THE DELAWARE LEHIGH AMATEUR RADIO CLUB, INC.

1995 HAMFEST

FEATURING NEW AND USED HAM RADIO EQUIPMENT & COMPUTERS

Sunday August 13, 1995

Talk in 146.70

Career Institute of Technology, Easton, PA

Open to Public at 8 AM - Vendor Set-Up at 5 AM

☺ **Sun or Rain**

Admission - $4

Unlicensed spouse and children under 12 Free

Tailgaters - $7 Indoor tables - $25

(Includes One Admission)

Full Breakfast and Snacks Available

Handicapped Accessible

- Forums
- Electronic Test Bench
- Door Prizes
- VE Examinations†
- DXCC Field Checking
- Electrical Safety Demo

For more information please call:

Chuck Drake, KD3SQ -Hamfest Chairman - (610) 866-4714

or the DLARC Answering Machine at (610) 820-9110

ARRL Sanctioned

†**VE tests ⇨** There will be two examination sessions: 10:00 AM and 1:30 PM. There is no preregistration; sign-up sheets will be posted at 7AM. The size of the room is limited and space is on a first come first serve basis. No visitors (i.e. persons not taking examinations) will be allowed in the room. The exams will start *promptly* at the stated times and no one will be admitted once the session has started. All needed elements will be administered at each session. There will be signs posted at various places on the hamfest site to guide you to the room. Please bring your own pens and pencils. You ***must*** bring a photo ID and a copy as well as the original of your license and any CSCEs. For questions leave a message for Robin at (610) 820-9110.

Vendors ⇨ There is ample indoor area for vendors. Spaces cost $25 including a table and one admission. Additional participants must purchase a hamfest ticket. For those who prepay some electric service is available at no charge on a first come first serve basis. Additional information is available upon request; contact Tom, N3LLL at (610) 366-0497. If you would like to prepay please send your requirements along with a check payable to the DLARC to the address shown on the back before July 31st.

Tailgaters ⇨ There is ample area for tailgating. Spaces will be assigned on a first come first serve basis. The $7 tailgaters fee includes one hamfest admission ticket. Additional participants must buy a ticket at the regular price of $4.

Career Institute of Technology

5335 Kesslersville Road, Easton PA 18040
Phone (610) 258-2857 Fax (610) 258-0805

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Needs Assessment
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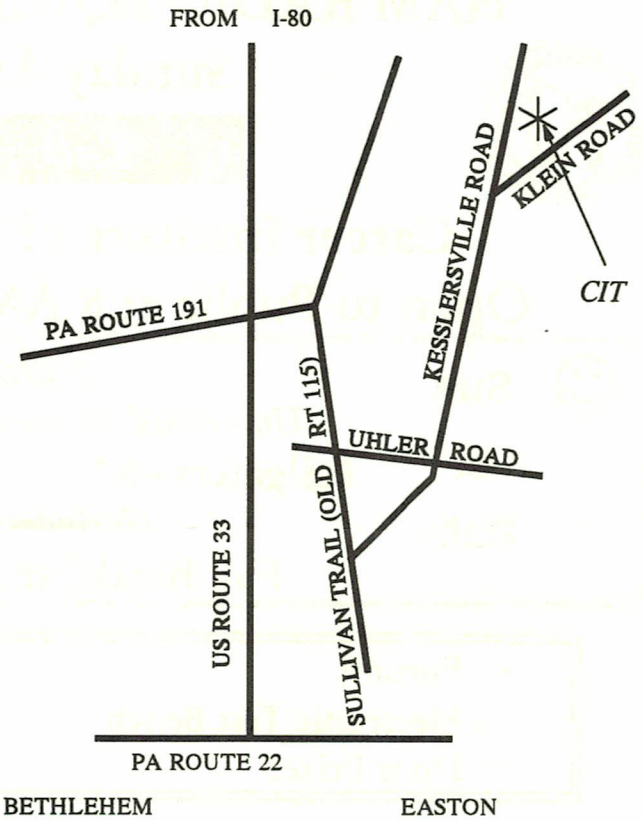
DIRECTIONS TO *CIT*

FROM PA 22 TAKE PA 33 NORTH TO THE STOCKERTOWN EXIT. TURN RIGHT ONTO PA 191. GO 150 YARDS TO TRAFFIC LIGHT. TURN RIGHT ONTO SULLIVAN TRAIL. GO SOUTH 1.5 MILES TO TRAFFIC LIGHT. TURN LEFT ONTO UHLER ROAD. GO ONE MILE TO TRAFFIC LIGHT. TURN LEFT ONTO KESSLERSVILLE ROAD. ***CIT*** IS 1 MILE ON RIGHT.

MAP IS NOT TO SCALE **TALK IN 146.70**



The Delaware-Lehigh ARC, Inc.
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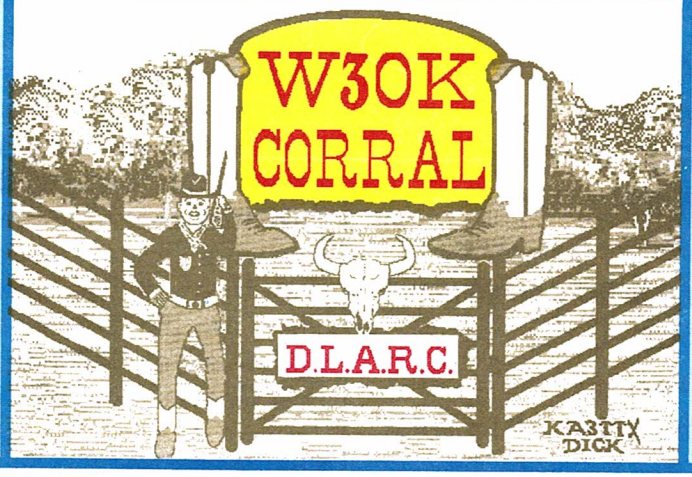
HAMFEST ANNOUNCEMENT
August 13th 1995



DELAWARE - LEHIGH AMATEUR RADIO CLUB, INC. W3OK

June 1995



SPECIAL SERVICE CLUB
ARRL Affiliated Club

Field Day June 24 & 25

Field Day for Newbies!

by Bob, KU3K

O.K...You don't have any idea why the ham radio fraternity/sorority celebrates the beginning of summer with this event called Field Day? Well, countless amateur radio operators have been responsible for the advance of technology throughout the history of this planet. We can therefore assume that in cases of disaster (natural or manmade) these 'communicators' will be the best problem solvers when it comes to dissemination of vital information.

Of course, we hams have proven ourselves time and again, providing needed information during earthquakes, floods, air races even the olympic games..and on the local level communications for weather emergencies and things like bike and foot races! This expertise has enabled us to garner many accolades, not the least of which is use of the many frequency bands we enjoy! As you may know the radio frequency spectrum is shared by countries all over the earth. Contrary to what some will say, mostly on 75 & 20 meters, nobody "owns" any frequencies we are simply permitted to use them by our government. The slice of amateur radio pie each government retains is decided by what is known as the World Amateur Radio Conference (WARC). They meet every 20 years or so and decide how to slice!!

In my opinion, I see no other reason for 'amateur radio' than its ability to supply engineers and the like to the ever expanding technology pool, to enable peoples of all nations to freely exchange information and ideas, providing the means for peaceful coexistence, and to supply global information links during times of emergency. Believe me, WARC takes all of this into account!

FIELD DAY is an Emergency Preparedness Drill! It is our practice session, our proof of performance that amateur radio operators across the United States are masters of emergency communications!

Please join us!!
June 24 & 25 1995
Plainfield Township Fairgrounds
Route 191 and Kesslersville Road

de Bob, KU3K, Field Day Chairman

Radio building from scratch or kits

The next DLARC meeting will be held on **June 1st** in **Kiva Hall** and will feature **Victor, N3OWE.** Vic is a graduate of Lehigh Valley Community College and possess an AAS in Electronic Communications Technology and is also a certified substitute teacher at the Lehigh County Vocational Tech. He is employed as an Instrumentation Technician.

Vic's interest in radio dates back to his childhood, his father is Victor Sr. is W3NKD. Vic has built and experimented with crystal radios, super regenerative detector receivers and transistor circuitry in his earlier years.

Learn what electronic part sources are available to the amateur radio builder today.. The progression of planning, laying out, fabrications, alignment and testing of radio receivers will be explained in detail.

Meeting in Kiva Hall, JUNE 1st 7:30 PM
Talk in on 146.70 if needed.

Contest Calendar

by Barry, KU3X, Contest Editor

Jun 10	Portugal Day Contest
Jun 10-12	ARRL June VHF QSO Party
	ANARTS WW RTTY Contest
	TOEC WW Grid Contest, phone
Jun 15	W1AW Qualifying Run, 10-35 WPM
Jun 17-18	All Asian CW DX Contest
Jun 24-25	ARRL Field Day
Jun 30	W1AW Qualifying Run, 10-35 WPM
Jul 1	RAC Canada Day Contest

Exchanges:

Portugal Day = RS plus serial number

ANARTS WW RTTY = RST, time and zone

ARRL VHF QSO Party = Grid locator

All Asian CW DX = RST plus age

RAC Canada Day = RS(T), serial number, and QTH

de Barry, KU3X

Thought of the month

I'm tired,

supplied by Leslie, KE4PWE



Yes, I'm tired. For several years I've been blaming it on middle age, iron poor blood, lack of vitamins, air pollution, water pollution, saccharin, obesity, dieting, under-arm odor, yellow wax buildup, and a dozen other maladies that make you wonder if life is really worth living. But now I've found out, 'taint that.

I'm tired because I'm overworked!

The population of this country is 200 million.
Eighty-four million are retired. That leaves 116 million to do the work.
There are 75 million in school, which leaves 41 million to do the work.
Of this total there are 22 million employed by the government. That leaves 19 million to do the work.
Four million are in the arm forces, which leaves 15 million to do the work.
Take from that total the 14,800,000 people who work for state and city government and that, leaves 200,00 to do the work.
There are 188,000 people in hospitals, so that leaves 12,000 to do the work.
Now there are 11,998 people in prisons.

That leaves just two people to do the work.

You and me

AND YOU ARE SITTING THERE READING THIS?

No wonder I'm tired

de KE4PWE at Ground Zero Radio Club

Let's be tolerant

by Tom, N2TTQ

In the past I have run across persons on ham radio that at first glance appeared to be illegitimate hams. They spoke funny, or the call letters seemed strange. At this occurrence I rapidly cleared off the frequency (mainly so as to avoid be construed with any wrong doing).

To my dismay I've found on all of these contacts they were hams with disabilities. They may have cerebral palsy, mental illness mental retardation or are geriatric hams that are not up to par. There is not much worse a feeling when you found out you've pulled the plug on a disabled ham. I've learned not to call shots on anyone unless of course its a definite violation (foul language, etc.). The moral of the story is lets be tolerant of disabled hams.

de Tom, N2TTQ

Ed Note: *This is the first item by Tom, N2TTQ for the OK Corral. Why don't you do your thing as well.*



A Product Review

Yeasu FT-900 HF Transceiver

by John Dunker NJ9C

I recently had the opportunity to test drive the new Yeasu FT- 900 HF transceiver. Yeasu has developed a reputation over the years as an innovative design company in the amateur radio field. After all, they were the first to develop an HF transceiver that was capable of receiving two separate bands and modes simultaneously. That is to say, you can plug a pair of stereo headphones into your FT-1000, top of the line HF rig, and monitor 80 meter CW in the left channel, while also listening to a 15 meter SSB signal at the same time in the headphones right channel, each with appropriate filter bandwidth.

The FT-747 series HF transceiver offered a detachable front panel - the first of its kind in the industry (for HF). And now, along comes the FT-900, with a detachable control head (as opposed to the detachable complete front panel of the FT-747). Clearly, Yeasu has realized the value of the remote head mounting in today's smaller vehicles. This design style allows remote mounting of the main unit under the car seat or in the trunk of the vehicle. Initially, I was excited by this configuration - I have a Honda Accord. The control head wedges between the left side edge of the front passenger seat, and the emergency brake lever. Use of the emergency brake dislodges the head, but after all, I don't employ the brake that often, and when I do, repositioning the control head to its original resting place is a simple task, indeed.

But enough of that - let's get to the main purpose of the review - "just how well does the FT-900 really perform?

DISPLAY:

The orange back lighted display allows for easy viewing of the display field information under virtually any lighting condition. This is certainly an improvement over the white fluorescent displays of certain other radios, particularly in mobile and field conditions (especially in daylight).

MULTIFUNCTION BARMETER:

The bar meter works well. Yeasu was wise to emulate Kenwood's dual reading display with peak hold feature, as pioneered in their TS950S/SD series radios. At a single glance, you can simultaneously read both ALC (microphone level) and power output, for example.

You can elect to show the radios peak power output, with the highest power "bar" remaining with a slight "hang time" for easy determination of the radios output. This is an operator-friendly feature, although bar displays do not render a level of accuracy required of the QRP purist who needs to determine the radios accurate power output (in this case 5 watts to satisfy the QRP requirement). There is no substitute for accurate analog metering for this other needs.

RECEIVER PERFORMANCE:

Overall, the FT900's receiver did quite well, even in the presence of strong, adjacent frequency signals. The IF shift works fairly well with SSB, but is ineffective for narrow (500 Hz) CW work . The notch was quite effective, minimizing annoying heterodynes caused by "turner-uppers" and strong foreign shortwave broadcasters in the evening on 40 meters.

RECEIVER AUDIO:

This is a strong point for Yeasu in general. When testing Yaesu's FT-890 a few years ago in a mobile installation, I was very impressed by the clarity of the receivers audio, even in the ambient noise of the mobile environment. The FT-900 is on par with the FT- 890 in this regard - very impressive receiver audio!

AUTOTUNER:

It's quick, quite, but was a bit finicky with my four foot multiband Outbacker mobile antenna.

TRANSMITTER:

Overall, the FT-900 did well on SSB, with no complaints. I have mixed feelings about its CW performance, however. In the "semi- breakin" (VOX CW) mode, the FT-900 sounded very clean, indeed. The same cannot be said for the FT-900 when operated in the full breakin (QSK) mode.

At moderate to high speeds of 28-45 works per minute (WPM) the CW characters exhibited a noticeable "truncation"- that is to say, they sounded choppy - cut short by the radios inability to quickly switch from send to receive and back again. This problem is common to many radios from Japan and not just Yaesu's. I have a test that I run when I'm evaluating a radio in the QSK CW mode. I call my friend Jim W4TNF. Jim has three things going for him. First, he offers a candid, honest opinion of the radios, knowing he's not going to hurt my feelings. Second, he is qualified being a high speed (QRQ) op in the 50 - 55 WPM range. Third, he is a Ten Tec owner, and they wrote the book on effective QSK design criteria. I remember climbing the hill on I-64 one evening after work, in QSO with Jim on 40 CW. He liked the 900 on semi-breakin, but quite frankly was very disappointed with the FT-900 in full breakin. (Our speed was in the 28 - 33 WPM range as I recall).

This brings me to an important point which applies to many rigs on HF. DO NOT rely on the radios side tone monitor as an accurate rendering of the actual transmitted keyed signal. Listen on another receiver to determine what's really going into the ionosphere. In the HF radio world sidetone "monitors" are in general akin to "smoke and mirror illusion".

CW OFFSET:

I liked the fact that the FT900's CW sidetone frequency matched the offset frequency, and is adjustable by the operator. A lot of us tire of the whinny 800Hz tone offered in many radios - high enough to send many of us to an asylum after a 48 hour DX contest!

FILTERING:

I chose to have both the SSB and CW optional narrow filters installed. I could write many pages on this alone, but in a nutshell, if you are going this route and have neither the proper tools for desoldering or the technical inclination, it is VERY important that this task be done by the selling dealer's technician or a local person who is qualified for the demands that the FT900 offers. To put it another way, keep your welder in the garage and your blowtorch in its holster, partner. If not, you could end up with a very expensive paperweight or a healthy repair bill! This is especially the case when installing the narrow SSB filter. In order to do so, the stock filter must first be DESOLDERED - and that is only after the main board is nearly removed from the radio's chassis, which requires the removal of numerous jumper cables and one ribbon wire. I think you're getting the picture by now.FT-890 owners note - this scenario also applies to this radio as well. Thanks to a local friend and club member who happens to be one of the two best technical/engineers that I've had the pleasure of knowing, the job was completed. Was it worth it? Even the casual CW op will appreciate the narrow filters use.

Continued on Page 4

Continued from Page 3

SSB folks will see some improvement when installing that modes optional filter as well, (although) not as dramatically as the CW filters performance. So, when in doubt, don't wreck the rig and stand up and shout, just stand back and get your wallet out!

Well, having now satisfied my reoccurring Longfellow-esque tendency, who don't we look at the FT-900, while operated as a remote unit. As good as the internal speaker sounds, that won't do much good when the main unit is in the vehicles trunk, or under the passenger seat. At least Yaesu could have mounted a speaker jack on the radio's control head, so yet another cable would have to be run from the rigs trunk mounted main unit to an external speaker located at the dash, for example.

There are a number of us that like to operate CW mobile. The FT-900's built-in keyer is nice, but is no good when the often adjusted speed control is located in the vehicles trunk! Additionally, a keyjack should also be located in the radio's remote control head (even if it's only an 1/8 inch jack, it would be worth having). This would eliminate another control cable.

I'm not certain if Yaesu's product development and engineering folks ever considered that the FT-900's remotable configuration could effectively lend itself to numerous "base station" applications as well! With todays smaller homes and crowded shacks, a "small footprint" remote head placed on the operating desk leaves more usable and available space for other modern necessities, such as computers,printers, keyboards, memory keyers, rotors, etc.

INCLOSING:

Overall, the FT-900 did well, as far as basic feature design is concerned. Frankly, however, it just didn't excite me enough to pay the considerable cost for the unit. In a mobile application, it is a bit TOO much radio for my taste, and awkward in a remote mount configuration. In a nutshell, this innovative radio's design could use some refinement. But, it you are a serious mobile phone op who feels the need for all of this radio's bells and whistles, the FT-900 is deserving of serious consideration - especially if you have a small vehicle.

To do this radio justice, a 25 page review would be more appropriate. It's just not feasible for a Newsletter's limited space. If you do have an interest in the FT-900, and have questions, although I don't have the radio anymore, I'd be happy to discuss it with you at any time.

This article was published in the Amateur Radio Transmitting Society newsletter ***Watts New*** *Greg Sheehan, KE4AYB editor and was supplied by Barry, KU3X*

Musikfest RF Platz

by John N3GLZ

One of the greatest skills which we have as amateur radio operators is the skill to communicate under less than ideal conditions. This is especially true among those of us who like to work contests and those who enjoy working public service events.Last year was the first year that members of the club participated in helping Musikfest with their radio communication's system. Although the system is not an amateur radio system, many of the skills we possess as amateur radio operators contribute greatly to the effectiveness of the Musikfest system.

The system is a Motorola radio system which consists of a base station and approximately sixty hand-held units in the field. The communication itself is related to anything from reporting low beverage inventories to medical emergencies. The Musikfest communications center is also linked by radio to the City of Bethlehem communication's center. Musikfest is a non-profit organization which utilizes the services of volunteers in order to stage one of the largest music festivals in the country. Each musikfest sight is named .....platz, (place in German) and signifies the type or variety of music which is usually performed at that sight. Because a working knowledge of the sights and the festival is essential in order to help with communications, it will be necessary for any volunteer operators to attend at least one training class which will be help sometime in July.

I will need about twelve volunteers in order to adequately staff the base station. I would also like to add an ARES station to the center in the event of a problem arising where additional communications capability might be needed. I would prefer volunteers who are proficient in operating under stressful conditions, such as contesting or emergency communications. The work is rather fast paced and can be somewhat stressful but also rewarding.

If you are interested in participating, you may call me at 610-435-3268 or drop me a packet message at N3GLZ @ N3DPU.#EPA.

Pakteck

RFI-TVI Problems?

If you have any technical questions on Amateur Radio and RFI-TVI problems, there is help available. Contact the EPA Technical Coordinator Dennis Silage, WB2LGJ at WB2LGJ@WB3JOE.#EPA. Voice mail 215-204-6761 and email silage @ vm.temple.edu. Dennis will try to help you with your problems along with the EPA Technical Specialists: **WA3DSP, N3IGA, N3IXQ, WA3KZN, K3NVI, and K3OQF**. Hands-on communications laboratory and engineering library facilities are also available to EPA technical experimenters courtesy of TUARC WA3TVT Electrical Engineering, Temple University, Philadelphia.

de John, N3IGA

Do not turn back

Do not turn back when you are just at the goal.

Edward Gibbon

- No good man ever grew rich all at once.

Arthur Burns

- It is better to learn late than never.

Sandy Denis

- The best prophet of the future is the past.

Ceferino Martinez

- The best way to keep your friends is not to give them away.

J. H. Tellechea

- From the Happy Club, de Juan, KF4OJ

A Beginner's Course on Computers.

How do they work?

Part 1 of 3

by Van, K3CP

Would you like to know how computers work? Read this article and find out. You'll be surprised how easy it is to learn. This article is for people who have no idea how computers work. It is intended for those who may or may not use computers but who would like to know the simple fundamentals. I will show you how they respond to our input and how they process that input. It is not difficult and I promise that if the newcomer to computers will continue to read this you will know a lot more about them than you do now. As someone once said, "A computer is like a big shallow lake - it's a mile wide, but only a foot deep."



Software and Hardware

Software is the programs. Some examples of software are:- **DOS** (Disk Operating System), Word Processors, Databases, Games, etc. We generally buy software from vendors. It is on floppy diskettes or **CD ROMs** (Compact Disk Read Only Memory). The diskettes are 3 1/2 or 5 1/4 inches in diameter. We take them home and transfer the programs to our hard drives. Hardware is the machinery. The computer itself, printers, disk drives, modems, monitors, keyboards, etc. are all examples of hardware.

Our Common Numbering System

There are many different numbering systems. The one we use in our everyday calculations is called the decimal system. The name comes from the fact that there are ten digits. We are so familiar with this system that we seldom, if ever, think about how it works. The digits are 0 through 9 and we can make every number we need by using these ten digits. Let's look at them in a slightly different form. We can write one as 0001, ten as 0010, one hundred as 0100 and one thousand as 1000. Of course, we don't use the leading zeros ordinarily, but they don't change the value of the number and they are shown here to demonstrate that the digit one is actually being moved from one column to another. We go from 0001 to 0010 to 0100 to 1000 by moving the number one from the right column to the left and by adding zero(s). The zeros have no value, but are used as position indicators to establish the location of the one. Think about the digits as being in columns. The VALUE of the digit depends on which column it is in. It is not the three zeros after the one that makes the number one thousand, but the location of the one. Picture a table consisting of eight columns with the column on the left as having the greatest weight or value. This is the Most Significant Bit **(MSB)**. The value decreases as we move to the right. The right most column is the Least Significant Bit **(LSB).** So, the digit 1 in the right most column would have a value of one. If we move the digit 1 to the left one column it would have a value of ten. If we move it left once more it would now have a value of one hundred. Finally we move it to the fourth column and it would have a value of one thousand. 10 is the base and 2 is the exponent. 10^2 means 10 raised to the exponent two or squared. (b^e) means the base number b is raised to the exponent e to establish the value of each column or bit. In the decimal system b is always 10 and e can be any reasonable number starting with 0. See Table 1.

Table 1

(10^7)	(10^6)	(10^5)	(10^4)	(10^3)	(10^2)	(10^1)	(10^0)
10000000	1000000	100000	10000	1000	100	10	1
0	0	0	0	0	0	0	0 = 0
0	0	0	0	0	0	0	1 = 1
0	0	0	0	0	0	1	0 = 10
0	0	0	0	0	1	0	0 = 100
0	0	0	0	1	0	0	0 = 1000
9	9	9	9	9	9	9	9 = 99999999

In the decimal system we use digits 0 through 9 as required to make our number. We can see that the location of the digit is much more important in determining the value of the number than the digit itself. Using Table 1 the highest number that can be formed is 99999999.

Continued next month

de Van, K3CP

Correction:

In the May issue the home telephone number for **George N3SQD** was in error for use in the **DLARC loan program.** It should be:

Home (610) 264-0888

The Prez sez

de Bob, KE3AW

June. The month of Field Day. Why all the excitement? It is time, once again to test our readiness, our emergency preparedness, to see how efficiently we can have our stations up and running in a short period of time in simulated emergency conditions. Towers up, antennas' direction calibrated, slingshots and bow and arrows in use to get the dipole antenna ends strung up near the highest suitable branches of trees. Portable power generators humming (no commercial power here). Check the SWR. Ready to transmit. Rain or shine we'll be ready for this public service ham activity!



It's the annual ARRL sponsored Field Day, held on the fourth weekend of June; this year it's June 24 and June 25. Our club members will be at the Plainfield Farmers Fairgrounds after they load the equipment at Gracedale and make the trek up Route 191.

Like Uncle Sam, **WE WANT YOU!** At the DLARC club meeting on June 1 you will hear Bob, KU3K, give the details, so be ready to get involved for whatever time you can on that weekend. It's a practice to check our skills, but it's also a time to learn how towers and antennas are erected in the field, if you never have seen it. It's a time to help, however you can, and improve your operating skills. Then, at the official start time, operate, log, or observe the operations. We'll be on the air for 24 hours straight -- right through the night, making as many Q's as we can.

Field Day is also a great time to kibitz with other club members, too. It is a sort of Meeting "C" with folks coming and going throughout the 24 hours. Meals, refreshments, and the camaraderie are great. So get out of the cozy ham shack on Saturday and Sunday, June 24 and 25. Check your emergency preparedness and flexibility on Field Day, 1995. And help DLARC continue our track record of "admirable scores" in these operations.

de Bob, KE3AW, president

MS 150 Bikeathon update

by Bob, WF3H

As usual, the members of The **Delaware-Lehigh Amateur Radio Club** have responded in their magnanimous way to the appeal from the MS Society for Bike Tour support for the weekend of **June 10 and 11**. To date, 36 members have volunteered, so we're well on our way to full strength for this event



As you recall, we provide all the communications for ambulances, sag wagons, staff, rest stops, etc. during the tour. If you haven't volunteered, feel free to do so for a few hours or for both days. It starts at the Velodrome in Allentown on June 10, finishes for the day at Millersville University that evening, and the riders return the next day. The event is a BLAST with parties, movies, food, and grateful bikers contributing to the spirit of festivities. Your help is definitely appreciated. If interested leave word on W3PYF-3 or on my BBS, WF3H-3. Thanks for your help.

de Bob/WF3H

CB Packet

from Radio Amateur Newsline 925

Announcements from CB operators in Australia are showing up on ham radio packet bulletin board world wide. One Australian group, BG3 CB Club has gotten a message going around that turned up in Germany. It calls for CBers of Philippine nationality to tune their CB radios to channel 26 and have a DX chat.

The problem is that nobody in Australia seems to know how these postings are getting onto packet. Once the audit trails get back to a specific city it ends abruptly. Some think the original posting may be to the world wide web with autoforwarding putting them onto the ham radio packet networks. Unfortunately the dead end trails make this theory impossible to confirm.

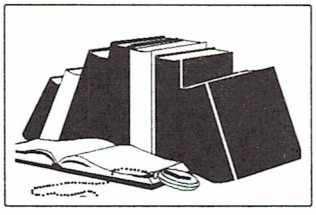
Australian telecommunications authorities are believed to be looking into the problem but their investigation could take a long time. For the near future a least, you can expect to see more foreign CB oriented messages flash by your PBBS and your own packet screen.

for Radio Amateur Newsline 925

Minutes of general meeting

May 4, 1995

by Bob, N3OLH, Secretary



The May meeting of the Delaware-Lehigh Amateur Radio Club was called to order at 7:30 P.M. in Kiva Hall at the Northampton County Community College on Thursday May 4, 1995 by Bob Green, KE3AW, the Club President. Approximately 92 members an guests were present.

The President informed the group that in addition to the regular 50/50 drawing at the end of the business meeting there would be a second drawing with the winner to receive a copy of the AARL Operating Manual.

Sue Stoufer, a representative from the **National Multiple Sclerosis Society,** showed a video the **1994 MS 150 PA Dutch Bike Tour** and explained how ham radio operators provided vital communications during this two day event. She asked Club members to volunteer their services for the year's Tour which will be held on Saturday and Sunday June 10 and 11.

Jim , N3QZS, made a motion to approve the minutes of the April General Meeting as printed in the May issue of the W3OK Corral. The motion was seconded by J. P., N3GWR and the motion was approved by the membership.

The Treasurers report was presented by the Club Treasurer, Dick, KA3MOU. The report showed a cash balance of $5,690.09 as of April 30. Clarence, W3PYF, made a motion to accept the Report and the motion was seconded by Bruce KA3TIU. The report was accepted as read.

Bob read letters from the Nazareth Sr. High School thanking the DLARC for its participation in the Nazareth Technical Expo. and from the AARP confirming our $200 contribution.

Membership applications were received from
Marc Borgo, N3GRE;
Werner Buckl, Call Pending;
Michael Hood, N3TNM;
James Malloy, KA3LEO;
Paul Satre, N3UGH;
Bayard "Kelly" Saunders, N3VAD;
Charles Spafford, N3LAI
David Zernhelt, N3VAB.

A motion by Ray, W3TDF, and a second by Bob, W2CCE was made to accept these applicants into membership. The membership voted to accept these members. The club welcomed the new members into the club. Guests were also recognized and welcomed to the meeting.

Bob announced that the winners of the DLARC Winter Challenge were **George, AA3JU**, in the Extra class, and **Dennis, N3HKX**, in the Novice /Tech class.

Charley, K3HKZ, presented **Clarence, W3PYF**, with a certificate showing that he had been elected into the prestigious **Radio Club of America.**

Don, W3LR, asked the group for authority to purchase a controller for the 443.45 repeater which will allow it to be linked to the 145.11 machine. The membership voted to approve the purchase. The club was also brought up to date about the current activities of AARC and its efforts to become the recognized repeater control group for this area.

Bob, KU3K, briefed the members about Field Day which is to be held during the weekend of June 24/25.

Chuck, KD3SQ told the group that Hamfest fliers promoting the Club Hamfest on August 14 are available. He also asked members to start volunteering for this event.

The President reminded the members that the Club's annual picnic will be held on the Sunday following Field Day..

President Bob told the group that our equipment loan program has begun with the first item an MFJ Antenna Analyzer. anyone interested in using this equipment should contact George, N3SQD. He also said that the Executive Committee had voted to purchase a mulit-band vertical antenna package to be used for demonstrations and other Club sponsored events.

Clarence encouraged the members to participate in the **Sunday morning and Wednesday evening ARES/RACES/DLARC** nets.

The business meeting was adjourned at 8:45PM.

Following adjournment, Barry KU3X presented the evening's program, "Antennas for Small Lots".

de Bob, N3OLH, Secretary

Bring a friend to the next DLARC meeting

Chopra's 10 Keys to Happiness

submitted by John, WD1V

1) Listen to your body's wisdom which expresses itself through signals of comfort and discomfort. When choosing a certain behavior, ask your body, "How do I feel about this?" If the body sends out a distress signal, watch out. If the body responds with joy and comfort, go for it.

2) Live in the moment. The present is the only moment you have. Pay attention to what IS and see its fullness in every moment. Work towards complete psychological acceptance that this present moment is as it should be. How could it be otherwise? This moment is as it is because the universe is as it is. Don't struggle against the universe.

3) Take time to be silent, to quiet the internal dialogue, to be guided by your intuition rather than externally imposed interpretations of what is or is not good.

4) Relinquish your need for approval. There is great freedom in that choice.

5) When you find yourself reacting with anger or violence toward any person, situation, or circumstance, recognize that you struggle only against yourself.

6) Know that those you react strongly to, whether you love them or hate them, are reflections of yourself. Use the mirror of relationship to guide your own spiritual evolution.

7) Shed the burden of judgment - you will feel much lighter.

8) Don't contaminate your body with toxins, either through food, drink, or toxic emotions.

9) Replace fear motivated behavior with love motivated behavior.

10) Understand that the physical world mirrors the process in our own consciousness. Cleaning up the environment and getting rid of toxic wastes that contaminate our Earth, rivers and oceans is worthwhile, but even more important is flushing out toxic ideas that contaminate the human mind.

"Relinquish your attachment to the known,
step into the unknown,
and you will step into
the field of all possibilities." -D. Chopra

editor note: *When I queried John, WD1V about the author of this article he says,* ***Deepak Chopra*** *is a medical doctor that specializes in the mind-body connection towards healing techniques. (this came from a packet message I spotted on the network) He is a best seller author, "Quantom Healing" is one of John, WD1V's favorites.*

FCC issues fact sheet on Amateur Radio

from the W5YI Report

FCC
FEDERAL COMMUNICATIONS COMMISSION

A new information fact sheet issued April 13 by the FCC on Amateur Radio does however, recognize that the Technician Class is now the entry path of choice into ham radio. Here are some quotes:

"There are six classes of operator licenses, each authorizing varying levels of privileges. The class for which each examinee is qualified is determined by the degree of skill and knowledge in operating a station that the examinee demonstrates to volunteer examiners (VEs) in his or her community. Most new amateur operators start at the Technician class and then advance one class at a time. The VEs give examination credit for the license class currently held so that examinations already passed need not be repeated. The VEs construct the written examinations from question pools that have been made public. Helpful study guides and training courses are widely available.

The privileges of a Technician class operator include operating stations while transmitting on channels in any of 17 frequency bands above 50 MHz with up to 1,500 watts power. It also authorizes the person to serve as a VE in helping to prepare [but not administer] certain examinations. To pass the Techinican examination, at least 41 questions from a two-part 55 question written examination must be answered correctly.

The next step is "Technician Plus" operator. This license adds privileges in four long distance shortwave bands in the HF range (3-30 MHz.) In addition to the above written examination, a slow-speed telegraphy examination at 5 words-per-minute must be passed."

The press release also mentions that the Novice license is still around "...for persons who pass the slow-speed telegraphy examination, but only pass the first part of the written examination for Technician class." (PR-5000, No. 210, Information About the Amateur Services, released April 13, 1995)

The preceding from The W5YI Report.

73 Chris KD3OA
ARRL EPA Bulletin Manager

Planting the seeds of success

or

Welcome to the Jungle

by George, AA3JU

I want to start this months column off with a bold statement. One that I am sure is going to alienate better than half my readers but it is a statement that must be made:

You cannot wear a "rig" on your belt.

It's true! A handie talkie yes. A radio possibly. And most certainly a triband-multifunction -communications device. But a 'rig' never. A rig is something that has warmth and personality. A rig is something that sits in the middle of your desk. A rig can be fixed with a pair of gas pliers and a Bernz-O-Matic torch. And alas the day of "the Rig" are drawing to a sad end.

Today's micro miniature, surface mounted, computer aided, digitally processed radio while, most likely working far better than Grandpas rig leaves us with a quandary. There really is very little inside to fiddle and diddle with. And hams are as a bunch the fiddleiest and diddliest group on earth. So where then do we turn our over anxious rosin stained fingers towards? Why to the old antenna farm where else?

Now I love antennas from the lowly J-Pole to multi- element, bi-phased, inverted, dopplegänger arrays I love em all. And one look at my yard or my truck proves this out. There is not one tree on my property that does not look like it was attacked by some demon copper spewing tent caterpillar. And my poor Ford Ranger pick-up truck sports an aerial that always elicits the same response from civilian onlookers "What the heck do you suppose that is?" It's all in a quest to add just another dB or two.

It all started out quite innocently I suppose with a 40 meter dipole and a promise to the wife that I would not turn our home into something resembling a fishing boat. How I ended up with 19 Hf antennas including two yaggis for 80 meters is beyond me. (Oh yeah we passed fishing boat a long time ago, we're up to let's say Schooner now) I suppose I saw the need and filled it. The 40 meter dipole just didn't work too well on the 80 meter novice band so I needed an 80 meter antenna. Except you really wouldn't call either of them high performance on 20 meters so I build a quad and so it went. The fever had set in. I was hooked perhaps even addicted.

This leads me to the addiction theory. I gave some thought at one point that this could be one of the many addictive illness' that plague our society today. So I stopped into a meeting of a 12 step group dealing with antenna addiction (hey it could happen) I listened to what they had to say but when time rolled around to hear these folks say that they were powerless over RF and that they were turning the control of their rigs to the God of their understanding I knew I had heard enough. I left them and their tepid coffee knowing in my heart of hearts that they were part of some left wing plot. And went on to a more serious endeavor designing a mono-directional mono-band yaggi for 20 meters (aimed at Japan).

Actually the wondrous thing is that all licensed amateurs from about the time they get their first radio start to tinker with the antenna system. This I think explains the number of new hams with cigarette pack sized walkie talkies sporting 19 inch antennas. It makes me cringe though to see the number of terrible misconceptions, and down right lies told to the unsuspecting regarding this shared passion. Who can ever forget the Maxon center insulator? Which when properly hooked up would give you a 1:1 SWR from 160 meters up to light. Sad thing was they didn't tell anyone about the 50 ohm resistors inside. Today we still love to hang dummy loads in the trees but now we call them G5RVs. Ah yes and while I am on this vein let me say this too, building a J-Pole is not an antenna project. A diversion from kerchunking the local repeater perhaps, but not a project.

We are truly in the golden age of antenna building. Today there is computer software that will show you just what your copper and nylon beauty is going to do before it ever hits the elms. All of the major ham magazines run articles on the subject nearly every month. My most recent favorite is the 100' quaggi for 2 meters. Right away I saw that this baby produced like 19 dB of gain and I got to wondering if I could make one for say 40 meters. However expanding the formula out a bit gave me something like a 2 1/2 mile long behemoth that I doubt that I could convince even the ever patient XYL, N3SWA that I actually needed so the project was scrubbed. My only question now is what to do with the five miles of nylon/poly rope and 10,000 feet of 14 gauge wire I bought for the project. Perhaps a three element quad for 160?

de George, AA3JU

MAY 5th, 1995 VE session

by Robin, WA3T

At this session, five candidates took a total of 11 elements. There was one upgrade, and three new licences...

James O. Scaggs, KA3PMP to Advanced
John Sarik new Technician Plus
Joshua B. Parris new Technician
Raymond G. Templeton new Technician

Additionally, one candidate earned element credit.

The VE's at this session were John, WX3C; Bill, NC3P; Bob, KE3AW; and Robin, WA3T.

The next test session will be on June 2nd; team 2 will be in attendance.

73 de Robin, WA3T, Team Liason Alternate

Retirement

by John, WX3C

After approximately 10 years of service to the DLARC as VE Liason I have decided to retire from the program. The last session in which I participated was on May 5 at Gracedale. I began assisting Don Holmes, KC3II around 1985. I was living in Quakertown in those days and traveled to Nazareth on the nights when testing took place. Don turned the program over to me and I said I would accept the job if Robin, WA3T would alternate the months with me. This worked out very well.

I want to take this opportunity to thank Robin and all the team members who also contributed their time to the program.

After a short period of recovery (from VEC), I will rejoin Robin but only as a quarterly assistant.

It has been my pleasure to serve the amateur community and help those who up-graded as well as the new comers.

73 for now

de John, WX3C

John Greenage WX3C

by Robin, WA3T

John Greenage, WX3C has announced his retirement from the position of Team Laison for the ARRL-VEC test sessions sponsored by the DLARC. John has served the amateur community for ten years as a VE and as Team Liason. He deserves all our thanks; particularly he deserves the thanks of the hundreds of hams who were tested at the sessions he led.



I would like to personally recognise John's efforts, and thank him for his friendship. He and I worked together professionally for almost fifteen years; long before I knew he was a ham. John was responsible for guiding me to the DLARC and to a test session at Nazareth at a time when officers of another club ridiculed and ignored me. But for John's help, I probably would not be a ham today: I owe him a substantial debt for that. For several years, we have worked together as VEs, his relaxed style providing a balance to my "slightly less relaxed" style. There was almost nothing which would keep John from test sessions. I well recall him, shortly after his severe auto accident, laboriously writing his signature on 610's at a time when the nerves were still regenerating in his arms and hands and he could barely hold a pen. John's tenacity and high standards of service to others have contrasted sharply withsome of the blatantly fraudulent "medical excuses" for code exemption which he encountered. Although John always remained polite, I know he found those instances extremely irritating.

I speak for all the DLARC VEs in saying that we will miss him at the test sessions.

Thanks, John, for everything.

de Robin, WA3T

Once again, DLARC has been honored by the American Radio Relay Leauge with the designation of Special Service Club. Consider this part of the public service work we do for our neighbors and our communities..

A Brief History of the Radio Club of America.

by Charlie, K3HKZ

Those of you who were at the meeting of the DLARC saw me present to Clarence, W3PYF his certificate of membership in the **Radio Club of America**, and wondered what it was

The **RADIO CLUB OF AMERICA (RCA)** is the oldest organized radio and electronic society which was founded on January 1, 1909, in New York City, by a group of young fellows who had originally organized the Junior Aero Club for flying model airplane which had just became popular. These young boys were looking for a way to control their planes without wires attached, and subsequently became more interested in radio, appropriately called "Wireless" at the time. Originally, the club was the Junior Wireless Club and it's name was changed to the Radio Club of America on November 4, 1911.

In those days there was no FCC or Amateur Licenses. Everyone used whatever wavelength he happened to hit upon. As the activity increased and interference became apparent amateurs who were members of the radio club advised and assisted the Commerce Department establish regulations regarding the use of these "wavelengths" and amateur radio was assigned certain bands as were used at the time. This was the beginning of amateur radio as it is known today.

Another organized radio club since about that time was the "de Forest Pioneers", which was merged with the Radio Club of America in 1983 to operate with a common cause and fellowship.

One of the original members of the club was Major Edwin H. Armstrong, who was known for the regenerative feedback circuits, the superhetrodyne receiver, the super-regenerative receiver and FM modulation.

There have been many past, honorary and active members who are names well recognized by our industry. The club continues to recruit outstanding people who have contributed to the electronic industry as well as radio communications.

The club has always and continues to provide a documented history of the discoveries, inventions and people who were responsible for them. Each year awards are made to outstanding people who have contributed to the industry as well as scholarships which are funded by donations from the industry.

At this time there are approximately 1350 members of the club. Membership to the club is open to anyone with a sincere interest in electronics and radio communications and requires sponsorship by two members. There are four classes of membership; regular members, fellows, senior members and honorary members, all of which are voted to their positions by the board of directors.

An annual meeting and banquet is held each year in New York City, during which awards are made and proceedings are published.

by Charlie Adams, K3HKZ

DLARC Hamfest

by Chuck, KD3SQ

You may notice the bilious green flyer enclosed in this months OK Corral. This can only mean one thing, the DLARC HAMFEST will be here soon!

That's right, our club's Hamfest will be held on **Sunday, August 13** at the Career Institute of Technology. Mark it on your calendar! We will again have ample indoor space for vendors and anyone else wishing an indoor table, and lots of room for tailgaters at oh-dark-thirty(military talk?? let's make it 5:00 AM) and we will open to the public at 8:00 AM. See the flyer for more information, and call Robin, WA3T, or myself if you have any questions or would like to volunteer t help out.

de Chuck, KD3SQ

Hams at Boston Marathon

Amateur Radio was widely in evidence at the 99th Boston Marathon on April 17. "There were hams everywhere, from everywhere," said the League's Bob Inderbitzen, NQ1R. "Many of the race officials and volunteers I spoke with throughout the day spoke highly of the ham volunteers who helped make the day a safe and enjoyable one for the runners, their families, and all of the spectators and volunteers."

This year's event saw 12,000 runners and 5,000 volunteers. Amateurs could be found in the following locations: At the starting line, shadowing rope holders and other race start coordinators; at all 26 Red Cross first aid stations along the race route and at all 13 water stations; shadowing security; at the information booths and in the lead vehicles; in all of the sweep buses (picking up injured runners); in all of the transportation for the "elite" runners; in downtown Boston at the finish line; in the medical tent; and shadowing wheelchair escorts, officials, doctors and nurses, etc.

The preceding from The ARRL Letter.

de Chris KD3OA EPA Bulletin Manager

DLARC Winter Challenge results.

by Blair, K3YD

The DLARC Winter Challenge *was an operating activity sponsored by a club member who wishes to remain anonymous. The idea of the Challenge was for club members of all license classes to participate in the Novice Roundup 1995. One Winter Challenge point could be earned for each CW QSO.*



The stations with the most QSO points would win. Participation categories were based on license class. 1.) Novice-Tech, 2.) General-Advanced, (3. Extra Class.

The Results

Would you believe that **Dennis, N3HKX**, the winner of the DLARC Winter Challenge equaled the total score of all other participants? Well it's true!

Dennis turned in a nice effort with 52 CW QSO's winning the Novice-Tech and Club overall categories. **George, AA3JU** took the honors among club Extra-Class licensees with 27 CW QSO's. All but one of these from George's mobile station. Blair, K3YD, was close behind George with 25 Q's. Congratulations Dennis and George

Unfortunately, that's the contest folks. Let's see, DLARC has 86 Extra Class licensees, 2 participated for a wimpy 4.3% participation. Among the 190 General-Advanced Licensees, there were no entrants for 0% participation . One of the club's Novice, Tech, and Tech-plus licensees submitted a log for 0.05 % participation.

It's pretty obvious that the activity didn't appeal to many club members, but speaking for those who did take part, it was a lot of fun. I was able to find at least 1 Novice-Tech participant to work any time I turned across the Novice-Tech CW Sub-bands. On the final Sunday afternoon, (February 5th) the activity began to sound like a real contest; Dennis's best hour showed a rate of 17 QSO's.

If you did not participate, in the January 1995 Novice Roundup, you may have missed your last chance. The contest is to be significantly revised or else eliminated in 1996.

de Blair, K3YD

Remember! When it is time to join or renew your membership in ARRL, contact Dick, KA3MOU, our treasurer, the club benefits from this.

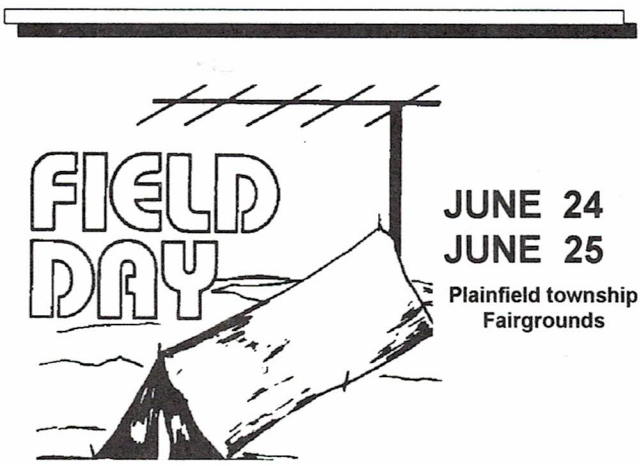
Highway Workers

A man was driving his car down the road and saw a highway truck on the side of the road, as he watched, the first highway worker would dig a hole. The second highway worker would wait a minute, then he'd fill the hole in. The man in the car asked them what they were doing. The highway workers said "planting trees." "But you don't have any trees !" Said the man in the car. "We know. Said the highway workers. There's usually a third guy on our crew who puts the tree in the hole but he called in sick today."

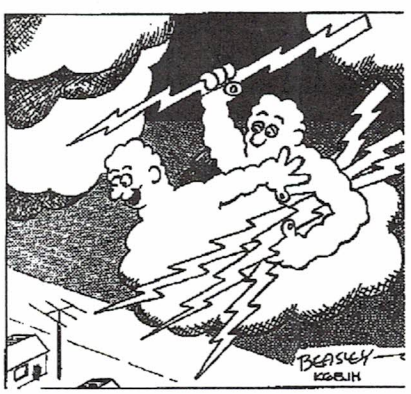
And this isn't a joke, it actually happened today. I went into a family-owned convenience store today.

The clerk had papers spread out on the counter. I handed him my purchase-a package of cupcakes marked 2 for $1.00. He looked at it and said "that would be 50 cents, right ?" Then he went back to his paper-work-his federal income tax form !! Good luck on this one, IRS !

from Steve, KD3AE —



Don't forget to pull the plugs. Summer is coming fast.

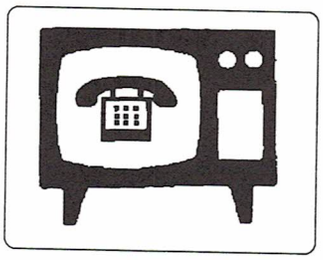


New media systems

Wireless Cable

by Joe Chuk, W3JD

It sounds like a contradiction in terms -- how can cable be "wireless"? The formal term is **Multichannel Multipoint Distribution Service (MMDS)**, but it's much more commonly known as "wireless cable," pointing to the fact that it is a way to get cable-style programming without being wired to a cable system. At a time when competition is the style of the media industry, this alternative to traditional cable service is beginning to capture widespread attention.



MMDS has been around for over 20 years, beginning as a single-channel service **(MDS)** in 1973. It was first used to send pay movies to hotel rooms, but was also intended to provide pay cable services to individual homes that had no access to a cable system. While cable now passes about 95 percent of American households (66 percent actually subscribe), the numbers were significantly lower in the 1970s, and a wireless service was seen as the best solution for getting premium programming to uncabled households.

MDS grew modestly into the early 1980s, but the explosive growth of the cable industry after the FCC's 1975 authorization of satellites for domestic relays (thus allowing national distribution of cable program services) made this single-channel service virtually collapse. Viewers simply wanted more than one choice.

In 1983, the FCC expanded the wireless service to eight channels (creating **MMDS),** and allowed operators to lease additional channels from license-holders in the **Instructional Television Fixed Service (ITFS)**, an under-utilized service designed to allow school districts to set up their own local educational television networks. Even with the additional channels available (up to a total of 33 in most markets), **MMDS** growth was hampered by a lack of investors and regulatory restraints. The wired cable industry had the corner on the non- broadcast entertainment television market, often with local cable systems holding exclusive contracts for program services in their coverage areas. The Cable Act of 1992 changed all that.

At the basis of the 1992 Cable Act was a realization of the newly-competitive media environment. No longer were cable companies the only alternative to broadcast entertainment. Telephone companies had begun to develop broadband networks, and satellites, previously used simply for relays, were being designed to broadcast directly to viewers' homes. The Cable Act required that all alternative program providers -- competitors to cable -- be given equal access to program sources. Wireless cable providers would now be able to contract for the same services that were available to cable companies, thus giving the **MMDS** operators the ability to compete for customers in cabled areas. In just three years, from 1992 to the present, the number of wireless cable systems grew from 115 to 200, and the number of subscribers went from less than 200,000 to 1 million.

MMDS is technically a point-to-point (or, more precisely, point-to-multipoint) rather than a broadcast system -- which makes it more like a relay satellite than a cable system. Wireless cable companies only distribute the programming of others; they don't provide their own programming. Signal delivery is more like a relay system, also. Subscribers need a directional antenna and an unobstructed path between them and the MMDS station to receive the microwave (2 ghz) transmissions. All of the receiving points are qualified for adequate signal reception and identified as subscribers. Each of these needs a downconverter, of course, to make the programming usable on home television sets. Hook-up for each subscriber costs about $500, and monthly fees are about the same as or lower than comparable cable service in the same market area -- thus allowing MMDS to compete directly with cable.

Even though digital compression technology will likely allow wireless cable systems to expand to over 100 channels, other emerging technologies like direct broadcast satellites and video dial tone may well turn **MMDS** into an interim technology. Its limited period of service, however, might last 15 years or longer, and, for the present, wireless cable continues to experience impressive growth.

de Joe, W3JD

Remember the ARES,RACES, DLARC nets that meet on Sunday at 9:30 AM and the Wednesday nets at 7:30 PM local time.

All Amateur Radio Operators are invited to
Participate to the DLARC, RACES & ARES nets
on 146.70 W3OK/RPT with an alternate of W3PYF/RPT 145.11
W3OK trustee Rick Saeger, K3OO
The Nets are held on Sundays at 9:30 AM and Wednesdays at 7:00PM

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DLARC INFORMATION LINE 820-9110

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--CLUB MEETINGS

All regular meetings of the D.L.A.R.C. are held on the first Thursday of each month at 7:30 PM at Northampton County Community College
TALK IN ON 146.70
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