

# DELTA AMATEUR RADIO CLUB

## SPARKS Web Edition

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W 4 B S R E P E A T E R S Y S T E M  
146.82, 147.36, 224.42, 443.2 & 145.03 Packet

### PRESIDENT'S PAGE

You've all heard that old saying, "When it rains, it pours", or "from rags to riches." Well that's the state that Delta Amateur Radio Club was in a couple of months ago. First we learned that the WKNO tower had been sold, then we learned that it was being dismantled and that we'd have to find a new home for the 146.82 repeater. Once we had determined where we were going to put the repeater, we were faced with another problem, "what about hard-line." We weren't sure we would be able to get our hard-line from the existing tower, or if we did, we didn't know what condition it would be in. Then, all of a sudden it was like we were wearing a halo, another tower resident said that we could have their old 158" hard-line, and the story goes on from there.

Well, there's a new chapter being written, or it's almost completely written to this saga. Many of you know that Kathy and I live across the street from a water tower in Bartlett. About a month ago we received a letter in the mail indicating that the City of Bartlett, they not only painted the water tower, they painted my house and my car. Not only that, they painted the car three times. So as you might expect, I was fighting mad and ready to take the City of Bartlett to court if they so much as got a speck of paint on my truck, my car, or my house. On the day that they were setting things up I walked across the street to talk to one of the men and found out that he worked for the Water Department of Bartlett. I gave him this hard-luck story about my house and car being painted the last time they painted the tower and told him I wasn't in good humor now that they were doing it again.

It was at this moment that I noticed these two black strands of hard-line running down each side of ladder that ascends the tower. Like any amateur radio operator, my mind focused in on the hard-line, and the painting of my house and truck now became a thing of the past. In an instant, my personality changed, call me Dr. Jeckle and Mr. Hyde. I very politely asked the man from the Water Department what he planned to do with the hard-line. He mentioned that they were going to throw away the hard-line and any of the other radio equipment that was on the tower. When I looked up, not only did I see the hard-line affixed to the tower ladder, but I saw two antennas and what looked like two sections and a cap of Rohn 25 tower. Before I could say anything, I think the gentleman I was talking to read my mind, and asked me if I wanted the antennas and the tower. I didn't hesitate, I said yes and yes. He then proceeded to show me where a repeater had been stored and informed me that they had taken it to the city garage and were going to put it in the city auction. He indicated that since Bartlett had gone to 800MHz system, this equipment was useless.

Well, I had any thoughts of suing the City of Bartlett for painting my house or vehicles they were definitely a thing of the past. I asked this very nice city employee would the City of Bartlett consider donating the repeater to Delta Amateur Radio Club. I told him about the public service activities we were involved in, and made sure to highlight the Bartlett Christmas Parade, and most importantly that we were a non-profit organization. He told me that he didn't have any problem with us getting the repeater but that he would have to check with his boss.

Well, today's Tuesday, March 23rd, and I called him up before going to work this morning. I was fully expecting him to say that the city was unable to donate this piece of equipment. But to my surprise, he told me just the opposite, he told me that he had been given approval to give us the repeater. He was in the process of clearing it off the books and would notify me when we could pick it up.

So, Delta Amateur Radio Club is now the proud owners of approximately 300 feet of 7/8" hard-line, two antennas (both resonant in the 150 MHz area), and a VHF repeater. I am not certain what we can do with the antennas, by this I mean, can we make them resonant in the amateur portion of the band, but I do know that with some modifications the repeater can be used by us.

Needless to say, I have had numerous inquiries about what we're going to do with the hard-line. At this time we are simply collecting it and storing it. The board needs to decide what should be done with the excess, the hard-line we own don't use. To answer any of our repeater sibs, I'm sure there are a number of members out there that would welcome the opportunity to buy some of this hard line, however, I think an amateur radio club can never be too poor when it comes to owning hard-line. To answer anyone who might be asking that question right now, we're just going to have to wait and see what we want to do.

This has been an exciting experience for me. Something that started out bad turned into an opportunity that has benefited Delta Amateur Radio Club.

Well, that's it for this month. Don't forget that if you have any radio gear that you want to get rid of, this next month's meeting is going to be the auction. Bring it to the meeting and list a price. If someone buys it, you and the club benefit.

See you at the April meeting.

73.

Ben, KU4AW

### Vice Presidents Corner

HAMPAIN 99

There is little news on the fund raising front this month. It finally happened--someone finally sent me information from his company on who to send a fund raising letter to. If we multiply that times 100, we may have a chance of making a significant amount of money with little effort. Please remember next meeting to bring either a name and address for me, or you can bring a cash donation if you would rather.

Dick Cookenham's idea, looking travel reservations through his company with Delta Club receiving the commissions seems to have been well received. Again, it will still take all of our participation to work, or at least to be able to earn a significant amount. We will have more news on that as details become available.

Lastly, please continue to think about easy ways to earn some money. Let me know! We still may have a tremendous need for a lot of cash, depending on how the repeater move/repair goes. If we don't have significant efforts in obtaining this money from companies and others outside the club, we'll have to dig into our pockets if we want to continue to have the best repeater and club in the Mid-South!

Kurt Schropp, KU4NH  
Vice President

### SECRETARY'S REPORT

The following is a list of hams who have rejoined the ranks of those belonging to the FRIENDLIEST REPEATER IN TOWN:

Charles Flowers, WA0WV  
Brenda Stauffer, KE4MKK (my apologies, I forgot to include her with her husband's renewal last month)  
Eugene Kays, KASALN, his wife Sally, KE4VCN  
Ken Stewart, KD4EFO  
Francis White, WA4ZYX, his wife Kathleen, KD4LGL, his three children Adam, KE4EYQ, David, KE4FLW, and Molly, KE4FLX  
Jim Kyle, WA4RFL  
Frank Bratt, N4LPE  
Jerry McNatt, N4RES  
Steve Greer, N4SGL, his wife Claire, KE4ZHH  
Steve Muir, KF4IVY and better late than never...  
Ben Troughton, KU4AW, and me too, Kathy, KE4UUY.

Our new members are:

Richard Page, WB4ZWV  
Kenneth Johnson, KB0ZTX  
Jim Barnes, N4YOK  
Leon Uiles, N5XLT  
Joe James, KD4TCL  
Jeff Crum, KB5SEV

Give them a friendly hello when you hear them on the air.

This brings our membership count to 250 licensed hams. Not bad, but I know each one of us knows at least two other hams who have not sent in their renewals. All it takes is a gentle (or maybe not so gentle!) reminder to do so. Or maybe you can bring them to the April Auction. That would be just the spark they need.

See you all at the April meeting, 73.

Kathy, KE4UYU

# APRIL 13 CLUB MEETING

## 7365 HWY. 70

### BARTLETT, TN

#### MEETING STARTS AT 7:00 PM

#### Amateur Radio and Electronic Equipment Auction

### DIRECTOR OF PROGRAMS

Sorry, folks about the March program SNAP! A bit of miscommunication by those who are supposed to know how to communicate! ANYWAY, the April Auction will be held at the April meeting, so bring your "junkie," bucks, and checkbooks. Kurt, KU4NH, will be in charge of the auction with help from various others. We've invited the Dixie Amateur Radio Group, the club from West Memphis to join us and hope to have a good representation from them.

The ground rules are that the respective club will receive ten percent (10%) of the sale price of those items brought and sold by the members of that club.

Minimum bids may be established by the seller on any item. Payment is cash or check at time of sale.

Also, we'll be auctioning sealed "Brown Bags." All proceeds from the Brown Bags will go to the club whose member brought it. Put something related to ham radio and/or computers and worth at least five dollars in a brown bag, box, gummy sack, whatever - seal it, and bring it to the auction.

Let's try to find out how fast Kurt can really talk by bringing too many items to get auctioned off in one night! The more the merrier.

73.  
K4TTA

## VE TESTING:

**Don't forget the monthly Volunteer Examiner testing session. Registration begins at 5:30p.m. and testing begins promptly at 6:00p.m. Please remember to bring two forms of identification the original and copies of any existing licenses or CSCE's you might have. Please be on time for registration, as you will not be allowed to enter the testing session after 6:00 p.m., so our volunteer VE team can finish in time to attend the club meeting. Call Joan Thorne 366-9722, if special testing arrangements are required.**

### DIRECTOR OF TRAINING

Thank you for allowing me to come on board as your Training Director - midstream so to speak. My thanks to Regina, KF4IGS, for all of her hard work.

With Field Day fast approaching, you'll need to brush up on your operating skills. Tom, K4TTA, has several operating opportunities planned for just this. One of which will be a Special Events Station on June 12th at the Navy Base, Navy Support Activity Mid-South, Millington. Tentative times are 10:00 - 16:00 but you will hear more later. This will be a great dry run before Field Day. Give Tom a call or Email him at K4TTA@arrl.net. Training is a continuing process - make your best better and your better best.

I will be setting up code classes in the near future. Volunteer CW teachers, experienced or inexperienced, are needed. Have you ever wanted to learn about packet, Amateur TV, satellites, DX hints or what ever? Our club has a wealth of talent in just about all facets of Amateur Radio. Please let me know what subjects you would like to see being taught.

The Delta Net has seven dedicated net control operators. I would like to build a cadre of qualified net control operators that could be called upon to fill in if needed. If you are interested in becoming a qualified net control operator on a regular basis or are willing to help out from time to time please let me know.

73.  
Dick, K3ORS@arrl.net

### Is Y2K Bugging You?

Are you tired of hearing about the Y2K bug? It's kinda getting old to me too, but it's something for us to be concerned about until after the first of next year.

Have you checked your home computer yet? Many people haven't thought about the fact that their home PCs may be affected too. However, it won't be as bad as how some of the businesses, public utilities and emergency services could be affected.

Memphis and Shelby County EMA is concerned about the problem as to how it may affect city and county services and their respective radio systems. Therefore, they have requested that volunteer amateur radio operators man all city fire stations and all hospitals, 24 hrs per day for three days, until it is certain that all systems are functioning as needed. The days planned at this point are Dec. 30, 31 and Jan. 1, 1999. In order to accomplish this feat, we will need approximately 150 amateur volunteers.

Look for more updates in monthly columns in SPARKS by Rob Ennis, KD4SKT. Rob is RACES officer for Memphis and Shelby County.

Tommy, KD4TJO

### CQ FIELD DAY FROM WHISKEY FOUR BRAVO SIERRA

This annual Field Day, lots of folks around the country are going to get to hear that (or the CW counterpart) if Field Day goes as well as it's started! I'd like to begin by thanking Dick, K3ORS, for accepting the co-chairman position. Dick is going to co-ordinate logistics and I will attempt to co-ordinate operations. We would like to thank all thirty-six folks who have signed up and also thank the people who have volunteered to be Station Captains. This year's Captains are:

**HF CW - K1H**  
**HF phone - K4NF, AA0AB, & AA5N**  
**VHF - KE4GDR & K44AS with packet help from KB4KA and satellite help from KD4LR**  
**NOVICE/TECH - KF4QFW & KD4TJO**  
**SITE - KF4EWO & KA4ACD**  
**PUBLICHTY - KA5HP & KF4ZGJ**  
**LOGGING - KCSVYX**  
**FOOD - KG4BVK**  
**KG4ALR will be Aide de' Camp to K4TTA and K3ORS.**

When a captain calls you, try to provide the help you can -- we ALL need it. If you have not yet signed up for FD, give me a call on the air, on the landline or email me at K4TTA@arrl.net.

An additional source of points are we looking to get this year in on VHF. We plan to have a 2-meter FM station going throughout the contest with a collinear ground plane antenna up at least 75 feet. We would like for EVERYBODY in Delta Club that DOES NOT OPERATE one of the W4BS field day stations to contact the VHF station on 146.52 or 146.49 simplex during the FD period. KF4GNB and KF4GNC will be calling (landline) during the FD period to urge further participation.

KF4WRU will be conducting a brief on-site chapel service Sunday morning (time to be announced) so plan to come on out and join the weekly crew of overnight operators.

I want to thank everybody for the willingness, support and enthusiasm that have been shown. We have a chance this year for a really big score and I'd like to see ten top ten stations in Class 2A. With everybody's continued support, we'll do it.

73.  
K4TTA

### PUBLIC SERVICE UPDATE

Again, as in last month's issue, I am asking for your assistance in providing communications for the March of Dimes WalkAmerica on Saturday, April 24. Many of you have helped in the past and I am counting on your support again this year. This is also a great event for new amateurs to get a feel for public service work.

Shortly afterwards on May 16, is the Memphis in May Triathlon. This project only requires about 10 amateurs, but unfortunately is also an early morning event. It is held at Edmund Orgill Park in Millington.. More on this one in next month's SPARKS.

I will have sign up sheets at the meeting for those of you who are willing to assist with these worthy public service projects.

Thanks in advance,  
Tommy, KD4TJO

### VE CORNER

The following *(in italics)* is part of a notice that I received from the ARRL:

Dear VE:

As we pass through our third month of 1999, the following are some of the types of questions we have been receiving here at the ARRLVEC, and no doubt you are getting them as well. To help you and help us, here are the answers we have been providing:

*Q - When will more be known regarding the FCC's decision in the license restructuring matter?  
A - The answer we are supplying is that the FCC has offered no indication as to when they will announce their determination. The FCC deadline for input was just 60 days ago (January 15th), and according to the FCC web site they have received some 2300 plus comments (which they are no doubt working on reviewing). We estimate (best guess) that it may be Fall to Winter 1999, or later, before more is known from FCC--and changes that might be implemented. If any would follow over a several month (if not a year or more) period. Remember, changes to the license and therefore exam structure, will most likely require a change to the question pools. Such pool changes/updates will take several months to accomplish, then make public (and study guides are then written and printed and distributed over a series of months), and finally implemented. From the announced revisions in the pools, to exam room test booklet changes, could take 8 or more months.*

*Q - I just passed my license exams. How long should I expect to take before I see my new call sign via the Internet or by mail?  
A - Depending on the VEC team processing, mailing delays and VEC processing time (currently 2-3 business days), the advice we offer is about ten days from test date until internet posting, and 7-10 days after that for FCC printing and mailing. We appreciate the fast turnaround afforded by many VE teams in mailing their packets the same day, or within a couple of days. Once the mail gets around to delivering your packets to us, our turnaround is presently two to four business days. Due to a 30% reduction in VEC staff for 1999 (in general following the decrease in overall exam test elements being administered over the past two to three years--but not necessarily in test sessions given or VEs served), our processing turnaround has increased from one to two days so far for 1999.*

73, Bart J. Juhnke, W9JJ  
Manager, ARRL/VEC

The turn around time for my last session, which I sent via FedEx the next day, went from 2-3 days to 8 days. Normally I have in the past 1 had a session on Tuesday - Send it by FedEx on Wednesday and the results posted on Friday or Saturday. This session of March 9th I shipped FedEx on March 10th which was received at ARRL on March 12th at 0945. The posting of this session however did not take place until March 19th, so patience is needed.

Thank you to: Dick WA2CPY, Eloise KF4GNB, Don KJHO, and Francis WA4ZYX for helping at the last testing session. Without the additional VE Members there would not be a Team to hold these sessions. Though the VE Team seems to continue to provide the reliability and low cost that we always have in the past," said a statement from Founder and Editor Al Brand, and Publishers Dave and Barbara Brand Wixon. Yellow Sheets subscribers will automatically get an Amateur Radio Trader subscription, while the subscriptions of AR1 subscribers and who also subscribed to the Yellow Sheets will be extended. Amateur Radio Trader of Crossville, Tennessee, is published by TAP Publishing.

\* Special Canadian call sign: The call sign X1.3D has been assigned for use on the 25th anniversary of the Ontario DX Association for the period March 25 to April 25, 1999.--RAC

\* NY0 becomes effective on July 1. The new Canadian Territory of Nunavut, VY0, comes into effect on April 1, 1999. To reflect this new addition, Nunavut will become a separate multiplier in the two RAC Contests, commencing with the RAC Canada Day Contest on April 1, 1999.--RAC

73.  
Joan, KN4PM

### W4BS REPEATER SYSTEM

**146.82 net 8:00 PM**

**147.36 tone = 107.2**

*(BACK ON THE AIR AT A TEMPORARY LOCATION)*

**224.42 1.25 w rpt**

**BACK ON THE AIR**

**443.20 patch, 107.2**

**145.03 packet / bbs**

### Items of Interest

I thought that the following articles might be of interest to the Delta Club members:

\* Ham Trader Yellow Sheets QRF: After 38 years in business, the Ham Trader Yellow Sheets will cease publication. The twice-monthly classified publication is being absorbed into the Amateur Radio Trader, according to an announcement in the last edition of the Yellow Sheets. "It has been increasingly difficult to continue to provide the reliability and low cost that we always have in the past," said a statement from Founder and Editor Al Brand, and Publishers Dave and Barbara Brand Wixon. Yellow Sheets subscribers will automatically get an Amateur Radio Trader subscription, while the subscriptions of AR1 subscribers who also subscribed to the Yellow Sheets will be extended. Amateur Radio Trader of Crossville, Tennessee, is published by TAP Publishing.

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73.  
Joan, KN4PM

### Calling the Police?

Here's a little tip for the next time you call the police by autopatch, cell phone or at home. Have you noticed the new automated answering system that they have now. Sometimes you can't wait for the polite little lady to finish talking. When you hear "If you're on the patch remember to key up when pressing #1#1.

Tommy, KD4TJO

### PSK31: First of a New Breed of HF Digital Modes

If you tune the HF bands between the CW and RTTY/PacTOR segments, you may have noticed something new. It sounds almost like a dead carrier, but has kind of a "warble" to it. It's probably PSK31 -- a new, easy, inexpensive, and very effective digital mode. Based on an idea by SP9VRC, it was developed into a "product" by Peter Martinez. Anyone with HF privileges can get in on this one!

The objective was to develop a "keyboard to keyboard" mode operating at about 50 wpm, similar to RTTY, but far more bandwidth efficient. A RTTY signal occupies about 250 Hz bandwidth (180 Hz shift plus sidebands). I won't go into the details here, but Peter was able to "squeeze" it into a bandwidth of 31 Hz.

[To put this in perspective, a CW signal at 20 wpm occupies about 50 Hz.] PSK31 also supports the entire ASCII character set. Successful PSK31 QSOs have been reported while actually operating between the mark and space frequencies of a much stronger 170 Hz-shift FSK signal. Hams are literally working the world with a few bytes, giving this mode a very low key.

So what's it take to operate PSK31? Probably a lot less than you think! It has made up a sound card, a stable SSB transceiver, a one of a kind set of cables, and a couple of resistors. By the way, it's free! (resistors are hardware) and you're ready to go on your PC. On the other hand, drift is deadly -- turn the rig on way ahead of operating this mode. Also, care must be taken not to overdrive the transmit audio input on your transceiver -- failure to do so results in broad signals. Incidentally, tuning is easily accomplished using a "waterfall" display on the PC -- effectively a spectrum analyzer. Makes it really easy to spot a PSK31 signal, even when you can barely hear it. Also makes it easy to spot somebody overriding their transmitter, so keep it clean or you'll hear about it. Typically, sound cards are run at about 25% of full output to avoid clipping, and are followed by about a 100:1 resistive attenuator to get the audio down to "microphone proportions." In some cases, an isolation transformer is needed to provide ground isolation between the PC and the radio. Most use VOX to key the transmitter, but a PTT output is available if needed (some auxiliary audio inputs bypass the VOX circuitry). It's typical to run your transmitter at about 25% of rated power (to avoid both distortion and toasted finals -- this is a "key-down" mode).

My setup came up and ran the first time I tried it (some don't report quite such good luck).

Recommended calling frequencies for PSK31 are around: 1838.15, 3580.15, 7035.15, 10140, 14070.15, 21080.15, and 28120. [The 10-meter frequency was recently changed to allow Novice and Tech-Plus licensees in the US to participate.]

Give it a try. Assuming you have a PC with a sound card in the shack, your total investment probably won't exceed a couple of dollars. OK, maybe ten bucks if you have an empty junk box and have to go out and buy all the connectors, wire, resistors, etc.

So download the software, hook your PC up to your receiver, and listen around. You'll be surprised how easy this is.

73, Don K9DM

### AMATEUR PACKET UPDATE...

Many of us run our radios on 12 VDC... Astron has a small 3 or 4 Amp continuous power supply. The unit is the RS-L series. These units have a built in cigarette lighter receptacle. This makes hookups easy for HT and mobiles with your current cigarette lighter plug. The unit is small (approx 3.5" by 6" by 7") and offers a perfect way to keep the HT hooked up at home. Astron has two models rated at 3 amps and 4 amps depending on your needs. This is plenty of power for HTs but check you owner's manual on your mobile to determine power requirements. If you are looking for a neat little 12 VDC supply for the house, check out the RS-L series from Astron.

James Butler  
KB4LJV

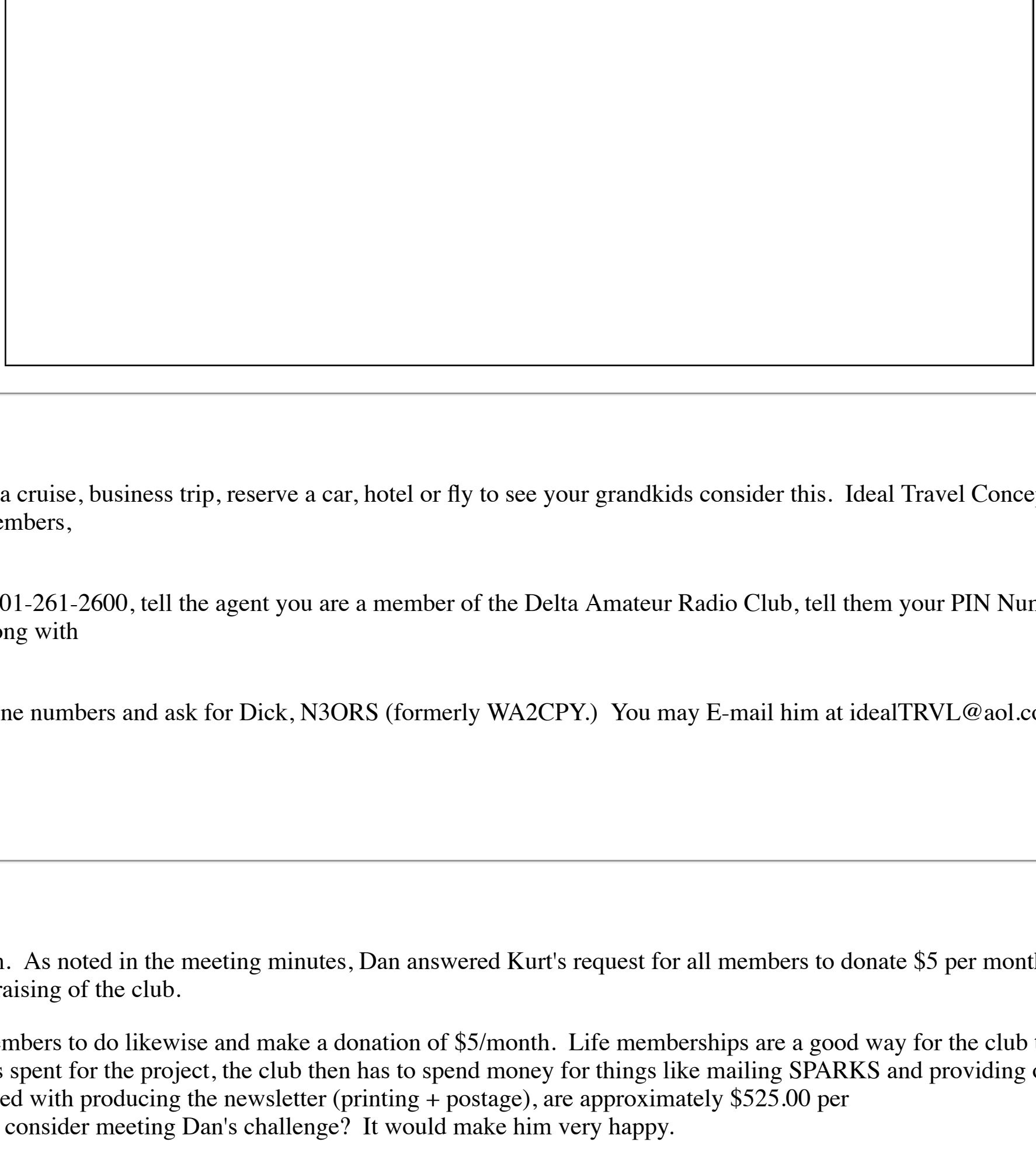
### AMATEUR HARDWARE UPDATE...

Many Amateurs build up their own electronic circuits for various projects. Transistors, resistors, and voltage regulators have one thing in common. In some applications they can produce excess heat which must be removed. This is done by using a heat sink to allow the device to run cooler and radiate it to the surrounding air. By making our own heat sinks we can save money and design heat sinks to let our projects run cooler which means they will run longer.

The raw material for the heat sinks is an ordinary sand cast. By cutting the top and bottom off and cutting the side with tin snips you can make that aluminum to cut to make up different heat sinks. The drawing shows some types of heat sinks that can be easily made. Holes can be made in the homemade heat sinks with a small paper punch for the leads. I will have some homemade heat sinks at the meeting to show and answer questions on for those who wish to build their own.

SEE YOU AT THE MEETING...

James Butler  
KB4LJV



### TRAVELING??

Before you make travel arrangements for the next DXpedition, go on a cruise, business trip, reserve a car, hotel or fly to see your grandkids consider this. Ideal Travel Concepts, a local travel agency, has agreed to give the Delta Amateur Radio Club a substantial return on every commission booked by our club members, it receives.

To plan is simple, when you are ready to travel call 800-432-6801 or 901-261-2600, tell the agent you are a member of the Delta Amateur Radio Club, tell them your PIN Number is 416307 and tell the agent what you are looking for. You may also fax your request to 901-261-2611 giving the same information along with your name and phone number.

If you have any questions about this program call one of the listed phone numbers and ask for Dick, N3ORS (formerly WA2CPY). You may E-mail him at idealTRVL@aol.com for queries and quotes only, no direct reservations are accepted by E-mail.

73.  
Dick Cookenham, N3ORS

### Challenge to Life Members

Dan, N4VMM asked me to put this challenge to the members for him. As noted in the meeting minutes, Dan answered Kurt's request for all members to donate \$5 per month to the club to go towards our fundraising efforts. Dan presented Ben, KU4AW a check for \$60 (\$5x12 months) to go towards the fundraising of the club.

Dan is the life member of Delta Club and is challenging all other life members to do likewise, and make a donation of \$5/month. Life memberships are a good way for the club to get quick cash for a project and it's also an excellent way to contribute to the club and to be around for 10+ years. But after the other life members to do the project, the club then has to spend money for things like mailing SPARKS and providing other club services for a life member. As an example, one member 81 life members which 57 receive a newsletter each month. Costs associated with producing the newsletter (printing + postage), are approximately \$525.00 per year just to send SPARKS to these 57 life members. Won't you please consider meeting Dan's challenge? It would make him very happy.

Tommy, KD4TJO

### CONTEST CALENDAR

Here are a few of the contests coming up in the next few weeks...

Apr. 12 VHF/UHF Spring Sprints

7pm-11pm local time

144 MHz - 8 hr, 12

222 MHz - Apr 20

432 MHz - Apr. 28

QRP to the Field - April 24

1600-2400z - CW HF QRP only

For more information on current contests please refer to the ARRL website at:  
[www.arrl.org/contests/monthlyapr.html](http://www.arrl.org/contests/monthlyapr.html)

### Other Important Contacts

<b>Field Day Chairman</b>	<b>VE Liaison</b>
Tom Richardson, K4TTA 386-6268 <a href="mailto:duffer@ix.netcom.com">duffer@ix.netcom.com</a>	Joan Thorne, KN4PM 366-9722 <a href="mailto:joan@mem.net">joan@mem.net</a>

<b>Membership Chairpersons</b>	
Hen Barth, KF4GNC Eloise Barth, KF4GNB 363-1286 <a href="mailto:elose@iast.com">elose@iast.com</a>	

### 1999 Board of Directors

#### E-Mail Us...

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