

# Minitioune v0.9.9.1j Read me

## Terms of use

**Windows:** Minitioune can be used under Win7, Win8 or Win10, 32bits or 64bits.

**The screen** to be used should be 16:9 or 16:10 if possible and must have at least 768 lines (The Minitioune interface is 1073x763) so you need a screen at least WXGA 16:9 (1280x768) or WXGA 16:10 (1280x800). An XGA 4:3 screen (1024x768) is not enough.

**The PC to be used does not have to** be powerful, but

- Must have USB 2 or 3 ports with good performance
- Shouldn't be too old, as recent CPUs have built-in video set-top boxes

**Minitioune works very well on a small recent Atom processor PC like the PIPO X8 or X9 or a Windows tablet**

## If you've already installed an earlier version of Minitioune:

- ⇒ you have to copy this version **minitioune\_v0\_9\_9\_1jexe** in the Minitioune directory
- ⇒ **You have to take the new file minitiouneConfig.ini provided with, which is more complete than the previous one,** and hand over its code, password, QRA locator, as well as its favorite button values. If you don't want to destroy your old file minitioune.ini or MinitiouneConfig.ini, you copy the `news` part of this file 'minitiouneConfig.ini'

**There is also new software:**

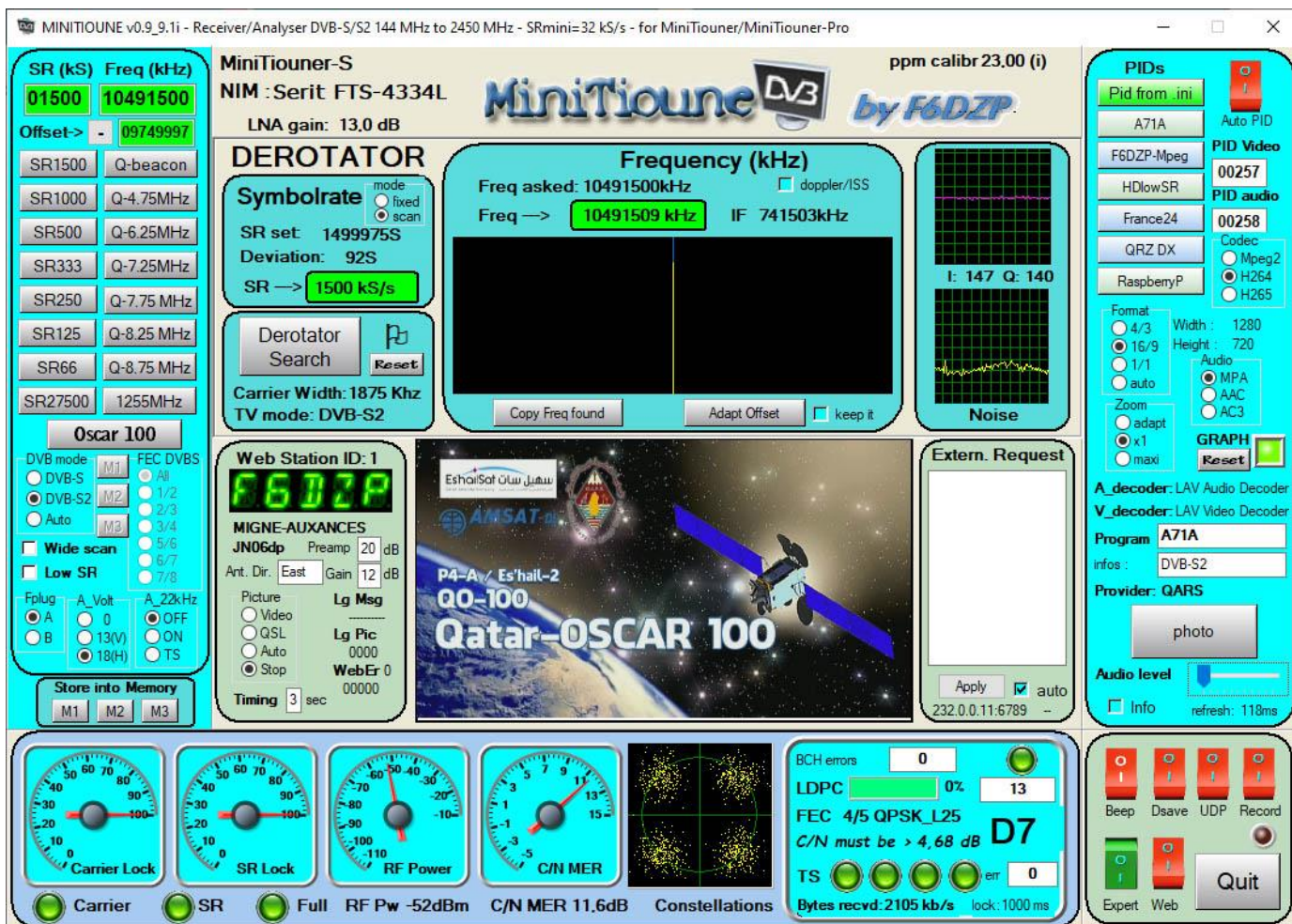
- **CheckMiniTiouneDriverAndFilters\_V0\_6a**
- **TestMyMiniTiouner\_v2.5**

## If you haven't installed Minitioune yet, WARNING!!

- **Pilots and codecs must be installed**
- **You need to test your card, USB socket and cables with TestMyMiniTiouner**
- **It is necessary to test the correct installation of drivers and codecs with CheckMinitiouneDriverAndFilter.**

**Only after these 3 steps, you can run Minitioune**

- ⇒ **Go page 15 for details**



## Minitioune version v0. 9.9.1j.

Minitioune can work with increasingly different types of MiniTioneurs:

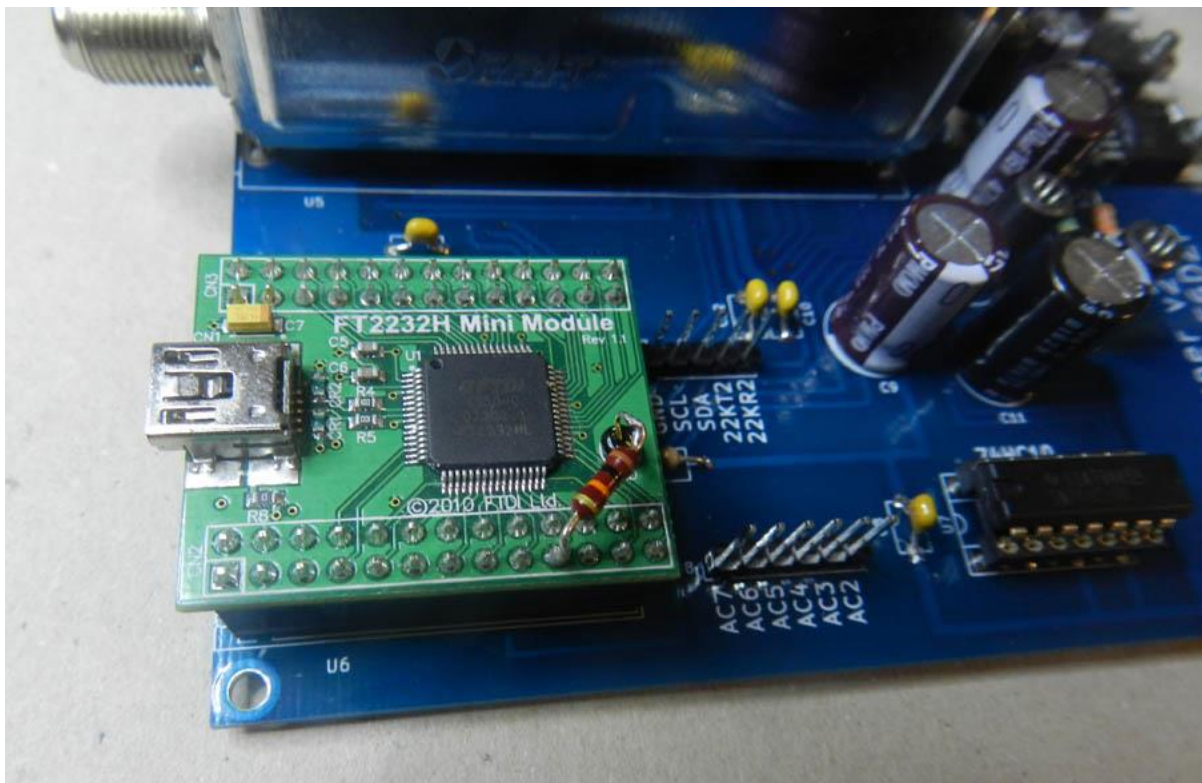
- **MiniTioneer V1** (homemade, F1CHF kit, BATC kit...)
  - with **NIM Eardatek** EDS-4B47FF1B
- **MiniTioneer V1** (homemade, F1CHF kit, BATC kit...)
  - avec **NIM SHARP** BS2F7HZ0169/**Samsung** DNBU-10512IST
- **MiniTioneer V1** (home-made)
  - with **NIM Serit SP-2246T**
- **MiniTioneer V1 + extension nouveau NIM** (kit BATC V1+ pcb extension)
  - with **NIM Serit** FTS-4335, FTS-4334 or FTS-4339
- **MiniTioneer V2** (homemade, BATC V2 kit...)
  - with **NIM Serit** FTS-4335, FTS-4334 or FTS-4339
- **MiniTioneer-PRO** (home-made or REF manufacturing)
  - with **NIM Serit** FTS-4335, FTS-4334 or FTS-4339
- **MiniTioneer-PROV2** (home-made or REF manufacturing)
  - with **NIM Serit** FTS-4335, FTS-4334 or FTS-4339
- **MiniTioneer-Express** (fabrication DATV-express.org/USA)
  - with **NIM Serit** FTS-4334
- **MiniTioneer E-Tioneer** (ELAD manufacturing /Italy))
  - with **NIM Serit** FTS-4334
- **MiniTioneer-S** (fabrication REF)
  - with **NIM Serit** FTS-4334

The software must therefore recognize the type of MiniTiouner used because they do not all have the same possibilities.

- In the case of a MiniTiouner V1 Eardatek, Sharp...), do not change anything.

- In the case of a MiniTiouner Pro or MiniTiouner Pro V2, do not change anything...

- **In the case of the MiniTiouner V1extension or V2 type BATC with NIM FTS4335 or FTS4334, it is necessary to add resistance between CN2-19 and ground**

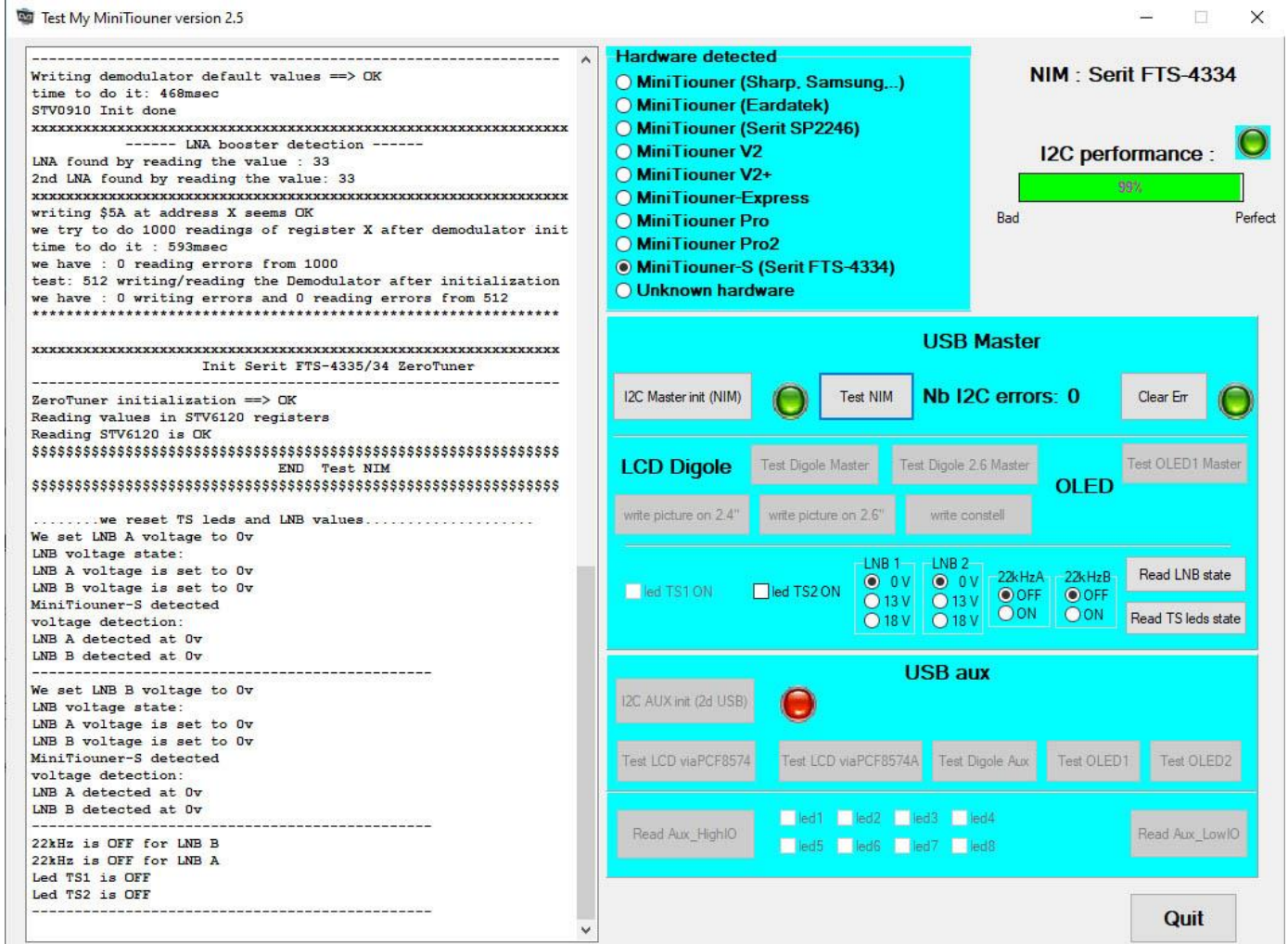


Resistance for the detection of a MiniTiouner V2

**Either way, you have to start by testing your MiniTiouner with the new version of TestMyMiniTiouner (V2. 3a, version common to all MiniTiouners).**

It will tell you if everything is well recognized and in the case of an NIM Serit FTS-43xx the speed of your USB link and I2c. It allows you to compare different MiniTiouners, different PCs, different USB sockets of the same PC:

**I2Cperformance:** The smaller the value, the slower the measurement display will be on your software because it will take longer to read the data provided by the demodulator. Unless the result is very bad, it does not change the possibilities of reception, it just changes the speed in measurements. In all tests performed on the same PC with the NIM Serit FTS-433x, the MiniTiouner-PRO / MiniTiouner-S / E-Tiouner give the best results.



Testing MiniTuner-S

You decide to run Minitioune (because you have already installed the drivers and codec, if not: go first p15):

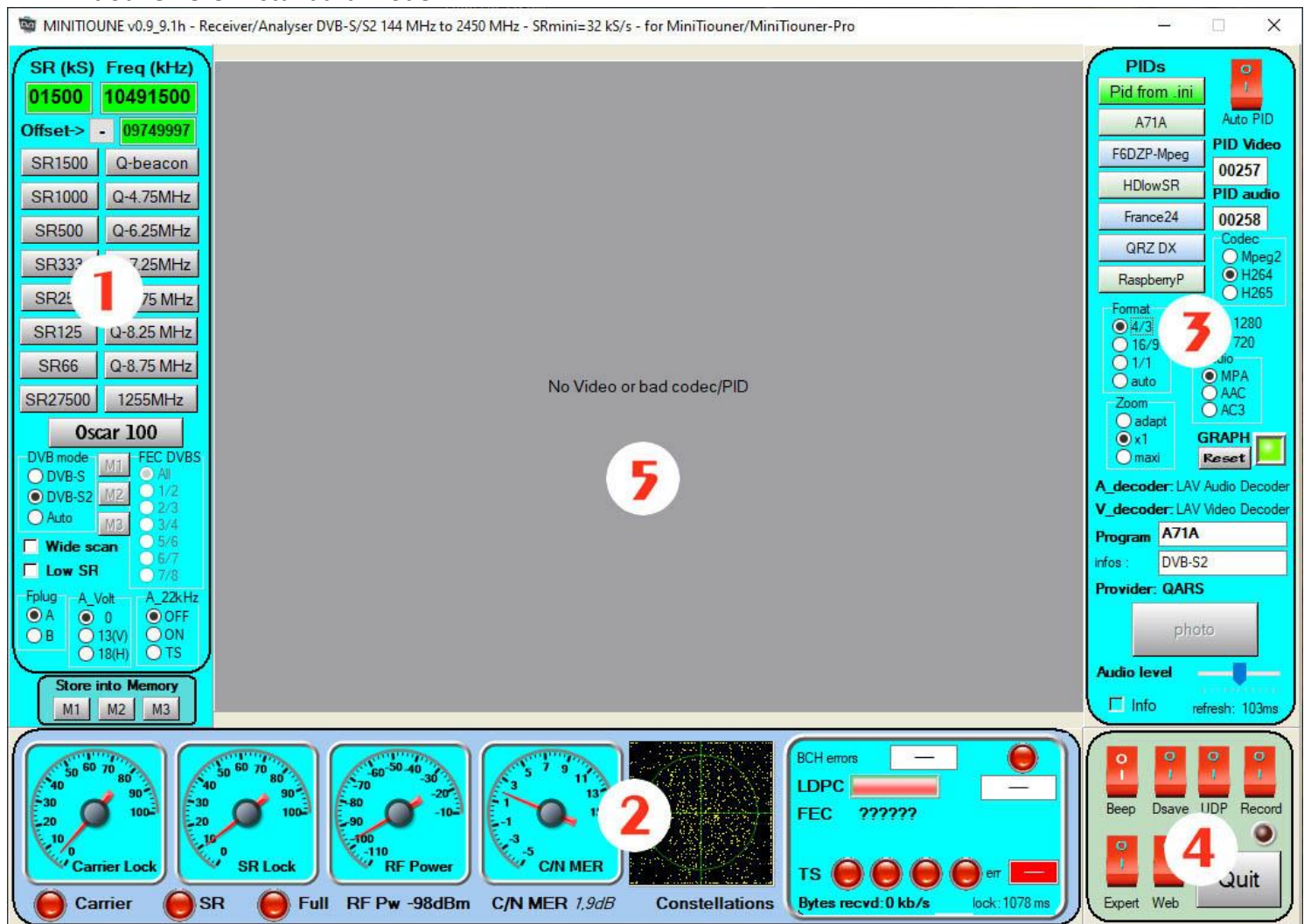
First, the **detection of the MiniTuner type** is displayed at the start of Minitioune v0. 9.9.1i



Then appears Minitioune, (the format of display at start-up depends on what is written in the file minitiouneConfig.ini.)

**There are 5 switchable viewing modes by clicking on the video area or pressing the Esc key.**

Minitioune here in standard mode:



For the regulars, there is not too much difference with the previous versions: we distinguish 5 zones.

1. **Command panel** for Symbol Rate (SR) and receiving frequency. You can use the preset buttons or write your own values in the green frames. One can and choose the DVB mode and possibly select in DVB-S the FEC used. All these settings as well as the value of the buttons are changeable in the minitiouneConfig.ini file.
2. **Measuring panel** that gives us all the results of measurements on HF signal and Digital signal, about lock, signal/noise ratio and error corrections..
3. **Decoding panel**: Once all the LEDs of the measuring panel are green, we receive a TS feed, we must decode it, it is in this panel that we can make the adjustments (PID audio, PID video, codec used etc.) but the easiest is to use the AutoPID button that will automatically find all the information.
4. **Buttons panel**: complementary features:
  - Beep: beep more and more acute to adjust an antenna
  - Dsave: saves measurements in a data file. Useful, for example, to examine a pass from the ISS
  - UDP: to send the TS stream to its local network via UDP protocol
  - Record: to record the video received on your hard drive.
  - Expert: button that makes us go into expert mode with more analysis and more settings. (See next paragraph)
  - QUIT: to leave the software

5. **The Video panel**, where the Video will be displayed, it is gray waiting for a reception.

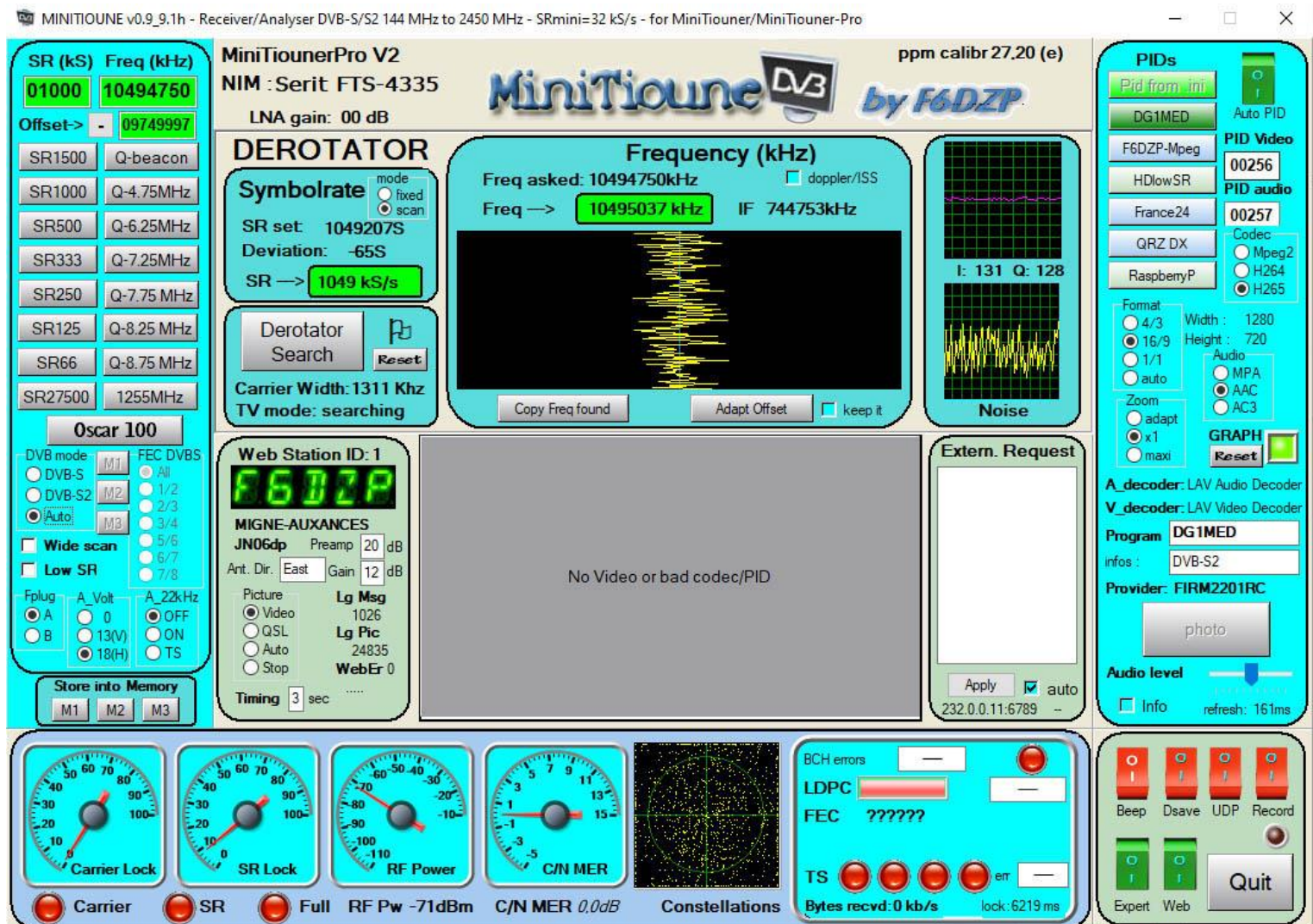
**Note:** The software's start-up positioning on your screen can be preset in the minitiouneConfig.ini file. You can even use a positioning mode for double-screen.

Here is an excerpt from the minitiouneConfig.ini file that indicates this position:

```
=====
[Position]
; position on the screen at start-up, very useful in 2-screen mode
; dualscreen=yes or no
XPosition= 30
YPosition=20
DualScreen no
```

If we press the Expert button (or if there is Expert choice to start in the MinitiouneConfig.ini file) we have a display in Expert mode.

In Expert mode, new possibilities and new displays



MinitiouneV0.9.9.1h Expert mode awaiting reception

The Symbol Rate (SR) has been entered and the frequency, expected DVB-S2 station and AutoPID is engaged.

To receive a station, you need all the green Leds. When you receive a station, AutoPID will detect in the data stream (Transport Stream - TS) the decoding parameters: video PID and audio PID, video codec and audio codec as well as the name of the station.



MinitiouneV0.9.9.1h\_ receivingOscar100 beacon

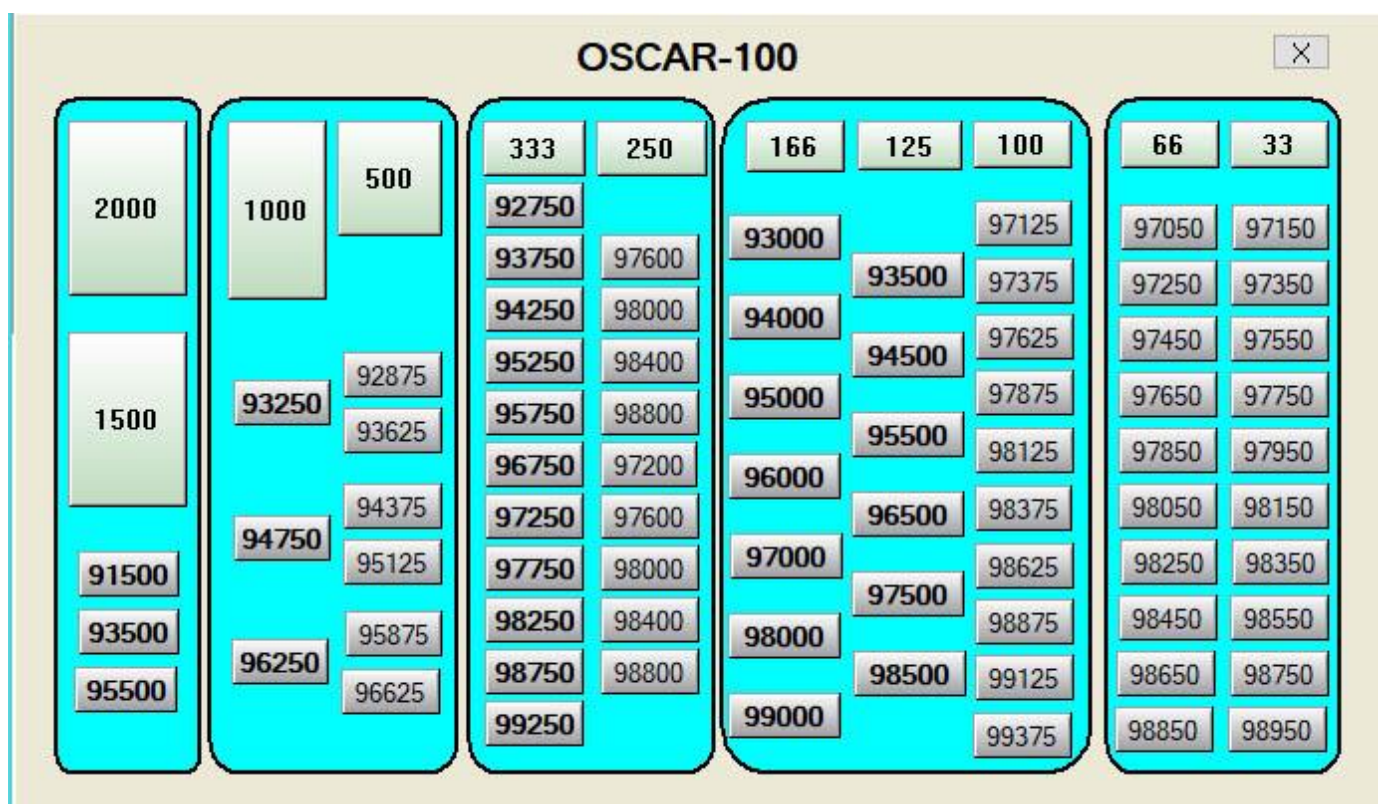
Let's see point by point what we have on this interface:

## 1. On the Command Panel:

❖ (1a, 1b, 2, 3) determine the 2 parameters needed for a station: its Symbol Rate (SR) and frequency.

- Values can be entered on the keyboard (1a, 1b) by writing in green areas. Keyboard value inputs require validation by typing the "Enter" key or clicking on an outside area.
- Instead, you can click the preset buttons (2) to indicate the SR and frequency.
- You can also click the "Oscar100" button (3) to see a whole set of frequencies and SR specific to Oscar100.
- You can also click a memory reminder button (M1, M2, M3) if it has previously been queued by clicking on a recording button in memory of a received station (7)

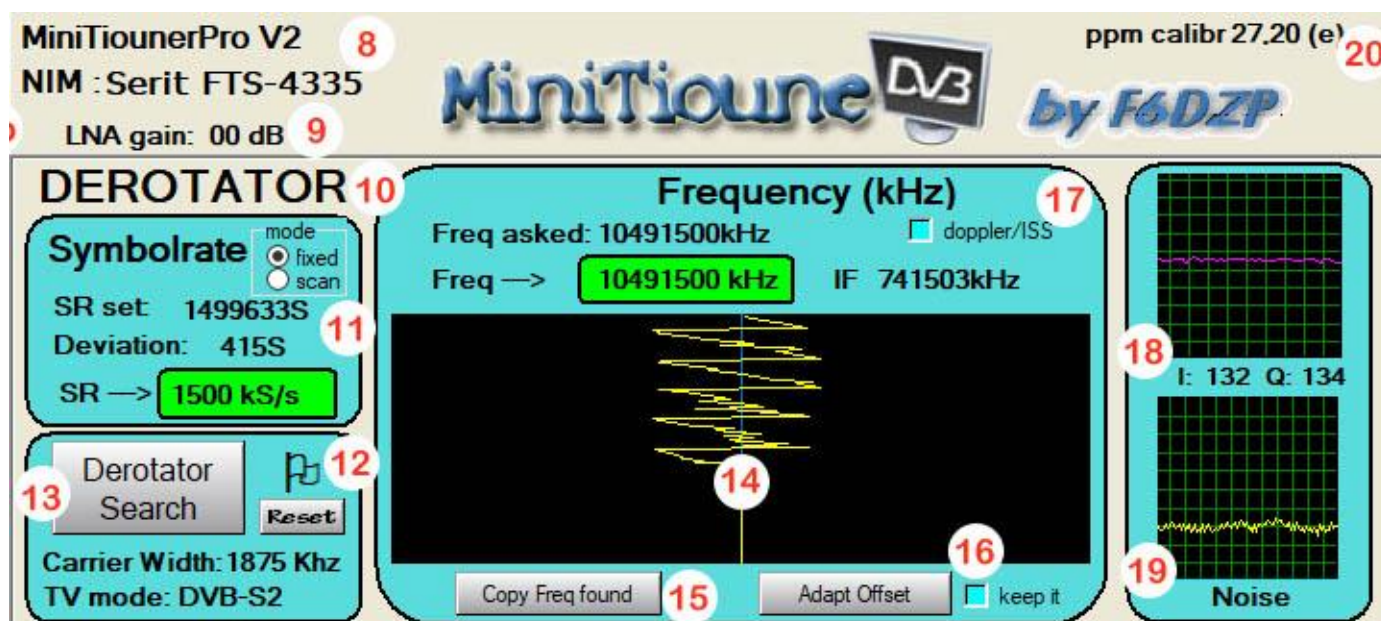
- ❖ Of course, the desired DVB mode (4) for the search was set: DVB-S, DVB-S2, or Auto if we do not know, set the F socket used for the antenna (6), the voltage sent in the LNB or preampli.
- ❖ Wide Search mode is used when you don't know the SR and allows you to scan - or 50% of the chosen value.



Frequency panel and SR on Oscar100. The bold values are those advocated by the band plan.

- ❖ LowSR mode is used primarily to receive very low Symbol Rate station. The possibility of special low-speed adjustment is now possible with the NIM Serit FTS-433x, for testing, but we see that for these NIMs, this setting is useless or harmful. With the NIM Eardatek, Sharp, Samsung, this mode is mandatory for speeds below SR 180 kS/s and is prohibited for speeds greater than SR 6500 kS/s. Between the two you can choose and observe the noise: you can see that in low-speed mode there is more noise, but this mode can help to lock more quickly on weak signals. The software now allows you to lower the SR to 65 kS/s with all NIMs (Eardatek, Sharp, Samsung, Serit...) and 32 kS/s with NIM Serit FTS433x.
- ❖ In DVB-S, the choice of FECs allows a much faster lock if you leave as little choice as possible to the software. Indeed when it will lock on a signal it will look among all the authorized FECs the one that is used, so the less choice it has, the faster it finds, but be careful to have at least the FEC that is used otherwise you will have that Carrier and SR LEDs that will be green, the others will remain red.

## 2. The Central panel with the Derotator



- ❖ We have at the top (8) the type of MiniTuner detected and the NIM that is installed on it. In our example, it is a MiniTunerPro V2 equipped here with a NIM FTS4335 (different from the FTS4334L because it has no internal LNA).
- ❖ In (9) we see the gain of the LNA (0dB here because it does not exist). For the NIM FTS-4334L, this gain is that of a complex preamp trying to fulfill the objective that the software assigned it: to provide the tuner with a signal if possible of -20 dBm. Its gain varies from 13 dB to -17 dB, which means it can also act as an attenuator. For example, if the incoming signal is -60 dBm, it will add 13 dB of gain and provide a -47dBm signal to the tuner. If the incoming signal is -15 dBm, it will provide a -5dB attenuation to provide the tuner with a signal of -20 dBm. This gain also varies a little depending on the frequency used but no documentation on it allows a better indication. A small, sad head may appear to the right of this value to signal that your signal is starting to be too strong and that you are degrading the reception more and more.

For all other NIMs, this gain is that of a transistor and varies only in relation to the frequency used. The software uses the gain curve provided by the manufacturer.

Like previous versions, the gain of the tuner (Base Band gain) can be set, but most of the time it is not advisable to put more 0dB because otherwise we add a lot of noise and the results are often less good. The bandwidth adjusts automatically.

### ❖ (10) DEROTATOR

The Derotator is the dual PLL system that will lock on the data frequency (SR) and on the HF frequency.

Note: The Derotator has this name because it allows the constellations not to "rotate" and then to display a beautiful round/ring on the constellation chart.

- During the search for the station we see the search for locking on the Symbol Rate, the value of the SR and its deviation move if you chose the mode "SR scan", only the SR deviation moves if you chose the mode "SR fixed". (11). This is the first PLL to work.
  - During the search for the station we see the search for locking on the frequency, we even see its tracing in the graph (14). This path will become a straight line when the second PLL is locked on the frequency.
  - Sometimes locking has difficulties or you see that the PLL in frequency is too far from the target frequency, then you can restart a search by starting from the target frequency by clicking the "Derotator Search" button. ((13)
  - When the station has been locked completely, a small flag appears (12), which means that the PLL setting has been memorized and that if the station disappears in the QSB (e.g. a DX on 437MHz), the Derotator does not scan again but waits for the station to return with the same parameters. This is very important for DX with QSB, it allows to lock as quickly as possible the station disappeared in the QSB. If it's a new station you want to receive without changing frequency, you click on Reset(12) to put the Derotator back into search mode, if you change frequency or SR, that flag and the PLL memorization automatically removes.
  - If, after locking a station, there is a difference between the requested frequency (Freq asked)(17) and the frequency found (Freq→), this may have 2 reasons:
    - The frequency was good (e.g. the frequency of the QO tag-100),but it is the offset value of my LNB that is bad (yes, LNB with PLL often move one kHz per minute), I click "Adapt Offset" so that the right value of Offset is put in the green Offset area of the control panel. That way, until my LNB has drifted, I will have the same values between "Freq asked" and "Freq→". If I then have to ask for other preset frequencies with the buttons (2), which have an outdated offset, I'll check the box "keep it" to keep the offset recently found.
    - The supposed frequency was different from the actual frequency of the received station, either I do nothing because it is not important, the Derotator did its job and managed to settle down, or I click "Copy Freq Found" because I want to settle again exactly on the frequency, maybe gain a little on the ratio S/N.
    - The blue line indicates the frequency sought. If there is a difference observed at the time of locking, the blue line is shifted to this final locking frequency
  - The Doppler/ISS checkbox is to be used for fast-drift signals such as HamTV on board the ISS. This allows the Derotator to better track the Doppler slide (about 100 kHz for an ISS pass)
- ❖ In (18) **measurement of IQ signals**. This is mainly used by those who develop a DVB modulator, to examine the balance of their signals.
- ❖ In (19) we see **the noise of the signal**. You can see its correlation with Constellations and the value of the MER or S/N.

## ❖ **Nim Calibration** (20):

In general, not all quartz on the NIMs have the same value and can cause frequency shifts. These shifts range from a few Hertz to a few dozen Hertz.

For very low-speed reception (250 kS/s) this frequency shift can cause difficulties or especially delay the locking. It is therefore important to have calibrated his tuner, spotted the lag it indicates in relation to a frequency.

One can indicate in ppm the correction to be made in the area [NIMcalibration] of the minitiouneConfig.ini file.

```
;=====
[NIMcalibration]
;=====
Calibration=yes
;.....
; MiniTiounerProS2_1
Calibration_ppm=30.8
```

Tiny Spectrum Analyzer (TSA) software has a mode that can measure your ppm correction value.

If you have several MiniTiouners, test them, you will see different values for each. It's a bit annoying, when you change MiniTiouner, you have to correct the ppm correction value in the minitiouneConfig.ini file, so....

**The TSA (Tiny Spectrum Analyzer) software can also write the ppm correction value in the Eeprom of your MiniTiouner, so each MiniTiouner carries with it its calibration information.**

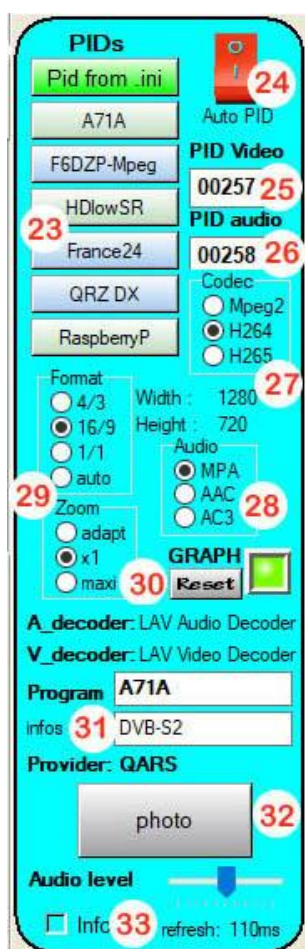
When Minitioune is starting, it will first go and see if the ppm correction value is written in the Eeprom of the MiniTiouner, if so, it will use it and we will see this on the screen:

**ppm calibr 27.20 (e)**

If he finds nothing in the Eeprom, it will go to see the ppm correction value in the minitiouneConfig.ini file and we'll see on the screen:

**ppm calibr 23.00 (i)**

### 3. The decoding panel



This panel has all the settings to select in the digital stream the station to be decoded thanks to the Video and Audio PIDs (Program Identification) which are the numbers of the data packets that contain the desired video and audio.

When you receive a broadcast station, in a transport stream (TS) there are often a dozen of services (TV or radio or data). It is by giving the desired PIDs that we select the channel to watch. With a DATV station there is mostly only one channel in the stream, so only one video PID and only one audio PID. If you use the "AutoPID" button (24), Minitioune will itself detect the PIDs contained in the stream and display the first torque of video and audio PID it found (25) and (26). The list of the first 6 TV channels found is assigned to the buttons (23).

The software should also be told what type of encoding is used for video (Mpeg2, H264 or H265) (27) and what type of encoding is used for audio (MPEG Audio, AAC or AC3) (28), but the easiest way is to let the "AutoPID" button find them.

The size of the image is displayed (it can be wrong with the LAV video decoder codec) and its format (29) is deducted if you have checked "auto" or fixed 4:3, 16:9 ...

The Graph is the Windows Process (Directshow) that will be built in order to perform the decoding. If there are jerks or sound cuts at any given time, you can restart the graph by clicking on Reset.

**A\_decoder** - shows the audio codec used by Windows.

**V\_decoder** - shows the video codec used by Windows.

Note: Windows can be changed for these codecs with the "Win7DSFilter Tweaker\_6.3" software and the change of "Merit" of the various codecs with the "DsfMgr" software (to download).

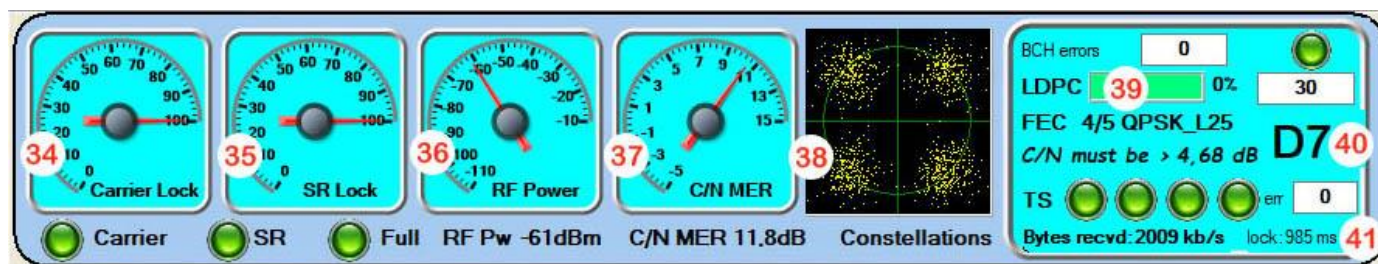
(31) the name of the received program and the name of the Provider can be found.

You can take a photo of the video (32), change the sound level and see the info (33) on the initialization of the software and on the decoding of the TS.

At the bottom right, we see the refresh rate of the measurements. This refresh rate is in the order of 110ms for an optimum station. Choosing the USB socket used on your PC can change everything. Use the "TestMyMiniTioner" software to observe the speed of the I2C link with the tuner, which depends a lot on the USB socket used.

With a small PC (Pipo X8) this timing is higher. (Up to 300 ms).

## 4. The measuring panel



### (34) Carrier Lock

Quality as a % of the lock on the Frequency. The LED must be green.

### (35) SR Lock

Quality as a % of the lock on the Symbol Rate. The LED must be green.

### (36) RF power

Signal level in dBm.

### (37) C/N SEA

Signal/digital noise ratio indicated by the MER. A minimum MER is required to be able to decode; this minimum value depends on the type of modulation and the correction rate (FEC) used.

### (38) Constellations

4 clouds of more or less scattered points give a view of the MER. The higher the MER, the smaller and more concentrated these clouds will be. The lower the MER, the more scattered these clouds are. Too much dispersion increases the number of errors.

### (39) Viterbi errors or LDPC, FEC

**We can see the % of** errors. The FEC used is displayed. Here we display FEC 4/5 QPSK L25, which means that the FEC used is 4/5 (4/5 bits for data and 1/5 bits for error correction), modulation is QPSK, using Long Frame and the Roll Off is 25.

### (40) The DaTV Report

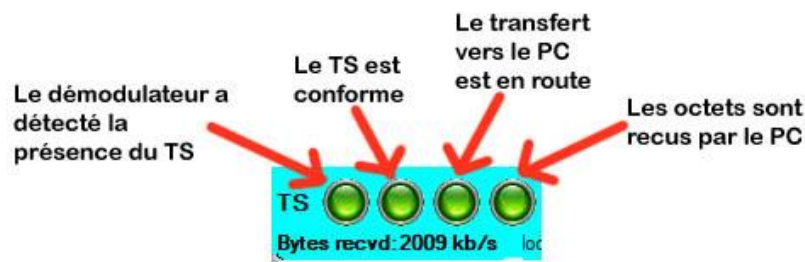
As we have a broadcast with a 4/5 FEC in QPSK, the minimum C/N to receive is 4.68 dB. As we receive with a MER of 11.8dB we have a rounded margin of 7 dB. **The Report is therefore D7, which clearly indicates to the correspondent how we receive him. If the Report is D0 or D1, it means that we barely receive, the slightest QSB will cause us to lose the signal.**

### (41) Lock time :

The lock time on the station is displayed. It depends initially on the SR used (the smaller the SR, the longer the locking time) and difficulties in getting the signal out (QRM, QSB, defects in modulation...)

### The TS Leds

The TS LED area. The 4 Leds grouped for the TS are used to closely monitor the extraction of the transport flow (Transport Stream-TS).



The number of bytes received (Bytes recvd) now shows the number of bytes received between 2 refreshments of your screen display. It is therefore variable depending on the PC and the throughput. What is important is to see that it moves, see its order of magnitude and especially that it does not indicate 0.

## 5. The buttons panel



- **Beep:** allows you to hear a beep more or less acute depending on the value of the MER. Useful for pointing his parable.
- **Dsave:** saves the history of measurements on the hard drive. The file can be viewed with TiouneDataReader. Useful example for observing a passage from the ISS.
- **UDP:** Allows you to transfer your TS stream to your local network in Multicast. The TS stream can then be received by VLC, analyzed by TSreader etc...
- **Record:** Saves the TS stream received on the hard disk. You can then review the videos received.
- **Expert:** switches Standard and Expert mode
- **Web:** allows you to send your data to your TiouneMonitor on the web (<http://www.vivadatv.org/tutioune.php?what=map>). Your correspondents can track in real time how you receive them.
- **QUIT:** to leave the software

### IMPORTANT

If you have a Minitioune start-up issue, check what happens first with the "TestMyMiniTiouner" software to see if it's a hardware problem, then with the "CheckMinitiouneDriverAndFilter" software to see if it's installing software that's wrong.

You can also visit the [www.vivadatv.org](http://www.vivadatv.org) website and ask your questions.

## IF you have not already installed Minitioune:

Unzip the file in a Minitioune directory and follow these instructions:

### Installation

1. I suppose that you have firstly :

- You have downloaded the FTDI D2XX driver

<http://www.ftdichip.com/Drivers/D2XX.htm> click at right on « setup executable »

**You will get something like CDM21228\_Setup.zip → CDM21228\_Setup.exe**

- Installed the FTDI driver by running the software:
- **CDM21228\_Setup.exe**
- **If you have bought a new separate Mini-Module, you must** change the setup of your mini module FT232H using **FTprog**. ( explanations here: <http://www.vivadatv.org/viewtopic.php?f=80&t=379>

2. Test your MiniTiouner using **TestMyMiniTiouner\_V2\_3a**

You must get 0 errors.

If you are using a Serit FTS-4334 or Serit FTS-4335, the software will show you the efficiency of the link between your USB port and the I2C line. So you can compare different USB input on your PC, or different PC, or different MiniTiouners.

3. You have now 3 steps to do:

#### a) Download and installation of GraphStudioNext

go to : <https://code.google.com/p/graph-studio-next/>

Download the last version.

There is no installation.

This software will help you to install easily Directshow filters like **usrc.ax**

#### b) Download and installation of « LAV filters » : if LAVfilters is not found in the software package, you must download it:

Go to : <https://github.com/Nevcairiel/LAVFilters/releases/download/0.74.1/LAVFilters-0.74.1-Installer.exe>

Download last version: ex **LAVFilters-0.74.1-Installer.exe**

Run it and let the installation of video decoder, audio decoder and TS splitter.

#### c) Installation of usrc.ax Directshow filter

The file **usrc.ax** must be in the Minitioune directory.

You have also the software: « install\_usrc\_ax\_WinXP.exe »

- If you are working under win XP, you have just to run this software
- If it doesn't work or you are using an another version of Windows:
  - Run **GraphStudioNext** in administrator mode ( right click ...)
  - Go to **Graph** → **insert Filter**
  - You have opened a new window: **Filters**, you click at the top right on **Register**  
And you link to **usrc.ax** which is in the Minitioune directory
  - Reboot your PC

4. You can now check that all is well installed using the software:

**CheckMiniTiouneDriverAndFilters\_V0\_6a**



You must get all Leds Green. (the WEB led can be red if you have no Internet access)

5. Now you can run the software **Minitiounev0.9.9.1h**

You need to get all the green LEDs (apart from the WEB LED if you are not connected to the Internet), if not, correct the faulty point.

If all LEDs are green, you can launch **The Minitiounev0 software. 9.9.1h**

# Annex

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## the minitiouneConfig.ini file:

*The lines starting with a ";" are ignored, these are comments*

```
=====
[Language]
=====
; French or/or English
Langue=English
; French language
=====
[TSbuffer]
=====
; Number of 1316 byte buffers for TS transfer --- 2 to 30
; number of 1316 bytes buffers used for TS transfert --- use a value 2 to 30
Totalbuffers=6
=====
[Position]
; position on the screen at start-up, very useful in 2-screen mode
; position on the screen when it starts, useful with 2 screen mode
; dualscreen=yes or no
XPosition= 30
YPosition=20
DualScreen no
=====
[WebMonitoring]
=====
; ID station: put a number from 1 to N depending on the number of Tutioune stations you have - to distinguish
them
; Station Idendicator: write a number 1 to N suiting number of Tutioune Station you have - for distinguish them
Station_ID=1
; OM_ID:give only your OM you call sign, maximum 7 letters accepted
; this call sign must be the same you have used for regsitering to vivadatv.org
; OM_ID:put only your amateur radio code, maximum 7 letters are accepted
; this code must be the one with which you registered on vivadatv.org
; use same password as you use for vivadatv forum/ use the same password as for the forum vivadatv
OM_ID=MY CALL
ForumPassword =password
Locator=JJ00xx
Ville=MY CITY
DirectionAntenne=East
; Gain - write 2 digits / write 2 digits
GainAntennedB=12
GainPreamplidB=20
```

```

;=====
; symbol Rate preset button programming
[SRPresetButtons]
;=====
; value in kSymbols / value in kSymbols
SR1Value=1500
; inscription on the button
SR1Text=SR1500

SR2Value=1000
SR2Text=SR1000

SR3Value=500
SR3Text=SR500

SR4Value=333
SR4Text=SR333

SR5Value=250
SR5Text=SR250

SR6Value=125
SR6Text=SR125

SR7Value=66
SR7Text=SR66

; SR8Value=33
; SR8Text=SR33

; SR8Value=2000
; SR8Text=SR2000

; to test a broadcast station
SR8Value=27500
SR8Text=SR27500
;=====
; Programming preset frequency/ Frequency buttons for preset buttons - 8 DIGITS!
[FreqPresetButtons]
;=====
; valeur en kHz/ Value in khz >>> 8 DIGITS
; Fplug A or B
; voltage : 0 13 (vertical) 18 (horizontal)
;22kHz Off On TS
; Doppler or drifting LO
;.....
Freq1Value=10491500

```

```

; offset with my DRO LNB
; Freq1Offset=-09748870
; offset with PLL LNBpro
Freq1Offset=-09749997
; offset with PLL LNB Avenger
; Freq1Offset=-09749902
Freq1Doppler-no
Freq1Text=Q-beacon
Freq1Fplug=A
Freq1LNBvoltage=18
Freq1_22kHz=Off
;.....
; Freq2Value=10495500
; Freq2Offset=-09750000
; Freq2Doppler-no
; Freq2Text=Q-5.5MHz
; Freq2Fplug=A
; Freq2LNBvoltage=18
; Freq2_22kHz=Off
;.....
Freq2Value=10494750
; Standard Satellite LNB offset
; offset with PLL LNBpro
Freq2Offset=-09749997
; offset with PLL LNB Avenger
; Freq1Offset=-09749902
Freq2Doppler-no
Freq2Text=Q-4.75MHz
Freq2Fplug=A
Freq2LNBvoltage=18
Freq2_22kHz=Off
;.....
Freq3Value=10496250
; Standard Satellite LNB offset
; offset with PLL LNBpro
Freq3Offset=-09749997
; offset with PLL LNB Avenger
; Freq1Offset=-09749902
Freq3Doppler-no
Freq3Text=Q-6.25MHz
Freq3Fplug=A
Freq3LNBvoltage=18
Freq3_22kHz=Off
;.....
Freq4Value=10497250
; offset with PLL LNBpro
Freq4Offset=-09749997

```

```

; offset with PLL LNB Avenger
; Freq1Offset=-09749902
Freq4Doppler=no
Freq4Text=Q-7.25MHz
Freq4Fplug=A
Freq4LNBvoltage=18
Freq4_22kHz=Off
;.....
Freq5Value=10497750
; Standard Satellite LNB offset
; offset with PLL LNBpro
Freq5Offset=-09749997
; offset with PLL LNB Avenger
; Freq1Offset=-09749902
Freq5Doppler=no
Freq5Text=Q-7.75 MHz
Freq5Fplug=A
Freq5LNBvoltage=18
Freq5_22kHz=Off
;.....
Freq6Value=10498250
; offset with PLL LNBpro
Freq6Offset=-09749997
; offset with PLL LNB Avenger
; Freq1Offset=-09749902
Freq6Doppler=no
Freq6Text=Q-8.25 MHz
Freq6Fplug=A
Freq6LNBvoltage=18
Freq6_22kHz=Off
;.....
Freq7Value=10498750
; offset with PLL LNB
; offset with PLL LNBpro
Freq7Offset=-09749997
; offset with PLL LNB Avenger
; Freq1Offset=-09749902
Freq7Doppler=no
Freq7Text=Q-8.75 MHz
Freq7Fplug=A
Freq7LNBvoltage=18
Freq7_22kHz=Off
;.....
; if I want to test a Broadcast station on QO100 at SR27500
; Freq8Value=11996000
;; offset with PLL LNB
; Freq8Offset=-09750000

```

```

; Freq8Doppler=no
; Freq8Text=11996MHz
; Freq8Fplug=A
; Freq8LNBvoltage=18
; Freq8_22kHz=Off
;.....
; if I prefer to receive 1255 MHz on the bottom F card (B)
Freq8Value=01255000
; offset with PLL LNB
Freq8Offset=-00000000
Freq8Doppler=no
Freq8Text=1255MHz
Freq8Fplug=B
Freq8LNBvoltage=0
Freq8_22kHz=Off
;=====
[NIMcalibration]
;=====
Calibration=yes
;.....
; MiniTiounerProS2_1
Calibration_ppm=30.8

; MiniTiounerProS2_2
; Calibration_ppm=11

; MiniTiouner Eardatek
; Calibration_ppm==04

;=====
[Modulation]
;.....
;DVBmode choice/choices: DVBS DVBS2 AUTO
DVBmode=DVBS2
;=====
[WorkingMode]
;
; Execution des messages externes / Auto Execution of external messages yes no
External_Auto=yes
;=====
; address UDP / UDP address
[UDP]
;=====
; UDP address to transfer TS
; UDP address for TS transfer
;.....
; UDP address for TS

```

```

TS_AddrUDP=230.0.0.10
; you can try a virtual address if you have no Ethernet or Wifi connexion
; TS_AddrUDP=127.0.0.1
TS_Port=10000
; local IP used for sending the TS
; put here the IP you use to make the sending: localIP
; it serves in case you have several local networks like my home
; a wifi network for the Internet and a local ethernet network
; PUT ONLY IF YOU HAVE PROPERLY VERIFIED YOUR IP FROM YOUR NETWORK CONNECTION
; TS_LocalIP=192.168.1.55
;=====
; UDP address to receive external requests
;.....
; UDP address for receiving External Request
;.....
Conf_AddrUDP=232.0.0.11
; you can try a virtual address if you have no Ethernet or Wifi connexion
; AddrUDP=127.0.0.1
Conf_Port=6789
; local IP used for receiving Stations configurations
; put here the IP you use to receive configurations: localIP
; it serves in case you have several local networks like my home
; a wifi network for the Internet and a local ethernet network
; PUT ONLY IF YOU HAVE PROPERLY VERIFIED YOUR IP FROM YOUR NETWORK CONNECTION
; Conf_LocalIP=192.168.1.55

;=====
; PID
[PIDs]
;=====
; autoPid when the software starts? yes or no
; autoPID when starting software = yes or no
AutoPID=yes
;.....
; nombre de stations / number of stations -----> MAXIMUM 6
NbProgramsIni=6

Program1=F6DZP-H264
PIDVideo1=1001
PIDAudio1=1002
CodecVideo1=H264
CodecAudio1=Mpa
;.....
Program2=F6DZP-Mpeg2
PIDVideo2=1001
PIDAudio2=1002
CodecVideo2=Mpeg2

```

```

CodecAudio2=Mpa
;.....
Program3=HDlowSR
PIDVideo3=4113
PIDAudio3=4352
CodecVideo3=H264
CodecAudio3=Mpa
;.....
Program4=France24
PIDVideo4=3160
PIDAudio4=3120
CodecVideo4=Mpeg2
CodecAudio4=Mpa
;.....
Program5=QRZ DX
PIDVideo5=33
PIDAudio5=49
CodecVideo5=Mpeg2
CodecAudio5=Mpa

Program6=RaspberryPi
PIDVideo6=1001
PIDAudio6=1000
CodecVideo6=H264
CodecAudio6=Mpa

;=====
;scan parameters
[ScanAndLock]
;=====
;
; PLL corrector Automode : 0=no 1=yes
pllcorrection=1
; default SRscan mode: wide or narrow
SRscanmode=narrow
; Derotator SR search Mode:          0=SR is fixed          1=SR scanner is On
SRsearchMode=1
; Doppler or drifting LO: 0=no 1=yes
doppler= 0
;=====
; Ici on peut prérégler les boutons / Here you can preset buttons
[buttons]
;=====
;.....
; Dsave_Switch    0=OFF 1=ON
dsave_switch=0
;.....

```

```

; WebMonitor      0=OFF 1=ON 2= auto video/QSL 3= no picture
web_switch=0
;.....
; UDP_switch      0=OFF 1=ON
udp_switch=0
;.....
; Record_switch   0=OFF 1=ON
record_switch=0
;.....
; TSErrorBit_switch 0=ON 1 = OFF
TSErrorBit_switch = 0
;.....
; Expert_switch    0=OFF 1=ON
Expert_switch=1
;.....
; If you start in standard mode (Expert_switch=0) you can choose the type of start screen
; if you start in standard mode(Expert_switch=0), you can choose which kind of screen you want
; 1: normal, 2: full screen, 3: full screen + measure, 4: maxi, 5 : mini
Video_mode=1
;.....
; LowSR_switch 0=OFF 1=ON //can only be ON if SR1Value<6500 kS/s // can be on only if SR1Value<6500 kS/s
;
; can only be OFF if SR1Value 300 kS/s // can be OFF only if SR1Value
LowSR_switch=0
;.....
; BBgainAuto_switch 1= auto_ON ..,-2,0, 2, 4, 6, 8 ... = auto_OFF = fixed preset
/Values accepted for NIM Sharp/Samsung/SERIT: 0.2,4,6,8,10,12,14,16 for NIM Eardatek: -10,-8,-6,-4,-
2,0,2,6,8,10,12,14
; value accepted for Sharp/Samsung/SERIT NIM: 0, 2, 4, 6, 8, 10, 12, 14, 16 for Eardatek NIM:-10.0-8.0-6.0-4.0 -2,0,
4, 6, 10, 12, 14
BBgainAuto_switch=0
;.....
; TS1 or TS2 choice for NIM SeritPro 1 or 2
; use: 1 => if you use TS1 output as Master 2 => if you use TS2 output as Master
TS=2
; .....
; .....
[Display]
; OLED 1.3" : yes or no
; Digole 1.44" or 1.88" => Digole=14 // Digole 2.2" or 2.4" => Digole=22 // 2.6" => Digole=26 //
NO Digole => Digole=0
OLED=yes
Digole=26
;=====
; MiniTiounerV2_BATC extensions
[MiniTiounerV2]
; if you have added a module with the management chip LNB RT5047 / if you have added a RT5047 module for LNB
13v 18v

```

; V2LNBmodule yes or no

V2LNBmoduleTM No

;=====

[Report]

; to give a report D0, D1, D2 ... we must know the difference between the CNR/MER we have and the CNRmini needed to receive

; when we give a report of D2 that means that we are receiving 2dB more that the minimum needed to receive

; CNR/MER minimum table is well known using DVB-S2

; adjust is to adjust your report considering your LNB ...

S2\_QPSK\_adjust= 0

S2\_8PSK\_adjust = 0.8

S2\_16APSK\_adjust = 1.4

S2\_32APSK\_adjust= 1.4

; CNR/MER minimum table is more difficult to know

; this values result from test from direct modulation,not on the air

; so could be changed considering your LNB...

CNRmini\_S\_12 = 1.7

CNRmini\_S\_23 = 3.3

CNRmini\_S\_34 = 4.2

CNRmini\_S\_56 = 5.1

CNRmini\_S\_67 = 5.5

CNRmini\_S\_78 = 5.8



**Current versions of software:**

- CheckMiniTiouneDriverAndFilters\_V0\_6a
- TestMyMiniTiouner\_v2\_3a
- Noise\_Power\_Measurement\_Vm1\_1
- Minitiounev0\_9\_9\_1h
- TiouneDataReaderV0\_2b