The Monitor

April 2007

Upcoming Events

TSRC Meeting April 14, 2007, 9:00 am
EBA's, Hanover, NH

TSRC Meeting May 12, 2007, 9:00 am
EBA's, Hanover, NH

Message from the President

When I first arrived in the Upper Valley almost four years ago I was delighted to be accepted into the ham radio community so quickly and warmly. You may not know it but New Englanders have a reputation in other parts of the country as being somewhat unfriendly. I am happy to report that my experience has been quite different. Hams not only helped me with local knowledge but they also got their hands dirty helping me raise antennas and even with the move into our new house two years ago. My hope is that I can continue that tradition by helping others in the hobby in whatever ways I can. When the warm weather finally does come let's try and help each other out as much as possible. It is safer and certainly more fun that way.

What you missed: last month's club meeting included a visit by Tom Frenaye, ARRL Division Director. This was our second opportunity to hear from and speak with Tom. Not many large national organizations can boast this level of accessibility to the leadership and I want to express our thanks to Tom for his considerable time to come visit.

See you at the club meeting!

73 de KX1Y
William Daugherty, TSRC President

Get Ready, Get Set, Be Safe

It always seems impossible at this time of year, but eventually the snow will be gone. It really will. Gone again for the few brief months that constitute the spring, summer, and fall seasons here in New England. If you intend to accomplish anything during the few warm months you need to plan far in advance so you can leap into action at the close of mud season.

Among the favored summertime activities of hams is antenna farming and tower construction/repair. For many activities there is a right way and a wrong way to proceed. For tower work I think there is a right way and many wrong ways. And the problem is that some of those wrong ways can kill you. Since the ham population hasn't been growing greatly in recent years, and the TSRC needs your dues money, we prefer that you approach your tower work the right way --- the safe way.

To help you along that path this month's TSRC meeting will include a presentation on tower building and safety by Dave Colter. As you all know, Dave is a tower climber with years of experience. More than that, Dave is a safety concious climber with tips that could make your tower work safer and more enjoyable.

Do you have gear that you use for your own tower work? Bring it along so the other club members can see it. Seeing your gear may help them make choices in buying equipment of their own.

Now for the question of the month: When assembling a tower, what steps should one take to insure that the tower sections can be disassembled at some time in the future?

Ken Tentarelli AC1H

CubeSat launch reset

A CubeSat launch that was to have taken place March 27 has been rescheduled for Tuesday, April 17, from Baikonur Cosmodrome, Kazakhstan. Four of the seven CubeSats will use Amateur Radio frequencies and modes. They are: CalPoly's PolySats CP3 and CP4, 436.845 MHz and 437.325 MHz respectively, 1200 bps FM AFSK, AX.25, 1 W, operating under an FCC Part-5 Experimental license; University of Louisiana CAPE-1 435.245 MHz, 9600 bps FM FSK AX.25 and CW telemetry during opposing 30-second intervals, 1 W, call sign K5USL (e-mail telemetry reports); Universidad Sergio Arboleda, Colombia, Libertad-1, 437.405 MHz, 1200 bps FM AFSK AX.25, 400 mW, call sign 5K3L. AMSAT News Service reports that the CubeSat team will not provide a live Webcast for this launch but will offer live updates on the CubeSat IRC Channel. Point your IRC client to: #cubesat on irc.freenode.net. -- AMSAT News Service

Swains Island N8S DXpedition is on the air!

The Swains Island N8S DXpedition <http://www.yt1ad.info/n8s/index.html> now is on the air and will continue until April 15. The international N8S team got up and running at around 1000 UTC on April 4 and plans to operate on all HF bands as well as moonbounce on 6 and 2 meters. The Daily DX <http://www.dailydx.com/> reports the DXpedition, in grid AH48lw, will fire up on VHF by April 6. On 2 meters, N8S will run 200 W into a 17-element antenna, transmitting on 144.112 MHz and listening on that frequency and up. Most activity will be during Swains Island local sunrise and sunset. Six-meter moonbounce also will begin as early as April 5. Listen 50.195 or 50.205 MHz. N8S will always transmit first. The same team is set to operate from Samoa as 5W5AA from April 17 to April 24. YT1AD will handle cards for N8S; YZ7AA will handle QSLs for 5W5AA. Swain's Island appears atop at least two lists of most-wanted DXCC entities.

AN AUTOMATIC SWITCH-OVER CIRCUIT FOR A POWER SUPPLY WITH BATTERY BACKUP

In developing a method for providing a "transparent" method for switching between a power supply and battery when the commercial power goes off, I ran across an Astron power supply with a neat circuit. This circuit can be built with three diodes and a resistor and will work with any power supply/battery combination up to 20 Amps.

In the accompanying diagram, D1 and D2 are 20 amp, 50 PIV diodes. D3 is a 1N4004 diode to protect against any accidental voltage inversions. A 20 Amp, fast blow fuse should be installed in the + line from the battery. If the battery is accidentally reverse wired, D3 will short out long enough to blow the fuse and protect the circuit and power supply.

When the power supply is on, voltage is supplied to the radio (s) through D1. R1 (5 Ohms, 10 wts) provides a trickle charge to the battery. When the battery voltage approaches the power supply voltage minus about 0.5 V diode drop, charging stops.

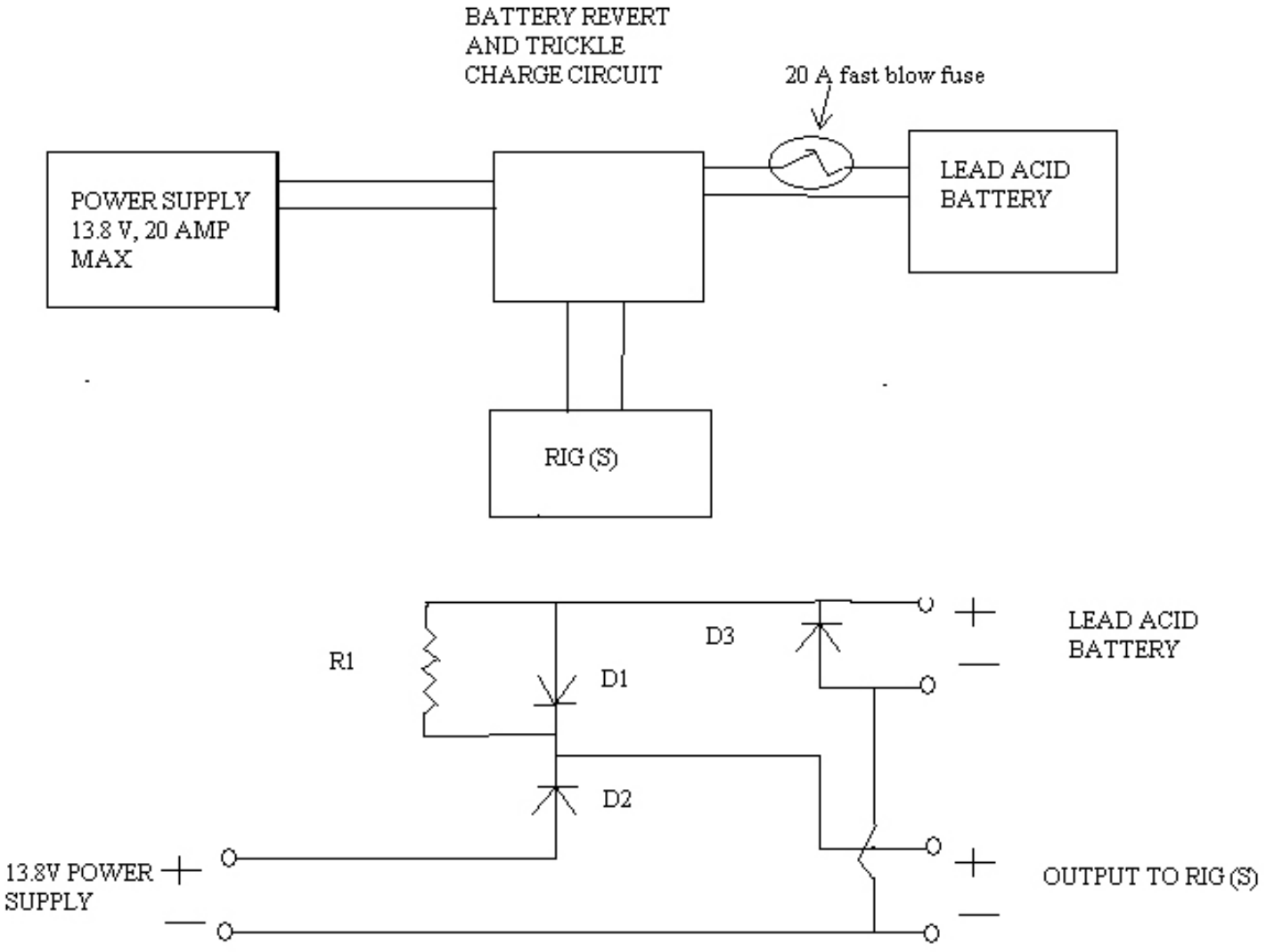
If the power supply is shut off or commercial power shuts off, the battery instantly provides the DC voltage and up to 20 Amps through D2. The station keeps operating until the battery voltage goes below the radio manufacturer's lower limit of operating voltage. When commercial power is restored, the power supply will come back on, the station will operate as normal and the power supply will trickle charge the battery.

I will plan to make more kits available to anyone who wants to build one of these circuits. Just send me an Email note.

If your power supply and radio setup demands a higher current system (up to 50 Amps), there are higher current diodes for D1 and D2 available for this application. Just check on-line parts suppliers. If you do install larger sized diodes, make sure to change the fuse size to match the maximum current drain.

One note on the battery- the series resistor in the circuit is sized for trickle charging a battery that is near full charge so as to keep it "floating". If you plan to use a battery that is low on charge (less than 10 V), use a battery charger to bring it up to full charge before installing it in this circuit. If the battery is a lead-acid unit with fluid electrolyte, please check the level of the electrolyte periodically. Most batteries have instructions on adding distilled water or electrolyte so as to avoid damage to the battery.

Bill WB1BRE



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ELECTRONIC ADDRESSES

*ARRL Website	http://www.arrl.org/
*NH ARRL Home Page:	http://www.arrlnh.org/
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Part 97	http://www.arrl.org/field/regulations/news/part97/

Don't forget to check the TSRC Home Page!
Make it your default start page!
http://www.w1fn.org

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