

# T-REX 2024 | AAR | Part-1

## (After Action Report)

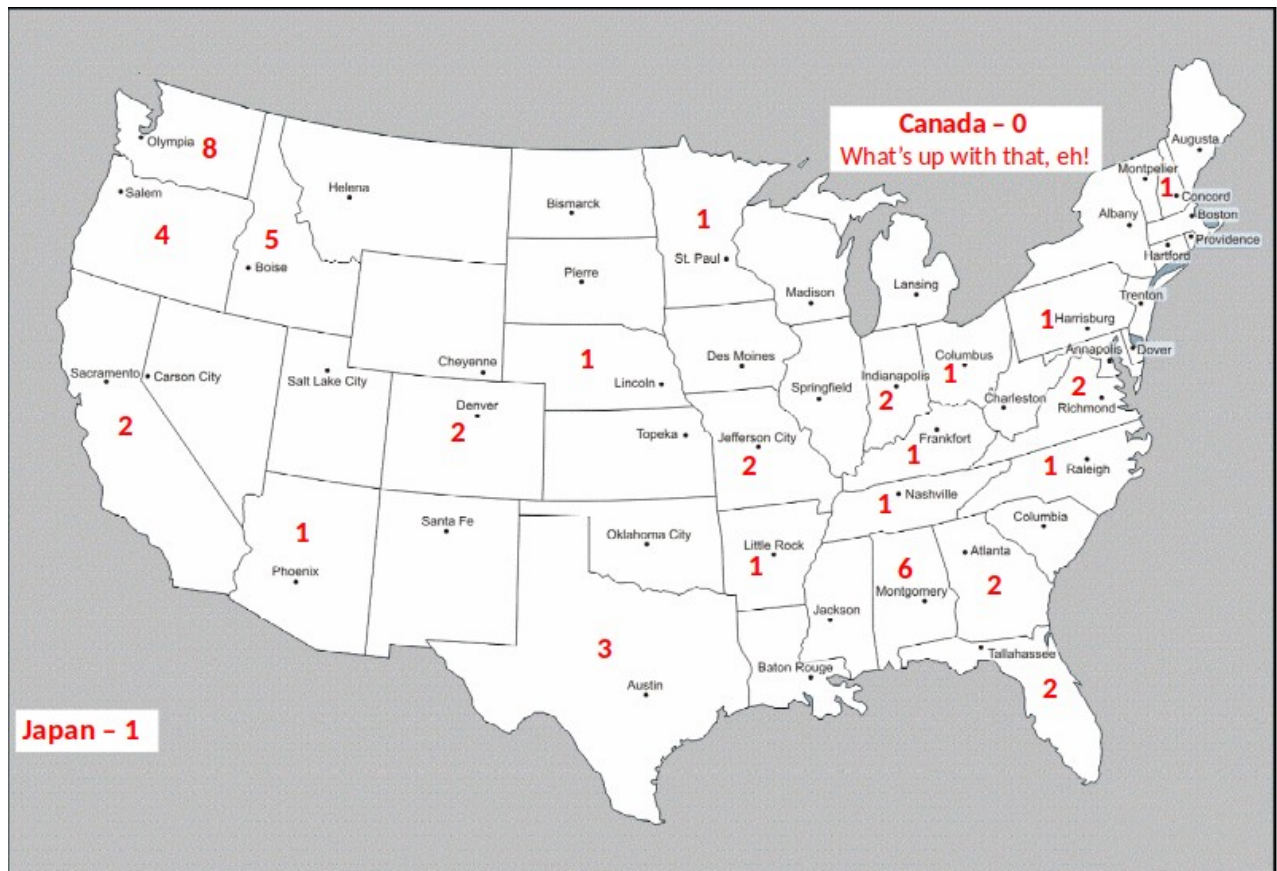
The following is a summary and compilation of the participants in the post-exercise survey for T-REX 2024. Fifty T-REX participants submitted a survey this year, from 22 states, and Japan. At a typical 25% participation rate, we estimate approximately 200 direct participants in the exercise, along with hundreds of others who used the exercise to practice their preparedness plan, but who's primary focus was on other tasks besides communications.

Part 2 will be an overview of the individual AARs received from some of our seasoned operators, lessons learned, and recommendations for improvements.

In this report, lessons learned, in the words of those who participated:

- What went well?
- What challenges did you have to overcome, and how?
- What advice would you give to someone else participating in T-REX for the first time?
- If T-REX were coming up again in a week or a month, what would you change/do to prepare?

### Where did the survey respondents report from?



**Top 3 States by Survey Participation:**

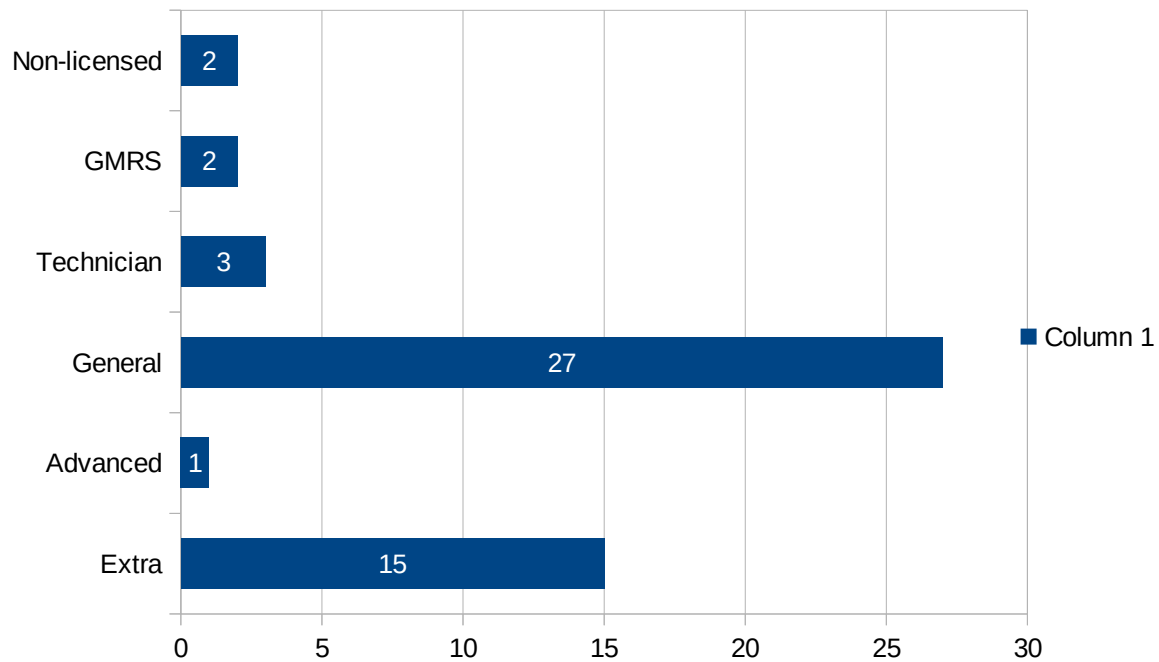
Washington: 8

Alabama: 6

Idaho: 5

AR	1	FL	2	MN	1	OH	1	VA	2
AL	6	GA	2	MO	2	OR	4	WA	8
AZ	1	ID	5	NC	1	PA	1		
CA	2	IN	2	NE	1	TN	1		
CO	2	KY	1	NH	1	TX	3	Japan	1

**If licensed, what class ham (or other) license?**



**AmRRON Membership status: AmRRON Standard, AmRRON Corps, or Visiting Participant?**

- AmRRON Standard member 6
- AmRRON Corps member 38
- Non member Visiting Participant 6

## What was/were the highlight(s) of the exercise for you, and/or your greatest accomplishments?

- Not cursing!
- Knowing my equipment works and I know how to deal with rough operating environment.
- This was the first T-REX where I was able to make contact with each of my local friends and family on VHF.
- JS8CALL and FLDIGI and FLAMP, FLMSG all seemed to work fine. I really don't know about COMMSTAT. It was loaded and listing some things in a colored grid. I have no idea what the map does and why the different color circles? I had just come out of minor surgery so really didn't care to try to look it up HI HI! There seems to be a "Directed.TX" file that is confusing. There are many things about COMMSTAT that maybe can be valuable, presently it seems like many are experiencing bugs, mostly in loading. Also leads to a lot of guess work on just what is in all that MENU DROP DOWN jargon and how to get the most out of it. I can't even figure out the scrolling banner?? COMMSTAT needs to be discussed with the developer. Who is it and what does he want the users to accomplish by using it and how best to put it into practice. LOTS of holes in that program right now and without the majority of operators using it, a clear picture of what is really going on out there is not shown, so I wouldn't put a lot of faith in it to give a grand overview.
- Accomplishments...receiving what I did in both FLmsg and Flamp....I'm new and still figuring my way through....and seeing how things should operate in an emergency setting.
- Getting traffic through the RTTY contest with mfsk16. I swear I don't know how anyone answers their cq calls they never take a break from transmitting cq and their info long enough for someone to get a word in edgewise
- Being able to copy most of the traffic. Finding out my weaknesses. Learning that a real world event is going to be a stressful time.
- Just getting on the air and receiving comstat data from others.
- Excellent test of my solar setup with less than optimal sunlight
- Being able to copy most of the traffic. Finding out my weaknesses. Learning that a real world event is going to be a stressful time.
- Not giving up!
- First time with T-Rex, starting out slow, but as summary reports started coming out, I saw how useful they could be. I expanded my working knowledge of the tools and the SOI.
- Working with P4 and AT-55. It's the people not the technology.
- Receiving two STATREP's into Commstat, running a T-REX hifers [sic] beacon on 13556.5 kHz at 3.6 milliwatts and receiving a listening report from Colorado.
- Comms were clearly received, bands cooperated. Battery QRP operation performed exceptionally well.
- Very grateful for the rolling nets! I could hear you guys depending on the noise floor, but you weren't able to hear me on check-ins. The NCS running the Eastern side were great with passing everything along. He asked me to relay when we were on 10.121, caught me off guard, and I'm pretty sure I didn't do it the right way. My lesson; get familiar with the "how to" in case I have to do that again.
- I learned a ton from our 4 man group.
- (JAP) No deaths, including my own. Special-made RX wire antenna for T-REX worked a great. Power and other resources, no problem (50L of filtered water stored; medical filtration system in normal use 24/7; 40kg of brown rice, 27kg of white rice, 19kg of beans, 12kg of tea, 5kg of

coffee stored; 300Ah of assorted battery power stored and ready to be topped off in the field or at the QTH via solar (various PowerFilm); full medical stored.

- ANCS'ing an operational net
- Running 30hrs on solar/batteries
- Collecting, creating an active dashboard of data in CommStat
- Small but not inconsequential was being part of a relay on JS8. Not a lot of opportunity to do that day-to-day for me. With propagation being iffy at times it is a nice capability.
- Watching Commstat work. Using my EFHW with 10w and being heard. My batteries held through the night, and solar panel recharged enough during the day
- Had enough solar power for the entire exercise
- Was busting my hump to get on the road out of town but copied all TFC I could on 40m using FLDIGI and relayed some as requested.
- I couldn't be at my rig most of the weekend. Commstat pulled in info from all over.
- Getting the info./up-dates on the 3 areas around the state that were having problems - Tri-Cities, cougar and the ID. fire welfare check.
- Reading SITREPS from other areas and especially the EIS & EXsums coming back down the chain really made my day..
- Getting commstat running.
- Shutting off the power
- Doing what it takes to move information meant adapting to conditions and sometimes having a station QSY to a better freq. I am convinced JS8, while a great mode, yet it causes chaos when not used correctly. SNRs are NOT needed during an RWE or exercise IMO other than when a station first comes online. The heartbeat beacon should also be turned off during an exercise or RWE.
- Operating HF at 5W off-and-on for 16 hours per day on 1 LiFePo4 100 AH battery was unexpected. Rain and low light prevented recharging the battery.
- Got GPS time sync working on the new laptop
- Seeing statreps, replying and receiving msg etc back
- Received a full stat rep
- Passing local traffic via vhf packet
- Finally got my backup power system working at maximum efficiency. Finished the exercise at 100% battery capacity after 3 days off-grid.
- JS8Call & COMMSTAT1 were awesome in overall situational awareness and knowing the best communication paths. I collected LOTS of MFSK-32 traffic and, best as I can tell, only missed one file. Utilization of FLAMP Ver >= 2.2.11 (with loadable relay files) made message tracking by queue # (and LESS duplication) much better.
- I found JS8Call was like FT8, primarily used for propagation and SNR checks with occasional abbr TREF24 statreps
- Monitoring at the top of the hour.
- Multiple bands simult with JS8 and Commstat, 3 radios on 3 antennas.
- The increased use of the BBS system. Ability to leave the tools up in persistent presence (and ExSums) and via nets to get the word out.
- Relay path for T501 to West SigCen
- It was a very frustrating experience - I'd call it a total failure. Nobody's fault but my own.

## What problems did you encounter? Any lessons learned we could pass along to learn from your experience?

- Local Comms, cell, internet, etc were actually down. Local cell tower experienced a complete failure. I was able to make a handful of 2 meter contacts. AmRRON channel was unresponsive do to outside interference.
- Reset the PC daily
- Noobs using Js8call during nets and sitting on 850hz and 900hz during fldigi nets and people relaying commstat every 30 minutes ( that's the same operator doing it)
- I'm not sure why, but I missed most of the official exercise traffic. I copied tons of STATREPs, SITREPs, and others, but only one of the T5xx messages.
- Where to start, operators that clearly haven't read the SOI, excess nonessential transmissions, operators out side of the JS8 allocation, improper file naming... I guess no one read the instructions on how to name t/tw traffic.... As for passing on, I learned I need a more thorough plan to move information outside of NVIS range. 20m was off and most didn't have decent 30m antennas...
- I was unable to copy any traffic from the 80m nets. So all I had to go on was js8call and commstat data. I was not able to get summary reports or anything like that on 80m flamp, flmsg. It could have just been me and my gear. I guess I expected more data rebroadcast of information, maybe on the PPN by those stations who are able to.
- I think what I learned from some previous exercises is don't sweat it. Over time and maybe on a different band eventually the information will come across, and if it doesn't...chill out. Sit it out and wait for distribution. One of the things I found useful this year was doing the SNR occasionally which let me know there were stations that heard me out there and I should be receiving also. It also let me know that people were hanging mostly around on the 40M band and didn't really adhere to an SOI time change, so I hung mostly on 40M too.
- digital is my nemesis...lol...I've had it working great leading up to T-Rex, then half way through it got wonky on me...I could read but FLmsg and FLamp did not receive...I did respond to a request on FLdigi, but never receive any acknowledgement.., I did see it transmit in wf...so not sure if reply made it out.
- Battery power didn't last as long as planned. Divided attention between staying on top of happenings on HF as well as trying to run a local net on a GMRS repeater. Almost needed two operators.
- No relays within range of my QTH or if there were operators to relay they were asleep at the wheel! In 10+ years doing T-Rex exercises, this is pretty pathetic
- Some reports were not clear as to the location of a threat. Such as "near town". I had to use the internet to locate the 6 char grid. I either need to get a better grid map or the reporting station identify town and state. Took a while for me to find the proper net schedule "B". Just me needing to read the SOI in more detail, but it would have been nice to have more announcements.
- qrm, waiting on collectors before being able to send something. I let them know with an appropriate break in and they said something like "go ahead this can wait.". It was perfect behavior 17m

- I figure that my inability to intercept any T-REX traffic is due to deciding to participate only a week or so before the event, technical issues preventing adequate reception, my part-time participation, and not briefing myself adequately before the event.
- Missed EXSUM1 Friday night, was not clear on National net time. Confusion on frequency used 3.588 or 7.110 during evenings. Sporadic hit or miss processing of statreps by COMMSTAT tool.
- The RTTY traffic was terrible, I was frustrated and that's alright because it forced me to try and find a solution. Only suggestion would be to push the Persistent Net harder. That's what I ended up defaulting to if I was unable to receive traffic. MY input is not to taken in offense, you all did a great job, and I have not gotten to a part of the SOI V that lays out whatever I'm bitchin about! So forgive my oversight if it is so.
- I had issues with commstat. I was able to work around it, but need fine tuning. Solar and battery systems worked great, but produced more noise than expected.
- (JAP) The usual: not being heard and often difficult to hear (conditions were not ideal, plus time difference puts the PpNet freqs. at poor time of day in Asia). As part of the AmRRON Foreign Legion, I think most CONUS members are (logically) neither looking for nor listening for my signal, and if it is encountered perhaps considered dubious ("JS8 @AMRRON group with a Japanese call? Bravo Sierra, brother..."). Perhaps we can consider mentioning the Foreign Legion in future SOI updates so members are aware that it exists?
- People at first were so trained to not use TxID that some tfc was sent but not decoded due to the mode change. This seemed to self correct by the end of the weekend.
- Coral undirected JS8/Commstat tfc.
- Daily summaries will be vital in an actual prolonged emergency
- Was assigned to "injects" for Saturday. Tried three times each, but never got any acknowledgement.
- Being on battery power made it a challenge to stay on persistence and balance it with nets. I dont hang by my radio 24/7 so of course missed some nets, but made some too. More than likely similar to real-world...which is good.
- Not copying the AMRRON forms correctly ranks up there at the top. Double check forms, update all programs a week before.
- Contest QRM was a real PITA. Suggest a check of the ARRL Contest Calendar before the next T-REX to avoid future issues like that. [JJS Note: Incidentally, we did check to be sure no contests were scheduled. However, we chose the dates late last Fall and the RTTY contest was scheduled afterward. Just worked out that way this year, after many people already put in for vacation to participate in T-REX 24.]
- RTTY was my biggest problem. I need more help with COMMSTAT/set-up
- In the week leading up to T rex, I 'improved' my laptop and totally hosed the comms software. I installed my back-up drive (Toughbook) which only required a brief update to forms and the unique configurations VERY quickly. The danger of 'improving just one more thing could have deafened me...'. As the saying goes "Perfect is the enemy of 'good'".
- Commstat has many bugs that I had to manually change lines of code to fix.
- I need a DX antenna to augment my NVIS. Add unattended, controlled cooking (oven).

- Stop sending SNR requests during serious operations. You can determine path reliability by observing the right-hand side of the screen viewing the snr from stations that are passing traffic. If the band is quiet, then perhaps send out an snr request occasionally.
- RTTY contest at end of exercise was a problem; but we should expect to work around interference, intentional or otherwise, so this was good practice for real-world situations.
- Js8call doesn't seem useful in our use case. And seems to torpedo a lot of FLdigi traffic
- Not enough battery run time on solar generator. Unusual amount of RF. Seeing some fldigi traffic but unable to decide most, no official comms received via flamp. Probably due to my RF or band conditions. With only one HF radio I had to split time on digital modes, so maybe missed critical traffic from one mode while monitoring another.
- Probably reception. The houses here are close together and I have to string my antenna between them.
- Just being inexperienced
- Band conditions, RTTY contest, unskilled/undisciplined participants. All were frustrating but added to the realism of the chaos we would be dealing with in the first few days of an activation.
- Receiving messages directly in FLMSG was highly problematic as a slight error could cause FLMSG to fail to recognize the traffic and not auto-save the file. The ability to leave the station up and running to collect traffic while unmanned is critical since in a real-world TEOTWAKI situation I have many other tasks to attend to in addition to comms. Persistent Presence Operators were FABULOUS in being able to get missed fills from comms received while unmanned. I was also able to assist other operators in filling missed blocks.
- Never could identify or contact any NCS or ACS in the central US region. Not sure why no relay offerings on any AmRRON frequencies (20m, 40m or 80m) were provided. I did attempt to send out multiple TREX STATREPS from my location with no acknowledgements from any station. I sent my simulated TREX StatReps in JS8Call, FSQ, and FLDigi Contestia 4/250 on 20m, 40m, 80m band
- Massive self-QRM from JS8 auto responses, multiple radios even on separate bands with filters. Vacuum running in home nuked traffic with EMI. Frequency slightly shifted off on sender, missed mode changes, or shifted for previous sender center freq. Missed blocks in FLAMP with no relay to fill, FLMSG traffic partials more useful. MFSK32 used when too much QRM, not switching to 16. Batteries died to due more radios and bad estimation, lost data on computer shutdown.
- Saturday propagation condx were less than ideal.
- Mostly technical - poor propagation gave us limited paths westward. QRN in our area required IPO and ATT filtering - RTTY made it worse Saturday night. We lacked adequate T5 and T4 contact with Central... had to over-rely upon one very effective AL station operator. BBS was hard to connect with all the noise.
- JS8Call
- I get the frustration, not crazy about the execution...  
KJxxxx: @AMRRON IS IT REALLY NECESSARY TO CONSTANTLY PUSH THE JS8 BUTTON WHILE MESSAGE TRAFFIC BEING PASSED.

AND YOU BONE HEADS RUNNING AT 850 AND 900 MOVE UP TO 1900HZ WHEN MESH TRAFFIC IS BEING TXED STAND BY.

LOOK AT 900 ON THE WATERFALL. IF YOU SEE A WIDE SIGNAL DON'T TRANSMIT KJxxxx-?

- I missed nearly all traffic by not being able to recognize which digital mode was being used. When I could see traffic on the fldigi waterfall, I couldn't determine which mode was being used - even using a cheat sheet. So I would miss messages by guessing the mode incorrectly, switching modes & guessing wrong again. It seemed like I was always on the wrong mode. I assumed that others would be using Contestia 4/250 or MFSK32, but that was a bad assumption. I have fldigi set to automatically detect and switch between modes, but that rarely worked.
- I'm also in FL and that puts me at the end of the reception chain. I can't pick up any official broadcast unless it gets repeated by someone. I heard no repeats. After awhile, I got just tired of asking if anybody had new info & hearing nothing.

### **What advice would you give to others participating in T-REX for the first time?**

- Get licensed Get ready ahead of time
- Listen, Stop, just stop pushing buttons
- Lay off JS8call and commstat and rx more than TX. Wasting battery power is not smart plus gives away your location.
- For your first time, just sit back, relax, and monitor. When I was new to AmRRON years ago, I learned tons about general AmRRON operations by following along with T-REX.
- don't be afraid to jump in....if you can't send forms just type it out...anything is better than nothing
- RTFD, also practice sending traffic more frequently, last stay away from the JS8 button unless directing a message to a specific person
- Don't get frustrated by what goes wrong. Use it as a learning experience to remedy what went wrong.
- Focus on listening mostly, but do prepare a sr with comstat and transmit daily. js8call with comstat seems to be the easiest to operate. Make sure auto-responders are off and disable immediately transmit in the js8call behavior menu.
- I would perhaps tweak my antenna setup to do a better job on 80m nets. I would Learn more about the digital modes that run at 1500 on wf.
- Don't get worked up. It is what it is. Wait and watch. If it's your first time you are probably going to have equipment glitches so work on those.
- Listen, listen, listen, and read the SOI. Listen to NCS's instructions. Do not ask for a resend or fills on messages that do not pertain to your AO unless you are assisting in relaying the message.
- don't be afraid to jump in....if you can't send forms just type it out...anything is better than nothing
- Don't do it unless you've trained for it. Have a multi-band antenna system.



- I was mostly in receive mode, not wanting to disrupt the process. Hope we last long enough to have another T-Rex and hope to engage more. But for first time, receiving was good enough.
- Learn how to put waterfall a 1500 and filter down to improve snr and reduce qrm during a net or traffic being passed. But don't expect FSQcall or anything to be alright until you put the dial back on SOI freq again.
- Pay close attention to any last-minute postings before the event, ask a seasoned participant how to approach the event, dive in, have fun, pay close attention to post-event assessments.
- Don't get frustrated with the software tools. Was not able to receive or understand when/where voice nets were? Voice nets are easier for beginners than getting all the software working.
- Patients [sic], of which I have none. I am used to in my past working with a lot of real-time data, via satellite or fiber optics. It ruined me!!! LOL
- Find an experienced group to do it with. And keep a printed copy of soi on hand, as well as printed maps and grid squares
- Don't get frustrated, keep at it, stay hydrated; and, at all times, improvise when needed, adapt, and overcome.
- Listen a lot, transmit a little, and be ready to relay what you have received!
- Open up filters. Listen before TXing. Practice your skills throughout the year. Not just during Operational exercises.
- Start early so you can learn at your own pace. But get started. And I would recommend JS8 as you will very quickly receive traffic which is always an encouragement.
- Your instructions said to listen mostly for first-timers. I was surprised there was not more operators so maybe encourage newbs to transmit and use the programs when not net times. Mistakes are how we learn.
- Double check all updates in computers, have the SOI handy, and don't worry about getting your sitrep acknowledged above gathering other reports.
- Learn digital modes and dial in your solar power
- Just have a good time and use it as a learning experience.
- Don't do SNRs unless you have traffic
- Take a lot of notes and be open to learn
- 1. Get your FLdigi, FLmsg and FLmag running reliable FIRST. HF voice nets have proven to be generally unreliable. When I read someone who says they can't hear our nets, when asked, they are generally operating HF voice.
- 2. Think in cycles of 24 hours, NOT instant cellphone like gratification.
- 3. Focus on your regional HF frequencies. 40/80m HF regional/NVIS are generally stronger and more reliable than the 20m long haul comms ( ymmv). Regional NCS likely has the EIS that you need for your region. DX Emcomm is generally too far to accurately reflect your immediate surroundings.
- Embrace the inevitable issues and work through them. Add them to a list for working on during the practice nets. Use practice nets ahead of time to prepare.

- Don't wait until the time for an exercise to learn the software. Train and practice now! Get the SOI!! I had a station that had been involved for two years in our group who asked me a question that required a lengthy answer. I referred him to the page number in the SOI. He said, "I don't have the SOI". I told him that in the middle of an SHTF situation is not the time to hold classes. Lol.
- Don't wait until the last minute to test equipment, etc.
- Read the SOI. Then read it again. Pay attention to net times for the operational nets, not confusing with practice net schedule.
- Watch the videos you recently did. They are excellent instructional videos for getting set up. Then, just listen and try to get the traffic. If that is going well, try upload a stat rep.
- Read carefully the AmRRON SOI
- Participate in practice nets, study the SOI, listen and learn before stumbling in and disrupting the exercise.
- Don't stress out... ENJOY the experience. Participate to the fullest extent that you can. Involve as many people as you can. It's more fun as a group effort, and the training is better too!
- Be patient. Participate as much as you are able
- One radio only on digital, skip trying voice, focus on receiving traffic files over transmitting anything including JS8 Statreps
- For first timers - patience. It's a learning experience. Don't be put off by the grumpy so-called 'veterans' who publicly bitch and moan about people not turning off beaconing or TXID, not being in the JS8 'filter band', etc. The whole experience is to learn how to fine tune those kind of settings. You will get more comfortable and more proficient each time. It also underscores the value of participating with the same tools in scheduled nets and persistent presence net.
- LISTEN - don't TX unless one has tfc to send. Find a lane in JS8. Use SLOW mode and setup on the 100 or 50 segments of the waterfall (ex. 2100, 2150). This would improve decoding ability.
- Good luck
- Be patient & be persistent. Be able to recognize a mode from the waterfall. And keep your broadcasts in Cont 4/250 and MSFK32.
- I would to encourage other hams to say "I just received xxx" after receiving it, so that others who are on freq but didn't hear it would know that new information is available. That way you could also scroll back through the fldigi log later to see that someone received something and you would know who to contact for it.

**What improvements would you make this week if T-REX were to take place again in a month?**

- Establish alternate Frequency(s) for lower band operators in case of interference or disruption
- Assign others to be NCS. I wore too many hats.
- Discontinue Commstat
- Have a second operator...one to focus on HF activity and one to focus on communicating with the local group.
- I definitely could use another solar panel or two. It was cloudy on Saturday, and I couldn't quite get a full recharge, even though I was conserving the best that I could.

- Improvements....ME....my gear/equipment needs to be lined out...I'm finding ways to make more time to fix it.
- Have my group practice more within the higher bands. 30-20-17 etc. insist that stations volunteering as inject stations be available all weekend.
- Well, to me the biggest thing is asking the question, "Did I get it all." As in an above question. How would I know? If I know I have a path to who might be a NCS, is it legit to send a message directly via JS8CALL asking that operator to get on FLDIGI and send out a list of all FLMSG/FLAMP file names they have so I can compare to my files? Then if I'm missing some maybe a time can be arranged that that NCS can retransmit them out, letting others know that files will be transmitted at a given time and stand by.
- Have a vetting process for those who are injecting traffic to ensure its folks who are proficient sending traffic with the FLDigi suite
- Improvements....ME....my gear/equipment needs to be lined out...I'm finding ways to make more time to fix it.
- Try to get commstatone up and running.
- I would bring a 17m, a 30m antenna, and a better 80m antenna if i was portable or remote again.
- Re-evaluate my receiving equipment, go with all hand-held, portable devices, practice with all equipment I'm going to use, minimize rat's nest style setups.
- Better clear explanation of the schedule.
- Setup a place that new people can connect (online) while the exercise is going on. This is suppose to be "training", I understand that and it's value, however, if you have to new people or just people that are not the very savvy folks you have on Telegram, then where do they get help? IMO it's the small victories that operators get that push them to learn more and be better in the overall effort. I can hear everyone yelling at me already, but everyone gets ready and executes the "training" at their pace not what everyone thinks they should be doing. I tend to tell on myself in telegram a lot, for no other reason than for the new person who doesn't want to ask the question. S\*\*\* happens, sometimes it's an easier pill to swallow if you know someone else is going through the same growing pains.
- Just honing system issues. Maybe a more powerful laptop for the radios. I would also run at least 2 stations at the same time
- Great event, we have a fantastic network of patriots. Js8 call is a liability, several of our call signs were published by a blogger on Monday who reported his t-Rex experience.
- More power. I have to assume that the foundation of not being heard is the signal not getting out far enough. I am on the move, not stationary, so 100W is going to be the max. I'll keep at it..
- Work on the macros I have, upgrade antenna to large horizontal loop.
- Directed JS8/Commstat checkins.
- Create a time-managment system to make sure all nets heard. And take my rig outside to operate.
- Put a vertical antenna back up. That might help with traffic from both sides of the country on 20m.
- This year has been a difficult one keeping up to date with AMRRON, [family situation]. I was very pleased that Commstat worked so well, and that I received my tr(u)sdr in the mail today, that will cut my rx current draw from 650 mA to 80mA so I can rx traffic 24/7.

- FLRIG doesn't work well for me. I can only run fldigi or js8call, I find more value in fldigi. Would be nice to get this figured out.
- Avoid scheduling it on a contest weekend.
- I'd hope to be at my rig.
- To make sure that COMMSTAT is working
- Add a local printer running for my comms laptop, rather than using the family printer. Having to rely upon a Wifi hub to print in an emergency is a bad idea.
- Antenna. Wire the oven circuit to the inverters.
- Make sure all PPP traffic is sent flamp or any traffic needing authentication. I copied maybe two messages sent via flmsg 100%. so, they could not pass authentication. Traffic that does not need to be authenticated is different and flmsg is fine. I understand and someone pointed out to me that sending flamp was too time-consuming for stations to ask for fills. Correct me if I am wrong but when I ask for a SigCen or a relay station that can relay to SigCen then I am not concerned with the "group" getting the message but rather only SigCen or the relay station. But PPP needs to be complete not hit or miss as is the case many times in flmsg. I thought about an alternative freq where stations could meet for fills after traffic has been passed and confirmed by the relay or SigCen station. I did this twice using VaraC up 5.
- Have big batteries and lots of solar. Don't forget that other stuff will be running off your power system besides your radio gear.
- Get more battery run time. Adjust setup to minimize local RF. Get a tool to measure antenna efficiency and adjust as needed. Read the SOI a couple more times. Setup a second HF rig.
- I think I would move to an open space.
- None for T-REX. For actual event, I need to put in some practice time performing drone surveillance for better situational awareness and STAT/SITREPS.
- More lead-up info on WIWT News. Being able to point more neighbors to the lead-up scenario could help generate more interest.
- better rolling regional NCS/ACS communications across the persistence net frequencies
- Local scheduled voice net
- Batteries staged for changes or already paralleled before and solar change station ready to rotate.
- I saw traffic pass through the node where end users were 'getting into it' and originating local observation traffic that was pretty creative. But that did not get passed into the nets from what I could see. Only official inserted traffic seemed to be included. Granted, you can't include everything, but in a real scenario, who would decide what gets passed into a net and what doesn't? Or would we pass everything and let end users sort out value?
- Define what our goal really is...a moving target. It used to be...keep it short as possible to hinder rf locating, and make detection time as short as possible. Now all net ncs hype is very bloated, the files are bloated, reports are bloated, the forms are bloated. Are we training to be a natural disaster response or comms of last resort...we no longer think or train for the latter. security is a thing of the past
- Have ConStat [sic] operational

## Any other comments or observations?

- Antenna quality is a big issue for portable and qrp stations. Low power you need a quality resonate antenna and know how to configure and use it. Sigcen was heard here but stations further north was unable to hear.
- Overall it was a fantastic exercise. Thanks to JJS and everyone else who worked hard to pull it off. Already looking forward to next year!
- I was impressed on how the exercise went down....Well done
- This was one of the more frustrating T-REX exercise. Mostly due to difficulty with other operators. It seems we were a more well oiled machine in the past.
- Don't get discouraged/detracted by those whining about JS8CALL operators doing SNR requests. It was not a problem where I live. Having said that, I think we need to figure out a way to get training and TTP's to newer and less experienced operators.
- I learned a lot but feel I missed out on a lot. I only found AmRRON a few weeks before T-REX so I had little time to prepare. Looking forward to doing better next time.
- JS8 operators not following protocol on where to be on the waterfall and not paying attention before Tx'ing interfering with a send of priority traffic.
- I was impressed on how the exercise went down....Well done
- Many thanks to all the members who helped set up and run this event. I'm sure there is a lot more going on behind the scenes than I could imagine.
- I appreciate the great effort that the T-REX communicators invested before, during, and after the event.
- Question - are flmsg comms signed? Prefix said key sig in msg however could not validate flmsg k2s with kleopatra tool. (Answer: No. Attached signatures are dropped by flmsg. Signature stays intact only when sending using FEC (Forward Error Correction) methods, such as in FLAMP)
- Grateful for the effort that you all put into this, in these times it's very important to keep Comms operational. IMO Persistent Net was a great addition. Thank you very much. I have a lot to learn.
- Great timing with CrowdStrike: T-REX and AmRRON prescient as ever. More seriously, CrowdStrike are the same jokers who covered for the data leak from the DNC computer servers in 2016 by saying that it was "a Russian hack" -- a claim they later admitted under oath was a lie. The timing with DT being shot a week previous and JB about to drop out is rather suspicious. Just sayin'...
- People need to get off their ass and train!
- There was one exchange when an operator kind a derogatory remark vs a newbie. Not cool. We were all trying to live with RTTY contest so someone transmitting near 900 on the band should be supported to move up instead of scolded. Nerves will be on end in a real event, so courtesy and respect should be front and center. Have heard a few exchanges on [Z-Net] too that made me cringe a little. Not a big deal but respect should be part of the culture.
- I see a lot of traffic on 1500 WF, which I assume is FSQ. I haven't used that mode, I'm curious if I am missing out? [JJS Note: No, you're not missing out. The modes used at 1500 on the WF are mostly Coordination and Support stations getting traffic moved around to/from your NCSs, so they will have what they need for dissemination in upcoming nets]
- Thanks for the effort needed to supply a good learning experience.
- The relay stations...if not for them I would not have been able to Rx what info. that I did.

- AmRRON blog posts did not include exercise end time-of-day. SOI operational schedule does not include 40m.
- Enjoyed the exercise!!
- Move Js8call traffic to it's own frequency, I've never had such a problem copying FLdigi traffic. I couldn't believe I only received two messages for the entire event. I kept switching to non Amrron frequencies to verify my system was hearing/decoding ok.
- I had higher expectations for my own personal performance and success. Definitely a learning opportunity to expose weakness in setup and ability. Motivated to press ahead and make my station more capable for real situations or the next exercise.
- I have a long way to go.
- The BBS was underutilized. There was a considerable amount of traffic passed from West to East, but very little traffic moved from East to West. And very few people connected to retrieve the traffic.
- In our current, precarious national situation, real-world developments were / are getting closer and closer to the exercise scenario. It was good to have the CloundStrike developments included in the exercise traffic.
- If there were any frequency or mode shifts used for this Exercise, I was not provided that information (as a non-member) clearly for TRES operational support. I feel the AmRRON core mission and exercise failed to meet expectations goals as backup communications for non-members. My station is a Xiegu G-90 mobile radio running 20w QRP on NVIS multiband tunable dipole at 10ft above ground [JJS Note: We can't emphasize strongly enough... PRACTICE. There was no "members only" frequency shift information implemented. If an NCS determined a mode or frequency change was necessary, it was announced (and repeated) over the air. The SOI is available to anyone, but we also designed the exercise so that even without an SOI, non-members could participate if they just tuned in to the listed practice net frequencies and then paid attention. Upcoming nets were announced in several places, times, and modes during the exercise. The direct correlation we see between success or non success is related to time spent participating in practice nets throughout the year, or even months, prior to a grid-down simulation.]
- Relays of traffic more would improve training value. Focused training event on single operating mode leading up would help prevent incorrect operations (JS8 wrong WF position, JS8 requests during traffic, etc). Everyone playing with all modes at once would be reduced.
- The first TRES that a menu of docs was offered to me, I could have requested. That was great.