

# The Ragchewer

SEPTEMBER 2004



## The Monthly News Letter of The Lancaster & Fairfield County Amateur Radio Club

### **Club Meetings:**

1st Thursday of  
every month at  
7:30 p.m. at the  
Club House on State  
Route 37 (Granville  
Pike) next to Beavers  
Field.

### **Radio Night:**

Every Thursday  
of every month  
(Except 1st Thursday)  
at the Clubhouse,  
6:30 p.m.  
to 8:30 p.m. on State  
Route 37 (Granville  
Pike) next to Beavers  
Field.

### **Net:**

Mondays 9 p.m.  
147.030 MHz (+.6)  
146.700 MHz (-.6)  
Alternate Freq.  
443.875 MHz (+5)

### **Club Packet BBS:**

145.53 MHz  
K8QIK-1 BBS  
K8QIK-2: OHIO53  
(Club Node)

Subject: Ohio Section Conference

Date: 7 Sep 2004 12:54:03 -0000

## HAM RADIO TOWER LAWS DISCUSSED DURING CONFERENCE

Recent ham radio court cases about amateur radio towers and the recent effects of PRB -1 will be one of the discussion topics during this month's Ohio Section Conference in Columbus.

Assistant Section Manager, Bob Winston, W2THU, a Cleveland attorney who made these court cases his specialty will moderate this topic. "If you have experience in this area or need to know the latest about the law and ham radio towers, this is the place to be," said Ohio Section Manager Joe Phillips, K8QOE." ASM Winston is a recognized authority in this area.

The 2004 Ohio Section Conference is Saturday, September 18, at the Ohio EMA headquarters in NW Columbus. It begins at 9 a.m. Beside the ham radio tower conference, the Conference will feature the big social event of the year, the Pizza Lunch Party sponsored by the Ohio Section of the ARRL. Also the conference will feature WinLink 2000, Official Observers conference, and the latest ARRL information on a variety of ham radio topics from the Great Lakes Division leadership. There will also be a parade of emergency vans from various Ohio County ARES programs.

This meeting of Ohio Section field appointments but all Ohio hams are welcomed is held each September to review ARRL activity in Ohio. The Severson Memorial Award and Ohio Section Newsletter award winners are also announced. The Ohio EMA address is 2855 W. Dublin-Granville Road (Ohio 161) in Northwest Columbus.

The Parade of Vans was last done in the September 2003 Conference. Nine such vans made the trip - but this year Section Emergency Coordinator John Chapman, WB8INY, is looking for a few more. At this display, you can see what other ARES programs in Ohio are doing and the equipment they employ.

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ARRL Ohio Section  
Section Manager: Joseph J. Phillips, K8QOE  
k8qoe@arrl.org

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- Meeting called to order by the Vice President
- Pledge of Allegiance - Led by the president.
- Visitors Matt from the EMA
- Secretary's Report Jon read report Bob motioned, Tom seconded.
- Treasurer's Report Ed read the finances. Motion to accept Bob, Tom seconded.
- Station Engineer (John Hillard)
  - Static with the repeater, 8 volts into the controller?! Jell Cell batteries were shorted. Batteries will need to be replaced most likely. Going to need to get some new batteries. Mr. Hillard might know someone to get this done. 50-60 dollars. Gary motioned to buy them, Harry seconded. It will be done.
- Hospital Antenna is up currently up. 1-1.1 currently. Repeater may be put in Tuesday at about eight.
- VE Testing Last session, one passed written general. (Mr. Snider)
- Net - Brenda wants to just not do the net anymore. Need another net manager. Calling Becky numbers to see if she can do it, if can't Bob will do it.
- Ragchewer - Next Thursday - Please email Bob so it can be put in.
- Emergency Coordinator (Ed Campbell Snr)
  - Why is Matt here?  
He would like to thank us for all that we do. Amateur radio has volunteered to put the radio antennas up. We have recieved a donation of 1500 to our club. We must check these antennas occasionally. We need to get test equipment. 1500 for the test equipment. Need a good VHF/UHF wattmeter, and an analyzer. Need to lock these up. MFJ antenna analyzer. Have Mr. Hillard, motion to get the MFJ antenna analyzer (UHF/VHF). Mr. Hillard will actually check first. Money to be put into fund for testing equipment. Harry motioned to put it into the special fund, Bob seconded.
    - Harry has the new article.
    - 5K run is November 13.
  - Identification? Might have identification system. We would have IDs made free of charge. Security officer had been there before, and they had to check with plant engineering.
- Fundraising (Hannah) - Candy Wright won, but was not present.
- Old Buisness - Comitee to make the election calls?! Report at the September meeting. No nominations will be made after September. John motioned to make it, Dusten seconded.  
Carpet cleaning? Money has been allocated. Clean carpet. Getting it done.  
  
October second, Alan Sellers having a little Ham Fest, no charges setup junk and sell stuff. Rain date will be next week. 8-12 noon. Anything you wanna sell.
- New Buisness  
Christmas party reservation. Kay and Connie are discussing. A couple things that need to be checked on. Tom suggested Friday night instead of Saturday night.
- Refreshments - Gary will bring refreshments next month.
- Closing - Tom motioned.
  - Bob seconded.
  - None Opposed

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IN THIS EDITION:

- \* +Amateur Radio readies for Hurricane Frances
- \* +FCC enforcing some Part 15 rules in ham radio interference cases
- \* +Space life sometimes challenging, astronaut says
- \* +ARRL Education and Technology Program to offer new activity board
- \* +ISS ham gear briefly becomes FM EasySat.
- \* +Real-time DXCC standings coming to ARRL Web site
- \* Solar Update
- \* IN BRIEF:

This weekend on the radio

Amateur Radio Emergency Communications Course registration

Employment opportunity at ARRL Headquarters

+ "The Beeb" to air program on Amateur Radio and 9/11

+ Opportunities Fair showcases ham radio for retirees

+ W9DXCC Convention features new location, full program

Bill Seabreeze, W3IY, wins August QST Cover Plaque Award

Industry Canada soliciting comments on Morse requirement, other issues + Available on ARRL Audio News

==> HURRICANE NET, WX4NHC CONTINUE HELPING FORECASTERS TRACK FRANCES

The Hurricane Watch Net (HWN) on 14.325 MHz this week has been working hand-in-hand with WX4NHC at the National Hurricane Center (NHC) to relay weather data and damage reports as a downgraded Hurricane Frances continues on what appears to be an inevitable collision with Florida's Atlantic Coast. As of September 3 at 1800 UTC, the National Hurricane Center said Frances was "relentlessly lashing central and western Bahamas" while slowly heading for Florida.

"We continue to have torrential rains," Marti Brown, KF4TRG/C6A, on Abaco reported to the HWN net control station September 3. "It's essentially a whiteout condition." Her report, typical of those being gathered, may portend what Southern Florida can expect. Another Amateur Radio report from the Bahamas indicated that seas were breaching the dunes of the beach, and residents were evacuating.

All such reports, typically including real-time measured weather data, are passed along to WX4NHC at the National Hurricane Center for forecasters to review. HWN operators have been handling and relaying all reports with businesslike efficiency, despite occasional QRM--some of it possibly intentional.

HWN Manager Mike Pilgrim, K5MP, in Boca Raton, Florida, briefly checked into the net using an indoor antenna "in case we need it," he told net control. The latest National Hurricane Center forecast is available via the HWN Web site <<http://www.hwn.org/atlantic/hapt31us.htm>>, which includes graphics.

During hurricanes and severe weather emergencies, trained HWN members work in cooperation with WX4NHC to relay observed or measured weather data and damage reports to forecasters via Amateur Radio. The ground-level weather data assist NHC forecasters in predicting a storm's path and behavior.

Frances was downgraded September 3 to a Category 3 hurricane, with winds of 115 MPH with higher gusts. Its forward motion was expected to continue to slow, however, perhaps buying some time for Floridians preparing for or escaping the storm's anticipated wrath.

As the state continued to recover from Hurricane Charley in mid-August, Amateur Radio Emergency Service (ARES) teams throughout Florida this week got ready for another punishing storm. Some communities hard-hit by Charley are in the potential path of Hurricane Frances.

Special sessions of the Southern Florida ARES Net (SFAN) to coordinate response activities (Florida Midday Traffic Net and Tropical Phone Traffic Net, both on 7242 kHz) were called up this week. Southern Florida ARES Section Emergency Coordinator Jim Goldsberry, KD4GR, says the Broward County Emergency Preparedness Net activated September 2 from the Broward County emergency operations center (EOC).

Palm Beach County also was recruiting ARES volunteers for shelter and EOC communicator duty. Palm Beach County RACES Officer Mark Filla, KS4VT, reported coastline and mobile home evacuations were under way.

"This is not a drill," emphasized Polk County Assistant Emergency Coordinator Wayne Miles, KG4TCJ, in a message to the Florida ARES reflector. Among the areas assaulted by Hurricane Charley, Polk County ARES has begun conducting informational nets (146.985 MHz, 127.3 Hz tone) at the top of every hour.

Earlier this week, Indian River County Emergency Management's Nathan McCollum put that county's Auxiliary Communication Services (ACS)--a Citizen Corps group--on a "Level 1" alert. The ACS includes Amateur Radio and REACT communication resources.

SATERN, the Salvation Army Team Emergency Radio Network, planned to activate September 4 at 1400 UTC on 14.265 MHz. SATERN will handle emergency and health-and-welfare traffic for those attempting to get news of friend and relatives in the affected areas. SATERN also accepts specific H&W inquiries via its Web page <<http://www.satern.org>>.

A fairly new all-CW entity, the National Radio Emergency Net (NREN), activated September 3 in response to Hurricane Frances to monitor 14,050 kHz and 7050 kHz for health-and-welfare, emergency traffic and hurricane information throughout the weekend. NREN is geared to low-power, portable and mobile stations.

ARRL West Central Florida Section Manager Dave Armbrust, AE4MR, said Hillsborough County and Sarasota County ARES were preparing for ARES Mutual Assistance Team (ARESMT) deployments. "If your county is not directly hit, please be ready to lend a hand elsewhere if requested," he advised.

In a message to the Tampa Amateur Radio Club Hillsborough County of Emergency Management Director Larry Gispert, KR4X, said that many emergency workers were "very impressed" by what Amateur Radio volunteers were able to accomplish during Hurricane Charley.

"In this day and age of ubiquitous Internet access and prolific cell phone usage, it is still amazing that when the chips are down the only reliable form of communication is a bunch of hams with their radios," Gispert said.

#### ==>FCC STILL ENFORCING PART 15 RULES IN SOME AMATEUR INTERFERENCE CASES

While the ARRL has accused the FCC of sweeping under the rug several Amateur Radio complaints of interference from unlicensed broadband over power line (BPL) devices, the Commission apparently is not ignoring other Part 15-related interference complaints from hams. With the assistance of the ARRL Laboratory, the FCC continues to dog complaints--some now longstanding--of power-line noise interference to amateur communication. Other cases of Part 15 device interference to radio amateurs have been a bit more exotic. For example, two recent citations issued by the Portland, Oregon, FCC field office involved interference from wireless microphones operating in the 70-cm band.

"The agent measured the field strength at 1500 uV/meter at a distance of 3 meters from the referenced wireless microphones and determined that the microphones were in noncompliance with §15.209 of the Commission's rules, which apply to intentional radiators," the FCC said.

Daniel Bathurst, WA7ABU, of Salem, Oregon, filed the complaint. In citations to FLECO Corp of Chino, California, and The Club Works Sound and Lighting of Salem, the Commission alleged that the devices, which operate on 432.55 and 439.55 MHz, also were not certificated for sale in the US. The FCC citation indicated that FLECO had sold the microphones to The Club Works.

As reported, the FCC earlier this year fined Best Wok, a Westville, New Jersey, restaurant \$10,000 for operating transmitting equipment on the 2 meter satellite subband without a license. The eatery allegedly was using a so-called "long-range cordless telephone" to communicate with its delivery vehicle.

Other recent cases have stemmed from radio amateurs' complaints about their neighbors' Part 15 devices. In a Texas case that FCC Special Counsel for Enforcement Riley Hollingsworth described as "an unfortunate neighborhood situation," the neighbor allegedly not only failed to respond to FCC letters but tossed out the toroid core devices the amateur, William Cooper, W5ZAF, had provided free and which, the FCC said, had resolved the interference.

Hollingsworth told the neighbor that under Part 15, operation of a consumer product "such as a battery charger" must not result in harmful interference to a licensed radio service. He emphasized that it's the neighbor's responsibility to correct the interference--whether or not the neighbor accepts Cooper's help.

In a similar case in Colorado, Hollingsworth on August 10 wrote another amateur's neighbor about interference from an electric fence charger to the Amateur Radio and broadcast television reception of P. E. Muetz, KOAWS.

"Operation of a consumer device such as your fence charger under Part 15 of the Commission's rules must not result in harmful interference to a licensed radio service, and Part 15 of our rules clearly explains that," said Hollingsworth, who'd also spoken with the neighbor by telephone last April.

In a seeming turnabout-is-fair-play situation, the FCC contacted a Mattawan, Michigan, resident to follow up on complaints that the individual's TV set was causing harmful interference to the Amateur Radio operations of Robert Lawson, KG8QD. Sharon Bowers, deputy chief of the FCC's Consumer Inquiries and Complaint Division, noted that Part 15 obliges the TV set's owner to resolve the interference promptly. Under Part 15, a TV set or a computer monitor is considered an "unintentional radiator."

In July, the FCC contacted Illinois Power Company to report receiving complaints that the utility's equipment may be causing harmful interference to the amateur operations of Earl Shaffer, WB9UWA, of Normal.

"The complainant has attempted unsuccessfully to work through your usual complaint resolution process, and, as a result, the matter has been referred to our office," Bowers said in a form letter to the utility's CEO. In both cases she handled, Bowers provided the address, telephone number and e-mail address of the ARRL's Radio Frequency Interference Desk as a source of "help and guidance about radio interference that involves Amateur Radio operators." More than five dozen power line interference cases have been referred to the League this year.

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### ==>LIFE IN SPACE FUN, CHALLENGING, ASTRONAUT TELLS PENNSYLVANIA STUDENTS

NASA International Space Station Science Officer Mike Fincke, KE5AIT, told students at Pennsylvania's Upper St Clair High School August 27 that life in space is both fun and, at times, challenging. The Amateur Radio on the International Space Station (ARISS) school group contact between NA1SS in space and WB4GCS in Western Pennsylvania represented a homecoming of sorts for Fincke, who was born in Pittsburgh and whose parents live in Emsworth, where he grew up. Fincke said problems with an onboard gyroscope system that occurred just as the Expedition 9 crew arrived aboard the ISS presented the most unexpected challenge to date of his six-month tour of duty.

"Our biggest challenge was to get some spacesuits and get outside and fix it, and it turned out that the American spacesuits were broken, and we had to go to our backup plan with the Russian spacesuits," Fincke recounted.

"That took a lot of work. That was a big challenge, but we were successful on the Fourth of July weekend, and we fixed that gyroscope's power source." The challenge aside, Fincke said, the experience was "really exhilarating."

Although he's missed his wife and children while in space since April, Fincke says he's enjoying his time aboard the ISS.

"The most fun I've ever had in space has been every day since I got here," he said in reply to a youngster's question. "I've been waiting my whole life, and every day aboard the space station has been a great day. There's always something new, something new to learn, something new to see."

Fincke said he'd like to see the human space flight program focus on once again landing on the moon, journeying to Mars and eventually to the stars. "We need to explore who we are and our potential as human beings."

Fincke also philosophized in response to a question about the perspective he's gained from living in space. "Every piece of history, everything we've ever talked about, every poem that was ever created, every heart that was broken, every joy that was felt is just on that ball of rock that's below us right now, and that really puts things into perspective."

The Expedition 9 crew is scheduled to return to Earth in about six weeks.

Mentoring the ARISS contact was Howard Ziserman, WA3GOV. Jim Sanford, WB4GCS, served as the control operator. Setting up the Earth station for the contact were the Wireless Association of South Hills (WASH) and Washington Amateur Communications (WACOM), with assistance from local AMSAT members.

ARISS is an educational outreach with US participation by ARRL, AMSAT and NASA.

### ==>NEW "BIG PROJECT" ACTIVITY BOARD A TREASURE TROVE OF TEACHING POSSIBILITIES

The ARRL Education and Technology Program (ETP--also known as "The Big Project") will offer a new activity board to schools this fall. ETP Coordinator Mark Spencer, WA8SME, says the "L/C/Resonance" or L/C/R activity board will allow students to explore many facets of alternating current and RF theory. The board will help students to unravel the mysteries of capacitive and inductive reactance, verify reactance formulas using actual data taken from the activity board, measure the resonant frequency of either series or parallel L/C circuits and then put it all together to explore the relationship between capacitive and inductive reactance and resonance. And there's more, Spencer points out.

"Because the board uses a microcontroller and a digital-to-analog converter (DAC) to generate the ac waveform used to explore L/C circuits, there is an additional learning opportunity: digital signal processing (DSP) fundamentals," he notes. "This facet of the board leads to exploration of root mean square (rms) voltage and current and the mathematical derivation of rms."

Given the level of mathematics involved, Spencer says the activity board is intended primarily for high school physics or second-year algebra students. But, he adds, anyone studying for the General or Amateur Extra license examination could benefit from the learning opportunities the L/C/R activity board affords.

"In other words," Spencer says, "there is a whole lot of activity packed into this little board."

Students use mathematical, graphing, graphing calculator, spreadsheet and critical-thinking skills to make sense of the data collected during the various board activities. For example, students use graphing calculator curve-fitting techniques to verify the reactance formulas. Drawing on the premise that one picture is worth a thousand words, Spencer says, spreadsheet software helps students visualize the raw voltage and current data measurements. During the DSP activities, students use the OptaScope digital oscilloscope to see the stair-step waveform generated by the computer and the DAC on one channel, and the smoothed waveform exiting a simple filter on the other. "Visualizing a waveform in discrete slices helps students understand what happens during DSP," Spencer explains.

The L/C/R activity board kit includes the circuit board, the parts to populate it, plus documentation to support the board's construction and use. As with previous activity boards, this one is designed to be constructed by students under adult supervision.

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Activity board kits are available to interested and qualified schools through generous donations to the Education and Technology Program Fund. To qualify for one of these kits, interested schools need to write Spencer on school letterhead and verify that (1) the lead teacher has reviewed the curriculum that supports the L/C/R activity board, (2) the curriculum and the board fit into the school's curriculum and the school intends to use the board as an instructional activity, and (3) the school has the capability to build the activity board (preferably, students will do the actual construction).

For schools wishing to roll their own, all documentation, diagrams, a parts list, and software in hard copy are available simply for the asking. Send requests to Mark Spencer, WA8SME, ARRL, 225 Main St, Newington, CT 06111.

Another new activity board kit, to be available in January 2005, is a simple and inexpensive direct-conversion receiver kit, produced by the American QRP Club.

For more information about these boards and the ARRL Education and Technology Program, contact Mark Spencer, WA8SME, 860-594-0396; mspencer@arrl.org. To learn more about how to support the ARRL Education and Technology Program, contact ARRL Chief Development Officer Mary Hobart, K1MMH, 860-594-0397; mhobart@arrl.org.

==>ARISS PUTS ISS PHASE 2 EQUIPMENT TO USE AS FM "EASYSAT"

The Amateur Radio on the International Space Station (ARISS) program this week put one of the two ham stations aboard the ISS to use as a U/V (Mode B) FM repeater (437.80 MHz up and 145.80 MHz down). The new Phase 2 ISS ham gear--primarily used for packet operation and tests and briefly by Expedition 9 Commander Gennady Padalka, RN3DT, during Field Day 2004--was pressed into service for several days as a low-Earth-orbiting FM "EasySat." The crossband repeater experiment, announced August 28, was shut down with the other ARISS gear September 2 in preparation for a September 3 space walk. The Amateur Radio equipment aboard the ISS will be powered back up no sooner than 1700 UTC on September 4, said ISS Ham Radio Project Engineer Ken Ransom, N5VHC.

"Mike Fincke [KE5AIT] reported hearing stations actively using the repeater over North America, the southern portion of South America, South Africa, Europe, Australia and Japan," Ransom said. He got lucky on the ISS repeater September 2, snagging a QSO with V31KD in Belize City, Belize (EK57).

The Phase 2 gear was scheduled to return to RS0ISS packet operation following the space walk, but the repeater experiment could be back for a "repeat" performance. ARISS International Team Chairman Frank Bauer, KA3HDO, said the crossband repeater test provided an opportunity to further experiment with the ISS Amateur Radio system.

Last December, ISS Expedition 8 Commander Mike Foale, KB5UAC, set up a new Kenwood TM-D700 Phase 2 dualband transceiver in the ISS Zvezda Service Module--the crew's living quarters. With the help of the ARISS Japan team, Kenwood donated the TM-D700 transceivers to ARISS and made specific hardware and firmware modifications--including limiting its power output to a maximum of 25 W--to prepare it for flight. Plans call for using the Phase 2 station at 10 W output during ARISS school group QSOs, starting with the arrival of the Expedition 10 crew this fall.

==>DXCC DROPPING ANNUAL LIST DEADLINE, ADDING REAL-TIME STANDINGS

The ARRL DX Century Club Program (DXCC) has announced that, effective immediately, there no longer will be a submission deadline for the DXCC Annual List.

"We have been working toward this end for several years," says ARRL DXCC Manager Bill Moore, NC1L. In the past, he explains, September 30 has been the traditional cutoff date to compile entity totals for the DXCC Annual List, published in the DXCC Yearbook.

Moore says that in the past, DXCC participants have tended to collect their cards and submit them once a year to ensure the highest possible total for the listing. A major downside of the deadline system is that DXCC typically has received more than 25 percent of annual credit submissions during September. That, in turn, created a huge increase in workload and lengthened processing time.

Under the deadline-free system, complete lists on the ARRL Web site will replace the lists of DXCC standings that customarily have appeared in the DXCC Yearbook. The new Web-based lists should be on-line early in the first quarter of 2005--about the time the DXCC Yearbook typically publishes. After an initial posting, DXCC will regularly update the Web lists. These listings also will include the standings of all DXCC members, not just those who made a submission in the previous year, as had been the practice.

ARRL will publish a scaled-down version of the DXCC Yearbook that will contain highlights of the standings, along with other features. For more information on the DXCC program, visit the DXCC Web page

<<http://www.arrl.org/awards/dxcc>>.

The Lancaster  
and Fairfield County  
Amateur Radio Club

# Public Service Communications



Edward Campbell, **WD8PGO**  
Fairfield Co. EC

2002/2003  
Officers:

*President:*  
Charles Snoke  
N8KZN

*Vice President:*  
Tom Moore  
KB8USK

*Treasurer:*  
Ed Campbell Sr.,  
WD8PGO

*Secretary:*  
Jon Larabee  
KC8RUI

*Activities:*  
Connie Snoke  
KC8LPN

*Station Engineer:*  
John Hilliard,  
W8OF

*Trustee:*  
Richard A. Schleiffer,  
W9ZZX

*Flower Fund:*  
Marie Moore, KB8VOL  
653-9092

*Editor:*  
Bob Bickel  
N8UTE

**September Birthdays**  
KC8MZA Debra Bruckelmeyer  
WX7C Edward Campbell  
KC8MTV Kevin Numbers  
KB8AHK Larry Wright  
KC8MAB Albert Coulson  
W8AEY Robert Sparrow  
KB8GWB Kelly Snoke

## **5K RUN**

November 13, 2004  
Details at next meeting

Subject: October 2, 2004 Swap meet

Allen KB8JLG is organizing a swapmeet at the clubhouse on October 2, 2004. The idea is to provide a social activity with a ham theme. It starts at 8:00AM and runs until 12:00 noon. At this time someone will pick up ordered sandwiches at a local business, maybe Subway or Corner Cafe. there will be iced soft drinks available for a nominal fee.

You will be able to sell or swap equipment from your vehicle (one parking space per ham). This is also a way to get rid of stuff that you want to remove from your junkbox but is too valuable to throw away. There is no fee to enter, no prizes offered and no reserved spaces.

Fred W8FZ and Bob K18JM have tentatively agreed to present a PSK31 demonstration at 1:00PM.



**Drop in and see us on Radio Night,  
Thursday evenings at 6:30 PM.**

Check out our Club Web Site at: [www.qsl.net/k8qik](http://www.qsl.net/k8qik)

## **CENTRAL OHIO CW LEARNING NET**

The CW Learning Net is Every Friday night at 8:00 P.M. on the W8CMH repeater 145.490 (-). Portion of 2 hour net is devoted to letter learning and the balance to QSO designed to promote speed development. Carl, AA8YY is Net Control.

## **SLOW SCAN TV NET**

The COSSTV (Central Ohio Slow Scan TV), <http://www.qsl.net/n8tut/sstv>, Net is the first Sunday of every Month at 7:00 PM. The group meets on the W8CMH repeater 145.490(-). All you need is a 2m radio, a computer with a sound card, and the W95SSTV software. The Software is available on the internet at <http://www.siliconpixels.com/W95SSTV/W95dload.htm>.

## **Weather Spotter Net**

146.76 repeater  
with 123htz. tone  
Every Tuesday at  
7:30 p.m.  
Alt. Freq 147.240

# UNIVERSAL RADIO TOP 80 ITEMS: Prices & Specials

## ▶ ALINCO

Order	Model	Regular	Comment	Price	Pg.
#4238	DJ-196T	\$139.95		\$139.95	67
#1596	DJ-596T	219.95		219.95	67
#0107	DJ-C7T	169.95	New model!	169.95	
#3610	DJ-X10T	329.95		329.95	21
#2020	DJ-X2000T	769.95		499.95	21
#1980	DR-135T	169.95		169.95	62
#4236	DR-135TP	269.95		269.95	62
#3621	DR-605TQ	339.95		339.95	
#0620	DR-620T	369.95		338.95	62

## ▶ AOR

AOR promotion ends 09/30/04.

Order	Model	Regular	Comment	Price	Pg.
#3705	AR5000A+3B*	\$2499.95	Free SWL book #2984	\$2499.95	22
#0083	AR8200Mk3B	589.95	Free SWL book #2984	589.95	23
#1860	AR8600Mk2B	889.95	Free SWL book #2984	889.95	22

## ▶ DRAKE

Drake promotion ends 09/30/04.

Order	Model	Regular	Comment	Price	Pg.
#0082	R8B	\$1469.95	Free Cal. & Book	\$1469.95	16

## ▶ GRUNDIG - ETON

Grundig promotion ends 09/15/04.

Order	Model	Regular	Comment	Price	Pg.
#4000	G400A	149.95	New! Free book #2984	149.95	
#0800	Satellit 800	\$499.95	Sale + Free book #2984	\$449.95	6
#3500	S350	99.95	Free SWL book #2984	99.95	6
#0400	YB-400PE	129.95	Free SWL book #2984	129.95	6
#0550	YB-550PE	99.95	Free SWL book #2984	99.95	7
#0110	E10	129.95	Expected 10/15/04	129.95	
#0100	E100	99.95	New!	99.95	

## ▶ ICOM

ICOM promotion ends 09/30/04.

Order	Model	Regular	Comment	Price	Pg.
#0208	208H	\$319.95	\$20 Rebate	\$299.95	61
#0703	703 Plus-15	569.95	Free Icom Hat	569.95	58
#3450	706Mk2-G	769.95	\$20 Rebate & Free RMK706	749.95	58
#0718	718	594.95	\$25 Rebate + Free UT106	569.95	58
#0074	746 Pro	1649.99	\$200 Cpn. +Hat +PS125	1449.99	58
#1756	756 Pro II		\$200 Cpn. +Hat +PS125	2249.98	58
#3756	756 Pro III		Not yet FCC approved.		
#1910	910H	1289.95	Free Icom Hat	1289.95	61
#2100	2100H-25N	179.98	\$20 Rebate	159.98	61
#0102	2200H	219.95	\$20 Rebate	199.95	61
#0272	2720H	379.95	\$20 Rebate	359.95	61
#0041	7800	10599.90	Free Jacket & Hat	10599.90	57
#1002	PCR1000-02BON	479.95	Free SWL book & Chart	419.95	17
#3333	R 3-26	349.95	\$10 Rebate + Free Chart	339.95	18
#0005	R 5-06	199.95	\$10 Rebate + Free Chart	189.95	18
#3550	R10-05	299.95	\$10 Rebate + Free Chart	289.95	19
#0020	R20-06	499.95	\$10 Rebate + Free Chart	489.95	19
#0175	R75	549.95	\$50 Cpn. +UT106 + Book	499.95	11
#1850	R8500-02	1499.95	Free book #2984 +Hat	1499.95	17
#4429	T2H Sport	99.95	Free Metal Flashlight	99.95	64
#3052	T7H	189.95	\$10 Rebate + Flashlight	179.95	64
#0690	T90A	259.95	\$10 Rebate + Flashlight	249.95	64
#0088	V8	129.95	\$10 Rebate + Flashlight	119.95	64
#4080	V8000	199.95	\$20 Rebate	179.95	61
#0838	W32A	269.95	\$10 Rebate + Flashlight	259.95	64

→ Note that prices shown are **after** mfg's rebate on applicable items.

## ▶ JAPAN RADIO CO.

JRC promotion ends 09/30/04.

Order	Model	Regular	Comment	Price	Pg.
#1545	NRD-545DSP	1799.95	Free JRC ST-3	\$1799.95	12

## ▶ KENWOOD

Kenwood promotion ends 09/30/04

Order	Model	Regular	Comment	Price	Pg.
#4211	TH-D7Ag	\$349.95	\$15 Coupon	\$334.95	63
#2222	TH-K2AT	149.95	\$15 Coupon	134.95	63
#3496	TH-K2AT K2	109.95	New Version!	109.95	63
#0066	TH-F6A	329.95	\$15 Coupon	314.95	63
#3699	TH-G71A[H]	234.95	\$15 Coupon	219.95	60
#0271	TM-271A	179.95	\$15 Coupon	164.95	60
#4116	TM-D700A	499.95	\$15 Coupon	484.95	60
#1621	TM-G707A	279.95		279.95	60
#3565	TM-V7A	399.95	\$50 Coupon	349.95	60
#0480	TS-480SAT	1199.95	\$200 Coupon	999.95	54
#2480	TS-480HX	1299.95	\$200 Coupon	1099.95	54
#0570	TS-570D[G]	964.95	\$50 Coupon +Logbook	914.95	54
#2519	TS-570S[G]	1124.95	\$50 Coupon +Logbook	1074.95	54
#1978	TS-2000	1749.95	\$100 Coupon +Mousepad	1649.95	54
#2797	TS-2000X	2249.95	\$100 Coupon +Mousepad	2149.95	54
#1937	TS-B2000	1549.95	\$100 Coupon +Mousepad	1449.95	54

## ▶ SANGEAN

Sangean promotion ends 09/30/04.

Order	Model	Regular	Comment	Price	Pg.
#3505	ATS-505P	\$119.95	Free Propo book #0027	\$119.95	8
#1069	ATS-818ACS	199.95	Free SWL book #2984	199.95	8
#1909	ATS-909	239.95	Free SR25V AM/FM/TV	239.95	8
#1080	PT-80	159.95	Free SWL book #2984	159.95	8

## ▶ TEN-TEC

Ten-Tec promotion ends 09/30/04.

Order	Model	Regular	Comment	Price	Pg.
#0321	RX-320D	\$328.95	Free SWL book #2984	\$328.95	13
#0340	RX-340	3950.00	Free Wall Clock #4614	3950.00	15
#0350	RX-350	1199.00	Free Wall Clock #4614	1199.00	14

## ▶ YAESU

Yaesu promotion ends 09/30/04.

Order	Model	Regular	Comment	Price	Pg.
#2786	FRG-100B	\$599.95	Free SWL book #2984	\$599.95	13
#0060	FT-60R	194.95	New model!	194.95	
#1817	FT-817ND	629.95	New version +RefCard	629.95	56
#2319	FT-840	599.95		599.95	56
#1467	FT-847	1799.95		1799.95	56
#1857	FT-857D	779.95	New version	779.95	56
#1897	FT-897D	889.95	New version	889.95	56
#2360	FT-1000MPv	2089.99	Free Yaesu Hat	2089.99	56
#2633	FT-1000Field	1799.95	Free Yaesu Hat	1799.95	56
#2800	FT-2800M	159.95		159.95	62
#3780	FT-7800R	269.95		269.95	62
#0080	FT-8800R	369.95		369.95	62
#0890	FT-8900R	429.95		429.95	62
#3120	VR-120D	199.95		199.95	20
#0500	VR-500	299.95		299.95	20
#0050	VR-5000	599.95	Free SWL book #2984	599.95	20
#0176	VX-2R	179.95		179.95	66
#1795	VX-5R BLACK	229.99		229.99	66
#4430	VX-5RS SILVER	229.99		229.99	66
#0777	VX-7R SILVER	329.99		329.99	66
#0778	VX-7RB BLACK	328.99		328.99	66
#3187	VX-150/64B	129.99		129.99	65



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