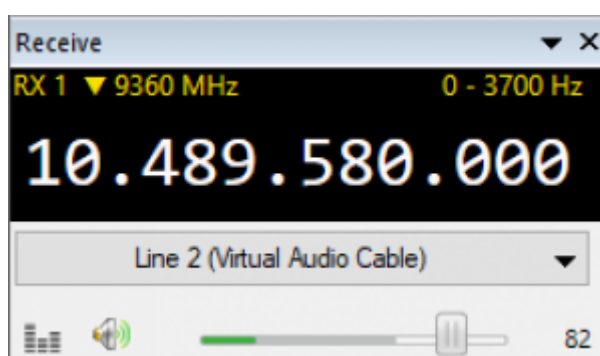


# Preparing the SDR console

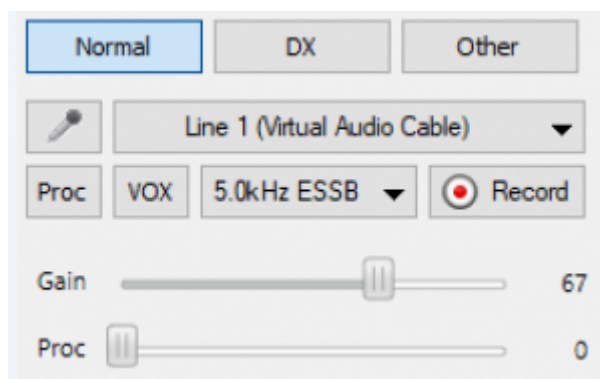
The SDR console is a comprehensive program with many settings. Hardly anyone knows them all by heart. Therefore all necessary settings are described here. If you have set everything correctly, a practically error-free operation with HSmodem will be possible. Apart from the filter settings, everything can be left as it is for normal SSB operation.

## Audio and Virtual Audio Cable:

On the **receiving side** we select the audio cable **Line-2** :



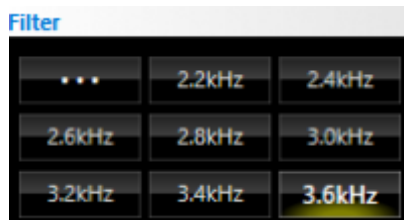
On the **transmission side** we select the audio cable **Line-1** :



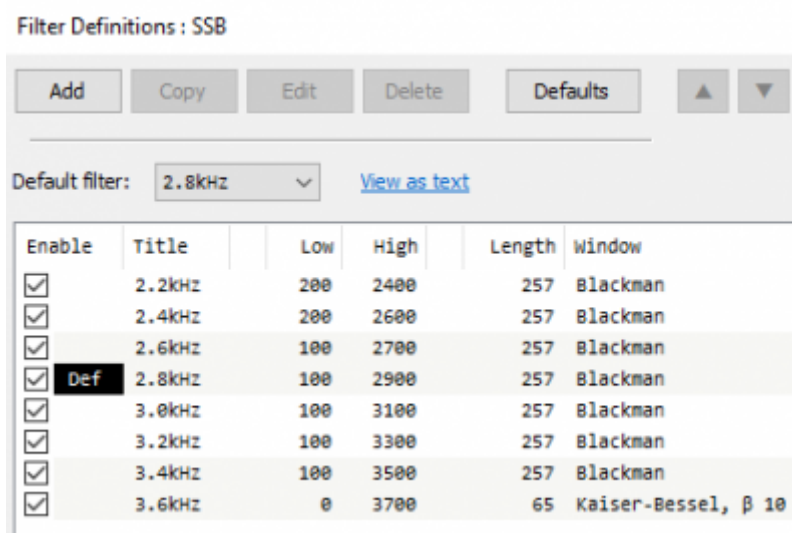
## Filter settings for reception:

the minimum filter width must be 3 kHz, but HSmodem has its own filters. It is therefore best to choose the reception filter as wide as possible:

To set, click on the three points in the filter settings



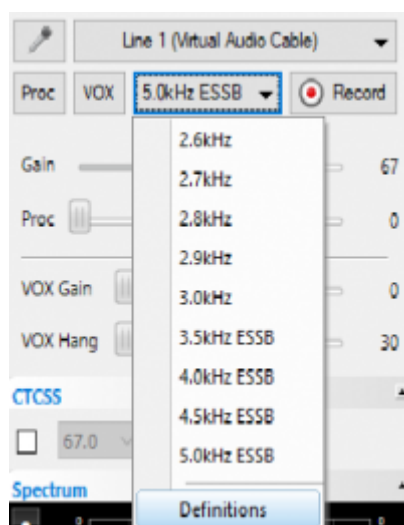
The lowest filter (3.6 kHz) is used. **Here it is important to set the lower limit frequency to 0 Hz**, because HSmodem uses the entire range.



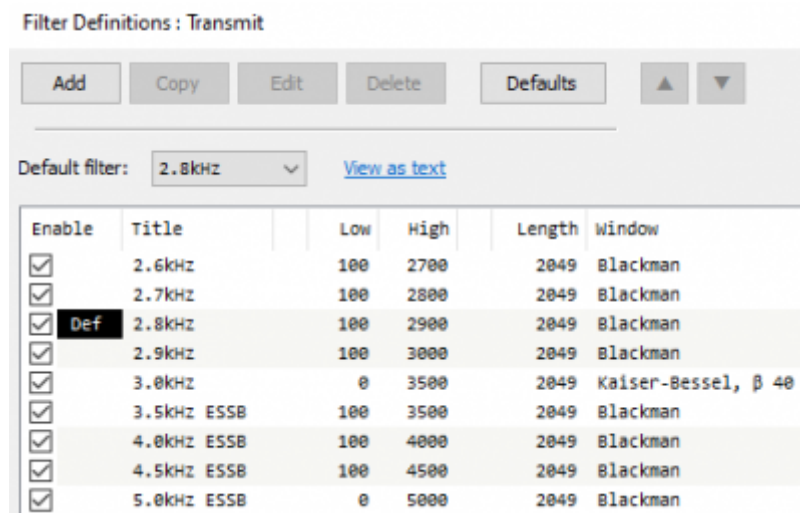
the filter is finally selected (highlighted in yellow) and is thus in operation.

## Filter settings for sending:

HSmodem also has its own filter here, so we can choose the widest one, the 5kHz ESSB filter. First we have to configure it:



Here, too, the lower limit frequency “low” must be set to 0.



## Volume settings for reception:

The reception volume must be set so that the signal is not overloaded. In our tests, a setting around 80% has proven itself.

## Volume settings for sending:

also here you have to be careful not to oversteer. As an aid, the SDR console has various “Meter” displays:



The picture shows an ALC of approx. 25%, it shouldn't be much more. Values up to 50% are not a problem, above 100 overdrive will occur and impair the signal. Please adjust with the gain control. The output power is set with the “Drive” control, not with “Gain”.

## Turn off all audio processors / audio improvements

that is a very important point. If the audio signal is caused by any noise blankers, equalizers or the like. is influenced, the phase modulation is destroyed and no operation is possible.

Here is a checklist, all points must be checked:

### at the sender:

- Normal (not DX or Other)
- Turn off proc
- Turn off CTCSS

### at the recipient:

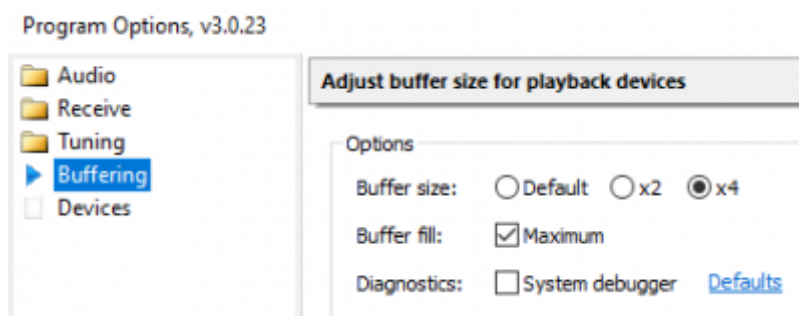
- RX filter: 100%
- CW: off
- Noise blanker: off
- Noise Reduction: off
- Notch: off
- Squelch: off

In addition, the equalizer must be switched off, this can be found in the menu **Receive** , button **Options** and there under **Audio Equalizer . Enable** must remain switched off here.

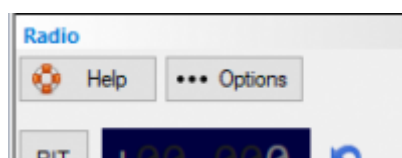
## Receive buffer

These buffers are important in order to avoid short interruptions in audio transmission, which would lead to data errors.

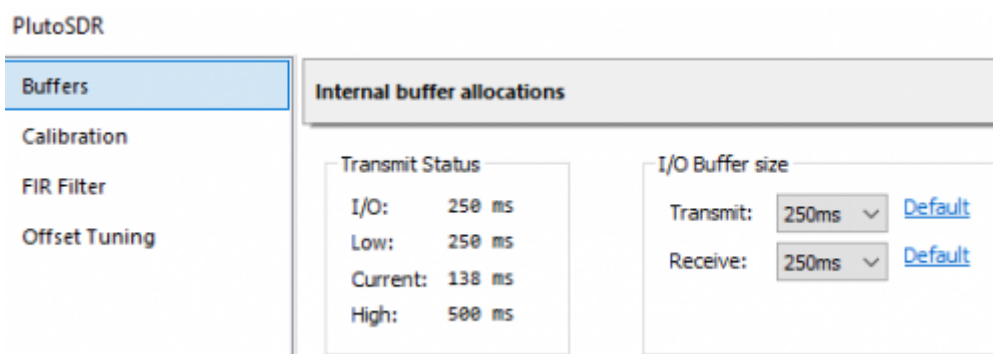
Menu **Receive** , button **Options** and there for **Buffering** : Buffersize x4 and buffer fill: set maximum.



In addition, the Pluto has its own buffer, which can be selected via \*\*\* Options on the receiving side:



Here you set transmit and receive to 250ms.



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