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xi
Contributor
Posts: 14
Country:

Re: TDS 1000,2000,3000 BW Hack
« **Reply #46 on:** May 15, 2018, 09:46:48 am »

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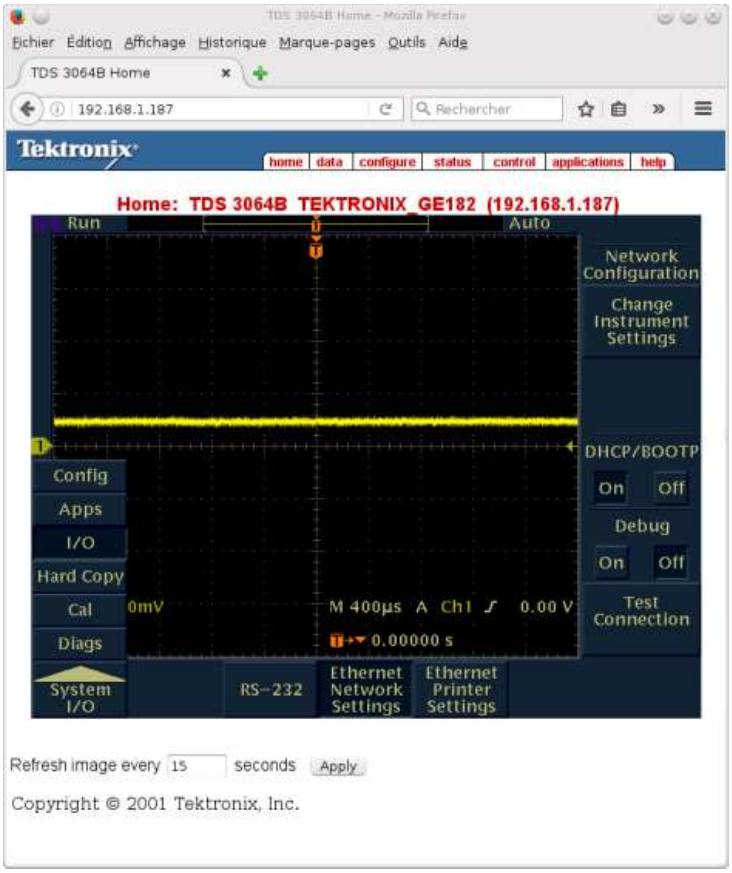
I am reporting success too, with my TDS 3014B converted to a TDS 3064B
I got this scope in an auction sale, and now I have a really fast sampling rate, thanks for the hack!

The upgrade process is not difficult, but I got some troubles with upgrading the firmware, so I am posting some infos for helping others:

You will need:
- a network connection between the TDS 30xxB and a computer with a web browser.
- 4 floppy disks 3"1/2 1.44MB (at least one).
- the firmware v3.39 (see above posts).

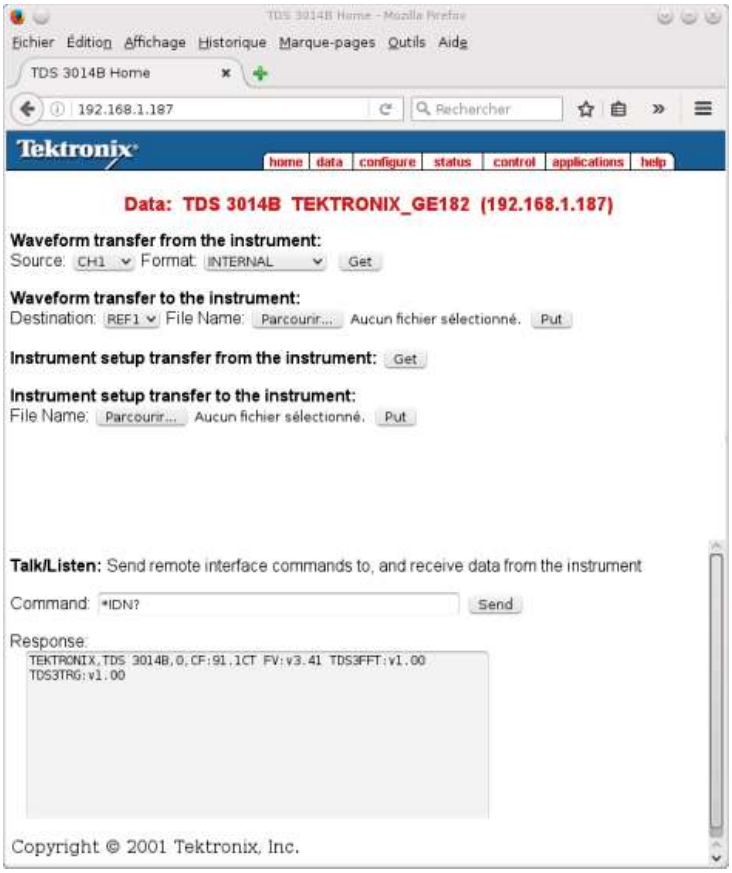
- **Configure network**

Plug the ethernet cable
On the scope: go to Utility -> I/O -> Ethernet Network Settings and enable DHCP/BOOTP
After a few seconds, the oscilloscope will display its IP address, just enter it in your web browser.
(Your network must run a DHCP server, otherwise you have to configure a static IP address)



- **Check firmware version**

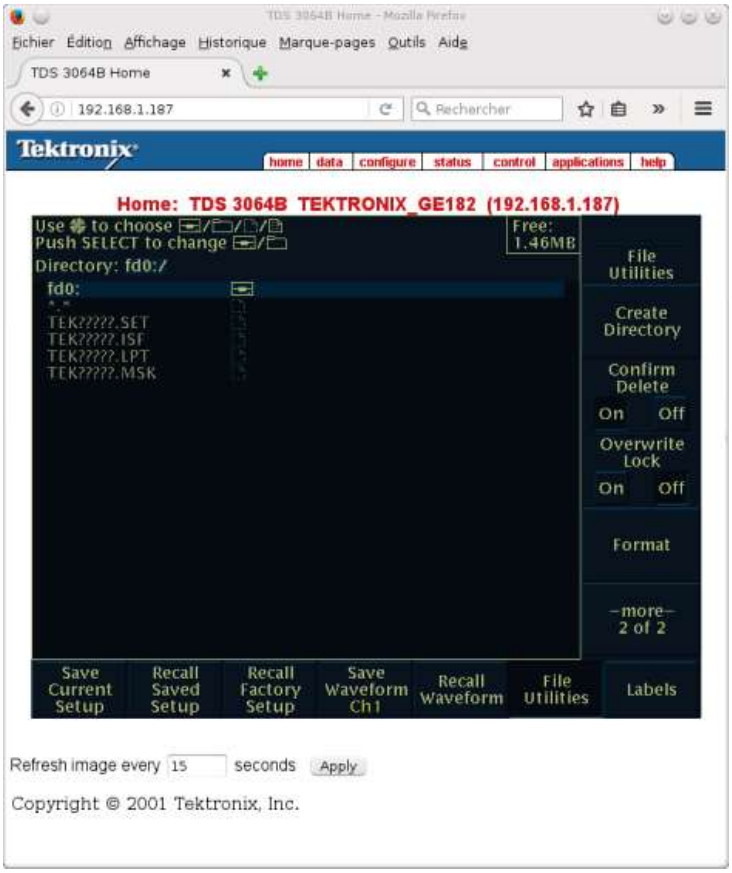
One way to check the firmware is to send the command "*IDN?" from the "data" tab of the TDS's web page:



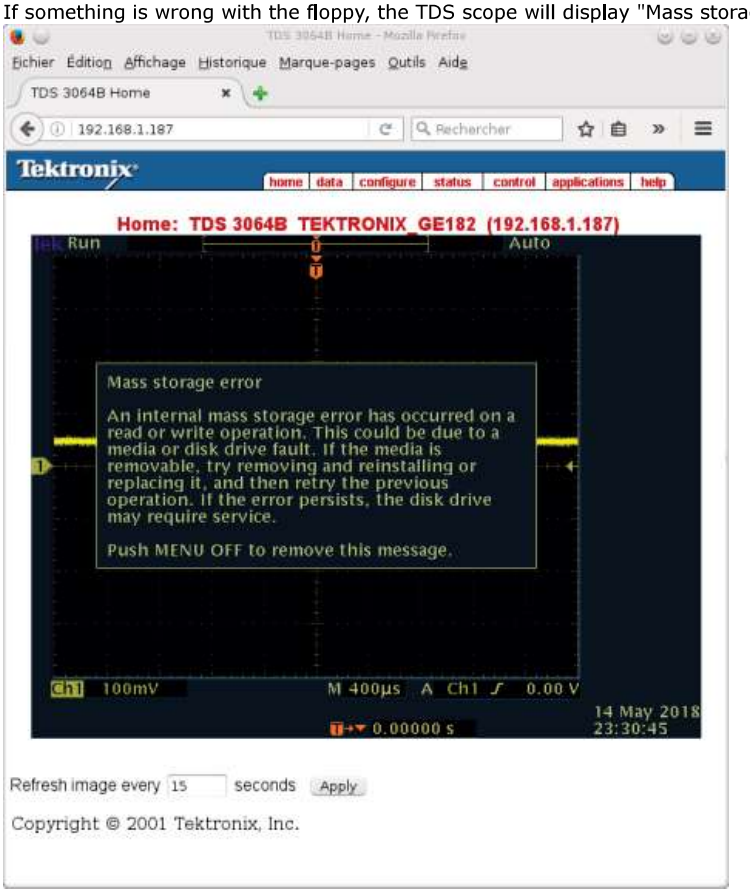
- **Downgrade to v3.39**

If your TDS is running version 3.41, the hack won't work, you have to downgrade to an older version.
If your current firmware version is older than 3.41, it should work directly (see other posts), so you can jump to next step.
Be careful with the updates, some versions has some quirks, read Tektronix recommendations! (for example, version 1.0 must be upgraded really carefully because of a bug in this version. Switching from version prior to 2.20 to version above 2.21 will need a recalibration, ...)

So let's upgrade / downgrade the firmware using floppy disks. I don't know if there are other means to change the firmware? I didn't find any...
I had formatted and prepared some floppy disks on an old computer, but the TDS refused to boot on it, so I strongly advice to format the floppy directly on the TDS: use save/recall menu:



If something is wrong with the floppy, the TDS scope will display "Mass storage error":



So try another floppy! Many of my old floppies were bad (particularly the Sony ones) ; back in time of 5"1/4 floppy, I had noticed that BASF one were more reliable than others ; so I searched for some old 3"1/2 BASF floppy disks and, guess what, they all worked in the TDS

Once formatted in the scope, you have to unzip and copy the firmware v3.39 to the floppy disks. The content of each directory (disk1 to disk4) must be copied on four separate floppy disks, without

creating any directory.
Take care to label each floppy disk with the name "disk1" to "disk4", this is needed by the TDS.
Once formatted by the oscilloscope, I run these commands on my Linux server (the only one that stills has a floppy disk drive):
[/list]

Code: [Select]

```
mlabel a:disk1 && mount /media/floppy/ && cp -av /home/share/temp/firmware_v3.39/disk1/* /media/floppy/ &&
```

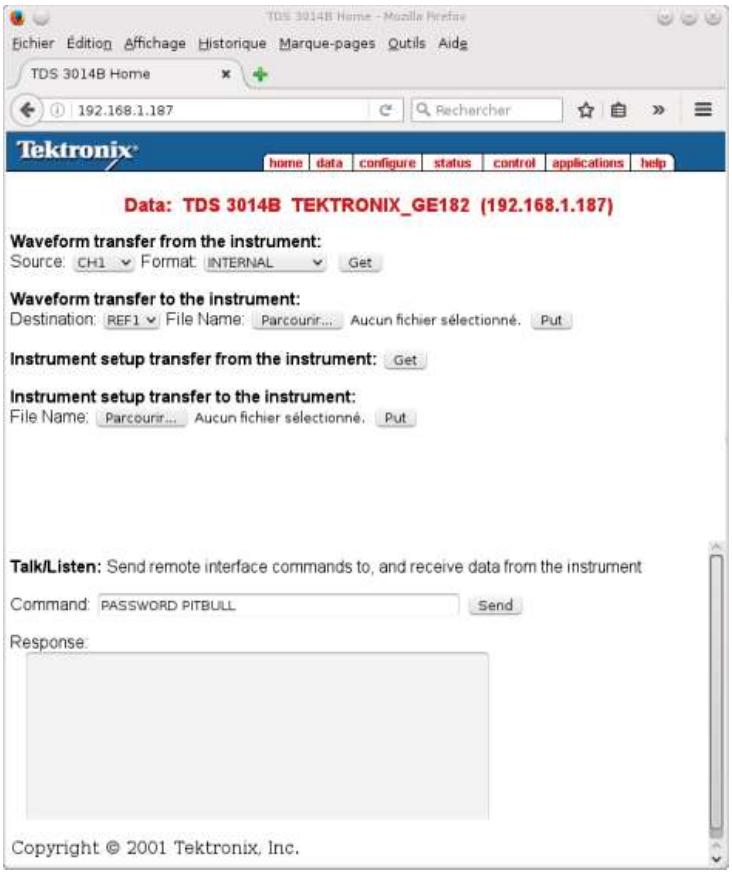
(don't forget to change all the "disk1" to "disk2" for the next floppy, etc...)

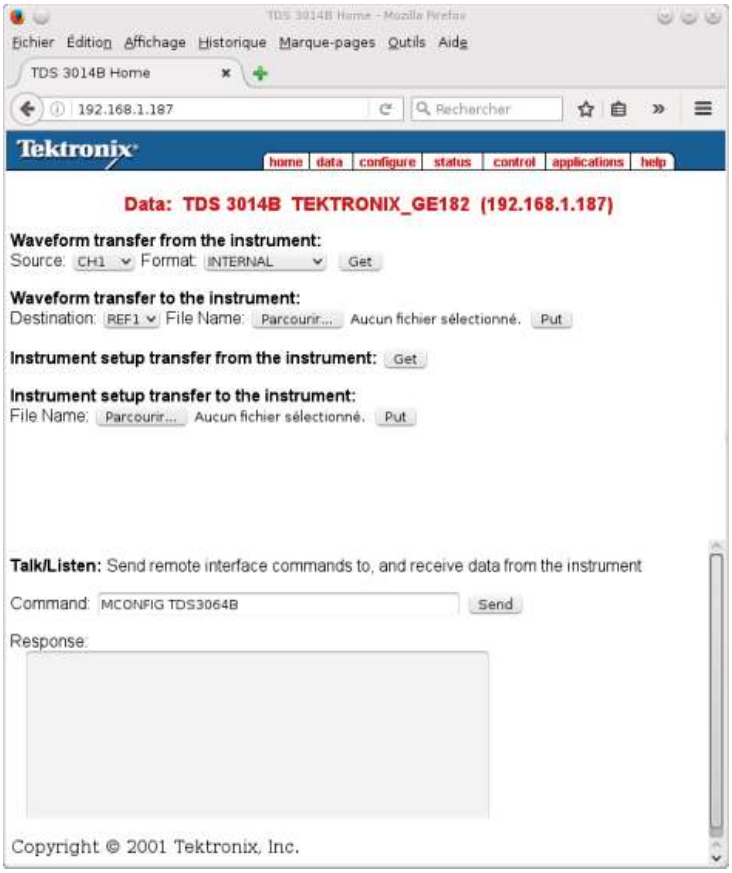
Last step is to stop the scope, insert the first floppy into the TDS and power it on. If you followed the above instructions, the scope will ask if you want to downgrade / upgrade the firmware: just follow the instructions

- **Bandwith hack**

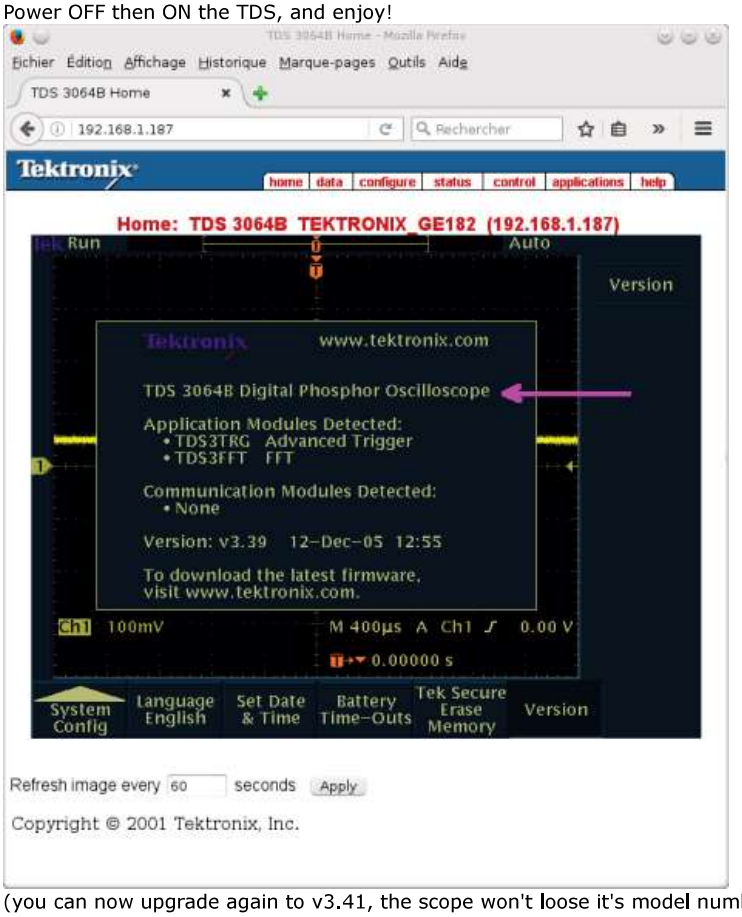
Connect again to the web interface and check that firmware version is lower than v3.41, using "*IDN?" command for example.

Now send the correct commands for hacking the bandwith: for my TDS 3014B it is:
PASSWORD PITBULL
MCONFIG TDS3064B





Power OFF then ON the TDS, and enjoy!



(you can now upgrade again to v3.41, the scope won't loose it's model number)