STANISLAUS AMATEUR RADIO ASSOCIATION • Est. 1976

The READOUT

Year 12 | Number 12 | December 1990

Spectrum SCR-77

Club Votes For New Two Meter Repeater

Replacement of our aging 2 meter repeater was unanimously approved at the November 20, 1990 meeting of SARA. Acting on the recommendation of our Chief Engineer, NV6S, the club authorized the purchase of a new Spectrum Communications SCR-77 repeater to replace the present Spectrum SCR-1000 which has been in service for over 10 years. The cost of the new repeater will be around $1,000 with the funds coming from our fund raiser account. The new repeater will become the main repeater and the current repeater will become the backup. It has not been decided yet what will be done with the Hamtronic's repeater which has been our backup machine. Discussions on it's fate ranged from out right sale of the unit to placing it in the club's digipeater site further up the hill as a backup should something happen to our main site in an earthquake or some other calamity.

The new repeater will not have as many features as the present, but Leroy said those features are not really needed. He said the new machine is comparable to our 220 repeater which has given us good service over the last several years. The new repeater will be ordered with a 30 watt final which is the same power that the current machine puts out. Delivery date has not been established, but not expected till after the first of the year

In related developments, the club ok'd the installation of a 440 repeater on Mt. Oso. Tim, N6ZUC, advanced the suggestion noting that several pieces of used equipment were available at no cost. The only items needed would be an antenna and duplexer. The club holds a 440 repeater sanction for 444.225 MHz (+) and will operate on that frequency. The autopatch links, which have been operating on that frequency, will be moved to a new frequency when the system is updated. The club authorized an expenditure of $1,000 for the project.

In the interim, the new ACC controller is in and has been installed. There are some bugs to be worked out. See the "Technical Report" on this page for more information on that. . It will take several months before things get back to normal, please be patient.

Technical Report

By Leroy, NV6S

A couple weeks ago Tim, N6ZUC and I went to Oso to bring the repeater down for the interface job with the new controller. The job turned into a lot more than expected.

The controller, although stated to be able to operate a remote base or link repeater, has some problems that had to be overcome to operate properly with the link. Also, it is designed to connect directly to a phone line for

See 'Technical Report' page 2

Merry Christmas & Happy New Year

The READOUT is published monthly by the Stanislaus Amateur Radio Association.

1990 SARA Officers

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Linda Franklin N6REB

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***SARA* VHF Net**

Thursdays @ 8 p.m. (Except Holidays)

2 meters 145.39 MHz WD6EJF

220 Band 223.68 MHz WD6EJF

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.

Technical Report

From front page

phone patch activities. All of these problems had to be dealt with as well as many audio level problems and logic levels that did not match the requirement.

After about two weeks work, I had everything to the point that it seemed to be performing properly and it was time to put it into the operating environment for a shake down. Not all together to my surprise, several problems were identified when it was installed on the mountain top.

Some of those I was able to overcome, except the auto patch does not work from the two meter side. I have plans to correct the rest of the problems as soon as I can get the time needed. Also the Id'er level is very loud and that is partially due to the design of the controller and partially due to what I believe to be a case of the repeat level changing in route to the site. I plan to let it run for a couple more weeks as is.

I want to shake down the controller before I make further modifications in hopes that on the next trip I will be able to iron out all the bugs. There is also a problem with dropouts and distortion from the 220 side. I'll address those problems at that time.

Please be patient while we are in the transition stages. Given time all will work properly. My thanks to the members who have helped out. Although several members have helped to varying degrees particular thanks goes to Tim, N6ZUC and Tom, N6LSA, who have accompanied me on recent trips and given me technical assistance. 73 and thanks for your patience.

Pay your 1991 dues before Dec. 31, 1990 and beat the increase!

Digital Radio

Today's radio receivers, and the over 10,000 AM and FM broadcast stations in this country, could soon become as outdated as 45 rpm records because of advancing technology. The emerging technology is called digital audio broadcasting, and is capable of providing high quality sound that is vastly superior to the standard today, including FM.

If it delivers as promised, DAB could provide virtually flawless reception by satellite, even in tunnels, and provide enormous savings in transmitter equipment and electricity costs.

In addition, more stations would be able to operate on the new frequency band that would be created. Some experts predict that DAB is only a minimum of five years away and some experts predict the superior quality of DAB could quickly conquer a new generation of radio listeners.

In the meantime, The FCC has unveiled their first proposal for usage of the new expanded AM radio band. Ten new channels, from 1610 to 1700 kHz, should eventually hold 250 to 300 stations across the country.

Each station would operate with 10 KW day and 1KW at night and be required to transmit in stereo. 1700 kHz will be set aside nationwide as a traveler's information frequency which heretofore have been using 1610 KHz. Medium sized towns that were never assigned licenses due to their proximity to larger cities will have first shot at the new frequencies. Expect to see station on 1610 and 1620 kHz first because those frequencies can be reached by current digital radio without modification.

Fighting The A-Rock Fire

By Dave Wallace, KB6GJN

On Sunday, August 12, 1990, the urge to get involved in the "A-Rock" fire in Yosemite National Park became too great. I responded to a call for volunteers by calling the Tuolumne County ARES who invited me to help out the next day.

I got up at 4:00 A.M. and headed out about 5:00 A.M. with my brother, Mark, KB6ZOA, my daughters Megan, KA7WUD, and Caroline. We headed for Mather Base, located at Camp Mather, near the Big Oak Flat entrance to Yosemite. About 9:00 we met Paul Girard, K6UKP, who was already in service at Mather Base with his own equipment.

About mid afternoon a call came in for help at NACO West, a campground near the park's entrance, where media people were being managed. We handled messages until we were released about 10:00 P.M. We all got home about 1:00 A.M. It was a long day.

Observations:

There is no question that we provided a service that was valuable beyond calculation. Nearly everyone was impressed by our capabilities and thankful that we provided the service. There was a little friction with at least one federal communications person who clearly considered us as intruders on his turf. His attempts to send us packing, however, were soundly quashed by the Incident Commander. There was just a tiny bit of satisfaction when he was called to the amateur radio station to communicate with his supervisor.

There was a small but significant problem with identifying who we were. We looked like civilians walking around in a place where we really should not have been. This is likely to be a problem in any emergency, particularly when access to the area is restricted. We should give thought to coming up with some inexpensive, durable, highly visible means of identification. My suggestion would be a vest, possibly yellow in color, to avoid being confused with the orange vests that are to be used by incident commanders and unit leaders in the Incident Command System (ICS).

We should also have some means of identifying our station location, such as a sign or banner made of canvas or similar material -- not a field expedient. Speaking of ICS, I believe we amateurs, who are becoming increasingly involved in emergency communications, must become familiar with ICS. From the equipment standpoint, I thought things went well. It was a 2-Meter show throughout. TARC's Turtle Dome link and their portable repeater, were perfect. Avoid, if possible, using a vehicle as an antenna base -- you may want to move the vehicle, or it may not be possible to keep the vehicle at the spot you are assigned for your station. The more radios you can operate the better, but one of the handiest items I saw there was a scanner. It can really multiply your capabilities, especially if the number of rigs available to you is limited. As you get into packet, consider how you might go to the field with it. Most of the traffic we handled would have been ideal for packet. Remember, however, that in Incident Command Posts, power is usually supplied by generator, even when the ICP is in downtown L.A.

Power is always a problem in any emergency. Consider developing the capability to run as much of your equipment as possible on AA alkaline batteries. You can't depend on having a power source to recharge NiCads. D cells, of course, are also available. If you need other power, try to arrange for it yourself.

Rick, KB6UUI, and Lynn, N6ZLN, deserve our thanks and appreciation, along with Tuolumne County ARES-RACES, for doing a great job of coordinating the Amateur Radio Operators' response to the Yosemite fire incident. Let's prepare ourselves to do as good a job when it is our "turn" to "host" such an affair.

Silent Key Calls

Ever wonder what happens to a Silent Key's call after their death. The FCC does not delete the call from their computerized data base unless it is specifically requested by the family. If no such request is made, the call will stay in the computer until it's expiration date. With the current 10 year license that could be a long time depending on when the Amateur died.

If the family want's it deleted, they must return the license to the FCC in Gettysburg with a letter of explanation. If the license can not be found, a letter may be sent to the FCC explaining the circumstances and requesting the cancellation. The FCC routinely denies requests for specific calls including those of Silent Keys.

Happy Holidays

(We hope Santa brings you a 940)

SARA Minutes

By Linda Franklin, N6REB

Club Secretary

The November 20, 1990 meeting of SARA was called to order at 750 pm by President Phil, WD0FFX. Introductions of 19 members and guests followed. The minutes of the October minutes were approved as published in The READOUT.

Guest speaker Bob Wilkens, N6FRI, from NARCC (Northern Amateur Relay Council of California) was introduced and spoke of the organization's job of coordinating VHF and above frequencies in Northern California.

The treasures report was given by treasurer Al, N6SAE. In the General Fund: Beginning balance $747.37. Eight debits for $331.00 and $215.00 in deposits. Ending balance $631.08. In the Fund Raiser Account: Balance $2,371.18. No debits or credits during the month. The report was approved. Al requested that the books should be audited as we end the year. It was suggested that Lori, N6JTD, be asked to conduct the audit, if she has the time.

VP, Oliver, KJ6YZ, reported that the San Joaquin Valley Section Communications Manager, Byron Smith, WA6YLB, of Exeter, has accepted the club's invitation to be our speaker at the December 18, 1990 meeting of SARA.

Bob, WA6ZLO, reported on some problems with the post office mainly concerning slow delivery of the newsletters. Also, on a few occasions, the post office is returning newsletters which have correct addresses on them. It's unknown what the problem is. ZLO reminded those members that move that they must notify the club of their new address before they move because the post office will not forward bulk mail.

The technical report was given by Leroy, NV6S. He said that he is not totally happy with the new ACC controller. He said he spent over 160 hours working on the interfacing of the unit and that many bugs remain to be worked out. He said that there are many things that can be done with the controller as far as the computer generated voice identification and announcements is concerned. He said he has programmed them all in to let the membership become familiar with them to help them decide which ones they want and don't want. He said the male voice can be changed to a female voice also. He said the courtesy tones are a little loud right now but will be turned down as soon as possible. He said the most important thing right now was to get back in good graces with his wife after spending so much time on the interfacing.

The autopatch will be out until further notice. Leroy requested that the club authorize an additional $80.00 for an expanded output card for the controller. It was approved. He said the audio delay board on the new controller was defective and he is going to have to send it back to the factory. He requested approximately $70.00 to purchase a PL encoder and decoder for the 2M repeater. It was approved. Discussion then turned to the acquisition of a new 2M repeater. Leroy and Tim, N6ZUC had reviewed the commercial equipment available and both recommended the Spectrum SCR 77 repeater. The price is a little over $1,000. Leroy recommended the model with a 30 watt final. N6KMR moved, N6ZUC seconded that we buy the recommended repeater. Unanimously approved. Selling the old Hamtronics standby receiver was suggested. ZLO pointed out that we presently have all of our equipment (except the digipeater) in the new building and that if it is destroyed in an earthquake we would be out of business. He suggested putting the Hamtronic machine in the Bureau of Reclamation building which is where the digi is located. This is a much more secure building. Leroy said he would look into it.

Tim, N6ZUC, inquired about the possibility of putting a 440 MHz repeater up. The club holds a sanction for 444.225 (+). He said that he had some 440 gear that could be donated. Leroy also had some used equipment. The main expense would be the duplexer. It was noted that many members have 440 equipment at this time. Used duplexers were discussed vs. new ones. N6KMR moved and N6LRB seconded that a maximum of $1,000 be allocated from the Fund Raiser account toward the purchase of 440 MHz duplexers.

WD0FFX requested help with the club station. He said we need to collect and set up a library of QST's, 73, CQ and other Amateur radio magazines. Donations are welcome. Educational material is needed. Desks need to be repaired in the radio room and set in place and the antenna's need to be mounted. ZLO, ZUC, KMR and YHZ volunteered to help with the antennas. FFX will coordinate the dates.

Bob, WA6ZLO, asked whether or not the club should take a close look at whether our new 2M building could withstand a major earthquake. It sits on the side of the mountain and is particularly vulnerable. N6KMR volunteered to assess the situation and determine what can be done and the expense involved.

The nominations committee for 1991 officers announced the following members have graciously agreed

See 'Minutes' page 5

U.S. Amateur Frequency Allocations

As of December , 1990

Novice

160 Meters:(1,800-2,000 kHz)
No Novice Privileges

---

80 Meters: (3,700-4,000 kHz)
3700-3750 kHz- CW RTTY DATA

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40 Meters: (7,000-7,300 kHz)
7100-7150 kHz- CW RTTY DATA

---

20 & 30 Meters: No Novice Privileges

---

15 Meters: (21,000 -21,450 kHz)
21,100-21,200 kHz CW RTTY DATA

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17 & 12 Meters: No Novice Privileges

---

10 Meters: (28,000-29,700 kHz)
28,100-28,300 kHz CW RTTY DATA
28,300-28,500 kHz CW & SSB

---

6 Meters & 2 Meters
No Novice Privileges

1.25 Meters (222-225 MHz)
222.100-223.91 MHz CW PHONE

70CM & 33CM No Novice Privileges

---

23 Centimeters (1240-1300 MHz)
1270-1295 MHz
CW PHONE

Novice Restrictions

(1) 200 Watts on all Freq's except
(2) 5 Watts on 23 Centimeters
(3) 25 W on 1.25 Centimeters

Technician

80 Meters: (3,700-4,000 kHz)
3700-3750 kHz- CW RTTY DATA

---

40 Meters: (7,000-7,300 kHz)
7100-7150 kHz- CW RTTY DATA

---

20 & 30 Meters: No privileges

---

15 Meters: (21,000 -21,450 kHz)
21,100-21,200 kHz CW RTTY DATA

---

17 & 12 Meters: None

---

10 Meters: (28,000-29,700 kHz)
28,100-28,300 kHz CW RTTY DATA
28,300-28,500 kHz CW & SSB

---

6 Meters (50.0-54.0 MHz)
50.0-50.1- CW Only
50.0-54.0- CW RTTY DATA MCW PHONE & IMAGE

---

2 Meters (144-148 MHz)
144-144.1 MHz CW Only
144.1-148 CW RTTY DATA MCW PHONE IMAGE

1.25 Meters (222-225 MHz)
222.100-223.91 MHz CW PHONE

70CM (420-450 MHz)
420-450 - CW RTTY DATA MCW PHONE & IMAGE

---

33 Centimeters (902-928 MHz)
902-928- CW RTTY DATA MCW PHONE & IMAGE

---

23 Centimeters (1240-1300 MHz)
1240-1300 - CW PHONE DATA
MCW PHONE IMAGE

General

160 Meters: (1,800-2,000 kHz)
1,800-2,000 kHz-
CW PHONE IMAGE RTTY DATA

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80 Meters: (3,700-4,000 kHz)
3,525-3,750 kHz-
CW RTTY DATA
3,850-4,000 kHz- CW PHONE
IMAGE

---

40 Meters: (7,000-7,300 kHz)
7,025-7,150- CW RTTY DATA
7,225-7,300- CW PHONE IMAGE

---

30 Meters: (10,100-10,150 kHz)
10,100-10,150 kHz-
CW RTTY DATA
No voice on this band. Maximum
power 200 W on this band .

---

20 Meters: (14,000-14,350 kHz)
14,025-14,150 kHz-
CW RTTY DATA
14,225-14,350 kHz-
CW PHONE IMAGE

---

17 Meters: (18,068-18,168 kHz)
18,068-18,110 kHz-
CW RTTY DATA
18,110-18,168 kHz-
CW PHONE IMAGE

---

15 Meters: (21,000-21,450 kHz)
21,025-21,200 kHz-
CW RTTY DATA
21,300-21,450 kHz-
CW PHONE IMAGE

12 Meters: (24,890-24,990 kHz)
24,890-24,930 kHz-
CW RTTY DATA
24,930-24,990 kHz-
CW PHONE IMAGE

---

10 Meters: (28,000-29,700 kHz)
28,000-28,300 kHz-
CW RTTY DATA
28,300-29,700 kHz-
CW PHONE IMAGE

---

6 Meters: (50.0-54.0 MHz)
50.0-50.1 MHz- CW ONLY
50.1-54.0 MHz-
CW RTTY DATA MCW
PHONE IMAGE

---

2 Meters: (144.0-148.0 MHz)
144.0-144.1 MHz- CW ONLY
144.1-148.0 MHz-
CW RTTY MCW
PHONE IMAGE

1.25 Centi: (222-225 MHz)
222-225 MHz-
CW RTTY MCW PHONE IMAGE

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70 Centimeters: (420-450 MHz)
420-450 MHz-
CW RTTY MCW PHONE IMAGE

---

33 Centi:(902.0-928.0 MHz)
902.0-928.0 MHz-
CW RTTY MCW PHONE IMAGE

---

23 Centi: (1240-1300 MHz)
1240-1300 MHz-
CW RTTY MCW PHONE IMAGE

Power Limits

It is recommended that only the amount of power necessary to maintain communications be used. In no event may Amateur transmitters exceed 1500 watts (PEP) peak envelope power.

This includes AM (double-sideband). PEP is the average power supplied to the antenna transmission line by a transmitter during one RF cycle at the crest of the modulation envelope, taken under normal operating conditions. It is read with a properly matched RF wattmeter.

The actual power may be calculated by using a peak RF voltage as indicated by an oscilloscope or other peak-reading device. Multiply the peak RF voltage by 0.707, square the result and divide by the load resistance (SWR must be 1).

Novices and higher-class licensees operating in the Novice class subbands on 80, 40 and 15 meters are limited to 200 watts. The sole exception to this 200 watt limit on the Novice sub-band is the 10 meter band where higher-class operators are allowed 1500 watts PEP.

All amateurs are limited to 200 watts PEP when operating 7.050-7.075 MHz segment in ITU Regions 1 & 3. (Outside North America)

All amateurs are limited to 200 watts PEP on the 30 meter band.

Advanced

160 Meters: (1,800-2,000 kHz)
1,800-2,000 kHz-
CW PHONE IMAGE
RTTY DATA

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80 Meters: (3,700-4,000 kHz)
3,525-3,750 kHz- CW RTTY DATA
3,775-4,000 kHz-
CW PHONE IMAGE

---

40 Meters: (7,000-7,300 kHz)
7,025-7,150- CW RTTY DATA
7,150-7,300- CW PHONE IMAGE

---

30 Meters: (10,100-10,150 kHz)
10,100-10,150 kHz-
CW RTTY DATA
No voice on this band. Maximum power 200 W on this band and Amateur must avoid interference to fixed stations outside the U.S.

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20 Meters: (14,000-14,350 kHz)
14,025-14,150 kHz-
CW RTTY DATA
14,175-14,350 kHz-
CW PHONE IMAGE

---

17 Meters: (18,068-18,168 kHz)
18,068-18,110 kHz-
CW RTTY DATA
18,110-18,168 kHz-
CW PHONE IMAGE

---

15 Meters: (21,000-21,450 kHz)
21,025-21,200 kHz-
CW RTTY DATA
21,225-21,450 kHz-
CW PHONE IMAGE

12 Meters: (24,890-24,990 kHz)
24,890-24,930 kHz-
CW RTTY DATA
24,930-24,990 kHz-
CW PHONE IMAGE

---

10 Meters: (28,000-29,700 kHz)
28,000-28,300 kHz-
CW RTTY DATA
28,300-29,700 kHz-
CW PHONE IMAGE

---

6 Meters: (50.0-54.0 MHz)
50.0-50.1 MHz- CW ONLY
50.1-54.0 MHz-
CW RTTY DATA MCW
PHONE IMAGE

---

2 Meters: (144.0-148.0 MHz)
144.0-144.1 MHz- CW ONLY
144.1-148.0 MHz-
CW RTTY MCW PHONE IMAGE

1.25 Centi: (222-225 MHz)
222-225 MHz-
CW RTTY MCW PHONE IMAGE

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70 Centi: (420-450 MHz)
420-450 MHz-
CW RTTY MCW PHONE IMAGE

---

33 Centi:(902.0-928.0 MHz)
902.0-928.0 MHz-
CW RTTY MCW PHONE IMAGE

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23 Centi: (1240-1300 MHz)
1240-1300 MHz-
CW RTTY MCW PHONE IMAGE

UTC Time

UTC	2400	PST	PDT
0000	1600	4 pm	5 pm
0100	1700	5 pm	6 pm
0200	1800	6 pm	7 pm
0300	1900	7 pm	8 pm
0400	2000	8 pm	9 pm
0500	2100	9 pm	10 pm
0600	2200	10 pm	11 pm
0700	2300	11 pm	12 mid
0800	0000	12 mid	1 am
0900	0100	1 am	2 am
1000	0200	2 am	3 am
1100	0300	3 am	4 am
1200	0400	4 am	5 am
1300	0500	5 am	6 am
1400	0600	6 am	7 am
1500	0700	7 am	8 am
1600	0800	8 am	9 am
1700	0900	9 am	10 am
1800	1000	10 am	11 am
1900	1100	11 am	12 pm
2000	1200	12 pm	1 pm
2100	1300	1 pm	2 pm
2200	1400	2 pm	3 pm
2300	1500	3 pm	4 pm

ITU Phonetics

A- Alfa
B-Bravo
C-Charlie
D-Delta
E-Echo
F-Foxtrot
G-Golf
H-Hotel
I-India
J-Juliette
K-Kilo
L-Lima
M-Mike
N-November
O-Oscar
P-Papa
Q-Quebec
R-Romeo
S-Sierra
T-Tango
U-Uniform
V-Victor
W-Whiskey
X-X-Ray
Y-Yankee
Z- Zulu

Extra

160 Meters: (1,800-2,000 kHz)
1,800-2,000 kHz-
CW PHONE IMAGE
RTTY DATA

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80 Meters: (3,700-4,000 kHz)
3,525-3,750 kHz-
CW RTTY DATA
3,750-4,000 kHz-
CW PHONE IMAGE

---

40 Meters: (7,000-7,300 kHz)
7,025-7,150- CW RTTY DATA
7,150-7,300- CW PHONE IMAGE

---

30 Meters: (10,100-10,150 kHz)
10,100-10,150 kHz-
CW RTTY DATA
No voice on this band. Maximum power 200 W on this band and Amateur must avoid interference to fixed stations outside the U.S.

---

20 Meters: (14,000-14,350 kHz)
14,025-14,150 kHz-
CW RTTY DATA
14,150-14,350 kHz-
CW PHONE IMAGE

---

17 Meters: (18,068-18,168 kHz)
18,068-18,110 kHz-
CW RTTY DATA
18,110-18,168 kHz-
CW PHONE IMAGE

---

15 Meters: (21,000-21,450 kHz)
21,025-21,200 kHz-
CW RTTY DATA
21,200-21,450 kHz-
CW PHONE IMAGE

12 Meters: (24,890-24,990 kHz)
24,890-24,930 kHz-
CW RTTY DATA
24,930-24,990 kHz-
CW PHONE IMAGE

---

10 Meters: (28,000-29,700 kHz)
28,000-28,300 kHz-
CW RTTY DATA
28,300-29,700 kHz-
CW PHONE IMAGE

---

6 Meters: (50.0-54.0 MHz)
50.0-50.1 MHz-CW ONLY
50.1-54.0 MHz-
CW RTTY DATA MCW PHONE IMAGE

---

2 Meters: (144.0-148.0 MHz)
144.0-144.1 MHz- CW ONLY
144.1-148.0 MHz-
CW RTTY MCW PHONE IMAGE

1.25 Centi: (222-225 MHz)
222-225 MHz-
CW RTTY MCW PHONE IMAGE

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70 Centi: (420-450 MHz)
420-450 MHz-
CW RTTY MCW PHONE IMAGE

---

33 Centi:(902.0-928.0 MHz)
902.0-928.0 MHz- CW RTTY MCW PHONE IMAGE

---

23 Centi: (1240-1300 MHz)
1240-1300 MHz-
CW RTTY MCW PHONE IMAGE

Modes

MCW= Tone Modulated International Morse Code

RTTY= Narrow-band printing telegraphy

CW= International Morse code telegraphy

IMAGE= Facimile and television emissions

DATA = Telemetry, telecomand (packet)

PHONE= Speech and other sound emissions

PRB-1

§97.15 (e)
Station Antenna Structures

Except as otherwise provided herein, a station antenna structure may be erected at heights and dimensions sufficient to accommodate Amateur service communications. [State and local regulation of a station antenna structure must not preclude Amateur service communications. Rather, it must reasonably accommodate such communications and must constitute the minimum practicable regulation to accomplish the state or local authority's legitimate purpose.

See PRB-1, 101 FCC 2d 952 (1985) for details. Effective 9-1-89.

Editor's Notes

By Bob Pinheiro, WA6ZLO

Welcome to new members John Walter, KC6KSN of Riverbank and Jim, N6UGH, and Sandy Jones, N6YBE of Patterson. John is a data processor while Jim works in Quality Control and Inspection for FMC in the Bay Area. With the addition of the three new members our membership has grown to 182 for the year.

Speaking of membership, some of you have already paid your dues for 1991. The rest of us have not, which means that our dues are due and payable on January 1, 1991.

Please continue to support your club by renewing your membership. Please complete the application form on page 7 of this edition and mail it and your check, or money order to the club's post office box.

It is your dues that pay the bills, the biggest of which is this newsletter, followed closely by liability and equipment insurance. These three items along take well over 50% of our budget. Because of increased costs, the membership dues have been increased by one dollar for some classifications. See the schedule on page 7.

• The FCC fined three San Diego computer retailers $2,000 each for offering uncertified computers for sale. The stores were Byte & Floppy Computers, Datel Systems Inc. and CCC Computers. Companies that display and offer for sale computing devices that don't comply with FCC rules are subject to fines of up to $10,000 per day for each day that the offense occurs up to a total of $75,000.

Meanwhile, U.S. Marshals and engineers from the FCC's San Francisco office seized $2,000 worth of illegal equipment from CB operator Harvey Peters, Jr. in Oakland. The equipment included five modified transceivers capable of operating out-of-band, and two CB linears capable of up to 300 watts. The FCC received over 30 complaints from residents about Peter's RFI and TVI. Peter's had ignored letters, fines and requests to inspect his station from the FCC.

• Congratulations to former SARA President, Paul Caruso, WD6EYX, who was elected to the District 5 Supervisorial seat on the Stanislaus County Board of Supervisors in November. Paul unseated incumbent Bill Mattox who was appointed to seat vacated by Assemblyman Sal Canella. Paul lives in Ceres and has been a Ceres City Councilman for several years. Paul was instrumental in helping Frank, N6YHY, in his antenna height restriction fight with the City of Ceres. Paul take office in January and can be relied on to champion the fight against and antenna height restriction ordinane that might before the Board during his tenure.

• A sincere "thank-you" to Bill, WB6SHE and Loretta Mathies for a very nice note of appreciation expressed to me regarding my efforts on the newsletter. It was very nice of you to take the time and effort to make your feelings known. Thank you very much!

• Speaking of thanks, thanks to Dave, KA6GJN, Chuck, KJ6DO and Ernie, K6UVI of Springfield, Or., all of whom contributed articles to The READOUT this month. Unfortunately, space limitation prevents us from running all of them this month. So, we ran Dave's story on the A-Rock Yosemite National Park fire this past summer and will run Chuck's story on the Boy Scouts Jamboree in January. Ernie's series on Packet radio will resume in the February issue. Contributions to the newsletter are most welcome and carefully considered. It is greatly appreciated when them come already typed via packet or by floppy disk. However, if you have sometime and can't send it to me via packet or disk, then just write or type it and mail it to me. That's it for this month. Happy Holiday's and 73.

New Look!

Thanks to the nice folks at Budget Copy Co., we are going to be able to continue to print the newsletter in the new larger style that debuted last month. Although the new size is more expensive, Budget graciously agreed to let us have it for the price of the previous style. The amount of space available is slightly less with the new style, but all the comments that we have heard have been most positive.

We greatly appreciate what Budget is doing for us and we hope you will remember to use them whenever you have copying to be done in the future. And be sure to let them know that you read about them in The READOUT. (See their ad on the back page). They are located on 13th street between I and J in downtown Modesto, just a block from the County courthouse. Let them know we appreciate it.

Minutes

From Page 4

N6YHZ. Secretary Linda, N6REB (for a third term) and Treasurer, Al, N6SAE, (for a second term). Nominations from the floor will be opened at the December meeting followed by the vote.

The meeting was adjourned at 945 pm. Respectfully submitted for the secretary by WA6ZLO

SARA 220 Frequency in Jeopardy

If the FCC prevails in taking the bottom 2 MHz of the 220 band (220-222 MHz), the SARA 220 repeater (223.68 MHz) will probably have to move to another occupied frequency higher in the band.

According to Bob Wilkens, 440 Coordinator for the Northern Amateur Relay Council of California (NARCC), if we lose the bottom two megs of the band, it is expected that those Amateur activities currently using 220-222 MHz will be moved up to 222-223 MHz and repeaters presently operating in that area will be moved above 223 MHz and forced to share with other existing repeaters.

The tentative plan calls for repeaters in the lower 6 channels of the band to be moved which would free up 240 KHz for the relocation of services from 220-222 MHz which includes primarily control links, packet and weak signal work. The lower six repeater channels include 223.64, 223.68, 223.72, 223.78, 223.82 and 223.94 MHz. Sharing of repeater frequencies will undoubtedly require PL'ing (Private Line) repeaters to reduce co-channel interference.

A moratorium on all new 220 sanctions has been impose until a decision is handed down by the Court of Appeals which is expected possibly as soon as this month. Wilkens, who addressed the SARA club meeting on November 20th, said that the day when all repeater systems on 2M, 220 and 440 will be required to operate with PL is rapid approaching. He said the most active band at this time is 23 Centimeters (1240-1300 MHz) with new repeaters coming on the air with increasing frequency. "The band is wide open right now," said Wilkens who encouraged groups or individuals who are contemplating putting up a repeater to look at this band. Presently there are 24 repeaters in Northern California on this band including KI6AG in Modesto. The Modesto repeater is on 1291.800 MHz and it presently operating at low-level in Modesto. The system is privately owned by Randy Anderson, KI6AG.

NARCC holds biannual meetings do discuss and organize coordination efforts for Northern California from Bakersfield to the Oregon border. At their last meeting in Concord on October 6, 1990, a number of changes in their bylaws were made. Some of the significant changes included the requirement that repeater owners file new "green sheets' (registration sheets) every year. Otherwise, sanctions will now automatically lapse and if repeaters go down for more than 3 months without notification to NARCC, someone else can apply for the pair.

Tracy Area Patch Available

Skip, N6ZAA, In Tracy, advises that his autopatch is now operational and can be accessed through the SARA repeater. The patch is located at his home in Tracy and is tied into the Tracy telephone exchange. You may call toll free any number in the Tracy exchange. Please remember that Modesto is not in the Tracy exchange and would be a long distance call which is not allowed by the equipment.

A nice feature of the patch is a dedicated code that dials 911. To reach 911 just dial 9*2. Also, remember that when using it for a 911 call, the call will go to Stockton and the San Joaquin County Communications Center. This does not present a problem for the CHP because they dispatch San Joaquin and Stanislaus County units and have radio connections to other area CHP commands. This does present a problem if you want to report something in Stanislaus Co.

The codes for the patch are:
* 5 = ON . # = OFF. 0 * 5= Memory redial of the last number dialed.
9 * 5= 911. You can access the patch anytime 24 hours on .39 and the 220 SARA machine when it's linked to .39.

With the new controller in the circuit now, you can tell when the machines are linked by listening to the courtesy tones. When linked you will heard a single beep followed immediately by a bleep-blop (3 tones all together). When they are unlinked you will hear only the bleep-blop.

Please remember this is private patch owed by Skip who is graciously allowing SARA members to use. Use it, don't abuse it.

220 Decision

On November 16, the US Court of Appeals for the District of Columbia Circuit heard oral argument in ARRL vs FCC, the ARRL petition for judicial review of the FCC decision to reallocate 220 to 222 MHz to the land mobile service.

Attorneys for the ARRL and the FCC presented their arguments and were questioned by the panel of three judges that will decide the case. The decision of the court is expected in a few weeks.

Progress: Dirty old men are now refered to as "Hot blooded glezers!"

SARA 1991 Dues

It's that time of the year. Time to keep the ship afloat by paying your 1991. The financial pressure on our treasury continues to grow with many increases led by postage and printing costs and liability insurance. All of our yearly expenses are paid from the general treasury, so your support is vital. We have only had three dues increases since our club was founded nearly 15 years ago in 1976. The first rate was $15.00 per year.

A few years back we increased it to $20.00 and this past year to $21.00. The aforementioned increased costs, as well as others, has forced us to increase the dues by another dollar this year for full and head of family memberships. The student and associate rates will remain the same. The new rates are as follows.

Membership Rate

Full Membership $22.00
Student to Sophomore in College ..$11.00
Associate (Unlicensed) $11.00
Family...(head of household) $22.00

For each additional member of the same household (living in the same home) $11.00. The fourth, or more, members of the same family living in the same home are FREE!

Graduates of *SARA* license classes will be granted a free membership in *SARA* for the first year.

The dues for newly joining members will be pro-rated from the month they join.

Join In:	Pay:	Join In:	Pay:
January	$22.00	July	$11.00
Februrary ..	$20.25	Aug	$9.25
March	$18.35	Sept.	$7.35
April	$16.50	Oct	$5.50
May	$14.70	Nov	$3.70
June	$12.85	Dec	$1.90

ARRL Memberships

SARA is an affiliated club of the ARRL. ARRL membership (new/renewals) can be made through *SARA* with the club earning a $2.00 commission for handling. Make your check payable to *SARA*. We will deduct $2.00 and send the ARRL a check for the difference.

Please be sure to include a membership application for new applicants. For renewals, include the mailing label from your last QST.

Rates ar $30.00 for full membership. $24.00 for applicants 65 or older. Proof of age required. Special rates are available for Amateurs 17 or younger. Write to ARRL 225 Main St. Newington, Ct. 06111 . Alow 5-6 weeks for delivery.

Membership & QST can not be separated. Fifty percent of dues is allocated to QST, the balance for membership. Signle copies of QST ar $3.00.

Stanislaus Amateur Radio Association
P.O. Box 4601
Modesto, CA. 95252

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Calendar

Dec. 6, 1990	V.E. Test Modesto	630 pm
	Contact: W6XK	
Dec. 18,1990	SARA Monthly Meeting	730 pm
	Election of 1991 Officers	
Jan. 15, 1991	SARA Monthly Meeting	730 pm
Feb. 19, 1991	SARA Monthly Meeting	730 pm
Mar. 19, 1991	SARA Monthly Meeting	730 pm

SARA meets the thrid 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 MHz and 223.68 MHz. Informational nets are held eaoh Thursday evening at 800 pm.