

Raspberry Pi 3 DXSpider Installation



CanaKit Raspberry Pi 3 Kit

The Raspberry Pi 3 DXSpider installation is a little different than on the older units. I found a few guides on the internet for installing DXSpider on the Raspberry Pi 1 & 2, but none were specific to the Pi 3. The hardware is different (adds Bluetooth and Wifi, etc.) and the software, Raspbian, is updated.

This is not a definitive guide for running DXSpider, you'll have to recheck some of the settings and configuration files to make sure they are correct for your station and location. DXSpider is new to me and I'm still learning it.

Let's start by getting the Raspberry Pi 3 setup for the installation. Here are some things to consider:

- You're running this at home, do you have access to your router? You'll need to either do port forwarding or set the IP for the Raspberry Pi 3 to DMZ. Something along those lines anyway.

- Do you have a fully qualified domain name or website? You'll have to edit the DNS to send the traffic to your home routers IP address. That brings up another thing, do you have a static IP?

If you don't have a FQDN or static IP there are services available for free that can help. Here's one: [No-IP](#).

Those things can be worked out later, but if you want others to be able to access your DXSpider node you'll need address those items.

Getting the hardware ready for your Raspberry Pi 3 DXSpider Installation

1. Connect a keyboard, mouse and monitor to the Raspberry Pi 3. You can use a wireless keyboard and mouse. This is what I bought for mine, [Logitech MK270](#) and if you want to use a monitor with a VGA cable you can use a [HDMI to VGA adapter like this one](#). You may have to edit the config file to get this working. Here's a YouTube clip that worked for me: [How to use a vga monitor with a Raspberry Pi](#).
2. Boot up the device (Raspberry Pi) and follow the instructions to install Raspbian.
3. Once Raspbian is installed boot it up and go into the desktop. You'll want to change the password for the user Pi. That's under Preferences>Raspberry Pi Configuration>System. You might as well change the hostname while you're in the system. Make it dxc or something easy to remember.
4. Depending on how you have your router setup, you'll probably want a static IP on the internal network. This is the guide that I followed: [How to give your Raspberry Pi a Static IP Address](#).
5. You may want to enable VNC. I use a VNC client to remotely access the desktop. To enable it go to

Preferences>Raspberry Pi Configuration>Interfaces and select VNC.

6. If you need to set the correct time zone use the command: `sudo dpkg-reconfigure tzdata`

From this point on I use SSH ([PuTTY](#)) on my laptop for the Raspberry Pi 3 DXSpider Installation. So the Pi can be headless (without monitor, keyboard or mouse) and I can use VNC to view the desktop if needed.

Here's my PDF for the installation: [Install-raspberry-pi-3-dxspider](#)

At 1:50 in the clip I missed the second part to Step 3 "adduser sysop sudo" and had to go back later to re-enter it. At 5:45 in this clip I didn't get logged in sudo su because I missed step 3, but even with those mistakes the ./cluster started. I went back later and re-entered Step 7 too. All is well ☐

You can buy a [Raspberry Pi on Ebay](#)

NEXT: [Running DXSpider On Raspberry Pi 3 And Configuring Partner Links](#)

Thank you for coming by and please comment below.

73, good DX – Rich, K0PIR

Resources for this article include:

[SV5FRI](#)

[D07PSL](#)

Raspberry Pi 3 Ham Radio

Projects

Okay what's a Raspberry Pi 3 you ask? Simply put, it's a very small, very inexpensive, [linux](#) based pc board. The Raspberry Pi 3 is the latest, fastest and best of all the models. It features built-in Bluetooth and wireless too. Just add a micro SD Card, HDMI monitor, keyboard, mouse, power supply and you have a very small and very inexpensive PC. Don't expect too much though! It's not anywhere near the processing power of even an old laptop.



Raspberry Pi 3

Can it run apps? Yes it can! It runs [DXSpider](#) very effectively. In addition to DXSpider I tried out ownCloud and it runs fine too. OwnCloud is a open source, self-hosted file sync and share app platform. It allows a user to access & sync files, contacts, calendars & bookmarks across devices. That might come in handy for some of you.

Raspberry Pi 3 DXSpider

Currently my little Raspberry Pi 3 is just running DXSpider v1.55 and I have three partner nodes. It is running good and I have my HRD Logbook connected to it.

I'm very new to this, but after reviewing a few tutorials online I was able to install [DXSpider](#) and get it running. At first there were a few issues, but I have most of them

resolved now.

My Pi is connected to a cable modem router via ethernet cable. It is a static IP address on my router and the router is configured with the Raspberry Pi's IP as a DMZ. This allows the ports from the Internet to pass through to the Pi. The url is pi.K0PIR.us and it;s using port 7300. I also setup SSH and VNC.

What More Can It Do?

So other than DXSpider I haven't tried any other ham radio apps. I'm considering a few to run my Icom 7300, but haven't decided on which apps just yet. Maybe a logging program and rig control program. [I hear Fldigi works good](#) with Linux and that might be fun to try. I'm not going to get into anything extravagant. Just keep it as simple as possible. In other words, I'm not intending on using custom cables or using the GPIO pins.

A good way to purchase a Raspberry Pi 3 is to buy a kit. This is the one I purchased and it gets rave reviews.

While there are a few articles out there installing DXSpider on the Raspberry Pi, there are not any specifically for the Pi 3 and the Pi 3 is slightly different than the older models. The OS, Raspbian, is different and the Pi 3, unlike the others, comes with built-in wireless and Bluetooth.

[I'll show you how to get it setup and ready for DXSpider, so look for that next and a video installing DXSpider.](#) Then later we'll configure partner links.

Interested? Stay tuned.

You can buy a [Raspberry Pi on Ebay](#)

UPDATE: Connecting a [wireless keyboard and mouse](#) to the Raspberry Pi 3 is easy and if you have a spare monitor that

uses VGA cable you can use a [HDMI to VGA adapter](#).

Are you using Raspberry Pi for anything? Please comment below.

NEXT: [Raspberry Pi 3 DXSpider Installation](#)

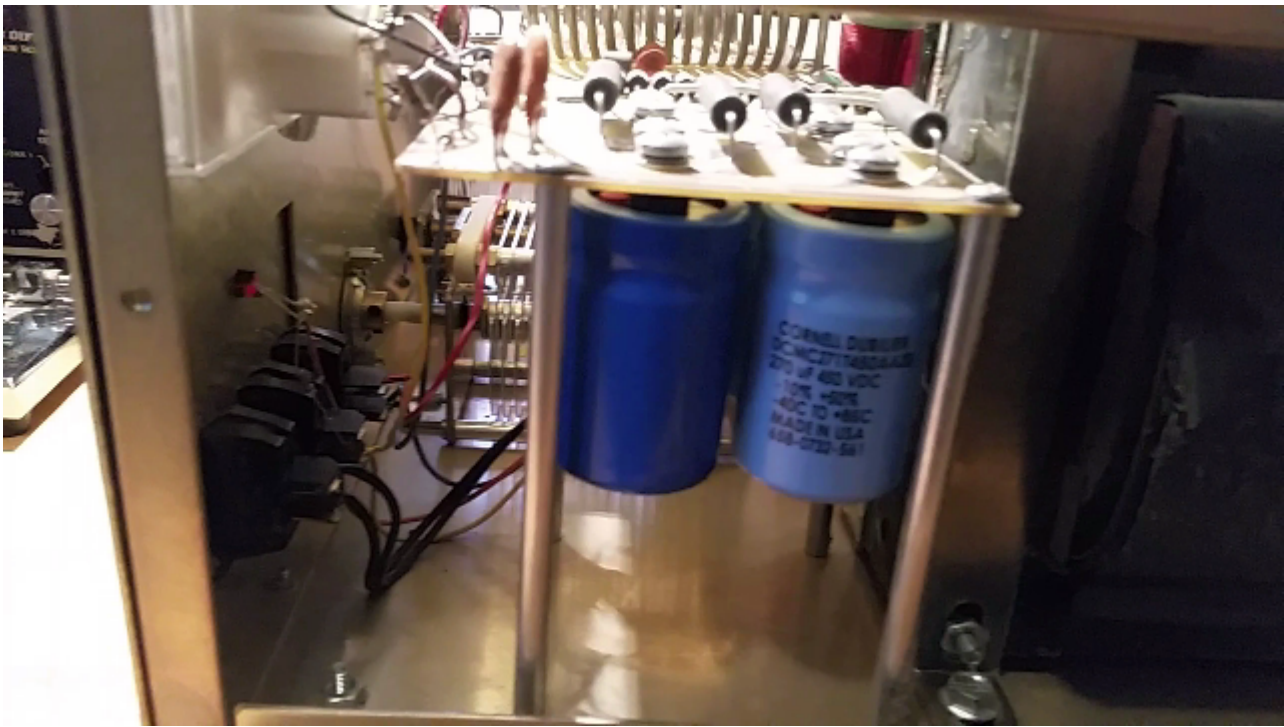
Ameritron AL-811 Repairs – Popping Noise

Boy, where to start on my Ameritron AL-811 repairs? It started a couple of months ago when I replaced the tubes.

I took the cover off, replaced the tubes and one of the meter bulbs went out. So I took the cover off again just to look at it and when I put the cover back on and fired it up, the other bulb went out! That's where the troubles began.

So I've been running it without lighted meters; it's not too bad, but I like the lights.

Just recently though I heard a popping noise coming from the amp. This needed immediate attention.



-811 Repairs – Capacitors

After checking the forums I decided to take a look at the capacitors and check for leaking or damage. I found one capacitor was leaking and ordered a replacement from Amazon. Total cost for one capacitor = \$29.98 at Amazon. The picture on Amazon showed two, but that's not what I got and that's way too expensive. I found later the cost at [MFJ](#) is a lot better and even at [RFParts.com](#). The shipping is a little high, but they still only come out to approx. \$15 per cap if you order four.

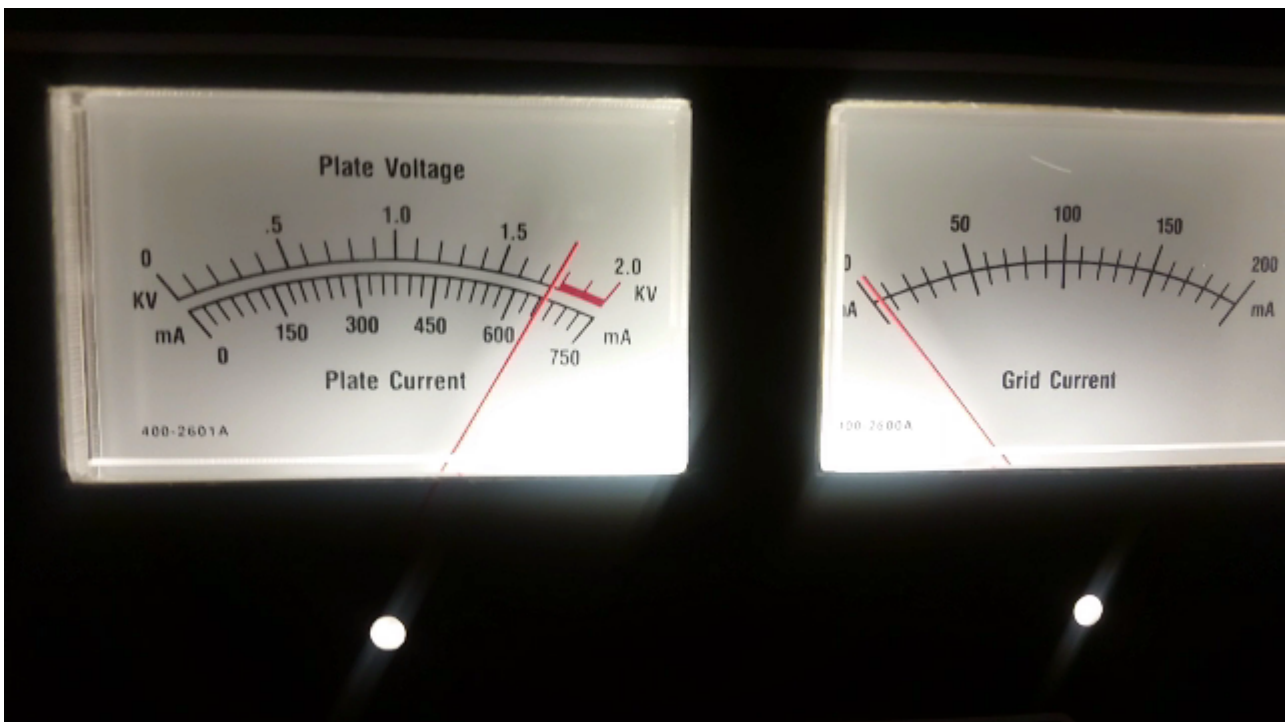
I replaced the one that was leaking and what do you know? It still popped when I tested it. So I order 4 more capacitors at [RFParts.com](#).



ur capacitors and again the same popping. After taking the cover off and removing all of them I discovered one of them had blown. A brand new cap went bad.

Luckily I had an extra, so I put it in and got it working.

UPDATE: Eventually, I had to replace one of the bleeder resistors and I haven't had any problems since.



L-811 Repairs – Bulbs

While I was waiting on the capacitors to arrive I ordered some [LED bulbs off of Amazon](#). Honestly I think these are a little too bright, but I like them enough and I have three to spare, so I'm going to stick with them.

I just soldered one in and wedged it between the meters (See video).

Ameritron AL-811 Repairs – If It's Not One Thing It's Another

Just as I thought I had everything working, the fan started making noise. I blasted it with canned air and tightened the screws; so far so good.

Here's a clip I made so you can have a good look at it.

CAUTION!!

WORKING ON AMPS IS VERY DANGEROUS, PLEASE TAKE EXTREME CAUTION. FOLLOW AT YOUR OWN RISK.

WARNING!!

DO NOT ATTEMPT TO PUT THIS AMPLIFIER IN SERVICE WITH THE COVER REMOVED!

**CONTACT WITH VOLTAGES INSIDE THIS AMPLIFIER CAN BE FATAL!
ALWAYS**

DISCONNECT THE AMPLIFIER FROM THE POWER MAINS AND WAIT FOR THE FILTER

CAPACITORS TO DISCHARGE BEFORE REMOVING THE COVER.

As an added precaution: Remove the cover and connect a jumper wire from ground to the anode connection of the tubes

What's your experience with Ameritron amps? Thanks for coming

by. Best wishes, 73 – Rich, K0PIR