

SatXmlEditor User Guide

The program SatXmlEditor version 1.0.0 is designed to edit the Satellites.xml file. It is written for Windows OS, but there is no need to install it (portable version). The program creates its database in the RAM memory, into which it loads the data from the Satellites.xml file. Furthermore, it only works with this database, so the user cannot accidentally overwrite the source file. **But it may forget to save the changes made.**

The program creates a separate table for satellites and a separate table for transponders in its database. Displays transponders only for the selected satellite. It is therefore not possible to display all transponders of all satellites at the same time. You can quickly switch between the satellites and transponders tables by double-clicking on the current table item.

Both satellite and transponder entries use parameters whose meaning is stored in the Explanation.xml file. After starting, the program uploads these data to the relevant tables of its database and uses them to edit satellites and transponders via drop-down combo boxes. It is therefore possible to add new values of existing parameters to this file, which will be introduced in the future for the Satellites.xml file. The program will thus learn to use them.

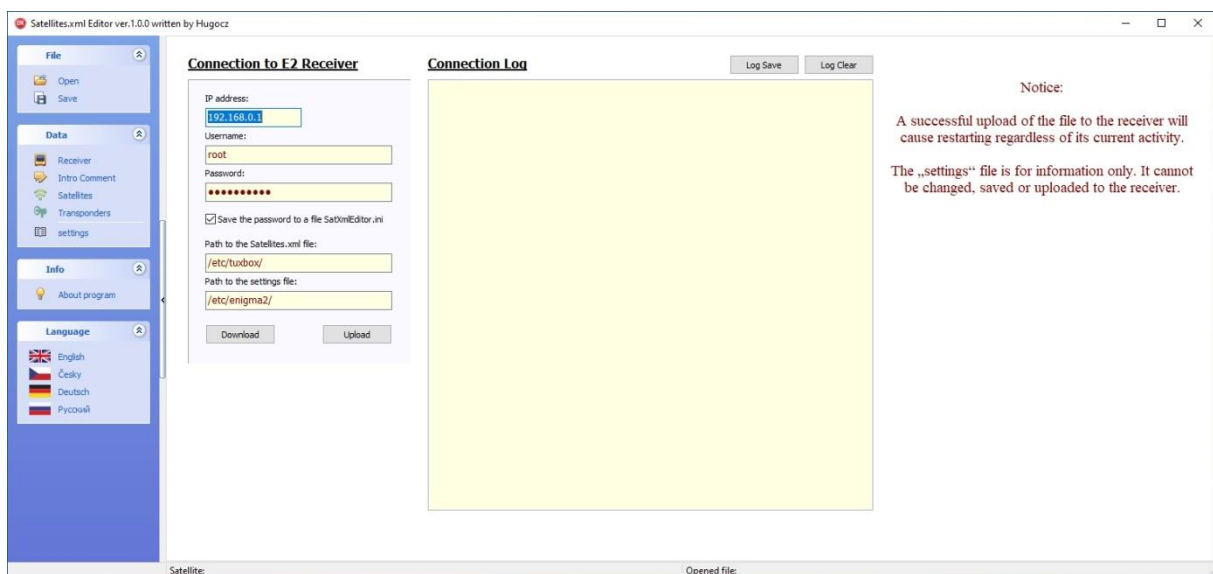


Fig. 1 – Appearance of the program after launch

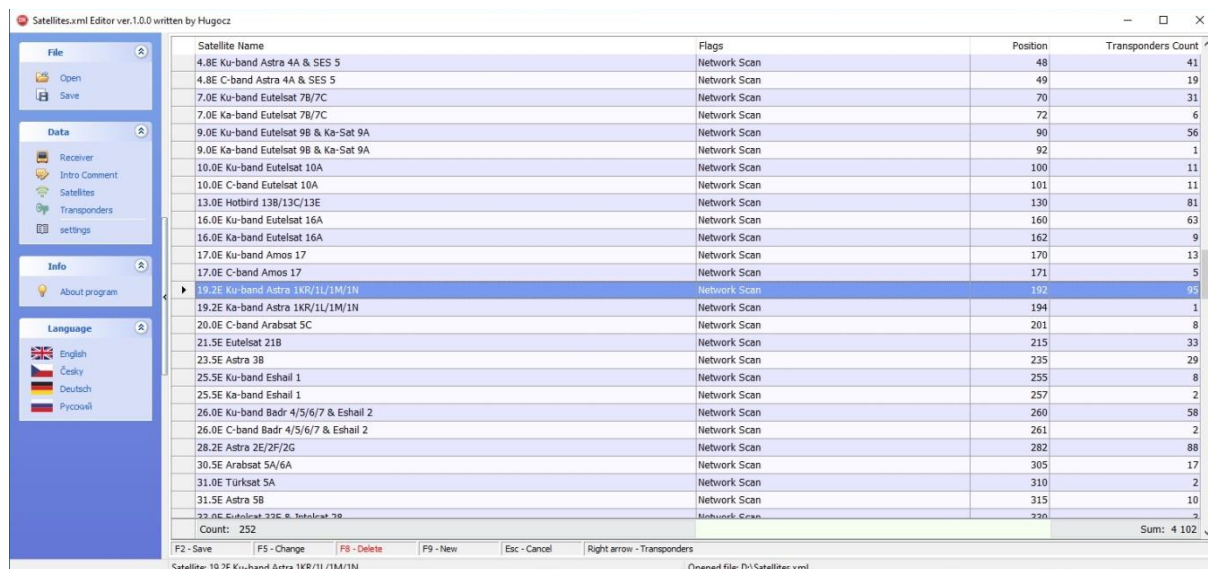
After starting the program, we have the option to open the Satellites.xml file from the computer disk, or download it directly from the Enigma satellite receiver. In both cases, the program copies the data to its database and does not continue to work with the source file.

The option to open a file from the computer disk is in the “File – Open” menu on the left. Depending on the Windows settings, it is also possible to browse the local network and search network drives.

The option to download a file from a satellite receiver is in the “Data – Receiver” menu. This page appears automatically after starting the program. The file is downloaded using the ftp protocol. First we need to set the correct data for connecting to the receiver and the correct path to the Satellites.xml file. Usually "/etc/tuxbox/". After a successful connection, this data is saved in the SatXmlEditor.ini file. The program will automatically load them at the next start, so you don't have to copy them all the time. With the "Save the password to a file SatXmlEditor.ini" check box, we decide whether the password is also saved in readable form in this file, or not saved at all.

Settings file is downloaded at the same time as the Satellites.xml file. The correct path is usually "/etc/enigma2/". In this file, among other things, the settings of the receiver's individual tuners are stored, which must correspond to the Satellites.xml file. This file cannot

be edited or saved. However, the text in the window can be selected, copied and pasted into any text editor. When saving to a file, UTF-8 encoding must be used.



The screenshot shows the 'Satellites.xml Editor ver.1.0.0' window. On the left is a sidebar with a 'File' menu (Open, Save), a 'Data' section (Receiver, Intro Comment, Satellites, Transponders, settings), an 'Info' section (About program), and a 'Language' section (English, Český, Deutsch, Pycckий). The main area is a table with columns: Satellite Name, Flags, Position, and Transponders Count. The table lists various satellites like Astra 4A & SES 5, Eutelsat 7B/7C, and Astra 1KR/1L/1M/1N. The bottom status bar shows 'Satellite: 19.2E Ku-band Astra 1KR/1L/1M/1N' and 'Opened file: D:\Satellites.xml'.

| Satellite Name | Flags | Position | Transponders Count |
|---|--------------|----------|--------------------|
| 4.8E Ku-band Astra 4A & SES 5 | Network Scan | 48 | 41 |
| 4.8E C-band Astra 4A & SES 5 | Network Scan | 49 | 19 |
| 7.0E Ku-band Eutelsat 7B/7C | Network Scan | 70 | 31 |
| 7.0E Ka-band Eutelsat 7B/7C | Network Scan | 72 | 6 |
| 9.0E Ku-band Eutelsat 9B & Ka-Sat 9A | Network Scan | 90 | 56 |
| 9.0E Ka-band Eutelsat 9B & Ka-Sat 9A | Network Scan | 92 | 1 |
| 10.0E Ku-band Eutelsat 10A | Network Scan | 100 | 11 |
| 10.0E C-band Eutelsat 10A | Network Scan | 101 | 11 |
| 13.0E Hotbird 13B/13C/13E | Network Scan | 130 | 81 |
| 16.0E Ku-band Eutelsat 16A | Network Scan | 160 | 63 |
| 16.0E Ka-band Eutelsat 16A | Network Scan | 162 | 9 |
| 17.0E Ku-band Amos 17 | Network Scan | 170 | 13 |
| 17.0E C-band Amos 17 | Network Scan | 171 | 5 |
| 19.2E Ku-band Astra 1KR/1L/1M/1N | Network Scan | 192 | 95 |
| 19.2E Ka-band Astra 1KR/1L/1M/1N | Network Scan | 194 | 1 |
| 20.0E C-band Arabsat 5C | Network Scan | 201 | 8 |
| 21.5E Eutelsat 21B | Network Scan | 215 | 33 |
| 23.5E Astra 3B | Network Scan | 235 | 29 |
| 25.5E Ku-band Eutelsat 1 | Network Scan | 255 | 8 |
| 25.5E Ka-band Eutelsat 1 | Network Scan | 257 | 2 |
| 26.0E Ku-band Badr 4/5/6/7 & Eutelsat 2 | Network Scan | 260 | 58 |
| 26.0E C-band Badr 4/5/6/7 & Eutelsat 2 | Network Scan | 261 | 2 |
| 28.2E Astra 2E/2F/2G | Network Scan | 282 | 88 |
| 30.5E Arabsat 5A/6A | Network Scan | 305 | 17 |
| 31.0E Türksat 5A | Network Scan | 310 | 2 |
| 31.5E Astra 5B | Network Scan | 315 | 10 |
| 33.0E Eutelsat 33C & Eutelsat 3B | Network Scan | 330 | 3 |
| Count: 252 | | | Sum: 4 102 |

Fig.2 – Page of satellites

After loading the data, the program automatically switches to the Satellites window. A table of satellites is displayed here, in which we can select any item. You can continue working with the selected satellite using the menu on the bottom bar of the window. The following options are available:

- F2 - Save: Saves the changed or new satellite sentence to the database in RAM
- F5 – Change: Opens a window allowing you to change the current satellite item
- F8 – Delete: Deletes the selected sentence of the satellite **with all its transponders**
- F9 - New: Opens a window to insert a new satellite item
- Esc – Cancel: Allows you to cancel the started editing of the current / new item
- Right arrow: Switching to the transponder table of the selected satellite

Offers can be activated by clicking the mouse or pressing the appropriate key. After choosing "F5 - Change" or "F9 - New", an editing window opens where you can enter the relevant changes. Individual items are colored in light yellow. This indicates a state where the value of the item has not yet been changed. As soon as any item is edited, its edit field turns dark yellow. This alerts you that you need to update the data in the database using the "F2 - Save" menu.

During editing, use the Enter or Tab key to move to the next item. This is how we go back to the first item from the last item. Until we finish editing the item by choosing "F2 - Save" or "Esc - Cancel", **all other functions of the program are blocked**.

Worth noting is the Position value. Positive numbers are ten times the positions of satellites located in the East direction. Negative numbers are ten times the positions of satellites located in the West direction, or their subtraction from the value of 360.0°. Importantly, there **MUST NOT** be two entries with the same position in the Satellites.xml file.

If multiple entries with the same position are needed (for example, a separate entry for Ku-band and a separate entry for C-band of the same satellite), it is necessary to increase or decrease the value of Position by 1 for one item. This creates a virtual position that differs from the real one by 0, 1°. This value must also be correctly specified in the settings file for the corresponding tuner settings record.

The table can be sorted by clicking on the appropriate column header. Clicking on this column header again will sort the items in reverse order. Canceling this forced sorting is done by clicking on the column header while holding down the Ctrl key.

| Active | Frequency | Polarization | Symbol Rate | FEC | System | Modulation | Inversion | Pilot | RollOff | NID | TID | IS ID | PLS Mode | PLS Code | T2MI FLP ID | T2MI FID | Comment |
|-------------------------------------|------------|--------------|-------------|-----|--------|------------|-----------|-------|---------|-----|-----|-------|----------|----------|-------------|----------|---------|
| <input checked="" type="checkbox"/> | 10 729 000 | Vertical | 22 000 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 758 000 | Vertical | 22 000 000 | 5/6 | DVB-S | QPSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 773 000 | Horizontal | 22 000 000 | 3/4 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 788 000 | Vertical | 22 000 000 | 5/6 | DVB-S | QPSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 803 000 | Horizontal | 22 000 000 | 3/4 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 818 000 | Vertical | 22 000 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 832 000 | Horizontal | 22 000 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 847 000 | Vertical | 22 000 000 | 5/6 | DVB-S | QPSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 876 000 | Vertical | 22 000 000 | 5/6 | DVB-S | QPSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 891 000 | Horizontal | 22 000 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 906 000 | Vertical | 22 000 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 921 000 | Horizontal | 22 000 000 | 7/8 | DVB-S | QPSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 936 000 | Vertical | 22 000 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 964 000 | Horizontal | 22 000 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 979 000 | Vertical | 22 000 000 | 5/6 | DVB-S | QPSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 10 994 000 | Horizontal | 22 000 000 | 5/6 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 11 023 000 | Horizontal | 23 500 000 | 3/4 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 11 038 000 | Vertical | 22 000 000 | 5/6 | DVB-S | QPSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 11 053 000 | Horizontal | 22 000 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 11 068 000 | Vertical | 22 000 000 | 5/6 | DVB-S | QPSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 11 082 000 | Horizontal | 22 000 000 | 3/4 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 11 097 000 | Vertical | 22 000 000 | 5/6 | DVB-S | QPSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 11 112 000 | Horizontal | 22 000 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 11 127 000 | Vertical | 22 000 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 11 156 000 | Vertical | 22 000 000 | 5/6 | DVB-S | QPSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 11 186 000 | Vertical | 22 000 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |
| <input checked="" type="checkbox"/> | 11 214 000 | Horizontal | 22 500 000 | 2/3 | DVB-S2 | 8PSK | | | | | | | | | | | |

Fig.3 – Page of Transponders

After selecting the satellite item, we switch to the transponders window. Here, all transponders of the selected satellite are displayed in a table. On the bottom bar of the window, there is again the possibility to work with items in the same way as in the case of satellites.

The first column of the table allows you to turn on / off the respective transponder. If this box is unchecked, the entire transponder is saved as a comment. The satellite receiver then ignores such a transponder. But the data is still stored in the Satellites.xml file, and if necessary, the entire transponder can be activated again by checking the appropriate box.

Any comment with notes about the transponder can be entered in the last column. These comments are always saved in the Satellites.xml file as a comment at the end of the line after the transponder.



Fig.4 – Page with the Intro Comment

Using the menu “Data - Intro Comment”, we switch to the page where the introductory comment from the Satellites.xml file is written. This comment can be edited. Any initial and final empty lines will be deleted by the program when saving.

After finishing editing the database, we have to save the changes to a file on disk using the "File - Save" menu, or to a file in the satellite receiver with Enigma using the "Data - Receiver" menu.

In the second case, we switch back to the "Data - Receiver" window and press the "Upload" button. First, the data from the database is converted into xml format . Then the program connects to the satellite receiver. With the telnet protocol he shuts down Enigma (init 4), with the ftp protocol he overwrites the original Satellites.xml file with a new file, and then with the telnet protocol he restarts the entire receiver (init 6). The progress of these activities is written in the "Connection log" window.

The inscription on the bottom line of the program informs about the need to permanently save changes to a file on disk or in a satellite receiver. If we do not save the changes made in this way, they will be irretrievably lost after the end of the program.

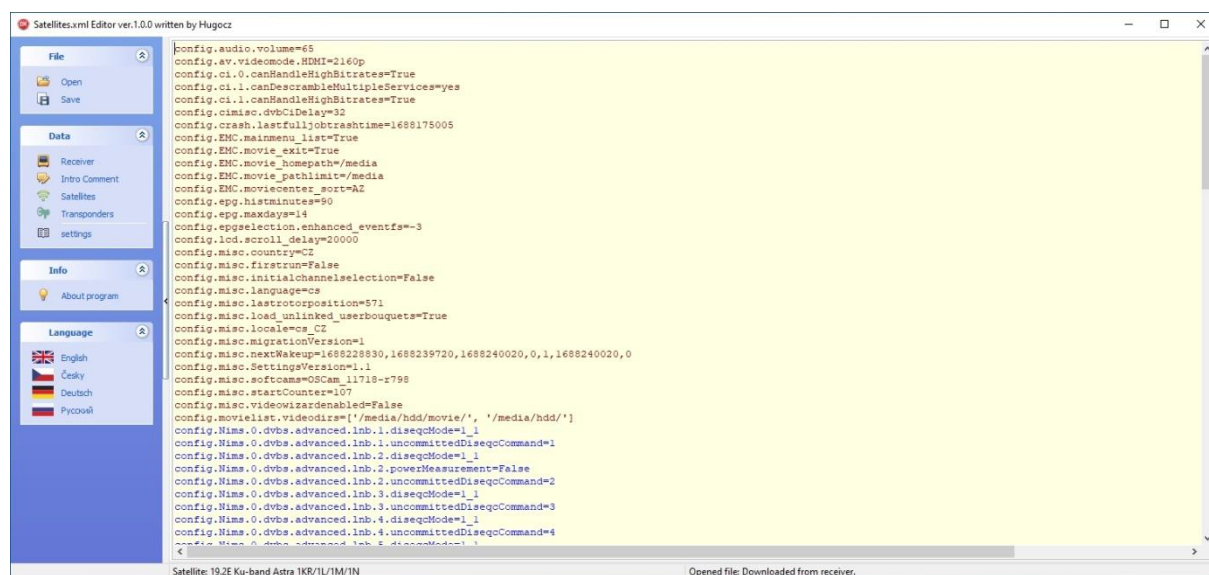


Fig. 5 – Page with a listing of the settings file

In the “Data – settings” menu, we switch to the window where the contents of the settings file are displayed. This listing is for informational purposes only. Therefore, it cannot be edited or sent back to the receiver. The lines related to the settings of the input part of the receiver are colored blue. Nims0 is the first tuner, Nims1 the second, etc. The config.Nims.x.dvbs.advanced.sat entry lists the positions of the satellites for tuning. This data must correspond to the position in the Satellites.xml file.

The program is translated into four languages. Information about the current language is stored in the SatXmlEditor.ini file. After starting the program, the last used language is automatically selected. All text strings for all languages are stored in the Languages.xml file. If the required phrase is not found in the file, the program will use its own text in English.

The program does not assume the existence of other translations. Therefore, it is not enough to just add a new language to the Languages.xml file. If you are interested in adding other languages, please contact me by email at hugocz@jevicko.org.