



Crosstalk

Issue #9

September, 2000

President's Message

Hamfest 2000 was a success!!!!

Bob Budd, KB2EAH, this year's hamfest Chairman, followed the fine hallowed club tradition of putting together an excellent hamfest and he certainly deserves a hearty congratulations for a job well done. It does take a great number of people of many individual talents to put all this on but there has to be a central organizing person and this year Bob was that person. He had a lot of input from last year's Chairman, John, N2AWD, so I'm sure that made things go a bit easier. I think being hamfest chairman is probably the toughest job this club has to offer anyone that likes a challenge. We had great weather, a pretty decent turnout, (from what I saw), and a good number of vendors. So in all, I think we did extremely well considering the late start we got. We learned a few lessons from this and we will be implementing the lessons before the new year so that no matter how things go next year, the groundwork was laid for the incoming club Officers.

At the Board meeting, Chuck, WA2TML, said that we are moving in the right direction towards getting our commercial power feed rebuilt at the trailer. We received a major installment of the insurance coverage which will enable us to move ahead with Conectiv coming out and doing the entire job. It has taken awhile but to have done it without going through the proper channels would have cost us an enormous amount of money.

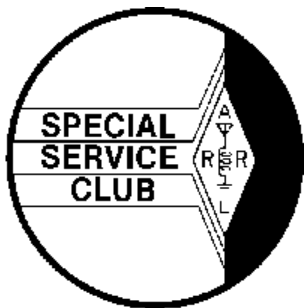
Wayne, WA2LET, has suggested that we get together, as a club function, some stations to operate down at his property near Batsto State forest for the November sweepstakes. He has 7 acres of land which could accommodate quite a few stations and it would be a fun weekend. The weather would be cool which would be a nice alternative to field day weekend which is usually hot during the day. At the next meeting let's get with Wayne and get some directions to his place and maybe just go out and do it. During the sweepstakes, there are no limitations on area as there is for Field day. Some tents, a Coleman lantern, a stove, and we're set. Let's give it some thought.

Speaking of thoughts, here is something that everyone should start giving some thought to, and that is, the new slate of elected Officers for 2001. It is September and nominations are going to be coming up next month. Just to let you all know, I answer to a higher authority and my wife says that I won't be President a third year in a row. Besides, we plan on buying a house next spring, we hope, and if we do then I won't have the time to properly serve as a President. There will be too many things on the honey-do list to get to meetings, etc. Also, Gene, N2IMK, said that this is his last year as my VP. He intends to leave office, completely and totally. Has no aspirations to be President, which is where the VP normally goes after a year. So, gang, you have to come up with a President, Vice-President, and a Recording Secretary, whose position I have been filling for the past year.

Therefore, I will see you at the meeting. 73's ART - KA2DOT



affiliated club



DX Dope

By Doug Gehring WA2NPD

As do some other publications, groups, etc., every year the ARRL DX gurus publish their "Hot 100 List" (in the Annual Yearbook) showing the most needed countries in the order of greatest need. Hence, #1 is North Korea, #2 is Scarborough Reef, #3 is Pratas Island, etc. etc.

The League bases its rankings primarily on QSL card submissions, or lack thereof. We New Jersey DXers are perplexed at some of the rankings, as, for example, some of the countries we haven't heard in years are ranked often far down the list. Thus, Somalia is #64, Afganistan is #27, Sudan is #76, Melish Reef is #37, and Desecheo #86.

How can this be? Well, I'm told the answer lies largely in the fact that the League speaks not just for US hams, but for DXers worldwide. So, for example, there may be a local ham living in Somalia who regularly works 40 meters, say 3 or 4 evenings a week, giving Europe, Asia, and Africa much activity. Well, 8 PM in Somalia is 1 PM EDST in the USA, and the 40 meter band at that time is mostly dead for DX in New Jersey. Hence, over a few year's span the League may receive a bunch of 60 submissions from Europe, etc. thus pushing Somalia far down the list.

Of course, this works both ways in that many Europeans may, for example, badly need, say, Costa Rica, which we in NJ can almost hit with a rock. Any ranking system will have some flaws - we just have to appreciate that nothing's perfect.

So what's up for this month? Obviously, ZD9 is the big one!

Station	Dates	Freq/Mode	Rarity	Country
ZD9ZM	9/5 - 9/?	160-10; Mostly CW	5	Tristan de Cunha
A5--	9/1 - 9/15	160-10; All	5	Bhutan
VK9XV	9/2 - 9/15	80-10; SSB only	4	Christmas Island
8Q7XX	8/31 - 9/11	80-10; SSB only	3	Maldives
9H0VRZ	9/16 - 10/8	160-10; All	2	Malta
5R8--	8/30 - 9/27	20, 15, 10; SSB, CW, RTTY	3	Madagascar
HQ0R	9/17 - 9/25	80-10; All	2	Honduras
3D2AD/AU	9/18 - 9/26	160-10, 6; All	2	Fiji Islands
A35AD/AU	9/26 - 10/3	160 -6; All	2	Tonga Islands
J28FH	QRV now	10; triband soon	3	Djibouti

5 is rarest

- *TNX to K2JF, AA2WN, and the 59(9) Report*

Propagation Notes

by John Fisher K2JF

PART 2 FORMATION OF AN IONIZED LAYER.

WHEN ULTRA-VIOLET RADIATION OF A PARTICULAR WAVELENGTH ENTERS THE EARTH'S ATMOSPHERE FROM ABOVE, THE WAVES PENETRATE TO A DEPTH AT WHICH THE CRITICAL DENSITY OF THE MEDIUM IS SUFFICIENT TO ABSORB THE LARGER PORTION OF THE INCIDENT ENERGY IN THE PROCESS OF PRODUCING IONIZATION. BEFORE REACHING THIS DEPTH, THE AIR PARTICLES ARE DISPERSED SO SPARSELY THAT ONLY RELATIVELY FEW MOLECULES OF THE RAREFIED GASES BECOME IONIZED. UPON REACHING THE LEVEL OF CRITICAL DENSITY, A GREATER PROPORTION OF MOLECULES ARE IONIZED, BUT THE WAVE ENERGY BECOME SO ATTENUATED BY THE PROCESS OF IONIZATION THAT IT IS TOO WEAK TO PRODUCE FURTHER IONIZATION. THUS, AN IONIZED LAYER IS FORMED WITH THE GREATEST INTENSITY OF IONIZATION AT ITS CENTER AND LESSER INTENSITIES AT ITS EDGES.

IONOSPHERE LAYERS OR REGIONS

BY MEANS OF IONOSPHERIC SOUNDING, IT HAS BEEN DETERMINED THAT THERE ARE FOUR DISTINCT LAYERS OF THE IONOSPHERE, WHICH ARE CALLED IN ORDER OF INCREASING HEIGHTS AND INTENSITIES, THE D,E,F1, AND F2 LAYERS. THE FOUR LAYERS ARE PRESENT ON ATMOSPHERE DURING THE DAYTIME, WHEN THE SUN IS DIRECTED TOWARD THAT PORTION OF THE ATMOSPHERE SPHERE. DURING THE NIGHT, THE F1 AND F2 LAYERS SEEM TO MERGE INTO A SINGLE F LAYER, AND THE D AND E LAYERS FADE OUT, BECAUSE OF THE RECOMBINATION OF THE IONS COMPOSING THEM. HOWEVER, THE ACTUAL NUMBER OF LAYERS, THEIR HEIGHTS ABOVE THE EARTH, AND THE RELATIVE INTENSITY OF IONIZATION PRESENT IN THEM ALL VARY FROM HOUR TO HOUR, FROM DAY TO DAY, FROM MONTH TO MONTH, FROM SEASON, AND FROM YEAR TO YEAR.

A comment about 10.7 cm solar flux - although 10.7 cm solar flux is easy to measure because the Earth's atmosphere is transparent at that wavelength, energy at 10.7 cm is about 1 million times less energetic than the true ionizing energy. Thus 10.7 cm solar flux contributes nothing to the formation of the ionosphere. But it is an indicator of the general activity level of the sun, and smoothed solar flux values (a 12 month running average) correlate very well with smoothed sunspot numbers (SSN).

A. D REGION.....AT SOMEWHERE BETWEEN THE HEIGHTS OF 20 TO 55 MILES (50 TO 90 KILOMETERS) ABOVE THE SURFACE OF THE EARTH, IS THE FIRST REGION OF PRONOUNCED IONIZATION, KNOWN AS THE D REGION. THE D REGION IS NOT EXTENSIVE AND HAS LITTLE EFFECT IN BENDING THE PATHS OF HIGH-FREQUENCY RADIO WAVES. THE CHIEF EFFECTS OF THE IONIZATION THIS REGION ARE THE CAUSE OF WEAKENING OR AN ATTENUATION OF THE FIELD INTENSITY OF HIGH- FREQUENCY RADIO WAVES AS THE TRANSMISSION PATH OF SUCH WAVES CROSSES THROUGH THIS REGION.

continued

Propagation Notes - *continued*

THE D REGION EXISTS ONLY DURING THE DAYLIGHT HOURS, AND ITS INTENSITY FOLLOWS THE VARIATION OF THE SUN'S ALTITUDE, BECOMING MOST DENSE AT NOON, AND FADING OUT SHORTLY AFTER SUNSET BECAUSE OF THE RAPID RECOMBINATION OF IONS AT THIS ATMOSPHERIC HEIGHT. (LISTEN TO 80 METERS AROUND 1100 TO 1300 ET).

B. E LAYER...AT HEIGHTS BETWEEN 55 AND 90 MILES (90 TO 145 KM) LIES THE SECOND REGION IN ORDER OF HEIGHT CALLED THE E LAYER. SINCE THE RATE OF RECOMBINATION IS LARGE AT THIS ATMOSPHERIC LEVEL, THE INTENSITY OF IONIZATION OF THE E LAYER FOLLOWS THE SUN'S ALTITUDE VARIATIONS CLOSELY, REACHING A MAXIMUM AT ABOUT NOON, AND FADING TO SUCH A WEAK LEVEL DURING THE NIGHT AS TO BE PRACTICALLY USELESS AS AN AID TO HIGH-FREQUENCY RADIO COMMUNICATION. THUS THE E LAYER IS OF GREAT IMPORTANCE TO RADIO TRANSMISSION FOR DISTANCES LESS THAN APPROXIMATELY 1,500 MILES.

(NOTE: THE TIMING IS IMPORTANT FOR THE BOYS WHO WORK UHF, 6 METERS, WITH THE EUROPEANS NOW ON 6 AND THE CARIBBEAN. DO NOT CONFUSE THIS WITH SPORADIC E>.

NEXT SECTION WILL BE ON F1 AND F2 LAYERS

C U IN THE PILE-UPS K2JF

Hamfest 2000 Report

by Bob Budd KB2EAH

I have been a member of GCARC for a number of years now, and until these past several months I haven't really felt part of a team. When I first took the position I was reluctant but was quickly reassured that all members would help. Well, I must confess, at first I had my doubts, but shortly afterwards the members came forward, and before I knew it, all the job slots were filled. The scene reminded me of the movie "Cool Hand Luke", where the employees of the prison gave him too much food on his plate. Each prisoner took a spoonful till it was all gone! That's how I felt this past hamfest, and before I knew it, it was all over. There is a lot of talent in our club, and it seems a shame that this resource is not used in other ways, to make Amateur radio more interesting and exciting.

We made some money for our club, to get us through this year, but I like to think that we as a club have, in a small way, possibly lengthened the life of Ham Radio, by the good experiences we had at our hamfest, by possibly upgrading ones license, finally finding that last piece of radio gear, or meeting that other ham after not seeing or talking to them in sometime.

As I walked around, I couldn't help but notice the smiles and laughter, along with the handshakes and jokes. Getting involved with the hamfest, in my opinion, was a good experience. We can only hope that the State may continue to leave us alone. Our club has experienced a lot of good, and some bad, but as long as we continue to work together, there is no reason why we can't overcome our membership problems. With some elbow grease, we just may be able to get back to the way our club and Amateur Radio used to be!

Here is a list of all those who gave their time and effort:

AA2BN	N2AWD	K2DAD	KB2AYU	N2LCQ
N2SRQ	W2LYL	WB2LNR	K2JF	AA2YO
N2WHL	AA2WN	WA2TOP	KC2BUN	WB2NBJ
WA2NPD	WA2TML	K2ZA	N2SRO	KA2DOT
WA2LET	N2IMK	WA2VOY	N2URO	WA2ADB
N2WUP				

My hat's off to all of you, thanks so much.

73 de KB2EAH

Estate Sale

My father, Everett Obenhein KB2ASH, passed away and left a complete "radio room" with various pieces of Amateur Radio equipment. The equipment is currently hooked up. If you have an interest in purchasing this equipment, the original shipping boxes are also available.

Kenwood hand held, Model TH26AT w/ battery charger
Icom hand held, Model IC24AT w/ battery charger and car antenna

Antenna rotator

Micronta power supply

Yaesu FT-757GX HF transceiver

Yaesu FP-757HD power supply

Yaesu FC-757AT antenna tuner

Yaesu MD-1 microphone

Cushcraft 20 15 10 meter beam (new in box, never installed)

Butternut vertical antenna

Box of QST magazines, 5 years or more

Box of license manuals

Box of assorted coax connectors, wire, etc.

Thank you,

Everett Obenhein Jr.

GCARC Officers

President - *Art Strong KA2DOT*

Vice President - *Gene Wallace N2IMK*

Treasurer - *Bob Krchnavek K2DAD*

Recording Secretary - *Open*

Corresponding Secretary - *Chris West WA2MVU*

Board of Directors

Chuck Colabrese WA2TML

Wayne Wilson WA2LET

*Al Arrison KB2AYU
Bob Krukowski KR2U
Bill Blakeley WA2ADB*

Happy Birthday

Congratulations to the following club members:

Bill Blakley WA2ADB	9/3
Mike Bryant KB2VVU	9/29
Sonny Gutin WB2DXB	9/7
Bill Hansche W2ILL	9/17
Joe Mitchell KB2FRN	9/5
Gene Schoeberlein AA2YO	9/15
Jim Simeon KC2AOF	9/16
Harry Spiece NJ2B	9/26
Ed Wargo WA2ED	9/4
Ken Weber N2UNI	9/17



Crosstalk Submissions

All submissions, queries, comments, editorials, or requests for interviews may be directed to:

John Zaruba AA2BN
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Franklinville, NJ 08322

jzaruba@snip.net
aa2bn@amsat.org

Submission deadline: 9/22/00

Committees

Advertising - Open

ARES/RACES -Chick WA2USI

Awards - Jack K2ZA

Banquet - Bob KR2U

Budget - Bob K2DAD

Clubhouse Site - Al KB2AYU

Constitution - Open

Crosstalk - John AA2BN

Database - John AA2BN

DX - Doug WA2NPD

Field Day - Tony KG2MY

Hamfest - Bob KB2EAH

Hospitality - Ray WB2NBJ

Membership - John AA2BN

Nominations - Bob KR2U

Publicity - John N2AWD

Repeaters - Chuck WA2TML

Scholarships - Greg WN2T

Special Services - Open

Sunshine - Open

Technical - Open

TVI - John AA2BN

VEC Testing - Chick WA2USI

4-H Parking - Bob KR2U

The W2MMD Repeaters

147.78/18 Mhz - Pitman

223.06/224.66 Mhz - Sewell

447.1/442.1 Mhz - Pitman
(CTCSS 131.8 Hz)

GCARC Meetings

General Membership

8p.m. 1st Wednesday every month, Pfeiffer Community Center, Williamstown, NJ

Board of Directors

8 p.m. 3rd Wednesday every month, GCARC Club site, Harrison Twp. 4-H Grounds
~1 mile south of Mullica Hill on RT77

Nets

**ARES/RACES -
Sundays 20:00 Hrs
(147.78/18 and
223.06/224.66
repeaters)**

**10 Meter - Sundays
following the
ARES/Races Net
(28.350 Mhz)**

September Meeting Program

Socializing

stamp



P.O. Box 370
Pitman, NJ 08071

Mailing Label