





St. Louis Amateur Television Society

#### **NOVEMBER 2024**

#### **IN THIS ISSUE**

#### On the News Front

From the Presidents Desk	Pg-2-3
Scams of the Month	Pg-4
Ham Radio in the Internet age	Pg-5-8
Items for Sale or Give-away	
Ham Radio Quick Links	

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Weekly Nets
7pm Fall/Winter
8pm Spring/Summer
W0ATN/R 440in 426out
Talk-back radio: 144.34 MHz

### -ON THE NEWS FRONT-

# **SLATS** offer to loan gear for prospective STL area ATV hams

SLATS has ATV equipment for loaning out to prospective hams expressing an interest in getting on ATV. If this is you, then click (<a href="https://statsatn.net/want-to-try-atv/">https://statsatn.net/want-to-try-atv/</a>).



Typical Digital ATV Station. Just add a TV, camera and antenna.

# WOATN NET CONTROLLER

### **NOVEMBER**







### FROM THE PRESIDENTS DESK

( Article submitted by: Mel KØPFX )

What's new in my ham shack?

De K0PFX

I had two "aging" computers in the shack but now I have one.

My how time flies...thanks to technology, a lot has changed in "PCs" since I bought these "old" HPs nearly eight years ago. Everything today is so much faster. Large SSDs (solid state drives) are the norm now and all being done with less power (and less heat) and make no noise! Not to mention the increased CPU speed.

I just replaced one of these PCs with a new one identified as a work station. Work stations are normally used for applications that require a lot of speed to run CPU/GPU intense applications. Work stations can be configured with a wide variety of CPUs, drives, GPU (graphic processor unit) and RAM memory. Work stations can cost a couple thousand to over ten thousand dollars retail. On eBay, I found a "factory" refurbished one with a two year warranty. It had never been used and in the original box. No dust anywhere! I would have classified it as an "open box." Buying from an eBay seller can be risky but for the price and warranty, I believed it was worth it especially with the option to return. I paid one-half of the manufacturer's suggested price with free shipping.

I did have one issue with obtaining it's Win 11 activation key. Armand KBØPXF suggested I tell the seller I was going to return the PC. About ten minutes later I was sent the key.

After installing Win 11, I quickly noticed the fast processing power of the CPU(i9)/GPU processors. Especially in my video apps. For video, it has a \$700+ (retail) Nvidia card with 4 HDMI ports, a really fast GPU, and 12GB of RAM. This card only draws 70w of power (DC). Phil Bunch, NØMFC (now living in Ark.) use to tell me I always had a "need for speed." Well, this one fulfills that need. At least for now...

Some work stations are what we normally think of as PC "towers" so they can be physically large. However, the one I have is actually smaller by several inches in depth leaving a little more room at the operating position. It is taller by 2 inches but has no vents on top allowing me to stack stuff on it. It weighs over 30 pounds. On top of my Work Station, I have a DC Power Supply, Bose speaker and audio selection switch.

My workStation is from Lenovo (formally IBM) and they call there's a "ThinkStation." Work stations can be "built" in a configuration tailored for whatever you want to do with it. Look for Lenovo "refurbished" ThinkStation P series with an Intel vPRO processor when considering a new PC for your ham shack



### FROM THE PRESIDENTS DESK

( Article submitted by: Mel KØPFX )

How to Fix File sharing not working in Windows 10 and 11

De K0PFX

If you exhausted all attempts of not getting your PCs LAN to share video files (actually any files), then here is a fix I found that worked for me. I have 10 devices in my network (when they are all on) and now all but one fails to share files. It is caused by the preverbal lost PW for the drive's network credentials. I'll find it someday.

Go to youtube video URL below. It will "fly you through" the steps. Be ready to click on "pause" and backup. The presenter is from VU2 land (India) and speaks very fast (or maybe I am just slowing down?)

https://www.youtube.com/watch?v=Gn9F6hdo4TI (describes steps below)

In Win 10, Go to Apps & Features>Programs & Features>Turn Windows Features on or off. Window Features window will pop up. Go to "SM 1.0/CIFS File Sharing Support" and click on the + and check "SMB 1.0/CIFS Client"

Click OK... windows will then scan for the files and Restart. After boot up, check Network and all PCs/devices will be shown that are "Shared."

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Win 11 changed where the location for the "Window Features window."

It is now found in the Control Panel>Programs>Programs & Features>Turn Windows Features on off Window. From this window, go to "SM 1.0/CIFS File Sharing Support" and click on it's + and check "SMB 1.0/CIFS Client" As they say, be careful what you click on as there are a lot of Windows "features" that may be turned off or on here.

Next, click OK... windows will then scan for the files and Restart. After boot up, check Network and all PCs/devices will be shown that are "Shared."

...and as the Indian said when he stopped talking.. "Thats it..."

### **SCAMS OF THE MONTH**

Due to the times we are living in, we need to be more careful for our safety as well as for our family members. In an attempt to expose some of these scams and crimes that we are seeing and are going on all around us, I am trying to show how some of these scams and crimes are being done. Below are some of the things that might help everyone who is now living in this time and age.

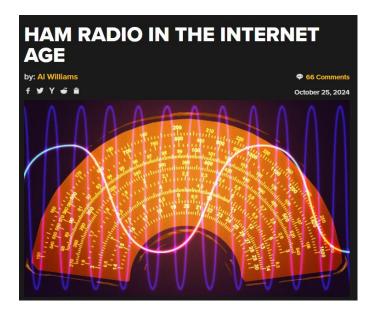
### **NEW SCAMS OF 2024**



The 4 Most Dangerous Scams To Look Out for in 2024



How to avoid the 'SIM swapping' scams that are on the rise



Even if you are relatively young, you can probably think back on what TV was like when you were a kid and then realize that TV today is completely different. Most people watch on-demand. Saturday morning cartoons are gone, and high-definition digital signals are the norm. Many of those changes are a direct result of the Internet, which, of course, changed just about everything. Ham radio is no different. The ham radio of today has only a hazy resemblance to the ham radio of the past. I should know. I've been a ham for 47 years.

You know the meme about "what people think I do?" You could easily do that for ham radio operators. (Oh wait, of course, someone has done it.) The perception that hams are using antique equipment and talking about their health problems all day is a stereotype. There are many hams, and while some of them use old gear and some of them might be a little obsessed with their doctor visits, that's true for any group. It turns out there is no "typical" ham, but modern tech, globalization, and the Internet have all changed the hobby no matter what part of it you enjoy.

## **RADIOS**

One of the biggest changes in the hobby has been in the radio end. Hams tend to use two kinds of gear: HF and VHF/UHF (that's high frequency, very high frequency, and ultra-high frequency). HF gear is made to talk over long distances, while VHF/UHF gear is for talking around town. It used to be that a new radio was a luxury that many hams couldn't afford. You made do with surplus gear or used equipment.

Globalization has made radios much less expensive, while technological advances have made them vastly more capable. It wasn't long ago that a handy-talkie (what normal folks would call a walkie-talkie) would be a large purchase and not have many features. Import radios are now sophisticated, often using SDR technology, and so cheap that they are practically disposable. They are so cheap now that many hams have multiples that they issue to other hams during public service events.

Because these cheap (\$20-\$40) radios often use SDR, they can even be hacked. These radios aren't typically the highest quality if you are used to repurposed commercial gear, but when you can replace the radio for \$20, it hardly matters.

HF radios are a different story. Thanks to software-defined radio, superpowerful computers, and FPGAs, even relatively inexpensive HF radios have features that would have seemed like magic when I first got my license.



The ICOM IC-7300 is considered a "starter" radio!

While some hams like to build gear or use simple or older gear, modern transceivers, like the IC-7300 from Icom shown here, have incredible RF filtering done in software, spectrum analyzers, and scopes built in. The 7300, by the way, isn't considered a "top of the line" radio by any means. But it has features that would have been a dream on a state of the art unit before the advent of DSP.

Having these kind of tools changes how you operate. In the old days, you'd tune around to see if you could hear anyone. Now, glancing at the screen will show you all the signals on a band and how strong they

are. Touch one, and you tune it in immediately. Digital noise reduction is very helpful these days with so much interference, and, of course, you can control the whole thing from a PC if you want to.

The receivers are exceptional compared to what even a high-end radio would offer a few decades ago. Specialized filters used to be expensive and limited in options. Now, you can design any filter you want on the fly and it will be nearly perfect.

Granted, these radios aren't in the impulse buy category like the handheld radios. Still, you can find them new for around \$1,000 and used for less. There are also other similar radios for much less. Just as you can buy imported handheld VHF and UHF radios, there are imported HF radios that put out a lower wattage (20 watts vs 100 watts is typical). These still have plenty of features, and you can get them for about half the cost of the name-brand 100W rigs. [K4OGO] has a video (see below) about several popular radios in that price range and you'll notice that many of them have similar displays.

## **DIGITAL MODES**

Paradoxically, you might not need as hot a receiver, or as big of an antenna, or as much power as you might think. Hams have long known that voice communication is inefficient. Morse code could be the earliest form of digital radio communication, allowing a proficient operator to copy signals that would never make a voice contact. However, hams have also long used other digital modes, including TeleType, which is more convenient but less reliable than a good Morse code operator.

That changed with computer soundcards. Your computer can pull signals out of a hash that you would swear was nothing but noise. Modern protocols incorporate error detection and correction, retries, and sophisticated digital signal processing techniques to pull information from what appears to be nowhere.

What kind of sound card do you need? Almost any modern card will do it, but if you have the Icom IC-7300 pictured above, you don't need one. It turns out, it is a sound card itself. When you plug it into a PC, it offers audio in and out for ham radio programs. It can even send IQ signals directly to the PC for common SDR programs to work with.

Some digital modes are conversational. You can use them like you might a radio-based chat room to talk to people you know or people you've just met. However, some modes are more specialized and optimized to make and confirm contact.

# **COMPUTER LOGGING**

There was a time when every ham had a log book — a notebook to write down contacts — and a stack of QSL cards. Operators would exchange cards in the mail to confirm contact with each other. Many of the cards were interesting, and collecting enough cards could earn an award (for example, working all 50 US states or over 100 foreign countries).

Things are different now. Many people use a computer to track their contacts. While you could just use a spreadsheet, there are many ways to log and — more importantly — share logs online.

The advantage is that when you make a contact and enter into the system, it can match your entry up with your partner's entry and immediately confirm the contact. This isn't perfect, because there are several systems people use, but it is possible to interoperate between them. No more waiting for the mail.

## DX AND PROPAGATION

I mentioned that having a display of the entire ham band changes how you operate. But there is even more help out there. Many people enjoy working rare foreign stations or special event stations held at parks or historical locations. These days, if you hear a station like that on the air, you can report it on the Internet so other people can find them. In some cases, the operator will report themselves, even.

Suppose you want to make contact with someone in Kenya because you haven't done it, and you are working towards an award that counts how many countries you've contacted. Instead of searching endlessly, you can simply watch the Internet for when a station from that country appears. Then turn on your radio, use the digital tuning to go exactly to their frequency, and try your luck.

Of course, radio propagation isn't foolproof. But you can use beacons to determine how propagation is near you. There are many tools to manipulate the beacon data to better understand radio conditions. In fact, if you use digital modes or Morse code, you can find out who's hearing you on the Internet, which can be very useful.



A real-time view of beacon reception across the globe.

## WHY NOT YOU?

Some old hams say the Internet is ruining ham radio. I say it is changing ham radio just like it has changed virtually everything else. Some of those changes aren't that drastic anyway. For years, people chasing awards, trying to work long distances, or participating in contests have very short contacts. You typically would exchange your name, location, and how strong your signal is and then make way for the next person to make contact. The digital mode FT8 automates all that. It is true that it isn't very personal, but those kinds of contacts were never personal to start with.

What's more is that you don't have to use any of this if you don't want to. I operate a lot of Morse code with no mechanical assistance. If I hear a big pileup, I might go look at the computer to see who has been spotted on that frequency. But I don't have to. I could figure it out the old-fashioned way.

Hams work with advanced signal processing software, satellites, moon bounce, support communities, design antennas, foster school education, work during disasters, and push the envelope on microwave communication. No matter what your interests, there's something you'll enjoy doing. For many years now, you don't even have to pass a test for Morse code, so if you didn't want to learn the code, you don't have to.

In many ways, hams were the original hackers, and you might be surprised by how many hackers you know who are hams already. I don't know what ham radio will look like in the year 2100, but I know it will be pushing the limits of technology, somehow.

Posted in Featured, Rants, Slider Tagged ham radio

### ITEMS FOR SALE OR GIVE-AWAY

#### FREE

Armand, KD0PXF has a free 42" monitor for anyone to pickup. It is a Gaming or Computer Monitor, not a TV monitor. It has the standard Component video input and works fine! Any questions or to arrange a pick-up please contact Armand armandh@sbcglobal.net



### Panasonic<sup>®</sup>

Wide Plasma Display **Operating Instructions** 

TH-37PWD4

#### ICOM HM-133V MICROPHONE

I want to:

Sell an item

Mel Whitten

Call Sign

K0PFX

Phone (optional)

+13147391108

Email

#### mel@melwhitten.com

Brief Description of item

ICOM HM-133V Microphone (not a fake!)

Details, price, condition, etc.

Popular microphone for many ICOM products. Never used.. I just pulled it out of the cigar plastic bag (as shown in picture)

Description found here on ICOM's web site:

https://www.icomjapan.com/lineup/options/HM-133V/ and sold widely at ham radio stores such as HRO here; https://www.hamradio.com/detail.cfm?pid=H0-006149

\$45 pick up at my QTH or plus cost for shipping USPS 3219 Haas Avenue

Bridgeton, MO

63044

US



#### 8" MITUTOYO DIAL CALIPER

I want to:

Mel Whitten

Call Sign

K0PFX

Phone (optional)

+13147391108 Email

#### mel@melwhitten.com

Brief Description of item 8 Inch Mitutoyo Dial Caliper

Details, price, condition, etc.

Model 505-644-50 0 to 8 inch and 0.1 inch/Revolution

with hard case and slip on cover

Stainless Steel, Hardened

Excellent Condition

Made in Japan with English docs

\$35.00

Bridgeton, MO 63044

US



### LINKS:

### **SOLAR UPDATE**



The K7RA Solar Update (arrl.org)

### SLATS REPEATER DVB-T WØATN

**Technical Summary** 

**Coordinates:** 38.72126N -90.46454W, Grid Square:

EM48sr What3Words

**Elevation:** 671 ft AMSL, 90 foot Rohn tower

**Transmitter:** HiDes HV-200Pro 426.000 MHz Vertical polarization, DVB-T 16QAM @ 4MHz Bandwidth, Video PID 641, Audio PID 642, DCI ATV BP RX/TX Filters **Output Power:** 426.000 MHz: (DVB-T) 25w Average **Receiver:** HV-110, 440.000 MHz, 4 MHz bandwidth, 16 OAM DVB-T

**Antennas:** (2) New-Tronics Hustler Spirits, 9db 426TX and 440RX

**Talk-Back radio:** 2 Mtr FM Diamond Antenna at 45 ft **Coordination:** Missouri Repeater Council (MRC) 2016 **Sponsor:** SLATS – St. Louis Amateur Television

Society (SLATS).

Popular off the shelf equipment for High Definition receiving and transmitting is available at the <u>HiDes</u> <u>Company</u> and on <u>eBay</u>



### **Ham Radio Quick Links:**

### **Amateur Television Network**

https://www.atn-tv.com/

<u>ATN Repeater</u> video streaming https://www.atn-tv.com/events/streaming

### ATN on YouTube

https://www.youtube.com/
AmateurTelevisionNetwork

ATN on Whereby.com https://whereby.com/atn1

**TAPR - Tomorrow's Ham Radio** 

https://tapr.org

#### **DIGITAL ATV**

Digital Amateur Television D-ATV
<a href="https://www.dxzone.com/catalog/">https://www.dxzone.com/catalog/</a>
Operating Modes/Digital ATV/

# YouTube Videos Dave Casler KEØOG - YouTube

Videos <a href="https://www.youtube.com/channel/UCaBtYooQdmNzq63eID8RaLQ">https://www.youtube.com/channel/UCaBtYooQdmNzq63eID8RaLQ</a>

# Solar Index & Propagation Made Easy The SmokinApe

https://www.youtube.com/user/ TheSmokinApe