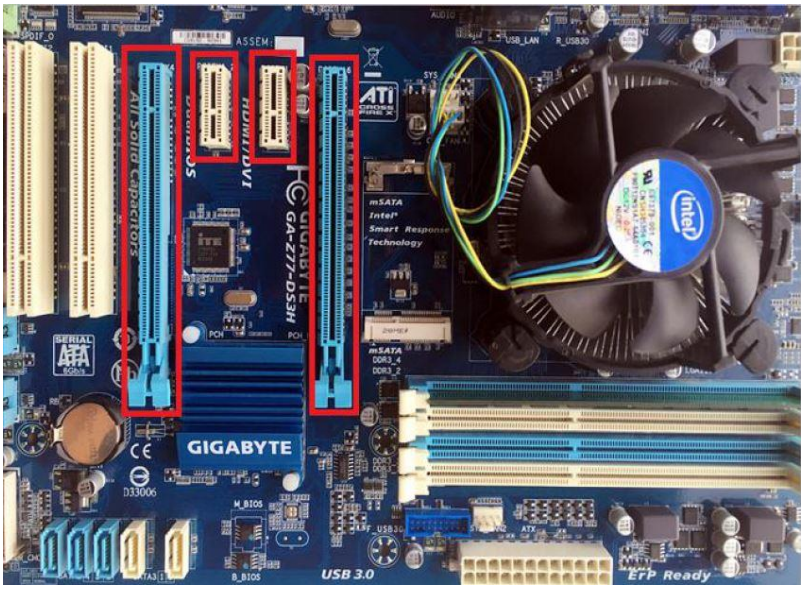
User Guide for DVB-S2 Octa-Tuner TV-Card, TBS-6909 and DVB-S2X/-S2 Octa-Tuner TV-Card, TBS-6909-X

1. Hardware Installation

Step 1.1:

Please make sure that your PC is completely disconnected before installing the TV card. Make sure that all parts are potential-free, otherwise there is a risk that by static electricity (when touching with your hands), the card could be damaged.

Put the TV card into a free PCIe slot (see the operating instructions of your PC Motherboards). In no case does the card fit into other slots that do not conform to the PCIe specification. Please note that there is enough space for installation and for example no graphics card fan disturbs. Please make sure the card fit in PCIe Slot tightly.



Step 1.2:

If you want to connect the card to a large motor, or the power supply is with the PCIe slot not sufficient, the supplied internal power cable must be additionally connected.

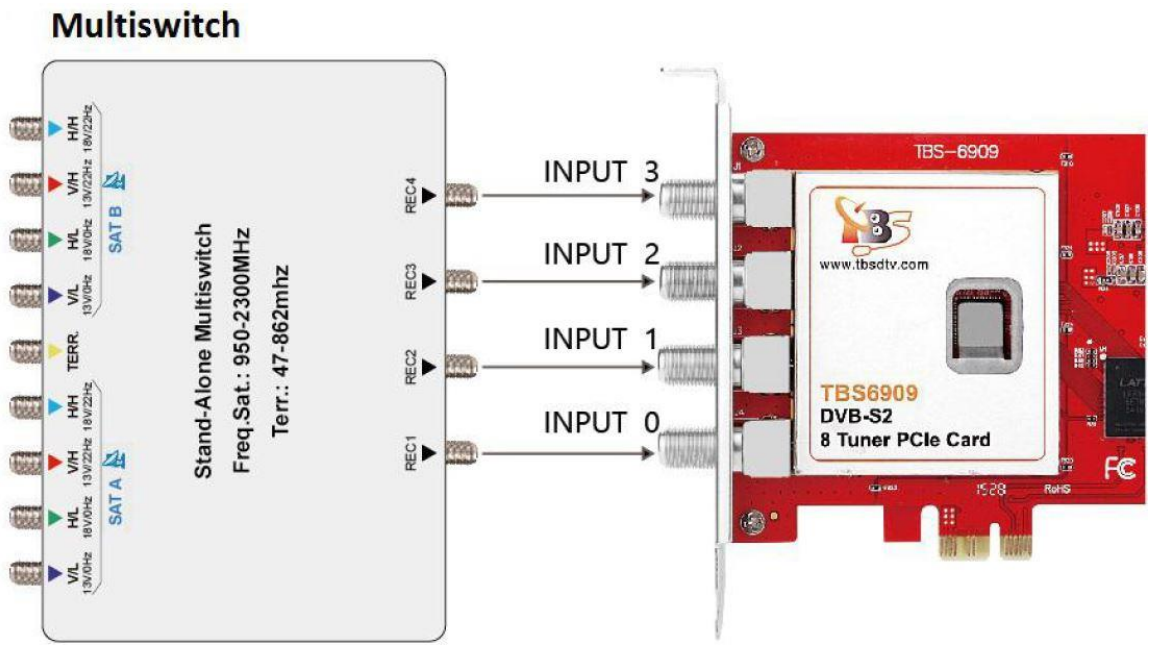
Step 1.3:

The TBS-6909 and the TBS-6909-X are powerful Octa-Tuner Cards.
Here is some information that you need to know before using:

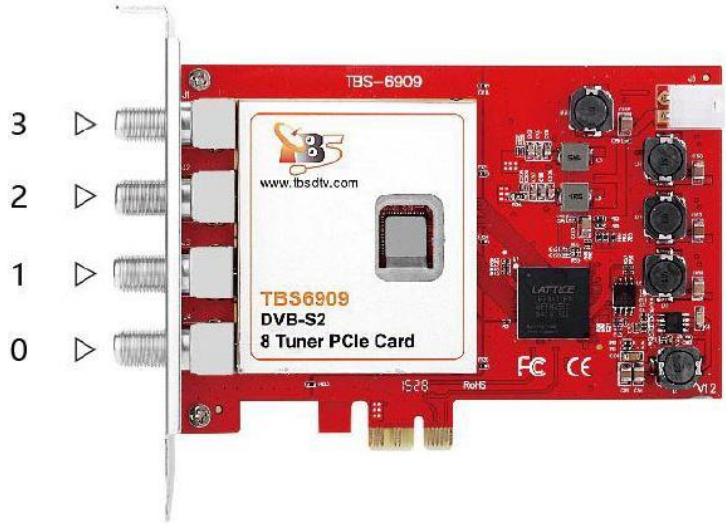
- C-Signal 5150 V access to Input 0
- H access to Input 2
- C-Signal 5750 V access to Input 1
- H access to Input 3

There are three ways of signal input for TBS-6909/TBS-6909-X, which are shown on the pictures below:

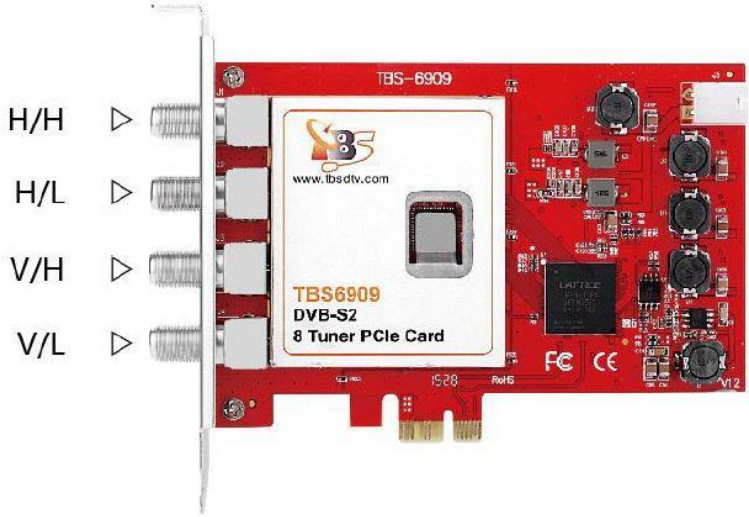
Mode 1:



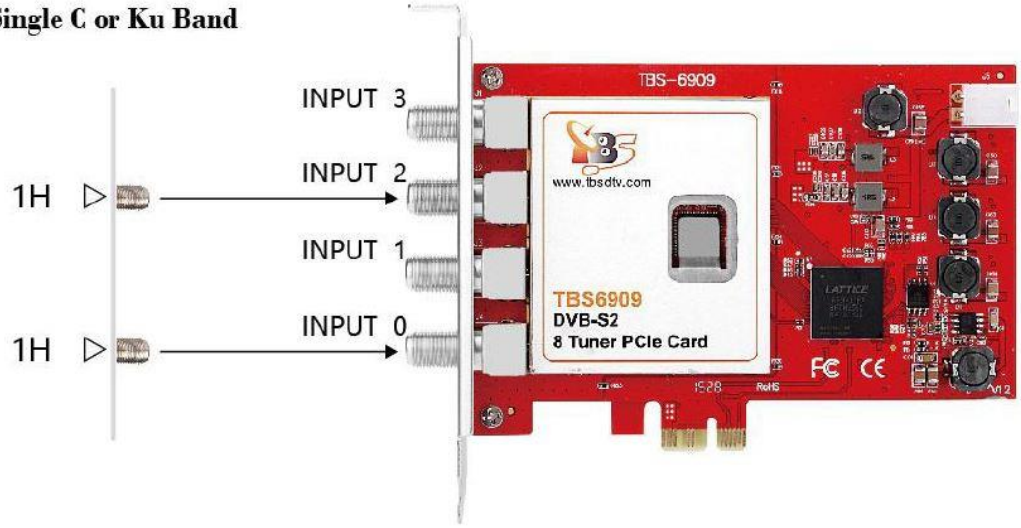
Quad-LNB



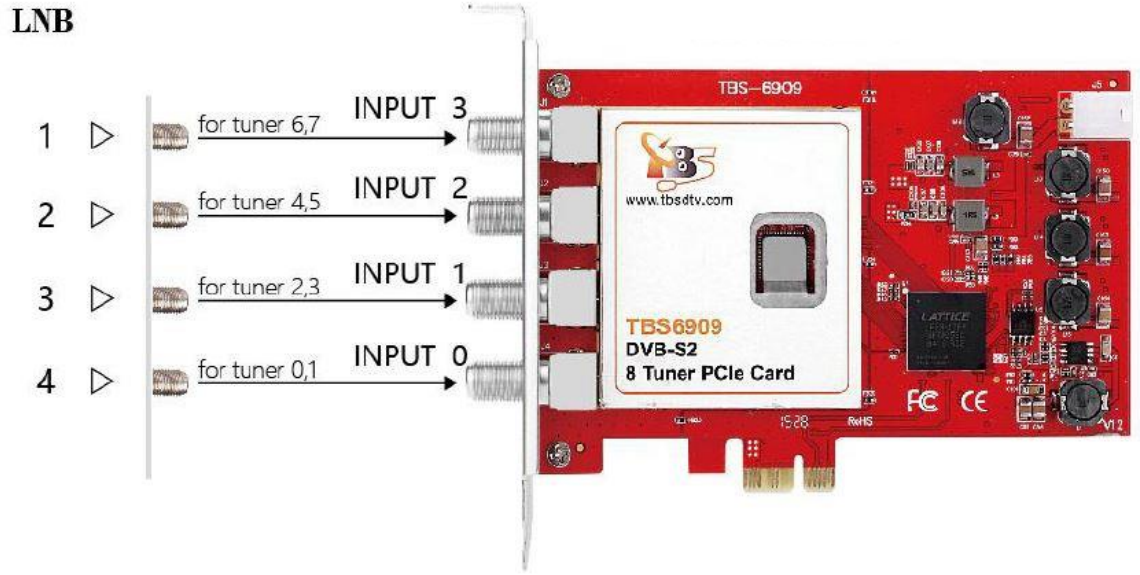
Quattro-LNB



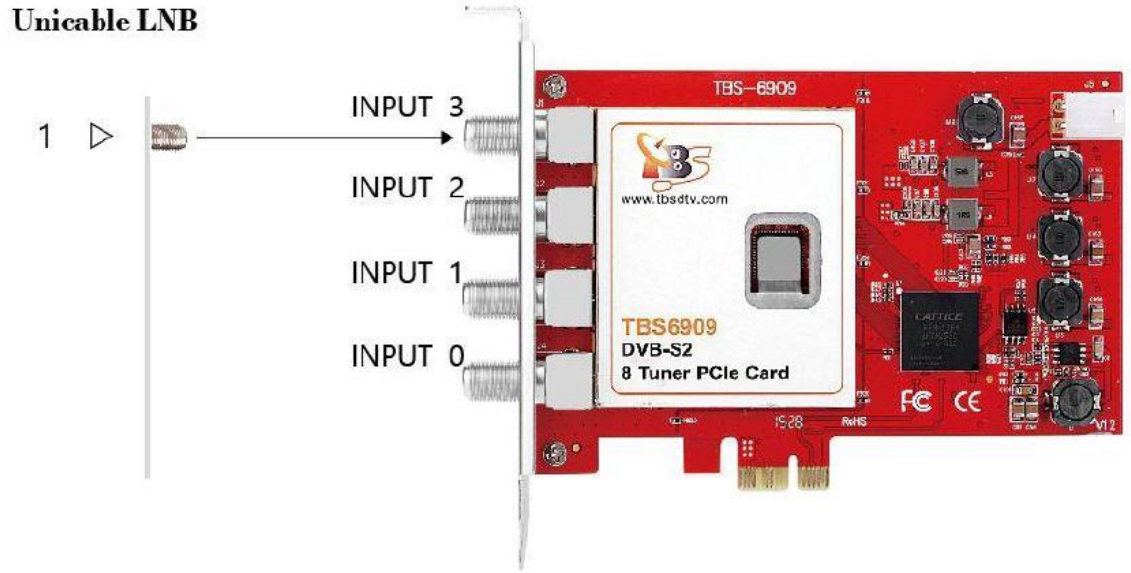
Single C or Ku Band



Mode 2:


LNB
1
2
3
4
for tuner 6,7
for tuner 4,5
for tuner 2,3
for tuner 0,1
INPUT 3
INPUT 2
INPUT 1
INPUT 0
TBS-6909
www.tbsdtv.com
TBS6909
DVB-S2
8 Tuner PCIe Card

Mode 3:


Unicable LNB
1
INPUT 3
INPUT 2
INPUT 1
INPUT 0
TBS-6909
www.tbsdtv.com
TBS6909
DVB-S2
8 Tuner PCIe Card

Linux Open Source driver model

Multiswitch mode: (Mode 0)

If you are using Quad-LNB, you can directly connect the 4 cables to the 4 ports of TBS-6909/TBS-6909-X.

If you are using Quattro-LNB, you have 4 cables (V/L, V/H, H/L, H/H). Connect the right one to you TBS-6909/TBS-6909-X like the above picture (input 0 - input 3 should be connected to V/L, V/H, H/L, H/H respectively).

If you are using C or Ku band single, then two inputs are enough. You just need to connect the cables to Input 0 and Input 2.

Input 0 Interface:
You can only receive DVB-S/-S2 TV channels from V/L TV signals with low frequency noise. After connecting these TV signals via "Input 0 Interface", you can receive SD/HD channels from all eight satellite transponders simultaneously.

Input 1 Interface:
You can only receive DVB-S/-S2 TV channels from high-frequency V/H TV signals. After connecting these TV signals via "Input 1 Interface", you can receive SD/HD stations from all eight satellite transponders simultaneously.

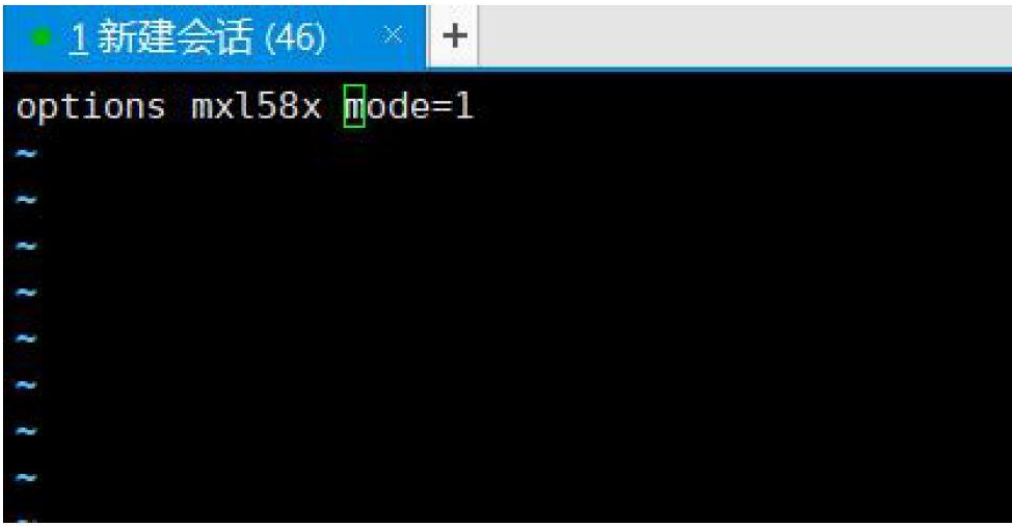
Input 2 Interface:
You can only receive DVB-S/-S2 TV channels from low-frequency H/L TV signals. After connecting these TV signals via "Input 2 Interface", you can receive SD/HD channels from all eight satellite transponders simultaneously.

Input 3 Interface:
You can only receive DVB-S/-S2 TV channels from high-frequency noise H/H TV signals. After connecting these TV signals via "Input 3 Interface", you can receive SD/HD channels from all eight satellite transponders simultaneously.

Hint:
If you want to receive TV broadcasts entirely from V/H satellite TV signals at the same time, you need to connect your satellite TV signal cable to the corresponding input interface.

Normal Mode (Mode 1)

At the very beginning, you need to create a configuration file under the Linux system directory: **/etc/modprobe.d/mxl58x.conf**.
The contents of the configuration file: **options mxl58x mode = 1**.
After completing the configuration, restart your computer please.



In normal mode: You can watch TV channels from high frequency/low-frequency noise V/H TV signals search through all four interfaces "Input 0, Input 1, Input 2, Input 3".

Connecting to a satellite cable:
Input 0: Only works for tuner 0 and tuner 1
Input 1: Only works for tuner 2 and tuner 3
Input 2: Only works for tuner 4 and tuner 5
Input 3: Only works for tuner 6 and tuner 7

Hint:
If you want to receive full TV channels from V/H satellite signals at the same time, you need to connect more than 2 satellite TV signal cables to the corresponding input interface.
For example, connect the satellite cable to the Input 0 and Input 1 interface, and you can then simultaneously search for TV channels from the V/H satellite TV signal.

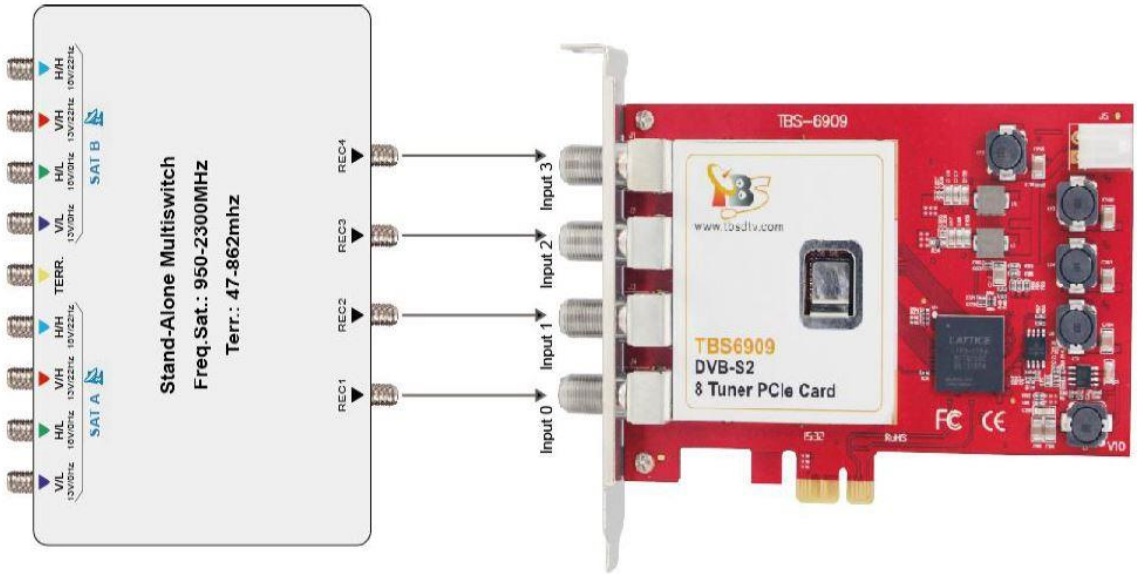
In normal mode:
Input 0 (corresponds to Tuner 0 or Tuner 1) can only use V or H if the corresponding signal is sent to it.
However, it is not possible to use V with Tuner 0 and at the same time to use Tuner 1 H.

Unicable (Mode 2)

At the very beginning, you need to create a configuration file under the Linux system directory: **/etc/modprobe.d/mxl58x.conf.**
The contents of the configuration file: **options mxl58x mode = 2**.
After completing the configuration, restart your computer.

Step 1.4:

Multiswitch:



In some cases, multi-switches have multiple satellite inputs. First, the corresponding satellite must be selected by sending the Diseqc command. Subsequently, this mode can be used.

If in this mode input 0 to input 3 has at least one active input, all tuners can be disabled, for example:
If a VH signal is connected to input 1 of satellite B, use dvblast to scan the channels: As with VH DVB-S, please use the following:
dvblast -f 12538000 -s 41250000 -v 13 -a 0 -5 DVBS
This means that the VH port in this case is satellite B, the other 7 tuners can receive the satellite B VH signal.

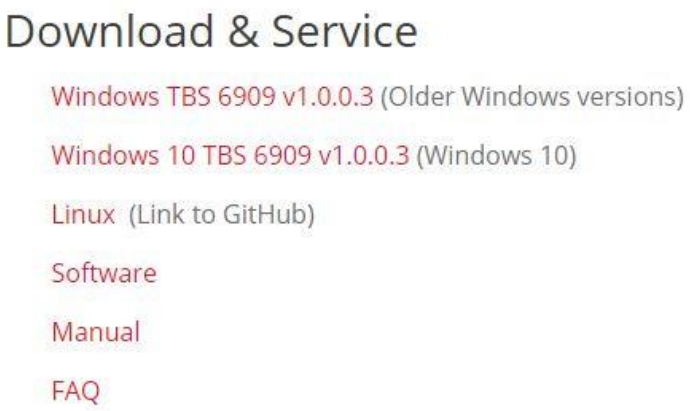
If a HL signal connected to input 2 is sent from satellite A, use dvblast to scan the channels: As with VH DVB-S2, use the following:
dvblast -f 11080000 -s 43200000 -v 18 -m psk_8 -a 0 -5 DVBS2
This means that the HL port in this case is satellite A, the other 7 tuners can receive the satellite A HL signal.

If you have four types of active signals connected to the correct 4 inputs, you can receive all the VL, VH, HL and HH signals.

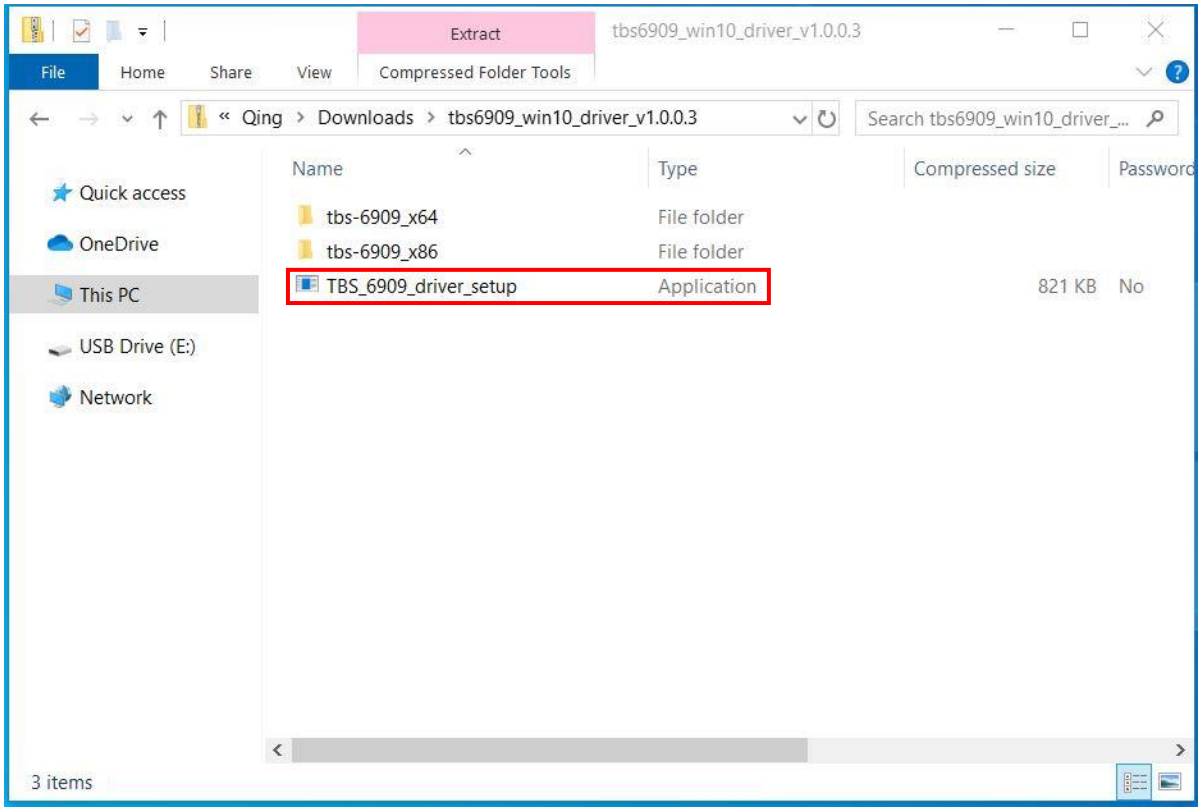
2. Windows Driver installation

Step 2.1:

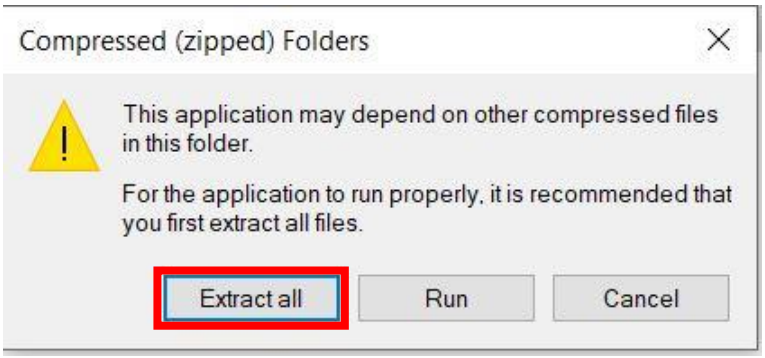
Download the TBS-6909 Driver (https://tbs-technology.de/produkte/dvb/6909-octa-tuner/?lang=en) **OR** the TBS-6909-X Driver (https://tbs-technology.de/produkte/dvb/6909-x-octa-tuner/?lang=en) from our Website by clicking on the respective driver.
Please make sure that there are drivers for Windows 10 or older versions of Windows and that you select the correct driver for your operating system.



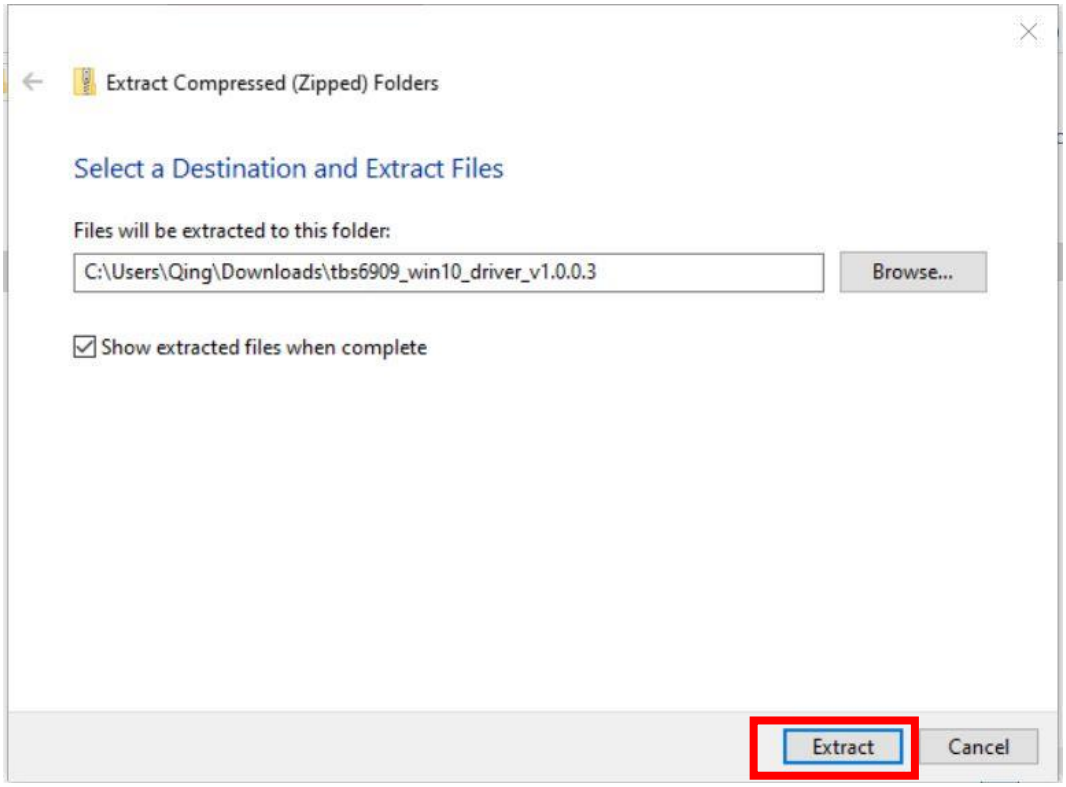
2.2) After downloading, a window opens. Start the setup.exe installation by double clicking on it.



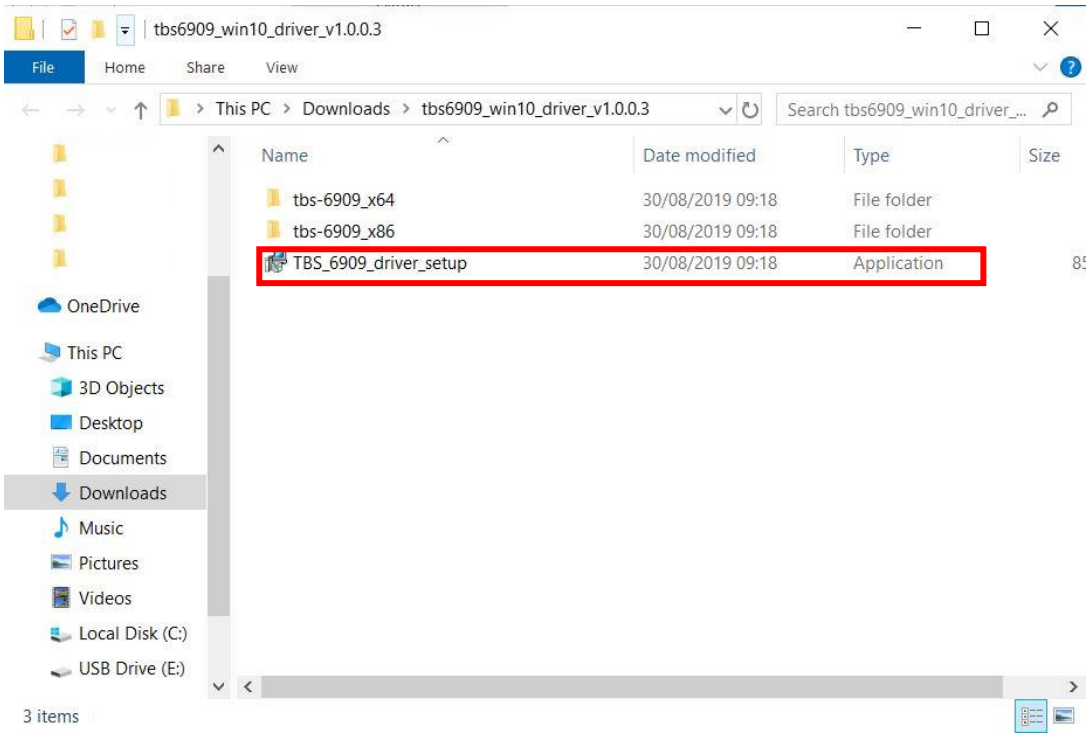
2.3) Confirm this window with “Extract all“.



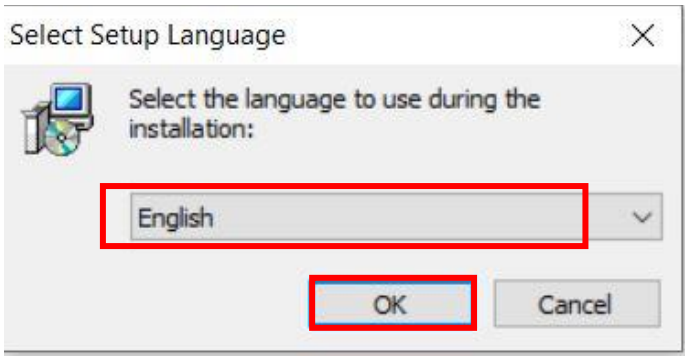
2.4) Continue with “Extract“.



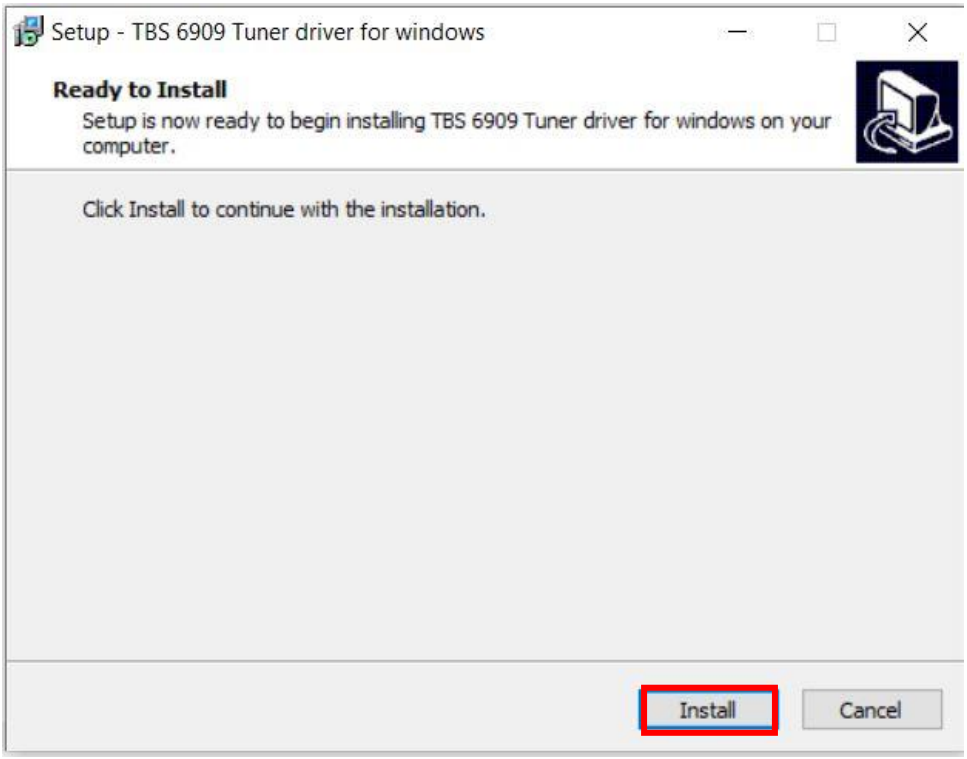
2.5) This window opens. Now select the setup file again.



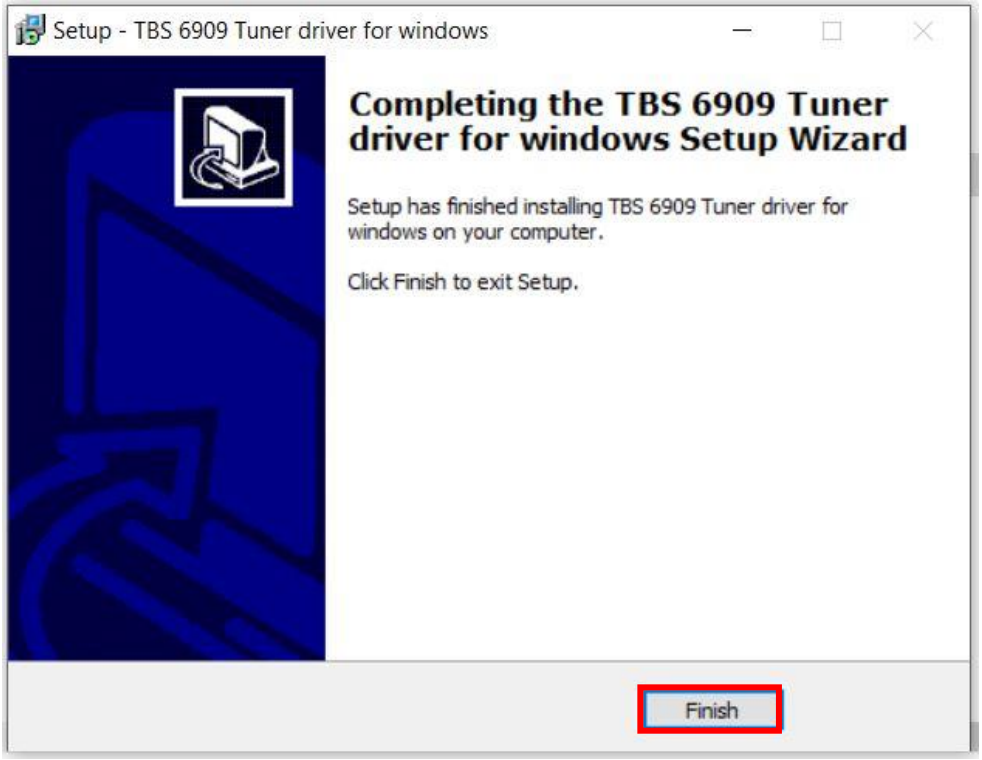
2.6) Then select the language and confirm with “OK“.



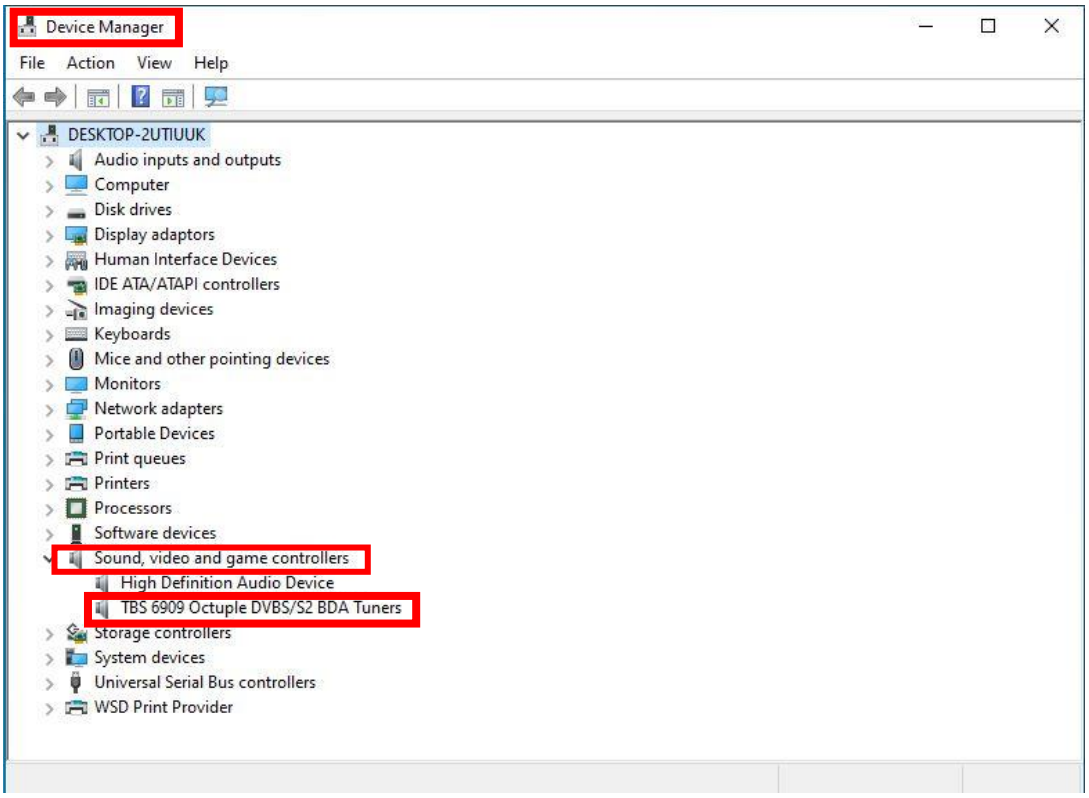
2.7) Confirm with “Install“.



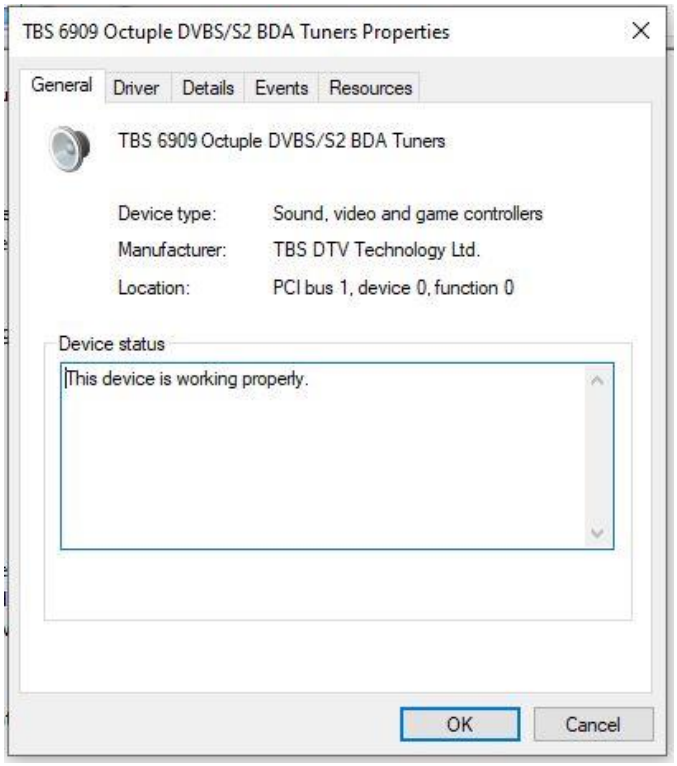
2.8) End the installation with “Finish“.



2.9) Once the driver installation is complete, the TBS-6909 is detected by your PC and shown in the Device Manager at “Sound, video and game controllers”.



2.10) Here you can also find all details about the drivers.



Hint:

● In some cases, the TBS-6909 will not be detected by your PC. We recommend to change the PCIe slot.

● If, for example, channels are not found during the channel search or the picture has small dropouts, the power supply of your PC via the PCIe plug is probably too low. In this case, please additionally connect the supplied power cable (yellow-black) to the TBS-6909.

● It is important to note that the PC should be turned off and disconnected when installing the TBS-6909. Otherwise, the TV card and also the PC can be damaged.

3. Software Installation

To enjoy satellite TV on the PC and / or record videos, you will need a TV application.

We recommend the TBS-Viewer, which you can download free of charge at the following link:

https://tbs-technology.de/wp-content/uploads/tbsviewer-v20181026.zip

Of course, the TBS-6909 is also compatible with other manufacturers' TV applications. Here is a list of downloads of TV applications and links to their respective providers of free and paid software:

https://tbs-technology.de/service/software/?lang=en

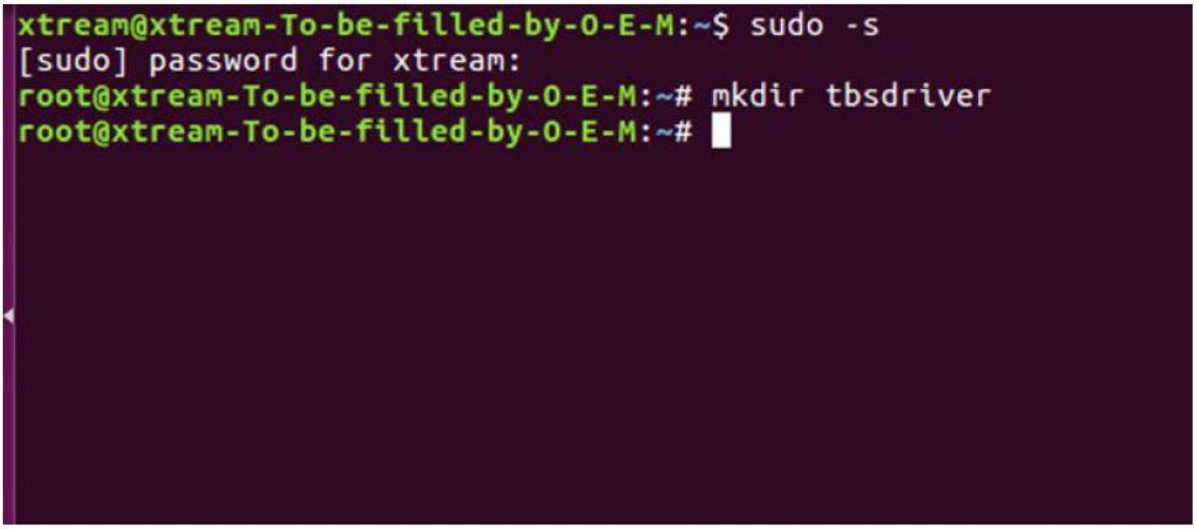
The following list shows downloads for TV-applications and links to the provider with free and chargeable software. Please look for the information on the website for the software. After an upgrade the software could became chargeable.

4. Linux Open Source driver installation

4.1) Restart your PC and right-click the operating system webui. Enter the "**sudo-s**" command and the Ubuntu default password to open "Terminal". It is now possible to access the operating system.

4.2) # lspci -vvv | grep 6909
This command detects whether there is “Device 6909”, displaying as the following webui.

4.3) Set up a directory called "tbsdriver". In our example, the directory is saved on the desktop: **# mkdir tbsdriver**



4.4) Execute the command # **apt-get install git** and install the package "**git**".

```
xtream@xtream-To-be-filled-by-O-E-M:~$ sudo -s
[sudo] password for xtream:
root@xtream-To-be-filled-by-O-E-M:~# apt-get install git
Reading package lists... Done
Building dependency tree
Reading state information... Done
Suggested packages:
  git-daemon-run | git-daemon-sysvinit git-doc git-el git-email git-gui gitk
  gitweb git-arch git-cvs git-mediawiki git-svn
The following NEW packages will be installed:
  git
0 upgraded, 1 newly installed, 0 to remove and 138 not upgraded.
Need to get 0 B/3,006 kB of archives.
After this operation, 24.0 MB of additional disk space will be used.
Selecting previously unselected package git.
(Reading database ... 211973 files and directories currently installed.)
Preparing to unpack .../git_1%3a2.7.4-0ubuntu1_amd64.deb ...
Unpacking git (1:2.7.4-0ubuntu1) ...
Setting up git (1:2.7.4-0ubuntu1) ...
root@xtream-To-be-filled-by-O-E-M:~#
```

4.5) Open the directory of "tbsdriver" and then download "media build" and "media".

 # git clone https://github.com/tbsdtv/media_build.git
 # git clone --depth=1 https://github.com/tbsdtv/linux_media.git -b latest ./media

```
root@xtream-To-be-filled-by-O-E-M:~/Desktop# cd tbsdriver/
root@xtream-To-be-filled-by-O-E-M:~/Desktop/tbsdriver# git clone https://github.co
m/tbsdtv/media_build.git
Cloning into 'media_build'...
remote: Counting objects: 3398, done.
remote: Total 3398 (delta 0), reused 0 (delta 0), pack-reused 3398
Receiving objects: 100% (3398/3398), 640.51 KiB | 3.00 KiB/s, done.
Resolving deltas: 100% (2415/2415), done.
Checking connectivity... done.
root@xtream-To-be-filled-by-O-E-M:~/Desktop/tbsdriver# git clone --depth=1 https:/
/github.com/tbsdtv/linux_media.git -b latest ./media
Cloning into './media'...
remote: Counting objects: 59051, done.
remote: Compressing objects:  61% (33904/55580)
```

4.6) Enter the directory of "media build" and execute "make dir DIR = .. / media".

 # make dir DIR=../media

```
root@xtream-To-be-filled-by-O-E-M:~/Desktop/tbsdriver# ls
media  media_build
root@xtream-To-be-filled-by-O-E-M:~/Desktop/tbsdriver# cd media_build/
root@xtream-To-be-filled-by-O-E-M:~/Desktop/tbsdriver/media_build# make dir DIR=../media
make -C linux/ dir DIR="../../media"
make[1]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/linux'
rm -rf drivers firmware include sound .patches_applied .linked_dir .git_log.md5 git_log
Searching in ../../media/Makefile for kernel version.
./use_dir.pl ../../media
sync file: firmware/av7110/Boot.S
sync file: include/uapi/linux/media-bus-format.h
sync file: include/uapi/linux/v4l2-dv-timings.h
sync file: include/linux/fence.h
sync file: include/linux/compiler-gcc.h
sync file: include/linux/dma-buf.h
sync file: sound/pci/bt87x.c
sync file: include/uapi/linux/videodev2.h
sync file: firmware/ttusb-budget/dspbootcode.bin.ihex
sync file: include/linux/cec-funcs.h
sync file: include/trace/events/vb2.h
sync file: include/sound/aci.h
sync file: include/uapi/linux/usb/video.h
sync file: firmware/cpia2/stv0672_vp4.bin.ihex
sync file: include/linux/ti_wilink_st.h
sync file: include/linux/pci_ids.h
```

4.7) **# make distclean**

```
root@xtream-To-be-filled-by-O-E-M:~/Desktop/tbsdriver/media_build# make distclean
make -C /home/xtream/Desktop/tbsdriver/media_build/v4l distclean
make[1]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/v4l'
No version yet, using 4.7.0-040700rc3-generic
rm -f *~ *.o *.ko .*.o.cmd .*.ko.cmd *.mod.c av7110_firm.h fdump \
        config-compat.h Module.symvers Module.markers modules.order \
        *.unsigned .*.ko.unsigned.cmd
make -C firmware clean
make[2]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/v4l/firmw
are'
rm -f ihex2fw
rm -f vicam/firmware.fw ttusb-budget/dspbootcode.bin cpia2/stv0672_vp4.bin av7110
/bootcode.bin
make[2]: Leaving directory '/home/xtream/Desktop/tbsdriver/media_build/v4l/firmwa
re'
rm -f .version .*.o.flags .*.o.d *.mod.gcno Makefile.media \
        Kconfig Kconfig.kern .config .config.cmd .myconfig \
        .kconfig.dep
rm -rf .tmp_versions .tmp*.ver .tmp*.o .*.gcno
rm -f scripts/lxdialog scripts/kconfig
make -C firmware distclean
make[2]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/v4l/firmw
are'
rm -f ihex2fw
rm -f vicam/firmware.fw ttusb-budget/dspbootcode.bin cpia2/stv0672_vp4.bin av7110
/bootcode.bin
```

4.8) # make -j4

```
root@xtream-To-be-filled-by-O-E-M:~/Desktop/tbsdriver/media_build# make -j4
make -C /home/xtream/Desktop/tbsdriver/media_build/v4l
make[1]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/v4l'
No version yet, using 4.7.0-040700rc3-generic
scripts/make_makefile.pl
make[2]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/linux'
Updating/Creating .config
make[2]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/linux'
Syncing with dir ../../media
Syncing with dir ../../media
Applying patches for kernel 4.7.0-040700rc3-generic
patch -s -f -N -p1 -i ../backports/api_version.patch
patch -s -f -N -p1 -i ../backports/pr_fmt.patch
make[3]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/linux'
Unapplying patches
patch -s -f -R -p1 -i ../backports/api_version.patch
make[3]: Leaving directory '/home/xtream/Desktop/tbsdriver/media_build/linux'
Applying patches for kernel 4.7.0-040700rc3-generic
patch -s -f -N -p1 -i ../backports/api_version.patch
patch -s -f -N -p1 -i ../backports/pr_fmt.patch
1 out of 1 hunk FAILED -- saving rejects to file drivers/media/platform/s3c-camif
/camif-core.c.rej
1 out of 1 hunk FAILED -- saving rejects to file drivers/media/platform/s3c-camif
/camif-regs.c.rej
```

4.9) # make install

```
root@xtream-To-be-filled-by-O-E-M:~/Desktop/tbsdriver/media_build# make install
make -C /home/xtream/Desktop/tbsdriver/media_build/v4l install
make[1]: Entering directory '/home/xtream/Desktop/tbsdriver/media_build/v4l'
-e
Installing /lib/modules/4.7.0-040700rc3-generic/kernel/mm files:
frame_vector.ko

Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/dvb/firewire:


Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/common/tuners:


Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/dvb/ttpci:


Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/dvb/bt8xx:


Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/video/cx18:


Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/video/hdpvr:


Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/video/saa7164:


Removing obsolete files from /lib/modules/4.7.0-040700rc3-generic/kernel/drivers/media/video/pwc:
```

4.10) Install the firmware and run the following command. Please save the file in your favorite directory and unpack the file in the directory "lib / firmwares".

4.10.1) Run # **wget** http://www.tbsdtv.com/download/document/linux/tbs-tuner-firmwares_v1.0.tar.bz2.

```
root@zhangweihua:~/Desktop/tbsdriver# wget http://www.tbsdtv.com/download/docume
nt/linux/tbs-tuner-firmwares_v1.0.tar.bz2
--2016-08-25 09:25:31--  http://www.tbsdtv.com/download/document/linux/tbs-tuner
-firmwares_v1.0.tar.bz2
Resolving www.tbsdtv.com (www.tbsdtv.com)... 45.79.75.140
Connecting to www.tbsdtv.com (www.tbsdtv.com)|45.79.75.140|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1018149 (994K) [application/x-bzip2]
Saving to: 'tbs-tuner-firmwares_v1.0.tar.bz2'

tbs-tuner-firmwares 100%[===================>] 994.29K   423KB/s    in 2.4s

2016-08-25 09:25:39 (423 KB/s) - 'tbs-tuner-firmwares_v1.0.tar.bz2' saved [10181
49/1018149]

root@zhangweihua:~/Desktop/tbsdriver#
```

4.10.2) # tar jxvf tbs-tuner-firmwares_v1.0.tar.bz2 -C /lib/firmware/

```
root@zhangweihua: ~/Desktop/tbsdriver
root@zhangweihua:~/Desktop/tbsdriver# tar jxvf tbs-tuner-firmwares_v1.0.tar.bz2
-C /lib/firmware/
dvb-demod-drxk-pctv.fw
dvb-demod-mn88472-02.fw
dvb-demod-mn88473-01.fw
dvb-demod-si2168-01.fw
dvb-demod-si2168-02.fw
dvb-demod-si2168-a20-01.fw
dvb-demod-si2168-a30-01.fw
dvb-demod-si2168-b40-01.fw
dvb-demod-si2183-b60-01.fw
dvb-fe-bcm3510-01.fw
dvb-fe-cx24116.fw
dvb-fe-cx24117.fw
dvb-fe-drxj-mc-1.0.8.fw
dvb-fe-drxj-mc-vsb-1.0.8.fw
dvb-fe-drxj-mc-vsb-qam-1.0.8.fw
dvb-fe-ds3000.fw
dvb-fe-ds300x.fw
dvb-fe-ds3103.fw
dvb-fe-mxl5xx.fw
dvb-fe-or51132-qam.fw
dvb-fe-or51132-vsb.fw
dvb-fe-or51211.fw
```

4.11) Please execute all the above commands first. Thus, the installation is completed successfully. Then restart the PC and enter the following commands to see if everything is correct:

 # reboot
 # dmesg | grep frontend

```
root@zwh-desktop:~# dmesg | grep frontend
[   36.018031] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 0 frontend
0 (TurboSight TBS 6909 DVB-S/S2 )...
[   36.143258] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 1 frontend
0 (TurboSight TBS 6909 DVB-S/S2 )...
[   36.232291] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 2 frontend
0 (TurboSight TBS 6909 DVB-S/S2 )...
[   36.357308] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 3 frontend
0 (TurboSight TBS 6909 DVB-S/S2 )...
[   36.452323] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 4 frontend
0 (TurboSight TBS 6909 DVB-S/S2 )...
[   36.544847] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 5 frontend
0 (TurboSight TBS 6909 DVB-S/S2 )...
[   36.670108] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 6 frontend
0 (TurboSight TBS 6909 DVB-S/S2 )...
[   36.794276] TBSECP3 driver 0000:02:00.0: DVB: registering adapter 7 frontend
0 (TurboSight TBS 6909 DVB-S/S2 )...
```

5) If you want to update the drivers in the future, please enter the "tbsdriver / media" and execute the following commands:

 # cd media
 # git remote update
 # git pull
 # cd ../media_build
 # git remote update
 # git pull
 # make
 # sudo make install
 # reboot

```
root@zhangweihua: ~/Desktop/tbsdriver/media_build
root@zhangweihua:~/Desktop/tbsdriver/media# git remote update
Fetching origin
root@zhangweihua:~/Desktop/tbsdriver/media# git pull
Already up-to-date.
root@zhangweihua:~/Desktop/tbsdriver/media# cd ../media_build
root@zhangweihua:~/Desktop/tbsdriver/media_build# git remote update
Fetching origin
root@zhangweihua:~/Desktop/tbsdriver/media_build# git pull
Already up-to-date.
root@zhangweihua:~/Desktop/tbsdriver/media_build# make
make -C /home/zhangweihua/Desktop/tbsdriver/media_build/v4l
make[1]: Entering directory '/home/zhangweihua/Desktop/tbsdriver/media_build/v4l
'
creating symbolic links...
make -C firmware prep
make[2]: Entering directory '/home/zhangweihua/Desktop/tbsdriver/media_build/v4l
/firmware'
make[2]: Leaving directory '/home/zhangweihua/Desktop/tbsdriver/media_build/v4l/
firmware'
make -C firmware
make[2]: Entering directory '/home/zhangweihua/Desktop/tbsdriver/media_build/v4l
/firmware'
make[2]: Nothing to be done for 'default'.
make[2]: Leaving directory '/home/zhangweihua/Desktop/tbsdriver/media_build/v4l/
```

6. Using dvblast with Linux Operational Environment

6.1) Connect the satellite cable to the LNB.
6.2) Lock the TV channels from the DVB-S signal**.**

```
root@zwh-desktop: ~
zwh@zwh-desktop:~$ sudo -s
[sudo] password for zwh:
root@zwh-desktop:~# dvblast -f 12538000 -s 41250000 -v 13 -a 0
DVBlast 3.1 (git-3.0-6-g179f049-dirty)
warning: restarting
debug: compiled with DVB API version 5.10
debug: using DVB API version 3.0
debug: Frontend "TurboSight TBS 6905 DVB-S/S2 " supports:
debug:  frequency min: 950000, max: 2150000, stepsize: 0, tolerance: 0
debug:  symbolrate min: 1000000, max: 70000000, tolerance: 0
```

(Tuner 0) dvblast -f 12538000 -s 41250000 -v 13 -a 0 -5 DVBS
(Tuner 1) dvblast -f 12538000 -s 41250000 -v 13 -a 1 -5 DVBS
(Tuner 2) dvblast -f 12538000 -s 41250000 -v 13 -a 2 -5 DVBS
(Tuner 3) dvblast -f 12538000 -s 41250000 -v 13 -a 3 -5 DVBS
(Tuner 4) dvblast -f 12538000 -s 41250000 -v 13 -a 4 -5 DVBS
(Tuner 5) dvblast -f 12538000 -s 41250000 -v 13 -a 5 -5 DVBS
(Tuner 6) dvblast -f 12538000 -s 41250000 -v 13 -a 6 -5 DVBS
(Tuner 7) dvblast -f 12538000 -s 41250000 -v 13 -a 7 -5 DVBS

6.3) Lock the TV channels from the DVB-S signal**.**

```
root@zwh-desktop: ~
zwh@zwh-desktop:~$ sudo -s
[sudo] password for zwh:
root@zwh-desktop:~# dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 0
DVBlast 3.1 (git-3.0-6-g179f049-dirty)
warning: restarting
debug: compiled with DVB API version 5.10
debug: using DVB API version 3.0
debug: Frontend "TurboSight TBS 6905 DVB-S/S2 " supports:
debug:  frequency min: 950000, max: 2150000, stepsize: 0, tolerance: 0
```

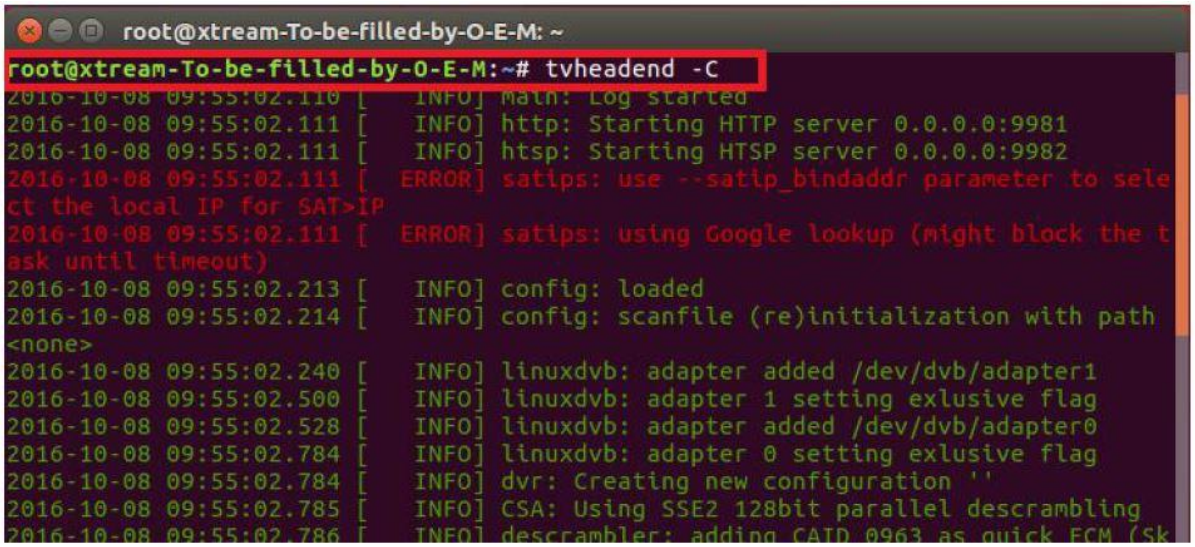
(Tuner 0) # dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 0 -5 DVBS2
(Tuner 1) # dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 1 -5 DVBS2
(Tuner 2) # dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 2 -5 DVBS2
(Tuner 3) # dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 3 -5 DVBS2
(Tuner 4) # dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 4 -5 DVBS2
(Tuner 5) # dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 5 -5 DVBS2
(Tuner 6) # dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 6 -5 DVBS2
(Tuner 7) # dvblast -f 12660000 -s 45000000 -v 13 -m psk_8 -a 7 -5 DVBS2

6.4) Proceed as with VH DVB-S2:

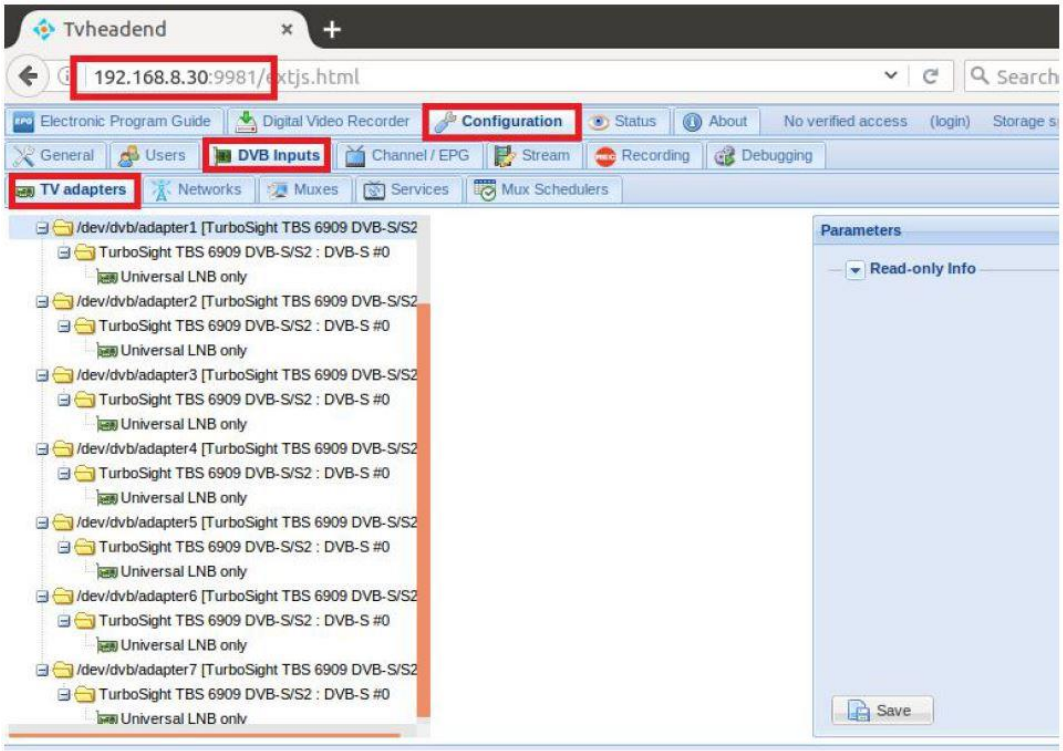
(Tuner 0) # dvblast -f 11080000 -s 43200000 -v 18 -m psk_8 -a 0 -5 DVBS2

7. Tvheadend manual

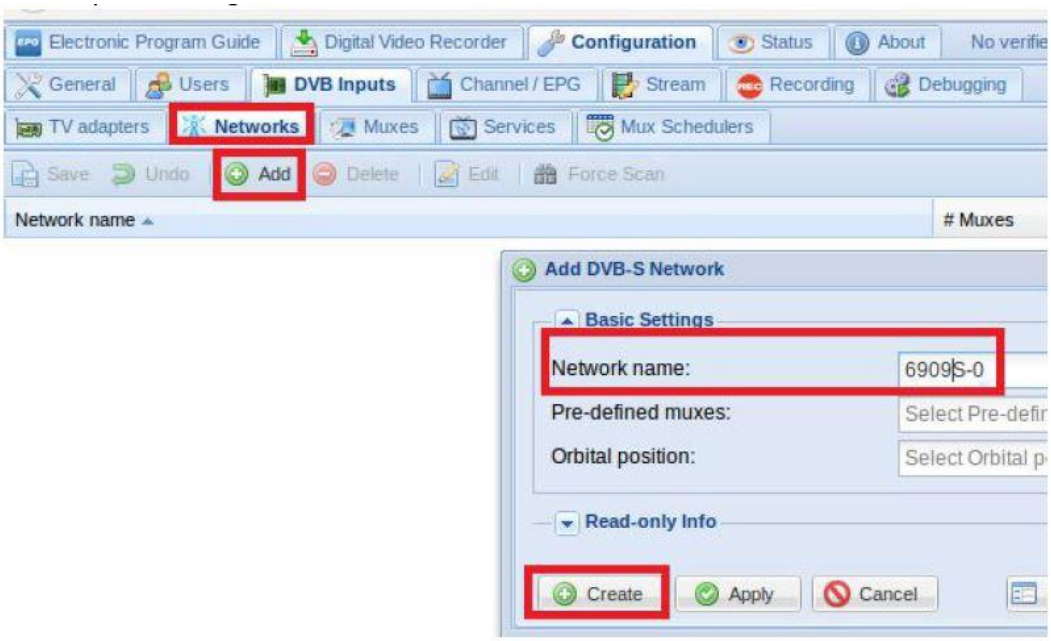
7.1) Connect the satellite cable to the LNB.
7.2) Install the software Run tvheadend -C.



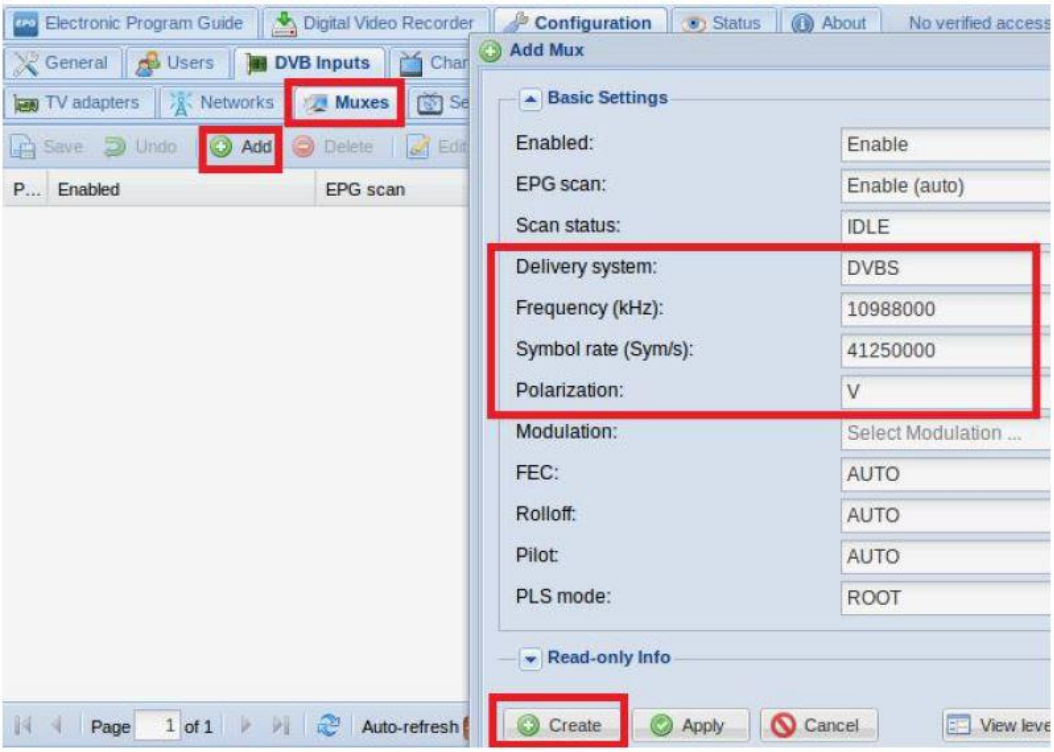
7.3) Start the Firefox browser and enter the IP address of your PC and the port number 9981. You can then log into the tvheadend configuration webui.



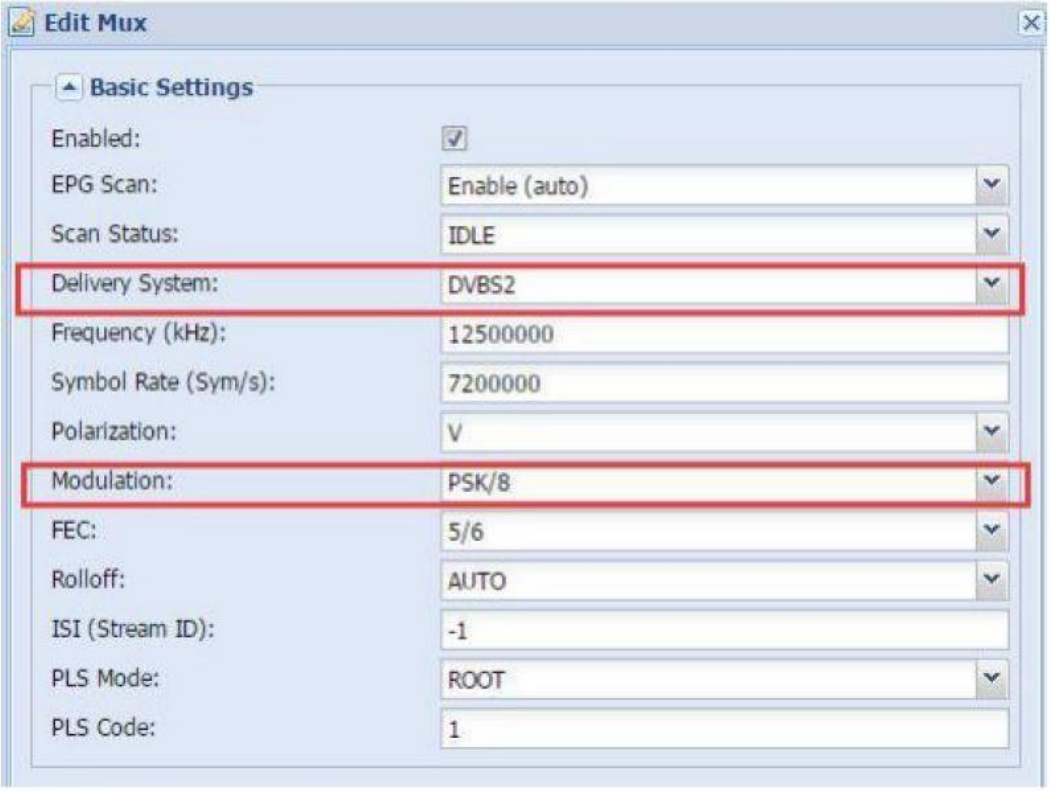
7.4) Open "Networks" and enter the correct "Network name" with the product name. Unlock the required TV signal via the LNB and save these settings.



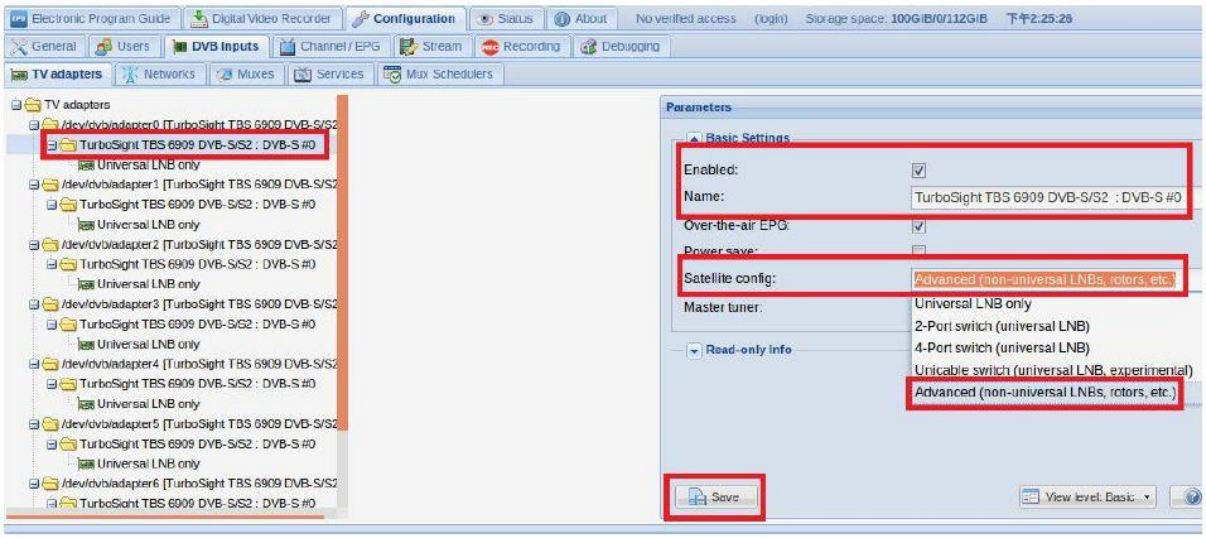
7.5) Open "Muxes" and enter the frequencies and parameters. Save this afterwards.



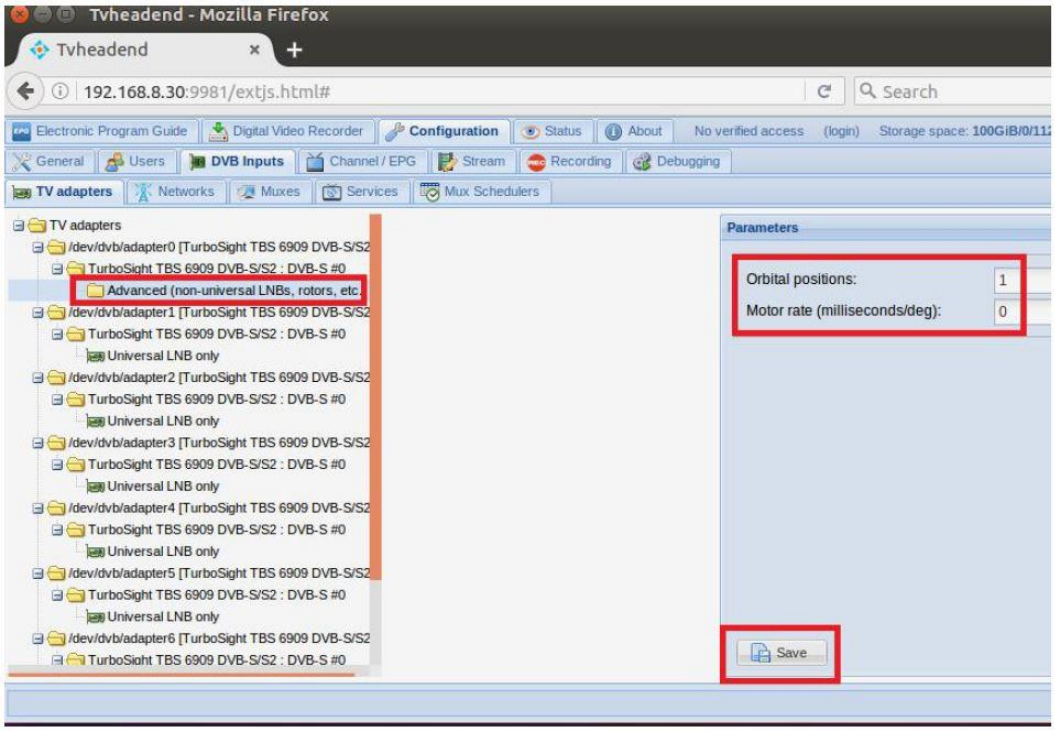
7.6) For "Delivery System" please save "DVBS2" and for "Modulation" please save "PSK / 8".



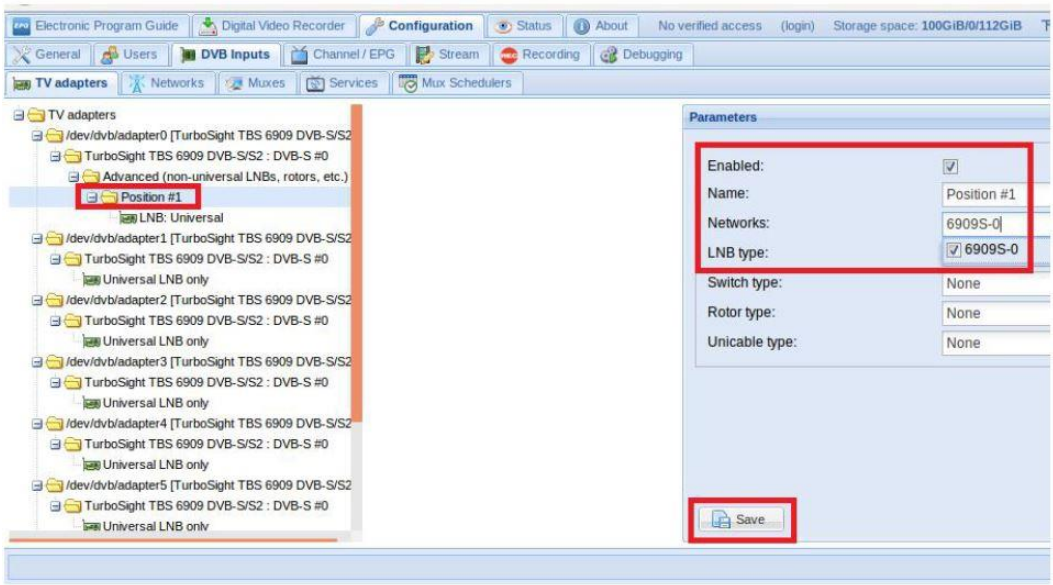
7.7) Enter the TV adapter, select the LNB port you want to use, open TurboSight and set the reference card to save.



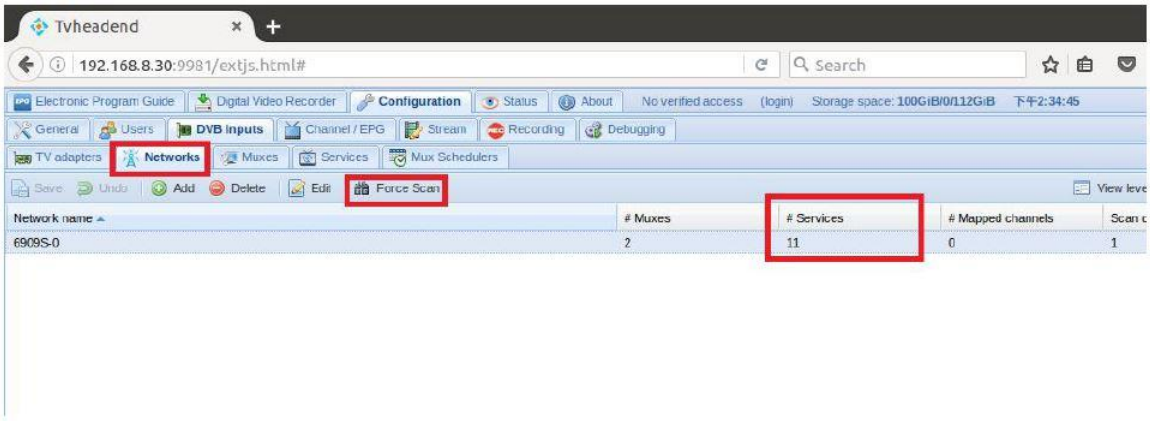
7.8) Click "Advance" and then "Save" to save the settings.



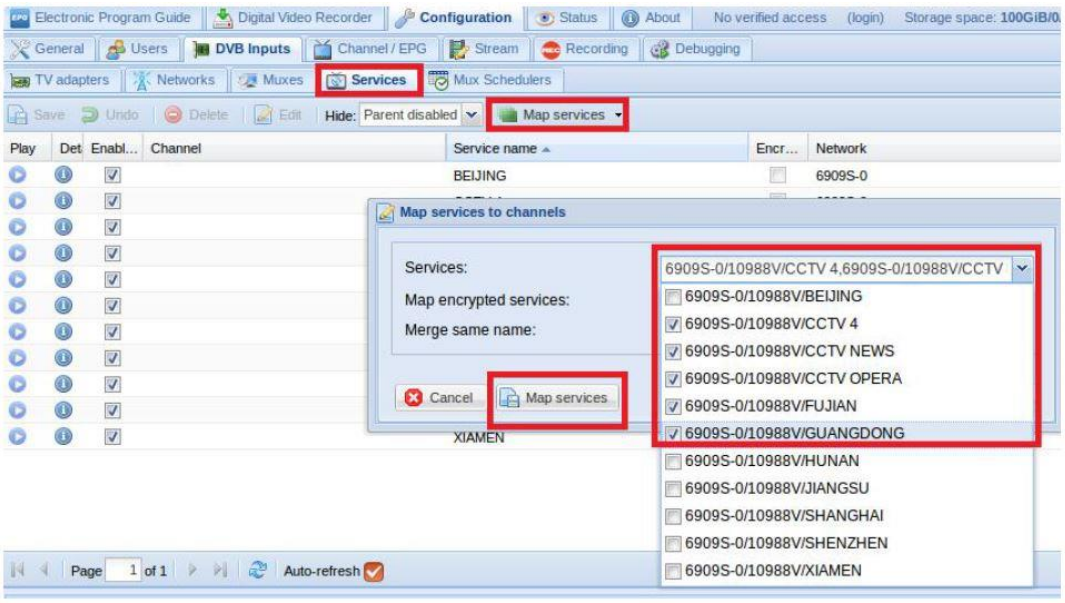
7.9) Click "Position # 1" and add the settings provided by the network channel. Save it afterwards.



7.10) Open "Networks" and then click on "Force Scan" to lock TV channels.

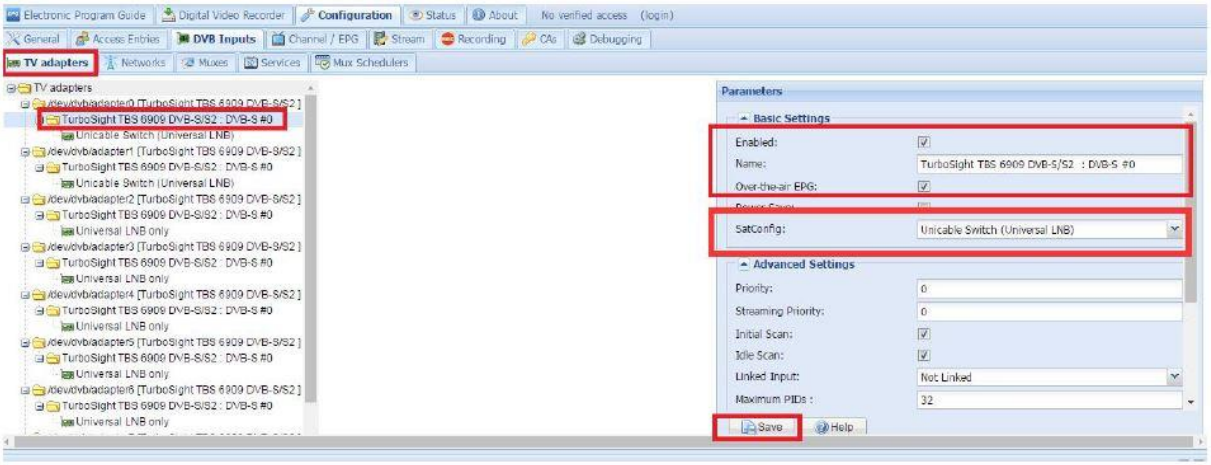


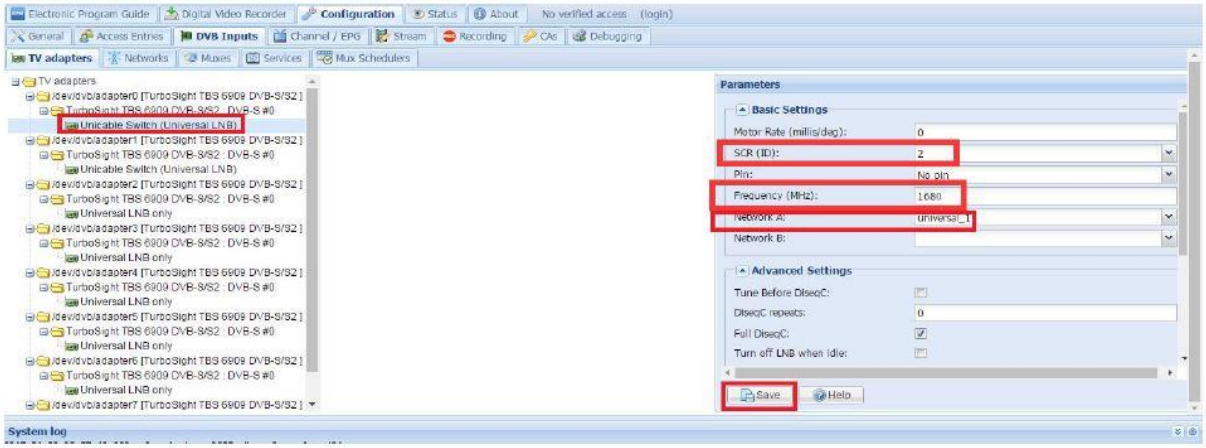
7.11) Open "Services". Here you can stream all the TV programs you want live. Also look at "Map services".



If you want to work with Tuner 1 to Tuner 7, please set the correct configuration. Use the parameters according to steps 7.4 - 7.11.

7.12) Unicable mode settings

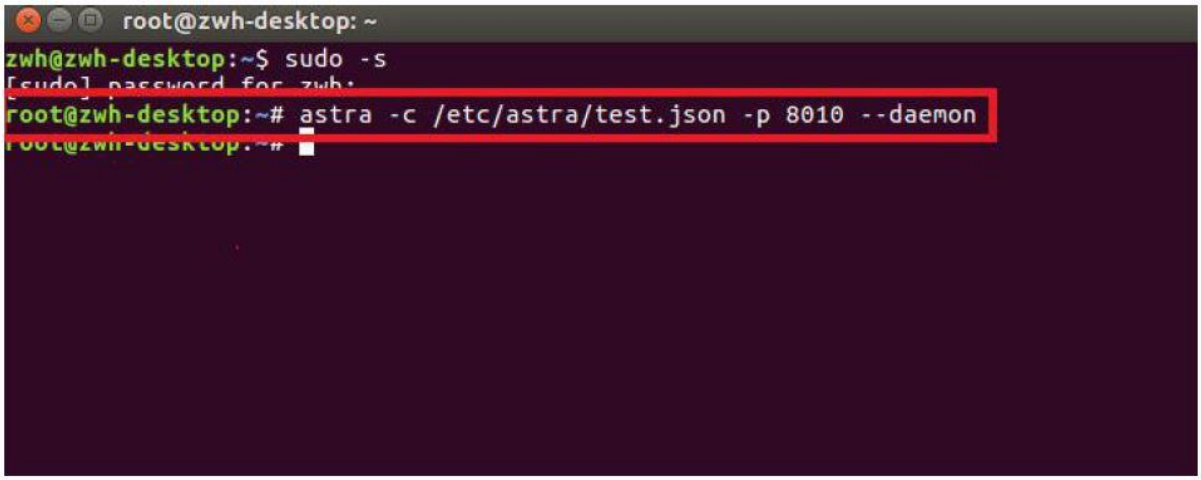




7.13) Further steps to be taken: 7.4 and 7.5, 7.9 and 7.11

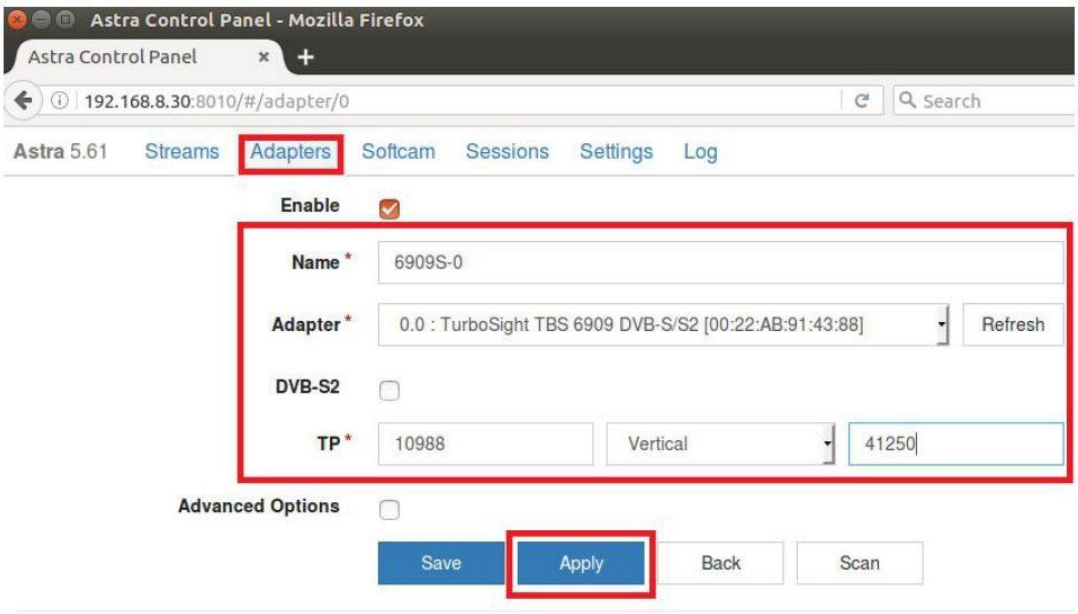
8. Astra manual

8.1) Connect the satellite cable to the LNB.
8.2) Install the Astra software and open the program.

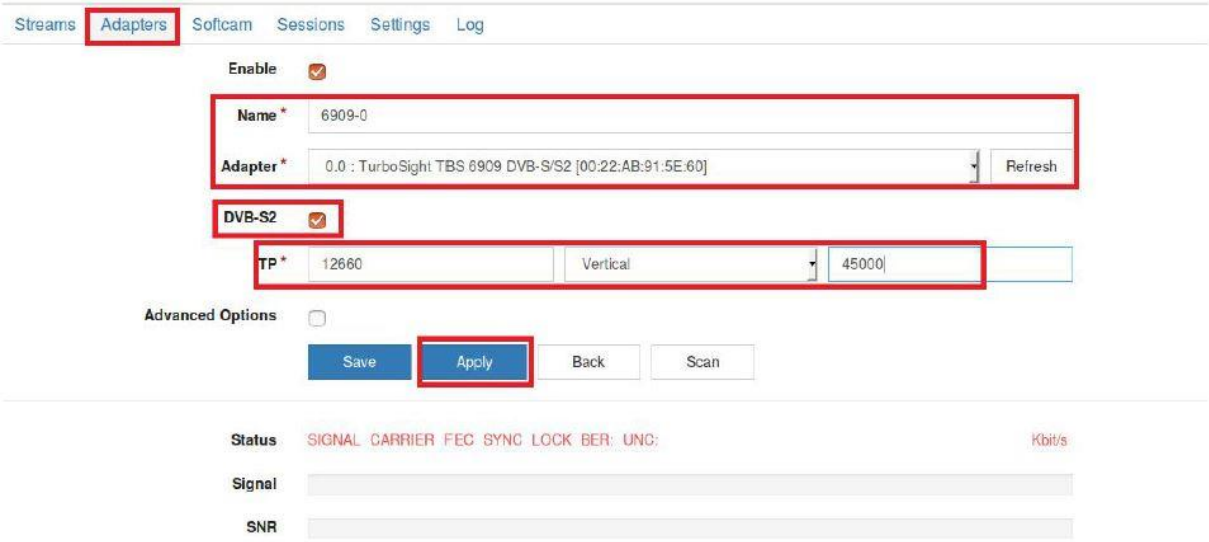


8.3) Start the Firefox browser and enter the IP address of your PC and the port number 8010. You can then log into the astra configuration webui
.

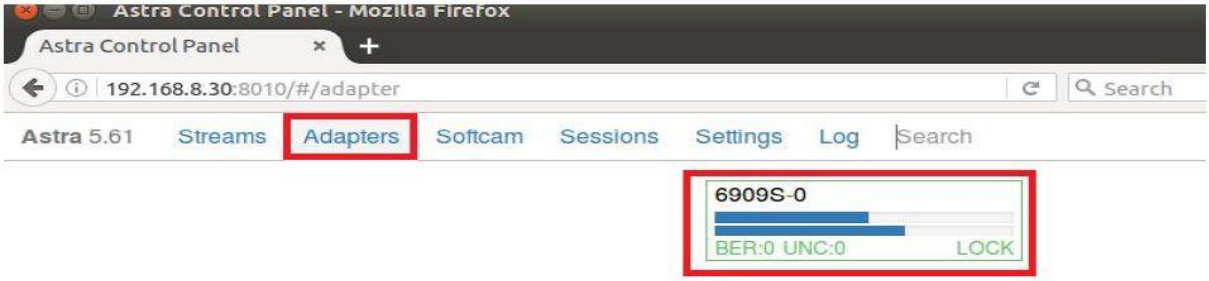
8.4) Create a new "adapter" and then set the right satellite TV signal and frequency parameters over LNB. Then click on "Apply".



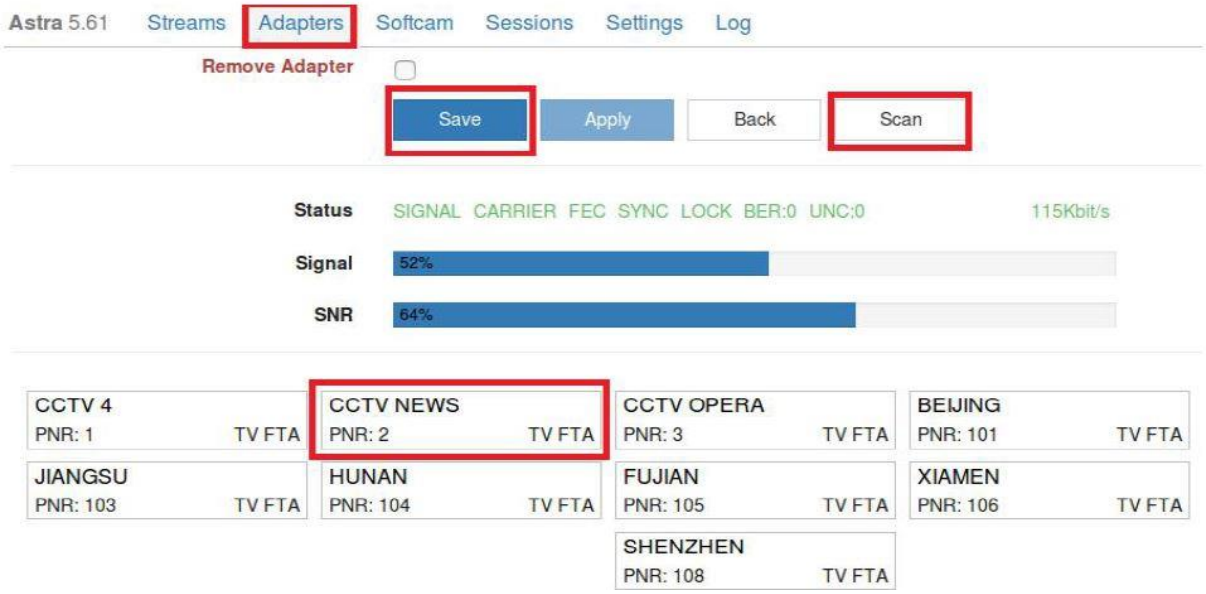
8.5) Save “DVB-S2“.



8.6) Open "Adapters" again. When the LNB signal display appears, the configuration was successful. Click it and you come to the operation interface.



8.7) Open "Adapters" to scan TV channels. Then select the programs you want to see and save with "Save".



8.8) Save all selected TV channels. You will find these under "Streams". Then set the output protocol (Output # 1) according to your wishes and save with "Apply".