Solving WiRES-X ISP Connection Problems

Category: WiRES-X
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If you want to set up an HRI-200 on Starlink, AT&T, or use you phone as a hotspot, there's a problem. You need to open incoming ports and that can't be done in many cases. The answer is to use a VPN to tunnel past your ISP to the raw Internet. One solution for some carriers is to use the PDN mode which does not require incoming ports to be open. But that may still not work.

The other problem is we're running out of IPv4 space. New ISPs, such as Starlink, don't have a lot of IPv4 addresses. IPv6 solves this problem plus many others. Thus it's no problem for each ISP subscriber to have thousands of unique IPv6 addresses. Unfortunately the WiRES-X software DOES NOT support IPv4. At all. IPv6 will become more and more dominant and this will just become a bigger problem.

If you set up a PDN (no HRI-200), a commercial VPN will work well. With a VPN, your IPv4 traffic will be sent in an IPv6 tunnel. At both ends, your node and the Internet, IPv4 addresses will be used. This works because PDN does not require any incoming ports to be open. It may be that Starlink provides this service automatically. Don't know.

If you use an HRI-200 then YOU NEED to open an incoming port. Most every commercial VPN does not permit assigning specific ports for incoming traffic. This is because they will share a single IPv4 address between dozens of subscribers. A couple of VPN providers do permit this. I have used Golden Frog's VyprVPN in the past for this purpose. VyprVPN is a "high end" VPN service and will cost you quite a bit more than free or low-cost

VPNs ($60/yr). You'll need to turn off the NAT firewall so make sure your exposed computer is well protected! This will give you complete, unfiltered access to the Internet – something you can't get with your ISP!

See https://www.vyprvpn.com/

A Really Nice Power Station

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I've had one of the power stations for some time now. It has a really good MPPT converter that extracts every watt out of the solar panels. You can turn on the AC output while you have solar power coming in and it provides an efficient source of solar AC. Buying these components separately is almost the cost of the power station. Internally it has a 268 Wh Lithium Iron Phosphate battery which won't burn your house down and can supply thousands of cycles. It also provides USB and USB-C power output as well as 12 VDC. Although I haven't tested it, it should work as a UPS as well. It will provide AC output while it is plugged into AC and transfer to battery when the main input goes away. The display shows power input, output and remaining capacity. A bluetooth connection works well with my iPhone. An internal fan kicks in when high power is being used and sometimes during charging. It can charge at 150+ watts input AC or DC. For testing, I ran a water pump on the AC output. It consumed around 400 watts and the power station ran it just fine – which I wasn't expecting. After all, this is a pump, not a radio!

The negatives: The internal battery is 22V, so the 12V output is from a DC-DC converter and is limited to 10A. So when operating SOTA or POTA it’s best to keep HF power under 50 watts. Also the USB-C doesn’t seem to coordinate well with some devices, delivering less power than it should. All in all I think you get quite a bit for the money. The reason I’m bringing this up is that there is currently a $90 off coupon. So be sure to check the check box!!! Normally the “standard” coupon is $60.

Here’s the Amazon link: https://amzn.to/42nOG5c
You may also be interested in the DC power output cable as it uses an uncommon circular connector. (I put some Anderson Power Poles on mine.) Also Solar panels.