Apr 1985

LETTER FROM THE PREZ:

Whew! What a hectic month. The last of the major contests are over and all the antennas stayed up this winter. Now it's time to start planning for field day.

Concerning last month's meeting and newsletter I would like to make a few comments. Tom's (WA3VFW) FT726R multiband HF, VHF and UHF rig sure looked good for someone wanting to get into OSCAR. Sorry I couldn't give advance notice about the N2AA film or his huge contest station. You have to show up at the meetings to see everything that's going on.

With regret Mike Bonnelli will no longer be publishing the club newsletter. The club has also received a bill from Mike for the cost of his materials since November '83. This matter is being addressed by the Club Officer's an Board of Directors.

The format on this month's newsletter will be followed until we can find another printer. If you know of someone please contact me.

Don't forget Ladies Night on March 30th. Contact Diane, N3BHF.

See you at the April meeting..... []

Tony, K3ZUF

APRIL MEETING TO FEATURE PACKET RADIO DEMO

The meeting of the Delaware-Lehigh Amateur Radio Club on April 4, 1985 will feature a demonstration of Packet Radio by Tom Stewart, K3TS. Tom has demonstrated this new mode of communication to amateurs in many organization will bring his entire Packet radio setup to the meeting for a full presentation.

Tom, one of the more knowledgeable amateurs in computers and bulletin boards will be able to contact other Packet radio stations from Harrisburg to Washington.

Because of the large crowd which will probably attend, please make sure that you fill up the seats all the way to the front of the room. []

SECRETARY'S REPORT
(Little Bo Beep's Corner)

Although April is the month that begans with a FOOL, it is also the month that ends up with the Dayton Hamfest. Waiting for the Dayton Hamvention is not foolish! It is the largest "Ham" flea market you'd ever want to see! See you there!

Last month we welcomed our new Kenwood TS430 equipment to the Club. Barry, KU3X, gave a careful demonstration on operating the rig after the meeting. Because of the new equipment the club now owns the membership voted on going with insurance through the ARRL. This would cover everything from damage or theft at replacement value! Not bad to check into for personal equipment!

Ladies Night plans were finalized by Diane,N3BHF for March 30th at the East Lawn Fire Company in Nazareth PA.

Clarence, W3PYF, reported that the DLARC Banquet will be held Saturday, JUNE 8th, starting at 6:00 PM at the Candlelight Inn on William Penn Highway near Easton. All members were urged to attend for a great night out.

As everyone can hear, our new repeater controller is off and running on list of fast dial emergency access numbers for Northampton County, Blue Mountain Control & Lehigh County. Any club member outside the Nazareth calling area but service by Bethlehem will be given as auto dialing box free of charge to call their home phone long distance. There will be other auto dialing boxes for a rental fee of $3.00 a year for members who want speed dialing or unlisted numbers.

It was decided the DLARC would join in as a sponsoring club of the PA QSO Party with other Pennsylvania Clubs and award a plaque for the contest.

It was announced three (3) club members Ron, K3LPR, Don, W3LR, & Clarence, W3PYF would be represnting the DLARC in the newly formed ARRL Frequency Coordinating Committee.

We had an interesting demonstration by Tom, WA3VFW and his Yaseu FT726R satellite transceiver, and closed the meeting with a film about a Ham Station made in Heaven!

Oh well. That's enough to make you dream on!

de Sandy, KA3LBP

AUTO-PATCH BOXES FOR OUT-OF-AREA MEMBERS

It is important that any member, who had patch access under the past Bethlehem exchange, contact W3LR and give him your phone number and name so that it can be entered into the new controller. It will give you a chance to call your home, regardless of where you live. First chances are given to members who have lost auto-privileges because of the change. When these have been serviced, a chance will be given to those members who may live in other areas.

***** KEEP IT CLEAN *****

After the last meeting, when we were putting the tables back in the room, we found empty soda cans on the floor as well as other debris. Please keep the place clean, the place has just been completely scrubbed and the carpets cleaned. Remember, we are the guests of EMA, lets not louse it up.

The tables must be put back after the meeting, please don't wait for the same people to do all the work in returning the room to the condition it was in when we got there. []

Clarence, W3PYF

MORE NEWS ON THE FOLLOWING NEXT MONTH

New Repeater
Field Day
Picnic
Contests

MARCH MEETING SPEAKER

The demonstration by Tom Luisser, WA3VFW, was a big hit at the March meeting. The full house saw a great demonstration of the capabilities of the new Yaseu rig made for Satellite Communications. To Tom, thanks for a job well done. We will be waiting with baited breath for a combination of the meeting of March and April when the unit demonstrated is connected to a Packet radio set-up, can you imagine the potential? []

MISCELLANY

The Houston FCC office has fined two unlicensed individuals $2000 each for illegally using a Phone Patch on the 2-meter repeater input frequency of 144.79 MHz last Dec. and Jan. The fines have not yet been paid and will be routinely turned over to the U.S. Attorney for collection if necessary.

Using data gathered from the CALLBOOK and the FCC, N6RJ Jim Rafferty, tracks the number of new amateur radio licenses issued monthly versus last year by the FCC. He says "..looks like the VEC Program is working!" []

ANNUAL DINNER

The time has been set....The reservations have been made....The menu has been chosen....even the date - JUNE 8 at the Candlelight Inn, William Penn Highway, between Easton and Bethlehem.

W3PYF, probably the oldest timer in the club according to K3ZUF is chairman of the dinner and we will try to invite as many of the original members of DLARC to join us this year at the dinner. Oh, yeh! the price, $12.50 each or a special of $25.00 per couple. Dinner will be selection of Top Sirloin of Beef, Chicken Cordan Bleu, or Broiled Flounder. A cash bar will precede the dinner beginning at 6:00 PM with the meal beginning at 7:00 PM.

Get out your girl friends, boy friends and even the wives and join us for a fun filled evening on JUNE 8, 1985.

Reservations should be mailed with a your check - made out to the DLARC - no later than MAY 30th and mailed to Chairman, Clarence Snyder with your choice of menu. []

Clarence Snyder, W3PYF
717 Porter Street
Easton PA 18042

ATTENTION MEMBERS

DID YOU RENEWAL YOUR MEMBERSHIP?
If not
This is your last copy you will receive

RENEWAL DUES ARE $12.00

ATTENTION WRITERS - DEADLINE APRIL 15, 1985
for MAY ISSUE

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KEEPING ANTENNA MOUNTS MAGNETIC

Carl Zelich AA4MI

Dropping and banging magnetic antenna bases when installing and removing them gradually causes them to lose their magnitism. It disorients the internal magnetic bipolar elements. Thus, the magnetic flux strength declines.

Secondly, when a magnet-even a so called "Permanent" magnet-is left laying around without a "keeper", the magnetic flux lines reach out to grasp other ferrous materials.

A "keeper" is generally a soft iron piece which provides a bridge between the poles for the flux lines to follow. This convenient path allows the magnetic lines to concentrate and confine themselves to the keeper.

The solution to these problems is simple. Go to the electrical department of a hardware store and purchase a round or square electrical box cover. This is just a flat piece of metal usually used for covering a junction box.

Place this "keeper" onto your magnet before putting the antenna inside the car or when storing the antenna for any length of time.

For about 50 cents for a keeper you can avoid spending $50 for a new antenna! And best of all, there is no work involved. []

NORTHAMPTON COUNTY EMA NETS

The Northampton County Emergency Management Amateur nets meet twice weekly on Wednesday at 1900 hrs and Sundays at 900 hrs local time on .70. When Daylight Savings time starts on the last Sunday in April the time will stay the same.

All members of the Club are urged to participate in the roll call. If you have an urgent business that you cannot stay for the formal roll call, call in at the end of the mobile call-up and you will be acknowledged. The net is a good place for all to keep up with the Club activities as well as good practice for emergencies.

[]

Clarence Snyder W3PYF

F O-R S A L E F O R S A L E

VHF ENGINEERING PS-15 power supply-12 V. 15 A. int. 10 A. cont. $40
MICRONTA regulated power supply - 2.5 A. cont. $15
ICOM speaker mike. $15
VIBROPLEX VIBRO-KEYER standard model - non iambic paddle. $30
CONTACT: RICH BARROW K3WPI Daytime: 717-424-3791. Evenings: 717-629-3840

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AMERITRON ATR-8 antenna tuner with built-in SWR bridge. 160-10 mtr. $65
CURTIS 8044 keyer board and parts. $25
CONTACT: JOHN KJ7K 866-5967

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ICOM IC-730 General Coverage Receiver. All Ham Bands. 2 VFO's - Memory backup. 500 HZ. CW filter.
PS-15 Matching Desk Mike.
TEN-TEC Model 229 Antenna Tuner. Top of the line. 200/2kw.
HEATHKIT Electronic Keyer.
BENCHER PADDLE
HUSTLER 80-10 Trap Vertical Antenna with 4 wire radials/band.
$950.00
CONTACT: BOB MAKARAUSKAS WA3ZMC Stroudsburg PA 717-476-0038
OR CALL ON: 146.865 Big Pocono Repeater

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ROHN 25-G TOWER - 40 ft. with Tilting Base, CDR Rotator, Gem Quad Antenna
KENWOOD TS-520S with CW filter
LINEAR AMPLIFIER. HUNTER 2000-B. 2000 watts input. Solid State Rectifiers 115/230 VAC. 80-10 mtr. 4-UB572B
ELECTRONIC KEYER
Misc. items-tools-power saw/table-meters-closed circuit TV camera-monitor
CONTACT: W. GOLDSTEIN W3IT 433-0001

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YAESU FT-101E with fan - 250 hz. cw filter - NEW spare Fox-Tango driver and finals. Extension boards - speaker/phone patch - hand mike and desk mike. $500.00
CONTACT: ISH WB3HBS 867-1819

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ICOM IC-2AT with rubber duck - wrist strap - wall charger and BC-30 drop in charger. All reasonalbe offers considered.
CONTACT: WA3HDP KEN at 767-1909 or on .70 repeater.

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TI-99 TAPE RECORDER $25
CONTACT: K3DVF JOE at 868-0127

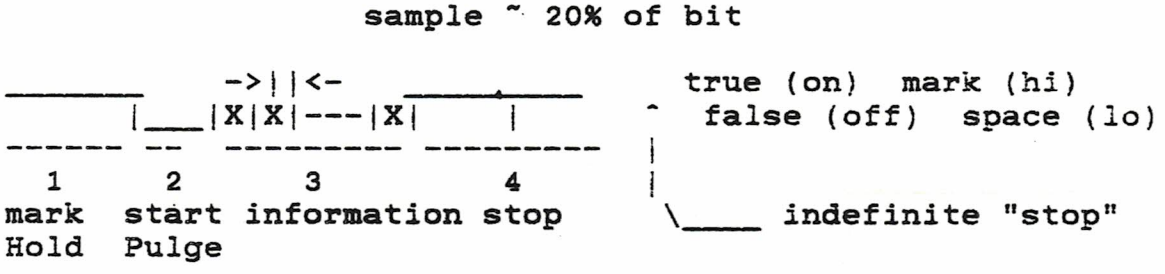
D I G I T A L C O M M U N I C A T I O N S

MYSTICAL ASYNCHRONOUS DITHER
(MAD)

With the growing use of standard digital techniques for communications on two meters, the low bands, and the "twisted pair", it has come to my attention through numerous contacts on the air and the twisted pair, that a few fundamental principles should be reviewed. The basic notions in this article are intended to be generic and not specific to particular hardware on slftware which you may have purchased.

The method by which we encode keystrokes for teletype like communication (computer or real teletype machines) fall into two classes. Both methods, unlike Morse Code, are fixed length codes - Morse in variable length. They are 5 bits (binary digits) for baudot and 7 bits for ASCII encoding for the information bits. There are merits and disadvantages for either mode (Baudot or ASCII) The relative merits have been discussed in earlier articles in this column.

The format for both of these encoding schemes are represented below:



The various elements of this ASYNCHRONOUS Code are discussed in the following text. First, the signal elements, like Morse Code, are composed of presence or absence of signal. They are named various terms which all mean the same thing. For example, the "high" signal may be termed "hi", mark, on, true, etc.

The presence or absence of signal originally was like Morse Code or A1 on-off keying and was called non-polar keying. This was found to be marginally successful since the "off" state (or unkeyed state), the absence of signal was more suseptable to noise than the the keyed state. This imparted a bias (interference) to the mark state. Reception with this non-polar techinique worked but was not as reliable as could be other techiniques. Therefore another mode - called polar (or bi-polar) keying was invented. This "polar" techinique sent a signal in both mark and space condition - whether tone keyed or FSK (Frequency Shift Keying). This is the present mode on RF or twisted communication modes.

The elements of the fixed lenght code are divided into four distinct parts as shown in the diagram. Refering to the diagram part 1, which is called mark-hold, is a signal which sent by the transmitter tells the asynchronous receiver to "standby", i.e. get ready for the information to follow. Part 2 is called the Start-pulse. It alerts the receiver that the following sequence of pulses will be information. Part 3 contains (5 bits for Baudot) or (7 bits for ASCII) information bits. The number of bits

indicates the number of diffent characters (as represented by these bits) that may be went to the receiver. Five bits may represent up to 32 different characters whereas, 7 bits may represent up to 128 different characters. the formula to compute the combinations which may be represent by "n" different bits is two taken to the "n" power (e.g. 2 to the 7th power is 128). Part 4 is called the stop pulse and indicates to the receiver that it should stop receiving the encoded sequence (which is sent in serial) and translate that encoded sequence to a print stroke - e.g. Make the key hit the paper.

The reason that this mode is called ASYNCHRONOUS is that the start pulse may occur at any time - any time. The stop pulse may be of any duration - (longer than a prescribed minimal limit). The synchronization of the receiver and transmitter is accomplished by the start and the stop pulses with both parties agreeing on a common clock - (mutually agreed speed). Synchronous transmissions have independent clock (timing) and data (information) bit patterns.

What does this mean to you - the proud owner of a new "XYZ" hardware/software system for RTTY, CW, AMTVR, Twisted Pair, Packet Communication system?

Common practice follows:

	CODE	SPEED	BAUD RATC	STOP BITS
A.	Baudot	60 WPM	45.45 Baud	1.43
B.	Baudot	100 WPM	75.75 Baud	1.43
C.	ASCII	110 Baud	(100 WPM)	1,2
D.	ASCII	300 Baud		1

We can spend hours reading and writing about all these "conventious". but, hopefully you can gleam what is a start pulse, a stop pulse, and information pulses.

TERMS TO LOOK UP

Baud
Speed
Stop pulse
Polar
Non-Polar
Asynchronous

ASCII
Baudot
Synchronous
Bit

{a bunch more-but enuf for this time}

All of thes things discussed above may be found in a variety of references. We haven't even discussed any of the electronic aspects of this mode and they are most important to understand when it comes to interfacing your TTL Modem, TU Widget to your new RS-232 Transceiver frammis. Should you go tone or TTL or RS-232 or FSK voltage dependent keying method? Go tone into the mike jack and 4 ohm to 600 ohm to the T.U. Isolate the PTT.

Confusingly yours, Joel A.B. Elston K9TBD

NEXT MEETING - APRIL 4th, 1985

D

SANDY BERSCH
39 SEYFRIED AVE.
NAZARETH, PA.
18064 KA3LBP

DELAWARE-LEHIGH AMATEUR RADIO CLUB
GREYSTONE BUILDING
RD#4
NAZARETH PA 18064

THE DELAWARE-LEHIGH AMATEUR RADIO CLUB, INC.

NEWS

BETHLEHEM, PENNA.

The DELAWARE-LEHIGH AMATEUR CLUB NEWS is the official publication of the DELAWARE-LEHIGH AMATEUR RADIO CLUB, INCORPORATE
Greystone Building
R.D.#4, Nazareth PA 18064

CLUB MEETING NITE

All regular meetings of the DELAWARE - LEHIGH AMATEUR CLUB are held on the First/Thursday of every month at 7:30 P.M. or 1930 hrs. Located near Nazareth PA at the Gracedale Hospital in the Greystone Building - CD Headquarters. 215-759-2600

APRIL 4, 1985 - NEXT MEETING

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1985-1986

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