

ROS FREQUENTLY ASKED QUESTIONS. v3.0

Q1: Where is the Frequency List?

A: ROS frequency List is in *Frequencies Menu*. If you use CAT you can change the Rig frequency doing click in *Frequencies menu* or in the Frequency Panel.

Q2: How i can save my QSO's in ADIF format?

A: First, in LOG/ADIF menu, you have to select the ADI file path.

When you complete a QSO, you have to do click on ADIF label, fill the fields, and click on EXPORT QSO. Also, the QSO can be sent to eQSL.cc if you click on eQSL.cc Checkbox.

Doing click over a callsign, data are filled via online in ADIF window.

Otherwise, data can be filled manually doing click over Callsign, Name or Locator. In the case of QTH, press CTRL and do click. This is explained in Help→shortcuts menu.

Q3: I see QSO's using 3 different colours (Blue,Purple,and Brown). What do the colours mean?

A: The colours relate to the Baud Rate of the transmissions. If you look to the left of the screen you will see that each new line starts with the letters "RX" followed by a number. The number relates to the baud rate, 8 for 8 baud, 16 for 16 baud etc.

ROS is able to decode different Baud Rates. In RX switch you can select the Baud Rates you want decode. "16-8-4" option requires more CPU than "16-8" option.

Q4: What is the average power used in a typical ROS QSO?

A: It depend of conditions of each station, distance, propagation, etc...

From the test performed Cuba-Twente, we have:

Power with ROS16 = Power PSK31 / 5
Power with ROS8 = Power PSK31 / 30
Power with ROS4 = Power PSK31 / 100

So, if you usually use 50 watts with PSK31 then you could use:

10 watts with ROS16
2 watts with ROS8
0.5 watt with ROS4

And if you usually use 100 watts with PSK31 then you could use:

20 watts with ROS16
4 watts with ROS8
1 watt with ROS4

Q5: What Symbol Rate have I to use for TX?

A: Again, it will depend on the conditions. If you do not get a response transmitting with ROS16, then try with ROS8. And if ROS8 is not enough then try with ROS4.

The other option is increase the power, obviously, but ROS philosophy is QRP communications.

My advise is that when propagation is closed "apparently" for other modes (dark night) you should try directly ROS8 or ROS4 instead of ROS16 for long path communications.

Q6: Could I TX with ROS16 and after RX a transmission with ROS8?

A: Yes, with ROS you can TX with a Baud Rate and decode to a different baud rate according features of your station.

Q7: What is the meaning of Marge?

A: Fade Marge (or Fading Marge) is a design allowance that provides for sufficient system gain or sensitivity to accommodate expected fading, for the purpose of ensuring that the required quality of service is maintained.

Using ROS over a HF channel, it is necessary at least 4 dB of Fade Marge. Above 10 dB of Fade Marge means that your correspondent is wasting the power.

Below 4 dB of Fade Marge means that your correspondent should change to a slow Baud Rate, for example from ROS16 to ROS8 (Or increase the power if he had that possibility)

Q8: What kind of filter I have to use in reception?

A: None, and also it is very important that you disabled the AGC.

ROS uses a "Matched Filter". It is a filter which optimizes the SNR and it is matched to the pulse. A narrow receive filter will let in less noise, but it will also let in less of the signal itself. If the signal is wideband and has significant components outside the filter's bandwidth, using a narrowband filter will result in signal power being filtered out. So, it's a question of trading off how much of the signal power you want to let in versus how much of noise you're willing to let in in the process. The matched filter does the best job in this SNR tradeoff (for Gaussian IID noise). It limits the receive filter to the bandwidth of the transmitted pulse so that most of the significant signal energy comes through.

Q9: My CPU is in Red Zone because my computer is very very old.

A: If your computer is very slow you have to:

- 1) Disable the waterfall
- 2) Set AFC to 78
- 3) Set Symbol Rate RX to 16-8

Note. In the worst case, you can set RX to 4 bauds, but in this case you only could receive to 4 bauds, obviously.

Q10: How must I work on 20 meters with ROS?

A: For 20 meters you have 4 channels (14078, 14101, 14103 and 14113). You have to do QSX between channels when one channel is occupied by others Hams that interfere with you. It is recommended to use CAT with ROS.

Q11: How can I receive a Signal Report by email?

A: You have to send your email address in the message by clicking on “Email Button”

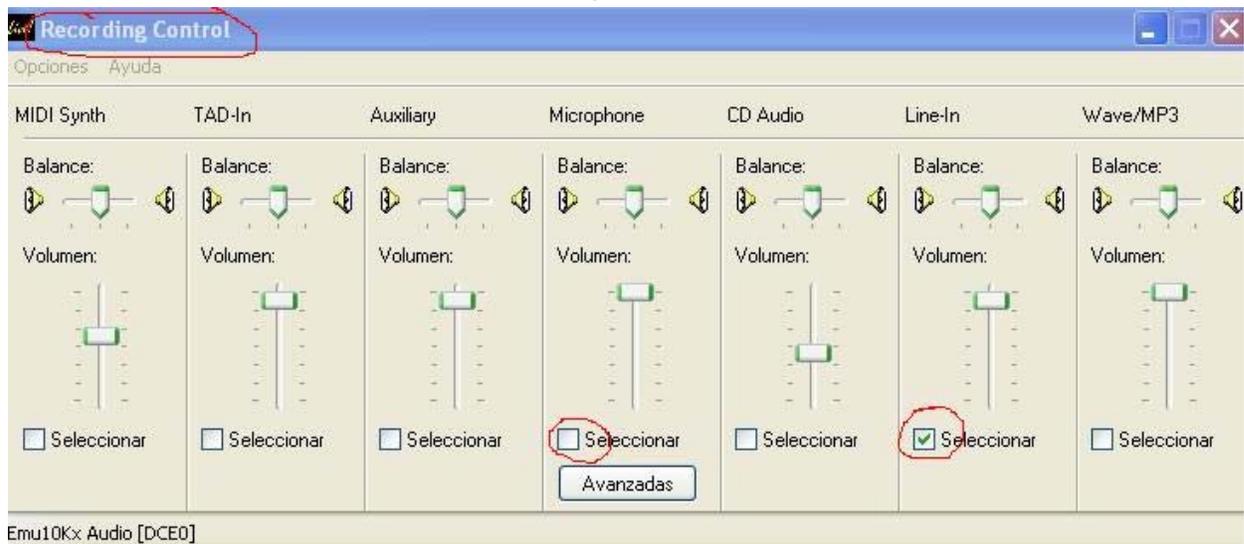
Q12: How can I send Signal Report by email?

A: You have to configure *Email Menu* and you will send emails automatically with signal information. Also, you can attach a photo (your QSL) in the email.

Q13: I see that ROS sync but in a few seconds no sync.

A: Probably, you have feedback between your different soundcards. Select the right Volume Input control as record input: “Line In” (blue input) or “Mic In” (pink input), according with the audio level of your Rig or Interface.

To select the Audio Input, open Windows Mixer. If you have several soundcards, first you have select your soundcard in the Windows Mixer → Options.



Q14: Don't appear any signal in the waterfall but I can heard the tones

A: You have the waterfall to OFF or you are not selected the right Volume Input Control in the Recording Options of Windows Mixer

Q15: I have downloaded a new version but it appears an error. However, latest version work fine.

A: You must delete completely the old folder and extract all the new files in a new folder. Then run *install.exe*

Q16: Beacon timer is in a Loop

A: In ROS, QSO's have priority over beacons. To avoid Beacon can interfere, Beacon doesn't work when others users are using the channel.

As security measure, and to sure a right reception, Beacon Timer enter in a loop if you have the cable disconnected or your PC is too much show to decode (CPU over 90% continuously). In these cases, beacon never transmit.

ROS USA

Q17: Is ROS Spread Spectrum and illegal in USA?

A: No, because ROS is a Base Band system. Tones are generated by a soundcard, as other many Digital Modes.