



The VHF Transmitter



Keystone VHF Club, Inc. W3HZU Founded 1955 – York, PA

VOL 47 No 9

CIRCULATION 160

September, 2001



Sept 2001
CALENDAR

Edited by Bob Gundlach, N3NBT
n3nbt@aol.com

- Sep. 1-2 All Asian DX Contest-
phone
- Sep. 3 Labor Day
- Sep. 4 Hilltoppers ARC meeting
- Sep. 5 SPCG ARC meeting
- Sep. 6 Keystone VHF ARC
meeting-club site
- Sep. 8 Hamfest-Bartonsville, PA
570-424-0845
- Sep. 8-10 ARRL Sep. VHF QSO
Party
- Sep. 9 Grandparents Day
- Sep. 13 Keystone VHF ARC
E-Board meeting
- Sep. 15 Hamfest-Schnecksville, PA
610-261-1121
- Sep. 15-16 VE Exam-York, PA
717-292-3529
- Sep. 15-16 Hamfest-York, PA
717-764-8193
- Sep. 17-23 Special Event K2BR
Miss America Pageant
- Sep. 22 Autumn begins
- Sep. 23 Hamfest-West Friendship,
MD 410-465-6324
- Sep. 27 Yom Kippur
- Sep. 29-30 CQ WW RTTY Contest
- Sep. 30 Hamfest-Bowie, MD
301-345-7381

On The Bands

By Dick Goodman, WA3USG

It's been a long, lonely, Summer up at the Keystone VHF Club. Normally, activity is lacking in the months from June through August but this year has been the slowest since I've been a member of the club ... and that goes back to 1983. There's a lot that competes for our time these days. Kid's need to be taken to their sporting events, houses need maintenance, vacations are taken and Summer projects are in full swing. Lots of things need to be done. Hopefully, activity will pick up once the first glimmer of Autumn arrives.

Bob Riese & I have still been involved in all manner of nerdy stuff! The end of Summer should yield an atmosphere not quite so full of radio noise and static crashes. All kinds of neat things are happening on the LF bands. The pond has been crossed on 136 KHz ... but it's taken computers and Digital Signal Processing to do it. It seems every month that a new version of Spectral Analysis software is released that dives deeper & deeper into the noise floor!

Has anyone here ever heard of "Mechanical Television?" Back in the 1920's and early 30's, there was a system created to broadcast television that was based on mechanical technology. It used electric motors, spinning disks, and flickering neon tubes. The TV receiver of this day looked like a Rube Goldberg contraption ... there were a lot of moving parts! If you would like to learn a little more about the history of this early TV, check out <http://www.nbtv.wyenet.co.uk/> on the Web. While this system was vastly inferior to the electronically scanned television that we have today, it has one big advantage it can be extremely narrow in bandwidth. So narrow in fact, that a real time, moving image may be transmitted in the space of a single voice channel ... yes TV could be sent over the FM repeater! This is not Slow Scan television (SSTV) Narrow band TV (NBTV) is a mode by which several low resolution frames are sent each second. If someone waves at you ... you actually see them move their hand. You don't get this on Slow Scan TV. It doesn't take a room full of electric motors, spinning disks, and finger eating gears to do this either. All the hardware has been replaced by a computer program (FREE). If you have a PC with a soundcard and a cheap internet camera (available at Staples for \$40) then you can send and receive NBTV! Bob Riese & I have been experimenting with this mode over the last few days. While it doesn't offer the clarity of modern broadcast TV, it's fun and a real education in history! Another really cool thing about this mode since the picture is sent at an audio rate, it may be recorded, saved, and "replayed" on a simple audio cassette recorder. Some of the earliest NBTV broadcasts have been discovered saved on old 78 RPM records ... truly a "look" back in time! (see inset on page 3)

Please don't forget the York Hamfest that is coming up on the 15th and 16th of September. While this isn't sponsored by our club, it is organized by several of our club members for the purpose of keeping the tradition of the York Hamfest alive ... a very noble cause! In addition, our club makes much needed operating expenses by selling food at this event. If at all possible, please volunteer some of your time to help. Lots of jobs are available ... Speak to either John Shaffer, W3SST or Ray Shaub, W3AXC. The small, local Hamfest seems to be becoming a dying breed ... let's keep this one going!

That's about it for this month. I wish that I had more to tell you. The Pig Roast and Corn Roast were reasonably well attended. I think that everyone had a good time. Club work parties have not been well attended. I think that this has been disheartening to our trustee's who devote so much of their time to keeping the club looking and functioning well. We will need at least one or two work parties to get the club ready for Winter. Please try to attend one of these ... **and finally, nominations for club officers will be held soon ... please consider running for one of the club offices. Give us your ideas and share some of your expertise lets keep the Keystone VHF Club a growing, dynamic organization**

NEXT MEETING
September 6th, 7 PM
at the Club Site
 (last club site meeting
 this year)
Spaghetti Dinner
Served !!!
Don't miss this one!



From the President
 By *Ruthanna Pearson, WB3CQN*
 wb3cqn@aol.com

The corn roast was good, lots of food and good company and weather, I realize summer is passing us by so fast, and many of you have vacation planned etc. those of you who missed this corn roast we hope will be able to make the next one!!!

Again we ask for people to help with the work parties and not to many made it, please guys it is so important we get this work completed!!!

The Hamfest is coming up and this is a money maker for our club be sure and come out and help let Joe KE3YR when you can help!!!!

This next club meeting at the club will have spaghetti made by our CHIEF DICK GOODMAN and helpers please plan to attend. This is the Sept. meeting.

**ARE YOU A MEMBER OF
 THE ARRL?**
Now more important then ever!



**Way's & Means
 Committee
 Report
 By
 Barb Green, N3RMI**

Committee met on 8/29/01 up at club site to stuff envelopes for Nov. Turkey Raffle. Marie Hagens brought the baskets for the Longeberger Basket Raffle. All tickets will be handed out to the members at the Sept. meeting. We are hoping to sell as many as we can. We need the support of you, the members, for this project. Please see Joe McLaughlin to sign up to help at the Ham Fest with the food concession!

Barb Green, N3RMI, Chairperson

Cookbooks

I would like to thank everyone who sent recipes for cookbook. Also thanks to Donna Lee N3VPJ and Joe KE3YR for helping me put cookbook together. The cookbooks are ready for sale at \$7.00 each. They will be available at club meetings and also at York Hamfest on Sept 16. They will make nice Christmas presents. Contact Charlotte N3URR or Barb N3RMI to order your books if you can't come to meetings.

73
 Charlotte

Any newsletter articles will be very cheerfully accepted by Dick Goodman, WA3USG at E-Mail: wa3usg@compuserve.com

The VHF Transmitter

published monthly by the

Keystone VHF Club, INC

Editor: Dick Goodman, WA3USG

ADDRESS LETTERS TO THE EDITOR and ARTICLES TO

DICK GOODMAN, WA3USG Voice: (717) 697-2353
 199 MAPLE LANE e-mail:
 MECHANICSBURG, PA 17055 wa3usg@compuserve.com

Printed Hard Copy & distribution via Internet by
 WA3USG

To change your address for the Newsletter, contact: Dick Goodman, WA3USG
 199 Maple Lane
 Mechanicsburg, Pa.
 (same as above)

Have you paid your Dues ?

Your club membership dues for the year 2001 are still due and payable.

(Just in case that you forgot !)

Full Membership only \$20.00
 Family Members still \$ 5.00
 Full members under 18 \$10.00

See Make checks payable to: Keystone VHF Club
 or for same day service send check directly to:

Sandy Barefoot
 3040 Muirfield Dr.
 Dover, PA. 17315



BOB'S TECH TALK

ELF
LF
HF
ATV
ANTENNAS
SSB
SECRET
STUFF!

By Bob Riese, K3DJC
riese-k3djc@juno.com

There has been a lot of activity over summer on the part 15 experimenters band. The Europeans have continued working DX on 136 Khz and in fact there has been openings and signals have made it across the Atlantic. The other interesting happening is in the 160 to 190 Khz band, the ARRL is petitioning the FCC to allow amateur operations here and this should make for a real DX band... if we ever get it. Now it is populated by the US Lofers and Ham operations in Australia. Lofers are the part 15 users that run beacons , mostly over the winter on these frequencies. Last year the Slow CW mode became very popular and really increased the DX on this band . Remember Lofers are allowed to run 1 watt input to the antenna which can be only consist of a 50 foot radiator. This translates to perhaps a milliwatt ERP at best. The latest note is probably reception of a US Lofer in New Zealand. This Lofer was running 10 second dots and the reception was at best a lot of guess work but points out the potential of these frequencies for a fun band. I can see lots of activity and real DX if we are ever allowed to run more power and have better antennas.

I would imagine that if we get these frequencies we could see stations on the air with several watts ERP. Remember that a wavelength at 180 Khz is 1730 meters so no matter how much power we run the antenna will be the limiting factor. How much wire can you get up in your back yard HAR! Never the less, I believe from the work by the guys that run beacons on 160 to 190 contacts should be routine up to several thousand miles and when the band opens up who knows!

If you listen on a good nite, you can hear aircraft beacons in this frequency range through out the US and Canada . Most of these are low power in the range of 25 to 100 watts. The one watt beacon I have, has been copied out 30 miles or so and that was transmitting into a very poor untuned antenna . From a very noisy location I have copied Lofers on 180 Khz out 500 miles or so. The bottom line is if we ever get this band it should make for some interesting hamming.

If you want to work Europe you will have to do it on 136 Khz. The Europeans have many AM radio stations in the 160 band and don't have this as a Ham band so all of there interest is at 136 and 73 Khz.

I started to say there has been activity over the summer on the Part 15 bands and what has made this summer interesting are the folks that have put beacons on the 13.5 Mhz band. This is just below 20 meters. Folks there are limited to around 1 mw ERP. I have copied stations here and am always amazed how a little RF will radiate when propagation allows it. I have included a QSL card from Dex for the reception of NC on 13.555.

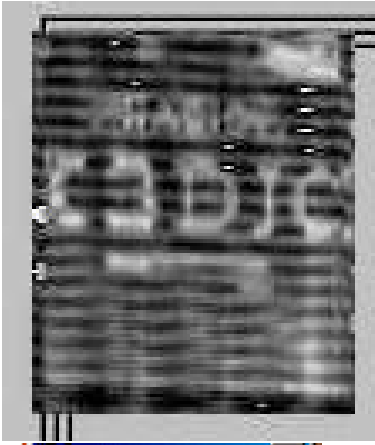
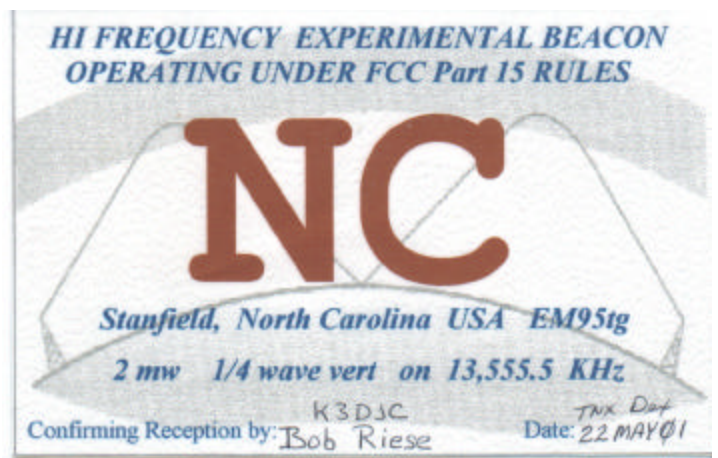
he was one of the first stations to use this band and has been copied all over the USA .

*** Note Dex is running 2 Mw to a quarter wave vertical.

Most of the beacons run Slow CW but some alternate between QRSS and regular speed code. The problem with QRSS is the amount of QSB that can be present on 13.5 and the signal may fade out before a complete call is received. Using 10 WPM CW there is enough time to receive the call before the signal fades.

13 to 14 Mhz is an interesting place to hang outas there are coded stations sending the same phrase on SSB over N over and this spot is a favorite place for undercover operators to. receive coded Messages.

Sitting here at Noon writing this article and tuned to 13.3333, I can hear the occasional Propagation sounder firing up and putting out what sounds like a series of popping noise or could it be ET calling home??



From Page 1

These two images give you an idea of what to expect on NBTv. The top image is Bob's call sign as received from one computer to another. This is what you could expect to receive. The bottom image is of me. This is the "preview" mode of the program and is what I see on my screen when I transmit. The computer encodes this image to 30 lines of video. By keeping the number of scan lines low, you limit your resolution but make possible the narrow bandwidth. Keep in mind that modern broadcast TV is 525 lines of resolution!



**Keystone VHF Club
General meeting Minutes
of
2 August, 2001
By Charlotte Markley, N3URR**

Meeting called to order at 19:15 by Ruthanna WB3CQN. 32 members present.

SECRETARY'S REPORT:

Charlotte N3URR, Minutes approved as appeared in newsletter.

TREASURER'S REPORT:

Sandi N3NCF, Balance in Certificate of Dep.	\$2,217.12
Balance in First Capitol Acct.	\$2,919.57
Balance in Merrill Lynch Acct	\$4,387.17
Total Cash and Bank Account	\$9,523.86

NEWSLETTER REPORT:

Dick WA3USG, change printing method for newsletter that is sent out by mail.

WAYS & MEANS REPORT:

Barb N3RMI, Cookbooks are available for sale, \$7.00 each. (250 books) Longaberger Basket raffle tickets will be sold, \$5.00 for 3 chances on one ticket. Tickets and Cookbooks will be sold at Hamfest.

Joe KE3YR will print tickets for Basket Raffle
Dick WA3USG will print tickets for Turkey Raffle.

RACES/ARES REPORT:

Chip W3FJD, Bike-A-Thon at Gettysburg great success. Ask us to do again next year.

NEW BUSINESS:

Dick WA3USG will be in charge of spaghetti dinner for Sept. meeting at club site.

50/50 drawing won by Joe KE3YR
Good of Order
Final Announcements
Meeting Adjourned at 19:45

Enjoy Breakfast Out ?

The club now holds two (2) Saturday morning breakfasts. The first starts at **7 AM at the "Round the Clock Diner" on route 30**. This is for you early birds or club members who will be attending work parties up at the club site. Our second breakfast is held at **9 AM at the Shiloh Family Restaurant right along Route 74 in Shiloh**. It's for those of us who like to sleep just a little later on Saturday mornings.

**Keystone VHF Club
E-Board Minutes of 9 August, 2001
By Charlotte Markley, N3URR
Secretary**

Meeting called to order at 19:15 by Ruthanna WB3CQN. 9 officers and 4 committee persons were present.

SECRETARY'S REPORT:

Charlotte N3URR, Minutes read and approved.

TECHNICAL REPORT:

Tim AA3BJ, work party at club site August 25.

CONTESTING REPORT:

Gene A3DE, VHF contest on Sept. 8, 9. Need help.

WAYS & MEANS REPORT:

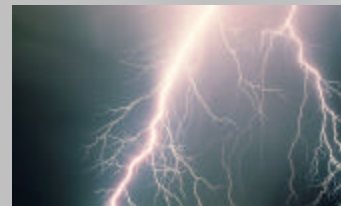
Barb N3RMI, next meeting Aug. 29 at club site at 7 p.m. Will get tickets ready to mail for Turkey Raffle.

Meeting was held at home of Tim AA3BJ and Sandi N3NCF. Picnic followed meeting. Thanks Tim and Sandi.

Meeting adjourned at 19:35

**TRUSTEE'S
REPORT**

*By Bob Gundlach,
N3NBT*



I think the club site has seen less use this year than any previous year that I can remember. Seems like interest in the facilities left with the passing of our fellow members Charlie Spencer and Bill Hurst. There were not many days that one or both of these two were not to be found at the club.

If the sign in book is any indication, there is frequently a week or more at a time when Bob Secrist is the only one at the club, and as one of the trustees, he is there to continue working away on the seemingly never ending list of chores to be done.

It is indeed a shame that with the pavilion and all of the radio equipment that the club owns, these facilities do not get used more than they do.

I know that there are times that I, as a trustee see little value in my taking of my valuable time to go to the club and mow lawn or do other chores around the buildings and grounds when no one comes around to see the fruits of my efforts.

I realize there have been discussions on previous occasions about members having access to the facilities, and I do not plan discussing those issues again at this time, but I will offer to work with any member who shows a genuine interest in taking the necessary steps to be placed on the admission list to the club building.

It is your facility, so why not make use of it.

Bob Gundlach-N3NBT

A HISTORY OF THE KEYSTONE VHF CLUB

CHAPTER FOUR

THE SIXTIES A DECADE OF CHANGE FOR THE CLUB *By Ray Shaub, W3AXC*

January 1960 finds the club still meeting at the York County Courthouse. We had settled into the one meeting per month routine. The second meeting of the month fell by the wayside sometime before this but we were still holding transmitter hunts on an irregular basis as a second monthly activity. I remember that the activities committee had a contest going were each month there was a mystery station. I don't remember the details of the contest but some club member was designated as the mystery station and if you worked that station and found that they were the mystery station you won a small monetary prize at the next meeting.

The club at this point had about 60 to 65 members. It is interesting to note that the nominating committee had no problem with coming up with at least 3 members to run for each club office. Some offices had as many as 5 candidates. Today in the new millennium and for the last decade of the last one the club has had trouble finding even one member willing to serve in a club office. What has changed, are we too busy in today's world to serve the club? It seems we can still get a crew out for a work party at the club, but nobody wants to be an officer.

As my title for this chapter states the sixties was a decade of change for the club. As you will see the club met its first crises that crippled the membership. We still met at the courthouse but the work on the clubhouse had begun and the footer was dug in June of 1960. I might point out here that Bob Riese K3DJC brought to my attention that the second hand cinder blocks came from a wall at the Zinn's Quarry that had been used to hold drums of tar. He mentioned that the tar had to be cleaned from the blocks before we could use them.

Before the end of 1961 we were meeting at the new club house. The first meetings were held outside during the summer... A rather fortunate turn of events brought Walter Guise whose call I can't remember into the club. Walt had an oil burner installation and repair business and that's how we wound up with a used oil burner heating system in the club building. A special room was constructed outside behind the building to house the furnace and the heat was "piped" into the building through a duct running down the center of ceiling of the room.

During the 1960's we had speakers at many of our meetings. Ed Neil W4ITO who was editor of the "GE Ham Tips Newsletter" was a speaker at one meeting. An attorney Mr LeCates was a speaker on Parliamentary Procedures. An engineer from the McCoy Crystal Factory gave a talk on the manufacturing process of crystals as used in crystal filters. We also had a plant tour of the McCoy Crystal factory at Mt. Holly Springs. After the tour, I remember that some of us were handed applications for employment. I don't remember if anyone signed up or not.

The very first corn roast was held in August of 1962. After a transmitter hunt the whole gang met at the summer cabin of the Shaub Family near Lewisberry. This was the beginning of the annual corn roast a tradition that is still celebrated to this

day although it had been shelved sometime during the late sixties.

The club trustees and officers drew up a set of rules for use of the club building. Any full member in good standing and 16 years of age or older was issued a key to the door of the building. The set of rules was posted on the wall at the club building.

We began looking for a second tower possibly a "crank over" or "crank down". Type that wouldn't have to be climbed. We found that a 40 or 50 foot tower like that would cost in the neighborhood of \$300. A sum the we didn't have and so we decided to put \$100 of the club's money in a "Tower Fund" and then ask for donations from members. After several months of looking for a suitable tower the idea was tabled and we thought about the purchase of a Gonset G50 6 meter transceiver instead.

The club did purchase a Gonset G-50 a 10 watt six meter AM transceiver. This rig was the standard for comparison in those days. It was the pride and joy of all the members and we couldn't wait to use it in the next VHF contest. However shortly after it was installed at the club it was stolen. We didn't have insurance and so the club took a loss that we couldn't afford. We never found out who had stolen the rig but we were sure it was someone familiar with the club, someone that knew the Gonset was there, we hadn't had any trouble with break in's until that time. I might mention here that break in's and stolen equipment plagued the club for years, even with an alarm system and a watchful police department. Every time a new piece of equipment came into the club it was stolen. Finally we couldn't leave equipment at the club. We kept it at members homes and only took it to the club for contests or to change the member that was protecting it.

It was about this time that the Clegg Laboratories in Lancaster County was running a VHF/UHF on the air contest and the Keystone Club won a top prize which was to be a state of the art "Clegg Interceptor Receiver" As I remember Ed Clegg kept stalling for one reason or another and as it turns out the club never did get the receiver. I know we approached the subject with Clegg on several occasions but to no avail.

This is when the first big downturn in Club membership occurred. As I had mentioned in a previous chapter the Bendix Engineering Department had contributed many members to the club. The vast majority were new hams that had passed the Technician Class License. The entry license for those wanting to operate on the VHF/Uhf bands. The most unfortunate occurrence happened on February 13, 1963 a date that will live in infamy. The Bendix Corporation lost a contract that had been in the offing for almost year, many engineers and technicians had been hired to staff the project team. Unfortunately when the 90% layoff came many of those that were let go were members of the Keystone Club.

There were not many industries that needed the expertise of electronic lab technicians and engineers in this area. Some members went to the "Navy Plant" but many left the county and there went the club membership.

... *Continued next month*



The VHF Transmitter
C/O: Dick Goodman
199 Maple Lane
Mechanicsburg, PA.
17055

DATED MATERIAL



**CLUB
REPEATERS
FM
IN/OUT
29.580/29.680
52.97/53.97**

**146.370/146.970
TONE 123.0**

**442.275/447.275
ATV
426.25 IN
439.25 OUT
923.25 OUT**

**PACKET 145.090
PBBS W3HZU-1
KA-NODE W3HZU-7
W3HZU-8
(Digi, Alias YORK)**

**Keystone VHF Club, Inc. W3HZU
P.O. Box 7462
York, PA 17404-0462**

CLUB WEB SITE: In process by Peter Carli, KA3QXE

CLUB SPONSORED NETS

All Nets: 146.97 (-)

**MON 8:30PM York ARES/RACES Committee
MON 9PM York County 2-Meter Net
TUES 8PM ATV Net (146.970 for audio)
WED 9PM Quarter Century Wireless Assoc.**

**Club meetings are held on the 1st Thursday of each month
at the Cyber Center or Clubsite in Summer, York, PA**