

ANAN-7000DLE MKII or other Orion boards

Protocol 2 Firmware programming

1. Download NPCAP:

<https://npcap.com/#download>

2. Install npcap (i used "run as admin")

3. Reboot your PC at this point (at least i did)

4. Download the latest ANAN firmware: "Metis_Orion_MkII_Protocol_2_v2.1.18.rbf" and remember where you saved it:

https://www.dropbox.com/s/j37h9hd02p6iv50/Orion_MkII_Protocol_2_v2.1.18.rbf?dl=0

or at the 1st page here (scroll to the end):

<https://apache-labs.com/community/viewtopic.php?f=32&t=3192&start=180>

5. Download the firmware installer HPSDRBootloader.msi at:

<https://github.com/TAPR/OpenHPSDR-SVN/blob/master/KV0S/hpsdr-programmers/Release/HPSDRBootloader.msi>

6. Install HPSDRBootloader

7. Reboot your PC at this point (at least i did)

8. **Power your ANAN/Orion OFF**

9. Slide the programming switch at the bottom of your ANAN 7K to the programming mode: slide it towards the midst of the bottom plate.

10. **Power your ANAN/Orion ON**

11. Run HPSDRBootloader as **ADMIN (!)** and press **"Test for Bootloader"**:

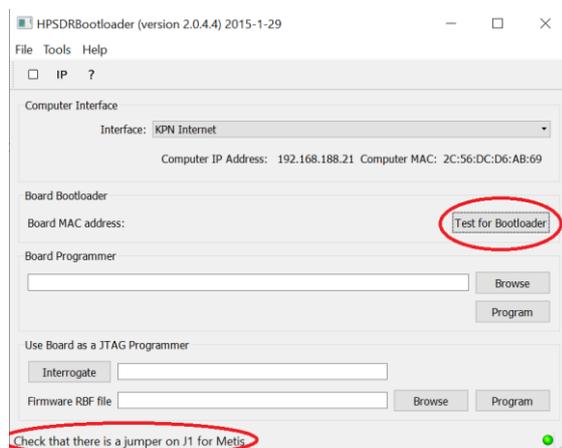


Fig1. **Not ok**: HPSDRBootloader doesn't see your radio. Power the radio off and check the programming switch again. Read 11: Run as admin... 😊

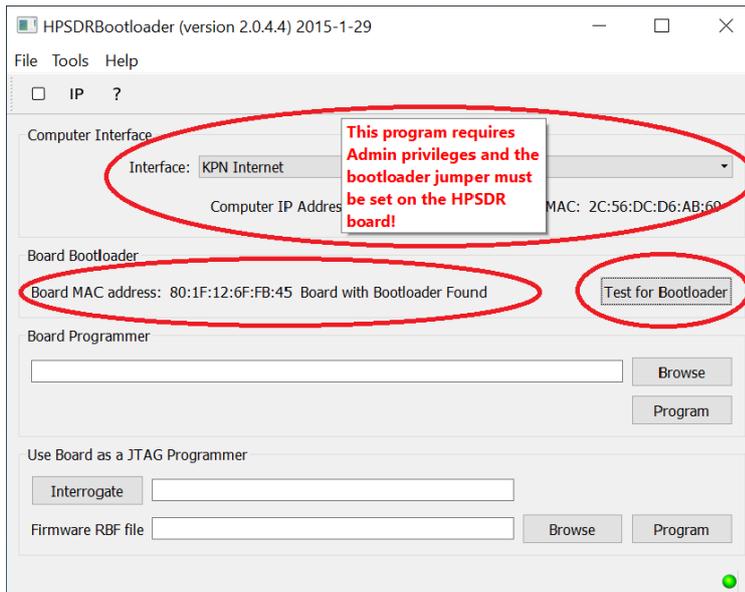


Fig2. OK, it sees your LAN and radio

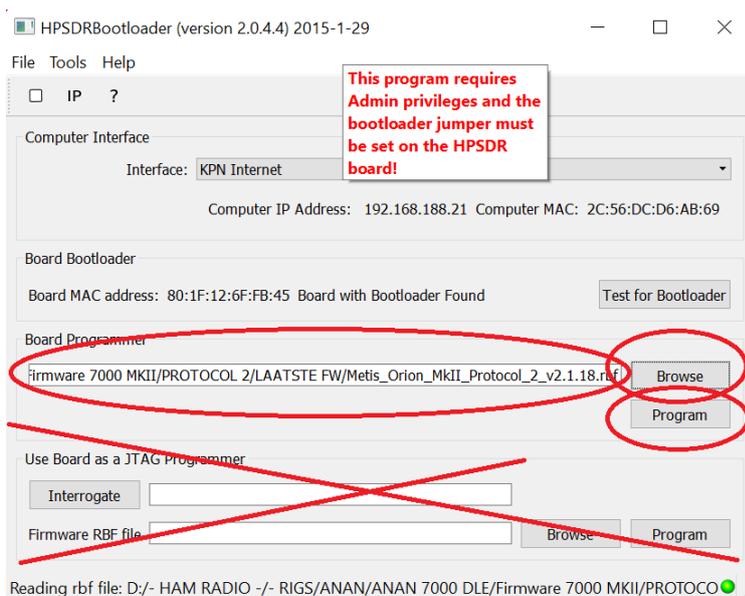


Fig3. Browse to, and load the firmware file Orion_MkII_Protocol_2_v2.1.18.rbf

12. Press the Program button and wait for the progress bar to finish.

13. **Power your ANAN/Orion OFF**

14. Set the programming switch at the bottom back to normal operation: slide it to the right-side of the radio.

15. **Power your ANAN/Orion ON**

16. Run Thetis and check the firmware version in Setup/HW

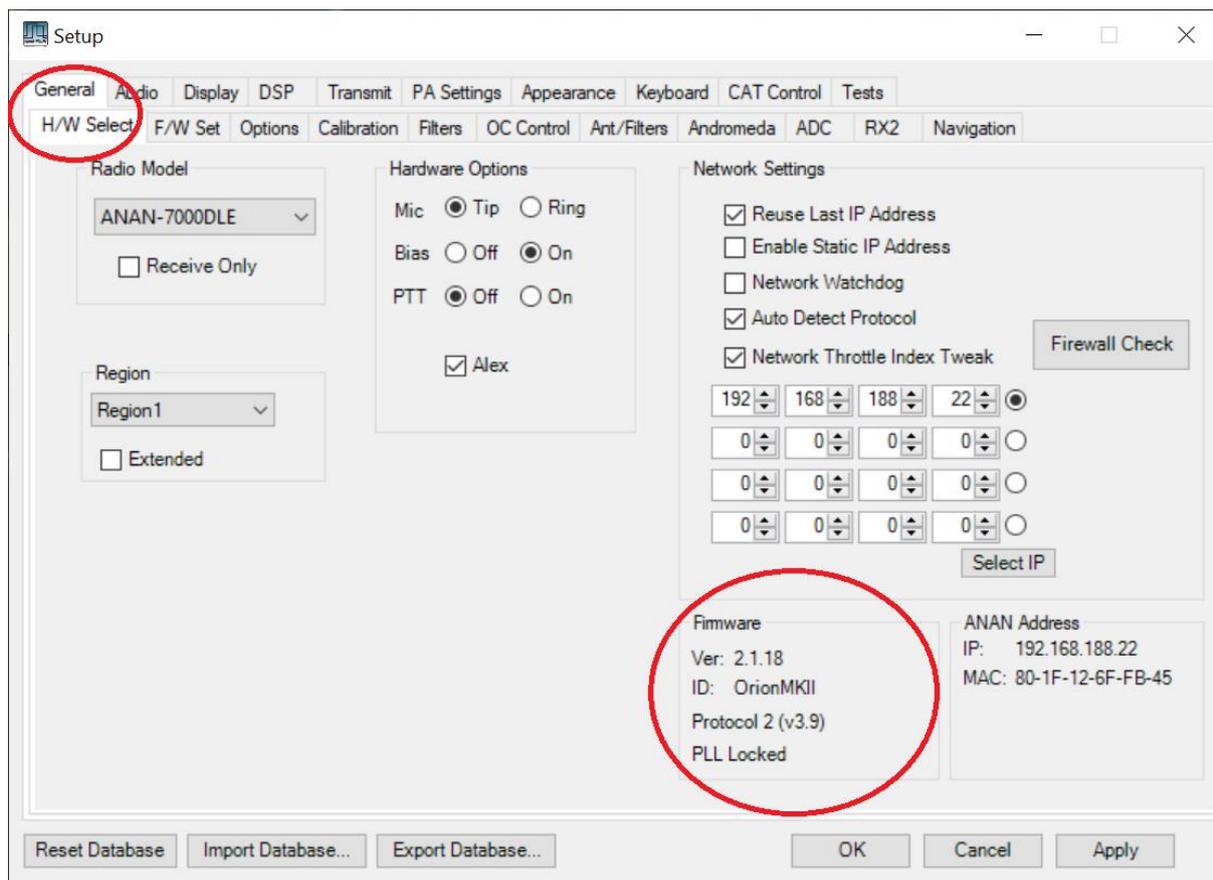


Fig.4 OK: firmware upgrade succeeded.

17. Ready

Note step 1: no need to use WINPCAP...it has been succeeded by NPCAP

Note step 11-Fig 1: if HPSDRBootloader can't find your LAN or doesn't finish the programming (stops at weird moments) then check the IP setting in **HPSDRBootloader**:

Push IP button. In the next small window push ReadIP button:

- in a **DHCP** local network the 4 fields should be empty (!)
- if not: enter 0 (zero) in each field and push Write IP
- try again: back to step 11
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- in a **Fixed IP** network enter an unused IP number that is valid for your sub-net.
- push Write IP and try again: back to step 11

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PD3LK