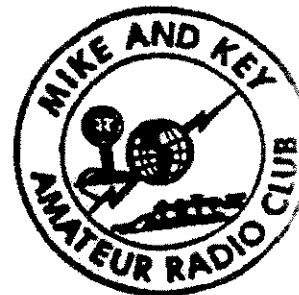




# K7LED RELAY



The K7LED RELAY is the official tabloid of the Mike and Key Amateur Radio Club. The mailing address is: P.O. Box 2121, Kirkland, WA. 98083. The Mike and Key Amateur Radio club is dedicated to the betterment of Amateur Radio. We meet the Third Saturday of every month at the Good Neighbors Center, 305 So 43rd, Renton - across from Valley Medical Center. The Club operates repeaters on 52.05-53.05, 146.22-146.82, 222.52-224.12 under the call of K7LED. The following nets meet on 146.82: Club Net Wednesdays at 7:30 PM, Public Service on Thursdays at 7:00 PM. Everyone is invited to participate.

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## PRESIDENT

Mike Dinklerman WA7UVJ  
637 2<sup>nd</sup> Ave. So.  
Kent, WA. 98032  
854-4031

## TREASURER (acting)

Charles Stroehrer WA7EBH  
19415 SE 21<sup>st</sup> ST  
Issaquah, WA. 98027  
392-5303

## TRUSTEE NO. 1

Ralph Schumacher WX7T  
4032 East Mercer Way  
Mercer Island, WA. 98040  
232-8053

## TRUSTEE NO. 4

Brian Wood KF7QF  
8706 206<sup>th</sup> St. SW  
Snohomish, WA. 98290  
481-2361

## VICE PRESIDENT

Jim Christiansen K7ND  
P.O. Box 147  
Fox Island, WA. 98333  
549-4062

## ACTIVITIES

Steve Roley AD7G  
3034 61<sup>st</sup> St. SE.  
Mercer Island, WA. 98040  
323-4989

## TRUSTEE NO. 2

Frank Krieger KA7QHG  
3410 So. 166<sup>th</sup> St.  
Seattle, WA. 98188  
243-9232

## TRUSTEE NO. 5

Julian Williams KA7MCB  
7839 So. 114<sup>th</sup> St.  
Seattle, WA. 98178  
772-5729

## SECRETARY

To be voted  
this meeting

## RADIO OFFICER

Ken Rau K7YR  
5430 Lake Alice Rd. SE.  
Fall City, WA. 98024  
222-7711

## TRUSTEE NO. 3

Wayne Moddison K6DOW  
16646 SE 134<sup>th</sup> ST.  
Renton, WA. 98059  
271-5314

## EDITOR

Joyce Stroehrer, N7JPW  
19415 SE 21<sup>st</sup> St.  
Issaquah, WA. 98027  
392-5303

JOYCE STROEHER  
19415 SE 21<sup>st</sup> ST.  
ISSAQUAH, WA. 98027



FIRST CLASS MAIL

## BOARD MEETING

On First Tuesday at 7:30 PM  
Onmi Restaurant on So. 188th ST.

## BREAKFAST

7:30 AM AT THE RIVERSIDE INN  
14060 Interurban So., Tukwila

K7WTG 92/01  
HEDBERG, PETE  
20904 NE 77th ST  
REDMOND, WA. 98053

## CLUB MEETING

Saturday September 21st at 10:00 AM  
Good Neighbors Center  
305 So. 43rd, Renton  
Doors open at 9:30 for donuts  
TALK-IN ON 146.82 RPTR

## RELAY DEADLINE

BY THE BOARD MEETING!

## XMAS PARTY IN DECEMBER

Volunteer(s) help needed for XMAS Party. Contact WA7UVJ.

CHECK MAILING LABEL FOR DUES EXPIRATION DATE!

## PRESIDENTS CORNER

I was told last month that I had the power of appointment (actually I knew that, but never dreamed of using it). So, I went a little POWER MAD at the August Board meeting and placed several persons of dubious responsibility in positions of frightening authority.

OK, maybe it wasn't that bad but you should know what's up.....

First, I am officially declaring the Treasurer position vacant. To fill the position, I am appointing a committee consisting of Chuck Stroehner and Jack Burrell, due to their intimate knowledge of the Club finances. This committee will stand until the next meeting that elections can be held. Also at that time, the Secretary position (which was vacated last month) will be voted upon.

Second, avoid Frank Krieger, KA7QHG, like the plague (hihi). He is the head of our elections - nomination committee and is seeking qualified (?) persons willing and able to accept the mantle of leadership in the upcoming elections in March 1992. Unfortunately, (for you) I will not tell you who else is on the committee so better watch out!

Third, I have officially appointed Ralph, WX7T, to head up a committee to investigate the possibility of submitting legislation to our State government similar to that enacted by Florida in the last year. This legislation incorporates PRB-1 into State law and reminds local governments of its presence. Don't be surprised if Ralph tags you if you have any talents in this area. (or don't be afraid to volunteer if the same applies).

Finally, I tried to appoint various persons as Court Jesters and Knights of the CW Roundtable but was promptly overruled. I guess you can go power mad for only so long (as events in the USSR have also shown).

Anyway, hope to see you all at the Club meeting.  
-wa7uvj

CLUB MEETING ON SEPTEMBER 21, AT 10 AM. VOTING FOR NEW SECRETARY. COME AND MAKE YOUR WISHES KNOWN.

## MINUTES MEMBERSHIP MEETING AUGUST 17, 1991

The meeting was called to order by President, Mike Dinkleman, WA7UVJ, at 10:00 AM in the Good Neighbors Center, Renton. Flag Salute, welcome and introductions followed. Approx 55 members and guests attended.

**Vice Pres:** Jim, K7ND: Introduced Betty Flenner, N7RYD, 6011 Oberlin Ave. N.E., Seattle, 98115. Ph 524-6276. She is unanimously voted in to membership. Badges are now arriving. Jim is the HF Awards Manager for the club. He can check those QSL cards for members now.

**Treasurer (acting):** Chuck, WA7EBH: Checking \$2500.00. CDs are generating \$54.00 a month.

**Secretary:** Darlene, KG7KC, has resigned. Nominations will be held for her replacement.

**Activities Manager:** Steve, AD7G: Currently out of town. KA7QHG and KA7MCB are working on picnic to be held Aug. 24 at Camp Long in West Seattle beginning about 11:00 AM. Hamburgers, hot dogs, buns, pop and tossed salad will be furnished as well as eating utensil. Other items will be potluck. Games to be played.

Pins are being ordered by Ray, WA7EKH. One pin will be provided to each member. Additional pins may be purchased for \$2.00 each. These will be ready in 4-6 weeks.

**Raffle:** Julian, KA7MCB, states the big raffle is next month.

**Public Service:** Chuck, WA7EBH: Thanks to all for helping with Seafair parades. Auburn Parade is Aug 24. To meet 9-9:30 AM at the Auburn Performing Arts parking lot. Kids begin at 11 and main parade is 11:30. Short parade, need approx 10 persons. Will attend the picnic afterwards. KA7QHG asked if anything in King County similar to emergency call-out in Pierce Co. Eastside 911 is active and meets the 2nd Thursday of month. Alert is sent out on the 146.70 repeater at 6PM. Those who do not respond are called on phone. Meetings begin at 7PM. This needs help and support from amateurs.

**President, Mike:** WA7UVJ: Coat list is circulating for new order. Must have 10 to send order in. There is \$480.00 budgeted for 4 sets of ARRL books. Need suggestions for placement with 3 suggestions from floor. Flea Market planning has begun with letters to commercial companies already sent. There is a Flea Market meeting Sept. 25, 7:30 PM at Mike Cross', WB7AYU. Ralph, WX7T appointed to PRB1 Coordination of Antenna

laws. There is no program this month. One is planned for September.

After 10 minute break, meeting resumed. Field Day: We won the challenge with Radio Club of Tacoma. (challenge?!!!!) They did not participate so we won by default. Need to find a new challenge for next year.

**New Business:** There are many visitors including several young people: Dave, KB7KIX, age 14, Bothell, was in movie with Gib, W7JIE. Patrick, KB7KYM, 14, North Seattle. Jeff, 14, from Philadelphia, who is studying for his license.

Vic, WB7TBR, is coordinating classes in Greater Seattle.

Brian, KF7QF, will arrange transportation for anyone interested in classes at Lynwood PUD.

Frank, KA7QHG, coordinating Code class, probably 1 time a week beginning 1st Thursday in September at 7:30 PM on 28.360 on 10 meters. Code practice for Commodore 64 disc available.

Question of decreasing dues for youngsters raised. Needs to be proposed to Board.

Angela has a good Code machine she will donate.

**Raffle:** \$80.00 collected today. \$25.00 Gift Cert to Betty, N7RYD; \$15.00 gift cert to Mike, WB7AYU; \$10.00 gift cert to Jack, N7IHS. World Radio Subs to Mike, N7PGZ, and John, W7HIL. Puyallup Fair tickets (pair) to N7QFX, W7JWP, W7HIL, W7JWP, K7KBY.

There being no further business, meeting adjourned.

Submitted by,  
Joyce, N7JPW, Sec pro-tem.

### **MINUTES BOARD MEETING September 3, 1991**

Present: KA7QHG, WA7UVJ, K7ND, KF7QF, WA7EBH, WX7T.

Absent: K6DOW, K7YR, AD7G, KA7MCB.

Visitors: WA7EKH, WA7TAI, WB7AYU, KB7ZS, N7JPW, AA7HB.

Meeting was called to order by C.O.B. Frank, KA7QHG. Minutes of the previous meeting approved as published.

**President:** WA7UVJ: WA7EBH and KB7ZS are appointed to handle the treasurer's duties. Setting up appointment with Radio Club of Tacoma to receive trophy for Field Day. Flea Market meeting at QTH of WB7AYU on Sept. 25, 7:30 PM. Program for September meeting to be GPS by Vern Bennett.

Books are ready to distribute to the libraries. Labels are in books indicating M&K as donators. Board of Trustees will determine where they go. It is suggested to check with libraries of previous books to see if they are being used.

**Vice Pres:** K7ND: Two versions of Flea Market fliers. Will take 500 to Tacoma Ham Fair. Commercial space \$80.00, Tables \$20.00, Admission \$5.00. Free labels are available from ARRL once a year.

**Treasurer:** WA7EBH: \$14,000.00 plus including CD's. Will need to transfer small CD when ready to print Flea Market fliers and mail. Generating \$54.00/month interest.

**Act. Mgr:** AD7G: Continues to be out of town. KA7QHG reports need of program for October meeting. Suggested Don Stoner, W6TNS.

**Trustee, WX7T:** Sequence for passing legislation includes 1) Attorney write up; 2) Sponsors - Representatives and Senators to introduce bill in both houses; 3) Bill to committee; 4) Rewritten in final form; 5) To House and Senate. PRB-1: Harry Lewis will get liaison and section persons.

**Trustee, KA7QHG:** Club contacts - committee will write letters to other clubs.

**Trustee, KF7QF:** Evergreen State Fair had a booth with Hams.

**N7JPW:** Minutes are done. In process of retrieving minutes from computer and check against book. Reminder for visitors to have legible handwriting when signing in to facilitate zero returns of RELAYS.

**WA7UVJ:** Lee, KG7OW would like to try Secretary.

**KB7ZS:** Repeater - Coax was stripped off tower. Purchased 100 ft. of 9913 and then was notified there was some coax there which was subsequently donated and only 2 ft. was used. There is 98 ft of 9913 for sale. The remote receiver operating. Noise in AM when cold and late afternoon when hot. WA7EBH will go to Fort Flagler on Oct 5 at 1 PM to secure facilities for Field Day. Ken, K7YR is out of town.

**WA7EBH:** Voiced concern of Christmas party planning. Tentative date is either Dec. 7 or 14. K7ND and WA7UVJ are planning.

**WB7AYU:** Voiced concern over vacancies on board. Situation is being remedied.

**WA7EKH:** Need Business Report Form from ARRL. It is noted this must be requested. Noted there is >\$3,000,000. in ARRL Budget for staffing - wondering why and what for. Reminder to use P.O. Box number for club business. The mail box is checked a minimum of once a week and more

during Flea Market time. Not sure where incorporation papers are - address is to K7YR - unable to get papers from Ken. This will be looked into.. Goal is to get all mailing addresses to P.O. Box number. Bought a patch a a ham show for \$3.00. Asking if club would be interested in selling patches for hats, etc. Voiced concern of inactivity of club members.

**WA7UVJ:** Picnic enjoyed by those who attended. Suggested that Julian keep food and use it. Board agreed. Need to have more advanced notice in the future.

**WA7TAI:** No report. Glad to see so many youngsters at general meeting.

**AA7HB:** No report. Just visiting.

There being no further business, meeting adjourned.

Submitted by,

N7JPW, Secretary Pro-tem.

## MANUAL TRAINING

*Congratulations! You have purchased an extremely fine radio, which is why we ask you to read this owners manual carefully before you unpack it. You already unpacked it, didn't you? and you plugged it in and turned it and fiddled with the knobs, and now your radio like the last one you bought, won't seem to come off the transmit position, right? And your just starting to read the instructions, right???*

Sorry, now lets talk about:

1. UNPACKING THE RADIO: The radio is encased in foam to protect it from Shipping People, who like to jab spears into the boxes.

**WARNING: DO NOT EVER, AS LONG AS YOU LIVE, THROW AWAY THE BOX OR ANY OF THE PIECES OF PLASTIC FOAM, EVEN THE LITTLE ONES SHAPED LIKE PEANUTS.** If you return the radio and are missing one single peanut, the store personnel will laugh at you in a chilling manner.

2. OPERATING THE RADIO: The radio was manufactured in Japan and the instructions were translated by Mrs. Shirley Peltwater of accounts receivable, who has never been to Japan but does have most of *SHOGUN* on tape.

Instructions: For results that can be the finest, it is our advising that: Never hold these buttons two times!! Except the battery. Next, taking the (something) earth section may cause a large occurrence! However. If this is not a trouble, such

rotation is a very maintenance action, as a kindly (something) viewpoint from Drawing B.

3. **WARRANTY:** Be it hereby know that this radio, together with but not excluding all parts thereunto, shall be warranted against all defects, failures and malfunctions as shall occur between now and Thursday afternoon at shortly before two.

**WARNING:** It may be a violation of some law that Mrs Peltwater has *SHOGUN* on tape.

Paraphrased from Readers Digest, KB7ZS

## ALUMINUM

I was asked recently if I was still collecting aluminum. You betcha!

While there are no Russians to fund this year, I am still taking the bloody stuff to the recycler when I get sufficient quantities to make it worthwhile. The resulting funds will go towards the Awards Banquet door prizes, split equally between the Ham and non Ham categories. Just bring it to the regular club meetings and throw in the back of my truck. The collection has been a bit poor lately! wa7uvj

## FLORIDA'S AMATEUR ANTENNA BILL

In April of this year the Florida Legislature passed a bill which can be referred to as "The Amateur Antenna Bill".

The law is simple. Briefly, it states that no County or Municipality shall enact or enforce any ordinance which fails to conform to the limited preemption entitled "Amateur Radio Preemption, 101 FCC 2d 952" (1985) as issued by the Federal Communications Commission. We refer to this preemption as PRB-1.

This legislation was discussed at the July Board Meeting. Pres. Mike, WA7UVJ, appointed a study group to look into what action we might take perusing this topic. The study group at this time includes: Ray, WA7EKH; Aldo, N7MYM; Michael, N7OXR; and myself.

As your committee continues to work, reports will be presented to you in the RELAY or at the General Club Meeting. 73, Ralph, WX7T.

## FLEA MARKED PLANNING

The Flea Market Committee will have it's first official planning meeting on Sept. 25 at 7:30 PM at QTH of WB7AYU, at Alki in West Seattle. Talk-in on club frequencies and 146.58 MHZ. All interested members are urged to attend. This is your chance to provide input, get involved with decisions, and choose any area of special interest you would like to be involved with this year. The committee is informal and ongoing.

From I-5 take Exit 163, Spokane Street to West Seattle. Follow Admiral Way SW to 59th SW, then East 1 block. WB7AYU

## 2M REPEATER UPDATE

Late last month we were contacted and advised that the tower coax the Club had been using must be removed. Since this was air filled metal tube coax, just what to do was a problem. After some consultation it was decided to replace it with type 9913 coax.

Upon arrival at the site we found that EPA did not want to make a trip to remove their coax (7/8" hardline) so the site operator asked if we might use it rather than rip it out. They said fine, so with a little bending and adapting a 259 to N connection, we ended up with nearly new hardline tower coax. Since the SWR checked out no other work was done to the repeater. The 440 control receiver was replaced and at the time of this report all is going well. Some trouble on Labor Day morning but it seems to be doing it's thing now.

One more trip, to check cavities, sealing, SWR, etc. and it should be set for the winter.

## BOOKS BOOKS BOOKS

The Mike & Key ARC buys and distributes \$500 worth of ARRL publications each year. The books have arrived and are being labeled. I would expect that in the next month, four sets of books will be delivered to local library systems. We will let you know which libraries are the beneficiaries in next months Relay.

## FIELD DAY

Yes, we did win the challenge band at this years Field Day. Unfortunately, it was more like a default than anything else.

Never the less, Jeff Freedman, K7JF and President of the Radio Club of Tacoma, will come by this month and present us with THE trophy. The one we've been presenting to the RTC for so many years. Lets give Jeff a rousing Mike & Key welcome and let him know that the Field Day spirit hasn't been lost at this Club.

From the last Club meeting, it would appear that most of you would like to see a continuing challenge but with possibly some other club. Who and how should we challenge? Maybe the prize should reflect our Northwest roots? Let me know? wa7uvj

## UPS & 220 Mhz

UPS, which was the major mover causing us to lose the bottom portion of the 220 Mhz band, has received some bad news from the FCC. Here is an article from the W5YI Report, Aug. 1, 1991:

United Parcel Service, who has invested a lot of money into the 220-222 Mhz spectrum reallocation proceeding, is now arguing before the FCC that it deserves "pioneer's preference" in the allocation of channels between 220 and 222 Mhz. They are opposed to the assigning of the new narrow band channels through LOTTERIES.

There were more than 60,000 applications filed for 220-222 Mhz channels before the FCC was forced to enact an application freeze on May 24. Some 200 applications were filed for nation-wide commercial systems alone.... where there are only 60 frequencies available.-W5YI

Seems to me that justice would be served if UPS were left out to lunch.-K7ND

## AUGUST VISITORS

Jeff and Andrew Kleist; Alan, KB7NYF; Brian and Joyce Baskett; WA7BVE; KA7VXN; Henry Dobroth, KA7CAB; Pat Ryan, KB7KYM; and Homer, W7NWP.

MAKE PLANS FOR THE CHRISTMAS PARTY IN THE FIRST PART OF DECEMBER. DETAILS TO FOLLOW IN LATER RELAY.

## JACKETS AND SHIRTS

I'll continue taking a list of persons wishing to purchase club jackets. The jackets have a lining, the Club logo, and come in two colors. The price generally falls around \$30 each but I need a minimum of ten orders to reduce the setup charges. Presently, I have five people signed up.

Also, as long as we are setup, we can have T-shirts made for a reasonable fee, probably less than \$10 a piece.

See me at the Club meeting if you are interested.  
-wa7uvj

## ROSTER CHANGES

KB7BVL: P.O. Box 166 Sumner, WA. 98390  
WV7Q: P.O. Box 166, Sumner, WA 98390  
N7NKO: 242-6715  
KB7KBY: 824-9356

## OLD MEMORIES-OLD BUT GOOD WORDS

Many years ago, I'd say at least 12-14, W6IIH and I were contemplating the mysteries of ham radio operations. How things ought to be and how they seem to be. Could we do anything about it? Knowing some of the obvious errors being made, we felt qualified to comment. So we wrote the following article.

It had very limited distribution in Puget Sound, but Mike Riley, KX1B, who was then Public Service Manager of ARRL, saw it. He liked it. Liked it so much that it was reproduced in its entirety in an ARRL book called "The Emergency Coordinators Manual". Again, a very limited distribution to most except those who asked for it--if they knew about the book.

It seems to me that it is time once again to raise up and bring to your attention some of the operating demerits, faults, deficiencies, and just plain bad operating that goes on. Not only on the M&K Repeater, but also on the lower frequencies like 20 meters, etc. Read it and take heart. Maybe you don't qualify but I'll bet you can find a few worthy thoughts. G1b, W7JIE.

(Ed.s Note: Article later in Relay.)

## SEPTEMBER PROGRAM

This month's program will be a presentation by Verne Bennets, discussing the Global Positioning Satellite system and equipment. Many of you may have heard of his presentation at the PARS last month and we are fortunate to have Verne as a guest this month. There will be an equipment demonstration as part of the program.

Verne is a retired Coast Guard Officer formerly in charge of the vessel traffic system in Puget Sound and has been involved with Magellan, a GPS manufacturer, for the past three years. I hope you will welcome him in and bring your questions. -wa7uvj

## FUTURE PROGRAMS

Help! We need some quality programs for the next six months.

Our Activity Manager has been Shanghaied and may not be available for some time. So, if you have any contacts, interesting videos, or are interested in presenting a program of your own please let me or any other Board members know immediately!

At this time, there are NO scheduled programs past September. It's your Club, please lend a hand and keep the meetings interesting.-wa7uvj

## WANTED

I want to thank all who went to the trouble of looking for a power transformer I needed to complete the power supply for my Russian amplifier. I am now searching for a rotary switch.

I need a switch with 2 poles and 6 positions. It doesn't have to be a high power type as it is for the input circuitry but I would like something a little more rugged than what I've been finding in the local part stores. (I could buy one through Radio Kit but its about \$30. I'm a cheap son of a gun.) If you've torn any surplus gear apart lately and have one lying around, I'd sure like to talk to you at the Club meeting wa7uvj

## THE BASIC THEORY OF TELECOMMUNICATIONS.

DEFINITIONS: TELECOMMUNICATIONS-is the ELECTRONIC exchange of information. (voice, teleprinter, handkey, TV, etc.)

COMMUNICATIONS-is the written word, or message that is NOT HANDLED ELECTRONICALLY. (a letter, memo, draft, etc.)

In this discussion we are NOT interested in Communications as defined above, however, the word COMMUNICATIONS may appear because it is so freely used by everyone. Since this information is EXPRESSLY addressed to TELECOMMUNICATIONS, do not become confused by the appearance of COMMUNICATIONS. WE ARE STILL ALWAYS TALKING ABOUT TELECOMMUNICATIONS!!

Now to the discussion.

In any Telecommunications transmission, there are six elements that must ALWAYS be present. Whether we are asking for the time of day or a complex logistic transmission, these six elements must always be present.

(1). First and foremost we must determine exactly what it is we wish to transmit. This is not as easy as it sounds. We must identify and understand a need, clarify and simplify it, then reduce it to its most basic and immediate essentials. Let's call it CONCEPT.

(2). DOCUMENTING. Once we have the concept, we must determine how to deliver it to the intended receiver. We must consider the vocabulary and expression to be used and find the best way to deliver the message in a simple form. Complex word groups or difficult phrases can be better understood if they can be simplified.

(3). TRANSMISSION. Now we have to send the message by some means. Phone, rty, packet, or handkey even. Make sure the circuit is free from interference (loud noises in the background such as talking, room noise, engines). This can do much to interrupt the transmission. Loud engines in the background, jets, saws, crowd noises all create interruptions. Or plain old QRM from interference by radio signals, static by QRN, or whatever, may cause transmission failure. Be prepared to change frequency if it will solve the problem.

(4). RECEPTION. The person who receives a message must not only receive it, but must understand it. The relaying operator must be able to legibly give the message to the intended receiver, thus minimizing the chance of error or misunderstanding.

(5). INTERPRETATION. Here reception is not enough. The actual addressee must be able to correctly interpret the message as it was originally conceived and delivered to the communicator.

(6). FEEDBACK. There must be a specific way to indicate that the first five steps have been completed successfully. This evidence of successful communication may be direct -- a vehicle has been requested to return, and the vehicle returns. Or, a particular item is needed and the item is delivered. In the case of voice messages, it is always good practice to repeat back to the sending radio operator, the essential parts of the transmission just to make sure it is understood. If there is any doubt, provide your own feedback by asking a question, requesting a repeat of the instructions, or obtaining physical proof, such as watching the direction of travel of a team dispatched to a problem situation. If you are the receiving operator, make sure you understand the instructions before action is taken.

Most breakdowns in telecommunications are owing to omission of one or

more of these six steps in information exchange. The best-conceived and transmitted message is worthless if directed to the wrong person or if your instructions or question are ambiguous or over-ridden by other messages. Don't be afraid to ask for a repeat or an acknowledgement if you think the message is not clear. If you stick to the six elements, your messages will be nearly 100% perfect.

#### GENERAL PROCEDURES.

- (1). TONGUE IN CHEEK. "TIC". Always talk ACROSS THE FACE OF THE MIKE!! Eliminates the "ESS'S" sibilants, heavy breathing, and "Popping" of the "P's". On any unidirectional mike this applies & few hams use anything else. Especially noticeable on hand-helds.
- (2). Speak S L O W L Y!! There is no rush. It is better to get the message through than to show how fast you can talk. Accuracy first--speed second.
- (3). Hold the push-to-talk button down for a second before you start talking. Many radio systems take just a spot of time to activate.
- (4). KNOW what you are going to say before you push that button!! Don't clutter up the air with: "Net Control this uh, this is WA, uh, ah, SEVEN, ah, uh, XYZ, and a uh, would you call Mr. Black, uh uh, to the radio, uh, for uh, Mister uh, Green, over".
- (5). Make sure you are not on the air with someone else -- the pause you hear from Net Control may be deliberate to allow two other stations to complete a transmission.
- (6). Chewing gum, eating, and other activities with items in the mouth tend to clutter up the clarity of your speech. Don't.
- (7). On 2-meter and other VHF fragment frequencies, look for a receiving "hot-spot" site and use it, particularly when on the fringes of communications. Don't walk around talking while in communications fringe areas. Repeaters have much more power than your hand-held. Even if you have a good signal from the machine, it does not mean you are good into the machine.
- (8). Under stress, many operators have a tendency to talk fast. Even if you are in the midst of the action, remember to talk slowly and clearly in order to get the message across correctly. ACCURACY FIRST, SPEED SECOND!!
- (9). Avoid angry comments on the air at all costs. Obscene statements are not required, and reflect on the Amateur Radio fraternity. Remember there are many "scanners" in use by unlicensed but interested people and your operating techniques are under observation all the time.
- (10). If you are relaying a message for another person, be sure you repeat the message exactly, word-for-word, as it is given to you. If it makes no sense to you, get an explanation before you put it on the air. Refer the message back to the originator for clarification.
- (11). Sound alert. Nothing destroys confidence as much as a bored & weary-sounding radio operator. If you are tired, get a relief operator.
- (12). Forget humor on the air. A radio system suffers enough confusion without wisecracks and jokes. Amateur radio may be a hobby to enjoy, but the Telecommunications function is serious business and should be



treated as such at all times.

(13). Watch certain words. They sound almost like the opposite meaning. For example, "can't" almost sounds like "can" and with a poor signal -- who knows. "Unable" is a better choice. Use "affirmative" instead of "yes". Use "negative" instead of "no". "Roger" is a good word. It means "message received", implying that it is understood. It does not mean "affirmative" or "yes". The use of "Q" signals on voice circuits is not adviseable! They are too easily misunderstood, rarely save time, and often result in errors.

(14). Identification of units in a multi-station function is a requirement by FCC. However, if the Net Control Station and each of the outlying stations give a complete identification at least once in a ten-minute period, the use of abbreviated call-sign identification is acceptable. As an example, W7XYZ can use the call-up "7XYZ" as long as the complete call is given by W7XYZ at 10-minute intervals. Dropping the "7" is permitted, but too brief a sign might result in error.

(15). ALWAYS identify your unit at the beginning of each transmission. Net Control, or anyone else for that matter, needs to know WHO is calling because voice identification may be difficult. Identify your unit again when the message exchange is completed. (Under rule 14, you may have been silent for quite a while and someone needs to hear your call).

(16). The word "break" is NEVER used UNLESS there is an emergency. Otherwise, use your call letters to gain access to the net. This rule applies at all times, whether in a net, accessing a conversation in progress on a repeater, or attempting to make a contact.

(17). Remember the strongest signal "captures" the receiver in an FM radio system. When two or more stations are on the air at the same time, confusion can result. Check to see that you are not over-riding someone or blanking out their communications with your signal.

(18). Do NOT act as a "relay station" unless Net Control, or another radio station, asks for a relay -- and YOU can fulfill the requirement at your station.

(19). When transmitting numbers (house numbers, street numbers, telephone numbers), always transmit the number sequences as a series of individual numbers. Never say numbers in combination. Example: "12345 SW 148 AVE." is given as a series "one, two, three, four, five, south west, one four, eight Avenue." Do not say: "Twelve three forty-five south west AH-hundred forty-eight Avenue." There is much confusion when sending combinations of numbers.

(20). There is no such thing as "common spelling" in any radio work. If there is a proper name to be transmitted, always spell it out using the International Phonetic Alphabet. DO NOT improvise a phonetic alphabet; if you don't know the International Phonetic Alphabet, now is a good time to learn it and use it in your daily operations.

--ALPHA	F--FOXTROT	K--KILO	P--PAPA	U--UNIFORM
B--BRAVO	G--GOLF	L--LIMA	Q--QUEBEC	V--VICTOR
C--CHARLIE	H--HOTEL	M--MIKE	R--ROMEO	W--WHISKEY
D--DELTA	I--INDIA	N--NOVEMBER	S--SIERRA	X--XRAY

E--ECHO

J--JULIETT

O--OSCAR

T--TANGO

Y--YANKEE

Z--ZULU

(21). ALWAYS acknowledge calls and instructions. You can acknowledge by just giving your unit identification. Nothing is more disruptive to the smooth flow of communications than dead silence in response to a message. If you cannot copy, or respond to the call immediately, then tell the caller to repeat or "stand by". Otherwise, acknowledge each call immediately.

(22). Never acknowledge calls and instructions unless you understand the call or instructions perfectly. If you do not understand, ask for a repeat. Make sure you have the instruction right before acknowledgement.

(23). Net Control Stations frequently are very busy with work that is not on the air. If you call the NCS and do not get a reply, be patient and call again in a minute or two. If it is an emergency, call more often and so state; otherwise, just space the calls to the NCS until they answer. You may be in a dead spot; try moving your position slightly until acknowledged. Be patient -- both at the NCS and at the outlying stations.

(24). ONLY TRANSMIT FACTS!! If your message is a question, deduction, educated guess, or hearsay, identify it as such. Do not clutter up the air with non-essential information. Particularly important is information regarding emergency work where rumors can be started from overhearing a transmission on a scanner or other receivers. Be careful of what you say on the air!!

(25). Always know where you are located. If you are mobile or portable and moving around, always keep a sharp lookout for location identification. The NCS and many others may need to know exactly where you are physically located, so keep a sharp eye on surroundings. If called upon, you can accurately describe your location at any time. This is particularly important if you are with a mobile unit on the move from place to place.

(26). ALWAYS leave a monitor on the net frequency. If you must leave the frequency, ask permission from NCS to change. Advise NCS of the change and always report back to the NCS when you have returned to the net frequency. It is vital that the NCS know the whereabouts of each station in the net, and it is up to YOU to keep the NCS advised.

(27). Stay off the air unless you are SURE you can be of assistance. It does no good to offer advice, assistance, comments or other input to a net unless you can truly provide clarification. It is better to remain silent and thought a fool than to open your mouth and remove all doubt!

(28). Many time radio conditions are poor and words must be over-exaggerated to be understandable. In general, speak very slowly and distinctly to carry through static or weak signals. The following list provides pronunciation of numbers in poor receiving conditions:

One--"WUN"	Two--"Too"	Three--"Tharee"	Four--"Fower"
Five--"Fiyuv"	Six--"Sicks"	Seven--"Seuven"	Eight--"Ate"
Nine--"Niner"	Zero--"Zearow".	(The number "zero" is NOT pronounced as "OH".)	

(29). If you do not understand the whole message given to you or if you missed a word out of the transmission, reply with "Say again." Do NOT say

"Please repeat" because it sounds too much like "Received" when conditions are poor.

(30). When you have understood the message, acknowledge the receipt with the word "acknowledge" or even "received." DO NOT use "QSL" since it may be misunderstood or even missed under poor conditions.

(31). Finally a few words about operating position of hand-helds. If you hang it on your belt or anywhere close to your body, remember your body is acting like a big "dummy load". It soaks up a lot of RF and a small amount is radiated. It is not only unhealthy but deteriorates communication. Reconsider how you use your hand-held, where you place it, where is the antenna, are you between the antenna and the rest of the net?



In conclusion, nothing in all the above words argue with the real world of Amateur Radio. These few rules and suggestions are intended to help you become a better operator whether in a ham contest, working a parade or helping on an emergency mission. As you can see, most of this material is directed toward phone operations. CW, RTTY, or other forms of digital operations are better described in other publications.

Above all, analyze your present operating methods and try to polish each element so your contribution to Amateur Radio communication is really worthwhile. Net Control may have final authority, but good, clean operating methods and procedures almost make a net run without a NCS.

73, de W6IIH & W7JIE.

# MIKE AND KEY AMATEUR RADIO CLUB

September 15 - October 26, 1991

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Sept 15	Sept 16	Sept 17	Sept 18  Yom Kippur 7:30pm MIKE AND KEY NET ON 146.82 RPTR.	Sept 19 7:00pm PUBLIC SERVICE NET ON 146.82 RPTR. 7:30pm PARS MEETING Puget Power Bldg. Bellevue	Sept 20	Sept 21 7:30am Breakfast at Riverside 10:00am CLUB MEETING AT UGN IN RENTON 1:00pm VE EXAMS at Good Neighbors Center
Sept 22	Sept 23 <i>Autumn begins</i>	Sept 24	Sept 25 7:30pm MIKE AND KEY NET ON 146.82 RPTR. <div style="border: 1px solid black; padding: 2px; display: inline-block;">7:30pm Flea Market meeting at WB7AYU</div>	Sept 26 7:00pm PUBLIC SERVICE NET ON 146.82 RPTR.	Sept 27	Sept 28
Sept 29	Sept 30	Oct 1 <b>**RELAY DEADLINE FOR NEXT ISSUE**</b> 7:30pm Board Meeting OMNI RESTRAUNT	Oct 2 7:30pm MIKE AND KEY NET ON 146.82 RPTR. 7:30pm ISSAQUAH RADIO CLUB MEETING	Oct 3 7:00pm PUBLIC SERVICE NET ON 146.82 RPTR.	Oct 4	Oct 5 8:00am CAMANO ISLAND HAM BREAKFAST 1:00pm Fort Flagler Reservations
Oct 6	Oct 7	Oct 8	Oct 9 7:30pm MIKE AND KEY NET ON 146.82 RPTR.	Oct 10 7:00pm PUBLIC SERVICE NET ON 146.82 RPTR.	Oct 11	Oct 12
Oct 13	Oct 14  <i>Columbus Day (Observed)</i>	Oct 15	Oct 16 7:30pm MIKE AND KEY NET ON 146.82 RPTR.	Oct 17 7:00pm PUBLIC SERVICE NET ON 146.82 RPTR. 7:30pm PARS MEETING Puget Power Bldg. Bellevue	Oct 18	Oct 19 7:30am Breakfast at Riverside 10:00am CLUB MEETING AT UGN IN RENTON 1:00pm VE EXAMS at Good Neighbors Center
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Contact editor for additions