



QRO

MONTHLY NEWSLETTER OF THE PALOS VERDES AMATEUR RADIO CLUB

FEBRUARY 2020



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All **QRO** monthly issues since 2007 are on the PVARC website at:
www.k6pv.org in the "Newsletter" tab

Sunspots and radio propagation

Terry Dennison, K9TAD

Thursday, February 6, 2020

6:30 pm: 1) "What's Next?" group...all ham radio questions welcome, and 2) separate "DMR Basics" group

7:30 pm: Main meeting and presentation

**Fred Hesse Community Park
(McTaggart Hall)
29301 Hawthorne Blvd.
Rancho Palos Verdes, CA
Visitors always welcome**

PVARC's upcoming meeting topics

The PVARC's February 6, 2020, meeting features Terry Dennison, K9TAD, speaking about sunspots and HF propagation. In the past year sunspots have been scarce, but there's hope we are just now starting Solar Cycle 25. Terry recently gave this presentation at a Southern California DX Club monthly meeting. Also at the February 6th meeting our club officers and directors will be elected to serve from February 6, 2020, to February 4, 2021 (see article below.)

Our March meeting program speaker is noted DXer and DXpeditioner Dr. Arnold Shatz, N6HC, who will show a video and discuss the 2019 Pitcairn Island DXpedition where he was an operator and team physician. If the place sounds familiar that's because Pitcairn is where "Mutiny on the HMS Bounty" mutineers led by Fletcher Christian hid from 1790 to 1794...and a permanent settlement continued after that. Today about 50 individuals live on Pitcairn Island, most of them descendants of the mutineers. In the late 1990's the PVARC was fortunate to have the island's long-time ham radio operator Tom Christian (VP6TC) at one of our monthly meetings. Tom Christian died in 2013 at age 77.

Speakers for our April and May meetings will be announced shortly. ■

PVARC Board of Directors election at February 6th meeting

The PVARC's officers and directors are elected annually at our February meeting to serve for the following 12 months. In advance of our January meeting where nominations are also taken from the floor a nominating committee of the Board always slates a list of candidates who have expressed their willingness and full commitment to respectively fill each position.

No additional nominations were made at our January 2 meeting. The slate nominated and committed to serve from February 2020 to February 2021 can be elected by simple voice affirmation at our February 6th meeting:

For President: Diana Feinberg, AI6DF

For Vice President: Ray Day, N6HE

For Secretary: Ron Wagner, AC6RW

For Treasurer: Peter Landon, KE6JPM

For Directors (2): Clay Davis, AB9A

Gary Lopes, WA6MEM ■

Thank you for supporting the PVARC in 2019

Our club is very appreciative to all PVARC members for supporting amateur radio in general—and specifically in our respective communities. Thank you for being our fellow club members.

At the end of each activity year we also recognize PVARC members who (without fanfare) either donated to our general fund; donated equipment, materials, or supplies for our ongoing operations; or donated to support our Holiday Dinner and/or International Lighthouse & Lightship Weekend. Their contributions (shown below in no particular order) enabled us to provide quality programs for all to enjoy.

Donations to PVARC General Fund

KE6PMN	Don Beaumont
K6JW	Jeff Wolf
WW6WW	John & Karen Freeman
KM6LGX	David Turner
NZ6L	Joe & Michelle Pace
KK6BFI	Laura Behenna
NJ6I	Robert Cullinan
KI6YMD	Robert Kollar
W6JBN	Jim Maxwell
KI6EAI	Robert King
KM6GXZ	Rick Heaston
K6MU	Jim Nadal
KC6NNV	Brad Rachielles
AF6VT	Mike Caulfield
KK6KCH	Mike Leyba
KK6EOS	Steve & Debbie Marschke
K6DPY	Dan Yang
KO6S	Mike Mockler
KF6QFH	Sid & Fran Wielin
WB6ZJD	Steve Nash
NG6R	Jerry Kendrick
KK6CYU	Rod Jensen
WA6MEM	Gary Lopes
K6SY	Mel & Doris Hughes
K1DFO	Walt Ordway
WJ1P	Joel Pastor
KK6MNO	Henry Bremer
WG6E	Don Wilt

I would like to additionally thank Don Beaumont, KE6PMN; Jerry Kendrick, NG6R; Sid & Fran Wielin, KF6QFH & KF6QFG; Tony Bressickello, W6GEZ; Steve & Debbie Marschke, KK6EOS & KK6EOW; Henry Bremer, KK6MNO; and Gary Lopes, WA6MEM, for their exceptional generosity to the PVARC in 2019.

Thank you again to all,
Diana Feinberg, AI6DF
PVARC President

*Our apology if we somehow omitted your name from our lists. If so, please advise your **QRO** Editor and we'll correct it.*

Donations of Equipment, Materials, or Supplies

K1DFO	Walt Ordway
K6JW	Jeff Wolf
W6HIP	Bob Closson
WA6MEM	Gary Lopes
AB9A	Clay Davis
N6HE	Ray Day
AB6SY	Bob Sylvest
AI6DF	Diana Feinberg
W6GEZ	Tony Bressickello
K6CTT	Cheri Tanimura
AF6VT	Mike Caulfield
N6KN	Rocco Lardiere
K6SY	Mel & Doris Hughes
NG6R	Jerry Kendrick

Donations to PVARC Holiday Dinner and Lighthouse Weekend

K1DFO	Walt Ordway
WW6WW	John & Karen Freeman
NG6R	Jerry Kendrick
KK6KCH	Mike Leyba
K6JW	Jeff Wolf
W6HIP	Bob Closson
K6DKC	David Calloway
WA6MEM	Gary Lopes
K6SY	Mel & Doris Hughes
AB9A	Clay Davis
AB6SY	Bob Sylvest
AI6DF	Diana Feinberg
NZ6L	Joe & Michelle Pace
W6GEZ	Tony Bressickello
KM6YGM	Georgiann Keller
KM6YGS	Annalisa Little
KO6MD	Malin Dollinger
K6CTT	Cheri Tanimura
AF6VT	Mike Caulfield
N6KN	Rocco Lardiere

Is there a Tijuana taxi in your future on the 440 MHz ham band?

By Diana Feinberg, AI6DF
QRO Editor

Ford Motor Company ads in the U.S. from 1944 to 2001 famously proclaimed “There’s a Ford in your future!” but lately some SoCal hams using 440-450 MHz amateur radio repeaters near the Mexican border might say “There’s a Tijuana taxi in your future!”

What happened was San Diego County hams suddenly began experiencing interference from Tijuana taxi companies, Tijuana delivery drivers, and other commercial two-way radio users south of the border. Hams with clear paths from the Palos Verdes Peninsula’s south and east sides might also be able to hear these sporadic Baja California signals coming across the ocean water, though not with the same strength. So what gives?

What gave was Mexico’s telecommunications regulator in the early 2000’s took away 440-450 MHz from Mexican hams for eventual re-assignment to commercial use. Mexican hams were relegated to 430-440 MHz for their 70cm band while the Mexican 440-450 MHz spectrum remained quiet until 2018 when frequencies were auctioned for commercial trunked radio systems (including in Baja California.) But U.S. hams across the border still had the entire 420-450 MHz for their 70cm band (as secondary users), with amateur repeaters extensively spread across 440-450 MHz.

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MEXICO: IFT Opens Public Draft for 10 MHz of Available Radio Spectrum in 440-450 MHz Band

The Federal Institute of Telecommunications is currently receiving public comments, opinions, and additional input for parties interested in the following draft: “Project of Public Tender Bases to grant the use, exploitation and commercial exploitation of 10 MHz radio spectrum available in the Band 440-450 MHz to provide the service of capacity position for private radio-communication systems.”

The objective is to define the general rules and guidelines of the draft, to include deadlines, requirements, procedural steps for submitting bids, and more. This ultimately will help establish the winning participants of the Public Bidding. Public comments and contributions are accepted from the 28th of April to the 26th of May 2017.

Above: Mexico’s equivalent of the FCC announcing in 2017 that the 440-450 MHz spectrum would open for private communication services.

Can you hear us now?

Recent land-mobile trunked radio systems on 440-450 MHz for taxis and other vehicles in Baja California are reportedly colliding with some ham repeaters north of the border.

PHOTO CREDIT: Unknown photographer posting on Flickr, https://c1.staticflickr.com/1/21/26533945_2b93010900_b.jpg



Is there a Tijuana taxi in your future on the 440 MHz ham band?

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Other differences in VHF/UHF amateur band plans between the U.S. and Mexico: In Mexico the 1.25-meter ham band has a 1.075 MHz “doughnut” hole for commercial radio services between 223.4875 and 224.5625 MHz and on 70-cm there’s a 1.0125 MHz commercial radio allocation between 433.9875 and 435.0 MHz.

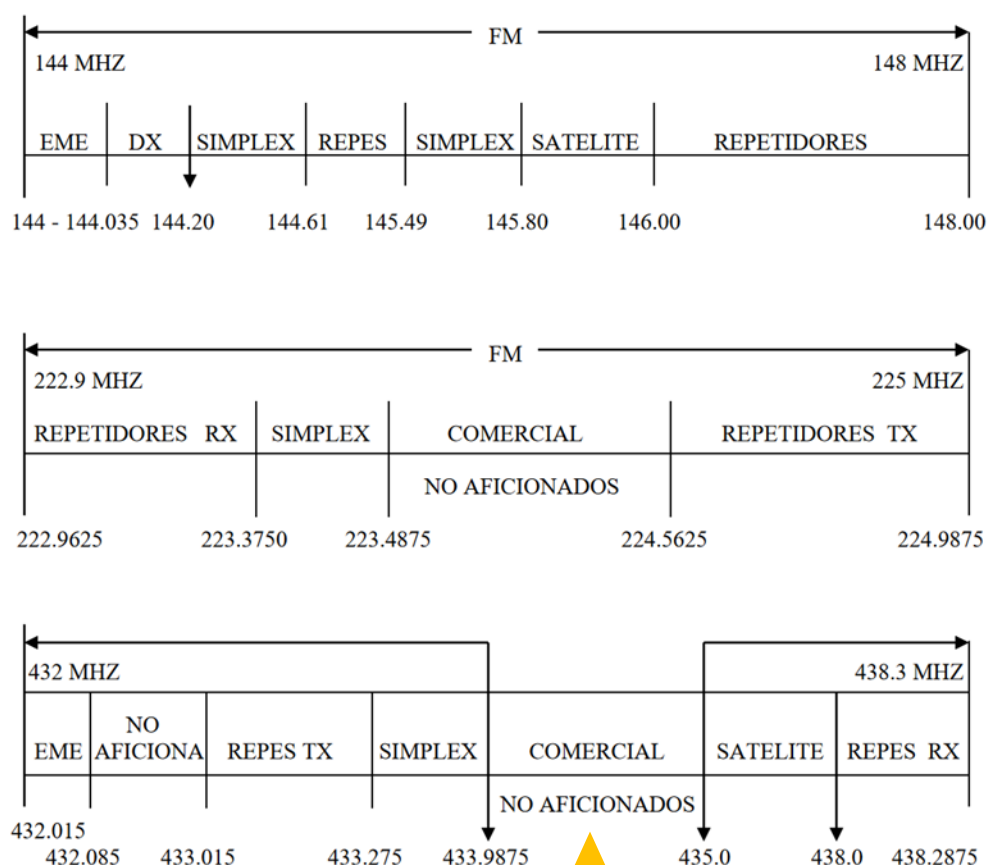
So why are land-mobile radio services in Tijuana interfering with some SoCal ham repeaters on 440-450 MHz?

With so many frequencies being used in Baja’s trunked radio systems some will directly or closely conflict with 440-450 MHz U.S. ham repeaters when the latter’s squelch is open. FM’s capture effect favors the higher power of commercial trunked systems vs. the 50-watt maximum for 70cm in Southern California (the limit due to our proximity with the Pacific Missile Test Range.)

But wait...FCC Part 97 (Amateur Radio) regulations actually require U.S. hams to accept interference and avoid creating any with fixed and mobile services across borders on 440-450 MHz.

In what seems like a chapter from “Ripley’s Believe It or Not” check this out:

From Article 33 of Mexico’s national amateur radio society code of conduct for amateur radio operators: Band Plans for 2-meters, 1.25-meters, and 70-cm



GRAPHIC: Besides 440-450 MHz having been allocated for commercial radio services the centers of Mexico’s 1.25m and 70cm ham bands have 1.0+ MHz zones for commercial radio. “Aficionados” means “enthusiasts”, i.e. ham radio operators.

CREDIT: La Federación Mexicana de Radioexperimentadores A.C. Technical Code of Conduct, <https://www.fmre.org.mx/regltec.html>

FCC Section 97.303: Frequency sharing requirements...

- (3) Amateur stations transmitting in the 420–430 MHz segment or the 440–450 MHz segment must not cause harmful interference to, and must accept interference from, stations authorized by other nations in the fixed and mobile except aeronautical mobile services.

Well, there might indeed be a Tijuana taxi dispatcher in a SoCal ham’s future due to band plan differences between the United States, Mexico, and their respective national regulations. We surely are grateful that the K6PV repeater on 447.120 MHz isn’t near the border but we’ll enjoy our ride on the airwaves, potholes and all. ■

Next HF Enthusiasts Group meeting at PV Library, February 8, with more focus on HF aspects

The PVARC's HF Enthusiasts Group meets Saturday, February 8, from 10:00 am to Noon, at the Palos Verdes Library's main branch (701 Silver Spur Rd / 650 Deep Valley Dr.) in the Purcell Room behind the Reference Desk.

Starting with February's meeting the HFE Group will have two discussion go-arounds. First, whoever is moderator will lead discussion of an HF-related topic or two. After that, the broader 2nd go-around will allow attendees to discuss whatever they are doing in amateur radio. Some attendees expressed that our recent meetings began veering too much into VHF, UHF, and other non-HF topics (all interesting and worthwhile) but we hope to return to more of an HF focus.

Among topics discussed at the January 9th HFEG meeting (as noted by Ray, N6HE) with 12 attendees:

- Jeff K6JW described the end to his HF SteppIR antenna issues by switching to a new Mosley beam on his tower covering 40 through 6-meters.
- Jim K6MU showed his expertly-assembled "QRP Labs" 40M and 20M CW 5W QRP transceivers; George NA6Q has ordered one, too.
- Jerry NG6R (top right photo) built and demonstrated an Arduino-based Morse Code Practice Oscillator based on software code originally developed by Clay, AB9A. (See article on following pages in this **QRO** issue.)
- Bob AC6RM reported he is about to get a Flex 6000-series SDR transceiver (we heard he later did).
- George NA6Q said he is working CW in the North America QSO Party...with a new HF antenna.

All are welcome to attend the HF Enthusiasts Group meetings...even if just to observe. ■



Left: The HFE Group meeting on January 9.

Above: Jim K6MU showed his assembled QRP Labs 5W CW transceiver.

Code Practice Oscillator: Inexpensive and easy to build

By Jerry Kendrick, NG6R

A March 2019 PVARC **QRO** Newsletter article [1] showed how an old and dysfunctional MFJ Morse code CW memory keyer was renewed by gutting it and installing an Arduino UNO microprocessor. The resulting unit, which is still operational and was used successfully in the 2019 ARRL Field Day event, has several CW message memories, an audio tone monitoring feature and can provide a transmit keying signal for interfacing with a modern CW transceiver. But, what if we now have a need to create just a simple code practice oscillator (CPO)? I.E., we don't need any canned messages and memories to hold them, and we don't need to interface with a transmitter. Can we exploit the same Arduino technology that we used before and build a small and inexpensive code practice oscillator? Yes, and this article describes how.

March 2019 CW keyer unit

As was discussed in the previous article, fellow PVARC engineer Clay AB9A dedicated a not-insignificant portion of his life to writing the software code (called a "sketch" in Arduino-ese) for a sophisticated Morse code CW memory keyer. He overcame a number of challenges in that effort, mostly involving timing subtleties, memory management, and "switch bounce" issues. [2] His sketch reached a staggering 726 lines of code. Clay offered access to this code if I (and others) would be interested in building a CW memory keyer. I leapt at the opportunity, grateful that I didn't have to attempt a similar tortuous code development effort. I modified Clay's sketch only slightly to add a variable tone pitch control function, but otherwise used it as he had written it.

The old MFJ unit I converted in 2019 already had push-button switches that could be used for triggering memory messages. Also, it had several connectors, an on/off switch, power distribution lines, LEDs and other niceties that would support a straightforward conversion effort. It also had enough space to accept the larger Arduino device called UNO.

January 2020 code practice oscillator unit

The aforementioned keyer unit works quite well as a code practice oscillator, but if one were starting over and simply needed a device that would create the "dit" and "dah" sounds from a Morse code paddle—and nothing more—a much smaller and simpler set of hardware with streamlined code (thus faster) should suffice. Since a small portable unit is desired, the Arduino NANO, with its much smaller footprint, was selected in lieu of the UNO. The Arduino NANO is shown on the left in Figure 1, compared to the UNO.

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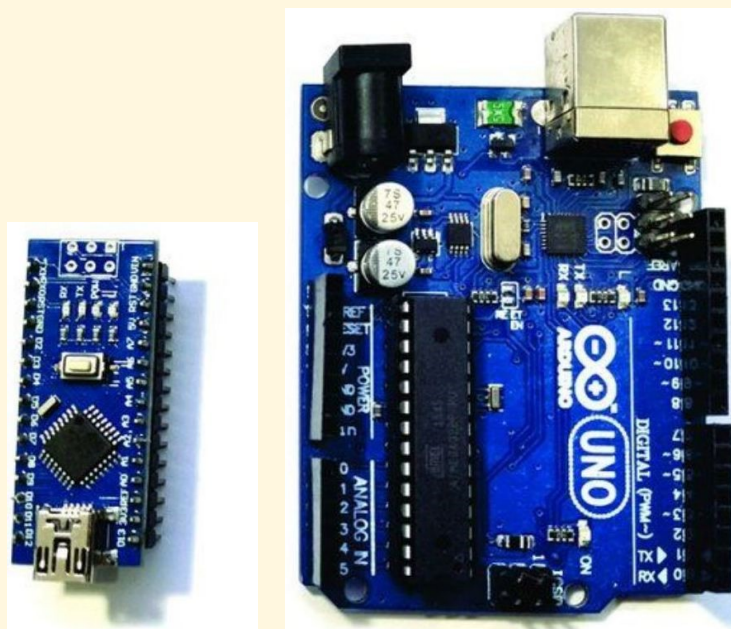


Figure 1. Physical comparison of the Arduino NANO and the Arduino UNO. They each have digital and analog I/O pins, as well as very fast processors. Although the USB computer connectors are different (USB mini-B for NANO and USB-B for UNO), both enable a direct USB interface for pre-loading and verifying software sketches.

Code Practice Oscillator: Inexpensive and easy to build

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Schematic

The schematic of the unit constructed in this project is depicted in Figure 2. Note that this Arduino application uses only three digital data pins (D2, D3 and D4) and two analog signal pins (A0 and A1). D2 and D3 are merely the pins that sense if the dit and/or the dah (i.e., the Morse code dot and dash) paddle switches are closed. Note the 0.01 microfarad capacitor across each paddle switch to help suppress the effect of “switch bounce.” D4 is an alternating on/off digital output signal with a 50% duty cycle that, when reduced in amplitude and filtered by the five low-pass-filter (LPF) stages (10 kilohm resistors and 0.01 microfarad capacitors), can be applied to an LM386 audio amplifier circuit (with its built-in volume control) (<\$1.50 and free shipping from eBay) [3] and a miniature speaker. Since only an audio monitoring function (no memories and no TX keying) is needed in this oscillator, we reduced Clay’s original 726 lines of code down to only 116 lines. Note that only two Arduino analog pins (A0 and A1) are used to control code speed and audio tone pitch, respectively. Code speed and tone pitch can be adjusted with front-panel knobs on variable resistors—programmed in the sketch for ranges of 10 to 30 wpm and 400 to 1000 Hertz, respectively. Power to enable both the NANO and the audio amplifier is supplied by a single external 9V battery (or a 7-12V wall wart if desired).

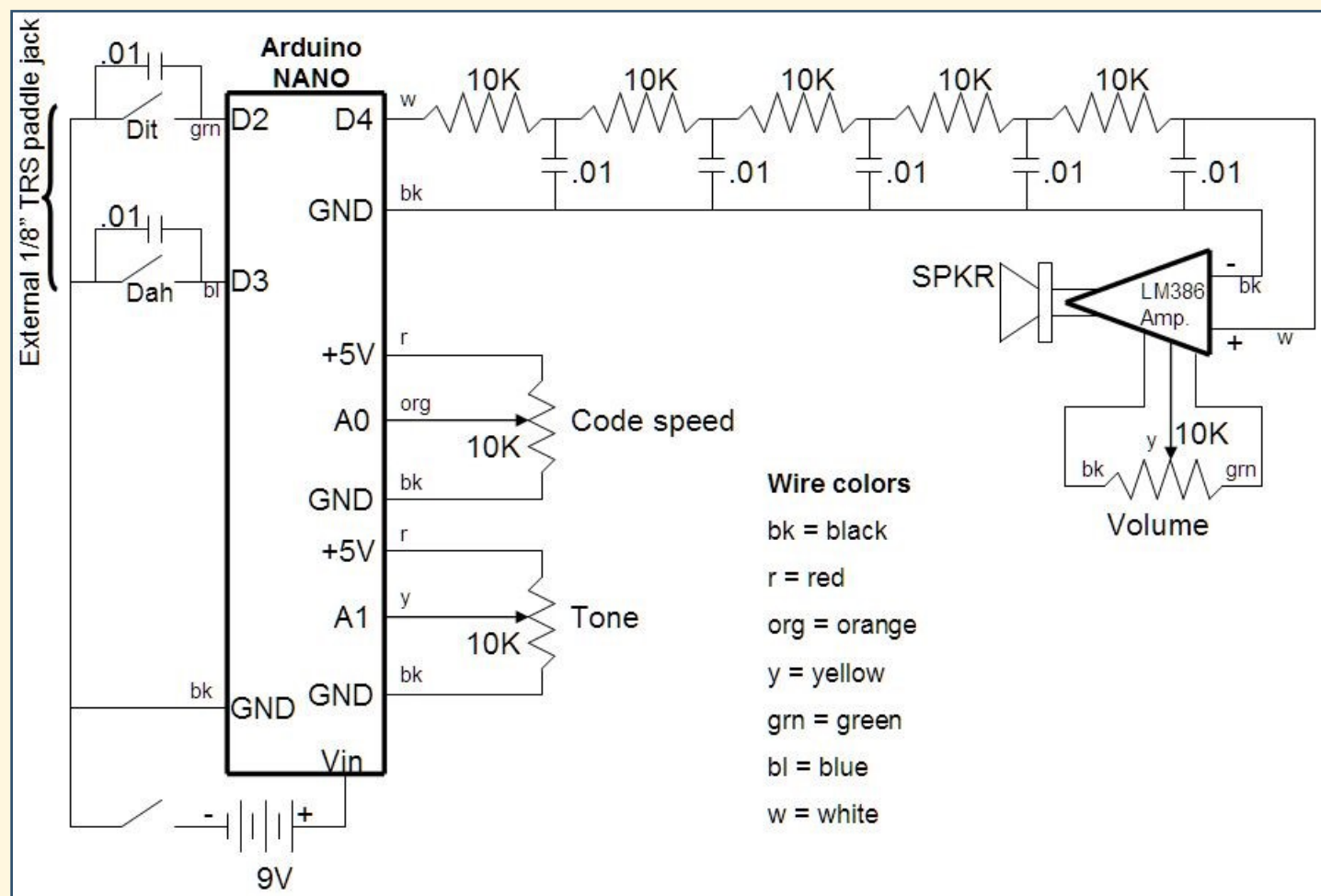


Figure 2. Schematic diagram of the code practice oscillator. The Arduino NANO does the processing based on only two input signals: closure of one or both of the two (dit and dah) switches on a CW paddle. The digital output signal from pin D4, whenever there is paddle switch closure(s), is sent through a series of low-pass filters, to reduce amplitude and higher harmonic levels, and then into an audio amplifier based on the LM386 chip.

Breadboard to get started

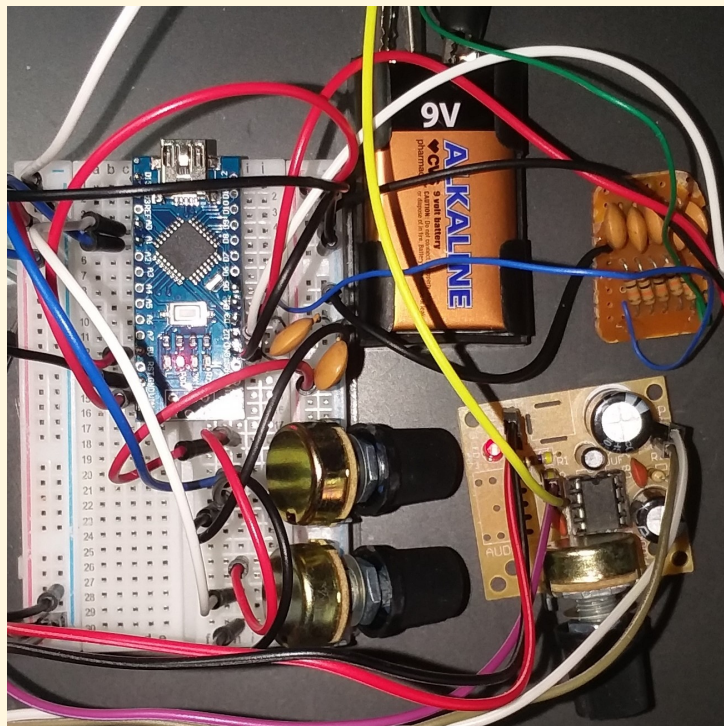
In order to make certain that the code practice oscillator would function as intended, prior to attempting to package all the components into the small plastic enclosure, a breadboard layout was constructed as can be seen in Figure 3, except for the

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Code Practice Oscillator: Inexpensive and easy to build

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speaker which was off-camera. Breadboarding techniques are ideally suited for Arduino experiments. [4] The “legs” of the NANO are formed by inserting pins at the bottom of the board that protrude up through small holes in the board and are soldered into place from the top. These microprocessor “legs” are exactly the spacing of the breadboard holes, making temporary point-to-point wiring connections a breeze. The Arduino microprocessor board creates its own regulated 5V power source from the 9 volts supplied by the external battery. The breadboard then makes it easy to distribute that 5V to



whatever needs it, such as the variable resistors that control speed and tone frequency.

Figure 3. The functional breadboard of the complete CPO shown here, except for the off-camera speaker, is laid out and operating on the workbench. Note how the NANO microprocessor straddles the centerline of the breadboard. On each row (like, say, row 25 in the photo), the 5 holes on either side of the centerline are electrically connected together internally. So, this internal construction of the breadboard enables several wire pins to be inserted and connected together on any row. The “voltage rails” on the outer edge of both sides of the breadboard allow the distribution (up and down the length of the breadboard) of 9V on one +/- rail and 5V on the other +/- rail, if the project can benefit from that feature. Generally, red push-pin wires are for power, like 9V or 5V, black for ground and different colors for other type signals. ALL PHOTOS: JERRY KENDRICK, NG6R

Completed unit

The finished CPO is shown in Figure 4. The features depicted in the left photo are the three adjustable user controls, volume, code speed and tone pitch; the power-on switch with red LED; the 1/8" CW paddle jack; and the small overall size indicated by the inch ruler. The right photo shows how the various components are laid out inside the small enclosure. Note the Arduino NANO nestled upside-down (“legs-up” for connection ease) on a Styrofoam sheet near the bottom.

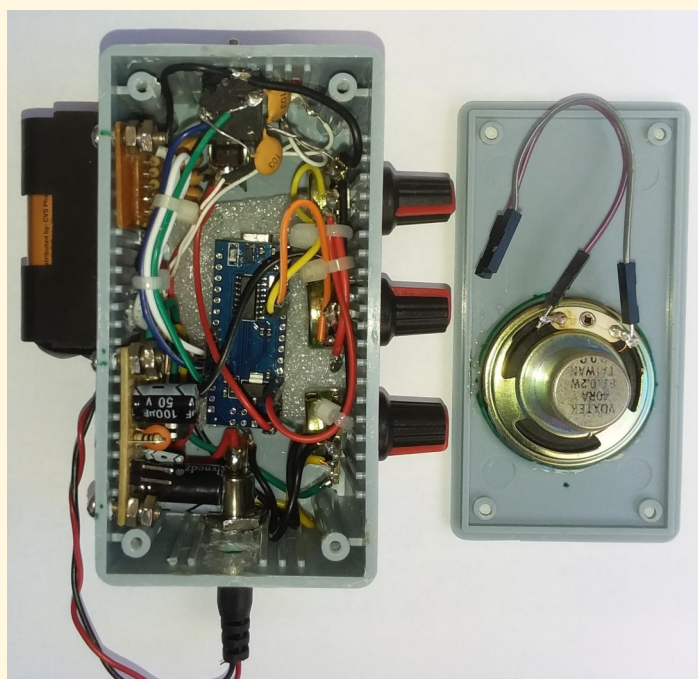


Figure 4. The top view of the completed unit in the right photo shows a lot of empty volume despite the small enclosure size and tight working conditions. The eBay-purchased audio amplifier kit and homemade LPF board are positioned vertically along the side, with all three variable resistors along the other side, thus leaving room to place the microprocessor board unobstructed near the center bottom of the box. Note the paddle connector at the top of the right photo with 0.01 microfarad capacitors attached to each of the “dit” and “dah” connector terminals (labeled “103”, the capacitor code for 10nF or 0.01 microfarads). [5] A DC connector at one end allows for an attached 9V battery. A wall wart can be substituted for the battery when 120VAC is available.

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Code Practice Oscillator: Inexpensive and easy to build

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Summary and conclusions

This code practice oscillator is small, portable, low-power for extended battery life, and self-contained—requiring only a CW paddle to get started working on improving one’s code speed. It can be built with very little cost, the 9V battery and the plastic case being the most expensive components! Arduino NANOs can be purchased for as little as two dollars each for the knockoffs—generally made in China—as compared to the genuine article directly from the Arduino website for \$22. Some experimenters avoid the knockoffs (and, indeed, a few are duds or require special downloadable Chinese driver software), but our experience with them has been more positive than negative. The NANO in this CPO is a knockoff and is working fine. At least, it’s easy enough to replace if it fails!

The biggest challenge in this construction project was working within the tight confines of this small enclosure. This plastic box was left over from a prior project so we opted to use it. However, we would recommend, if you decide to take on this project, that you select a somewhat larger enclosure that will provide greater ease for component installation and soldering.

Our club’s HF Enthusiasts Group, which meets monthly, is always seeking ways to encourage CW operations. So, if there is anyone in the club who acquires the parts and attempts to complete this project—and supplies the Arduino device—we’ll be more than willing to program it for you using this CPO sketch. You’ll be delighted at how well this CPO works. It even allows “iambic” operation [6] (e.g., like creating a period, di-dah-di-dah-di-dah, by holding down both the dit and the dah paddles at the same time).

It’s not too late to take on another New Year’s resolution: Learn Morse code and then build up your code speed. Morse code has been a dependable mode of amateur communications since ham radio’s origin. [7] [8] Tricks have been created to enable operators with just minimal code speed to work high-code-speed CW and log rare DX entities. [9] Many resources have been developed to aid ham operators in learning this translational language. [10] With diligent practice for 20 minutes a day for one month using this CPO and a Koch trainer [11][12] with a Farnsworth feature (extra gap between characters to reduce overall code speed while retaining character speed) [13], you should know all 40 essential characters—26 letters, 10 numbers and 4 punctuation symbols (, , ? /)—and feel comfortable sending and receiving at 10 wpm. After that, use the CPO to gradually increase speed. Resolving to learn Morse code for ham radio communications is a decision you’ll not regret.

References

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13. <http://www.arrl.org/files/file/Technology/x9004008.pdf> ■

PVARC Club News

Consider being an ARRL member

Please consider joining the American Radio Relay League (ARRL) if not currently a member. The ARRL is the only national organization representing amateur radio and has another significance for the PVARC: We receive benefits from being an ARRL-affiliated club. But being an ARRL-affiliated club requires at least 51% of club members also be ARRL members. Annual ARRL membership costs \$49 and now includes your choice of the printed monthly **QST** magazine or the ARRL's new **On The Air** magazine for newer hams. Both are available electronically to all ARRL members. Additionally all ARRL members have access to numerous web-based materials, ARRL staff, and assistance with ham radio issues. Visit: www.arrl.org/ then click "Join/Renew." ■

PVARC badges await pickup at next monthly meeting...or another time

Gary Lopes, WA6MEM, has the following PVARC badges ready for distribution at our February 6 meeting or by other arrangement.

- K6DMO
- KM6YGM
- KM6YGS
- NJ6I

To make special arrangements with Gary (or to order a badge) contact him at: wa6mem@cox.net. ■

Embroidered PVARC patches available at monthly meetings

PVARC club patches are available at our monthly meetings for \$4 each. They may be sewn on any cap, jacket, shirt, or bag.



The four illustrations in the patch center are emblems of the Palos Verdes Peninsula's four cities (clockwise from top left: Palos Verdes Estates, Rolling Hills Estates, Rancho Palos Verdes and Rolling Hills.) ■

Palos Verdes Amateur Radio Club

An American Radio Relay League Affiliated Club

Board of Directors:

President	Diana Feinberg, AI6DF
Vice President	Ray Day, N6HE
Treasurer	Peter Landon, KE6JPM
Secretary	Ron Wagner, AC6RW
Directors	Clay Davis, AB9A
	Gary Lopes, WA6MEM
Past Vice President	Bob Sylvest, AB6SY

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VE ARRL Liaison	Jerry Shaw, KI6RRD
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	Dale Hanks, N6NNW; Bob Sylvest, AB6SY;
	Ron Wagner, AC6RW; Dan Yang, K6DPY

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Monthly Meetings:

1st Thursday (except July and December in 2019) at 7:30 pm at Fred Hesse Park, 29301 Hawthorne Blvd., Rancho Palos Verdes, CA. Visitors always welcome.

Repeaters (Open, though often listed as "Closed"):

PVARC: K6PV, 447.120 MHz

- **Analog FM:** (-), PL 100.0, CTCSS
- **Digital DMR:** 447.120 MHz (RX); 442.120 MHz (TX)
Talkgroup 31060, Color Code 1, Time Slot 2

"PV-West": W6MTA, 449.980 MHz (-), PL 173.8, CTCSS

To order a Club badge:

Gary Lopes, WA6MEM, wa6mem@cox.net

To order a Club jacket or patch:

Dave Scholler, KG6BPH, 310-373-8166

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Front page photo — Pt. Vicente Lighthouse during a February sunset.

PHOTO: DIANA FEINBERG, AI6DF

PVARC Club News

PVARC upcoming dates in 2020

- ♦ **PVARC monthly meeting at Hesse Park, McTaggart Hall**

1st Thursday each month, 7:30-9:30 pm, except in August and December. 6:30-7:25 pm, "What's Next?" group for newer hams and "DMR Basics".
- ♦ **HF Enthusiasts Group meetings at Palos Verdes Library, Peninsula Center main branch**

2nd Saturday every month, 10 am to Noon, in the Purcell Room (corner behind Reference Desk.)
- ♦ **Walt Ordway, K1DFO, Technician and General amateur radio license classes at Hesse Park**

Saturdays, Feb. 1 and 8, 2020; exams, Feb. 15.
Saturdays, May 2 and 9, 2020; exams, May 16.
Saturdays, Nov. 7 and 14, 2020; exams, Nov. 21.
- ♦ **Field Operating Events:**
ARRL Field Day, June 27-28, Soleado School.
International Lighthouse & Lightship Weekend, August 22-23.
- ♦ **Public service events in 2020:**
Ridgecrest Int. School 5K, Apr. 26.
RHE Hills Are Alive 10K/5K run/walk, Aug. 10.
Conquer the Bridge race, Labor Day, Sept. 7.
Palos Verdes Half Marathon-10K-5K, Nov. 21.
- ♦ **PVARC 2020 Holiday Dinner:** To be announced.

Non-PVARC Events of Note:

- ♦ **W6TRW Swap Meet:** last Saturday each month, Northrop Grumman Space Park, North Redondo Beach, 7:00-11:30 am.
- ♦ **Yuma Hamfest & ARRL Southwestern Division Convention**, Yuma, AZ: Feb. 14-15.
- ♦ **International DX Convention**, Visalia, CA: Apr. 24-26.
- ♦ **Dayton Hamvention**, Xenia, OH: May 15-17.
- ♦ **Sea-Pac & ARRL Northwest Division Convention**, Seaside, OR: June 5-7.
- ♦ **PACIFICON & ARRL Pacific Division**

WELCOME NEW MEMBERS OF THE PALOS VERDES AMATEUR RADIO CLUB IN 2018-2019

Daniella Ward, KM6TRC
 Dylan Brown, KM6TDI
 Ellen Tessitore, N6XJM
 Michael Vulpilat, KJ6RVU
 Brian Clebowicz, K6BRN
 Warren Arata, KM6YGR
 Chris Sundlee, N6CGS
 Brad Rachielle, KC6NNV
 Georgiann Keller, KM6YGM
 Annalise Little, KM6YGS
 Tim Couture, KM6QWA
 Frank Brown, KM6YGQ
 Charlie Hansen, AJ6HZ
 Diana DiDomenico, KM6IQN
 William McClure, W7QLI
 Rick Shigio, K6RTS
 David Calloway, K6DKC
 Jon Kuroyama, K6LDQ
 Ray Grace, WA6OWM
 Robert Keller, K9BGC
 Alex Marko, KD6LPA
 Erin Okada, KN6FYV
 Derek Okada, K6DMO
 Xing Yang, KN6FYX
 Stephen Anderson, KN6FZA
 Charles Tang, KN6FYY
 Ikue Duncan, KN6FYW

PVARC Calendar

February 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1 PVARC ham radio license classes, Tech: 9:30 am-1:30 pm; General 1:45-5:00 pm, Hesse Park (Continues Feb. 8)
2	3	4 PVARC weekly net on K6PV repeater & cross-band, 7:30 pm (analog); 8:00 pm (DMR)	5	6 PVARC monthly meeting, Hesse Park. What's Next, & DMR 6:30 pm; Main meeting, 7:30 pm	7	8 PVARC HF Enthusiasts Group, 10 am to Noon, Palos Verdes Library Peninsula Center Purcell Room
9	10	11 PVARC weekly net on K6PV repeater & cross-band, 7:30 pm (analog); 8:00 pm (DMR)	12	13	14 Yuma Hamfest & ARRL SW Division Convention, Yuma, AZ	15 Yuma Hamfest & ARRL SW Division Convention, Yuma, AZ PVARC VE ham test session, 10 am, Hesse Park
16	17	18 PVARC weekly net on K6PV repeater & cross-band, 7:30 pm (analog); 8:00 pm (DMR)	19	20	21	22
23	24	25 PVARC weekly net on K6PV repeater & cross-band, 7:30 pm (analog); 8:00 pm (DMR)	26	27	28	29 W6TRW Swap Meet, 7:00-11:30 am at Northrop Grumman, North Redondo Beach

Tell your friends and family about our upcoming ham license classes at Hesse Park.

Two Free Amateur Radio Courses

FCC **“Technician”** course (entry level)

FCC **“General”** course (2nd level)

Each course is 2 sessions

The sessions will be on 1 and 8 February 2020

Technician 9:30 AM to 1:30 PM both Saturdays (bring your lunch)

General 1:45 PM to 5:00 PM both Saturdays

The FCC tests will be 10:00 AM to noon on 15 February 2020

At the start of the 1 February Technician course, the Palos Verdes Amateur Radio Club will give a 30 minute presentation on how to get further involved with amateur radio.

The class location is at Fred Hesse Community Park,
29301 Hawthorne Blvd., Rancho Palos Verdes, CA 90275

Confirm your attendance to Walt, K1DFO at waltordway@juno.com

There is no fee for either course.

Taking the FCC test is \$15.

Optional Material (sold at cost)

Gordon West books with all the FCC test questions,

\$26 for the Technician and \$26 for the General

Paper copy of Walt's Power Point charts,

\$22 for the Technician and \$18 for the General

For courses sponsored by the Palos Verdes Amateur Radio Club, students thru grade 12 who pass their examination at a PVARC VE test session will, upon application to the Club, be eligible for reimbursement up to a maximum of \$50 to cover the cost of materials and the examination fee.

Everyone who obtains their first ham radio license through a PVARC VE test session, regardless of age, will receive a free membership in the Palos Verdes Amateur Radio Club for the remainder of the current calendar year.



Palos Verdes Amateur Radio Club
P.O. Box 2316
Palos Verdes Peninsula, CA 90274
www.k6pv.org

NEW MEMBER & 2020 MEMBERSHIP RENEWAL FORM

NEW: _____ or RENEWAL: _____ MEMBERSHIP DATE: _____

Last Name: _____ First Name: _____ Spouse: _____

Street Address: _____

City: _____ Zip: _____

Phone: Home _____ Work _____ Cell _____

Email address: _____

(Unless otherwise noted emails will be sent to the applying member only)

License Call: _____ License Class: _____ ARRL Member? _____ Birth Mo./Day: _____

Other amateur radio groups you belong to: _____

Additional Household and/or Family Members (if Applicable):

Name _____ Call _____ Class _____ ARRL _____ Birth Mo./Day: _____

Name _____ Call _____ Class _____ ARRL _____ Birth Mo./Day: _____

Name _____ Call _____ Class _____ ARRL _____ Birth Mo./Day: _____

Individual membership (\$20.00) \$ _____

Household and/or Family membership (\$25.00) \$ _____

Additional donation to support PVARC activities \$ _____

PayPal: _____ Cash: _____ or Check #: _____ Date _____ TOTAL \$ _____

Please make checks payable to: Palos Verdes Amateur Radio Club; Dues based on January 1st to December 31st year.

PayPal payment: Go to www.paypal.com, enter recipient name: PVARC90274@gmail.com

All New and Renewal Member applications must be signed below.

I am applying for a new or renewal membership in the Palos Verdes Amateur Radio Club and understand that by accepting membership I agree to abide by the Club's constitution and by-laws (available on-line at: <http://www.k6pv.org> or upon request.)

Signature: _____ Date: _____

Family Member Signature: _____ Date: _____

Family Member Signature: _____ Date: _____

2020 Southwestern Division Convention

Yuma Hamfest Yuma, Arizona Feb. 14 & 15, 2020



Yuma County Fairgrounds
2520 East 32nd Street, Yuma, Arizona

www.yumahamfest.org

Check the Website for Additional Information

Gates Open for Camping Thursday, 2 pm	Event Hours Friday, Noon - 5 pm Saturday, 8 am - 5 pm	Hamfest Dinner & Grand Prize Drawing Saturday Night 6:00 - 8:00 pm
Vendor Setup Friday, 7 am - Noon		

**Vendors & Exhibitors
Consignment Sales
License Testing
Hourly Door Prizes
On-site RV Camping
Hamfest Dinner
ARRL Speakers
Transmitter Hunt
\$5.00 Admission**

**Tailgating (Swap Meet)
Full Seminar Schedule
DXCC Card Checking
\$22000+ in Grand Prizes
Emergency Preparedness
Admission Prizes
Hospitality Area
Near Space Balloon Launch
Antenna Clinic & T-hunt**

Email Contact: ***info@yumahamfest.org***