwood City, CA 94062-3919

PAARA

Celebrating 61 years as an *active* ham radio club
Since 1937