

# W2MMD

## 1993 OFFICERS

President ..... Cory Sickles ..... WA3UVV  
 Vice President ..... Ken Bozarth ..... KN2U  
 Treasurer ..... Bill Mollenhauer ..... N2FZ  
 Recording Sec. .... Peter Butler ..... KA2DZF  
 Corresponding Sec. .... John Fisher ..... K2JF

## Directors

3 Yr (93-95) ..... Leroy Brady Jr. .... KB2ODL  
                                   Harry Jessen ..... N2DUZ  
 2 Yr (92-94) ..... Jim Mollica Sr. .... K2OWE  
                                   Beth Barnish ..... KB2EAL  
 1 Yr (91-93) ..... Charles Colabrese .... WA2TML  
                                   John Cliver ..... N2NLE

## Trustees

4 Yr (93-96) ..... Marla Bozarth ..... N2DWR  
 3 Yr (92-95) ..... Joel Supkow ..... KB2AYW  
 2 Yr (91-94) ..... Milt Marder ..... WA2FGA  
 1 Yr (90-93) ..... Howard Marder ..... WA2IBZ

### G.C.A.R.C. Meetings

#### General Membership:

- ◆ 8 PM, 1st Wednesday of every month.
- ◆ Deptford Elks Lodge, Highland Ave.  
1 Block from Egg Harbor Rd.

#### Board of Directors:

- ◆ 7:30 PM. 3rd Wednesday of every month
- ◆ G.C.A.R.C. site. Harrison Twp. 4-H Grounds.  
Approximately 1 mile south of Mullica Hill  
on Rt. 77.

### Club Repeaters

147.780/180 Mhz      223.06/224.66 Mhz  
 447.100/442.100 Mhz (CTCSS 131.8)

## 1993 Committee Chairpersons

Advertising ..... //OPEN//  
 ARES/RACES ..... Chick ..... WA2USI  
 Awards ..... Jack ..... K2ZA  
 Banquet ..... Marla ..... N2DWR  
 Budget ✓ ..... Cory ..... WA3UVV  
 Chaplin ..... Tom ..... N7GBH  
 Constitution ✓ ..... Harry ..... N2DUZ  
 Contests ..... Clif ..... N2PLE  
 Crosstalk ..... Harry ..... N2DUZ  
 Data Processing ..... Charlie ..... K2PQD  
 DX ..... Cliff ..... N2PLE  
 Field Day ✓ ..... Steve ..... N2GVR  
 Hamfest ✓ ..... Pete ..... KA2DZF  
                                   Joe ..... N2KLE  
 Health & Welfare ✓ ..  
 Help ..... Ken ..... KN2U  
 Historian/Archivist... Pete ..... KA2DZF  
 Hospitality ✓ ..... Andrew ..... N2PKV  
 Legislation ..... //OPEN//  
 Membership ✓ ..... Ed ..... KB2ODJ  
 Nets ..... Mike ..... WA2TOP  
 Nominations ✓ ..... Herb ..... K2HPV  
 Publicity ✓ ..... //OPEN//  
 Repeaters ✓ ..... Chuck ..... WA2TML  
 Site ✓ ..... ED ..... KB2ODJ  
 Scholarships ..... Greg ..... WN2T  
 Special Events ..... Walt ..... WB2OYQ  
 Special Services ..... Al ..... N2FJQ  
 Sunshine ..... Miriam ..... KB2EUA  
 Technical ..... Ken ..... KN2U  
 Training/Testing ..... Bill ..... WA2VQG  
 TVI ..... John ..... K2JF  
 Ways & Means ..... //OPEN//

(✓ Indicates Standing Committees)

### Nets

**ARES/RACES .. Sundays, 220 Hrs on both the  
 147.780/180 & 223.06/224.66 repeaters.**

**10 Meter ..... Sundays immediately after the  
 ARES/RACES net. 28.350 MHZ.**



Open 7 A.M. to 1 A.M. (609) 228-5166



**Fine Selection of Gourmet Food**

**Steaks • Chops • Seafood**

**Cheesecake**

Rte. 47 & 41 Deptford Township  
 Conveniently Located at  
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Ample Parking



# ❖ CROSSTALK ❖

November 1993

## President's Message

**I**very once in a while, something happens that provides you with an opportunity to sit back and reflect upon your life. Events such as these can be positive or negative. Perhaps it's a micro-commentary on the way our lives are, but usually, the most "reflection-potential" events are seemingly negative.

At the end of September, I had to run some errands in Pitman. It was a nice day and I thought I would do something *healthy and environmentally concious*, so I walked. All was well until I was about four blocks from the house. A "cute little dog" with a bad attitude (this is your dog, this is your dog on drugs...) came from his attack position in front of house, with a blood-curdling bark, locked onto his target and bit me on the leg. I shook him off and began to experience one of those moments when time takes and unnatural bend and the speed of your thought processes extend this state of "non-reality". With adrenaline levels rising, I kept hearing my mother's warning about stray dogs, rabies and those awful shots. Feeling the pain in my leg, I had all the "damage reports" coming in that I wanted. Shocked by the fact that after thirty-five years, this was the first strange dog to have the audacity to actually bite me!

Of course, while my neural network was suffering from sensory overload, that chromosome damaged, genetically defective, furry version of Jaws was plotting a feeding frenzy only a few feet away. I started to walk very slowly backwards, while keeping an eye on "man's best friend". I guess I got about six feet away when he lunged for me again. In trying to defend myself and maneuver away, I hit the sidewalk. The dog, presumably thinking he had killed me, ran back to his ambush position by the front door. I managed to get limp home. After a painful week of bruises and amazingly expensive medical tests, I found out I have a herniated disc, which will take a minimum of six to twenty four months of treatment to heal. If, in fact, it does heal. So much for healthy exercise...

Since I wasn't able to do much in the way of work or anything else, for that matter, I now found myself with one of those opportunities to reflect.

All in all, I have been rather healthy throughout my life. I've never broken any bones, suffered

lasting effects from some disease, lost a limb in a traffic accident and I am, of course, still alive. If my life up to this point had played out a little differently, my lifestyle and in fact, my entire way of living could be much different. So, as many problems as I may have from time to time, I'm rather thankful for all that I have and, perhaps more importantly, all that I don't have.

November is a good month to sit back and reflect like this. This month we celebrate a "Uniquely American" holiday; Thanksgiving.

Oh sure, some countries have a "thanks for the harvest" or "thanks for the rain, etc." kind of celebration. But Thanksgiving has always been a special time to celebrate our families, our liberties, our experiences (both good and bad), our traditions and our abundance of food. America, for better or worse, has been blessed with a history of success, prosperity, morality and intelligent compassion. Even though many of our better values and traditions are being eroded and threatened, I'm still thankful for all we have.

I'm also thankful that the earth was created with an ionosphere, which makes possible certain aspects of a hobby which I enjoy very much. I'm thankful for the friends I have made through this hobby. I am thankful beyond words for the unselfish way the hand of friendship was extended by many of you earlier this year.

It is difficult to imagine my life without amateur radio. It has forever made its mark on who I am and what I do. Additionally, I am thankful to have been president of our club this year. It gave me an opportunity to see just how much being a ham has meant to me. I'm thankful my enthusiasm and my vision has rubbed off onto others in a positive way.

So on the fourth Thursday of this month, when you are gathered around the table, or just "kicking back" watching sports on TV, take a moment to reflect just how many things, and how many people you have to be thankful for.

73...

WA3UVV, Cory



**A** POLOGIZIES to the following Club members from the Editor. Seems that I forgot to put in Birthday Wishes for September and October. There is no excuse for this other than there were, and still are, too many things going on in my life right now and I forgot.



**Happy Belated Birthday**  
to the following persons from the  
G.C.A.R.C. membership!

**SEPTEMBER**

N2PKV.....	ANDREW HUMMEL.....	3
KA2KMW.....	EDWARD WARGO.....	4
WA2WFZ.....	MARK ANTHONY.....	5
KB2FRN.....	JOSEPH MITCHELL.....	5
WB2DXB.....	SONNY GUTIN.....	7
KB2PAU.....	JAMES LANGWORTHY.....	9
KE2WC.....	MARK MASTROGIACOMO ..	12
N/C.....	WILLIAM CONLEY.....	13
WB2OZE.....	JOSE LOPEZ.....	18
N2DWK.....	SAM ROSENBERG.....	19
K2UUY.....	FRANK RITTER.....	20
KN2U.....	KENNETH BOZARTH.....	22
N2QEB.....	WILLIAM BURBAGE.....	23
W2DWE.....	DOM FARINELLA.....	25
NJ2B.....	HARRY PIECE.....	26
WA2QOY.....	HAROLD BERRY.....	29

**OCTOBER**

KB2OWC.....	THOMAS MEYER.....	2
N2SCJ.....	ROBERT TURNER JR.....	3
N2LZS.....	LEWIS PARKER.....	6
N2QED.....	DONNA REED.....	7
K2ZA.....	JOHN ZARUBA.....	9
N2FZ.....	BILL MOLLENHAUER.....	9
N2FKS.....	MICHAEL LIPNITZ.....	11
KA2OSV.....	JAMES CLARK SR.....	16
N2NAX.....	RICHARD STEIN.....	21
WB2GES.....	DENNIS SANDOLE.....	21
KB2ETX.....	JEFF MARDER.....	24
K2QOK.....	EDMOND KWIATKOWSKI ..	26
K2JOL.....	ROBERT HOUCK.....	26
WB2CAK.....	JERRY BARNISH.....	27
N2BK.....	WILLIAM KARDAS.....	30

Again, Apologies....

N2DUZ, Harry  
Crosstalk Editor

**WHAT?  
ANOTHER NET?**

**A** S SOME OF YOU might already know, I am going to be starting a club net (with the blessings of the Board of Directors) but I need your help too! I need to hear from you about a few things that will make this a net that will work and a net that you will not only listen to, but take part in. Here are a few things I would like to hear from EVERY club member on:

- 1: Best day for the net? \_\_\_\_\_
- 2: Best time for the net? \_\_\_\_\_
- 3: How much time do you have to give to the net on the date and time given in items 1 & 2? \_\_\_\_\_
- 4: Which club repeater(s) can you work or listen to?  
2mtr \_\_\_\_\_ 440 \_\_\_\_\_ 220 \_\_\_\_\_
- 5: Would you like to... 

	<b>YES</b>	<b>NO</b>
a: hear the Westlink Report?	_____	_____
b: have a swap & shop segment?	_____	_____
c: have a technical roundtable?	_____	_____
d: have a CW practice Net?	_____	_____
e: have a Junior Operators Net?	_____	_____
f: have a YL Net?	_____	_____
g: have a computer roundtable?	_____	_____
h: have an RDF (Radio Direction Finding ) Net	_____	_____

My plan is to start the net with an introduction to the G.C.A.R.C., W2MMD, and then ask for check-ins for the info portion. We will then roll on into the Westlink Report and the onto G.C.A.R.C. Chairperson time followed by other club business.

The next portion will be the Swap & Shop, asking for only for those check-ins who have something to trade, sell give away or are in need.

The last portion of the net will be the technical roundtable, asking for check-ins from those in need of answers concerning operating, antennas, radios or whatever. I will try to have on board our more experienced and technically inclined members and/or friends to answer these questions.

This is in NO WAY a concrete plan! I am very flexible and might alter this in some way. After all, this net is for YOU, and I'd like to hear you actively participating. Also, the CW, Junior Op, YL and Computer Nets are something we can do, if we have the interest and the Net Control Operators to help out.

Well! Don't just sit there! Get up and give me a call on the landline (609)694-0162, or - if you can catch me - on the repeaters.

73... N2GVR, Steve

## YOUR CLUB YOUR VOTE YOUR CHOICE

**H**ere it is, that time of year when we again have a chance to have our say about how the club is being run and who will represent us the coming year. The turn out was poor at the October meeting, mostly because of the Phillies playoff game. (At least they won that one!)

Anyway, here is the slate that was put forth by the Nominations Committee at the October meeting:

- President: ..... N2DWR, Marla
- Vice-President..... N2SRQ, Charlie
- Treasurer..... //No Nomination//
- Recording Secretary ..... //No Nomination//
- Corresponding Secretary ..... N2PLE, John
- 3 year Directors (2) ..... N2GVR, Steve
- //No Nomination//
- 4 Year Trustee (1) ..... //No Nomination//

There were also nominations from the floor....

- President: ..... //None//
- Vice-President..... //None//
- Treasurer..... //None//
- Recording Secretary ..... N2IVN, Chris
- Corresponding Secretary ..... //None//
- 3 year Directors (2) ..... AA2BN, John
- WA2UDO, Bob
- 4 Year Trustee (1) ..... KB2PAU, Jim
- K2HPV, Herb

As the title says above, It is **YOUR CLUB, YOUR VOTE, and YOUR CHOICE.** If you want to change things, now is the time to try and do something beside complain! Nominate your favorite person, or yourself. Nothing says you can't declare yourself a candidate for an office.

Lets get out at the November and December meetings and have a real election!

Article Deadline for  
**December Crosstalk is**  
**8PM, Sunday, November 21.**

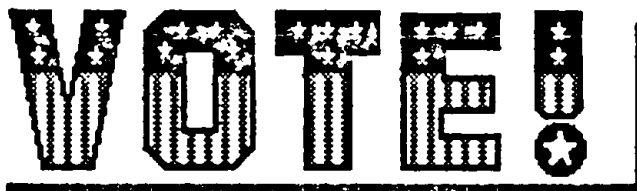


**Happy Birthday**  
to the following persons from the  
G.C.A.R.C. membership!

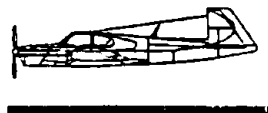
- K2JF ..... JOHN FISHER ..... 1
- K3JGJ ..... JOE Mc CONAGHY ..... 5
- WA2IBZ ..... HOWARD MARDER ..... 9
- WA3UVV ..... CORY SICKLES ..... 10
- N2JXS ..... ELEANOR MATTISON ..... 10
- N2RTW ..... GERRY CONNER ..... 14
- WB2LNR ..... RAY MARTIN ..... 14
- N2CFW ..... GEORGE HANKINS ..... 17
- N2ASV ..... RUSSEL GLANS ..... 24
- N/C ..... RICHARD OEHRLER ..... 24
- KG2G ..... BERNARD ONACHILA ..... 27
- KA2DZF ..... PETER BUTLER ..... 29
- KB2ERL ..... ROBERT NICOTERA ..... 29
- N2DJN ..... HANK BASCH ..... 30

73....

K2PQD, CHAS



## Congrats To The Amateur Flyer



**H**early congratulations are in order to Milt Marder, WA2FGA, for passing his *Private Pilots* exam on Monday, October 18, 1993. Milt has relentlessly pursued this long time dream of his to be a pilot.

"At the age of 77 he is the oldest in this general area, to enroll in flying lessons and pass this extremely difficult exam", say the owners of the South Jersey Flyers Club in Mt. Holly, NJ. All of us in his family are truly proud of this accomplishment and wish him the very best with this new found hobby and await anxiously to fly with him.

May all your skies be fair and blue.

The Marder Family

## DC ELECTRONICS

### Learn The Fundamentals First

**N**O PREVIOUS exposure to electronics? NO PROBLEM! Watch basic electronics theory come to life.

This colorful video begins with a thorough explanation and animated demonstration of electron theory. From there, it takes you through an introduction to current, voltage resistance, inductance, capacitance, Ohm's Law, magnetism and DC electrical measurement. You'll learn the proper use of test equipment for troubleshooting and repairing simple electronic circuits as well. NO PREVIOUS ELECTRONICS KNOWLEDGE IS REQUIRED.

Here is the program everybody has been waiting for. DON'T be an appliance operator anymore! Start to learn electronics. Your Board of Directors determined that a continuing education series like what is being projected will build a solid foundation in electronics and enhance any amateur radio class.

So on November 6th, 13th and again on the 20th, we will be showing this program at the GCARC Club House beginning at 1PM (that's 1300 for all the true hams). I'd like to see a lot of you out there, especially our more experienced and technically inclined to help answer questions.

The tape runs about 70 minutes, but stops through out to allow for student workbook activity (optional). Refreshments will be available. So come on out to your Club House and get some use out of it. If any of these other programs sound interesting to you, and you would like to see them get going, give me a call at (609)694-0162.

But why stop there? I am proposing the following itinerary for the Heathkit Educational Systems, Individual Learning Programs, Video Series.

- 1: DC Electronics
- 2: AC Electronics
- 3: Recognize & Understand Electrical Components
- 4: Semiconductor Devices
- 5: Electronic Circuits
- 6: Common Circuits in Electronic Equipment
- 7: How Op-Amp Circuits are Used.
- 8: Operation of Switching Power Supplies
- 9: Soldering - Solder Like an Expert
- 10: High Reliability and Surface Mount Soldering
- 11: Troubleshooting with Electronic Test Equipment
- 12: Troubleshooting with the Oscilloscope
- 13: Digital Techniques (Six 2 Hour Tapes)
- 14: How Microprocessors Operate (Three 2 Hour Tapes)
- 15: Troubleshooting Techniques for Microprocessors

All these tapes can also be used for club meetings in addition to the showings at the Club House.

Tapes 10 through 12 could be used for an advanced program showing at a different time at the Club House.

Tapes 13 through 15 could be used as a special program for an advanced group with special showing at the Club House.

What do you think? Let me or your elected club officials hear from you... PRO or CON!!

73... N2GVR, Steve

## EMERGENCY BATTERY POWER

**E**mergency battery power or just plain auxiliary power for your HT requires some thought as to station power consumption verses operating time.

Here is where selecting the right size and type of battery becomes important. Lead-Acid or GelCell that is the Question. Well First off, there are two types of Lead-Acid batteries...

- a) Starting
- b) Deep cycle

The major difference between the two is the size of the plates and the amount of catch space between the the bottom of the plates and bottom of the case. Starting batteries Have a small catch space, and are designed to supply very high current for very short periods of time (seconds). Deep cycle batteries on the other hand have large catch spaces and are designed to supply low to moderate currents for long periods of time (hours). The catch space holds the debris that flakes off of the plates during discharge, if this space becomes full the plates will short and the battery will no longer hold a charge. Gel-Cells and deep cycle batteries are functionally the same, though GelCell charging procedures differ slightly. For emergency home power choose a Deep cycle battery. For auxiliary power for your HT choose a small Gelcell, a 12V 3AH GelCell will power most modem HT's for days. Of course this depends on whether you use Hi or Low power, how much you transmit, and whether or not your HT has power saver features, Remember Hi power with a 12V pack is normally 5 Watts.

Here is some important information to assist you in selecting the proper size battery for your needs. Remember your car battery just will not do the job ( unless of course you leave it in the car with the engine running ).

The following applies to Lead-Acid and GelCell batteries in general,

*Cont'd on Page 5a*

Cont'd from Page 4b

1) Selecting Battery Capacity:

The capacity of lead-acid batteries is typically expressed as an Ampere-hour rating called C. This value C is typically the number of ampere-hours available from the battery at the 20 hour rate. What this means is that if we draw a current from the battery with a value of C/20 amperes, the battery will be fully discharged at the end of 20 hours. Fully discharged means that the terminal voltage for a 12 V nominal battery has fallen to 10.5 volts or 1.75 volts per cell (6 cells). If the battery is discharged below this voltage, serious, irreversible damage to it will result, with a loss of capacity.

Here's an example of an amp-hour calculation: Take a battery with a 5.0 Ampere-hour rating. If we draw a current of :

$$5/20 = 0.25 \text{ Amperes}$$

from it for a period of 20 hours, it will be fully discharged. What if we draw higher currents from it? The answer is that if we exceed a current of C/20 amps, the ampere-hours available from the battery will be somewhat shorter than the published figure. Here is a little guideline published by a typical battery manufacturer:

Discharge Hours	% of Rated Ampere-Hours Available
20	100 %
15	95 %
10	88 %
5	78 %
2.5	67 %
1.5	60 %
1.0	47 %

To show the use of the above table, take our 5.0 Ampere-hour battery, and let's see how much current we can draw from it for 1.0 hour. From the above table, for a 1.0 hour discharge we only have 47 % of 5.0 Ampere hours or 2.35 Ah available. Therefore the current that we can draw for a 1.0 hour discharge is :

$$2.35\text{A-hr} / 1.0 \text{ hour} = 2.35 \text{ amps}$$

So you can see that it's important to size the battery correctly. It's also important NOT to discharge the battery too far. The above example, where the battery is discharged to 1.75 volts per cell (or 10.5 V for a 12 volt battery) is an example of 100% discharge ..not a good idea, as the battery life will be shortened unnecessarily. Here's another table which shows the effect of depth of discharge on battery life:

Depth of Discharge (%)	Number of Charge/discharge Cycles to end of life.
80 %	200 to 600
50 % (optimum)	400 to 1000
25 %	> 2000
10 %	> 10000

Note that 50 % is given as the optimum depth of discharge and is a trade-off between battery life and cost of ownership. So for our final example, if we want to choose a battery which will let us draw 4.0 amperes for 2.0 hours each day with no more than 50 % depth of discharge...how big will it be ??

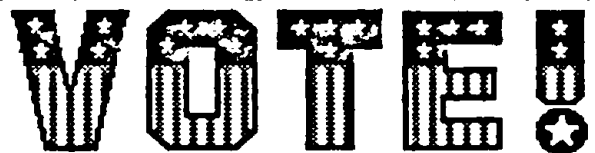
**Solution:** Looks like we have 4.0 Amperes x 2.0 hours = 8.0 Ah for 100 % depth of discharge, so if we wanted 50 % depth of discharge we would choose a battery with a rating of 16 Ah, then divide this figure by approximately 65% to allow for the 2.0 hour discharge. This would give us 27 Ah...quite a big battery. Remember however that this battery will last for 400-1000 cycles of this treatment. You can scale the above example to fit your current and time of discharge.

2) Charging Time:

Do not leave your batteries on charge continuously, as this will definitely shorten their lives—even a float charge at 13.8 V for a 12 V battery will eventually erode the positive battery plates. The best way to re-charge, is to set your power supply (must be low-ripple) to 13.8 Volts for a 12 V unit, and re-charge, watching that the current stays below C/10 amps. Once the battery current falls to a low value (less than 100 mA) raise the power supply voltage to 14.6 volts, once again keeping the current below C/10. It should take less than an hour for the current to fall below 100mA, at which time the charge should be discontinued and the battery disconnected from the charging set-up.

Hope that this has been of some help. If you care to see just how to home Brew an auxiliary power pack for your HT, see me at the November meeting.

73 DE JOHN N2PKF



**TUESDAY**  
**NOVEMBER 2, 1993**

Dear G.C.A.R.C. Member,

As you may know, our clubhouse (formerly referred to as "the trailer site"), has been considered for use in several short-term and continuous activities. These activities include training (for all ages), special projects, contesting and the activation of efficient and reliable communications in the event of emergencies. This is not to say it will compete or interfere with the Gloucester County ARES/RACES organization; but it will be there in case it is needed for this application; it is not the sole purpose for the clubhouse. There have been discussions concerning the upgrading of communications equipment there, and it is time to decide. Since it is your club, you have a say in what the club does or does not do.

At the November General Membership meeting there will be discussion on the topic followed by a vote. For such an important decision, it is imperative that you come out, speak your piece and vote. I am sure that not only this issue will be discussed, but also an open discussion should take place on what we are here for (as ham radio operators); what the object of our group's existence is. Come to talk about what we can do as a club. For instance, should we have more events, outings and ham radio fun, subsidized by our organization? Or do you have an idea worthy of some of the club's available funds? Any reasonable ideas will be entertained during the discussion, but you must be there in person to let us know what you want your club to do. Remember - you as a powerful group have control.

On page 7 you will find the proposal for the clubhouse equipment upgrades as presented at the Board-of-Directors meeting on Wednesday, October 20, and at the General Membership meeting on November 3, 1993.

See you at the meeting!

73, Ken, KN2U,  
Clubhouse Technical Chairman

**TUESDAY**  
**NOVEMBER 2, 1993**

## PIANO TUNING and REPAIR

A poorly kept piano - one that is out of tune or suffering from broken parts, ill adjusted pedals or sticking keys - will discourage any piano student and impede their progress in becoming a better player.

Call...

**T.D. Church - Piano Service**  
(aka N7GBH)  
**Assoc. Member Piano Technicians Guild**  
(609)931-2436

## G.C.A.R.C. Noted in Nov. QST

**T**he November issue of QST, Page 60, lists G.C.A.R.C. in 3rd place among the groups who operated via satellite during Field Day '93. My son, N2NRD, advises that if we had operated using CW in addition to phone, G.C.A.R.C.(W2MMD) would have ended up in 1st place.

Something to shoot for on Field Day '94!!

Good showing, but we will do better next year!

73... K2OWE, Jim

## BELL LABS PROVES THE EXISTENCE OF DARK SUCKERS

For years it has been believed that electric bulbs emit light. However, recent information has proven otherwise. Electric bulbs don't emit light, they SUCK DARK. Thus they now call these bulbs dark suckers. The dark sucker theory, according to a Bell Labs spokesperson, proves the existence of dark, that dark has a mass heavier than that of light and dark is faster than light. The basis of the dark theory is that electric bulbs suck dark. Take for example, the dark suckers in the room where you are. There is less dark right next to them than there is elsewhere. The larger the dark sucker, the greater its capacity to suck dark. Dark suckers in a parking lot have a much greater capacity than the ones in this room. As with all things, Dark Suckers don't last forever. Once they are full

Cont'd on Page 10a

**PROPOSAL  
GCARC CLUBHOUSE STATION  
IMPROVEMENTS**

**T**he following is an itemized list of equipment deemed, by the Clubhouse Equipment Technical Committee, to be necessary to make the station efficient and enjoyable by the membership. This equipment, if purchased, represents a good compromise between effectiveness, operating convenience and cost. Not only h.f. dx hounds and contesters will be accommodated, but also those who would enjoy vhf "dx" chasing, packet and local communications. It was decided that the h.f. rig should be capable of computer-interfacing and be of competition grade. To give equal opportunity to vhf users, it was decided to list an all-mode 2M. rig. A dual-bander with 440 MHz capabilities was suggested, but to allow the most effective vhf / uhf contesting, a separate 440 MHz rig would be necessary, the purchase of which is not included in this proposal; if the interest in this area grows, it will be entertained. Evidence of rodents' having developed a taste for RG-213, and the desire to elaborate the antenna system, suggests that we need to acquire more coaxial cable. Additionally, no equipment is to be installed at the clubhouse until the new alarm is installed, which includes controlled-access to the clubhouse. The basic alarm system having been replaced, only the 250-user (expandable to 350) access control system is included as an item in this proposal. This new access control system will make keys to the clubhouse obsolete; each and every member who wants access will no longer have to search for an escort to let him/her in. Just drive on down to the station, fire up the rig (our KW amplifier will be there) and forget about TV! Efforts have been made to find reasonable prices for all equipment listed. Very good buys have been found for the 2M rigs, so no debating should be necessary. H.f. rigs, on the other hand, can be debated in their many attributes, so alternate packages will be included, comprised of the closest in performance offered by the various manufacturers. Some rigs include internal power supplies. Page two presents packages which include the above list of items, along with h.f. equipment from the various major manufacturers. Those that include rigs which have internal power supplies also delete a power supply purchase. The club's Astron RM35 is fully capable of powering any h.f. rig requiring 12 volts.

**General items included in all packages**

Entry control system, Corby System 1 .....	\$930.00
Coaxial cable, 9913, 500' .....	240.00
Coaxial cable, RG213, 500' .....	170.00
Desk materials .....	300.00
2M all-mode, TS751 .....	650.00
Power supply, Astron RS20 .....	90.00
Microphone, MC80 .....	95.00
2m FM, TM241 .....	359.00
2M performance antenna .....	<u>200.00</u>
Sub-Total .....	<b>\$3034.00</b>

**COMPARABLE PACKAGES**

**Kenwood H.F. Package**

TS850S/AT, cw filter, tuner .....	1769.00
Microphone, MC80 .....	95.00
P/S for 2M FM, Astron RS20A (16A) .....	<u>90.00</u>
Subtotal .....	1954.00
Subtotal from 'General items' .....	<u>3034.00</u>
<b>Total</b> .....	<b>\$4988.00</b>

**Icom H.F. Package**

IC-765 .....	2399.00
Microphone, SM-6 .....	<u>79.00</u>
Subtotal .....	2478.00
Subtotal from 'General items' .....	<u>3034.00</u>
<b>Total</b> .....	<b>\$5512.00</b>

**Ten-Tec H.F. Package**

Omni VI .....	2285.00
Microphone .....	90.00
P/S for 2M FM, Astron RS20A (16A) .....	<u>90.00</u>
Subtotal .....	2465.00
Subtotal from 'General items' .....	<u>3034.00</u>
<b>Total</b> .....	<b>\$5499.00</b>

**Yaesu H.F. Package**

FT-990 .....	1899.00
Microphone .....	<u>95.00</u>
Subtotal .....	1994.00
Subtotal from 'General items' .....	<u>3034.00</u>
<b>Total</b> .....	<b>\$5028.00</b>

**!! NOVEMBER !!**

This is your **LAST CHANCE**  
to nominate someone for office!  
Come on out and join the club!  
Become **ACTIVE!**

Based upon opinions of several knowledgeable operators, the package utilizing the S850S/AT was recommended. The rig has every feature required, is user-friendly, has a good track record and happens to be the most economical.

Respectfully submitted by  
Ken Bozarth, KN2U  
Chairman



## ARES/RACES CALL-UP LIST

WA2USI	CHIC	N2LZS	LOU
KA2KMW	ED	N2MOO	DON
N2DWR	MARLA	N2MWX	DENNIS
AA2BN	JOHN	N2NGO	LLOYD
K2HPV	HERB	N2NLE	JOHN
K2JF	JOHN	N2PKJ	BILL
K2OWE	JIM	N2PKK	PEG
K2ZA	JACK	N2PKN	TONY
KA2DZF	PETE	N2PKP	MARK
KB2AYU	AL	N2PKT	LOU
KB2DHQ	JERRY	N2QEB	BILL
KB2EAI	HARRY	N2QEE	GARY
KB2ETV	CHARLES	N2RTX	RICH
KB2ETX	JEFF	N2SVN	JIM
KB2FRM	EARL	N2SCD	STAN
KB2GL	_____	N2SCE	STEVE
KB2GW	GEORGE	N2SRO	MIKE
KB2IRK	WESLEY	N2SS	TONY
KB2JCG	WALTER	N2SXO	RAY
KB2ODJ	ED	NY2J	_____
KN2U	KEN	W2HVW	WALLY
N2AKL	ROZ	WA2FGA	MILT
N2ASV	RUSS	WA2IBZ	HOWARD
N2AYK	ED	WA2PFC	ED
N2CME	PETE	WA2TML	CHICK
N2DWK	SAM	WA2TOP	MIKE
N2FJQ	AL	WA3UVV	CORY
N2FKT	DAN	WB2CAK	JERRY
N2FNF	IRMA	WB2DXB	SONNY
N2HYS	JANICE	WA2EFL	HERB
N2IMH	JIM	WB2OZE	JOSE
N2KLD	MARY- ELLEN	WB2VFX	BILL
N2KLE	JOE	CET CONTROL	_____



### ARES/RACES NET CONTROLS

The following is a list for the ARES/RACES Net Controls for November, 1993.

#### PRIMARY

Oct 31.....N2QEB.....Bill  
 Nov 07.....N2QEE.....Gary  
 14.....N2PKJ.....Bill  
 21.....N2MWX.....Dennis  
 28.....N2FKT.....Dan

#### ALTERNATE

Oct 31.....N2SRO.....Mike  
 Nov 07.....N2PKT.....Lou  
 14.....N2NLE.....John  
 21.....N2KLE.....Joe  
 28.....N2FNF.....Irmaa

And as you see, the call up list is to the left. If you are involved in ARES/RACES, please keep this page for your records.

Thanks...



**DID U KNOW****NOV 2 1993 DON'T FORGET TO VOTE**

NOV 2 1920... Westinghouse applied for full commercial broadcast license and received the famous call KDKA. Commercial broadcast radio was born.

NOV 5 1935... The meeting of the Institute of Radio Engineers in New York City included the first "public demonstration of FM. Saying: " This is Amateur Radio W2SG at Yonkers, NY broadcasting on FM at a frequency of two and one half meters."

NOV 6... ARRL SS CW 2100Z (30 HRS)

NOV 20... ARRL SS PH 2100Z (30 HRS)

NOV 22 1922... Four minute QSO between W1AW AND (KH)6AZ relay and back.

NOV 25 1923... Although there was never any official acknowledgment, this contact between U7HG (Signing U for US) in Tacoma, WA, and the station signing 'JUPU" Tokyo was probably legitimate, and would be the first full spanning of the pacific, and also the first radio contact between the U.S. and Asia.

NOV 26 1923... The first short wave two-way exchange (QSO) across the Atlantic. F8AB worked 1MO and immediately also 1XAM.

NOV 27... CQ DX CW 0000Z (48 HRS)

C U in the Pile-Ups K2JF, John

**A Privilage  
NOT  
A Right!**

You have a privilege to exercise this month. It may sound "corny", but many have risked and given their lives so that you (yes, *you*) can live in a land where you are free to criticize, challenge, elect and direct the men and women who serve as leaders in our government. We may not always think we have the best choices, but at least we have a choice.

**YOU'RE INVITED**

**WHAT:** 1994 GCARC Installation of Officers & Awards Dinner

**WHEN:** Saturday, January 8, 1994  
6-11PM (1800-2300)

**WHERE:** Dutch Inn  
Rt. 295-S  
Gibbstown, NJ

**MENU:** Seafood Newburg on a Bed of Rice  
Carved Top Round of Beef  
Jumbo Stuffed Shells  
Boneless Breast of Chicken(Italian Style)  
Carved Smithfield Ham  
Greenbeans Almondine  
Rice Florentine  
Potato Salad, Cole Slaw, Pickled Beets,  
Macaroni Salad, Assorted Relish  
Tray, Tossed Salad, Dinner Rolls  
Coffee, Tea, Milk  
**AND**  
**DESSERT TABLE**  
Cash Bar...

There will be music (DJ Style). RELAX!! This year the music is by Charlie(N2SRQ) and Marla(N2DWR). NO, we are NOT going to have the same DJ as last year, eventhough many people requested it.

There will be dancing, and of course, everyone should come to see our newly elected officers get sworn at.... I mean SWORN IN!! There are always lots of laughs that evening!



Come by yourself, or bring a friend. Hey, you can even bring your spouse if you want to!

The cost? A mere \$16.50 per person, or \$33.00 a couple. There will be DOOR PRIZES GALORE!!!! Not to bad for a nights entertainment, friendship and food!

Please R.S.V.P. by December 20, 1993, to Marla, N2DWR

*Cont'd from Page 6b*

of dark they can no longer suck. This is proven by the black spot on a full dark sucker. A candle is a primitive dark sucker. A new candle has a white wick. You will notice that after its first use, the wick turns black, representing all the dark which has been sucked into it. If you hold a pencil next to the wick of an operating candle, the tip will turn black because it got into the way of the dark flowing into the candle.

Unfortunately, these primitive dark suckers have a very limited range. There are also potable dark suckers. The bulbs in these can't handle all the dark by themselves, and must be aided by a dark storage unit. When the dark storage unit is full, it must either be emptied or replaced before the portable dark sucker can operate again.

Dark has mass. When dark goes into a dark sucker friction from this mass generates heat. Thus it is not wise to touch an operating dark sucker. Candles present a special problem, as the dark must travel into the solid wick instead of through glass. Thus it generates a great amount of heat. Thus, it can be very dangerous to touch an operating candle. Dark is heavier than light. If you swim deeper and deeper, you notice it gets slowly darker and darker. This is because the heavier DARK sinks to the bottom of the lake and the Light floats to the top.

The immense power of DARK can be utilized to man's advantage. We can collect the DARK that has settled to the bottom of lakes and push it through turbines which generates electricity and helps push the dark from the ocean, where it may be safely stored. Prior to turbines, it was much more difficult to get dark from rivers and lakes to the ocean. The Indians recognized this problem and tried to solve it.

When on a river in a canoe travelling in the same direction as the flow of dark, they paddle slowly, so as not to stop the flow of dark. But when they travelled against the flow of dark, they paddled quickly so as to help push the dark along its way.

Finally, we must prove that DARK is faster than Light. If you were to stand in an illuminated room in front of a closed dark closet, then slowly open the closet door, you would see the light slowly enter the closet, but since DARK is so fast, you would not be able to see the DARK leave the closet.

In conclusion, BELL LABS stated that dark suckers make all our lives much easier. So next time you look at an electric bulb remember is indeed a DARKSUCKER.

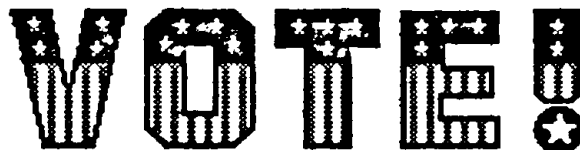
*Author Unknown*

How about that! And we thought it was a light bulb.  
73... WB2DXB, Sonny

## HELLO? R U THERE?

Some of us are looking for some of you.  
Are you interested in experimenting with something different?  
How about VHF/UHF/SHF SSB & CW?  
How about ATV for less than a 2 meter handheld?  
Curious?

Contact Cory, WA3UVV.



**TUESDAY  
NOVEMBER 2, 1993**

## FOR SALE

The following items are available on a sealed bid basis. The bids must be received no later than 19:30, November 17, 1993. Bids must be marked with the words "Bid Enclosed" on the outside of the envelope, and mailed to...

G.C.A.R.C  
P.O. Box 370  
Pitman, NJ 08071

Bids received out of time or not marked as instructed will not be considered.

Successful bidders must pay for and take possession of the item(s) no later than the beginning of the December general membership meeting. If this does not occur, the item(s) will be assigned to the next highest bidder.

- (A) LaFayette HA146 2-meter crystal-controlled FM transceiver. Non-Working.
- (B) Azden PCS-3000 2-meter synthesized FM transceiver. Non-Working.

Both radios are offered as one item. Minimum Bid \$ 25.

WA3UVV, Cory  
President