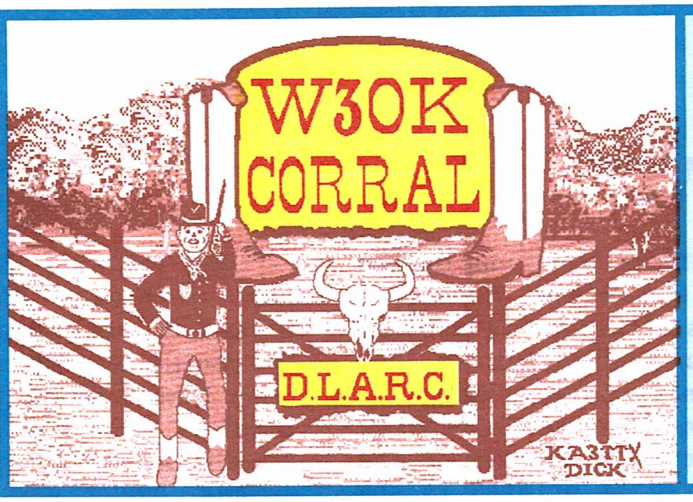
DELAWARE-LEHIGH AMATEUR RADIO CLUB, INC. W3OK

June 1991



SPECIAL SERVICE CLUB

ARRL Affiliated Club

FIELD DAY JUNE 22nd & JUNE 23rd

FIELD DAY 1991
by Bob, KU3K
DLARC FIELD DAY CHAIRMAN

As I get older, I ponder my youth! Ham radio was my obsessive hobby as a young lad of 12, before the dating game took most of my time at about 15 or 16. Whenever I think of my early hamming I most fondly remember the early summer jaunt known as FIELD DAY. Most of the fun I'll admit was being allowed to stay out for the entire weekend, and not being concerned with that late night parental edict, "get to bed, Bob!" I guess becoming a good ham operator is something that can be self taught, if one "operates" enough! Another way (and one I highly recommend) is to observe great operators.

An even better way would be to operate under the watchful eye of a "good op" and pick up personal pointers! You just can't learn this kind of stuff while alone in your shack sipping coffee staring at the knobs, or worse, the computer screen! Now if you're someone who doesn't have a shack, or can't operate because of "neighbors",this FIELD DAY thing is perfect for you!! You see, we get this bunch of people together and set up all this great state-of-the-art ham gear in tents, vans, mobile homes, you name it! Then we put up towers, beams and wire antennas of all types, portable generators, and broil the whole thing for 24 hours! That reminds me, food and cookin', ummmmmm I can smell those char-broiled burgers now! Oh, of course, there is plenty to drink too. During the 24 hour operating period we try to work as many other stations as possible using 4 transceivers simultaneously on just about every band using many different modes including a solar powered station. As we did last year a special NOVICE station will be readied and operated by the newcomers to this great hobby. Are you one of our novices?... A Tech perhaps?...Will we see you there?

In a very broad sense you could call this a contest but the main purpose of the exercise is to test our emergency preparedness. As I have said many times, our setup machine is well oiled and I for one take great pride in our clubs yearly accomplishment. After all, operating in emergencies is one of the important facets of ham radio is it not?

Now for those of you who have never been on a FIELD DAY, please come, help us for as long as your time permits. I know you will have a great time!!

ARRL FIELD DAY 1991
Date: June 22-23, 1991
Setup:June 22 8:00 AM Gracedale/Load equipment
9:00 AM Hacketts Park, Easton
Operation: 1800 UTC to 1800 UTC
Teardown: June 23 2:00-5:00 PM

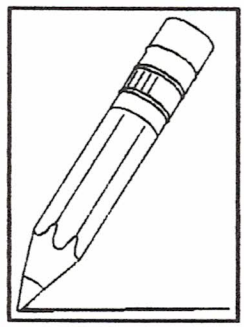
DELAWARE-LEHIGH
WINNER
PAQSO PARTY
1990
AMATEUR RADIO CLUB
W3PYF

PAGE 3 FOR DETAILS

JUST THE MINUTES
by Dave, N3EYT

The May 2nd meeting of the DLARC was called to order at 7:30 p.m. by Ray, W3TDF. Seventy--three members and friends attended the meeting held in the Northampton auditorium on the Northampton County Community College campus.

Roy, KA3MNY, read the treasurer's report which was approved as read. The minutes of the April meeting were approved as printed in the W3OK Corral with one correction under item. The comments should have been identified as coming from N3HES, Edward Petro, a member in good standing with the DLARC.



Field Day: Coming soon to a park near you. Can you spare a couple of hours? Contact KU3K.

The DLARC welcomes the following new members into the club: Dennis Hochstrasser, call pending; Joe Leddy; John Vogelsang; and George Richmond.

Clarence, W3PYF, encouraged club members to join the Emergency Management Association (at no cost) to qualify for coverage under county insurance during drills and actual emergencies.

DLARC T-shirts are available from Ken, KA3MOU, for $7 each.

Bill, KA3RBH, was looking for help during the Boy Scout Jamboree for one day only, May 18th, form about 10 a.m. to 5 p.m. A HF station will be set up to demonstrate Amateur Radio to the Scouts and parents.

An all-day Technician licensing class has been scheduled by the RF Hill club for May 11th in Telford.

PA QSO: No official word yet from the Nittany Amateur Radio Club, but the signs are very encouraging.

Program: Victor Piper, representative of Rohn Towers, fielded questions concerning towers, their design and installation. He also brought brochures and catalogs which were quickly claimed by club members.

de Dave, N3EYT

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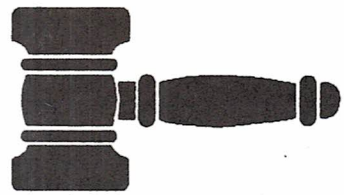
REMEMBER FIELD DAY

FIELD DAY, JUNE 22 AND 23rd..COME OUT AND HELP LET'S BE NUMBER 1 THIS YEAR IN OUR CLASS

THE GAVEL SPEAKS
by Ray, W3TDF



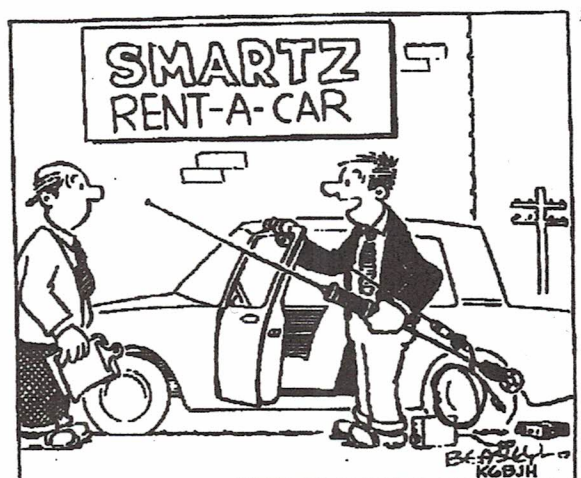
Did you miss the May meeting? You missed a real gem. The business meeting only lasted about 35 minutes, and the program didn't last much longer. Short meetings are great! Unfortunately, our next meeting may not be quite as short. Final Field Day plans, and sign in sheets will be a necessity. Please let Bob,-KU3K, know if you can help in some way. He'll be there.

I would like to explain that when you hear me on W3OK(146.70) stating that I am listening on FIVE ONE ONE, it is not a mistake. That's where you'll find me. 146.70 is too crowded, sometimes with QSO's that could easily be handled on simplex, or the alternate. Boy, it's nice and quite listening to 145.11.

Somewhere, recently, I saw a reference to Field Day, and the date was given as the last weekend of June. Let there be no mistake, it's the 4th weekend, ie. June 22/23, NOT the last weekend!

MEETINGS - Next semester scheduling is currently being done. Our June 6 meeting will be in the Theatre. JULY meeting will be the 2ND Thursday, July 11, and it, along with the Aug. 1 meeting will be in KIVA hall.

Best wishes, Ray.



WE DID IT BEFORE AND WE DID IT AGAIN

HOW DID WE DO?
by Clarence, W3PYF

The report from the Nittany Amateur Radio Club sponsors of the Pennsylvania QSO Party said it well. "The Delaware-Lehigh ARC bunch demolished the record score on their way to their second consecutive club championship". It continues "The 67 logs they submitted totaled 2,622,371 points".

It further stated "They amassed over 2.6 megapoints to top the record they set last year by OVER 1 MILLION points."

The top score for the club was Bill, K3ANS who made 200100 points. In the nine plaque divisions open to PA stations, the DLARC had 22 in the top ten.

NC3P	10th	Mobile category
K3ANS	3rd	Eastern PA division
K3NZ	4th	Eastern PA division
W3LR	6th	Eastern PA division
W3TDF	5th	Western PA division
N2LAU	8th	Out of State division
N3GXU	1st	Novice/Tech division
KA3WQX	4th	Novice/Tech division
N3GRK	6th	Novice/Tech division
KA3TEQ	7th	Novice/Tech division
N3GMI	9th	Novice/Tech division
KB3TS	1st	QRP division
WC3Y	2nd	QRP division
N3IK	3rd	QRP division
N3EOF	5th	QRP division
KX5X	10th	QRP division
W3TDF	3rd	Portable single op division
N3IK	7th	Portable single op division
KA3TEO	10th	Portable single op division
W3OK	3rd	Multiple op division
KC3QO	10th	Multiple op division
K3EX	5th	Multi Trans division
WD5BRP/M	7th	Multi Trans division

First places in PA counties were:
KO3M, Carbon;W3TDF, Clarion;N3IK, Elk;Lehigh, K3NZ;Monroe, KB3TS;Northampton, K3ANS; and in Northern New Jersey, N2LAU.

I hope I got all of them, but if I goofed I will correct next month. Great effort by a great club..

de W3PYF, Clarence

JUNE MEETING
by Bill, K3ANS

Tired of hearing about DX and contesting? Prefer VHF subjects over low band drivel? No room for monstrous towers and yagis. Hate CW? Too poor to buy fixed station rigs? Prefer pocket size ham station. Well, we got a program for you! Great for technicians! ....and extras. Come hear Mike, N3DZM tell you about the new state wide Pennsylvania linked repeater system on 2 meters. Try the Long Pond (Pocono Mountains) repeater on 145.23. Besides its excellent coverage, this repeater is tied into other repeaters throughout Pennsylvania. Talk to your buddy in Erie or Uniontown without big antennas. No zoning problems or deed restrictions on 2 meter handy talkies. You don't need beverage receiving long wires , amplifiers, general license, 220 volts in the shack for the BIG signal cross state! Your little 3 watts will be full quieting in Pittsburgh. If this does not interest you in a DLARC program, then you are not interested in ham radio at all! How is that for a challenge. See you June 6, 1991 at the Northampton County Area Community College, 7:30 PM.

de Bill, K3ANS

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HANDI-HAMS
by Adrienne, KA3YEB

This was posted on my telephone BBS and may be of interest to the club at large. This is about an organization called Handi-Hams.

To all that may be interested, Handi-Hams is not affiliated in any way with the ARRL. It is part of a larger organization dedicated to helping the disabled. But membership is not restricted to the disabled. Able-bodied hams are also welcome (and needed) in order to help disabled persons interested in amateur radio (in whatever way possible). For more information you can write to them at Courage Center, 3915 Golden Valley Road, Golden Valley, Mn. 55422 or call (612) 520-0511.

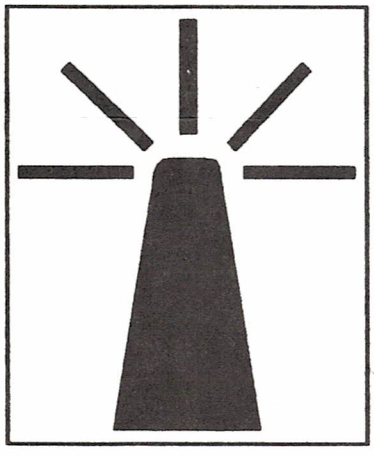
REMEMBER TO RENEW OR JOIN ARRL, CONTACT TREASURE KA3MNY.

HAM where did it come from

by Chris, NU3L

In the earliest days of unregulated wireless operation amateur stations chose their own call signs. Such was the case when a station operated by three members of the Harvard Radio Club first set up a new station in 1908.

Albert S. Hyman, Bob Almy,and P. Murray first called their station "Hyman-Almy-Murray". That would be a tough identifier on phone let alone CW. So they quickly shortened it to "Hy-Al-Mu" and then to "HYALMU". The station was operated with this call until 1909 when confusion with the wireless operations of a Mexican ship carrying the name "Hyalmo" started to occur. At that time they decided to shorten the call further to "HAM". As time went on in those pioneer days of wireless, some amateur stations had better signals than commercial stations and they picked their own frequencies. The resulting interference led to congressional action to regulate frequencies and severely limit amateur radio activities. The bill which would have imposed unreasonable license fees and other restrictions became very controversial and in 1911 Albert Hyman chose it as the topic for his thesis at Harvard. A copy of the thesis was sent to Senator David I. Walsh who was a member of the committee responsible for the bill.



Congressional debate ensued on the Wireless Regulation Bill and the station called "HAM" became the symbol for all small stations who were trying to defend themselves against the greed of the commercial interests. (Some things never change!) When the bill was debated on the floor of congress many speakers referred to the poor little "HAM" station. National publicity eventually associated "HAM" with all amateur radio operators. And there you have it.

(Information was taken from an article which appeared in the May 1990 issue of Radioscan Magazine and more detail can be found in the Congressional Record.)

de Chris, NU3L

ONLY IN AMERICA

He drives his German made car of Swedish steel and an interior of Argentinian leather to a gasoline station where he filled up with Arab oil shipped in a Liberian tanker and bought two French tires, composed of rubber from Sri Lanka. At home, he dropped his Moroccan briefcase, hung up his Scottish tweed wool coat, took off his Italian shoes and Irish wool socks along with this shirt made of Egyptian cotton and donned his robe from Hong Kong with matching slippers from Taiwan. More comfortable now, he poured a hot cup of Brazilian coffee into an English mug, set on a Mexican Placemat on an Irish linen tablecloth atop a Danish table varnished with linseed oil from India. Then, he filled his Austrian pipe with Turkish tobacco, lit it, picked up his Japanese ballpoint pen, and wrote a letter to his congressman demanding to know why the U.S. has an unfavorable balance of trade.....

from W3TDF

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FOR SALE

VHF RADIO'S, originally a business system.
2 Handhelds, 1 GE, 1 Motorola (single channel) includes batteries, charger and cases
1 Base Transciever RCA, May need repair 2 channel
2 RCA Mobile Transcievers with remote control heads 1-3 channel.
All Crystaled at 155.XXX..Asking $300.00 for all..Call Carl, N3CDO at 863-5873.

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WANTED

Heath Power Supply HP-20..by recent novice licensee..He is waiting for license..Call Al Antonelli, Jr., at 215 867-8117.

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A REAL FAMILY AFFAIR

Three down and one to go..That is the report from Dave, WA3HVR. Recently his wife Laurie, passed her (no code) Technician license, she joins son Eric, KA3WLQ making it a threesome. Jodi, his 7 year old daughter says she will be next, maybe as early as next year. I don't know if Dave can afford all the HT's he will have to buy..

de W3PYF

ARE YOU AN ACTIVE MEMBER?

Are you an active member
The kind that would be missed -
Or is it your intention
To be a name upon a list.

Do you attend the meetings
and mingle with the crowd -
Or do you just stay home
and gripe both long and loud.

Do you take an active part
to help the club along -
Or are you just satisfied
to be the kind that just belongs.

Do you ever go to visit
a member who is sick -
Or leave the work to just a few
and talk about the clique.

There is quite a program schedule
that means success if done -
And it can be accomplished
with the help of everyone.

So attend the meetings regularly
and help with both hand and heart -
Don't just be a member
but take an active part.

Now, think it over carefully
am I right or wrong -
Are YOU and active member -
or do you just belong.

This reprinted from Ham News Outlet, from the Radio Amateur Gazette....it was edited by KB5AWM....

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AMATEUR RADIO--A HOBBY?
by Ed, W3BNR

Amateur radio a hobby? Please don't forget the purpose of amateur radio in Part 97.1

Subpart A -- General Provisions

97.1 Basis and purpose.

The rules and regulations in this Part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.

(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.

(c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

(e) Continuation and extension of the amateur's unique ability to enhance international goodwill.

I also did a search throughout the entire text of Part 97 and nowhere in my copy is the word 'hobby', 'HOBBY', or 'Hobby'. It looks like too many amateurs are overlooking the purpose for which we are allowed to use the radio waves. The spectrum is valuable and limited. If you and others manage to convince the FCC and commercial groups that the amateur fraternity considers this only a hobby, you can look forward to the loss of additional spectrum as time goes by. Everybody, please re-read Part 97.1 73 de Ed, W3BNR

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ANNUAL GRACEDALE EVACUATION TEST A SUCCESS
by Clarence, W3PYF

With many members of the DLARC and the Northampton County RACES organization in control 59 "victims" were evacuated from the Gracedale complex, in a simulated drill, with KA3MOU and WF3H at the EOC, KB3RI, KA3RBH and KA3YAT at Easton Hospital; KA3TEQ, KA3TER and WA3T at Muhlenberg Hospital and KD3TI, W3TDF and KD3SQ at St. Lukes a complete count of all patients going for care via the 21 ambulances was immediately available to the committee at headquarters.

On site with the County communications van were KA3ONZ, N3IYX, and N3AWT. Participants as well were KC3CR, KA3MTY, N3GXV, KC3QO, N3RYX, KA3OEG, N3HQE, KA3MOB, KA3MNY, N3GXW, N3IZK, and W3PYF.

Sitting where I was in the control room with the heads of EMS, EMA, Pennsylvania Emergency Management and the Red Cross as well as the various police and fire services, it was great to hear the great comments from the these representatives of the community.

de W3PYF, Clarence Radio Officer RACES

CONTEST CALENDAR
by Barry, KU3X

June 1-2 RSGB Field Day
June 4 West Coast Qualifying run (10-40 WPM
June 8-9 ARRL VHF QSO Party
World-Wide South American CW Contest
Portugal Day Contest
June 10 W1AW Qualifying Run (10-40 WPM)
June 15-16 All-Asian DX Contest CW
EA RTTY Contest
June 23-24 Field Day
June 26 W1AW Qualifying Run (10-60 WPM)
July 1 Canada Day Contest

Looks like they never run out of CW contests. They are trying to tell us something. So get out those old J-38's or bugs and get practicing. Put the headphones on and tune in on a Qualifying run end get going on CW. You don't know what you are missing.

You could always practice on the green keys on June 15th and 16th. Although packet and amtor seem to be the digital mode of the future, RTTY is still a lot of fun and you will be surprised to see how active the bands will be on those dates.

Now comes the big one, FIELD DAY! You don't want to miss that one. Lots of fun setting up, operating, and tearing down the club station. Where else can you learn how to put up a tower, make portable antennas, run a logging program, and much more? Call it a free school, call it a blood and guts contest, or just call it having a lot of fun. It is all of the above and more. Hope to see you all there.

73 de Barry, KU3X

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VE TESTING MAY
by John, K3GQJ

At the May 3 session at Gracedale, 16 candidates took a total of 29 elements. There were 6 upgrades, one new Novice and 5 new Tech's. These included:
Leo J Skotek KA3YOF, Tech;
James S Warner, N3IYN, Advanced;
George R Richmond, new Novice;
Andrew J Dudish, new Tech;
Robert J Fredrich Sr. new Tech;
Alfred P Antonelli, new Tech;
John J Paulus, new Tech;
Thomas J Walsh, new Tech;
James P Monteleone Sr N2LPX, General;
Harmon M Purviance IV, N3INK, Advanced.
VE's at this session were: Robin, WA3T; Carman, WC3F; Chuck, NE3K; Bob, KW3W; Bill, NC3P and John, K3GQJ.

The session for June 7 will have team 2 attending.

73 de John, K3GQJ Team Liaison

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FORGOT ONE
by Bob, WF3H

Overlooked in the recent article on DLARC Elmers was Bill, K3ANS. Bill has served not only an Elmer to many hams, but as club program director, has generously facilitated use of his station during contests.

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DLARC "T" SHIRTS AVAILABLE

Through the help of Ken, KA3EED, DLARC T shirts, yellow in color, with the club logo on it are available.

The shirts are made in USA, 50% Polyester, and 50% cotton and can be had in the following sizes: Small, Medium, Large, Extra Large and Extra-Extra Large. Orders are being taken by Dick, KA3MOU. Call him at 837-1585. The price only $7.00 each.

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K2BPP INJURED AND PARALYZED
by Bill, K3ANS

Dave Porter, K2BPP & KD8DX, a member of the Delaware-Lehigh ARC was injured in a fall on a sailboat at Ascension Island, where he has been living and working for the last 6 months. He was climbing a ladder which broke and he fell injuring his back, which was already in bad condition from spinal arthritis. He was medi-evacuated to Patrick Air Force Base in Florida on May 15th.

Cards, and especially QSL cards should be sent to:

Dave Porter
Holmes Regional Medical Center
1350 Hickory Street
Melbourne, FL 32901

At press time for the O K Corral, no room number was available, but any cards will be delivered.

de Bill, K3ANS

RESISTORS

by K3CP, Van

"Hello Elmer," said Ima Lidd. "It's surely nice to see you and I am looking forward to talking with you."

"It's nice to see you too, Ima," said Elmer. "What would you like to talk about today?"

"I would like to ask about Ohm's law. I've heard about it ever since I got started in ham radio, but what is it?"

Elmer answered, "Ohm's law for DC states that the current in a circuit varies proportionately with the voltage and inversely with the resistance. Or more simply it says that the current in a circuit goes up when the voltage goes up and down when the resistance goes up. For example:- One volt applied to a circuit containing a one ohm resistor would produce a current of one ampere."

"Boy, that sounds simple enough," responded Ima. "Let's see if I can give another example. 10 volts in the same circuit would produce 10 amperes of current. Is that right, Elmer?"

"You bet it is, Ima. In a DC circuit that just about tells the whole story. It is truly a linear circuit." Ima interrupted, "Wait a minute, Elmer, I've heard a lot about linear circuits and linear this and that. What does it mean?"

Elmer replied. "The word linear comes from the word line - in this case a straight line. If we plotted the examples on linear graph paper we would get a straight line. If we plotted volts on the vertical scale (y axis) from zero to ten and plotted resistance on the horizontal scale (x axis) from zero to ten we could draw a graph showing the current flow. That graph would be a straight line for any combination of voltage and resistance. Try it, Ima."

"OK, I'll get a piece of paper and lay out a vertical line two and a half inches long and a horizontal line of the same length. I'll put a mark on each line 1/4 inch apart and make each mark one volt on the vertical scale and each mark one ohm on the horizontal scale. Now I'll put a dot at the three volt mark and at the three ohm mark and at four or five etc. Ah, yes. I see what you mean. It is a straight line."

"Very good, Ima," said Elmer. "Let's express Ohm's law in its formula form. You will recognize these formulas. They all are derived from the definition of Ohm's law given above.

$$I = E/R$$
$$R = E/I$$
$$E = IR$$

"Let's test formula one. If the voltage (Electro Motive Force - EMF - that's where the E comes from) is 5 volts and the resistance is 10 ohms then 5/10 equals 0.5 amperes or 500 milliamperes. Substituting the same values in formula two yields 5/0.5 equals 10 ohms. The same results will be had with formula three. The three formulas are the same, just rearranged a little. "The formula for power is:-

$$P = EI$$

"So the power in the above example would be 5 volts times 0.5 amps. or 2.5 watts. In this case the voltage and the current are known. This formula also can be rearranged to find the power when the EMF and the resistance are known and when the current and resistance are known. For example, since I = E/R we can substitute E/R for the I and if E = IR we can use IR for E.

$P = E \times E/R$ becomes $P = E^2/R$
$P = IR \times I$ becomes $P = I^2 \times R$

"That is simple enough," said Ima. "I just never understood how the formulas were derived. Thanks, Elmer for another interesting lesson."

"You're welcome, Ima. Remember that electronic theory does not have to be difficult to learn or complicated. All you need to know is how a few things work. They are:- resistors, capacitors, inductors, and semiconductors. Resistors oppose current flow in DC and AC circuits. Capacitors inhibit current flow in DC circuits, but less so in AC and RF circuits. High frequency and/or a large capacitor can result in almost a short circuit. On the other hand, high frequency and a large inductor can result in close to an open circuit. See you next time.

de Van, K3CP

DIGITAL COMMUNICATIONS

by Joel, K9TBD

Simply Digital - from Mandelbrot to Sierpinski

Many hams (our club maybe 35%) have some sort of digital computer, either in support of AMTOR, RTTY, Packet, or other digital modes. Now that it is sitting there and you had to convince your spouse that it was a wise investment, but, maybe it is underutilized, then here are a few thoughts to burden your new found toy to its limit! The algorithms (a method for doing something - however lengthy, yet finite) described here are currently recreational although there is serious scientific pursuit of these concepts in many fields ranging from medicine, biology, cinematography, and engineering to mention a few. The topic is: recursive calculations using a digital computer. (recursive means: 'Play it again Sam')

You may well ask, "What does this have to do with Ham Radio?". Maybe nothing, but perhaps with this article, you can justify that digital computer you got for the radio. Anyway, this is just for fun! I won't give you the programs to compute what is described here, but, just enough clues in order that you can construct them on your own. Perhaps you will get into programming a computer from this simple perspective, which has some entertainment merit, and develop some skills you may have otherwise neglected. You can reconstruct the programs that I wrote on nearly any digital machine including a hand calculator - so do not fret yet!

SIERPINSKI's TRIANGLE:

I won't give you the history for this favorite because I don't know where it came from - probably could look it up though. This fascinating figure can be created with a pencil and paper approach, however, it becomes tedious after a while and you will see the merit of a computer to do the simple calculations. Here is the gist of his triangle:

1) set out three points on a piece of graph paper (a triangle - but don't connect the dots)
2) select any point of the triangle (vertex) as a starter
3) arbitrarily select another point (vertex) and put a "dot" exactly half-way between the two. Remember this point.
4) go back to 2) to select another vertex and put a dot half-way between the remembered point and this new point.

If you do this forever, you will get the most amazing "triangle" called Sierpinski's triangle. One would think that you would fill the entire space between the points of the original triangle, but, this is not the case. When you get tired of doing it by hand, write a little program to do the work for you. Note: if the X direction is horizontal and the Y direction is vertical on your sheet of paper, then the half-way point between the point X1,Y1 and X2,Y2 is the average - or new X is (X2+X1)/2 and new Y is (Y2+Y1)/2. Simple!

MANDELBROT SET:

This one is not much more difficult to figure out, but, will give an infinite (not finite) variety of pleasure in the patterns you may develop (if you plot this points out). [This fellow, Mandelbrot, works for IBM, and as I understand the development, he wanted to test out a new computer and devised this as a test, however, after visualizing the results on a screen - got so excited that he developed a new branch of mathematics - or something like that] This iterative (recursive - 'Play it again Sam') calculation is not much more difficult and goes as follows:

1) Select a starting point in a piece of graph paper. (I would suggest this starting point be somewhere between -2 and 0.5 in the X direction, and -1.25 and +1.25 in the Y direction). Also select another place: let's say X=0 and Y=0 for starters. Let's call these X-start and Y-start respectively. Let's call this point X_s and Y_s for brevity. Assign them to X_o and Y_o (the 'o' standing for 'old') to begin with. The (n_) will stand for 'new'.
2) Calculate new X and Y coordinates in the graph by the following rule: X_n = X_o * X_o - Y_o * Y_o + X_s and Y_n = X_o * Y_o + X_o * Y_o + Y_s In words: this says the new X point is the difference between the squares of the X coordinates plus the start X_s , and the squares of the Y coordinates and the new Y point is the sum of the squares plus the start Y_s. If this is confusing, the equation in the complex plane is Z = Z^2 + C, where Z and C are complex.
3) Repeat step 2) forever! You will get wonderful pictures.

These little examples of iterated calculations have given pleasure to my kids and probably their kids (don't know yet) because of their simplicity and availability to all those that have even this simplest computer (or none at all - just a piece of graph paper.) For those more interested in this digital subject, I suggest looking into "Contraction Mappings", quite often exposed in popular journals such as the 'Scientific American'. Some are called "Fractals".

A diversion from Digital Communications - 'Or is it?'
73 Joel

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LOCAL BBS AVAILABLE FOR HAMS

by Adrienne, KA3YEB

The Supermarket BBS is a 24 hour/7 days bbs offering message subs on many topics including amateur radio. Currently there are two active message subs concerning amateurs with two more in the near future. Of the two possible subs to come, one will be concerning packet radio and the other SWLing. All are invited to become members of this bbs and join in the conversations. Discussions are not limited to just local amateurs. These message subs are 'netted' and input comes from all over the county. On one current sub we are pleased to say some of the staff members of the ARRL in CT participate actively. The bbs handles modem speeds of 300/1200/2400 bps, parity N, data bits 8, and stop bits 1. The phone number for the bbs is(215) 791-1656.

Hope to catch you on the message subs!

de Adrienne, KA3YEB

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WE DID IT BEFORE AND WE DID IT AGAIN. BE SURE TO SEE PAGE 3 FOR FULL INFORMATION ON THE DLARC EFFORT IN THE PA QSO PARTY

YANKEE DOODLING

HINTS & KINKS

I recently ran across some interesting tid-bits in the ARRL Field Forum, a newsletter published by ARRL for section and division level appointees.

1. A company called Ocean State Electronics[**OSE**] (P.O. Box 1458, Westerly, RI 02891) Ph. 401-596-3080 offers a product line which will appeal to most ham builders and tinkerers.

OSE will supply parts kits for most QST article and ARRL Handbook construction projects going back to 1976. They also offer a catalog of small parts (IC, connectors, etc.) They are unusual in having only a $5. minimum order. The company is run by a ham, Frank Pellacano, WB1GTK-**tnx KA1CV.**

2. Do you own an older Ten-Tec radio with permeability tuned VFO (Examples would be the Omni, Triton, or Argonaut.) that is now suffering from rough tuning or "dead spots?"

If so, you should know that Ten-Tec offers a rebuild kit which typically includes bearings, shaft, bushings lubricant, and instructions for about $15. plus shipping. The company cautions that the job is not for "the faint hearted or mechanically inexperienced ham." The job involves removal of the front panel & dis-assembly of the PTO. If you fall into the all thumbs category, Ten-Tec will do the mechanical work for you--at reasonable rates. By the way, the turn-around time at their shop is usually under 2 weeks; often under a week. (Maybe Ten-Tec rigs don't break too often??)-again, **tnx KA1CV.**

3. Lewis Cullen, AA4XE, has found that a Radio Shack phone model #ET-171, catalog #43-374A has adequate built-in EMI suppression. He reports that it is immune to his 1200 Watt station. Other telephones tried, notably the AT7T trimline, did not exhibit this immunity. The phone is available in other colors as #'s 43-375A, 43-376A, and 43-377A.-**tnx AA4XE.**

4. Rus Healy, NJ2L, of ARRL staff reports no personal TVI from operation on HF & VHF at the 1500 Watt level. He has had no TVI even when using 1.5 KW into a Tri-bander only 35' over his house. Almost all of his consumer electronics equipment is manufactured by Sony. Perhaps this is a brand to consider when looking for equipment with good RFI/TVI immunity?? **tnx NJ2L.**

REPEATER FREQUENCY COORDINATION

Frequency co-ordination for amateur radio repeater began about the time that the second repeater went on the air. Coordination has evolved into many semi-formalized groups under the ARRL umbrella. For the average repeater user the system seems to work pretty well--at least here in the east. For the repeater owner/trustee, things reportedly haven't always been so smooth, but the coordinators are amateurs like us, so the coordinating task probably gets done after work hours, and after a few "honey-do's" at home. Enough said.

Now a California group, the SOUTHERN CALIFORNIA REPEATER AND REMOTE BASE ASSOCIATION has presented a proposal for rule-making to the FCC to formalize the frequency coordination function--much as the license examination task has been turned over to amateurs. The proposal, complete with proposed language for FCC rule changes was reportedly delivered to the FCC in late April.

The text of the proposed changes will probably appear in an early issue of your favorite amateur radio magazine, or you can get a copy by sending an SASE to:

Joe Schwoebel
c/o Santa Clarita Amateur Packet Assn.[SCAPA]
P.O. Box 800122
Santa Clarita, CA 91380

Some information from Southern California indicates that the proposal is not universally well thought of.

If you own or operate a repeater, repeater link system, remote base or packet node or bulletin board, or just operate on VHF or above I suggest that you learn a bit more about this proposal. It could have a really profound impact on the future of VHF/UHF operation in the amateur radio service.

FIELD DAY

You've heard all about the club's Field Day effort elsewhere in the newsletter and you'd like to come out, but that's the weekend you're working 16 hours, or you have to watch the kids 'cause your wife is at a business meeting or whatever.... Well, don't give up completely.

The Field Day stations need someone to work and home stations count, too, Bunky! Sooo, fire up the old Kenwood or whatever, scan the bands for W3OK and give us a call and a contact. You can work the club station on many bands and modes, and they all count for the club score. (i.e. 80 CW, 75 SSB, 40 CW, 40 SSB etc.) I know it's not the same as being there, but it can help the club's score and let the guys and gals know that you're thinking of them too. Oh, there will be a club novice station, too, but I'm not sure what call will be used. We'll try to talk that up a bit on the repeater before Field Day. You can really help the club by giving the novice station a contact because of its point scoring, especially on CW..

06.91 **73 de K3YD**







All Amateur Radio Operators are invited to participate in the DLARC, RACES & ARES nets on 146.70 W3OK/rpt. with an alternate of 145.11, W3PYF/rpt.

The Nets are held on Sundays at 9:30 AM and on Wednesdays at 7:00 PM.

+++++++ DLARC INFORMATION LINE 820-9110 ++++++++

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1991

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All regular meetings of the D.L.A.R.C. are held on the first Thursday of each month at 7:30 PM at the Northampton County Community College

TALK IN ON 146.70

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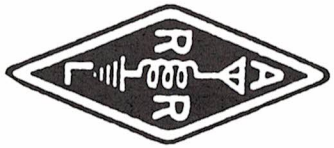



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The W3OK CORRAL

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