# Setting up the RF kit for VNC screen transmission and TCI frequency data transmission with Thetis

**Preliminary information to understand the client/server setup with VNC and TCI:**

1) Transfer RF-Kit desktop to PC desktop via VNC protocol: The RF-Kit acts as a VNC server that is operated by a PC with any VNC client software. Therefore, the IP address of the VNC server (IP of the RF-Kit) must be entered in the client software on the PC.

2) Band/frequency data to RF-Kit via TCI protocol: The Thetis PC acts as a TCI server and the RF-Kit retrieves the frequency/band data from the TCI server as a TCI client. The IP address of the TCI server (Thetis PC) must therefore be entered in the RF-Kit (client). Your own PC IP address is also stored in Thetis.

To simplify matters, a static IP address should be configured for both the PA (RF kit) and PC (Thetis):

The RF-Kit and the Thetis computer are connected via a router using DHCP and both devices must be assigned fixed IP addresses in the router. For example, in the FritzBox, "Always assign the same IPv4" must be activated for both devices (i.e. RF-Kit and Thetis PC) under Network (see image).

## 1) Set up VNC client for interface control on a Windows or Linux system

Once you have ensured that the PC with Thetis and the RF-Kit receive the same fixed IPv4 address each time they are restarted, you can start setting up the VNC client. The IP address of the PC and the RF-Kit should be memorised. Then enter a port and a password in the RF-Kit menu under VNC Config (remember both):
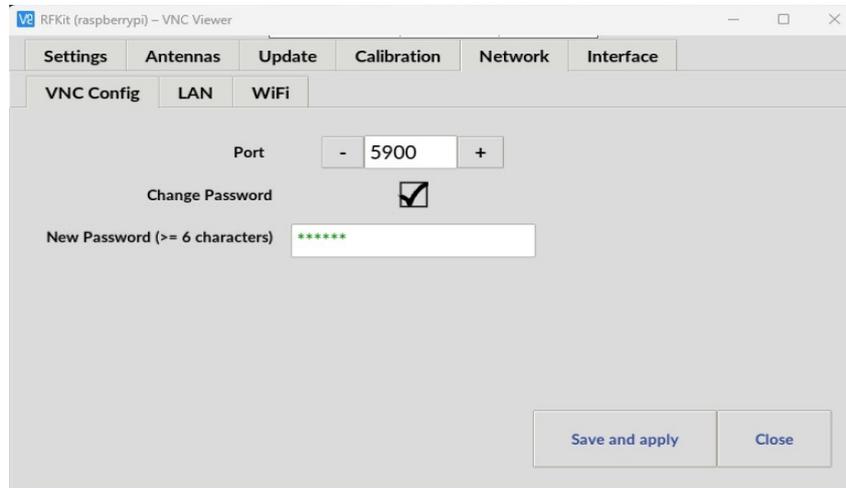
On the PC, I use the VNC client software VNC Viewer, which I have had the best experience with. After installation, we start the VNC Viewer and set up a new connection under File - New connection – Properties.
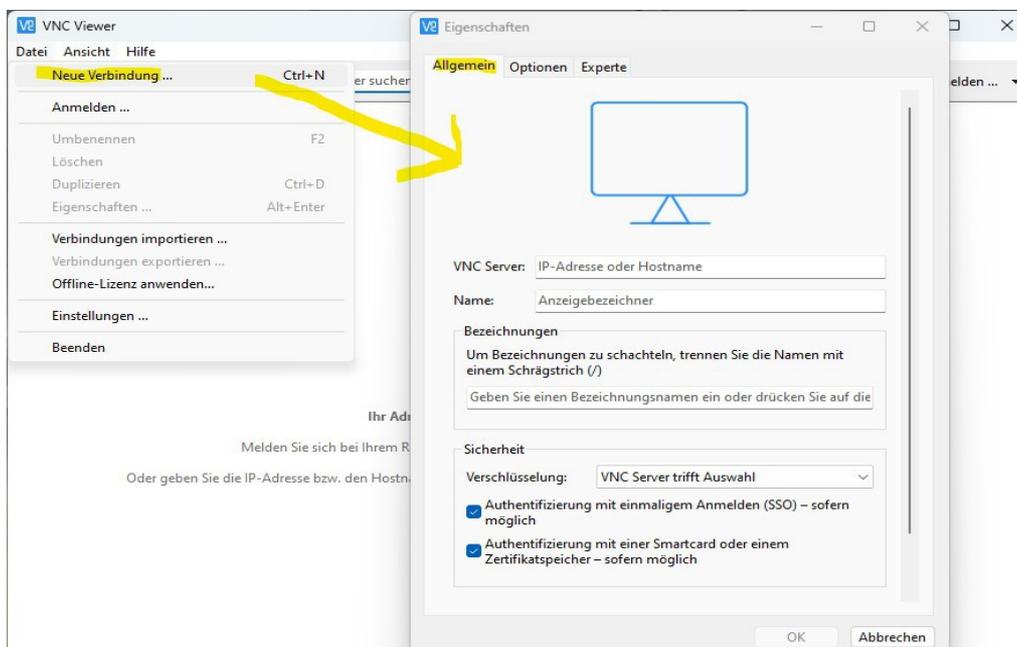
Here we enter the IP of the RF-Kit and the port. Next to Name, enter RFKit (pay attention to the spelling). The entry "VNC server meets selection" remains next to Encryption.
Then click OK.
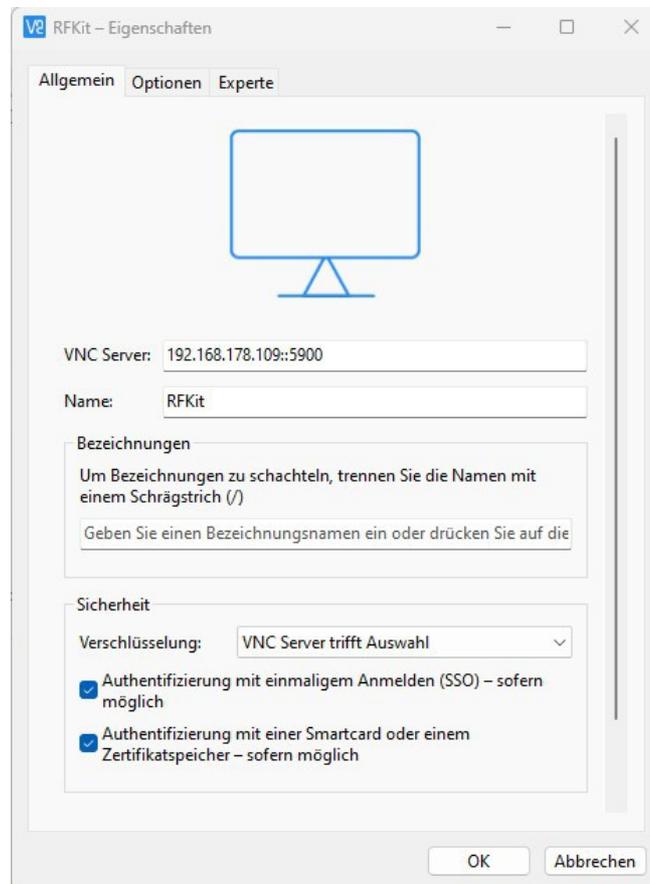


You should now see an RFKit box in the VNC Viewer window.
Double-click on it to open the authentication window and enter the password assigned in the RF-Kit and activate "Save password". Then click OK.
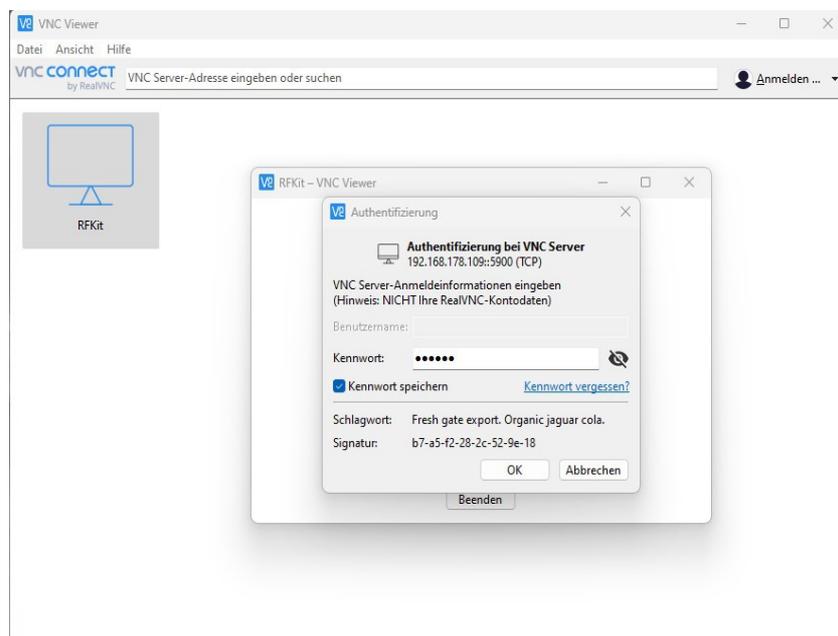
Now you can start the VNC client by double-clicking on the RFKit icon and the interface should now appear on your PC screen as on the PA itself and can also be operated with the mouse. **That's it!**

*TIPS:*
The VNC client window size can be set with the right mouse button on the RFKit entry and there under Options. Here is the example with 75%:
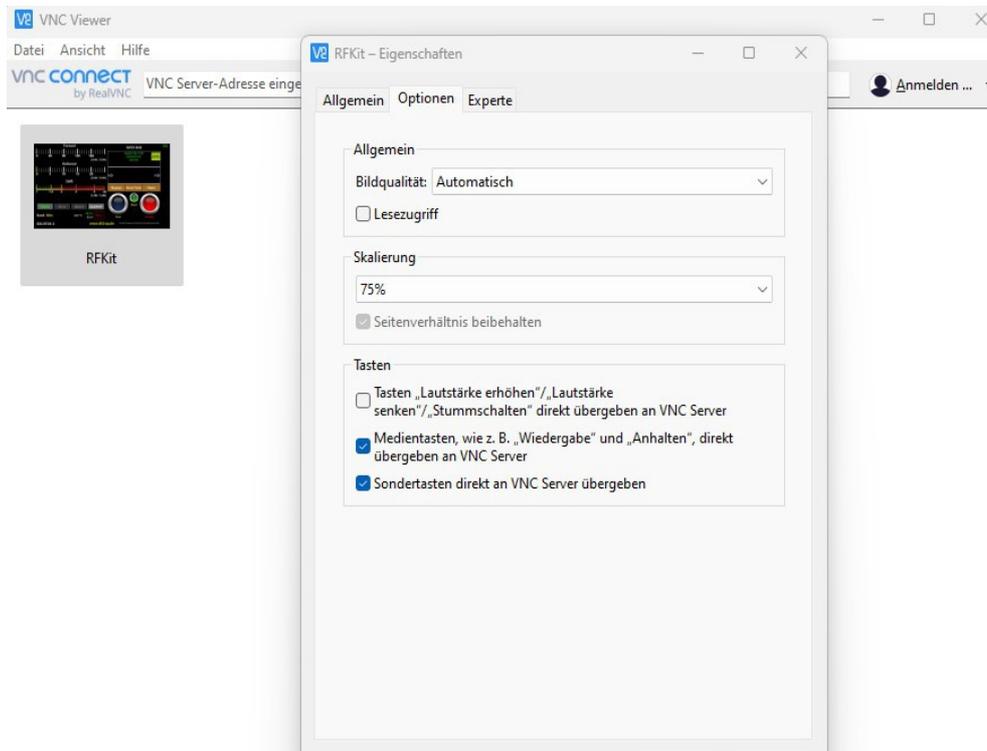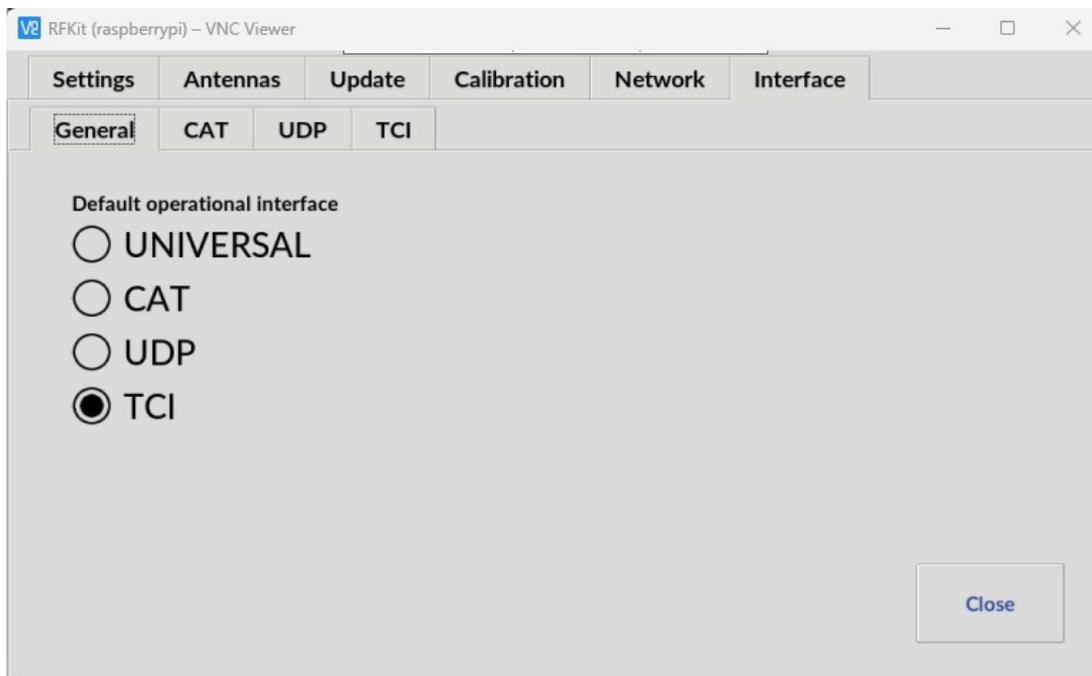


If the main window of the VNC client - which is now no longer required - is disturbing on the desktop, you can activate "VNC Viewer may be closed" under File - Settings - Display. The main window of the VNC Viewer can then be closed after the VNC connection.
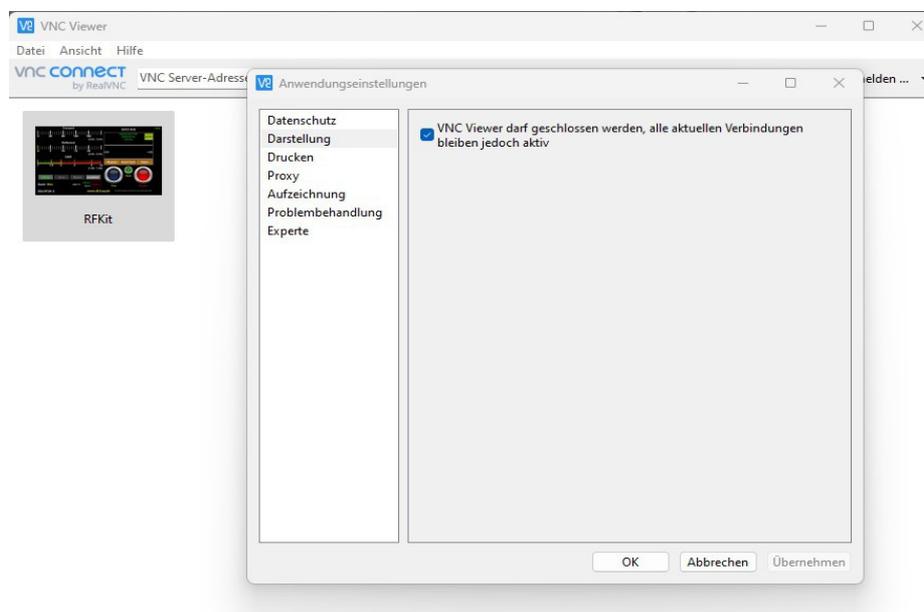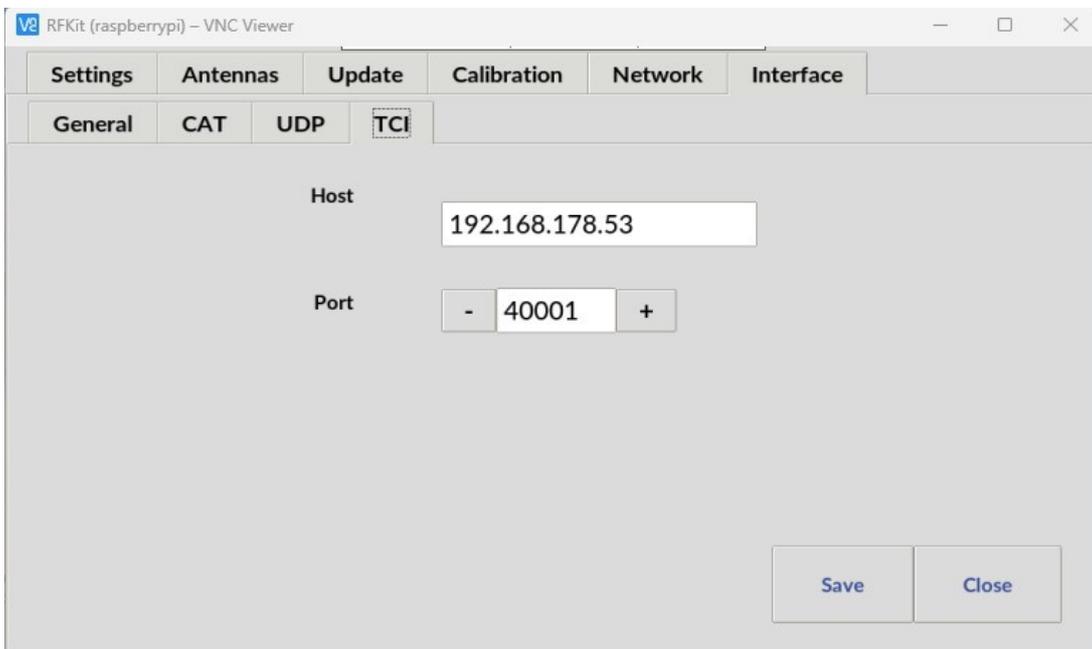
## 2) Setting up the TCI protocol between the RF kit and Thetis

In the RF kit, activate TCI under General:



Under TCI, enter the IP address of the TCI server (computer with the Thetis installation) and a port. Then exit the menu again with Save:

In Thetis under Setup - Serial/Network/MidiCAT - Network, the IP address of the Thetis PC and the port must be entered under TCI Server in exactly the same way as in the RF kit. The TCI server must be activated at the bottom left before Server Running:
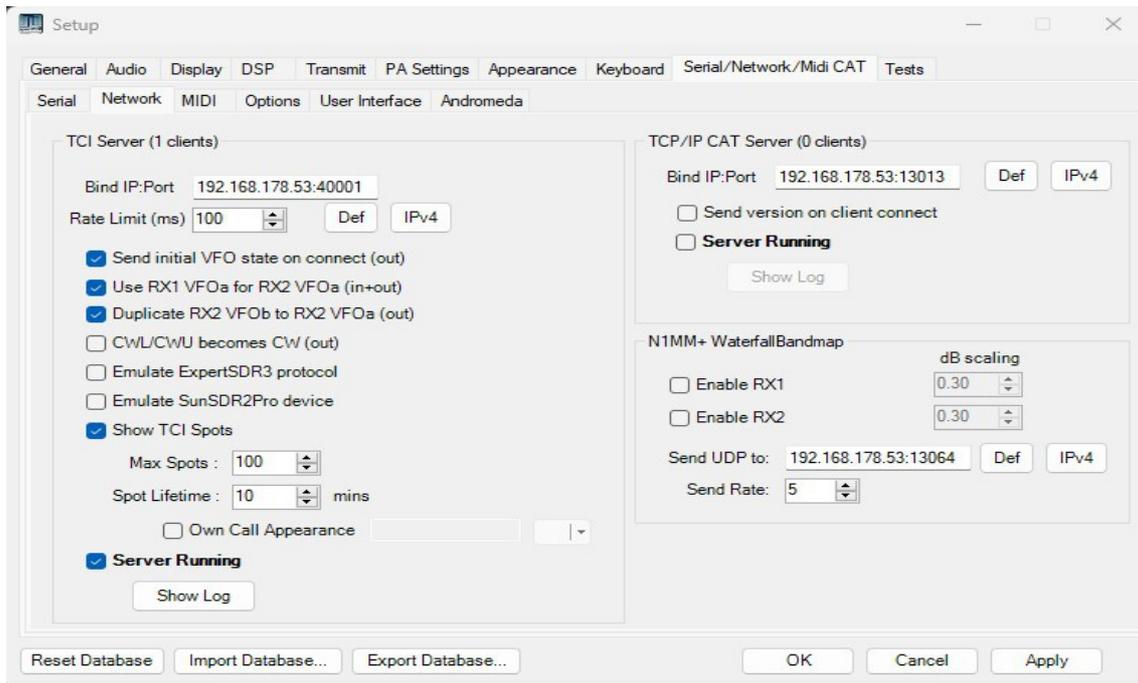


Finally, on the RF kit, make sure that TCI is displayed at the top right (above the red arrow), as shown here in the picture. If it says something else such as UNIV or CAT, click on it until TCI is displayed in green.
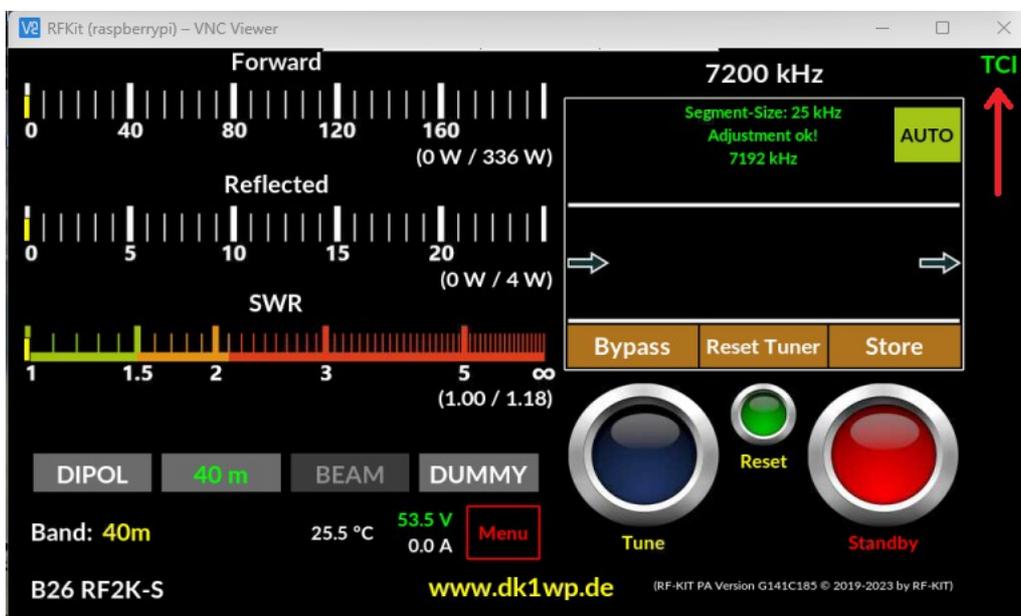


That's it!
If you have followed my instructions above in detail, you should be able to operate your RF-Kit with the VNC Viewer on your screen and at the same time the frequency and band data should also run synchronously on the RF-Kit via the TCI interface.

Written in 2024 by Marcus DK1WP