

# Lakeland Amateur Radio Club

K4LKL

Editor: [Joe Pirkle](#) July 2005, Vol. 29 - N<sup>o</sup>. 7 Publisher: [Pat Pirkle](#)

The LARC MEMBERSHIP MEETING is held on the first Monday of each month at The Fellowship Hall of the Westminster Presbyterian Church on S. Florida Ave between Riggins Street and Mosswood, Lakeland FL. at 7:00 PM, Talk in on 146.685 MHz. PL Tone 127.3 Hz.

## THE PREZ SEZ

Pat Pirkle – WD4BEK



The year is half over and we made it through Field Day. Whew! Although our scores were not high, we made some new friends and renewed old acquaintances. All seemed to enjoy themselves despite a few setbacks such as antennas falling down, destroyed computers, deaf operators on the other end. All part of Field Day, I guess.

Joan Haynes, XYL of Ernie, KG4YNI made a beautiful table cloth for the phone station. She embroidered Ernie's and Kevin's names and call signs and a Morse code key, and the phrase, "There is a fine line between a hobby and mental illness." Okay, been there, done that, but did not get the T-shirt.

Many of our club members participated and appeared to have a good time. Gill, KC5TEN, prepared and set up for our evening meal while tending to more serious personal matters.

Thanks for the super job, Gill. Pat, WD4BEK, (me) prepared breakfast (grits, eggs, sausage and bacon, coffee) and fed the folks who stayed overnight.

Our next meeting will be July 10 at Lake Parker Park combined with a picnic. Bring side dishes and prepare for an 11:00 am to 3:00 pm event.

*73/88 de Pat Pirkle - WD4BEK*

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# HAPPY Birthday

## July

WB2ODC	Floyd Young	July 9	KE4ECW	Bob Pendleton	July 19
WB4YYO	Marty Lyons	July 20	N4JMY	Jim Macri	July 25

If your birthday was omitted, please contact the editor at [ad4ih@arrl.net](mailto:ad4ih@arrl.net) to correct your database profile.

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**Contribute an article!**

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## GPS TECHNOLOGY

Submitted by Jack Falkenhof, K4BYF

It looks like we are going to have a very hard time getting lost in the near future when these things are incorporated into our HT's.

Atmel(R) Corporation (Nasdaq: ATML) today expanded its global positioning systems (GPS) offering with the industry's first 14-channel, GPS baseband IC to carry a US\$5 price tag and three-meter accuracy. Atmel's Baldur(tm) chip is priced about 45% lower than any other comparably featured GPS baseband IC. The chip was developed jointly with Thales Navigation for Thales' Magellan(R) eXplorist(TM) handheld GPS units. Thales licensed the GPS IP to Atmel in December of 2004. Hundreds of thousands of eXplorists with the Atmel chip have been sold since November of 2004.

The Baldur GPS baseband IC achieves horizontal resolution of as little as one meter, corrected, and three meters, autonomous. Vertical resolution is five meters (corrected) and velocity is measured to within 0.1 meters/second. The chip's superior acquisition (-37 dBm) and tracking (-150 dBm) sensitivities are possible because Baldur can receive and process signals from as many as 12 different tracking satellites at the same time. Additionally, it has two Satellite-Based Augmentation System (SBAS) channels for Wide Area Augmentation System (WAAS), European Geostationary Navigation Overlay Service (EGNOS) or Multi-functional Transport Satellite Augmentation System (MSAS). The maximum position update rate is once per second.

Developed specifically for portable handheld applications, Baldur dissipates only 70 mW under continuous operation at 16 MHz, and 18 mW in power-saving mode. Battery life for an eXplorist device is 14 hours. Baldur's time-to-first-fix (TTFF) signal acquisition takes less than 90 seconds from a cold start, 30 seconds from a warm start and only 15 seconds from a hot start. Once fixed, signal reacquisition takes less than a second.

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## Links I Like

Compiled by the Editor

*The following is a list of Web sites I have recently visited or re-visited. Visiting these sites is fun and might even be educational!*

<http://www.arrlwf.org> - Your section news!

<http://www.srh.weather.gov/tbw/TampaBaySkywarn> - Lots of good SkyWarn news...

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## New NI4CE Repeaters Coming Shortly

June 2005 is going to be an exciting and groundbreaking month for the West Central Florida Group, Inc. and the NI4CE Repeater System.

Our Technical team has been working hard the last several weeks preparing for the launch of two new repeaters in Polk County. During the next few weeks, the new NI4CE Pebbledale repeaters will begin service from antennas located on WMOR-TV32's one thousand foot tower. The AGL level and is expected to provide outstanding coverage throughout Hardee, Hillsborough, Eastern Pasco and Polk Counties. Hams in Manatee County will have their choice of accessing NI4CE/r through either the Pebbledale or existing Verna repeater sites. antenna for the 442.825 repeater will be located at the eight hundred foot (800'). At the same time, we will also be



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installing and commissioning a new backbone linking repeater on 224.280 MHz. This repeater will tie all NI4CE repeater sites together to act as one.

But Pebbledale is only the beginning. Once this site is active, it will enable some other exciting changes and additions to the NI4CE system. A new repeater has been ordered to replace the GE Master II that had been operating on 145.29 in St. Petersburg. The new repeater will be installed, along with a different antenna and transmission line, at the current St. Petersburg site. I know this will be welcome news for the many Hams who gather for the QCWA Saturday Morning Net.

The WCFG Team is also working hard to bring a new repeater to air from the 805' platform on the ATC Riverview tower. NI4CE/r on 442.55 (PL 100.) will site halfway between our St. Petersburg and Pebbledale sites and bring enhanced coverage to Hillsborough, Pinellas and Southern Pasco Counties.

A word about the 146.76 Holiday repeater. As you know, the Holiday site was taken off the air earlier this year to enable WTSP-TV to install a new transmitter and antenna on their tower. The project has taken much longer to complete, in part because of the need to add strengthening to the 1,536 Channel 10 tower. WCFG has been working hard trying to secure an alternate repeater site for 146.76 but without success. We apologize for the those of service and hope the outage will be resolved shortly.

Not all of our efforts, however, have involved repeaters. WCFG, through the Paul Knupke, Jr. Memorial Education Fund, has entered into the first phase of an Education and Training Partnership with several key WCFG Founders. Six area Amateur Radio organizations, including the Clearwater Amateur Radio Society, the Lakeland Amateur Radio Club, the Highlands Amateur Radio Club, the DeSoto Amateur Radio Club and the Sarasota Emergency Radio Club will be receiving a DvD copy of the ARRL Technician Class Video Series and ten copies of Now You're Talking. The clubs will be using these materials to launch New Ham Education classes to bolster the cadre of licensed Hams in West Central Florida. A set of these materials is also being delivered to the Manatee Co. CERT program and their supporters from the Manatee Amateur Radio Club and Bradenton Amateur Radio Club.

A word of THANKS to all who have provided tax-deductible contributions to the West Central Florida Group, Inc. during the past few months. Your generous support has enabled the Board of Directors to move forward with the ambitious expansion of the NI4CE Repeater System. There is still more to do. With your help and support, we will be able to bring additional repeaters and services online in the near future. A NEW PayPal donation page has been added to the NI4CE website. Click on the SUPPORT hotlink on the Home page, and then click on the PayPal hotlink to make a donation via PayPal.

We have also been fortunate to receive funding from several major corporate partners. They include Nextel Corp., Harris Corporation and IAC Foundation. I also would like to take this opportunity to acknowledge and thank Cox Radio-TampaBay, WMOR-TV32, MLF Properties and ATC for their continued generosity providing tower space and emergency power facilities for the NI4CE repeaters. We begin the 2005 Hurricane Season with the hope that this year will not see a repeat of the events of the 2004 season. However, should a Tropical Weather System threaten West Central Florida, the NI4CE system stands ready to support WX4TBW and the National Weather Service as well as public and private disaster response organizations who may be called on to assist those in need.

Very 73 de Paul-NA4AR

President



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## RACES

What is the role of RACES in Post - 9/11 America?

You first have to differentiate between RACES, and hams that are Emergency Management Agency (EMA) registered volunteers such as those enrolled in an Auxiliary Communications Service (ACS) within the EMA.

RACES is simply an FCC authorized radio service that can be used by EMAs - it is not an organization or any other kind of entity. EMA-registered ham volunteers can just as easily operate under RACES or ARS rules.

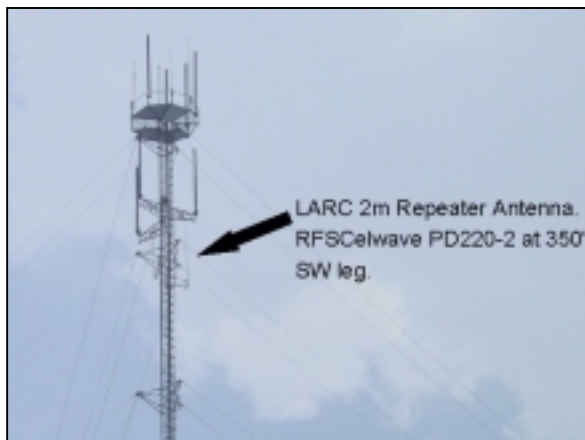
The practice of calling those volunteers a "RACES group" has clouded reality. Operation under RACES rules has little value - the part of the War Powers Act that would automatically suspended normal Amateur Radio operations has expired. The President can still suspend operations, but things have changed quite a bit since the 1940s, and today the value in shutting down Amateur operations in wartime is negligible. The Internet is far more likely to be used for passing spy messages to the enemy than is Amateur Radio, and the governments monitoring capabilities are far greater today than in WWII.

There is one other small value to operating under RACES rules - the ability to coordinate with military stations on 53.3 and 3997 MHz, but this is seldom used, and only the stations actually doing this need operate under RACES rules.

*Dave Colter, WA1ZCN*  
*SEC - New Hampshire*  
*Editor, ARRL ARECC Course Series*

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## OUR REPEATER



THE TOWER AND ANTENNA

*Photos by Richard Sharp, KQ4KX*



REPEATER AND DUPLEXER

The [Lakeland Amateur Radio Club](#) owns and operates a 2-meter repeater in [Lakeland, Florida](#) and is coordinated 146.685 MHz by the [Florida Repeater Council](#). A CTCSS tone of 127.3 Hz is required for access. The repeater also transmits a CTCSS tone of 127.3 Hz allowing users to utilize tone squelch on their transceivers.



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The repeater equipment consists of a [Vertex](#) VXR-5000 25W VHF repeater controlled by a [SCOM](#) 7K controller. The duplexer is a four-cavity [TX RX systems](#) model 28-37-02A with bandpass filters model 11-37-01. A backup system consists of a Vertex VXR-5000 25W VHF repeater and SCOM 6K controller. The antenna is located on the City of Lakeland's 400' communications tower near downtown Lakeland, Florida. The antenna is a [RFS Celwave](#) D220-2 Super Stationmaster™ at 350' on the Southwest leg. The feedline is [Andrew](#) LDF5-50A 7/8" Heliax®.

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### **HUMOR**

A ham and his wife walked into a dentist's office. The man said to the dentist, "Doctor, I am in one hell of a hurry! I have an NTS schedule in just a little while and then the QRP CW contest starts right after that. So forget about the anesthetic and just pull the tooth and be done with it. I don't have time to wait for the anesthetic to work.

The dentist thought to himself, "My goodness, this sure is a brave man, asking me to pull his tooth without using anything to kill the pain."

So the dentist asked him, "Which tooth is it, sir?"

The ham turned to his wife and said, "Open your mouth` honey, and show the doctor which tooth hurts."

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### **CHANGES ABROAD**

**-UK-**

**From E-HAM (UK)**

Ofcom (*UK's version of the FCC – Editor*) today announced proposals to reduce the regulatory burden for amateur radio users by replacing the current paper-based system of licensing, renewed annually, with a new, low-cost electronic licence for life. Ofcom is not proposing to remove the need for amateur radio users to hold a Wireless Telegraphy Act licence. Nor will it will remove any regulation that safeguards the integrity of radio spectrum used by the amateur radio community. Rather, it is seeking the right balance between maintaining sufficient regulatory control to avoid undue interference whilst removing unnecessary bureaucracy and cost.

Amateur radio is an important and popular hobby. It can provide useful training for technical careers and can facilitate research into wireless communications. More than 63,000 people currently hold amateur radio licences, many of whom communicate with fellow amateurs at home and abroad using a broad range of technologies.

Ofcom intends to introduce a simpler, low-cost, electronic licensing process. This would mean:

- amateur radio licences would be valid for life, thereby avoiding the need for paper-based annual renewals which currently cost most users £15 a year; and
- licences would only be updated where amendments to licence details were necessary (for example, changes of name, address or licence level). This would be facilitated by a free online licensing system.

As part of the new process, Ofcom would:

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- provide a web-based licensing service as an alternative to the postal service;
- issue electronic licences, free of charge, to users of the online licensing service; and
- continue to offer a postal service for applicants who do not have access to, or prefer not to use, the internet. This service would incur a fee to cover administrative costs, although Ofcom will ensure that disabled licence holders are not disadvantaged as a result.

Ofcom would continue to hold a database of the names and addresses of amateur radio enthusiasts and users will still need to hold a valid Radio Amateur Examination Pass Certificate to obtain a licence. Ofcom would also retain the power to revoke the licence where, for example, a radio amateur breached the terms of the licence.

The introduction of free licences for life would not alter licensees' access rights to spectrum. Ofcom will continue to monitor frequencies and take action against undue interference wherever appropriate.

The closing date for responses to the public consultation is 18 August 2005. The document can be found at <http://www.ofcom.org.uk/>.

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#### **-SWEDEN-**

**The ARRL Letter Vol. 24, No. 19 May 13, 2005**

Sweden's telecommunication regulatory agency PTS has taken steps to deregulate Amateur Radio and essentially no longer requires a government license. Effective last fall, the PTS turned over Amateur Radio operator "certification" to the Society of Swedish Radio Amateurs (SSA), that country's IARU member-society. Under the new regulatory regime, the SSA administers testing and issues operator certificates and call signs, which have SA prefixes and three-letter suffixes. There's no longer a Morse code requirement for HF access.

The PTS still handles relevant international agreements, such as band allocations, in conjunction with the ITU. Sweden no longer dictates mode-specific subbands within amateur bands, but band plans are in place. Both the SSA and the PTS can issue the new call signs, but the SSA option reportedly is less expensive. All previously issued Swedish call signs are valid for life. Foreign visitors from countries outside the CEPT agreement must still apply to the PTS for temporary operating authority in Sweden.

Kenya's telecommunications regulator, the CCK, recently issued a new schedule of Amateur Radio frequencies, modes and power limits. Ted Alleyne, 5Z4NU, of the Amateur Radio Society of Kenya reports that radio amateurs there now may use 30 meters (10.100 to 10.150 MHz) and 160 meters (1.810 to 1.850 MHz).

The National Telecommunications Commission of Thailand has granted permission through 2005 for all Thai radio amateurs to use 80 and 160 meters during contest periods. HS- and E2- stations may use 1.800-1.825 MHz and 3.500-3.540 MHz, CW or SSB, during contest weekends.

Starting May 1 in the Czech Republic, new regulations provide access to 7.100 to 7.200 MHz for Amateur Radio on a secondary basis. Power output is limited to 250 W PEP. The Czech Republic also has begun issuing Novice class licenses with OK9-prefix call signs and three-letter suffixes. Operation is permitted on 160, 80, 15 and 10 meters on HF, and up to 2 meters on VHF, at a maximum power output of 10 W.



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The Malta Communication Authority has automatically extended HF privileges to "codeless" Class B licensees. Licensees in Malta still must pass a Morse code examination to operate CW on the HF bands, however.

*The Daily DX* <http://www.dailydx.com>; *RSGB*; *SM0JHF*; *ARSK*; *OK1MP/Czech Radio Club*; *MCA*

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### ALLOCATED FREQUENCIES FOR AMATEUR USE

Have you committed to memory the allowable frequencies for amateur radio use for your class license? If you are typical, you have a couple "favorite" bands you work, and you have a certain frequency range you always use.

For quick reference, the ARRL has a great, color-coded frequency chart available to download for personal use ([http://www.remote.arrl.org/FandES/field/regulations/Hambands\\_color.pdf](http://www.remote.arrl.org/FandES/field/regulations/Hambands_color.pdf)). They also have a page in text format that gives the U.S. amateur radio frequency allocations and power limits for each band

(<http://www.arrl.org/FandES/field/regulations/allocate.html>).

As per FCC Rules and Regulations, Part 97.313 "Transmitter Power Standards", transmitter power must be the minimum necessary to carry out the desired communications. Unless stated otherwise, the maximum power output allowable is 1500 watts PEP. There is a limit of 200 watts PEP in the 80, 40, and 15 meter Novice/Technician Plus subbands for all amateurs. Some power restrictions apply in certain geographical areas in the 70 cm, 33 cm and 23 cm bands.

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### **\*\*PUBLIC SERVICE\*\***

### **GUARDIAN AD LITEM**

Do you want to make a difference in your community and in the life of a child? Here's your opportunity. If you become involved with the Guardian Ad Litem Program, you are in a position to directly impact a child's life, helping to ensure the best possible outcome for their future. Did you know that there are over 2,000 children in Polk, Hardee, and Highland's counties that do not have an advocate to represent them. Please help the Guardian Ad Litem Program to provide a **strong voice** for Florida's abused and neglected children. Night training will be offered from 5:30-9:30pm on August 15, 16, 18, 22, 23, 25<sup>th</sup>, 2005.

Please call Heather Rimes at 863-534-4605 for more information.

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### **FIELD DAY 2005**

Or

**"Murphy Comes Calling"**

*Joe Pirkle -AD4IH*

I was assigned the duties of getting the GOTA station running for our version 2005 ARRL Field Day. Also took on the responsibility of preparing eleven NTS messages for extra credit. Now that is not a hard task and I have done these things so many, many times. But now the rest of the story, as Paul Harvey would say...

We loaded the generator in the covered trailer Friday evening and also loaded quite a bit of stuff I needed to set up displays to recruit for new classes, explain EchoLink, etc. Friday morning Pat

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and I finished loading the truck with the radio equipment, computer equipment, antennas and antenna support, food and drink and untold other items.

The time to depart for the site was upon us when Pat said, "Joe the right tire on the trailer is flat...and so is the left one! Not to worry. I have an electric tire pump in the truck. Uh oh, no tire adapter but I can get the other pump. Plugged it in and it did not run. Becky came to the rescue with one out of here car and we were soon on our way. Murphy was defeated.

With the able assistance of Dan Gagnon, Marvin Johnson and others we soon had the generator unloaded and the antenna in the air. The generator ran 12 hours on a tank and a half of gas, about 7-1/2 gallons and was shut down once for re-fueling.

I dropped my logging computer after three contacts and destroyed it. Not to worry, Murphy, I had loaded the logging program onto the computer I was using to show "Ham Radio Today". Brought it on line and Murphy was again defeated...Oops – was that my antenna that just fell to the ground? Yes, but not to worry, Dan had brought his BuddiPole and we were soon on the air again. Take that, Murphy! Something funny is going on. Stations that are 20 dB over 9 can't hear us but some weak stations are working us no problem? Those are the strange ways of Field Day, and we just work past it, Murphy. Hey! I left the NTS traffic on my desk at home. This one Murphy wins, I guess.

When the final contact was made all I had to do was copy the log file to a floppy and turn it over to Jim Murray. And of course, Murphy again reared he ugly snake-bit head. The computer would not recognize the floppy drive for some strange reason. I worked on it Monday morning and it started working for some unknown reason. I copied the files and e-mailed them to Jim Murray. Our score was not very high, but we had a great time meeting some new people and seeing Dan do a masterful job on the radio after a ten to twelve year layoff from FD.

Will I do it again next year? Stay tuned for that answer in the next episode.

*Others please send in your comments and experiences for the next issue.*

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### **ANTENNA WOES**

Rick, WB9IJW, asked me to write about my antenna losses from the recent hurricanes. I don't know if he is making a survey of all the LWRA members or if he After returning home and chain sawing through the mess, I found that there wasn't anything salvageable from the tower, the TH-3 tribander was all twisted and smashed, the Hustler vertical was flat on the ground and my 2 meter Ringo Ranger was scrap. Wonders of wonders, three legs of my 80-meter full wave loop were still in the air at 60 feet. For some unexplainable reason only one of the trees I used for support had fallen!

After a few days of getting the situation somewhat in hand, I felt that I just had to get back on the air. I bent the vertical back to a nearly upright position. It really looked like the letter "C" but it still worked. Since we still didn't have any electricity, I got on the air with my Elecraft K2 and a gel cell for power. It all worked fine. When hurricane Frances blew through, the vertical again went to the ground when a branch from somewhere hit it and smashed one of the traps. I again straightened it back up, sort of, and did some bashing and smashing on the trap cover to get it back to almost a cylindrical shape.

The antenna still worked! Finally Jean came and knocked it down again. You know the old saying. "Three strikes and you're out"? I think that after 25 years of use, its time has finally





come.

I have the 80-meter loop back in operation again and hopefully I'll eventually get another tower and beam. I'm thankful that neither Anne nor I was hurt and that the damage to the house is minor compared to some I've seen.

**73 de Jack, K4BYF**

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**THANKS!**

A heartfelt "Thank you" to Paul Toth, NA4AR and the WCFG, Inc. for their assistance in the recent acquisition of a gift of equipment from Paul (W1PHW) and Marion White of Tavares, FL..

And another "Thanks" for the educational material from the same group. Already Allen Lewis, 14 years old, is studying one of the manuals under the mentoring of his dad, Rex Lewis, N4LXG, Polk County EC from the early '90s. Go get 'em, Allen.

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**FLORIDA HAMFESTS**

**July/August**

**For more detailed information consult the ARRL Web Site at [www.arrl.org](http://www.arrl.org) or your current QST.**

There are no Florida Hamfests on the calendar for July and August.

**-30-**



# BACKSCATTER

Newsletter of The Lakeland (FL) Amateur Radio Club



### Board Of Directors

<b>President</b>	Pat Pirkle	WD4BEK
<b>Vice President</b>	Ron Smith	KF4JED
<b>Secretary</b>	Gillian Murray	KC5TEN
<b>Treasurer</b>	Marvin Johnson	KI4CDZ

<b>Board Members</b>	Jack Falkenhof	K4BYF
	Jim Murray	KC5QCW
	Joe Pirkle	AD4IH
	Bob Pendleton	KE4ECW
	Richard Sharp	KQ4KX

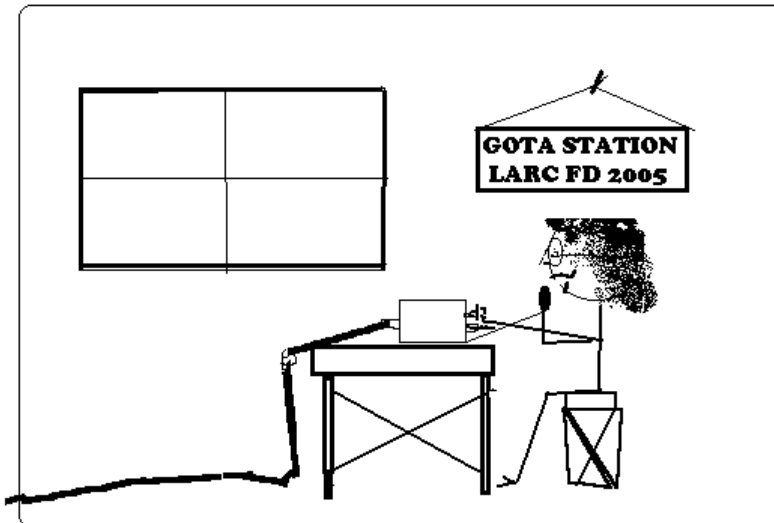
### Committee Chairpersons

<b>Education</b>	Joe Pirkle	AD4IH
<b>Events</b>	Patrick O'Neil	KI4XΔΨ
<b>E-Mail Reflector</b>	Joe Pirkle	AD4IH
<b>Field Day</b>	Jim Murray	KC5QWG
<b>Hospitality</b>	Lenore Smith	KF4TKY
<b>Publicity</b>	Joe Morrell	KR4TU
<b>LARC Net</b>	Kevin Smith	KI4EFN
<b>Membership</b>	Gillian Murray	KC5TEN
<b>Newsletter</b>	Joe Pirkle	AD4IH
<b>Publisher</b>	Pat Pirkle	WD4BEK
<b>Program</b>	Ron Smith	KF4JED
<b>Repeater Trustee</b>	Richard Sharp	KQ4KX
<b>Sympathy</b>	Lenore Smith	KF4TKY
<b>Webmaster</b>	Joe Pirkle	AD4IH
<b>Silent Key</b>	Bert Onachila	KG2G

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 (Backscatter is the monthly Newsletter of the Lakeland Amateur Radio Club)

**Editor: Contact Joe Pirkle – AD4IH – ad4ih@arrl.net – (863) 688-7351**

**Lakeland Amateur Radio Club**  
**P.O. Box 792**  
**Eaton Park, FL 33840**



Somebody said this is "third party". I musta missed the other two!