MOUNTAIN SPARK GAPS

NPARC—The Radio Club for the Watchung Mountain Area

Website: http://www.nparc.org
Club Calls: N2XJ, W2FMI
Facebook: New Providence Amateur Radio Club (NPARC)

April 2023

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Regular Meetings

Second & Fourth Mondays

4/10/23 - Business Meeting on Zoom
4/24/23 - Technical Meeting on Zoom

Upcoming Events

Digital Net Mondays at 9:00 PM – 28085

CW Net, Thursdays at 9:00 PM – 28050

Check www.nparc.org for details.

Meeting Schedule

Regular Meeting: 7:30—9:00 PM
2nd & 4th Monday
of each month
Watch for Emails

Everyone is Welcome
If a normal meeting night is a holiday, we usually meet the following night.
Call one of the contacts below or check the web site

Club Officers for 2023

President: K2UI, Jim Stekas
201-406-6914
Vice President:W2EMC Brian DeLuca
973-543-2454
Secretary: K2AL: Al Hanzl
908-872-5021
Treasurer: K2YG Dave Barr
908-277-4283
Activities: KC2MTN, John Zellhofer
973-462-2014

On the Air Activities

Club Operating Frequency
145.750 MHz FM Simplex

Sunday Night Phone Net
Murray Hill Repeater (W2LI) at 9:00 PM
Transmit on 147.855 MHz
With PL tone of 141.3 Hz
Receive on 147.255 MHz
Net Control K2AL

Digital Net
Mondays 9 PM
28,084 — 28,086
Will be using PSK and RTTY
Net control K2YG

Club Internet Address

Website: http://www.nparc.org
Webmaster KC2WUF David Bean
Reflector: nparc@mailman.qth.net
Contact KC2WUF, David

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Editor: K2EZR Frank McAneny
Contributing Editors:
WB2QOQ Rick Anderson

WB2QOQ is on vacation and has arranged for a substitute weather watcher to provide the report.

The weather report this month is by JB2QOQ from New Providence's sister city of Maizuru in the Kyoto prefecture of Japan.

各地の天気予報へ

北海道	宗谷地方	上川・留萌地方
	十勝地方	胆振・日高地方
東北	青森県	岩手県
	福島県	
関東甲信越	茨城県	栃木県
	東京都	神奈川県
東海・北陸	富山県	石川県
	愛知県	三重県
近畿	滋賀県	京都府
	和歌山県	
中国	鳥取県	島根県
四国	徳島県	香川県
九州・沖縄	福岡県	佐賀県
	宮崎県	鹿児島県

President's Column

The yearly NPARC auction is a fun event for members and guest. It's a great place for eyeball QSO's, drinking coffee, and catching up with old friends. It also produces positive revenue for the club. About enough to cover the porta-johns at Field Day.

Someone on the Executive Committee commented on how nice it would be to have NPARC owned Field Day rigs that we could train members to operate and could use year after year. A pair of ICOM IC-7300s and 20A power supplies would be perfect, but that would cost about $2500 and deplete the treasury. Thinking out of the box the Executive Committee explored some innovative ideas for revenue generation.

After discarding the illegal schemes (and some were quite creative!) the most promising idea remaining was to invest in some low risk, high payoff, gaming strategies. For about $20 per week the club could invest in the NJ Pick-6, with insignificant negative impact on the NPARC balance sheets but with the potential for huge gains. When Mega Millions of Powerball are large (say > $250M) the expected return on a ticket will be larger than its price, so we could throw another $50 in that direction.

Lotteries are very attractive ways to gamble because one is not required to memorize 4 decks of cards dealt by the Blackjack dealer, or calculate probabilities of other players holding a higher hand than you. Even so, there are resources for hams who want to improve their gaming skills. The GOTA Net (Gamblers On-The-Air) meets every Thurs at 0300 UTC on 3990 MHz AM phone. SSB check-ins are tolerated provided they only transmit when they have something solid to offer: a QB health report from an NFL trainer, or info from a track veterinarian. The net must be a good source for handicapping info because I have yet to hear of anyone on the net being in the red.

73,
Jim - K2UI

Ham News Highlights

The 34th edition of the **ARRL PL-259 Compendium** just came out. Reviewers especially praised the extensive revisions of *Chapter 12 - Soldering to RG-8U*. Demand was so high that the ARRL on-line store was down for 9 hours. "They're selling faster than Taylor Swift tickets.", @Weller200W tweeted. The hardcover version is sold out and only a few paperback copies remain.

Edgar Alvin, KG6DRK, a 15 year old sophomore at the Nerdly Academy in Palo Alto, attained 5BDXCC over the winter break. Edgar mistakenly left his ChatGPT enabled version of fldigi running while the family vacationed in Hawaii. Upon returning Edgar had 17,961 QSL's in LOTW and 217 new countries worked.

Studies by Cal Tech show that the FT8 waveform actually breaks down CO2 in the atmosphere. "If we had ten million more active hams on WSJT we could reverse global warming.", DOE Secretary Jennifer Gigaohm opined. The FCC is reformatting the Technician's class exam using international cartoon symbols so as not to exclude applicants who can't read.

Shohei Ohtani, the Babe Ruthian pitcher/outfielder for the LA Angels has signed a $20M deal to be the face of ICOM. Reliable sources report he will soon appear in a commercial operating an IC-705 with a mag-loop from his hotel room. Ohtani has a 100+ mph fastball and operates CW at 50+ wpm. "SSB is for bush league slap hitters. For serious DX, CW blasts through like my four seamer.", Ohtani said through his interpreter.

Rumor has it that the Federal Trade Commission (FTC) will file sealed anti-trust charges against MFJ for monopolizing the market in shoddily made amateur radio products. An unnamed source commented that, "MFJ has such a hold on that market that all of China is locked out." If the FTC suit is successful, MFJ may be forced to drastically reduce its catalog of products. It's hard to imagine an MFJ catalog with only 17 models of hand-held SWR meter, but that possibility looms large.

Earnest Hoardoor, KX2UI, has entered rehab for treatment of "pathological acquisition syndrome". After Hoardoor fell two years behind in his taxes investigators found that he had four storage units filled with FT-101 transceivers. "That's 240 radios and that doesn't include the 12 in the basement!", said his XYL. The court has appointed a special master to sell the rigs on eBay and recover back taxes.

Magnetic Loop Magic

Jim Stekas - K2UI

Sometime in the early 1990's I began to see advertisements in QST for the AEA Isoloop antenna. This was a small loop antenna about 43 inches in diameter that covered 10-30 MHz. The first time I saw it I had one of those "why-didn't-I-think-of that" moments. The AEA ads in QST revealed enough about the innards of the Isoloop that I could understand how it worked and build my own version.

Any small antenna (less that 1/10 wavelength in size) will have a very low radiation resistance ($R_{RAD} < 1\Omega$) and a very high reactance. To cancel the high capacitive reactance of a short vertical antenna we add a loading coil at the base which will have some resistance, R_{COIL} . In general, $R_{COIL} \gg R_{RAD}$ so more of the RF energy is dissipated in the coil than actually gets radiated.

The genius of the loading small loop is that it replaces the lossy loading coil with a short vertical with a practically lossless air dielectric capacitor. On the down side, a small loop generally has an even lower radiation resistance, $R_{RAD} < 0.01\Omega$, so the loop must have a ***very very*** low ohmic resistance. Poorly soldered connections and wiper terminals on variable capacitors are killers. There is no free lunch.

My first loop antenna was a single turn loop of ½ inch copper tubing roughly 1m in diameter. It worked fairly well on 10m and 15m, but it it couldn't get it to resonate on 40m even with the capacitor plates fully meshed. I built a 3-turn loop, roughly 1m in diameter, that I would resonate well below 7 MHz. I didn't do much over-the-air testing with the loops, but I did enjoy amazing my kids by lighting fluorescent lights that I held in my hand.

The multi-turn loop seemed promising, so I decided to see how far I could push it. I built a 12-turn loop, 1ft in diameter, using ¼ inch copper tubing. It resonated beautifully on 20m. Stuck in the house during the 1996 blizzard I decided to give it a go on the air. I moved the antenna and my FT-7B transceiver from the basement to the second floor guest room and tuned up on 20m. I heard W7?? ending a QSO so I figured I'd have a go …

> "W7?? this is NJ2F, November Juliette Two Foxtrot" [1]
>
> "NJ2F this is W7??, your 57, go ahead."
>
> "W7?? from NJ2F, you are 59 in Murray Hill New Jersey. What is your QTH?"
>
> "NJ2F from W7?? I am in Morris Plains"

So, I managed to work a W7 with 50 watts into a 1ft loop antenna from my Murray Hill QTH. That's all anyone needs to know.

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1 NJ2F was my call before K2UI. On CW I was always N1? , so I changed it to something more CW friendly.