Scan & Tioune

Scan & Tioune is software that can scan a frequency band and automatically detect the stations that broadcast in DVB-S or DVB-S2

Tested mostly on satellite OQ-100, it can also be used to monitor eg the 437 MHz band and automatically receive any station that appears, without knowing anything about this station.

> ➢ MUST INSTALL POCICE CHARACTER: WINGDNG3.ttf (right click on the
>   file and choose Install)
> ➢ We must have the active Ethernet card and indicate possible (if you have wifi
>   also active) the IP address of the Ethernet card in the Scan & Tioune.ini file **otherwise the video will not be**
>   **seen as not received by the VLC decoder built in Scan & Tioune**

Scan & Tioune_v0.1 is currently experimental version, many things can be improved for use:

- Scan & Tioune does not decode the audio and video and video as Minitioune.
    - o Minitioune has its own functions that transfer the received TS stream to
        demultiplexer and decoders and display of Windows. (Technical DirectShow).

    - o Scan & Tioune simply receives the TS stream and send it to your network
        Local UDP, it then uses VLC software dll functions to give us the video and audio.

- This use of .dll VLC <u>requires you install VLC 3.0.8 **32bit Version**</u> Even under Win10 64 bits.

- <u>This use of the local network requires an active Ethernet card</u> . If you have only WiFi network, this will cause problems. If you do not have an available Ethernet network, it's easy to turn your Ethernet card by just plugging your PC to a small Ethernet hub connected to anything else.

- **Experimental,** means that I also try to test whether a solution using Dll VLC is interesting. If this causes too many problems I will return to the method used by Minitioune the internally decoding calling decoders / Windows display and no need then link Ethernet_UDP

- **Experimental,** means that we also try to see that this method of scannerrécepteur can bring in our use daily and what key parameters need to be improved. It is the beginning. Not knowing any other tool making this dual function in DVB, for me everything is still to be discovered.

- **Scan & Tioune can display a spectrum up to 60 MHz wide.** This can be very useful to analyze exactly what gets your NIM, defects LNB emerge,

noise neighbors, especially of 437 MHz, which disturb the entrance of your NIM and act on the AGC etc.

- The software **Tiny Spectrum Analyzer (TSA)** can be even better suited for it: it allows a finer filtering and also measures the PPM necessary correction for your MiniTiouner.

Scan & Tioune_v0.1 is available for download that can experience, but nothing is guaranteed on the functioning in your configuration.

Remarks:

- **Scan & Tioune** only works with MiniTiounerPro or MiniTiouner V2 have a NIM Serit FTS4334 and FTS4335. (*The MiniTiouner Express does not conform are cases will be seen perhaps later.)*

- **Scan & Tioune** ^ may not be work well with some powerful PC. Tests are under way and the software will be optimized later for this.
- **You have 5 files:**
    - ✓ **The software :** Scan & Tioune_V01h.exe
    - ✓ **The configuration file:** Scan & Tioune.ini
    - ✓ **A font:** WINGDNG3.ttf
        You can easily install the font in Win10 by double clicking on the file name and tinsel on "Install"
    - ✓ **Rapid manuals in French "** Scan & Tioune manual rapide.pdf **"**
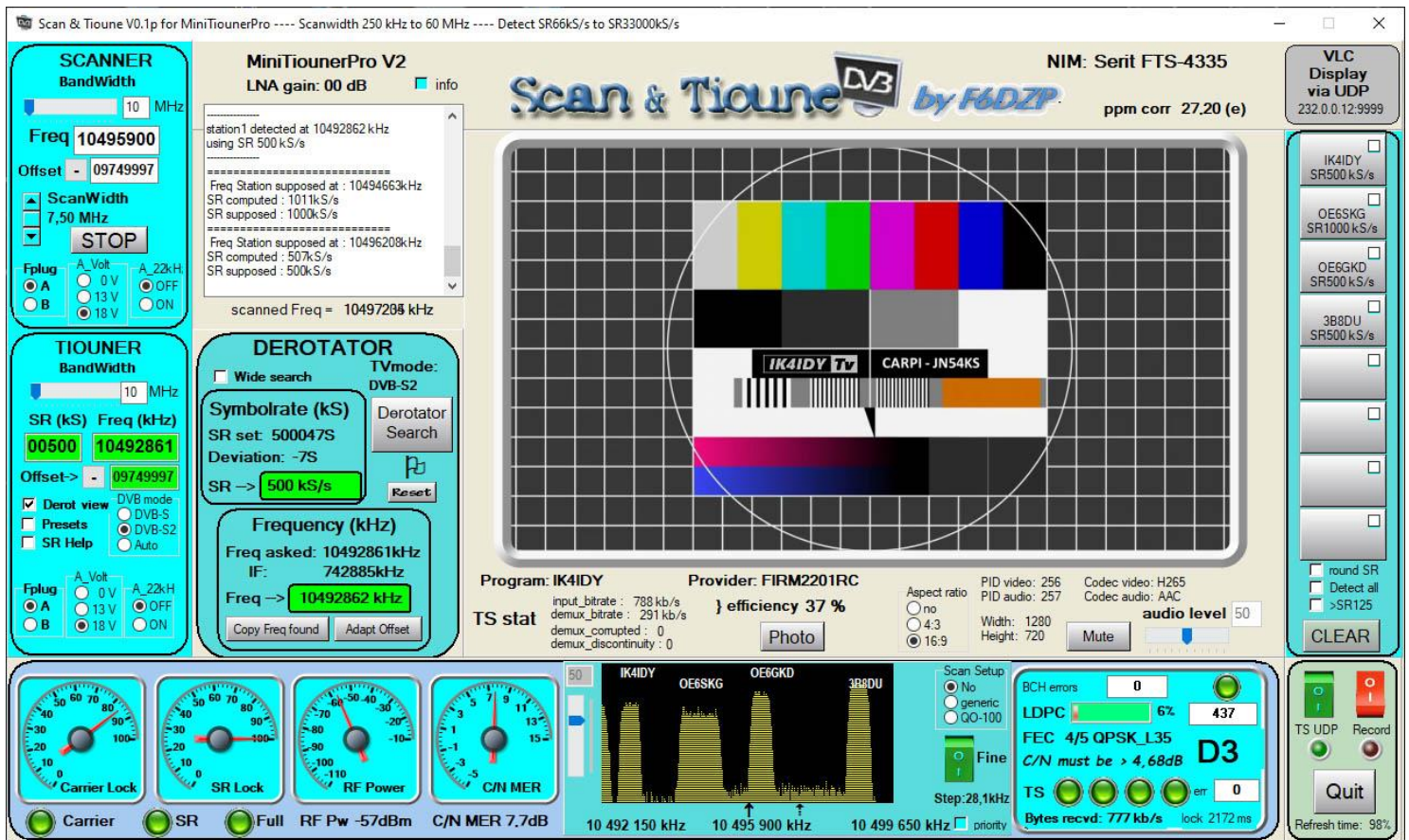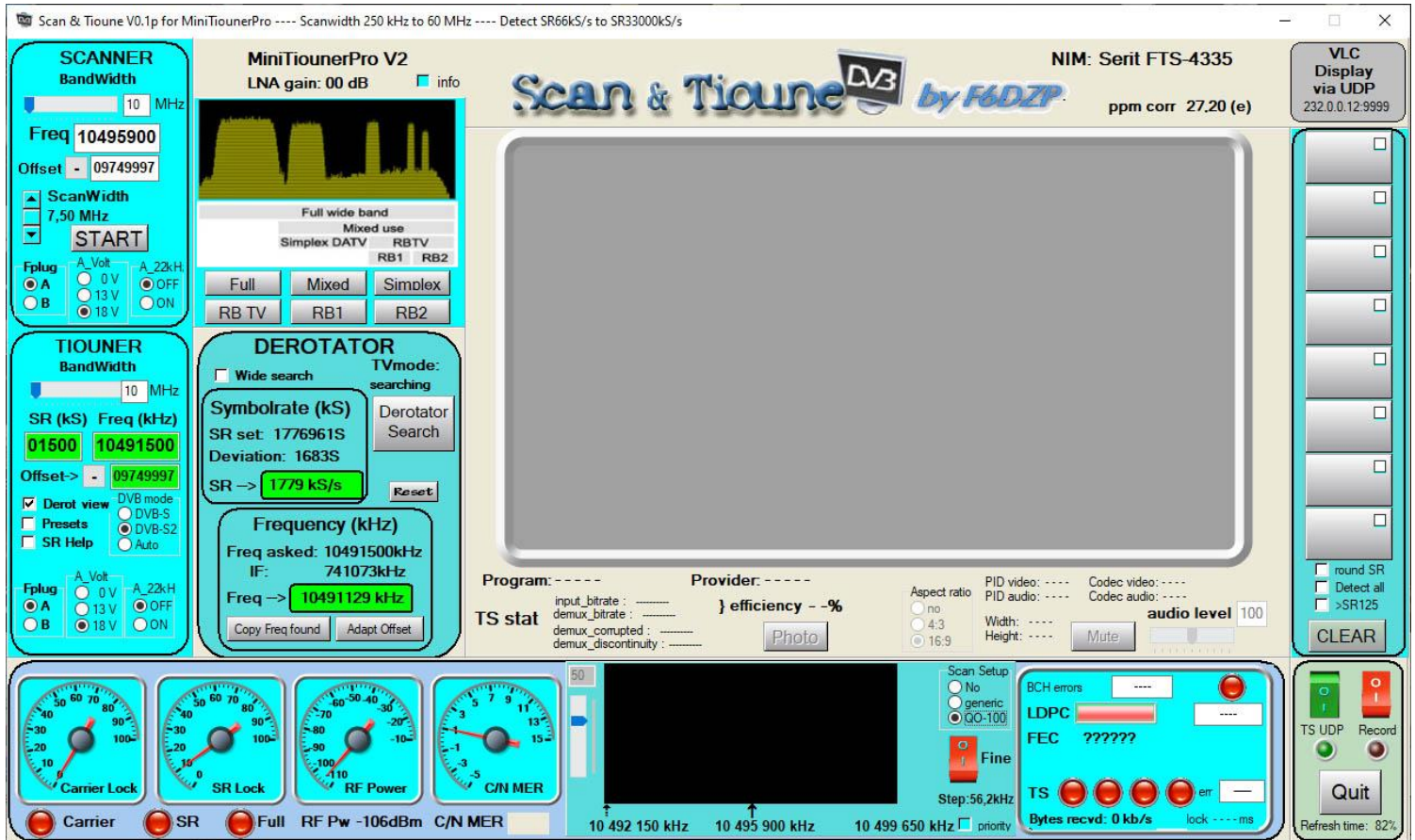
Fashion Quick Job:

o You can use initially the Scan & Tioune.ini file without changing it.

You may modify later after some time of using Scan & Tioune.

o After installing VLC 32bits and font "Wingdings 3" simply start
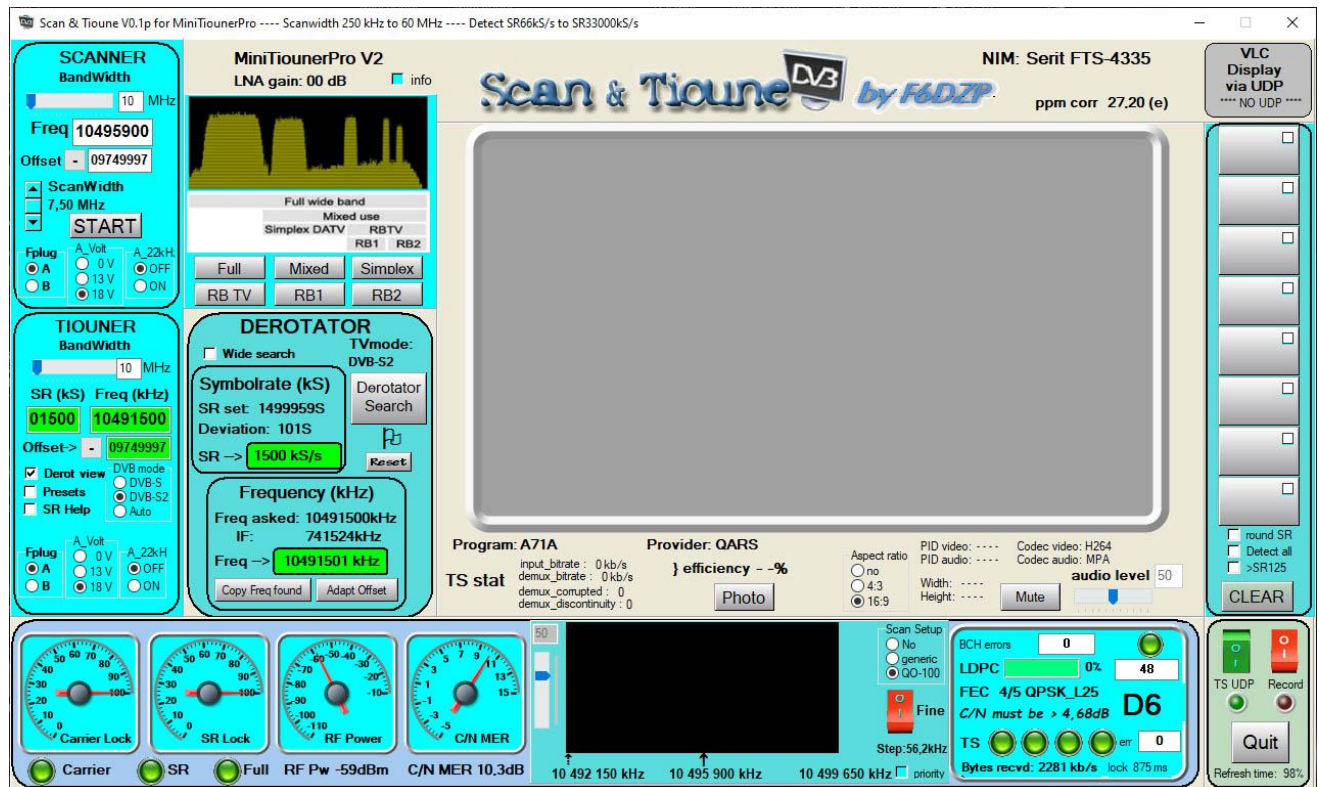
Scan & Tioune software

You have to see this, if you do not receive what OQ-100:
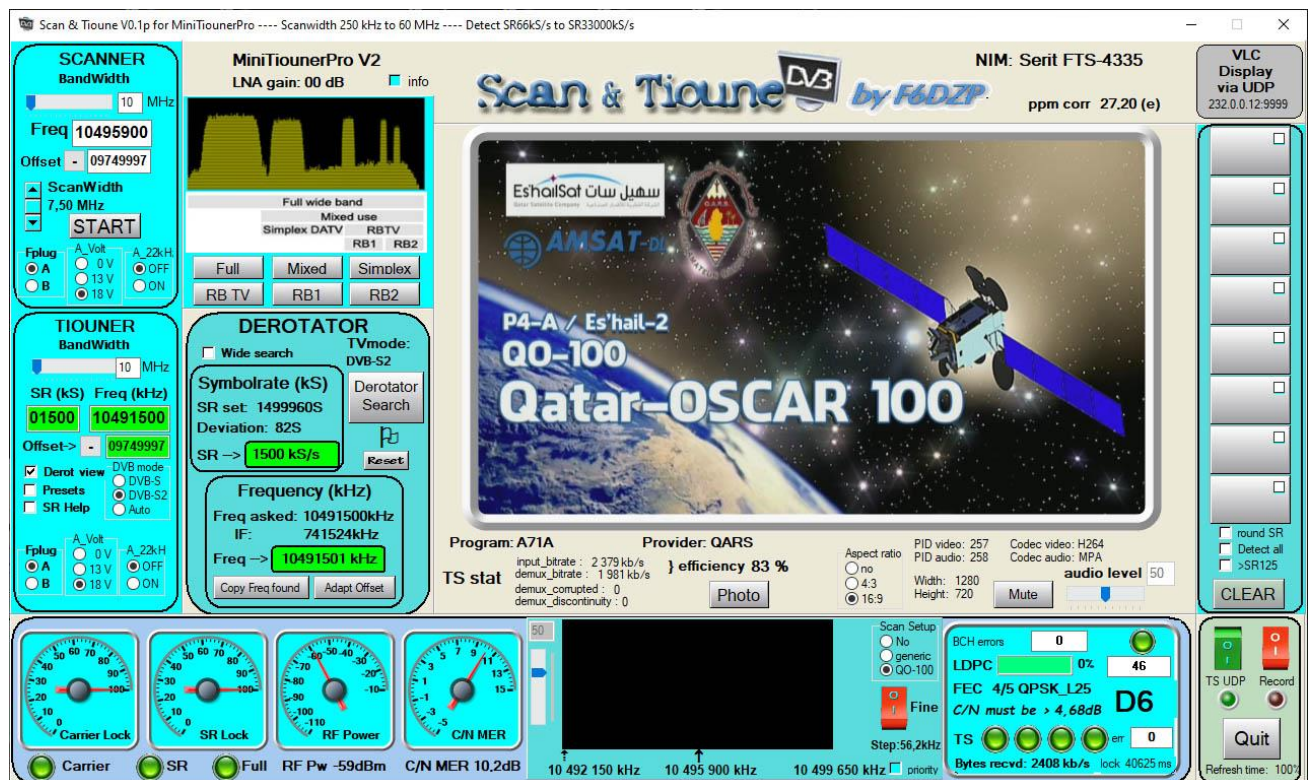

(LEDs are red, it gets nothing)

You have to see this if you have a round dish on QO-100 but no UDP network:

The LEDs are green but the TS stream can not be sent to VLC

You have to see this if you have a round dish on QO-100 and UDP network via interface
Ethernet:

This is VLC that displays the video. You are in "Expert" mode that gives you a lot of information on the signal and the TS stream, and the effectiveness of the encoding used over the bandwidth used.

The "Expert" mode can be changed by clicking on the video area or by pressing the "Esc" key. If you want to see large image, throwing externally receiving VLC UDP stream to the address. (232.0.0.12 here: 9999)

- **You click the START button on the scanner**

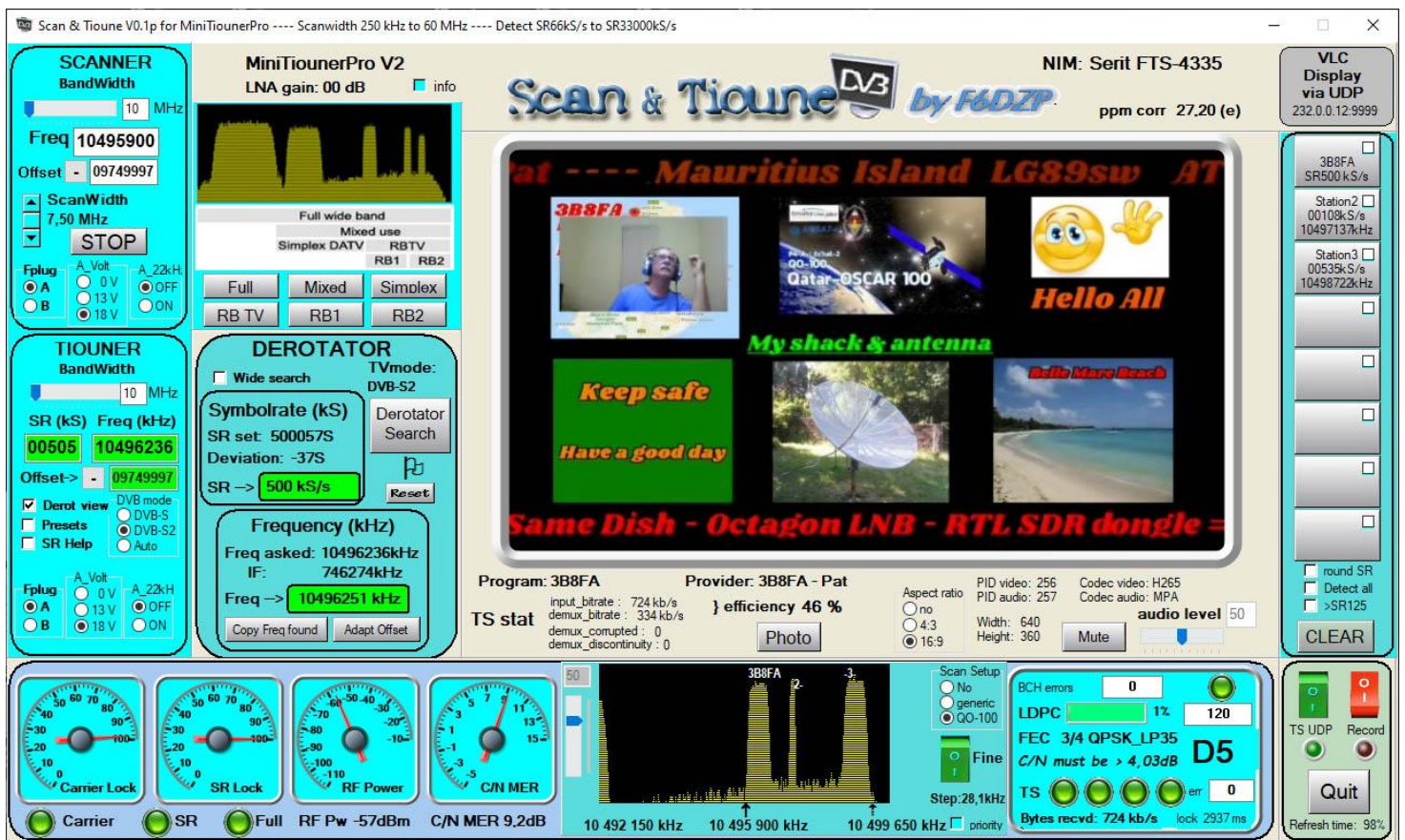By default it scans the right QO100 tag because it is the OM stations that interest us.
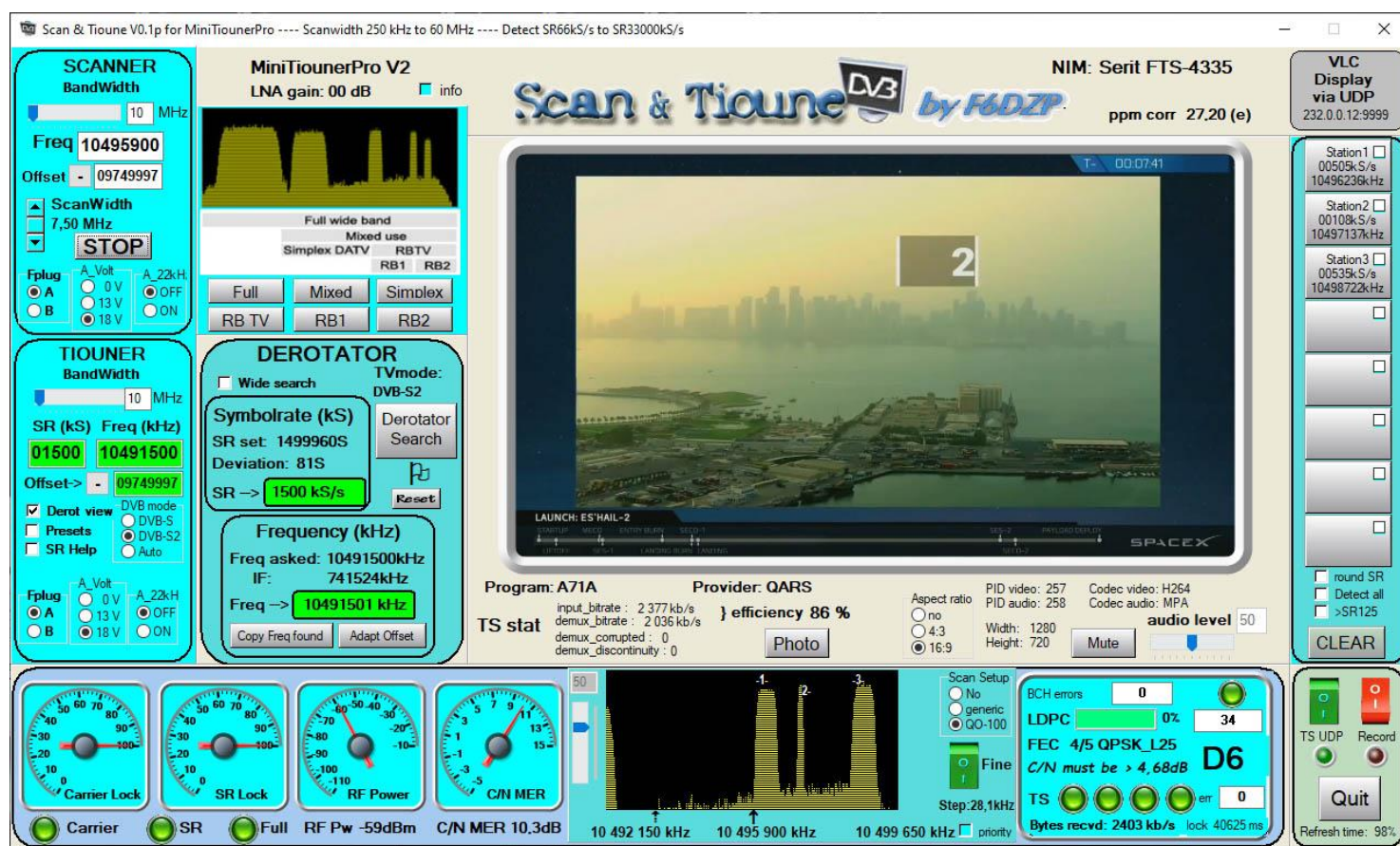
We continue to watch the video tag OQ-100 and at the same time it scans the OM part of the band OQ-100. Here we see appear 3 stations.

(One could also receive an image on 437MHz and simultaneously scan QO-100)

• **You click the number '-1' in the spectrum (or the station 1 button at the top right)**

The station is detected, you see the call of the station be written in the spectrum instead of '-1'.

The name of the station and its parameters are written on the top right button 1. Of course we see the video of the station and a set of information on TS, including the ratio of data sent and that contain video and audio (we deduce the rate of null packets) and this results in the coefficient ; "Efficiency".

One can click and by hand on each station of the spectrum.

One can also ask " **Detect all** "So that everything is done automatically.

" **Detect all** "Ticks all the checkmarks buttons, they will be detected one after the other.

But my favorite way is to ask the hand by just clicking in the spectrum to see a particular station.

SR detected are not accurate, they depend on the width of the band scanned and Fine mode. You see the pitch (step) displayed here 28.1 kHz Fine_ON fashion if 56,2kHz in Fine_OFF mode.

If you want to detect stations S125 or especially SR66 must be Fine_ON mode.

This slows down the scanning speed. To go faster, you can tick 'Priority' which will give priority to the scanner and adopt measures to Minitioune when the station is detected.

Remarks:

- The "Tiouner" is set by default to receive DVB-S2, the most common of QSO-100, it may be DVB-S or Auto mode. In auto mode must be able to decode the DS or DVB-S2 but Tiouner more difficult and will take longer. This mode can be set in the Scan & Tioune.ini file

- I usually do not scan any satellite (scan "Full") because the tag is still there, not worth the spot. I put myself almost always scan mode "Mixed". As I scan shows that the right of the beacon stations and there is more precision.
- More you reduce the scanned part is more accurate detection. There is another way to increase accuracy is to engage the "Fine" display (Button Fine). But as we have 2 times more samples for the spectrum it will put 2 times longer to scan. With MiniTiounerPro (faster than MiniTiouner V2) **I put 6 seconds for a simple, 12 sec scan to scan "Fine".**

- If a lock on a station is not full = some LEDs are red, click "Derotator Search" to restart the lock or test if the DVB-S or DVB-S2 following the DVB mode where you were.

- Sometimes depending on the accuracy and shape of the spectrum that changes according to the linearity of the amplifier used for the issue, there may be confusion on the detected SR. If you do not lock, left click (SR Help) on SR 333 or SR250 buttons etc .. With practice, looking at the spectrum, we see immediately how we deal SR.

- If the SR is not used "standard" (different from the following 66, 125,250,333,500 ...) you can use the Wide Search option that will tell the Derotator to look further around the selected SR.

IMPORTANT:

This software is not completed, it is still evolving. There is no guarantee that it works on all PC configurations. It is right at your disposal to calm your impatience and / or satisfy your thirst for discovery.

For questions or comments, use the Vivadatv.org forum, I will not answer that on this support. Please, no mail to my home address.

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