



The SKYHOOK



HOLIDAY CITY AMATEUR RADIO CLUB

www.hcarc.us

February 2024

Toms River, NJ

Our President's Message



As Cycle 25 continues to improve the propagation of radio signals, amateurs who have been frustrated working the bands are noticing a great improvement in contacting distant stations. Even though “rotating the dial” from the beginning of the band to the end of the band is the old- fashioned way of selecting a contact, there is an improved method of deciding on which station to select and possibly start a QSO.

“Spotting” programs exist which provide the amateur many benefits to their communication experience. One advantage is to see who is on the air by their call sign identification. Another benefit is observing where the operator is located. It is also possible to see if your rig is successful in reaching a distant location.

There are other reasons how “spotting programs” assist the radio amateur. Come to our February meeting for a presentation on this subject.

As mentioned at our January meeting, everyone was asked to provide the club with a “Hint or Kink” they have used during their radio experience. This could be a small demonstration or a short talk on a particular subject.

Doug Poray, President, HCARC

The Duesy Is Back



The Duesy is red to remind us that some dues are still due. Please have a check or cash for Larry at the February meeting.

Happy Birthday To:

Carl LeFevre WA2IQE

Betty Bernstein



Happy Anniversary To:

Carl & Harriette LeFevre

Robert & Vincenza Mattson



OUR NEXT REGULAR MEETING:
Thursday February 1st at 7:00 PM
Holiday City South Clubhouse A
Santiago Drive at Mule Road

Ocean County ARES® News

February 2024

The next meeting of Ocean County ARES will be on February 21st at 7:00 PM. This will be a virtual Zoom meeting and the join codes will be sent out via Groups.io a day or two before the meeting.

The Girl Scouts Thinking Day on the Air (TDOTA) is back for 2024. The date is February 17th (Saturday). There will be two locations like last year. One in Monmouth County and One in Ocean County at the Ocean Service Center. We are trying to get an early start time when the day is warmer and possibly an inside setup for our stations. Obviously, the antennas will be outdoors.

Glen, KD2FFR, will be supervising the Monmouth station and Bob, WX2NJ, the Ocean setup. If you are interested in assisting, let the appropriate supervising operator know.

On January 13th, Ocean County ARES participated in the first Monmouth County Go-Box Expo at the Red Cross Headquarters in Tinton Falls. Thirteen tables were setup around a large meeting room and ARES and RACES groups from around the state exhibited their various Go-Boxes and deployment antennas. The expo was an overwhelming success with close to two hundred visitors. Many were OEM and Red Cross officials getting a better idea of our capabilities.



N2LD and N2XW Oversee Ocean County ARES Display

Boxes varied with some having HF, VHF, UHF functions along with APRS and VARA stations. Some contained batteries for operation and others required 12VDC or 120 VAC. Flexibility and functionality were the key components.



N2LD and Ocean County ARES Display

The following Ocean County ARES operators assisted with the display:

Bob, WX2NJ; John, N2LD; Tom, N2XW; Glen, KD2FFR; Mike, K2MDW and George, NC1A.

The Red Cross was nice enough to offer lunch to us in an adjacent room.



The orange case self-contained Go-Box built by K2MDW drew the largest crowd and the most interest for Ocean County.

73 de WX2NJ

Bob Murdock

Ocean County Amateur Radio Emergency Service® EC

2023 Holiday Luncheon



Photo by Thom Roberts

The Holiday City Amateur Radio Clubs annual Christmas luncheon was once again a festive occasion!

The Club members, XYL's and guests enjoyed our time together. The luncheon is always a meaningful time for each of us. The meal selections were all met with complementary comments.

President Doug Poray, spoke about the accomplishments of the club during the past year.

John Robert's spoke about the Sky Hook. He asked for everyone to participate in writing articles for each month's publication.

Steve Jackson spoke about how Kevin Wagner originally started the HCARC website but then turned the site over to Steve to maintain it. Once again Tom Robert's had beautiful jewelry gifts for the XYL's.

We all look forward to being together at the bimonthly Fortune Buffet luncheons.

Grace Puccio

Our Volunteer Examiner Crew

Larry [K2QDY](#) (Liaison) 732-349-2950,

John [KQ4WR](#), Stan [KB2PD](#),

Steve [N2WLH](#), Michael [WA2CWX](#)

License exams are given by appointment at 7:00pm on the first Wednesday after each HCARC meeting at Holiday City South Clubhouse Bldg A, which is at the corner of Mule Rd. and Santiago Dr. **Call Larry Puccio, [K2QDY](#), at 732-349-2950 for an appointment.**

Directions: From either Route 37 W or Davenport Road, take Mule Road to Santiago Drive. Clubhouse A is the building nearest the street corner.

Holiday City Amateur Radio Club

Toms River, New Jersey

Web Site www.hcArc.us

President	Doug Poray	KC2TZC	732-928-2316
Vice President	Steve Jackson	N2WLH	732-255-7916
Secretary	John Perry	KD2NDY	732-349-2705
Treasurer	Larry Puccio	K2QDY	732-349-2950
Program Chair	Carl Lee	W2PTZ	732-575-7558
Skyhook Editor	John Roberts	KQ4WR	732-350-1162
W2HC Trustee	Larry Puccio	K2QDY	732-349-2950

Membership is open to all interested persons. Ham license is not required. Dues are \$25.00 per year, payable Jan 1st. Members joining during the year will have the dues prorated. Family membership \$30.00 per family.

Meetings are held at 7:00 pm on the first Thursday of every month except December.

Location: Meeting Room #1 in Holiday City South Clubhouse.

Directions: From either Route 37 W or Davenport Road, take Mule Road to Santiago Drive. Turn into the parking lot from Santiago Drive, park near the pool. Enter Building A (the building nearest the street intersection).

Newsletter: The SKYHOOK is the HCARC's official newsletter, circulation about 75. Original articles and photos are appreciated. Editor is John Roberts, [KQ4WR](#), 732-350-1162.

I Was Off The Air

It was a cold and nasty January evening. The wind was blowing, the rain was beating against the windows, and you could hear the gusts moving the trees outside. The weather bureau had predicted very high wind gusts up to 50 miles per hour this night. Well, it was a good night to just stay home, watch TV and go to bed.

Suddenly, we heard a loud bang out in the back yard. Well, something had blown over. It was not the garbage pails, since we had brought them into the garage in anticipation of the heavy winds predicted.

The next morning, I turned on the rig and to my amazement the SWR on the band was off the scale. I went outside in the rain and wind only to find that my antenna mast had broken in half and was lying on the shed. I noticed the outside lamp mounted on the back wall of the house was also hanging down.

Well I could not do anything with the weather being as it was, so I was off the air for the duration.

After about two weeks off the air, the weather was a little better. I went out in the back yard to investigate what had happened.

The antenna mast is constructed of two pieces. The bottom section is a 10-foot piece of a PVC 1½ inch diameter pipe. This section is supported to the back wall of the house with two 6-inch metal brackets spaced about 18 inches apart, one above the other.

The top section is a 13-foot fiberglass pole that is 1½ inch at the bottom and tapers off to 3/8 inch at the top. To splice them together I had a 3-foot piece of 5/8 inch PVC in the base of the top section, taped in place and extending 18 inches into the bottom section. The top fiber glass pole has two guy ropes secured to and tied to the left and right side of the roof.

This had worked fine all the while the mast had been up. But with the high wind gusts, the 5/8 inch PVC buckled and bent in half causing the top piece to crash down onto my shed, taking the outside lamp with it.

I untapped the bent 5/8 inch PVC, removed it, and replaced it with a 3 foot 7/8 inch exterior grade wooden dowel stick. When the top section came down, about 5 feet of ladder line was torn in half. I

then realized that it had caught the top of the outdoor lamp, and taken it down too.



Repaired Antenna

With the two sections together and back up, I went back on the air to work Dale in Chile that afternoon.

73

Larry Puccio K2QDY

Impedance

You know that resistance is the ratio of volts to amps. But that's only if the volts and amps occur at the same time, such as with direct current. That rarely happens with alternating current, including Radio Frequency

current. For that, the ratio of volts to amps is more complex. That's Impedance.

Resistance is one of the parts, and is the ratio of volts to amps, but only the part of the voltage (volts) that's in sync with the current (amps).

The other part of impedance is the voltage/current ratio of the portion of voltage that's a quarter-cycle out of step with the current. That's called Reactance.

Because Resistance and Reactance are phased 90 degrees (a quarter-cycle) apart, like length and width, you can't just add them together to get Impedance.

So Impedance has two parts, Resistance and Reactance. Both are measured in ohms, and vary with frequency.

As with DC, the Power in Watts is the Current Flow Squared times the Resistance on ohms. ($P = I^2 * R$).

In the Reactance, however, Voltage and Current produce energy that is stored in parts of a cycle and fully returned in other parts. That's because half the time, one of them is positive and the other is negative.

So the voltages and currents can be quite high even when the power is low.

A theoretically perfect inductor (such as a coil) would have Reactance, but zero Resistance.

Likewise, a perfect capacitor would have a negative value of Reactance, but infinite Resistance (zero Conductance).

When an inductor and a capacitor are connected in series, their Reactances tend to cancel each other. Inductive reactance increases with frequency, while capacitive reactance diminishes with frequency, so there is always some resonant frequency, where the sum is zero.

There are three commonly used ways to express the amount of Impedance.

One way is to consider the impedance (Z) as the sum of two sine waves that are a quarter-cycle apart, one for the resistance and one for the reactance. Consider a simple circuit consisting of a resistor and an inductor (or a capacitor) connected in series. $Z=R+jX$.

When they're in parallel, the impedance can still be calculated, but that's another discussion, and it might

be time to consider doing the calculations in Admittance, the inverse of Impedance, instead.

A second way is to consider the resistance and the reactance are already combined ($|Z| = \text{Volts/Amps} = \text{SQRT}(R^2+X^2)$), but then you should also specify the amount of phase shift (in degrees).

The third way is to specify the Standing Wave Ratio (SWR) that the impedance would cause in a system designed for a given impedance, such as 50 ohms. But SWR doesn't tell the whole story. An SWR of 1 indicates perfect impedance match.

When AC first enters a cable, the cable acts like a resistance until the very first cycle gets to the far end and some of it returns to the input because of mismatch at the far end. From then on, the cable's input impedance will be affected by the return signal, so it will vary with cable length and frequency.

A Standing Wave is the pattern of voltage and current caused by a wave meeting its own reflection.

Microwave ovens have rotators to keep food moving through standing waves.

Standing waves in a transmission line are caused by returning energy that was not absorbed by a resistive load that matches the impedance of the line.

Because RF travels slower in a cable, the length of a wave in a cable is shorter than when in free space. For most coaxial cables, it's about 2/3 as long. For ribbon cable it's about 4/5.

A relatively short length of cable will present a small series inductive reactance and a small parallel capacitive reactance.

The effect becomes more severe as the effective cable length approaches a quarter wavelength. At that length, the impedance at its input end will equal the cable's characteristic impedance squared, divided by the load impedance at the other end (give-or-take some because of power loss in the cable).

As you might suspect, the second quarter-wavelength tends to undo the first one.

-John Roberts KQ4WR

Larry Puccio K2QDY Worked:

DATE	TIME	FREQ	MODE	CALL	ENTITY	IOTA	LOC	MILES	DIR
12/12/2023	00:28	7.019	CW	S524PMC	Slovenia		JN76ga	4268	NE
12/12/2023	00:30	7.021	CW	F50KB	France		JN23no	3937	ENE
12/12/2023	01:36	7.024	CW	HB9CVQ	Switzerland		JN47ei	3967	NE
12/12/2023	01:50	7.029	CW	P49X	Aruba	SA-036	FK52a1	1918	S
12/13/2023	00:40	14.015	CW	HC5CW	Ecuador		FI08np	2871	S
12/24/2023	23:13	14.040	CW	KL7KC	FAIRBANKS, AK		BP64cu	3294	NNW
01/02/2024	22:47	7.026	CW	GB4WWA	Scotland	EU-005	I091v1	3503	NE
01/03/2024	00:20	7.025	CW	CT3MD	Madeira Is.	AF-014	IM13tb	3195	E
01/03/2024	22:57	7.026	CW	EA3CWT	Spain		JN11dx	3857	ENE
01/03/2024	22:57	7.026	CW	EA3CWT	Spain		JN11dx	3857	ENE



Some DX Opportunities

Opportunities shown in alphanumeric order of callsigns.

Italics if DX > 8000mi

Mode codes: 8 = JT8 (DG), C = CW, D = Digital (DG), 4 = JP4 (DG), 3 = PSK31 (DG), R = RTTY (RY), S = SSB (PH), T = SSTV.

Many thanks to Bill Feidt NG3K for ADXO. Also to Wikipedia, the ARRL, the RSGB, DX World, The Daily DX & QRZ.com.

START	FINISH	ENTITY	PFX	CALLSIGN	IOTA	BANDS	MODES	QSL via	LOC	MILES	DIR	INFO by
2024 Feb20	2024 Feb27	Mauritius	3B8	3B8/OK6DJ		40-10m	C	LoTW	JN69no	4093	NE	TDDX
2024 Feb10	2024 Feb18	Georgia	4L	4L/K6VHF		80-6m	C S 8 R	K6VHF /LoTW	LN21jr	5626	NE	TDDX
2024 Feb17	2024 Mar03	Madagascar	5R	5R8BV		80-40m	C S	S53BV	LH46ds	8520	E	TDDX
2024 Jan27	2024 Feb04	Senegal	6W	6W/OE3GEA		30-10m	C	OE3GEA	IK14gp	3826	E	ARLD004
2024 Jan25	2024 Feb12	Yemen	70	702WX	AF-028	160-40m	C	OK2WX	KP04hm	3907	NNE	DXW.Net
	2024 May13	Malawi	7Q	7Q6M		160, 80-10m		LoTW	KH67ru	7693	E	ARLD048
2024 Jan24	2024 Feb05	Maldives	8Q	8Q7GR	AS-013	80-10m	S	G3WRO	MJ65rj	8695	NE	ARLD003
2024 Jan24	2024 Feb06	Maldives	8Q	8Q7WR	AS-013	80-10m	S	G3RWO w/SASE	MJ63oe	8818	NE	TDDX
2024 Feb14	2024 Feb24	Guyana	8R	8R7X		160-6m	C S 8 R	OQRS /LoTW	GJ06xs	2505	SSE	DK6SP
	2024 Dec31	Croatia	9A	9A100RKZ				9A1ADE	KM64lo	5513	NE	ARLD004
2024 Jan01	2024 Mar31	India	VU	AT3POG				VU3GWN	MK82sw	8363	NNE	ARLD052
2024 Feb10	2024 Feb24	Juan Fernandez	CB0Z	CB0ZA	SA-005	160-2m	S C R 8	see web	FF06oi	5097	S	DXW.Net
2024 Jan20	2024 Feb10	Morocco	CN	CN2DX		40-6m	C S 8	EA5GL	IM64sh	3666	ENE	TDDX
	2024 Mar15	Morocco	CN	CN2YD/p	AF-065	80-10m		F6FYD	JN18eu	3671	NE	ARLD052
2024 Jan30	2024 Feb05	Madiera	CT3	CT3/F4IFF	AF-014	60-10m	S 8	EB7DX	IM12mr	3174	E	TDDX
2024 Jan01	2024 May15	Fed Rep Germany	DA	DB100FK				LoTW	J040ic	3901	NE	ARLD052
2024 Jan01	2024 May15	Fed Rep Germany	DA	DC100FK				LoTW	J060xw	4084	NE	ARLD052
2024 Jan01	2024 May15	Fed Rep Germany	DA	DD100FK				LoTW	J040ic	3901	NE	ARLD052
2024 Jan01	2024 May15	Fed Rep Germany	DA	DF100FK				LoTW	J040ic	3901	NE	ARLD052
2024 Jan01	2024 May15	Fed Rep Germany	DA	DL100FK				LoTW	J060fs	4031	NE	ARLD052
2024 Jan01	2024 May15	Fed Rep Germany	DA	DM100FK				LoTW	J040ic	3901	NE	ARLD052
2024 Jan01	2024 May15	Fed Rep Germany	DA	DM100MW				LoTW	J040ic	3901	NE	ARLD052
2024 Jan20	2024 March	Antarctica		DP1POL	AN-016	80-10m	C s d	DL1ZB0	IB59ui	8307	SSE	ARLD003
2024 Jan01	2024 May15	Fed Rep Germany	DA	DQ100FK				LoTW	J040hd	3896	NE	ARLD052
2024 Jan01	2024 May15	Fed Rep Germany	DA	DR100FK				LoTW	J0601t	4049	NE	ARLD052
2024 Jan01	2024 May15	Fed Rep Germany	DA	DR100PE				LoTW	J040ic	3901	NE	ARLD052
	2024 Dec31	Armenia	EX	EX/RX3DPK		160-10m	8	RX3DPK	K085vt	4722	NE	ARLD001
	2024 Feb02	Guadeloupe	FG	FG/F5HRY		80-10m	C S	F5HRY	FK96eg	1805	SSE	ARLD004
	2024 Aug15	St Barthelemy	FJ	FJ4WEB	NA-146			K2LIO	FK87ov	1672	SSE	ARLD051
2024 Feb19	2024 Mar09	Wallis & Futuna	FW8	FW8GC	OC-054	160-10m	C S R 8 4	LoTW	AH16vr	7437	W	DXW.Net
2024 Feb22	2024 Mar07	Temotu	H40	H40WA	OC-065	160-10m	C S 8	M0URX /LoTW	RH29vg	8276	WNW	N6PSE
2024 Feb10	2024 Feb28	Solomon Is	H44	H44MS	OC-047	160-6m	S 8	LoTW	RI01hp	8433	WNW	TDDX
2024 Jan15	2024 Apr15	Minami Toroshima	JD1	JD1/JG8NQJ	OC-073	80-10m	C 8	JA8CJY	PM86tf	6800	NNW	ARLD002
2024 Feb17	2024 Mar14	US Virgin Is	NP2	NP2R	NA-106	160-10m	C S 8	KC3UII /LoTW	FK78mh	1595	SSE	TDDX
2024 Feb10	2024 Feb29	NEVADA USA	NV7	NV7AL			8 S	NV7AL	DM26jd	2226	W	ARRL Ltr
	2024 Jun30	Austria	OE	OE24BI				see QRZ.com	JN67tr	4174	NE	ARLD001
	2024 Jun30	Austria	OE	OE60RRDXA				LoTW	JN77nm	4242	NE	ARLD004
2024 Jan11	2024 Mar03	Saba St Eustatius	PJ5	PJ5/SP9FIH	NA-145	40-6m	S R 8 4	LoTW	FK87cm	1672	SSE	ARLD001
	2025 May	Antarctica		RI1ANE	AN-016			RQ8K	KB15qd	9006	SSE	ARLD051
	2024 March	Antarctica	^RN*	RN1ON	AN-016		C S D	RI1ANC	OB31km	9782	S	ARLD
	2024 Dec31	Sweden	SM	SK100FRK				per opr	JP70to	3866	NE	ARLD001
2024 Jan27	2024 Feb03	Guatemala	TG	TG7/N3PEM		40-10m	S	N3PEM	EK44mv	2005	SW	TDDX
	2024 Feb28	Gabon	TR	TR8CR		30-10m	C	F6AJA	JJ40rj	5871	E	ARLD001
2024 Jan18	2024 Feb02	Clipperton I	F0	TX5S	NA-011	160-6m	S C 8	LoTW	DK50jh	2963	SW	DXW.Net
2024 Feb06	2024 Feb20	Antigua & Barbuda	V26	V26CV	NA-100	80-10m	C	KG9N /LoTW	FK97cc	1747	SSE	TDDX
2024 Feb25	2024 Mar04	St Kitts & Nevis	V4	V4/K1ZN	NA-104	80-10m			FK87pf	1717	SSE	K1ZN
2024 Feb17	2024 Feb27	St Kitts & Nevis	V4	V47JA	NA-104	160-6m	S 8	W5JON	FK87pf	1717	SSE	W5JON
2023 Nov16	2024 Apr30	Namibia	V5	V51NH		160-10m		DK2WH	JG88ap	7171	ESE	DXW.Net
	2024 Novem	Antarctica		VK0DS		80-10m		VK2JDS	MC81xk	10214	SSE	ARLD051
2024 Jan11	2024 Apr11	Montserrat	VP2M	VP2MDX	NA-103	80-10m		LoTW	FK86vq	1764	SSE	DXW.Net
2024 Feb26	2024 Mar15	Cambodia	XU	XU7GNY		160-6m	C S 8	DJ6TF	OK22sv	8790	N	TDDX
	2024 Jun30	Laos	XW	XW4KV		15-10m	8	F4BKV LoTW	OK19oc	8357	N	ARLD050
2024 Jan22	2024 Feb01	Indonesia	YB	YB9/F5LIT		40-10m	S	OQRS	OI71pl	10192	NNW	TDDX
2024 Feb04	2024 Feb11	Vanuatu	YJ	YJ0AA	OC-035	80-10m	8	JH3QFL /LoTW	RH42en	8429	W	JH3QFL
2024 Feb04	2024 Feb11	Vanuatu	YJ	YJ0MN	OC-035	80-10m	8	JH3QFL /LoTW	RH42en	8429	W	JH3QFL
	2024 Dec31	Cypress	ZC4	ZC4GW				MW0BRO	KM64lo	5513	NE	ARLD004
2024 Jan16	2024 Feb04	St Helena	ZD7	ZD7Z	AF-022	160-6m	C S R 8 4	IK2DUW	IH74db	5852	ESE	ARLD003
	2024 Feb15	Cayman Is.	ZF	ZF9CW	NA-016	80-10m	C s	K5GO	FK09cr	1437	SSW	ARLD025

February

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1 HCARC Meeting 7pm	2	3
4	5	6	7 6:30pm License Exams at HCARC by appoint; 7:30pm ARES digi net 145.170MHz; 8:30pm ARES voice net 449.825MHz	8	9	10
11	12	13	14 7:30pm ARES digi net 449.825MHz; 8:30pm ARES voice net 145.170MHz	15	16	17
18	19	20	21 Noon HCARC Board lunch; 7:30pm ARES digi net 145.170MHz; 8:30pm ARES voice net 449.825MHz	22	23	24
25	26	27	28 7:30pm ARES digi net 449.825MHz; 8:30pm ARES voice net 145.170MHz	29		
					Updated on	1/20/2024

Thank You All

[School Club Roundup](#) | February 12 - 16, 2024

[International DX CW](#) | February 17 - 18, 2024

Many thanks to Doug Poray KC2TZC, Larry Puccio K2QDY, Bob Murdock WX2NJ, QRZ.com, KC0ONR, Bill Feidt NG3K, and the ARRL.

QSO Parties Rules

Feb 2,3 VT <http://www.ranv.org/vtqso.html>

Feb 3 MN <https://www.w0aa.org/mnqp-rules/>

Feb 3,4 BC http://www.orcadxcc.org/bcqp_rules.html

Feb 24,25 SC <http://scqso.com/>

Feb 25-26 NC <http://ncqsoparty.org/rules/>