

DATV-Forum

The DATV-VE-RX a simple DATV receiver for everyone - latest developments



- What happened since Hamradio 2025?
- Solving a big problem
- What's new in the current version?
- What's next?

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What happened since Hamradio 2025

- October 25: the DATV-VE-RX was part of a special edition of the CQ/DL dealing with QO-100
- December 25: In CQ-TV a brief report on the DATV-VE-RX of me and a longer report by Nigel, M0NDE
- There were many feedbacks and ideas for extensions of the receiver and some problems were reported
- The most important problem was the insufficient selectivity of the receiver especially on QO-100
- In terrestrial application, this never occurred
- since version V1.53 the problem is solved
- The user interface is slightly more structured
- some new features have made it into the receiver

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As a summary:

- many new contacts
- many new ideas
- and finally a lot of work

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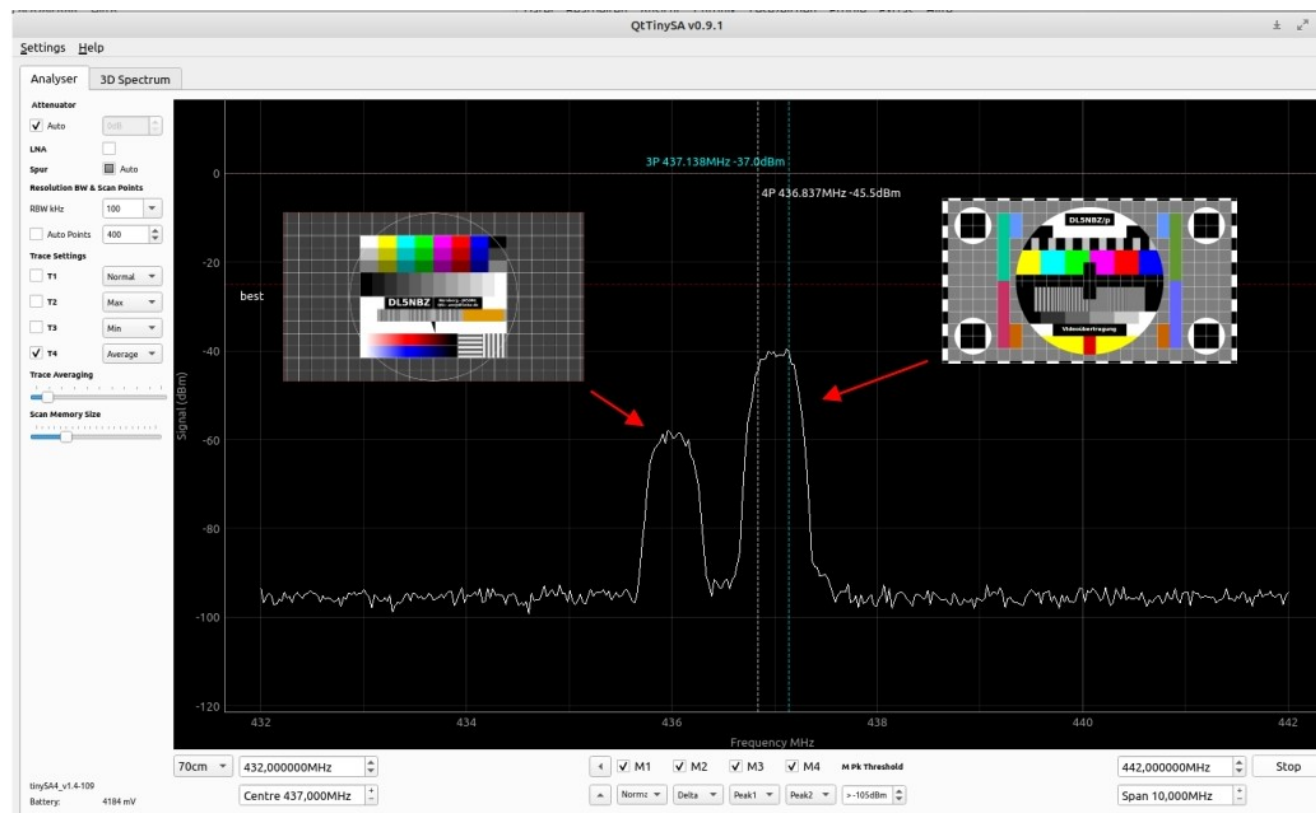
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Solving a big problem

none of the two signals could be decoded

WHY?



Solving a big problem

For further explanations some additional knowledge is needed

There are two terms sounding similar to each other:

Symbolrate (part of the DVB standard - the speed of data transfer)

Samplerate (a characteristic of SDR's - sets the bandwidth within which the sample is scanned)

Both terms are involved in solving the problem!

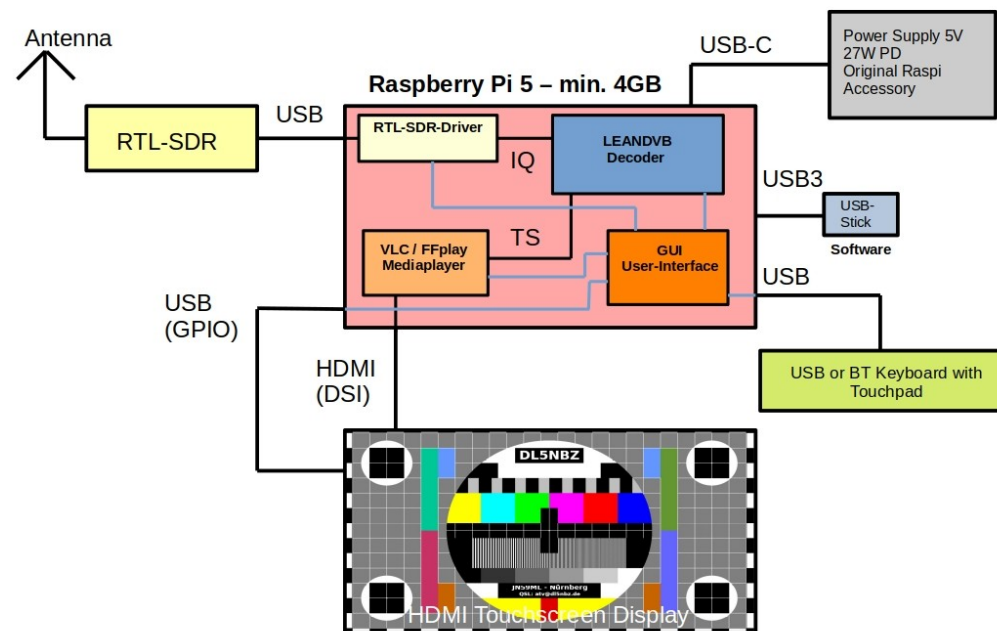
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Solving a big problem

the decoder (LEANDVB) did not want to work with a sample rate of less than 1MHz

So a different solution had to be found

Why not run the front end and the decoder with different sample rates?



DATV-VE-RX – Modules and Connections
DL5NBZ - 2405

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Solving a big problem

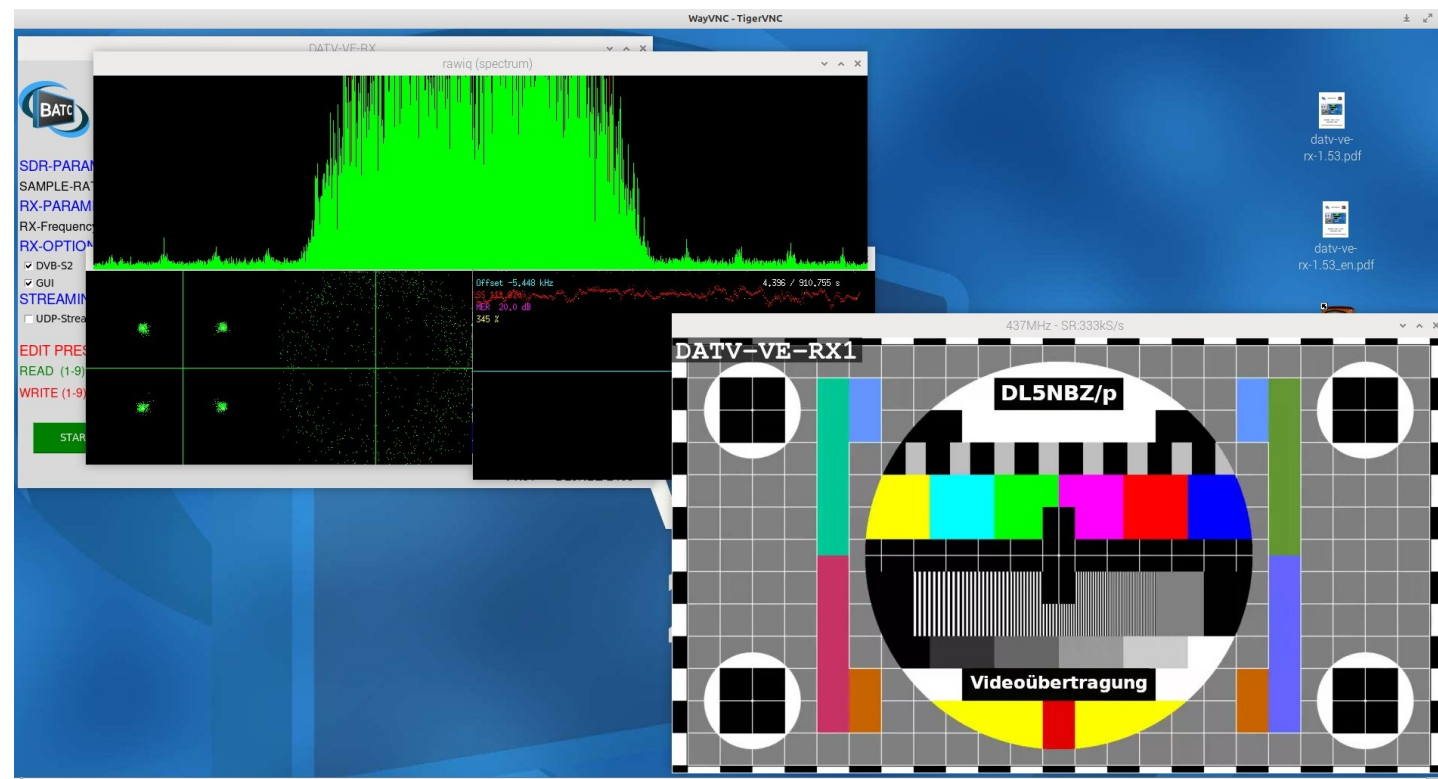
Remember the first spectrum

Now the receiver uses following parameters

SR: 333kS/s

Frontend: Samprate 450kHz

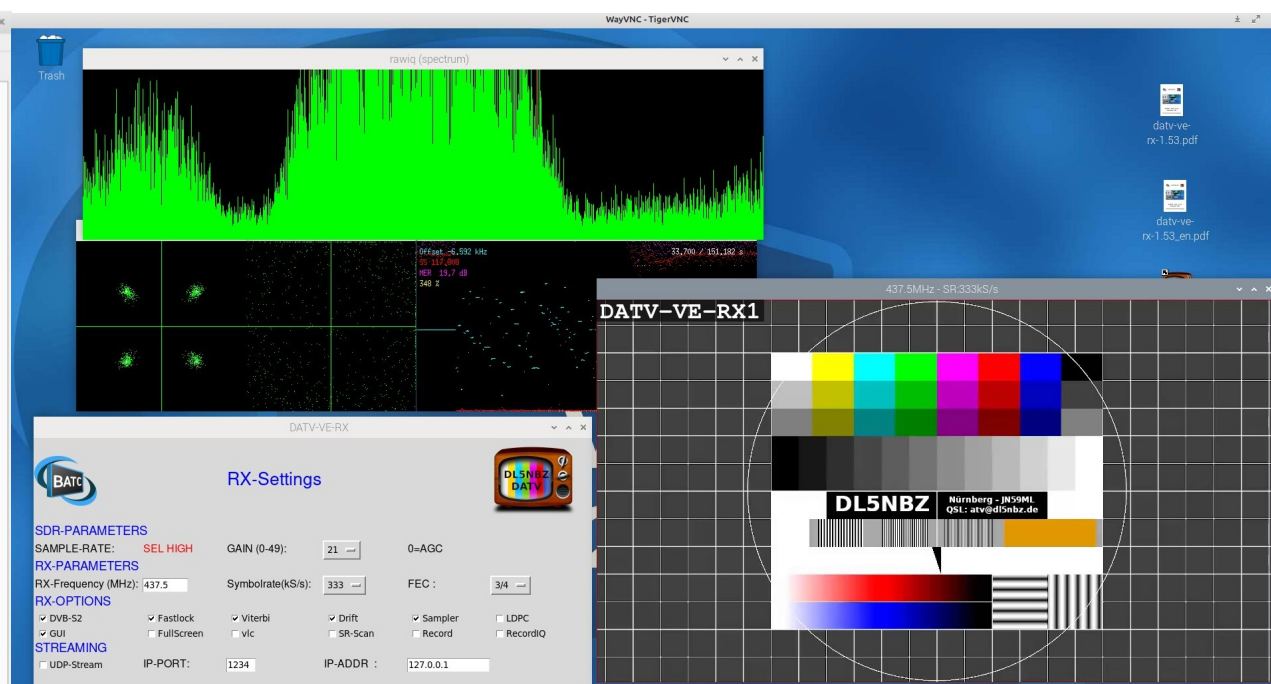
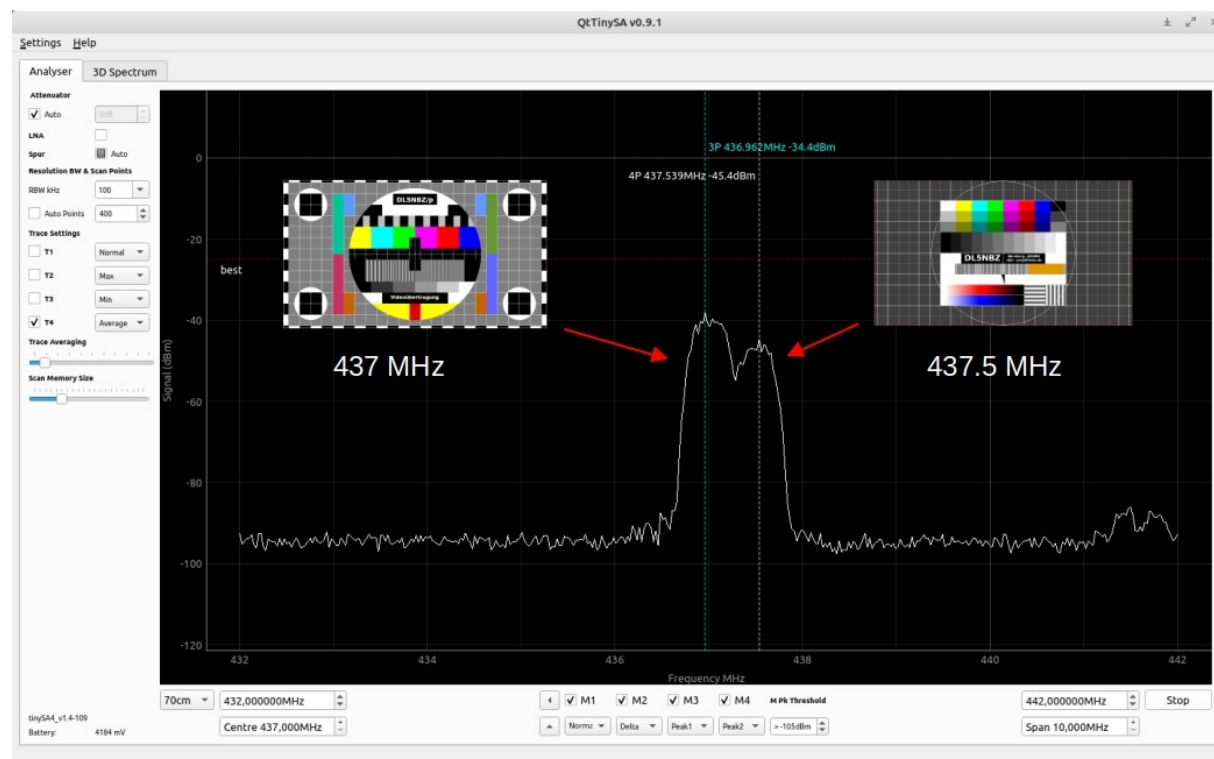
Decoder : Samprate 1000kHz



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Solving a big problem

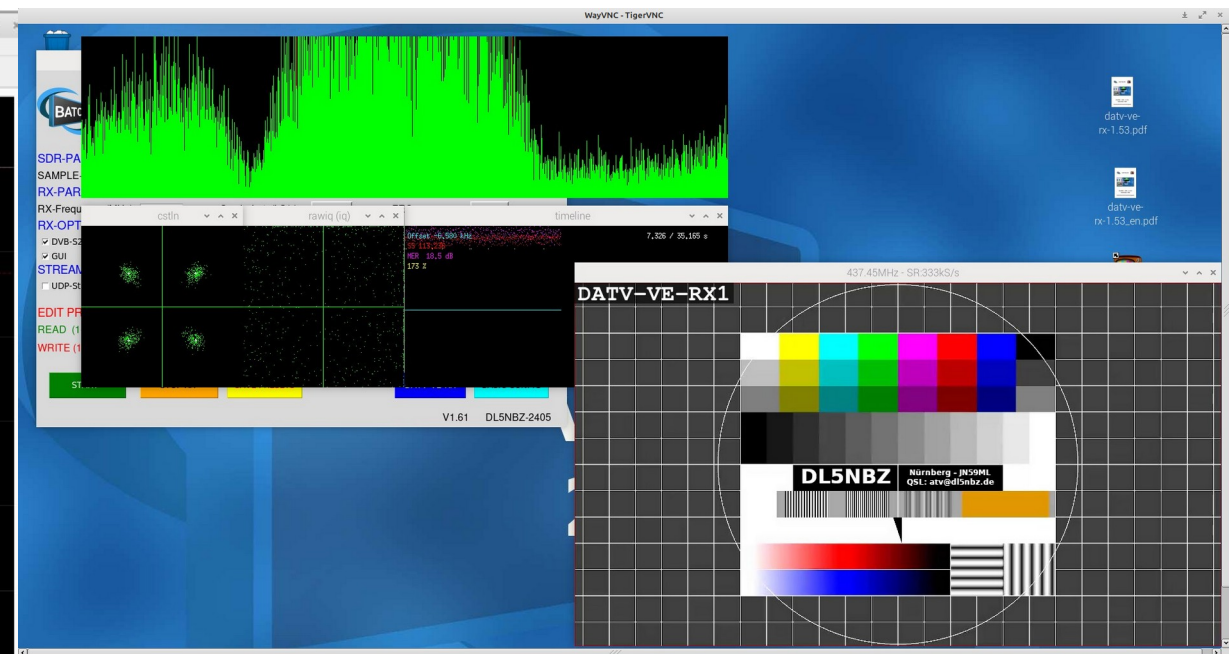
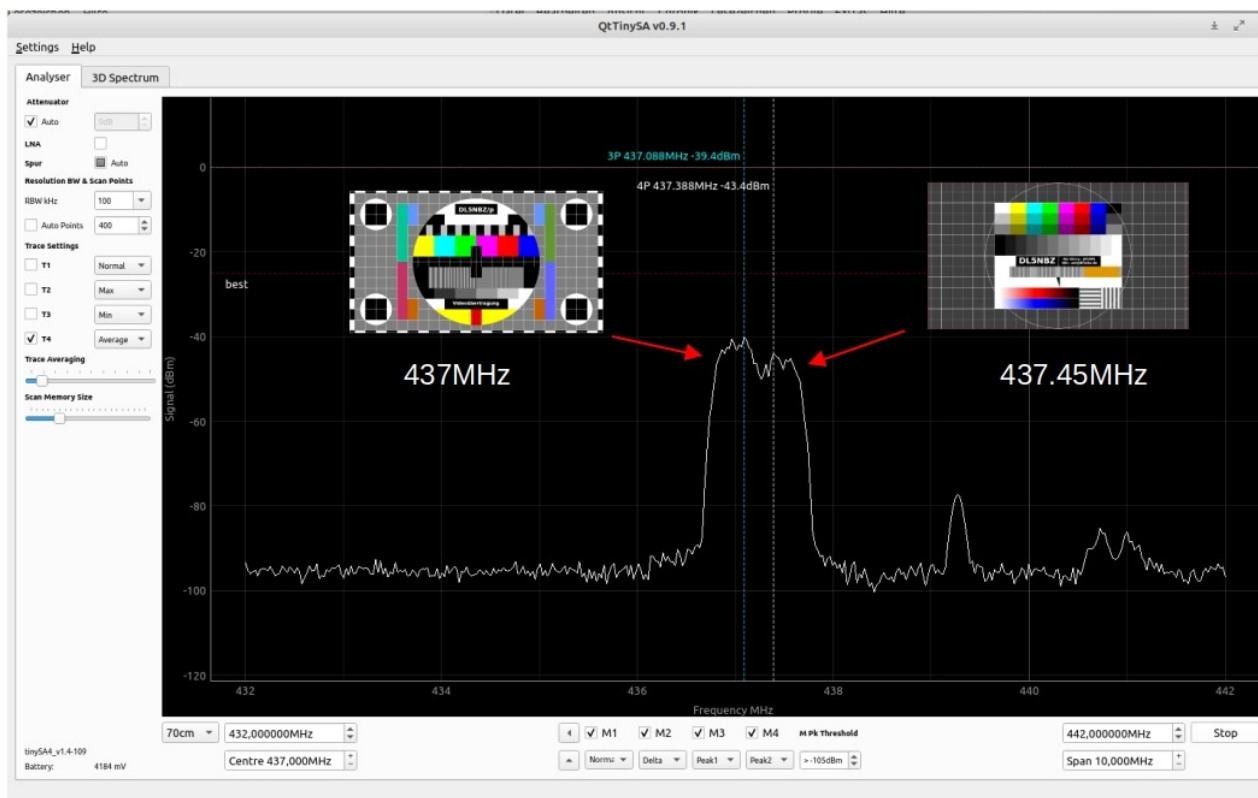


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Solving a big problem



Solving a big problem

The problem seems to be solved:

The current versions work with a hard-coded table that has a sample rate for each symbol rate for the front end and for the decoder.

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What's new in the current version?

- Improved selectivity
- Improved user interface structure
- A FTP server that allows you to load TS files and images from and to the receiver
- the VNC server for remote control of the receiver

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What's new in the current version?

DATV-VE-RX

 **RX-Settings** 

SDR-PARAMETERS
SAMPLE-RATE: **SEL HIGH** GAIN (0-49): 0=AGC

RX-PARAMETERS
RX-Frequency (MHz): Symbolrate(kS/s): FEC :

RX-OPTIONS
☒ DVB-S2 ☒ Fastlock ☒ Viterbi ☒ Drift ☒ Sampler ☐ LDPC
☒ GUI ☐ FullScreen ☐ vlc ☐ SR-Scan ☐ Record ☐ RecordIQ

STREAMING
☐ UDP-Stream IP-PORT: IP-ADDR :

EDIT PRESET-No
READ (1-9): LABEL:
WRITE (1-9): COLOR:

Program **Program**

V1.53 DL5NBZ-2405

DATV-VE-RX

 **Basic Configuration** 

Functions
Auto Start Channel (0-9): 0=No Auto Start
Init Time s (1-9): SDR-Init
Selectivity: 0=normal 1=high
Receiver No (1-9): RX-No displayed
RX-NAME : Name or Call of RX

Program **Program**

V 1.53 DL5NBZ - 2405

What's next?

- An editable table in a file with the sample rate data
- The previously promised user interface for QO-100
- A possibility to use Pluto as a front end
- Switching options for Bias-T

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link to software, description and presentations

<https://www.darc.de/der-club/referate/agaf/atv-weblinks/>



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**Thanks to the users for their
feedback that have helped to
improve the project**

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Thank you for listening

Any Questions?