

## **Tech Session in Sunnyvale Saturday Sept 9<sup>th</sup>. (includes free lunch)**

**Time:** Saturday September 9th – 12 noon – 3PM

**Topic:** uSDX+ all mode compact transceiver – *Ed Fong WB6IQN and Ron Quan KI6AZB*

**Place:** 1163 Quince Ave. Sunnyvale, 408-245-8210

**Menu** - lasagna, salad, drinks, and chips. Ice cream dessert.

Optional – bring a desert to share

**Cost: FREE**

**Raffle Tickets:** \$5 each or 3 for \$10

**Grand Prize** - uSDX+ All Mode HF portable transceiver or Lenovo i5 laptop or QB25 quad band 25 watt transceiver or Nano 1.5 GHz VNA.

**RSVP:** edison\_fong@hotmail.com

### **Directions:**

If you need precise directions from where you are coming from, go to [www.googlemaps.com](http://www.googlemaps.com). They seem to give the best directions or give me (Ed Fong) a call on the phone.

**Topic** - Overview of the uSDX+ all mode HF transceiver

Covid is finally over and we are bringing back the annual technical session at my house.

So what is the newest fad in the world of ham radio? It is the uSDX+ all mode portable transceiver. This is a full software defined transceiver base on the Silabs synthesizer chip and the Atmel ATMEGA 328P FPGA. The entire radio including the 4000mAh Lion battery is only 1 lb 2 oz. The radio can operate all weekend with a single charge.

General coverage receiver – 3.5MHz- 30 MHz

Transmits on 80-10 meters including all WARC bands and even CB band

Built in CW decoder, keyer, all DSP filter from 4KHz to 50 Hz, DSP noise reduction

Output - 5 watts for CW - for SSB slightly under 10 watts.

What is interesting about this new gem is the Class E output amplifier. Class E is a switching amplifier, so although efficient, it cannot be directly used as a SSB output stage which historically requires a less efficient linear amplifier. So how do that achieve linear SSB amplification from a switching amplifier and achieve 80%+ efficiency? The key is in the 800 kHz sigma delta modulator. Come by and learn the new method of generating SSB.

Raffle prizes – tickets are \$5 each or 3 for \$10. – below are the top 4 prize choices.

Winner gets choice of four prizes just in case they already own the uSDX+ transceiver



**uSDX+** - QRP HF transceiver - Covers 80-10 meters – SSB, CW, digital QRP transceiver. 5 watts CW – 10 watt SSB. Built in CW decoder, full DSP noise reduction. Complete with 4000 MaH LiOn battery, AC adapter/charger, Speaker/microphone



**1<sup>st</sup> Prize Lenovo – Thinkpad X240** i5 processor with 8GB of memory and 256 GB SSD drive

Windows 10 operating system

CNET rates this laptop a 4.3/5

Up to 15 hours battery life.

PC benchmark 4,717 - very respectable.

Less than 3 pounds 0.8 inches thick

USB 3.0

12.5 inch screen - just perfect to carry around.

Intel HD4400 graphics processor

USB 3.0

Intel Cetrino Wifi.



**Nano VNA - H4** - 4 inch 1.5 GHz VNA - Tuned antennas, duplexers, filters etc. Full touch screen. Latest version includes functions for TDR – time domain reflectometer.

Includes cables and full calibration kit.



**3rd Prize Radioddity QB25** - Quad Band Mobile 25 watt transceiver. This radio boast 200 memories, full software programmability, great bullet proof front end with 0.25 uV sensitivity, full FM

broadcast radio, direct microphone key pad entry, absolutely the best color display out there and more. If you have been looking to get on 220 MHz, this is the latest and greatest. You will be a proud owner of one of these radios.

Comes with programming cable and programming software.

### Other Prizes UV5R Baofeng dual band handie talkie



### UV5R Baofeng dual band handie talkie

VHF/UHF handie talkie 136-174 MHz 400-520 MHz

128 fully programmable channels

LiOn 1800 mahr battery with smart charger

Built in LED flashlight

4 watts output

FM broadcast radio (65-108 MHz)

Choice of three for 2 nd prize



**ATS-20** All Mode AM/FM/SSB/CW 100KHz-30 MHz - FM Stereo Receiver



DVM - digital multimeter