

Gold Country Nuggets

Newsletter of the Nevada County Amateur Radio Club

OCTOBER MEETING

October 12, 2009
7:00 PM - Salvation Army Bldg
10725 Alta St, Grass Valley, CA

Door Open – 6:30
Coffee & Sodas
“Free” Flea Market Table
Raffle

CLUB DISCUSSION

EQUIPMENT DISPOSITION

&

PLANNING

UPCOMING EVENTS

CALIFORNIA OSO PARTY (CQP)

0900 (3 Oct) to 1500 (4 Oct)
See: www.cqp.org/Rules.html

FRESNO ARC HAMFEST

October 17, 2009
Salvation Army Event Center

President's Report

Walt, N6HNS

This month's column starts with the equipment which has been donated to the club over the last year. In previous columns I've described the equipment we received, mostly to acknowledge the generosity of a fellow ham. However, the club now has so much gear that we want to try to sell most of it, while retaining a few nice items for the club to use.

We still hope to get a fully functional station on HF and VHF/UHF in the radio room at the Salvation Army Community Center and a couple transceivers will be used for that purpose. In addition, we'd like to have some gear available to loan to members, especially new hams and newly upgraded hams. The idea here is for them to get some experience with different radios and help them decide on gear they may want to purchase.

But, even after saving some equipment for the club, there are still several transceivers and lots of other items we want to sell.

Elsewhere in the newsletter is a list of the equipment for sale. As most of these items are pretty old, it's difficult to establish a good asking price

(Continued on page 2)

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LICENSE EXAMS

Morse Code No Longer Required

November 28

Contact Jon W6EXX for details
jf-morris@usa.net

President's Report

However, on several of the items we have guessed at a price we feel is what we would ask if the rig was at a swap meet or on an internet auction site, like E-Bay. But these will be offered to club members at a discount (25% off), and the discount price is shown on the list. This is all new to us, so if you see something you'd like, but think our asking price is too high, we might be willing to negotiate – particularly if it seems that nobody wants it at our price. Many of the items have not been fully tested, and everything is pretty old. But if you buy something and find it doesn't work as well as you expected, bring it back for a refund within a reasonable period, say at or before the next club meeting.

We will have all of the equipment available to look at during the October meeting. If you see something you like, you can purchase it on the spot and take it with you, or let us know that you will be purchasing it, and we can set it aside. On items without a set asking price we will have a silent auction sheet (and possibly a low starting amount). Here, you put your call and your bid amount on the sheet. The highest bid gets the item.

All the equipment that doesn't find a home by the end of the October meeting will be available at the November meeting. Anything that doesn't sell at the November meeting --- well, we can decide what to do it with it at that time. The general feeling is that anything that we don't sell to a member will eventually end up at a swap meet.

We aren't expecting to get top dollar for things, especially selling to members, and if a piece of gear isn't doing what it should be doing, we aren't really losing anything if we end up giving a refund. It is nice, though, to get some extra cash into the club's checking account, as we did last year after Burl, K4YVL, and Doc, FG6YHH, took a bunch of stuff to Sacramento for us. Once we see how much is collected, we can decide what we want to do with the extra funds. Some of the items on my suggested purchase list are: a new antenna analyzer (for use at club events, and as a loaner for members who want to check out an new or old antenna), maybe a new portable HF rig or a stand-alone auto antenna tuner, . . . list goes on and on. But, let's see what we can sell first before deciding what to get.

On another topic, you will soon be hearing some new voices as Net Control on the Tuesday evening 2 meter nets. For starters, Charlie Kotan, KOTAN, has agreed to take on some of the net control duties, so now there will be three of us rotating in that job. In addition, we have a couple of other volunteers who want to give it a try. I think in the next month or two, we will be having "guest" Net Control operators filling in for one of the three can be very useful – in regular operating and also preparing for taking

(Continued on page 3)

MEMBERSHIP INFORMATION

The Nevada County Amateur Radio Club is an organization whose purpose is to further the interests of amateur radio and be of service to the community in times of need. Membership is open to anyone who shares these group goals.

GENERAL MEETINGS:

2nd Monday of each month at 7:00 PM, at the Salvation Army Center located at 10725 Alta Street, Grass Valley, CA 95945. - Visitors are welcome.

ANNUAL DUES:

\$20.00* per year. (* \$6.00 /yr for associate or additional household members). Membership is renewable January 1st each year. Members who fail to pay dues before January 31st will be removed from the club roster until membership is renewed. For further information and/or application contact N.C.A.R.C., P.O. Box 2923, Grass Valley, CA 95945...or see the club web site at <http://www.ncarc.org>

SEE LAST PAGE FOR RENEWAL FORM

Please contact the club secretary with any changes in email or contact information.

NETS

All Licensed Amateurs Are Welcome

NCARC	TUES	7:00 P	147.285 PL 151.4
10 M	TUES	AFTER 2M NET	28.453 USB
WX	MON- FRI	7:30 A	147.285 PL 151.4
ARES	THURS	7:30 P	147.285 PL 151.4

NCARC NEWSLETTER: *Published monthly. Please submit articles and information of interest to Gerry, AB7G via email. (ab7g@att.net)*

The Gold Country Nuggets monthly newsletter is compiled and edited by Gerry, AB7G of the Nevada County Amateur Radio Club. - All material contained herein is obtained from the sources credited and edited for this newsletter. -

NCARC WEBSITE:

For more club info see us at ncarc.org.

President's Report

part in emergency communications – simulated and the real thing. Having people who can jump in if the scheduled net control operator cancels can keep things going. There have been times when some of you have jumped in to run things, when, for example, my radio seems to have stopped working (I forgot to hook up everything after using it in the field) and it took several minutes to get back on the air. But those individuals didn't have the net script and net roster to help them run things. Having several people with all the info, should make for a more seamless operation if the scheduled operator can't make it, as well as adding to the operating skills of those who choose to help with the net.

And for my last topic, I want to mention that at the October meeting we will be starting to take photographs of members for the Club brochure. For those of you who haven't been to the last couple of meetings, we decided to put together a simple brochure with the names, call signs and a photo of members. This was suggested by Burl, K4VYL, as a means of helping us all put a name with the faces we see at meetings. Ron Carpenter, a new member, volunteered to put it all together once we get all the photos and info. I'm hoping we have everything we need to make it available early next year.

In the mean time, start thinking about how many of the bargains you will be taking home from the October meeting.

73 Walt N6HNS

NCARC MEETING MINUTES

General Meeting on 14-September - 2009

Attendance: 23

After the usual introductions, Dave, W1SER entertained us with a professional-quality video of recent Field Days. Your Secretary was especially impressed with the CW sequence from the 2009 Field Day. It reminded me of the montage sequence from Flying Tigers oh, I'm dating myself again. Anyway, Dave did a good movie!

Bill Ragsdale, K6KN, dropped in to invite us to participate as operators in the big Boy Scout Capitol March on October 24 in Sacramento.

After the break, Treasurer Chuck advised us that the club balance stood at \$3538.49 with 68 members in the club. Your Secretary read the minutes for August's General Meeting.

Richard, K16UOV, was unanimously approved to fill out the remainder of the term in the vacant Director's position.

Chuck, K0TAN, reminded us about the Super Raffle at the Christmas Dinner Meeting, with a 2-meter radio to be the Grand Prize.

As usual, the raffle ended the meeting, and we adjourned at approximately 8:40 p.m.

Respectfully submitted by Jon, WA6TNC, Secretary

SACRAMENTO VALLEY SECTION NET

Second Wednesday of the month. Begins on the WD6AXM Repeater at 146.085 MHz, (PL 127.3) at 1900 local.

By 1930 local, we will migrate to 3987 kHz LSB, plus or minus QRM. We will discuss the latest ham radio news and answer questions

WORLD RADIO MAGAZINES "FREE" ON-LINE

World Radio Magazine is now available "free" in PDF format. WorldRadio readers will feel right at home, with many of the same columnists now in electronic format. http://cq-amateur-radio.com/images/0209_WorldRadio_Online.pdf>
- ARRL Letter

NEW INTERNET MARKET PLACE FOR AMATEUR RADIO

The Amateur Radio Exchange is a new eBay style auction / listing site that is less expensive and safe for Amateur Radio.

The Amateur Radio Exchange is said to be a safe and secure place for hams to Sell, Buy, or swap.
amateurradioexchange.com

The new Forum is easy to access using the same username and password. You are invited to visit and register to use this Amateur dedicated website.
amateurradioexchange.com/Forum/index.php

LATEST CONTEST VISUALIZER

The A7BNM perpetual contest calendar is available for download from Bob KØRC.

This Excel 2003 spreadsheet-based tool will show you all of the 2009 contests in a graphic display and will reveal the overlapping times of these events. It also performs UTC to Local time conversion for your convenience. <http://tinyurl.com/cbbhq>

WHERE ARE THE HAMS?

Want to know the locations of other hams in your neighborhood try

hams.mapmash.com/mapOneZip.php?hist=zipmatch:95946&zip=95946

NEWS FROM THE ARRL et al

CALIFORNIA QSO PARTY (CQP) – 3 & 4 OCT

The Northern California Contest Club is sponsoring the California QSO Party 3-4 October 2009.

This is the big one among the state qso parties. Everyone outside the state will want to contact you if they can on this weekend.

Stations outside our state will want to contact each of our 58 counties and those counties serve as the multipliers. CA stations need the 50 U.S. states and the 8 Canadian provinces. Other DX stations count too, but not as multipliers. Details at: www.cqp.org/Rules.html .

For other contests see:

www.arrl.org/contests/update/?issue=2009-09-30

NATIONAL SAFETY COUNCIL RESPONDS TO ARRL: NO EVIDENCE OF "SIGNIFICANT CRASH RISKS" WHILE OPERATING MOBILE

ARRL President Joel Harrison, W5ZN, wrote a letter to National Safety Council (NSC) President Janet Froetscher in July expressing the ARRL's concerns that Amateur Radio not become an unintended victim of the growing public debate over what to do about distracted drivers

Froetscher has now replied, saying the NSC does not support bans or prohibitions on the use of Amateur Radios while driving. Noting that there is significant evidence that talking on cell phones while driving poses crash risk four times that of other drivers, Froetscher observed that the NSC position calling for bans on the use of cell phones while driving is grounded in science. "We are not aware of evidence that using Amateur Radios while driving has significant crash risks," Froetscher wrote in her August 24 letter.

"We also have no evidence that using two-way radios while driving poses significant crash risks. Until such time as compelling, peer-reviewed scientific research is

presented that denotes significant risks associated with the use of Amateur Radios, two-way radios or other communication devices, the NSC does not support legislative bans or prohibition on their use."

Froetscher said that while "the specific risk of radio use while driving is unmeasured and likely does not approach that of cell phones, there indeed is some elevated risk to the drivers, their passengers and the public associated with 650,000 Amateur Radio operators who may not, at one time or another, not concentrate fully on their driving."

She points out that the "best safety practice is to have one's full attention on their driving, their hands on the wheel and their eyes on the road. Drivers who engage in any activity that impairs any of these constitutes an increased risk."

ARRL Chief Executive Officer David Sumner, K1ZZ, said the ARRL "appreciates NSC President and CEO Janet Froetscher's clear statement that the NSC does not support legislative bans or prohibitions on the use of Amateur Radio while driving. We applaud the NSC for taking positions that are grounded in science. At the same time, all radio amateurs should heed her call to concentrate fully on driving while behind the wheel. It is possible to operate a motor vehicle safely while using Amateur Radio, but if it becomes a distraction we owe it those with whom we share the road, as well as to our passengers, to put safety first."

On January 30, 2009, the ARRL Executive Committee adopted the ARRL's Policy Statement on Mobile Amateur Radio Operation that states "Amateur Radio mobile operation is ubiquitous, and Amateur Radio emergency and public service communications, and other organized Amateur Radio communications activities and networks necessitate operation of equipment while some licensees are driving motor vehicles.

Two-way radio use is dissimilar from full-duplex cellular telephone communications because the operator spends little time actually transmitting; the time spent listening is more similar to, and arguably less distracting than, listening to a broadcast radio, CD or MP3 player.

There are no distinctions to be made between or among Amateur Radio, public safety land mobile radio, private land mobile radio or citizen's radio in terms of driver distraction. All are distinguishable from

mobile cellular telephone communications in this respect. Nevertheless, ARRL encourages licensees to conduct Amateur communications from motor vehicles in a manner that does not detract from the safe and attentive operation of a motor vehicle at all times."

In his letter, Harrison explained to Froetscher that Amateur Radio operators provide essential emergency communications when regular communications channels are disrupted by disaster: "Through formal agreements with federal agencies, such as the National Weather Service, FEMA and private relief organizations, the Amateur Radio volunteers protect lives using their own equipment without compensation. The ability of hams to communicate and help protect the lives of those in danger would be strictly hindered if the federal, state and local governments do not ensure that Amateur Radio operators can continue the use of their mobile radios while on the road."

Froetscher replied that she "appreciate[s] your focus of Amateur Radio for emergency communications during disasters. I encourage ARRL to adopt best practices for the safe operation of vehicles that confines use of Amateur Radios while driving only to disaster emergencies."

The Policy Statement asserts that the ARRL "is aware of no evidence that [mobile] operation contributes to driver inattention. Quite the contrary: Radio amateurs are public service-minded individuals who utilize their radio-equipped motor vehicles to assist others, and they are focused on driving in the execution of that function." - ARRL Letter

[AMATEURS RIGHTS RESTORED ON 40 METERS](#)

The fall operating season is just around the corner. Whether it's because radio conditions improve or just because attention returns to indoor pursuits as the days get shorter, on-the-air activity always picks up at this time of the year.

Do you operate on 40 meters? "If you haven't been on the band lately, you're in for a real treat!" said ARRL Chief Executive Officer David Sumner, K1ZZ. "Years of patient effort by the ARRL and by our sister members of the International Amateur Radio Union (IARU) have paid off. The band is more useful now than it's been in more than 70 years."

When you think of 40 meters, you probably think of interference from foreign broadcasters. Here in the Americas, amateurs always have had access to 7,000-7,300 kHz - but we had to tolerate broadcasters in the rest of the world in the upper two-thirds of the band."

Sumner said he can recall the "futility" he felt as a 13-year-old Novice, "trying to make myself heard through the racket with just two crystal-controlled transmitting frequencies to choose from. I remember taking the crystal holders apart and putting pencil lead on the crystals in a vain attempt to slip in between the broadcasting behemoths."

" At the 2003 World Radiocommunication Conference (WRC-03) -- 40 years later -- he had the privilege of being present in Geneva when it was agreed that amateurs had made the case for a wider worldwide amateur band, free of broadcasting interference."

" For the first time in the history of radio communication, an HF broadcasting allocation would be shifted in order to accommodate the needs of another radio service -- the Amateur Radio Service!

Sumner called the WRC-03 decision "very gratifying," but said an important question remained: Would the broadcasters really move?

"The International Telecommunication Union has no enforcement authority," he explained, "and operation in contravention of the international Radio Regulations is not exactly unknown. In fact, the transition turned out to be quite dramatic.

On the last weekend of March, on Friday evening 7,100-7,200 kHz was full of broadcasters as usual –

As the new seasonal broadcasting schedule took effect on Saturday night the band cleared of all but a few. For the very first time our overseas friends could hear us on 40 meter phone without having to breach the wall of broadcasters! Over the past six months the situation has continued to improve as more broadcasters have complied with the WRC-03 decision.

Nighttime operation above 7,200 kHz remains a challenge, but it's not an exaggeration to say that 40 meters is like a whole new band."

Sumner explained that moving hundreds of broadcast transmitters in dozens of countries out of a band didn't just happen: "It took years of patient effort by a global team of volunteers and ARRL professionals, working through the IARU, to overcome objections and marshal the necessary support. It was an expensive undertaking, and it never could have been accomplished without the voluntary contributions -

above and beyond their basic dues - of thousands of ARRL members."

Decisions for WRC-12 are being made now that will determine how many administrations -- including the United States - will support a new secondary allocation to the Amateur Service at 500 kHz, and whether proposals for allocations to oceanographic radars will threaten some of our existing HF bands.

"We are hard at work meeting these challenges, but we need your help," Sumner said, in asking for support for the ARRL Spectrum Defense Fund. "Members' past response helped us to keep commercial satellites out of the 144 and 420 MHz bands, to gain access to frequencies around 5 MHz, and to win our court challenge of the FCC's flawed Broadband over Power Lines (BPL) rules. New challenges keep cropping up. Currently we are working to ensure that new short-range medical devices do not impact our ability to use our UHF and microwave bands."

To help in the ARRL's ongoing mission to protect our valuable spectrum, please visit the Spectrum Defense area on the ARRL Web site You can also reach ARRL Chief Development Officer Mary Hobart, K1MMH, at 860-594-0397 or via e-mail: k1mmh@arrl.org. Special gifts are being offered for contributions, including a mug and pin. More details on thank you gifts can be found on the donation form for the Spectrum Defense Fund. – ARRL Letter

[ARRL BOARD ADOPTS GUIDELINES AND RECOMMENDATIONS ON USE OF AMATEUR RADIO](#)

On Friday, September 25, the ARRL Board of Directors adopted guidelines on the appropriate use of Amateur Radio on behalf of commercial, non-profit and government entities, as well as recommendations for additional steps to be taken by the ARRL to educate radio amateurs and others on how to prepare and train for public service and emergency communications while complying with the current FCC Rules.

At its meeting in July 2009, the ARRL Board created an ad-hoc committee to study the issue and prepare suggested guidelines. The committee submitted its report to the ARRL Executive Committee, which reviewed and revised the document. After additional discussion among Board members by electronic mail and teleconference, the Executive Committee submitted the document to the Board for formal adoption.

Entitled The Commercialization of Amateur Radio: The Rules, The Risks, The document offers guidelines to assist radio amateurs and anyone wishing to utilize the

capabilities of Amateur Radio in understanding the FCC. Rules that prohibit communications in which the amateur has a pecuniary interest, including communications on behalf of an employer.

While the FCC Rules in this regard have not changed in many years, there has been increasing discussion of the issue as growing numbers of employers and non-amateur organizations recognize the value of Amateur Radio as an emergency communications resource and encourage their employees to obtain amateur licenses. Also included are guidelines for evaluating the appropriateness of Amateur Radio volunteers providing communications services to commercial enterprises and other entities for which other communications systems are available.

"The guidelines are not intended to be the last word on the subject, and surely will not be," observed ARRL First Vice President Kay Craigie, N3KN, and chair of the ad-hoc committee. "The report includes several recommendations for additional steps that the ARRL needs to take to help amateurs and the organizations we serve to better understand the Rules and to ensure that what we do to prepare to be of service in emergencies is consistent with the current Rules."
– ARRL Letter

[INTERNATIONAL REPLY COUPONS \(IRCS\): OUT WITH THE OLD, IN WITH THE NEW](#)

It is now time to start dumping your old International Reply Coupons (IRCs). The "Beijing Model No 2" must be redeemed before December 31, 2009.

The new IRC -- the Nairobi Model IRC has been available in the US since September 10 and elsewhere since July; the price is \$2.10 each in the US. The Nairobi Model is due to expire in 2013. For more information, click here arrl.org/news/stories/2009/09/30/11103/?nc=1.
– ARRL Letter

[4U1UN : GENERAL ASSEMBLY SPECIAL EVENT](#)

To celebrate the 64th General Assembly of the United Nations, 4U1UN -- the Amateur Radio station at the UN began operating as 4U64UN on September 22.

According to The Daily DX <<http://www.dailydx.com/>> , 4U64UN will be on the air for 64 days on all bands and modes.

QSL via Logbook of The World (LoTW arrl.org/lotw) or direct to Herbert Aeby, HB9BOU. Logs will be uploaded to LoTW once the event is over. QSL cards

will be mailed out starting in December 2009. – ARRL Letter

GOVERNOR'S \$250,000 GRANT TO AMATEUR RADIO GOES ONLINE AS OREGON HAMS INSTALL NEW WINLINK SYSTEM

This month, Oregon ARES members will complete the state-wide installation of Winlink thanks to a \$250,000 grant from Governor Ted Kulongoski.

In 2007, the governor was impressed by the hams' ability to handle emergency communications when severe winter storms wreaked havoc on Oregon's North Coast and flooded the City of Vernonia, knocking out 911 services, Internet and phone service for an extended period of time. The Oregon Office of Emergency Management said that during the storms, the radio operators were "tireless in their efforts to keep the systems connected." When even state police had difficulty reaching some of their own troops, ham radio worked, setting up networks so emergency officials could communicate and relaying lists of supplies needed in stricken areas.

"I'm going to tell you who the heroes were from the very beginning of this...the ham radio operators," the governor said at the time. "These people just came in and actually provided a tremendous communication link to us." Because of the service rendered by Amateur Radio operators in providing communications support, the governor allocated funds for the installation of a Winlink system to integrate Amateur Radio with the Internet.

The equipment will be installed in the Emergency Operating Center in each of Oregon's 36 counties. Once the monies were distributed, ARES members researched and purchased the equipment that would be needed, formalized and signed contracts between the state, counties and ARES, and allocated space to install the antennas and equipment within each EOC. The project is scheduled to be completed in time for the 2009 ARRL Simulated Emergency Test (SET) scheduled for October 3-4

"Using Winlink equipment and other amateur equipment already in place at the EOCs, ARES teams will have to quickly create a communications network, in some instances without depending on other infrastructure such as telephones or Internet," said ARRL Oregon Section Public Information Coordinator Steve Sanders, KE7JSS. "Many will not use commercial electric power. Despite these limitations, the ARES teams should not only be able to quickly pass local messages, but also

communicate with other regions of the country. The ability to pass information in and out of disaster areas is crucial to the effectiveness of emergency responders."

When Oregon's State Office of Emergency Management was activated on December 3, 2007 hams over the course of the next four days used Winlink to pass message traffic. "The Winlink system performed perfectly, and the ARES team at the OEM was able to pass approximately 200 messages into and out of the State of Oregon Emergency Operations Center," said Marion County ARES Emergency Coordinator Dean Davis, N7XG. "The only mode of communications for several Oregon counties for the first two days of the storm was the Winlink system." - ARRL Letter

NEW PRODUCT REVIEW TESTS: OCTOBER QST

When you peruse the October issue of QST, you may notice a few extra lines in the Product Review data. "Here at the ARRL Lab, we strive to make our test procedures relevant to current technology and to new features common on today's transceivers," said ARRL Test Engineer Bob Allison, WB1GCM. "We continue to research ways to improve our testing and to develop new tests that will benefit our members. I hope you will find these new measurements useful in evaluating and comparing transceivers."

* RECEIVER SENSITIVITY (MDS): 137 AND 505 KHZ

Several countries now give amateurs permission to operate at and around 137 and 505 kHz. In the US, there is activity on 495 to 510 kHz by more than 20 stations around the country operating under the ARRL sponsored WD2XSH experimental license. In addition, there are other Part 15 experimental licensees operating in this range. The WD2XSH stations are on the air regularly, gathering propagation data. They are always looking for signal reports.

Allison said that with many of today's transceivers and a suitable antenna, you can listen for these experimental stations and submit reception reports via the Web site: "The new Product Review tests will help identify transceivers suitable for use on these frequencies. With equipment built over the last 25 years ago or so, I've noticed a wide variety of available sensitivity, from terrible to quite good. Many receivers tune to 137 and 505 kHz; not all are proficient at receiving signals there. For you 'lowfers,' this measurement is for you."

* SPECTRAL SENSITIVITY

Spectral sensitivity is the weakest signal that can be "seen" on a visual display of spectrum above and below the operating frequency.

Often called a spectrum scope or panadapter, this feature is included on many mid-range and high-end transceivers. "This data represents the level, in dBm, at which the operator can see a signal poke up out of the display noise floor," Allison explained.

"Although the measurement is somewhat subjective, it works out to be about 3 dB above the noise floor at the bottom of the display when the scope is adjusted to show 100 kHz of spectrum. With software-defined receivers (SDRs), such as the FLEX-3000, the sample rate is set to the highest setting."

* AUDIO OUTPUT THD AT 1 V RMS

Allison said that one of the ARRL Technical Advisors posed the question, "Who ever listens to their receiver at full volume?"

Allison explained that audio output power and THD (total harmonic distortion) at the specified load impedances as

specified by the manufacturer have been tested and reported. "Generally, the specification is at or near the maximum audio output the receiver is capable of," he said. "If severe hearing loss isn't an issue, we normally listen with the volume control set to around the 9 o'clock to 11 o'clock position on most transceivers and not with the control cranked to maximum." Allison explained that distortion at normal listening levels is an important factor, especially when you are listening for an extended period of time: "High levels of distortion can make signals more difficult to understand and add to fatigue. We'll continue to measure and report how audio output power and THD compare to manufacturers' specifications, but we have added a new test intended to show distortion at more typical volume levels." After testing several radios for comfort, Allison picked 1 V RMS as an output level for the new test. "It's an easy figure to remember," he said. "We will now also report THD at this level. Note that this test will appear with the next transceiver reviewed because the FLEX-3000 has only a low-level audio output and is dependent on external, user-supplied devices to amplify the audio to normal listening levels." – ARRL Letter

NCARC “MEMBER’S SALE”
Contact Walt, N6HNS for Purchase Interest and Info

BRAND	MODEL	NCARC MEMBER PRICE
YAESU	FT-757GXII HF XCVR w/ Matching Pwr Sply	\$ 300.00
YAESU	FT-747GX HF Xcvr	\$150.00
ICOM **	IC-765 Xcvr w/SM-8 Mic <i>This is the big HF rig that's been in the radio room for years</i>	\$575.00
MFJ	492X Memory Keyer	\$75.00
MFJ	1118 DC Power Strip, 30A	\$65.00
ASTRON	RS-12 Power Supply	\$30.00

NCARC “SILENT AUCTION”

BRAND	MODEL	
KENWOOD	TS-120 HF Xcvr	“Make Bid” At Club Meeting
KENWOOD	HS-5 Headset	“Make Bid” At Club Meeting
YAESU	FT-2700RH Dual-Band	“Make Bid” At Club Meeting
ICOM	IC-3PA, 3 amp power supply	“Make Bid” At Club Meeting
ICOM	IC-22 2 meter mobile	“Make Bid” At Club Meeting
ICOM	IC-25 2 meter mobile	“Make Bid” At Club Meeting

As well as other stuff we happen to find between now and the meeting.