

## **Programming kit - RTX4002 Repeater**

### **1. Auto registration**

1. **Ensure that the repeater is switched off.**  
Disconnect the power plug.
2. **Set the base station in registration mode.**  
On most base stations, holding down the “Registration or Page” key for several seconds starts the procedure. Consult your base station user guide for more information.
3. **Switch on the Repeater**  
Connect the power plug.
4. **The LED on the Repeater flashes.**  
After a short while the LED stays on permanently indicating that registration is complete and the unit is ready for operation.

### **2. Manual registration**

1. **Set the repeater in registration mode**  
Insert the repeaters power plug for 1-5 seconds in the socket and then remove it. Insert it once more and leave it there. The LED on the repeater flashes slowly after the start. You now have five minutes to carry out the registration. If the procedure is not carried out within this period you must start over again.
2. **Set the base station in registration mode**  
On most base stations, holding down the “Registration or Page” key for several seconds starts the procedure. Consult your base station user guide for more information.
3. **The LED on the front of the repeater flashes**  
If the LED flashes very quickly without interruptions go to step 5. If the LED flashes very quickly with brief interruptions go to step 4.
4. **Registration of the handset**  
If the base code has been changed, it must be set to “0000”. You must repeat the registration procedure even if the mobile unit used was already registered at the base station, (consult your base station user guide for more information). Now the LED flashes very quickly without interruptions.
5. **Assign a repeater number**  
You must now assign a repeater number to the repeater (selection: 2-7, for up to 6 repeaters). Please note that each number only can be assigned once, when using more than one repeater. These numbers are independent of the mobile unit extension numbers.  
Hook off by pressing the \*-key (the LED stops flashing). Press a number between 2 and 7. When the repeater has accepted the chosen number, the LED will flash a corresponding number of times. Accept the registration by pressing the \*-key and then the #-key (hook on). The repeater is now automatically restarted. The LED goes off for 2 seconds, flashes for a brief moment and the remains continuously illuminated. The registration of the repeater is completed. You can now disconnect the power and move the repeater to the selected location (disconnecting the power will not delete the registration.)

### **3. Reset the repeater**

1. **Switch off the repeater.**  
Disconnect the power plug.
2. **Switch on the repeater for 1 to 5 seconds and switch off again.**
3. **Switch on the repeater for 25 to 35 seconds on switch off again.**  
Now the repeater is ready for a new registration.

**Note:** Reset the repeater will also delete the registrations in the repeater.

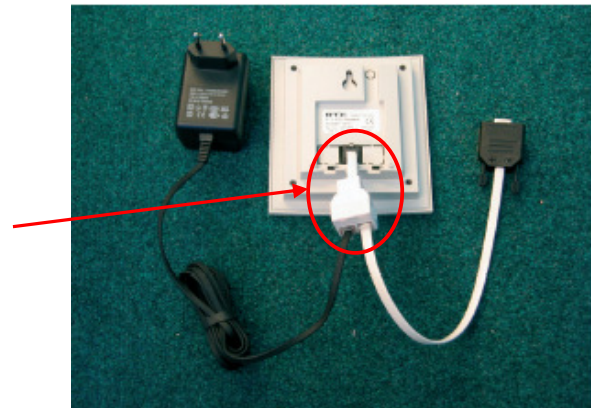
### **4. Install Repeaters in series**

1. Register one repeater to your base station as described above – This is Repeater 1 in daisy chain.
2. Insert CD in your laptop or computer.
3. Read “Read me” folder from CD.
4. Install “CP2101 driver” and “Setup\_wrs4002cfg” on your laptop or computer.
5. Go to directory that you specified under installation of “CP2101driver” that has name “Cygnal”. Run file “Set up. exe”
6. Connect Repeater 1 with splitter using the cable from the box. Connect power and USB cable to splitter. Fig.1.  
Connect repeater to power.

IMPORTANT: Power must be switch on before connecting the USB cable to the Com port in laptop or computer.

Fig.1

7. Connect USB cable to laptop or computer.
8. Wait until your laptop/ computer has identified new hardware and run



this hardware wizard.

In the first window choose “Yes, only this time” -> next -> select “Automatically install” -> next

9. Go to Menu “ Start” -> “Control panel” -> “System” -> “Hardware” -> “Device manager” -> “Ports (COM & LPT)” -> open this folder

Check that “CP2101 USB...” device is installed correct – if it is not installed correct you will see yellow question sign next to it. In this case left double click on line “CP2101 USB...” and select reinstall.

When USB is installed correct – **remember/ write down COM port number** that it has received. – This number is going to be used in step 11.

10. Start the program Wrs4002cfg. An empty scheme of the program Rtx4002 Repeater config program will appear. Fig.2

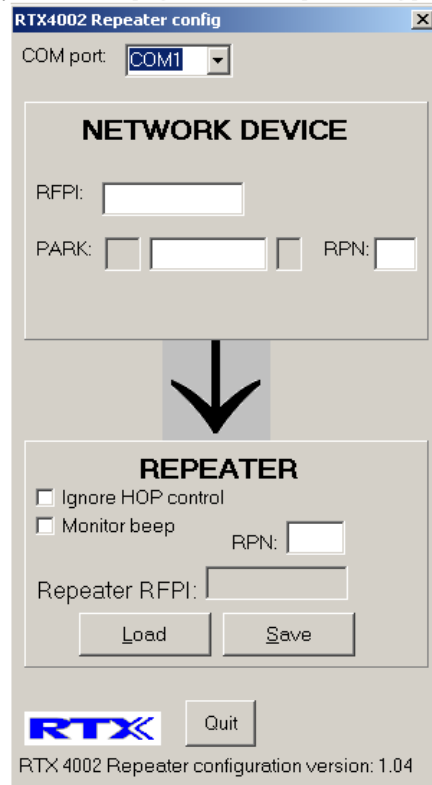


Fig.2.

11. In the COM port drop down box select the COM port where USB cable is connected – the number you have found under step 9. Fig.3  
The COM port number remains the same for ALL repeaters you install in this daisy chain.



Fig.3

12. Click on the “Load” button in the “REPEATER” window. Fig.4

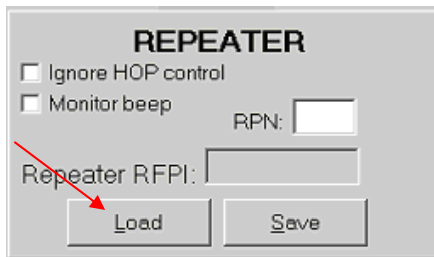


Fig.4

13. The Base station (Network device) RFPI and the repeater RFPI is shown in the “RTX4002 repeater config program”.

**Write down the Repeater RFPI number and Repeater RPN number.** Fig.5

The repeater RFPI and RPN numbers are going to be used step 18.

*! If you used **Manual registration** mode while registering Repeater 1 to telephone base station, Repeater RPN number will be similar to the assigned repeater number!*

Fig.5

The first repeater RFPI

14. Exit "RTX4002 Repeater config" by pressing "Quit" button.
15. Disconnect the Repeater 1 and put it aside without connecting to power.
16. Connect Repeater 2 (next repeater in daisy chain) to the laptop or computer as described in step 6. Start the "RTX40042 Repeater config" program.
17. Check that repeater COM port is correct – it is the same that in step 9 and 11. Fig. 6.

Fig.6

18. Enter RFPI of the Repeater 1 in the "NETWORK DEVICE" window. Fig 7.  
It is always the RFPI of the latest repeater in the chain that you enter here - in this case the repeater 1. When you register Repeater 2 you need to enter PRFI number of Repeater 1 and so on.

Fig. 7

19. Mark the "Ignore HOP control" check box. Fig 8  
Note the value in PARK and RPN will automatically update.

Fig. 8

20. In REPEATER window Change Repeater RPN number to network Device RPN number +1.  
*Example: Network Device RPN number is 2 → Repeater RPN number must be changed to 3.*

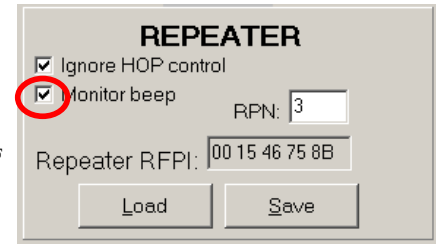
21. Monitor beep check box configures whether a beep will be played once every 3 seconds in the earpiece of a handset operating on the repeater. Fig.9

If this feature is enabled, it will not be possible to transmit or receive fax or modem.  
When connecting several repeaters in serial a beep from each repeater will be audible.

*If you install 2 or more repeaters in a row, we would advice that you mark the Monitor beep on the last repeater. This enables you – when testing – to hear that the handset is on the last repeater.*

ig. 9.

*After completing a test you can unmark “Monitor beep” by connecting Repeater to computer and unchecking “monitor beep” box followed by Save.*



22. Press the “Load” button in the “REPEATER” window.
23. Press the “Save” button in the “REPEATER” window to save the changes.
24. If you wish to add Repeater 3 to daisy chain – repeat steps 13 to 23.
25. Quit the RTX4002 Repeater config program by pressing the “Quit” button.
26. **When all repeaters have been registered in daisy chain, you have to register them to the telephone base station except Repeater 1 which is already registered to the telephone base station. Use the same registration method as was used to register Repeater 1.**

**After the registration of the repeaters to telephone base station is completed, you can disconnect the power and move the repeaters to the selected location (disconnecting the power will not delete the registration).**