

## **Remove and reprogram the WaveLAN card in an SM unit:**

### **Requirements:**

- ! Hardware
  - Security screwdriver
  - Torque wrench
  - Phillips #1 Screwdriver
  - Cutting pliers
  - Tie wrap
  - Adjustable wrench
  - RTV sealant (clear)
  - Sharp utility knife
  - Masking tape
  - Pen
  - Laptop with PCMCIA bay
  - Ethernet network card
  - Crossover UTP cable
- ! Software
  - Windows OS (W9X, NT or 2K)
  - Speedlan ISP card drivers
  - Station Function Firmware 6.08
  - Speedlan Configurator, V 3.55
  - Bin File 3.75
- ! Time:
  - About 60 minutes

This procedure assumes that the user is proficient in the use of the laptop computer and knows the procedure to upload bin files and reconfigure the equipment. Also assumes the laptop has all software already installed and functional

The procedure assumes the environment is a bench.

### **Download the actual configuration:**

1. Connect the laptop to the network where the SM is connected
2. Configure the laptop IP to be in the same network as the SM
3. Open the Configurator software
4. Click on File>Open Remote Configuration
5. Give the IP of the SM unit and the password, or use the scan button
6. After the configuration was read, click on File>Save, and give a name to the file
7. Close the configurator

### **Opening the unit:**

1. Turn off the unit, and remove the power cable.
2. Using the security screwdriver remove all three security screws, located in the back panel
3. Using the adjustable wrench, loosen and remove the nut from the external amplifier power connector. **GENTLY**, pull the back panel plate, be **EXTREMELY CAREFUL** with the antenna and switch cables.
4. Using the masking tape and the pen, mark all cables
5. Push the external amplifier power connector and set it aside.
6. **CAREFULLY**, pull the white coaxial antenna cable, until the N connector assembly comes out.
7. Being **EXTREMELY CAREFUL** with the switch cables, pull the back panel sideways, so it allows to slide the unit's cover out
8. Once the cover is out, you should be able to see the radio card, with the switch cables passing through its bracket. Make sure you have enough room to avoid any damage to the cables.
9. Inside the unit you will see the ISA card with the radio facing downwards. Carefully observe all cable routes, and mark where they are connected. Observe how much RTV was used to secure which connectors, since you will have to replace it.
10. Using the knife cut the RTV sealant that holds the ISA card. **BE EXTREMELY CAREFUL** to avoid any damage to the card.
11. Using the Phillips #1 screwdriver, remove the two black screws from the back of the unit that holds the ISA card bracket. Now, being very careful with the cables, push the ISA card out of its connector.
12. Once the card is out of the connector, you should be able to loose the silver Phillips screw on top of the bracket holder, and free the ISA card.
13. Turn the card so you can see the FlashROM card. There you will see the connectors for the black and red switch cables, secured in place with RTV. Using the knife cut the RTV **BE EXTREMELY CAREFUL** to avoid any damage to the FlashROM card or connectors.
14. Unplug the black and red cables and take them out of the ISA card bracket assembly.

### **Removing the radio card:**

1. Once the switch cables are out, the only cable left is the white coaxial antenna cable. It's secured with a tie wrap to the upper part of the PCMCIA connector assembly. Using the pliers cut the tie wrap. Discard it.
2. Once the antenna cable is free, **CAREFULLY**, remove it from the back of the WaveLAN card.
3. Push the WaveLAN card out of the PCMCIA connector assembly. You may help yourself using the ejector on top of the assembly.

Insert the WaveLAN card into the PCMCIA interface on the laptop

### **Reprogramming the card:**

1. The OS should recognize the WaveLAN card if the right drivers are installed. Please be aware that Lucent drivers **WILL NOT** work with the Station Function Firmware provided. You **MUST** be running the Speedlan ISP Card drivers. Be aware that depending on the laptop's drivers for the PCMCIA interface, under Windows NT 4.0 you cannot plug and unplug the card without turning off the machine.
2. You may receive a message that the firmware is older than the card drivers. Acknowledge the message.
3. Run the Station Function Firmware. It should find the card, and show its information
4. This part of the procedure **REQUIRES** a stable data transfer from the laptop to the WaveLAN card. If you're operating on batteries, make sure they are fully loaded or connect the laptop to an outlet. Also, close all other programs, and let running the Station Function Firmware alone. Click on the Update button, the software will start the transfer and will show the progress in the blue bar. Once it's finished, it will display the download successful message
5. Remove the card from the laptop
6. Close the Station Function Firmware software

### **Reinstalling the WaveLAN card**

1. Push the WaveLAN card inside the PCMCIA connector assembly. Make sure it is firmly seated.
2. Being **EXTREMELY CAREFUL** plug the antenna cable back in the WaveLAN card. It will be difficult, since the bracket doesn't allow free movement. Be **VERY CAREFUL** with the connector. If the connector is damaged, either the card or the cable should be replaced and the unit will be out of order until spares arrive. No spares of them are supplied, they must be ordered from the factory.
3. Replace the tie wrap that secured the coaxial cable. **DO NOT** tighten it too much, or you will damage the cable.
4. Reroute the switch cables (black and red) by passing their connectors by the ISA card bracket and bracket holder. Secure them with the silver Phillips screw.
5. Plug the black and red cables back in its place, and use RTV to secure them to the FlashROM card.
6. Using the guide in the back panel, place back ISA card in its connector. Once it's firmly plugged, use RTV to secure the card.

### **Closing the unit**

1. Retrieve the unit cover, and push the back panel cover through the unit cover, sideways, so it allow the unit cover to slide back in.

2. Push back the external amplifier power connector into the back panel cover. Replace the lug and secure it using the adjustable wrench. Do not over tighten.
3. Push the antenna cable inside the unit, so it allows the back panel cover to be placed back.
4. Using the security screwdriver tighten the security screws.

### **Installing BIN 3.75 file**

1. Connect the unit to the network
2. Open the configurator, and read the 3.75 BIN file using the provided software serial key
3. Download the file to the unit's IP address
4. Wait unit finishes the startup
5. Open the previously save configuration file, and download it to the unit.

Read the configuration, and make sure it's properly configured. In case the configuration cannot be downloaded, open a second Configurator instance and copy the parameters from the saved file to the unit.

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