



The SKYHOOK



HOLIDAY CITY AMATEUR RADIO CLUB

www.hcarc.us

April 2022

Toms River, NJ

Our President's Message



Morse Code is the oldest form of electronic communication used by radio amateurs. It continued to be used for this purpose for many years until communication by voice became popular, which eventually caused the FCC to eliminate the requirement of code proficiency to qualify applicants to obtain their amateur licenses.

This did not discourage a great number of amateurs to continue to use morse code for sending their messages. Today, many radio amateurs either rely on using code entirely or they use morse code together with voice to communicate.

There is a great history concerning morse code and the necessary equipment required for implementing this form of communication.

Join us at the April meeting for a presentation on this subject. Experienced as well as new amateurs will find this topic interesting.

-Doug Poray, KC2TZC, President

Happy Birthday To:

Donna Perry
Grace Puccio
Marjorie Stafiej



The Telegraph

Before there were telephones, the telegraph was the only form of rapid communications over distances of more than a few hundred feet. Railroads were probably the first users of telegraph, as they needed a way to schedule trains that was faster than the trains.

The telegraph system used simple electromagnets to make scratch marks on paper tape, but the operators soon discovered that they could read at least some of the messages just by listening to the clack-click sound of the machine.

The code used had dots and dashes, but there were short dashes, long dashes, and really long dashes, and some of the characters had little pauses within them. That code is now called and American Morse, or Railroad Morse. It was used by American railroads, Western Union telegrams, and newspapers until teletypewriters became available in the late 1930s.

Even decades later, it and was still used by a few small railroads and a few radio amateurs who had been telegraphers.

Since the earliest days of radio communications, the standard is the International Morse Code, which is far easier to master, because it was designed to be read by sound, rather than by machines making hard to decipher marks on paper.

In a hundred years, there has been only one change to that code: the '@' sign had to be added. It's an 'a' (didah) and a 'C' (dahdidahdit) sent without the gap between them (didahdahdidahdit).

Much more at the regular meeting on Thursday.

-John Roberts, KQ4WR

OUR NEXT REGULAR MEETING:
Thursday April 7th at 7:00 PM
Holiday City South Clubhouse A
Santiago Drive at Mule Road
Toms River, NJ

Ocean County ARES® News



April 2022

The next meeting of Ocean County ARES will be on April 20, 2022 at the Ocean County EOC, Robert J. Miller Airpark, Berkeley Township. The meeting will start at 7:00 PM. All are invited.

A while ago I heard an individual on a club net ask if it was necessary to bond the ground from his garage sub panel (where his shack is) to his antenna ground system. I would like to spend the rest of this newsletter addressing this issue along with a real-life experience.

Bonding is simply a matter of taking all of the electrical and metallic masses in a facility and connecting (bonding) them with conductors, bringing them to the same electrical potential. The primary reason for bonding is personnel safety, so someone touching two pieces of equipment at the same time does not receive a shock by becoming the path of equalization. For the same reason bonding protects people, it protects equipment, reducing unwanted current flow on power and data conductors and controlling arcing between pieces of equipment at different potentials.

It is a difference in potential across your equipment causing current flow through the equipment which causes damage.

Current divides and takes all paths. The amount of the current flowing on any one path is proportional to the surge impedance of that path relative to the total surge impedance of all paths. Even if heavy duty bonding straps are provided between grounds as the primary intended path of equalization, some of the current flow will be through unintended paths; through other conductors and equipment. Therefore, it is critical to bring all services and equipment grounds within a facility to the same potential before they connect to the grounding system, eliminating the

possibility of current flow.

In a typical installation, we must be concerned with several different ground potentials. The first set of ground potentials is associated with the services to the site, i.e., AC power, TELCO, data and RF transmission lines from antennas. If a piece of equipment is connected to both a data line and to a power supply, and there is a difference in ground potentials between those two service grounds, that difference in potential can equalize within the equipment, causing damage or accelerated wear.

In a real-life case that I know of, a ham operator had a tower erected in his back yard with ample ground rods, surge protectors, ground cables, etc. Because the electrical service entrance was located in the front yard, a ground cable was not installed between the tower and the electrical service entrance ground rod.

During an electrical storm, a lightning strike entered the service entrance ground. Lightning seeks the best path to ground, which in this case was the better grounds of the ham radio tower. Even though a single ground rod was installed at the service entrance, lightning potential went on the hunt for a better one. Over \$20,000 of equipment damage occurred.

Lightning entered the ham radio station power supply and jumped over to each piece of gear powered by 12 VDC. Numerous components and circuit board traces were literally vaporized as the lightning potential finally found the antenna coax and ground connections to the superior ground.

The real kick in the pants of this whole event was the lightning entered the residence via the Comcast Cable line. Yes, the service that many of us pay a lot of money every month for has no other ground protection in distribution boxes and is grounded by that flimsy little ground link at your service entrance. Needless to say, the consumer electronics (TV's, VCR, etc.) of the residence were also sacrificed by the hit.

Keep in mind, even if the electrical service entrance was connected to the antenna ground with a strong bonding conductor, potentials will increase during a

lightning strike, but damage will (hopefully) be kept to a minimum.

Finally, for the last couple of months there has been an individual on the Toms River UHF repeater identifying himself with a strange callsign. We were finally able to capture his voice on audio tape and he is identifying himself with his GMRS callsign. GMRS licenses only permit operation on GMRS frequencies, not amateur radio frequencies. Amateur radio licenses also do not permit operation on GMRS frequencies. The individual has been asked on numerous occasions to identify with his ham callsign and he has not, so one has to assume that he is not a licensed ham.

The FCC has been contacted, given the facts of the violation and they will be contacting the individual.



Hopefully, this will be the end of the incident, but if it is not, the individual will be looking at a hefty fine. Thanks to all that assisted in identifying the perpetrator.

73 de WX2NJ
 Bob Murdock
 Ocean County Amateur Radio Emergency Service®

Southern NJ Section News



April 2022

The weather is beginning to improve. Many clubs are planning their activities and gathering together again. There are also some hamfests in the planning phase. Some other clubs are planning Foxhunts and some have already had one or two. There seems to be no

lack of amateur radio activities in the Southern New Jersey Section. Remember Field Day is coming in June. Even though you can work from home many clubs are planning to set up in the field again. I will be making the rounds to many clubs and I hope to see many of you. Don't forget to order your Field Day gear from the ARRL.

The ARRL Website is being redesigned. Check it out to see the new layout. We have been waiting for this for some time. I think many will like the new look. Don't forget to check out the ARRL Learning Center for new and updated courses <https://learn.arrl.org/>

Annual Armed Forces Day Cross-Band Exercise Set for May 14.

Holiday City Amateur Radio Club

Toms River, New Jersey

Web Site www.hcsrc.us

President	Doug Poray	KC2TZC	732-928-2316
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Secretary	John Perry	KD2NDY	732-349-2705
Treasurer	Larry Puccio	K2QDY	732-349-2950
Executive Board (open)			
Executive Board	John Roberts	KQ4WR	732-350-1162
W2HC Trustee	Larry Puccio	K2QDY	732-349-2950

CLUB COMMITTEES

<i>Webmaster:</i>	Steve	N2WLH	N2WLH@yahoo.com
<i>Program Coord:</i>	(open)		
<i>Field Day:</i>	Larry	K2QDY	732-349-2950
<i>VE Sessions:</i>	Larry	K2QDY	732-349-2950
<i>Membership:</i>	John	KQ4WR	732-350-1162

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 normally held on the first Thursday of every month except December, at 7:00 pm.
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 and park near the pool. Enter the building that's nearest the street intersection.

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The 2022 running of the Armed Forces Day (AFD) Cross-Band exercise will be held on May 14, 1300 – 2200 UTC. A complete list of participating stations, modes, frequencies, times, and other details will be announced on April 1. The event is open to all radio amateurs. Armed Forces Day is May 21, but the AFD Cross-band military-amateur radio event traditionally takes place 1 week earlier, in order to avoid conflicting with Dayton Hamvention®. During the exercise, radio amateurs listen for stations on military operating frequencies and transmit on frequencies in adjacent amateur bands.

Military and amateur stations have taken part in this event for more than 50 years. It's an exercise scenario, designed to include ham radio and government radio operators alike.

Per previous announcements: "The AFD Cross-band Test is a unique opportunity to test two-way communications between military communicators and radio stations in the Amateur Radio Service, as authorized in 47 CFR 97.111. These tests provide opportunities and challenges for radio operators to demonstrate individual technical skills in a tightly controlled exercise scenario that does not impact any public or private communications."

Military stations in various locations will transmit on selected military frequencies and announce the specific ham band frequencies they are monitoring.

An AFD message will be transmitted utilizing the Military Standard (MIL-STD) serial PSK waveform (M110), followed by MIL-STD Wide Shift FSK (850 Hz RTTY), as described in MIL-STD 188-110A/B. The AFD message will also be sent in CW and RTTY. Full details will be released on April 1.

2022 World Amateur Radio Day is April 18

All amateur radio operators worldwide can participate on Monday, April 18, 2022 at 0000 UTC until Tuesday, April 19, 2022 at 0000 UTC. This is a global event covering all regions of the International Amateur Radio Union (IARU).

World Amateur Radio Day, held on April 18 each year, is celebrated worldwide by radio amateurs and their national associations which are organized as member-societies of the International Amateur Radio Union

(IARU). It was on this day in 1925 that the IARU was formed in Paris. American Radio Relay League (ARRL) Co-Founder Hiram Percy Maxim was its first president.

On World Amateur Radio Day, all radio amateurs are invited to take to the airwaves to enjoy our global friendship with other amateurs, and to show our skills and capabilities to the public.

World Amateur Radio Day is not a contest but rather an opportunity to "talk" about the value of amateur radio to the public and our fellow amateur colleagues. It is also a great opportunity to talk about your radio club and amateur radio in local media as a lead-up to ARRL Field Day (held each year during the fourth full weekend in June) and another ham radio related activity in your community – such as volunteers who serve in local emergency communication readiness including the ARRL Amateur Radio Emergency Service®.

Here are just a few ways to participate in, and promote, World Amateur Radio Day:

[Get a station on the air! Create your own personal "event" to talk about amateur radio to others, including family and friends.](#)

[Create and hold a special net or on-air event on World Amateur Radio Day to raise the level of attention for the celebration, and to encourage other hams to talk about our hobby. Consider creating and offering a commemorative certificate for contacting your special activation. It can be an electronic one as these are cost effective.](#)

[Promote your personal World Amateur Radio Day activity\(ies\) on social media platforms like Twitter and Facebook by using the hashtag #WorldAmateurRadioDay. Make sure you send it to various clubs, reflectors, and media.](#)

Join us in celebrating World Amateur Radio Day and all the ways amateur radio brings us together!

Tom Preiser N2XW SNJ Section Manager

n2xw@arrl.org

Tornado Spotting



In tornado-prone states, when the weather looks nasty, people turn on the TV or radio to hear the local weather report. All TV and broadcast radio programming gets interrupted by the local "weather anchorman" until the danger passes.

When I was a SKYWARN member in Alabama, the weatherman was a ham. He monitored the local SKYWARN net with one ear while giving his report on TV, often repeating what he heard nearly word-for-word.

FCC regulations did not permit broadcasting the actual transmissions.

SKYWARN was often the only communications system

still operating.

NOAA gets tornado and other current storm reports from SKYWARN spotters.

Weather radar rarely sees a tornado, because radar doesn't scan lower than a few hundred feet above ground level.

Also, NOAA weather radar takes 6 minutes to make a scan, so by the time it sees debris in the air, it's old news.

Once a tornado is spotted, SKYWARN reports its position and direction of travel.

During and after the tornado, trained SKYWARN spotters are already there, accurately reporting what damage has been done, and what emergency services are needed.

-John Roberts, KQ4WR

Some DX Opportunities

Listed in alphanumeric order of Callsign, which may not have the entity's usual prefix.

Mode codes: 8 = FT8, 9 = JT9, A = AM, C = CW, D = Digital, E = EME, R = RTTY, S = SSB, T = SSTV.

Bands: "Low" usually means 160, 80 & 40m. HF means 3 to 30 MHz (includes 80 to 10 meters).

Many thanks to NG3K, Wikipedia, Google Maps, the ARRL, the RSGB, DXWorld, DXNews & QRZ.com for the data.

FINISH	ENTITY	PFX	CALLSIGN	IOTA	BANDS	MODES	QSL via	LOC	Miles	Dir	INFO
220401	Senegal	6W	6W/ON4AVT		80-10m	S D	Club Log OQRS	IK14mi	3865	E	OPDX
220427	Maldives	8Q	8Q7DX	AS-013	160-10m		E73Y / OQRS	MJ65ja	8694	NE	DXNews
220423	Nepal	9N	9N7MK		40-15m	8 S C	S57MK	NL27pr	7584	NNE	ADXL
220526	Botswana	A2	A25VR		80-10m		VE7VR	KG28ma	7660	ESE	ADXL
220419	Azores	CQ8	CQ84AS	EU-089	80-10m	C	HB9CRV	HM49jl	2266	ENE	TDDX
220415	Antarctica	EM1U	EM1UA EM1U	AN-006	80-10m	8	UT7UA	FC74us	7293	S	ARLD006
220419	Martinique	FM	FM/DF8AN	NA-107	80-10m	C D	DF8AN	FK97mq	1923	SSE	TDDX
220419	Martinique	FM	FM/DF8AN	NA-107	80-10m	C D	DF8AN (B/d)	FK94mq	1923	SSE	TDDX
220424	Dominca	J7	J79MN	NA-101	80-10m	C D	DF8AN	FK95ij	1869	SSE	TDDX
220424	Dominca	J79	J79MN	NA-101	80-10m	C D	DF8AN (B/d)	FK95ij	1869	SSE	TDDX
220615	Minami Torishima	JD1	JG8NQD/JD1	OC-073	80-10m	C	JA8CJY	QL64xh	7024	NW	ARLD010
220426	Svalbard	JW0	JW0Z	EU-026	80-10m	C S R D	M0URX OQRS	JQ75tf	3566	NNE	ONSUR
220429	Aland Is	OH0	OH0EG	EU-002	80-15m	4 8 R	SP1EG	KP00ae	4015	NE	TDDX
220504	Saba & Sint Eustatius	PJ5	PJ5/W5JON	NA-145	60-6m	S 8	W5JON	FK87cm	1672	SSE	W5JON
220501	St Lucia	J6	tbd	NA-103	80-10m	C D	DF8AN	FK93mu	1976	SSE	TDDX
220415	Central African Rep	TL8	TL8AA		160-6m	C S R	I2YSB	JJ94gl	6170	E	I2YSB
220415	Central African Rep	TL8	TL8ZZ		160-6m	8	I2YSB	JJ94gl	6170	E	I2YSB
220406	Guadeloupe	FG	T01Q	NA-102	80-10m	S 8	F1ULQ	FK96eg	1805	SSE	ARLD011
220428	Austral Is	TX5	TX5N	OC-114	160-10m	C S	M0URX OQRS	BG66dd	6461	WSW	TDDX
220501	St Kitts & Nevis	V4	V4/KG9N	NA-104	80-10m		LoTW KG9N	FK87pg	1714	SSE	DXNews
220425	Norfolk I	VK9	VK9NT	OC-005	160-6m	C s	M00XO OQRS	RG30xx	8892	W	TDDX
220420	Burkina Faso	XT	XT2MAX		160-10m	C D	EA2GL	IK92fh	4765	E	DXW.Net
220911	South Sudan	Z8	Z81D		40-10m		OM3JW	KJ54su	6832	ENE	ARLD010

Larry Puccio K2QDY Worked:

Date UTC	Time UTC	Freq.	Mode	Call Sign	Entity	LOC	Miles	Dir
2/19/2022	22:47	14.032	CW	PY2NY	Brazil	GG58ur	4552	SSE
2/25/2022*	23:43	1.828	SSB	W1VE	VA	FM18it	181	WSW
2/25/2022	23:58	1.828	SSB	KB3VQC	MD	FM19kb	166	WSW
2/26/2022	00:03	1.829	SSB	K3ZM	VA	FM08sb	262	WSW
2/26/2022	00:07	1.847	SSB	NG4C	NC	FM16tj	272	SSW
2/26/2022	00:08	1.847	SSB	N2CW	NJ	FM29up	22	S
2/26/2022	00:09	1.857	SSB	W4NF	VA	FM18hq	189	WSW
2/26/2022	00:11	1.861	SSB	K3CT	PA	FN20fr	87	NW
2/26/2022	00:14	1.866	SSB	W3BGN	PA	FN20kk	57	NW
2/26/2022	00:15	1.870	SSB	NN3W	VA	FM18iv	179	WSW
2/26/2022	00:17	1.868	SSB	K9RS	DE	FM29er	75	WSW
2/26/2022	00:23	1.892	SSB	ND8DX	OH	EN91rb	340	WNW
2/26/2022	00:24	1.921	SSB	W3TS	PA	FN10ml	148	WNW
3/05/2022*	16:58	14.245	SSB	DM0A	Germany	J040ic	3901	NE
3/05/2022	17:00	14.215	SSB	SN7D	Poland	J091uu	4273	NE
3/05/2022	17:03	14.212	SSB	II2S	Italy	JN55fk	4115	NE
3/05/2022	17:07	14.209	SSB	C37N	Andorra	JN02sm	3806	ENE
3/05/2022	17:10	14.255	SSB	KP4AA	Puerto Rico	FK68jb	1571	SSE
3/05/2022	17:11	14.256	SSB	ED3W	Spain	IN80mm	3652	ENE
3/05/2022	17:12	14.259	SSB	PJ2T	Curacao	FK52kg	1939	S
3/05/2022	17:14	14.261	SSB	9A9Z	Croatia	JN75xt	4335	NE
3/05/2022	17:16	14.276	SSB	SP5C	Poland	K002oi	4311	NE
3/05/2022	17:18	14.279	SSB	I04X	Italy	JN62ks	4309	NE
3/05/2022	17:53	14.290	SSB	I00A	Italy	JN63ec	4275	NE
3/05/2022	18:43	28.357	SSB	KP4PR	Puerto Rico	FK68xk	1566	SSE
3/05/2022	18:44	28.356	SSB	NP4DX	Puerto Rico	FK68ph	1562	SSE
3/05/2022	18:46	28.353	SSB	KP2M	US Virgin Is.	FK77ps	1636	SSE
3/05/2022	18:56	28.395	SSB	PY2DY	Brazil	GG66qk	4738	SSE
3/05/2022	18:57	28.378	SSB	PX5M	Brazil	GH49eq	3765	SSE
3/05/2022	18:59	28.367	SSB	V26K	Antigua & Ba.	FK97bc	1745	SSE

***Contests**

February 25/26 was the SSB 160 meter contest. March 5/6 was the ARRL DX SSB contest. Contests are a good way to work new countries or states.

-Larry Puccio K2QDY

Russ Young, WA2VQV Reports:

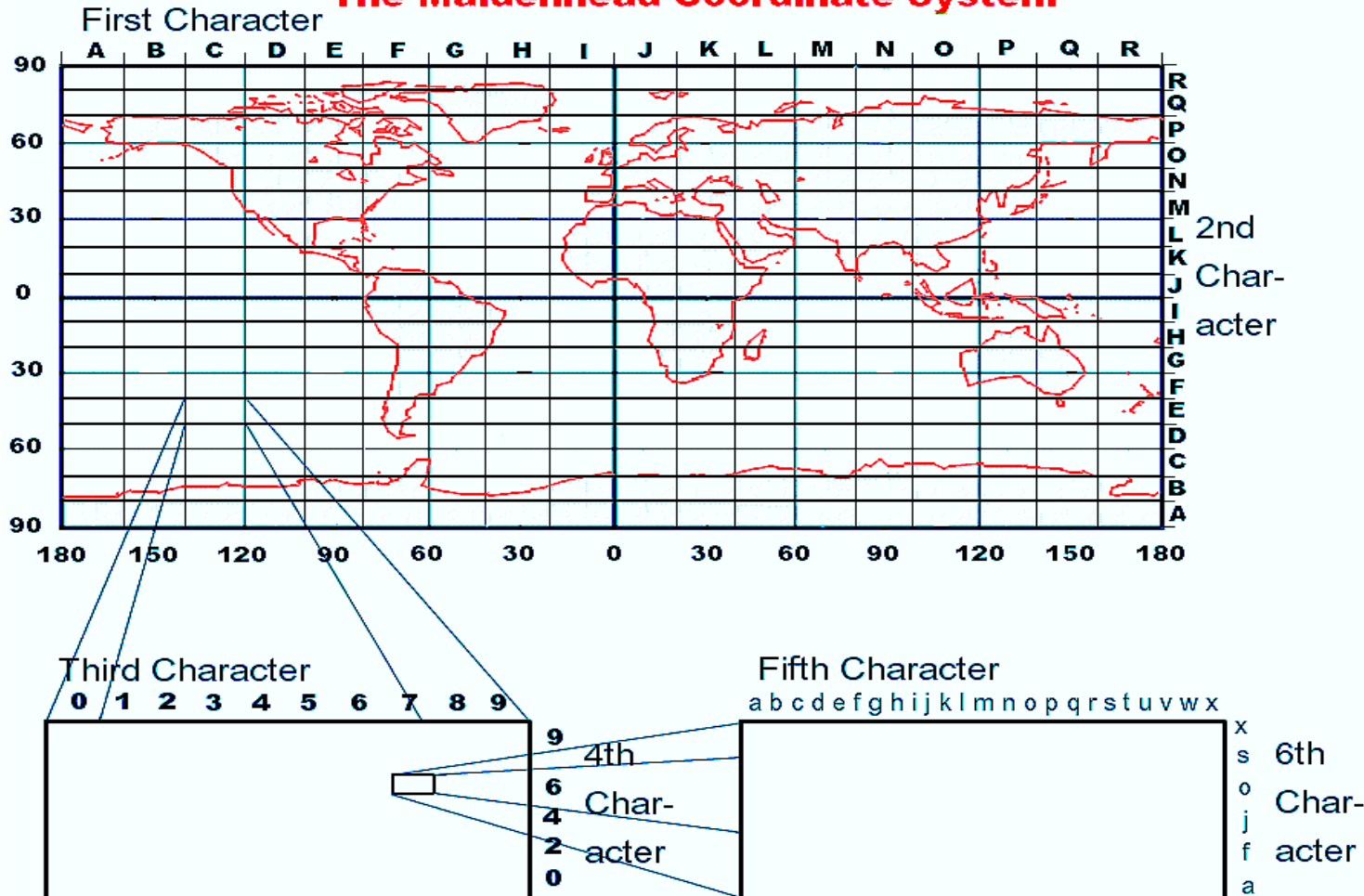
On Friday received email from Rudy, OM3KFO, requesting sked, as he needed Delaware for WAS. We set up a sked for Saturday at 1500Z on 24893 MHz +/- QRM on CW. On Saturday at 1511Z we made contact on 24892.2 MHz as seen below.

DATE	UTC	MODE	BAND	FREQ	CALLSIGN	ENTITY	IOTA	GRID	DIST	DIR
2/27/2022	2204Z	CW	10m	28001	FK8IK	New Caledonia	OC-032	RG37fr	8657	W
2/27/2022	2223Z	CW	12m	24891	FK8IK	New Caledonia	OC-032	RG37fr	8657	W
2/28/2022	2105Z	CW	17m	18070	V4/KG9N	St. Kitts & Nevis	NA-104	FK87pg	1678	SSE
3/4/2022	2135Z	CW	10m	28020	XE1XR	Mexico		EK09kk	1952	SW
3/4/2022	2150Z	CW	12m	24896	JH1HDT	Kawasaki-Shi, Japan		PM86tf	6737	SSE
3/18/2022	2133Z	CW	15m	21017	6D1A	Mexico		EK09kk	1952	SW
3/18/2022	2154Z	CW	15m	21020	JH1GEX	Yamanashi, Japan		PM95ik	6860	NNW
3/19/2022	1511Z	CW	12m	24892	OM3KFO	Topolcany, Slovakia		JN98bn	4420	NE
3/19/2022	2022Z	CW	12m	24905	PJ7AA	Sint Maarten	NA-105	FK88ka	1620	SSE
3/21/2022	2145Z	CW	17m	18083	JH1HDT	Kawasaki-Shi, Japan		PM86tf	6837	NNW
3/21/2022	2201Z	CW	12m	24891	FY5KE	French Guiana		GJ25qd	2733	SE

[Russ runs 75 watts to an MFJ Super-High Q 3-foot loop antenna, indoors over his guest bedroom, which is above the downstairs neighbor's one-car garage. It covers the 30 meter to 10 meter bands. He has

another similar antenna for the 40 meter band, but it does not cover the 12meter or 10 meter bands, and is not currently operational. Such antennas are precisely remotely tuned by remote control from the shack.]

The Maidenhead Coordinate System



April

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:00 PM April 13 Skywarn Training Net 145.170 MHz					1	2 Louisiana QSO Party 10AM- Midnight
3	4	5	6 7:30pm ARES digi net 145.170 MHz; 8:30pm ARES voice net 449.825MHz	7 7:00 PM HCARC live meeting (see page 1)	8	9 NM & GA QSO Parties begin 10AM & 2PM
10	11	12 FCC License Exams Wed April 13 see page 1	13 7:30pm ARES digi net 449.825 MHz; 8:30pm ARES voice net 145.170 MHz	14	15	16 Mich & Ontario QSO Parties begin 10PM & 2PM
17	18 World Amateur Radio Day see page 4	19	20 Ocean County ARES Meeting see page 2	21	22	23
24	25	26	27 7:30pm ARES digi net 449.825 MHz; 8:30pm ARES voice net 145.170 MHz	28	29	30 Florida QSO Party Noon to May 1 5:59PM

License Exams

SKYWARN Weather Net



The SKYWARN Training Net starts at 8PM April 13 on the 145.170 MHz Repeater.



Our ARRL Volunteer Examiners give examinations for FCC Amateur Radio licenses monthly. For a new license or an upgrade, call Larry Puccio at 732-350-2950 for an appointment.

"Thank You"

Skyhook Editor John Roberts wishes to thank Doug Poray, Bob Murdock, Tom Preiser, Larry Puccio, and Russ Young for contributing articles for this issue.