



FLORIDA REPEATER COUNCIL, INC.

NEWSLETTER

Volume X Issue 2

<http://florida-repeaters.org>

December 2002

PRESIDENT'S MESSAGE

Ray Kassis, N4LEM

This message is given in memory of Paul Knupke N4PK, SK. Paul and other FRC directors have suggested that the FRC implement a requirement to tone a new repeater to aid in solving interference complaints. To test the idea I have toned my 147.360 with 107.2 tone. The bad response was "I can't figure out how to turn on tone in my rig!", "Why do we need tone Anyway?" I even discovered that three of my own rigs didn't have tone boards! So after a trip to AES, with new rigs I have finally discovered the good in using TONE! First, the rig is very Quiet! no more ducting interference. The repeater is toned on encode and decode and if you use both on your transceiver you will enjoy a better communication service. I will keep the machine toned and give you a better report next time. Please keep your director informed on any "PAPER REPEATERS" so that the FRC can have the most accurate data base to serve our wonderful hobby. I sure do miss Paul, a good ham and FRC director.

73, Ray Kassis N4LEM
FRC President



Communications is the life blood of the Florida Repeater Council

TREASURERS REPORT

Dana Rodakis, K4LK

Balance 7/30/02:	\$8,795.99
Income:	\$600.00
Expenditures:	\$1,136.11
Balance 12/22/02:	\$8,259.88

Minutes of September Board Meeting

Florida Repeater Council, Inc.
Minutes of Annual Business Meeting
September 14, 2002
Melbourne, Florida

The Open Forum was convened at 3:00 PM by President Ray Kassis, N4LEM. The following staff were in attendance:

- Directors in attendance were:
- District 1: Nilo A. Hernandez, W4HN
 - District 2: Mark Filla, KS4VT
 - District 3:
 - District 4: Paul Knupke Jr., KR4YL
 - District 5: Ralph Betts, KC4SGG
 - District 6: Dave Armbrust, AE4MR
 - District 7: Ted Wirick, W4YJC
 - District 8: Frank Butler, W4RH

Staff Members in attendance were:

- President: Ray Kassis, N4LEM
- Vice President: Ira R. Bickham Jr., K8HRR
- Secretary/Treasurer: Dana G. Rodakis, K4LK
- Database Manager: Dana G. Rodakis, K4LK

(Continued on page 4)

FEBRUARY FRC MEETINGS

There will be two FRC Board of Directors meetings in February. They will be held at the Miami Tropical Hamboree (www.hamboree.org) on 2/1/03 from 3 to 5 PM and at the Orlando HamCation (www.oarc.org/hamcat.html) on 2/8/03 (see hamfest schedule for time). There will be an open forum to allow members to express their opinions and ideas followed by the Board of Directors meeting.

Staff Directory

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DATABASE MANAGER/WEBMASTER/
SECRETARY/TREASURER**

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Okaloosa, Santa Rosa, Taylor, Wakulla, Walton, and
Washington Counties)

*Your Staff and
Directors are
willing to help
you. Please
avail yourself of
their services.*

NOTICE

Please send all certified mail to
District 1 Director Nilo Hernandez.
He will sign for the mail and forward
it to the appropriate staff member in
the Council

FRC NEWSLETTER EDITOR

Dana G. Rodakis
FRC Secretary/Treasurer
6280 Fairfield Ave. So.
St. Petersburg, Florida 33707-2323
727-381-3344

2002 DATABASE CHANGES
(1/01/02 through 12/23/02)
(Listed in reverse chronological order)

NEW COORDINATIONS & TRANSFERS

146.925 Oxford
 146.685 Punta Gorda
 53.210 St. Petersburg
 146.925 North Port
 444.125 West Palm Beach
 147.225 Cape Coral
 146.670 West Palm Beach
 147.075 Spring Hill
 442.450 Apopka
 145.190 Palm Beach Gardens
 146.850 Seminole
 224.840 Seminold
 442.650 Seminole
 145.190 Tampa
 146.940 Tampa
 442.975 Tampa
 145.450 Pensacola
 443.850 Pensacola
 146.745 Chipley
 443.575 Inverness
 443.475 Ft. Pierce
 224.280 Verna
 443.075 Winter Haven
 145.290 St. Petersburg
 146.895 Miami
 146.760 Clewiston
 442.100 Orlando
 147.300 Bunnell
 145.190 Palm Beach Gardens
 145.370 Cocoa Beach
 444.650 Cocoa Beach
 146.880 Rockledge
 443.375 Clearwater
 444.125 Orlando
 442.050 Spring Hill
 146.625, 442.325 Wauchula
 442.900 Bradenton
 921.700 Riverview
 442.550 Riverview
 443.450 St. Petersburg
 442.650 Orlando
 145.150 Tampa
 146.625 Spring Hill
 145.110 Coral Springs
 443.850 Coral Springs
 146.865 Coral Gables
 444.125 North Port
 146.715 Naples
 53.010 Marianna
 442.125 Vero Beach
 146.955 Daytona Beach
 442.400 Ormond Beach
 421.250 Osprey
 147.210 Samsula
 442.950 Palm Beach Gardens
 444.725 Vero Beach
 146.865 Bartow
 442.050 Cantonment
 444.875 Cantonment
 443.675 Lutz
 443.900 Fort Pierce
 922.000 Ft. Lauderdale
 444.250 Lutz
 444.200 Vero Beach

442.325 Palm Coast
 444.400 Cocoa
 147.045 Deland
 145.290 Orlando
 147.030 Naples
 443.700 Naples
 442.000 Tallahassee
 145.170 Ocala
 224.460 Pompano Beach
 442.200 Ft. Lauderdale
 146.610 Pompano Beach
 442.225 Palm Bay
 444.300 Largo
 442.225 Palm Bay

FREQUENCY CHANGES

146.955 Bradenton
 145.210 Lake Placid (from 145.250)

DE-COORDINATIONS (new coordination not issued)

146.955 Daytona Beach
 224.240 Dunedin
 145.330 Palm Beach Gardens
 444.900 Lake City
 443.475 Sarasota
 444.000 Milton
 443.450 Largo
 29.620 Port Charlotte
 224.860 Mims
 146.700 Bithlo
 444.350 Bithlo
 443.250 Ocala
 444.650 Crestview
 442.050 Seven Springs
 442.250 New Port Richey
 444.250 Clearwater
 444.775 Melbourne
 444.650 Ellisville
 147.120 Punta Gorda
 224.360 Naples
 224.160 Sarasota
 146.670 Naples
 224.020 Ocala
 421.250 Ocala
 442.325 Ocala
 1291.20 Ocala
 147.075 Tampa
 146.685 South Daytona
 146.955 St. Cloud
 145.450 Shell Point
 145.270 St. Petersburg
 444.875 Barrineau Park
 147.120 Jacksonville
 224.500 Jacksonville
 442.000 Jacksonville

APPROVED RELOCATIONS

145.450 Shell Point
 145.270 St. Petersburg
 444.875 Barrineau Park
 921.200 Trenton

(Meeting Minutes continued from page 1)

President Ray welcomed all in attendance.

Dennis Griffin represents the interests of the West Central Florida Group. He mentioned that he had two applications pending with the council and would like to know their status. Both applications had conflicts. One was cleared by submitting a legible copy of a bill of sale. The other was cleared by the trustee of an existing pair relinquishing his coordination.

George Baustert mentioned that the Council suggests the use of CTCSS on repeaters to avoid interference. He suggested that it become mandatory on 2 meters. Director Paul mentioned that other coordinating bodies make it mandatory for coordination. Considerable discussion followed. It was decided to make a motion during the Business Meeting to require CTCSS for new coordinations. Director Wirick volunteered to author an article for the next newsletter.

Mike Fletcher, AD4HV proposed the allocation of the sub-442 repeater pairs for "backyard" repeaters which are using pairs that could be used for wider-area coverage systems.

David Kraus, N4DAV volunteered to help with Coordination duties to help expedite the process. Considerable discussion followed about how busy Dana is wearing five hats. The President and Directors expressed their appreciation for his offer. Nobody volunteered to take over Secretary/Treasurer.

Chuck, N4EHM mentioned that WA4Zfq's call sign is still on the 147.150 Lake City repeater without his approval. It is coordinated to Doug Baker. President Kassis suggested that WA4Zfq contact the FCC since the FRC has no rules enforcement authority.

Chuck mentioned that the 444.900 is also coordinated to Doug Baker but it has been operating without an ID. It has been inactive for at least 6 months. The database manager mentioned that he notes inactive machines in the database but doesn't de-coordinate them without the trustee or a Director's approval.

The business meeting was called to order at 3:55 PM on September 14, 2002 by President Ray Kassis, N4LEM, who welcomed all in attendance. The Secretary determined that a quorum of qualified Directors were in attendance:

Directors in attendance were:

- District 1: Nilo A. Hernandez, W4HN
- District 2: Mark Filla, KS4VT
- District 3:
- District 4: Paul Knupke Jr., KR4YL
- District 5: Ralph Betts, KC4SGG
- District 6: Dave Armbrust, AE4MR

District 7: Ted Wirick, W4YJC

District 8: Frank Butler, W4RH

Staff Members in attendance were:

President: Ray Kassis, N4LEM

Vice President: Ira R. Bickham Jr., K8HRR

Secretary/Treasurer: Dana G. Rodakis, K4LK

Database Manager: Dana G. Rodakis, K4LK

PRESIDENT'S REPORT:

President Kassis mentioned that the Melbourne hamfest committee is proposing to section a portion of the Melbourne auditorium for forums to avoid the expense of renting conference rooms at the Hilton Hotel.

President Kassis thanked all repeater owners for their support by sending in their dues and requested other owners to support the council.

SECRETARY'S REPORT:

Secretary Rodakis mentioned that the newsletter was mailed a little late and that about 10% was returned undeliverable. The Directors will contact those recipients that reside in their districts. Dana announced that the minutes of the last meeting have been posted on the FRC web site. A motion was made and seconded to approve the minutes of the February 2002 meeting as posted. Motion passed unanimously.

TREASURER'S REPORT:

The FRC Secretary/Treasurer reported the following accounting:

Opening balance, 2/9/02	\$7,699.32
Income:	\$1,828.00
Expenses:	\$1,465.35
Balance: 8/7/02:	\$8,061.97

A motion was made and seconded to approve the treasurer's report. Motion passed unanimously.

WEBMASTER'S REPORT:

The Council web site receives 20 hits per day. Some spammers have found our web site resulting in unsolicited email. Christ Schwab suggested removing all "clickable" email links and substitute a graphic with the email address. Dana mentioned that the new Filemaker Pro database makes it much easier to keep the repeater listings up-to-date. President Kassis inquired about the 146.76 in Clewiston which is not coordinated. Considerable discussion followed. The 1992 database shows the Clewiston repeater.

(Continued on page 5)

DATABASE MANAGER/COORDINATOR'S REPORT:

The Coordinator reported that he recently completed a big backlog of applications with two pending. There are 1,120 repeaters in database.

REPORTS OF DIRECTORS:

District 1: Director Nilo reported that a repeater operator is interfering with himself on 145.330 MHz. No other problems.

District 2: The 147.135 repeater in WPB was raised 200 feet without permission. It was returned to its original height after a threat of de-coordination. The 146.880 repeater in WPB is experiencing technical problem. New hardware has been ordered. The proposal for new coordination distances has a typo.

District 3: (Report by VP Ira Bickham) The address of a couple of returned newsletters are silent keys. The 146.940 repeater in Cocoa was transferred to another group due to a trustee illness. The Coordinator has approved the new proposed location. There is some confusion about the location of the ATV repeater also.

District 4: The 449.600 W4EFK repeater is still operating upside-down. Riley Hollingsworth has been informed. Paul received a complaint from Orlando. There has been no further complaints from the 442.950 owner in Oviedo. There has been no complaints from Orlando about the 146.640 repeater in Holiday. The antenna pattern was changed from offset to omnidirectional in Holiday. Still chasing some paper repeaters.

District 5: A couple of new coordinations have been granted. Pretty quiet otherwise.

District 6: The Highland and Bradenton repeaters were coordinated too close and interfering with each other. Simultaneous nets aggravated the problem. The Bradenton repeater will be moving to 146.955 MHz.

District 7: Other than the inactive pair that Chuck mentioned, all is quiet.

District 8: Two co-channel repeaters on 147.030 have some coverage overlap and use the same CTCSS tone. Tallahassee will be changing tone.

OLD BUSINESS:

Coordinator was directed to notify Riley Hollingsworth of the Council's position on the Wally Cashwell, W4EFK 449.600 upside-down situation. This was completed.

Transmitter power must be specified on new applications for 440 MHz and those that specify more than 50 watts require a copy of a waiver from the Military Frequency Coordinator.

Funds of \$1,800 were allocated for purchase of Filemaker Pro for Mark, Dave, Nilo, Ted, Karen and Frank. Dana and Paul already have one. No purchases have been made.

Coordinator was directed to allocate a pair in the sub-442 band for statewide emergency use. This was not completed.

NEW BUSINESS:

Vote upon Director Filla's proposal for new coordination distances based upon antenna height for 144, 220 and 440 MHz. The proposed distances do not include the effects of ducting or output power. The proposal was published on the FRC web site and newsletter as directed. A motion was made and seconded to accept the corrections mentioned during the open forum. Existing repeaters are grandfathered (existing 85-mile protection applies). When a search is conducted, the antenna height of existing repeaters is not added to the height of the proposed new repeater when determining minimum separation. Considerable discussion followed. The proposal passed by a vote of 7 to 1 and will be effective when the Coordinator has adequate search capability (tentatively March 1, 2003).

Create a procedure to deal with paper repeaters. Considerable discussion followed. It was decided to table this issue until the February meeting. Decide on an alternative to the Orlando Hamfest for the annual business meeting. Director Nilo will contact the Miami Tropical Hamboree committee to determine if the meeting can be held there.

Director Wirick made a motion that, all 144 and 440 MHz repeaters coordinated after January 1, 2003 must support CTCSS on both receive and transmit to reduce interference to other repeaters caused by coverage overlap. It is strongly recommended that these repeaters choose the CTCSS frequencies recommended by the FRC for the respective district to prevent overlap with co-channel repeaters in adjacent districts. Existing repeaters that choose not to support CTCSS should not expect the FRC to resolve their interference problem if CTCSS would likely solve the problem. The motion was seconded and passed unanimously.

The meeting was adjourned at 4:06 PM by President Ray Kassis.

Respectfully submitted
Dana G. Rodakis, K4LK
Secretary

Change to the FRC Coordination Policy

Effective January 1st, 2003 there are significant changes to the Florida Repeater Council policy regarding the use of CTCSS encode and decode which is also know as PL tone.

For many years now the commercial two-way radio service has used PL tone to minimize interference issues on their bands. While this technology has been available to amateur radio for some time the use of PL tone has not been as wide spread in Florida repeaters. This has caused our repeaters users to deal with interference issues that would not have existed if the use of CTCSS encode and decode were wide spread.

The first part of this Florida Repeater Council's policy change is, starting January 1st, 2003, no new coordination will be granted for the 144 MHz and the 440 MHz bands unless the repeater has both CTCSS encode and decode. This policy will not affect existing repeaters coordinated before that date UNLESS an interference issues arises.

If an interference issue exists and if the Florida Repeater Council believes that the use of either tone encode or tone decode would solve the issue then it will be the position of the Florida Repeater Council that either CTCSS decode and/or encode must be used to solve the interference issue.

This is a significant change from our previous policy. In the past the repeater council could only recommend the use of tone, as it was not a specific part of our policy. If we had an interference complaint and the repeater owner or user did not want to use t one there was no FRC policy that they must do so to resolve the interference. We would then look to other ways to solve the complaint.

This new policy extends not only to the repeaters but also to users as well.

Rarely does a repeater interfere with another repeater. Instead it is more common for distant users to interfere with local repeaters or for local users to hear distant repeaters when their local repeater is not in use. Both of these types of interference complaints can be dealt with by the proper use of tone.

If the local repeater was using tone decode for access it would be far less likely that a distant user would "bring-up" the local repeater unintentionally. In these situations the FRC will require that the local repeater install tone decode to resolve this interference issue regardless of the date of original coordination of either repeater.

If a user "hears" a distant repeater when the local repeater is not in use this problem can also be solved by the proper use of tone. If both the local repeater has tone encode and the local users has a radio equipped with done decode this problem can be eliminated . In these situations the FRC will require that the local repeater uses tone encode AND that the local user uses tone decode to resolve this type of problem.

If an repeater coordinated before January 1st, 2003 does not cause interference and does not experience interference then there will be no requirement that tone encode or decode must be used as long as there are no interference complaints.

It will remain the recommendation of the Florida Repeater Council that ALL repeaters use both CTCSS tone encode and decode regardless of the coordination date.

If you have any questions or concerns regarding this new policy please contact your FRC District Director.

**By Dave Armbrust, AE4MR
District 6 FRC Director**

The Plus of PL

In Shakespeare's day, "to be or not to be" was the burning question. Times have changed. Technology has complicated our lives. It is not merely enough "to be", at least if you are an Amateur Radio repeater in Florida. The question that now consumes repeater owners and users is, "To tone or not to tone?"

Private Line (PL) or Continuous Tone Coded Squelch System (CTCSS) tones have been around for a long time. They are widely used in other radio services, including the substantially more crowded Commercial Land-Mobile Service, the General Mobile Radio service (GMRS), and even the Family Radio Service (FRS). Their purpose is to keep users of Repeater A from accessing Repeater B, Repeater C and any other repeaters that may be operating on the same frequency, and often in the same locale or metropolitan area. At the same time, Land-Mobile and GMRS repeaters often transmit a PL or CTCSS tone to allow users to selectively filter out all other repeaters transmitting in a locale on the same frequency. And even though repeaters are not used in the Family Radio Service, many FRS radios use PL tone squelch to maintain some privacy to their conversations.

Amateur Radio repeater owners have been slow to adopt PL/CTCSS for a variety of reasons. In some cases, repeaters are owned by clubs comprised of a mix of new hams with modern, up-to-date equipment, those who have been around the block for a while, and whose equipment reflects a simpler time. Those owners of less-modern equipment sometimes adamantly refuse to embrace change. In other cases, the repeater owner/trustee simply does not see the real need to add PL encode/decode to the repeater.

But this is Florida, "Land of the TropoDuct" where transmissions that should be line of sight often extend far beyond the horizon and propagate hundreds of miles. With nearly forty thousand licensed hams in the Sunshine State, the need for repeaters continues to grow. This means fewer and fewer so called "clear frequencies".

In fact, the Amateur Radio two-meter and seventy-centimeter bands are teaming with repeaters. It is not uncommon to find five or more repeaters using the same frequency pair. While the Florida Repeater Council (FRC), the authorized repeater coordinating body in the Sunshine State requires a minimum distance separation of eight-five (85) miles between repeaters using the same frequency pair, this, often times, is not enough. A single user may find himself accessing two or more repeaters operating on the same frequency, unless those machines require a PL tone to access the repeater receiver.

Now, if that single user can access multiple repeaters, those repeaters will now compete for airspace, creating an annoying heterodyne or squeal in the process. Ouch! Try communicating a cogent thought to someone over that. It's not easy. To solve this problem, and help those operators who wish to selectively listen to their local repeater (as in singular), some owners add a

PL tone to the repeater output, or allow the users' PL tone to pass through. Such use of PL can also minimize the reception of disruptive intermodulation signals in metropolitan areas.

As the Florida sandbar keeps shrinking, and the pressure for more Amateur Radio repeaters continues to grow, the need for PL encoding and decoding will become imperative, if good engineering and operating practices are to be employed. Even those repeaters located in the middle of nowhere will need to add PL/CTCSS toning to keep the greater RF neighborhood a friendly place to "play radio". By the way, if someone can tell me which county nowhere is located in, I would like to visit it someday!

Written by Paul J. Toth NA4AR

FRC Dues

The mailing label shows the year [in brackets] through which your dues are paid. Clip this coupon and mail with your \$10.00 annual dues. Your cancelled check is your receipt. **This coupon is NOT a substitute for your repeater update. Payment of dues is not required to receive the services of the Council. Thank you for your support.**

Name: _____

Callsign: _____

Address: _____

City: _____

State: _____ Zip: _____

E-Mail: _____

Repeater callsign: _____

Repeater City: _____

Output frequency(s): _____

Signature: _____

**Make checks payable to:
Florida Repeater Council
 and mail to:
 Dana G. Rodakis, K4LK
 6280 Fairfield Ave. So.
 St. Petersburg, FL 33707-2323**

Florida Repeater Council
Minimum Distances for New Coordinations

The Florida Repeater Council's Board of Directors approved a change in part 8 of the Voice Repeater Coordination Policy. This section currently states "8. The FRC currently maintains the following coordination zones: 85 miles co-channel (all bands), and 30 miles adjacent-channel on 2-meters in the segment where adjacent- channel frequency separation is 15 KHz. No adjacent channel separation is required in the 6-meter band, the 2-meter-band segment where frequency separation is 20 KHz, and the 222, 440, 902, and 1240 MHz bands". This change to the Coordination Policy will take effect when the FRC Coordinator has acquired improved database searching capability (tentatively March 1, 2003).

The table below shows the minimum distances for new coordinations.

Height of Repeater Antenna above average terrain (feet)	Minimum Co-Channel Separation (miles)		
	144 MHz	220 & 440 MHz	All other bands
50 to 200	65	50	85
201 to 300	70	60	85
301 to 500	80	70	85
501 to 700	90	80	85
701 to 1000	100	90	85
1001 to 1500	140	110	85
1501 to 2000	160	125	85

An adjacent-channel separation of 30 miles remains in effect for frequencies separated by 15 kHz in the 146 to 148 MHz band.

These distances do not account for atmospheric ducting or transmitter output power.

When a search is conducted, the antenna height of existing repeaters is not considered (added to the height of the proposed new repeater) when determining minimum separation.

FLORIDA REPEATER COUNCIL, INC.
Office of the Secretary/Treasurer
Dana G. Rodakis
6280 Fairfield Ave. So.
St. Petersburg, FL 33707-2323

Inside This Issue

<i>President's Message</i>	<i>Page 1</i>
<i>February Meeting Notice</i>	<i>Page 1</i>
<i>Minutes of Melbourne Meeting</i>	<i>Page 1</i>
<i>Directory of Directors & Staff</i>	<i>Page 2</i>
<i>Database changes</i>	<i>Page 3</i>
<i>Coordination policy changes</i>	<i>Page 6</i>
<i>"The Plus of PL" by Paul Toth</i>	<i>Page 7</i>
<i>Dues Renewal Notice</i>	<i>Page 7</i>

ADDRESS CORRECTION REQUESTED

Page 8

FLORIDA REPEATER COUNCIL, INC.

FROM THE DATABASE MANAGER

Due to the tremendous growth of Amateur radio, especially 2 meters, there are few (if any) repeater pairs available in most areas in the state. Many of the coordinated repeaters are inactive, or are being used for other purposes, such as simplex autopatches. Some repeaters have no inputs and their outputs are simply re-transmitting other active repeaters simply to generate activity. Some amateurs simply like to hoard repeater pairs for future use. In addition, repeater licensees are relocating their repeaters or increasing the antenna height or output power without authorization from the FRC Coordinators - in direct violation of FRC Coordination Policy.

Please notify the appropriate FRC Coordinator (see the Directory of FRC Staff and Directors), if you suspect that a repeater is inactive, is no longer in its coordinated location, has an abnormally large coverage area, has no receiver, or is being used for a simplex autopatch.

The FRC needs your help in locating the repeater pairs that are being used for anything but legitimate full-duplex repeaters, so that they may be re-coordinated to amateurs who will use them properly.

The frequency of repeater status reports has changed. In

odd-numbered years, reports are due from even-numbered districts and in even-numbered years, reports are due from odd-numbered districts.

A LIST of repeaters that WILL NOT BE INCLUDED in the next report to the ARRL for their 2003-2004 ARRL Repeater Directory (due out Spring 2003) can be accessed by visiting the FRC web site at the following URL: <http://florida-repeaters.org/rptromit02.pdf>. Either these repeaters are uncoordinated or the required bi-annual update HAS NOT BEEN received from the coordinated trustee. If any of these repeaters are familiar to you, then please urge the trustee to submit the required update by January 31, 2003.

The Council web site contains a wealth of information, including the latest repeater listings, Council By-Laws, coordination policy, minutes of the Board of Directors meetings, and links to other coordinating agencies and pages of interests to the amateur radio operators. For the most up-to-date repeater listings visit the following URL: <http://florida-repeaters.org/dblist.htm>

Repeater status reports and applications for new or changed coordinations can be submitted on-line by visiting the following URL: <http://florida-repeaters.org/frcappl.htm>
