



NOVEMBER / DECEMBER 2004

REMARCS

www.marc-radio.org

NOVEMBER 23 PROGRAM BY DENNIS K3DS "EARTH ROVER DIGITAL COMMUNICATIONS USING AMATEUR RADIO"

Dennis Silage K3DS is a professor of electrical and computer engineering at Temple University and a member of the ARRL's High-Speed Multi-Media Working Group. He doesn't just talk about introducing Amateur Radio to bright young people. He does it through his courses at Temple.

His program for our November meeting will be a great opportunity for you to bring technical-minded colleagues who suppose -- as so many people do -- that ham radio is all old-timey stuff that went out with "I like Ike" buttons. Dennis's programs always show how ham radio has applications in up-to-the-moment technical activities.

Get up to speed before the MARC program by reading Dennis's article in November *QST*: "Amateur Radio -- A Perfect Fit for Engineering/Computer Students." It starts on page 49.

HOLIDAY PARTY -- DECEMBER 14 THE USUAL PLACE BUT NOT THE USUAL DATE!

The MARC holiday party will NOT take place on the usual meeting date this year. Because many members travel out of town to visit family in late December, we moved the holiday party to the SECOND TUESDAY in the month. We hope this will enable more people to attend the party.

At the holiday party there is no business meeting and no formal program. You're invited to bring family members for special refreshments and good fellowship. Festivities begin at the usual meeting time, 8 PM. You don't have to get all dressed up, either.

Members who have artistic talents -- photography, drawing & painting, wood-carving, needlework, etc. -- are invited to bring samples of your creative work to display. You'd be surprised what kinds of talents hams have besides soldering resistors and working DX. Happy holidays to all members and friends of MARC.

2004 - 2005 BOARD ELECTION RESULTS

As this is being written, the national presidential election is a nail-biter, but as usual the MARC elections held surprises for no one. All the candidates who appeared on the ballot were declared elected at the October meeting. Twenty-two ballots were cast and there were no write-in votes.

Under the By-Laws, the votes should have been tallied at the September meeting, but there wasn't one. President **Steve N3ORH** made a command decision to defer the vote counting so no one would be excluded from casting his or her ballot. This isn't, after all, Florida!

Departing the board is **Al N3EA**, who (as a founding member of the club) has held just about every position on the list at one time or another, including President. **Bob W3SA** was elected Member-at-Large in the slot formerly occupied by **Al N3EA**. **Dennis KA3QOT** joins the board for the first time as Secretary, following **Bob W3SA**, who did an outstanding job for many years. All other incumbents were re-elected. See the line-up in the box on page 3.

STORM FORCES CANCELLATION OF SEPTEMBER MARC MEETING

Hazardous weather brought to us by what was left of killer Hurricane Jeanne forced cancellation of our September club meeting. President **Steve N3ORH** called off the meeting because it was just too dangerous for people to be on the roads unnecessarily. Many roads were closed by flooding, a mud-slide closed part of the Schuylkill Expressway (trapping a bunch of cars), and tornados struck in Delaware and New Jersey.

Your editor had the disagreeable experience of flying home from Washington, DC, that evening and driving home in the storm. The next day, I saw what the Delaware tornado had done to the buildings in its path. Steve made the right decision to cancel the club meeting. It was ugly out there and lucky you if you were not out in it trying not to drive into something you couldn't drive out of.

To ensure that everyone who wanted to vote could do so, the ballot counting was postponed until the October meeting. That allowed anyone who planned to turn in a ballot in person to do it.

ABOUT MARC

wb3joe@marc-radio.org
http://www.marc-radio.org

MEMBERSHIP MEETINGS

4th Tuesdays, 8 PM, Tredyffrin Township
Bldg, Wayne/Berwyn. Guests welcome.
Smoke-free. Handicapped-accessible.

BOARD MEETINGS

4th Thursdays, 7:30 PM, Paoli Hospital.
Members may attend as observers.

SYSTEMS

145.13/R, 147.06/R, 224.42/R, 445.675/R
145.13 & 147.06 linked, CTCSS 131.8 Hz
Webmaster: Steve N3ORH (610-327-8666,
smaslin@marc-radio.org)

NETS

Club Net, Sunday, 8:30 PM
Traffic net, M/W/F, 8:30 PM
All nets on linked 145.13/R & 147.06/R
Net Manager: Dick K3IIN
(610-688-0874, k3iin@arrl.net)

DUES

\$15 Full (licensed Amateurs)
\$5 Associate (unlicensed persons)
Family rate \$5 per ham after first
member pays full dues.

NEWSLETTER

REMARCS is published in the odd
months, edited by Kay N3KN
(610-993-9623, n3kn@arrl.net)

BRING A FRIEND
TO A MARC MEETING!

LICENSE EXAMS NOVEMBER 6

MARC will sponsor license exams on Saturday,
November 6, at the Bryn Mawr Presbyterian
Church on Montgomery Avenue in Bryn Mawr.
Applicants should arrive by 9:15 AM to complete
the required paperwork.

Pre-registration is strongly encouraged, because
the session will be cancelled if nobody pre-
registers. This is done to avoid wasting the
examiners' time on a Saturday morning.

MARC members may take part in one club-
sponsored license test session per year at club
expense. The current test fee is \$12.

For full details and pre-registration, contact **Bob**
W3ZQN (rjlees@aol.com, 610-265-6032).

**Everybody's welcome on the Thursday
night round-table net at 7:30 PM on the
linked 2 meter repeaters. It's fun,
informal, and a good way to get to know
other club members better. Listen for a
few minutes to get the hang of it, and
then check in for good conversation.**

VOX

Dori W3IBH has been accepted into the national honor society for nursing on the basis of her outstanding record at West Chester State University. **Lor W3QA** plays a major role in the article in November QST titled "Winlink 2000 in the Jungle," starting on page 42. **Kay N3KN's** QST article on the origins of ARRL's major operating awards was translated and published in the Japanese magazine *CQ Ham Radio*. **Carter N3AO** attended emergency comm seminars at the ARRL Pacific Division convention in San Ramon, California. **Bob WA3PZO** was a featured speaker at an Eastern PA Section conference on emergency communications in Selinsgrove. **Owen N3WO** says via e-mail that things are going well for him at boarding school. **Bob W3ZQN** will step down as Montgomery County ARES Emergency Coordinator / RACES Radio Officer at the end of 2004. Thanks for all the years of outstanding leadership, Bob! **Andy K3JSE's** October meeting program on radio-controlled model aircraft brought a lot of people to the meeting. Thanks, Andy! **Dori W3IBH** is picking up the Friday night Traffic Net Control spot formerly worked by **Carter N3AO**. **Dennis KA3QOT** will join the rotation as a Sunday night Net Control Station.

Kim KB3COV (SK) has been named Grand Marshall of the 2004 Mayfair-Holmesburg holiday parade, honoring the memory of her key organizing role in the annual event. The parade's community service float will be named in her honor. A MARC member who was married to **Bob WA3PZO**, Kim died of cancer just over a year ago.

PUBLIC SERVICE EVENT

We have one more public service communications event this fall, and more volunteers are welcome to take part.

**Vietnam Veterans of America 5K Run (Norristown Farm Park) -
Sunday, November 14, 8 AM**

Taking part in public service events is easy and interesting to do. It's also important, because public service justifies Amateur Radio's continuing access to billions of dollars' worth of spectrum. You don't need any prior experience; both brand-new hams and old-timers alike can do these events. We have to do more than talk the talk, folks. Proving the value of Amateur Radio begins here in our own communities with people who're willing to stand up and help out.

If you can give a few hours on a weekend morning to serve the community and ham radio, too, please contact **Bob N3JIZ** (610-687-4587) as soon as possible to get details and sign up.

HIGHLIGHTS OF THE BOARD MEETINGS

At the September meeting, the board recognized **Al N3EA** for nearly 30 years of service to the club and wished him well in his new Florida home. Reports were given on public service, the newsletter, and future programs. The treasury balance was \$11,524.03.

At the October meeting, the board allocated a budget for the holiday party. The results of the election were noted. Changes in the Net Control Station schedule were announced. Programs for early 2005 are taking shape, although it is not possible to get firm commitments from speakers half a year in advance. The 440 repeater is not yet operating as well as it should. A member's proposal to sponsor a bus trip to ARRL HQ at club expense was considered but not approved. The liability insurance and post office box rent have been paid for the coming year. The treasury balance was \$10,644.85.

FROM THE EDITOR'S JUNK BOX

We are fortunate here in the Philadelphia area to live in a place where generally speaking our natural environment is not trying to kill us. The September 28 storm was dangerous and destructive enough around here, thanks very much. Can you imagine how bad the original version of Hurricane Jeanne must have been?

Most of us have little or no idea what it's like to live where ARES/RACES groups are regularly called out for forest fires, earthquakes, hurricanes, monster tornados, mud slides, major floods, paralyzing blizzards, and the odd volcanic eruption. Not to mention disasters caused by human errors and evil-doing.

However, our general good fortune grants us no license to be fat, dumb, and happy. "Stuff" can happen here, too. The Phillies are not the only kind of local disaster, and our communities are better off when hams organize to provide emergency communications when authorities need us.

Do they still need us? Haven't cell phones and the Internet chucked ham radio emergency communications into the dustbin of history? Heck, no.

Did you know that most cell phone tower sites in the Philadelphia area do not have emergency backup power? Even in the 21st century, phone service can go out or can be overloaded to the point that emergency management officials need more communications capability. Also, even with all their computers and radar, the National Weather Service still wants data from human beings trained in weather spotting -- Skywarn.

The Internet is a valuable resource, but if local access to the Internet is interrupted, officials can't use it to manage a disaster. Using the WINLINK2000 system, hams can use RF to get e-mail into and out of the Internet for served agencies if conventional means of e-mailing have broken down. We're working on it now in Chester County.

Tell the hams down south that Amateur Radio was irrelevant to the weather disasters they went through this fall. They will look at you like you're smoking something which does not have a tax stamp on it.

If you have been using "they don't need us any more" as your excuse for not signing up with your county's ARES/RACES group, be advised that dog won't hunt! They do need us, and most of the counties around here are smart enough to know it. If you want to help earn the privileges we enjoy as ham radio licensees, ask me how to get involved in ARES/RACES where you live! -- **73, Kay N3KN**

NOVEMBER / DECEMBER BOARD MEETING DATE

Because life is busy during the holiday season and board meeting dates sometimes conflict with holiday dates, MARC's board holds a combined November / December meeting each year.

This year the double-dip meeting will be on Thursday, December 2, at the Paoli Memorial Hospital. If you have input for the board to consider, please send it to one of the Members-at-Large before that date.

FLEA MARKET

For Sale: Linksys compact USB wireless (80211.b) adapter, in original packaging, \$20. Orinoco Silver wireless (80211.b) adapter PC card, with CD-ROM and installation booklet, \$20. Contact **Kay N3KN** (610-993-9623, n3kn@arrl.net)

BOARD OF DIRECTORS, 2005

PRESIDENT

Steve Maslin N3ORH 610-327-8666
smaslin@marc-radio.org

VICE PRESIDENT

Bart Feroe K4BF 610-367-4288
k4bf@arrl.net

SECRETARY

Dennis DeMarco KA3QOT 610-935-7954
dennisdm@earthlink.net

TREASURER

Carter Craigie N3AO 610-993-9623
n3ao@arrl.net

MEMBERSHIP SERVICES

Kay Craigie N3KN 610-993-9623
n3kn@arrl.net

PROGRAMS

Dick Thompson K3IIN 610-688-0874
k3iin@arrl.net

PUBLIC RELATIONS

Bob Weiss KB3FSQ 215-477-6475
kb3fsq@netcarrier.com

PUBLIC SERVICE

Bob Palin N3JIZ 610-687-4587
rjpelectric@worldlynx.net

TECHNICAL

Dennis Silage K3DS 610-353-4829
silage@temple.edu

MEMBERS-AT-LARGE

To 9/30/2005: Gene Hoenig N3HG
610-353-3281, n3hg@arrl.net

To 9/30/2006: Bob Haase W3SA
610-293-1919, rhaase@bellatlantic.net

CALLSIGN TRUSTEES

WB3JOE: Carter Craigie N3AO
610-993-9623, n3ao@arrl.net

W3NWA: Kay Craigie N3KN
610-993-9623, n3kn@arrl.net

THERE'S STILL TIME TO QUALIFY FOR MARC TRAFFIC NET CERTIFICATES

The traffic net certificate program recognizes MARC Traffic Net participants who send and/or receive at least one radiogram per month. You still have time to earn a certificate with endorsements for November and December. Learning to handle formal message traffic is an important skill for everyone to develop, and our nets are a great place to learn.

It is likely that the certificate program will not continue in 2005. So if you want one of these attractive certificates for your wall, you have two more months to get out there and play in the traffic!

**HAPPY
HOLIDAYS!**

LOU SELTZER W13J SK

Lou Seltzer W13J (ex-W3COG) the founder of Chester County radio station **WCOJ**, became a Silent Key at age 86 in late August. A ham since childhood, Lou and partner **William Halpern** started the broadcast station in 1949. He was known for his philanthropy as well as his business enterprises. The resemblance between the broadcast station's callsign and Lou's 1x3 ham callsign was not accidental. He had many friends in the amateur radio community and was still interested in listening to the ham bands -- though poor health prevented him from transmitting -- in the last weeks of his life. Lou was a MARC member for a few years, quite some time back. *[Info tnx Daily Local News, Harry W3FM]*

FCC PERMITTED 3RD PARTY TRAFFIC WITH CAYMANS, BAHAMAS DURING STORM CRISES

FCC staff assured ARRL that it would not punish Amateurs passing appropriate emergency-related traffic with stations in the Cayman Islands and the Bahamas, with which the US has no third-party traffic agreement, during the hurricanes. The Caymans and Bahamas experienced significant damage during the storm, like many other island nations.

Because of changes to the international Radio Regulations at World Administrative Conference 2003, the FCC decided not to enforce international third-party traffic rules at paragraph 97.115 of the FCC Amateur Radio Service rules for the passage of emergency and health-and-welfare traffic in this case.

The changes regarding international third-party traffic made at WRC '03 have not been incorporated into the FCC's Rules yet, though this will happen eventually.

Until the FCC acts, hams are well-advised to follow the existing rules for all routine international traffic -- that is, messages which do not directly pertain to the immediate safety of life and property. Watch the ARRL Web page at www.arrl.org for news about FCC rule-making actions.

PHONE PHACTS

Do you have a telephone at your house which will work if the electricity is out? Many people are so enamored of electronic phones with all the fancy features that we long ago got rid of our boring old plain-vanilla phones which don't need to be plugged into a socket.

Well, people say, if the electricity goes out I'll just use my cell phone. Did you know that most cell phone sites around here have no emergency power? In a major blackout, your cell phone may not work at all. And if it does work, how were you planning to recharge its battery?

In case of a major blackout, having a non-electronic phone at home could be the difference between being able to call for help and being in deep you-know-what. Non-electronic phones are still for sale and cost only a few dollars. Or you might have one in a forgotten closet corner somewhere at home. Is there one at your house?

MERCER COUNTY ARES / RACES WORKS DURING IVAN FLOODING

In Mercer County, NJ, ARES/RACES activated on September 18 - 19 to staff the radio room at the county EOC because of flooding. The high water resulted from heavy rain from remnants of Hurricane Ivan in the Catskill and Pocono Mountains, causing the Delaware River to reach its highest flood levels in 50 years.

Southern NJ Section Emergency Coordinator **Gary Wilson K2GW** reported that debris in the river, which included a 1000-gallon propane tank, caused periodic bridge closures over the weekend. About 1,500 people had to evacuate September 19 to three shelters, area hotels and other sites. Mercer County radio amateurs staffed the EOC's **W2MER** Amateur Radio station continuously in four-hour shifts. Additional amateurs were on call via the **W2ZQ** Mercer County ARES/RACES repeater.

"The hams used the NJOEM statewide 220 MHz **NJ2EM** repeater and the statewide 2 meter APRS digital messaging network to maintain links with the Hunterdon County and Warren County EOCs farther up the river," Wilson said. "Per the Mercer County EOC protocol, the hams also were the operators of the public safety radios in the EOC to maintain contact with the sheriff officers coordinating the evacuations along the river."

HAMS START HOLIDAY TOY DRIVE FOR HURRICANE-STRICKEN FLORIDA CHILDREN

Radio clubs and individual hams across the US have indicated they'll be taking part in ARRL's recently -announced nationwide holiday toy drive to benefit children in Florida displaced or left homeless in the wake of recent hurricanes. Joanne Ramsey KB1KWJ, one of the hurricane relief/recovery volunteers working in Central Florida, saw the devastation and the need following Hurricane Ivan.

Recent figures from FEMA and the Red Cross showed over 22,000 homes destroyed and over 40,000 severely damaged. Families who once had their own home or apartment are now living wherever they can, in vehicles, or tents, or sharing undamaged homes or shelters. It is not a shortage of affordable housing; it is a lack of ANY housing.

"For a child suddenly living out of a tent, or car, or someone else's home, the 2004 holiday season will be anything but jolly," said ARRL Public Relations Manager Allen Pitts W1AGP. "But hams across the country are coming to their rescue in a new way through the League's program."

Between now and Thanksgiving, November 25, hams radio operators throughout the US are invited to send new, unwrapped children's toys, accompanied by a QSL card, to Ham Radio, The United Way White Dove Project, 50 Kindred St - Suite 207, Stuart, FL 34994. Persons wishing to donate money instead of a toy should send a check to White Dove, c/o United Way of Martin County, 50 Kindred Street, Suite 207, Stuart, FL 34994. Martin County United Way is handling the toy distribution. The focus is on Central Florida communities because they took the brunt of the three storms.

DEMOGRAPHIC SNAPSHOT OF MARC

At the present time, we have 156 club members, 153 of whom are licensed hams. Of the licensed members, all but 6 are known to be on e-mail. Ten licensed members live outside Pennsylvania.

Fifteen members have some form of "Robert" as their first names. Nine go by some form of "William." Eight are named "Steven" or "Stephen." Five call themselves some form of "Richard."

The most common callsign prefix is N3 -- there are 34 members with that prefix, far more than any other. Other stats about our members appear in the sidebars.

ARRL BEGINS ON-LINE RF PROPAGATION COURSE

A new course titled "Radio Frequency Propagation" (EC-011) is the latest in the League's catalog of ARRL Certification and Continuing Education (CCE) courses. The first offering of the course is in progress now.

The course curriculum was written by Ian Poole G3WYX and edited by Carl Luetzel-schwab K9LA and Terry Dettmann WX7S. A noted DXer, Luetzelschwab writes the "Propagation" column for WorldRadio magazine and occasionally fills in for Tad Cook K7RA to write the weekly ARRL propagation bulletin. Dettmann is the CCE program's mentor coordinator and also an expert on the topic of propagation.

Students signing up for EC-011 will study the science of RF propagation, including the properties of electromagnetic waves, the atmosphere and the ionosphere, the sun and sunspots, ground waves and sky waves, and various propagation modes -- including aurora and meteor scatter.

Over the course of 15 learning units -- or about 35 hours -- students will cover a body of knowledge that typically takes years of listening and operating experience to acquire. They'll also engage in various listening and logging activities and visit several Web sites that deal with solar phenomena related to radio wave propagation.

There are no prerequisites for this new course, which runs 12 weeks and earns 2 Continuing Education Units. Students in the RF Propagation course will need to have an HF receiver to complete the various activities associated with the course. All on-line CCE courses also require access to a computer with an Internet connection as well as e-mail and Web navigational skills. Tuition for the RF Propagation course is \$65 for ARRL members and \$95 for nonmembers.

Poole's text, *Radio Propagation -- Principles & Practice*, is the optional reference manual for the course. Published by the Radio Society of Great Britain, the 112-page book offers a practical understanding of radio propagation and serves as a guide to knowing how to choose the right band at the right time for the desired communication path.

To learn more about this and other on-line courses, visit the ARRL Certification and Continuing Education Web page (www.arrl.org/cce/) or e-mail the ARRL Certification and Continuing Education Program Department (cce@arrl.org).

HZ1AB NO LONGER A CLUB CALLSIGN

Since early 1947, over 160 Amateurs have operated in Saudi Arabia at **HZ1AB**, first known as the United States Military Training Mission station and more recently as the Dhahran Amateur Radio Club station. The club secretary has reported to the DX media that changes in the Saudi Arabian station license regulations forced the station to shut down earlier this year.

The callsign has now been reassigned to an individual Saudi national. Do not send him QSL requests for old contacts with HZ1AB, because he doesn't have the club station logs. If you need confirmation for contacts with the **HZ1AB** club station, the QSL manager is **Leo Fry K8PYD**. [info tnx ARRL, The Daily DX]

Locations

With 4 or More Members

Malvern	11
Strafford/Wayne/Radnor	10
West Chester	10
King of Prussia	7
Berwyn	6
Downingtown	6
Havertown	6
Newtown Square	5
Philadelphia	5
Phoenixville	5
Ardmore	4
Paoli	4

License Class

Tech/Tech Plus	35
General	38
Advanced	20
Extra	60

40 METER BAND EXPANDS IN UK

By the time you read this, hams in the UK will be enjoying a 40 meter band twice the size it used to be.

The Office of Communications -- the UK equivalent of our FCC -- proposed in late September to allow hams to use 7.1 to 7.2 MHz in addition to the 7.0 to 7.1 allocation they already had. The proposed additional allocation was secondary, meaning British hams could not cause any interference to services having primary status and would have to accept interference from primary-status services.

This allocation proposal was made possible because of regulatory changes at the World Radio Conference of 2003. At WRC 2003, it was agreed to enlarge the Amateur allocation at 7 MHz from 100 kHz to 200 kHz, but the change was set to take effect in 2009. Some administrations have decided to let hams use the additional 100 kHz on a secondary, non-interference basis in the meantime.

The change at WRC 03 has no effect on the 40 meter band in the western hemisphere, which of course is 7.0 to 7.3 MHz.

British hams had an opportunity to comment on the OfCom proposal, and the expansion was to go into effect on October 31, 2004.

FUN WITH A POCKET TRACKER

Or: Why won't this blasted thing work? . . . Oh . . . *That's why!*

By Bob Lees W3ZQN

For years I have been encouraging RACES/ARES people to get involved in APRS so that our vehicles can be tracked as we are deployed. While I have dabbled with the APRS program from time to time, I never really got into that mode myself. Then through **Ron Cohen K3ZKO** I became aware of a web site that allows you to monitor APRS stations via the internet (www.findu.com). This includes tracking positions, getting weather data and so on. That intrigued me, but it still seemed a pain to set up a computer, TNC and GPS in the car just to broadcast position information.

The task has been made easier by the development of small specialized modules devoted just to tracking or weather info. One such device, the Tiny Trak, has been available for some time (www.byonics.com/tinytrak). Several Montco RACES members have built and used this device. But, while quite small itself, it still must be interfaced with a radio and a GPS receiver.

One day I was browsing the Byonics web site and found that a new device is now available, the Pocket Tracker (www.byonics.com/pockettracker). This module consists of a Tinytrak married to a small two meter transmitter operating on the national APRS frequency of 145.39 MHz and putting out about 250mW. It is very small; the entire module, including the 9 volt battery fits inside a user-supplied Altoids tin. With this device, the only extra gear needed is the GPS receiver and an antenna. It appeared to me that even the GPS could be eliminated if I wanted to just beacon a fixed position, say, from my home. This concept caught my fancy and I decided to give it a try. The kit arrived July 21. (By the way, October 2004 QST, page 40, has an article on the Pocket Tracker with nice photos.)

Now the fun began! Miniaturization was achieved through the use of surface mount components, about 90 of them. Thankfully, these are already mounted on the board, but there are still around 40 conventional parts for the builder to install. Construction went smoothly, aided by well-written assembly instructions. The only place I deviated was when I was asked to solder flat head screws to the inside of the mint tin for mounting the board. I found it much easier to drill holes in the tin for these screws.

It only took me about three hours before I was ready for alignment and testing. Transmitter alignment requires adjustment of only one coil while listening to the signal in a nearby two meter receiver. The first real problem appeared when I could not hear the signal. It seemed the phase locked loop was not working. Poking and prodding around the PLL area on the board bore no results. I searched for the usual culprits, solder bridges, cold joints, unsoldered leads, etc. and finally found a place on the top of the board where there might be a solder bridge. The parts are so small it was hard to tell, even with a magnifying glass. Cleaning up this area resulted in a working transmitter. Success!

Now, for programming. The assembly instructions refer to the Pocket Tracker Owner's Manual available on the Byonics web site. Surprise! It's not there because it does not exist. In fact, it may never exist according to the writer, because there has been almost no demand for it, except by me, that is. Now, that

is not really as bad as it sounds, because, except for the transmitter, this really is a Tinytrak, and a manual does exist for that. However, the physical differences between the Tinytrak and the Pocket Tracker are enough to cause some confusion.

Also, the Pocket Tracker does not use all of the components that are used in the Tinytrak. One example: The Tinytrak has four LED's that give status information. At first glance it appeared that the Pocket Tracker had no LED's. Then I discovered that there are two, but they are surface mount components, almost invisible until they light up! But why only two? Well, the developer decided that a "Power On" LED was unnecessary since the "GPS Data Good" LED is normally lit anyway. The "Channel Busy" LED is unnecessary since the Pocket Tracker has no receiver and does not listen to the channel before transmitting.

There are other differences but I will skip them. It is sufficient to say that not everything is covered in the FAQ's on the web site. A manual specific to the Pocket Tracker would have been helpful, at least to me. However, my questions were promptly answered via e-mail and that kept me from too much frustration.

You program the Pocket Tracker via the serial port of your computer using software available free on the web site. I had purchased the necessary cable along with the kit and programming the many variables was easy and went without a hitch. I first tried to program a fixed location and hoped that I could see my house location being plotted on a map on www.findu.com. Didn't work! I still do not have the APRS program on my computer, but I do have a working packet station, so I looked at my output signal on packet. All seemed fine. The packets from my Pocket Tracker looked good and reflected the information I had programmed. (I have since learned that this should work but did not due to a glitch in the programming software. I have the updated program but have not again tried the tracker without the GPS.)

After several days tinkering with this setup, I decided to try connecting the GPS receiver. I use a Garmin GPS 3, which is no longer sold, but the Garmin web site had the data cable I needed, at an exorbitant price, of course. I hooked it up and it didn't work! No GPS data was getting to the Pocket Tracker, as indicated by one of those tiny LED's. I checked my connections again and found I had inadvertently used the cable's "GPS data in" wire and not the "GPS data out" wire. Once that was corrected the LED behaved as it should and I could see the GPS data as part of the packets being sent. Success! Well, sort of.

Over to the findu.com site again. Can I see myself? No! So what's wrong now? Again, several days of tinkering, reprogramming and looking with no success. At some point during this process I e-mailed **Paul Morris AA3SD** and he gave several helpful hints. But still no success.

Finally, I decided that maybe running 250 mW and expecting to be heard was asking a little too much, especially in a noisy urban setting. (The developer had e-mailed that the Packet

(Continued on page 7)

MAKING TRACKS

Continued from page 7

Tracker is routinely heard 30 or 40 miles away out west, but that it didn't work well in some city areas.) Fortunately I had a two meter HT amplifier and decided to see if it would work with the Pocket Tracker. Yea! The output of the tracker was sufficient to activate the amp's switch circuit and I was able to measure about five watts out. Was I now being heard? Yes, at last!

I tried the set-up from the car and it seemed to work, so I mounted the tracker and amp on a chassis along with a power switch and new two-position antenna switch that would allow me to switch my car mounted antenna between the mobile radio and the tracker. I installed it and everything worked well . . . for about a week. Then, suddenly, I was no longer being heard. Tinker, tinker, fool around, fool around, check this, check that. Finally I put an antenna analyzer on the antenna without the switch in line. All OK. Next with the switch in line. No good! It turned out that the brand-new, no-name coax switch had broken inside and was sending all five watts directly to ground!

All of the above took about a month of work on and off in my spare time. Does it work now? Yes, it does. I can come home and look on the Internet and see where I have been. Anyone else could track me on the web site too. Neat!

Would I go this route again? Probably not. The Pocket Tracker does not put out enough power to be picked up reliably in the area where I live. I have traveled around with the amplifier off, and, to the best of my knowledge, I have been picked up only once without it. Also, since the Pocket Tracker does not listen before it transmits, a lot of collisions are to be expected. 145.39 MHz is a fairly busy frequency around here and I estimate that less than 25% of my position transmissions are picked up.

Now, that's still good enough because I have programmed the tracker to send a position every time I make a turn. So, a lot of reports are sent. My general track shows on the internet, but only a small percentage of my data gets plotted.

To be fair, the Pocket Tracker was designed to be used locally, say at a parade or run. It is small enough to be worn by a person on foot and for a local event its frequency can be changed to 145.36 MHz by moving an internal jumper. As long as there is an APRS receiver somewhere nearby it probably works just fine.

I encourage everyone to get involved with this technology. I've learned a ton but have barely scratched the surface. I don't even have the APRS program running on my computer yet. If you want to see more, here are some references:

To see my last reported position, go to this URL:
www.findu.com/cgi-bin/find.cgi?w3zqn
Any other call sign can be substituted for mine provided it has been heard from within the last week.

To see all stations within about 30 miles of your zip code, go to www.findu.com/cgi-bin/near.cgi?zip=xxxxx where xxxxx is your zip code.

As I typed this, I checked and found about 75 stations listed, including many weather stations inputting directly to the Internet without any radio. Some call signs that may be familiar to you were **WX3I**, **AA3SD**, **AA3JY**, **KB3CO**, **WB3GCK** and **NJ2BB**.

And now for the long one, to see a track of where I have been for the last 24 hours, go to
www.findu.com/cgi-bin/track.cgi?line=18&call=w3zqn&geo=http%3A%2F%2Fwww.wulfden.org%2Fmaps%2FphiladelphiaPA1.geo&start=24&length=24

Substitute any other number of hours for the two 24's. Don't expect too much of a track since I routinely travel no more than a few miles from home.

If you have questions, contact me and I'll try to answer. Happy tracking!

WHAT'S THAT WHOOSHING NOISE ON 75 METERS?

A digital broadcast signal on 3995 kHz has prompted some hams to contact ARRL to say it's QRming the top 10 kHz of 75 meters and asking what can be done about it. Not much. The signal, from Deutsche Welle in Germany, is legal since radio Amateurs share that part of the band with broadcasters in Region 1, which includes Europe. The international *Radio Regulations* do leave the door open to request that the station reduce power or change its antenna pattern, however.

Although the station has been broadcasting for some time on the same frequency in conventional AM, it's attracted more notice from hams since July, when it began testing using digital format -- also referred to as "DRM," (*Digital Radio Mondiale*, French for "Digital Radio Worldwide").

Programming originates from Deutsche Welle's brand-new, all-digital broadcast center in. Of course, the vagaries of propaga-

tion will be a big factor as to the amount of interference US hams experience at any given time.

"Digital shortwave will revolutionize cross-border broadcasts and will initiate a worldwide renaissance of radio," Deutsche Welle Director General Erik Bettermann burred recently. Bettermann says Deutsche Welle plans to gradually shut down its analog shortwave transmissions as DRM receivers becomes more available globally -- something not anticipated until late 2005.

Meanwhile, radio Amateurs have been experimenting with programs such as *HamDream* (www.qslnet.de/member/hb9tlk/) a DRM program adapted for Amateur Radio use by **HB9TLK**. It enables digital voice and data transmissions using bandwidths on the order of 2.3 to 2.5 kHz.