



# R

# F



VOLUME XXII No.5

ORANGE COUNTY AMATEUR RADIO CLUB MAY 1981

P.O. BOX 95, ORANGE, CALIF. 92668

ORANGE COUNTY AMATEUR RADIO CLUB

PRESENTS  
MAY 15, 1981

"Sights and Sounds of Japan"



Our guest speaker will be Chip Margelli, K7JA, Assistant V.P. OF YAFRU. Chip will present a slide and tape program featuring his experiences while living, working, and hamming in JA land. During the November Sweepstakes contest Chip set an all time record for the Southwestern Division working just short of 2100 QSO's! Chip came in first place for the SSB fone mode operations working as K7JA/N7DD. Now that FIELD DAY is fast approaching, maybe Chip will let some of his secrets pass on to the membership. This will be a very interesting meeting and we urge all members to come, maybe bring a friend or two.

\*\*\*\*\*ORANGE COUNTY AMATEUR RADIO CLUB\*\*\*\*\*

1981 CLUB OFFICERS

PRESIDENT.....	FRANK SMITH.....	WA6VKZ.....	838-3271
VICE PRESIDENT.....	ROBIN HOFF.....	KA6HNY.....	731-4803
TREASURER.....	FRANK GREGG.....	WB6KJS.....	968-1450
SECRETARY.....	HOWARD ATWELL.....	KA6CZI.....	779-5797
ACTIVITIES.....	JERRY ZILIAK.....	KB6MT.....	990-8442
MEMBERSHIP.....	BOB TEGEL.....	WD6DPK.....	554-0836
PUBLICITY.....	SID SHISHIDO.....	N6AQC.....	521-8380
T V I.....	BOB ECKWEILER.....	AF6C.....	639-5074
M A L.....	ERNIE PRITCHARD.....	WA6FOW.....	530-0738
M A L.....	BILL FRICKER.....	WD6ESS.....	526-4068
*****	*****	*****	*****
EDITOR.....	JOHN CHRISTOPHER.....	WD6GXZ.....	557-6399
*****	*****	*****	*****

OUR NEXT CLUB MEETING WILL BE HELD

MAY 15, 1981

MERCURY SAVINGS & LOAN  
 1095 Irvine BLVD  
 TUSTIN, CALIFORNIA  
 TIME: 7:30 PM

Everyone is welcome to come. Why not bring a friend or neighbor and introduce them to the Amateur hobby and happenings!

\*\*\*\*\*

ORANGE COUNTY AMATEUR RADIO CLUB NETS:

TUESDAYS: 10 Meter SSB-----On or about 28.775 Mhz at 7:00 PM local  
 Need some 10 10 info or numbers, why not check into this net.  
 Look for W6ZE as Net Control.

WEDNESDAYS: 15 Meter CW Novice Net---On or about 21.175 Mhz at 7:00 PM local  
 All novices are welcome to check-in. We will slow down for you.  
 Look for W6ZE as Net Control.

" 15 Meter SSB-----On or about 21.375 Mhz at 8:00 PM local  
 Look for W6ZE as Net Control.

" 2 Meter FM Simplex Net---Look for W6ZE as Net Control on the  
 following frequency of 146.5500 Mhz Simplex at 9:00 Pm local.

\*\*\*\*\*

ORANGE COUNTY AMATEUR RADIO CLUB BREAKFAST:

PLACE: MILE SQUARE COUNTRY CLUB HOUSE  
 Located midway between Brookhurst and Euclid on the South side of the  
 Park, in the city of Fountain Valley.

Time: Around 8:30 AM

DATE: First Saturday of each month

\*\*\*\*\*

## Impromptu code saves life

Submitted by Ero Erickson, KA9DYS

At first, James Zerilli thought the groans and taps coming from the other end of the phone line were part of a joke.

But the St. Clair Shores police officer quickly realized the caller needed help, and he devised a tapping system to find out where the caller lived.

The simple code was a lifesaver for a city councilman who had suffered a stroke and lost his voice.

"All I could think of while it was going on was that if I couldn't get the information from him, the guy was just going to lie there and die," said Zerilli.

Zerilli told the caller to tap once for yes and twice for no, and then he asked yes-or-no questions to determine what part of the city the man lived in, said Sgt. James Bell, who listened in on the call.

Did he live in the southern part of the city? Tap.

Did he live on Colony Street? Tap-tap. How about California Street? Tap.

"We just lucked out. He lived on one of the main streets," Bill said. "If he had lived on an odd-ball one, we could have been there forever."

Next, Zerilli turned to blocks. Did the caller live in the 20000 block? Tap-tap. Nine questions later, Bell learned what block the caller lived on. Then he told the caller to tap the last number in his ad-

## Kerchunk

The KERCHUNKERS (Des Moines chapter) meet each day when the repeater is not in use. To qualify as a kerchunker one must show his skill by pressing the microphone button long enough to activate the repeater but not long enough to I.D. or be identified. To be a certified kerchunker, one must follow this procedure successively until the mike finger fatigues or someone wants to use the repeater.

Be careful to kerchunk when you know no one is listening, so that legitimate repeater users will not be irritated and put an anti-kerchunk device on the repeater.

By being a Certified Kerchunker, one can do the following:

- 1) See if your transmitter can access the repeater.
- 2) See if the repeater can hear your transmitter.
- 3) Enjoy the excitement of hearing the squelch tail.
- 4) See if the repeater is "up."
- 5) Use the repeater without having to talk to anyone.

It is a real thrill to put your license, your rig, and the repeater to use by kerchunking and be sure to complain when the repeater is "down."

The KERCHUNKERS are not taking any new applications for membership; we have too many members now.

(By I. AM. Dumb, Chief Kerchunker)  
— Static Sheet, Des Moines ARC

## Jammer is fined

The Commission's Field Operations Bureau, under delegated authority, has fined Donald L. Rhoads of San Francisco \$750 for deliberately interfering with the operation of an Amateur Radio 2-meter repeater station located on nearby Grizzly Peak.

An amateur repeater station, usually installed at a high elevation, is designed to receive weak signals from low power amateur stations and re-broadcast them over a wide area.

Rhoads, whose station was unlicensed, falsely identified it by using a call sign belonging to a licensed Amateur Radio operator, transmitted obscene, indecent, and profane language, as well as music and party records, which jammed the repeater and prevented its use by authorized Amateur Radio operators.

Engineers from the Commission's San Francisco District Office, using sophisticated direction-finding equipment, traced the jamming signal to Rhoads' apartment and closed the illegal station down. □

## Take a card

Here's an idea your club might want to try. Paul Hower, WA6GDC, had several cards printed up (see below); they make for good publicity for Amateur Radio!

### GLAD TO HELP . . . . .

. . . . you have been assisted by an Amateur Radio Operator (HAM) whose name and call is:

"Hams" have for many years assisted with relief in major disaster, emergencies of every kind and personal needs such as you have just experienced, by providing vital communications.

An Amateur Radio Operator (HAM) — not to be confused with Citizens Band — is licensed by the government (F.C.C.) after a very thorough examination on code (CW) and radio theory. A ham can then communicate with other hams throughout the world.

Anyone can become an Amateur Radio Operator. It is a voluntary, non-commercial radio service which contributes much, as a personal hobby, to the skills of communication and technical knowledge as well as good will. □

## ORANGE COUNTY AMATEUR RADIO CLUB Inc.

### Financial Report

April 1981

### Income

Dues	\$10.00
Sweepstakes	\$56.00
Coffee Kitty	\$4.00
Total	\$70.00

### Expenses

Stamps	\$18.00
Roster Printing	\$20.13
Mailing labels	\$7.68
Sweepstakes Prizes	\$64.55
Total	\$110.36

### Balance as of May 1, 1981

Checking Account	\$298.91
Savings Account	\$772.03
Generator Fund (in checking Account)	\$136.75

We still need more dollars for the Club's Generator Fund if we are ever going to get one! Get your donations in now, and help.

# 15/10 meter skip survival

Ted Hommel, W7LFL

Do you understand the skip characteristics of 15 and 10 meters and therefore get all the enjoyment you can out of these bands? I hope this article will help many of the newer amateurs understand what is going on and to be more tolerant of the activities of these bands.

Interference (QRM) from other stations is basically either from propagation changes (reflection and refraction of radio waves) or ignorance of operators (all of us, to some degree). Intentional jamming of a signal by one amateur to another is so rare we can assume it does not happen.

Not quite all your long distance propagation will be due to sun radiation activated ionospheric skip, usually from the E and F layers, or due to "wind" activated ionospheric skip, known as sporadic E (happens in the E layer, written as E<sub>s</sub>). Let us review these and see how they affect our operating.

## Sun radiation activated ionosphere

The sun radiation activated skip is very regular and although the day-to-day variation may be great, it tries to follow a pattern. In the morning more stations from the East are heard; by evening more stations in the West are heard. Stations to the Southeast or Southwest will be stronger than stations to the Northeast or Northwest if you live in the mid-latitudes of the Northern Hemisphere. That is because there will be more ionization by the sun's radiation toward the Equator than toward the North Pole.

This also means the band will be open longer for Florida stations working Southern California than for Maine stations working Washington state. This is why, in the evening, a United States station will hear Australian stations long after Japanese stations have faded away. It all balances out since the stations in the northern latitudes get more use from the lower frequency bands such as 80 meters.

Now apply what you know. The time is near sunset and one station is to the east and one is to the west; which one will give you a long QSO (contact and conversation)? Usually the western one. Why only usually? Consider the following:

As the sun moves away from your area, the ionosphere gets thinner. Therefore your signal will need to leave your antenna at a more horizontal angle for it to keep skipping. The more vertical part of the signal will begin to penetrate the ionosphere. This horizontal and vertical is not the polariza-

tion of your antenna, but how long your signal will travel close to the ground.

Again, apply what you know. The time is again near sunset, one station is west and close, but the other is west and not as close; which one will give you the longer QSO? Usually the station farther away. There is more to this type of ionization, but this is enough to put the point across.

## "Wind" activated ionosphere

If you have listened to 15 and 10 meters in the spring and summer, you know that on many evenings stations from the East, from a thousand miles away, come in like they were next door. This is sporadic E, E<sub>s</sub>, an ionization of the E layer due to high winds at that level. Do not picture a major wind storm because this area is almost outer space, which is why the ions, these chemically and electrically active things, can exist like this.

Sporadic E will usually exhibit these characteristics: lasts for several hours (but minutes or a day of time is also possible); most common for a few hours after noon and at about sunset; happens about every day in June (Northern Hemisphere, 40° North), but only one or two days a week by September; more than twice as common for stations as far south as St. Louis, Missouri

when compared to stations in New Hampshire; the ionized areas tend to move east and west.

It is also common for more than one ionized area, called clouds, to exist at a time. Each "cloud" will reflect only between certain geographical areas (technically the word *reflect* should be *refract*). The area of reflection can have very sharp boundaries. It is not uncommon to have a strong station disappear in a minute. If only one cloud exists, a whole band of activity can disappear; this is especially true at night when there is no sun radiation to act as a back-up. The ionization level of these clouds can be so strong that you can work stations only 200 miles away on 10 meters and once or twice a year, the ionization reaches such a level that frequencies higher than the 2 meter band (144-148 MHz) are reflected.

If you understand this you will see why a station you are working will disappear, (the cloud common to both of you disappeared or moved), and other stations in QSO have replaced him (a new cloud or one has moved). Also, if you understand this, you now know when and how to work all states on 10 meters (use E<sub>s</sub> to work nearby states).

There are several ways to tell when an E<sub>s</sub> cloud is forming or is existing. Some are: very short skip; evening skip to the skip stations on TV or the FM broadcast band; and S meter breaking strong skip signals from about 1000 miles away. E<sub>s</sub> peaks in June, but can happen any time, any month.

Often when E<sub>s</sub> is about to begin, ground wave stations that are not too strong will have multi-path flutter on them. That is the same flutter you get on your FM radio or TV set when a low airplane goes over your house (and you use over-the-air reception, not cable). The flutter will recycle every few minutes.

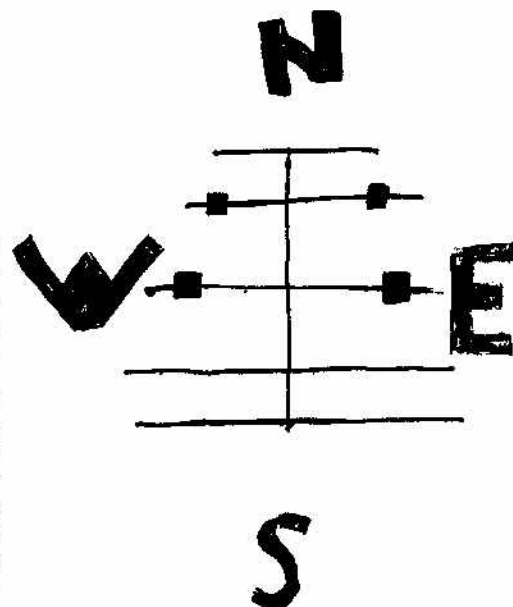
If you think sporadic E, E<sub>s</sub>, is interesting then operation of the amateur six-meter band is for you. E<sub>s</sub> causes more than 90 percent of the skip signals that exist there.

## QRM, QRM, QRM ←

Now that you are an expert on propagation, consider and understand why the following QRM conditions can occur:

W9, Illinois, and W7, Utah, are in QSO. From Wyoming, W7LFL cannot hear either of them (too close). W8, Ohio, does not hear W9; they are too close. W9 is now transmitting and therefore, both W8 and W7LFL hear an open frequency. W7LFL, who cannot hear either W7 or W9, calls CQ and answers. W7, Utah, hears both W8 and W9 and therefore suffers from QRM. This very common cause of QRM is close to unavoidable.

Consider this: early morning at W7LFL, who is working W5 to the south using E<sub>s</sub>. Also on the same frequency but not hearing the just-mentioned QSO is W1, New England, working W4, Florida, using a dif-



# Skip survival

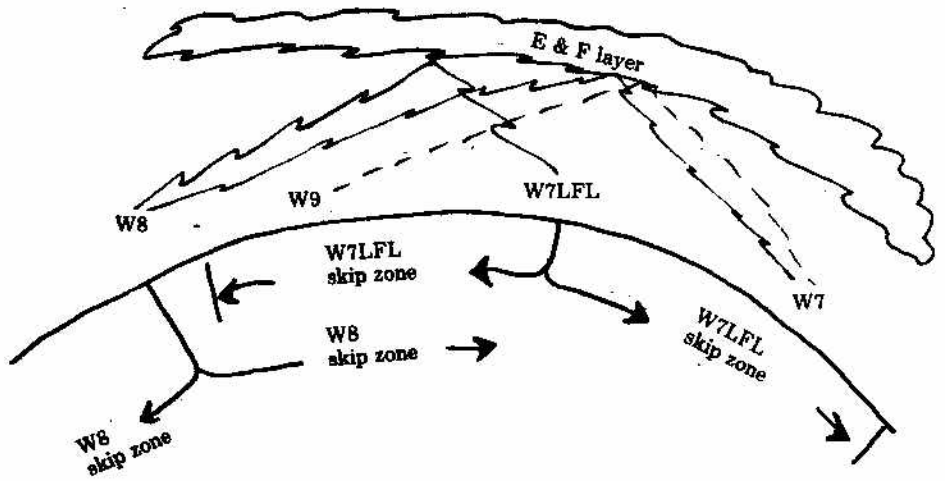
(continued from page 7)

ferent  $E_s$  cloud. As the morning progresses, the ionosphere is sun radiation activated between these two QSOs over a period of 30 minutes and then all four stations can hear one another. QRM, yes; avoidable, no.

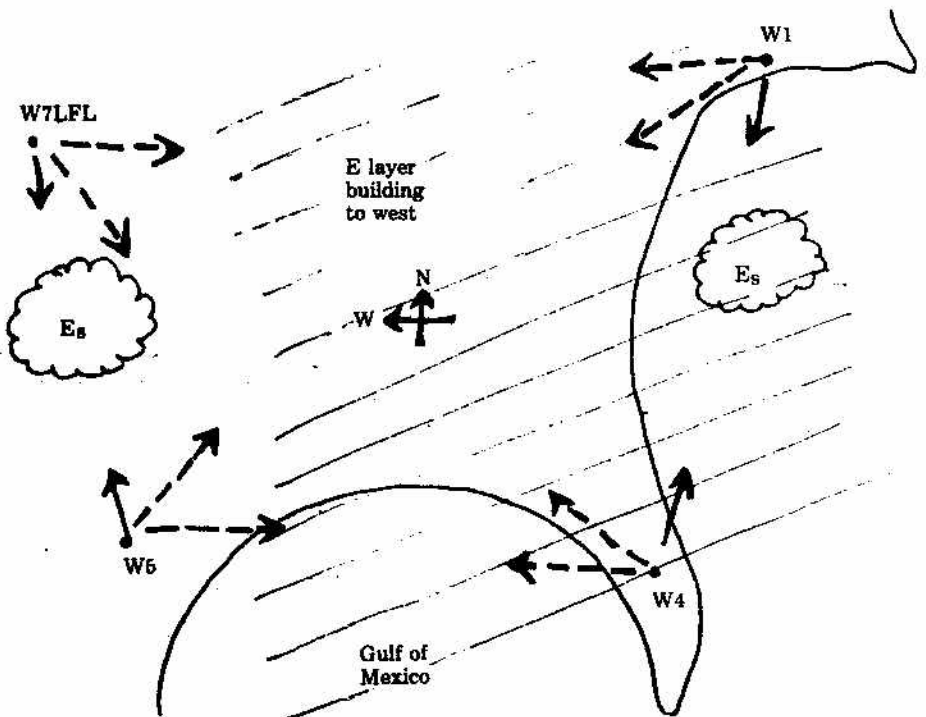
Some QRM is avoidable. If you have called CQ three transmissions in a row and did not get an answer (assume the band is open), then you most likely are on top of a station that is too close for you to hear. So you move to another frequency. This is especially true near sunset, when the minimum skip distances may be in excess of 2,000 miles.

If you are a Novice and the 15 meter Novice band is full, do not slide "almost" on top of a weak station and call CQ. Just because you own an 80 Hz wide CW filter, the other station may not, and as conditions change you may ruin his QSO. Instead try another band or just listen for a while and you will be able to call a station at the end of his QSO.

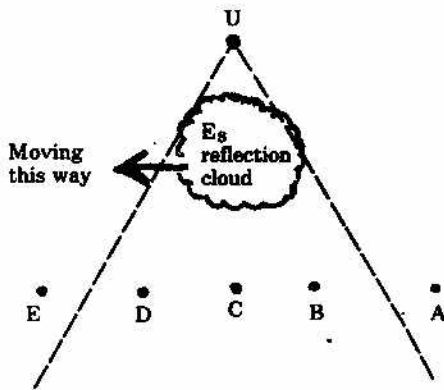
If I call CQ, more than one station may come back to me. I pick the one who is RST 599 and you, who were only RST 329, are ignored. Does that mean you, thinking that you were not heard, should call CQ on this frequency? If you do and if Kilowatt Sam, who lives 50 miles away from me answers you, then I will have lost my QSO because my contact can hear Sam better than me. Or what if conditions change, and they will, and I wipe out your contact with Sam? Where will you be then? Of course, these things cannot happen because you now understand these bands. □



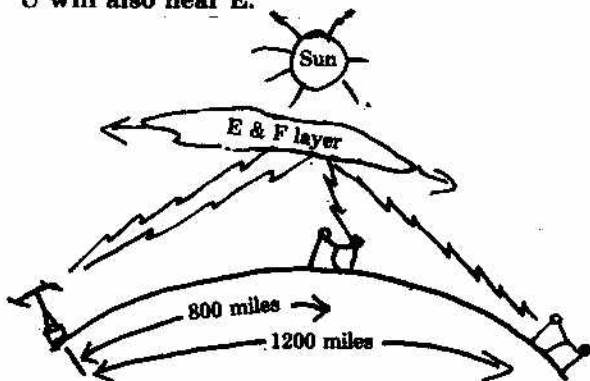
When W9 is transmitting, W7LFL not hearing QSO will call CQ. W8 hearing only W7LFL on clear frequency will answer and cause QRM at W7.



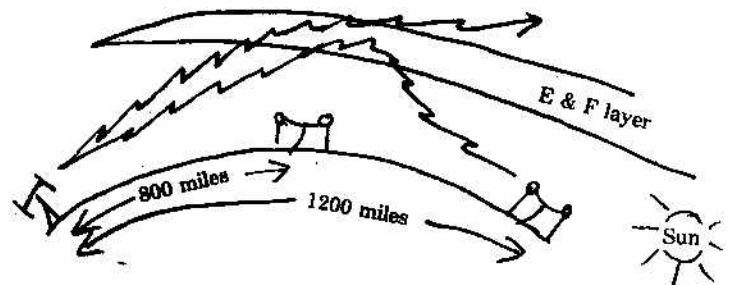
As morning goes to midday, the E layer will do what the  $E_s$  clouds did earlier. With the E layer building because of the sun, the two QSOs will QRM one another.



Station U loses contact with A and now hears B, C and D. Soon, station U will also hear E.



During the afternoon, the closer stations get a good reflection.



In the evening, the ionization is not enough to return the signal down to the closer stations.

- A. With regret the resignations of Jerry, KB6MT and Bill, WD6ESS as members of the board were accepted, both plan on continued participation with the club.
- B. Bob, AF6C asks that members notify him of TVT problems involving some of the new cable or subscription tv systems being installed in Orange County. It is his understanding that some of the systems produce IF's that cause problems on our bands.
- C. A fine program on nuclear fusion and fusion reactors as a source of future energy, was presented by Tom McLEAN, of General Atomic.
- D. Field Day band captains are as follows:
- |                    |                             |
|--------------------|-----------------------------|
| 10&80m-WD6DPK BOB  | POT LUCK SUPPER COORDINATOR |
| 15m-W6OOH Don      | Robin Hoff-KA6HNY           |
| 20m-WA6VKZ Frank   |                             |
| 40&VHF KB6MT JERRY | RULES AND COMPLIANCE        |
|                    | BOB AF6C                    |
|                    | FIELD DAY TRAINING          |
|                    | KEN W6HHC                   |

#### FIELD DAY 1981

Some crossed signals resulted in postponement of the April 30 Field Day site visit. Hopefully this little non strenuous task will have been accomplished by the May 15th club meeting? W6ZE trustee, Bob, AF6C, reminds everyone that If They are Going To Operate From The Field Day Site, They must have in THEIR possession A COPY OF THEIR LICENSE WITH THEM!!!. There are plans to have a solar powered VHF rig on the site! Bob, AF6C will again take care of the final score submissions. Its going to be great and it is hoped everyone will roll out and join in the fun....Everyone operates....everyone participates...O K ?

#### ORANGE COUNTY FAIR

The West Coast Amateur Radio Club will be coordinating the Amateur radio booth and exhibit. Members interested in working with them during this July event should notify Frank Smith, WA6VKZ.

#### H. R. 2203

Still no word on whether or not this bill is going to pass. Have you sent your QSL card to your Congressman telling him you want this bill to pass, so we might clean up the Amateur bands from Malicious Interference? Dont have your Congressman's adress, just call the League of Women Voters, they can give you the information you will need on where to write.

#### Show & Tell

Have you received some interesting QSL's or an award lately? Maybe a certificate or two? If so why not bring it down to the club and share it with the members, show them what they are or have missed out on. There is one free lottery ticket to the member who brings in the oldest WAS or WAC award certificate.

## Happenings:

WD6GXZ, John Christopher reports that on the evening of April 27, there was a good band opening on 40 meters. The editor had the very best of luck in working KH6PX in Honolulu, Hawaii for over 1 hour on 7.125 with very little QRM or QSB. A great catch indeed! CO2OM, in Havana Cuba has been noted lately also on 10 meters SSB around 28.501 Mhz, John had the good luck of working him also in April. Talk about a bum deal, On April 25 There was a Utah QSO PARTY, John Needed Utah to complete his Worked All States on 10 meters. After some searching on the bands, John found a Station in Salt Lake City, Utah on the 20 meter Fone bands N7SM, Who agreed to come up on 10 meters later in the day, so that John might get the state confirmed. After a few anxious hours a telephone call came from N7SM, As they had arranged, and the both of them got on 10 meters CW to give it a try. Well the final outcome was that John heard N7SM, weak but copiable, But N7SM never did hear WD6GXZ. Talk about one frustrated Operator! HI. Oh well Tommorrow is another day as they say, We'll keep on yap'n till we trap one.

---

Monty, WD6AUS is recuperating from back surgery as of this date. Al watts, W6IBR has taken over the duties and responsibilities of the V I P program that Monty had. Monty should be back in full swing in a few months, good as new. We're all thinking of you Monty, get well soon. During the month of May the Vice President, Robin Hoff, KA6HNY, will be preparing an extensive written report to the membership on the successful Visually Impaired Persons (VIP) program. The annual report will detail accomplishments, member involvement, and future directions of the program.

---

## 10-10

Several club members have caught Certificate Fever it seems. This bug has been known to be very contagious to 10-10 International Members, and is spreading very rapidly across the planet. If you have been in contact with this bug, you are requested to bring your certificate numbers as well as your 10-10 number to the May meeting. We will be making a list for future use, rumor has it we may need a 14k memory computer program just for Judy, WA6HEL and her list!

---

## DX News

AS a result of the W A R C, several countries have revised their Amateur radio privileges and band plans. Look for new countries higher up in the 40 Meter Amateur band in the future.

---

## Has your amateur license expired?

Take note, due to recent changes within the FCC, and their real speedy service they are so well known for, Amateurs should now submit their license renewal at least 90 days prior to the licenses expiration date! Play it safe, and send your 610 form in early. The FCC no longer is using the old type 610 form (1977) series, but has a new shorter form (Sept 1980) 610. Some new 610 forms will be at the next club meeting hopefully. If any of you members are planning a trip down to the FCC offices in the near future, why not pick up a few 610 forms for the W6ZE club files, thanks.

---

## SCM COMMENTS

Fried Heyn, WA6WZO sends along his thanks for a job well done by the many amateurs, and club members who participated in the recent Gordon Bennett Balloon Race, by supplying the needed communications and man power. Fried also is encouraging all members to check into the NTS TRAFFIC NETS. (Mother's Day would be a good chance to send a word or two to Mother) NTS operates daily on several frequencies listed below.

SCN 1 7:00pm local time-3598 Khz(cw 20 wpm)  
SCN 2 8:15pm local time-3598 Khz(cw 13 wpm or less)  
SCNV 9:00pm local time-W6TIO/Repeater 147.645/ 147.045 Mhz  
RN6D 10:45am-1:45pm-and 3:30pm on 7275 Mhz (SSB) local time

ORANGE COUNTY AMATEUR RADIO CLUB, Inc.  
POST OFFICE BOX 95  
ORANGE, CALIFORNIA 92688

VOL. XXII, NO. 5 MAY 1981

FIRST CLASS MAIL !!!  
DATED MATERIAL !!!



FIRST CLASS MAIL