

YONKERS AMATEUR RADIO CLUB

W2YRC

P.O. Box 378 Centuck Station Yonkers, New York 10710-0378

146.865 - (PL 110.9)

224.940- (PL 88.5)

440.150 + (PL 88.5)

EDITOR: EFREM ACOSTA, W2CZ



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MARCH 2008

ISSUE #3

OFFICERS

President:	John Costa	WB2AUL
Vice President:	Bill Hall	AB2HZ
Treasurer	Dan Calabrese	AA2HX
Secretary	Anna Nance	KC2LJT
Membership	Paul Maytan	AC2T
Trustee	Dan Calabrese	AA2HX

DIRECTORS

Brad Lisnak	KC2CGI
Efrem Acosta	W2CZ
Johnnie Nance	KC2EXA
Charles Lewis	W3IFX
Mitch Holmes	KC2PHD

Volunteer Examinations

Volunteer Exams are scheduled for the 1st Sunday of every month at the 1st Precinct Police Station on East Grassy Sprain Rd. Bring **original** and **copies** of your FCC license and Certificates of Completion (CSCE). For information call Dan, AA2HX (914) 667-0587.

VE TESTING: Sunday March 2, 2008 at 8:30am

Membership Meeting

On **Sunday March 9, 2008** YARC will hold their monthly membership meeting at the 1st Precinct Police Station on East Grassy Sprain Rd. Yonkers, N.Y.

SOCIAL HOUR: 10:00 A.M. served with coffee, donuts, bagels, and all the extras. Meeting starts at 10:30A.M. Family and friends are welcome to attend.

Membership is opened to all, new hams and old alike.

SCHEDULED WEEKLY NETS:

SUNDAY:	7:00 P.M.	-	28.456 USB	Lloyd, NA2LF
MONDAY:	7:30 P.M.	-	2 meter repeater	Doug, K2JJ
THURSDAY:	8:00 P.M.	-	2 meter repeater	Rich, KC2HZW

The 2 meter Repeater is available on EchoLink

YARC LINK: All items for publication should be sent in no later than the 20th of the month.

78 Buckingham Road
Yonkers NY 10701-6716
W2CZ@arrl.net

Look us up at <http://www.yarc.org>

Dues reminder

Please remember that you may mail in your club dues or pay them at any meeting. If you choose to mail it send it direct to Paul AC2T at:

Paul Maytan
19 Hunts Bridge Road
Yonkers N.Y. 10704



Retired Guys and Gals Luccheon

The next luncheon of The Retired Guys and Gals will be on March 20th, at the Mount Olympus Diner, which is located at the corner of Central Park Ave and Jackson Ave. Yonkers NY at 12 pm everyone is invited, hoping to see everyone there!

John WB2AUL



YARC Club Elections

Elections were held at the February meeting and the new officers for 2008 are:

President	John Costa	WB2AUL
Vice Pres.	Bill Hall	AB2HZ
Secretary	Anna Nance	KC2LJT
Treasurer	Dan Calabrese	AA2HX
Membership	Paul Maytan	AC2T

Directors

Mitch Holmes	KC2PHD
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Brad Lisnak	KC2CGI
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Special Raffle at March Meeting!

A brand new Alinco HT, model DJ296T, will be raffled at the next meeting. Tickets will be \$10 and only 20 will be sold. All tickets must be sold! If there are not 20 sold, all monies will be returned. Tickets will only be sold at the March meeting so please plan to attend and take a chance!

This a 220 mhz radio and will allow the winner to use the new 220 repeater!

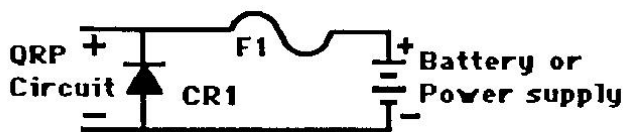


#2 . . . "Protection from Improper Power Supply Connections"

by Joe Everhart, N2CX

Here's another circuit "quickie" from my grab bag. It's for homebrewers and QRP'ers who suffer from temporary lapses of sense when they hurriedly hook up a battery or power supply without double checking polarity. The laws of probability say that you have a 50/50 chance of getting it right, but our friend Murphy tips the scales so that 90% of the time the polarity is wrong. The result seems to be usually that you end up frying something. And if the rig has unusually expensive or hard-to-get parts, they are just what goes up in smoke!

There is a simple fix for this malady -- the dummy diode. That's not a new type of semiconductor device from Motorola, but an ordinary diode to protect dummies from themselves. (One ham friend of mine has a much more anatomically descriptive term for it.)



CR1 - 1N400 series diode

F1 - Fuse rated to pass maximum current drawn by QRP circuit

Figure 1 - Dummy diode gives reverse polarity protection

Figure 1 shows this device in use. It's merely a garden variety rectifier diode hooked up with reverse polarity across the DC power input to your rig. If the DC power is hooked up as it should be, the diode is reversed biased and will draw only microamps of leakage current. But if you accidentally reverse the positive and negative power leads, the diode conducts and acts as a short circuit to ground. I **highly** recommend adding the in-line fuse shown in the figure. If the fuse is in place, the short circuit will blow this fuse, protecting the rig and telling you that you goofed. Without the fuse, several outcomes are possible:

1) If the DC source is a current limited power supply, the supply will just reduce its output voltage low enough to supply the rated short circuit current. The rig will see a reverse polarity voltage of only about 0.7 to 1 volt (one diode drop). It will probably survive.

2) If the DC source is a non-current-limited supply to a high current battery, a **large** short circuit will be drawn. Again, there are several possible sub-outcomes:

a) If the current is much above the diode's forward current rating, it will eventually overheat and fail. When it fails it will probably become an open circuit. When this happens (within a fraction of a second) there is no longer any reverse polarity protection and your rig will fry. Therefore the diode did you no good in the first place.

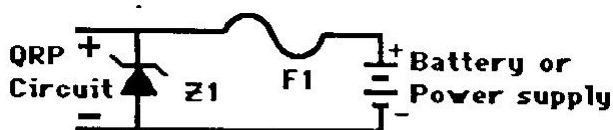
b) If the current is less than the diode's rating, the power wiring and/or source will go up in smoke. Again, the diode did you no good.

c) If you are **extremely** lucky, the diode, the power source and wiring will not instantaneously self-destruct and you will notice that something is over-heating. You may have enough time to remove power and correct the reversed polarity, but don't count on it!

The bottom line is, **use a series fuse**. It should be large enough to pass the highest current you would normally draw, but small enough to blow if there is a short circuit or reverse polarity condition.

What kind of diode should you use? well, that depends. For low power transmitters and such, I usually use a 1N4000 series diode. The 1N4001 will withstand a back voltage of 50 volts so the usual 12 or 24 volt DC supply will be unaffected. If your rig normally draws less than an amp, use a 1 amp series fuse for protection. For higher power rigs, both diode and fuse should be upgraded accordingly.

For even better protection, you can use a transient suppressor diode. It hooks up the same way as a regular diode, but acts like a high power zener. Figure 2 shows its use. The diode shown is specially designed to have low leakage for a DC reverse voltage of up to 15 volts or so, as you would see in 12 volt applications even including auto battery voltage. Above 18 volts, it conducts heavily to protect electronic equipment from overvoltage surges. And of course it acts like a regular diode if the power is backwards, to provide reverse polarity protection. The series fuse is still needed to provide a "safety valve" if overvoltage or reversed power make the protection diode conduct.



**Z1 - 1N6277 or 1.5KE18A
transient suppressor**

**F1 - Fuse rated to pass maximum
current drawn by QRP circuit**

**Figure 2 - Improves circuit adds
protection from voltage spikes**

I highly recommend the transient suppressor diode if you can get one. The part number I have used successfully is a General Semiconductor industries 1.5KE18A. Motorola also manufactures the same device under the part number 1N6277. I can't guarantee a source for the diode, but I know that some branches of Active Electronics used to carry the GSI part. Their head office is at 133 Flanders Road, Westborough, MA 01581. They have a toll-free telephone number, 1 (800) 677-8899.

Whichever scheme you use, I think you should consider adding a protective diode and fuse to your DC-powered QRP gear. This little "quickie" can save you big trouble and a lot of bucks if you should slip up and swap positive and negative power leads. Just think of it as a prophylactic measure to help you practice safe QRPing!

PS: Why don't I just use a series diode? Well, I could but don't for two reasons. First, I don't like to lose the 0.7 volt diode drop. When I'm using batteries, I want every last bit of efficiency I can. And secondly, using a series diode adds a nonlinear impedance to the power supply. That can make either a receiver or transmitter oscillate unpredictably. Only a dummy would use a series diode!

You can contact Joe at n2cx@voicenet.com or send mail to: Joe Everhart, 214 New Jersey Road, Brooklawn, NJ 08030

Special thanks to Joe N2CX for allowing us to reprint his words and thanks to Doug K2JJ who contacted Joe and secured the necessary permission

Efrem W2CZ



Yonkers Amateur Radio Club's 60 Years of ARRL affiliation

Lou KB2DHG has been working on setting up a bus trip for the 19th of September to ARRL headquarters. The "League" has expressed a interest in hosting our group. The group will be given a tour and question about league operations will be answered. In addition many of the folks who run the day to day operations will be there to greet us!

Of course don't forget to bring your license with you so that you'll be able to operate W1AW Maxim Memorial Station!

Lou is now attempting to see what the price to the membership will be. After the next meeting we should know what the final price and exact itinerary will be such lunch or shopping at a near by ham dealer.

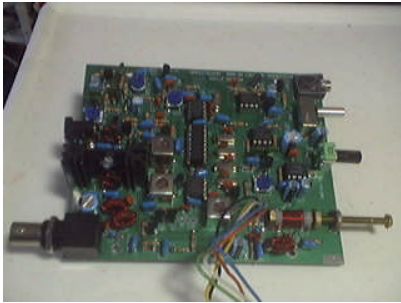
Lou is trying to make it affordable so that all members who want to go can without any financial hardship.

Also planned still is a special event station of that weekend that will involve some causal operating and barbeque

Please think about going and feel free to contact Lou KB2DHG@optonline.net if you already know that you can go, have ideas or wish to lend a hand in some manner.



Member's Kit building Highlights



This is the Hendricks QRP 40 Meter CW AND SSB Kit transceiver John WB2AUL has been busy with!

If you have any projects, kits or items that might be of interest to the club make sure that you snap a picture and send it in!

Also if you'd like please do include a few words about the item. Learning from each other makes the club work.



AC6V SK

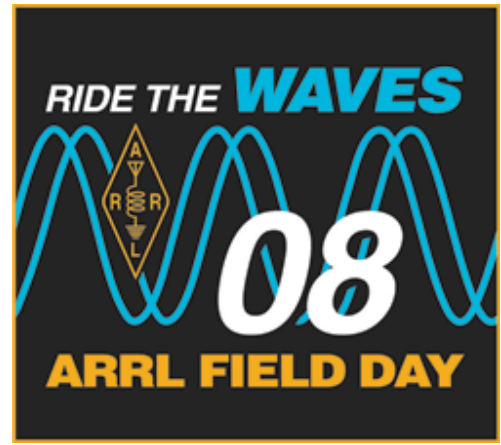
Rod Dinkins, AC6V, of Oceanside, California, passed away Saturday, February 16th. Mr. Dinkins was the author of several amateur radio related books and also had one of the most informative websites on the internet. When I first became a ham and still today I visit <http://www.ac6v.com> as it a great source of information on just about any topic in ham radio.

If you're new to the hobby or have been around a while looking through the AC6V website will provide anyone with a good source of information (there are over 130 pages).

Thanks again Rod!



Field Day 2008 is coming!



June 28 and 29th

Start making plans to join us for Field Day (it's only a little more than 3 months away)

More information is on the ARRL website at <http://www.arrl.org/contests/announcements/fd/>



Not even March winds will keep this ham from buying her raffle ticket at the next meeting and possibly win a brand new Alinco 220 HT!

YONKERS AMATEUR RADIO CLUB
P.O. BOX 378 CENTUCK STATION
YONKERS, NY 10710-0378



NEXT MEETING: March 9, 2008

FIRST CLASS MAIL
DATED NOTICE – PLEASE DO NOT DELAY