

Minitioune v0.7b – Read-me

IF you have already installed an older Minitioune version

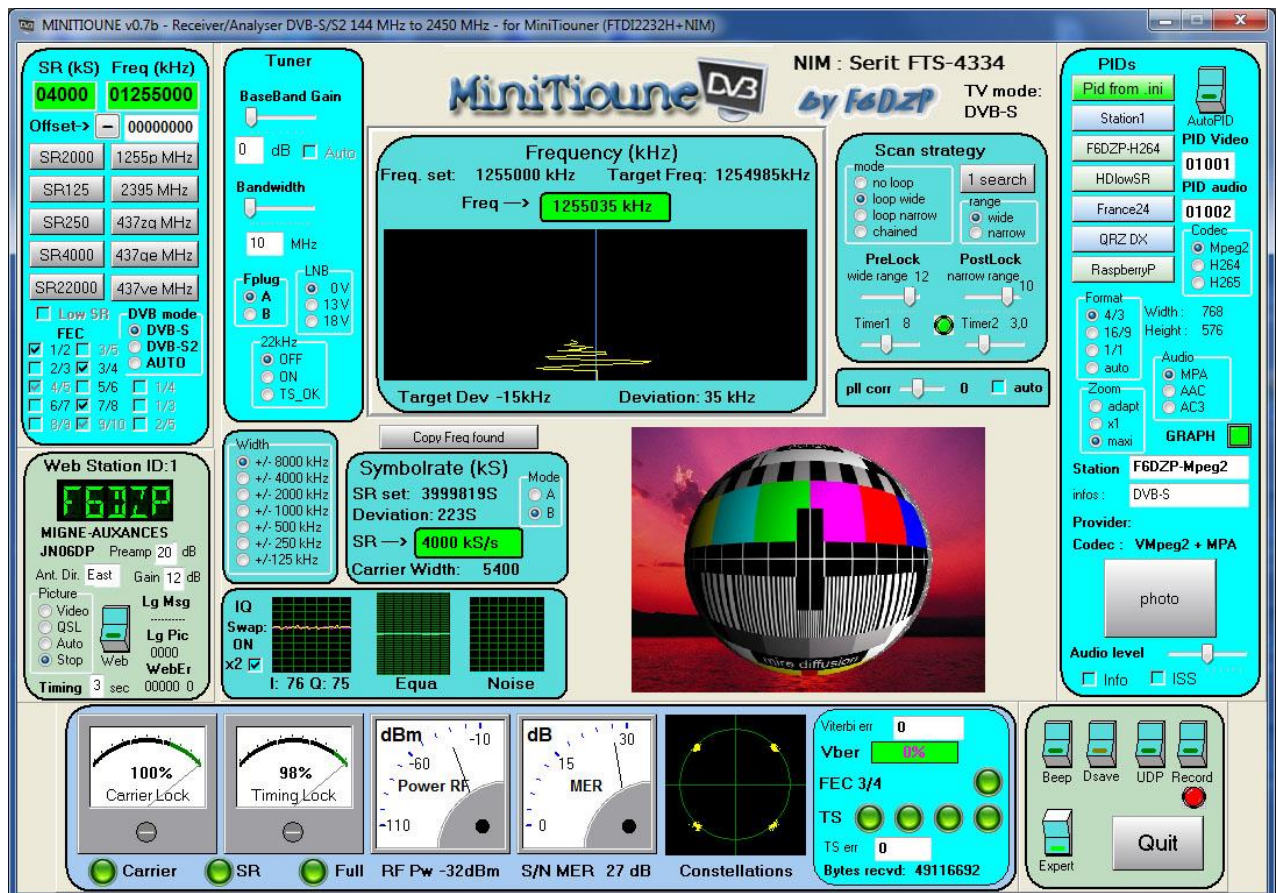
- ⇒ You need to copy the new exe file (minitioune_v0_7b.exe) in the minitioune directory
- ⇒ You need to **copy the new “minitioune.ini” file that has now more parameters** for the buttons setup, or you can add/copy the end of this new minitioune.ini to your old minitioune.ini and add the new parameters.

There are also new tools:

- Noise_Power_Measurement_Vm1_0
 - CheckMiniTiouneDriverAndFilters_V0_4
 - TestMyMiniTiouner_v1_4b si vous utilisez un MiniTiouner
- OR
- TestMyMiniTiounerPro_v0_1b si vous utilisez un MiniTiounerPro

IF you have already installed Minitioune

- ⇒ Goto page 5



Main improvements over the v0.6d:

- **Works MiniTiouner or MiniTiounerPro**
- codecs Mpeg2, H264, H265 for video and MPEG Audio, AAC or AC3 for audio
- You can choose the screen size when you start (tell it in « minitioune.ini »)
- You can click on the video screen to change all the displaying mode les modes including Expert mode.
- RF level computation revisited.
- LOw SR can go down to 75 kS/s if you use a FTS-4335 or FTS-4334
- All FEC values used with DVB-S2 are usable.
- **.grf files are no more indispensable.**
- **If you use a MiniTiounerPro :** you can set 13v/18v/22kHz and use Oled or LCD_Digole display and led TS2 (master).

BUG or known difficulties :

- Sometimes, the video renderer stops at the beginning, Solution : restart the graph by changing codec and go back to the codec you need..
- When you lock on a big TS coming from a satellite (Astra...) with SR>20MS/s, the TS content several multiplexed programs, the part of software that extract the list of stations (**AutoPID**) **don't always find them**. If not, write the PIDs yourself.

Main improvements over the v0.5a:

- We can use the new NIM **Serit « Pro » FTS-4335 that can receive from 144 MHz to 2450 MHz without any converter.**
- You can choose between 2 RF inputs (if you have a NIM Serit Pro)
- You can set the DVB mode when starting (in minitioune.ini)
- Fix some little bug (choice of UDP port)

Main improvements over the v0.4c

- We can now receive DVB-S and **DVB-S2** en QPSK et 8PSK
- We can decode video codecs : Mpeg2, H264 and **H265**
- **More accurate values for MER and power**
- Some little bugs fixed
- Useful for a PIPO,
 - A click on vu-meter « MER/SN » changes standard/Expert mode
 - A click on vu-meter « RF Pw » switches the AutoPID button
 - A click on vu-meter « TimingLock » changes the DVB mode(DVB- S, S2, Auto)
 - A click on vu-meter « CarrierLock » asks a new lock (= « 1search »)

- In standard mode, un click on thea video changes the display format (= Echap)
- There are new FEC values for DVB S2
- We can preset the BBgain value and the lowSR/highSR mode
 - ⇒ **The file Minitioune.ini is now different with the new FEC values and the new possibility to preset BBgain and LowSR.**
 - ⇒ **There is a new file « H265 decod.grf » for H265 decoding.**

*Tested usingr Win XP pro 32bits, Win7pro 32bits, WIN10 64 bits and my PIPO X8 ...
using NIM Sharp, NIM Eardatek, NIM Samsung et NIM LG*

Main improvements over the v0.4b

- Fix the bug with autoPID that did not work the first time if set in the .ini file.
- Fix the TiouneMonitor display when several freq buttons have same frequency
- Correction of some bad colors in the interface
- Fix bad picture format in TiouneMonitor when in auto QSL/video mode
- Add a message during loading

Main modifications since version 0.3b release:

- Minitioune can now work with **NIM SERIT SP2246 (STV6111, STV0913)**
- Offset values for LNB or converter can be positive or negative.

WARNING: You must now indicate in the “minitioune.ini” file if the offset values must be used for a subtraction or an addition. (Make modification to your old .ini file)

- The minitioune.ini file allows to setup TS bit error and Expert mode when the software starts

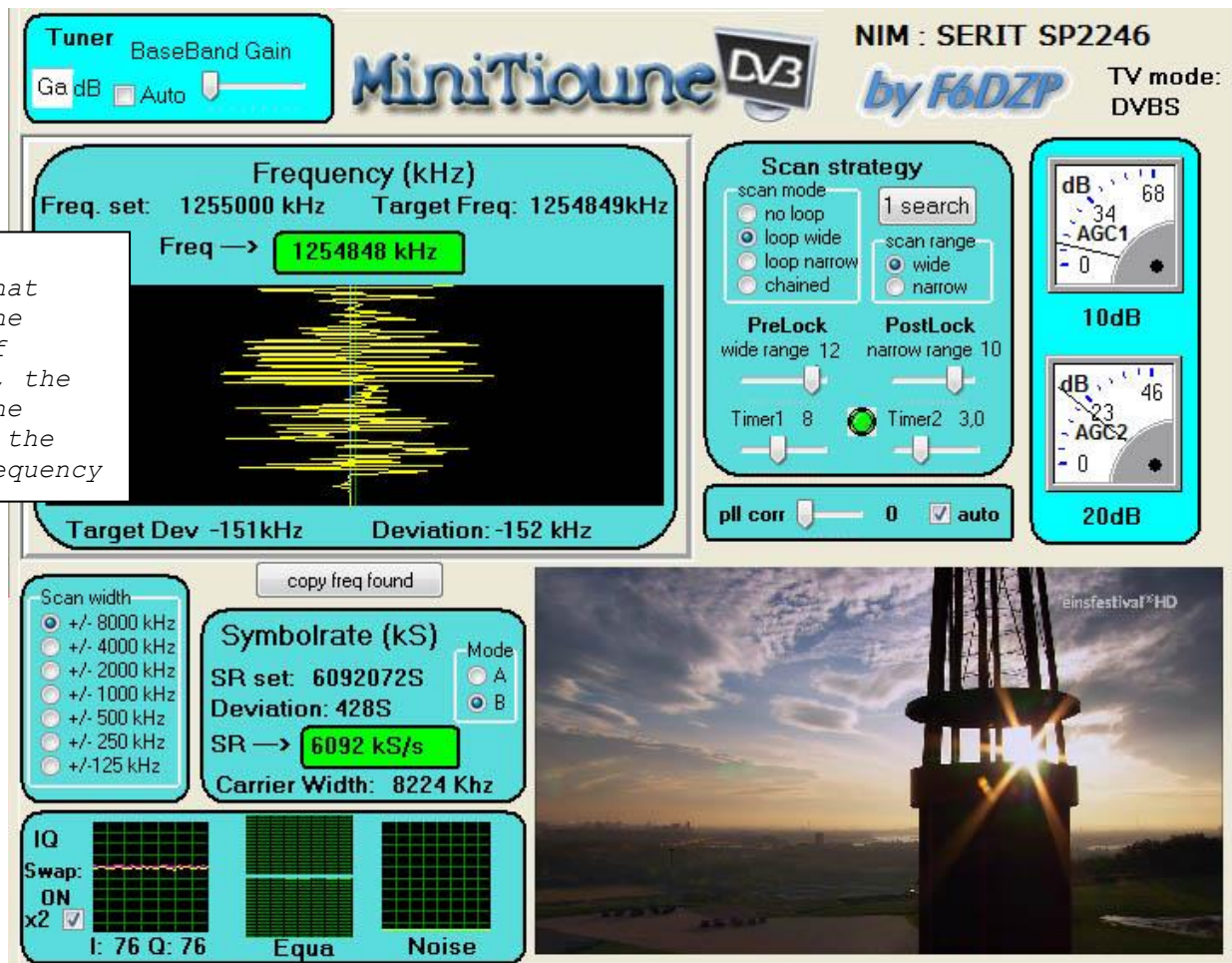
```
;.....
;TSErrorBit_switch 0=ON 1 = OFF
TSErrorBit_switch = 0
;.....
;Expert_switch      0=OFF 1=ON
Expert_switch=1
```

- **Expert mode is now simplified and shows only what is important**

We get only what is essential for the fine tuning of our DVB-S receiver.

Others information can be get using CTRL+A for a complementary panel. In normal use, we never need it.

Expert mode allows us to follow exactly the derotator movement of Derotator.



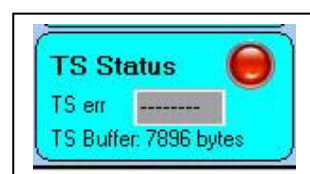
The new Expert panel

Main modifications since version 0.3a :

- Some situations where locking was difficult are now fixed.
- Changing aspect ratio from 4 :3 to 16 :9 now stretch the picture, so we can now correct bad situation like we have with HamTV that send 16 :9 pictures and indicate 4 :3 ratio.
- The frequency found is no more systematically copied in the frequency asked. There is now a separate button to do it. « copy »

Main modifications since version 0.2c :

- Now IIS mode is full working, we can receive, record ... HamTV signal.
- Derotator scan strategy improved, a new window can be opened using "CTRL + A "and will show us the graphic of the derotator movement.
- We have now the possibility to preset all buttons position when Minitione start.
- The buffer used to transfer the TS to the decoder is adjustable. The value by default is very little, so the delay for sending the TS is 1/10th of second.



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 :

- Installed the FTDI driver by running the software:
CDM v2.12.06 WHQL Certified.exe
- You have changed the setup of your mini module FT232H using FTprog.(explanations here:
<http://www.vivadatv.org/viewtopic.php?f=80&t=379>
- **Test your MiniTiouner using TestMyMiniTiouner_v1_4b**
You must get 0 error.

2. 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 allow you to read the .grf files used by Minitioune. These are graphs that show us the structure of decoding and rendering TS data.

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

b) Download and installation of « LAVfilters »

Go to : <https://github.com/Nevcairiel/LAVFilters/releases>

Download last version : [LAVFilters-0.68.1-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

3. You can now **check that all is well installed** using the software

CheckMiniTiouneDriverAndFilters_V0_4b

You must get all Leds Green.

4. Now you can run the software **Minitiounev0.7b**

Annex

About minitioune.ini:

1. Use of scan parameters :

Here is the part of « minitioune.ini » that presets the derotator parameters

```
=====
;scan parameters
[scan]
=====
; range/course affect the nbr of KHz the derotator will explore for locking
;value is between 5 and 12
range1=12

; timer1 unit is 1 sec, timing between each scanning start value 2 to 16 sec
timer1=8

; range2 = afterlock, value : 0 to 8 0=freeze on freq
range2=10

; timer2 unit is 1/2 sec so value : 2 to 16 ==> 1 to 8 sec
timer2=6

;PLL corrector 0=no 1=yes
pllcorrection=1

; default scan mode: wide or narrow
scanmode=wide

; SR search mode A ou/or B
searchmode=A
```

range1 will define the range of steps made by the derotator. A value of 12 seems good for low SR like SR250. **Timer1** show us the number of seconds between each Search that start again the derotator on the frequency using the loop wide mode.

If we hit **CTRL+ A**, we see a new window that show us the scan made by the derotator, the fuchsia line show us the frequency asked and every 8 seconds (=Timer1 value) we start a new search from the frequency asked.

Range2 and **Timer2** show us the **narrow** mode, that allow a narrower search using a shorter timing for each search.

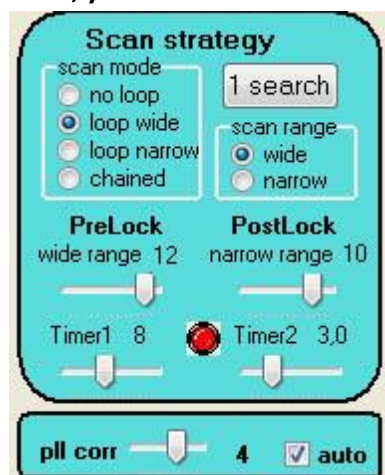
For greater Symbol Rate, the scan range becomes greater. We must remain that when we search a SR2000 station, this station occupies about 2.7MHz in bandwidth, so a scan of + or - 1 MHz around the frequency asked is not strange. We can set this scan width by putting the range1 value to 5 or less.

Take care, it seems that the use of a too much narrow scan (= a smaller derotator step) can result in a longer time for locking as the derotator has more constraint and changes its value using little step.

In fact, don't hesitate to try and retry and find the best value for you, for a specific SR that gives the quickest locking. You can change the value in the Expert mode and when you have found your best values, write them in the "minitioune.ini" file.

Last info to know:

- The chained mode allows us to start in Wide range mode before first lock, and after having locked a station, go automatically in narrow mode if we have lost the station.
- Each time we lock on a station, the frequency found is written instead of the frequency asked, so, if we lose the station in QSB, we will search it using the last frequency value where we have locked it.
- the « **pll correction** » mode can be very important: if you are receiving a station at LOW SR that has not a very good Nyquist filter, you must use this correction



We can see this value (PLL corr) under the "scan strategy" panel in Expert mode.

If "Auto" is checked, the pll correction value will be set automatically, depending of the SR used.

If "Auto" is not checked, you can set yourself the value you want

2. use of preset position of buttons

At the end of the minitioune.ini file, we can find now information to setup the position of each button when Minitioune start.

```

;=====
; Ici on peut pr  r  gler les boutons / Here you can preset buttons
[buttons]
;=====
; ISSmode

```

```

;utilisé pour suivre l'effet Doppler et corriger le bug HAmTV  oui/yes(1)   Non/No : (0)
;used for ISS doppler effect and HamTV bug correction   Non/No : (0)   oui/yes(1)
issmode=0
;.....
; Dsave_Switch    0=OFF  1=ON
dsave_switch=0
;.....
; WebMonitor      0=OFF  1=ON
web_switch=0
;.....
;UDP_switch       0=OFF  1=ON
udp_switch=0
;.....
;Record_switch    0=OFF  1=ON
record_switch=0
;.....
;22 kHz           0=OFF  1=ON  2= ON when TS OK
22kHz_switch=0
;.....
;TSErrorBit_switch 0=ON  1 = OFF
TSErrorBit_switch = 0
;.....
;Expert_switch     0=OFF  1=ON
Expert_switch=1
;.....
;LowSR_switch     0=OFF  1=ON // can be ON only if SR1Value<6500 kS/s
;                                     // can be OFF only if SR1Value>=300 kS/s
LowSR_switch=1
;.....
;BBgainAuto_switch 1= auto_ON   ..,-2,0, 2, 4, 6, 8 ... = auto_OFF
;value accepted for Sharp/samsung NIM: 0,2,4,6,8,10,12,14,16   for Eardatek NIM: -10,-8,-6,-4,-
2,0,2,4,6,8,10,12,14
BBgainAuto_switch=-10

```

We can keep **BBgainAuto_switch = -10** even if we don't use an Eardatek NIM, the value will be automatically set to 0 for a Sharp or Samsung NIM

In general, this is the best value if we use a converter (for 146MHz or 437 MHz) that already has a great gain.

New with version 0.6 :

```
;.....  
;DVBmode          choix/choices : DVBS  DVBS2  AUTO  
DVBmode=AUTO  
;.....  
; TS1 or TS2 choice for NIM SeritPro  1 or 2 // Choix de la sortie TS1 ou TS2 utilisée  
; use:  1 => if you use TS1 output      2 => if you use TS2 output  
TS=2
```

New with version 0.7 :

In the [buttons] zone, you can ask the screen mode at start (if you are not in Expert Mode)

```
;.....  
; si on démarre en mode standard (Expert_switch=0) on peut choisir le type d'écran de démarrage  
; 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=3
```

New zones:

```
;.....  
[Directshow_Graph]  
; Graph : use of .grf file / utilisation des fichiers .grf  
ReadGRF=yes  
SaveGRF=no  
AddToROT=no  
;.....  
[Display]  
OLED=no  
Digole=no
```

3. Adjusting the TS buffer :

We can now adjust the number of buffers of 1316 bytes that will be used to transfer the TS to Decoder, UDP ...

The value by default is 6.

```
;=====
```

```
[TSbuffer]
```

```
;=====
```

```
; Nombre de buffers de 1316 octets pour le transfert du TS --- mettre valeur 2 à 30  
; number of 1316 bytes buffers used for TS transfert --- use a value 2 to 30  
Totalbuffers=6
```

New softwares :

- CheckMiniTiouneDriverAndFilters_V0_4b
- TestMyMiniTiouner_v1_4b
- TestMyMiniTiounerPro_v0_1b
- Noise_Power_Measurement_Vm1_0
- Minitiounev0_7b