WHITE NOISE

Palm Beach Packet Group, Inc.
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President Doug Welcker WB4KGY
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Vice President Mike Michaels K2GPI
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Editor Bill Manley KB4XE

Volume 12, Number 1 January 2000

AMATEUR RADIO RESTRUCTURING

(How much do you really care?)

Bill Manley KB4XE

IV. CONCLUSION

69. Consequently, in view of the foregoing, we are amending our rules to: (a) reduce the number of amateur radio operator license classes from six to three, (b) reduce the number of written examination elements from five to three and the number of telegraphy examination elements from three to one, (c) authorize Advanced Class amateur radio operators to prepare and administer examinations for the General Class amateur radio operator license, and (d) eliminate RACES station licenses. The amended rules which are appended hereto will simplify and streamline the regulations that govern the Amateur Radio Service.
-FCC 99-412 December 22, 1999 page 40

With their Notice of Proposed Rulemaking (98-143) of August 31, 1998 the FCC unleashed 16 months of comment, debate, and anxiety within the amateur fraternity. It all came to an end with their docket released late last December. The 70 page document redefines the license and examination structure, explains each issue in great detail, acknowledges commentary from key amateurs and amateur organizations, and finally sets the stage focusing upon strengthening the technological skills of the service.

The HF bands have been resounding with discussion, both pro and con, of the pronouncement. Even with careful listening it has been difficult to determine the overall consensus of the amateur community. Is this a good thing or a bad thing?

We resorted to the internet to find documented opinions which could be measured. My favorite newsgroup rec.radio.amateur.antennas reliably posts clear, accurate, and readable technical issues (but not without the usual percentage of spam). Key participants in this newsgroup include such distinguished contributors as Peter Bracket AB4BC who Palm Beach Packet Group members will remember as having contributed, in the past, stimulating discussion at our after-meeting seminars.

In the interval between December 30, 1999 and January 8, 2000 we downloaded 460 comments by 168 respondents spread over 12 threads. Many respondents posted several messages. We read their comments and tabulated whether they Favored, Opposed, or were Neutral about the restructuring.

Our findings were

Favored	28.9%
Opposed	6.6%
Neutral	64.5%

We tabulated as Favored those respondents whose postings clearly indicated that the new structure would be beneficial to amateur radio. We tabulated as Opposed those respondents whose postings clearly indicated that the new structure would not be beneficial to amateur radio. The Neutral postings were somewhat less clear consisting primarily of commentary on other postings. Since they failed to directly address a pro or con opinion about the ruling, it can be assumed that they had no strong feelings one way or the other.

One thing we noted in both the Report and Order as well as the newsgroup postings was that it is clearly recognized that we are entering an age where digital communications and its supporting technologies are the future trend of Amateur Radio.

qsl.net

Alan L. Waller K3TKJ

QSL.NET and QTH.NET users,

Three years ago today the QSL/QTH systems were born as an experiment in managing a live network and learning Linux. In my wildest dreams I would have never predicted it would grow to be the number one Amateur Radio Site on the Internet. There literally is no other resource for ham radio that can compare. Many sites may be graphically more appealing but none can provide the variety of resources that make up QSL/QTH. A user on QSL/QTH can spend weeks looking at ham radio related topics at a single site. For over 40 years I have enjoyed not only the hobby of Amateur Radio but the people I have met along the way. I had a desire to make a worldwide service and the only requirement was a shared love of the hobby we all enjoy. Today about 40% of the users of the systems are from outside the US.

As we start the new millenium I have a few minor announcements and one very major one...

Let's get the minor things out of the way.

1. For our European users, we are now mirrored at http://www-dl.qsl.net in Munich, Germany thanks to the hard work of DL4NER. You still upload the same as always but you can view your home page at either location.

2. The finest DX site on the web is at http://dx.qsl.net This is the creation of N6RT.

3. QTH.NET now has almost 900 lists on ham topics, if there is a need for another list topic, you want to move an existing list here, or your club or special event needs a list to help them, please let me know.

4. All servers are at the latest levels in hardware and software as we start the new year...this means it will all be outdated by Spring.<grin>

Now for the BIG NEWS.....

It's with great pleasure I announce that QSL.NET is an International Dial-Up Internet Service provider exclusively for Radio Amateurs.

Through a great deal of time, effort and money we have partnered with a major provider of Worldwide Internet Service. QSL.NET now has 450 locations for access and thousands of access numbers in the following Countries:

United States (85% of the US can access QSL.NET as a local call) Canada (Most Major Cities)

Soon to include:

United Kingdom
France
Italy
Germany
Belgium
Netherlands
Switzerland
Japan

Access is V.90 56K and 64/128K ISDN.

To answer a few of your immediate questions.....

Q. Is this the end of QSL.NET being just for hams?

A. Absolutely not! QSL.NET Internet dialup remains JUST for hams.

Q. Will this service be free too?

A. As much as I would like it to be.... that is not possible, however, it is competitively priced and since there is power in numbers we have the potential to drive the Internet costs into unheard of low monthly rates.

Q. So you're an Internet Provider, big deal, there's a dozen in my home town. Why are you better??

A. To quote QSL/QTH's internet provider:

"PSINet operates a global Internet-optimized network featuring layered switching technology to provide a quality of service that no "router only" ISP can provide. PSINet is in the process of installing more than 10,000 miles of fiber optic route miles at speeds up to 9Gbps (9billion bits per second), making our infrastructure among the largest, most capable communications systems on earth."

Q. Translate the above answer for me?

A. The days of having a local ISP where you dial into a modem are fast going away. This is a huge private network that was built just for the Internet. Reliability and performance are in the 99 percentile area at all times. Besides you already have you e-mail and web page here!

Q. Why would I care about other numbers in other cities?

A. QSL.NET now provides to what amounts to local Internet access, Internationally!....if you relocate, travel or live in two different places, your e-mail never changes, you just dial the number in the city you happen to be in and the Internet works exactly as it does from home. No more reconfiguring IP's and gateways and DNS servers to use another system.

Q. What about my QSL.NET email alias?

A. Your mail account will become a normal "pop3" account and you will send and receive mail from QSL.NET as you would do with any provider.

Q. What has to change on my end to use QSL.NET as my ISP?

A. The number you call for access, your login name, and your password.

Q. I have a "free" e-mail address and web page at QSL.NET what happens to these?

A. Nothing! This is just another service available from QSL.NET..... You are welcome to keep your existing mail and web site for as long as you wish..

Q. I'm interested, what do I do now? Tell me more?

A. Visit our website at http://www.qsl.net for all the details.

To say that I am excited about this is to put it mildly. I have spent many months getting this system engineered and working, it works and works well! I would like to thank my beta testers, NE3Y, W3ETT, W4BYG, KB9LPJ, other non-ham friends and members of my family for their help in verifying the reliability and performance of this new QSL.NET service.

As I have told you many times, QSL.NET belongs to Ham Radio, I am honored to get to pull the levers that keep it moving forward. Never think I did this all by myself, the many hundreds of users who have donated talent, time and money are why this works. If I have never thanked you personally please accept my most sincere thanks for your help and support for the last 3years. To the senders of the several thousand "Seasons Greetings" I received, I am sorry I cannot answer every one personally but to all my best wishes for the coming New Year.

In closing I would like to invite you to consider using the new QSL.NET Internet Dial-Up as your provider. It will be good for QSL.NET, Ham Radio and for you.

73 and Happy New Year,

Al

(The Palm Beach Packet Group maintains a web site http://www.qsl.net/pbpg on Alan's site. We received this email message from him. We realize that many readers, who receive *White Noise* by snail mail, may never visit our site. Thus we are repeating his message here for their benefit - Ed)

PBPG MINUTES

December, 1999

OPENING AND REPORTS
Vice President Doug Welcker (WB4KGY) brought the meeting to order at 19:30 hrs. As all present were acquainted, introductions were dismissed.

TREASURER'S REPORT
Marvin (KD2CK), who had just returned from over a months stay with younger son Stuart, reported that the November 1999 statements show a total assets of were $5901.85. A complete report will be provided in the January "*White Noise*".

TECHNICAL COMMITTEE REPORT
President Doug Welcker (WB4KGY) gave the technical report and indicated that the Palm Beach Switch had again not been visited or remotely reset during the month. Andy (KF4ATC) has readied a Motorola MITREK as a backup spare should it be necessary for the Clewiston APRS site. The next technical task is to get the APRS digipeater in Stuart installed and operational. The spare transmission line was tested with the help of Rick (K4GPS) and his vector impedance meter. Another MITREK will be installed at this site. As mentioned at last months meeting, the hundreds of feet transmission lines on the Stuart tower which were swinging in the breeze were reattached by S&S tower of Okeechobee.

OLD BUSINESS
Update on the future Clewiston Switch site: Palm Beach Count approved the necessary land use change from agricultural which includes a zoning change for construction of a tower. Next is the application for permits for the tower and a building.

A small lending library is available to those who want to borrow a book. Please contact Secretary Burck Grosse(KC4UEV).

NEWS & INFO
Two presentations were made this month by Doug (WB4KGY) and John (WB4MOZ).The first was to Engineers of Palm Beach County Division of Communications on "What is Packet Radio and what it can be used for". The second was to the Wellington ARC on lightning protection and grounding.

Interesting quote: "We are installing enough optical fiber to go around the earth two times a day. Think of it as backhoe traveling at Mach 3" Quote by Thomas Koch, PHD, Lucent Technologies Optoelectronics

NEW BUSINESS
Are we at risk of loosing the Stuart Switch site? One non club operated ham repeater has been sent a letter pay or leave. We will be checking into this situation and report findings next month.

Allen Richter (W4PHL) has requested assistance in setting up a BBS using the 220Mhz 9K6 radios/tnc's/computer the EOC has on hand. John (WB4MOZ)will be working with Allen in completing the goal.

Nominations for elections have been made which includes the current slate of officers plus Dick Schofield (AF4OR) for Vice-president Elections will be held at the next meeting January 13th.

ADJOURNMENT
The meeting was concluded at 20:25.

EDUCATIONAL SECESSION
Doug (WB4KGY) did a presentation on LEO's (Low Earth Orbiting Satellites). This included the Major players; IRIDIUM, Alcatel, Teledesic, Orbcomm and a discussion of their markets, technical aspects, and time to market.

Broward Amateur Radio Digital Society

December 18, 1999

Jim did exactly what he said he would do. His goal was to explain convolution using simple math. He "convolved" 1, 2, 3, 4, and 5 with 6, 7,8, and 9. So after we knew what convolution was, he used it do determine the frequency response of a simple filter. So now we all know how to make a digital filter.

We did not have particularly good attendance. I did not realize how many attendees really depended on the reminder messages I had been sending out. I will send a reminder out for our next meeting.

We haven't sorted out what would make a good program for the January 15thmeeting. Everyone has some projects going. Carl is working on a multiple range thermocouple temperature sensor and Seymour has been able to send thermocouple data using a KPC-3 TNC analog input. Bob has gotten some contesting software running that will control the transmitter and send Morse code contest exchanges.

Bob, N4CU

The Temperature Conversion Guide (Fahrenheit degrees)

50 above - New Yorkers turn on the heat. People in Buffalo plant gardens.

40 above - Californians shiver uncontrollably. People in Buffalo sunbathe.

35 above - Italian cars won't start. People in Buffalo drive with the windows down.

32 above - Distilled water freezes. Buffalo water gets thicker.

20 above - Floridians wear coats, gloves & wool hats. People in Buffalo throw on a t- shirt.

15 above - Californians begin to evacuate the state. People in Buffalo go swimming.

Zero - New York landlords finally turn up the heat. People in Buffalo have the last cookout before it gets cold.

10 below - People in Miami cease to exist. People in Buffalo lick flag poles.

20 below - Californians fly away to Mexico. People in Buffalo throw on a light jacket.

40 below - Hollywood disintegrates. People in Buffalo rent videos.

60 below - Mt. St. Helens freezes. Buffalo Girl Scouts begin selling cookies door to door.

80 below - Polar bears begin to evacuate the Arctic. Buffalo Boy Scouts postpone "Winter Survival" classes until it gets cold enough.

100 below - Santa Claus abandons the North Pole. People in Buffalo pull down their ear flaps.

173 below - Ethyl alcohol freezes. People in Buffalo get frustrated when they can't thaw their kegs.

185 below - Microbial life start to disappear. Buffalo cows complain of farmers with cold hands.

460 below - ALL atomic motion stops. People in Buffalo start saying "Cold 'nuf for ya?"

500 below - Hell freezes over. Buffalo wins the Super Bowl.

(Received by email from relatives in Buffalo. Nothing to do with radio or digital communications but Dolphin fans and Floridians will appreciate it -Ed)

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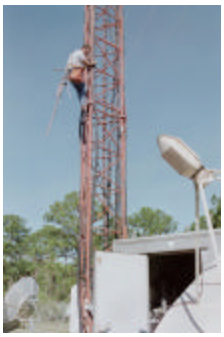
Volume 12, Number 1 January 2000

It Was One of Those Days.....

By Doug Welcker (WB4KGY)

OH Yes...it was a very busy long day at the Stuart SWITCH.

There were two major areas of work going on simultaneously.



Wayne N4PZJ at 20 ft level

First was getting the tower work done. A friend of my mine, Wayne (N4PZJ) climbed the tower with two antennas and one mounting bracket. On the way up the tower he had to mark the two transmission lines as no one knew how high they terminated on the tower. They were marked with yellow and blue electrical tape.

The first transmission line (75 ohm CATV type) ended at 290 ft and was connected to a HUSTLER Dual Band(2/440) antenna of which the top half had fallen off. Interestingly enough, Wayne and I installed this antenna in April of 1992 and how do we remember this? Well as it turns out this was the first out of town trip for Wayne's new Chevrolet Truck which gave him a chance to check the mileage. (Funny how one remembers some things - mostly by association) The antenna mount was no longer required (3/4 galvanized water pipe) so Wayne removed it and tossed it off the tower out over the fence and began installing the new mount and the J-Pole.

Andy KF4ATC holding the J-Pole and bracket

While this was going on John (WB4MOZ) and Andy (KF4ATC) started working in the equipment cabinet. It was quite a hodge-podge as the site evolved over the years it was never really rewired to what needed to be done. Besides this we knew there was a problem with the backup battery (which turned out to be a shorted cell) so we brought a new replacement. Then it was found that the power supply, a 50 amp Astron, was not charging just hummmming. The backup power supply was installed, a7 amp Astron, but after floating the battery for a period time it was found the voltage was only 12.8 Volts when a float should be around 13.5 Volts. In the process of adjusting up the voltage the power supply released all its smoke, rolled over and died. That is what happens to some supplies when there is no back-feed diode in series with the output.

Author Doug WB4KGY and Wayne

Mean time I'm working with Wayne checking the transmission for continuity which at first looked good. After he installed the J-Pole we lost continuity which led to a lot of connector investigation. As it turns out the transmission line had a TV "F" fitting that had gone bad so, being as prepared as a boy scout, I had sent two new connectors up the tower with Wayne. They were CATV line to "N" Male and also enclosed were appropriate jumper cables to the antenna. Then more problems. The new connectors inner sleeve is suppose to slip inside the aluminum CATV line outer sheath. Well it didn't by less than .020"! We were stopped in our tracks here so Wayne followed the other transmission line to 320 ft. and found the connector to be an "N" female and in good condition. It was just an abandon piece of 7/8 Heliax on the tower. He proceeded to mount the second antenna, a commercial folded dipole to the west leg of the tower and started his way down.

Back at the power supplies laying in the driveway - the filter cap from the 7 amp unit was installed in the 50 amp unit as the filter cap screw post had burned off of the original capacitor! That worked even though we are about 50,000 uf short on capacity. Now the SWITCH stack came back on line and everything began working. Along with this the shelves were relocated closer together vertically to make room for a backup computer (not installed yet), should the primary fail, and another shelf installed for the APRS equipment.

While all this was happening Mike (N0IL) from the Stuart repeater club showed up to see what is wrong with their repeater. Turns out that on the way to the site we communicated thru this repeater and the sensitivity and reception were significantly reduced in range. While Wayne was getting ready to climb the tower someone noticed that the repeater transmission line was almost broken in half so we quickly pointed this out to Mike.

While Wayne was climbing down the tower Pete (KD4SPW) hooked up his TH-D7 to the APRS antenna and began investigating what was out there. Ranges seemed a bit short but what does one expect from 2 watts? After finishing installing the APRS radio and TNC, Rich (K4GPS) and I completed some changes to the program parameters and put it into operation. Rich began testing it through his mobile setup and it didn't seem to be working well at all. Back into the building - found that an adapter used to transmission from "N" to "PL" had fallen apart so it was replaced by coax cable with the correct fittings attached. Still not working as well as expected. Started checking - Inner to outer resistance of the line (remember a folded dipole is short). Ohm meter reads 7.5 ohms a little high. humm... Next the Bird - 40 fwd/15 not good. Fortunately Mike had a TDR (Time Delay Reflectometer) with him. A TDR is like a little radar. It sends out a pulse and you look at the results on a scope which allows you to detect short/opens and all perturbations in between. This was attached to the line - looked perfect with a short at the antenna which it should be. Next Andy's MFJ impedance tester was connected and showed - 50 ohms 1:1 @ 168 Mhz. oh well...I said it was a commercial antenna. Reconnected the antenna and went home.

The Switch is working much better than it had for some time and hopefully in the next month we can get back up the tower and make some changes. What we decided to do is put a tri-band antenna where the J-Pole is and move the J-Pole to the upper transmission line and remove the folded dipole.

Turned out to be a very long day. We arrived at 9am and left at 4:30 with no stopping for lunch. The APRS equipment is working but with shortened range. Did we help APRS coverage? Definitely - the Vero Beach and Melbourne locations are now visible to us in the Palm Beaches as we are to them.

I want to thank Rich (K4GPS) for the pictures.

MIAMI TROPICAL HAMBOREE
SOUTH FLORIDA SECTION WORKSHOP

Bill Manley KB4XE

From my point of view the anticipation of the Miami Hamboree was driven by the hope to see the Icom IC756 Pro. After 3 months of hype, there it was. Pushing the buttons disclosed that it was a rig of its own, different than its predecessor. The menus were different, somehow seeming more logical than its earlier kin, the IC756. On the drive home, I prided myself in having resisted the temptation to challenge my credit card to the $3000 ante. But, sure would like to have it in the shack for a week or so.

The bad news about the Hamboree was that the crowds seemed alarmingly thin. This was also the good news in-as-much-as you could navigate up and down the aisles without the shoulder-to-shoulder confrontation experience of previous years. There was easy access to all of the booths. The crowd of bargain hunters was somewhat more dense in the flea market areas.

New to this Hamboree was the South Florida Section Workshop organized by Phyllisan West KA4FZI, our recently appointed section manager for the South Florida Section. Even with the logistic mishap rendering the appointed meeting room unavailable, Phyllisan wasted no time in commandeering an alternate site.

Following introducing her new cabinet, splinter groups were broken off with the cabinet members acting as chairpersons. I attended the meeting conducted by Sherri Brower PIC. In addition to myself representing the *White Noise* newsletter, there were other PIOs, radio club presidents, RACES coordinators, and liaisons. Attendees for the PIC splinter group were:

Al Alviani, N4LML, RACES Officer, Sarasota County
Jeff Beals, WA4AW, ACC, ARRL SFL Section
Sherri Brower, W4STB, PIC, ARRL SFL Section
Bill Manley KB4XE, TS, ARRL SFL Section, Palm Beach Packet Group *White Noise* editor
Chris Myers, KF4OQY, Pres., Vero Beach ARC
Rick Vahan, N4PBF, Pres., Dade Radio Club, PIO, Dade County

Sherri and Phyllisan were well prepared with an agenda and many handouts. One of the interesting topics discussed concerned hams, working with the State Forest Service while fighting forest fires, setting up the Service's commercial radio systems.

SOUTH FLORIDA SECTION CABINET

Section Manager:	Phyllisan West KA4FZI	ka4fzi@arrl.org
Section Emergency Coordinator:	Manny Papandreus W4SS mpapandr@bellsouth.net	
Section Traffic Manager:	Jan Scheuerman KJ4N	ylham@ix.netcom.com
Affiliated Club Coordinator:	Jeff Beals WA4AW	wa4aw@arrl.net
Public Information Coordinator:	Sherri Brower W4STB	w4stb@iu.net
Technical Coordinator and Training Specialist:	Joel Kandel KI4T jkandel@ix.netcom.com	
Official Observer Coordinator:	R. L. Caron K4GP	k4gp@peganet.com
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Section Government Liaison:	John Hills KC4N	hillsj@worldnet.att.net
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Dist. 2 Emergency Coordinator:	Bruce Reid WB9SHT ASM	wb9sht@gate.net
Dist. 3 Emergency Coordinator:	Jim Sparks AA4BN	
Dist. 4 Emergency Coordinator:	Jim Goldsberry KD4GR	kd4gr@hotmail.com
Dist. 5 Emergency Coordinator:	Gary Arnold WB2WPA	garnold@naples.net

PBPG MINUTES

JANUARY 13, 2000

OPENING AND REPORTS

President Doug Welcker (WB4KGY) brought the meeting to order @ 19:30 hrs. All present were acquainted, introductions were dismissed. It was announced that Burck (KC4UEV) was having health problems, and with this situation the minutes would be taken by Bill (KE4GUM). We wish Burck a quick and speedy recovery.

TREASURER'S REPORT

See attached - Ed

TECHNICAL COMMITTEE

President Doug Welcker (WB4KGY) gave the technical report. Andy (KF4ATC) has a replacement APRS radio ready for the Clewiston site should it become necessary. Andy and Doug added 3/4 of a gallon of watered to the batteries at the West Palm Switch on January 6th. The next week John and Doug investigated BBS forwarding port problems. Found the transmitter 2.5khz high; the next day John (WB4MOZ) fixed a problem created by last trip which disabled the link to BOCA. APRS installation at Stuart is scheduled for 22nd of Jan.

OLD BUSINESS

Adelphia provides the Palm Beach Packet group tower and equipment space at the West Palm Beach location near IBIS on North Lake Blvd. and in Stuart, a few miles north of the new causeway, as a public service. Recently Adelphia has turned the responsibilities of tower management over to ANI who manages many towers in South Florida and Virginia. This was done with the stipulation to ANI that we, the PBPB, will continue to be located at these sites at no charge. Thank you again Adelphia. (Take a look at the ANI website - I think you will find it very interesting; www.anisite.com).

Handouts for SWITCHES & NODES are now on the website.

PBPG has six Packet Books are for lending (Burck).

NEWS & INFORMATION

In the future we will be hearing about:
"SDR's" software defined radio's.
"Bluetooth" A system at 2.4Ghz linking computers to local devices, printers, phones, alarm systems, HVAC, other computers, etc. Named for Danish King Harald of the 10th century.
Ericsson sheds Radio Business (formally GE) to Com-Net Critical Communications.
TV channels 60 through 69 reallocated to commercial radio service/auctioned.
RS selling 10M SSB 25 watt transceiver $ 135.00

HAMFEST LISTINGS:

Sarasota Jan. 15/16
Arcadia Jan. 29th.
Miami Feb. 5/6
Orlando Feb. 11/13

NEW BUSINESS

Elections for new Officers for 2000 were held, the results.
President, Doug Welcker (WB4KGY)
Vice Pres, Richard Schofield (AF4OR)
Treasure, Marvin Kaskowitz (KD2CK)
Secretary. Burck Grosse (KC4UEV)

Dr. & Mrs. SCHILLER donated a Kenwood TS-120 transceiver as he is moving back to New Jersey. Doug & Andy accepted the donation and removed his 2M & HF verticals from their Royal Palm Beach condominium.

If you would like to get involved with PBPG. Please contact a club officer. They can use your help.

ADJOURN/BREAK/WORKSHOP

Marvin (KD2CK) held everyone in high suspense, describing his adventure installing and implementing APRS/GPS, in his automobile. Bottom line is that tracking his vehicle, in case it was stolen, it would be cheaper to hire a full time person to sit in the car 24 hrs. a day. A funny presentation. You had to be there.

Next meeting is Thursday Feb.10, 2000.

Broward Amateur Radio Digital Society

January 15, 2000

Attendance was up this weekend with 9 for breakfast and 10 for the meeting. Seymour did a great job on his presentation of the 8 channel A to D converter. After an introduction to the functions, he gathered data over coffee break. Then we graphed the temperature changes in the room. Seymour showed slides of the KPC-3 commands and the program that would allow the KPC-3 to store or transmit data.

Next meeting is on PSK-31. This digital transmission of modulation that is phase shift keying and only about 31 Hz wide. It can be recovered at noise level signal strengths.

Bob, N4CU

IT'S A BOY!

Logan Richard Garcia finally arrived on Sunday Feb 6 at 12:52 p.m. Logan was born weighing 7lbs 2.6oz and he came very quickly once mom knew it was time. Mother and son are doing very well and we are back home tonight.

Rich Garcia K4GPS EX: N2CZF KA2FXA
k4gps@bellsouth.net
Jupiter Farms, Florida

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Volume 12, Number 4 April 2000

Cy Harris Memorial Free Flea

Bill Manley KB4XE

Cy Harris WB4MAQ is remembered by the South East Florida amateur radio community as the organizer of the Free Flea. He was one of the "movers-and-shakers" of the Broward Amateur Radio Club BARC. Cy held office with the BARC and was an enthusiastic worker helping present their hamfest each November. When that was discontinued, his enthusiasm persisted by holding tail-gate parties, sometimes monthly, sometimes when he just felt like it. Motorola, and employee members of the Motorola Amateur Radio Club (MARC), generously supported the events on their parking lot on Sunrise Blvd. We mourned Cy's passing in 1988 but his enthusiasm continued for several years with Billy Lewis WD4NEA.

Currently Richard Block KG4CHW, with other MARC members, and Robin Terrill N4HHP present the event every 6 months. I received my reminder at the Miami Hamboree in February. Robin distributed fliers reminding locals of the upcoming March 25 event.

The cloudless, sunny Florida morning brought out the enthusiastic crowd which was estimated as 60 tail-gaters and 200 buyers/gawkers. The spirit of Cy Harris prevailed as participants negotiated their sales and purchases while renewing acquaintances and making new friends among the South Florida amateur community.

When is the next Free Flea? Probably about October, more or less.

STUART UPDATE

By Doug Welcker (WB4KGY)

Remember reading the January White Noise article about the Saturday "Murphy" struck big time while we were installing the APRS antenna and other upgrades in Stuart? Well folks we struck back and won. Our biggest disapointment was the incompatibility of the connectors we had to physically fit the transmission line. After doing a little interfacing with the site engineer we acquired four of the proper connectors for CATV line we are using which by the way is called a "625 Connector". Since this connector is only the body that fits the line we needed to improvise a way to adapt it into a standard RF type connector. Joe (K1VAO) showed me a neat trick to complete the job. As it turns out the threads of an "N" fitting match that of the CATV body and by cutting the center conductor of the CATV fitting to the proper length and soldering on the center pin you have a completed "N" male or female connector. I did find from rummaging through my junk box for "N" fittings that the threaded part actually comes in two sizes. If you go looking for connectors, you may need to look through several boxes of junk at the next hamfest to collect the correct size, which is the smaller of the two diameters.

This time you author wasn't able to make the trip to the Stuart SWITCH site but Andy (KF4ATC), John WB4MOZ), and Wayne (N4PZJ) arrived at the tower site on Friday April 17th at 0900. To test the connector installation the first connector was installed at the equipment end of the transmission line. Special tools to properly repair the line were supplied by ADELPHIA which includes coring the foam dielectric to allow the connector slip inside the aluminum shield of the line. It all worked well and looked and performed very professional. Next Wayne donned his climbing harness and scurried up the tower to the two hundred foot level and rigged the tower to pull up the tool bucket, a tri-band antenna and mount. After installing the new connector on the CATV line the APRS J-Pole was removed along with it's mount and the new Tri-Band antenna and mount were installed and connected with a jumper to transmission line. Next Wayne carried the APRS J-Pole to about the two hundred and eighty-foot level, installed and connected the line where we had the folded dipole. If you remember the folded dipole was found to match only above 160 Mhz! While Wayne was on the tower, Andy and John tested the antennas, which turned out to be a very good match. Previous to the new Tri-Band antenna, we had diplexed two of the UHF radios onto one antenna. With the new Tri-Band antenna the diplexer along with its loss has been eliminated by connecting each UHF radio to it's own antenna. This reduces system loss and increased fade margins to make the links even more reliable.

While Wayne was on the tower a replacement power supply was installed temporally so the original 35 amp unit could be brought back for repair and as a precaution the backup battery was installed in plastic battery box. The best part was Murphy took the day off and gave this hard working crew a break. And the other plus is APRS system is performing, as one would expect. We want to give our special thanks to Wayne for his many unselfish hours of hard work.

NEWS FROM THE HUDSON LOOP
TOLERANCE AND A WELCOME MAT -- AN EDITORIAL

Frank Fallon, N2FF0
ARRL Hudson Division Director
(n2ff@arrl.org)

April 15, 2000 marked an important milestone for Amateur Radio in the United States. It was the first time in over 60years that US Amateurs can operate throughout all the HF bands without having passed a Morse code test at 13 WPM or higher. In 1937 the FCC upped the code speed to 13 WPM from 10 WPM.

Many of the new upgraded hams will now be using the HF bands for the first time, and it appears there will be a lot of them from reports of crowds at recent VE sessions nationwide. They will be operating both phone and CW, and some of them won't know what life is like on HF. They may not realize that one doesn't call CQ on HF by tuning to a quiet spot and announcing that they're "Listening on frequency." They won't know much, if anything, about band plans, about nets, about working "up", or a host of other

things. They will need help, just as badly as you and I needed help when we first went on HF. They will need to learn things that have never been part of any FCC test. They will need guidance, not hostility and transferred anger from those unhappy with the new FCC license structure.

Please, oh please, be generous with your help! Be tolerant of their mistakes and be friendly and tactful when you offer suggestions for improvement. Please, put out the welcome mat for them. Let them know also when they've done something right, not only when they've done something wrong. We certainly don't wanta bunch of grouches turning them away from ham radio! It's going to be our task to Elmer them into Amateur Radio. Let's all provide them with a warm ham welcome.

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-ed)

MINUTES PBPG MARCH 2000

OPENING AND REPORTS

The meeting was called to order at 19:33hrs. by Doug (WB4GKY)

There were a lot of smiling faces in attendance this evening, everyone knew each other and introductions were suspended.

TREASURER'S REPORT

Marvin (KD2CK) advised that due to not having latest bank statement, the last statement that appeared in the *White Noise* would still be current for this month.

TECHNICAL REPORT

Doug (WB4KGY) reported that there were no "resets" or trips on the switch this month. Stuart still needs new connectors on both ends of the APRS transmission line. Clewiston APRS short range has been traced to a bad antenna connector at the top of the tower. The problem will be addressed in the next few months, when a tower climber will be installing the antenna for a low power non-commercial FM station. The prefab building, currently at Gary Meeker's, is to be installed when shell-rock fill is completed. This will move the equipment 180 feet closer to the tower. The building is to be installed in late August. The new Clewiston switch site is awaiting construction permitting which takes about 8 weeks and a second permit which will take an additional 6 weeks, before construction can begin.

OLD BUSINESS

The club still has many rolls of 7/8" hardline for sale. The club bought new connectors for the line at the Miami Hamfest. We recently obtained specs from the manufacture. We need help finding buyers.

PBPG has six packet books for lending (call Burck). Handouts for *Switches & Nodes* are on the website.

NEWS & INFO

Database emailing list has been updated. There are four different entry categories . Some "Guest List" mailings have been removed, due to non response. BARDS members have been added. To make the database as accurate as possible, the last mailing requested

from the USPS return of undeliverable pieces. For an extra charge per piece we had about fifteen pieces returned. Most were people who had moved and not updated their address. Please furnish your correct address, so we can keep the database "uptodate". We have 62 paid members, 35guests, and 136 free samples which are sent to people in hopes of gaining membership. We welcome your support.

The new Wellington Repeater is on the air; 147.285 MHz +600 ctcss103.5Hz. The 147.135 repeater on the VA Hospital has a new Allen Group DB224E antenna installed, courtesy of Andy & Marvin. Marvin took picture Andy did the work!!!!!!

Hamfest Listings:
Sebring March11
Stuart March18
Plantation March25

Good article on Winlink 2000 in March issue of QST.

We were sorry to hear that Pat Newell is in JFK hospital. The PBPG will send her a card. Pat GET WELL QUICK!!!

NEW BUSINESS

Test sessions will be held at the VA Hospital and FAU BOCA on March 11th.

March of Dimes walk will be held March29, Dick (W4FOR) needs some help. If you can help please let It be known. Walk will be held at John Prince Park. If you want to help your club, please contact one of the officers. We need you. Memberships are being accepted. Send in the for month in back of the *White Noise*.

ADJOURN/BREAK/WORKSHOP

A "BANGUP" program was presented by Rich (K4GPS). Video of Wayne (N4PZJ) climbing/installing antennas on Stuart SWITCH tower site. We were captured by the time/skill that is required to make an installation at 300+ft.

Without these guys this hobby would be in trouble. A BIG THANKS FOR YOU GUYS!!!!

Next meeting will be held April 13, 2000.
Meeting adjourned at 20:33hrs.

Broward Amateur Radio Digital Society

March 11, 2000

We had very high attendance, 15 for this meeting.

Randy, K9BCT, made a presentation on PSK-31. Randy solved the tape recorder stability problem, which prevents tape recorder playback by using a digital telephone answering box. He described PSK31 from the concept of PSK on up to a demo of programs decoding PSK31.

The next meeting is April 15th, the regular third Saturday. This being April, Carl will give the program. He says he will show us a way to reduce our FPL bill. Will it be fact or April Fool? Only Carl knows for now.

Bob, N4CU

WHITE NOISE

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Volume 12, Number 3 May/June 2000

HAM RIDES THE CREST OF THE WAVE WITH THE NAVY

Bill Manley KB4XE

Tom Kneisel K4GFG is literally riding the crest of the wave in the pursuit of his Amateur Radio hobby. He has experienced many of the operating modes and now creates a new one. Tom is experimenting with satellite detection and identification by radar. But Tom's radar station consists of standard amateur radio components and a good deal of ingenuity.

As Tom describes it, there is a government radar curtain spanning the continent at about 33 deg north latitude. The Navy Space Surveillance System (NAVSPASUR) operates CW near 217 MHz. It has been in service 24 hours a day since July 29, 1958. DOD's ARPA authorized Naval Research Lab to do it. There are 3 transmitting stations and 6 receiving stations (plus Kneisel's in Davie, FL). The transmit sites are at Gila River Az, Lake Kickapoo Tx, and Jordan Lake Al.

The signal from the Kickapoo, TX transmitter is so strong (ERP = +98 dBW, 6.3 billion watts) that it can be copied via moonbounce with only a dipole for a receiving antenna. Their antenna has a gain of 40 dBi, and is 3.2 Km long. The site consumes over 1 million KWH per month!

The NAVSPASUR system catalogs and tracks around 8000 objects. It can detect objects the size of a basketball at 2000 miles, and larger objects out to 10,000 miles.

Tom learned that, as satellites cross the curtain, they are detected, identified and cataloged by the Navy. "Well …. If they can do it, so can I", Tom figures. And so he did.

"I've detected objects as small as 14" diameter at 1700 miles distant. Many hamsats, too. Maximum range on a large object was 7000 Km. I estimate my system can determine the position of a satellite to within 1 Km accuracy after tracking for 2 days, and the velocity to within .001%.", says Tom.

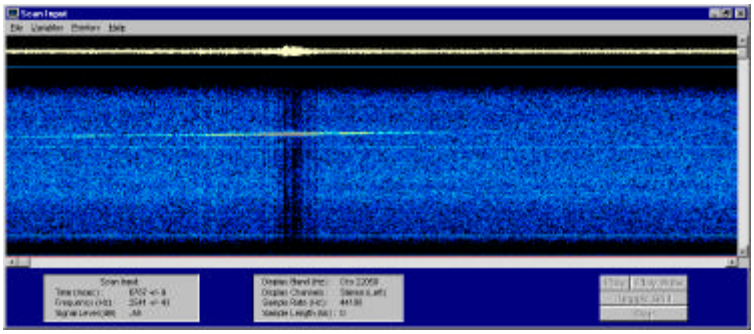
The heart of Tom's system is his KLM 14 element Log Periodic 220MHz antenna, mounted on a tower at 50', and steerable in azimuth and elevation. As a satellite passes through the Navy RF curtain it reflects a signal which is sensed by the station. The signal is detected by his ICOM R7000, mixed with a home brew 444KHz precision oscillator for calibration purposes. The receiver IF is downconverted to baseband audio which is input to his computer sound card.

Using freeware and home brewed software he precisely measures the tone and chirp (rate of change of tone) to generate the orbital elements of the satellite. From those, Tom predicts the next pass. His software can also compare the elements to a published almanac of orbital body ephemeredes and select the best fit to identify the space object. His system stands ready to automatically record the event confirming that the detected object is the object identified even while Tom is not present.

Sounds simple? Well perhaps. Listening to radar echoes on a SSB receiver is simple enough to stimulate the construction of similar stations among other hams with whom Tom stays in touch to compare notes.

As Tom demonstrated the system, during my visit, a number of satellites pinged the system. There are thousands of objects up there. He often gets several pings per minute. They paint his computer screen in real time. The display shows a spectrogram of frequency versus a moving time axis. The doppler shifted tone is visible from left to right as the satellite moves through the curtain. The vertical position on the screen is indicative of the received doppler shift of the ping.

A brilliant prolonged trace caught our attention as we chatted. "That was a big one", said Tom, as he brought up his data reduction software which ultimately identified it as an early Cosmos 2082



The system can be used in a number of modes Tom says. With orbital elements available from an outside source, it can be used to validate those elements by comparing the predicted radar fence crossings to actual measurements. It can catch unknown satellites and identify them by comparison to a known almanac which is available on the internet If orbital elements are not available, it can acquire unknown satellites and generate their orbital parameters.

Did I wet you appetite? Visit Tom's web site: http://www.gate.net/~tomk

"… and enjoy your stay in Dayton"

Bill Manley KB4XE

VHF frequency 146.94 was very busy indeed at Dayton during the third weekend in May. One-by-one, visitors confirmed directions to the Hara Arena. Parking instructions were relayed repeatedly by the Dayton Amateur Radio Association (DARA) control operator. In every case the instructions were followed by a welcoming "… and enjoy your stay in Dayton".

This was our first visit to the Dayton Hamvention. Like hams everywhere, my wife and I attended having made the trip from South East Florida to Dayton as part of a planned vacation. Lu and I quickly learned that you really cannot "see" Dayton with a single visit. It is simply too large to cover in the allotted 3 days. The indoor exhibitor booths numbered to 749 spread over 5 buildings. These alone were a challenge to visit. In addition the outside exhibitor's area numbered 4266 tables spread over the surrounding Area lot.

During the closing ceremonies the DARA officials announced that 28,500 people attended this 49th Hamvention. The vendors generously offered $80,000 worth of prizes. Neither Lu nor I were among the fortunate recipients but I did buy a new dual band HT and some software. We also attended the much exclaimed Hamvention Grand Banquet held at the Nutter Center. Local weather man Carl Nichols N8WFQ was the Master of Ceremonies. Keynote speaker FCC's Special Council for Enforcement Riley Hollingsworth K4ZDH apologized for the agencies' past laxity regarding ham radio enforcement and assured all that that policy has now changed. (Just check out 14.313 and note the absence of nonsense compared to just a few months ago - ed.) Following the banquet the Center was opened for general admission to attend the entertainment offered by the Smothers Brothers. I've been a fan of Tom and Dick Smothers brand of humor since the beginning of their 40 years in show business. I remember seeing them in person in San Francisco and since have enjoyed every performance they offered on television. During the short interval that they stopped clowning and sang I was enthralled with the quality of their voices. The Banquet was an occasion to remember. (Photo: DARA prize committee find a winner in the stands).

We had an eyeball schedule with Doug Welcker, his wife Julie and John Green set for Saturday morning. Doug is the president of the Palm Beach Packet Group and John is a Director. The three of us attended the informal get-together with Alan Waller who is the web master of the QSL.NET which hosts our web page which can be found on http://www.qsl.net/pbpg. Doug presented Alan with a donation in gratitude for the web service he provides to ham radio and to the PBPG.

(Photo left to right: Lu KB4XE/XYL, John WB4MOZ, Doug WB4KGY, Julie WB4KGY/XYL, Alan K4TKJ).

On the return leg of our 2600 mile vacation Lu and I agreed that we really did not "see" the Hamvention. We more likely viewed it. We've tentatively planned to return for the 50th Hamvention to view some more. Did we enjoy our stay in Dayton?

You bet we did!

Summer Vacations and other things

As you noticed in the previous article, key players in the publishing of the WHITE NOISE attended the Dayton Hamvention. Their absence necessitated the delay of the May issue. Thus we have dubbed this issue the MAY-JUNE issue.

There is more to come.

Vacation plans for those same people are not firmed up as of this printing. But it is all but certain that future summer issues will also be delayed and/or combined. Please be patient with us and we will be back again as the Fall season approaches.

-ed

PBPG MINUTES

April 13, 2000

OPENING AND REPORTS

President Doug Welcker WB4KGY brought the meeting to order at 19:30 hrs. All present introduced themselves, using their names and call signs.

The treasurer's report was given by Treasurer Marvin Kaskawits KD2CK. The report itself will be made available on the pages of "White Noise".

The technical committee report was given by Doug.
1. Doug, John WB4MOZ and Andy KF4ATC returned the Stuart/Vero link to 1200 baud. Several tries couldn't make 9K6 work, but they will try again in the future.
2. Wayne N4PZJ, Andy, and John spent Friday, April 6th fixing the antenna problems in Stuart. The APRS J-Pole was moved up the tower to near 300 feet and a new Tri-Band antenna was installed at 200 ft plus level. The transmission line for this antenna had both connectors replaced as well as a new jumper between the antenna and hard line.
3. Ed N9HFR who operated the Charlotte County BBS and node is interested in converting to FPAC and is working with John.
4. John got the 9K6 link working to Joel N4JOA BBS. After many months of chanting radios, antennas, and TNC's it turned out to be a bad DED EPROM in the TNC.

OLD BUSINESS

PBPG was asked by Adelphia to move to temporary shelter, and to provide that shelter during expansion to their existing facility. John, Andy, Doug and George Milhet of Channel 2 met at the site to coordinate plans. Channel 2 would help pay for some of the costs. WPB radio club volunteered their communications trailer, which was inspected with Manny W4SS. Just before moving the trailer, Adelphia said "Stand by till we call you." When we called, they had changed their mind and cancelled the construction project till further notice.

NEWS AND INFORMATION

John and Doug attended the FADCA meeting last month. Bud N0IA is working hard on the Orlando LAN. Doug WB4KGY is now the Director for District 2.

PBC Sheriff Comm Div wants to share our 2M Switch Antenna. More on this later.

The March of Dimes Walk will be Saturday, April 29th. Dick can still use some more help.

NEW BUSINESS
As listed above under NEWS, Doug is now the Director for District 2 of FADCA.

ADJOURN\BREAK\WORKSHOP
The next meeting will be Thursday, May 11th. Dick Scofield will be the temporary secretary since Burck will be out of town. Doug will discuss towers. He will also discuss Sheriff's Office re: remote receivers.

There being no further business the meeting was adjourned at 20:15 hrs.

PBPG MINUTES

May 11, 2000

OPENING AND REPORTS
The meeting was called to order at 19:30 hrs. by President Doug Welcker WB4KGY. Dick Scofield AF4OR will be secretary in Burck's absence.

The technical report was given by Doug Welcker.

Doug Welcker will be away for 2 months this summer. John Green WB4MOZ will also be away for 2 months. The White Noise may have some interruptions but Doug will get info to Bill Manley for printing.

The statement from the Credit Union was not received by the treasurer in time for the meeting. When received the report will be forward to the Editor of White Noise for publication.

Doug read a letter concerning the situation with the QRZ.NET being priced out of its current server. The letter was a request for donations to help supplement the cost of equipment and operation. As QRZ.NET provides the PBPG web page and postings of the White Noise a donation was deemed in order. A motion was made by John Green and seconded by Bob Pasquale to send a $50.00 donation. The motion passed by unanimous vote.

Field Day was discussed as Larry Lazar, Wellington Radio Club, has invited the PBPG to participate with digital modes. Anybody interested, please let Doug or Board members know.

Doug Welcker said next month's meeting will be an interesting meeting with pictures of commercial antenna sites.

Dick Schofield will talk to Larry Lazar regarding packet setup with the E.O.C. from the hospitals. Larry is the liason with communication group for the ARES group. This was requested by Marvin Kaskawits KD2CK.

There being no further business, the meeting was adjourned at 20:30 hrs. Next meeting will be June8, 2000 at the Picadilly Restaurant.

Submitted by Dick Schofield

APRIL BARDS MEETING

Bill Manley KB4XE

The meeting was opened without fanfare at 0900 by Carl W9ZGU.

He protested the perception of his traditional April presentations as being suspect and identified others' whose were even more outrageous. When the gawfaws subsided he proceeded with his a demonstration which (allegedly) demonstrated how replacement of standard light bulbs with a 24 volt version would reduce the household electrical bills. Carl had samples of each item which he adjusted to like brightness. Then, using tried and proven and beloved metering systems, he proceeded to demonstrate that the 24 volt bulb consumed less power than the 120 volt variety.

Attendees conducted themselves with an appropriate distrusting demeanor and a snickering overtone pervaded the Motorola conference room. Carl relented to the pressure and commenced with the final part of his presentation.

With the aid of an oscilloscope which monitored the voltage waveforms to each bulb he showed that the effective (RMS) voltage to the 24 volt bulb was quite different than represented by the beloved metering instruments. An enlightening discussion of the differences between RMS and average followed and commenced with appropriate applause for Carl and a job well done.

MAY BARDS MEETING

May 13, 2000

We very good attendance at the May meeting with 10 hams including a licensed XYL, Cheryl, KE4WAI.

The program started with an excellent discussion by Grant Porter, KI4CA, of a 300 foot APRS site that will be primarily funded by BellSouth.

Bill, KB4XE, and Bob, N4CU, teamed up for a program on contesting software. Both Bill and Bob entered the Florida QSO Party contest and contacted each other on the air. After the contest Bill and Bob discussed the different software they used and it may be a good subject for a program. Murphy struck the program before it even got started. Bob's floppy died just before the contest was over. Use of the floppy for automatic backups is hard coded into his program. Oh bother… But that would only make a small dent in the program. Plenty of good stuff still to show. So the Bob and Bill team started the show. For computer oriented BARDS presentations we use a LCD panel for an overhead projector. The slide projector has an automatic function that is supposed to recognize a VGA display. It decided not to be automatic. We got it to work just before the coffee break. After coffee break, Bill started his portion of the presentation. The computer decided to swallow his data CD-ROM. So that was the end of what we thought was a carefully prepared program. We did manage to describe what the programs should do.

Fortunately, we had some time to do some planning. We all know Carl, W9ZGU, is the master of hose jobs. We decided to hose the hoser. Carl likes antennas so we dreamed up a story of an antenna and propagation program and it went like this->"The originally scheduled program was on contesting programs by Bill, KB4XE and Bob, N4CU. Motorola had a visitor for an in plant seminar, K7VVV, Paul Cook. Paul has been author of the weekly ARRL Propagation Bulletin since 1990. Paul gave an excellent presentation on propagation and the advantages of different antennas during different propagation conditions."

The next meeting is June 17th, the regular third Saturday. The program will be by Al, N2EPI, on Solar Power. But don't tell Carl. He thinks we just delayed the Contesting Program Presentation. Let's see how long we can keep him hosed. I'll send out a "correction" just for him before next meeting. And when you see Carl, just think GOTCHA!

Bob, N4CU

WHITE NOISE

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Volume 12, Number 4 July, August, September 2000

WHEN AM RADIO WAS KING

Doug Welcker WB4KGY

In the last issue you got the inside scoop about the Dayton hamfest from Bill (KB4XE). Well this was my year to return to the home of the worlds largest hamfest after twenty-seven years plus or minus. Last time I was there not all of the rooms were in use by the hamfest but the swap area seems about the same. It is the kind of swap area where you just get lost for three days then you emerge with more stuff than you really wanted and can't remember where the stuff you really wanted was located. Any way I digress from where we really want to go with article.

Now lets go way back when radio was still new and exciting - yes, believe it or not way before my time. Say 1927 Cincinnati Ohio and your shinny new Western-Electric 50KW transmitter is on the air feeding a "longwire", running north to south, suspended between two 300 foot towers, 600 feet apart. Remember Powel Crosley the inventor/manufacture who made everything from radios to automobiles? Well this was his baby. His philosophy on radio was interesting as he figured he could make cheaper radios if his radio station was a powerhouse so he set out to make his mark in the AM Broadcast industry. His next goal was what makes this so fascinating - 500,000 Watts.

Now this is where things get interesting. My wife and I were invited to visit this famous transmitter, WLW, by Jim Johnson (W4JBZ) along with several others. [You may remember Jim provides us the APRS location in Clewiston on his AM tower.] The transmitter site was not actually in Cincinnati but up I-75 about twelve miles next door to the famous VOA transmitter site of Bethany, Ohio which closed down a few years back. So what is the first thing you look for when you go to a transmitter station - the antenna of course and your in for a surprise with this one. This antenna is a single, omnidirectional, double diamond-shaped halfwave tower 747 feet high. It weighs 135 tons and was built by Blaw-Knox in 1933. Now don't let this 135 tons fool you. When you add in the additional weight caused by the stress from the guy wires it adds up to 900,000 lbs on the double bell insulator at the base. This antenna looks like the diamond in the ARRL logo and has only one level of eight guy wires at midpoint. It is 35 feet wide at the midpoint where its illuminated letters " W L W " make a great site in the evening.

Now that we have found the transmitter site the tour begins with a quarter mile walk to the antenna. You follow a path along the original coax line which was home made and about ten inches in diameter. Remember this is pre 1933 and coax was almost unheard of as everyone use open wire transmission line. At the end of the line is a little building which contains the matching LC matching hardware. These capacitors and inductors had to match the 50 ohm line to the 260 ohms of the tower and not arc. Can you imagine a building for your HF match box?

It is getting toward dusk as we gather back at the transmitter building. Try and imagine this. It's the late 1920s - you approach the red brick building - walk up the wide steps to the ten foot double doors. This place kind of looks like an old court house that you would see in the center of town - like Arcadia or LaBelle here in Florida. The door opens and your instantly back in the early thirties. Ever have you wife drag you to one of those old antique stores - remember how the have that smell of OLD and you don't really want to touch anything because the dust is so thick you didn't want to disturb it? Well you have just walked into the operating museum of WLW. This building has five generations of transmitters on site. On your left stretching for 35 feet is the original 1927

model Western Electric 7a 50 kW transmitter. This is the original 50 kW transmitter that WLW put in operation in October1928. This transmitter has been maintained through the years and on New Years Eve the transmitter was brought back on line to bring in the year 2000.

And ahead standing larger than life was what we all had come to see. 500, 000 watts vintage 1933. The total height of the transmitter is 15 ft tall by 54 feet wide with a catwalk running the full length. Some controls and metering were below the catwalk while most of the metering was above the access doors along the catwalk. WLW began construction of this new, first-of-its-kind 500,000 watt facility with the approval of the FRC (Federal Radio Commission). A new $400,000 RCA 500 KW transmitter. A 75 feet square, concrete lined pond was built in front of the building for transmitter cooling. Water was pumped through specially designed, water cooled tubes, through a heat exchanger then out through fountains which sprayed the water into the air and into the pond. On January 1, 1934 the FRC authorized WLW to use 500,000 watts on an experimental basis using the call W8XO. As this station operated under a **STA** from the FRC it was assigned an experimental call sign thus W8XO. On April 17, 1934 the FRC issued a license to operate at 500,000 watts during regular hours under the WLW call letters**.** Finally on May 2, 1934 WLW began experimental 500 KW broadcasting as Mrs. Franklin D. Roosevelt threw the switch at the White House desk in Washington D. C. Some saw the WLW call letters as signifying "Whatta Lotta Watts".

Some more interesting facts - there were 17 daytime technicians to keep the transmitter running. A note from the operators log on May 2, 1934 : PA voltage of 11.7 Kilovolts with a PA current of 65 Amperes, which yields a DC input power of 747.5 KW. Antenna current was 72 Amperes. Starting in early 1938 WLW used the air slogan "The Nation's Station". (With power like that I would think so as it was the only AM broadcast station to operated above 50 KW). From the basement you can view the pluming for the water cooling. There are hundreds of feet to glass tubing filled with distilled water used as an insulator from the high voltage. You really have to be there to appreciate the scope of this operation. But since I know not all of you can, check out the Web Site by Jim Hawkins, http://hawkins.pair.com/wlw.shtml for some incredible pictures not only from today but original photos and page through the original manual. Jim includes lots of history in detail on this station but has listed information on many of the famous and not so famous AM & FM stations around the country. Unfortunately all good things must end. On February 28, 1939 WLW reverted back to 50,000 watts of power, ending the superpower experiments, except for the W8XO experimental license, allowing 500 KW operation between 12 midnight until 1:00 AM, which remained in effect until December 29, 1942.

So what does this all have to do with Digital Communications. Well, during W.W.II this station had a modification made to it's reference oscillator to give the station a very narrow shift FSK capability. This was a very secret operation where many AM stations around the country would demodulate an adjacent stations FSK and rebroadcast. Talk about a set of digi-peaters. This gave the Army a backup nationwide communication system.

The officers of the PBPG with their packet address and phone numbers are:

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Breaking News

Doug WB4KGY

As of this afternoon, August 15th, the Palm Beach Packet Group has a new antenna and transmission line replacing the original equipment at the ADEPLHIA site on North Lake Boulevard. Check you S-Meters and let me know is the signal strength is better or worse. Check the next issue of White Noise for the full story.

The Good Old Summer Time

It's summer time again and the key people charged with the responsibility to publish the White Noise have flown the coop again. Much of the copy for this issue was originated by President Doug WB4KGY while vacationing on the Pacific Coast. Copy for the White Noise is passed to key people between Broward and Palm Beach Counties through the internet. This time it was transcontinental.

For the rest of the summer those who perform the mechanical duties to publish the White Noise will be unavailable. We expect to product the next issue sometime around October.

In the meantime we wish all to have a happy and restful summer. And, if you travel please drive safely. - ed.

PBPG MINUTES
June 8, 2000

OPENING AND REPORTS

The meeting was called to order by President Doug Welcker (WB4KGY) at 19:30 hrs. All attendees were acquainted one with another and needed no introductions.

The Treasurer's report was not submitted in time to catch this edition of "White Noise" as a result of Marvin's (KD2CK) being on vacation.

The Technical Committee report was given by Doug.
1. The Technical Committee has not needed to visit the local switch by reason of lack of need. The switch has not needed service in approximately 3 months.
2. Andy (KF4ATC) did the final installation and adjustment of the Veteran's Administration Packet Radio Equipment.
3. Andy has built radio harnesses for the Orlando Lans new MITREKs.
4. Andy has started looking into testing Motorola MOSTAR radio.

OLD BUSINESS

A check was cut and delivered to QSL.NET at the Dayton Hamfest to cover expenses incurred in creating and maintaining our web pages.

PBPG has six Packet books available from the lending library. Please see Burck.

Handout for SWITCHES & NODES are available at the web site - www.qsl.net/pbpg.

NEWS & INFO

"White Noise" is at the printers. Look for it in your mailbox within two weeks.

The Dayton Hamfest was fantastic. If you have never been, you really should give it a try sometime.

NEW BUSINESS

There will be a summer break for the meetings – no meetings for July, August and September. Many of our members will be gone much of that time.

Larry Lazar (KS4NB) of the Wellington Radio Club has invited the PBPG to participate in Field Day with Digital Modes.

If you would like to get involved with our club, we could certainly use your help. Please notify Doug or any of the officers.

Memberships are being accepted this evening by Burck in the absence of Treasurer Marv Kaskawits.

ADJOURN/BREAK/WORKSHOP

The workshop was photo identification by infrared of different types of antennas with emphasis on failure modes.

The next meeting will be held on Thursday, September 14th. The meeting was adjourned at 20:30 hrs.

Burck Grosse (KC4UEV)
Secretary, PBPG

Broward Amateur Radio Digital Society

June 17-July 15, 2000

June 17th Art, N2EPI, gave us an excellent Solar Power presentation. He covered what is available in the way of panels and what to watch out for. He told us how to calculated our requirements to size a panel and what kinds of panels to use. The question and answer session was very interesting. Art proceeded to prove he knows what he is talking about by providing the solar power for field day contacts the following weekend.

July 15th Bill, KB4XE, gave a program on the Maxon antenna for 6 meters. This was an EZNEC simulation on the Field Day version described in the June QST. Bill bought WinSmith and EZNEC at the Dayton hamfest and used the two programs to learn about antennas. We got a look at the screens from both programs plus an insight into the design of a very easy to build gain antenna. EZNEC says this antenna will have about 10 dBi 10 feet over ground, about 5 in free space. The pattern is

interesting. Al, K4BVL, built a Maxon designed 2 meters from the January issue of QST and brought it for demo purposes. He says it is an excellent performing antenna.

The July meeting Q and A touched on some of Art's program about taking care of batteries used for emergency purposes. Batteries can generate internal gas that can push out fluid. We discussed various ways of preventing this. On solution provided by Seymour, KC4NMY, was a battery cap that replaced water. It is made by Hydro Cap in Miami, 305-696-2504.

In several meeting we have fumbled trying to use the LCD Panel with the Overhead Projector. We may have figured out how to use the panel to best advantage. This will help making future presentations easier and better for the attendees.

The August19 program will be by Jesse, KG4GEG, about keeping your hamshack and mobile atmosphere healthy.

73, Bob, N4CU