The Parasitic Emission

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The Last Ten Years

by Joe Shupienis, WA3IHK

In early 1975, many hams in the DuBois area were experimenting with the almost-new two meter FM mode of amateur communications. There were as yet no repeaters in the local area, and many nights were spent by local hams at the shack of WA3BUX, listening to various distant repeaters. K3QEQ had done some operating and experimentation with a tube-type repeater, using a Motorola transmitter and a Farnsworth receiver on 146.94/.34 (!) with some success. Much of the communications was on 146.94 simplex, and I recall my many trips to Penn State, trying to see how much farther each week's new antenna experiment would work.

It was during this time that I had the idea that a local ham radio club would be a nice thing to have. I dug out the Callbook and recorded the names and calls of everyone with a 158 or 168 zip code. When I was finished, the list contained 138 names! These hams all were located in the four-county area surrounding DuBois. I ran down to the keypunch, punched up the information, and ran it through the Penn State computer as a student project. Questionnaires were printed and sent to everyone on the list, inviting them to a meeting at the DuBois High School on Friday, April 17, 1975 at 7:30 pm, for the purpose of seeing if there was enough interest to form a local amateur radio club.

Twenty-three local hams showed up at that meeting, and the Quad County Amateur Radio Club was born. There was a humble schedule prepared for the meeting, tentatively called The Parasitic Emission, which was a take-off on the title of the Penn State ARC newsletter, The Unbiased Emitter. A vote was taken, and the unanimous decree was that a local club should be formed.

At the next meeting, WA3HSE suggested the name "Quad-County Amateur Radio Club", and for this he received the prize of a life membership. Nobody wanted to rename the newsletter, and so that prize was never awarded. W3GNR became the first president, dues were set at $12.00 per year, and monthly payments were accepted. A raffle, coffee and doughnuts were part of each of the meetings.

Several club members, led by K3TFL had jointly purchased a plot of land on a hilltop overlooking the Clear Run section of DuBois, and plans were made to hold Field Day activities there. The first QCARC Field Day was a fun-filled event, and the slides I took of the festivities were enjoyed for several seasons after.

During the fall, a spate of Novice code & theory classes were offered, and each issue of the Parasitic Emission featured artwork by K3TFL. A popular cartoon series was "Clem and Orville", two hillbilly hams, who never quite got on the air.

In 1976, the first QCARC Spring Banquet was held at the Lithuanian Club in DuBois. During the summer, many hamfests were visited by our members - many of whom had never had any reason to go to a hamfest before! Field day suffered from very sparse attendance, perhaps because the previous one was a tough act to follow. The newsletter had grown considerably, and featured advertising from local and not-so-local ham-type businesses. The big news of 1976 was the K3ZDR repeater. Coordinated on 146.13/.73, and located at the Clear Run hilltop, the repeater provided the QCARC area with reliable two meter coverage for the first time.

In 1977, work was started on the Rockton Mountain to establish a location for the repeater. A plot was leased from the State, and many spring and summer evenings were spent digging the foundation and putting up the cement block building, as well as erecting the 105 foot tower. I remember the thundershower that curtailed the tower raising one day, resulting in 18 hams packed into K3TFL's van! Finally, at 11 am, on November 11, 1977, K3PS (ex-ZDR) flipped the switch and put the repeater on the air from its present location. Field Day was held at the farm of Daryl Boucher in the Beechwoods section near Falls Creek.

Joint banquets were held with the Nittany ARC of State College, and Horseshoe ARC of Altoona during this time. A group of members from Jefferson County formed the Punxsutawney ARC. The meeting location moved to Jeff Tech in Reynoldsville, and Field Day was held at WA3GMT's QTH, south of that town. Under the guidance of W3GNR, the "WIT" VHF Contest team became a serious contender in the ARRL VHF contests of that day. Operating from the Clear Run VHF site, they frequently won WPA Section championships, beating arch-rival Nittany ARC teams in both the June and September outings.

For the next several years, the newsletter "came and went", and club activities tapered off. Many of the "old guard" faded away, and no one else came forth to take their place. Some people seriously questioned the club's survival. In 1983, a reorganizational meeting was held at the Clear Run VHF site. A "steering committee" was appointed, and regular, scheduled meetings were again held at the Unilec building in DuBois. The Parasitic Emission has been published monthly since then, and is now created by word processing equipment. Meetings are held monthly at the DuBois Senior High School, and the club membership stands at just under 50 members. Novice and upgrade training classes are being offered on a regular basis by a team of interested hams, and the programs arranged by W3WM rival those in ANY club. Happy birthday, QCARC! And many, MANY happy returns!!!

QCARC

Minutes of the March 1985 Meeting
by Bryan Simanic, WA3UFN

The regular meeting of the Quad County Amateur Radio Club was called to order March 15, 1985 by Pres. WA3IHK.

The minutes of the previous meeting were read and approved.

TREASURER REPORT- No treasury report available.

COMMITTEE REPORTS- WA3UFN reported that the Novice and Upgrade classes are proceeding as scheduled, with about 7 students in each class. There was no report for the special events program. WA3IHK reported that he is planning to have a special edition of the newsletter for the May edition, commemorating the tenth anniversary of the QCARC. All material for the newsletter is to be received, at the Club PO box, by April 5.

OLD BUSINESS- None

NEW BUSINESS- The Tenth Anniversary and Banquet of the QCARC will be held April 13, 1985 at 7:30. Reservations must be made for the banquet as early as possible. There will be a short Exec Board business meeting before the banquet. The Ham-of-the-Year award will be presented again among others. A question was raised about a special mailing to those not usually notified of the banquet. Pres. WA3IHK stated that none was planned. VE exams will be held May 18, 1985 at the DuBois Senior High School, deadline for application is April 18. There was a discussion about the effectiveness of a special mailing. Motion was made by W3WM seconded by KA3MKY to have a special mailing to people who do not get the newsletter, with a limit on expenses to $15.00. Motion carried.

With no further business for the meeting a motion to adjourn was made by W3WM and seconded by KA3DEO. Motion carried. The members present adjourned for a slide program, by N4BIX, about his visit to China.

ATTENDANCE- WA3IHK, WA3UFN, KA3DEO, K3IQN, WA3GQU, KA3FHV, W3WM, KA3MKY, N4BIX, WA3GNS, J. Bishop, G. Platco

QCARC

Program Comments and Announcement
by Art Kunst, W3WM

Our March program Ham Radio Engineer Visits Communist China was a real winner based on the comments of the attendees. The presenter was Roger Allshouse, N4BIX, of State College and new president of the Nittany Amateur Radio Club. Roger's visit was made for RCA in 1973 to open communication channels after President Nixon's visit to China.

Roger's slide collection in color was extensive and covered all phases of Chinese life and culture. The photo slides received much favorable comment for their professional quality. Roger's narration of his slides indicated that he is an unusually astute observer and commentator. His parents live on a farm near Brookville. In his professional life he is Roger Allshouse, PhD Electrical Engineering.

Our program for the May meeting is a technical program on Packet Radio. Details will be announced in the next issue of the club newsletter. This program concerns one of our newer communications techniques involving computer-type communications which is receiving much attention in amateur radio. This will be another good learning experience for all of our members.

QCARC Exec. Board Minutes

by Bryan Simanic, WA3UFN

The Exec. Board met at the Buccaneer Restaurant, in St. Marys. The Board members enjoyed lunch before the business meeting.

The Exec. Board meeting of the Quad County Amateur Radio Club was called to order March 8, 1985, by President WA3IHK.

Board members present: WA3IHK, WA3UFN, KA3MYQ, N3DEO, WA3GNS

The minutes of the previous Board meeting were read and approved.

There was no Treasury report available.

OLD BUSINESS- There was some discussion about sending out recruitment letters, as mentioned in the last minutes no further contacts are to be made by special letter.

NEW BUSINESS- The Tom Mix special event station was discussed. There was no report available. It was suggested that the chairperson check on using a call such as W3TMX or the like if we are able to obtain permission to use someone's call. Pres WA3IHK stated that the new meeting place at the Senior High School in Du Bois has been approved for this year at no charge to the club. He also reported on the first VE Exam held in January, that the turnout was good despite the bad weather. The 1985 QCARC banquet will be held at the Lithuanian Club in Du Bois, the dinner part of the banquet will begin at 7:00 PM. Reservations will be for $9.00 per person. We need 40 people to have the usual buffet style meal. The guest speaker will be Dale Clift WA3NLO from ARRL, along with several other ARRL officials. Awards will be presented that include: Ham of the Year, Special Service Club designation, etc. N3DEO volunteered to be MC for the banquet. The subject of prizes was brought up, it was decided that we have flowers for the YLs, as last year. Motion by N3DEO seconded by WA3UFN that we appropriate money for a paperback ARRL Handbook and the same prizes as last year as well as dinners for the speaker and special guests. Motion carried. There was an observation made about the program at the February meeting.

The meeting adjourned at 2:45 PM.

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WB3DDA is now at home, recuperating from a broken leg. He wishes all the best to those who wrote him during his hospital stay, and thanks you for the many cards he has received.

Principal Speaker for Banquet Changed

by Art Kunst, W3WM

Contrary to the announcement in the March issue of the Parasitic Emission, our 10th Anniversary Banquet speaker will be Bob Myers, K3HWL. Bob is from the Titusville area and is known to some of our club members through his active in-state role in ham radio.

The title of Bob's presentation is: Amateur Radio, Your Wife, Your Family, and Your House. Bob is a fine speaker and presenter whose topic will appeal to all present at the banquet. Bob has numerous speaking engagements for amateur radio, as Director of the Redevelopment Authority of Titusville, and member of a number of community organizations.

Bob is a very active and concerned radio amateur, and is the Section Appointee for State Government Liaison in Harrisburg. His recent activity in Harrisburg has concerned antenna tower height legislation.

Our Club Banquet is privileged to be addressed at its 10th Anniversary Celebration by this outstanding area radio amateur, Bob Myers, K3HWL.

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Old-Old Timers Recognition Award

by Art Kunst, W3WM

This year for the first time the members of the Quad County Amateur Radio Club will recognize several radio amateurs in our area who have been "hams" for fifty or more years. It is appropriate indeed that this event will be part of the 10th anniversary celebration and banquet of QCARC on April 13.

The following OOT's will be introduced at the banquet and their radio achievements recounted.

Ron Drummond	W3FF	Punxsutawney
Wilbur Rimer	W3IE	St. Marys
Cliff Carlson	W3VMX	Ridgway
Ralph Bush (ex-8NM)	N3AWQ	Kane

We regret that Ralph became a Silent Key in January, and so his Recognition Award will be given to his widow. Plans for his recognition preceded his death. (See his Memoriam in this issue.)

All members and guests will be privileged to extend personal congratulations to our honorees as each will make a special effort to attend. The Recognition Awards will be in behalf of the Club by W3WM.

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EXAMS

by Paul Silinsky, K3PS

Amateur radio examinations for all class licenses will be given on May 18, 1985 beginning at 9 AM at the DuBois Area Senior High School. Send your completed FCC form 610, a check for $4.00 payable to "ARRL/VEC", and a copy of your license to:

Gary Boucher, W3GNR
913 Chestnut Ave.
DuBois, PA 15801

Gary must receive your registration materials by April 18, 1985 at the latest.

There will be a VERY LIMITED number of walk-ins permitted for each class license exam. They will be available first come, first served! Don't miss out. Pre-register now. Form 610's are available from Gary for an SASE.

QCARC

NEW POSTAGE RATES

by WB3IQE

Remember two things: 1) The "D" stamps the post office is selling for 22 cents these days are not usable on international mail, and 2) If you put your card in an envelope, that makes it a letter, and that's that!

The world is divided into four parts:

A. Domestic, including overseas military personnel with APO/FPO addresses.

B. Canada and Mexico.

C. Central America (except Mexico), all Caribbean Islands, Bahamas, Bermuda, Colombia, Venezuela, St. Pierre and Miquelon Islands.

D. Everywhere not covered above.

The Rates	A	B	C	D
Surface Postcard	.14	.14	.25	.25
Air Postcard	*	*	.33	.33
Surface Letter				
0-1 oz.	.22	.22	.37	.37
1-2 oz.	.39	.40	.57	.57
Air Letter				
0-.5 oz.	*	*	.39	.44
.5-1 oz.	*	*	.78	.88
1-1.5 oz.	*	*	1.17	1.32
1.5-2 oz.	*	*	1.56	1.76

* There are no separate surface and air mail classes within the US. Mail to Canada or Mexico moves under that rule within the US, then goes by air within Canada or Mexico.

A Visit to Barry Goldwater's Hamshack

by Jeff Rowles, KA3PHV

Quite a few years ago I was introduced to ham radio by my mother's cousin, WA3JDT - Jack, in Erie. Under his control, I talked with a man in South Africa.

Back home, we went to Altoona and I bought a Hallicrafters S-108 receiver. For many years I was content to monitor and log. Armed with a couple of old Callbooks given to me by Jack, I started to write to hams telling them when and where I heard them and requesting their cards. Many of them replied, all advising me to study and get my ticket.

The visit to Barry Goldwater's "shack" began when my family was planning to fly to Phoenix, Arizona in 1977 for a vacation. When I found out where we were going, I wrote to Senator Barry Goldwater, K7UGA, telling him I would be in the area and that it would be an exciting and unforgettable experience if I could visit his ham shack. On an earlier occasion he had sent me his QSL card, so I was not surprised when, on the day of our departure, I received a letter from him saying that, unfortunately, he would not be there but if I would be sure to take the letter with me, the caretaker would let me in the shack. He said to get there after ten thirty in the morning because that's when the teletype operation was going on and he thought I would find it most interesting.

On the appointed day we called and got directions to Mr. Goldwater's home in Scottsdale. The ham shack is located beside the swimming pool at his home.

The shack was a very impressive sight - a fully operational station complete with RTTY sending and receiving stations. The crew that was operating the Air Force Mars Radio Station AFA7UGA were very gracious and eager to fill us in on the operations they were involved in carrying out, mainly the process of receiving and passing messages to and from servicemen overseas.

We spent several hours there. There was a living room type area in the shack. There was an impressive photo gallery with pictures of Mr. Goldwater with many famous people, including Presidents of the United States. Also, there was an interesting Indian artifact collection.

I left that day with a greater appreciation for one of the many ways amateur radio can provide a public service as well as an appreciation of the dedicated effort of operators around the world who pass the messages from servicemen and women who are far away from home.

In Memoriam - Ralph Bush, N3AWQ

by Arthur Kunst, W3WM

I regret to inform the area amateur radio community that Ralph Bush, N3AWQ became a silent key on January 21, 1985. Ralph was 77 years of age and lived most of his life in Kane, PA. It was my pleasure and honor to become acquainted with Ralph this last year, and visit with him and his wife twice at his QTH. Most area radio hams do not realize that Ralph was one of the first licensed hams in the area. His wife tells me that the Kane newspaper wrote a feature article on him as the radio pioneer of the area.

Ralph was licensed in 1927 while a student in high school, as 8NM and later as W8NQ. When this radio district changed to the third call area in 1946, Ralph became W3NQ. He retained this call until recent years when the renewal date of his license slipped by too long.

Ralph was a keen radio amateur and an indefatigable experimenter. He had an ancient supply of parts, but he surprised me with his knowledge and application of semiconductor theory and recent amateur techniques. His wife tells me that Ralph was a constant student of technical radio and tried to stay up to date.

Ralph was not one to be stopped and knew how to "make do" in the best amateur radio tradition. Last summer, I observed that Ralph was erecting a 40 meter dipole and using two stout pieces of bakelite as end insulators because he had no store-bought glass or ceramic insulators.

Ralph loved his hobby of amateur radio and operated almost every day. As a concession to the new age of equipment, Ralph purchased a TENTEC transceiver a year ago. He was often found on 40 meters where he maintained operating schedules. He preferred CW, but found phone easier in recent years.

On the day of his death, Ralph was operating as usual, with his last logbook QSO at 11:32 am. Ralph left the shack to pick up the mail from his RFD mailbox some 300 feet from the house. It was a day to remain indoors, as it was windy, snowing and 21° below zero. Maybe the thought of his wife returning home from the hospital in a few hours made him go out into that storm. He got the mail, but the exertion was too much, and he never made it back into the house.

Ralph lived most of his life in Kane. He worked first for the Pennsylvania Railroad, and then with Sylvania in Warren. He and his wife retired from the Stackpole plant in Kane. He was recognized by his employers as an innovator and solver of technical problems which saved much money for them.

Ralph leaves a mourning family of his wife and three sons. He regretted that none of his children took up amateur radio. The sympathy of the amateur radio community is extended to the family. I found Ralph to be a gentleman in the best amateur radio tradition. He was kind, quiet, thoughtful, considerate and alert notwithstanding declining health. I consider myself immensely benefited by the short period of our acquaintance, and regret that this growing friendship was cut short.

Ralph had been a member of the Quad County Amateur Radio Club only recently, and enjoyed our newsletter. He liked being part of a club of radio amateurs. It was the plan of our club to honor Ralph at its April banquet as a radio pioneer, as well as others. We see no reason to change this plan.

May all of us be inspired to be better radio amateurs by his example of 58 years devotion to ham radio, and to better observe the amateur Code of Conduct. Ralph would have been pleased to have influenced us this way as a Silent Key.

QCARC

SOME THOUGHTS ON SPECIAL EVENTS

by WA3GQU

Since I opened my mouth and got my foot stuck, I must write a bit on what we in the Quad County area need to do as group activities for special events. In this regard I would like to present ideas for constructive criticism and rebuttal. The League has the procedure down to a science. We need only to tune the bands to hear nets, traffic, brass pounders league, ragchews and contests (Field Day, VHF, Sweepstakes). We can derive ideas galore for the taking.

THE WHO IS US. THE WHEN IS NOW. THE WHY IS BECAUSE. THE WHERE IS HERE. THE WHAT IS SPECIAL EVENTS.

On numerous occasions in the past, we radio amateurs have done numerous good projects for the DuBois area. Lets think what we've done, what it accomplished, and what needs improvement for future efforts. Field Day seems to be a popular activity with vacations just starting and everyone needing something to do to alleviate the summer doldrums. The message handling at the DuBois Centennial showed what can be achieved when thought and organization are applied. Several

amateurs worked hard at this effort under the leadership of WA3IHK, and performed a job well done for a once-in-a-lifetime event.

Times, frequencies and places of operation should be studied, discussed and experimented with. New computer techniques can be used to good advantage. It appears a large numbers of hams are improving and using their home stations. This makes me wonder if more could be accomplished at some central location or at various individual stations, convenient to the operators involved.

In conclusion, if all available amateurs in our club made some contribution to our efforts in special events, a great deal could be accomplished and we could gain recognition for our area now and in the years to come. I intend to be operating from 160 to 2 meters from my location outside of DuBois at any and all times for whatever it takes to achieve our goals. How about you?

QCARC

The Frontiers of Technology
by K3PS

The time has come to announce to the world that the Quad County ARC Technical Committee has made a significant breakthrough on the very edge of repeater technology. For over ten years, the committee has been hard at work to perfect the "Simplex Repeater." Yes, that's right! A repeater that receives and transmits on the very same frequency. Think of the frequencies that will again be available when the simplex repeater craze sweeps the country.

It has taken ten years of very hard work to perfect the simplex repeater. Keep in mind that a repeater must transmit and receive at the same time. If the receiver and transmitter are both operating on the same frequency at the same time, some method must be devised to keep the transmitter from interfering with the receiver. Early tests at the Clear Run Laboratory indicated that a "simplexer" constructed of discarded metal cylinders might be the key to the problem. After years of hard work and hundreds of marginal simplexers, the breakthrough was made. "The key to the problem is to stabilize the destructive inter-harmonic interference inherently present in any simplexer by utilizing automatically compensated phase-shifted feedback," says Wassil Slotnik, K3X (you will recall that Wassil was issued his special 1x1 call in recognition of his pioneering work on an energy conversion system that supplied his can even participate to some degree in the entire home energy needs for two years by extracting energy from the millions of signals on channel 19 CB).

A prototype simplex repeater is currently undergoing Phase II field testing in the Quad County area. It is operating on 146.46 MHz, in receive only mode at this time. Since it is in receive only mode (another Slotnik development), it will absorb all signals on the frequency. All hams in the area are invited to participate in the prototype testing. You can do so by calling "QRZ, simplex repeater" on 146.46. When you let up on your mic key and hear no signal returning, you can be sure you have accessed the receive only mode of the Quad County simplex repeater, K3X/R. Happy QRZeding!

QCARC

LET'S GET TOGETHER WITH COMPUTERISTS
by Gary Boucher, W3GNR

When the first radio experimenters communicated by radio, they had an opportunity unique to researchers. They could quickly communicate their experiences and ideas to other experimenters through a media which, in itself, proved their knowledge and applications. What an exciting time that must have been, never knowing when the next conversation might develop into a better or entirely new idea which would change the history of radio communication forever.

With the great inventions like AM, FM, SSB, TV, RADAR, tubes, transistors, integrated circuits, etc. behind us, it is hard to imagine that many truly revolutionary ideas still exist. However few, the application of digital and computer circuitry to amateur radio is one revolutionary idea many hams would like to, but can not, ignore. Fifteen years ago about the only thing that ham radio and computers had in common was that both required electricity to operate, and digital and RF circuits were distinctly different applications areas in most ham's minds. Now the distinction between computers and RF communications has blurred to the point it is difficult to tell whether computers have RF communication peripheral devices (radios), or radios have computer accessories.

Through our radio hobby, digital communications and computer experimenters are engaging one another in the much the same way the early radio experimenters must have done. It's important for us to understand this and to accommodate digital experimenters and their new ideas to keep our hobby interestingly abreast of technology. If we like, we

future of amateur radio digital communications by embracing this somewhat foreign technology.

How can we convince computer hobbyists to apply their talents in amateur radio? Very easily, I believe. If door-to-door salesmen had a selected list of customers on par with computer hobbyists, they would never miss a sale. These are highly motivated practicing new-technologists which are in many ways similar to ham radio experimenters. For instance, both hobbies require the devotees to learn new languages, and the computerist's programming and digital circuitry proficiency is remarkably like our code and analog circuitry requirements.

So, why not invite these individuals to join us? In a recent discussion on the subject, an objection was raised that there are too many different brands of computers in use to ever hope to support computer user groups within the club. However, it is not a specific brand of computer, but common computer technology, which can be applied to amateur radios, that should be supported. Whatever the applications such a liaison between the two groups would produce, the combined hobby community would benefit. Moreover, digital circuitry and control programs for different computers are remarkably similar, so brand name computer owners may indirectly benefit from a QCARC supported Amateur Digital Applications Group. What do you think?

QCARC

How to Select the Right Computer System For Your Ham Shack

by Joe Shupienis, WA3IHK

Perhaps you have been bitten by the computer bug, and you would like to jump on the computer band wagon. But maybe you are so overwhelmed by the cost, complexity and number of choices and decisions, that you feel helpless. This is the first in a series of articles that will help you make the right selection. I have been teaching these topics in my Introductory Data Processing classes at Jeff Tech for many years, so you know they are "tried and true."

Hardware and Software - Before you can make intelligent buying decisions, you must understand some of the terminology. **Hardware** is permanent equipment such as the computer; peripheral devices like printers and disk drives; and accessories such as light pens, joy-sticks, CW adaptors, voice synthesizers and the like. **Software**, on the other hand is considered to be consumable. It includes the programs that control the computer, special forms such as bank checks, invoices or contest log sheets, and supplies such as blank disks, printer ribbons, etc.

Hardware and software work together to form a **computer system**, which you, as a user will operate. When you are considering a computer system, you must realize that both the hardware and software are equally important. Unfortunately, not all hardware is compatible with all software, and so your selection must be based on what you want to use the system for.

The first step in selecting a computer system is to analyze your needs. Ask yourself what you want the computer to **do** for you. Before spending any money, you should have at least three things on your list that you know a computer can realistically do.

Now that you know what you are looking for, you can begin to look for the **software** that will do those jobs. Many people have wasted time, effort and money by buying a particular brand of computer first, only to find that no programs were available that did what they wanted. Where can you look?

Start out with ads in magazines. If you are looking for a computer Morse Code program, then the ham magazines would be the logical choice. Look for a program that fits **your** idea of what a CW program will do. If you want RTTY capability, then make sure that it is included. Now check the back issues to see if anyone has ever reviewed that program. Remember that the advertiser pays big money to the magazine, so take glowing praise with a grain of salt. But by the same token, **really** believe the **negative** comments! Try to find at least one more similar program and compare the two.

Finally, pretend you're from Missouri, and say, "**SHOW ME!**" Talk to someone who is using that program, or better still - try using it, yourself. A hamfest is a good place to see the latest and greatest systems being demonstrated. Next you should say, "**LET ME TRY!**" If you find the program easy to use, and it fills the bill, then you have made a real find. If you aren't allowed to try it, ask yourself, "What are they trying to hide?"

After all - would you buy a used car without a test drive? Once you have found the right programs, **THEN** start looking at the hardware required. Remember - if you try it and like it, then it's right for you - **regardless** of what "experts" may tell you. Be like the art critic who said, "I don't know a Picasso from a daVinci - but I know what I like!"

Next time we will select your computer!

Ham Puzzle

by Bill Latta, KA3MKY

See if you can find the following ham radio words in the puzzle:

Amateur Radio	Marconi
Antenna	S Morse
Audio	Morse Code
BALUN	Microwave
Beat Frequency	Novice
Capacitor	Ohm
Circuit	Ohm's Law
Conductor	Operations
Crystal	OSCAR
Demodulator	Phone Patch
Diode	Power Supply
Dipole	QST
Double Conversion	Quartz
Electron	Regulations
FCC	Receiver
Field Day	Repeater
Field Strength Meter	RTTY
Frequency	Sending
Filter	Skip
General	Solder
Ham Fest	Station
Hartley oscillator	Transmit
Key	Tuner
Licensee	Wavelength
Location	Wire

V R P H O N E P A T C H V T R A N S M I T B G
S N N V F R N L V H M K P R O P O G A T I O N
N C E D E M O D U L A T O R S K F I L T E R T
O Y E I L N T L A K B S O L D E R R O Y P X R
I R F I E L D S T R E N G T H M E T E R F N E
T O M F C R Y S T A L Q V G V K O K N A R R V
A E R K T U N E R V X B N G R Y U Z O W V O I
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A V D O U B L E C O N V E R S I O N K D N Z P

"QCARC"

This newsletter contains 5423 words! It is by far the largest one we have ever published!

HAPPY BIRTHDAY QCARC!

The Parasitic Emission
Newsletter of the
Quad County Amateur Radio Club
P.O. Box 352
Du Bois, PA 15801

FIRST CLASS MAIL

Member:

An Affiliated Club of the American Radio Relay League

Serving Radio Amateurs in Clearfield, Cameron, Elk and Jefferson Counties since 1975