

April 29, 2024 Training material

There are many facets of amateur radio that provides something for ever one, regardless of one's background, or education. Some of these include:

- Emergency communications
- Public Service Events
- Community service
- Contesting
- Parks on the Air
- Rag chewing
- Building your own equipment, from a kit or from scratch.
- Digital modes
- Satellites
- QRP

The list goes on and on.

Tonight's topic is Innovation, Innovators, and a few examples of Innovative products I've recently encountered.

MFJ

If you look at the list of advertisers in the back of any issue of QST magazine, there are many companies that are selling products for amateur radio. The biggest advertiser in QST is MFJ Enterprises, which consists of MFJ, Ameritron, Cushcraft, Hy-gain, Mirage, and Vectronix. In this month's edition, collectively they had 15 full page ads. The best efforts of Icom, Kenwood, Yaesu, Ham Radio Outlet, or DX Engineering was only 1 or 2 pages each. Sadly, MFJ announced that they would be ceasing production of all of their companies next month. Martin Jue, K5FLU is the founder, owner and CEO; after over 50 years in the business, he's retiring at the age of 80. I never met Martin Jue, but he was an instructor at Mississippi State University about the time I was going there. Some of my classmates had part time jobs at MFJ. They started production in 1972 in a rented hotel room in Starkville, MS with one product: a highly successful CW filter which eventually sold thousands of units. Over the years, Martin Jue has designed many products and has been granted over a dozen patents. The company has grown tremendously and their products are sold through over 250 dealers world-wide. My first MFJ product was a model 1278 Multi Mode Data Controller I purchased in the early '90s. That got me started in Packet, SSTV, weather FAX, RTTY, and other digital modes. The user manual for that device was over 350 pages. Although some folks have equated MFJ products as the Harbor Freight of Ham Radio, I would argue that's not a bad thing. We wish him well in retirement, and we certainly hope someone will buy those companies and keep making those products.

Bulletpoint Mounting Solutions and BuiltRite Industries

Recently, we traded in my old Honda pickup for a new SUV for the missus. Because of that, I had to remove my mobile rig and find a mounting solution in our other vehicle, a Ford F-150. I couldn't use a mag mount as the F-150 has an aluminum body. I used a stake-mount for the dual-band antenna, ran coax under the bed and thru a grommet in the cab. I wanted to mount the base unit either under or behind the back seat, but wasn't sure how I was going to get access. On the F-150, the back seat on the passenger side folds down for access to the car jack, but there's not an easy way to do that on the drivers side, as Ford did not include a pull handle to release the drivers side back seat. That's where

BuiltRite Industries saved the day. They make an aftermarket rear seat release bracket for about \$40 that mounts on the existing hidden latch, which allows easy access to what was unusable wasted space. I mounted the base unit of my TYT dual bander on a piece of wood I wedged behind the back seat. Then I ran the power, control cable, and speaker cable under the floor mats. For the installation of the radio control head, I wanted to put it on the dash. I installed a RubiGrid Dash Mount manufactured by Bulletpoint Mounting Solutions, so that the radio control head could be mounted in an easily viewed and accessible location. The dash mount is highly configurable and was fairly easy to install, and provides a rock-solid installation. If I upgrade my mobile rig in the future, or add additional equipment like a cellphone holder, or dash cam, it will be an easy installation with the existing mounting system which has a base that has multiple slots that can accommodate multiple devices. Bulletpoint makes custom mounting systems designed for specific make and model vehicles. They have systems for Ford, Chevy, Toyota, Dodge, GMC, Nissan, and Jeep. The mounting system for my Ford F-150 was about \$100 and comes with a limited lifetime warranty.

Hyundai

The SUV we purchased was a Hyundai Tuscon. There were two innovative features which were factors in picking this model. It's not unusual for new cars to have camera systems, but the Tuscon has side mounted cameras that are activated by the turn signal lever; the left image is displayed in the speedometer gauge, and the right image in the RPM gauge. The other feature is being able to pull in or out of a tight parking space by using the car remote.

HF Signals - QRP HF kits

Our first road trip with the new car was to West Virginia earlier this month. On the way, we stopped in Huntsville, Alabama to visit the new Gigaparts store. Gigaparts has been an online only store for several years until they recently opened their first storefront in Huntsville with 60,000 square feet of retail space. This is a great store with a lot of diverse products, from telescopes, cameras, electronic components, tools, 3D printers, science kits, robotics, and of course ham radio gear. They had a large display of Icom and Yaesu gear, and all the stuff you need to setup a station; power supplies, SWR meters, antennas, coax, and all the other do-dads you need. While purusing the do-dad aisle, I found an interesting QRP transceiver 'kit' manufactured in India by HF Signals. Founded by Ashhar Farhan VU2ESE, HF Signals manufactures inexpensive QRP equipment. The model I purchased was the uBITx v6, a 10 watt, SSB and CW transceiver which covers the HF bands 160 through 10 meters, and is run by an Arduino Nano running open source firmware with a 2.8" touch screen. Open source means that you can change the screen layout, and add new features, like a CW decoder, or spectrum display. This radio can be easily modified and upgraded; for example, the Nano can be replaced with a Raspberry Pico, or the stock touch screen can be replaced with a higher resolution LCD graphics display. It can even use CAT control for FT8 operation. This 'kit' consists of two fully assembled circuit boards, mounting hardware and a metal cabinet. All you need is a screwdriver to assemble it; no soldering required. The kit sells for just over \$200. It's not an Icom, but it's a good learning tool, especially if you like to tinker. There is a great user group online at Groups.IO that is very active; I've already gotten several answers to some of my questions regarding the configuration and calibration of this transceiver.

Last night, I made my first contact with this rig with a station in Puerto Rico on 20 meters. And, I used my manual MFJ antenna tuner.

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