

Lake County

Ham Radio Journal

SUMMER

June / July 2009

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The Official Newsletter Of

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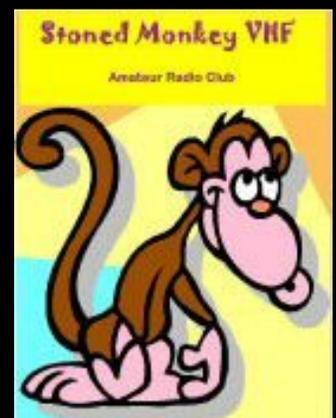
IKEA Radio Box Project

Product Reviews



W9WLC

www.welcars.org



N9UHF

www.stonedmonkey.org

Upcoming Events

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Chris - N9YH

Contributors

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Joe - KC9LFP
Christopher - KC9MKL

WeLCARS Meetings and Events

General Meetings

Fridays 7PM
Fox Lake Community Center
23 South St., Fox Lake

VE Session

Friday August 14 - 7PM
Fox Lake Community Center

Hamfests

Bolingbrook ARS

Aug 2 - Bolingbrook, IL
www.k9bar.org

75th Hamfesters Hamfest

Aug 9 - Peotone, IL
www.hamfesters.org

Racine Megacycle Freefest

Aug 15 - Sturtevant, WI
www.w9udu.org

Radio Expo 2009

Sept 12-13 - Belvidere, IL
www.chicagofmclub.org

On the Air

144 MHz SSB SWOT Net

Sundays 7PM
144.250 USB

Informal Net / Radio Tradio

Sundays 8PM
KB9I Repeater
145.41 (-) PL 107.2

Contest Calendar

ARRL UHF Contest

Aug 1 1PM - Aug 2 1PM
222+ MHz Phone, CW, Digital
www.arrl.org/contests

Maryland-DC QSO Party

Aug 8 11AM - Aug 9 7PM
1.8-440 MHz Phone, CW, Dig.
www.w3cwc.org

ARRL 10 GHz Contest

Aug 15 6AM - Aug 16 12AM
10+ GHz Phone, CW, Digital
www.arrl.org/contests

North Amer. QSO Party

Aug 22 2AM - Aug 23 5PM
1.8-28 MHz Phone
www.ncjweb.com

Hawaii QSO Party

Aug 15 1PM - Aug 16 1AM
1.8-28 MHz Phone, CW, Digital
www.karc.net

Sept VHF QSO Party

Sept 12 1PM - Sept 13 10PM
50+ MHz Phone, CW, Digital
www.arrl.org/contests

Other Events

Lake Co RACES

No meetings July or Aug

MCWA Meeting

August 4 - 7:30PM
Sept 1 - 7:30PM
Nunda Township Hall

McHenry Co RACES Meeting

August 25 - 7PM
McHenry County EOC

LMR400 Look-Alike Cable Review

Tom Staley - K9TMS, WeLCARS Contest Coordinator, President Stoned Monkey VHF ARC

For the first time in a long time I find myself having to write something less than a glowing review of a product I have tried.

Recently several of us have purchased some LMR400 look-alike cable available from DC Ace for \$69.99 for 100 feet. I believe that the cable I have is labeled LLR400. I regret to have to report that extreme care needs to be taken with this cable.

I have basically two lengths of this cable. One length of 100 foot was used for the 222 feed line at the VHF contest. So far that cable assembly has been ok as it is equipped with N type connectors. The other line was used to connect to my 2/440 vertical at home. I had problems with this cable originally when installed and had to redo the connector after the center conductor snapped. Recently I moved this cable and again wound up with massive issues with it again. This time it was swapped out for an old piece of Radio Shack RG8X.

My impression is that the cable has a center conductor that is copper clad aluminum. This makes the cable lighter and cheaper but aluminum will not put up with anywhere near as much in the flexibility department. The cable also has what seems to be a lower quality outer jacket which melts a bit easier than others. To be honest the real LMR400 I have noticed will not put up with as much heat as Belden cables as well. But the low cost stuff can really be a problem some in this area.

Bottom line if you decide to get this cable be very careful on placement of the cable avoid any and all movement of it. Use decent connectors and keep the heat down when soldering them on. I would keep the bend radius to about 2 feet or greater and never ever use this stuff around a rotor.

Danger, Will Robinson! We give this product 1 Robot for "Use With Caution."



"They Get Paid For This?" File : National Hurricane Center Predicts Near Normal for 2009

from the ARRL

Forecasters with the National Hurricane Center (NHC) are calling for a "near-normal" Atlantic hurricane season this year. In its initial outlook for the 2009 Atlantic hurricane season -- which runs from June 1-November 30 -- the National Weather Service's Climate Prediction Center (CPC) is calling for a 50 percent probability of a near-normal season, a 25 percent probability of an above-normal season and a 25 percent probability of a below-normal season. You read that right, folks - equal chance of a "near normal" season as an above- or below-normal season. According to the CPC, global weather patterns and a lack of any means of accurately forecasting the weather are imposing a greater uncertainty in the 2009 hurricane season outlook than in recent years. In other news, with word of their poor track record predicting the weather participation in the CPC office lottery pool has declined sharply.

The "Stacked" June VHF Contest

Tom Staley - K9TMS, President Stoned Monkey VHF ARC

Well summer arrived, well maybe, which means that the Monkeys head for the farm. If you look at our contest efforts over the years there always is something that stands out. This year that had to be the number of Stacked Antenna Arrays we used. And you thought I meant something else! [I was wondering if we were at the same contest... - Ed.] Last June we stacked 6 and 222 this year we added 432 and 1296 to that list. Stacking affords more gain as well as narrows the vertical beam width which points more of your signal at the horizon where it needs to be. If that isn't enough reason to do it, then the "Cool" factor also needs to be taken into account.



combination. The Kenwood TS2000 does have the ability of directly driving a transverter and will display the actual operating frequency not just the IF frequency. With the addition of the digital recording module to the TS2000 we also managed to have the voice keyer all of the older voices like after 20 hours in the operating chair. The performance of the combination seems to be outstanding. The station interference we experienced with the older transverter now seems to be a thing of the past. The Elecraft seems to be not quite as



sensitive as the DEMI, but with the noise gone we can live with a slightly lower signal to noise. The Elecraft has the added benefit of a output power bar indicator which is reassuring that you have the correct power out. Everyone seems to really have enjoyed the new addition.

We are currently looking into stacking a pair of 13B2 beams on 2 meters that will have a bit broader beam width and hopefully about the same or slightly better gain than Big Bertha. At the same time hopefully it will be a quicker setup. And of course look really cool.



Along with the new hardware I also added some new software functions to the logging software that that believe it or not is in its 7th year. One thing that we have always had issues with is running out of items to throw at various operators around the shack to determine what frequency the various radios are tuned to. This is especially an issue on the bottom 4 bands.



After you get over the stacking coolness, another new addition for this contest was a new 222 station. The new 222 station consists of an Elecraft 222 transverter and Kenwood TS2000 transceiver. The Kenwood was a last minute deal I couldn't pass up, thanks to N9YH for spotting that find! The setup works great for both the multi-op and will be an advantage in the rover as it will allow me to have the bottom 4 bands in one radio and transverter

Last year N9QDS introduced us all to the HRD software for control of the radios. In looking at HRD I determined there were DDE "hooks" one could snag with Visual Basic to read the frequency out of the radios. After

a bit of encoding and installing HRD we finally can now read the frequency of on the bottom 4 bands, 6 through 432, provided of course we are using an HRD supported and connected radio. This really came in handy and will continue to be improved to offer better reliability.

So you now know the details on to how we did. As they say a picture is worth a 1000 words so:

Band	QSO's	QSO Points	Multipliers
50:	265	265	97
144:	136	136	23
222:	36	72	16
432:	65	130	15
903:	3	9	3
1.2:	6	18	3
2.3:	0	0	0
3.4:	0	0	0
5.7:	0	0	0
10:	1	4	1
24:	0	0	0
74:	0	0	0
LGT:	2	8	1
Total Score:	514	642	x 159 = 102078

Basically we beat last year's score by approximately 12,000 points. Way to go everyone! The bottom 4 bands saw increased QSO numbers across the board. Above 432 things were pretty much what they have been not much new. We did have some QSO's on 1296 and 903 that just could not be made for reasons unclear to Mike and myself. I will be looking at how to do this setup better in the coming months. One thing I would like to do is have a frequency counter to check our 903/1296 frequencies to make sure we are in where we are supposed to be. By the way this is again a record score for us from the Farm, only score higher was one from the Ski Hill long, long ago!

So did we have fun? You bet, have a look for yourself.

As with all things in life we have continued to push our capabilities, learn and improve at what we do. This year we were up and running

in record time. This doesn't happen on it's own but rather with the help of people that love to get involved enough to understand the stations and setup. If you look at our crew of operators only a small hand full of us has been doing this more than 2 to 3 years. This year it was a pleasure to watch and work with what I



consider a well seasoned crew of operators that not only can spin the dial with the best of them yet also know the way of doing portable setup's. One of the reasons our score has been increasing is due to the fact that we are on the air making contacts faster. This year all 4 of the bottom bands were on the air making contacts at 1300 Saturday. UHF is always the last but is also a highly experimental and temperamental setup, with that in mind we still had it up shortly after the start. Outstanding job to all and many thanks!

In closing see you all in September when we will do it again and have fun.

73 de Tom K9TMS



We lost the picture of the good looking operators... Here are their stunt doubles.



"N9UHF QRZzzzzzzzzzz...."

Field Day 2009 - We Came, We Saw, We Ate Hot Dogs and Chili

Story by Chris Burke - N9YH

Photos by Joe Brault - KC9LFP and Christopher Bork - KC9MKL

Field Day for hams is like Christmas for kids. You spend several months waiting in anticipation for it to finally come and when the closing bell rings at 1PM on Sunday, you can't believe it's already over. WeLCARS was out in it again, and this time with only a brief pause for the weather. Taking up temporary residence at the Worldwide Headquarters, we were able to operate in relative comfort and gorge ourselves on hot dogs, polish sausage, and chili.

With none of the setbacks that plagued us last year, we were able to start our setup on Friday. Tom K9TMS, the Contest Commandant,



The breakfast of champions!

starting bringing towers and station supports out on Friday afternoon, as well as signs he plastered all over the walls that commanded everyone to, "Say 'No' to Over Engineering! Say 'No' to Over Tightening!" Seems poor Tomas had to go a few rounds with some mongo-cranked down fasteners after the June VHF contest and was not

looking to repeat the experience... No antennas went up on Friday, and no radios were brought to the WWHQ as there wouldn't be anyone staying the night, but by the time many of the members arrived Friday evening there was a good amount of equipment there, and Terry K9HA was slaving away making

The W9WLC crew racking up QSOs



cable runs out of Keith N9QDS's mongo spool of RG-58.

Saturday morning came early for everyone but your humble servant, who was catching up on the Z's he lost having worked Thursday night and arriving home from court at 1PM Friday afternoon. By the time I arrived around 10 AM with my vertical strapped to the roof of my truck, most of the antennas were up and things were cooking along. By 1PM, nearly everyone was on the air and Tom was inviting disaster by remarking that he was pleasantly surprised by how smoothly everything was going. Eric KB9BNY and I had a few initial problems setting up my station for CW or digital, the first problem being the computer keying didn't get along well with the TS-850's internal keyer and I was ill-prepared and left the manual at home. So we decided to try our hand at PSK31, but the computer I brought to use had never been used for any digital modes, so it took us nearly two hours to work the kinks out to get it set up. Once we finally had it working we were off to the races and worked a few other stations on a variety of modes from PSK31 to RTTY to Hellsreiber.

We had set up for an ambitious 7 Alfa category this year, meaning 7 transmitters all running on emergency power. Amongst our weapons were stations for 15 meters, 20 meters, 40 meters, 80 meters, 6 meters, 2 meters, two digital stations, and a Get On The Air (GOTA) station. With all that horsepower running around in a limited space, interference was a

bit of a problem. To start with, there was some kind of man-made noise source near the WWHQ that brought intermittent S8-9 noise on several of the HF bands. Adding insult to injury, some of the stations interfered with one another. The digital stations had to attempt to operate on the same bands used by the phone stations, and we dished out and took plenty of interference as a result. Still,

W1MRK at the GOTA station



operating on more than phone was new for the group for this year and the extra 2 point QSOs certainly helped the score at the end of the day.

It was much easier for us to find GOTA operators simply interested in having fun with the radio rather than GOTA operators capable of making 500 CW QSOs. This year the GOTA station brought in by Mike W1MRK (formerly KB9YIV) used the radios and project box he describes elsewhere in this fine publication. Mike had his share of problems, too, among

them an antenna issue that required him to move to an Opek HVT-400 multi-band vertical. Once this new antenna was up, Mike and some other GOTA ops, including the as-yet unlicensed Jenna, daughter of Christopher KC9KCL, were off and running. Mike was able to net us over 20 contacts, good for an extra 20 bonus points.

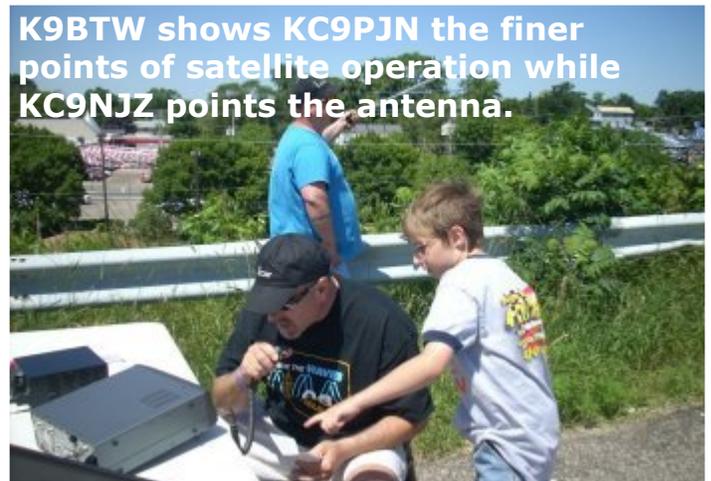
As Field Day 2009 was winding to a close, several stations were still on the air desperately trying to net a few more contacts. I grudgingly withdrew from interference battles on 20 meters (with K9HA) and 40 meters (with KC9PJN at the mic and K9BTW as the control op) and settled on 15 meters to make a few last minute PSK31 contacts. The activity from the 40 meter station was hot and heavy as I could hear other operators talking faster and faster as 1800 UTC came closer. KC9PJN worked a few stations on 40 meters, though some mistook a very young OM as a YL. Given the now-frantic pace of the contacts on 40 meter SSB, Jonathan decided to let that one lie and continued to search and pounce until the contest... er... I mean operating activity was over.

All in all, I think we can say that our effort was a success despite a few difficulties, which is what Field Day is all about. Like little kids who look forward to next Christmas as soon as the wrapping paper has been torn off, we're already thinking ahead to Field Day 2010. Though the WWHQ makes for very comfortable operating digs, the antennas in close proximity and the interference in the area are a little too much to take. Rumblings of returning to the Grant Township grounds have been heard in the group, perhaps with access to either the Highway Department's garage or the board room.

Our next HF contest event will be the November Phone Sweepstakes, tentatively at the WWHQ. There will be prizes for anyone working all 80 ARRL sections or eating 80 hot dogs.



KC9MKL, daughter Jenna, and daughter's friend Casey making contacts



K9BTW shows KC9PJN the finer points of satellite operation while KC9NJZ points the antenna.



K9TMS, aka "Contest Commandant," takes the reins on 6 meters



Thankfully, N9VUD refused to give out her chili recipe over the air

IKEA Radio Box Project

Mike Kulis - W1MRK

In short I had become annoyed with the clutter and placement of my radios on my computer desk. I therefore set about on a quest to find a useful yet compact radio setup that would suit my needs. After searching numerous pages on the Internet and viewing the shack pictures of other hams a couple of ideas came into my mind.

IKEA is currently the supplier of almost all of my furniture as well as my computer desk, so I figured that would be a great place to start. I found exactly what I was looking for both in size and style in the EINA bedside table for \$29.99. Building something myself was also a possibility but I

opted for an easier approach. High school shop class was 10 years ago and I do not have the motivation for woodworking at the moment. [But he does have all his fingers, folks. - Ed.] The photo below shows construction before radio installation.

To start the installation off I arranged everything I wanted to install to make sure it would fit and that placement would be acceptable. Once the measurements were done I began installing the VHF/UHF setup. I was able to remove the top as at that moment it was held together simply by 4 locking screws and 2 rods. The main VHF rig is a Yaesu FT-1802M 2 meter 50 watt transceiver. On the opposite side is a Kenwood TM-G707a dual-bander. It has always been my desire to have a satellite capable shack and with this setup I was able to achieve that without breaking the bank on a radio with two internal VFOs. Depending on the mode of the satellite, one radio can use the uplink while the other can monitor the downlink. My choice of radios allows both VHF and UHF transmit or receive. Also included on the top is an AES PCL-1 speaker that sadly is no longer produced by Amateur Electronic Supply.

The bottom of the radio holds both a MFJ-1124 40 Amp DC power strip with power pole connectors connected to the Samlex 1223 23 Amp switching power supply. Securing the power supply was done by using the tube shown in the photo. It is called Shoe-GOO. It's used to repair shoes, but if you're in a fishing boat and you spring a leak you can use this stuff and go back to baiting another worm. While it is a form of rubber cement it holds very firmly and is easily removed when the time comes without leaving a trace.





VHF radios, power supply, and Shoe-GOO

The middle shelf is comprised of a thick piece of pure press board. While it does not look sturdy from a distance I was surprised at how hard it was to drill the rear cable holes. The bottom of the shelf holds an Icom IC-718 and uses the Icom MB-5 mounting bracket I originally bought for a mobile setup. Also included is a Uniden Bearcat BC780XLT 500 channel trunking and WFM scanner that I have had for years and still works like a trooper. [That is to say very hard. I know what you guys are thinking! - Ed.] Both the 718 and the 780 use their internal speakers as I have found for this application they do just fine.

Now to the top shelf. A museum piece if there ever was one is a 1971 Motorola metal speaker that was produced with a volume control on the side. I saw this beauty at the 2004 Lake County hamfest for \$40 dollars. Still in its original box and plastic and most amazingly never used. I have never reached for my wallet that fast in my life. Walking to the other side of the 'fest I found a ham selling Motorola parts and he just so happened to be selling a brand new faceplate for the speaker I had just snagged. And at \$5 I once again reached for my wallet faster than Wyatt Earp. Sitting next to the speaker is a Vectronics VC300DLP tuner with built in SWR and 300 Watt meter. It remains to be seen if I will be



Middle shelf with IC-718, scanner, tuner, and speaker

retaining it or replacing, but I snagged it new for \$65.

Now comes the reinforcement of the IKEA project box and the addition of side handles to allow for portability. As you can see in the pictures below support was placed on the back as well as eight L brackets on the inside. I attached the handle but it's soft press board inside. Shoe-GOO to the rescue. Placed a bunch of Shoe-GOO on both handles then went ahead and attached it with screws. Working like a charm. I drilled three



Rear of the completed box

holes mainly to allow the power and coax to be neatly routed while keeping them tucked inside during any transport. A Kipling Passport pouch that has numerous zippered compartment was secured to side using screws and washers. It helps carry the basics like a leatherman, fuses, connectors, and an 800 MHz BNC antenna for when I want to monitor

trunking systems. Otherwise a BNC adjustable antenna is mounted to a BNC base on the top of the unit.

I wish to thank everyone who gave advice along the way.

73 and thanks for reading!

Mike Kulis - W1MRK

Kenwood TS2000 and XV222 Transverter Review

Tom Staley - K9TMS, President Stoned Monkey VHF ARC

About 2 years ago I acquired an Elecraft VX144 2 meter transverter. From the start I found it to be an impressive little transverter. Over the last couple of contest outings we have had issues with the old DEMI transverter I built some 12 or so years ago. It has been a very good performer, but in a multi-op situation with the large number of control cables it has to use, the system has a tendency to put a small amount of noise on the other bands within the shack. For a single-op this is not a problem, for a multi-op... you get the idea. So I decided as much as I liked the XV144 that a XV222 needed to be in my future. I actually had the transverter built for the January contest but could not get it completely tuned and ready to go for the January contest. So it turned into a June goal to get the system fully operational.

My original intent was to run the new transverter off an FT817ND I acquired last year. As the contest grew nearer I began to question whether the little 817 was the IF radio I really wanted running the XV222. After a recent visit to AES I considered getting an IC756 Pro to fill the IF radio job. After a budgetary review and a look at the increased used IC756 prices I determined that was outside the budget. At about the same time N9YH spotted a Kenwood TS2000 for what turned out to be a great price. After a thorough review of the TS2000's good and bad points I decided it was time to take the plunge, which turned out to be a great decision.

It turned out that after I got the TS2000 home I found out this radio was really the answer to much of what I wanted for a "Base VHF" radio. In playing with the radio I found it very capable of doing a good job. It filled the need for many

items I had thought about and a few I hadn't. The TS2000 is a bit dated technologically but for the most part worked well on trials on 2, 6, and HF. The only minor negative things I have noted is the possibility of a slightly lower signal to noise issue and the issue of strong adjacent signals causing havoc with the front end. Well to be honest the sensitivity doesn't seem to be an issue. The strong signal issue is a concern but then I have had the same issue on IC706s so it's something I can adjust to.



So lets look at the TS2000 and the XV222 combined. First off the XV222

like the XV144 is easier to build and align than the DEMI variety. It's specs are very comparable to the old DEMI so I wasn't concerned there. The TS2000 has the advantage of displaying the correct frequency. Getting the system to work requires two menu commands. On the TS2000, Menu 25 needs to be turned on and the correct frequency display can then be set. You also need to tell the radio to apply the amplifier key line that will be used to key the transverter. The cool thing is the key line has a delay that is adjustable so that the radio delays output power being applied. This is settable to either 10ms or 25ms.

So once I had the two units interfaced the issue of adjusting the XV222 sensitivity was the only remaining issue. This was an easy issue to solve by simply turning off the AGC and listening to on air noise and making the adjustment. The other adjustments had already been completed in January with the

FT817 at the same power input levels.

Now that the radio and the transverter were playing nice together the only item I wanted was the voice keyer. It turns out that Kenwood has made this an option. The option does cost \$130 but seems to work well. It is not as nice as that of the IC756 or IC7000 but the radio's other features well made up for it. The option is installed in a couple of minutes and gives 3 messages. Programming the messages is easier than the Icom's but there is no ability to add an external switch box to key the message. Well, there is no perfect radio yet!

The combination performed better than I expected. The XV222 has a sequencer built into it so the amplifier is keyed properly, another worry taken care of. The output power bar is really an advantage of giving you at least the power level out of the transverter. Performance wise we snagged 6 more QSOs this June than last so at it would appear that the combination works pretty well.

One thing to be aware of is that if you plan to use this in a roving situation you really need to use caution about how this setup is connected. The issue is the TS2000 can put out 100 watts on all bands except 432. This would not be good having 100 watts going into the transverter. What I found the proper thing to do is to use antenna port 2 for the IF port and set the 28Mhz band to antenna port 2 with a 5 watt output while not in transverter mode. Then connect the six meter antenna to port 1. As long as you don't mess with things this setup should work well. The only thing you will need to do is turn off the transverter function via Menu 25. Not a perfect solution, but not bad for a roving situation.

Bottom line I am very pleased with the performance, as well as the speed and ease of setup.

So Your Cylon is Lonely...

And our newly debuted "Robot Scale" has you feeling a bit nostalgic. No worries, you can stop asking your spouse to flail their arms and yell, "Danger! Danger!" whenever you wander near a dark cave. B9 Productions will sell you an officially licensed replica of the original Lost In Space Robot, complete with 500 voice tracks recorded by Richard Tufeld, the voice of the original Robot. Dr. Smith not included. (\$24,900 www.lostinspacerobot.com)



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To Write for the Journal!

send your submissions to
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