

Columbia Amateur Radio Association Newsletter



November, 2000

7:30 PM Tuesday, November 28 Room 401 Gateway Center

RF Safety And You



CARA's
Annual Elections
will be held at
this meeting.

Presented by
Ed Mantiplay
FCC, Washington, DC

This Month at CARA

| | |
|-----------------------------|----|
| Elections | 2 |
| RACES..... | 2 |
| MD QSO Party Story | 3 |
| Prez Sez..... | 5 |
| For Sale & For Free..... | 5 |
| Radio/TV Museum..... | 6 |
| History of Heathkit..... | 7 |
| Club Info..... | 9 |
| Calendar | 10 |

On September first of this year, the FCC implemented a new set of radiation safety standards designed to protect humans from hazardous exposure to radio frequency radiation. It should come as no surprise that these regulations apply to amateur radio stations as well as to commercial broadcast stations.

Ed Mantiplay, from the FCC's headquarters in Washington will be at the CARA meeting this month to explain the new standards and what they require of us. He will show us how to make the necessary measurements and how to interpret the results. Here is the perfect opportunity to add to your understanding of the biological effects of RF, which will not only let you operate your station safely, but will also give you the basis to reassure your neighbors that you are not putting them at risk.

This is also election night at CARA. Come in and cast your vote!

Nominating Committee Selects Slate of CARA Officers for 2001

The CARA Nominating Committee presents the following slate of candidates for 2001.

Additional nominations will be accepted from the floor at the November meeting:

President Dave Prestel, W8AJR
Vice-president John King, KB3WK
Treasurer John Pinkston,
W3GJN
Secretary Dan Goulette, N3LDC
Member-at-large Tim Titus, W1TRT

Respectfully submitted,
Bob Nauman, WA3VUQ, Chairman

RACES

HOWA RACES members KF3O and WA1QAA participated in the annual HOWA Fire and Rescue Services Exposition on 22 October. This year, we provided a demonstration of ATV for the public and HOWA EM staff. We were pleased to have the support of Bob/W3WCQ, Heru/W3WV, Gene/W3BAB, and Ken/KA3UQQ. W3WCQ provided a miniature transmitter and antenna as well as a receive antenna and converter. W3WV provided a battery operated good quality camera, the receive antenna and converter. Gene/W3BAB provided the TV set and VCR for recording the received picture, and Ken/KA3UQQ provided pictures from the camera atop the tower at his home QTH. We sincerely thank these gentlemen for providing an

excellent demonstration of ATV for the public and HOWA Office of Emergency Management. 434 MHz was used for the portable setup, as well as the pictures from the tower cam. Video transmissions were recorded during the day's activities, and are being edited by W3WCQ. HOWA EM personnel expressed an interest in using this amateur capability in future emergencies.

During the November COMEX, we re-familiarized ourselves with the river rise step gauge locations, then assessed and reported on their and the surrounding area's conditions. The gauges are located throughout HOWA in low-lying areas which are prone to flooding during heavy rain or rapid thawing conditions. Monitoring of the gauges during such situations by RACES is one of the duties specified in the HOWA Emergency Operations Plan. Our operators were deployed to locations different from those assigned to the same operator during previous exercises since, in an emergency, the gauge or gauges assigned will be dictated by need, previous flooding experience, and speed of onset of the flooding rather than proximity to our home QTHs. For this reason, it is valuable for each operator to know how to find each gauge expeditiously, and the COMEX provided us with this opportunity. Conditions such as gauge readability, water level, brush and grass obscuration, and unusual or dangerous conditions at or around the gauge site were reported. The results of the exercise are being forwarded to HOWA through our Emergency Management Agency for

remedial action where necessary. Sincere thanks to WA3WZX, K3UOD, W3CCI, K3EF, and WA1QAA for their participation and for the information provided during the COMEX.

HOWA RACES received two Icom IC207H dual band transceivers from HOWA EM. One of the transceivers was used during the November COMEX; it's performance was unflawed and it was quite easy to operate. These radios are being programmed with RACES/ARES frequencies used throughout central Maryland. The new radios will be used primarily in the RACES room, and the older radios will be assigned to shelter locations.

Typically, there is no RACES COMEX during December. The January 2001 COMEX will be held on the second Tuesday, 9 January. Please feel free to join our ARES/RACES net on the first and third Tuesdays of the month. In the interim, I hope you all have a happy, healthy, prosperous, and safe Holiday Season.

73, Mike WA1QAA

CARA 2000 Maryland/DC QSO Party

by Rod Clayton KA3BHY

We had a small group this year – just Jim Pilotte, N3ZPL, and me. We figured that we didn't want to camp out at the elementary school this year, since it was just the two of us.

We decided to set up in my back yard in Columbia. I figured that because our antennas wouldn't be permanent structures I would not have to get approval from the Owen Brown Architectural Committee. Jim and I agreed to meet at my house at about 9 AM.

I got up, walked outside and the weather was GREAT! In previous years I have been baked and almost blown away with the famous CARA blimp. This year it was overcast and about 72 degrees.

Jim arrived right on time and we started unloading his equipment. We set up a screen tent to keep the bugs off at night, and we strung extension cords out to the screen tent. Jim brought his laptop for logging and a cooler of sodas. He also brought his slingshot, some fishing line, and lead weights.

I have worked with Alan (N3AC) and his bow putting up antennas before, but never a sling shot. At this point we learned a lot about the subtleties of putting up dipoles using just trees. The first antenna – an 80 meter dipole – went up in about 30 minutes. It was looking like this was going to be a snap. We ended up with an inverted v lying on its side.

With the next antenna were not so lucky. I don't remember how long it took to get up the 40 meter antenna, but it seemed to take forever. We didn't go through any trees with the first antenna. With the 40 meter antenna, we were trying to use a tree in my yard as a center support and hook to trees on both sides.

This turned out to be harder than we thought. We had problems with the support rope for the center of the dipole and the antenna element going through the tree getting tangled. We tried this several different ways but could not get it to work. We finally allowed the antenna element that was going over the tree to also support the feed line and balun.

Then we put up a 20 meter antenna between two more trees in my yard. This antenna was just supported by the ends and wasn't as bad to put up.

By this point we were running out of trees, but with an antenna tuner we were able to get on 80, 40, 20, 15, 10, and 6 meters with these antennas. We also put up a two meter j-pole to get us on two meters.

By the time all the antennas were up it was about 2:30PM. We missed the first two hours of the contest and we were both ready to sit down after running around the yard untangling string.

I don't think we missed much during the first few hours of the contest. Early on Saturday the contacts weren't exactly rolling in. Other people were complaining about the condition of the bands. Things picked up about six o'clock. We ran across a couple of HF mobile units on HF who were handing out multipliers. We packed it in about midnight when the contest closed for the evening.

We started again the next morning. This time we didn't have to worry about putting up any antennas.

We contacted CARA member Robert Carlson (KC3AEI) on 2 meters. He happened to be in the area so he dropped by and operated for a little while.

During a slow period, Jim fired up his laptop with some PSK31 software and gave us a demonstration. If you were at the CARA meeting were they demoed PSK31, you know it's a pretty cool mode.

We worked Ken Williams (W3CCI) from CARA on HF mobile.

I just got the official results back. The winning club was BARC (W3FT) with 650 QSO points and 56 multipliers for a total score of 36,400 points. Next was W3HAM with 588 QSO points and 48 multipliers for a total score of 28,224. CARA (W3CUJ) was third with 397 QSO points and 47 multipliers for a score of 18,659. We beat Goddard ARC and the Historical E. Museum with 17,910 and 4,200 points respectively.

Next year we need to send an e-mail out to the club members asking them to give us a quick call on 2 meter mobile. This would be a big boost on our QSO count.

The 2000 QSO Party had a small turnout but was a lot of fun. We had a great time and hope we can get a few more people to join us next year.

RF Safety

Want a preview of the calculations and measurements involved in making an assessment of your station's compliance with the new FCC regulations? Fire up your web browser and point it toward the home page of the University of Texas Amateur Radio Club at:

www.utexas.edu/students/utarc..

Follow the link on the home page to their Radiation Calculator, which will let you calculate the radiation levels for your unique situation.

From The Prez...

Election of officers for the year 2001 will be held at the November meeting. Remember there is no meeting in December.

The Board of Directors has been discussing the format and site of the January meeting and installation of officers. When this is decided, the members will be notified.

This will be my final article as President. I want to take this opportunity to thank everyone in CARA for their support, friendship, and cooperation during my five years as President. It has been an interesting tenure and I had hoped to get the tower issue finished before leaving office but the County moves slowly and hopefully the three tower sites will be ours during the next administration. Please give the incoming officers all your support and this will make CARA the BEST

club anywhere. We have the potential, all we need is support.

So much for now ...

Bob Scarburgh, KC3EV

Antenna Supplies

We have antenna wire and feedline left over from our antenna building program and are making available to the members at cost. Contact Dave Prestel, (W8AJR) at (410) 203-9432 or dprestel@home.com.

| | |
|------------------|--------------|
| 450Ω Twinlead | \$.19/foot |
| Stranded Cu Wire | \$.15/foot |
| PL-259 w/adapter | \$ 1.50 each |

If you want to build your own J-pole antenna, of the type that we built at the meeting, the directions, courtesy of Alan, N3AC, are available on request

Dave Prestel, W8AJR

Don't Forget To Vote!

Free, To A Good Home

Want to try some RTTY operation the old fashioned way? As in when RTTY gear was mostly mechanical – gears, levers, motors, cams, clutches, springs, and rolls of paper and inked ribbon – rather than simply a program that you run in your computer. Take a look at a Model 28 ASR:



According to its proud owner, "The ASR works perfectly. I have the rolls of paper but no tape. Plenty of spare parts. I'll even throw in a demodulator. I used it when I was heavily involved in both Army and Air Force MARS. Not too active any more."

If you're interested, please contact Steve Weigel at his office, 703-302-7961, or by e-mail at WeigelSJ@state.gov, to make arrangements.

Come and Hear The FCC At The November CARA Meeting!

A GREAT PLACE TO VISIT - THE RADIO-TV MUSEUM

by Murray Green, K3BEQ

If you plan to be in the Washington DC area during the holidays, please try to visit the relatively new Radio-TV Museum in Bowie, Maryland. Housed in the historic Harmel House, which was renovated and

provided to the Radio History Society by the City of Bowie, Maryland, the Museum contains vintage electronic equipment, components and memorabilia.

Some of the displayed items are:

- A portion of the original transatlantic telegraph cable.
- The first miniature tube.
- The DeForest Audion tube used by Edwin Armstrong when he invented the regenerative receiver and the Armstrong oscillator in 1911/12.
- Two floors filled with equipment from the earliest days of radio.

The Museum is open on Saturdays and Sundays from 1-4pm. Tour the facility at your own pace or ask one of the docents to give you a descriptive tour.

Group tours, (great for scouts, boys clubs etc.) can be arranged by calling 301-390-1020. Visit the Radio History Societies Web page at: <http://www.radiohistory.org> for detailed information and directions. Also see the November 1999 issue of QST, article, "Build It And They Will Come" (page 31.)

The President of the Radio History Society is radio and television personality, Ed Walker, N3HFT, who hosts a weekly 4 hour radio program on WAMU FM 88.5 MHz from the Washington DC area, Sundays, from 7-11pm. The program features old-time radio shows. Live streams are

available at their WEB page:
<http://www.wamu.org/>

EE Times - Reprinted with permission
October 02, 2000, Issue: 1134
Section: Times People

A Tale Of The Unstoppable Electronic Kit

By George Rostky

If it weren't for the death of Edward Bayard Heath in the crash of an airplane he built, thousands of engineers might never have gotten into the electronics business.

Nobody knows just how many engineers got their inspiration and start in electronics by building their first piece of test equipment—probably a scope—from an electronic kit, which was likely made by Heathkit Co., an outfit that more or less fell into the business of build-it-yourself electronic kits years after the death of its founder.

In time, there were quite a few manufacturers of test-equipment kits, among them the Electronic Instrument Company (EICO), RCA (noted mostly for its Voltohmyst vacuum-tube voltmeter), Hickok (whose strength was in tube testers), Knight (part of the giant mail-order distributor, Allied Radio), and a handful of others. Though there are no statistics, it's likely that Heathkit was the leader.

It started in an entirely different business when Edward Heath, an early flying enthusiast (long before people had to stand in line to get on a plane), started the E.B. Heath

Aerial Vehicle Company to sell aircraft parts. In 1918, the company became the Heath Airplane Co., whose primary business was selling surplus World War I aircraft components.

Note the word "surplus," a key element in the company's future. Almost 30 years later, the Heath Co. was again selling surplus, this time from the big war following the war to end all wars, and this time surplus electronic components—not surplus aircraft equipment.

Subsequently, the Heath Airplane Co. developed a light plane, the Heath Parasol, which was available in the form of just plans for \$99; uncovered frame and wings for several hundred dollars more; complete without the engine for \$699; and ready to fly from the factory for \$999. This began to look like a kit business.

The Heath Parasol became a classic—a single seater, lightweight, high-wing monoplane, designed to accept a 4-cylinder motorcycle engine. The first Heath Parasol, in 1926, was advertised in hobbyist magazines like *Popular Mechanics*.

Edward Heath eventually developed advanced models, first the Heath Cannonball, then the Heath Baby Bullet. While he was test flying a new version of the Baby Bullet in 1931, a structural failure occurred. The plane crashed and Heath, who was 43, was killed.

This did not make for great publicity, and the plane had limited

success. Heath Airplane Co. gradually declined due to the loss of Heath's leadership. The decline accelerated as government regulation of private aircraft tightened. The company, renamed Heath Co., moved from Niles, Ill. (near Chicago) to Niles, Mich. It went bankrupt in 1935.

Grabbed it for \$300

Howard and Helen Anthony bought the business in 1935 for \$300 and moved it to Benton Harbor, Mich.

It produced a line of accessories, including electronic equipment, for small planes. By the end of World War II, Howard Anthony began sensing a good future in a fledgling business-electronics.

The government was selling tons of surplus equipment at prices far below what it originally paid. Anthony bought lots of war-surplus electronic components-tubes, tube sockets, cathode-ray tubes, passive components-just about everything somebody might need to build almost anything electronic. Anthony dreamed up the idea of selling kits of those war-surplus components, along with easy-to-follow plans for building something useful.

A scope starts it all

The first kit, an oscilloscope with a 5-inch CRT, was priced at \$39.50 and introduced to the market in 1947. This was a year before a fellow by the name of Howard Vollum introduced a \$700 scope at the annual convention of the

Institute of Radio Engineers (predecessor to the IEEE), for his new company, Tektronix.

In 1947, when the cost of labor to assemble an instrument was considerable and the cost of parts was low, the scope kit was a huge success. So the company expanded the line to include amateur radio equipment, marine equipment, high-fidelity amplifiers and tuners, guitar amplifiers, color TVs, even analog computers-but mostly test equipment. And the company could no longer depend on war-surplus components. It purchased components from component manufacturers.

Somewhere along the line, the company, which had been selling kits exclusively by mail order, decided it could sell more if people could see what the finished product would look like, so it opened 65 of its own stores-sprinkled around the country.

In 1954, Howard Anthony, like Edward Heath, died in the crash of a plane-one he was planning to buy.

A year later, Daystrom Co., a furniture company intent on expanding into the burgeoning electronics industry, purchased Heath Co. Daystrom had already purchased Weston Instruments (the inventor of the digital panel meter and a leader in photographic instruments, especially light meters).

Three years later, in 1958, Daystrom moved Heath from Benton

Harbor to a brand new building in nearby St. Joseph, Mich. The company retained Benton Harbor as its mailing address because the St. Joseph post office could not handle the volume of mail.

Just as its hunger for electronics companies drove Daystrom to swallow Heath, Schlumberger, the giant, French-based oil-exploration company, swallowed Daystrom in 1962. (Schlumberger acquired Fairchild Semiconductor in 1979.)

In 1974, the kit business was thriving and Heath was growing handsomely. Management had long recognized that much of its success lay in the clarity of its instruction manuals—a valuable lesson for many manufacturers to this day.

How to write a manual

Management had learned early that it couldn't depend only on the skill of tech writers to prepare manuals for building electronic kits. So it adopted an unusual procedure. After the first draft of an instruction manual was written, the company selected people from the production line—people with no knowledge of electronics. Those people were given the preliminary manual (in what might be considered a beta test), a box of components, a soldering iron and some hand tools.

They were told to build kits. If they made mistakes or expressed confusion, the manual was re-written, and re-written again as new people from the production line were selected to build kits using modified

manuals—until there were no more errors and no more confusion.

So the manuals became as important as the kit components. Almost anybody who could read and who could cope with a soldering iron and some hand tools could build an oscilloscope or, in time, a ham radio or a color TV. And the company acquired great strength in writing manuals and other instructional material. Heath decided that if it could write kit manuals clearly enough to show somebody how to build a TV from a collection of parts, it could probably write them clearly enough to teach concepts like basic electronics and basic computers. That lesson was to prove very valuable.

So, in 1974, management created Heath Educational Systems, which focused on creating technical courses (and course materials, including, of course, manuals), for secondary and post-secondary schools.

When the personal-computer business came along in the 1977-79 time frame, with the introduction of the MITS Altair, then the Apple, Heath was among the first to offer a kit computer. It was so successful that the company created Heath Data Systems, which sold fully assembled computers as well.

In 1979, Zenith Radio Corp., which had been king of the color-TV business, thanks to emphasizing point-to-point wiring (which it dubbed "hand crafted") when TV servicemen were nervous about

repairing TVs built with printed-circuit boards, saw a bright future in personal computers. So Zenith Radio bought Heath from Schlumberger. Zenith renamed the computer operation Zenith Data Systems, which sold assembled computers, largely to the U.S. government.

At its zenith, Zenith Data Systems sold almost \$1 billion worth of assembled computers. And the kit line was showing signs of neglect.

In 1989, Heath Co., which Zenith purchased in 1979 from the French oil-services giant Schlumberger was sold to the French computer giant Groupe Bull.

In the spring of 1991, Heath's kit division, Heathkit Educational Systems and Heath/Zenith (which manufactures security lighting and doorbells and was one of the thriving offsprings of Heath's kit business), all part of Groupe Bull, moved back to a completely remodeled K-Mart building in Benton Harbor. Groupe Bull made the kit division a stand-alone unit, separate from the computer group. And it increasingly neglected the kit business.

There was a reason for neglecting kits. Thanks to the growth of large-scale integrated circuits, the labor cost in an instrument declined sharply, so building a kit was almost as costly as buying a manufactured instrument. And people no longer wanted to spend time building kits. Bull focused on

its more profitable computer business.

In 1995, Groupe Bull sold the neglected kit business along with Heath/Zenith and Heath Educational Systems to a group of private investors. Bull retained the computer division, which it subsequently sold to Packard-Bell, which was later purchased by NEC, which merged the products into its own lines.

The private investors killed the kit business and retained Heath Educational Systems as well as Heath/Zenith.

In 1998, the private investors sold Heath/Zenith to Desa International and sold Heath Educational Systems to a different private investor group, which owns the company to this day.

As it was conceived in 1974, Heath Educational Systems still specializes in creating technical courses and course materials (including, of course, manuals) for personal computer and telecom technicians. That's a long flight from a fatal plane crash.

Remember, Tuesday, November 28, At CARA

- **FCC – Radiation Safety**
- **CARA Elections**

Club Information

Repeaters (K3CUJ)

147.135 / R+ Net repeater. CTCSS: 156.7 Hz
147.39 / R+ Open autopatch ("*" to activate, "#" to clear) and direct dial 911
448.275 / R- CTCSS: 156.7 Hz
449.475 / R- CTCSS: 156.7 Hz

Mailing Addresses

Club Business

CARA
P.O. Box 911
Columbia, MD 21044
CARA@QSL.net

Newsletter

c/o Dave Prestel W8AJR
10160 Tanfield Court
Ellicott City, MD 21042
dprestel@home.com

This newsletter is © Copyright 2000, Columbia Amateur Radio Association, Inc. Items from this newsletter may be republished only for non-commercial Amateur Radio use; credit must be given to CARA. If you wish to republish material from this newsletter for other purposes, please contact the newsletter editor.

Activities

Club meeting: the fourth Tuesday of the month at 7:30 p.m., Rm 401, Gateway Center, on Columbia Gateway Drive, off of Rt. 175, near I-95. Monitor net repeater for directions.

On-the-air net: Net repeater at 8:30 p.m. each Tuesday except for meeting night.

On-the-air RACES / ARES net: Net repeater at 7:30 p.m. on the 1st and 3rd Tuesdays each month.

On-the-air RACES exercise: Net repeater at 7:30 p.m. on the 2nd Tuesday each month.

CARA breakfast: 9:00 a.m. on the second Saturday of each month, at Jilly's Restaurant in the Enchanted Forest Shopping Center. If you wish to attend, contact Bob Scarburgh (KC3EV).

Executive board meeting: Held monthly, one half hour before the monthly meeting. All members are welcome.

CARA on the World Wide Web: Visit us at <http://www.qsl.net/cara/> for the latest "hot tips" and electronic edition of the newsletter.

Officers and Chairpersons

Officers:

| | | | | |
|----------------------|---------------------|------------|----------------------|---------------------|
| President..... | Bob Scarburgh..... | KC3EV..... | H: 410-465-2421..... | rscarburgh@aol.com |
| Vice-president..... | Dave Prestel..... | W8AJR..... | H: 410-203-9432..... | dprestel@home.com |
| Secretary..... | Dan Goulette..... | N3LDC..... | H: 410-796-2587..... | danjanis@connex.net |
| Treasurer..... | John Pinkston..... | W3GJN..... | H: 410-531-3450..... | jpinksto@erols.com |
| Member-at-large..... | Tim Titus..... | W1TRT..... | H: 410-730-8420..... | w1trt@aol.com |
| Past President..... | Larry Russo..... | K3TFU..... | H: 301-725-2840..... | lrusso@erols.com |
| Trustee..... | Alan Chedester..... | N3AC..... | H: 301-596-6543..... | alanc1@juno.com |

Committee Chairpersons:

| | | | | |
|----------------------|---------------------|-------------|----------------------|---------------------|
| Elmers..... | John Pinkston..... | W3GJN..... | H: 410-531-3450..... | jpinksto@erols.com |
| Field Day..... | Alan Chedester..... | N3AC..... | H: 301-596-6543..... | alanc1@juno.com |
| | John Pinkston..... | W3GJN..... | H: 410-531-3450..... | jpinksto@erols.com |
| FAR Rep..... | Tim Titus..... | W1TRT..... | H: 410-730-8420..... | w1trt@aol.com |
| Hamfest..... | Dave Prestel..... | W8AJR..... | H: 410-203-9432..... | dprestel@home.com |
| Newsletter..... | Dave Prestel..... | W8AJR..... | H: 410-203-9432..... | dprestel@home.com |
| Publicity..... | Vacant | | | |
| Satellite..... | Ed Cabic..... | N2EC..... | H: 410-992-7197..... | EdCabic@home.com |
| Social..... | Vacant | | | |
| Quartermaster..... | Vacant | | | |
| Technical..... | Dave Prestel..... | W8AJR..... | H: 410-203-9432..... | dprestel@home.com |
| T-MARC Rep..... | Dave Prestel..... | W8AJR..... | H: 410-203-9432..... | dprestel@home.com |
| VE Testing..... | Bob Scarburgh..... | KC3EV..... | H: 410-465-2421..... | rscarburgh@aol.com |
| Youth Education..... | Dave Anderson..... | WA3WZX..... | H: 410-465-8557..... | dranderson@juno.com |
| Youth Group..... | Vacant | | | |

ARES / RACES:

| | | | | |
|------------|-----------------|-------------|----------------------|-----------------|
| ARES..... | Ed Wallace..... | K3EF..... | H: 410-465-0042..... | k3ef@home.com |
| RACES..... | Mike Carr..... | WA1QAA..... | H: 410-799-0403..... | bamcc@erols.com |

November, 2000 Calendar of Events

| Sun | Mon | Tues | Wed | Thurs | Fri | Sat |
|--|-----|--------------------------|-----|-------|-----|---|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 ARES / RACES Net | 8 | 9 | 10 | 11 Breakfast at Jilly's Restaurant |
| 12 | 13 | 14 RACES COMEX | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 CARA meeting | 29 | 30 | | |
| Dates to Remember: 11/28: FCC Presentation on RF Safety at CARA | | | | | | |

December, 2000 Calendar of Events

| Sun | Mon | Tues | Wed | Thurs | Fri | Sat |
|---|-----|--------------------------------------|-----|-------|-----|--|
| | | | | | 1 | 2 |
| 3 | 4 | 5 ARES / RACES Net CARA net | 6 | 7 | 8 | 9 Breakfast at Jilly's Restaurant |
| 10 | 11 | 12 RACES COMEX | 13 | 14 | 15 | 16 Laurel VE |
| 17 | 18 | 19 ARES / RACES Net | 20 | 21 | 22 | 23 |
| 24, 31 | 25 | 26 | 27 | 28 | 29 | 30 |
| Dates to Remember: No CARA Meeting This Month! | | | | | | |