

SHORT SKIP



Sonoma County Radio Amateurs, Inc.

Club Station

W6LFJ

P.O. Box 116

Santa Rosa, CA 95402

Repeater Station

WB6PVS

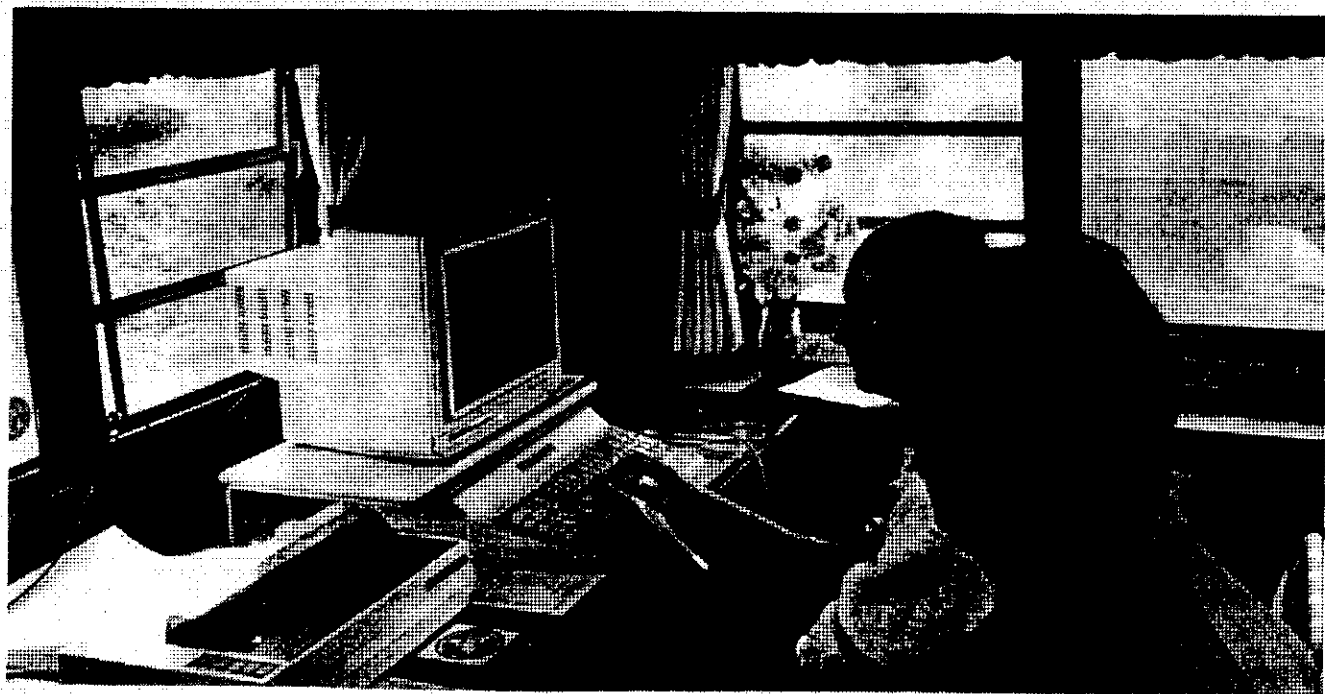
VOL 16 # 6

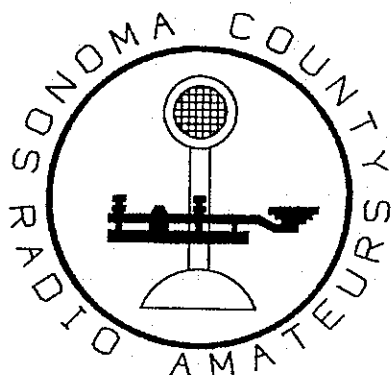
JUNE 1991

RACES DRILL, LAKE SONOMA, April 6

Packet Personnel Merl N6VUC (at keyboard) and Lou N6YMQ

Photos tnx John W6TLK





OFFICERS FOR 1991			
PRESIDENT:	Jim Pelmulder	N6PTM	823-7947
VICE PRESIDENT:	Brian Torr	N6IIY	575-5871
SECRETARY:	Alan Bloom	N1AL	538-7115
TREASURER:	Merlyn Pfeiff	N6VUC	584-3898
MEMBERS-AT-LARGE:	Philip Gaul	KC6BSI	544-2572
	John Wallack	W6TLK	833-1873
REPEATER CHAIRMAN:	Jim Rutherford	WB6PER	526-2972
SHORT SKIP STAFF:			
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CIRCULATION MGR:	Harvey Lawrence	K6KZ	
ADVERTISING MGR:	John Wallack	W6TLK	833-1873
SWAP SHOP:	Hank Davis	W6DTV	823-7885

ARRL Liaison: Alan Bloom N1AL 538-7115
 Ast. Director: Chuck Sabin N6DDK 795-2371
 Badge Chair: Connie Freitas N6FYV 823-9691

Activities Committee:

Pub. Service: Bill Splaine N6GHG 431-8636
 (days) 577-2913
 Flea Market: John Wallack W6TLK 833-1873
 QSL Mgr: John Wallack W6TLK 833-1873
 TVI/RFI: Al Bloom N1AL 538-7115
 Awards: Steve Lund WA8LLY 823-4544
 VEC Exams: Steve Lund WA8LLY 823-4544
 +N1AL WN6D WW6D WW6F WB6FRZ K6UXO
 Education: John WB6FRZ 838-6398
 +N1AL WD6CKP WB7CNJ WA8LLY WB6TMY
 K6XZ
 Field Day: N1AL(cw) N6PTM(ph) WB6PER(social)
 Refreshments at meetings: Bob Olsten WD6DPE
 Greeter at Meetings: Jane Vanderslice N6NTB
 Raffle at meetings: Philip Gaul KC6BSI
 Membership lottery: Bob Scolnick K6GEV

Repeater Control Op's:

WB6PER Jim 526-2972 N6PTM Jim 823-7947
 WD6CKP Hoppy 542-6750 W6TLK John 833-1873
 Interference Committee: WB6PER Jim 526-2972

SHORT SKIP ADVERTISING RATES:

Business cards: \$10

\$11 First 1/4 Column
 \$3 Additional 1/4 Columns
 (\$32 Full Page, 1 side)

Pre-printed inserts: \$32/sheet

Guaranteed circulation: 200/month
 AD DEADLINE: 10th of previous month

ARE YOU NOT AN SCRA MEMBER?

IF SO, then this is a complimentary copy. Our club is involved with almost every area of Amateur Radio: Repeaters (13/73), Field Day, license classes (Novice through Extra), volunteer exams, RACES, DX programs, packet radio, hidden xmtr hunts -- you name it. We invite you to attend our next monthly meeting (see below) or check into the Tuesday night SCARS net on the 146.13/73 repeater at 7PM. You will hear the latest Amateur Radio Newline broadcasts, announcements of SCRA activities and a Swap Shop. If you would like to join SCRA, please refer to the dues listed below. Hope we can have an "eyeball" QSO with you at the next meeting! 73 ...

Club Meetings:

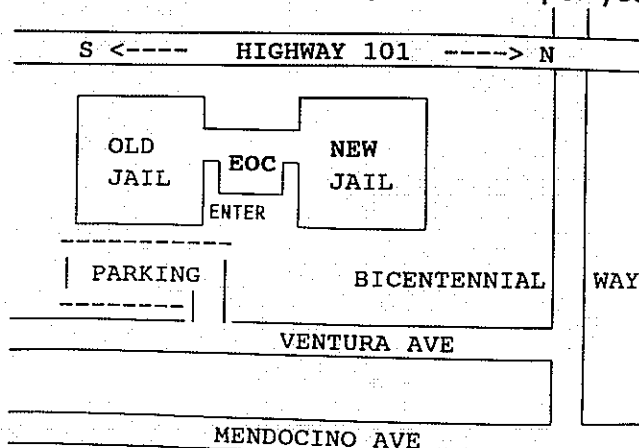
7:30 PM, 1st Wednesday each month at the EOC (Emergency Operations Center). Anyone interested in Amateur Radio is welcome.

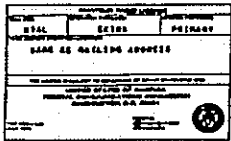
NEXT MEETING: May 1, 1991

PROGRAM: FIELD DAY 1991

Learn how to operate a FD station.

DUES: \$12 per year, plus a one-time \$4.00 initiation fee. Dues are pro-rated \$1/month for new members who get an SCRA call/name badge. Family memberships are \$18 per year.





UPGRADE EXAM RESULTS

by STEVE LUND WA8LLY

On 14 May, 40 candidates attended the latest SCRA ARRL-VEC exam session. 31 either obtained new licenses or upgraded and several others obtained element credit.

The new no-code Technician license was the most popular with the following new hams: Allen Adams, Herbert Dickinson, Nadine Sharrock, Leonard Weber, Frank Ball, Thomas Kaminska, Terry Sauers, Bob Armantrout, Charles Joiner, David Barlow, John Rowbotham, Frank David, Karen Young, Ronald Carver, Joseph Miller, & Gary Gouger.

Earning the Technician license with HF privileges were Charles WD6DTK, Mark KC6LRB, Kathy KC6UXJ, Don KC6UXI, Doug KC6RHA, Aaron KC6URO, Dawn KA6OPN, Oliver KB6IOT, Pat KB6KSA, Salvatore Caruso, Kyle Frampton and Chris Ward.

Leon KC6SSD, Bill N6GHG, and George KC6UXK all earned the General license.

This large of an exam session would not be possible without the help of John WB6FRZ, Robin N6PHP, Jim WN6D, Bill N6OLD, John W6TLK, and Steve WA8LLY.

The next exam session is planned for late September. There are several methods to find out when the session will be held. A notice will always be posted at HSC Electronics in Cotati. The next best way is to send an SASE/postal card to Steve Lund WA8LLY, POB 476, Graton, CA 95444. As soon as the date/time are known, I'll send you a flyer in the SASE. The worst method is to call me at home.

Too many candidates are bringing altered or damaged copies of their original amateur radio license to the test sessions. You do not need to carry your original license with you -- a photocopy is sufficient. If your license is lost or needs replacing, write the FCC, PO Box 1020, Gettysburg, PA 17326, and request that a new copy be made. The VEs have been told not to accept any license (or photocopy), which has any alterations done to it. Incidentally, the FCC is now printing the licenses with a laser printer and including a copy suitable for displaying in your shack. ■

SCRAPS by Bill Splaine N6GHG

Sonoma County Radio Amateurs Public Service volunteers have been very busy during the past few weeks. We participated in 6 events for a total of 281 operating hours. They were:

SUPER CITIES WALK, Multiple Sclerosis Society, 34 hours. Hank W6DTV, Sarah N6FAX, Betty AG6C, Hoppy WD6CKP, Wilbur N6MGY, and Bill N6GHG.

RUN-FOR-SIGHT BIATH-A-LON, Lions Club of Coddingtontown, 22 hours. Hoppy WD6CKP, Betty AG6C, Wilbur N6MGY, Bob WB6EKV, Phil KC6BSI, and Bill N6GHG.

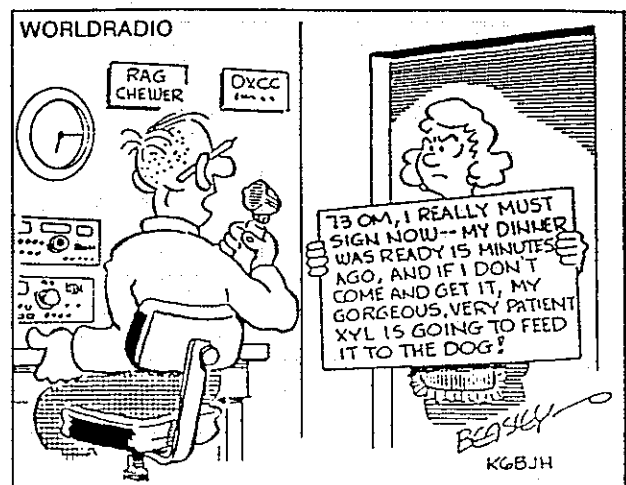
SPECIAL OLYMPICS, 27 hours. Connie N6FYV, Bob WB6EKV, Bob K6GEV, Phil KC6BSI, John W6TLK, and Bill N6GHG.

GREENSPACE ALLIANCE RIDE, 30 hours. Bob N6RMW, Phil N6OOA, and Bill N6GHG.

WALK AMERICA, March of Dimes, 49 hours. Hank W6DTV, Sarah N6FAX, Rick N6RXA, Bob K6GEV, Harvey K6KZ, Ruth WA6AQA, Hans KI6PD, Chuck N6DDK, and Bill N6GHG.

WINE COUNTRY CENTURY, Santa Rosa Cycling Club, 119 hours. Marie KI6QY, Ken N6MHG, Bob N6RMW, Betty AG6C, Rudy N6KLU, Georgia N6GZU, Rick N6RXA, Dave AA6YX, Hoppy WD6CKP, Phil N6OOA, Hans KI6PD, Ken N6GXI, Cal KI6NY, Don W6CPE, Wilbur N6MGY and Bill N6GHG.

A BIG THANKS TO ALL THESE VOLUNTEERS ■



—73 O.M., I REALLY MUST SIGN NOW-----

BEAM POINTER

SOME OLD AND NEW TECHNOLOGY

by Jack Reeder W6NGZ

Wouldn't it be great if you had a BEAM POINTER that you just turn to the desired heading and it all shuts off automatically, leaving your hands free for tuning or logging? One other advantage is that no limit switches are required at the antenna to keep the coax from twisting. I still like prop-pitch motors -- I have used them for years, and they are trouble-free. They coast a few degrees after being shut off, which cuts down on the twist effect of the tower, all too common in some commercial rotors with brakes.

Radio compass S3 functions as a central control knob. It is padded with a felt washer to prevent self-rotation and can only be moved manually. By turning S3 to a new heading differing by 90 degrees, an error voltage is produced through S3's controller armature. If S3 is turned to 270 degrees, again a voltage is produced, but with the opposite phase -- thus the magnitude of the controller voltage tells how far the beam must turn, and the phase tells in which direction.

S2 is an autosyn motor only, which I mounted behind a re-produced photograph of the ARRL World Map. The reference voltage is produced by T1: When this voltage is exactly in phase with the voltage on the synchro transmitter S1 rotor winding then the voltages from the two rectifiers (D1 & D2) are equal. This causes the

S1-AY231 Autosyn 400 cycle
S2-AY-1 Autosyn motor only
S3-MN-98 Radio Compass (modified)
T1-6.3 Volts
T2-18 Volts CT
RY2-DPST 120 VAC
RY3-DPST 120 VAC
RY1-DC polar Relay Type 255A

Two normally open contacts, one to close on positive voltage; the other to close on negative voltage.

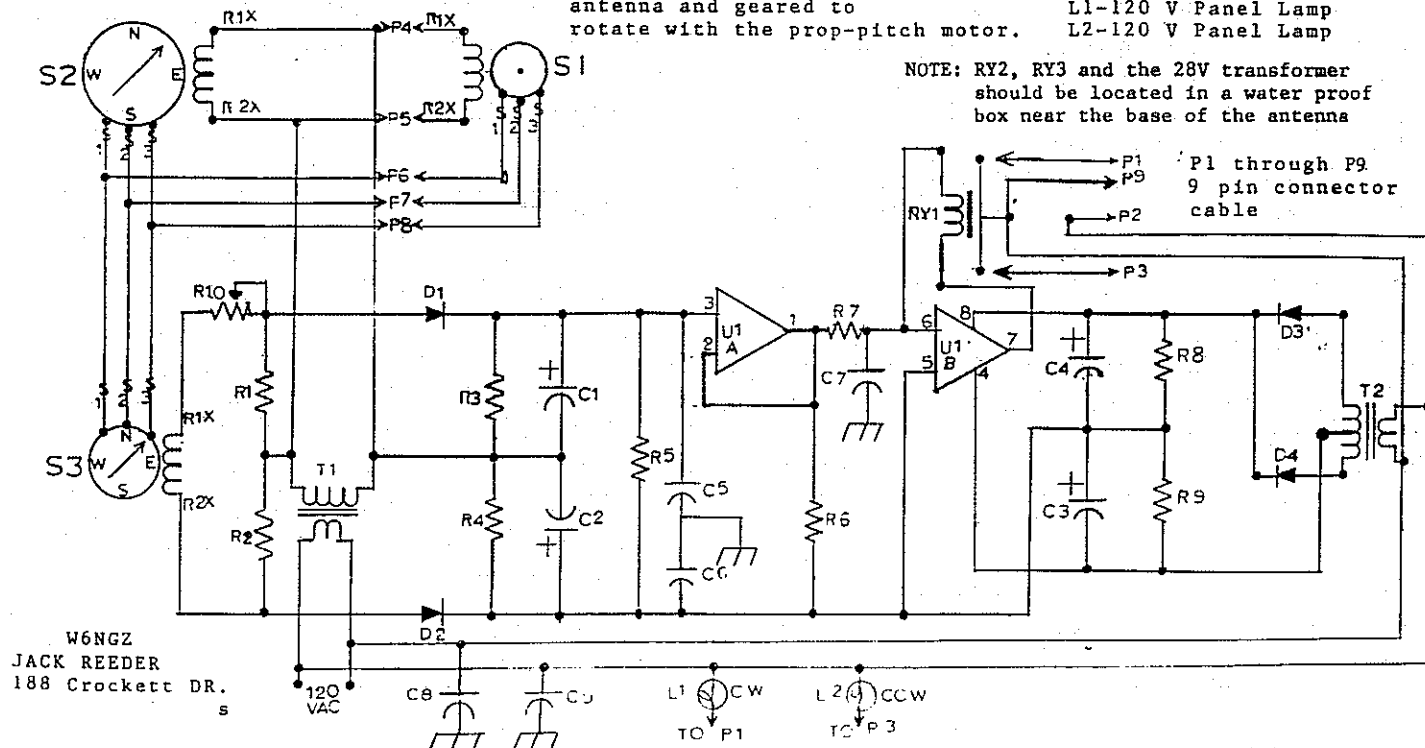
The above Surplus items available from:
FAIR RADIO SALES, LIMA OHIO 45802

U1-1458 Amp (dual)
R1-220 ohm $\frac{1}{2}$ w
R2-220 ohm $\frac{1}{2}$ w
R3-2.2 K $\frac{1}{2}$ w
R4-2.2 K $\frac{1}{2}$ w
R5-100 K 1 w
R6-47 ohm $\frac{1}{2}$ w
R7-47 ohm $\frac{1}{2}$ w
R8-1 K $\frac{1}{2}$ w
R9-1 K $\frac{1}{2}$ w
R10- 5 K Rheostat

D1- 1N34
D2- 1N34
D3- 2-5 Amp 100 PIV
D4- 2-5 Amp 100 PIV
C1-100 uf 35 V
C2-100 uf 35 V
C3-2200 uf 35 V
C4-2200 uf 35 V
C5-.01 uf Ceramic Disc
C6-.01 uf " "
C7-.01 uf " "
C8-.01 uf 1KV Ceramic Disc
C9-.01 uf " "
L1-120 V Panel Lamp
L2-120 V Panel Lamp

NOTE: S1 to be located at the antenna and geared to rotate with the prop-pitch motor.

NOTE: RY2, RY3 and the 28V transformer should be located in a water proof box near the base of the antenna



reference voltage across R5 to be zero. An input signal will unbalance the rectifiers, causing a net + or - voltage which makes the rotor to turn one way or the other, depending on the phase of the input signal.

This describes the original circuit which was published by John Lamb K8ERV in the late 1950's. The circuit used a "micropositioner" relay placed where R5 is now located. It has a 900-ohm coil with one volt sensitivity and two normally-open contacts -- one closes on positive voltage, and the other closes on negative voltage. This old surplus relay is no longer available. I tried the type 255-RY1 relay, but its 150-ohm coil is not sensitive enough. Therefore, I added the U1-1455 dual op amp to the circuit, using the voltage from T2 and related DC power supply. U1A is a buffer amp which isolates the original circuit. U1B supplies enough current to drive the RY1-255.

The circuit is now quite sensitive and will function by adjusting the radio compass S3 just a few degrees -- say 5 or 6. R10 is used for adjusting the sensitivity, depending on how much your beam rotor will coast after the power relays are shut off. S2 will register the exact heading regardless of how many degrees the beam coasts.

When the unit was first tested it would not function properly due to RF getting into the op amp. The problem was solved by adding C5, C6, C7, C8, and C9 which are grounded to the chassis which is then bound to ground.

The two panel lamps are used as a precaution; should anything malfunction, a relay stick, or S1 fail to rotate, then L1 or L2 would continue to glow, indicating the beam was still turning. They also indicate CW or CCW rotation. Should your beam turn in the wrong direction, reverse the wiring between P1 and P3.

If you wish to build the beam pointer, there are several alternatives you might consider:

(1) You may eliminate S2 from the circuit. S3 will be accurate within 5 or 6 degrees depending on how much your rotor and beam coast after the relays shut off. Most commercial antenna rotors function in this manner.

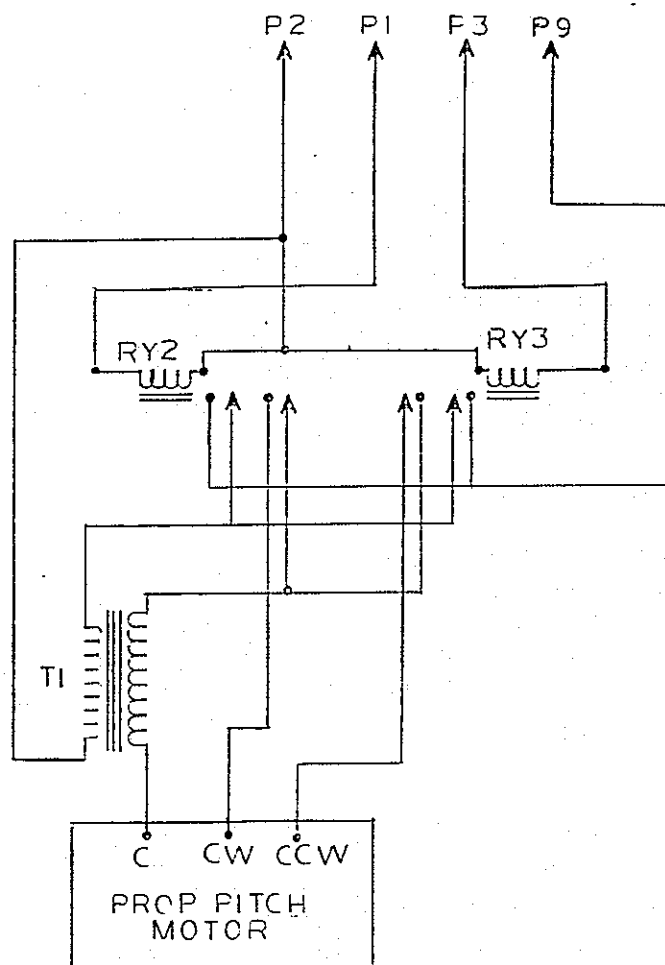
(2) You could use two radio compasses for S2 and S3. These are available in two sizes, 5 inch (MN-98) and 3 inch (ID-637) diameter.

(3) You could use an autosyn motor (AY-1) for S3 as a pointer, using a knob and a compass face. Then use either a 3 inch or 5 inch diameter radio compass for S2. ■

BEAM CONTROL WATER-PROOF
locate near base of beam

RY2 DPST 120 volt relay
RY3 DPST 120 volt relay
T1 120 volt pri--24 volt sec
10 amp Transformer

P9, P2, P1, P3 to control relay box in shack.



Radio Shack

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ZANE BATES

MANAGER

WB6SRU

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TELEPHONE
546-8423

FIELD DAY OPERATING

by Alan Bloom N1AL

Field Day is different things to different people. It's a picnic. It's a campout. It's a social occasion. It's an emergency exercise. And finally, it's a contest.

The object of a contest is to contact as many stations as possible in a set period of time. For Field Day, this is the 24 hours between 11 AM Saturday and 11 AM Sunday. There are no extra points for contacting rare stations: For FD, a California contact counts the same as one from Tahiti. Phone QSO's count 1 point each, CW contacts count 2.

You can work the same station once on each band. CW and phone count as separate bands. Our novice station, WA6XXX, is considered separately. So, for example, we can work the same station 3 times on 40 meters -- Once on CW and once on phone signing W6LFJ, and once in the Novice bands signing the novice call.

THE EXCHANGE:

A valid contact consists of an exchange of callsigns and "the exchange." For Field Day, the exchange is the entry class and the ARRL section. Our class is 5A (5 transmitters, club station), and the section is SF (San Francisco).

CALL CQ:

There are two ways of making contacts on Field Day -- calling CQ or answering other stations' CQ's. Calling CQ is easier, since you don't have to be bothered tuning the radio, so it's a good method for for inexperienced op's.

The first key to success in calling CQ is to find a good spot. You want to be down near the bottom of the band segment where all the action is, so people can find you. You also want to find a spot that is clear of interference. Unfortunately, these two requirements are contradictory, so you just have to find the best compromise. On the higher bands, there may be a loud station on frequency that you can't hear because of the skip zone. If you aren't having much success and you can hear a lot of stations going back to someone you can't hear, you might consider moving to a less-congested spot.

How long should the CQ be? And how long do you wait for a reply before giving up and calling CQ again? You'll learn this from experience. When things are slow, you might give a fairly long CQ: "CQ Field Day, CQ Field Day, this is W6LFJ Whiskey Six Lima Foxtrot Juliet, go ahead" and wait several seconds for a reply. When you have a good "run" going, you want to waste as little time as possible: "CQ Field Day, W6LFJ" <other station's reply> "W1XYZ 5 Alpha, San Francisco" <his exchange> "Roger, QRZ W6LFJ" etc.

HUNT & POUNCE:

Unless you are running a kilowatt into a big antenna, you'll usually get a higher QSO/hour rate by answering other stations' CQ's. The technique is to start at one end of the band (I start at the low end, but it doesn't matter) and slowly tune up the band looking for CQ's. Take the time to try to copy EVERY station you hear -- don't skip over crowded areas figuring you'll catch them on the next sweep.

Pay attention to propagation. It may not be worthwhile to call weak east coast stations in early evening when atmospheric absorption is still high here on the west coast.

To save time, log the other station's callsign as soon as he starts to reply. Enter the exchange as he sends it (don't recopy). Start tuning as soon as he QSL's (no need to listen to his next CQ.) You can fill out the dupe sheet while tuning for the next contact.

If a station comes back to someone else, it is usually worthwhile waiting to call him again, rather than tuning for another station. But if he doesn't reply even though nobody else was calling, don't waste your time. Remember, there are no extra points for "rare" ones.

If things get slow, you might flip the receiver bandswitch and check out another band. But don't flitter from band to band -- you lose precious minutes every time you do this.

LOGGING:

Most FD stations use two people per station: an operator and a logger. The logger fills out the log and dupe sheets. However, I like to do my own logging. During a contest, there almost always are several stations in the passband of the receiver at one time. The logger often is listening to a different station



RACES NEWS

by John Wallack W6TLK

A meeting of all interested RACES members was held on Saturday May 18 at the Kenwood Fire Station. The 30 people present had a very productive and interesting time. A delicious lunch was served by Susan N6IRJ, Shirley KC6SXN and Kathy KC6UXJ. Jim WB6PER, Chief Radio Officer, and John W6TLK, Assistance Radio Officer, presided over the meeting. The new Sonoma County Communications Trailer was on display for those who hadn't already seen it.

Several important topics were discussed:

- The number and type of emergency communications drills, with an emphasis on a greater variety of assignments.
- A more detailed map and list of RACES locations and possibly a video tape highlighting the more prominent locations will be produced by Jim KC6PJW and John KK6XT.
- Two lists of members, active and inactive, was discussed. To be on the active list a member will have to be involved with at least one drill a year and one net a month.
- There is a vital need for a group of responsible and willing members who want to be net control operators for both the EOC and the Communications Trailer, OES-1. 12 members signed up for the commitment and any needed training.
- The upgrade of the antenna systems at the EOC was discussed.
- All RACES cards expire on 1-92. Only active members will be issued new cards.
- For the newly-interested people present, there was a discussion about the Standard Operating Procedures.
- The usefulness of Amateur TV in emergency communications was discussed. Three members expressed interest and were encouraged to pursue this mode for RACES.
- The Emergency Response Institute in San Rafael. Jim and John made some good

contacts with Marin RACES, State OES, and the Sonoma County Sheriff's Search and Rescue Team. Future drills are planned with the Search and Rescue Team.

- An update of activities was given by Bob WD6DPE for Santa Rosa, Mike N6DJE for Rohnert Park/Cotati, and Phil WB6SEU for Sonoma State University, where a new 2 meter station is being installed.

A very enjoyable meeting was had by all with a great emphasis on social comradery. Thanks to all who attended. ■



Hello everyone!

Received the newsletter yesterday. We were in a car accident a year ago (not our fault -- we were passengers), and Kermit was in the hospital almost 2 mo. ICU 32 days, but all is well now and he is doing fine. He is a tough old bird.

Weather back here is now (I think) Springtime. Lots of WIND and humidity only 7%.

Back here we have what they call the ZIA link. 14 repeaters all linked together. It covers all over New Mexico and Arizona and into Texas and California. Really a fantastic setup. So when you bring up one repeater, it goes out all over the country.

Tell everyone hello for us.

Kermit KB6GBV and Rose
Belen, NM

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A CALL FOR MORE SCIENTIFIC TRUTH IN PRODUCT WARNING LABELS

by Susan Hewitt and Edward Subitzky

As scientists and concerned citizens, we applaud the recent trend towards legislation requiring the prominent placing of warnings on products that present hazards to the general public. Yet we must caution that such warnings, however well-intentioned, merely scratch the surface in this important area. This is especially true in light of the findings of 20th century physics.

We therefore propose that, as responsible scientists, we join together in an intensive push for new laws that will mandate the conspicuous placement of suitably informative warnings on the packaging of every product offered for sale in the United States. Our suggested list of warnings appears below.

WARNING: This product warps space and time in its vicinity.

WARNING: This product attracts all matter in the universe, including the products of other manufacturers, with a force proportional to the product of the masses and inversely proportional to the distance between them.

CAUTION: The mass of this product contains the energy equivalent of 85 million tons of TNT per net ounce of weight.

HANDLE WITH EXTREME CARE: This product contains minute electrically charged particles moving at velocities in excess of five hundred million miles per hour.

NOTICE: Because of the "Uncertainty Principle," it is impossible for the consumer to find out at the same time precisely where this product is and how fast it is moving.

ADVISORY: There is an extremely small but nonzero chance that, through a process known as "tunneling," this product may spontaneously disappear from its present location and reappear at any random place in the universe, including your neighbor's home. The manufacturer will not be responsible for any damage or inconvenience that may result.

THIS IS A 100% MATTER PRODUCT: In the unlikely event that this merchandise should contact antimatter in any form, a catastrophic explosion will result.

ATTENTION: Despite any other listing of product contents found hereon, the consumer is advised that, in actuality, this product consists of 99.9999999999% empty space.

COMPONENT EQUIVALENCY NOTICE: The subatomic particles (electrons, protons, etc.) comprising this product are exactly the same in every measurable respect as those used in the products of other manufacturers, and no claim to the contrary may legitimately be expressed or implied.

IMPORTANT NOTICE TO PURCHASERS: The entire physical universe, including this product, may one day collapse back into an infinitesimally small space. Should another universe subsequently re-emerge, the existence of this product in that universe cannot be guaranteed.

(The above is excerpted from Volume 36, # 1 of The Journal of Irreproducible Results. Copyright 1991 Blackwell Scientific Publications Inc. 3 Cambridge Center, Cambridge MA 02141. Individual US Subscriptions \$12.00. ■

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SCRA MINUTES

May 1, 1991



The meeting was called to order by President Jim Pelmulder N6PTM at 7:32 PM. Other officers present: Vice President Brian Torr N6IY, Treasurer Merlyn Pfeiff N6VUC, and Members-at-Large Phillip Gaul KC6BSI & John Wallack W6TLK. 62 members were present.

VISITORS introduced by Jane N6NTB: Harvey Budgett, Pat Malone, Gary Price, Richard Paffus KC6RDH, Mark Walsh KC6RKZ, Terry Parker, Rich Mahan, & Dave Jackson KC6SSF.

UPGRADES: Irma KF6FX has passed the written exam to upgrade to Extra, but still needs to pass the code test.

The **MINUTES** were approved as published in Short Skip. m/s W6DTV/N6OOA

LATE SHORT SKIP: Due to its lower priority at the copy center, *Short Skip* printing was delayed. It will also be late next month since Al N1AL will be out of the country.

The **TREASURERS REPORT** was approved m/s N6MGY/WB6MJB. We have \$3551.13 in the General fund & \$755.43 in the Repeater Fund.

John W6TLK announced that **RACES** is having an open meeting on May 18 at the Kenwood Fire Station. RACES and non-RACES members are invited. The meeting will begin at 9:00 AM and last until noon, when lunch will be served. Please RSVP to John W6TLK or Jim WB6PER to ensure there will be enough food.

Bill N6GHG thanked all those who have participated in the many **PUBLIC SERVICE** events in the last three weeks. The events included the Greenspace Bike Ride, March of Dimes Walkathon, and the Lion's Club Biathalon. There are two events this weekend, May 5, and three more volunteers are needed; one for the Special Olympics and two for the Wine Country Century Ride.

Steve WA8LLY announced that **VEC EXAMS** will be held Tuesday, May 14, at the EOC. The written and code exams begin at 7:00 PM. No pre-registrations accepted; walk-ins only. The

fee is \$5.25. Make checks payable to ARRL-VEC. Bring original license and a photocopy and original of CSCE, if one has been issued. Also, more volunteer examiners are needed.

On the **TRAINING** front, John WB6FRZ reported three classes are now in progress. Al N1AL is teaching the Technician class. The new novice class meets Monday evenings and has 15 students. There is a 5 to 13 wpm code class on Friday evenings.

Bill N6OLD presented **HOMEBREW CONTEST** plaque to winner Walt Burandt KC6RHB. Walt's 25-Watt, 40 and 80 meter transmitter was featured in the May issue of Short Skip.

PROGRAM: CELLULAR RADIO - Rick K6ZWB and Steve KB6LSB gave an interesting talk on Cellular Radio. Rick focused on the hardware and Steve on the automatic billing process. Rick passed around a sample of very low-loss coax and told of how the electronic serial numbers in each cellular phone has helped to recover stolen phones. Steve enlightened the members on some ways to avoid charges (but don't do it in your home area!).

Hank W6DTV reported that Connie N6FYV will have all **BADGES** taken care of by next meeting.

The new **FIELD DAY** site will be Liberty Glen Campground at Lake Sonoma, a good HF location. We will run 2, possibly 3, Novice stations, 2 CW stations, and 1, possibly 2 phone stations. **OPERATORS ARE NEEDED!** Field Day is June 22-23. There will be no camping fees. We will be in Group Site Area E.

Phil KC6BSI has **RESIGNED** as Board Member-at-Large. Lou N6YMQ has been nominated to fill the position.

A Yaesu 6-channel HT was reported **STOLEN**; if you are approached to buy one, steer clear!

Rick K6ZWB proposed a **VERBAL BBS** to help fellow hams find what they are looking for. This might be incorporated as part of the Tuesday night net. Several members voiced what their current needs are.

The **MEMBERSHIP LOTTERY** was won by Steve WA8LLY. Steve went home with \$9.50. The meeting was adjourned at 9:42 PM. m/s N6FAX/ W6DTV. Respectfully submitted, Acting Secretary Brian Torr N6IY

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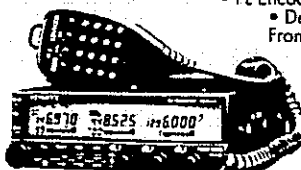
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• PL Encode Built-in
• Detachable Front Panel



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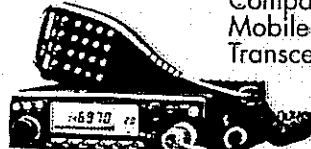
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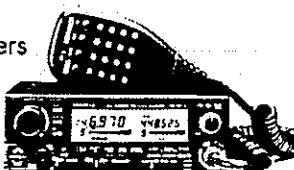
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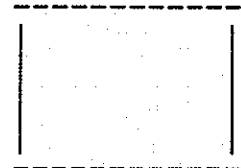
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