

# How to update the firmware of the AOR ARD-300 Multi-Digital Voice Decoder

Matthias, DD1US, October 4<sup>th</sup> 2019, rev 1.0

Hello,

Recently I acquired an ARD-300 Multi-Digital Voice Decoder from AOR in order to be able to decode some digital voice repeaters in the neighbourhood. Here are some pictures of the device:



My device did not have the latest firmware installed and thus I started searching the internet for the appropriate firmware and update software. Unfortunately, my search was not successful and thus I decided to write an Email to a good friend in Japan and asked him to check the Japanese AOR Website. Shortly after my friend Toshi responded and sent me the latest firmware which is "v501A". He also downloaded the corresponding software "ARD300Writer" which is needed to upload the firmware into the device. For the programming a serial port on a PC and a straight through serial cable is needed. The serial cable shall be connected to the 9 pin SUB-D connector labelled "service" on the rear of the ADR-300.

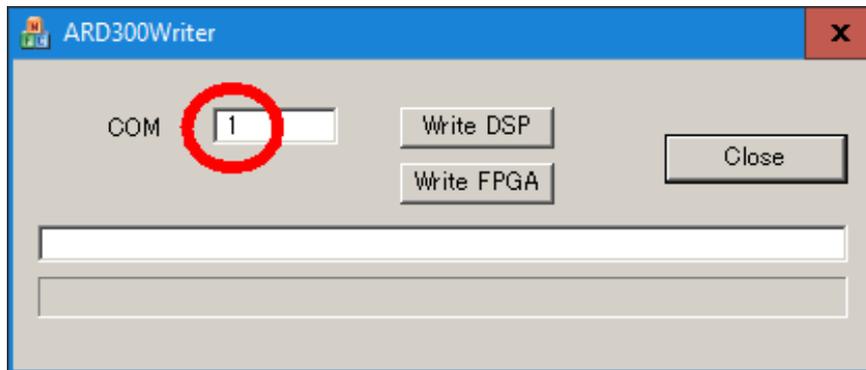


As the description on how to use the software and conduct the firmware update is only available in Japanese my friend Toshi was kind enough to translate it to English. Here is the step-by-step description how to update the firmware:

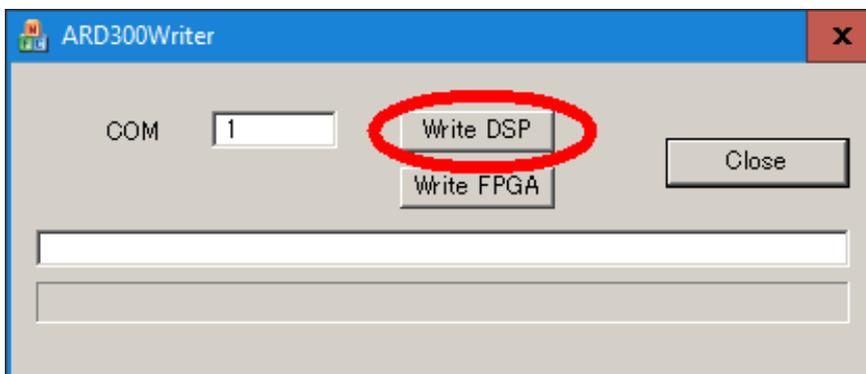
Fortunately the software is very simple and quite straight forward. Here are the steps to be followed.

- 1) The software supports Windows 7 and 8. Whether it also works using Windows 10 is unknown.
- 2) ARD-300 has two firmware parts: one for the DSP (the file name ends with .a3d) and the other for the FPGA (the file name ends with .a3f). As of October 2019 only updated DSP firmware is available.
- 3) For the connection between the ARD-300 (service port) and the PC a D-SUB9 straight cable has to be used.

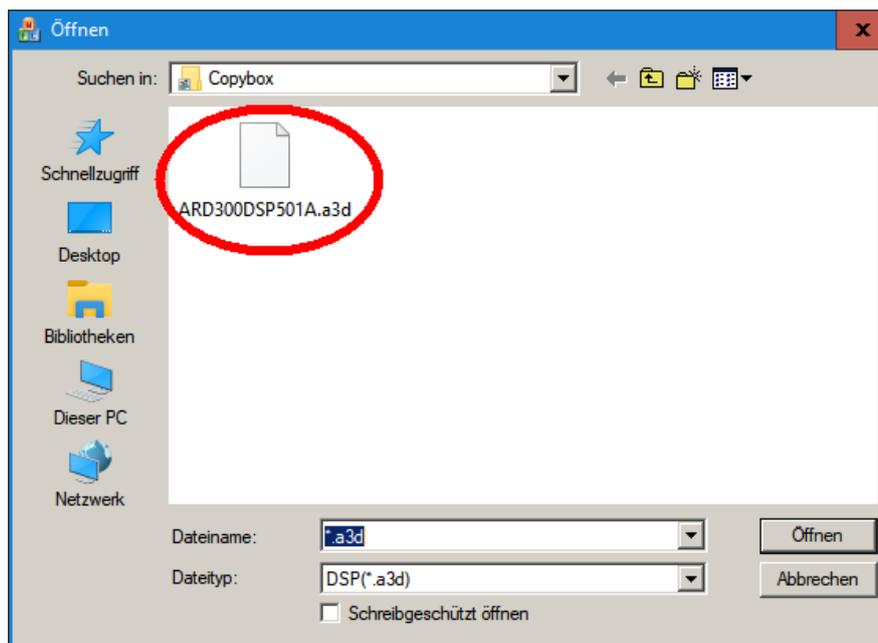
- 4) Power on the ARD-300 and start the software ARD300Writer. There is no need to install the software. You simply start the executable.
- 5) Enter the COM port number of the serial port, to which you have connected the ARD-300.



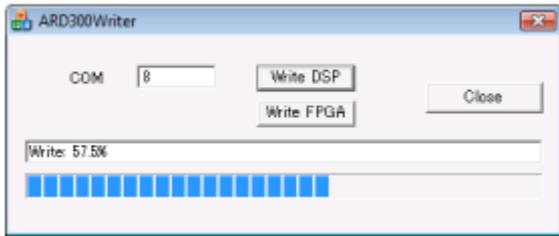
- 6) Select "Write DSP" to update the DSP firmware.



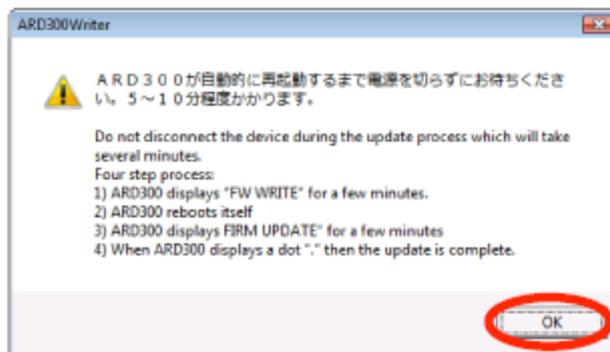
- 7) Next you are asked for the firmware file name. In the drop-down menu you can select the respective file.



8) Then, your PC screen shows the progress of the firmware update and the ARD-300's display shows "FW WRITE".



By Clicking "OK" the window on your PC screen will disappear.



9) Your PC screen shows a window telling you to wait for a while. It may take 5 ~ 10 minutes. During the update, the ARD-300's display shows "FIRM UPDATE.."

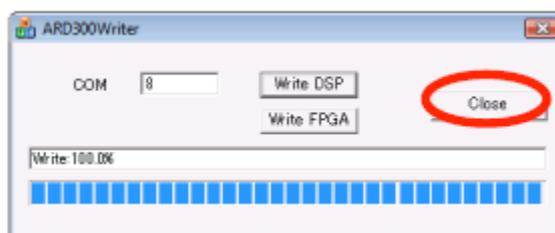


Wait until the ARD-300 automatically reboots. After the reboot, ARD-300 should show "ARD-300 Ver.501A".



NOTE: Sometimes, the ARD-300 won't move on after showing the version on the display. This can be solved by initialization the unit as described further down.

10) Once the progress bar reaches 100%, then please click "Close".



If needed you can now start the Initialization of the ARD-300:

First remove ARD-300's power supply. Then press simultaneously the "Enter" and ESC" keys and reconnect the power supply. Keep pressing the two buttons until the firmware version is shown on the display (approx.. 5 seconds). After the initialization, you must set up various parameters such as the receiving mode and the IF frequency.

Please note that the settings are only saved, if you switch off the device with the power button on the rear of the ADR-300 (and not if you simply remove the power supply).

If you have questions or if you are having trouble finding the programming software and/or the latest firmware you may send me an Email and I will be happy to help you.

Updating the firmware is at your own risk. I cannot take any responsibility.

I would like to thank my friend Toshi for helping me with obtaining the software and firmware as well as providing me the translation of the Japanese instructions.

Kind regards

Matthias DD1US

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