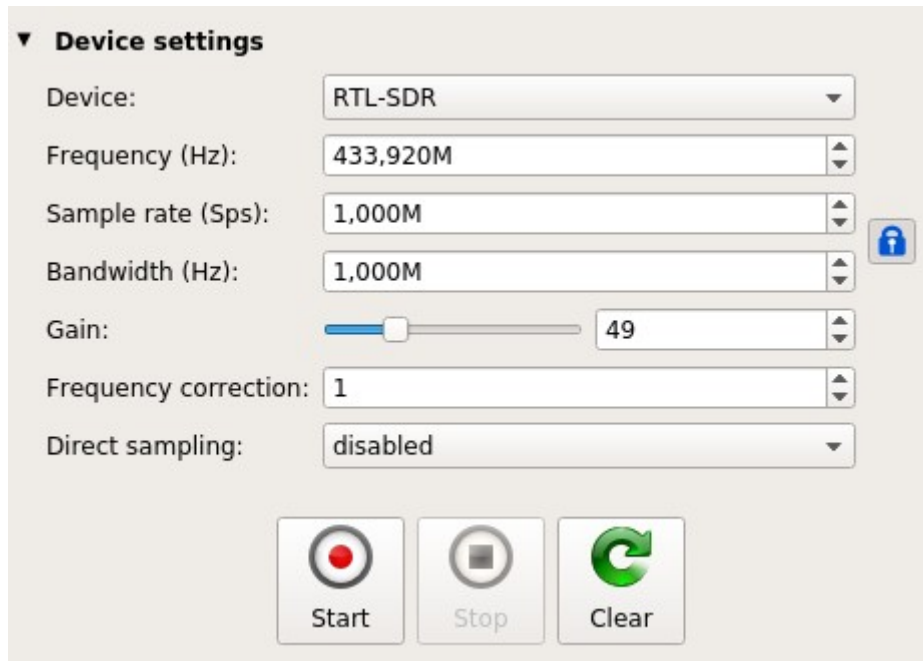
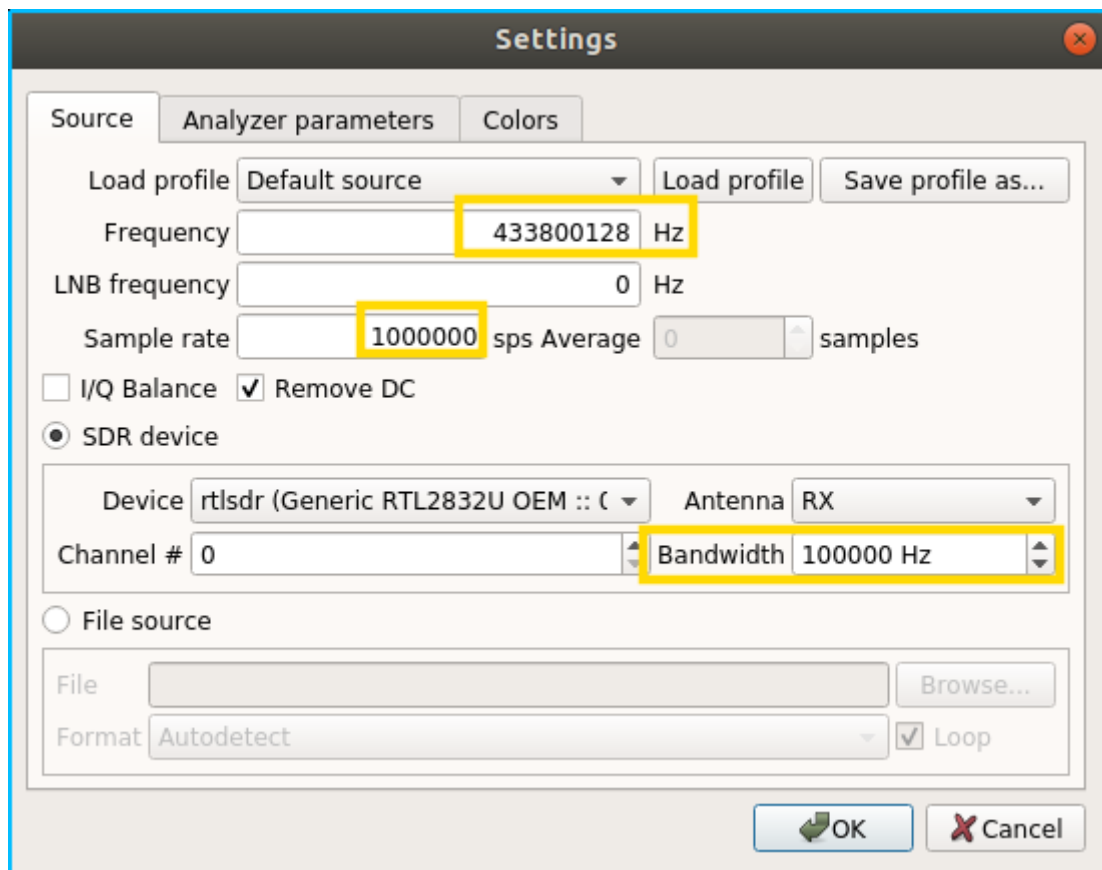


After installing URH, all essential settings are “ready to use”, there is no need to know which bandwidth and sample rate (even gain) should be set. In addition, as a bonus, frequency is set to ISM 433.920M.



Advantage of SD is that there device detection.

Disadvantage of SD is that you have to set all the values and in addition you have to put them in Hz

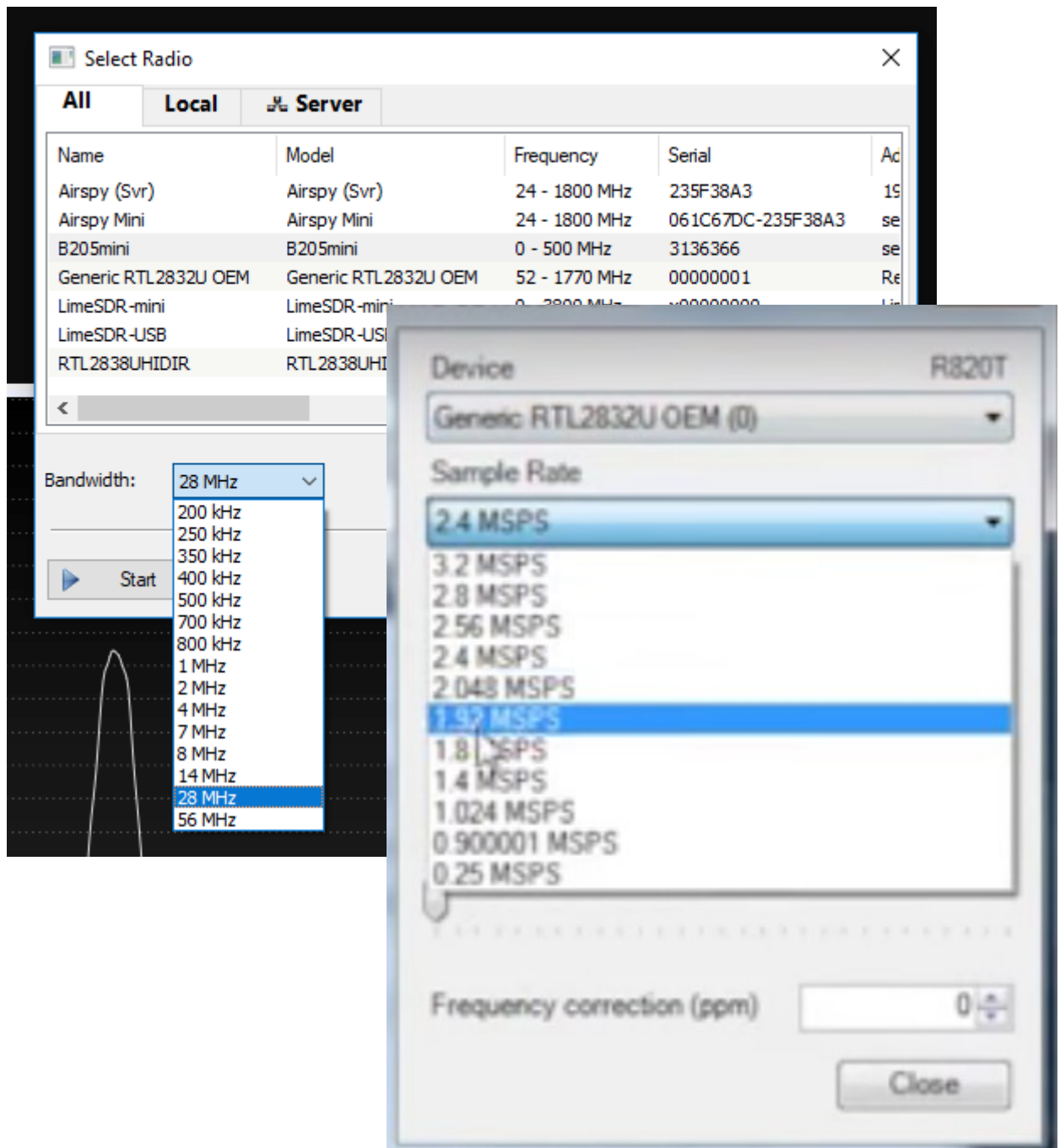


## Feature request:

- Add default settings (after installation)
- Allow introduction of parameters with M(ega) notation like 2.1M sampling rate and frequency
  - or even use drop down menu for BW and SR with predefined values for SR
- Use generic settings for the market.. it means RTL-SDR via USB 2.0
  - ~2M sample rate and BW
  - Set frequency like 433 ISM that can be used to decode RF remote controls (ASK)
- For multi antenna outputs, set default – e.g. for LimeSDR by default there is selected NONE but you can preselect LNAW / LNAL

This will make better impression for the new users that are trying the software but are not familiar with GNU Radio style parameters “10e Hz”.

## Inspiration screenshots:



# Decoding Flow

New user want to use SigDigger for fast signal identification and preferably decoding of the ASK,PSK,FSK and stream it somewhere else or replay it:

[https://www.youtube.com/watch?v=uIVBVd6yi\\_A](https://www.youtube.com/watch?v=uIVBVd6yi_A)

I see SG as a “point on signal and it will help with identification of essential parameters like clock recovery, frame sync,

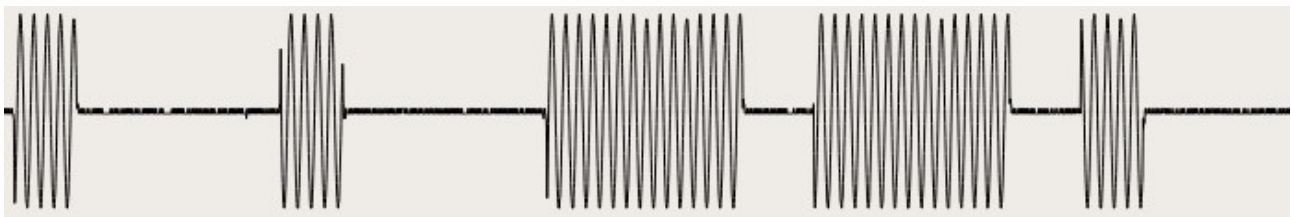
<https://www.youtube.com/channel/UCqIWuCQfX00XHFiwTENI79A>

Example with ASK Remote Control Decoding:

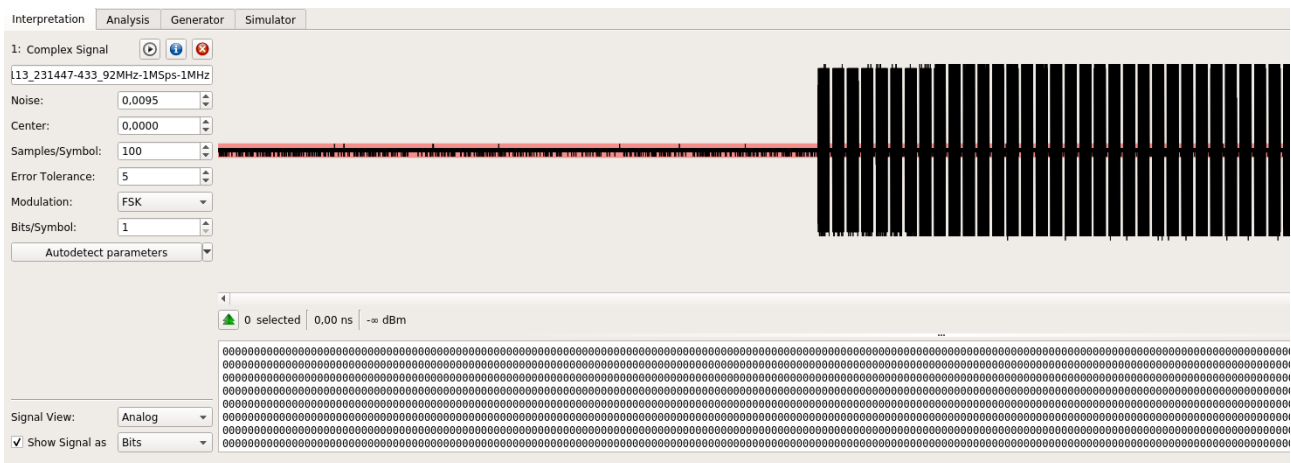
URH provides nice interface where you can see packets (pressed button):



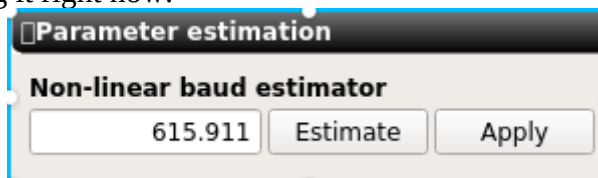
you can use mouse scroll to zoom in on the signal:



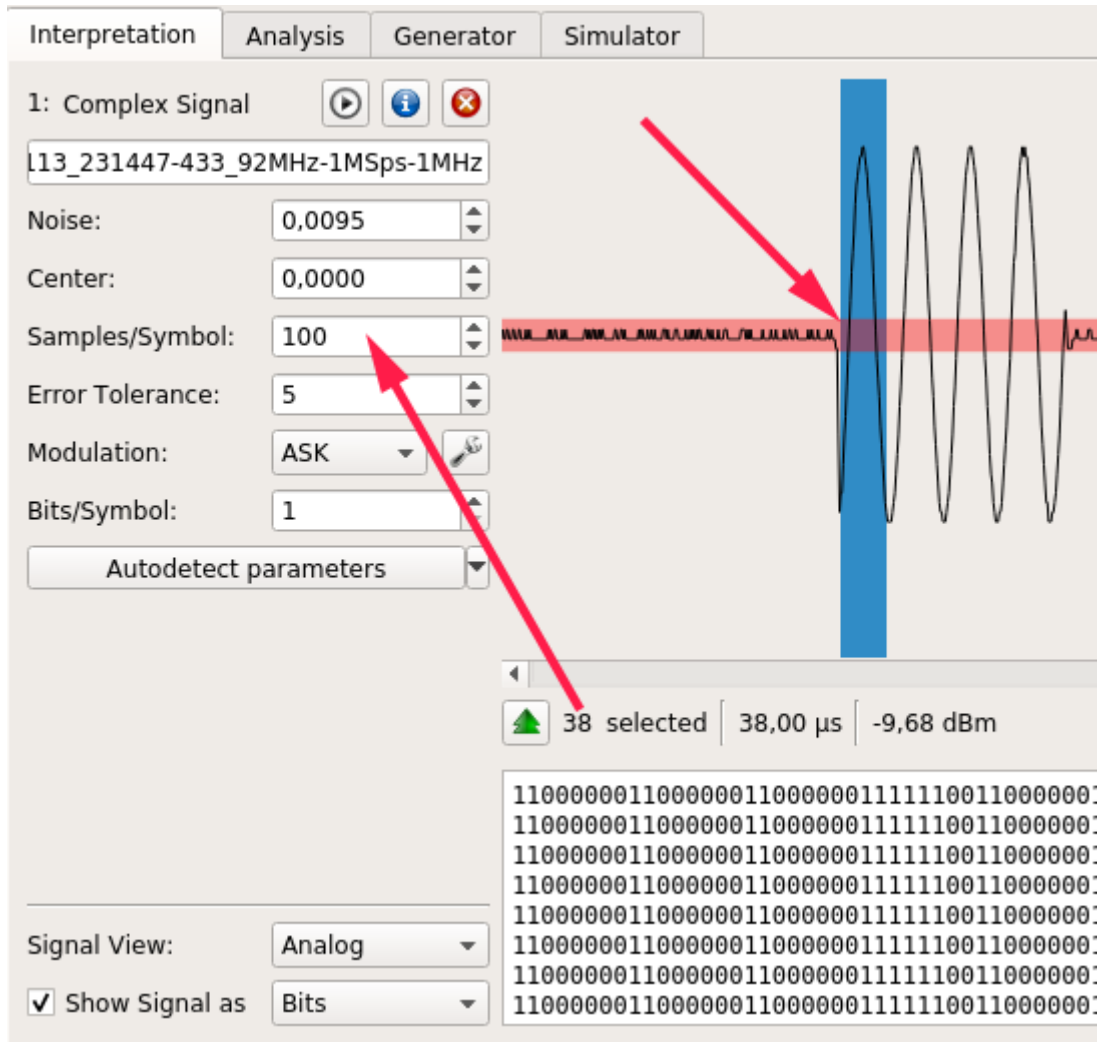
In the interpretation window I can directly see attempt to decode Bits:



Where SigDigger should be useful is automated analysis of the Symbol Rate – This can be identified as you are doing it right now:



in URH you have to manually check this parameter:



URH will change the view as data are decoded:

You can also mark part of waveform and have highlighted Bits/Symbols:

nterpretation Analysis Generator Simulator

Complex Signal

13\_231447-433\_92MHz-1MSps-1MHz

Noise: 0,0095

Center: 0,0000

Samples/Symbol: 38

Error Tolerance: 5

Modulation: ASK

Bits/Symbol: 1

Autodetect parameters

2664 selected | 2,66 ms | -11,92 dBm

```

11111 [Pause: 611 samples]
11111 [Pause: 610 samples]
11111 [Pause: 612 samples]
111111111111111110000011111 [Pause: 611 samples]
111111111111111110000011111 [Pause: 612 samples]
111111111111111110000011111 [Pause: 611 samples]
111111111111111110000011111 [Pause: 611 samples]
111111111111111110000011111 [Pause: 610 samples]
111111111111111110000011111 [Pause: 610 samples]
111111111111111110000011111 [Pause: 611 samples]
11111 [Pause: 613 samples]
1111111111111111100000111111111111111110000011111 [Pause: 611 samples]
11111 [Pause: 611 samples]
1111111111111111100000111111111111111110000011111 [Pause: 6244 samples]

```

There is also interpretation window where you can see how bits are changing when you press different buttons (just simple example):

Protocols Participants

Enter pattern here Search

-10,16 dBm

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
57 (B)	1	1	1	1	1																								
58 (B)	1	1	1	1	1																								
59 (B)	1	1	1	1	1																								
60 (B)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
61 (B)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
62 (B)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
63 (B)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
64 (B)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
65 (B)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
66 (B)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
67 (B)	1	1	1	1	1																								
68 (B)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
69 (B)	1	1	1	1	1																								

Bit: 111111111111111110000011111 Hex: ffff073 Decimal: 6710781

This view is perfect to know that you are decoding signal (correct filter bandwidth, distinguishing signal from noise floor etc)



but users want to be able to see bits, make sense of them (preamble, body) and preferably replay them.

That why I seen this feature really promising:

