

🔊 Mute This Topic (https://groups.io/g/HP-Agilent-Keysight-equipment/ft/92010458?csrf=5513314409256117711&mute=1&p=Created%2C%2C%2C20%2C1%2C0%2C0)

Release of the "HP8753 Companion" program Date ▾ (https://groups.io/g/HP-Agilent-Keysight-equipment/topic/92010458?p=Created%2C%2C%2C20%2C1%2C0%2C0)



vk2bea

6:21am 🔗 (https://groups.io/g/HP-Agilent-Keysight-equipment/message/127492)

Oops .. looks like I had a typo when I set up the repo.
The Github link should now work. <https://github.com/VK2BEA/HP8753-Companion> (https://github.com/VK2BEA/HP8753-Companion)

Michael

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Dr. David Kirkby, Kirkby Microwave Ltd (/g/HP-Agilent-Keysight-equipment/profile/3528140)

3:38am 🔗 (https://groups.io/g/HP-Agilent-Keysight-equipment/message/127485)

On Mon, 27 Jun 2022 at 05:40, Adrian Godwin <artgodwin@gmail.com (mailto:artgodwin@gmail.com)> wrote:

If you're considering this, can I suggest that you look into making it part of the Sigrok suite ?
It contains a lot of infrastructure necessary to write instrument interfaces for all sorts of APIs, and the result is that the driver or control/display program is then supported under a number of OSs rather than just your target.

Maybe having it only under linux will be an incentive for others to upgrade to linux. 🙄🙄 If someone is tech-savvy enough to use an 8753, they should be able to handle linux.

Dave

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Adrian Godwin

Jun 26 🔗 (https://groups.io/g/HP-Agilent-Keysight-equipment/message/127482)

If you're considering this, can I suggest that you look into making it part of the Sigrok suite ?
It contains a lot of infrastructure necessary to write instrument interfaces for all sorts of APIs, and the result is that the driver or control/display program is then supported under a number of OSs rather than just your target.

Of course, porting a linux version to Windows will also result in two systems being supported but unfortunately they're then likely to diverge, and both may not survive.

I have seen a number of GPIB utilities announced in eevblog, all single-OS. It seems such a waste.

I don't believe doing this will require you to test under both (I have certainly been able to write a 34401 driver under linux and was not expected to test it under windows).

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vk2bea

Jun 26 (<https://groups.io/g/HP-Agilent-Keysight-equipment/message/127477>)

OK David,

You would have to link with the NI library (rather than the linux GPIB library) but it may well work (or need a minor tweak). (every API call I use (ibrd, ibrda, ibwt, ibfind etc) seems to be identical between the Linux and NI libraries)
I don't have an NI board to try it on unfortunately. The library and include files look like they are named the same, so assuming the development files (/usr/lib/gpib/....) and the libraries are installed it should compile.

I agree that the Linux GPIB library is a little daunting at first sight. I did create a script to download and build it for the Raspberry Pi and this is likely to work with other Debian systems (like Ubuntu).

<https://github.com/VK2BEA/HP8757-Companion/blob/main/GPIB-Linux.driver/installGPIBdriver.on.RPI> (<https://github.com/VK2BEA/HP8757-Companion/blob/main/GPIB-Linux.driver/installGPIBdriver.on.RPI>)

I've more experience with Fedora Linux than Ubuntu but this script is what I wrote to get it to build and install on the RPi.

I've created an updated GPIB driver RPM for Fedora (<https://copr.fedorainfracloud.org/coprs/vk2bea/GPIB/>

(<https://copr.fedorainfracloud.org/coprs/vk2bea/GPIB/>)) which installs with a couple of commands but that's cold comfort to an Ubuntu user I guess 8-(

Michael

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Dr. David Kirkby, Kirkby Microwave Ltd (</g/HP-Agilent-Keysight-equipment/profile/3528140>)Jun 26 (<https://groups.io/g/HP-Agilent-Keysight-equipment/message/127475>)

On Mon, 27 Jun 2022 at 00:13, vk2bea via groups.io (<http://groups.io>) <vk2bea@yahoo.com@groups.io> (<mailto:yahoo.com@groups.io>)> wrote:

Hello HP list viewers....

I have written and released a program for use with the HP8753 vector network analyzer.
It communicates with the analyzer (naturally) over the GPIB using the Linux GPIB driver.

Would it be expected to work with a National Instrument driver on Ubuntu? Last time I looked, building the linux GPIB driver seemed quite a lot of work, whereas National Instruments makes the linux driver installation simpler (I hope).

I assume there's a good chance this would work with an 8719/8720/8722, as the commands are pretty much identical. I have my own GPIB code that I wrote that runs under Solaris which I use to control both the 8753ES and 8720D. If I do get it worked on my 8753, I will try on the 8720 too and send you some feedback.

An interesting project.


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vk2bea

Jun 26  (<https://groups.io/g/HP-Agilent-Keysight-equipment/message/127474>)

The source is on Github ... <https://github.com/VK2BEA/HP8757-Companion/tree/main/src> (<https://github.com/VK2BEA/HP8757-Companion/tree/main/src>)

Theoretically, yes it can be ported to Windows. The GUI framework is done with GTK3 which (I understand) is ported to Windows. (you could also code up the graphics using the native Windows APIs)

The Linux GPIB API looks very close to (or even identical) to National Instruments' API but again, the comms. is pretty straight forward.

There are some utilities for the 8753 that already exist for Windows (written by KE5FX).

He has a very useful HP plotter emulator. Unfortunately my Keysight HPIB USB controller can't act as a 'device' (and hence can't emulate the plotter) so, even if I had a Windows machine in the lab, I cannot use it to get plots from the 8753.

I also think the procedure with the emulator is a little more cumbersome than my program (IMHO) ... but you get exactly what's on the screen in all its low resolution glory.

If you do want to port the program I'll give you as much help as I can.

Michael


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Karin Johnson

Jun 26  (<https://groups.io/g/HP-Agilent-Keysight-equipment/message/127471>)

I would be interested in seeing the source code. I would perhaps like to attempt to port this to Windows. Is that possible???? If so I can send contact info later.

Karin Anne Johnson P.E.
Palm Harbor, Florida


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vk2bea

Jun 26  (<https://groups.io/g/HP-Agilent-Keysight-equipment/message/127470>)

Hello HP list viewers....

I have written and released a program for use with the HP8753 vector network analyzer. It communicates with the analyzer (naturally) over the HPIB using the Linux GPIB driver.

The program facilitates the saving and restoration of configuration and setup profiles. It also retrieves, displays and prints the traces, trace data and markers.

I hope other Linux users (who have an HP8753 ... both of you) may find it useful.

A brief description video shows it's operation: <https://youtu.be/ORWQE22tbRo> (<https://youtu.be/ORWQE22tbRo>)

The program is freely available (Apache 2.0 licence) from <https://github.com/VK2BEA/HP8753-Companion> (<https://github.com/VK2BEA/HP8753-Companion>)

and <https://copr.fedorainfracloud.org/coprs/vk2bea/HP8753/> (<https://copr.fedorainfracloud.org/coprs/vk2bea/HP8753/>)

On Fedora Linux, install with:

```
$ sudo dnf copr enable vk2bea/HP8753
```

```
$ sudo dnf copr enable vk2bea/GPIB
```

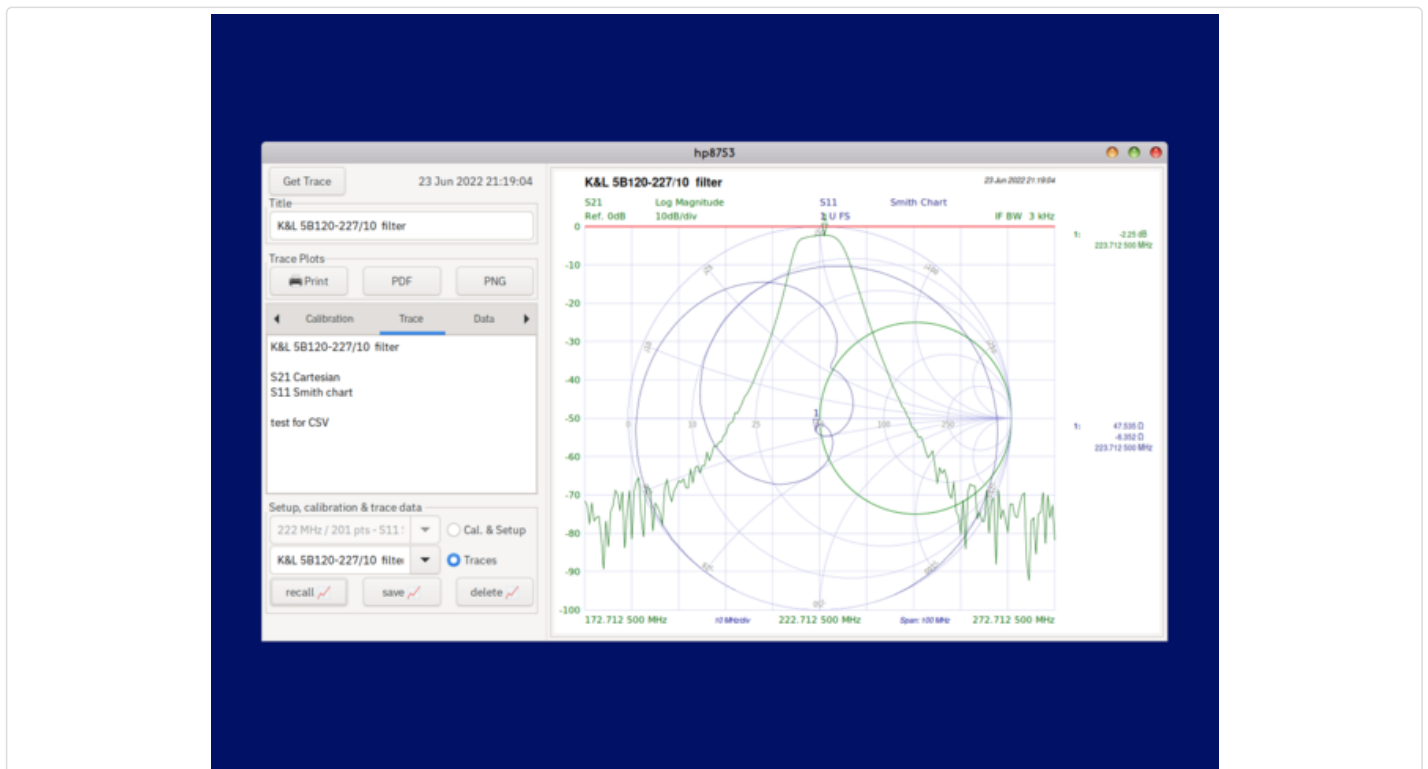
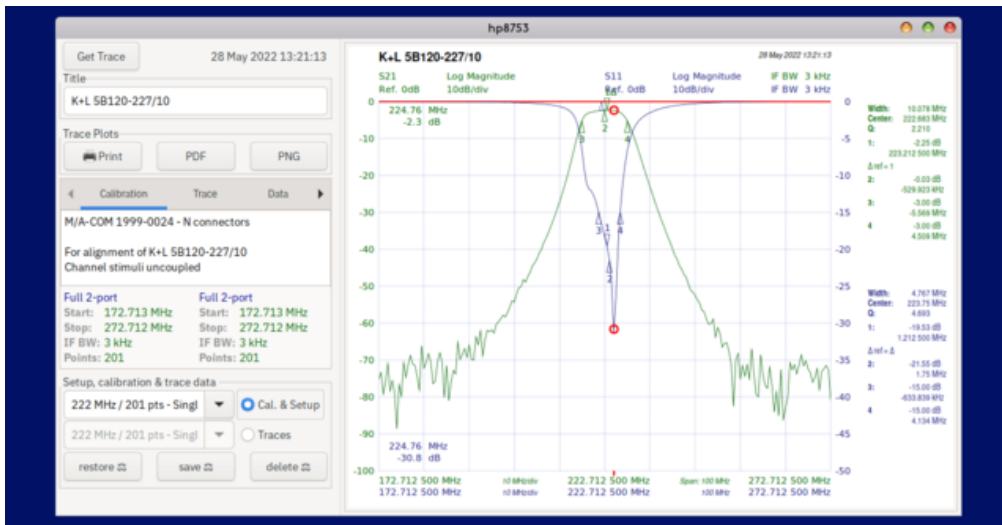
```
$ sudo dnf install hp8753
```

On the Raspberry Pi, use the `autotools` instructions to build and install (in the `ReadMe.md` file)

If you have suggestions for enhancements or if you find bugs, please let me know on Github.

thanks,

Michael



(<https://groups.io/g/HP-Agilent-Keysight-equipment/attachment/127470/0/hp8753.key.png>)

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[← \(https://groups.io/g/HP-Agilent-Keysight-equipment/topic/92018590?p=%2C%2C%2C0%2C0%2C0%3A%3A%2C%2C%2C0%2C0%2C0%2C92018590\)](https://groups.io/g/HP-Agilent-Keysight-equipment/topic/92018590?p=%2C%2C%2C0%2C0%2C0%3A%3A%2C%2C%2C0%2C0%2C0%2C92018590)

