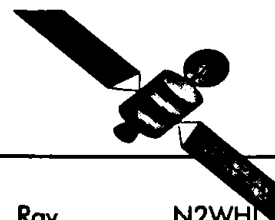




# W2MMID



## Gloucester County Amateur Radio Club

### 1994 Officers

|                |                  |        |
|----------------|------------------|--------|
| President      | Charlie Olinda   | N2SRQ  |
| Vice President | Gus Bendler      | N2TXW  |
| Treasurer      | John Zaruba, Jr  | AA2BN  |
| Recording Sec. | Chris Chamberlin | N2IVN  |
| Corres. Sec.   | Cory Sickles     | WA3UVV |

### Directors

|              |                  |        |
|--------------|------------------|--------|
| 3 Yr (94-96) | Bob Krukowski    | WA2UDO |
|              | Steve Fidler     | N2GVR  |
| 2 Yr (93-95) | Leroy Brady, Jr. | KB2ODL |
|              | //OPEN//         |        |
| 1 Yr (92-94) | Jim Mollica Sr.  | K2OWE  |
|              | Beth Barnish     | KB2EAL |

### Trustees

|              |                  |        |
|--------------|------------------|--------|
| 4 Yr (94-97) | Thomas Mawson II | KE2SC  |
| 3 Yr (93-96) | Marla Bozarth    | N2DWR  |
| 2 Yr (92-95) | Joel Supkow      | KB2AYW |
| 1 Yr (91-94) | Milt Marder      | WA2FGA |

### GCARC Meetings

#### General Membership:

8 p.m., 1st Wednesday every month,  
Deptford Elks Lodge, Highland Ave., one  
block from Egg Harbor Road.

#### Board of Directors:

8:15 p.m., 3rd Wednesday every month,  
GCARC site, Harrison Twp. 4-H Grounds  
(approximately one mile south of Mullica Hill  
on Rt. 77).

#### Club Repeaters

147.780/180 Mhz    223.06/224.66 Mhz  
447.100/442.100 Mhz (CTCSS 131.8)

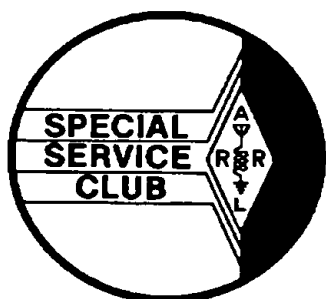
## 1994 Committee Chairpersons

|                     |          |        |
|---------------------|----------|--------|
| Advertising         | Ray      | N2WHL  |
| ARES/RACES          | Chick    | WA2USI |
| Awards              | Jack     | K2ZA   |
| Banquet             | Marla    | N2DWR  |
| Budget ★            | Charlie  | N2SRQ  |
| Callbook Info.      | John     | K2JF   |
| Chaplain            | Tom      | N7GBH  |
| Clubhouse Site ★    | //OPEN// |        |
| Constitution ★      | //OPEN// |        |
| Crosstalk           | Greg     | WN2T   |
|                     | Don      | N2WFM  |
| Data Processing     | Skip     | KE2SC  |
| DX                  | John     | K2JF   |
| Field Day ★         | Steve    | N2GVR  |
| Hamfest ★           | John     | KA2EZN |
|                     | Bill     | N2QEB  |
| Heath & Welfare ★   | //OPEN// |        |
| Help                | Ken      | KN2U   |
| Historian/Archivist | //OPEN// |        |
| Hospitality ★       | Andrew   | N2PKV  |
| Legislation         | //OPEN// |        |
| Membership ★        | Drew     | N2UNG  |
| Nets                | Steve    | N2GVR  |
| Nominations         | Charlie  | N2SRQ  |
| Publicity ★         | Ray      | N2WHL  |
| Repeaters ★         | Chuck    | WA2TML |
| Scholarships        | Greg     | WN2T   |
| Special Services    | Al       | N2FJQ  |
| Sunshine            | Marla    | N2DWR  |
| Technical           | Ken      | KN2U   |
| Training & Testing  | Bill     | WA2VQG |
| TVI                 | John     | K2JF   |

( ★ Standing Committee )

### NETS

ARES/RACES - Sundays, 2200 Hrs  
(147.780/180 & 223.06/224.66 Repeaters)  
10 Meter - Sundays following the  
ARES/RACES net (28.350 Mhz)



### PIANO TUNING AND REPAIR

A poorly kept piano - one that is suffering  
from broken parts, ill adjusted pedals or  
sticking keys - will discourage any piano  
student and impede progress in becoming  
a better player. Call...

T.D. Church - Piano Service  
(a.k.a. N7GBH)

Assoc. Member Piano Technicians Guild



*President's Message*

*What does Amateur radio mean to you?*

This is a question that bears asking! Anyone who has taken the time to study for the FCC Amateur Radio Examination...young or old...male or female...rich or poor...no matter what nationality, religion, what country you live in...WHAT DOES AMATEUR RADIO MEAN TO YOU?

Definition: **Elmer (L-mer)** n. 1. One who shares their life experiences (specifically in the field of Amateur Radio) with others just starting out. 2. A person who does not charge or make a profit in any way from the above mentioned sharing and sometimes costs the giver something. 3. One Ham who shows another how to build a shack with little or no money...they use the Hamfest to find the necessary deals. 4. A little town located in SNJ on US Route 40 and is half way between Atlantic City and the Twin Bridges. v. 1. This is the act of giving of yourself to someone who has just stepped onto the road of Amateur Radio and guiding them around the pot holes of life.



At the last General Membership Meeting I asked the question..."Where were you when you made your first contact?". This yielded about 15-20 minutes of great memories from those who were at the meeting. We did not by any means have enough time to get everyone's experiences on the floor, but from what I heard these were all rich and memorable experiences!

I experienced the same sort of start up in my youth...the spark that made me become interested in Electricity and Electronics was an old Heathkit 11- meter lunchbox. Boy did I have it made! I was

as happy as a pig in a polk...nothing could be finer...I had a rig and I had an Elmer. "Wait a minute, didn't you say that you had an 11- meter set?" — that's right, mine was an 11- meter lunchbox that I got from my 11- meter Elmer, Bob V., KCC-3309. At the time he was the only person to share with me his experiences in radio. I remember the long hours at his house watching him work on electronic things and also on cars...that was his hobby as well. My bedroom was a small replica of Bob's workshop area and garage. I wanted to do the things that he did....doesn't that sound like the result of being tutored by a real Elmer!

As President of the Gloucester County Amateur Radio Club and a new Ham, I get a chance to meet many people and get a chance to build some "first impressions" of Amateur radio and those who are affectionately known as "Hams." A small percentage of these folks are the ones who are the Elmers of our club, and good ones I might add! I know most of our Elmers well and applaud them for their efforts. What drives them to help others so much is probably the fact that someone spent the time to help them in their adventure into the world of Amateur radio.

I guess the time is right to bring up the fact that we have some in our Club who have a hidden agenda. These come forth as those who would help, much like an Elmer would, only to receive the credit that a "real" Elmer should receive. This is wrong! (May the fleas of a thousand Camels be upon you!). I say this because I have personally seen and experienced this. Let me repeat, "That is wrong!!!"

I'm sure that there are those who are thinking that they should be helping more..."but how do I get started?" Life by the yard is hard...but life by the inch is a cinch!! All you have to do is find someone who has just started in Amateur Radio and put them

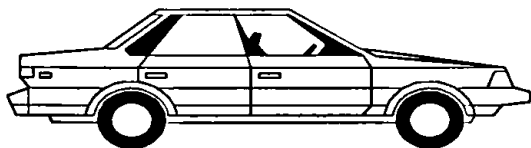
under your wing....find out their birthday....give them a call every once in awhile...go to their house...show you are really interested in them...help them with the code. Everybody is different in the ways that they learn, but you can count on a method that I use: **MODEL...LEAD...TEST**. These three components will help you in any education that you maybe involved in. I must caution you to never remove any one of these three components or the teaching will stop and discouragement will creep in (at this point the negative consequences are great). Just take the time to teach and encourage and you will go far as an Elmer.



Mention of the Good Elmers has been made before in this column because I feel that they need to be recognized for their efforts. Thank you for a job well done!

For those of you that are lacking the skills that a "mature" Amateur Radio operator should have, remember it is never too late to start. You can share some of the rich experiences that you have encountered in the past. You don't have to be the hero in every story. People can really relate to the whole human, mistakes and all. Be a good Elmer! I hope that someday I will be thought of affectionately as an Elmer from Elmer, N.J.!

I wish for everyone a great month. Try your best to stay cool and have fun Hamming!.....73, de N2SRQ, Charlie Olinda.



### Volunteers needed!

By the time this issue makes it to press the 4-H parking event, July 28, 29, and 30, will be history. Whether or not we get enough volunteers remains to be seen. If we don't get enough people then the responsibility is laid on the 4-H Club. We said that we would handle this responsibility every year. Let's hope that there are people to volunteer just 3 hours of their time to the club!

OUR HAMFEST IS COMING UP SOON AND A CALL FOR HELP IS RINGING OUT! YOU DON'T NEED TO VOLUNTEER FOR LONG HOURS...A LOT OF PEOPLE WITH SHORT STINTS OF HELP WILL GET THE JOB DONE. CONTACT ME IF YOU WOULD LIKE TO HELP IN ANY WAY OR LEAVE YOUR NAME AND PHONE NUMBER ON THE CLUB ANSWERING MACHINE: JOHN, KA2EZN, WILL GET BACK TO YOU.



Last issue we unfortunately "upgemixed" the names and relationships of the Goldman family. Arthur, K3WIN, is Milt's son and Jay is Milt's grandson. Sorry for the error, Milt. Keep in touch!

WA2DUV  
Willie Ustaszski - 08/02  
N2EDK  
James Thompson - 08/05  
N2AKI  
James Bray - 08/17  
K2OWE  
James Mollica Sr. - 08/23



WB2GSF  
Harry Jackson - 08/26  
N2GVR  
Steve Fidler - 08/30

### FOR SALE

Yaesu FT-7B. Very clean. Covers 80, 40, 20, 15, and 10 mtrs. SSB, CW (100 watts), AM (25 watts). Asking \$300.00.

MFJ-962 Versa Tuner III. Asking \$100.00.

Astron RS 20A Power Supply. Asking \$80.00.

KLM 4-Element Yagi with balun (never outside). Asking \$150.00. Total Rig: \$600.00.

John T. Cronin, KB2ETT

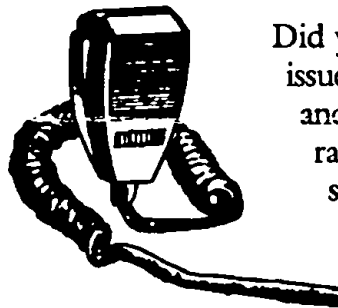
zap

Did you read about the "radio Poltergeists"? According to a July 4th article in the *Philadelphia Inquirer*, radio waves (plain old "RF") from WPGR-AM in Roxborough, Pa., have been getting into nearby houses, causing an eerie display of signal rectification in copper pipes, gutter downspouts, fluorescent lights, and all manner of electronic gadgets! The problem is simply too much RF for the neighborhood, which unfortunately has houses too close to the station's towers.

Hams aren't the only ones suffering from RF overload! The solution? Other than moving the station or the neighborhood -- neither likely options -- the offended parties may have to install filters on electronic equipment and the phone and cable companies may have to shield their cables more effectively. Sound a little familiar?

## Go Forth to Serve!

Did you know that 1,150 radio amateurs have passed through the gates of Bellmawr since training first started? This enviable record will be broken, though, as classes will resume September on Tuesday nights from 7 - 9:30 at the Bellmawr Senior Citizens Center. (Exact date later.)



Did you read about the ham in the August issue of *QST* who quit his corporate job and now spends his time restoring antique radios? Anyone in the Club do this? If so, why not share this interest with the Club at a future meeting. An exhibit or two might be a joy to behold!

Chick Naylor, WA2USI, says that the classes will be for the Novice/Tech ticket and run for 10 weeks. Training for the General Class ticket also will be offered.

## Fox Hunting

We can expect hidden XMTR hunting to resume this fall, sez Steve, N2GVR. This popular activity offers a real challenge and some great fellowship, too. Steve, what is APRS all about? (Ed.)



QST!

Who donated the issues of *QST* that are now at the Club site? If we can't find the person by next month, we're going to use them for future 50-50 raffles. Please come forward.



## OUR RESEARCH SHOWS...

At the last Club meeting we learned that many of our fraternity have other hobby interests in addition to ham radio. Shortwave listening and monitoring are popular, even though some just tune into the bands on occasion.

Does anybody in the Club ever use AM ("ancient modulation") on the high frequency bands? This is a big activity. Listen around 3,885 khz in the evenings and you'll hear many of the AMers using the old radio gear -- sort of like an antique car club of ham radio!

## DX Bulletin

The smoothed sunspot count is near 10. Cycle 23, while expected to begin in 1996, won't begin to curve upward until mid-1997, and won't return to the 1993 levels until 1998. Flux is currently at levels not seen since 1987, one year after the last solar minimum in 1986. This prediction doesn't mean that there won't be any DX to work until 1998, but it does suggest that the higher bands will be spotty at best for several years. Look for the maximum useable frequency (MUF) to inch above 17 meters, and occasionally above 15 meters. However, the main DX bands will remain 20 meters, with nighttime openings on 40 and below. 30 meters should be an excellent band of DXing as well. Good hunting! Tnx/ THE DX BULLETIN /K2JF

## Working With Old Gear

What to do with that new (used) piece of ham gear that you bought at that hamfest -OR- How to set your basement on fire in three easy steps.

Being one who likes to get his hands on older equipment, I have found that there are several steps that one should follow before attempting to use it "on the air." Usually, it is not possible to test the rig in question, and it is bought as is. The vendor usually tells you that he "used it just last week," and it's just a coincidence that there is a 3-inch layer of grime and dust on it. Many people will walk away from such a piece of gear, but if the price is right, it pays to refurbish a radio. Several steps that one should take would be as follows:

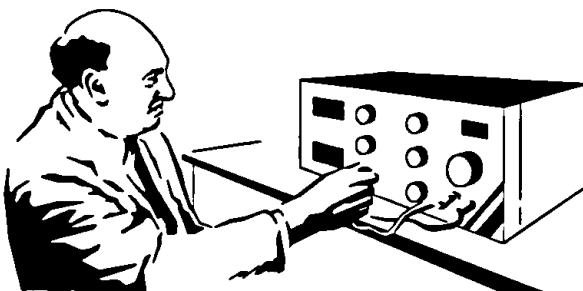
**A) Don't plug it in! And let me stress this again.  
Don't plug it in!!!!**

**B) Disassemble the radio in question.** Are all of the tubes in place? If there is a manual, are the right tubes in the right sockets? Examine the chassis. Are there wax-type capacitors inside? I'd replace them even before I would attempt to fire it up. They have a nasty habit of drying up internally, and if voltage is suddenly put on them, they could blow apart. (Case in point: I had a Lafayette HA-460. I turned it on, and it played fine. About a half hour later, smoke was pouring out of the thing. Two capacitors literally exploded in the underside of the chassis.)

*What did I do wrong?* I just applied voltage to the unit. There are several ways to properly fire up (no pun intended) a radio, without causing damage. (This will be discussed later.) Back to examining the chassis. Any loose parts? Even before placing your fingers into the unit, get a large screwdriver and SHORT all filter capacitors to ground. And NEVER place both hands into a chassis. One hand goes into your pocket. Remember, there are 800-volt potentials in these older units.

**C) Now, assuming that all of the parts are where they should be, it is time to apply power to the unit. Make sure the unit has a fuse! If there is no fuse, ADD ONE!** It is a nice safety feature that could save your life.

There are two methods that I use to apply power to the unit. One method requires the usage of a variac. The method is to slowly bring the voltage up over a period of time. This keeps the components from



going berserk from a sustained surge. The second method (the one that I usually use) involves turning on the unit for one second, off for two; On for five seconds;

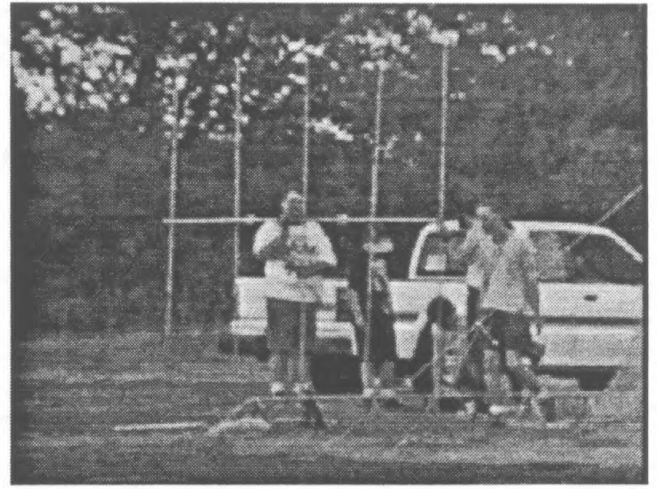
off five. And keep increasing the time, until you reach a minute, at which time you can let the thing cook. Then you can go about testing the unit for operation. Remember. **ONE HAND ONLY IN THE UNIT!!!** The worst accidents can happen by having one hand in the chassis. If you are unsure what you are doing, STOP. Ask someone to help. There are several hams available to work with you, myself included. "Remember, there is no such thing as a stupid question."

Finally, I'd like to relate something that happened to me in April. I finally purchased a Johnson Viking Valiant transmitter. It is really a dream unit for me. I was sorely tempted to just try to get it on the air. But cooler heads prevailed, and I disassembled the unit. The B+ line, 750 volts!, was lying directly on the chassis. I bought the unit, "as is," with the understanding that the unit might require repair or rebuild. It is entirely possible that if I had not followed my own guidelines, an estate sale would be going on now. I did set fire (!) to the unit three times during the rebuild (someone had put sub-standard components with lower voltage ratings in it) -- but that's another story.

73, John - KA2EZN

### MS-150 Bike Tour City to Shore Sept. 17 & 18

For info contact:  
MS 150 Bike Tour  
P.O. Box 426  
New Castle, DE 19720  
or, AA3CH



# GCARC Field Day 1994

**CANDID  
CAMERA!**



Congratulations to  
Barb, N2SBP, and  
Glen, N2Y40  
on their engagement!



# "A Really Good Shew" \*



Congratulations to these GCARC members on their outstanding awards accomplishments.  
Patience, practice, and maybe a little luck, too?


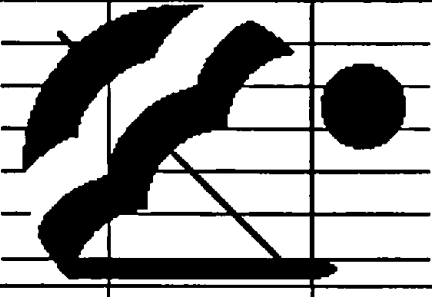
## GCARC DX/WAZ/WAS ROLL

| CALLS  | 1A    | DXCC | 5 BAND   |      |     |     | DXCC |     |    |    | WAZ | WAC | WAS | SAT/PK |    |
|--|-------|------|----------|------|-----|-----|------|-----|----|----|-----|-----|-----|--------|----|
|  | AWARD |      | HON ROLL | DXCC | WAZ | WAC | WAS  | MIX | CW | PH |     |     |     | QRP    | DX |
| AA2GQ  |       |      |          |      |     | X   | X    | X   | X  |    |     |     | X   |        |    |
| K2HPV  |       |      |          |      |     |     | X    | X   |    | X  |     |     | X   |        |    |
| K2JF   | MIX   | CW   | X        | X    | X   | X   | X    | X   |    | X  | X   | X   | X   |        |    |
| K20WE  | CW    | CW   | X        |      |     |     | X    | X   |    |    | X   | X   | X   |        |    |
| K2ZA   |       |      |          |      |     |     | X    |     |    |    |     |     |     |        |    |
| K3JGJ  |       | X    | X        | X    |     |     | X    | X   | X  |    | X   | X   | X   |        |    |
| KB2GW  |       |      |          |      |     |     | X    |     |    |    |     |     | X   |        |    |
| KB2ETV   |       |      |          |      |     |     |      |     |    |    |     | X   |     |        |    |
| KD2CR  |       |      |          |      |     |     | X    |     | X  |    |     | X   |     |        |    |
| N2BDC  |       |      |          |      |     |     | X    |     | X  |    |     |     |     |        |    |
| N2DWR  |       |      |          |      |     |     | X    |     | X  |    |     | X   | X   |        |    |
| N2FJL  |       |      |          |      |     |     | X    |     |    |    |     |     | X   |        |    |
| N2FJQ  |       |      |          |      |     |     | X    |     |    |    |     | X   | X   |        |    |
| N2IVM  |       |      |          |      |     |     |      |     |    |    |     |     | X   |        |    |
| N2MWX  |       |      |          |      |     |     | X    |     | X  |    |     |     | X   |        |    |
| N2PKN  |       |      |          |      |     |     | X    |     |    |    |     |     |     |        |    |
| N2SS   | MIX   | MIX  |          |      |     |     | X    |     | X  |    |     |     | X   |        |    |
| WA2NPD   |       |      |          |      |     |     | X    |     | X  |    | X   | X   | X   |        |    |
| WA2PFC   |       |      |          |      |     |     | X    |     | X  |    |     | X   | X   |        |    |
| WB2DXB   |       |      |          |      |     |     | X    |     | X  |    |     |     | X   |        |    |
| WB2LNR   |       |      |          |      |     |     | X    |     |    |    | X   | X   | X   |        |    |
| IF THERE ARE ANY ADDITIONS OR CORRECTIONS PLEASE FILL IN THE BLOCKS AND SEND OR NOTIFY K2JF...73 TNX |       |      |          |      |     |     |      |     |    |    |     |     |     |        |    |

\* Trivia time...What famous emcee said this?

*This to K2JF for data!*

**AUGUST 1 - 31, 1994**

| SUNDAY  | MONDAY  | TUESDAY | WEDNESDAY   | THURSDAY   | FRIDAY                                   | SATURDAY  |
|---|---|---------|---|--|--|---|
|   | Aug. 1  | Aug. 2  | Aug. 3<br><br>GCARC<br>General<br>Membership<br>Meeting<br>20:00 | Aug. 4   | Aug. 5                                   | Aug. 6<br>8/6&7-<br>ARRL UHF Test;<br>North Amer.<br>QSO Party;<br>QRP ARCI                                       |
| Aug. 7<br>20:00<br>ARES/RACES<br>20:30<br>10 Mtr Net on<br>28.350 Mhz<br>Hamfest-<br>Warrington,<br>Pa.   | Aug. 8  | Aug. 9  | Aug. 10   | Aug. 11  | Aug. 12<br>8/12-14-<br>ATV Quest<br>Test | Aug. 13<br>8/13&14 -<br>European<br>DX Test, CW;<br>W1AW Quali-<br>fying Run, 10-<br>40 wpm                       |
| Aug. 14<br>20:00<br>ARES/RACES<br>20:30<br>10 Mtr Net on<br>28.350 Mhz<br>Hamfest-<br>Easton, Pa.         | Aug. 15   | Aug. 16 | Aug. 17<br>20:15<br>GCARC<br>Board of<br>Directors Mtg  | Aug. 18  | Aug. 19                                  | Aug. 20<br>Hamfest-<br>Oakland,<br>New Jersey<br>8/20&21 -N.J.&<br>No. Amer. QSO<br>Parties<br>SARTG<br>RTTY test |
| Aug. 21<br>20:00<br>ARES/RACES<br>20:30<br>10 Mtr Net on<br>28.350 Mhz<br>Hamfest-<br>Georgetown,<br>Del. | Aug. 22<br>W1AW<br>Qualifying<br>Run -<br>10-35 wpm | Aug. 23 | Aug. 24   | Aug. 25  | Aug. 26                                  | Aug. 27<br>Hamfest-<br>Bridgewater,<br>New Jersey   |
| Aug. 28<br>20:00<br>ARES/RACES<br>20:30<br>10 Mtr Net on<br>28.350 Mhz<br>Hamfest-<br>GCARC               | Aug. 29   | Aug. 30 | Aug. 31   |  |  |   |
|   |   |         |   |  |  |   |



## Hams Aid Cuban Refugees

Amateurs in four countries helped relay an SOS by Jorge L. Martinez, WP4KTF. Early on the morning of June 4, 1994, 61 Cubans left the port at Mariel in a commandeered Cuban vessel bound for the United States. About 20 minutes after setting sail a Cuban gunboat came into view, which then was joined by two more gunboats and a patrol boat. The refugees were fired on and four men were shot.

According to the *Miami Herald*, a mayday call went out about 4 AM. The call was made by an amateur named Juanito, CO2PJ on the amateur transceiver he had brought on board with him. The call was picked up on 7.118 MHz by Pedro Rodriguez, YV5JCB, who was soon joined on frequency by Carlos Chang, HP8DCF and Alvaro Andrade, HP1DAV. Andrade then telephoned his friend Jorge L. Martinez, WP4KTF/HP1XZQ, stationed with the U.S. Army at Ft. Davis, Panama.

If you are interested in Martinez's story check the "THE ARRL LETTER" at the Club House. It will be posted on the announcement board. (Tnx to The ARRL LETTER/K2JF)

## UPCOMING DX

\ OS PRINCIPALITY OF SEBORGA... Stations OS1A and OS1B still continue to be active mainly on 20 meters, CW, SSB and at various times. Remember ! WFWL. 3B8 MAURITIUS... 3B8/ON4QM is active from Mauritius until mid August. 7Q7 MALAWI... Peter ON6TT, may be active soon as 7Q7XT. Start looking around August 5. QSL via ON5NT 8P9 BARBADOS... Mark, formerly J5UA1 is now 8P9HB. He operates CW, SSB and RTTY. QSL via NW8F. FO FRENCH POLYNESIA...Chris Ramade F6GQK is active from Tahiti as FO5OU. He uses an ICOM 745 into a 14AVQ Vertical and is most active on 40,20, and 15 meters, primarily CW. FT KERGUELEN IS... Pierre FT5XJ operates RTTY around 14085 Khz between 1215 and 1245z. QSL via F5NLL. GM0 ISLE OF MULL,(EU-008) SCOTLAND... Jack, KB8RJ, will be active from the Inner Hebrides Group as GM0/KB8RJ August 8- 20th. Activity will be SSB only on 14260, 21260, 28460, and 7 MHz if conditions permit. HL SOUTH KOREA... Del, HL9DC, an American from Ohio, has been heard on 14025, kHz around 1200z. Also check the bottom edge of 7 MHz between 1100-1200. QSL via N7RO. P4 ARUBA... Hiro JR4PMX & Jun JH4RHF will be active for one week on Aruba starting August 24th. Activity will be on 160- 10 meters, CW, SSB & RTTY. QSL their CBA. S92 SAO TOME... Charlie S92SS has been heard on the WARC bands. Check 18087, or 10109,kHz around 2245z. S92YL has been active on 15 and 20 meters between 2030 and 23130z. ST0 SUDAN... Lou ST0K has been on 20 meters CW around 14019 Khz between 2230 and 0030z. SU EGYPT... Ayman, SU1AY, was heard and checks into the 14226 DX net around 0000z. QSL via OE6EEG. By this time TN0CW, Rudi, has left the Congo. Let us hope you got him, for we have no idea when the next operation from that area will be allowed. He is one of the few who visits that place who operates CW. Conditions are not too band for this time of year, especially in the early morning and evening at dusk. There is a lot of good stuff out there so GO-GET-EM. Remember if you have your cards and you are looking for your first DXCC, the Club has the only card counters in South Jersey (K2OWE & K2JF). Tnx to DX BULLETIN, QRZ DX, and others. C U IN THE PILE-UPS 73 JOHN K2JF



**PROPAGATION WATCH** The Space Environment Services Center (the people who prepare the WWV propagation report) have refined their prediction for the end of Sunspot Cycle 22. Given the accelerating pace of sunspots disappearing it now appears that Cycle 22 will end at solar minimum in late 1996. However, the sunspot counts will continue to decline rapidly for the rest of this year. This suggests that 1995-1996 will be marked with very low solar activity, with the solar flux hovering in the 80 range and a smoothed sunspot count near 10. Cycle 23, while expected to begin in 1996, won't begin to curve upward until mid-1997 and won't return to the 1993 levels until 1998. Flux is currently at levels not seen since 1987 - one year after the last solar minimum in 1986. This prediction doesn't mean that there won't be any DX to work until 1998, but it does suggest that the higher bands will be spotty at best for several years. Look for the maximum useable frequency (MUF) to inch above 17 meters, and occasionally above 15 meters. However, the main DX bands will remain 20 meters, with nighttime openings on 40 and below. 30 meters should be an excellent band of DXing as well. Good hunting! (Tnx/ THE DX BULLETIN /K2JF)