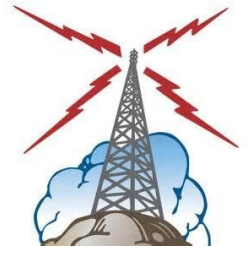




# SLATS



St. Louis Amateur Television Society

JUNE 2024 | Volume 6-Nbr 18

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SLATS newsletter is published monthly on the 15th as the official newsletter for the St Louis Amateur Television Society.

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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

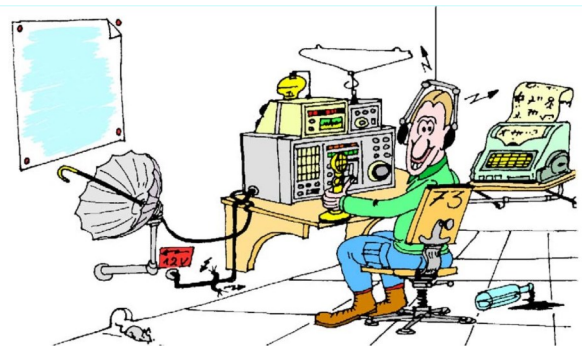
SLATS has ATV equipment for loaning out to prospective hams expressing an interest in getting on ATV. If this is you, then click (<https://slatsatn.net/want-to-try-atv/>) .



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

June							2024
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
						1	
2	3	4	5 SLATS NET 8: 00 P.M	6	7	8	
9	10	11	12 SLATS NET 8: 00 P.M	13	14	15	
16	17	18	19 SLATS NET 8: 00 P.M	20	21	22	
23	24	25	26 SLATS NET 8: 00 P.M	27	28	29	
30							

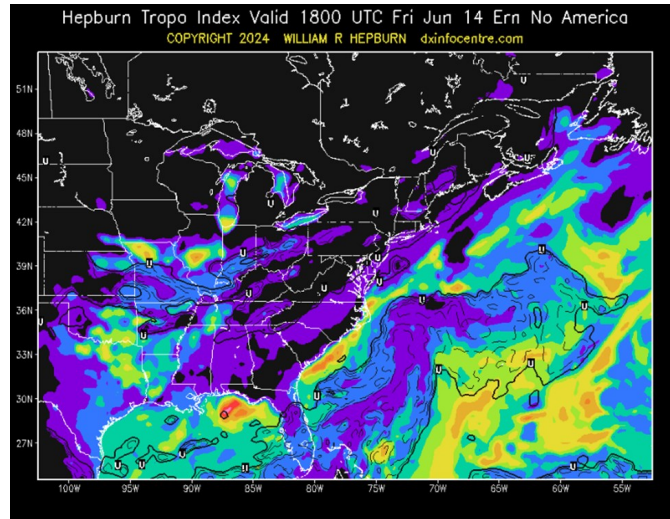
## NET CONTROLLER FOR JUNE



**VINCE**  
KEØVYE

# FROM THE PRESIDENTS DESK

## Tropospheric Ducting.... Its that time for year!



As I have mentioned here in the past, Tropospheric Ducting can extend the range of signals on the VHF and UHF bands significantly. It allows signals to propagate great distances (from hundreds to thousands of miles). The distance record (I think it is) for analog ATV is between California and Hawaii.

This “Tropo” as hams call it, can be predicted and displayed on the map in different color shading using an index developed by William Hepburn, a Canadian meteorologist and avid radio and TV DX enthusiast. Hepburn’s tropo forecasts can be found at <https://www.dxinfocentre.com/tropo.html>

. These maps provide a 6 day and 42-hour preview for most of the world and you’ll find his forecast for us in the eastern half of the US.

The tropo index indicates the overall tropo signal strength on a linear scale from 0 to 10. See the scale on Hepburn’s web site above his map. The higher the index, the greater the propagation opening by ducting is possible. 10 is really intense and we don’t see a lot of it in the Midwest compared to the Southern Gulf region of the country. But it does happen for both ATV and other VHF/UHF modes (even at microwave freqs). In the last tropo opening I was working the east coast on FM with just a vertical and 25 watts. You may hear “CW IDs” from repeaters out of state even with marginal intensity. Tropo “builds” (and can fall) over a relatively short time (hours) and that’s why there are frequent updates to Hepburn’s forecasts.

This ducting usually happens when there is a big temperature rise in the higher altitudes and a lower humidity in the layer of air below it. As I write this, we’re experiencing pretty low humidity and I just heard the Lake of the Ozarks repeater N0ZS with a strong CW ID indicating some ducting maybe occurring. If a red intense layer would appear between us and the Dayton ATV repeater, we might have a chance of seeing some video. We can only hope. □

Mel, K0PFX

## Repeater News...

Hamclock version 4.03 is now running in demo mode on the repeater’s #2 HDMI port. The user manual may be downloaded here <https://www.clearskyinstitute.com/ham/HamClock/HamClockKey.pdf> The first 4-5 pages are installer info followed by description of each pane. The data is updated frequently. I think you may find it useful and may want to set up the Hamclock in your station. A turnkey solution for it is available from the Inovato website [www.inovato.com](http://www.inovato.com) It is a pretty amazing value given what it does way beyond just a Gray Line map. You can configure it to meet your operating requirements.

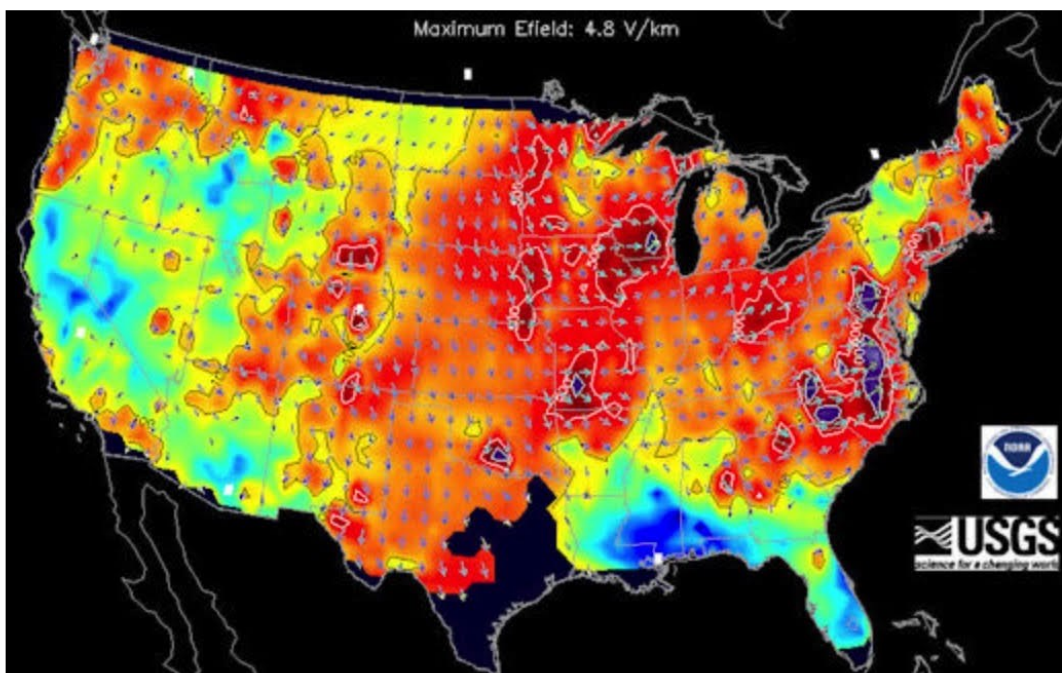
Mel, K0PFX

## ROCKS AND SOIL ELECTRIFIED BY SUPER STORM

Article presented by: Gary Lue—NOGL

**ROCKS AND SOIL ELECTRIFIED BY THE SUPERSTORM:** Across the USA on May 10th and 11th, sky watchers marveled at bright displays of aurora borealis during the biggest geomagnetic storm in decades. Little did they know, something was also happening underfoot.

Strong electrical currents were surging through rocks and soil. The biggest voltages along the US eastern seaboard and in the Midwest were as much as 10,000 times normal. A map from NOAA and the US Geological Survey shows some of the 'hot spots' during the early hours of May 11th:



Back in March 1989, voltages only a little stronger than the ones shown above brought down the entire Hydro-Québec power system. The resulting [Great Québec Blackout](#) plunged millions of Canadians into darkness.

This time, however, power grids stayed up. "We haven't heard of any serious problems so far," reports Christopher Balch of NOAA's Space Weather Prediction Center.

Balch leads an effort at NOAA to model geoelectric fields during solar storms. The map, above, is a snapshot from [a real-time display](#) that takes into account the 3D conductivity of the Earth and ongoing geomagnetic activity. A computer at the Space Weather Prediction Center crunches the data to produce minute-by-minute estimates of electricity in the ground.

"I started working on this in 2011 after a NOAA Space Weather Workshop where representatives from the power industry asked for a geoelectric field model," recalls Balch. "It's a collaboration between NOAA, the US Geological Survey and others; we now have a version that covers much of Canada and the United States"

**ROCKS AND SOIL ELECTRIFIED BY  
SUPER STORM (CONTINUED)**



A power blackout (left) and transformer damage (right) during the March 1989 storm.

When researchers talk about geoelectric fields they use units of volts per km (V/km). Earth's crust naturally contains quiet-time fields measuring as little as 0.01 V/km. During geomagnetic storms, these values skyrocket.

"On May 10-11, geoelectric amplitudes exceeded 10 V/km in Virginia and 9 V/km in the upper Midwest," says Jeffrey Love, a key member of the collaboration at the USGS. "These are very high. For comparison, we estimate that geoelectric amplitudes reached almost 22 V/km in Virginia during the March 1989 storm."

This means the May 2024 storm was, electrically speaking, about half as intense as the storm that blacked out Québec 35 years ago. That's too close for comfort. "Although power companies have taken measures to improve the resilience of their systems, no one would welcome another storm as intense as that of March 1989," says Love.

Realtime electric field maps are published 24/7 on the NOAA website. During the next geomagnetic storm, [click here](#) to see what's happening underfoot!

# DAYTON HAMFEST 2024

LIVE! From the Dayton Hamvention of 2024



<https://www.youtube.com/watch?v=b-tOnCSgKzk>

Catching up with TEN-TEC at Dayton Hamvention 2024



<https://www.youtube.com/watch?v=yVEyAEUj5N8>

Hamvention 2024 - Day Two Walk-through



<https://www.youtube.com/watch?v=bgY6nBF2D2A>

Dayton Hamvention 2024 Vendors, I do the walking for you!



<https://www.youtube.com/watch?v=e3OqAhAleXU&t=633s>

Dayton Hamvention 2024(2)



<https://www.youtube.com/watch?v=i5vtLae-KBo>

Dayton Hamvention 2024



[https://www.youtube.com/watch?v=CpIYObns\\_SE](https://www.youtube.com/watch?v=CpIYObns_SE)

# ITEMS FOR SALE OR GIVE-AWAY

**HOT AIR SMD TOOL**

I want to:  
 Sell an item  
 Name  
 Mel Whitten  
 Call Sign  
 K0PFX  
 Phone (optional)  
 +13147391108  
 Email  
[mel@melwhitten.com](mailto:mel@melwhitten.com)  
 Brief Description of item  
 Hot Air SMD Tool  
 Details, price, condition, etc.  
 Leister is the "Swiss Cadillac" of hot air tools. Hot air flow and temperature can be carefully controlled with this tool making the job of installing or removing components easier. Google Leister + hot air tools for more info.  
 \$100 pick up at my QTH or add \$35 for shipping

3219 Haas Avenue  
 Bridgeton, MO  
 63044  
 US



**MicroLux JIGSAW/SCROLL SAW & ACCESSORIES**

I want to:  
 Sell an item  
 Name  
 Mel Whitten  
 Call Sign  
 K0PFX  
 Phone (optional)  
 +13147391108  
 Email  
[mel@melwhitten.com](mailto:mel@melwhitten.com)  
 Brief Description of item  
 MicroLux JigSaw/Scroll Saw and accessories  
 Details, price, condition, etc.  
 See description here at MicroLux's web site:  
<https://www.micromark.com/mini-powertool/MicroLux-Precision-Mini-Power-Tool-Line>  
 New condition, never used.

\$100 plus shipping  
 3219 Haas Avenue  
 Bridgeton, MO  
 63044  
 US



Description	
AW BLADE FINE (10)	
Lux® Jigsaw / Scroll Saw	
AW BLADE COARSE (10)	
Binary Table Attachment for I	
Lux® High-Power Digital Tran	

**SMD EXTRACTOR (de-soldering) TOOL**

I want to:  
 Sell an item  
 Name  
 Mel Whitten  
 Call Sign  
 K0PFX  
 Phone (optional)  
 +13147391108  
 Email  
[mel@melwhitten.com](mailto:mel@melwhitten.com)  
 Brief Description of item  
 SMD Extractor (de-solder) Tool  
 Details, price, condition, etc.  
 NuConcept System Pak-X-Trac PXT-44A with extractor tips for removing SMD resistors, caps, diodes, etc. Makes the job real easy and avoids damage to the PCB. Just tin the tips and then squeeze the tool on each side of the SMD component and lift off. I have no other tips for it but if found on 'net, tool maybe used for removing leaded IC components also.  
 Good Condition.  
 \$25 or add \$12 additional for shipping

3219 Haas Avenue  
 Bridgeton, MO  
 63044  
 US



**HIDES DVB-T TX/RX Dongles**

I want to:  
 Sell an item  
 Name  
 Mel Whitten  
 Call Sign  
 K0PFX  
 Phone (optional)  
 +13147391108  
 Email  
[mel@melwhitten.com](mailto:mel@melwhitten.com)  
 Brief Description of item  
 Hides DVB-T TX/RX Dongles  
 Details, price, condition, etc.  
 Full duplex DVB-T modulator/demodulators. UT100A for 5-8MHz BW (\$75). UT100B for 2,3,4 MHz BW (\$100). Sold on ebay here: [https://www.ebay.com/sch/i.html?\\_sbn=Hides168&store\\_name=hides168&oac=1&trksid=p4429486.m3561.1170197](https://www.ebay.com/sch/i.html?_sbn=Hides168&store_name=hides168&oac=1&trksid=p4429486.m3561.1170197)  
 Software and further description available at Hides web site:  
[http://www.hides.com.tw/downloads\\_eng.html](http://www.hides.com.tw/downloads_eng.html)

3219 Haas Avenue  
 Bridgeton, MO  
 63044  
 US



Dongles use "MCX" connectors. Cables available with BNC, N, UHF, etc. on one end and MCX on the other end are available on eBay and called "pigtailed". The male end snaps into the mating connector on the dongles. The Dongles can be a direct replacement for the TX and RX but requires a PC and software found on the Hides website.

**LINKS:**

**SOLAR UPDATE**



[The K7RA Solar Update \(arri.org\)](http://arri.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 QAM 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 [HiDes Company](#) and on [eBay](#)

**Ham Radio Quick Links:**

**Amateur Television Network**

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

**ATN Repeater 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**

[https://www.dxzone.com/catalog/Operating Modes/Digital ATV/](https://www.dxzone.com/catalog/Operating%20Modes/Digital%20ATV/)

**YouTube Videos**

**Dave Casler KEØOG - YouTube**

**Videos** <https://www.youtube.com/channel/UCaBtYooQdmNzq63eID8RaLQ>

**Solar Index & Propagation Made Easy**

**The SmokinApe**

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

**Upcoming Hamfests, Conferences & Conventions!**

- Dayton Hamvention, ARRL National Convention and 08/17/2024 – 08/18/2024.
- **St. Charles Hamfest / Convention: 8/11/24**
- SLSRC 2024 Field Day: June 22–23, 2024, Love Park
- NARCFest 2024: November 9, 2024, Nixa, MO