

The READOUT

Year 13

Number 4

April 1991

CNN Scoops Competition

CNN (Cable News Network) scooped their competition when war broke out in Iraq, and they did it by using an incredibly cheap old fashion technology. If you were watching CNN, you know that when the bombs began falling on Baghdad four CNN newsmen were giving a vivid description from their room in the Al Rashid Hotel in downtown Baghdad.

CNN was the only news service allowed to set up an old-fashioned four-wire telephone line that allowed uninterrupted live audio coverage via satellite throughout most of the night. Because a four-wire circuit is made with direct connections, it does not pass through the same relays to complete a circuit as do hotel and office phones, CNN's four-wire was the only link to the outside world after Baghdad's telephone relay station was damaged at the beginning

See "CNN Scoop" Page 2

Disaster Drill April 25, 1991

The Stanislaus County Office of Emergency Services will be conducting a table top training exercise on April 25th, 1991 and Amateur Radio will play a significant role providing communications using 2 meters and packet.

The County Emergency Operations Center (EOC) will be activated along with the cities of Turlock, Ceres, Oakdale, Riverbank, Waterford, Newman, and Hughson.

Since it has been over 5 years since these EOC's have been exercised, many local officials will experience the Amateur service and what we can do for the first time. This drill is an excellent time for Amateurs in the valley to participate in this training and simulated disaster drill.

Those Amateurs interested in volunteering for the April 25th (DAYTIME) drill are urged to register ASAP. Those of you who wish to help but may not have equipment, we can use you and will assign you to locations where equipment is available. I can be reached by telephone: 523-5911 or 524-9181. Allen Woods, WA6OYF, Stanislaus County ARRL Emergency Coordinator.

FCC Proposes Amateur Fees

Confronted with inadequate funding, deteriorating building and equipment, and an ever-growing workload, the FCC has proposed controversial new "user fees" for all radio services and many non-radio communications services that require Commission attention.

Whether commercial or non-commercial, all "fee-able" services would have to pay or face cancellation of their FCC authorization to operate.

Some 3 million users of the spectrum would be subject to the fee. The proposed fees are separate from application and license processing fees which levied on most radio services.

The Amateur service is currently exempt from these charges. The new users fees would cover FCC operational costs tied to rulemak-

See 'FCC Fees' page 6

**Next SARA Meeting
April 16, 1991 730 pm
Co. Administration Bldg.
12th & H Streets
Downtown Modesto**

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1991 SARA Officers

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Vice President

David Grout, N6YHZ 576-8730

Secretary

Linda Franklin N6REB

Treasurer

AL Dionizio N6SAE 523-4485

SARA VHF Net

Thursdays @ 8 p.m. (Except
Holidays)

2 meters 145.39 MHz WD6EJF

220 Band 223.68 MHz WD6EJF

10 Meter 28,440 kHz USB

Tuesdays at 730 pm.

Contributions to *The READOUT* are always welcome and may be submitted to the editor by mail or via packet at N6REB-BBS on 145.79 MHz. The deadline for articles is the 15th of the preceding month. Articles regarding religion or politics are not accepted.

Editor

Bob Pinheiro, WA6ZLO

1221 Mist Flower Ct.

Modesto, CA. 95355

209-523-5880

An ARRL affiliated club!

ARRL membership may be paid through SARA with the club retaining a \$2.00 commission. Please send your ARRL membership form along with your check made payable to "SARA". We will deduct the \$2.00 and send a check to the ARRL.

"CNN Scoop"

From front page

of the raid. CNN managed to keep the link alive until about 11 am the following day when the Iraqi's ordered it shut off. Despite the use of the simple four-wire, CNN had its share of technology available in the middle east. It had four flyaway satellite upstations with antennas ranging from 1.8 to 2.2 meters. Two were in Saudi Arabia and two in Jordan. For nighttime action the network used the Litton Industries infrared nightscope. Despite the shaky reputation hi-tech equipment has had with desert conditions, CNN experienced few problems during the bombings. As it turned out, the heat, which at times reached 120 degrees in August,

caused more problems with the equipment. One major inconvenience, though, was power conversion. CNN drew power largely from local sources or from generators, both of which were 220 volts. Most of CNN's equipment required 110 volts. CNN was forced to use bulky step-down transformers that were difficult to move. It is fair to say that technology-wise, CNN lacked major advantage over the other networks; they all had the same level of quality equipment. But for those first 17 hours or so in Baghdad, CNN beat them all using one of the oldest tricks in the book.

-Thanks TV Technology

SARA Transmitter Hunt April 20

The first SARA transmitter hunt to be held in Modesto in several years will take place Saturday April 20, 1991 at 3 pm. If you have never taken part in a hidden transmitter hunt, here is your chance. Hunters and their assistants will meet in the parking lot behind the Stanislaus County Administration building at 12 and G streets in downtown Modesto.

See 'T-Hunt' Page 6

220 Machine Frequency Change

The FCC has released adopted rules for the use of the 220-222 MHz band by the Private Land Mobile service. The move means the Amateur Radio Service will be forced to vacate that portion of the band 90 days after the effective date of the rules which is expected around July of this year.

NARCC (Northern Amateur Radio Relay Council of California) has been working on a new 220 Amateur band plan in anticipation of the loss of this portion of the band. Their plan calls for the moving of the seven lowest repeater pairs in the band, which includes our 223.68 repeater.

NARCC has suggested a pair and interference tests will be conducted before any final decisions are made. Our machine will have to be PL'ed

See 'Frequency Change' page 6

March Minutes

By Linda Franklin, N6REB, Club Secretary

The March 19, 1991 meeting of SARA was called to order at 7:40 pm by Pres. Oliver, KJ6YZ. Thirty three members and guest present introduced themselves. Volunteers are needed for the upcoming RACES drill to be held by Stanislaus County on April 25, 1991. Contact Allen, WA6OYF, at 523-5911 or 524-9181 to volunteer.

WDOFFX said the SARA license classes are going well. They meet every Thursday from 6:30-7:30 pm in room 51 at Downey High on Coffee Rd. The tuition is \$15.00 per person. If it's a family, \$5.00 for each additional member of the family up to a maximum of \$25.00. The books and code tapes (if needed) are extra. FFX announced he has been appointed the 2 meter coordinator by NARCC (Northern Amateur Radio Relay Council of California).

Treasurer Al, N6SAE reported as of this date in the General Fund \$1863.62. Seven debits of \$194.75. Three credits of \$417.60. Balance, \$2086.47. In the Fund Raiser account, beginning balance of \$388.57. No debits. Two credits of \$341.00. Ending balance of \$729.57. In the Educational Training Account, beginning balance of \$409.95. Two debits of \$12.74. One credit of \$274.56. Balance of \$671.77. Report accepted unanimously. Four new members were welcomed to the club. Ralph Gendron, Timothy Johnson and Robert & Laura Kimball all new Technicians who graduated from the current SARA license class. They earned, in addition to their licenses, a free membership to SARA for the remainder of the year. Ralph and Tim are from Modesto and the Kimball's from Patterson.

VP, Dave, N6YHZ, requested those interested in Field Day to contact him ASAP. If there is enough interest, it will be held at the Niles Garden School near Ripon. Minutes of the February meeting were approved as they appeared in the newsletter.

Leroy, NV6S, gave the technical report. He thanked Bill, WA6OHP, who did all the work on the 440 repeater. He also thanked Bill's company, Air Call Communications of Modesto, for helping SARA obtain the Sinclair Duplexer and connectors at half price. The 440 machine is on 440.225 MHz and has a 136.5 Hz PL.

The autopatch should be in service before the end of the month. The ACC controller will be back in service also. Once everything is installed, we will have the capability of linking all three repeaters (2M-220 and 440) together if, and when needed, and to activate, PL protection by remote control. The antenna on the 10M Digi broke and

Leroy requested approval of around \$100 to replace it. Approved! Leroy also reported that he received a quote from a local television dealer for a television set for the upcoming raffle. The dealer offered us any RCA set we wanted at 10 % below their cost. After discussion, it was unanimously voted to offer a \$500 portable stereo color television or \$500 cash as the grand prize for our next raffle.

Jim, KB5FB, offered to help us with the printing costs of the raffle tickets at a substantial savings. It was decided that the raffle would begin as soon as the tickets were ready and end with the drawing on June 30, 1991, during Field Day activities. A \$1.00 donation will be asked for the tickets.

A letter from our liability insurance company was read. The club's liability insurance premium this year will be \$609.00. Unanimous approval to pay the bill. Bob, WA6ZLO, reported the cost of printing and mailing the newsletter have increased. However, it appears a new printer has been found at a substantial savings which should help hold the line.

The evening raffle, a portable digital world time clock, was won by Ray Erickson, ex-WA6MSV. Ray, by the way, is getting back into ham radio having just recently passed his General Class test.

KJ6YZ requested volunteers for the Empire Fire Dept. Bike-a-thon, a 60 mile run in Knights Ferry on April 13th. It starts at 6 am. Contact Oliver, KJ6YZ, to sign up.

YZ also mentioned the club's 10 meter net Tuesday nights at 7:30 pm on 28.440 MHz. They call themselves the "Misfits" and have a lot of fun. They have had check ins from Japan and Australia. Meeting adjourned at 9:15 pm. Respectfully submitted by WA6ZLO for the Secretary who was ill.

2,000 Watt CB Linear

FCC engineers and U.S. Marshalls swooped down on Rohan Monrigh of Wyandanch, New York, and seized his illegal CB equipment which included a 2,000 watt linear amplifier. The raid was in response to a petition signed by 106 area residents who said Monrigh's transmissions could be heard on their television and telephone equipment. He was issued a \$1,000 fine for unauthorized CB operation.

Editor's Notes

By Bob Pinheiro, WA6ZLO

Welcome to new SARA members Kent Stromberg, KC6MSQ, of Ripon. Kent is in retail management and works in Modesto. He holds a Technician class license. Robert & Laura Kimball of Patterson, Timothy Johnson and Ralph Gendron both of Modesto are brand new Technicians and graduates of the current SARA License Class.

- Best wishes to Dan Tonini, WA6KDC, who is recuperating from triple bypass heart surgery. Dan spent more than two weeks in Memorial Hospital in Modesto following the surgery in March. He says he feels better and is on the road to recovery.

- For those of you who have been around for a while the name E.F. Johnson will be familiar. Johnson dominated the citizens band radio and Amateur radio markets in the USA from the 1950's to the 70's. The founder of the company, Edgar F. Johnson, died at his home in Waseca, Minnesota in February at the age of 91. Johnson was a pioneer in the development of two-way radio transmitters. When the CB craze dropped off in the late 70's the company merged with Western Union which later sold it to DEl Corp. The Johnson Viking was one of the most popular ham rigs made by the company.

- Police communications in Mon Valley, Pa. just outside Pittsburgh have been plagued by annoying interference ranging from belching, loud clicking, kazoo serenades and what police discretely describe as "body sounds." The interfering sounds have plagued the department frequencies for the past year and the responsible has been dubbed "The Burper." The Chief of Police says they are close to solving the problem and says he thinks the responsible may be a member of his department using department police cars for the transmissions. The chief adds, "We'll find 'The Burper' by process of elimination."

- Digital audio broadcasting is a reality in Japan. A Japanese radio station is now delivering daily digital programming via satellite that sounds as good as a compact disk. Annoying multipath and fading, common with FM broadcasts, is non-existent with DAB and listeners with digital audio tape recorders can make recordings off the air that are virtually identical with the master tapes. The service will expand to a 24 hour service sometime this month and the signal will be scrambled. For \$4.60 a month the company will provide the decoder to unscramble the signal. The company hopes to have 700,000 paying customers in two years.

- The President of the United States has a new Air Force One plane. It's a jumbo jet 747 made by Boeing. The new plane stands six stories high and is equipped with a secure worldwide communications system and anti-nuclear defense shield. It has two galleys able to serve 100 meals at a sitting. It's painted the same blue and white as its 707 predecessor aircraft. The plane holds a crew of 23 and 70 passengers, about double the capacity of the 707. Its wing span and deck space are 195 feet and 4,000 square feet respectively, compared with 145 feet and 1,260 square feet for the old plane. It has a complete medical unit on board and built-in stairs and baggage loader. Too bad the President isn't a ham. Wouldn't that be a great air-mobile shack?

- TV Marti, the controversial television station designed to broadcast to Cuba, is temporary off the air. The station's transmitter, generator, antenna and associated equipment which are housed in the belly of an Air Force blimp tethered over an Air Force base in Florida, were damaged when the blimp broke loose from its mooring and landed in a mangrove forest near the tip of the Florida peninsula. The blimp, nicknamed "Fat Albert," was being lowered for maintenance when the tether broke at 3,000 feet and it "went on its merry way" according to a VOA engineer.

- I received a call from new SARA member Kevin Perry, N6YUQ. He is looking for some inexpensive low-band equipment. If you have anything that is reasonable give him a call at 209 667-1973.

- Don't forget the RACES Drill on April 25th. Your help is needed. Remember the County provides us with our meeting room each month free of charge. All they ask in return is our help in RACES operations. Let's show our appreciation and support.

- If there is a enough interest, SARA plans to participate in Field Day this year on June 29-30, 1991. A perfect site for the event is available at the Niles Garden School west of Ripon. If you're interested, contact Dave Grout, N6YHZ, at 576-8730. There is much planning that must go into a Field Day and it can not be done at the last minute.

- Don't miss the fun of the SARA Transmitter Hunt on April 20, 1991. The fun starts at 300 pm. That's it for this month. 73 Bob

SARA Technical Report

By LeRoy, NV6S

I've been working on the patch and linking equipment for several weeks. Bill, WA6OHP was very helpful and put the 440 repeater together for us. He tuned it up and helped install it on the hill.

The new two meter repeater arrived on March 1, and Bill and I headed for the hill on March 2nd to get the new machines on the air. While we were in route, the old Spectrum repeater and the ACC controller died. I'm not totally sure what caused the failure. The ACC is powered by the Spectrum supply. When the Spectrum pass transistor shorted the output voltage went to 25 volts which caused an over voltage protection diode to trigger and short everything to ground. The current to blow the fuse was too much for the zener and it shorted to ground permanently.

The cause of the whole problem may have been an over voltage from the line or a failure of the voltage regulator chip. I found the regulator to be out as well. The ground pin on the chip was open which may have been caused by too much current and heat, or perhaps it just wasn't soldered properly at the last repair. Those units were brought down the hill for repair after we installed the new 440 repeater. It is temporarily operating on two separate antennas with the transmit antenna ground mounted. This will continue until the new cavities we ordered arrive which should be here soon. The new two meter repeater was installed and is operating great at this time.

As for reports on the new equipment, the sensitivity of the new two meter machine seems to have improved over the old one. Although we haven't had any harmonic interference from the paging service yet. There have been many complaints on the output PL on our new 440 repeater. It is up with the current technology but many older rigs, and even some new ones do not have high pass filters to keep the tone from being heard.

There have also been complaints of the signal level fluctuation. We checked the output and the standing wave while we were on the hill and could find not a problem. The current transmit antenna is ground mounted. That will change when the new duplexers arrive. We are also experiencing a great deal of interference on the 440 machine. At times the interference sounds like a telephone paging service, and at other times it sounds like a mix with two different signals being heard on the output. That may be helped with a helical resonator

added to the front end of the receiver. I will start reinstalling the ACC controller and connecting the patch and link equipment around March 15.

I want to let the new repeater run for a while before I connect anything to it that could possibly void the warranty. I also will install PL on the two meter and 220 MHz repeaters. The current plans are not to turn on the PL unless it is needed. We need the immediate ability to do so if problems. It may be very useful when interference is particularly bad as it will keep the interfering signal from opening the receiver. The PL frequency that I plan to use is 136.5 Hz for all the equipment.

Our new 440 repeater consists of a Spectrum SCR-450 receiver, Hamtronics RP-100 COR (Carrier Operated Relay) and a commercial grade GE transmitter with a GE 10 watt PA. It has a ComSpec TS-32 PL encoder/decoder. I'm told that both input and output PL will be a requirement of our sanction, as it will be for all new sanctions, and NARCC (Northern Amateur Radio Relay Council of California) would like to see the same installed on all existing 440 repeaters. I also believe that soon the 2 meter machine will also have to have the same as will all 220 repeaters. There are advantages to being PL'ed, particularly where interference is a problem as it is on Mt. Oso.

The 440 transmit antenna is temporarily ground mounted on a stub of pipe driven into the ground. The new 440.225 repeater already has that PL installed on both input and output. There have been some complaints on the level of the PL tone on the output of the 440 repeater. It is currently set at .5 khz. I can reduce that level slightly to make it less noticeable although some receivers cannot hear it at its current level.

Most receivers need a high pass filter to attenuate frequencies below 300 Hz. Some receivers do a good job of this, while others are without filtration. We have also been notified by NARCC that there is another repeater on our 440 pair in the Bay area somewhere. The 440 coordinator said he would not issue a sanction until interference tests could be made. My thanks to Bill, WA6OHP and his family for the help on the repeater equipment. 73. De LeRoy

**For the Turlock Turkey Award
Contact Conrad, KC6RRP**

FCC Fees

From Front page

ing, enforcement and other regulatory activities. The proposed fee for Amateur Radio is the smallest. Ham's would pay \$3.00 per year or \$30.00 for a 10 year license which would have to be paid in one lump sum of \$30.00.

The new fees are over and above fees charged for new applications. The ARRL led a successful charge in the Congress to exempt Amateurs from previous attempts to charge fees and is expected to do so again.

The FCC expects to raise over \$65 million from the fees mostly from the private sector which includes all the private radio services, TV and Radio broadcasters, Cable T.V., Cellular radio/telephones, phone companies, satellite operators and anyone else the over which the FCC has jurisdiction.

In case you feel that \$30.00 is too much to pay, read on. AT&T (American Telephone & Telegraph) would have to pay a cool \$2 million a year if the fees are adopted. Its competitors MCI and Sprint would pay a half a million dollars each.

Frequency Change

From page 2

which is now required for all 440 and 220 systems. Amateur operations presently in the 220-222 MHz section will be moved above 222 MHz.

The new proposed bandplan places 220 repeater inputs between 222.160 and 223.380 MHz with outputs from 223.760 to 224.980 EME. SSB, Weak Signal, Packet, etc. will occupy 222.000-222.160 MHz.

'T-Hunt' April 20, 1991

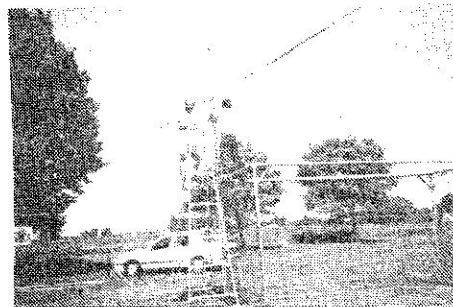
From page 2

to. The hunt begins at 3 pm sharp so be there early to get signed in, pay your entry fee, check over your equipment and that of your opponents. The entry fee is \$1.00. If you show up late the entry fee goes to \$1.50 per hunter. The entry money will go into the pot and the person(s) who find the transmitter first gets it all. The rules prohibit any base station aid. All equipment must be portable and with the hunters. Everyone is invited. You do not have to be licensed to participate. Novices and prospective

new hams are most welcome. You will need a two meter receiver (talkies are best) and directional antenna. Rubber ducks will do but limit your directional ability. Signal attenuators are useful when you get close to the transmitter. You also need transportation. If you just want to be along as an observer, you are most welcome. Teams are welcome and everyone will have FUN. If you have any questions contact Dave, KJ6DL or Jim, N6KMR, who will hide the transmitter. Good Luck!

Field Day

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Field Day Site at the Niles Garden School west of Ripon. Dave, KJ6DL sets up a beam attached to a baseball backstop. The trees in the background provide the shade for the operating positions.

SARA & TARC Newsletter History

The lead story read "K6AYA Operates Bed Pan Mobile". followed by stories of the first work done on Black Butte Mountain for the club's two meter repeater. Dues were just \$15.00 and the Thursday night SARA

one of the charter members of the SARA who helped form the in 1976 and later served two terms as club President. He has been the only editor with the exception of two issues published in 1980 by W6LHQ.



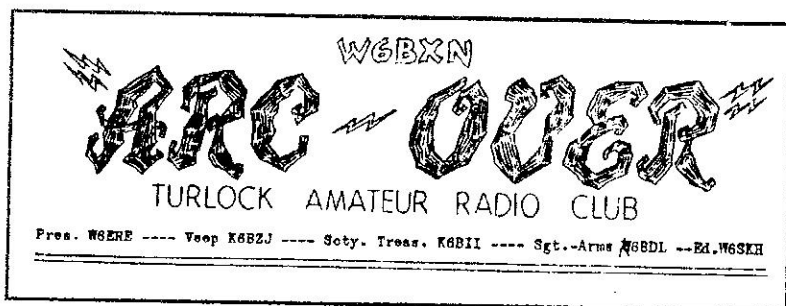
A contest was announced in 1980 by then President Les Lester, W6LHQ, to select a name for the newsletter and design a logo. The winner of the contest was Turlock old timer, Ivan Lowe, W6SKH, who came up with the name "SARA READOUT" with a circular logo containing the club's name and club station call in the center of the circle with the club's station call in Morse Code across the bottom. It was Ivan's feeling that the art style and name he selected be in keeping with the present day state of the art. Several years later the newsletter masthead and logo was refreshed by WAZLO and it appears today on each newsletter.

information net was gaining in popularity with Cliff, W6ERE, as the net control. These stories and more appeared in the first edition of the club's newsletter which debuted on December 1, 1977.

The idea for the newsletter, and its editor, was Bob Pinheiro, WA6ZLO. For lack of a better name, it was simply called "Club News" for the first three years. The first edition was printed on both sides of two 8 1/2 x 11 sheets of paper and printed on a copy machine. It was mailed to a grand total of about 35 members. ZLO was

Ivan was also involved with designing the original logo of the Turlock Amateur Radio Club which was the only Amateur radio club in the area in the 30's, 40's and 50's.

He joined TARC in the late 30's and received his first ticket in 1940 after radio silence was lifted after WWII. In 1950 the Turlock club decided to have a newsletter and names were tossed about. The late Cliff Price, W6ERE, came up with "ARC OVER" which was the winner.



Ivan was selected as the first editor, newsgetter, printer, (using an antique mimeograph machine) and art editor. He also designed the ARC OVER logo.

In recent years, ARC OVER editor's have included Shirley Owens, WA6QOP, and today's editor Andy Anderson, KA6SJR. And now you know the rest of the story

-Thanks W6SKH & WA6ZLO

SARA CW Contest

Novice and Technician members of SARA attention. You can win a nice plague and certificate to hang on your wall by participating in the on going SARA CW contest. The object is to encourage all Novice and Technicians to be active on CW with the eventual goal of upgrading your license. Here are the rules:

1. Must be a SARA member
2. Novice and Technicians only
3. Use the Novice CW portions of 10 through 80 meters

4. You may submit copies of logs from other contests such as Novice Roundup, WPX, CQ Worldwide etc. in addition to Individual contacts.

5. Copies of your logs with QSL cards to verify must be submitted to the contest coordinator, Dave, KJ6DL, at PO Box 691, Ripon, CA. 95366 by the 10th of the new quarter.

6. Scoring: 1 point for stateside contacts. 3 pts. for DX outside the 48 contiguous states. (Alaska and Hawaii count as 3 pts.) Call Dave Bullard, 521-8281 for more information.

Calendar

Apr. 7, 1991	Livermore Swap Meet	All Day
	Las Positas College, Livermore	
Apr. 13, 1991	VE Testing Sonora	900 am
Apr. 16, 1991	SARA Monthly Meeting	730 pm
Apr. 20, 1991	SARA Transmitter Hunt	3 pm
Apr. 25, 1990	Stanislaus Co. RACES Drill	TBA
May 3-5, 1991	Fresno Hamfest	3 Days
	Airport Holiday Inn, Fresno	
May 5, 1991	Livermore Swap Meet	All Day
May 5, 1991	North Hills Swap Meet	800 am
	Elks Lodge in Folsom (Carmichael & Manzanita)	
May 18, 1991	VE Testing Turlock	900 am

SARA meets the third Tuesday of each month (except holidays) at the Stanislaus County Administration Building at 12th and H streets in downtown Modesto. The meetings are held in the lower-level conference room starting at 730 pm. Visitors and interested parties are most welcome. SARA is an ARRL Affiliated Club and is affiliated with Stanislaus County and City of Modesto RACES. Repeaters WD6EJF operated on 145.39, 223.68 & 440.225 MHz. Informational nets are held each Thursday evening at 800 pm.

Stanislaus Amateur Radio Association
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**The Next SARA Meeting is April 16,
1991 at 730 pm. You're Invited!**